ICP-CC488

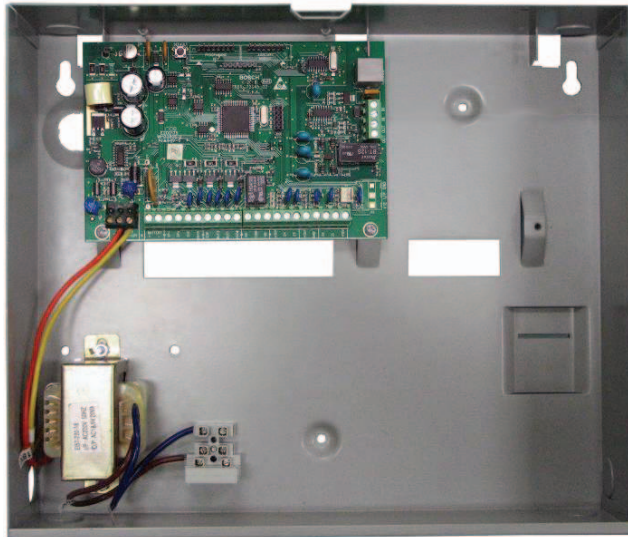**EN**

Installation Guide
ICP-CC488 Control Panel

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Contents

Figures

Tables

1.0   Introduction

Congratulations on selecting the ICP-CC488 Control Panel for your installation. Take the time to read through this guide and familiarize yourself with the outstanding operating and installation features of this system so you can get the most from your unit.

In all aspects of planning, engineering, styling, operation, convenience, and adaptability, we try to anticipate your every possible requirement. Programming simplicity and speed are major considerations; we believe that our objectives are more than satisfied.

This installation guide explains all aspects of programming the ICP-CC488 Control Panel from factory default to final commissioning. All system parameters and options are detailed, but suitability is left to the individual. Each control panel can be tailored to meet your requirements quickly and easily. The programming simplicity makes your installation quick, accurate, and rewarding.

As ICP-CC488 Control Panels continue to improve over the years, they become very powerful. We have addressed the needs of some early first-time users who have advanced to true "power users," while maintaining simplicity of the product and the installation guide.

1.1   ICP-CC488 Features

The ICP-CC488 security system uses the latest in microprocessor technology to provide you with useful features, and superior reliability and performance.

The control panel provides these features:

- Eight programmable User Codes (1 to 8)
- Eight variable User Codes (radio remote/programmable User Codes (9 to 16))
- Eight programmable hard-wired or sixteen programmable wireless Burglary Zones
- Partitionable to two separate areas
- Dual reporting
- On-board Line Fault Module
- Telco arming/disarming Sequence
- Automatic arming and disarming
- Codepad Duress, Panic, Fire, Medical, Access Denied Alarms
- STAY Mode and AWAY Mode operation
- Upload/download programmable
- Dynamic battery testing
- Entry and Exit Warning beeper
- Remote arming
- Answering machine bypass
- AC fail and system FAULT indicators
- Monitored Siren Output
- Strobe Output
- Relay Output
- Separate Fire Alarm sound
- EDMSAT – Satellite Siren-compatible
- Zone lockout
- Sensor watch
- Day Alarm
- Walk Test Mode
- Delayed reporting
- 40 events in non-volatile memory

1.2 Quick Start

The following steps allow you to use the ICP-CC488 Control Panel with factory default values. The default values allow the control panel to communicate in the Contact ID format. If you are not familiar with programming the control panels, read the information in *Section 7.0 Programming* before starting the installation.

After all wiring is complete, connect the AC plug pack to the control panel.
Both the MAINS and AWAY indicators are lit. The MAINS indicator lights to indicate the AC MAINS supply is connected.
The AWAY indicator lights to signify the system is armed in AWAY Mode.
If any 24-Hour zones are unsealed when you power up the system, the Siren, Strobe, and Bell Outputs are activated into alarm and the corresponding zone indicator flashes.

Enter the default Master Code (2580) and press [AWAY] to disarm the system and to reset any alarm that occurred when you powered up the system.
The AWAY indicator is extinguished to signify that the system is disarmed.
If any zone indicator is flashing, an alarm occurred in that zone.
If a zone indicator is lit constantly, the zone is unsealed.

Connect the backup battery.

Enter the default Installer Code (1234) and press [AWAY].
Two beeps sound and the STAY and AWAY indicators flash simultaneously to indicate that you entered Installer's Programming Mode.
When entering Installer's Programming Mode, you are automatically positioned at Location 000, the first digit of the Primary Telephone Number for Receiver 1.

Enter the Primary Telephone Number, the Secondary Telephone Number, and the Subscriber ID Number for Receiver 1.
Refer to *Sections 11.1*, *11.2*, and *11.5* for more information about programming these numbers. When programming the telephone numbers for Receiver 1 and Receiver 2, you must program a 0 as a 10. Programming a 0 in the telephone number indicates the end of the dialing sequence. Unless otherwise stated, program a 0 as a 0 in all locations other than the telephone numbers for Receiver 1 and Receiver 2, and the Call Back Telephone Number.

If required, set the Test Report time.
Program any other required changes. Otherwise, factory default settings are used. Refer to *Section 15.28 Test Reporting Time* for more information.

Enter command [9 6 0] and press [AWAY] to exit from Installer's Programming Mode.
Two beeps sound and the STAY and AWAY indicators are extinguished. The system is returned to the disarmed state and is ready for use. Refer to *Section 7.4 Installer's Programming Commands* for more information.

Use the Master Code to set the date and time.
Refer to *Section 1.2.1 Set the Date and Time* for more information.

1.2.1 Set the Date and Time

1. Enter your Master Code and press [6][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the day, month, year, hour, and minute in DD, MM, YY, HH, MM format (where DD is the day of the month, MM is the month of the year, YY is the year, HH is the hour of the day, and MM minute of the day) and press [AWAY]. Use 24:00 hour format when programming the hour of the day.
Two beeps sound and the STAY and AWAY indicators are extinguished. If a long beep sounds, there was an error when you entered the date and time.

Example

To set the date and time for the 1st January 2004 at 10:30 PM, enter:

[2 5 8 0 6][AWAY][0 1 0 1 0 4 2 2 3 0][AWAY]

1.2.2 ICP-CC488 Zone Defaults

The default zone settings for the control panel are listed in *Table 1* on page 9. You can program Zones 1 to 8 to any of the zone types. Refer to *Table 2* on page 10 for the zone types you can select.

Table 1: Zone Defaults for the ICP-CC488			
Zone	**Zone Type**	**Zone**	**Zone Type**
1	Delay-1	5	Instant
2	Handover	6	Instant
3	Handover	7	Instant
4	Handover	8	24-Hour Tamper

1.2.3 Zone Types

There are thirteen zone types to choose from when programming zones for the ICP-CC488 Control Panel. Refer to *Section 14.3 Zone Programming* for more information.

Table 2: Zone Types

Type	Description	Type	Description
0	Instant	8	24-Hour Holdup
1	Handover	9	24-Hour Tamper
2	Delay-1	10	Reserved
3	Delay-2	11	Keyswitch
4	Reserved	12	24-Hour Burglary
5	Reserved	13	24-Hour Fire
6	24-Hour Medical	14	Chime only
7	24-Hour Panic	15	Zone not used

2.0 Codepad Indicators

2.1 ICP-CP508W Eight Zone LED Codepad

Figure 1: ICP-CP508W Eight Zone LED Codepad
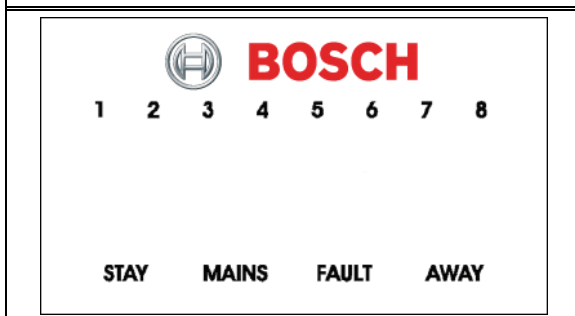
The codepad is the communications interface between you and the alarm system. The codepad allows you to issue commands and offers visual and audible indications to guide you through general operation.

The codepad incorporates a number of indicators: eight zone indicators show the condition of each zone and four other indicators show general status. These indicators are described in *Table 3* through *Table 8* on pages 10 through 11.

Zone Indicators

Table 3: Zone Indicators

Indicator	Definition
On	The zone is unsealed.
Off	The zone is sealed.
Flashing fast (0.25 sec. on/ 0.25 sec. off)	The zone is in alarm.
Flashing slow (1 sec. on/1 sec. off)	The zone is manually isolated.

STAY Indicator

The STAY indicator lights when the system is armed in STAY Mode 1 or STAY Mode 2. The STAY indicator flashes with the AWAY indicator when you are in Installer's Programming Mode or you are using a Master Code function.

For more information, refer to:

- *Section 3.3* to arm the system in STAY Mode 1.
- *Section 14.3.5* to set zones to be automatically isolated in STAY Mode 1.
- *Section 3.5* to arm the system in STAY Mode 2.
- *Section 5.1.5* to use the Installer Code to set zones to be automatically isolated in STAY Mode 2.
- *Section 5.2.6* to use the Master Code to set zones to be automatically isolated in STAY Mode 2.

Table 4: STAY Indicator

Indicator	Definition
On	The system is armed in STAY Mode 1 or STAY Mode 2.
Off	The system is not armed in STAY Mode 1 or STAY Mode 2.
Flashing	Zone isolating mode or setting STAY Mode 2 zones.
Flashing once every 3 sec	Day Alarm status on/off indicator

AWAY Indicator

The AWAY indicator lights when the system is armed in AWAY Mode. The AWAY indicator flashes with the STAY indicator when you are in Installer's Programming Mode or you are using a Master Code function.

Refer to *Section 3.1 Arming the System in AWAY Mode* for more information.

Table 5: AWAY Indicator

Indicator	Definition
On	The system is armed in AWAY Mode.
Off	The system is not armed in AWAY Mode.

MAINS Indicator

The MAINS indicator displays whether the system's AC MAINS supply is normal or failed.

When programming in Installer's Programming Mode or using a Master Code function, the MAINS indicator lights to indicate a location value from 10 to 15. The MAINS indicator represents the 10 digit, which is added to the value of the lit zone indicator (for example, if the value programmed in a location is 12, the MAINS and Zone 2 indicators light).

Table 6:	MAINS Indicator
Indicator	**Definition**
On	The AC MAINS power is normal.
Flashing	The AC MAINS supply failed.

FAULT indicator

The FAULT indicator lights when the system detects a system fault. Refer to *Section 3.12 Fault Analysis Mode* on page 18 for more information on system faults.

Each time a new system fault is detected (the FAULT indicator flashes), the codepad beeps once per min.

Press [AWAY] to stop the beeping and to acknowledge the fault.

Table 7:	FAULT indicator
Indicator	**Definition**
On	A system fault must be corrected.
Off	The system is normal (no faults).
Flashing	A system fault must be acknowledged.

Audible Indicators

The codepad provides these audible indications:

Table 8:	Audible Indicators
Audible Indicator	**Definition**
One short beep	A button was pressed on the codepad, or Exit Time ended when arming in STAY Mode 1 or STAY Mode 2.
Two short beeps	The system accepted your code.
Three short beeps	The system executed the requested function.
One long beep	Exit Time ended when arming in AWAY Mode, or the requested operation was denied or aborted.
One short beep every sec	Walk Test Mode is currently active, or warning before automatic arming takes place.
One short beep every 2 sec	Telephone Monitor Mode is active.
One short beep every min	There is a system fault to be acknowledged.

2.2   ICP-CP508LW Eight Zone LCD Codepad

Figure 2:   ICP-CP508LW Eight Zone LCD Codepad
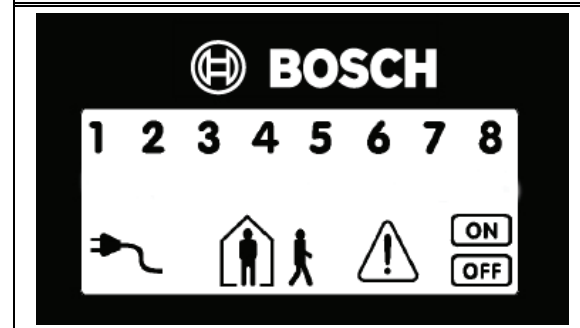
The codepad is the communications interface between you and the alarm system. The codepad allows you to issue commands and offers visual and audible indications to guide you through general operation.

The codepad incorporates a number of indicators: eight zone indicators show the condition of each zone and seven other indicators show general status. These indicators are described in the tables throughout this section.

Zone Indicators

1 2 3 …   The zone indicators (1 to 8) display the status of the zones listed in *Table 3* on page 10.

AWAY Indicator

The AWAY indicator lights when the system is armed in AWAY Mode. The ON indicator also lights when the system is armed in AWAY Mode (refer to *Table 5* on page 10).

The AWAY indicator flashes with the STAY indicator when you are in Installer's Programming Mode or you are using a Master Code function.

Refer to *Section 3.1 Arming the System in AWAY Mode* for more information.

STAY Indicator

The STAY indicator lights when the system is armed in STAY Mode 1 or STAY Mode 2 (refer to *Table 4*).

The STAY indicator also flashes with the AWAY indicator when you are in Installer's Programming Mode or you are using a Master Code function.

The ON indicator also lights when the system is armed in STAY Mode 1 or STAY Mode 2.

For more information, refer to:

- *Section 3.3* to arm the system in STAY Mode 1.

- *Section 14.3.5* to set zones to be automatically isolated in STAY Mode 1.

- *Section 3.5* to arm the system in STAY Mode 2.

- *Section 5.1.5* to use the Installer Code to set zones to be automatically isolated in STAY Mode 2.

- *Section 5.2.6* to use the Master Code to set zones to be automatically isolated in STAY Mode 2.

System Disarmed

This indicator lights with the OFF indicator when the system is disarmed.

MAINS Indicator

The MAINS indicator displays whether the systems AC MAINS supply is normal or failed.

When programming in Installer's Programming Mode or using a Master Code function, the MAINS indicator lights to indicate a location value from 10 to 15. The MAINS indicator represents the 10 digit, which is added to the value of the lit zone indicator (for example, if the value programmed in a location is 12, the MAINS and Zone 2 indicators light).

Table 9:	MAINS Indicator
Indicator	**Definition**
On	The AC MAINS power normal.
Flashing	The AC MAINS supply failed.

FAULT indicator

The FAULT indicator lights when the system detects a system fault (refer to *Table 7* on page 11). Refer to *Section 3.12 Fault Analysis Mode* on page 18 for more information on system faults.

Each time a new system fault is detected (the FAULT indicator flashes), the codepad beeps once per min. Press [AWAY] to stop the beeping and acknowledge the fault.

Programming Mode

These two indicators flash when you enter Installer's Programming Mode or use any Master Code function.

Flashing

OFF Indicator/Zone Sealed

OFF The OFF indicator lights when the system is disarmed and flashes when a zone becomes unsealed when disarmed. The indicator stops flashing when all zones are sealed.

ON Indicator/Zone in Alarm

ON The ON indicator lights when the system is armed and flashes when an alarm occurs. The indicator is reset after a valid User Code is entered.

Audible Indicators

The codepad provides a number of audible indications. Refer to *Table 8* on page 11.

2.3   ICP-CP500PW Master Partitioned LED Codepad

Figure 3:	ICP-CP500PW Master Partitioned Codepad
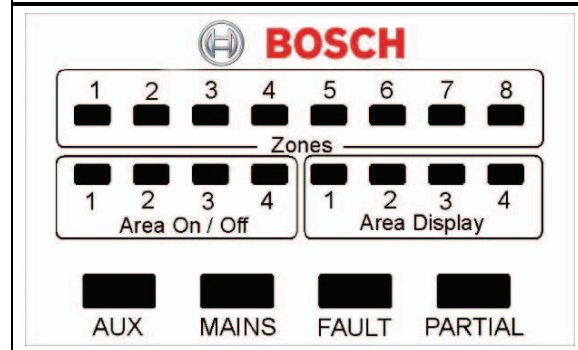
This codepad is used only on a partitioned ICP-CC488 Control Panel. The Master Partitioned LED codepad allows a user to operate both areas individually from the same codepad, without the need to operate individual areas from separate codepads.

The codepad is the communications interface between you and the alarm system. The codepad allows you to issue commands and offers visual and audible indications to guide you through general operation.

The codepad incorporates a number of indicators: eight zone indicators show the condition of each zone, eight area indicators show the area status, and four other indicators show general status. These indicators are described in the tables throughout this section.

Zone Indicators

The zone indicators (1 to 8) show the status of each zone as defined in *Table 3* on page 10. The zones belong to the area with the lit Area Display indicator.

AREA ON/OFF Indicators

The group of four Area On/Off indicators shows the status of each area as defined in *Table 10* on page 13.

If an area is armed in STAY Mode 1, the corresponding Area On/Off indicator is lit in conjunction with the PARTIAL indicator. If the area is armed in AWAY Mode, only the ON/OFF indicator is lit.

Table 10:	Area On/Off Indicators
Indicator	**Definition**
On	The area is armed in AWAY Mode or STAY Mode 1.
Off	The area is disarmed.

Area Display Indicators

The group of four Area Display indicators shows the area to which the eight zones belong. For example, if the Area 1 indicator is lit, the Zones indicators correspond to the zones assigned to that area.

Press [AWAY] to move to the next area display. For example, if the Area 1 indicator is lit, pressing [AWAY] extinguishes the Area 1 indicator and lights the Area 2 indicator.

Table 11:	Area Display Indicators
Indicator	**Definition**
On	Information is displayed for the area.
Off	Information is not displayed for the area.

AUX Indicator

If Options 8 is selected in Location 500 (refer to *Section 19.3.1 Partitioning Options 1* on page 85), the AUX indicator lights when the control panel is using the telephone line. The AUX indicator also flashes with the PARTIAL indicator when Installer's Programming Mode or Master Code functions are used.

Table 12:	AUX Indicator
Indicator	**Definition**
On	The control panel is using the telephone line.
Off	The control panel is not using the telephone line.
Flashing	Installer's Programming Mode or a Master Code function is active.

MAINS Indicator

The MAINS indicator shows the status of the AC MAINS supply (refer to *Table 6* on page 11).

When programming in Installer's Programming Mode or using a Master Code function, the MAINS indicator lights to indicate a location value from 10 to 15. The MAINS indicator represents the 10 digit, which is added to the value of the lit zone indicator (for example, if the value programmed in a location is 12, the MAINS and Zone 2 indicators light).

FAULT indicator

The FAULT indicator lights when the system detects a system fault (refer to *Table 7* on page 11). Refer to *Section 3.12 Fault Analysis Mode* on page 18 for more information on system faults.

Each time a new system fault is detected (the FAULT indicator flashes), the codepad beeps once per min.

Press [AWAY] to stop the beeping and to acknowledge the fault.

PARTIAL Indicator

The PARTIAL indicator lights when the system is armed in STAY Mode 1. The PARTIAL indicator flashes with the AUX indicator when Installer's Programming Mode or a Master Code function is active. Refer to *Table 13* on page 13.

Table 13:	PARTIAL Indicator
Indicator	**Definition**
On	The system is armed in STAY Mode 1.
Off	The system is not armed in STAY Mode 1.
Flashing	Installer's Programming Mode or a Master Code function is active.

Audible Indicators

The codepad provides a number of audible indications. Refer to *Table 8* on page 11.

2.4   ICP-CP516 Sixteen Zone Codepads

The ICP-CP516 Sixteen Zone Codepad must be used with sixteen wireless zone systems. The sixteen zone codepads operation and display similarly to 8 zones codepads, but also display zones 9 through 16.

Figure 4:	ICP-CP516W Sixteen Zone LED Codepad
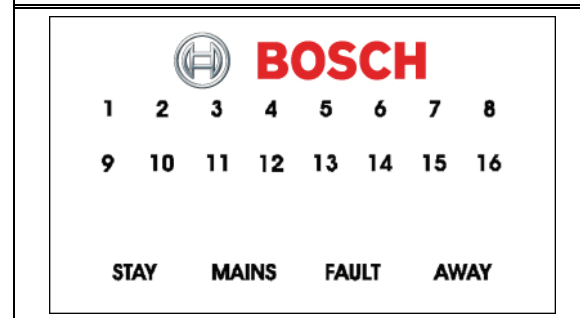
Figure 5:	ICP-CP516LW Sixteen Zone LCD Codepad
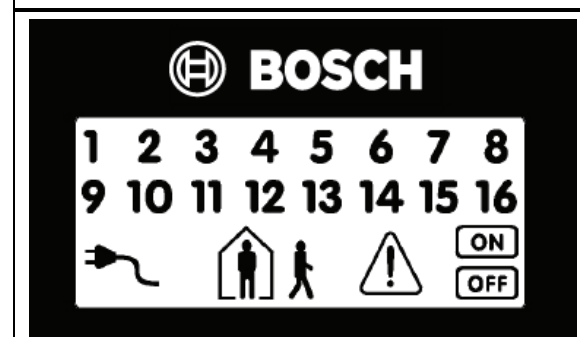
3.0 System Operations

This section explains the general operations of the system: arming and disarming the system in the three modes, isolating zones, initiating codepad alarms, and determining a fault.

3.1 Arming the System in AWAY Mode

Arming the system in AWAY Mode is normally performed when you leave the premises and require that all zones are activated in a ready state to detect an intrusion.

There are two different methods to arm the system in AWAY Mode. You can always use method one. You can use method two only if Option 2 is enabled in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

If you must isolate a zone (or zones) before arming the system in AWAY Mode, refer to *Section 3.11 Isolating Zones* on page 17.

> ✓ Single button arming in AWAY Mode reports as User Code number 16.

To arm the system in AWAY Mode (method one):

Enter your code and press [AWAY].
Two beeps sound, the AWAY indicator lights, and Exit Time starts.

To arm the system in AWAY Mode (method two):

> ✓ Select Option 2 in Location 497 to enable single button arming in AWAY Mode (refer to *Section 18.6 Consumer Options 2* on page 83).

1. Press and hold [AWAY].
2. When two beeps sound, release the button. The AWAY indicator lights and Exit Time starts.

If a zone is not sealed at the end of Exit Time, the zone is automatically isolated and its indicator is lit on the remote codepad. The zone becomes an active part of the system again as soon as it is resealed. For example, if a window is open when Exit Time expires, the window is not an active part of the system until it is closed. Opening the window after Exit Time expires causes an alarm.

Forced Arming

Arming the system when a zone is not sealed is known as forced arming. Refer to *Section 14.3.7 Zone Options 2* on page 63 to enable forced arming for each zone.

If the AWAY indicator does not light and a long beep sounds when you attempt to arm the system in AWAY Mode, forced arming is not permitted. If this is the case, you seal all zones or manually isolate them before you can arm the system.

3.2 Disarming the System from AWAY Mode

When you enter the premises after the system is armed in AWAY Mode, you must disarm the system from AWAY Mode to disable detection devices that activate the sirens, strobe, and bell outputs.

If there was an alarm prior to disarming the system from AWAY Mode, a zone indicator flashes, indicating a previous alarm in that zone.

To disarm the system from AWAY Mode:
1. Enter your code and press [AWAY].
2. Two beeps sound and the AWAY indicator is extinguished.

3.3 Arming the System in STAY Mode 1

STAY Mode 1 is used when you need to arm the perimeter and unused areas of the premises to detect a would-be intruder entering the premises, while at the same time being able to move freely within an area that is automatically isolated.

Only the installer can program zones to be automatically isolated in STAY Mode 1. Refer to *Section 14.3.7 Zone Options 2* on page 63 for more information on setting zones to be automatically isolated in STAY Mode 1.

There are two methods to arm your system in STAY Mode 1. You can always use method one. You can use method two only if Option 2 is enabled in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

If the system reports to a base station, it sends a Partial Close Report (Contact ID Event Code 456).

Entry Guard Timer for STAY Mode

When arming the system in STAY Mode 1, an optional entry timer called Entry Guard Timer for STAY Mode can be used to delay the sirens, strobe, and bell outputs if a zone that is not automatically isolated activates an alarm. Entry Guard Timer for STAY Mode is the delay time used for all zones, except 24-Hour zones, when the system is armed in STAY Mode 1 or STAY Mode 2.

If the Entry Guard Timer for STAY Mode is programmed and a zone that was not automatically isolated is activated, the codepad beeps twice per sec until the Entry Guard Timer for STAY Mode expires or the system is disarmed. If the alarm is not reset before Entry Guard Timer for STAY Mode expires, the strobe, bell, and siren outputs are activated into alarm.

> ✓ Single button arming in STAY Mode 1 reports as User Code number 16.

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To arm the system in STAY Mode 1 (method one):

1. Enter your code and press [STAY].
2. Two beeps sound and the STAY indicator is lit. Exit Time starts.

The indicators for any zones that are programmed to be automatically isolated in STAY Mode 1 begin to flash until Exit Time expires. At the end of Exit Time, the zone indicators are extinguished and the codepad sounds one short beep.

To arm the system in STAY Mode 1 (method two):

1. Press and hold [STAY].
2. When two beeps sound, release the button. The STAY indicator is lit and Exit Time starts.

The indicators for any zones that are programmed to be automatically isolated in STAY Mode 1 flash until Exit Time expires. At the end of Exit Time, the zone indicators are extinguished and the codepad sounds one short beep.

If a zone is not sealed at the end of Exit Time, the zone is automatically isolated and is lit constantly on the remote codepad. The zone becomes an active part of the system again as soon as it is resealed. For example, if a window is open when Exit Time expires, the window does not become an active part of the system until it is closed. Opening the window after Exit Time expires causes an alarm.

Forced Arming

Arming the system when a zone is not sealed is known as forced arming. Refer to *Section 14.3.7 Zone Options 2* on page 63 to enable forced arming for each zone.

If the STAY indicator does not light and a long beep sounds when you attempt to arm the system in STAY Mode 1, forced arming is not permitted. If this is the case, you must seal all zones or manually isolate them before you can arm the system.

3.4 Disarming the System from STAY Mode 1

There are two methods to disarm the system from STAY Mode 1. You can always use the first method. You can use method two only if Option 4 is enabled in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

To disarm the system from STAY Mode 1 (method one):

1. Enter your code and press [STAY].
2. Two beeps sound and the STAY indicator is extinguished. The system is now disarmed.

To disarm the system from STAY Mode 1 (method two):

A flashing zone indicator represents a previous alarm in that zone. If this is the case, a valid User Code is required to disarm the system using method one. To enable method two, Option 4 in Location 497 must be enabled (refer to *Section 18.6 Consumer Options 2* on page 83).

1. Press and hold [STAY].
2. When two beeps sound, release the button. The STAY indicator is extinguished and the system is disarmed.

> ✓ Single button disarming from STAY Mode 1 reports as User Code 16.

3.5 Arming The System in STAY Mode 2

STAY Mode 2 is used when you need to arm the perimeter and unused areas of the premises to detect a would-be intruder from entering the premises, while at the same time being able to move freely within an area that is automatically isolated.

You can program zones to be automatically isolated in STAY Mode 2 using an Installer Code function (refer to *Section 5.1.5*) or a Master Code function (*Section 5.2.6*).

If the system reports to a base station, it sends a Partial Close Report (Contact ID Event Code 456).

Entry Guard Timer for STAY Mode

When arming the system in STAY Mode 2, an optional entry timer called Entry Guard Timer for STAY Mode can be used to delay the sirens, strobe, and bell outputs if a zone that is not automatically isolated activates an alarm. Entry Guard Timer for STAY Mode is the delay time used for all zones, except 24-Hour zones, when the system is armed in STAY Mode 1 or STAY Mode 2.

If the Entry Guard Timer for STAY Mode is programmed and a zone that was not automatically isolated is activated, the codepad beeps twice per sec until the Entry Guard Timer for STAY Mode expires or the system is disarmed. If the alarm is not reset before Entry Guard Timer for STAY Mode expires, the strobe, bell, and siren outputs are activated into alarm.

> ✓ Single button disarming from STAY Mode 2 reports as User Code 16.

To arm the system in STAY Mode 2:

1. Press and hold [0].
2. When two beeps sound, release the button. The STAY indicator is lit and the Exit Time starts.

The indicators for any zones that are programmed to be automatically isolated in STAY Mode 2 flash until the Exit Time expires. At the end of Exit Time, the zone indicators are extinguished and the codepad sounds one short beep.

If a zone is not sealed at the end of Exit Time, the zone is automatically isolated and is lit constantly on the remote codepad. The zone becomes an active part of the system again as soon as it is resealed. For example, if a window is open when Exit Time expires, the window does not become an active part of the system until it is closed. Opening the window after Exit Time expires causes an alarm.

Forced Arming

Arming the system when a zone is not sealed is known as forced arming. Refer to *Section 14.3.7 Zone Options 2* on page 63 to enable forced arming for each zone.

If the STAY indicator does not light and a long beep sounds when attempting to arm the system, forced arming is not permitted. If this is the case, you must seal all zones or manually isolate them before you can arm the system.

3.6 Disarming the System from STAY Mode 2

There are two methods to disarm the system from STAY Mode 2. You can always use the first method. You can use method two only if Option 4 is enabled in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

To disarm the system from STAY Mode 2 (method one):
1. Enter your code and press [STAY].
2. Two beeps sound and the STAY indicator is extinguished. The system is now disarmed.

To disarm the system from STAY Mode 2 (method two):

A flashing zone indicator represents a previous alarm in that zone. If this is the case, a valid User Code is required to disarm the system using method one. To enable method two, Option 4 in Location 497 must be enabled (refer to *Section 18.6 Consumer Options 2* on page 83).
1. Press and hold [0].
2. When two beeps sound, release the button. The STAY indicator is extinguished and the system is disarmed.

> ✓ Single button disarming from STAY Mode 2 reports as User Code16.

3.7 Codepad Duress Alarm

Figure 6: ICP-CP500PW LED Codepad Showing Audible Alarm Buttons
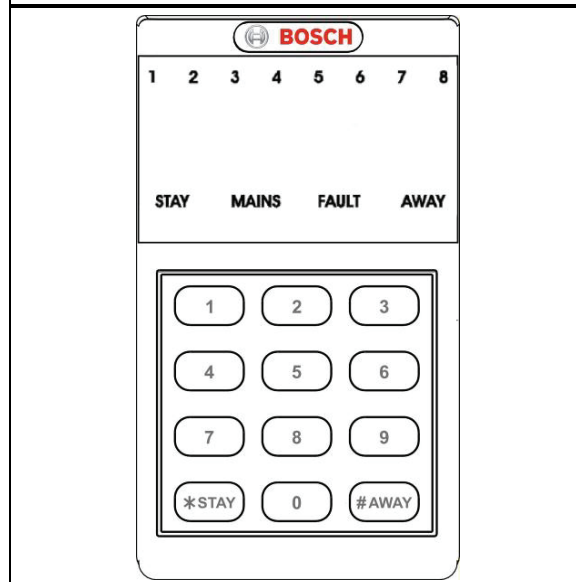
A codepad Duress Alarm is used as a silent holdup alarm when 9 is added to the end of a valid User Code being used to disarm the system. If a User Code has a priority level that allows arming only, that User Code can transmit a Duress Alarm when the system is armed.

A Duress Alarm (Contact ID Event Code 121) is useful only if your system reports to a monitoring station or pocket pager because domestic reporting format cannot decipher the type of alarm that occurred. You can disable the codepad Duress Alarm Report by programming 0 in Location 394 (refer to *Section 15.15 Codepad Duress Report*). You can select Option 2 in Location 498 to use 3 instead of 9 to activate a Duress Alarm (refer to *Section 18.7 Consumer Options 3* on page 83).

3.8 Codepad Panic Alarm

An audible codepad Panic Alarm activates when a user presses either [1] and [3] or [STAY] and [AWAY] simultaneously.

Select Option 1 in Location 493 to program the codepad Panic Alarm as silent (refer to *Section 18.2 System Options 2* on page 81). To disable the codepad Panic Alarm Report, program Locations 405 and 406 to 0 (refer to *Section 15.16 Codepad Panic Report* on page 66). A codepad Panic Alarm transmits Contact ID Event Code 120 if the system reports to a base station receiver.

3.9 Codepad Fire Alarm

An audible codepad Fire Alarm activates when a user presses [4] and [6] on the remote codepad simultaneously. A distinct fire sound emits through the horn speaker to indicate this type of alarm. The fire sound is different than the burglary sound.

Select Option 2 in Location 493 to program the codepad Fire Alarm as silent (refer to *Section 18.2 System Options 2* on page 81). To disable the codepad Fire Alarm Report, program Locations 407 and 408 to 0 (refer to *Section 15.17 Codepad Fire Report*). A codepad Fire Alarm transmits a Contact ID Event Code 110 to a base station receiver.

3.10 Codepad Medical Alarm

An audible codepad Medical Alarm activates when a user presses [7] and [9] simultaneously.

Select Option 4 in Location 493 to program codepad Medical Alarm as silent (refer to *Section 18.2 System Options 2* on page 81). To disable reporting of the codepad Medical Alarm Report, program Locations 409 and 410 to 0 (refer to *Section 15.18 Codepad Medical Report*). A codepad Medical Alarm transmits a Contact ID Event Code 100 to a base station receiver.

3.11 Isolating Zones

Isolating zones allows you to manually disable one or more zones before arming the system in AWAY Mode, STAY Mode 1, or STAY Mode 2. When a zone is isolated, access is allowed into that zone when the system is armed without activating an alarm.

For example, you might want to isolate a zone before arming the system because a zone passive infrared (PIR) detector is activating false alarms or because you need to leave a pet inside a particular zone while you are away.

You can isolate zones using one of two methods. One method requires a valid User Code and the other does not. The ability to isolate zones is determined by the priority level assigned to each User Code holder. Some User Code holders cannot isolate zones. Refer to *Section 13.3 User Code Priority* for more information. By default, the standard isolation method is used.

Zones that are manually isolated using this method transmit a Zone Bypass Report (Contact ID Event Code 570) for each isolated zone when the system is armed. A Zone Bypass Restore Report is transmitted when the system is disarmed.

When you select a 24-Hour Burglary Zone to be isolated, a Contact ID Event Code 572 is sent. If you select a 24-Hour Fire Zone to be isolated, a Contact ID Event Code 571 is sent.

3.11.1 Standard Isolating

Standard isolating allows any operator to isolate zones because no code is required.

1. Press [STAY] twice.
   Three beeps sound and the STAY indicator flashes.
2. Enter the number of the zone to be isolated and press [STAY].
   The indicator for the zone flashes.
   24-Hour zones are automatically isolated as soon as you press [STAY]. All other Burglary Zones are automatically isolated only after the system is armed.
3. Repeat *Step 2* for each zone you want to isolate.

> As each zone is selected to be isolated, the corresponding zone indicator flashes. If you make a mistake, enter the incorrect zone number and press [STAY]. This zone is no longer selected to be isolated and the zone indicator is extinguished.

4. Press [AWAY].
   Two beeps sound and the system returns to the disarmed state.
   The indicators for the selected zones continue to flash until the next time the system is disarmed.

Example

To manually isolate zones 1, 3, and 4, press:

[STAY][STAY][1][STAY][3][STAY][4][STAY][AWAY]

3.11.2 Code to Isolate

The code to isolate method permits only those User Code holders with a priority level that includes Code to Isolate. The standard isolating method is disabled for any User Code with this priority level set.

1. Press [STAY].
2. Enter your code and press [STAY].
   Three beeps sound and the STAY indicator flashes.
   If you attempt to enter isolating mode with a User Code that is not set for Code to Isolate, the system ignores the attempt.
3. Enter the number of the zone to be isolated and press [STAY].
   The indicator for the zone flashes.
   24-Hour zones are automatically isolated as soon you press [STAY]. All other Burglary zones are automatically isolated only after the system is armed.
4. Repeat *Step 3* for each zone you want to isolate.

> As each zone is selected to be isolated, the corresponding zone indicator flashes. If you make a mistake, enter the incorrect zone number and press [STAY]. This zone is no longer selected to be isolated and the zone indicator is extinguished.

5. Press [AWAY].
   Two beeps sound and the system returns to the disarmed state.
   The indicators for the selected zones continue to flash until the next time the system is disarmed.

Example

To manually isolate zones 1, 3, and 4, press:

[STAY][User Code][STAY][1][STAY][3][STAY][4]
[STAY][AWAY]

3.12　Fault Analysis Mode

When a system fault occurs, the FAULT or MAINS indicator flashes and the codepad beeps once per minute.

If the AC MAINS supply fails, the MAINS indicator flashes until the AC MAINS supply is restored. Press [AWAY] once to acknowledge the fault and stop the codepad from beeping once every minute.

To enter Fault Analysis Mode to determine a system fault other than the AC MAINS supply:

1. Press and hold [5] until two beeps sound.
   The FAULT indicator remains lit and the STAY and AWAY indicators flash.
   The lit zone indicators indicate the type of fault that occurred. Refer to *Table 15* on page 20.
2. If necessary, hold down the button corresponding to the indicator to further determine the fault. Refer to *Table 15* on page 20.
3. To exit from Fault Analysis Mode, press [AWAY].
   The STAY and AWAY indicators are extinguished and the FAULT indicator remains lit.

3.13　Fault Descriptions

1 − System Fault

The system FAULT indicator lights when any of the faults listed in *Table 14* on page 19 occurs. In Fault Analysis Mode, hold down [1] to determine the fault that occurred.

2 − RF Low Battery

This fault occurs when a wireless zone (1 to 16) reports a low battery condition. In Fault Analysis Mode, hold down [2] until two beeps sound to light the indicator for the zone that reported the fault.

3 − Tamper Fail

This fault occurs when a zone becomes open circuit. In Fault Analysis Mode, hold down [3] until two beeps sound to display the zone that reported the fault.

4 − Sensor Watch Fault

This fault occurs when one or more detection devices fails to detect an intrusion while disarmed for the time period programmed in Locations 476 and 477 (refer to *Section 15.5 Zone Status* − Sensor Watch Reports on page 78). The fault clears when the faulted zone detects movement and is reset.

In Fault Analysis Mode, hold down [4] until two beeps sound to show the zone that reported the fault.

5 − RF Sensor Watch Fault

This fault occurs when one or more wireless detection devices fails to detect an intrusion while disarmed state for the time programmed in Locations 476 and 477 (refer to *Section 15.5 Zone Status* − Sensor Watch Reports on page 78). The fault clears when the faulted zone detects movement and is reset.

In Fault Analysis Mode, hold down [5] until two beeps sound to show the zone that reported the fault.

6 − Communication Fail

A communication failure registers when the control panel fails to communicate with the receiving party (for example, monitoring company, mobile phone, or pocket pager).

The communication fault clears when the control panel successfully reports to the receiving party.

In Fault Analysis Mode, hold down [6] until two beeps sound to show which communication fault occurred: 1 − Receiver 1; 2 − Receiver 2.

Table 14:	System FAULT indicators

Indicator	Fault Description
1	Low battery This fault registers when the system detects a low capacity backup battery. The system automatically performs a battery test every 4 hours and every time you arm the system.
2	Date and time This fault registers when the system is powered down. The fault does not cause the FAULT indicator to light on the codepad unless automatic arming time is programmed. To program the date and time, refer to *Section 5.2.8*.
3	RF receiver fault This fault registers when the RF wireless receiver unit detects RF jamming, the RF wireless receiver is disconnected from the control panel or failed, or the RF receiver's cover tamper switch is activated.
4	Horn speaker This fault registers when the system detects the horn speaker is disconnected. This fault clears when the horn speaker is reconnected. This feature is enabled by selecting Option 2 in Location 492 (refer to *Section 18.1 System Options 1*).
5	Telephone line fault This fault registers when the system detects the telephone line is disconnected from the control panel. This feature is enabled by selecting Option 1 in Location 176 (refer to *Section 11.11 Telephone Line Fault Options*).
6	EEPROM fail This fault registers when the system detects an internal checksum error. Contact your installer if this fault is displayed.
7	AUX Power Supply fail This fault occurs when the AUX Power Supply has failed. Contact your installer when this fault occurs.

AC MAINS Failure

An AC MAINS supply failure automatically flashes the MAINS indicator. If the AC MAINS supply is disconnected continuously for longer than 2 min, the remote codepad beeps the codepad buzzer once per min. If the control panel is programmed to report an AC MAINS failure to a base station receiver, an AC Fail Report (Contact ID Event Code 301) is transmitted.

The MAINS indicator stops flashing when the AC MAINS supply is reconnected. When the AC MAINS supply is connected continuously for 2 min, the codepad stops the once per min beep and an AC Fail Restore Report is transmitted to the base station receiver.

If the Enable AC Fail in 1 Hour option (1) is selected in Location 494 (refer to *Section 18.3 System Options 3* on page 81), the codepad flashes the MAINS indicator when the AC MAINS supply is disconnected, but does not activate the dialer or the codepad buzzer unless the AC MAINS supply is disconnected continuously for 1 hour.

If the Ignore AC MAINS Fail option (2) is selected in Location 494 (refer to *Section 18.3 System Options 3* on page 81 the codepad does not indicate when the AC MAINS supply fails, but the control panel still reports an AC Fail Report, if enabled.

Table 15:   Fault Analysis Conditions

Zone Indicator	Fault Description	Hold Down Button	Zone Indicator	Fault Condition
1	System fault	1	1	Low battery
			2	Date and time
			3	RF receiver jamming
				RF receiver tamper switch
				RF receiver communications fail
			4	Horn speaker
			5	Telephone line fail
			6	EEPROM fail
			7	AUX Power Supply fail
2	RF low battery	2	1 to 16	Zones 1 to 16 RF low battery
3	Zone Tamper Alarm	3	1 to 16	Zones 1 to 16 Tamper Alarm
4	Sensor watch fail	4	1 to 16	Zones 1 to 16 sensor watch fail
5	RF sensor watch	5	1 to 16	Zones 1 to 16 RF sensor watch fail
6	Communications fail	6	1	Receiver 1 fail
			2	Receiver 2 fail

4.0   Remote Radio Transmitter Operations

The ICP-CC488 Control Panel can be remotely operated using hand-held remote radio transmitters. You can use either a 2-button or a 4-button hand-held transmitter to operate the system.

Figure 7:   RF3332: 2-Button Keyfob Transmitter
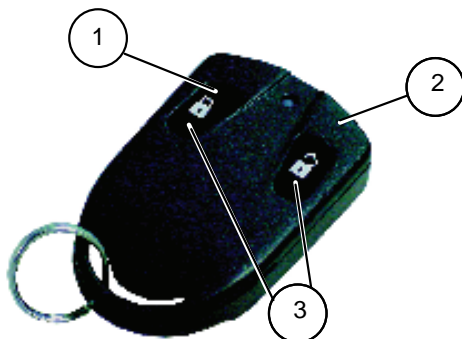
1 –   Arm button
2 –   Disarm button
3 –   Arm and Disarm buttons: Press both buttons at same time for 2 sec to send a Panic alarm

Figure 8:   RF3334: 4-Button Keyfob Transmitter
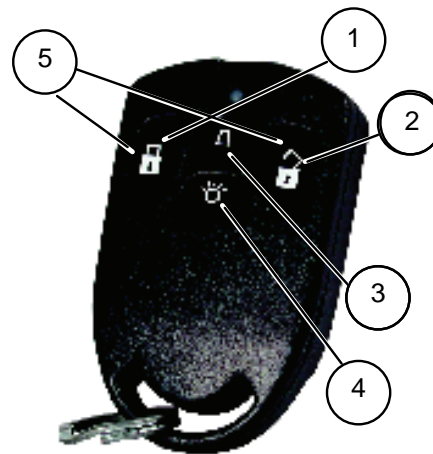
1 –   Arm button
2 –   Disarm button
3 –   Option 1 button
4 –   Option 2 button.
5 –   Arm and Disarm buttons: Press both buttons at same time for 2 sec to send a Panic alarm

The 2-button and 4-button hand-held transmitters can remotely arm and disarm the system in AWAY Mode or STAY Mode 1, and can activate remote Panic Alarms. The 4-button hand-held transmitter has the added ability to operate the control panel's programmable outputs to activate a garage door or outside lights, for example.

Before a hand-held radio transmitter can operate the control panel, you must teach the transmitter's radio code to the control panel. Refer to *Section 4.3 Changing or Deleting Remote Radio User Codes* for more information.

4.1   Indications from Remote Radio Transmitter Operations

When using the 2-channel or 4-channel hand-held transmitter to operate the system, audible or visual indications, or both, can be provided by the horn speakers or the strobe. These indications allow you to operate the system from outside the premises with confidence. The installer can program audible and visual indication beeps by selecting Options 4 and 8 in Location 492 (refer to *Section 18.1 System Options 1* on page 80). You can adjust the speaker beep volume in Location 491 (refer to *Section 17.15*).

Table 16: Horn Speaker Indication Beeps for Remote Operations	
No of Beeps	**System Status**
One	System disarmed
Two	System armed in AWAY Mode
One two-tone beep	System armed in STAY Mode 1

Table 17: Strobe Indications for Remote Operations	
Strobe Duration	**System Status**
3 sec	System disarmed
6 sec	System armed in AWAY Mode
6 sec	System armed in STAY Mode 1

4.2   Remote Radio User Code Priority Levels

You can program the remote radio hand-held transmitters to operate only as User Codes 9 to 16. You can assign priority levels to each hand-held transmitter, allowing the transmitter to arm the system only, or to arm and disarm the system, for example. Refer to *Section 13.3 User Code Priority* for more information.

Before a hand-held radio transmitter can operate the control panel, you must teach the transmitter's radio code to the control panel. Refer to *Section 4.3 Changing or Deleting Remote Radio User Codes* for more information.

4.3   Changing or Deleting Remote Radio User Codes

You can use up to eight remote radio hand-held transmitters (User Codes 9 to 16) to operate the system. Before the control panel accepts a signal from a remote radio hand-held transmitter, the control panel must learn the transmitter's code.

> You can substitute the Installer Code for the Master Code below to change or delete remote radio User Codes.

To add or change a remote radio User Code:
1.   Enter the Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2.   Enter the user number (9 to 16) you want to add or change and press [AWAY].
     Two beeps sound and the corresponding zone indicators light. Refer to *Table 18* on page 21.

Table 18: Codepad Indicators for Remote Radio User Numbers									
Data	**Zone Indicators**								
Value	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**MAINS**
9	X							X	
10									X
11	X								X
12		X							X
13			X						X
14				X					X
15					X				X
16						X			X

3.   Enter the nine-digit RF ID number located on the back of the hand-held transmitter and press [AWAY].
     Two beeps sound and the STAY and AWAY indicators are extinguished.
4.   Repeat *Steps 1* to *3* to add or change another remote radio User Code.

> This function is automatically terminated if you do not press a button within 60 sec or if you press [AWAY].
>
> One long beep indicates that the code already exists or you selected an incorrect user number.
>
> When using a partitioned ICP-CC488 Control Panel, you must allocate the remote radio User Codes to one or more areas (refer to *Section 19.5 User Code Allocations*).

To delete a remote radio User Code:

1. Enter the Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the user number (9 to 16) you want to delete and press [AWAY].
   Two beeps sound and the corresponding zone indicators light. Refer to *Table 18* on page 21.
3. Press [STAY] to delete the User Code.
   Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat *Steps 1* to *3* to delete another remote radio User Code.

> ☑ This function is automatically terminated if you do not press a button within 60 sec or if you press [AWAY].
>
> One long beep indicates that you selected an incorrect user number.

5.0   System Functions

This section explains more advanced features, such as Installer Code, Master Code, and hold-down functions that are required for testing and regular maintenance of the system.

5.1   Installer Code Functions

Installer Code functions allow the installer to perform various system tests and tasks without knowing a Master Code.

To access the required Installer Code function, enter the Installer Code and corresponding function digit, and press [AWAY]. The Installer Code functions are listed in *Table 19* on page 22.

You can access these functions only when the system is disarmed.

Table 19:   Installer Code Functions

Function	Description
0	Add/delete RF wireless devices (Refer to *Section 5.1.1*)
1	Set the number of days until the first Test Report (*Section 5.1.2*)
2	Change domestic telephone numbers (*Section 5.1.3*)
3	Change the Telco arm/disarm sequence (*Section 5.1.4*)
4	Set STAY Mode 2 zones (*Section 5.1.5*)
5	Satellite Siren (EDMSAT) Service Mode (*Section 5.1.6*)
6	Turn Telephone Monitor Mode on and off (*Section 5.1.7*)
7	Walk Test Mode (*Section 5.1.8*)
8	Event Memory Recall Mode (*Section 5.1.9*)

5.1.1   Add or Delete RF Wireless Devices

The control panel can accept up to 16 wireless devices on any or all of the eight zones used by the system. It is possible to connect wireless PIRs, reed switches, and smoke detectors directly to the control panel. You can allocate multiple wireless devices to each zone (for example, you can allocate up to 16 wireless devices to Zone 1 and hard wire the remaining seven zones). Refer to *Section 20.3 Default RF Device Mapping (Devices 1 to 8)* and *Section 20.4 Default RF Device Mapping (Devices 9 to 16)* for more information.

To program an RF wireless device:

1. Enter the Installer Code and press [0][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the RF device number (1 to 16) you want to change and press [AWAY].
   Two beeps sound and the corresponding codepad indicators light to show the RF device number you selected.
3. Enter the nine-digit RF ID number found on the back of the RF device and press [AWAY].
   Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat *Steps 1* to *3* to add another device.

> ☑ This function is automatically terminated if you do not press a button within 60 sec or if you press [AWAY].
>
> One long beep indicates that you selected an incorrect user number.

Example

To program RF wireless device number 3 whose 9-digit ID number is 000094946, enter

[1 2 3 4 0][AWAY][3][AWAY]
[0 0 0 0 9 4 9 4 6][AWAY]

To delete an RF wireless device:

1. Enter the Installer Code and press [0][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the RF device number (1 to 16) you want to delete and press [AWAY].
   Two beeps sound and the corresponding codepad indicators light to show the RF device number you selected.
3. Press [STAY] to delete the RF device.
   Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat *Steps 1* to *3* to delete another RF wireless device.

5.1.2   Set the Number of Days until the First Test Report

This function determines when the system sends the first Test Report (Contact ID Event Code 602). If you do not use this Installer Code function, the first Test Report is sent to the base station receiver after the repeat interval programmed in Location 428 (refer to *Section 15.28 Test Reporting Time*). If you want the system to send the first Test Report sooner than the repeat interval, use this function to set when the first Test Report is sent.

To set the first Test Report:

1. Enter the Installer Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of days (1 to 15) until the first Test Report is sent and press [AWAY].
   Two beeps sound and the STAY and AWAY indicators are extinguished. The system returns to the disarmed state.

> ✓ Each time you enter Installer's Programming Mode, the first Test Report time defaults back to the repeat interval set in Location 434.
>
> The number of days decrements by one at 2400 hours as set in Locations 901 to 904 (refer to *Section 17.16 System Time*).

Example

If the repeat interval is set to 7 days, but you want the first Test Report to be sent in 2 days, enter:

[1 2 3 4 1][AWAY][2][AWAY]

5.1.3   Change Domestic Phone Numbers

When the system is set up for domestic dialing, this function allows the installer to view and program the telephone numbers the system calls if an alarm occurs. Refer to *Section 9.0 Domestic Dialing* on page 42 for more information.

To change domestic phone numbers:

1. Enter the Installer Code and press [2][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
   If no telephone numbers are programmed, they are displayed one digit at a time using the remote codepad indicators. Refer to *Table 21* on page 24 for the indicators and their meanings.
   If no telephone numbers are programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after you enter the last digit of the last phone number.
2. Enter the first phone number.
   Each digit is displayed as you enter it.
3. If you are programming another phone number, press [STAY][4] to separate the end of one phone number and the beginning of the next.
   If you are not programming other numbers, go to *Step 5*.
4. Repeat *Steps 2* and *3* to program another phone number.
5. Press [AWAY] to exit from this mode.

Table 20:	Domestic Dialing Digits		
Digit Required	**Number to Program**	**Digit Required**	**Number to Program**
0	0	8	8
1	1	9	9
2	2		
3	3	*	[STAY]1
4	4	#	[STAY]2
5	5	4 sec pause	[STAY]3
6	6	break	[STAY]4
7	7	15	[STAY]5

Example

If you want to program two separate telephone numbers (9672 1777 and 9672 1233), enter:

[1 2 3 4 2][AWAY][9 6 7 2 1 7 7 7][STAY]
[4 9 6 7 2 1 2 3 3][[AWAY]

You can suspend domestic dialing at any time (for example, you are moving house and do not want the system to continue calling your work place or mobile phone).

To disable domestic dialing:

Enter the Installer Code and press [2][AWAY] [STAY][4][AWAY].

Table 21:	Codepad Indicators When Changing Phone Numbers

| | Zone Indicators | | | | | | | | MAINS |
Digit	1	2	3	4	5	6	7	8	Indicator
0									X
1	X								
2		X							
3			X						
4				X					
5					X				
6						X			
7							X		
8								X	
9	X							X	
*	X								X
#		X							X
Pause			X						X
Break				X					X
15						X			X

5.1.4   Change Telco Arm/Disarm Sequence

This function allows you to program the call forward sequence to automatically operate when you arm the system in AWAY Mode. This feature is available only if the call forward option is available from your telecommunication provider.

Telco Arm Sequence

This option allows you to program the Call Forward – Immediate On sequence or Call Forward – No Answer sequence that automatically operates when you arm the system in the AWAY Mode..

> ☑ The examples provided for this feature apply only to Australia.

- Call Forward – Immediate On
  You can redirect calls to anywhere in Australia, including mobiles, pagers, and answering services. When this Call Forward option is turned on, your telephone does not ring.

- Call Forward – No Answer
  If your telephone is not answered within 20 sec, this feature redirects the incoming call to another number anywhere in Australia. You can still make outgoing calls.

Telco Disarming Sequence

This option allows you to automatically disable the call forward sequence when you disarm the system.

Table 22:	Telco Arm/Disarm Dialing Digits		

Digit Required	Number to Program	Digit Required	Number to Program
0	0	8	8
1	1	9	9
2	2		
3	3	*	[STAY]1
4	4	#	[STAY]2
5	5	4 sec pause	[STAY]3
6	6	break	[STAY]4
7	7		

To program the telco arming sequence:

1. Enter the Installer Code and press [3][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.

2. Press [1][AWAY] to change the telco arming sequence. Three beeps sound.
    If a call forwarding sequence is already programmed, the sequence is displayed one digit at a time using the remote codepad indicators. Refer to *Table 21* on page 24 for the indicators and their meanings.
    If no call forward sequence is programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after the last digit of the call forward sequence is displayed.

3. Enter the desired call forward sequence.
    For example, program [* 6 1][phone number][#] for the call forward – no answer sequence, or [* 2 1][phone number][#] for the call forward – immediate sequence.

> ☑ Remember that when you program a * in the telco arm sequence, you enter [STAY][1]. When you program the # in the telco arm sequence, you enter [STAY][2].

4. Press [STAY][2][AWAY].
    Two beeps sound and the system returns to the disarmed state.

Example

If you want to automatically divert all unanswered incoming calls to another telephone number (for example, 9672 1777) when the system is armed in AWAY Mode, enter:

[1 2 3 4 3][AWAY][1][AWAY][STAY]
[1 6 1 9 6 7 2 1 7 7 7][STAY][2][AWAY]

You can suspend the telco arming sequence at any time. To disable the telco arming sequence:

Enter the Installer Code and press [3][AWAY][1] [AWAY][STAY][4][AWAY].

To program the telco disarm sequence:

1. Enter the Installer Code and press [3][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.

2. Press [2][AWAY] to change the telco disarming sequence.
Three beeps sound.
If a telco disarming sequence is already programmed, the sequence is displayed one digit at a time using the remote codepad indicators. Refer to *Table 21* on page 24 for the indicators and their meanings.
If no telco disarming sequence is programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after the last digit of the sequence is displayed.

3. Enter the desired call forward disable sequence. For example, program [# 6 1 #] to disable the call forward – no answer sequence, or [# 2 1 #] to disable the call forward – immediate sequence.

> Remember that when you program a **#** in the telco arm sequence, you enter [STAY][2].

4. Press [AWAY].
Two beeps sound and the system returns to the disarmed state.

You can suspend the telco disarming sequence at any time.

To disable the telco disarming sequence:

Enter the Installer Code and press [3][AWAY][2][AWAY][STAY][4][AWAY].

5.1.5 Setting STAY Mode 2 Zones

This function allows the installer to select the zones that are automatically isolated when the system is armed in STAY Mode 2.

To arm the system in STAY Mode 2, press and hold [0] until two beeps sound. Refer to *Section 5.4.3* or *Section 3.5 Arming The System in STAY Mode 2* for more information.

To set STAY Mode 2 zones:

1. Enter the Installer Code and press [4][AWAY]. Three beeps sound and the STAY indicator flashes.

2. Enter the number of the zone you want to automatically isolate and press [STAY].
The corresponding zone indicator flashes.

3. Repeat *Step 2* for each zone you want to select.

> As each zone is selected to be isolated, the corresponding zone indicator flashes. If you make a mistake, enter the incorrect zone number and press [STAY]. This zone is no longer selected to be isolated and the zone indicator is extinguished.
>
> This function does not work on a partitioned ICP-CC488 Control Panel.

4. Press [AWAY].
Two beeps sound and the system returns to the disarmed state.
The indicators for the zones you selected and the STAY indicator are extinguished.

Example

If you want to select zones 2, 5, and 6, enter:

[1 2 3 4 4][AWAY][2][STAY][5][STAY][6][STAY][AWAY]

You can disable all zones selected to be automatically isolated for STAY Mode 2 at any time. To disable STAY Mode 2 zones:

Enter the Installer Code and press [4][AWAY][AWAY].

5.1.6 Satellite Siren Service Mode

If the SS914 Satellite Siren (EDMSAT) is connected to Output 1, this function allows you to perform service work on the system without activating the satellite siren. The satellite siren returns to its normal working state the next time the system is armed.

To enter Satellite Siren Service Mode:

Enter the Installer Code and press [5][AWAY]. Three beeps sound.

5.1.7 Turning Telephone Monitor Mode On and Off

Telephone Monitor Mode allows you to use the remote codepad for visual representation of data transmissions between the control panel and the base station receiver. The dialing sequence is also shown in this mode.

The codepad beeps once every two sec when Telephone Monitor Mode is active, whether the system is in Installer's Programming Mode or normal operating mode. The first five indicators show the progressive steps during a transmission to the base station receiver.

After you activate Telephone Monitor Mode, hold down [9] until two beeps sound to initiate a Test Report.

Table 23:	Telephone Monitor Mode Indications
Zone LED	**Dialing Event**
1	Telephone line seized
2	Dialing phone number
3	Handshake received
4	Data is being transmitted
5	Kiss-off received
None	Telephone line released

To turn Telephone Monitor Mode on:

1. Enter the Installer Code and press [6][AWAY]. Three beeps sound.
2. Press and hold [9] until two beeps sound. A Test Report is sent.

To turn Telephone Monitor Mode off:

Enter the Installer Code and press [6][AWAY]. Two beeps sound.

> You must exit from Telephone Monitor Mode to resume normal operations.

5.1.8   Walk Test Mode

Walk Test Mode allows you to test detection devices to ensure they are functioning correctly. Before activating Walk Test Mode, isolate any zones that are not required for testing. Refer to *Section 3.11 Isolating Zones* for more information. Use Locations 383 and 384 to enable Walk Test Mode Reports (refer to *Section 15.2*).

To enter Walk Test Mode:

1. Enter the Installer Code and press [7][AWAY]. Three beeps sound and the STAY and AWAY indicators flash. The codepad beeps once per sec when Walk Test Mode is active.
2. Unseal and seal the zones to be tested. The codepad sounds one long beep and the horn speaker sounds one short beep each time a zone is sealed or unsealed.
3. Press [AWAY] to exit from this function. Two beeps sound and the STAY and AWAY indicators are extinguished. The system returns to the disarmed state.

5.1.9   Event Memory Recall Mode

This function allows you to play back the last 40 system events that occurred. Event Memory Recall Mode reports all alarms and each arming or disarming of the system and helps with troubleshooting system faults. The events are displayed using the codepad indicators.

To enter Event Memory Recall Mode:

Enter the Installer Code and press [8][AWAY]. Three beeps sound. The events are played back by the codepad indicators in reverse chronological order.

Example

If the events occurred in the following order:

Table 24:	Event Sequence
Sequence	**Event**
1	System armed in AWAY Mode
2	Alarm in Zone 3
3	Alarm in Zone 4
4	System disarmed

The alarm memory plays back in this order:

Table 25:	Event Memory Playback	
Sequence	**Indication**	**Event**
1	All indicators off except MAINS	System disarmed
2	Zone 4 and AWAY indicators light	Alarm in Zone 4
3	Zone 3 and AWAY indicators light	Alarm in Zone 3
4	AWAY indicator lights	System armed in AWAY Mode

Each event is indicated by a beep and a lit indicator. Resetting a disarmed 24-Hour Alarm is indicated by a beep only.

After the last event, three beeps sound to indicate the end of playback. You can stop the replay at any time by pressing [AWAY].

> If the system is armed in STAY Mode 1 or STAY Mode 2, the STAY indicator shows the event memory playback. There is no differentiation between STAY Mode 1 and STAY Mode 2.
>
> If the control panel is powered down, the memory of all events is saved.
>
> If a ICP-CC488 Control Panel is partitioned, only ten events per area play back.

5.2 Master Code Functions

Master Code functions allow those users that have the appropriate priority level to perform certain supervisory level functions. You can use these functions only when the system is disarmed.

The default Master Code (User Code 1) is 2580. It is possible to program multiple Master Codes. Refer to *Section 13.3 User Code Priority* for more information.

To access a Master Code function, enter the Master Code and press the corresponding function digit and the [AWAY] button. The Master Code functions are listed in *Table 26*.

Table 26:	Master Code Functions

Function	Description
0	Arm or disarm both areas at the same time (Refer to *Section 5.2.1*)
1	Add, change, and delete User Codes/Remote Radio User Codes (*Sections 5.2.2* and *5.2.3*)
2	Change domestic phone numbers (*Section 5.2.4*)
3	Change Telco Arm/Disarm Sequence (*Section 5.2.5*)
4	Set zones for STAY Mode 2 (*Section 5.2.6*)
5	Turn outputs on and off (*Section 5.2.7*)
6	Set the date and time (*Section 5.2.8*)
7	Walk Test Mode (*Section 5.2.9*)
8	Event Memory Recall Mode (*Section 5.2.10*)

5.2.1 Arm or Disarm Both Areas at the Same Time

This Master Code function only operates with partitioned ICP-CC488 systems and allows Master Codes allocated to both Area 1 and Area 2 to arm or disarm both areas at the same time.

This feature allows a Master Code holder to arm or disarm the system by pressing one extra button rather than entering a code twice. You can use either the CP5 Area Addressable Codepad (CP500A) or the Master Partitioned Codepad (CP500P) with this function. To enable this feature, select Option 2 in Location 501 (refer to *Section 19.3.2 Partitioning Options 2*).

To arm or disarm both areas at the same time:

Enter your Master Code and press [0][AWAY]. Two beeps sound and both areas are armed or disarmed from AWAY Mode.

5.2.2 Changing and Deleting User Codes

This function allows a Master Code holder to change or delete a User Code.

When using a partitioned ICP-CC488 Control Panel, the Master Code holder cannot add, change, or delete User Codes unless the User Code is allocated to the same area as the Master Code. Refer to *Section 13.3 User Code Priority* for more information.

1. Enter your Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of the code (1 to 8) you want to change and press [AWAY]. Two beeps sound and the corresponding zone indicator lights. Refer to *Table 27* on page *28*.
3. Enter the new code and press [AWAY]. Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat this procedure to change other User Codes.

This function is automatically terminated if you do not press a button within 60 sec or if you press [AWAY].

One long beep indicates that the code already exists or you entered an incorrect user number.

Example

To program User Code number 2 as 4627, enter:

[2 5 8 0 1][AWAY][2][AWAY][4 6 2 7][AWAY]

To delete a User Code:

1. Enter your Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of the code (1 to 8) you want to delete and press [AWAY]. Two beeps sound and the corresponding zone indicator lights. Refer to *Table 27*.
3. Press [STAY] to delete the User Code. Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat this procedure to delete other User Codes.

This function terminates automatically if you do not press a button within 60 sec or if you press [AWAY].

One long beep indicates that the code already exists or that you entered an incorrect user number.

Table 27:　User Numbers Displayed by the Codepad Indicators

User Number	Zone Indicators							
	1	2	3	4	5	6	7	8
1	X							
2		X						
3			X					
4				X				
5					X			
6						X		
7							X	
8								X

Example

To delete user code number 3, enter:

[2 5 8 0 1][AWAY][3][AWAY][STAY]

5.2.3　Changing and Deleting Remote Radio User Codes

This function allows a Master Code holder to change or delete a remote radio User Code.

To add or change a remote radio User Code:

1. Enter your Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of the code (9 to 16) you want to change and press [AWAY].
   Two beeps sound and the corresponding codepad indicators light. Refer to *Table 28* on page 28.
3. Enter the nine-digit RF ID number found on the back of the hand-held transmitter and press [#].
   Two beeps sound and the STAY and AWAY indicators are extinguished.
4. Repeat this procedure to change other remote radio User Codes.

> This function is automatically terminated if you do not press a button within 60 sec or if you press [AWAY].
>
> One long beep indicates that the code already exists or you entered an incorrect user number.

To delete a remote radio User Code:

1. Enter your Master Code and press [1][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of the code (9 to 16) you want to delete and press [AWAY].
   Two beeps sound and the corresponding codepad indicators light. Refer to *Table 28*.
3. Press [STAY] to delete the User Code.
   Two beeps sound and the STAY and AWAY indicators are extinguished.

4. Repeat this procedure to delete other remote radio User Codes.

> This function terminates automatically if you do not press a button within 60 sec or if you press [AWAY].
>
> One long beep indicates that the code already exists or that you entered an incorrect user number.

Table 28:　Remote Radio Numbers Displayed by the Codepad Indicators

User No	Zone Indicators								MAINS Indicator
	1	2	3	4	5	6	7	8	
9	X							X	
10									X
11	X								X
12		X							X
13			X						X
14				X					X
15					X				X
16						X			X

5.2.4　Changing Domestic Phone Numbers

When the system is set up for domestic dialing, this function allows the installer to view and program the telephone numbers the system calls if an alarm occurs. Refer to *Section 9.0 Domestic Dialing* on page 42 for more information.

To change domestic phone numbers:

1. Enter you Master Code and press [2][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
   If no telephone numbers are programmed, they are displayed one digit at a time using the remote codepad indicators. Refer to *Table 30* on page 29 for the indicators and their meanings.
   If no telephone numbers are programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after you enter the last digit of the last phone number.
2. Enter the first phone number.
   Each digit is displayed as you enter it.
3. If you are programming another phone number, press [STAY][4] to separate the end of one phone number and the beginning of the next.
   If you are not programming other numbers, go to *Step 5*.
4. Repeat *Steps 2* and *3* to program another phone number.
5. Press [AWAY] to exit from this mode.

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

Table 29:	Domestic Dialing Digits		
Digit Required	**Number to Program**	**Digit Required**	**Number to Program**
0	0	8	8
1	1	9	9
2	2		
3	3	*	[STAY]1
4	4	#	[STAY]2
5	5	4 sec pause	[STAY]3
6	6	break	[STAY]4
7	7	15	[STAY]5

Example

If you want to program two separate telephone numbers (9672 1777 and 9672 1233), enter:

[2 5 8 0 2][AWAY][9 6 7 2 1 7 7 7][STAY] [4 9 6 7 2 1 2 3 3][[AWAY]

To disable domestic dialing:

Enter your Master Code and press [2][AWAY] [STAY][4][AWAY].

Table 30:	Codepad Indicators When Changing Domestic Telephone Numbers								
	Zone Indicators								**MAINS**
Digit	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Indicator**
0									X
1	X								
2		X							
3			X						
4				X					
5					X				
6						X			
7							X		
8								X	
9	X							X	
*	X								X
#		X							X
Pause			X						X
Break				X					X

5.2.5 Change Telco Arm/Disarm Sequence

This feature allows you to program the telco arm sequence and telco disarm sequence. This feature is available only if your telecommunication provider has the call forward option available.

Telco Arm Sequence

This allows you to program the Call Forward – Immediate On sequence or Call Forward – No Answer sequence that automatically operates when you arm the system in the AWAY Mode.

The examples provided for this feature apply only to Australia.

- Call Forward – Immediate On
  You can redirect calls to anywhere in Australia, including mobiles, pagers, and answering services. When this Call Forward option is turned on, your telephone does not ring.

- Call Forward – No Answer
  If your telephone is not answered within 20 sec, this feature redirects the incoming call to another number anywhere in Australia. You can still make outgoing calls.

Telco Disarming Sequence

This option allows you to automatically disable the call forward sequence when you disarm the system.

Table 31:	Telco Arm/Disarm Dialing Digits		
Digit Required	**Number to Program**	**Digit Required**	**Number to Program**
0	0	8	8
1	1	9	9
2	2		
3	3	*	[STAY]1
4	4	#	[STAY]2
5	5	4 sec pause	[STAY]3
6	6	break	[STAY]4
7	7	15	[STAY]5

To program the telco arming sequence:

1. Enter your Master Code and press [3][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.

2. Press [1][AWAY] to change the telco arming sequence. Three beeps sound.
   If a call forward sequence is already programmed, the sequence is displayed one digit at a time using the remote codepad indicators. Refer to *Table 30* on page 29 for the indicators and their meanings.
   If no call forward sequence is programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after the last digit of the call forward sequence is displayed.

3. Enter the desired call forward sequence.
   For example, program [* 6 1][phone number][#] for the call forward – no answer sequence, or [* 2 1][phone number][#] for the call forward – immediate sequence.

When you program a * in the telco arm sequence, enter [STAY][1]. When you program the # in the telco arm sequence, enter [STAY][2].

4. Press [STAY][2][AWAY].
Two beeps sound and the system returns to the disarmed state.

Example

If you want to automatically divert all unanswered incoming calls to another telephone number (for example, 9672 1777) when the system is armed in AWAY Mode, enter:

[2 5 8 0 3][AWAY][1][AWAY][STAY]
[1 6 1 9 6 7 2 1 7 7 7][STAY][2][AWAY]

You can suspend the telco arming sequence at any time. **To disable the telco arming sequence:**

Enter your Master Code and press [3][AWAY][1] [AWAY][STAY][4][AWAY].

To program the telco disarming sequence:

1. Enter your Master Code and press [3][AWAY].
Three beeps sound and the STAY and AWAY indicators flash.

2. Press [2][AWAY] to change the telco disarming sequence.
Three beeps sound.
If a telco disarming sequence is already programmed, the sequence is displayed one digit at a time using the remote codepad indicators. Refer to *Table 30* on page 29 for the indicators and their meanings.
If no telco disarming sequence is programmed, an additional two beeps sound after entering this mode. These two beeps normally sound after the last digit of the sequence is displayed.

3. Enter the desired call forward disable sequence. For example, program [# 6 1 #] to disable the call forward – no answer sequence, or [# 2 1 #] to disable the call forward – immediate sequence.

> ☑ When you program a # in the telco arm sequence, enter [STAY][2].

4. Press [AWAY].
Two beeps sound and the system returns to the disarmed state.

You can suspend the telco disarming sequence at any time. **To disable the telco disarming sequence:**

Enter your Master Code and press [3][AWAY][2] [AWAY][STAY][4][AWAY].

5.2.6 Setting STAY Mode 2 Zones

This function allows the Master Code holder to select the zones that are isolated automatically when the system is armed in STAY Mode 2.

To arm the system in STAY Mode 2, press and hold [0] until two beeps sound. Refer to *Section 5.4.3* or *Section 3.5 Arming The System in STAY Mode 2* for more information.

To set STAY Mode 2 zones:

1. Enter your Master Code and press [4][AWAY].
Three beeps sound and the STAY indicator flashes.

2. Enter the number of the zone you want to automatically isolate and press [STAY].
The corresponding zone indicator flashes.

3. Repeat *Step 2* to select each zone.

> ☑ As each zone is selected to be isolated, the corresponding zone indicator flashes. If you make a mistake, enter the incorrect zone number and press [STAY]. This zone is no longer selected to be isolated and the zone indicator is extinguished.
>
> This function does not work on a partitioned ICP-CC488 Control Panel.

4. Press [AWAY].
Two beeps sound and the system returns to the disarmed state.
The indicators for the zones you selected and the STAY indicator are extinguished.

Example

If you want to select zones 2, 5, and 6, enter:

[2 5 8 0 4][AWAY][2][STAY][5][STAY][6][STAY] [AWAY]

You can disable all zones selected to be automatically isolated for STAY Mode 2 at any time. To disable STAY Mode 2 zones:

Enter your Master Code and press [4][AWAY] [AWAY].

5.2.7 Turning Outputs On/Off

If an output is programmed for remote operation, you can turn the remote output on or off using this Master Code function or remotely using the Alarm Link Software.

To use this Master Code function, you must program one or more of the outputs with these Output Event Types:

Output 1 = Output Event Type 2,8 (page 74)
Output 2 = Output Event Type 2,9 (page 74)
Output 3 = Output Event Type 2,10 (page 74)

To turn an output on from the remote codepad:

1. Enter your Master Code and press [5][AWAY].
Three beeps sound and the STAY and AWAY indicators flash.

2. Enter the number of the output (1 to 3) and press [AWAY].
Three beeps sound and the output turns on.

3. Repeat *Step 2* to turn on another output.

4. Press [AWAY] to exit from this function.
Two beeps sound and the STAY and AWAY indicators are extinguished.

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

Example

If Output 2 is programmed as 291000 in Locations 443 to 448, the Master Code holder can turn on this output by entering:

[2 5 8 0 5][AWAY][2][AWAY][AWAY]

To turn an output off from the remote codepad:

1. Enter your Master Code and press [5][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the number of the output (1 to 3) and press [STAY].
   Two beeps sound and the output turns off.
3. Repeat *Step 2* to turn off another output.
4. Press [AWAY] button to exit from this function. Two beeps sound and the STAY and AWAY indicators are extinguished.

Example

If Output 2 is programmed as 291000 in Locations 442 to 447, the Master Code holder can turn off this output by entering:

[2 5 8 0 5][AWAY][2][STAY][AWAY]

5.2.8　　　　Setting the Date and Time

Use this function when the date and time must be changed or if the system was powered down.

If the date and time is not set, the date and time fault appears only when the Auto Arming Time is programmed in Locations 482 to 485 (refer to *Section 17.12 Auto Arming Time* on page 79), or when you enter Fault Analysis Mode by holding down [5].

To set the new date and time:

1. Enter your Master Code and press [6][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.
2. Enter the day, month, year, hour, and minute in DD, MM, YY, HH, MM format (where DD is the day of the month, MM is the month of the year, YY is the year, HH is the hour of the day, and MM is the minute of the day) and press [AWAY].
   Use 24:00 hour format when programming the hour of the day.
   Two beeps sound and the STAY and AWAY indicators are extinguished. If a long beep sounds, an error occurred when you entered the date and time.

Example

To set the date and time for 1st January 2009 at 10:30 PM, enter:

[2 5 8 0 6][AWAY][0 1 0 1 0 9 2 2 3 0][AWAY]

5.2.9　　　　Walk Test Mode

Walk Test Mode allows you to test detection devices to ensure that they are functioning correctly. Before activating Walk Test Mode, isolate any zones that are not required for testing. Refer to *Section 3.11 Isolating Zones* for more information. Use Locations 383 and 384 to enable Walk Test Mode Reports (refer to *Section 15.2*).

To enter Walk Test Mode:

1. Enter your Master Code and press [7][AWAY]. Three beeps sound and the STAY and AWAY indicators flash. The codepad beeps once per sec when Walk Test Mode is active.
2. Unseal and seal the zones to be tested.
   The codepad sounds one long beep and the horn speaker sounds one short beep each time a zone is sealed or unsealed.
3. Press [AWAY] to exit from this function.
   Two beeps sound and the STAY and AWAY indicators are extinguished. The system returns to the disarmed state.

5.2.10　　　　Event Non-volatile Memory Recall Mode

This function allows you to play back the last 40 system events that occurred. Event Non-volatile Memory Recall Mode reports all alarms and each arming or disarming of the system and helps with troubleshooting system faults. The events are shown using the codepad indicators. The event memory is not lost even with the power supply off.

To enter Event Memory Recall Mode:

Enter your Master Code and press [8][AWAY]. Three beeps sound. The events are played back by the codepad indicators in reverse chronological order.

Example

If the events occurred in the following order:

Table 32:	Event Sequence
Sequence	**Event**
1	System armed in AWAY Mode
2	Alarm in Zone 3
3	Alarm in Zone 4
4	System disarmed

The alarm memory plays back in this order:

Table 33:   Event Memory Playback

Sequence	Indication	Event
1	All indicators off except MAINS	System disarmed
2	Zone 4 and AWAY indicators light	Alarm in Zone 4
3	Zone 3 and AWAY indicators light	Alarm in Zone 3
4	AWAY indicator lights	System armed in AWAY Mode

Each event is indicated by a beep and a lit indicator. Resetting a disarmed 24-Hour Alarm is indicated by a beep only.

After the last event, three beeps sound to indicate the end of playback. You can stop the replay at any time by pressing [AWAY].

> ☑ If the system is armed in STAY Mode 1 or STAY Mode 2, the STAY indicator shows the event memory playback. There is no differentiation between STAY Mode 1 and STAY Mode 2.
>
> If the control panel is powered down, the memory of all events is saved.
>
> If an ICP-CC488 Control Panel is partitioned, only ten events per area play back.

5.3   User Code Functions

5.3.1   Arm or Disarm Both Areas at the Same Time

This User Code function operates only with partitioned ICP-CC488 systems and allows User Codes allocated to both Area 1 and Area 2 to arm or disarm both areas at the same time.

This feature allows a user to arm or disarm the system by pressing one extra button rather than entering a code twice. You can use either the CP5 Area Addressable Codepad (ICP-CP500A) or the Master Partitioned Codepad (ICP-CP500P) with this function. To enable this feature, select Option 2 in Location 501 (refer to *Section 19.3.2 Partitioning Options 2*).

To arm or disarm both areas at the same time:

Enter your User Code and press [0][AWAY]. Two beeps sound and both areas are armed or disarmed from AWAY Mode.

5.4   Hold-Down Functions

Hold-down functions allow easy activation of specific operations. When you hold down a button for 2 sec, two beeps sound and the corresponding function operates. The hold-down functions are listed below.

5.4.1   Arm the System in AWAY Mode

Holding down [#] until two beeps sound arms the system in AWAY Mode. This hold-down function operates only if you select Option 2 in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

> ☑ This hold down function does not work if you are using an ICP-CP5 Master Partitioned codepad (CP500P) with a partitioned ICP-CC488 Control Panel.
>
> If you are using an ICP-CP5 Area Addressable Codepad (ICP-CP500A) with a partitioned ICP-CC488 Control Panel, this function arms the corresponding area in AWAY Mode.

5.4.2   Arm the System in STAY Mode 1

Holding down [*] until two beeps sound arms the system in STAY Mode 1. This hold-down function operates only if you select Option 2 in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

If there was no alarm during the armed cycle, holding down [*] a sec time disarms the system from STAY Mode 1. To enable single button disarming from STAY Mode 1 using this hold-down function, select Option 4 in Location 497.

If an alarm occurred or entry warning was activated, a valid User Code is required to disarm the system.

Refer to *Section 14.3.7 Zone Options 2* on page 63 for information on programming each zone to be automatically isolated in STAY Mode 1.

> ☑ This hold-down function does not work if you are using an ICP-CP5 Master Partitioned Codepad (ICP-CP500P) with a partitioned ICP-CC488 Control Panel.
>
> If you are using an ICP-CP5 Area Addressable Codepad (ICP-CP500A) with a partitioned ICP-CC488 Control Panel, this function arms the corresponding area in STAY Mode1.

5.4.3   Arm the System in STAY Mode 2

Holding down [0] until two beeps sound arms the system in STAY Mode 2. This hold-down function operates only if you select Option 2 in Location 497 (refer to *Section 18.6 Consumer Options 2* on page 83).

If no alarm occurred during the armed cycle, holding down [0] a sec time disarms the system from STAY Mode 2. To enable single button disarming from STAY Mode 2 using this hold-down function, select Option 4 in Location 497.

If an alarm occurred or entry warning was activated, a valid User Code is required to disarm the system.

For more information, refer to *Section 5.1.5 Setting STAY Mode 2 Zones* on page 25 (using the Installer Code function) or *Section 5.2.6 Setting STAY Mode 2 Zones* on page 25 (using the Master Code function).

✓ STAY Mode 2 is not available on partitioned ICP-CC488 Control Panels.

5.4.4   Horn Speaker Test

Holding down [1] until two beeps sound activates the horn speaker for a 2-sec burst. No other sounding device operates during this mode.

5.4.5   Bell Test

Holding down [2] until two beeps sound activates the internal screamers for a 2-sec burst. No other sounding device operates during this mode.

If the SS914 Satellite Siren (EDMSAT) is connected to the control panel, this function tests both the horn speaker and the strobe connected to the satellite siren for a 2-sec burst.

5.4.6   Strobe Test

Holding down [3] operates the strobe. No other device operates during this mode.

If the SS914 Satellite Siren (EDMSAT) is connected to the control panel, this function also tests the strobe on the satellite siren.

To turn the strobe test on:

Press and hold [3] until three beeps sound.
The strobe flashes.

To turn the strobe test off:

Press and hold [3] until two beeps sound.
The strobe stops flashing.

5.4.7   Turning Day Alarm On and Off

Holding down [4] turns Day Alarm on or off. If you want the STAY indicator to indicate the status of Day Alarm operation (enabled or disabled), select Option 8 in Location 484 (refer to *Section 18.5 Consumer Options 1* on page 82). When this option is selected, the STAY indicator flashes once every 3 sec when Day Alarm is active.

To turn Day Alarm on:

Press and hold [4] until three beeps sound.

To turn Day Alarm off:

Press and hold [4] until two beeps sound.

5.4.8   Fault Analysis Mode

Several system faults can be detected by the control panel. When any of these faults are present, the FAULT indicator flashes and the codepad beeps once per min. Refer to *Section 3.12 Fault Analysis Mode* on page 18 for more information on each fault type.

To determine the type of fault:

Press and hold [5] until two beeps sound.
The STAY, AWAY, and FAULT indicators flash.
One or more zone indicators (1 to 8) light to indicate the type of fault that occurred. Refer to *Table 15* on page 20.

To exit from Fault Analysis Mode:

Press [AWAY].
The STAY and AWAY indicators are extinguished and the system returns to the disarmed state.

5.4.9   Initiate a Modem Call

Holding down [6] until two beeps sound forces the control panel to dial the callback telephone number programmed in Locations 159 to 174 (refer to *Section 11.9 Call Back Telephone Number* on page 51) in an attempt to connect to the installer's remote computer.

The remote computer must be running the CC816 Alarm Link Software and must be set to Waiting for an Incoming Call. If no callback telephone number is programmed, holding down [6] has no effect.

5.4.10   Reset Latching Outputs

Holding down [7] until two beeps sound resets any output that is programmed to remain on after it is activated.

The output must be programmed with a latching polarity. Refer to *Section 16.3 Output Polarity* on page 76 for more information.

5.4.11   Change the Codepad Buzzer Tone

Holding down [8] down continuously changes the tone of the buzzer in the remote codepad. There are 50 different tones from 1500 Hz to 5000 Hz. In an installation with multiple codepads, you can set a different tone for each codepad.

To change the buzzer tone:

1. Press and hold [8] continuously.
   The tone of the buzzer increases in pitch.
2. Release [8] button when you hear the desired tone.

✓ Every time the system is powered down, you must reset each codepad to its individual tone using this function.

On partitioned ICP-CC488 Control Panels, this hold-down function also indicates the area to which the codepad belongs.

To determine the area to which the codepad belongs:

1. Press and hold [8] until two beeps sound.
   A zone indicator lights to show the area to which the codepad belongs.
   Zone 1 = Area 1 codepad
   Zone 2 = Area 2 codepad
   Zone 7 = Master Partitioned Codepad
   If no zone indicator lights, the codepad is set up incorrectly or an incorrect codepad is used.
2. Press [AWAY] to exit from this mode.

5.4.12   Send Test Report

Holding down [9] until two beeps sound transmits a Test Report (Contact ID Event Code 602) to test the dialing and reporting capabilities of the system without activating the sirens.

6.0   Remote Arming by Telephone

This feature allows you to arm your system from any remote location by telephone. For obvious security reasons, you cannot disarm the system using this method. A touch-tone telephone is required to use this feature.

To remotely arm your system by telephone:

1. Call the telephone number to which your control panel is connected.
   When the control panel answers the incoming call, a short jingle sounds.

   > If you hear several strange sounding tones when the control panel answers the incoming call, the system is programmed for remote programming functions. Wait for a pause in the tones and follow *Step 2* to arm the system remotely.

2. Hold the phone controller to the telephone's mouthpiece and press and hold the button on the side of the unit for 3 sec.
   You can alternatively press and hold [*] on the touch-tone telephone for 3 sec to arm the system. Two beeps sound to indicate that the system is armed in AWAY Mode.
3. Hang up the telephone.
   The system remains armed.

If the control panel does not answer the call, the system might be armed already, remote functions are not enabled, or the ring count is set to 0. To enable remote arming by telephone, select Option 2 in Location 177 (refer to *Section 12.1 Dialer Options 1* on page 52). To set the number of rings before the control panel answers, refer to *Section 11.10 Ring Count* on page 51.

> When both Remote Arming and Upload/Download are selected, the control panel answers the call expecting the remote computer. When this occurs, modem negotiating tones sound rather than the remote arming jingle.
>
> Using this method with a partitioned ICP-CC488 Control Panel arms both areas in AWAY Mode. Arming individual areas is not available with this method.

7.0   Programming

The control panel programming options are stored in a non-volatile EPROM. This memory holds all relevant configuration and user-specific data even after a total power loss.

Because the data retention time is up to ten years without power, no reprogramming is required after powering down the control panel.

You can change data as many times as required without additional specialized equipment. The memory is organized in locations, each of which holds the data for a specific function.

> The maximum value you can program into any location is 15.

In general, the entire programming sequence consists of selecting the required location, and then entering or changing the current data. Repeat this procedure until you program all required data. The factory default settings are selected for reporting to the monitoring station in Contact ID format.

The Installer Code provides access only to the Installer's Programming Mode and does not allow you to arm and disarm the system. You cannot enter Installer's Programming Mode when the system is armed, or at any time during siren run time.

You can program the ICP-CC488 Control Panel using any of these devices:

- Remote codepad
- CC816 Alarm Link Upload/Download Software

7.1   Programming with the Remote Codepad

To program the control panel using the remote codepad, the system must be disarmed with no alarm memory present.

To access Installer's Programming Mode:

Enter the four-digit Installer Code (the factory default is 1234) and press [AWAY].
Two beeps sound and both the AWAY and the STAY indicators flash simultaneously to indicate that you entered Installer's Programming Mode.

When you enter Installer's Programming Mode, you are automatically positioned at Location 000, the first digit of the Primary Telephone Number for Receiver 1. The codepad indicators show the current data stored in this location.

Data	Zone Indicators								
Value	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**MAINS**
0									
1	X								
2		X							
3			X						
4				X					
5					X				
6						X			
7							X		
8								X	
9	X							X	
10									X
11	X								X
12		X							X
13			X						X
14				X					X
15					X				X

Table 34: Codepad Indicators

To move to a different programming location:

Enter the location number and press [AWAY]. For example, press [3 4][AWAY] to automatically step you to the beginning of the Subscriber ID Number for Receiver 1. The data stored in the new location appears.

To move to the next location:

Press [AWAY].
For example, if you are currently positioned at Location 034, press [AWAY] to step to Location 035.

To move to the previous location:

Press [STAY].
For example, if you are positioned at Location 035, press [STAY] to step back to Location 034.

To change data in the current location:

Enter the new value (0 to 15) and press [STAY]. The data is stored and you remain positioned at the same location. The new value is displayed using the codepad indicators (for example, if you enter [1 4] and press [STAY], the Zone 4 and MAINS indicators are lit).

To exit from Installer's Programming Mode:

Enter command [9 6 0] and press [AWAY]. Two beeps sound and the STAY and AWAY indicators are extinguished. The system returns to the disarmed state and is now ready for use.

Refer to *Section 7.4 Installer's Programming Commands* on page 36 for more information about using Installer's Programming Mode.

7.2 Programming with the Programming Key

The CC891 Programming Key allows you to store or copy programming information from your control panel. After storing information in the programming key, you can easily program other ICP-CC488 Control Panels with the same programming data. You can also use the programming key to back up existing information.

If you connect the programming key to the control panel when it is disarmed, the key automatically initiates a data transfer to the control panel's memory.

If you have a new programming key, enter Installer's Programming Mode, program the system as required, and then connect the programming key to the control panel.

To connect the programming key:

Locate the socket labeled PROGRAMMING KEY at the top of the printed circuit board (PCB) next to the Auxiliary Module socket (refer to *Figure 24* on page 96). Observe the triangular markings on the PCB and align them with the markings on the programming key.

To copy data from the control panel data to the programming key:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode.
2. Enter [9 6 2 #].
   Refer to *Section 7.4.4 Command 962 – Copy the Control Panel Memory to the* Programming Key on page 37 for more information.
3. Enter [9 6 0 #] to exit from Installer's Programming Mode.
   Two beeps sound and the system returns to the disarmed state. Before removing the programming key, wait 2 sec for the activity LED to return to its normal state. The programming key becomes your standard data pattern for future control panel programming.

If you enter Installer's Programming Mode, insert a programming key, and then change the data in any location, the data for both the programming key and the control panel is changed at the same time.

⚠ If you do not enter Installer's Programming Mode first, connecting the CC891 Programming Key to the control panel when the programming key memory is blank corrupts the control panel's memory. If this occurs, you must return the control panel to Bosch Security Systems, Inc. to unlock the control panel's memory. A service fee will be charged.

7.3 Programming Option Bits

When programming these locations, each location has four options. You can select one, two, three, or all four options for each location, but you can program only one value for the location. Calculate this value by adding the option bit numbers together.

Example

If you want to select Options 1, 2, and 4 for Location 177, add the numbers and program the sum. In this example, program a 7 in the location $(1 + 2 + 4 = 7)$.

Table 35:　Programming Option Bits Example

Option	Description
1	Allow dialer reporting functions
2	Enable remote arming by telephone
4	Enable answering machine bypass only when armed
8	Enabled = Use Bell 103 for FSK format Disabled = CCITT V21 format

7.4 Installer's Programming Commands

You can use ten commands in Installer's Programming Mode. To issue the command, enter the command number and press [#].

Table 36:　Installer's Programming Mode Commands

Command	Function
959	Test the programming key Refer to *Section 7.4.1.*
960	Exit from Installer's Programming Mode Refer to *Section 7.4.2.*
961	Reset the control panel to factory defaults Refer to *Section 7.4.3.*
962	Copy the control panel memory to the programming key Refer to *Section 7.4.4.*
963	Copy the programming key data to the control panel memory Refer to *Section 7.4.5.*
964	Erase the programming key Refer to *Section 7.4.6.*
965	Set up domestic dialing format Refer to *Section 7.4.7.*
966	Enable/disable the automatic stepping of locations during programming Refer to *Section 7.4.8.*
999	Display the software version number or control panel type Refer to *Section 7.4.9.*

7.4.1 Command 959 – Test the Programming Key

This command initiates a test of the programming key. You can use the CC891 Programming Key only with the ICP-CC488 Control Panel.

The programming key test is non-destructive, and any data in the programming key remains after the test is completed. One long beep indicates that the programming key test failed. Two beeps indicates a successful test.

If you remove the programming key before the test is finished, the programming key data becomes corrupt. Do not remove the programming key while the activity LED is lit or pulsing rapidly.

To test the programming key:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.
2. Connect the programming key to the PROGRAMMING KEY pins (next to the Auxiliary Module socket) at the top of the control panel printed circuit board.

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3. Enter [9 5 9 #].
   Two beeps sound after a successful test of the programming key. A long beep indicates that the programming key data is corrupt and must be erased to clear the corrupt data. Refer to *Section 7.4.6* on page 38 for more information.

4. Enter [9 6 0 #] to exit from Installer's Programming Mode.
   Two beeps sound. The STAY and AWAY indicators are extinguished on the remote codepad and the system returns to the disarmed state.

5. Remove the programming key from the control panel.
   Failure to exit from Installer's Programming Mode before removing the programming key can corrupt the data in the programming key.

7.4.2 Command 960 – Exit from Installer's Programming Mode

This command exits from Installer's Programming Mode. You can exit from Installer's Programming Mode from any location.

To exit from Installer's Programming Mode:

Enter [9 6 0 #].
Two beeps sound and the system returns to the disarmed state. When using the remote codepad, the STAY and AWAY indicators are extinguished.

7.4.3 Command 961 – Reset the Control Panel to Factory Default Settings

This command resets the control panel to factory default values. Default values are listed throughout this guide and in the programming sheets in *Section 25.0 Programming Sheets* on page 101. You can reset the control panel from any location.

To reset the control panel to factory defaults:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate that you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Enter [9 6 1 #].
   Two beeps sound and the system is reset to the factory default values.

7.4.4 Command 962 – Copy the Control Panel Memory to the Programming Key

This command copies the control panel memory to the programming key. You can only use the CC891 Programming Key with the ICP-CC488 Control Panel.

To copy the control panel memory to the programming key:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Connect the programming key to the PROGRAMMING KEY pins (next to the Auxiliary Module socket) at the top of the control panel found printed circuit board.

3. Enter [9 6 2 #].
   Two beeps sound after the control panel memory is successfully copied to the programming key. A long beep indicates that the programming key is corrupt and must be erased to clear the corrupt data. Refer to *Section 7.4.6 Command 964 – Erase the Programming Key* on page 38 for more information.

4. Enter command [9 6 0 #] to exit from Installer's Programming Mode.
   The STAY and AWAY indicators are extinguished on the remote codepad to indicate the system is disarmed.

5. Remove the programming key from the control panel.
   Failure to exit from Installer's Programming Mode before removing the programming key can corrupt the programming key.

7.4.5 Command 963 – Copy the Programming Key to the Control Panel

This command copies data from the programming key to the control panel. You can use the CC891 Programming Key only with the ICP-CC488 Control Panel.

To copy the programming key memory to the control panel:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Connect the programming key to the PROGRAMMING KEY pins (next to the Auxiliary Module socket) at the top of the control panel printed circuit board.

3. Enter [9 6 3 #].
   Two beeps sound after the programming key's data is successfully copied to the control panel. A long beep indicates that the programming key is corrupt and must be erased to clear the corrupt data. Refer to *Section 7.4.6 Command 964 – Erase the Programming Key* on page 38 for more information.

4. Enter [9 6 0 #] to exit from Installer's Programming Mode.
   The STAY and AWAY indicators are extinguished on the remote codepad to indicate the system is disarmed.

5. Remove the programming key from the control panel.
   Failure to exit from Installer's Programming Mode before removing the programming key can corrupt the programming key.

7.4.6   Command 964 – Erase the Programming Key

This command erases all data from the programming key. You can only use the CC891 Programming Key with the ICP-CC488 Control Panel.

To erase the programming key:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Connect the programming key to the PROGRAMMING KEY pins (next to the Auxiliary Module socket) at the top of the control panel found printed circuit board.

3. Enter [9 6 4 #].
   Two beeps sound after the data is deleted.

4. Enter [9 6 0 #] to exit from Installer's Programming Mode.
   The STAY and AWAY indicators are extinguished on the remote codepad to indicate the system is disarmed.

5. Remove the programming key from the control panel.
   Failure to exit from Installer's Programming Mode before removing the programming key can corrupt the programming key.

7.4.7   Command 965 – Set Up Domestic Dialing Format

Command 965 simplifies the setup of the domestic dialing format to a one-step operation. Refer to *Section 9.0 Domestic Dialing* on page 42 for more information.

To set up domestic dialing format:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Enter [9 6 5 #].
   The command automatically sets Receiver 1 to domestic reporting and sets the locations shown in bold in *Table 37* on page 39 for Receiver 2 only. No other locations are changed when you issue command 965.

All domestic telephone numbers are stored in Locations 550 to 597. For more information, refer to *Section 9.2 Setting Up and Programming Domestic Reporting* on page 43.

As shown in *Table 37* on page 39, the transmission format is automatically set for domestic dialing and the Subscriber ID Number set for one identification beep. All reports, except Zone Status reporting and System Status reporting, are allocated to Receiver 1 for domestic dialing.

Zone Status Reports including Zone Bypass, Zone Trouble, Sensor Watch, and Alarm Restore codes, and System Status Reports including AUX Power Supply Fail, AC Fail, Low Battery, and Access Denied Reports are allocated to Receiver 2 and do not report unless Receiver 2 is also set up to report.

7.4.8   Command 966 – Enable/Disable the Automatic Stepping of Locations

This command allows the automatic stepping of locations when programming in Installer's Programming Mode.

Programming with the remote codepad provides no visual indication that Auto Step Mode is enabled.

To enable the automatic stepping of locations:

1. Enter the Installer Code (default = 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the STAY and AWAY indicators flash on the remote codepad to indicate you entered Installer's Programming Mode. The remote codepad displays the data stored in Location 000.

2. Enter [9 6 6 #].
   Two beeps sound.

To disable the automatic stepping of locations:

Enter [9 6 6 #].
Two beeps sound.

Example (Auto Step Enabled)

To enter the Primary Telephone Number 02 (pause) 9672 1055 when auto step is enabled:

1. Press [0 #].
    You are positioned at Location 000 (the Primary Telephone Number for Receiver 1).
2. Program the number by pressing:
    [10 * 2 * 13 * 9 * 6 * 7 * 2 * 1 * 10 * 5 * 5 * 0*]

Example (Auto Step Disabled)

To enter the Primary Telephone Number 02 (pause) 9672 1055 when auto step is disabled:

Press [0 #].
You are positioned at Location 000 (the Primary Telephone Number for Receiver 1).

To program the number, press:
[10 * # 2 * # 13 * # 9 * # 6 * # 7 * # 2 * # 1 * # 10 * # 5 * # 5 * # 0 *]

Table 37:	Command 965 Defaults		
Location	**Description**	**Default Value**	**Setting**
032	Handshake Tone for Receiver 1	**1**	(Handshake Tone)
033	Transmission Format	**4**	(Domestic)
034 and 039	Subscriber ID Number	0, 0, 0, 0, 0, **1**	(1 Beep)
392	Zone Status Reporting Options	**2**	(Receiver 2 only)
401 to 402	Open/Close Reports	**11, 12**	(Open/Close Reports)
403	Open/Close Reporting Options	**2**	(Receiver 2 only)
424 to 426	System Status – Access Denied	**6, 7, 12**	(Access Denied)
427	System Status Reporting Options	**2**	(Receiver 2 only)
428 to 434	Test Report Time	0, 0, 0, 0, **7, 1, 0**	(Test Reports)
435	Test Reporting Dialer Options	**1**	(Receiver 1 only)

7.4.9   Command 999 – Display the Panel Type or Software Version Number

When using the remote codepad, this command displays the version of the control panel. Visually determining which control panel your printed circuit board (PCB) is set to is difficult because various control panels use the same PCB.

The codepad displays 8 to indicate the control panel software, ICP-CC488.

To display the control panel type or software version number:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. If you are using the remote codepad, the STAY and AWAY indicators flash to indicate you entered Installer's Programming Mode.
2. Enter [9 9 9 #].
    Two beeps sound.
    If you are using the remote codepad, the codepad lights a zone indicator corresponding to the control panel type. Refer to *Section 2.0 Codepad Indicators* on page 10 for more information.
3. Press [#] to exit from this command and return to the Installer's Programming Mode.

4. Enter [9 6 0 #] to exit from Installer's Programming Mode.
    Two sound and the system returns to the disarmed state.
    If you are using the remote codepad, the STAY and AWAY indicators are extinguished to indicate the system is disarmed.

7.5   Disable Factory Defaults

Location	900
Default	0

This feature prevents the control panel from manually restoring the default settings by the default button and prevents the use of a programming key to automatically download to the control panel when the system is disarmed.

Enter the default setting of 0 for Location 900 to restore the control panel to its default settings. Enter 15 for Location 900 to restrict the ability to restore the control panel to its default settings and to require the Installer Code for future control panel programming.

If the Installer Code is unknown, you must restore the control panel to your Bosch distributor for exchange. A nominal fee applies for this service.

> ✓ The use of this feature is not recommended.

If you are required to disable the ability restore the control panel to its default settings, a special procedure eliminates the possibility of accidentally setting this option. You must hold down the default button on the printed circuit board (PCB) when programming this location.

To prevent manually restoring the default control panel settings:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound and the remote codepad displays the data programmed in Location 000. If you are using the remote codepad, the STAY and AWAY indicators flash to indicate you entered Installer's Programming Mode.
2. Enter [9 0 0 #] to move to Location 900.
3. Press and hold the default button. The default button is located at the top of the PCB next to the PROGRAMMING KEY socket.
4. Enter [1 5 *] to program 15 into Location 900.
5. Release the default button.
6. Enter [9 6 0 #] to exit from Installer's Programming Mode. Two beeps sound and the system returns to the disarmed state. If you are using a remote codepad, the STAY and AWAY indicators are extinguished to indicate that the system is disarmed.

If Location 900 is not programmed as 15, do one of the following procedures to restore the default control panel settings.

To default the control panel settings using the Installer Code:

1. Enter the Installer Code (the default is 1234) and press [#] to enter Installer's Programming Mode. Two beeps sound. The STAY and AWAY indicators flash to indicate you entered Installer's Programming Mode.
2. Enter [9 6 1 #]. Two beeps sound after the default control panel settings are restored.
3. Enter [9 6 0 #]. Two beeps sound. The STAY and AWAY indicators stop flashing and the system returns to the disarmed state. The control panel default factory settings are restored.

To restore the default control panel settings using the default button:

1. Disconnect the AC MAINS supply and the backup battery from the control panel.
2. Press and hold the default button. The default button is located at the top of the PCB next to the PROGRAMMING KEY socket.
3. Reconnect the AC MAINS supply to the control panel.
4. Wait 3 to 5 sec and release the default button.

5. Enter [2 5 8 0 *] to disarm the system using the default Master Code. The control panel default factory settings are restored.

If the option to restore the default control panel settings is disabled using Location 900:

- The dialer seize relay (RL2) clicks four times. You must return the control panel to Bosch Security Systems, Inc. for exchange. If the Installer Code is unknown, a service fee is charged to unlock the control panel's memory

- When programmed to disable the default control panel setting, you cannot use the command [961#] to retrieve the programming data.

- The use of this feature is not recommended.

8.0   Alarm Link Software

You can program or control the ICP-CC488 Control Panel remotely using an IBM or compatible personal computer and the CC816 Alarm Link Software. This software allows you to change your customer's control panel without leaving your office, which improves customer service and saves you time and money. For locations where a control panel is installed hundreds of kilometers from your office, the Upload/Download feature is invaluable.

When selecting the control panel type during the setup of a new customer database in the Alarm Link Software, the software version number is ICP-CC488 V1.0X and the panel type is I488.

When you add a new customer in the Alarm Link Software, the Subscriber ID Number and the Installer Code must match the values programmed in the control panel for synchronization during connection to the control panel. If these two locations do not match those of the control panel, the computer and the control panel cannot be synchronized.

8.1   Remote Connect

The remote connect feature allows you to establish a connection through the telephone network from your IBM or compatible computer to the ICP-CC488 Control Panel. This software allows you to offer faster service to your clients.

8.1.1   Remote Connection with Customer Control

If you want to configure the control panel so that a remote connection can be established only when the client initiates it through the remote codepad, program the following information:

- Program the Call Back Telephone Number in Locations 159 to 174 (refer to *Section 11.9* on page 51).

- Disable Option 1 in Location 180 (refer to *Section 8.2 Alarm Link Options* on page 41).

The control panel is set so the client controls when a remote connection is established.

To dial the remote computer:

Press and hold [6] until two beeps sound on the remote codepad.

8.1.2 Remote Connection without Callback Verification

Remote connect without callback verification is useful if you must perform Upload/Download functions from multiple locations.

There are two methods to disable callback verification. Using this feature reduces the security of the control panel.

Method One

Method one allows you to call the control panel from any remote location without the control panel calling back to the computer to establish a link. When using this method, the customer cannot initiate a modem call by holding down [6].

To program method one:

1. Program Locations 159 to 174 for the Call Back Telephone Number to 0 (refer to *Section 11.9* on page 51).
2. Select Option 1 and disable Option 2 in Location 180 (refer to *Section 8.2 Alarm Link Options* on page 41*)*.

The control panel allows a connection of the first call without calling the remote computer back.

Method Two

Method two allows you to program a callback telephone number so that the customer can still initiate a modem call when required. When you call the control panel from a remote location using the computer, the control panel does not call back the remote computer to establish a link.

To program method two:

1. Program the Call Back Telephone Number in Locations 159 to 174 (refer to *Section 11.9* on page 51).
2. Select Option 1 and disable Option 2 in Location 180 (refer to *Section 8.2 Alarm Link Options* on page 41*)*.

The control panel allows a connection of the first call without calling back the remote computer to make contact. It allows the customer to initiate a modem call by holding down [6].

8.1.3 Remote Connection with Callback Verification

Remote connect with callback verification offers the highest degree of data security by incorporating a two-level security check.

The first level is provided because the Installer Code and the Subscriber ID Number must match those of the control panel. The sec level of security exists because the control panel calls the programmed callback telephone number to establish the valid connection.

To program the control panel for remote connection with callback verification:

1. Program the Call Back Telephone Number in Locations 159 to 174 (refer to *Section 11.9* on page 51).
2. Select Options 1 and 2 in Location 180 (refer to *Section 8.2 Alarm Link Options* on page 41*)*.

8.1.4 Direct Connection

The direct connect feature gives the installer a simple method to program the ICP-CC488 Control Panel using a portable computer. Because telephone lines and modems are not required, programming of the control panel is easily completed in min.

To use the direct connect feature, connect the CC808 Direct Link Cable between the correct serial port on your IBM or compatible computer and the auxiliary module socket on the control panel.

To use the direct connect feature, it is not necessary to select Option 1 Location 180. The direct connect feature ignores this option.

8.2 Alarm Link Options

Location	180
1	Enable upload/download using Alarm Link
2	Enable Alarm Link call back
4	Terminate Alarm Link connection on alarm
8	Reserved

When programming these locations, you can select any of four options. You can select any combination of the options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

1 – Enable Upload/Download Using Alarm Link

Select this option to use the CC816 Alarm Link Software to program the control panel remotely. The control panel does not respond to the Alarm Link Software if this option is not selected. Refer to *Section 8.0 Alarm Link Software* on page 40 for more information.

2 – Enable Alarm Link Call Back

If this option is selected and a callback telephone number is programmed, the remote programming computer must be connected to the telephone line programmed in the callback telephone number in Locations 159 to 174 (refer to *Section 11.9* on page 51).

If this option is not selected, the installer can connect to a customer's control panel from any remote location for Upload/Download operations without the control panel calling back to the remote computer. The customer can initiate a modem call from the codepad by holding down [6]. Refer to *Section 8.0 Alarm Link Software* on page 40 for more information.

4 – Terminate Alarm Link Connection on Alarm

If an alarm occurs when the control panel is communicating with a remote computer using the CC816 Alarm Link Software, the Alarm Link session is terminated and the relevant alarm message is transmitted to the base station receiver.

If an alarm occurs that does not have to be reported to the base station receiver, the session is not terminated. If this option is not selected and an alarm occurs, the Alarm Link software prompts the operator with a Terminate or Continue message.

9.0   Domestic Dialing

The locations of the primary and secondary telephone numbers for Receiver 1 or Receiver 2 are used only for base station and pager reporting. When either Receiver 1 or Receiver 2 is set up for domestic reporting, both the primary and secondary telephone numbers are ignored.

The domestic dialing telephone numbers are stored separately in Locations 550 to 597, which can store up to 48 digits. These 48 locations can store one or more telephone numbers. Depending on the length of each telephone number, you can store four or more different telephone numbers for domestic dialing.

If both Receiver 1 and Receiver 2 are set up for domestic reporting format, you still have 48 data locations. Both Receiver 1 and Receiver 2 use the same domestic telephone numbers. Programming separate domestic telephone numbers for Receiver 1 and Receiver 2 is not available for domestic dialing format.

Refer to *Section 9.2 Setting Up and Programming Domestic Reporting* on page 43 for more information.

9.1   Domestic Dialing Function

When the control panel is activated into alarm, it dials the first programmed telephone number. If a busy or engaged tone is detected, the control panel hangs up and dials the sec telephone number (if one is programmed). The first call is counted as one unsuccessful dialing attempt. If the sec telephone number is also busy or an engaged tone is detected, the control panel hangs up and dials the third telephone number (if one is programmed) or attempts the first telephone number again.

If a busy tone is not detected, the control panel assumes the telephone was answered and sends its transmission. The transmission sequence consists of an identification beep, followed by a siren tone and a long pause. The transmission sequence is repeated until the control panel receives an acknowledgment tone during the pause. The control panel automatically hangs up after 2 min. If more than one control panel reports to the same telephone number, the identification beep allows the customer to verify the control panel that called. The identification beep is programmed in Location 039 of the Subscriber ID Number for Receiver 1 or Location 079 of the Subscriber ID Number for Receiver 2.

> When set up for Domestic Dialing Format, the control panel attempts a maximum of six calls for each alarm event. This count includes any unsuccessful calls. The counter is reset if the zone is reactivated and the control panel attempts an additional six calls. The control panel stops dialing after six attempts or three successful calls. The control panel also stops dialing if a valid User Code is entered at the remote codepad.
>
> If both Receiver 1 and Receiver 2 are programmed for domestic dialing, the maximum number of calls for each alarm event is twelve.

To acknowledge domestic dialing:

If the received call is not acknowledged during any of the transmission pauses by pressing the [*] button on a touch-tone telephone, the control panel continues to send its transmission for two min. Then it hangs up and dials the next telephone number. If the call is successfully acknowledged, the control panel hangs up and makes no more calls for that event.

9.2   Setting Up and Programming Domestic Reporting

Programming the control panel for domestic reporting is extremely simple when using the Installer's Programming Command 965. Refer to *Section 7.4.7 Command 965 – Set Up Domestic Dialing Format* on page 38 for more information.

To set up the control panel for domestic dialing:

1. Enter the Installer Code and press [AWAY] to enter Installer's Programming Mode.
   Two beeps sound and the STAY and AWAY indicators flash.
2. Enter [9 6 5] and press [AWAY].
   Two beeps sound. The control panel is now set up for Domestic Dialing Format.
3. Enter [9 6 0] and press [AWAY] to exit from Installer's Programming Mode.
   Two beeps sound and the STAY and AWAY indicators are extinguished. The system returns to the disarmed state.
4. To program your telephone numbers, enter your Master Code and press [2][AWAY].
   Three beeps sound and the STAY and AWAY indicators flash.
   If any telephone numbers are already programmed, they are displayed one digit at a time using the codepad indicators.
   If no telephone numbers are programmed, two additional beeps sound after you enter this mode. These two beeps normally sound after the last digit of the last phone number is displayed.
5. Enter the digits for telephone number 1, one digit at a time.
   As you enter each digit, the corresponding codepad indicator lights.
6. After you enter all the digits of the first telephone number, press [STAY][4] to insert a break between the first telephone number and the sec telephone number.
7. Repeat *Step 6* for each additional phone number.
8. After the last digit of the last telephone number, press [AWAY] to exit from this mode.

Table 38:   Domestic Dialing Digits

Digit Required	Number to Program	Digit Required	Number to Program
0	0	8	8
1	1	9	9
2	2		
3	3	*	[STAY]1
4	4	#	[STAY]2
5	5	4 sec pause	[STAY]3
6	6	break	[STAY]4
7	7	15	[STAY]5

Example

To program two separate telephone numbers (9672 1777 and 9672 1233), enter the following sequence:

[2 5 8 0 2][AWAY][9 6 7 2 1 7 7 7][STAY] [4 9 6 7 2 1 2 3 3][AWAY]

You can cancel domestic dialing at any time (for example, you are moving and do not want the system to continue calling your work place or mobile phone).

To disable domestic dialing:

Enter your Master Code and press [2][AWAY][STAY][4][AWAY].

10.0 Dialer Reporting Formats

10.1   Transmission Formats

The ICP-CC488 Control Panel provides a number of transmission formats for its dialing and communication features. Program the transmission format for Receiver 1 in Location 033 and the transmission format for Receiver 2 in Location 073 (refer to *Section 11.4 Transmission Format for Receiver 1 and Receiver 2* on page 50). The control panel is set at the factory to report in the Contact ID Format.

10.1.1   Contact ID Format

Contact ID Format can identify hundreds of protection zones by their unique codes. This format provides a single-digit Event Qualifier and a three-digit Event Code that quickly identifies the reported condition.

In general, Contact ID Format is very simple because most of the Event Codes and Point ID Codes are predefined. The base station software usually can identify an alarmed zone by its Point ID Code and usually pays little attention to the Event Code.

Refer to *Section 10.1.3 Alarm Link Options* on page 44 for more information about the ICP-CC488 Point ID Codes.

Table 39:	Contact ID Format Breakdown			
Subscriber ID Number	**Qualifier**	**Event Code**	**Group Number**	**Point ID Number**
SSSS	Q	XYZ	GG	CCC
Four-digit Subscriber ID Number	Event Qualifier, which provides specific event information: 1 – New event or opening 3 – New restore or closing	Event Code (comprised of three hex digits)	Group Number (comprised of two hex digits)	Point ID Number (comprised of three hex digits)

10.1.2   Contact ID Format

Contact ID Format can identify hundreds of protection zones by their unique codes. This format provides a single-digit Event Qualifier and a three-digit Event Code that quickly identifies the reported condition.

In general, Contact ID Format is very simple because most of the Event Codes and Point ID Codes are predefined. The base station software usually can identify an alarmed zone by its Point ID Code and usually pays little attention to the Event Code.

Refer to *Section 10.1.3 Alarm Link Options* for more information about the ICP-CC488 Point ID Codes.

10.1.3   Point ID Codes

Table 43 on page 46 shows the different Point ID Codes and Event Codes transmitted to the base station receiver when using Contact ID Reporting Format. All Event Codes are fixed. The control panel always transmits the same code because there are no programming locations to change the codes.

10.1.4   4 + 2 Reporting Format

The $4 + 2$ Express Format reports a Subscriber ID Number followed by an Expansion Code. The reporting Channel Number is transmitted directly after the Expansion Code.

Table 40:	Example Reporting in 4 + 2 Format	
Subscriber ID Number	**Expansion Code**	**Channel Number**
SSSS	A	C_H

Table 41:	4 + 2 Reporting Format
New Event	**4 + 2 Report**
Alarm	SSSS AC_H
Trouble	SSSS TC_H
Bypass	SSSS BC_H
AC Fail	SSSS EAC
Low Battery	SSSS LL_B
Opening Report	SSSS OU
Closing Report	SSSS CU
Test Report	SSSS T_E
Program Altered	SSSS P0
Duress	SSSS DD_0
Event	**4 + 2 Report**
Alarm Restore	SSSS R C_H
Trouble Restore	SSSS TR C_H
Bypass Restore	SSSS B_R C_H
AC Fail Restore	SSSS E_R A_{CR}
Low Battery	SSSS L L_B
Low Battery Restore	SSSS L_{BR}
Panic	SSSS P P_{CH}

Table 42:	4 + 2 Transmission Code Descriptions

Code	Description
SSSS	Subscriber ID Number
A	Alarm
C_H	Channel Number[1]
0	Zero
T	Trouble
B	Bypass
E	AC Fail Code 1st digit
AC	AC Fail Code 2nd digit
L	Low Battery Code 1st digit
L_B	Low Battery Code 2nd digit
O	Open
C	Close
U	User Number
R	Alarm Restore Code
TR	Trouble Restore Code
B_R	Bypass Restore Code
E_R	AC Fail Restore Code 1st digit
AC_R	AC Fail Restore Code 2nd digit
L_R	Low Battery Restore Code 1st digit
L_{BR}	Low Battery Restore Code 2nd digit
D	Duress Code 1st digit
D_0	Duress Code 2nd digit
P	Panic Code 1st digit
P_{CH}	Panic Code 2nd digit
T_E	Test Code

[1] 0=Zone 16, 1=Zones 1 through 15. Some receivers might need to have parameters set to 0 for Zone 16

10.1.5 Basic Pager Reporting Format

Although Basic Pager Format requires some interpretation of the numbers that appear on the display, it is possible to differentiate among 1000 different control panels if a number of control panels report to the one pager.

To set up Receiver 1 for basic pager reporting:

1. Program the Basic Pager's access telephone number in Locations 000 to 015 (refer to *Section 11.1 Primary Telephone Number for Receiver 1 and Receiver 2* on page 49).
2. Program the Subscriber ID Number in Locations 034 to 039 (refer to *Section 11.5 Subscriber ID Number for Receiver 1 and Receiver 2* on page 50).
3. Select the Pager Handshake option (5) in Location 032 (refer to *Section 11.3 Handshake Tone for Receiver 1 and Receiver 2* on page 49).
4. Program the Basic Pager Format option (5) in Location 033 (refer to *Section 11.4 Transmission Format for Receiver 1 and Receiver 2* on page 50).

To set up Receiver 2 for basic pager reporting:

1. Program the Basic Pager's access telephone number in Locations 040 to 055 (refer to *Section 11.1 Primary Telephone Number for Receiver 1 and Receiver 2* on page 49).
2. Program the Subscriber ID Number in Locations 074 to 079 (refer to *Section 11.5 Subscriber ID Number for Receiver 1 and Receiver 2* on page 50).
3. Select the Pager Handshake option (5) in Location 072 (refer to *Section 11.3 Handshake Tone for Receiver 1 and Receiver 2* on page 49).
4. Program the Basic Pager Format option (5) in Location 073 (refer to *Section 11.4 Transmission Format for Receiver 1 and Receiver 2* on page 50).

The example in *Figure 9* on page 47 shows:

- A transmission from Subscriber ID Number 5678
- Zone 2 is in alarm
- Zone 3 is manually isolated
- The system is armed
- The Panic Zone is normal
- The AC is connected
- There is no fault condition.

Table 43:   Point ID Codes

Point ID	Event Description	Event Code	Explanation	Section
Zones 1 to 8	Burglary Zone	130	Burglary	*14.3.2*
	Medical Zone	100	24-Hour Medical	*14.3.2*
	Panic Zone	120	24-Hour Panic	*14.3.2*
	Hold-Up Zone	122	24-Hour Hold-Up	*14.3.2*
	Tamper Zone	137	24-Hour Tamper	*14.3.2*
	Burglary Zone	133	24-Hour Burglary	*14.3.2*
	Fire	110	24-Hour Fire	*14.3.2*
User Specific 1 to 16	Open/Close Report	401	Opening – User # Closing – User #	*15.14*
User Specific 1 to 16	Open/Close Report Partitioned	402	Opening – User # Closing – User #	*15.14*
User Specific 1 to 16	Partial Close Report	456	Closing – User #	*12.2*
040	AC MAINS Fail	301	AC Power	*15.22*
031	Low Battery	309	Battery Test Failure	*15.24*
User Specific 1 to 16	Codepad Duress	121	Duress Alarm	*15.15*
041	Codepad Panic	120	Panic Alarm	*15.16*
046	Codepad Fire	110	Fire Alarm	*15.17*
045	Codepad Medical	100	Medical Alarm	*15.18*
042	Code Retry Limit Exceeded	421	Access Denied	*15.26*
044	Test Report – Automatic	602	Test Report	*15.28*
047	Test Report After Siren Reset	602	Test Report	*18.5*
Zone Specific 1 to 8	Sensor Self Test Failure	307	Sensor Watch	*15.5*
Zone Specific 1 to 8			RF Device Supervision	*15.8*
Zone Specific 1 to 8	Trouble	380	Sensor Trouble	*15.4*
00	AUX Power Supply Fail	300	System Trouble	*15.20*
User Specific	Walk Test	607	Walk Test Mode	*15.2*
Zone Specific 1 to 8	Tamper	144	Zone Tamper	*15.1*
Zone Specific 1 to 8	RF Low Battery	384	RF Low Battery	*15.9*
001	RF Receiver Fail	355	RF Receiver Jamming	*15.10*
002			RF Receiver Tamper Switch	*15.10*
003			RF Receiver Failure	*15.10*
Zone Specific 1 to 8	Bypass	573	Zone Bypass	*15.3*
Zone Specific 1 to 8	Bypass	572	24-Hour Zone Bypass	*15.3*
Zone Specific 1 to 8	Bypass	571	24-Hour Fire Zone Bypass	*15.3*

Figure 9: Basic Pager Display

1 – Subscriber ID number
2 – Zone status
3 – System status
4 – 0 – Zone Normal
     1 – Alarm
     2 – Manually Isolated
     3 – Auto Isolated
5 – 8 – Disarmed
     9 – Armed

6 – 0 – Normal
     1 – Panic/Duress
     2 – Fire Alarm
     3 – Medical Alarm
7 – 0 – AC Normal
     1 – AC Failure
8 – 0 – System Normal
     1 – System Fault
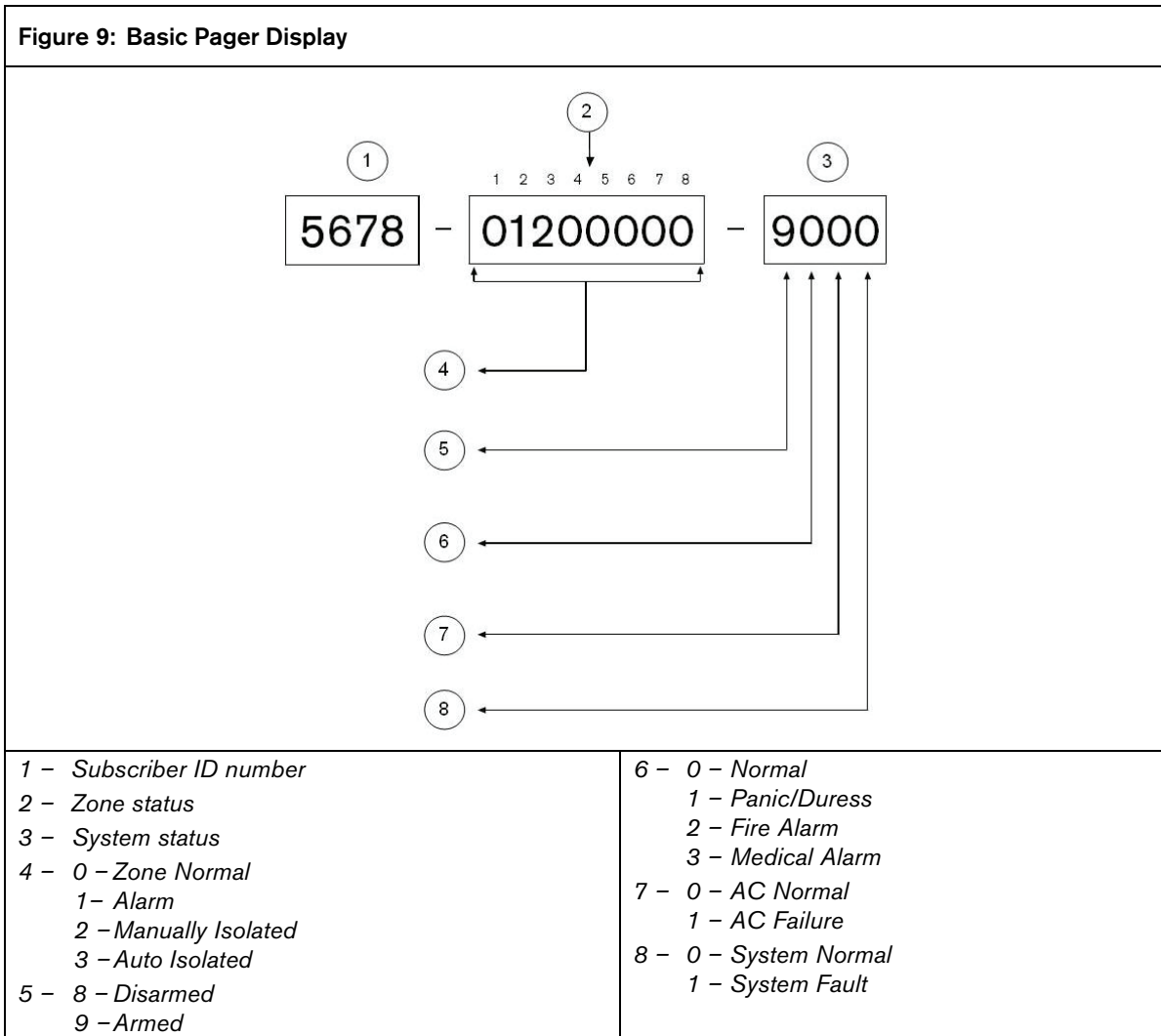
10.2　Basic Pager Display Information

> ☑　The Pager format supports only eight zones.

Subscriber ID Number

This is the identification number of the control panel and is programmed in Locations 034 to 039 for Receiver 1 and Locations 074 to 079 for Receiver 2 (refer to *Section 11.5 Subscriber ID Number for Receiver 1 and Receiver 2* on page 50). The pocket pager displays only the last three digits of the Subscriber ID Number.

Zone Status

The zone status display shows you the status of each zone (1 to 8) of the control panel. *Table 44* on page 48 describes each status number when displayed on a pocket pager.

Table 44:　Zone Status Display	
Status	**Zone Description**
0	Zone normal The zone is sealed.
1	Alarm The zone is unsealed and in alarm.
2	Zone bypassed A system operator manually isolated the zone. Refer to *Section 3.11 Isolating Zones* on page 17for information about manually isolating a zone(s) before arming the system. Refer to *Section 15.3 Zone Status – Bypass Reports* on page 65 for more information.
3	Zone trouble A zone was left unsealed after the end of Exit Time. Refer to *Section 15.4 Zone Status – Trouble Reports* on page 65for more information.

System Status

The system status information shown by four digits is defined in *Figure 9* on page 47.

- The first digit indicates whether the system is armed or disarmed.

- The sec digit indicates if a codepad alarm was activated by the operator (refer to *Section 3.7 Codepad Duress Alarm* through *Section 3.10 Codepad Medical Alarm* on page 17 for more information).

- The third digit indicates the status of the AC MAINS supply.

- The fourth digit indicates whether a system fault occurred at the control panel (refer *Section 3.12 Fault Analysis Mode* on page 18 for more information.

11.0　Dialer Information

This section outlines the programming information required for the ICP-CC488 Control Panel when communicating with a base station receiver. These parameters specify the telephone numbers to call, transmission formats, handshake tones, and transmission speeds.

The control panel can report event information from two on-board dialers. The first dialer reports to Receiver 1 and the sec dialer reports to Receiver 2. You can program each dialer with two separate telephone numbers, handshake tone, reporting format type, and Subscriber ID Number.

Example

You can set up Dialer 1 to report in Domestic Dialing Format to Receiver 1 and set up Dialer 2 to report to a base station receiver in Contact ID Format only if Dialer 1 is unsuccessful.

To program a telephone number:

When programming a telephone number, you must program a 0 as a 10. Each location in the primary, secondary, and callback telephone numbers stores one digit of the telephone number.

You must insert a 0 at the end of a telephone number to indicate to the dialer the end of the telephone number is reached. The dialing sequence terminates when a 0 appears.

Example

To program the telephone number 9672 1055 as the Primary Telephone Number for Receiver 1, program the following sequence into Locations 000 to 015:

[9　6　7　2　1　10　5　5　0　0　0　0　0　0　0　0]

To enter a 4-sec pause in the dialing sequence, program a 13. A pause might be necessary when the dialer communicates through an old (slower) telephone exchange or when a PABX system is in place.

Example

To program the number 02 pause 9 672 1055, enter:

[10　2　13　9　6　7　2　1　10　5　5　0　0　0　0　0].

Table 45 on page 55 shows how to program the numbers, keys, and functions for a telephone number.

Table 45: Dialing Digits

Digit Required	Number to Program	Digit Required	Number to Program
terminator	0	8	8
1	1	9	9
2	2	0	10
3	3	*	11
4	4	#	12
5	5	4 sec pause	13
6	6	break	14
7	7	15	15

11.1 Primary Telephone Number for Receiver 1 and Receiver 2

Location	000 to 015 (Receiver 1)
Default	0
Location	040 to 055 (Receiver 2)
Default	0

When the control panel transmits a report, the panel dials the Primary Telephone Number to contact the monitoring station or pager, for example. If the call is successful, the relevant information is transmitted and the dialer returns to Standby Mode.

If unsuccessful, the dialer attempts two more calls using the Primary Telephone Number for Receiver 1. If these calls are unsuccessful, the dialer calls the Secondary Telephone Number for Receiver 1 up to three times. If the dialing sequence is still unsuccessful, the control panel repeats this sequence by dialing the Primary and Secondary Telephone Numbers for Receiver 2 (if they are programmed).

If the first six attempts are unsuccessful and no telephone numbers for Receiver 2 are programmed, this procedure is repeated only once for a maximum of twelve call attempts per alarm, after 10 min.

If the Primary and Secondary Telephone Numbers for Receiver 2 are also programmed, the control panel attempts a maximum of 24 calls per alarm.

Contact your monitoring station or pager company for the correct telephone numbers before you program these locations.

> When Receiver 1 or 2 is set up for domestic reporting, telephone numbers programmed into these locations are ignored. Refer to *Section 5.1.3 Change Domestic Phone Numbers* on page 23 (using the Installer Code function) or *Section 5.2.4 Changing Domestic Phone Numbers* on page 28 (using the Master Code Function).

11.2 Secondary Telephone Number for Receiver 1 and Receiver 2

Location	016 to 031 (Receiver 1)
Default	0
Location	056 to 071 (Receiver 2)
Default	0

Refer to *Section 11.1 Primary Telephone Number for Receiver 1 and Receiver 2* on page 49 for programming information.

> When Receivers 1 or 2 is set up for domestic reporting, telephone numbers programmed into these locations are ignored. Refer to *Section 5.1.3 Change Domestic Phone Numbers* on page 23 (using the Installer Code function) or *Section 5.2.4 Changing Domestic Phone Numbers* on page 28 (using the Master Code Function).

11.3 Handshake Tone for Receiver 1 and Receiver 2

Location	032 (Receiver 1)
1	HI LO handshake (Contact ID Format)
2	1400 Hz (Ademco Tx @ 1900 Hz)
3	2300 Hz (Low Speed Sescoa)
4	No handshake
5	Pager handshake
Location	072 (Receiver 2)
1	HI LO handshake (Contact ID Format)
2	1400 Hz (Ademco Tx @ 1900 Hz)
3	2300 Hz (Low Speed Sescoa)
4	No handshake
5	Pager handshake

These locations set the type of handshake tone required for the receivers before data transmissions to the monitoring station begin.

1 – HI LO Handshake

HI LO Handshake Tone is required to communicate in Contact ID Format or High Speed DTMF.

2 – 1400 Hz

1400 Hz Handshake Tone is required to communicate in Ademco Lo Speed Format or Domestic Dialing Format.

3 – 2300 Hz

Reserved.

4 – No Handshake

This option is not recommended.

5 – Pager Handshake

Pager Handshake Tone is required to communicate in Basic Pager Format.

11.4 Transmission Format for Receiver 1 and Receiver 2

Location	033 (Receiver 1)
1	Contact ID
2	4 + 2 express
3	FSK 300 baud Bell
4	Domestic
5	Basic pager

Location	073 (Receiver 2)
1	Contact ID
2	4 + 2 express
3	FSK 300 baud Bell
4	Domestic
5	Basic pager

Select the desired transmission format here. These locations select the data format used to transmit to the base station receiver. These locations also allow you to configure the control panel for domestic or basic pager formats.

11.5 Subscriber ID Number for Receiver 1 and Receiver 2

Location	034 to 039 (Receiver 1)
Default	0
Location	074 to 079 (Receiver 2)
Default	0

The Subscriber ID Number is transmitted to identify the calling control panel. Enter the Subscriber ID Number in the six locations provided for each receiver.

For Basic Pager Format, Locations 034 to 036 (for Receiver 1) and Locations 074 to 076 (for Receiver 2) are ignored and the first digit of the Subscriber ID Number must start in Location 037 (Receiver 1) and Location 077 (Receiver 2).

When using Domestic Dialing Format, the number of identification beeps is determined by the value programmed in Location 039 (Receiver 1) and Location 079 (Receiver 2). This value allows the identification of up to 15 different control panels that call the same telephone number.

Example

To program the Subscriber ID Number as 4729, program the six locations as:

[0 0 4 7 2 9]

11.6 Dialing Format

Location	080
1	Australian DTMF (5 digits/sec)
2	Australian decadic
3	Alternate DTMF and Australian decadic
4	International DTMF (touch tone)
5	Reversed decadic (10 minus 1)
6	Alternate DTMF and reversed decadic

The Dialing Format determines the method for dialing telephone numbers. Options 3 and 6 alternate the dialing sequence between DTMF and decadic if the call to the base station receiver is unsuccessful. Use caution when selecting the dialing method.

Select the Australian method only if the control panel is connected to the Australian Telecommunications Network. Select the International DTMF dialing option only in countries that allow both the caller and the receiver to terminate a phone call. Using the incorrect format can disable the control panel's patented Telephone Anti-Jamming feature.

> ☑ The alternating sequence is: DTMF – decadic – DTMF – decadic – DTMF – decadic.

11.7 Telco Arming Sequence

Location	113 to 142
Default	0

These locations allow you to activate call diversion automatically on your telephone when you arm the system in AWAY Mode.

When the Telco Arming Sequence is activated after arming the system in AWAY Mode, the control panel redirects all calls to your mobile phone, pocket pager, or answering service.

Contact your telecommunications provider for more information on Call Forward operations.

Table 46: Telco Arm/Disarm Dialing Digits

Digit Required	Number to Program	Digit Required	Number to Program
terminator	0	8	8
1	1	9	9
2	2	0	10
3	3	*	11
4	4	#	12
5	5	4 sec pause	13
6	6	break	14
7	7	15	15

To turn call forward (immediate) on, enter:

[* 2 1][forwarding telephone number][#]

Example

To immediately forward all incoming calls to the telephone number 96721055 after arming the system in AWAY Mode, program:

[11 2 1 9 6 7 2 1 10 5 5 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

To turn call forward (no answer) on, enter:

[* 6 1][forwarding telephone number][#]

Example

To forward all incoming calls, when there is no answer, to the telephone number 96721055 after arming the system in AWAY Mode, program:

[11 6 1 9 6 7 2 1 10 5 5 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

11.8 Telco Disarming Sequence

Location	143 to 158
Default	0

These locations allow you to deactivate call diversion automatically on your telephone when you disarm the system from AWAY Mode.

To turn call forward (immediate) off, enter:

[# 2 1 #]

Example

To disable call forward (immediate) after disarming the system from AWAY Mode, program:

[12 2 1 12 0 0 0 0 0 0 0 0 0 0 0 0 0]

To turn call forward (no answer) off, enter:

[# 6 1 #]

Example

To disable call forward (no answer) after disarming the system from AWAY Mode, program:

[12 6 1 12 0 0 0 0 0 0 0 0 0 0 0 0 0]

11.9 Call Back Telephone Number

Location	159 to 174
Default	0

This location stores the telephone number to call when Upload/Download is requested or the user holds down [6] to initiate a modem call from the control panel to establish a communications link with the remote computer. The computer must be running the CC816 Alarm Link Software and must be set to Waiting for an Incoming Call. The Call Back Telephone Number is also required if Remote Connection with Callback Verification is required (refer to *Section 8.1.3* on page 41).

Refer to *Section 8.0 Alarm Link Software* on page 40 for more information.

11.10 Ring Count

Location	175	
Default	8	
0		Panel does not answer
1 to 13		Number of rings until panel answers
14		Answering machine bypass 2
15		Answering machine bypass 1

This location sets the number of rings before the control panel answers an incoming call. Set this count to an acceptable level, noting that one ring is "Ring, Ring – Ring, Ring" and that a Ring Count of 10 represents approximately 60 sec. This location has an effect only if Remote Arming, remote Upload/Download using Alarm Link, or both are enabled. Programming this location to 0 prevents the control panel from answering incoming calls regardless of other programmed options.

Answering Machine Bypass

Answering Machine Bypass allows a connection with the control panel for Remote Arming or Upload/Download when an answering machine or facsimile machine is on the same telephone line. Answering Machine Bypass has two different methods. Program a 14 to use the secondary method only when there is a large amount of traffic on the line (at a home office, for example). This method reduces the chance of the control panel incorrectly answering an incoming call.

Programming the Ring Count to 15 enables Answering Machine Bypass in the primary mode. When calling the control panel, allow the telephone to ring no more than four times and then hang up. If you call again within 45 sec, the control panel answers the call on the first ring and the connection is established. This prevents the answering machine or facsimile machine from answering the call. To enable Answering Machine Bypass only when the system is armed, select Option 2 in Location 177 (refer to *Section 12.1 Dialer Options 1* on page 52).

Program the Ring Count to 14 to enable Answering Machine Bypass in the secondary mode. In this case, call the control panel and allow the phone to ring no more than twice and hang up. Wait a minimum of 8 sec and call the control panel again. The control panel answers on the first ring. If you do not wait the 8 sec, the control panel does not answer the call. To enable Answering Machine Bypass only when the system is armed, select Option 2 in Location 177 (refer to *Section 12.1 Dialer Options 1* on page 52).

> Set the Ring Count for the answering machine or facsimile machine to a value greater than two rings. Four to six rings is preferred.
>
> Program a 0 into this location to disable the control panel from answering an incoming call.

11.11 Telephone Line Fault Options

Location	176
Default	0
1	Display FAULT indicator when telephone line fails
2	Sound alarm when system is armed
4	Sound alarm when system is disarmed
8	Reserved

This location has three options. You can select any combination of these options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

The control panel monitors the telephone line. If the telephone line is cut or disconnected for longer than 40 sec, the control panel lights the FAULT indicator on the codepad. The FAULT indicator is extinguished after the telephone line is restored for longer than 40 sec.

> Options 2 and 4 do not operate unless you also enable Option 1.

1 – Display FAULT indicator When the Telephone Line Fails

When this options is selected, the FAULT indicator flashes and the codepad buzzer beeps once per min if the control panel detects that the telephone line is disconnected. Refer to *Section 3.13 Fault Descriptions* on page 18 for more information.

2 – Sound Alarm When System Is Armed

You must also select Option 1 to use this option. If the control panel detects that the telephone line is disconnected when the system is armed, the horn speaker, bell, and strobe outputs are activated. If only one audible alarm per arming cycle is required, select the Lockout Telephone Line Fail Alarm option (2) in Location 179 (refer to *Section 12.3 Dialer Options 3* on page 53).

4 – Sound Alarm when System Is Disarmed

You must also select Option 1 to use this option. If the control panel detects that the telephone line is disconnected when the system is disarmed, the horn speaker, bell, and strobe outputs are activated. If only one audible alarm per arming cycle is required, select the Lockout Telephone Line Fail Alarm option (2) in Location 179 (refer to *Section 12.3 Dialer Options 3* on page 53).

> If you program 7 in this location, the horn speaker, bell, strobe, and EDMSAT outputs are all activated when the system is armed or disarmed.

12.0 Dialer Options

Locations 177, 178, 179, and 180 have up to four options per location available for programming. You can select any combination of the options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

12.1 Dialer Options 1

Location	177
1	Dialer reporting functions allowed
2	Remote arming by telephone allowed
4	Answering machine bypass only when armed
8	Bell 103 used for FSK format (disabled = CCITT V21)

1 – Dialer Reporting Functions Allowed

If you select this option, the dialer operates for all functions.

If you do not select this option, the communication dialer does not operate.

Upload/Download using the CC816 Alarm Link Software and telephone remote arming remains operational regardless of this setting.

2 – Remote Arming by Telephone Allowed

If you select this option, you can remotely arm the system using a standard telephone by pressing [*] on your touch-tone telephone. Refer to *Section 6.0 Remote Arming by Telephone* on page 34 for more information. Forced arming is automatically assumed when this feature is used. Refer to *Section 14.3.7 Zone Options 2* on page 63 for more information on forced arming.

Remote arming by telephone is not affected by whether remote functions are enabled or disabled. Refer to *Section 8.2 Alarm Link Options* on page 41 for programming the number of rings before the control panel answers an incoming call.

4 – Answering Machine Bypass Only When Armed

Select this option to enable the Answering Machine Bypass feature when the system is armed. When the system is disarmed, the control panel does not answer any incoming calls. This option is beneficial in high telephone traffic installations where the control panel could answer an incoming call. Refer to *Section 8.2 Alarm Link Options* on page 41 to program Answering Machine Bypass.

8 – Use Bell 103 for FSK Format (Disabled=CCITT V21)

If this option is selected, the control panel uses the BELL 103 transmission frequency at 300 baud. If this option is not selected, the control panel uses the CCITT V21 transmission frequency at 300 baud.

12.2 Dialer Options 2

Location	178
Default	0
1	Open/Close Reports only if previous alarm
2	Open/Close Reports for STAY Mode 1 and STAY Mode 2
4	Delay siren until transmission complete
8	Extend handshake wait time from 30 sec to 60 sec

1 – Open/Close Reports Only if Previous Alarm

When selected, an Opening Report is transmitted to the base station receiver when the system is disarmed after an alarm occurred. When the system is armed, a Closing Report is transmitted. An Opening or Closing Report does not report again until the system registers another alarm.

Open/Close Reports must be enabled in Locations 401 and 402 (refer to *Section 15.13 Open/Close Reports* on page 65) for this option to work.

For a partitioned ICP-CC488 Control Panel, an Open/Close Report is sent only for the area in which the alarm occurred.

> If the system is disarmed when an alarm occurs, only a Closing Report is sent the next time the system is armed.
>
> A User Code with a priority set to Always Send Open/Close Reports overrides this feature (Open/Close Reports are always sent for that User Code).

2 – Open/Close Reports for STAY Mode 1 and STAY Mode 2

Select this option if Open and Close Reports are required when the system is armed in STAY Mode 1 or STAY Mode 2.

If this option is selected, a Partial Close Report (Contact ID Event Code 456) is sent when the system is armed in STAY Mode 1 or STAY Mode 2.

Open/Close Reports must be enabled in Locations 401 and 402 (refer to *Section 15.13 Open/Close Reports* on page 65) for this option to work.

4 – Delay Siren until Transmission Complete

If this option is selected, the EDMSAT, horn speaker, bell, and strobe outputs are not activated until after the control panel sends the message and the base station receiver sends a kiss-off back to the control panel. If multiple messages are transmitted, the sirens are activated after the last kiss-off is sent.

If a Codepad Panic, Codepad Fire, or Codepad Medical Alarm is activated, the EDMSAT, horn speaker, bell, and strobe outputs operate immediately.

8 – Extend Time to Wait for Handshake from 30 to 60 Sec

By default, the control panel waits approximately 30 sec for receipt of a valid handshake tone after it dials the monitoring station. The handshake tone indicates to the control panel that it reached the monitoring station and can now transmit its messages. Selecting this option extends this wait time from 30 sec to 60 sec.

12.3 Dialer Options 3

Location	179
1	Set DTMF dialing pulses to 1 digit per sec
2	Lockout Telephone Line Fail Alarm
4	Change decadic dialing to 60/40
8	Reserved

1 – Set DTMF Dialing Pulses to 1 Digit/Sec

If this option is not selected, the Australian DTMF dialing format dials at 5 digits per sec (that is, 100 ms tone, 100 ms pause, 100 ms tone, 100 ms pause).

If this option is selected, the Australian DTMF dialing format dials at the rate of 1 digit per sec (that is, 500 ms tone, 500 ms pause).

2 – Lockout Telephone Line Fail Alarm

Selecting this option allows an audible alarm only once per arming cycle when the control panel detects the telephone line is cut or disconnected. This option does not follow the Swinger Shutdown Count for Siren, in which you can program the number of times a zone can sound an alarm during an arming cycle. Use Location 176 to program the telephone line fault options (refer to *Section 11.11* on page 52).

4 – Change Decadic Dialing to 60/40

Some countries have different requirements for decadic dialing. Selecting this option changes the dialing characteristics from 65/35 (Australian Standard) to 60/40. Select this option only when the control panel is used in a country that requires decadic dialing as 60/40. This option has no effect when using DTMF tone dialing.

12.4 Alarm Link Options

Location	180
1	Upload/download allowed
2	Call back phone number required for upload/download
4	Exit upload/download connection on alarm

For more information about this location, refer to *Section 8.2 Alarm Link Options* on page 41.

13.0 Access Codes

This section describes the access codes used to assign privileges and access functions for User Code holders of the system. There are two types of access codes: the Installer Code and User Codes. Each of these codes allows specific access and operation of control panel functions.

13.1 Installer Code

Location	181 to 184	
	Location	**Default**
	181	1
	182	2
	183	3
	184	4

This code is used to access Installer's Programming Mode. The Installer Code can be up to four digits long. After the control panel is powered up, the Installer Code can disarm the system if it is the first code used. The next time the Installer Code is used enables access to Installer's Programming Mode.

Installer Code functions allow the installer to execute functions when the system is disarmed without the customer's Master Code. Refer to *Section 5.1 Installer Code Functions* on page 22 for more information.

Refer to *Section 7.1 Programming with the Remote Codepad* on page 34 for more information on programming the system.

13.2 User Codes

The purpose of User Codes is to arm and disarm the system and to perform other specific functions as described in *Section 5.2 Master Code Functions* 26. A Master Code holder can change or delete User Codes at any time.

User Codes 1 to 8 can be one to four digits long. Each User Code has its own priority level. More than one User Code can have the same priority level. The priority level controls the behavior of the code, such as allowing it to arm only, arm and disarm, or allow access to the Master Code functions. The installer can assign access to Master Code functions to multiple User Codes. The priority level for each User Code is programmed in the last location of the code.

> ✓ Only the installer can change the priority level.

Although 16 User Codes are available, User Codes 9 through 16 can only be Remote Radio User Codes. Refer to *Section 4.0 Remote Radio Transmitter Operations* on page 20 for more information.

User Code 16 is reported when any of these methods are used to arm or disarm the system:

- Arming and disarming using remote radio control equipment connected to the RE005 2 Channel Radio Interface.

- Arming and disarming using the CC816 Alarm Link Software.

- Arming remotely by telephone.

- Single button arming in AWAY Mode, STAY Mode 1, or STAY Mode 2.

- Single button disarming from STAY Mode 1 or STAY Mode 2.

- Automatic arming in AWAY Mode or STAY Mode 1.

- Automatic disarming from AWAY Mode, STAY Mode 1, or STAY Mode 2

13.2.1 User Codes

The ICP-CC488 Control Panel can have up to sixteen programmable User Codes (1 to 16) to operate the system. Refer to *Section 3.0 System Operations* on page 14 for information about the different methods to arm and disarm the system.

If you want to remotely operate the system using hand-held remote transmitters, you can program User Codes 9 to 16 as remote User Codes. Refer to *Section 4.0 Remote Radio Transmitter Operations* on page 20 for information on remote operations and adding and deleting Remote Radio User Codes.

Location	185 to 264		
		Location	Default
User Code 1		185	2
		186	5
		187	8
		188	0
	Priority Level	189	10
User Code 2		190 to 193	15
	Priority Level	194	2
User Code 3		195 to 198	15
	Priority Level	199	2
User Code 4		200 to 203	15
	Priority Level	204	2
User Code 5		205 to 208	15
	Priority Level	209	2
User Code6		210 to 213	15
	Priority Level	214	2
User Code 7		215 to 218	15
	Priority Level	219	2
User Code 8		220	0
		221 to 223	15
	Priority Level	224	3
User Code 9		225 to 228	15
	Priority Level	229	2
User Code 10		230 to 233	15
	Priority Level	234	2
User Code 11		235 to 238	15
	Priority Level	239	2
User Code 12		240 to 243	15
	Priority Level	244	2
User Code 13		245 to 248	15
	Priority Level	249	2
User Code 14		250 to 253	15
	Priority Level	254	2
User Code 15		255 to 258	15
	Priority Level	259	2
User Code 16		260 to 263	15
	Priority Level	264	2

13.3   User Code Priority

The installer can assign one of ten different priority levels to a User Code. Each priority level allows or restricts a user from performing specific functions.

Table 47: Priority Levels	
Priority Level	**Description**
0	Arm/disarm
1	Arm only
2	Arm/disarm and Open/Close Reports
3	Arm only and Close Report
4	Arm/disarm and code to isolate
6	Arm/disarm, code to isolate, and Open/Close Reports
8	Arm/disarm and Master Code functions
10	Arm/disarm, Master Code functions, and Open/Close Reports
12	Arm/disarm, Master Code functions, and code to isolate
14	Arm/disarm, Master Code functions, code to isolate, and Open/Close Reports

Arm/Disarm

The user can arm and disarm the system. A Closing Report is sent only after a previous code with the ability to send an Opening Report disarms the system.

Arm Only

The user can arm the system but cannot disarm the system. A Closing Report is sent only after a previous code with the ability to send an Opening Report disarms the system.

Open/Close Reports

Open and Close Reports are sent to the monitoring station when the user disarms and arms the system, but only if Open/Close Reports is enabled in Locations 401 and 402 (refer to *Section 15.13 Open/Close Reports* on page 67).

Code To Isolate

If one or more User Codes include this option, the method of standard isolating is disabled and only a User Code with this option in its priority level can isolate zones before arming the system using the Code to Isolate method. Refer to *Section 3.11 Isolating Zones* on page 17 for more information.

> ✓ When priority level 4, 6, 12, or 14 is assigned to any User Codes, the Standard Isolating method no longer operates. Only User Codes with a priority level of 4, 6, 12, or 14 can isolate zones using the Code to Isolate method.

Master Code Functions

The user has access to all Master Code functions. Refer to *Section 5.2 Master Code Functions* on page 26 for more information.

14.0 Zone Information

14.1 Day Alarm Information

Location	265
Default	0
1	Zone 1
2	Zone 2
4	Zone 3
8	Zone 4

This location has four programming options. You can select any combination of the options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

Day Alarm allows some zones to be monitored when the system is disarmed. Indications are available at any of the programmable outputs, including the codepad buzzer. This function accommodates latching and non-latching Day Alarm Output Event Types.

When the system is armed in AWAY Mode, STAY Mode 1, or STAY Mode 2, zones programmed as Day Alarm Zones activate the sirens and dialer just as non-Day Alarm Zones do. When Day Alarm is activated, it ignores any zone Pulse Count settings programmed for that zone (that is, the zone Pulse Count is only relevant when the system is armed).

Example

You can set up a Day Alarm at the front door of a shop with a pressure mat or electronic beam that is activated when a customer enters the shop. When a customer walks on the pressure mat or breaks the electronic beam, the codepad buzzer beeps.

14.1.1   Day Alarm Resetting

An output that is programmed for Day Alarm Resetting operates when a zone programmed for Day Alarm is activated. The output is reset after the zone is resealed. This occurs only when the system is disarmed. Refer to *Output Event Type 0,14 Day Alarm Resetting* on page 72 for more information.

14.1.2   Day Alarm Latching

An output that is programmed for Day Alarm Latching operates when a zone programmed for Day Alarm is activated. The zone indicator and the latching output resets when [AWAY] is pressed. This occurs only when the system is disarmed. Refer to *Output Event Type 0,15 Day Alarm Latching* on page 72 for more information.

14.1.3   Day Alarm Operation

If a zone is programmed for Day Alarm, the zone can be isolated in the normal way so that it does not register as a Day Alarm Zone when the system is disarmed. You can use only Zones 1 to 4 as Day Alarm Zones.

You can program the STAY indicator to indicate whether Day Alarm is turned on or off by selecting Option 8 in Location 496 (refer to *Section 18.5 Consumer Options 1* on page 82). When Day Alarm is on, the STAY indicator flashes once every 3 sec.

You can program an output to mimic a zone for monitoring Zones 5 to 8. Refer to *Section 16.2 Output Event Types* on page 71 for more information on the Output Event Types that you can program.

To turn Day Alarm on:

Press and hold [4] until three beeps sound.

To turn Day Alarm off:

Press and hold [4] until two beeps sound.

14.2 EOL Resistor Value

Location	266
0	No EOL
1	1K (brown, black, red)
2	1K5 (brown, green, red)
3	2K2 (red, red, red)
4	3K3 (orange, orange, black, brown) 1%
5	3K9 (orange, white, red)
6	4K7 (yellow, violet, red)
7	5K6 (green, blue, red)
8	6K8 (blue, grey, black, brown) 1%
9	10K (brown, black, orange)
10	12K (brown, red, orange)
11	22K (red, red, orange)
12	Reserved
13	Reserved
14	Split EOL (3K3/6K8) with tamper (1K)
15	Split EOL 1% resistors

You can program the control panel for different end-of-line (EOL) resistor values. This is a global parameter that affects all zones simultaneously. This feature allows you to install the ICP-CC488 Control Panel at an existing site without changing the EOL resistors. This feature also increases the security of the system because eleven possible EOL resistor values can be used, which makes it extremely difficult to tamper with the system.

This configuration is suitable only for normally-closed (N/C) contacts. If normally-open (N/O) contacts are used, as is the case with most smoke detectors, a short circuit on one zone activates both zones connected in parallel.

If you require N/O contacts when using split EOL resistors, refer to *Figure 12* and *Figure 13* on pages 57 and 58 for information on how to connect N/O contacts.

Figure 10: Split EOL Resistors Using N/C Contacts

1 – Zone 1	6 – Zone 6
2 – Zone 2	7 – Zone 7
3 – Zone 3	8 – Zone 8
4 – Zone 4	9 – 3K3
5 – Zone 5	10 – 6K8
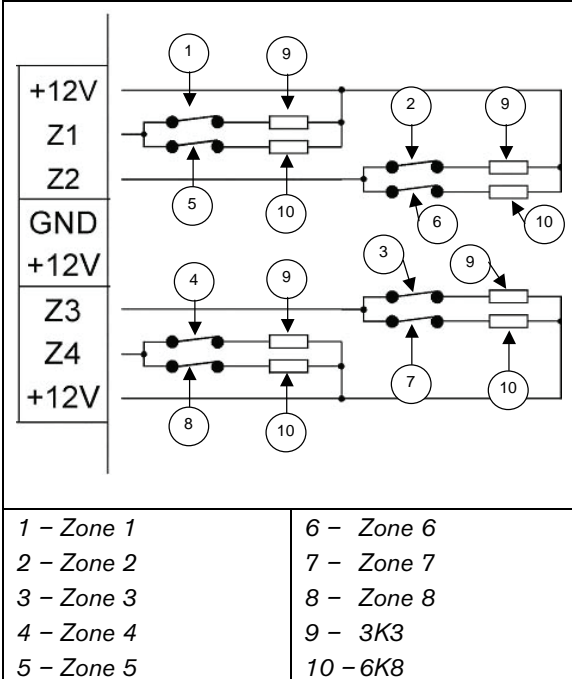
Figure 11: Split EOL Resistors with Tamper Circuit
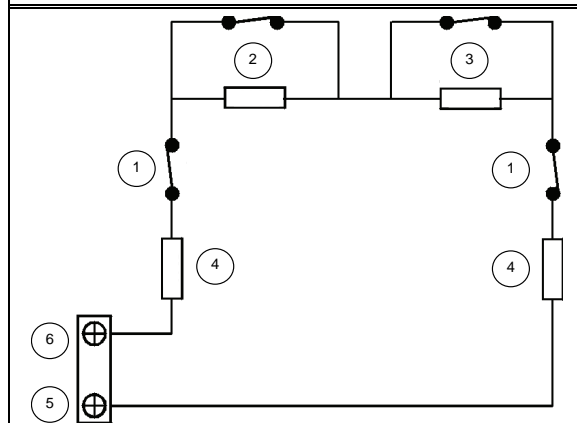
1 – Tamper	4 – 1K
2 – Zone 1 3K3	5 – Zone 1
3 – Zone 5 6K8	6 – +12V

Figure 12: Split EOL Resistors Using One N/O Contact
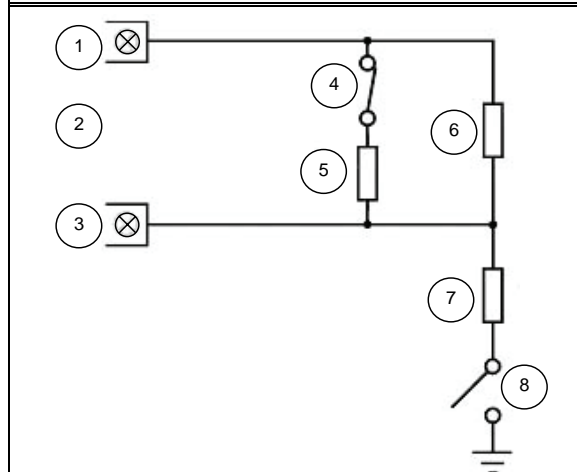
1 – +12 V	5 – EOL 3K3
2 – Zone Input	6 – EOL 6K8
3 – Zone	7 – EOL 4K7
4 – N/C	8 – N/O

Figure 13: Split EOL Resistors Using Two N/O Contacts

1 − +12 V	5 − EOL 6K8
2 − Zone Input	6 − EOL 1K5
3 − Zone	7 − EOL 4K7
4 − EOL 3k3	8 − N/O
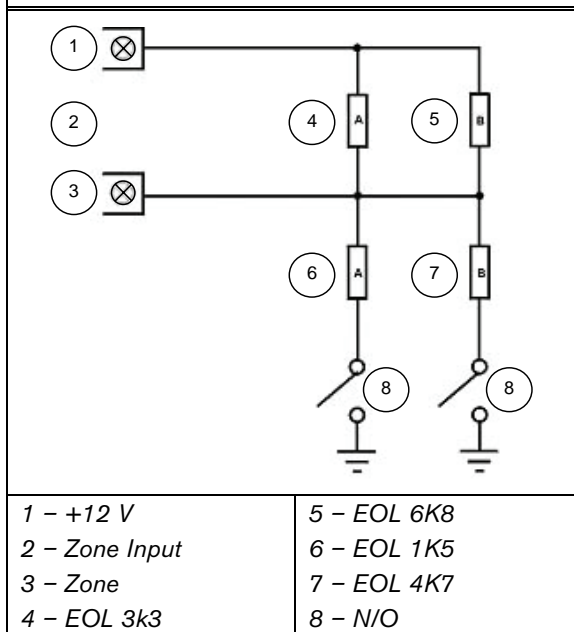
14.3   Zone Programming

The programming information for each zone is stored in seven locations divided into three groups. The first three locations determine how the zone operates, the next two locations set up a number of zone options, and the last two locations store the dialer reporting information for the zone.

Zone Operating Information

These locations store the Zone Type (for example, Delay-1, Instant, or 24-Hour), the Zone Pulse Count, and the Zone Pulse Count Time. The Zone Pulse Count specifies the number of times the zone must activate within the time specified in the Zone Pulse Count Time. Refer to *Sections 14.3.2 Zone Types, 14.3.3 Zone Pulse Count*, and *14.3.4 Zone Pulse Count Time* on pages 59 through 61 for more information.

Zone Options

These two locations allow you to select from a number of options. Refer to *Sections 14.3.5 Zone Options 1* on page 61 and *14.3.7 Zone Options 2* on page 63 for more information.

Zone Reporting Information

This information includes the locations for the Zone Report Code and the Zone Dialer Options.

The Zone Report Code determines if the control panel sends Alarm Reports for the zone. Refer to *Section 14.3.8 Zone Report Code* on page 64 for more information.

The Zone Dialer Options location enables you to specify how a zone reports to a base station receiver. Refer to *Section 14.3.9 Zone Dialer Options* on page 64 for more information.

14.3.1   ICP-CC488 Zone Defaults

Location	267 to 378	

	Location	Default
Zone #01 (Default = Delay−1)		
Zone Type	267	2
Zone Pulse Count	268	0
Zone Pulse Count Time	269	0
Zone Options 1	270	1
Zone Options 2	271	14
Report Code	272	1
Dialer Options	273	1
Zone #02 (Default = Handover)		
Zone Type	274	1
Zone Pulse Count	275	0
Zone Pulse Count Time	276	0
Zone Options 1	277	1
Zone Options 2	278	14
Report Code	279	1
Dialer Options	280	1
Zone #03 (Default = Handover)		
Zone Type	281	1
Zone Pulse Count	282	0
Zone Pulse Count Time	283	0
Zone Options 1	284	1
Zone Options 2	285	14
Report Code	286	1
Dialer Options	287	1
Zone #04 (Default = Handover)		
Zone Type	288	1
Zone Pulse Count	289	0
Zone Pulse Count Time	290	0
Zone Options 1	291	1
Zone Options 2	292	14
Report Code	293	1
Dialer Options	294	1
Zone #05 (Default = Instant)		
Zone Type	295	0
Zone Pulse Count	296	0
Zone Pulse Count Time	297	0
Zone Options 1	298	1
Zone Options 2	299	14
Report Code	300	1
Dialer Options	301	1
Zone #06 (Default = Instant)		
Zone Type	302	0
Zone Pulse Count	303	0
Zone Pulse Count Time	304	0
Zone Options 1	305	1
Zone Options 2	306	14
Report Code	307	1
Dialer Options	308	1

Location	267 to 378 (continued)	
	Location	**Default**
Zone #07 (Default = Instant)		
Zone Type	309	0
Zone Pulse Count	310	0
Zone Pulse Count Time	311	0
Zone Options 1	312	1
Zone Options 2	313	12
Report Code	314	1
Dialer Options	315	1
Zone #08 (Default = 24-hr. Tamper)		
Zone Type	316	9
Zone Pulse Count	317	0
Zone Pulse Count Time	318	0
Zone Options 1	319	1
Zone Options 2	320	12
Report Code	321	1
Dialer Options	322	1
Zone #09 (Default = Instant)		
Zone Type	323	15
Zone Pulse Count	324	0
Zone Pulse Count Time	325	0
Zone Options 1	326	1
Zone Options 2	327	14
Report Code	328	1
Dialer Options	329	1
Zone #10 (Default = Instant)		
Zone Type	330	15
Zone Pulse Count	331	0
Zone Pulse Count Time	332	0
Zone Options 1	333	1
Zone Options 2	334	14
Report Code	335	1
Dialer Options	336	1
Zone #11 (Default = Instant)		
Zone Type	337	15
Zone Pulse Count	338	0
Zone Pulse Count Time	339	0
Zone Options 1	340	1
Zone Options 2	341	14
Report Code	342	1
Dialer Options	343	1
Zone #12 (Default = Instant)		
Zone Type	344	15
Zone Pulse Count	345	0
Zone Pulse Count Time	346	0
Zone Options 1	347	1
Zone Options 2	348	14
Report Code	349	1
Dialer Options	350	1

Location	267 to 378 (continued)	
	Location	**Default**
Zone #13 (Default = Instant)		
Zone Type	351	15
Zone Pulse Count	352	0
Zone Pulse Count Time	353	0
Zone Options 1	354	1
Zone Options 2	355	14
Report Code	356	1
Dialer Options	357	1
Zone #14 (Default = Instant)		
Zone Type	358	15
Zone Pulse Count	359	0
Zone Pulse Count Time	360	0
Zone Options 1	361	1
Zone Options 2	362	14
Report Code	363	1
Dialer Options	364	1
Zone #15 (Default = Instant)		
Zone Type	365	15
Zone Pulse Count	366	0
Zone Pulse Count Time	367	0
Zone Options 1	368	1
Zone Options 2	369	14
Report Code	370	1
Dialer Options	371	1
Zone #16 (Default = Instant)		
Zone Type	372	15
Zone Pulse Count	373	0
Zone Pulse Count Time	374	0
Zone Options 1	375	1
Zone Options 2	376	14
Report Code	377	1
Dialer Options	378	1

You can program Zones 1 to 16 as any zone type.

14.3.2   Zone Types

The zone types are listed in *Table 48.*

Table 48: Zone Types	
Zone Type	**Description**
0	Instant
1	Handover
2	Delay-1
3	Delay-2
4	Reserved
5	Reserved
6	24-Hour Medical
7	24-Hour Panic
8	24-Hour Holdup
9	24-Hour Tamper
10	Reserved
11	Keyswitch
12	24-Hour Burglary
13	24-Hour Fire
14	Chime Only
15	Not used

0 – Instant Zone

An Instant Zone (Contact ID Event Code 130) immediately sounds the sirens and operates the dialer if it is unsealed after the Exit Timer expires.

If an Instant Zone is not restored when the time the system is disarmed, a Zone Restore Report is automatically sent to the receiving party.

1 – Handover Zone

A Handover Zone (Contact ID Event Code 130) acts as an Instant Zone if it is activated by itself. If a Handover Zone is activated after a Delay Zone, the remaining Delay Time is handed over from the Delay Zone to the Handover Zone.

Handover can be sequential or non-sequential. The default settings is sequential handover. You can disable sequential handover by disabling Option 8 in Location 494 (refer to *Section 18.3 System Options 3* on page 81).

If a Handover Zone is not restored when the system is disarmed, a Zone Restore Report is automatically sent to the receiving party.

2 – Delay-1 Zone

A Delay-1 Zone (Contact ID Event Code 130) has a delay time determined by the value in Locations 466 and 467 (refer to *Section 17.2 Entry Timer 1* on page 78). After Entry Time expires, the system activates an alarm.

If a Delay-1 Zone is not restored when the system is disarmed, a Zone Restore Report is automatically sent to the receiving party.

3 – Delay-2 Zone

A Delay-2 Zone (Contact ID Event Code 130) has a delay time determined by the value in Locations 468 and 469 (refer to *Section 17.3 Entry Timer 2* on page 78). After Entry Time expires, the system activates an alarm.

If a Delay-2 Zone is not restored when the system is disarmed, a Zone Restore Report is automatically sent to the receiving party.

6 – 24-Hour Medical Zone

A 24-Hour Medical Zone (Contact ID Event Code 100) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. A Medical Report is transmitted to the base station receiver. A 24-Hour Medical Zone does not send a Restore Report until the zone is restored.

7 – 24-Hour Panic Zone

A 24-Hour Panic Zone (Contact ID Event Code 120) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. A Panic Report is transmitted to the base station receiver. A 24-Hour Panic Zone does not send a Restore Report until the zone is restored.

8 – 24-Hour Holdup Zone

A 24-Hour Holdup Zone (Contact ID Event Code 122) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. If you want the holdup alarm to be silent, select Option 4 in the first Zone Options location (refer to *Section 14.3.5 Zone Options 1* on page 61). A 24-Hour Holdup Zone does not send a Restore Report until the zone is restored.

9 – 24-Hour Tamper Zone

A 24-Hour Tamper Zone (Contact ID Event Code 137) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. A 24-Hour Tamper zone does not send a Restore Report until the zone is restored.

11 – Keyswitch Zone

Use a Keyswitch Zone to connect a keyswitch to operate the system. Refer to *Section 14.3.6 Keyswitch Zone Options* for information on programming this zone type. User Code 16 is reported when arming and disarming using this method of operation. Programming the priority level of User Code 16 also affects the operation of the Keyswitch Zone. Refer to *Section 13.3 User Code Priority* for more information.

12 – 24-Hour Burglary Zone

A 24-Hour Burglary Zone (Contact ID Event Code 133) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. A 24-Hour Burglary zone does not send a Restore Report until the zone is restored.

13 – 24-Hour Fire Zone

A 24-Hour Fire Zone (Contact ID Event Code 110) is always ready to activate the dialer, horn speaker, bell, and strobe, whether the system is armed or disarmed. A distinct fire sound is emitted through the horn speaker to indicate this type of alarm. This fire sound is completely different from the burglary sound. A 24-Hour Fire zone does not send a Restore Report until the zone is restored.

14 – Chime Zone

A Chime Zone is not a burglary zone. It can never sound the sirens or activate the dialer. Its purpose is to map the zone to a programmable output to indicate if the zone is sealed or unsealed. Refer to *Output Event Type 4,5 Global Chime* on page 75.

Chime zones require EOL resistors and are registered at a remote codepad. These zones do not affect the operation of forced arming.

15 –Zone Not Used

If a zone is not used, program the zone type location to 15. An EOL resistor is not required if this zone type is used. This zone type never sounds the sirens or activates the dialer.

14.3.3   Zone Pulse Count

Zone pulse count is the number of times a zone must be activated before the zone registers an alarm. The number can vary from 0 to 15. The zone pulse count value is relative to the time frame (that is, the number of pulses that must be present during a particular time frame). Refer to *Section 14.3.4 Zone Pulse Count Time* for time frame settings.

> ☑ A zone that is programmed with a pulse count activates an alarm when it is continuously unsealed for 10 sec. A 24-Hour Fire Zone programmed with a pulse count activates an alarm when it is continuously unsealed for 30 sec.

Zone Pulse Count Handover

Zone pulse count handover operates only with Zone Pulse Count Time options 8 to 15. Refer to *Section 14.3.4 Zone Pulse Count Time* for more information.

Any zone that registers one activate pulse automatically increments any other zone pulse count that already registered at least one activate pulse during its respective time. To enable this feature, select Option 4 in Location 494 (refer to *Section 18.3 System Options 3* on page 81).

> ☑ 24-Hour Zones will receive all handover pulses from other zones. 24-Hour Zones cannot handover pulses to other zones.

14.3.4   Zone Pulse Count Time

Zone pulse count time is the time frame or period over which the programmed number of pulses must register to activate an alarm.

Table 49:   Zone Pulse Count Times

20 ms Loop Response		150 ms Loop Response	
Option	Time (sec)	Option	Time (sec)
0	0.5	8	20
1	1	9	30
2	2	10	40
3	3	11	50
4	4	12	60
5	5	13	90
6	10	14	120
7	15	15	200

For zone pulse count time, options 0 to 7 have a zone loop response time of 20 ms and options 8 to 15 have a zone loop response time of 150 ms. Loop response time is the length of time a zone must be unsealed before it can register as a valid pulse.

Inertia sensors should use options 0 to 7 and PIR detectors should use options 8 to 15.

> ☑ 24-Hour Zones can receive any handover pulses from other zones. 24-Hour Zones cannot hand over pulses to other zones.

14.3.5   Zone Options 1

This location has four programming options. You can select any combination of the options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

Table 50:   Zone Options 1

Option	Description
1	Lockout siren/lockout dialer
2	Delay Alarm reporting
4	Silent Alarm
8	Sensor watch

1 – Lockout Siren and Lockout Dialer

Lockout refers to one activation per arming cycle (that is, a zone programmed for Lockout can activate the sirens or dialer only once).

The next time the system is armed, the zone can activate the sirens and dialer once more. Restore signals are sent when the system is disarmed.

The ICP-CC488 Control Panel performs lockout differently than other control panels because only the first zone to activate an alarm is locked out. All other zones that are activated during the same Siren Run Time are reset when the sirens are reset. This prevents an intruder from activating all zones and waiting for the sirens to stop before re-entering the premises.

Example

All zones are programmed for both lockout siren and dialer. Zone 1 is activated, followed by all other zones, which activates the sirens and causes the dialer to report to the base station receiver. Zone 1 is the only zone that stops reporting to the base station receiver because the first activated zone is locked out. The remaining zones continue to report if they are activated again.

Use Location 379 to set the number of times the siren is allowed to activate before it is locked out (refer to *Section 14.4 Swinger Shutdown Count for Siren* on page 64). Use Location 380 to set the number of times the dialer is activated before lockout takes effect (refer to *Section 14.5 Swinger Shutdown Count for Dialer* on page 64).).

2 – Delay Alarm Reporting

Select this option to allow the reporting of alarms on selected zones to be delayed so that a user can enter a code to cancel alarms that are not required to report. All sounding devices (horn speaker, strobe, and bell outputs) operate as soon as the alarm occurs, but the dialer does not operate until the delay time programmed in Locations 474 and 475 expires (refer to *Section 17.6 Delay Alarm Reporting Time* on page *78*).

4 – Silent Alarm

Select this option to program a zone as silent. A silent zone does not activate the horn speaker, bell, strobe, or EDMSAT outputs. The dialer and all other programmable outputs function according to the parameters programmed for the zone.

8 – Sensor Watch

Sensor watch allows the control panel to recognize when detection devices might have stopped working. This feature monitors the operation of a zone over the time period programmed in Locations 476 and 477 (refer to *Section 15.5 Zone Status – Sensor Watch Reports* on page 78).

This value specifies how many 24-hour periods a zone can remain continuously sealed before it registers as a Sensor Watch fault. The number of hours required to fulfill these 24-hour periods is calculated only when the system is disarmed. Every time the system is armed in the AWAY Mode, STAY Mode 1, or STAY Mode 2, the Sensor Watch Timer pauses its count. The Sensor Watch Timer continues its count the next time the system is disarmed.

Program Locations 389 and 390 to 0 to disable Sensor Watch Reports (refer to *Section 15.5 Zone Status – Sensor Watch Reports* on page 66).

Example

If the Sensor Watch Time is programmed for 2 days and the premises is armed for 12 hours and disarmed for 12 hours each day, it takes 4 days before a zone can register a Sensor Watch fault.

14.3.6   Keyswitch Zone Options

Table 51 on page 62 lists the options available to Keyswitch Zones. If you program a zone as a keyswitch input (Zone Type 11), program the selected Keyswitch Zone options in the location normally used for Zone Options 1. Keyswitch zones report as User Code 16.

Table 51:   Keyswitch Zone Options

Option	Description
0	Latching arm and disarm in AWAY Mode
1	Latching arm in AWAY Mode
2	Latching disarm from AWAY Mode, STAY Mode 1, or STAY Mode 2
4	Latching arm and disarm in STAY Mode 1
5	Latching arm in STAY Mode 1
6	Latching disarm from STAY Mode 1 or STAY Mode 2
8	Momentary arm and disarm in AWAY Mode
9	Momentary arm In AWAY Mode
10	Momentary disarm from AWAY Mode, STAY Mode 1, or STAY Mode 2
12	Momentary arm and disarm in STAY Mode 1
13	Momentary arm in STAY Mode 1
14	Momentary disarm from STAY Mode 1 or STAY Mode 2

0 – Latching Arm and Disarm in AWAY Mode

The system is armed or disarmed from AWAY Mode when using the latching keyswitch input.

1 – Latching Arm in AWAY Mode

The system is armed in AWAY Mode when using the latching keyswitch input. Disarming the system is not permitted from the Keyswitch Zone.

2 – Latching Disarm from AWAY Mode, STAY Mode 1, or STAY Mode 2

The system is disarmed from AWAY Mode, STAY Mode 1, or STAY Mode 2 when using the latching keyswitch input. Arming the system is not permitted from the Keyswitch Zone.

4 – Latching Arm and Disarm in STAY Mode 1

The system is armed or disarmed in STAY Mode 1 when using the latching keyswitch input. Arming and disarming the system in AWAY Mode is not permitted from the Keyswitch Zone.

5 – Latching Arm in STAY Mode 1

The system is armed in STAY Mode 1 when using the latching keyswitch input. Arming the system in AWAY Mode or disarming the system is not permitted from the Keyswitch Zone.

6 – Latching Disarm from STAY Mode 1 or STAY Mode 2

The system is disarmed from STAY Mode 1 or STAY Mode 2 when using the latching keyswitch input. Arming the system in STAY Mode 1 or STAY Mode 2, or arming and disarming the system in AWAY Mode is permitted from the Keyswitch Zone.

8 – Momentary Arm and Disarm in AWAY Mode

The system is armed or disarmed from AWAY Mode when using the momentary keyswitch input.

9 – Momentary Arm in AWAY Mode

The system is armed in AWAY Mode when using the momentary keyswitch input. Disarming the system is not permitted from the Keyswitch Zone.

10 – Momentary Disarm from AWAY Mode, STAY Mode 1, or STAY Mode 2

The system is disarmed from either AWAY Mode, STAY Mode 1, or STAY Mode 2 when using the momentary keyswitch input. Arming the system is not permitted from the Keyswitch Zone.

12 – Momentary Arm and Disarm in STAY Mode 1

The system is armed or disarmed in STAY Mode 1 when using the momentary keyswitch input. Arming and disarming the system in AWAY Mode is not permitted from the Keyswitch Zone.

13 – Momentary Arm in STAY Mode 1

The system is armed in STAY Mode 1 when using the momentary keyswitch input. Arming the system in AWAY Mode or disarming the system is not permitted from the Keyswitch Zone.

14 – Momentary Disarm from STAY Mode 1 or STAY Mode 2

The system is disarmed from STAY Mode 1 or STAY Mode 2 when using the momentary keyswitch input. Arming the system in STAY Mode 1 or STAY Mode 2, or arming and disarming the system from AWAY Mode is not permitted from the Keyswitch Zone.

Figure 14: Wiring Diagram for Keyswitch Zone

1 – EOL

2 – Keyswitch (Momentary/Toggle)
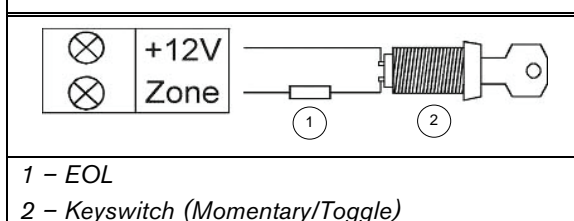
Figure 15: Wiring Diagram for Keyswitch Zone Using Split EOL with Tamper

1 – EOL

2 – Keyswitch (Momentary/Toggle)
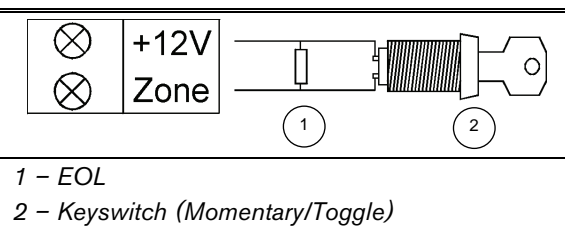
14.3.7   Zone Options 2

This location has four programming options. You can select any combination of the options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

Table 52: Zone Options 2

Option	Description
1	Isolate in STAY Mode 1
2	Zone Isolation Allowed
4	Forced Arming Allowed
8	Zone Restore Report

1 – Isolate in STAY Mode 1

If this option is selected, the zone can be automatically isolated when the system is armed in STAY Mode 1.

If this option is not selected and the system is armed in STAY Mode 1, the zone activates an alarm when activated as it normally would in AWAY Mode.

You can specify a global entry time for all zones, except for 24-Hour Zones, when the system is armed in STAY Mode 1. You program this time in Locations 472 and 473 (refer to *Section 17.5 Entry Guard Timer for STAY* Mode on page 78). The Entry Guard Timer overrides the delay time programmed for a Delay Zone. If you program the Entry Guard Timer as 0, each zone acts according to its programmed zone type.

Refer to *Section 3.3 Arming the System in STAY Mode 1* on page 14 for more information.

2 – Zone Isolation Allowed

If this option is selected, the operator can isolate the zone before arming the system. If this option is not selected, the zone cannot be manually isolated. When a zone is manually isolated, a Zone Bypass Report (Contact ID Event Code 570) is sent. Refer to *Section 3.11 Isolating Zones* on page 17 for more information.

When isolating 24-Hour Zones, the system automatically sends a Zone Bypass Report when the zone is selected to be isolated. All non-24-Hour zones send a Bypass Report only when the system is armed.

If you do not want the system to report Zone Bypass Reports, program Locations 385 and 386 to 0 (refer to *Section 15.3 Zone Status – Bypass Reports* on page 65).

4 – Forced Arming Allowed

If this option is selected, the system can be armed with the zone unsealed. If this option is not selected, the system does not allow the User Code holder to arm the system until the zone is sealed or manually isolated. Refer to *Section 3.11 Isolating Zones* on page 17 for more information.

8 – Zone Restore Report

If this option is selected, the zone sends Restore Reports when the zone is restored. If this option is not selected, the zone does not send Restore Reports when the zone is restored.

If a non-24-Hour zone is not restored when the system is disarmed, the system automatically sends a Zone Restore Report for that zone. All 24-Hour zones send a Zone Restore Report only when the zone is restored.

14.3.8   Zone Report Code

If you want the control panel to transmit Zone Alarm Reports, program this location as 1. If not, program this location as 0.

14.3.9   Zone Dialer Options

By default, a zone reports only to Receiver 1. *Table 53* on page 64 lists the reporting options for the zone.

Table 53:   Zone Dialer Options

Option	Description
0	No report required
1	Receiver 1
2	Receiver 2
4	Receiver 1 and Receiver 2
8	Receiver 2 only when Receiver 1 fails

14.4   Swinger Shutdown Count for Siren

Location	379
Default	3
1 to 15	Number of times siren operates until lockout

Location 379 determines the number of times the sirens can be activated before lockout options take effect. This location has no effect unless you program at least one zone for lockout siren. Refer to *Section 14.3.5 Zone Options 1* on page 61 to program zones for lockout siren.

Only alarms activated from zone inputs can decrement the Swinger Shutdown Counter. Alarms such as Codepad Panic, Access Denied, and other system alarms do not affect the Swinger Shutdown Count.

When the sirens are operating, the Swinger Shutdown Counter is decremented only by the first zone that activated the alarm. Any other zones activated during Siren Run Time do not affect the counter.

When the Swinger Shutdown Count is reached, all zones that were activated are locked out according to their individual lockout settings.

Example

All eight zones are programmed for lockout siren with a Swinger Shutdown Count of 3. If Zone 1 activates an alarm, the Swinger Shutdown Count is decremented by one after the end of Siren Run Time to a swinger shutdown count of 2.

After the Siren Run Time is reset from the previous alarm, Zone 2 activates an alarm and activates the sirens. After the sirens are reset, the swinger shutdown count is decremented again to 1.

If Zone 3 also activates an alarm after the sirens are reset from Zone 2, the Swinger Shutdown Count is decremented to 0, which locks out all three zones from sounding the sirens until the system is reset.

At this point, the Swinger Shutdown Count for Sirens is reset to 3 and the process of swinger shutdown for remaining zones begins again until all zones are locked out.

> If the ICP-CC488 Control Panel is partitioned, the Swinger Shutdown Count for Siren applies to both Area 1 and Area 2.

14.5   Swinger Shutdown Count for Dialer

Location	380
Default	6
1 to 15	Number of times dialer operates until lockout

Location 380 determines the number of times the dialer can be activated before lockout options take effect. This location has no effect unless you program at least one zone for lockout dialer. Refer to *Section 14.3.5 Zone Options 1* on page 61 to program zones for lockout dialer.

Only alarms activated from zone inputs can decrement the Swinger Shutdown Counter. Alarms such as Codepad Panic, Code Retries, and other system alarms do not affect the Swinger Shutdown Count.

When the dialer is online, its counter is decremented only by the first zone that activated the alarm. Any other zones activated while the dialer is online do not affect the counter.

When the Swinger Shutdown Count is reached, all zones that were activated are locked out according to their individual lockout settings.

> ✓ If Lockout Dialer is enabled for any zone, the last restore signal is not transmitted until the system is disarmed.
>
> If the ICP-CC488 Control Panel is partitioned, the Swinger Shutdown Count for Dialer applies to both Area 1 and Area 2.

Example

All eight zones are programmed for lockout dialer with a Swinger Shutdown Count of 6. If Zone 1 activates an alarm, the Swinger Shutdown Count decrements to 5 when the control panel calls.

If Zone 1 reactivates the dialer, the Swinger Shutdown Count is decremented by to 4. If Zone 1 reactivates the dialer three more times, the Swinger Shutdown Count is 1.

If Zone 2 activates an alarm, the Swinger Shutdown Count is decremented to 0, which locks out Zone 2 from activating the dialer until the system is reset. At this point, the Swinger Shutdown Count for the Dialer is reset to 6 and the process of swinger shutdown for the remaining zones, including Zone 1, begins again until all zones are locked out.

15.0 System Reporting Information

This section covers features that are involved with basic housekeeping of the system. These include monitoring of the zones, whether they are isolated from the system or are actually operating, the status of the AC MAINS and DC power to the system, and codepad-generated alarms activated by the user.

15.1 Zone Status – Zone Tamper Report

Location　　381 to 382		
	Location	**Default**
Zone Tamper Report	381	0
Zone Tamper Restore Report	382	0

A Zone Tamper Report (Contact ID Event Code 144) is sent when Option 14 is programmed in Location 266 (refer to *Section 14.2 EOL Resistor Value* on page 56) and the zone loop using split EOL resistors (3K3/6K8) with tamper (1K) becomes open circuit.

To enable Zone Tamper and Zone Tamper Restore Reports, program the two locations with any digit from 1 to 15.

15.2 Zone Status – Walk Test Report

Location　　383 to 384		
	Location	**Default**
Walk Test Report	383	0
Walk Test Restore Report	384	0

A Walk Test Report (Contact ID Event Code 607) is sent when either the Installer or Master Code holder activates Walk Test Mode (refer to *Section 5.1.8* on page 26 or *Section 5.2.9* on page 31 for more information).

To enable Walk Test and Walk Test Restore Reports, program the two locations with any digit from 1 to 15.

15.3 Zone Status – Bypass Reports

Location　　385 to 386		
	Location	**Default**
Zone Bypass Report	385	9
Zone Bypass Restore Report	386	8

A zone is bypassed when it is manually isolated. Refer to *Section 3.11 Isolating Zones* on page 17 for information on isolating zones. A Zone Bypass Report (Contact ID Event Code 573) is sent at the end of Exit Time for any zone that was manually isolated. A 24-Hour Zone sends a Zone Bypass Report when the zone is selected to be isolated.

A Zone Bypass Restore Report is sent when the system is disarmed. All bypassed zones are automatically cleared when the system is disarmed.

The Bypass code parameter has no effect on Contact ID Format because a Zone Bypass is always reported as Event Code 570.

> ✓ If Zone Bypass Reports are not required, program Locations 385 and 386 as 0.
>
> A 24-Hour Burglary Zone that is manually bypassed reports as Contact ID Event Code 572.
>
> A 24-Hour Fire Zone that is manually bypassed reports as Contact ID Event Code 571.

15.4 Zone Status – Trouble Reports

Location　　387 to 388		
	Location	**Default**
Zone Trouble Report	387	2
Zone Trouble Restore Report	388	3

A zone is in trouble when it is unsealed at the end of Exit Time. A Sensor Trouble Report (Contact ID Event Code 380) is sent to indicate that one or more zones were automatically isolated by the system. 24-Hour Zones that are unsealed at the end of Exit Time do not transmit a Sensor Trouble Report because the restoral for that zone is still outstanding.

A Sensor Trouble Restore Report is sent for Burglary Zones when the zone is resealed or the next time the system is disarmed (whichever happens first). A 24-Hour Zone sends a restore signal only when it is resealed.

The Trouble code parameter has no effect on Contact ID Format because a Sensor Trouble Report is always reported as Event Code 380.

☑ If Sensor Trouble Reports are not required, program Locations 387 and 388 as 0.

15.5 Zone Status – Sensor Watch Reports

Location	389 to 390	
	Location	Default
Sensor Watch Report	389	4
Sensor Watch Restore Report	390	5

A Self Test Failure Report (Contact ID Event Code 307) is sent to the base station receiver when a zone was not activated during the Sensor Watch Time programmed in Locations 476 and 477 (refer to *Section 15.5 Zone Status – Sensor Watch Reports on page 78*). This report continues to be sent (according to the frequency of the Sensor Watch Time) until the fault is corrected.

To clear the fault and stop any additional reporting, you must unseal and reseal the zone that registered the fault. Use the Sensor Watch Time in Locations 476 and 477 to set the number of days a zone can remain sealed without registering a fault. Refer to *Section 14.3.5 Zone Options 1 on page 61* to select zones to be monitored by the Sensor Watch feature.

☑ If Self Test Failure Reports are not required, program Locations 389 and 390 as 0.

15.6 Zone Status – Alarm Restore Code

Location	391
Default	14

If Zone Alarm Restore Reports are required, program this location as 14. If not, program this location as 0.

Location 392 (*Section 15.7 Zone Status Reporting Options on page 66*) is ignored when programming the Alarm Restore code and is global for all zones. A zone Restore Report is sent only to the receiving party to which the zone is allocated (for example, Receiver 1 or Receiver 2).

15.7 Zone Status Reporting Options

Location	392
0	No zone status reports allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

This location is set by default to report only to Receiver 1. You can select whether Zone Status Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or no reporting.

For a partitioned ICP-CC488 Control Panel, this location is ignored if Option 1 is selected in Location 501 (refer to *Section 19.3.2 Partitioning Options 2* on page 85).

15.8 RF Supervision Time

Location	393
Default	0
0	Disable RF Supervision Time Reports
1 to 15	Increments of 6 hours (0 to 90 hours)

An RF Supervision Failure Report (Contact ID Event Code 307) is sent to the base station receiver when the wireless receiver has not received a signal from any RF wireless zone during the RF Supervision Time. This report continues to be sent (according to the frequency of the RF Supervision Time) until the fault is corrected.

To clear the fault and stop additional reporting: Unseal and reseal the zone that registered the fault. Refer to *Section 3.13 Fault Descriptions* on page 18 for more information.

☑ If RF Supervision Failure Reports are not required, program Location 393 as 0.

15.9 RF Low Battery Report

Location	394 to 395	
	Location	Default
RF Low Battery Report	394	6
RF Low Battery Restore Report	395	8

An RF Low Battery Report (Contact ID Event Code 384) is sent to the base station receiver when the battery voltage on a wireless zone falls below approximately 2.4 VDC. An RF Low Battery Restore Report is sent on the first valid signal after the battery is replaced.

15.10 RF Receiver Trouble Report

Location	396 to 397	
	Location	Default
Tens digit	396	7
Units digit	397	9

An RF Receiver Trouble Report (Contact ID Event Code 355) is sent to the base station receiver when the RF receiver registers one of these events:

RF Signal Jamming (Point ID Code 001)
RF Receiver Tamper Switch (Point ID Code 002)
RF Receiver Failure (Point ID Code 003)

15.11 RF Receiver Trouble Restore Report

Location	398 to 399	
	Location	**Default**
Tens digit	398	7
Units digit	399	11

An RF Receiver Trouble Restore Report is sent to the base station receiver when the RF receiver no longer registers RF Signal Jamming, RF Receiver Tamper Switch, or RF Receiver Failure.

15.12 RF Dialer Options

Location	400
0	No report allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

Location 400 is set by default to report only to Receiver 1. You can select whether Zone Status Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or there is no reporting at all.

15.13 Open/Close Reports

Location	401 to 402	
	Location	**Default**
Open Report	401	11
Close Report	402	12

An Opening Report (Contact ID Event Code 401) is sent to the base station receiver when the system is disarmed from AWAY Mode. A Closing Report (Contact ID Event Code 401) is sent at the end of Exit Time when the system is armed in AWAY Mode.

If an expanded format is selected, this code is used as the Expansion Code and the user number that armed or disarmed the system follows in the same transmission.

To enable Open and Close Reports in STAY Mode:

Select Option 2 in Location 178 (refer to *Section 12.2 Dialer Options 2* on page 53). To enable Open and Close Reports only after a previous alarm, select Option 1 in Location 178.

> If Open and Close Reports are not required, program Locations 401 and 402 as 0.
>
> A partitioned ICP-CC488 Control Panel sends Open/Close Reports with Contact ID Event Code 402.

15.14 Open/Close Reporting Options

Location	403
0	No Open/Close Reports allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

Location 403 is set by default to report only to Receiver 1. You can select whether Open and Close Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or no reporting.

15.15 Codepad Duress Report

Location	404
Default	6

A Duress Report (Contact ID Event Code 121) is sent to the base station receiver when 9 is added to the end of any valid User Code used to disarm the system. This alarm is always silent. A Duress Alarm can be activated during Exit Time. In other words, if the system is armed and then disarmed by adding 9 to the end of the User Code before Exit Time expires, a Codepad Duress Report is transmitted. Adding 9 to the end of a User Code when arming the system does not cause a Duress Alarm.

If you want a 3 to activate a Codepad Duress Alarm instead of 9, select Option 2 in Location 498 (refer to *Section 18.7 Consumer Options 3* on page 83).

> Restore Reports are not sent for this event.
>
> If Codepad Duress Reports are not required, program Location 404 as 0.

15.16 Codepad Panic Report

Location	405 to 406	
	Location	**Default**
Tens digit	405	7
Units digit	406	15

A Panic Alarm Report (Contact ID Event Code 120) is sent to the base station receiver when a user presses either [1] and [3] or [STAY] and [AWAY] at the same time. A Panic Alarm is audible, but you can program the alarm as silent by selecting Option 1 in Location 493 (refer to *Section 18.2 System Options 2* on page 81).

☑ Restore Reports are not sent for this event.

If Codepad Panic Reports are not required, program Locations 405 and 406 as 0.

15.17 Codepad Fire Report

Location	407 to 408	
	Location	Default
Tens digit	407	7
Units digit	408	14

A Fire Alarm Report (Contact ID Event Code 110) is sent to the base station receiver when a user presses [4] and [6] at the same time. A Fire Alarm is audible, but you can program the alarm as silent by selecting Option 2 in Location 493 (refer to *Section 18.2 System Options 2* on page 81). A distinct fire sound is emitted through the horn speaker to indicate this type of alarm. The fire sound is different than the burglary sound.

☑ Restore Reports are not sent for this event.

If Codepad Fire Reports are not required, program Locations 407 and 408 as 0.

15.18 Codepad Medical Report

Location	409 to 410	
	Location	Default
Tens digit	409	7
Units digit	410	13

A Medical Report (Contact ID Event Code 100) is sent to the base station receiver when a user presses [7] and [9] at the same time. A Medical Alarm is audible, but you can program the alarm as silent by selecting Option 4 in Location 493 (refer to *Section 18.2 System Options 2* on page 81).

☑ Restore Reports are not sent for this event.

If Codepad Medical Reports are not required, program Locations 409 and 410 as 0.

15.19 Codepad Reporting Options

Location	411
0	No Codepad Alarm Reports allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

Location 411 is set by default to report only to Receiver 1. You can select whether Codepad Alarm Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or no reporting.

15.20 System Status – AUX Power Supply Fail Report

Location	412 to 413	
	Location	Default
Tens digit	412	10
Units digit	413	3

A System Trouble Report (Contact ID Event Code 300) is sent when either the codepad AUX power supply is blown or the AUX power supply malfunctions. The system reports the event approximately 10 sec after the failure.

15.21 System Status – AUX Power Supply Fail Restore Report

Location	414 to 415	
	Location	Default
Tens digit	414	10
Units digit	415	8

A System Trouble Restore Report (Contact ID Event Code 300) is sent when the AUX power supply is reset. The system reports the event approximately 10 sec after power supply is reset.

15.22 System Status – AC Fail Report

Location	416 to 417	
	Location	Default
Tens digit	416	10
Units digit	417	2

An AC Fail Report (Contact ID Event Code 301) is sent to the base station receiver when the AC MAINS supply is disconnected for 2 min. If you do not want an AC Fail Report to be sent until the AC MAINS supply is disconnected for 1 hour, select Option 1 in Location 494 (refer to *Section 18.3 System Options 3* on page 81). If you want to ignore AC Fail, select Option 2 in Location 494.

☑ If AC Fail Reports are not required, program Locations 416 and 417 as 0.

15.23 System Status – AC Fail Restore Report

Location	416 to 417	
	Location	Default
Tens digit	416	10
Units digit	417	7

An AC Fail Restore Report is sent when the AC MAINS supply is connected continuously for longer than 2 min.

☑ If AC Fail Restore Reports are not required, program Locations 418 and 419 as 0.

15.24 System Status – Low Battery Report

Location	420 to 421	
	Location	**Default**
Tens digit	420	10
Units digit	421	1

A Battery Test Failure Report (Contact ID Event Code 309) is sent to the base station receiver when the system's battery voltage falls below 11.2 VDC or when a Dynamic Battery Test detects a low capacity battery.

The control panel continually monitors the battery voltage. Refer to *Section 3.13 Fault Descriptions* on page 18 for more information. A Dynamic Battery Test is done every time the system is armed and every 4 hours after the control panel is powered up.

> ☑ If Low Battery Reports are not required, program Locations 420 and 421 as 0.

15.25 System Status – Low Battery Restore Report

Location	422 to 423	
	Location	**Default**
Tens digit	422	10
Units digit	423	6

A Low Battery Restore Report is sent if the backup battery is restored the next time the system is armed, or when the next Dynamic Battery Test reports the battery test is OK.

> ☑ If Low Battery Restore Reports are not required, program Locations 422 and 423 as 0.

15.26 System Status – Access Denied

Location	424 to 426	
	Location	**Default**
Code Retry Limit (0 = Unlimited)	424	6
Tens Digit	425	7
Units Digit	426	12

An Access Denied Report (Contact ID Event Code 421) is sent to the base station receiver when the number of incorrect code attempts equals the number programmed in Location 424. An Access Denied Alarm is audible, but you can program the alarm as silent by selecting Option 8 in Location 493 (refer to *Section 18.2 System Options 2* on page 81).

> ☑ Restore Reports for this event are not transmitted.
>
> If Access Denied Reports are not required, program Locations 424 and 425 as 0.

Code Retries

The Code Retries feature restricts the number of times an invalid User Code can be entered in an attempt to operate the system. Location 424 sets the number of incorrect code attempts that causes an alarm. When the number of incorrect code attempts equals the number programmed in this location, the system performs these actions:

- Activates the sirens, internal screamers, and strobes connected to the control panel. Select Option 8 in Location 493 (refer to *Section 18.2 System Options 2* on page 81) to change this alarm to silent.

- Shuts down all codepads connected to the control panel and locks them out for the time period programmed in Location 478 (refer to *Section 17.8 Codepad Lockout Time*).

- Sends an Access Denied Report (Contact ID Event Code 421) to the base station receiver.

Each time the system is armed or disarmed, the Code Retries counter is reset. You can program the counter to a value from 1 to 15. If you want the number of incorrect code attempts to be unlimited, program a 0 in Location 424. In this case, the Access Denied Report is never generated and the system does not perform the three actions listed above. This function works when the system is armed or disarmed.

15.27 System Status Reporting Options

Location	427
0	No report allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

Location 427 is set by default to report only to Receiver 1. You can select whether System Status Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or no reporting.

15.28 Test Reporting Time

Location	428 to 434	
	Location	**Default**
Hour of day (tens digit)	428	0
Hour of day (units digit)	429	0
Minute of day (tens digit)	430	0
Minute of day (units digit)	431	0
Test Report (tens digit)	432	7
Test Report (units digit)	433	1
Repeat interval in days	434	0

A Test Report (Contact ID Event Code 602) is a specific signal sent to the base station receiver and is normally used to test the dialing and reporting functions of the control panel.

When programming Test Report options, specify the hour and minute of the day the report is required, and how often to send the report. Test reports are reported on a daily basis from every day to every fifteen days. Refer to *Section 5.1.2 Set the Number of Days until the First Test Report* to set the first test report.

> If Test Reports are not required, program the repeat interval in Location 434 as 0.
>
> Program the Test Report Time as 24:00 to send reports every 30 min.

Example

If you want to send Test Reports once every seven days at 11:35 PM, program Locations 428 to 429 as:

[2 3 3 5 7 1 7]

15.29 Test Reporting Dialer Options

Location	435
0	No report allowed
1	Report to Receiver 1
2	Report to Receiver 2
4	Report to both Receiver 1 and Receiver 2
8	Report to Receiver 2 only if Receiver 1 fails

Location 435 is set by default to report only to Receiver 1. You can select whether Test Reports are sent to Receiver 1, Receiver 2, or both, Receiver 2 only when Receiver 1 fails, or no reporting.

16.0 Programmable Outputs

The ICP-CC488 Control Panel has four fully-programmable outputs on the main printed circuit board and one programmable output that operates the codepad buzzer. The four outputs are set by default to operate as horn speaker, fire alarm verification, strobe, and internal screamer.

Programmable outputs require four parameters to operate correctly.

Table 54: Output Parameters

Parameter	Description
Event Type	The Event Type specifies when an output is activated. The Output Event Types are listed in *Section 16.2* on page 71 . Enter the code for the Output Event Type into the two corresponding locations for the output.
Polarity	Polarity determines whether the output operates for the duration of the event, pulses for the duration, operates only once (one shot), or latches on. The Polarity options are listed in *Table 56* on page *76*.
Time Base/ Time Multiplier	The Time Base and Time Multiplier parameters determine how long and how often the output operates. Refer to *Section 16.4 Output Timing*.

Location	436 to 465		
		Location	Default
Output 1 (Default – Horn Speaker)			
	Event Code	436	1
	Event Code	437	14
	Polarity	438	0
	Time Base	439	0
	Time Base Multiplier	440	0
	Time Base Multiplier	441	0
Output 2 (Default – Fire Alarm With Verification)			
	Event Code	442	2
	Event Code	443	7
	Polarity	444	10
	Time Base	445	2
	Time Base Multiplier	446	1
	Time Base Multiplier	447	5
Strobe Output (Default – Strobe – Reset After 8 hrs.)			
	Event Code	448	2
	Event Code	449	0
	Polarity	450	6
	Time Base	451	4
	Time Base Multiplier	452	0
	Time Base Multiplier	453	8
Relay Output (Default – Sirens Running)			
	Event Code	454	1
	Event Code	455	15
	Polarity	456	1
	Time Base	457	0
	Time Base Multiplier	458	0
	Time Base Multiplier	459	0
Codepad Buzzer (Default – Entry/Exit Warning and Day Alarm)			
	Event Code	460	0
	Event Code	461	13
	Polarity	462	2
	Time Base	463	1
	Time Base Multiplier	464	0
	Time Base Multiplier	465	1

16.1 Redirecting Outputs to the Codepad Buzzer

Multiple output event types can be directed to the codepad buzzer so that the buzzer can indicate a number of events.

To redirect an output to the codepad buzzer, select an output and program it for the desired Output Event Type. If the output is functioning correctly, add 8 to the first (tens) digit of the Output Event Type.

Example

3,0 Communications Failure

This event operates after the dialer makes all possible attempts to reach the base station receiver. It is reset when the panel receives the first Kiss-off. This Output Event Type is not applicable to domestic reporting.

To redirect this Output Event Type to operate a codepad buzzer, program the Output Event Type as:

11,0 Communications Failure

The codepad buzzer operates instead of the output that was programmed. Output 3 is no longer functional and cannot be used for any other Output Event Type.

16.2 Output Event Types

There are approximately 75 Output Event Types. Two numbers designate each Output Event Type. Program these numbers into the appropriate locations for the output.

> All reset times reference Polarity 1 and 8. Reset times vary depending on the selected polarity.

0,0 EDMSAT - Satellite Siren (Output 1 Only)

This output controls all functions of the SS914 Satellite Siren (EDMSAT). The Speaker Indication Beeps option does not function through the satellite siren for remote operations. No polarity is required for this Output Event Type.

0,1 System Armed

This output operates when the system is armed. The output is reset when the system is disarmed. If the system is partitioned, this output operates when both areas are armed in AWAY Mode or STAY Mode 1.

0,2 System Disarmed

This output operates when the system is disarmed. The output is reset when the system is armed. If the system is partitioned, this output operates when both areas are disarmed.

0,3 Armed in STAY Mode

This output operates when the system is armed in STAY Mode 1 or STAY Mode 2. The output is reset when the system is disarmed. If the system is partitioned, this output operates when either area is armed in STAY Mode 1.

0,4 Armed in AWAY Mode

This output operates when the system is armed in AWAY Mode. The output is reset when the system is disarmed. If the system is partitioned, this output operates when either area is armed in AWAY Mode.

0,5 Auto Arm Pre-Arming Alert Time

This output operates during the time period before the control panel is automatically armed in AWAY Mode or STAY Mode 1. The output is reset when the control panel is automatically armed in AWAY Mode or STAY Mode 1. The Auto Arming Pre-Alert Time is programmed in Location 481 (refer to *Section 17.11* for more information).

0,6 Exit Warning with All Zones Sealed or Entry Warning

This output operates during Exit Time when the control panel is armed and all zones are sealed. The output is reset when Exit Time expires.

This output operates again during Entry Time and is reset when Entry Time expires or the system is disarmed.

This output also operates if a zone is activated when the system is armed in STAY Mode 1 or STAY Mode 2 and the Entry Guard Timer for STAY Mode is programmed in Locations 472 and 473 (refer to *Section 17.5* on page 78).

0,7 Exit Warning

This output operates during Exit Time when the system is armed. The output is reset when Exit Time expires.

0,8 Exit Warning Finished

This output operates after Exit Time expires when the system is armed. The output is reset when the system is disarmed.

0,9 Kiss-Off after Exit Time

This output operates after the first successful transmission to the base station receiver when Exit Time expires. The output is reset when the system is disarmed.

0,11 Entry Warning

This output operates when during Entry Timer 1, Entry Timer 2, or Entry Guard Timer for STAY Mode. The output is reset when the Entry Time expires.

0,12   Entry Warning + Day Alarm Resetting

This output combines Entry Warning and Day Alarm Resetting so that either of these two events activates the output.

If the output is activated by Entry Timer 1, Entry Timer 2, or Entry Guard Timer for STAY Mode, the output is reset when the Entry Time expires or the system is disarmed.

If a zone programmed for Day Alarm is activated when the system is disarmed, the output is reset when the zone is resealed. You can turn Day Alarm on and off by holding down [4]. Refer to *Section 14.1 Day Alarm Information* for programming zones to operate for Day Alarm.

0,13   Exit Warning + Entry Warning + Day Alarm Resetting

This output operates when the system is armed, regardless of whether zones are sealed or unsealed, until Exit Time expires.

The output operates again during Entry Time and is reset when Entry Time expires or the system is disarmed. The output also operates during the Entry Guard Timer for STAY Mode time.

If a zone programmed for day alarm is activated when the system is disarmed, the output is reset when the zone is resealed. You can turn Day Alarm on and off by holding down [4]. Refer to *Section 14.1 Day Alarm Information* for programming zones to operate for Day Alarm.

0,14   Day Alarm Resetting

This output operates when a zone programmed for Day Alarm is activated. The output is reset when the Day Alarm zone is resealed. You can turn Day Alarm on and off by holding down [4]. Refer to *Section 14.1 Day Alarm Information* for programming zones to operate for Day Alarm.

0,15   Day Alarm Latching

This output operates when a zone programmed for Day Alarm is activated. The output is reset by pressing [AWAY]. You can turn Day Alarm on and off by holding down [4]. Refer to *Section 14.1 Day Alarm Information* on page 56 for programming zones to operate for Day Alarm.

If the ICP-CC488 Control Panel is partitioned, pressing [AWAY] on a CP5 Area Addressable codepad other than the one to which the zone is allocated, or pressing [AWAY] on a CP5 Master Partitioned Codepad does not reset the output. You can reset only this output on the area codepad to which the zone is allocated.

1,0   Day Alarm Enabled

This output operates when Day Alarm is enabled. The output is reset when Day Alarm is turned off. Refer to *Section 14.1 Day Alarm Information* on page 56 for programming zones to operate for Day Alarm.

You can turn Day Alarm on and off by holding down [4]. Three beeps indicate that Day Alarm is turned on, two beeps indicate that Day Alarm is turned off. Refer to *Section 5.4.7 Turning Day Alarm On and Off* on page 33 for more information.

1,1   Telephone Line Fail

This output operates when the built-in telephone line fault module detects that the telephone line is disconnected longer than 40 sec. The output is reset when the telephone line is restored continuously for 40 sec. This output does not operate unless Option 1 in Location 176 is selected (refer to *Section 11.11 Telephone Line Fault Options* on page 52).

1,2   Kiss-off Received

This output operates after the control panel successfully transmitted to the receiving party.

1,3   AUX Power Supply Fail

This output operates when either the 1 A codepad AUX power supply or the 1 A accessories AUX power supply fails. The output is reset when the faulty AUX power supply is reset.

1,4   AC Fail

This output operates when the AC MAINS fails. The output is reset when the AC MAINS is restored. This output operates regardless of whether Option 2 in Location 494 is selected (refer to *Section 18.3 System Options 3* on page 81).

1,5   Low Battery

This output operates when a Dynamic Battery Test detects the battery failed or the battery voltage is below 11.2 VDC. The Dynamic Battery Test is performed every 4 hours after the system is powered up and every time the system is armed.

This output is reset only after a Dynamic Battery Test reports that the backup battery voltage is normal.

1,6   Horn Speaker Monitor Fail

If the Enable Monitoring of Horn Speaker option (2) in Location 492 is selected (refer to *Section 18.1 System Options 1* on page 80), this output operates when the horn speaker is disconnected. The output is reset when the horn speaker is reconnected.

1,7   Sensor Watch Alarm

This output operates when the Sensor Watch Count is reached. Refer to *Section 14.3.5 Zone Options 1* on page 61 for more information on programming zones for sensor watch. Refer to *Section 15.5 Zone Status – Sensor Watch Reports* on page 78 for setting the number of days before a zone registers as a faulty sensor watch zone.

1,8   Codepad Medical Alarm

This output operates when a user activates a Codepad Medical Alarm by pressing [7] and [9] at the same time on the remote codepad. This output is reset when a valid User Code is entered at the remote codepad.

1,9   Codepad Fire Alarm

This output operates when a user activates a Codepad Medical Alarm by pressing [4] and [6] at the same time on the remote codepad. This output is reset when a valid User Code is entered at the remote codepad.

1,10   Codepad Panic Alarm

This output operates when a user activates a Codepad Panic Alarm (audible or silent) by pressing either [1] and [3] or [STAY] and [AWAY] at the same time on the remote codepad. This output is reset when a valid User Code is entered at the remote codepad.

1,11   Codepad Duress Alarm

This output operates when a user activates a Duress Alarm by adding a 9 to the end of the User Code used to disarm the system. This output is reset the next time the system is armed.

1,12   Codepad Tamper – Access Denied

This output operates when the wrong code is entered more times than allowed. The number of incorrect attempts allowed is programmed in Location 424 (refer to *Section 15.26 System Status – Access Denied* on page 69). This output is reset when a valid User Code is entered.

1,13   Speaker Beeps

This output functions during all remote radio or keyswitch operations, which allows you to install a 12 VDC buzzer or light as a status indicator. The identification beeps are defined in *Table 55*.

Table 55: Horn Speaker Beeps	
No of Beeps	**System Status**
1	System disarmed
2	System armed in AWAY Mode
3	System armed in STAY Mode 1

1,14   Horn Speaker (Output 1 Only)

This output operates only on Output 1. Use this output for one or two 8 Ω horn speakers. Refer to *Section 17.9 Siren Run Time* and *Section 17.10 Siren Sound Rate* to program the speaker.

To enable monitoring of the horn speaker, select Option 2 in Location 492 (refer to *Section 18.1 System Options 1* on page 80).

1,15   Sirens Running

This output operates for the duration of the Siren Run Time programmed in Location 479 (refer to *Section 17.9 Siren Run Time*). When the sirens are activated, this output is reset when the Siren Run Time expires. The relay output (Output 4) is set by default for this operation.

2,0   Strobe Operating

This output operates when an alarm occurs and is reset when a valid User Code is entered. The strobe output (Output 3) is set by default for strobe operation and is programmed to reset automatically after 8 hours.

2,1   Silent Alarm

This output operates when any zone programmed to be silent activates. The output is reset when the Siren Run Time expires, an audible alarm is activated, or a valid User Code is entered.

2,2   Alarm When in STAY Mode

This output operates when an audible or silent alarm zone is activated when the system is armed in STAY Mode 1 or STAY Mode 2. The output is reset when the system is disarmed.

2,3   Alarm When in AWAY Mode

This output operates when an audible or silent zone alarm is activated when the system is armed in AWAY Mode. The output is reset when the system is disarmed.

2,4   Mimic System Fault

This output operates without time delays when any system fault occurs, including an AC MAINS supply failure. The output is reset when the system fault or the AC MAINS supply is restored.

2,5   Fire Alarm Resetting

This output operates when a 24-Hour Fire Zone is activated. The output is reset when a valid User Code is entered or when Siren Run Time expires.

2,6   Fire Alarm Latching

This output operates when a 24-Hour Fire Zone is activated and is reset when the system is armed or disarmed.

2,7   Fire Alarm Verification

This feature is used on some commercial fire control panels to reduce false alarms from smoke detectors. It is similar to zone pulse count used in some motion detectors. A fire zone is allotted a pulse count of 3 pulses over a period of 3 min.

If the smoke detector trips, the voltage to the smoke detector is disconnected for 15 sec and then reapplied. No alarm is registered.

If the unit activates again within 3 min of the first activation, no alarm is registered and the voltage to the smoke detector is again disconnected for 15 sec and then reapplied.

If a third activation is detected within 3 min of the first activation, (three pulses in 3 min) a fire alarm is registered. Power to the smoke detector is maintained to facilitate unit identification through the detector memory.

Connect this output to the negative side of any fire/smoke detector. To configure an output for this feature, use these settings.

EVENT TYPE – 2,7
POLARITY – 10
TIMEBASE – 2
MULTIPLIER – 15

The zone to which the fire or smoke detector is connected should be programmed as:

ZONE TYPE – 13
ZONE PULSE COUNT – 3
ZONE PULSE COUNT TIME – 15

2,8   Remote Control 1
2,9   Remote Control 2
2,10   Remote Control 3

These outputs can be remotely activated (turned on or off) by the following methods:

- Remote codepad (refer to *Section 5.2.7 Turning Outputs On/Off* for more information).

- Remotely through the Alarm Link Software (refer to your *Alarm Link Instruction Manual* for further information).

2,11   Radio Control Output 1

This output operates when the [DOOR] button on the 4-channel hand-held transmitter is activated when the system is armed or disarmed.

2,12   Radio Control Output 2

This output operates when the [AUX] button on the 4-channel hand-held transmitter is activated when the system is armed or disarmed.

If you select Option 8 in Location 492 (refer to *Section 18.1 System Options 1* on page 80), this output does not operate and arms the system in STAY Mode 1 only.

2,13   Radio Control Output 1 – Not in AWAY Mode

This output operates when the [DOOR] button on the 4-channel hand-held transmitter is activated when the system is disarmed or armed in STAY Mode 1 or STAY Mode 2. The output does not operate when the system is armed in AWAY Mode.

2,14   Radio Control Output 2 – Not in AWAY Mode

This output operates when the [AUX] button on the 4-channel hand-held transmitter is activated when the system is disarmed or armed in STAY Mode 1 or STAY Mode 2. The output does not operate when the system is armed in AWAY Mode.

If you select Option 8 in Location 492 (refer to *Section 18.1 System Options 1* on page 80), this output does not operate and arms the system in STAY Mode 1 only.

2,15   Communications Failure after Three Unsuccessful Calls

This output operates after the communication dialer makes three unsuccessful calls to the base station receiver. The output is reset when all messages are transmitted (that is, when the buffer is empty or when all possible attempts are made).

3,0   Communications Failure

This output operates after the communication dialer makes all possible attempts to reach the base station receiver. The output is reset when the first Kiss-Off is received. This output does not operate for domestic formats.

3,1   Dialer Disabled

This output operates when the Dialer reporting functions allowed option (1) in Location 177 is not selected (refer to *Section 12.1 Dialer Options 1* on page 52). The output is reset when Option 1 is selected.

3,2   Dialer Active

This output operates when the communication dialer is online. The output is reset when the communication dialer releases the telephone line.

3,3   Ring Detect

This output operates when an incoming call is detected by the control panel. The output is reset when the ringing stops or when the call is answered.

3,4   Codepad Panic (Multi-Break)

This output operates when a Panic Alarm is initiated from the codepad. The output operates for 200 ms if the polarity is programmed as 1. You can program the time base and multiplier to increase the period during which the output operates.

3,5	**Mimic Zone 1**
3,6	**Mimic Zone 2**
3,7	**Mimic Zone 3**
3,8	**Mimic Zone 4**
3,9	**Mimic Zone 5**
3,10	**Mimic Zone 6**
3,11	**Mimic Zone 7**
3,12	**Mimic Zone 8**

These output types mimic the zone inputs. The output operates when the zone is unsealed and is reset when the zone is sealed. They operate regardless of the selected zone type (for example, a zone programmed as Not Used can still operate a mimic output). This feature operates when the system is armed or disarmed.

4,5　　　Global Chime

This output operates when any Chime zones are activated. The output is reset when the zone is resealed. Refer to *Section 14.3.2 Zone Types* on page 61 for more information.

4,6　　　Zone Not Sealed

This output operates when a Burglary Zone is unsealed. Chime zones do not operate this output.

4,7　　　Zone Not Sealed after Exit Time

This output operates at the end of Exit Time if a Burglary Zone is unsealed. The output is reset when all zones are sealed or the system is disarmed. Chime zones do not operate this output.

4,9　　　AC MAINS 60 Hz or 50 Hz

This output is activated when the AC MAINS supply frequency is 60 Hz. The output is reset if the AC MAINS supply returns to 50 Hz.

> Output Event Types 4,10 through 6,1 are available only to partitioned ICP-CC488 Control Panels.

4,10　　Area 1 Has Unsealed Zone
4,11　　Area 2 Has Unsealed Zone

These two outputs operate when a zone in their corresponding area registers as unsealed either when the area is armed in AWAY Mode or STAY Mode, or the area is disarmed.

Example

Zone 1 is allocated to Area 1. If Zone 1 is unsealed, Output Event Type 4,10 operates. The output is reset when the zone is resealed.

5,2　　　Area 1 in Alarm
5,3　　　Area 2 in Alarm

These two outputs operate when a zone in their corresponding area registers an alarm. These outputs are reset when a valid User Code is entered.

Example

Zone 1 is allocated to Area 1. If Zone 1 registers an alarm, Output Event Type 5,2 operates. The output is reset when a valid User Code assigned to Area 1 is entered.

5,6　　　Area 1 Is Armed
5,7　　　Area 2 Is Armed

These two outputs operate when their corresponding area are armed in AWAY Mode or STAY Mode 1. The output is reset when the corresponding area is disarmed.

Example

If Area 1 is armed in AWAY Mode or STAY Mode 1, Output Event Type 5,6 operates. The output is reset when Area 1 is disarmed.

5,10　　Area 1 Is Disarmed
5,11　　Area 2 Is Disarmed

These two outputs operate when their corresponding area is disarmed. The output is reset when the corresponding area is armed.

Example

If Area 1 is disarmed, Output Event Type 5,10 operates. The output is reset when Area 1 is disarmed.

5,14　　Any Areas Armed

This output operates when either Area 1 or Area 2 is armed in AWAY Mode or STAY Mode 1. The output is reset when both areas are disarmed.

5,15　　Any Areas Disarmed

This output operates when either Area 1 or Area 2 is disarmed. The output is reset when both areas are armed in AWAY Mode or STAY Mode 1.

6,0　　　Area 1 Codepad Data Terminal

This output type is used to connect the data terminal of the Area 1 codepad when you are using the Master Partitioned codepad as the main codepad.

Set DIP switch 1 to the ON position for the Area 1 codepad to operate correctly.

Refer to *Figure 16* on page 76 for the location of the DIP switches on the pack of the codepad.

If you are not using a Master Partitioned as the main codepad, connect the data cable from the Area 1 codepad to the DATA terminal on the control panel and select Option 2 in Location 500 (refer to *Section 19.3.1 Partitioning Options 1* on page 85).

Refer to *Figure 16* on page 76 for more information on connecting codepads when the system is partitioned.

6,1　　　Area 2 Codepad Data Terminal

This output type is used to connect the data terminal of the Area 2 codepad.

Set DIP Switch 2 to the ON position for the Area 2 codepad to operate correctly.

Refer to *Figure 16* on page 76 for the location of the DIP switches on the back of the codepad.

Figure 16: DIP Switch Location on Codepad
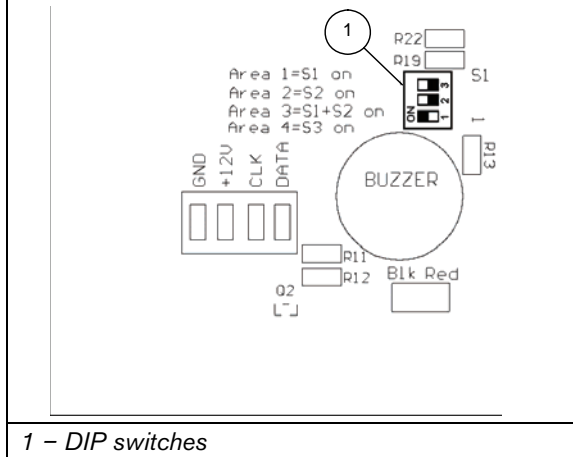
1 – DIP switches

16.3　Output Polarity

There are fifteen different polarities. Each polarity is designated by a number that you program into the appropriate location for the output.

Table 56:　Event Type Polarities

Option	Description
0	Output not used
1	Normally open, going low
2	Normally open, pulsing low
3	Normally open, one-shot low
4	Normally open, one-shot low (reactivate)
5	Normally open, one-shot low (can reset)
6	Normally open, one-shot low (alarm)
7	Normally open, latching low
8	Normally low, going open
9	Normally low, pulsing open
10	Normally low, one-shot open
11	Normally low, one-shot open (reactivate)
12	Normally low, one-shot open (can reset)
13	Normally low, one-shot open (alarm)
14	Normally low, latching open

0 – Output Not Used

If an output is not required, program the polarity as 0.

1 – Normally Open, Going Low

This polarity is normally open circuit and switches to 0 V when the event occurs. The output switches back to open circuit when the event is restored. Time parameters do not apply to this polarity.

2 – Normally Open, Pulsing Low

This polarity is normally open circuit and switches to pulsing 0 V when the event occurs. The output switches back to open circuit when the event is restored. Time parameters vary the On time of the pulse.

3 – Normally Open, One-Shot Low

This one-shot polarity is normally open circuit and switches to 0 V when the event occurs. The output switches back to open circuit when the time parameter setting expires. This one-shot time setting always runs its full duration and cannot be manually reset.

4 – Normally Open, One-Shot Low with Reactivate

This one-shot polarity is normally open circuit and switches to 0 V when the event occurs. Every time the event occurs, it restarts the one-shot timer. The output switches back to open circuit when the one-shot time expires. This one-shot time setting always runs its full duration. You cannot reset the time.

5 – Normally Open, One-Shot Low with Reset

This one-shot polarity is normally open circuit and switches to 0 V when the event occurs. Because the output switches back to open circuit when the one-shot time expires or when the event returns to normal, the operation of the output can be shortened regardless of the programmed time parameter.

6 – Normally Open, One-Shot Low with Alarm

This one-shot polarity is normally open circuit and switches to 0 V when the event occurs. The output switches back to open circuit when the one-shot time expires, the event returns to normal, or the system is disarmed.

This polarity is ideally suited for the operation of strobe lights because you can program the lights to reset (up to 99 hours) and prevent them from burning out or bothering others due to prolonged operation.

7 – Normally Open, Latching Low

This polarity is normally open circuit and switches to 0 V when the event occurs. The output switches back to open circuit when a user holds down [7] on the remote codepad until two beeps sound. Time parameters do not apply to this polarity.

8 – Normally Low, Going Open

This polarity is normally 0 V and switches to open circuit when the event occurs. The output switches back to 0 V when the event is restored. Time parameters do not apply to this polarity.

9 – Normally Low, Pulsing Open

This polarity is normally 0 V and switches to pulsing open circuit when the event occurs. The output switches back to 0 V when the event is restored. Time parameters vary the Off time of the pulse.

10 – Normally Low, One-Shot Open

This one-shot polarity is normally 0 V and switches to open circuit when the event occurs. The output switches back to 0 V when the time parameter expires. This one-shot time setting always runs its full duration and cannot be manually reset.

11 – Normally Low, One-Shot Open with Reactivate

This one-shot polarity is normally 0 V and switches to open circuit when the event occurs. Every time the event occurs, it restarts the one-shot timer. The output switches back to 0 V when the one-shot time expires.

12 – Normally Low, One-Shot Open with Reset

This one-shot polarity is normally 0 V and switches to open circuit when the event occurs. Because the output switches back to 0 V when the one-shot time expires or when the event returns to normal, the one-shot timer can be shortened regardless of the time setting.

13 – Normally Low, One-Shot Open with Alarm

This one-shot polarity is normally 0 V and switches to open circuit when the event occurs. Because the output switches back to 0 V when the one-shot time expires, the event returns to normal, or the system is disarmed, the one-shot timer can be shortened regardless of the time setting.

14 – Normally Low, Latching Open

This polarity is normally 0 V and switches to open circuit when the event occurs. The output switches back to 0 V when the user holds down [7] on the remote codepad until two beeps sound. Time parameters do not apply to this polarity.

16.4   Output Timing

The timing of outputs is calculated by the time base and a multiplier. These two values play different roles depending on the selected polarity. When you program outputs to pulse, you can set both the On and Off times. You can program one-shot polarities to operate from 200 ms to 99 hours.

> The maximum value you can program in the two multiplier locations is 9,9.

Table 57:   Time Base Settings

Option	Description
1	200 ms
2	1 sec
3	1 min
4	1 hour

You can only set the time base settings to one of the values listed in *Table 57* on page 77. The multiplier value is a two-digit decimal number from 00 to 99. For greater accuracy, use 60 sec for 1-min intervals and 60 min for 1-hour intervals.

16.5   Pulsing Polarities

When programming pulsing polarities, you must set both the On and Off times. The duration, or On time, for an output is determined by time base selected from one of the options in *Table 57* on page 77. In other words, there are only four possible On times.

The Off time is calculated by multiplying the On time by a decimal number between 00 and 99. If you want an output to operate for 200 ms every 5 sec, program the time settings as:

On Time: 1
Off Time: 2 5

Table 58:   Pulsing Time Settings

On Time	Off Time	Increments	Tolerance
200 ms	200 ms to 19.8 sec	200 ms	±200 ms
1 sec	1 to 99 sec	1 sec	±1 sec
1 min	1 to 99 min	1 min	±1 min
1 hour	1 to 99 hr	1 hr	± hr

16.6   One-Shot Polarities

The duration, or On time, of an output is determined by the product of the time base and the multiplier.

If you want an output to operate for 5 sec, program the time settings as:

Time Base: 2
Multiplier: 0 5

The On time is calculated by multiplying the time base setting (1 sec) by the multiplier value (05) (for example, 1 x 05 – 5 sec).

Table 59:   One-Shot Time Settings

On Time	Increments	Tolerance
200 ms to 19.8 sec	200 ms	±200 ms
1 to 99 sec	1 sec	±1 sec
1 to 99 min	1 min	±1 min
1 to 99 hr	1 hr	± hour

17.0 System Event Timers

This section covers the features that involve timing, such as Entry and Exit Times, Sensor Watch Time, Siren Run Time, and System Date and Time.

17.1   Programming Entry/Exit Timers

There are two programming locations for Entry Timer 1, Entry Timer 2, Exit Time for AWAY Mode, and Entry Guard Time for STAY Mode.

The first location of the timer allows you to set the timer in increments of 1 sec. The sec location allows you to set the timer in increments of 16 sec. Add these two locations together for the total time.

Example

To set the Entry Time to 18 sec, program Location 466 as 2 (2 x 1 sec = 2 sec) and Location 467 as 1 (1 x 16 sec = 16 sec) for a total time of 18 sec (2 + 16 = 18).

17.2   Entry Timer 1

Location 466 to 467		
	Location	Default
Increments of 1 sec (0 sec to 15 sec)	466	4
Increments of 16 sec (0 sec to 240 sec)	467	1

You can program Entry Timer 1 from 0 to 255 sec in increments of 1 sec. Entry Timer 1 is the delay time used by the Delay-1 Zones. Refer to *Section 14.3.2 Zone Types* on page 61 for more information.

17.3   Entry Timer 2

Location 468 to 467		
	Location	Default
Increments of 1 sec (0 sec to 15 sec)	468	8
Increments of 16 sec (0 sec to 240 sec)	467	2

You can program Entry Timer 2 from 0 to 255 sec in increments of 1 sec. Entry Timer 2 is the delay time used by Delay-2 Zones. Refer to *Section 14.3.2 Zone Types* on page 61 for more information.

17.4   Exit Timer

Location 470 to 471		
	Location	Default
Increments of 1 sec (0 sec to 15 sec)	470	12
Increments of 16 sec (0 sec to 240 sec)	471	3

You can program the Exit Timer from 0 to 255 sec in increments of 1 sec. When arming the system in AWAY Mode, the remote codepad beeps during Exit Time until the final 10 sec, when the codepad sounds one continuous beep to indicate the end of Exit Time is near.

The remote codepad always sounds one short beep at the end of Exit Time when arming in STAY Mode 1 or STAY Mode 2.

17.5   Entry Guard Timer for STAY Mode

Location 472 to 473		
	Location	Default
Increments of 1 sec (0 sec to 15 sec)	472	0
Increments of 16 sec (0 sec to 240 sec)	473	0

Entry Guard Timer for STAY Mode is the delay time used for all zones except 24-Hour Burglary and 24-Hour Fire Zones when the system is armed in STAY Mode 1 or STAY Mode 2. All zones, including Delay Zones, use this timer for the entry delay (for example, the Entry Guard Timer overrides the delay time programmed for a Delay Zone). If the Entry Guard Timer is programmed as 0, each zone acts according to its programmed zone type.

Refer to *Section 14.3.7* to program zones to be automatically isolated in STAY Mode 1. Refer to *Section 5.2.6* to program zones to be automatically isolated in STAY Mode 2.

17.6   Delay Alarm Reporting Time

Location 474 to 475		
	Location	Default
Increments of 1 sec (0 sec to 15 sec)	474	0
Increments of 16 sec (0 sec to 240 sec)	475	0

These locations program the time in sec that a delayed report waits dormant in the dial buffer before it is sent to the receiving party. If a User Code holder resets the alarm within this time frame, the control panel clears the dialer buffer and does not report the alarm to the receiving party. Refer to *Section 14.3.5 Zone Options 1* on page 61 to program zones for delay alarm reporting.

17.7   Sensor Watch Time

Location 476 to 477		
	Location	Default
Increments of days (tens digit)	476	0
Increments of days (units digit)	477	0

The time set in these two locations determines the number of days (0 to 99) a zone can remain sealed before registering as a fault. This feature is active only when the system is disarmed. If a zone programmed for Sensor Watch is not unsealed and reset during this time, the FAULT indicator lights. Refer to *Section 3.13 Fault Descriptions* on page 18 for more information on Sensor Watch Faults. Refer to *Section 14.3.5 Zone Options 1* on page 61 for programming zones for Sensor Watch.

The Sensor Watch Time counter is active only when the control panel is disarmed. If the system is disarmed for 8 hours a day and the Sensor Watch Time is programmed for 1 day, a zone programmed for Sensor Watch registers a Sensor Watch Fault if it is not activated while disarmed within 3 days.

This feature is useful, for example, when someone places objects in the view of a motion detector, which prevents the detector from picking up movement.

To disable Sensor Watch Reports, program Locations 389 and 390 as 0 (refer to *Section 15.5 Zone Status – Sensor Watch Reports* on page 66).

17.8 Codepad Lockout Time

Location	478
0	No lockout
1 to 15	Lockout time (increments of 10 sec)

All codepads are locked out for the programmed time if an invalid code is entered more times than allowed by the code retry attempts programmed in Location 424 (refer to *Section 15.26 System Status – Access Denied* on page 69). If the Codepad Lockout Time is programmed as 0, codepad lockout does not occur.

17.9 Siren Run Time

Location	479
Default	5
0	No siren time
1 to 15	Siren time in min

The Siren Run Time determines how long the horn speaker operates during an alarm. You can program the Siren Run Time from 0 to 15 min in 1-min intervals.

17.10 Siren Sound Rate

Location	480
Default	7
0	Slowest frequency
15	Fastest frequency

The Siren Sound Rate varies the frequency of the siren tone slowest (0) and to fastest (15). The Siren Sound Rate does not change the frequency of the fire alarm tone.

17.11 Auto Arming Pre-Alert Timer

Location	481
Default	1
0	No alert time
1 to 15	Alert time (increments of 5 min)

This location sets the time period during which the control panel warns you it is automatically armed in AWAY Mode. The codepad beeps once every second until the Pre-Alert Timer expires: the system then automatically arms itself in AWAY Mode. If you want the system to automatically arm in STAY Mode 1, enable Option 4 in Location 496 (refer to *Section 18.5 Consumer Options 1* on page 82).

After the control panel is automatically armed in AWAY Mode or STAY Mode 1, Exit Time starts. If a valid User Code is entered during the Pre-Alert Time, the Auto Arming Time programmed in Locations 482 to 485 (refer to *Section 17.12 Auto Arming Time* on page 79) is extended by 1 hour.

If you want a programmable output to operate during the Auto Arming Pre-Alert Time, use Output Event Type 0,5 Auto Arm Pre-Arming Alert Time (refer to page 71).

17.12 Auto Arming Time

Location	482 to 485		
		Location	Default
Hour of the day (tens digit)		482	0
Hour of the day (units digit)		483	0
Minute of the day (tens digit)		484	0
Minute of the day (units digit)		485	0

These locations specify the time of day the system automatically arms itself in AWAY Mode. Set this time in 24-hour format (for example, program 10:30 PM as 2230). If you want the system to arm in STAY Mode 1, select Option 4 in Location 496 (refer to *Section 18.5 Consumer Options 1* on page 82).

If forced arming is disabled for any zone, the automatic arming feature operates regardless of whether any zones are unsealed. Refer to *Section 14.3.7 Zone Options 2* on page 63 for more information on programming zones for forced arming.

User Code 16 is reported when this feature is used.

For partitioned ICP-CC488 Control Panels, both areas are automatically armed in AWAY Mode at the same time each day.

17.13 Auto Disarming Time

Location	486 to 489		
		Location	Default
Hour of the day (tens digit)		486	0
Hour of the day (units digit)		487	0
Minute of the day (tens digit)		488	0
Minute of the day (units digit)		489	0

These locations specify the time of day the system automatically disarms itself. Set this time in 24-hour format (for example, program 10:30 PM as 2230).

User Code 16 is reported when this feature is used.

For partitioned ICP-CC488 Control Panels, both areas are automatically disarmed at the same time each day.

17.14 Kiss-Off Wait Time

Location	490
Default	3
Increments of 500 ms (500 ms to 8 sec)	

This location sets the time the control panel waits for acknowledgment before resending a report. This timer applies only to the 4 + 2 Express Format.

17.15 Speaker Beep Volume

Location	491
Default	13
0	No beeps
15	Loudest beeps

This location allows you to adjust the speaker volume for remote radio operation.

17.16 System Time

Location	901 to 904	
	Location	**Default**
Hour of the day (tens digit)	901	0
Hour of the day (units digit)	902	0
Minute of the day (tens digit)	903	0
Minute of the day (units digit)	904	0

The ICP-CC488 Control Panel has a real-time 24-hour clock you must set during installation. Set this time in 24-hour HHMM format (for example, program 10:30 PM as 2230). You must reset the System Time every time the system is powered down.

17.17 System Date

Location	905 to 910	
	Location	**Default**
Day of the month (tens digit)	905	0
Day of the month (units digit)	906	1
Month of the year (tens digit)	907	0
Month of the year (units digit)	908	1
Current year (tens digit)	909	0
Current year (units digit)	910	1

The ICP-CC488 Control Panel has a real-time 12-month calendar you must set during installation. Set the date in DDMMYY format (for example, program 1 January 2004 as 010104). You must reset the System Date every time the system is powered down.

To set the date and time:

1. Enter your Master Code and press [6][AWAY]. Three beeps sound and the STAY and AWAY indicators flash.

2. Enter the day, month, year, hour, and minute in DD, MM, YY, HH, MM format (where DD is the day of the month, MM is the month of the year, YY is the year, HH is the hour of the day, and MM minute of the day) and press [AWAY]. Use 24:00 hour format when programming the hour of the day.
   Two beeps sound and the STAY and AWAY indicators are extinguished. If a long beep sounds, there was an error when you entered the date and time.

Example

To set the date and time for the 1st January 2004 at 10:30 PM, enter:

[2 5 8 0 6][AWAY][0 1 0 1 0 4 2 2 3 0][AWAY]

18.0 System and Consumer Options

The locations in this section have up to four options. You can select any combination of these options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

18.1 System Options 1

Location	492
1	Bosch Security Systems, Inc. smart lockout allowed
2	Horn speaker monitor
4	Strobe indications for radio arm/disarm
8	Assign Button 4 on transmitter to operate STAY Mode 1

1 – Smart Lockout Allowed

This feature allows the control panel to remove any zones that are programmed for lockout dialer from the lockout list when the sirens are running. This feature allows a monitoring station to receive zone alarm reports from previously locked out zones during siren time. Refer to *Section 14.3.5 Zone Options 1* on page 61 for information on programming zones for lockout dialer and lockout siren.

Refer to *Section 14.5 Swinger Shutdown Count for Dialer* on page 64 to program the number of times the zone can report before being locked out.

2 – Horn Speaker Monitor

If this option is selected, the control panel detects when the horn speaker is disconnected from the speaker terminals. The FAULT indicator lights when the horn speaker is disconnected and is extinguished when the horn speaker is reconnected.

If an output is required to operate when the horn speaker is disconnected, use Output Event Type 1,6 Horn Speaker Monitor Fail (refer to page 72 for more information).

4 – Strobe Indications for Radio Arm/Disarm

This option allows the strobe to indicate when the system is armed and disarmed when remotely operating the system using the DSRF Series RF Receiver.

Table 60:	Strobe Indications for Remote Operations

Strobe Duration	System Status
3 sec	System disarmed
6 sec	System armed in AWAY Mode
6 sec	System armed in STAY Mode 1

8 – Assign Button 4 To Operate STAY Mode 4

This option allows Button 4 on the RF3334 4 Channel Hand Held Transmitter to arm the system in STAY Mode 1.

18.2 System Options 2

Location	493
Default	0
1	Codepad Panic to be silent
2	Codepad Fire to be silent
4	Codepad Medical to be silent
8	Access denied (code retries) to be silent

1 – Codepad Panic To Be Silent

If this option is selected, a Codepad Panic Alarm or Radio Remote Panic Alarm does not operate the horn speaker, the bell, or the strobe outputs. If this option is not selected, all three outputs operate after a Codepad Panic Alarm is activated when a user presses [1] and [3] or [STAY] and [AWAY] at the same time on the remote codepad. Selecting this option does not affect the operation of the communication dialer.

If you want to disable reporting of a Codepad Panic Alarm, program Locations 404 and 405 as 0 (refer to *Section 15.16 Codepad Panic Report* on page 66).

2 – Codepad Fire To Be Silent

If this option is selected, a Codepad Fire Alarm does not operate the horn speaker, the bell, or the strobe outputs. If this option is not selected, all three outputs operate after a Codepad Fire Alarm is activated when a user presses [4] and [6] at the same time on the remote codepad. Selecting this option does not affect the operation of the communication dialer.

If you want to disable the reporting of a Codepad Fire Alarm, program Locations 407 and 408 as 0 (refer to *Section 15.17 Codepad Fire Report* on page 66).

4 – Codepad Medical To Be Silent

If this option is selected, a Codepad Medical Alarm does not operate the horn speaker, the bell, or the strobe outputs. If this option is not selected, all three outputs operate after a Codepad Medical Alarm is activated when a user presses [7] and [9] at the same time on the remote codepad. Selecting this option does not affect the operation of the communication dialer.

If you want to disable the reporting of a Codepad Medical Alarm, program Locations 409 and 410 as 0 (refer to *Section 15.18 Codepad Medical Report* on page 68).

8 – Access Denied (Code Retries) To Be Silent

If this option is selected, a Codepad Tamper Alarm does not operate the horn speaker, bell, or the strobe outputs. If this option is not selected, all three outputs operate after a Codepad Tamper Alarm occurs.

Refer to *Section 15.26 System Status – Access Denied* on page 69 to set the number of invalid code retries that causes an alarm condition. Selecting this option does not affect the operation of the communication dialer. If you want to disable the reporting of Access Denied reports, program Locations 424 to 426 as 0.

18.3 System Options 3

Location	494
1	AC fail after 1 hour (disabled – after 2 min)
2	Ignore AC fail
4	Pulse count handover allowed
8	Handover delay to be sequential

1 – AC Fail after 1 Hour

If this option is selected, the MAINS indicator flashes when the AC MAINS supply is disconnected. An AC Loss signal (Contact ID Event Code 301) is transmitted to the base station receiver after the AC MAINS supply is disconnected continuously for longer than 60 min.

If this option is not selected, the MAINS indicator flashes and an AC Loss signal (Contact ID Event Code 301) is transmitted to the base station receiver after the AC MAINS power is disconnected continuously for 2 min.

The MAINS indicator stops flashing when the AC MAINS supply is restored longer than 2 min.

An AC Loss Restore Report is transmitted to the base station receiver after the AC MAINS supply is restored continuously for more than 2 min regardless of whether this option is selected.

2 – Ignore AC Fail

If this option is selected, the MAINS indicator does not flash and the codepad does not beep every minute when the AC MAINS is disconnected from the control panel. If you want a programmable output to operate when the AC MAINS fails, use Output Event Type 1,4 AC Fail (refer to page 72).

If this option is selected, an AC Loss report (Contact ID Event Code 301) still reports to the base station receiver unless Locations 416 and 417 are programmed as 0 (refer to *Section 15.22 System Status – AC Fail Report* on page 68).

4 – Zone Pulse Count Handover

If this option is selected, any zone pulse count readings are handed over and accumulate to any zone that is activated during the same arming cycle. Zone pulse count handover only operates with zone pulse count options 8 to 15. Refer to *Section 14.3.3 Zone Pulse Count* on page 61 and *Section 14.3.4 Zone Pulse Count Time* on page 61 for more information.

> 24-Hour Zones can receive any handover pulses from other zones. 24-Hour Zones cannot hand over pulses to other zones.

8 – Handover Delay To Be Sequential

If this option is selected, handover delay is sequential (that is, in numerical order from lowest to highest). If the sequence is broken before the Entry Time expires, an alarm occurs. If this option is not selected, handover delay follows the entry path if a Delay Zone is activated first. Refer to *Section 14.3.2 Zone Types* on page 61 for more information about Handover Zones.

18.4   System Options 4

Location	495
Default	0
1	Panel to power up disarmed (if power reset)
2	Arm/disarm tracking on power up
4	Internal crystal to keep time
8	Night arm station or RE005 installed

1 – Panel To Power Up Disarmed

If this option is selected, the control panel powers up in the disarmed state when the battery and AC MAINS are reconnected after the system is powered down.

If this option is not selected, the system is always powered up armed in AWAY Mode.

2 – Arm/Disarm Tracking on Power Up

If selected, the control panel keeps its current armed status in non-volatile memory. If the control panel is restarted due to a power failure, the control panel returns to being armed or disarmed as it was before the power failed.

Example

If the system is disarmed when the system is powered down, the system returns to the disarmed state when the system is powered back up.

4 – Internal Crystal To Keep Time

If this option is selected, the control panel uses the internal crystal (XTAL) to keep track of time. This option is useful in countries that do not have a constant MAINS frequency. If this option is not selected, the control panel uses the MAINS frequency as a time base to keep time.

8 – Night Arm Station, or RE005 Installed

Select this option to use the RE005 2-Channel Radio Interface or the CP105 Night Arm Station. This option enables any of these three accessories to operate the control panel. User Code 16 is used to send Open/Close Reports when you use any of these accessories.

> The Night Arm Station cannot operate a partitioned ICP-CC488 Control Panel.

18.5   Consumer Options 1

Location	496
Default	0
1	Test reports only when armed
2	Test report after siren reset
4	Auto arm in STAY Mode 1
8	STAY indicator to display Day Alarm status

1 – Test Reports Only When Armed

If this option is selected, Test Reports (Contact ID Event Code 602) are only sent when the system is armed. It is no longer necessary to send a Test Report with an Opening and Closing Report every day.

Most commercial premises are open during the working week, so a Test Report is not necessary because Open and Close Reports are sent at the programmed time. If you want to manually send a Test Report, press and hold [9] button until two beeps sound.

Refer to *Section 15.28 Test Reporting Time* to set the desired Test Report time. To set the first Test Report, refer to *Section 5.1.2 Set the Number of Days until the First Test Report.*

2 – Test Report after Siren Reset

Select this option to force the control panel to send a Test Report after the siren is reset. This can be used to indicate to the monitoring station that the control panel itself was not tampered with during the alarm period.

4 – Auto Arm in STAY Mode 1

Select this option if automatic arming in STAY Mode 1 is preferred to automatic arming in AWAY Mode.

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Program the time that the control panel automatically arms itself in Locations 482 to 485 (refer to *Section 17.12 Auto Arming Time* on page 79). Set the Auto Arming Pre-Alert Time in Location 481 (refer to *Section 17.11*).

> ☑ For partitioned ICP-CC488 Control Panels, both areas are automatically armed.

8 – STAY Indicator To Display Day Alarm Status

If this option is selected, the STAY indicator flashes once every 3 sec when Day Alarm is enabled.

Specify Day Alarm zones in Location 265 (refer to *Section 14.1 Day Alarm Information* on page 56).

You can turn Day Alarm on and off by holding down [4] for 2 sec. Three beeps indicate Day Alarm is turned on and two beeps indicate Day Alarm is turned off. Refer to *Section 14.1.3 Day Alarm Operation* on page 56 or more information.

18.6   Consumer Options 2

Location	497
1	Codepad display extinguishes after 60 sec
2	Single button arming allowed (AWAY/STAY Modes 1 and 2)
4	Single button disarming allowed (STAY Modes 1 and 2)
8	Alarm memory reset on disarm

1 – Codepad Display Extinguish after 60 Sec

If this option is selected, all indicators on the remote codepad display are extinguished if a button is not pressed for 60 sec. The indicators lights again when there is an alarm (except a silent alarm), when a button is pressed on the codepad, when the AC MAINS fail beeps, or if the Entry Timer is activated.

2 – Single Button Arming Allowed

If this option is selected, the hold-down functions for arming in AWAY Mode, STAY Mode 1 and STAY Mode 2 are functional. Refer to *Section 5.4 Hold-Down Functions* on page 32 for more information.

4 – Single Button Disarming Allowed

This option operates only when Option 2 in this location is also selected. This option allows hold-down functions for disarming from STAY Mode 1 and STAY Mode 2. Refer to *Section 5.4 Hold-Down Functions* on page 32 for more information.

8 – Alarm Memory Reset on Disarm

If this option is selected, the alarm events memory clears from the remote codepad when the system is disarmed. If this option is not selected, the system must be armed and disarmed again to clear alarm memory from the remote codepad.

18.7   Consumer Options 3

Location	498
1	Codepad fault beeps allowed
2	Use digit 3 for Codepad Duress Alarm (instead of digit 9)
4	Alarms activate sirens and strobe outputs in STAY Mode 1 and 2
8	Zone Tamper Alarms to be silent

1 – Codepad Fault Alarms Beep

If this option is selected, the FAULT indicator flashes and the codepad beeps once every minute until the user acknowledges a system fault. To acknowledge a new fault and stop the codepad from beeping once every minute, press [AWAY].

If this option is not selected, the codepad only the FAULT indicator flashes when a new fault occurs and the codepad does not beep once every minute.

2 – Digit 3 for Codepad Duress Instead of 9

If this option is selected, a user can add 3 (instead of a 9) to the code used to disarm the system to activate a Duress Alarm.

4 – Alarms Activate Sirens and Strobe Outputs in STAY Modes 1 and 2

Select this option if audible alarms are required when the system is armed in STAY Mode 1 or STAY Mode 2.

8 – Zone Tamper Alarms To Be Silent

This option allows Tamper Alarms, when Option 15 is programmed in Location 266 (refer to *Section 14.2 EOL Resistor Value* on page 56), or Tamper Alarms on RF wireless devices to be silent when activated.

18.8   Radio Input Options

Location	499
Default	0
1	DSRF Receiver
2	Latching keyswitch input
3	Momentary keyswitch input
4	Reserved

1 – DSRF Series Receiver

Select this option to use the DSRF Series Receiver for remote operations using radio remote hand-held transmitters.

2 – Latching Keyswitch Input

Selecting this option allows you to connect a latching keyswitch to the TS2 terminals D and GND to remotely arm and disarm the system in AWAY Mode.

4 – Momentary Keyswitch Input

Selecting this option allows you to connect a momentary keyswitch to the TS2 terminals D and GND to remotely arm and disarm the system in AWAY Mode.

19.0 Partitioning

The ICP-CC488 Control Panel includes the partitioning feature, which can effectively transform your single control panel into two separate areas. Normally, arming and disarming the system turns the entire system on or off. When the ICP-CC488 Control Panel is partitioned, you can arm or disarm an individual area without affecting the other area.

Partitioning is extremely useful when you want to secure sheds, dual occupancy dwellings, accessory dwellings, shops, and offices.

Only the CP5 Area Addressable (CP500A) codepad and the CP5 Master Partitioned (CP500P) codepad can be used in partitioned systems.

19.1 CP500 Master Partitioned LED Codepad

Figure 17: ICP-CP500PW Master Partitioned Codepad
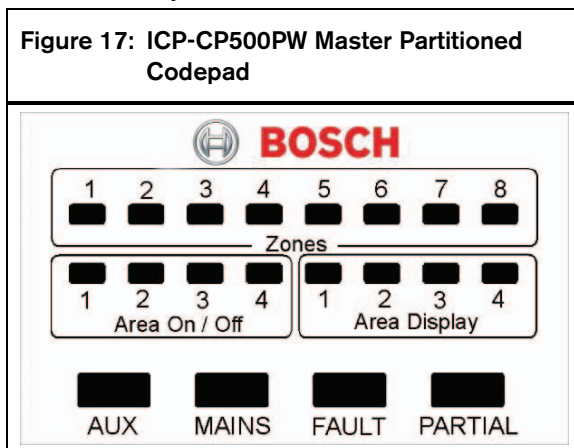
This codepad is only used on a partitioned ICP-CC488 Control Panel. The Master Partitioned LED codepad allows a user to operate both areas individually from the same codepad, without the need to operate individual areas from separate codepads.

The codepad is the communications interface between you and the alarm system. The codepad allows you to issue commands and offers visual and audible indications to guide you through general operation.

The codepad incorporates a number of indicators: eight zone indicators show the condition of each zone, eight area indicators show the area status, and four other indicators show general status. These indicators are described in detail in *Section ICP-CP500PW Master Partitioned LED Codepad* on page 12.

19.2 Using Codepads in a Partitioned System

19.2.1 Operating with a CP5 Area Addressable LED Codepad

The display and operations of a CP5 Area Addressable (CP500A) codepad in a partitioned system are exactly the same as the CP5 Eight Zone LED codepad, except that the commands issued from the codepad affect only the area to which the codepad is allocated. Refer to *Section 3.0 System Operations* on page 14 for more information.

Example

If the codepad is allocated to Area 2, only User Codes that are allocated to Area 2 can operate the codepad. If User Codes have access only to Area 1, entering the code at the Area 2 codepad does not work.

If you want to determine the area to which the codepad you are operating is allocated, hold down [8]. If Zone 1 lights, the codepad is allocated to Area 1. If Zone 2 lights, the codepad is allocated to Area 2. Refer to *Section 5.4 Hold-Down Functions* on page 32 for more information.

19.2.2 Operating with a CP5 Master Partitioned Codepad

Operations using a CP5 Master Partitioned (CP500P) codepad in a partitioned system are the same as the CP5 Area Addressable codepad with one exception. All operations are related only to the lit Area Display. If the Area Display 2 is lit, the codepad displays information only for Area 2 (that is, all operations effect only Area 2). Refer to *Section 3.0 System Operations* on page 14 for more information.

To move from one area to the next:

1. Press [AWAY].
   The next Area Display indicator lights (for example, if Area Display 1 is lit, pressing [AWAY] lights Area Display 2.
2. Press [AWAY] to toggle the display back to other Area Display indicator.
   In the example, pressing [AWAY] again lights Area Display 1.

19.3 Programming

Locations 500 and 501 apply only to a partitioned ICP-CC488 Control Panel.

These locations have up to four options. You can select any combination of these options by programming a single value. Calculate this value by adding the option bit numbers together. Refer to *Section 7.3 Programming Option Bits* on page 36 for more information.

19.3.1 Partitioning Options 1

Location	500
Default	0
1	First to open/last to close reporting
2	Area 1 codepad connected to data terminal
4	Reset sirens from any area allowed
8	Master codepad to display AUX indicator when online

1 – First To Open/Last To Close Reporting

Select this option if only one Open/Close Report is required for a partitioned system. Instead of sending individual Open/Close reports for each area, a Closing Report is sent only after both areas are armed and an Opening Report is sent as soon as one area is disarmed.

The reports are sent with the Subscriber ID Number allocated to the specific area. You must program Subscriber ID Numbers and Open/Close Reports for both areas.

> This option is applicable only when all User Codes have a priority level set with no open/close reports. If User Codes have priority levels set to Open/Close Reports, an Opening or Closing report is always sent when any area is disarmed or armed, regardless of whether the area was first to open or last to close.

2 – Area 1 Codepad Connected to Data Terminal

If this option is selected, the DATA terminal on the ICP-CC488 Control Panel is configured to send only status information that is relevant to Area 1. This allows you to connect an area addressable codepad (CP500A) set for Area 1 operation to the DATA terminal of the control panel instead of connecting the addressable codepad to an output.

If this option is not selected, the CP5 Master Partitioned (CP500P) codepad must be used because the DATA terminal on the control panel displays information for both Area 1 and Area 2.

An advantage to using this option is that you can configure a system into separate areas and preserve the maximum number of programmable outputs for other applications.

4 – Reset Sirens from Any Area Allowed

This option applies only to a partitioned control panel. If this option is selected, any valid User Code from Area 1 or Area 2 can reset the horn speaker, strobe, bell, or EDMSAT outputs while in alarm. This option does not allow a User Code allocated to one area to disarm another area.

8 – Master Codepad To Display AUX Indicator When Online

If this option is selected, the AUX indicator on the CP5 Master Partitioned (CP500P) codepad lights when the control panel seizes the telephone line to send a report. The AUX indicator is extinguished when the telephone line is released.

19.3.2 Partitioning Options 2

Location	501
Default	0
1	Lock Area 1 to Receiver 1 and Area 2 to Receiver 2
2	User Code allowed to arm/disarm both areas at the same time
4	Reserved
8	Reserved

1 – Lock Area 1 to Receiver 1 and Area 2 to Receiver 2

If this option is selected, all reports for Area 1 are sent to Receiver 1 and all reports for Area 2 are sent to Receiver 2.

If this option is not selected, you must manually program all reporting to be sent to Receiver 1 or Receiver 2 for both areas.

2 – User Code Allowed To Arm/Disarm Both Areas at the Same Time

If this option is selected, any user allocated to both areas can arm or disarm both areas at the same time without entering the code at each area codepad. Refer to *Sections 5.2.1* and *5.3.1* for more information.

If the user arms both areas at the same time and Option 1 is selected in Location 500 (refer to *Section 19.3.1 Partitioning Options 1* on page 85), only a Closing Report for Area 2 is sent.

If the user disarms both areas at the same time and Option 1 is selected in Location 500, only an Opening Report for Area 1 is sent.

19.4 Zone Allocations

You can allocate up to eight zones to each zone. The eight locations for each area are represented by the zone indicators on the remote area addressable codepad. You can map any zone to either area to appear as any zone on the remote area addressable codepad (that is, you can allocate a zone to both Area 1 and Area 2 to become a common zone, but each Area zone number cannot exceed 8).

Zones programmed as common zones report to the base station receiver on group zero (Area 1 – Group 1 and Area 2 – Group 2). Zones allocated to only one area report on the corresponding group number. Common zones, other than 24-Hour zone types, do not activate an alarm until both areas are armed in either AWAY Mode or STAY Mode 1.

19.4.1　Zone Allocations for Areas 1 and 2

Location　502 to 517		
	Location	**Default**
Zone 1 LED – Area 1 Codepad	502	0
Zone 2 LED – Area 1 Codepad	503	0
Zone 3 LED – Area 1 Codepad	504	0
Zone 4 LED – Area 1 Codepad	505	0
Zone 5 LED – Area 1 Codepad	506	0
Zone 6 LED – Area 1 Codepad	507	0
Zone 7 LED – Area 1 Codepad	508	0
Zone 8 LED – Area 1 Codepad	509	0
Zone 1 LED – Area 2 Codepad	510	0
Zone 2 LED – Area 2 Codepad	511	0
Zone 3 LED – Area 2 Codepad	512	0
Zone 4 LED – Area 2 Codepad	513	0
Zone 5 LED – Area 2 Codepad	514	0
Zone 6 LED – Area 2 Codepad	515	0
Zone 7 LED – Area 2 Codepad	516	0
Zone 8 LED – Area 2 Codepad	517	0
0	Not mapped for this LED	
1	A zone is mapped to this LED	

You can enable or disable the zone allocations for Area 1 and Area 2. For example, if the location 507 is set to "0", the zone LED of Area 1 is not mapped.

Detailed Example

In the following example, Zones 1, 2, 3, and 4 are allocated to Area 1 to appear as zones 1, 2, 3 and 4. Zones 1, 5, 6, 7, 8 are allocated to Area 2 to appear as zones 1, 5, 6, 7, and 8. Programming the same zone into more than one area specifies that zone as a common zone.

Figure 18: Area 1 Codepad Display
Area 1 Zone Allocations *Locations 502 to 509: 1　2　3　4　0　0　0　0*
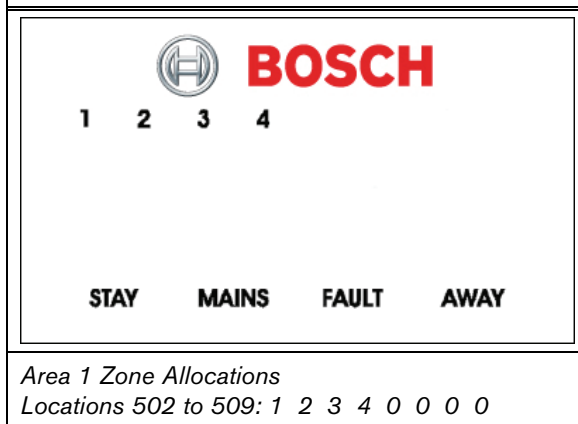
Figure 19: Area 2 Codepad Display
Area 2 Zone Allocations *Locations 510 to 517: 1　0　0　0　5　6　7　8*
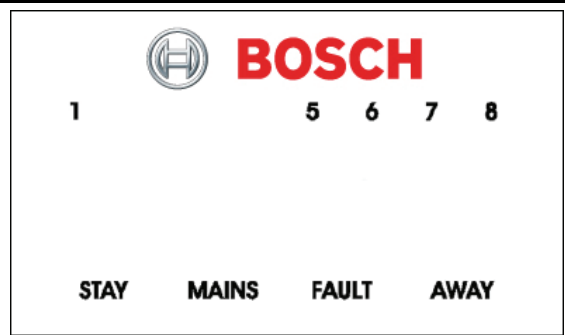
19.5　User Code Allocations

Location　534 to 549		
	Location	**Default**
User Code 1	534	0
User Code 2	535	0
User Code 3	536	0
User Code 4	537	0
User Code 5	538	0
User Code 6	539	0
User Code 7	540	0
User Code 8	541	0
User Code 9	542	0
User Code 10	543	0
User Code 11	544	0
User Code 12	545	0
User Code 13	546	0
User Code 14	547	0
User Code 15	548	0
User Code 16	549	0

Locations 534 to 549 are used to assign each User Code to one or two area areas of a partitioned ICP-CC488 Control Panel. Enter a value from 0 to 3 into each of these locations to assign the User Code holder to the areas it must operate (refer to *Table 61*). You can allocate multiple User Codes to the same area.

Table 61:　User Code Allocations	
Option	**Description**
0	Not allocated to an area
1	Allocated to Area 1
2	Allocated to Area 2
3	Allocated to Area 1 and Area 2

19.6　Setting Up and Programming Codepads for Partitioning

Only the CP5 Area Addressable (CP500A) and CP5 Master Partitioned (CP500P) codepads can be used with a partitioned ICP-CC488 Control Panel.

19.6.1   Setting Up the Master Partitioned Codepad as the Main Codepad

To use the CP5 Master Partitioned (CP500P) codepad as the main codepad in a partitioned system, connect the codepad to the main codepad terminals (CP-, CP+, CLK, and DATA). Set all DIP switches on the back of the codepad to the ON position (refer to *Figure 20* on page 87).

19.6.2   Setting Up an Area 1 Codepad as the Main Codepad

If you are not using the CP5 Master Partitioned codepad as the main codepad of the partitioned system, connect the Area 1 codepad to the main codepad terminals (CP-, CP+, CLK, and DATA). Set DIP switch 1 on the back of the codepad into the ON position (refer to *Figure 20* on page 87) and select Option 2 in Location 500 (refer to *Section 19.3.1 Partitioning Options 1* on page 85).

19.6.3   Setting Up an Area 1 Codepad

If you want a separate area codepad only for Area 1 when using the CP5 Master Partitioned codepad as the main codepad, connect the Area 1 codepad to the main codepad terminals (CP-, CP+, and CLK) and connect the DATA terminal to one of the outputs programmed as 6,0 Area 1 Codepad Data (refer to *page 75*). Set DIP switch 1 on the back of the Area 1 codepad to the ON position (refer to *Figure 20* on page 87).

19.6.4   Setting Up an Area 2 Codepad

If you want a separate area codepad only for Area 2, connect the Area 2 Codepad to the main codepad terminals (CP-, CP+, and CLK) and connect the DATA terminal to one of the outputs programmed as 6,1 Area 2 Codepad Data (refer to *page 75*). Set DIP switch 2 on the back of the Area 2 codepad to the ON position (refer to *Figure 20* on page 87).

Figure 20: DIP Switch Location on Codepad
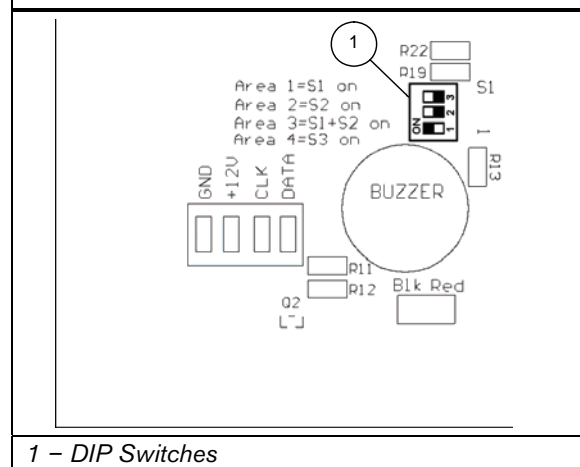
1 – DIP Switches

19.7   Codepad Connections For Partitioning - Examples

If the CP-5 Area Addressable (CP500A) codepad is assigned to Area 1:

1. Set DIP Switch 1 on the back of the remote codepad to the ON position (refer to *Figure 20* on page 87).
2. For Output 1, program Location 436 to 6 and Location 437 to 0 (refer to *page 75*).

If the CP-5 Area Addressable (CP500A) codepad is assigned to Area 2:

1. Set DIP Switch 2 on the back of the remote codepad to the ON position. (refer to *Figure 20* on page 87).
2. For Output 1, program Location 436 to 6 and Location 437 to 1 (refer to *page 75*).

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

Figure 21:   Connections for CP-5 Master Partitioned Codepad and CP-5 Area Addressable Codepad

1 – Data	5 – Master Partitioned Codepad
2 – CLK	
3 – +12 V	6 – Addressable Area Codepad
4 – GND	

Set the DIP Switches and program these locations for the two CP-5 Area Addressable (CP500A) codepads to function correctly.

1. Set DIP Switch 1 on the back of the remote codepad for Area 1 to the ON position (refer to *Figure 20* on page 87).
2. Set DIP Switch 2 on the back of the remote codepad for Area 2 to the ON position.
3. Select Option 2 in Location 500 (refer to *Section 19.3.1 Partitioning Options 1* on page 85).
4. For Output 1, program Location 436 to 6 and Location 437 to 1 (refer to *page 75*).

Figure 22:   Connections for Two CP-5 Area Addressable Codepads

1 – Data	4 – GND
2 – CLK	5 – Area 1 Codepad
3 – +12 V	6 – Area 2 Codepad
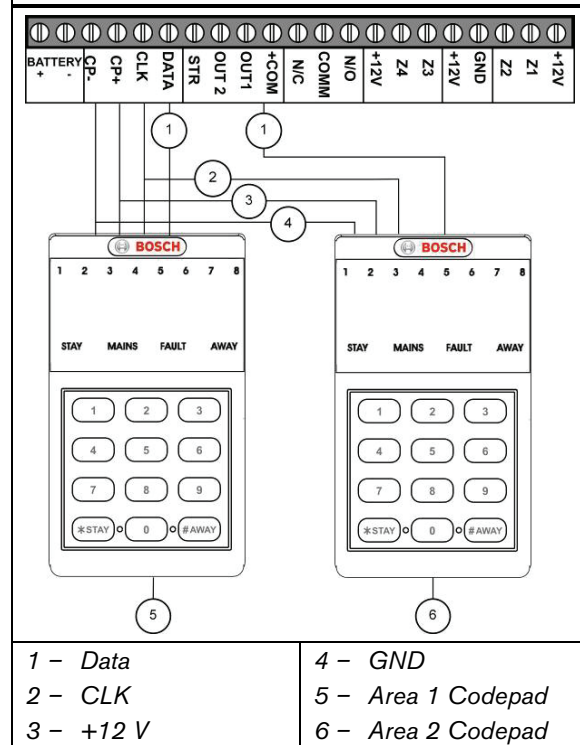
20.0 RF Information

20.1   RF Option Bit

Location	599
Default	0
1	Sound siren on RF receiver fail
2	Sound siren on RF receiver tamper/jamming
4	Unseal zone that fails supervision (if supervision enabled)
8	Enable RF jamming monitoring

1 – Sound Siren on RF Receiver Fail

If this option is selected, the horn speaker, piezo, and strobe operate when the RF receiver fails to communicate with the control panel.

2 – Sound Siren on RF Tamper/Jamming

If this option is selected, the horn speaker, piezo, and strobe operate when the tamper switch on the receiver becomes open circuit or the receiver picks up jamming signals from an RF device.

4 – Unseal Zone that Fails Supervision

If a wireless zone device fails to send a signal within the RF Supervision Time programmed in Location 393 (refer to *Section 15.8*) the codepad zone indicator lights as unsealed.

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

8 – Enable RF Jamming Monitor

If this option is selected, the RF receiver monitors the background RF levels. If this level reaches a preset limit, the receiver assumes it is being jammed. This generates a fault on the codepad and sends an RF Jamming Report to the monitoring station.

20.2   RF Device Mapping Option

Location	600 to 615		
		Location	Default
Map RF Device 1		600	1
Map RF Device 2		601	1
Map RF Device 3		602	1
Map RF Device 4		603	1
Map RF Device 5		604	1
Map RF Device 6		605	1
Map RF Device 7		606	1
Map RF Device 8		607	1
Map RF Device 9		608	1
Map RF Device 10		609	1
Map RF Device 11		610	1
Map RF Device 12		611	1
Map RF Device 13		612	1
Map RF Device 14		613	1
Map RF Device 15		614	1
Map RF Device 16		615	1
0	Mapping Disabled		
1	Mapping Enabled		

These locations allow you to enable or disable any of the sixteen RF devices. For example, if location 607 is set to "0", RF device 7 is not mapped and is disabled.

20.3   Default RF Device Mapping (Devices 1 to 8)

Location	616 to 623		
		Location	Default Value*
Map RF Device 1 to Zone (1 to 16)		616	00
Map RF Device 2 to Zone (1 to 16)		617	01
Map RF Device 3 to Zone (1 to 16)		618	02
Map RF Device 4 to Zone (1 to 16)		619	03
Map RF Device 5 to Zone (1 to 16)		620	04
Map RF Device 6 to Zone (1 to 16)		621	05
Map RF Device 7 to Zone (1 to 16)		622	06
Map RF Device 8 to Zone (1 to 16)		623	07
0-15	Mapping RF device to zone 1-16		

* The programming for zone numbers 1 through 8 is in hexadecimal code (00 through 15).

These locations allow you to allocate RF wireless devices 1 to 8 to any of the 16 zones on the control panel. You cannot map more than one RF wireless device to the same zone. Refer to *Section 20.4 Default RF Device Mapping (Devices 9 to 16)* to map RF wireless devices 9 to 16. By default, RF devices 1 to 8 are mapped separately to each of the eight zones (that is, Device 1 is mapped to Zone 1, Device 2 to Zone 2, and so on). Locations 616 to 623 and locations 624 to 631 can be programmed as any value from 00 to 15. Refer to *Section 20.5 Using Hexadecimal Values for RF Device Mapping* on page 89 for mapping information.

20.4   Default RF Device Mapping (Devices 9 to 16)

Location	624 to 631		
		Location	Default
Map RF Device 9 to Zone (1 to 16)		624	08
Map RF Device 10 to Zone (1 to 16)		625	09
Map RF Device 11 to Zone (1 to 16)		626	10
Map RF Device 12 to Zone (1 to 16)		627	11
Map RF Device 13 to Zone (1 to 16)		628	12
Map RF Device 14 to Zone (1 to 16)		629	13
Map RF Device 15 to Zone (1 to 16)		630	14
Map RF Device 16 to Zone (1 to 16)		631	15
0-15	Mapping RF device to zone 1-16		

* The programming for zone numbers 9 through 16 is in hexadecimal code (00 through 15).

These locations allow you to map RF wireless control panel. You cannot map more than one RF wireless device to the same zone. Refer to *Section 20.3* to map RF wireless devices 1 to 8.

By default, RF devices 9 through 16 are mapped separately to each of the eight zones (that is, Device 9 is mapped to Zone 9, Device 10 to Zone 10). Locations 616 to 623 and locations 624 to 631 can be programmed as any value from 00 to 15. Refer to *Section 20.5 Using Hexadecimal Values for RF Device Mapping* on page 89 for mapping information.

20.5   Using Hexadecimal Values for RF Device Mapping

To map an RF device, first select a device number and enable the device. Refer to *Section 20.2 RF Device Mapping Option* on page 89.

Then, find the RF device number in *Section 20.3* (for devices 1 through 8) on page 89 or *Section 20.4* (for devices 9 through 16) on page 89. Use the device's corresponding location (616 through 631). To map the selected device to a zone other than the default zone, refer to *Table 62* and use the correct hexadecimal value.

Table 62:	Hexadecimal Values for Zone Nos.
Zone Number	**Hexadecimal Value**
1	00
2	01
3	02
4	03
5	04
6	05
7	06
8	07
9	08
10	09
11	10
12	11
13	12
14	13
15	14
16	15

20.6 RF Device Signal Strength (Devices 1 to 8) (Read Only)

Location	801 to 808		
		Location	**Default**
RF Device 1		801	0
RF Device 2		802	0
RF Device 3		803	0
RF Device 4		804	0
RF Device 5		805	0
RF Device 6		806	0
RF Device 7		807	0
RF Device 8		808	0
0-15	Mapping RF Device to Zone 1-16		

These locations allow you to view the received signal strength for RF wireless Devices 1 to 8. Location 801 displays the signal strength of Device 1, Location 802 displays the signal strength of Device 2, and so on. The signal strength is measured from 0 (lowest) to 8 (highest).

20.7 RF Device Signal Strength (Devices 9 to 16) (Read Only)

Location	809 to 816		
		Location	**Default**
RF Device 9		809	0
RF Device 10		810	0
RF Device 11		811	0
RF Device 12		812	0
RF Device 13		813	0
RF Device 14		814	0
RF Device 15		815	0
RF Device 16		816	0

These locations allow you to view the received signal strength for RF wireless Devices 9 to 16. Location 809 displays the signal strength of Device 9, Location 810 displays the signal strength of Device 10, and so on. The signal strength is measured from 0 (lowest) to 8 (highest).

21.0 Optional Equipment

Bosch Security Systems, Inc. manufactures a number of accessories that can be used in conjunction with the ICP-CC488 Control Panel. These optional pieces of equipment enhance certain features to make the system extremely flexible.

21.1 RE012/RE013 2 Channel/4 Channel Hand Held Transmitters 304 MHz

These hand-held radio transmitters can be used in conjunction with the RE005 304 MHz RF Receiver to operate the system remotely. Both hand-held transmitters can remotely arm and disarm the system in AWAY Mode or STAY Mode 1 and can activate remote Panic Alarms. The 4-channel hand-held transmitter can also operate outputs such as garage doors, swimming pool pumps, or outside lights.

21.2 RE005 2 Channel Radio Interface

The 2-channel radio interface allows customers to operate control panels remotely and to control two on-board relays. The interface can be used as a stand-alone receiver, independent of an ICP-CC488 Control Panel, used solely for remote control of external devices connected to the two on-board relays.

The interface's operating frequency is 304 MHz with the ability to store up to 120 radio remote codes. Connect the interface to an ICP-CC488 Control Panel using a three-wire connection in parallel with the codepad and select Option 8 in Location 495 (refer to *Section 18.4 System Options 4* on page 82).

21.3   SS914 EDMSAT Satellite Siren

The EDMSAT Satellite Siren is a totally self-contained unit incorporating a high-powered siren and a weatherproof strobe. A 1.2 Ah sealed lead-acid battery must be installed. The EDMSAT requires only two wires, which enable charging of the battery and activating of the siren and strobe. This is accomplished by pulse code modulating (PCM) the charging voltage. Any attempt to tamper with the wiring or to substitute an alternate power source across the wiring disrupts the data transmission and activates the EDMSAT immediately. When the EDMSAT executes a battery test, the unit sounds for 2 sec if the battery test fails. Use Output Event Type 0,0 EDMSAT - Satellite Siren (refer to page 71) when programming an output for the satellite siren.

21.4   CC891 Programming Key

The programming key copies and stores all information programmed in your control panel. The programming key can hold all your common configuration data such as monitoring station telephone numbers and zone reporting channels.

21.5   CC816 Alarm Link Software

This software package is designed to program the ICP-CC488 Control Panel by either the direct link or remote connect methods. This software can access all options and features and maintain history and service reports. Program options to use this feature in Location 180. Refer to *Section 8.0 Alarm Link Software* on page 40 for more information on using Alarm Link software.

21.6   ICP-CP508W Eight Zone LED Codepad

This codepad operates with the control panels. It provides indications for up to eight zones. This codepad cannot be used with the ICP-CC488 Control Panel.

21.7   ICP-CP508LW Eight Zone LCD Codepad

This codepad operates with the ICP-CC488 control panels. This codepad has a fixed icon display and provides indications for up to eight zones. This codepad cannot be used with the ICP-CC488 Control Panel.

21.8   ICP-CP500AW Eight Zone Area Addressable Codepad

This codepad operates with a partitioned ICP-CC488 Control Panel. This codepad has a DIP switch on the back to select the area to which the codepad belongs. Refer to *Section 19.6 Setting Up and Programming Codepads for Partitioning* and *Section 19.7 Codepad Connections For Partitioning* for more information.

21.9   ICP-CP500PW Master Partitioned Codepad

This codepad operates with a partitioned ICP-CC488 Control Panel. This codepad enables you to operate the entire system from a single codepad by toggling between the two areas by pressing [AWAY]. With this codepad, it is not necessary to have separate CP5 Area Addressable (CP500A) codepads for each area. Refer to *Section 19.6 Setting Up and Programming Codepads for Partitioning* and *Section 19.7 Codepad Connections For Partitioning* for more information.

21.10 CP105 Night Arm Station

The night arm station incorporates a panic button and allows the user to arm and disarm the system in STAY Mode 1 from a bedroom or sitting room. Enable the night arm station to operate with the system by selecting Option 8 in Location 495 (refer to *Section 18.4 System Options 4*).

21.11 TF008 Plug Pack (TF008)

The TF008 plug pack is used with control panels. The plug pack includes built-in thermal fuses that blow during overload or fault conditions to eliminate a possible fire threat due to excessive heat buildup inside the casing.

The plug pack incorporates a three-wire flying lead that enables a MAINS earth connection between the equipment and the plug pack. This connection might be required for lightning protection on equipment connected to phone lines or for safety reasons such as earthing of metal enclosures.

22.0 Terminals and Descriptions

22.1 Terminal Descriptions

| Table 63: Terminal Descriptions	
Terminal	**Description**
EARTH	Connect this terminal to the green wire on the TF008 Plug Pack that is internally connected to MAINS earth. Because extensive lightning protection is built into the control panel, this terminal must be connected correctly to take advantage of this protection.
18 VAC	These two terminals are plug-on type, and are the termination point for the TF008 plug pack. To ensure correct operation, the voltage of the plug pack must be 18 VAC to 22 VAC at 1.3 A (minimum).
+BATTERY −BATTERY	The +BATTERY terminal connects to the red positive terminal of the battery and the −BATTERY terminal connects to the black negative terminal of the battery. The battery should be a 12 VDC sealed lead-acid rechargeable type with a capacity from 1.2 Ah to 6.5 Ah. The battery is protected by a 2.5 A PTC. The charging globe situated above the 2.5 A PTC is always lit until the battery is 100% charged.
GND +12V CLK DATA	This group of terminals provides the connection points for your system codepads. All system codepads should connect in a parallel configuration back to these terminals. The only factor restricting the number of codepads that can be connected is the available power and its distribution. Since each codepad has a maximum power requirement of 60 mA with all indicators lit, take this into consideration to calculate your available continuous power. The total continuous external load should not exceed 1 A.
STR OUT 1 +COM	These terminals are the output interface terminals. They can be configured to any combination of the functions available through the system programming options. You can use them for a variety of functions with considerable flexibility. All outputs have a common +12 VDC terminal and each output can sink up to 400 mA. By default, Output 1 operates a horn speaker. This group of terminals is protected by the solid-state IPS system, which provides considerable tolerance to abuse or incorrect wiring. Each output is open collector and does not source any current, but it can sink up to 400 mA per output.
COMM N/O	These relay contacts are fully programmable similar to the strobe and Output 1. By default, they are an alarm output (Sirens Running – Output Event Type 1,15). The N/O contact is the connection point for the positive side of a DC siren, such as a piezo screamer. The negative side of the DC siren connects to the GND terminal. The PCB provides a link (JP2) to connect the COM terminal to either GND or +12 V. Connect this link to +12 V as shown in *Figure 23* on page 95. The relay is rated at 1 A/30 VDC.
+12V Z4 Z3	These terminals are provided for Zones 3 and 4. The common terminal is +12V. Connect all normally-closed contacts in series with the EOL resistor and connect all normally-open contacts in parallel with the EOL resistor. The function of the zones and their response times are configured using the system programming options. If split EOL is programmed, 24-Hour Zones or Keyswitch Zones connected in parallel to Zones 3 and 4 act as Zones 7 and 8.
+12V GND	These two terminals are provided to power detectors and other equipment. They are fuse-protected by the 1 A PTC.
Z2 Z1 +12V	These terminals are provided for Zones 1 and 2. The common terminal is +12V. Connect all normally-closed contacts in series with the EOL resistor and connect all normally-open contacts in parallel with the EOL resistor. The function of the zones and their response times are configured using the system programming options. If split EOL is programmed, 24-Hour Zones or Keyswitch Zones connected in parallel to Zones 1 and 2 act as Zones 5 and 6.

22.2 Glossary Of Terms

Table 64: Glossary

Term	Description
24-hour zone	A monitored input where tamper switches and emergency switches can be connected. If one of these switches is violated at any time (whether the system is armed or disarmed), an alarm is reported.
alarm condition	The status when an alarm system is armed and one of the detection devices is violated. A 24-Hour zone (for example, a smoke detector) can activate when the system is armed or disarmed.
answering machine bypass	A condition that enables connection with the control panel for remote arming or remote programming operations when there is an answering machine or facsimile machine on the same telephone line.
Armed (System ON)	A status in which the system is ready to accept alarms.
automatic arming	Programming that allows the system to arm automatically at the same time each day in AWAY Mode or STAY Mode 1.
automatic disarming	Programming that allows the system to disarm automatically at the same time each day in AWAY Mode or STAY Mode 1.
AWAY or #	A codepad button used to execute any given command.
AWAY Mode	The mode used to arm your system when you leave your premises.
codepad	A device that allows you to perform all functions such as arming, disarming, and programming of your alarm system.
day alarm	Programming that allows a combination of zones to be monitored while the system is disarmed.
detector	A unit installed as a satellite component in a security system designed to detect an intruder within a protected area. Some common forms of detection devices are passive infrared, smoke, photo electric beams, reed switches, and vibration sensors.
dialer	An electronic device that uses tones or pulses to dial an electronic receiver such as a monitoring station, mobile phone, or pocket pager. It uses the public switched telephone network to send alarm or supervisory signals.
disarmed	A system status that does not accept alarms, except for 24-hour zones.
dual reporting	Reporting that allows your control panel to transmit alarm signals in two different reporting formats (for example, the control panel can transmit to a monitoring station and to a mobile phone, or to two different monitoring stations).
dynamic battery testing	A method used to monitor and test the condition of your backup battery.
EDMSAT satellite siren	A self-contained siren unit complete with flashing blue strobe light and a backup battery that provides a higher level of security for an alarm system.
entry delay	A programmed delay of the system alarm responses that allows a person to enter a building through the entry door to turn the system off.
entry warning	The beeping from a codepad during an entry delay as a reminder to disarm the system.
exit delay	A programmed delay of the system alarm responses that allows a person to leave a building after turning the system on.
external equipment	Any device connected to a security system, such as a detector, codepad, or siren.
force arming	A method of overriding the safety feature that prevents arming with a faulted zone on a control panel.
hand-over delay	If a system is armed and Zone 1 is violated, the entry delay starts timing. If Zone 2 is violated, the entry delay time is handed over to the Zone 2 and so on, to Zones 3 and 4. This is known as sequential hand-over delay.
hand-held radio remote control	A device used to arm and disarm a security system or to cause a panic alarm.
lockout dialer	A dialer that activates only once per zone per arming cycle.

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

Table 64:   Glossary (continued)

Term	Description
lockout siren	A siren that activates only once per zone per arming cycle.
master code	A numeric code used for arming and disarming the system, and for allowing access to all functions available through the codepad.
monitoring station	A secure location where a digital receiver monitors a number of alarm systems and deciphers their alarm transmission reports so the operator can advise the appropriate authorities to take immediate action.
panic	A condition or type of alarm in which the user requires either immediate police or medical assistance.
partitioning	Splitting a control panel into two separate controllable areas. Partitioning is useful for securing sheds, dual occupancy dwellings, accessory dwellings, shops, and offices.
phone controller	A device used to arm a security system over the telephone line, and to acknowledge domestic alarm reports.
remote radio user code	A code used to arm and disarm a system from a remote location, using hand-held transmitters (in AWAY Mode or STAY Mode 1). Remote panic alarms are also allowed.
sealed	Refers to a zone's status. If a zone is sealed, the detection devices are not violated and the zone indicator is not lit (that is, a reed switch is closed or a detector is on standby waiting for an intrusion).
sensor watch	A feature that allows the control panel to recognize when detection devices might have stopped working. Sensor watch monitors the operation of a zone over a programmed time period.
silent alarm	An alarm that sounds only at a remote location, and gives no obvious local indication that an alarm was sent out.
STAY Mode 1	A condition that automatically isolates certain zones when the security system is armed in this mode. Only the installer can program these zones.
STAY Mode 2	A condition that automatically isolates certain zones when the security system is armed in this mode. The Master Code holder can program these zones.
telco arming sequence	A feature that automatically diverts a telephone number to another telephone when a security system is armed in AWAY Mode, the same as using call forwarding.
telco disarming sequence	An automatic suspension of diverting of the telephone when the system is disarmed.
unsealed	Refers to a zone's status. If a zone is unsealed, the detection devices are violated and the zone indicator is lit (that is, a reed switch is open or a detector noted an intrusion).
user code	A numeric code used to arm and disarm the system.
zone	A monitored input used to activate an alarm. A zone might be set up to activate an alarm only when the system is armed or to operate whether the system is armed or disarmed.

22.3   Diagrams

Figure 23: ICP-CC488 Wiring Diagram
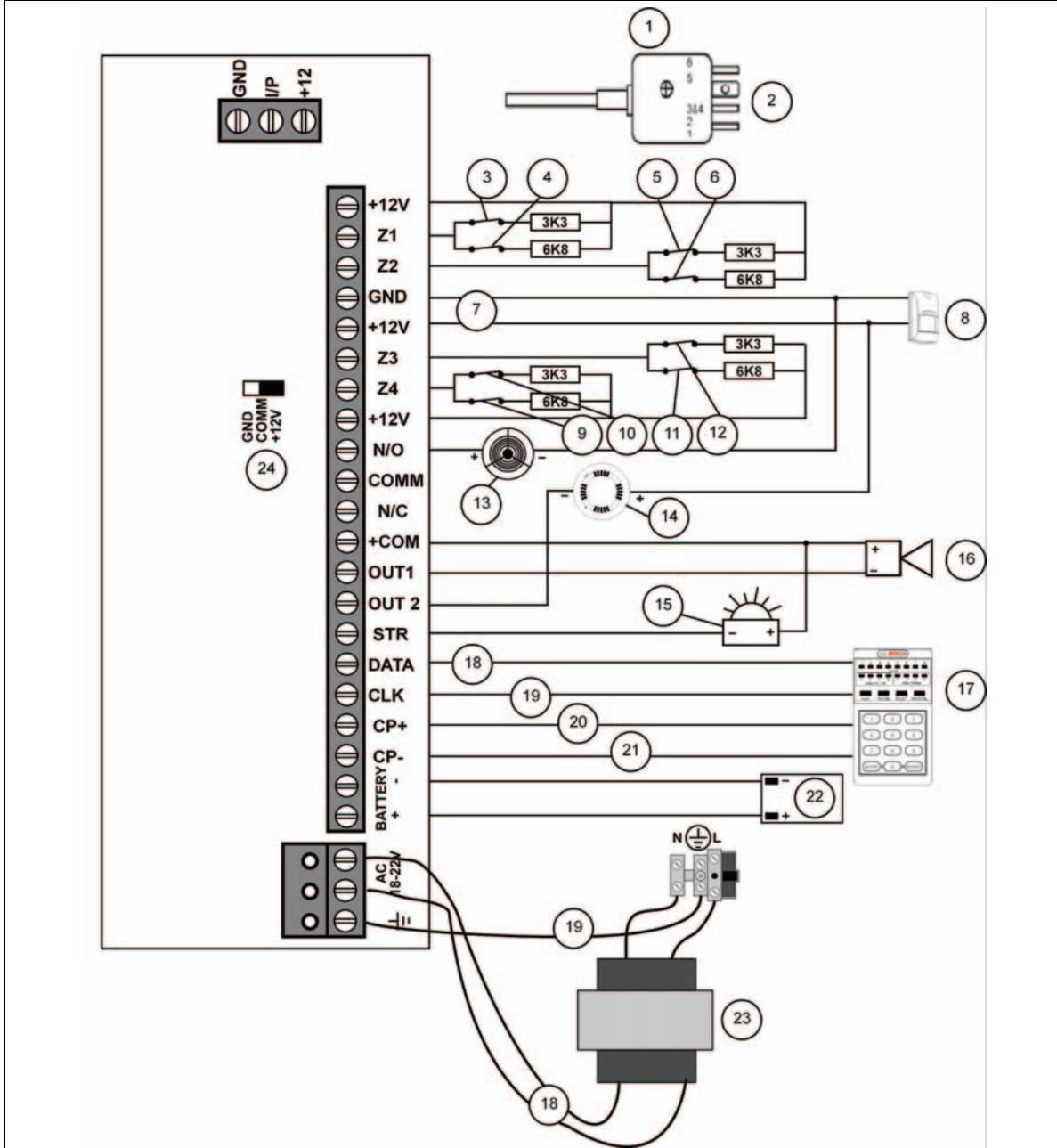
1 – 605 plug	7 – Power to external equipment: 12 V @ 400 mA	15 – Strobe
2 – 6 (Red) Telecom line (street)		16 – Horn speaker
5 (Yellow) Internal phone line	8 – PIR	17 – Codepad
3 and 4 Not used	9 – Zone 8	18 – Yellow
2 (Black) Telecom line (street)	10 – Zone 4	19 – Green
1 (Green) Internal phone line	11 – Zone 7	20 – Red
3 – Zone 1	12 – Zone 3	21 – Black
4 – Zone 5	13 – Piezo siren	22 – Battery
5 – Zone 2	14 – Smoke detector	23 – 18 VAC 1.3 A plug pack (TF008)
6 – Zone 6		24 – Link between +12 V and Comm

Figure 24: ICP-CC488 Component Overlay

1 – Socket for telecom lead connect	6 – Battery input
2 – Termination for phone line	7 – Plug pack input (Bosch TF008)
OUT – internal phone line	8 – Relay contact select
IN – Telecom line (street)	9 – Default switch
3 – Receiver interface connection	10 – Programming key
4 – Zone termination strip	11 – Auxiliary Module: direct link cable
5 – Output termination strip	

Bosch Security Systems, Inc. | 12/08 | F01U089457-02

Figure 25: DSRF Radio Receiver Wiring Diagram

1 − ICP-CC488 *Control Panel*	2 − *DSRF Receiver*
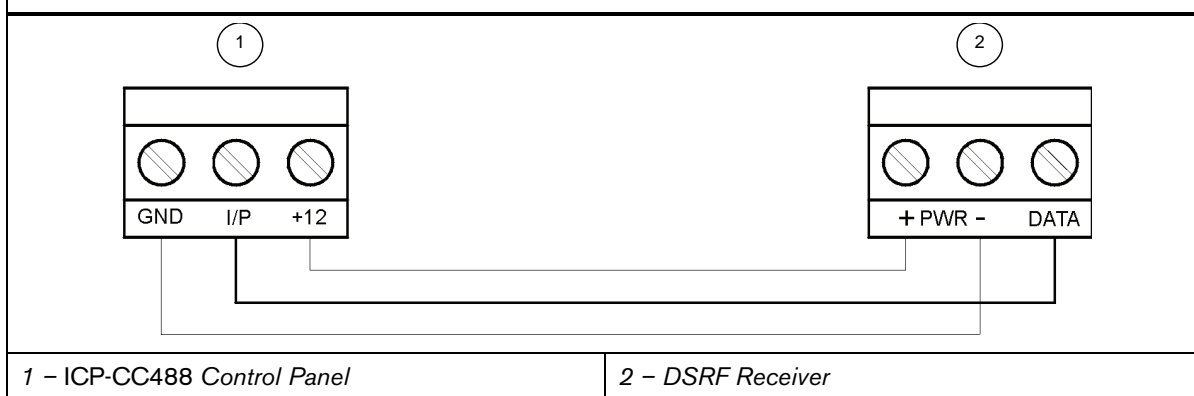
Wiring and Power Up

1. Remove power from the control panel.
2. Connect the RF Receiver to the control panel as shown in *Figure 25* on page 97.
   Use 0.8 mm (22 gauge) or larger wire. Wire length must not exceed 300 m (1000 ft).
3. Apply power to the control panel.
   The red LED in the centre of the module lights.

Operation

The LED shows the status of the DSRF RF Receiver:

- LED On – the module is functioning normally.
- LED Off – a power failure occurred or the module is not wired correctly.
- LED turns off momentarily – the module acknowledged receiving an RF signal from a remote RF device.

Figure 26: Telecom Connection Diagram for Australia

1 − Control panel	8 − Telecom line
2 − Red wire	9 − Black wire
3 − Yellow wire	10 − 611 socket
4 − 6P4C plug (top view)	1 (green): internal phone line
5 − 605 plug	2 (black): telecom line (street)
6 − Internal phones	3 and 4: not connected
7 − Green wire	5 (yellow): internal phone line
	6 (red): telecom line (street)
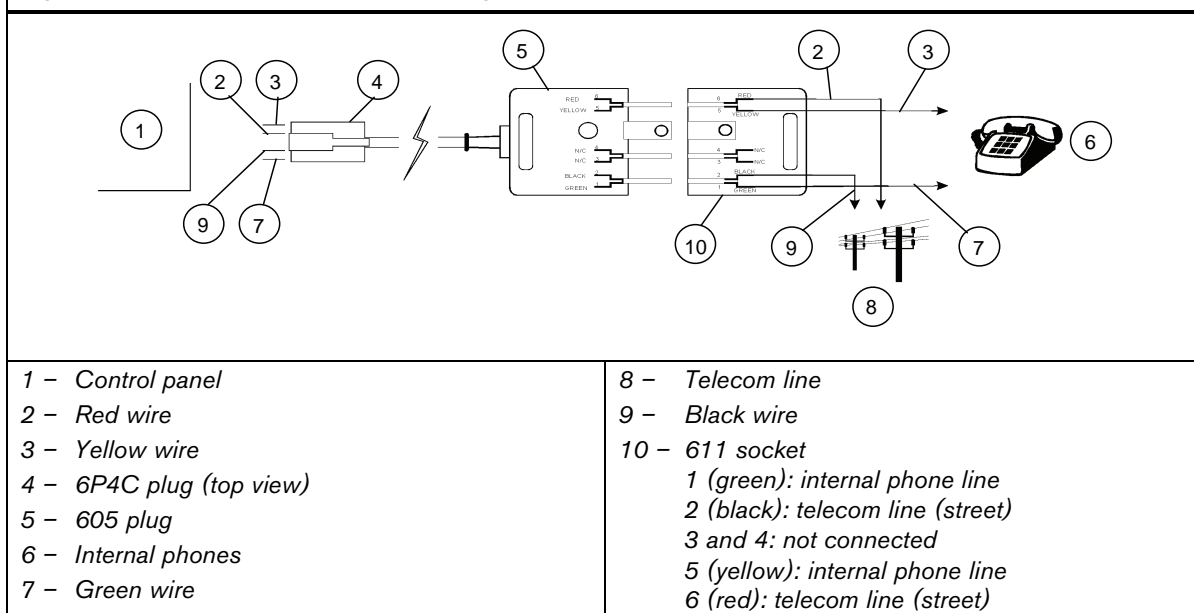
Figure 27:   Telecom Connection Diagram for New Zealand

1 – Control panel	7 – (black): telecom line (street)
2 – Black wire	(green): internal phone line
3 – Red wire	(red): telecom line (street)
4 – RJ45 plug (top view)	(yellow): internal phone line
5 – Internal phones	8 – Green wire
6 – Telecom line	9 – Yellow wire
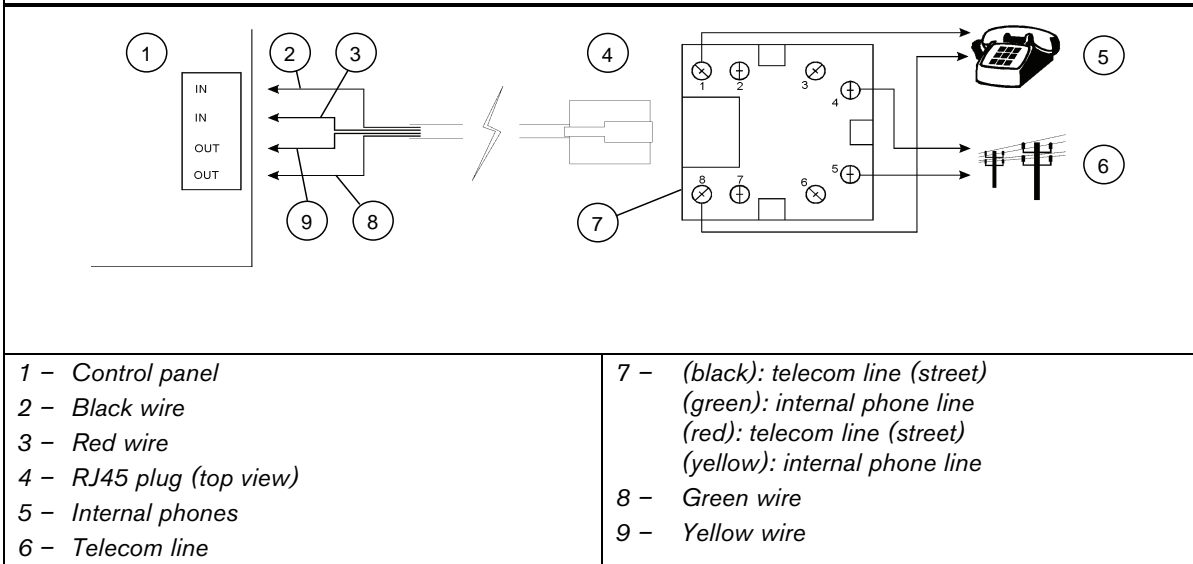
Figure 28:   Telecom Connection Diagram for China

1 – Control panel	8 – Rear view of telephone plate
2 – Red wire	(green): internal phone line
3 – Black wire	(black): telecom line (street)
4 – 4P4C plug (top view)	(yellow): internal phone line
5 – RJ12 plug (top view)	(red): telecom line (street)
6 – Telecom line	9 – Yellow wire
7 – Internal phones	10 – Green wire
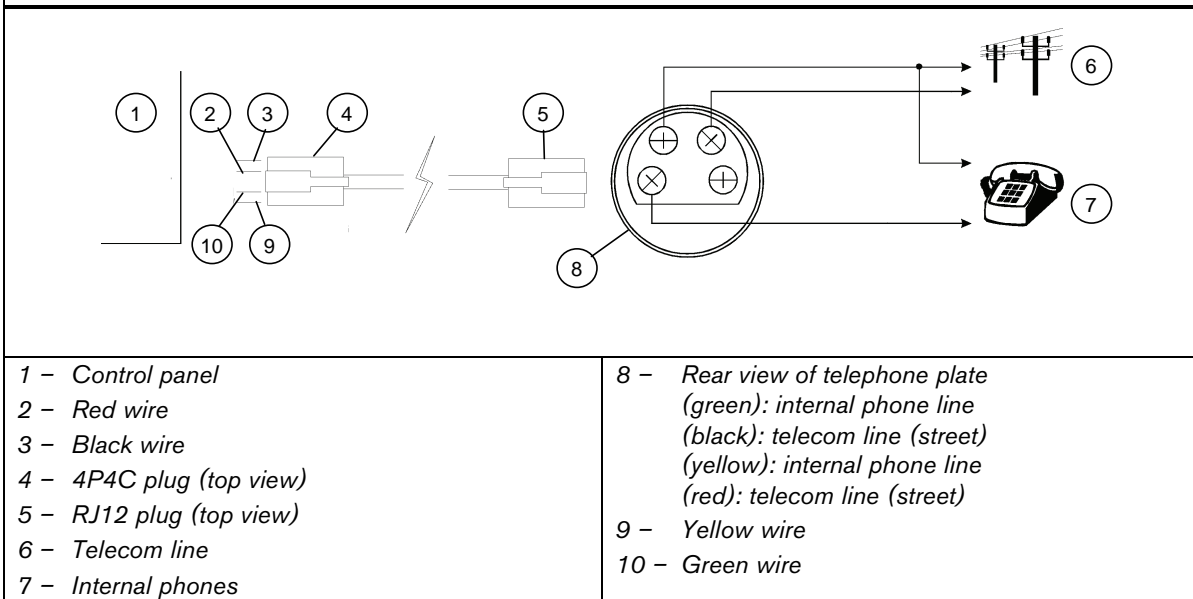
23.0 Appendices

23.1 Appendix A – Telephone Anti-Jamming

There are many companies that import American-designed products claiming to have anti-jamming, and they push this feature as if it were a major breakthrough in control panel technology. This is not the case because most control panels have some sort of anti-jamming feature. We can go back to the early 1980s where even the 678 Dialers incorporated a form of anti-jamming as a standard programmable option.

The important thing to note is that most American-designed products are primarily aimed at their local market and telephone networks. When these products are imported to Australia, their anti-jamming functions do not perform as they should.

To clear up what anti-jamming is and how it works needs some understanding of telephone networks. In America either of the two parties (that is, the one who initiated the call or the one receiving the call) can clear the line by placing the hand piece back on the hook. If you pick up the hand piece again, a dial tone is received and you can make a new call immediately. That is not so here in Australia.

In Australia, only the calling party can terminate the call immediately. If you receive a call from someone and hang up, picking the hand piece back up again to make a new call only reconnects you to the original caller. It is impossible to make another call until the original caller hangs up or you hang up the phone for ninety sec or longer. Australia is different and needs a special form of anti-jamming its our telephone network.

There are control panels on the market that, after making a few unsuccessful call attempts, simply hang up and wait for ninety sec in an attempt to clear the jamming incoming call. This may work in some instances where the caller is not a burglar and is not deliberately trying to jam the control panel. With this simple method of hanging up for ninety sec, not only is the alarm signal delayed for this time, but also the time taken for the original failed call attempts (these could easily total 4 min). This is bad enough, but even more disturbing is that the initial failed call attempts allow for the establishment of an audio connection between the would-be burglar and the control panel. Anyone with a little knowledge of alarm systems can trick the dialer that it is communicating to a base station and clear the alarm signal. It is pretty frightening when the control panel you use and recommend to your customers is supposed to have anti-jamming.

At Bosch Security Systems, Inc., we take anti-jamming very seriously and have devoted a great deal of time and money researching this problem. Our engineers have designed the best possible anti-jamming procedure known and patented it accordingly (Patent Number 571994).

Our procedure is very simple and effective because we never answer the burglar's phone call and the Telecom Network automatically clears an unanswered call in approximately 90 sec. This time is shorter if the call is originated through the Mobile-Net Network where it will most likely be in the case of a true burglary.

When the control panel detects that the phone line has stopped ringing, it immediately loops the line and makes its call, thereby transmitting its alarm message successfully. The line is also automatically disconnected from the telephones within the protected premises immediately on an alarm condition by the control panel to further confuse the burglar and eliminate the possibility of the burglar answering the call. In the worst possible case, our method of anti-jamming delays the alarm signal by ninety sec, but even more importantly never allows an audio connection between the burglar and the control panel.

All dialing products produced by Bosch Security Systems, Inc. since 1985 incorporate this true anti-jamming feature as standard. We do not consider it an option but a must in any professional security system.

Only Bosch Security Systems, Inc. products have true anti-jamming. Other manufacturers can offer only second best because of our patent for this very unique and effective procedure.

23.2 Appendix B – Test Reports Only When Armed

The ICP-CC488 Control Panel allows Test Reports to be sent to the base station receiver to verify that the dialer is functional. Most alarm dialers allow you to do this.

The one problem is that installations that send Opening and Closing Reports generally also send a Test Report each day. This call is unnecessary because a successful Opening and Closing Report means that the dialer is functioning correctly.

The ICP-CC488 Control Panel allows you to save time and money by providing Test Reports only when the system is armed.

Select Option 1 (Send Test Reports only if the system is armed) in Location 428 (refer to *Section 18.5 Consumer Options 1* on page 82) and then set the Test Report Time to be in the middle of the day. During Monday to Friday when the premises are generally open and the system is disarmed, a Test Report is not sent. On the weekend, the premises are closed and the system armed, so a Test Report is sent at the programmed time to verify the operation of the dialer.

At first glance, this may not seem to be significant, but by doing a few sums you can see where savings are possible.

Assume that the customer wants, needs, or has Test Reports programmed for once per day with Opening and Closing reports. In this scenario, at least three phone calls are made each weekday, one call on Saturday, and one call on Sunday.

By using the ICP-CC488 Control Panel you can eliminate five calls per week. Over one week, you save your customer $1.25 and over one year you save them $65.00.

Not a bad saving, but remember these figures are for local calls only.

Now assume a control room with 1000 customers sending the same reports. It can expect to receive 884,000 phone calls ($221,000 assuming local calls) just for reporting Opening, Closing, and Test reports over a twelve month period.

If you use the ICP-CC488 Control Panel, you can cut the calls to 624,000 per year (at a value of $156,000 assuming local calls), a saving of $65,000. If we now assume that for each call one line is printed on the logging printer, and that one page is filled every 60 calls. You can save 4333 sheets of paper per year and at approximately $45 per box, this becomes a considerable saving.

As you can see using the ICP-CC488 Control Panel saves you money, saves your customer money, and helps to conserve our natural resources. In fact, the only organization that doesn't like this feature is Telecom.

24.0 Specifications

24.1 Warranty Statement

Bosch Security Systems, Inc. warrants this product to be free from defects in material and workmanship for a period of three years from the date of manufacture as indicated by the date stamp or the serial number on the product.

Defective units returned by the purchaser at their own expense during this period will be repaired or replaced at the option of the manufacturer. The repair or replacement will be free of charge provided that the defects were not incurred during shipping or handling, or the damage was not due to causes beyond the control of Bosch Security Systems, Inc., such as lightning, excessive voltage, mechanical shock, or damage arising out of abuse, alteration, or improper application of the equipment.

24.2 Specifications

Table 65:   Specifications

Temperature Range	0°C to +45°C (+32°F to +113°F)
Humidity	10% to 95%
Power Source	TF008 Plug Pack – 240 V/18 VAC @ 1.3 A
Standby Current	65 mA
Current Draw In Alarm Condition	115 mA
Current Draw In Alarm Condition With Codepad	105 mA
Backup Battery	6.5 Ah/12 VDC rechargeable sealed lead acid battery
Dimensions (case, packed in carton)	306 mm x 262 mm x 84 mm (12.05 in. x 10.31 in. x 3.31 in.)
Weight	2.5 kg (5.51 lbs.)
Supplier Code	N771
New Zealand Telepermit	
ICP-CC488	PTC 211/98/083

24.3 Software Version Number

Refer to *Section 7.4.9 Command 999 – Display the Panel Type or Software Version Number* for more information.

24.4 New Zealand Telepermit Notes

- The grant of a telepermit for a device does not indicate Telecom acceptance of responsibility for the correct operation of the device under all operating conditions.

- This equipment shall not be used in any manner that could constitute a nuisance to other Telecom customers.

- Disconnect this equipment immediately if it becomes physically damaged and arrange for its disposal or repair.

- The transmit level from this device is set at a fixed level, so there may be circumstances where the performance is less than optimal. Before reporting such occurrences as faults, please check the line with a standard telepermitted telephone and do not report a fault if the telephone performance is satisfactory.

- This device is equipped with pulse dialing while the Telecom standard is DTMF tone dialing. There is no guarantee that Telecom lines will always continue to support pulse dialing.

  Use of dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. If problems such as this occur, the user should not contact the Telecom Faults Service.

- This equipment is set up to carry out test calls at pre-determined times. These test calls interrupt other calls that might be set up on the line at the same time. Discuss the timing set for these test calls with the installer.

  The timing set for test calls from this equipment may be subject to drift. If this proves to be inconvenient and your calls are interrupted, discuss the problem of timing with the equipment installer. Do not report the matter as a fault to Telecom Faults Service.

- This equipment shall not be set up to make automatic calls to the Telecom 111 Emergency Service.

  This equipment should not be used under any circumstances that may constitute a nuisance to other Telecom customers.

- In the event of any problem with this device, disconnect the system battery, AC MAINS supply, and the telephone line. The user must arrange with the supplier of the device for the necessary repairs.

  If the matter is reported to Telecom as a wiring fault and the fault is proven to be due to this product, a call-out charge will be incurred.

24.5   A-Tick

The ICP-CC488 Control Panel is designed to comply with A-Tick.

25.0 Programming Sheets

25.1   ICP-CC488 Programming Sheets

Primary Telephone Number for Receiver 1

Location	000 to 015	Refer to page 49
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Secondary Telephone Number for Receiver 1

Location	016 to 031	Refer to page 49
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Handshake Tone for Receiver 1

Location	032	Refer to page 49
1	HI-LO handshake (contact ID)	
2	1400 Hz (Ademco TX @ 1900 Hz)	
3	2300 Hz (Low Speed Sescoa)	
4	No handshake	
5	Pager	

Transmission Format for Receiver 1

Location	033	Refer to page 50
1	Contact ID	
2	4 + 2 express	
3	FSK 300 baud	
4	Domestic	
5	Basic pager	
6	Reserved	
7	Reserved	
8	Reserved	

> The Basic Pager option supports only eight zones due to protocol limitations. If you use more than eight zones, this option is not recommended.
>
> If you use the Zone 16, the 4 + 2 Express and FSK 300 Baud formats are not recommended because Zone 16 will be assigned as "0" and some receivers will not support this zone.

Subscriber ID Number For Receiver 1

Location	034 to 039	Refer to page 50
Default		0 0 0 0 0 0

Primary Telephone Number for Receiver 2

Location	040 to 055	Refer to page 49
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Secondary Telephone Number for Receiver 2

Location	056 to 071	Refer to page 49
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Handshake Tone for Receiver 2

Location	072	Refer to page 49
1	HI-LO handshake (contact ID)	
2	1400 Hz (Ademco TX @ 1900 Hz)	
3	2300 Hz (low speed Sescoa)	
4	No handshake	
5	Pager	

Transmission Format for Receiver 2

Location	073	Refer to page 50
1	Contact ID	
2	4 + 2 express	
3	FSK 300 baud	
4	Domestic	
5	Basic pager	
6	Reserved	
7	Reserved	
8	Reserved	

> The Basic Pager option supports only eight zones due to protocol limitations. If you use more than eight zones, this option is not recommended.
>
> If you use the Zone 16, the 4 + 2 Express and FSK 300 Baud formats are not recommended because Zone 16 will be assigned as "0" and some receivers will not support this zone.

Subscriber ID Number For Receiver 2

Location	074 to 079	Refer to page 50
Default		0 0 0 0 0 0

Dialing Format

Location	080	Refer to page 50
1	Australian DTMF (5 digits/sec)	
2	Australian decadic	
3	Alternate DTMF and Australian decadic	
4	International DTMF	
5	Reversed decadic	
6	Alternate DTMF and reversed decadic	

Reserved

Location	081 to 112

Telco Arming Sequence

Location	113 to 142	Refer to page 50
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Telco Disarming Sequence

Location	143 to 158	Refer to page 51
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Callback Telephone Number

Location	159 to 174	Refer to page 51
Default		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Ring Count

Location	175	Refer to page 51
Default		8
0	Panel will not answer	
1 to 13	Number of rings until panel answers	
14	Answering machine bypass 2	
15	Answering machine bypass 1	

Telephone Line Fault Options

Location	176	Refer to page 52
Default		0
1	Display FAULT indicator if telephone line fails	
2	Sound alarm when system is armed if telephone line fails	
4	Sound alarm when system is disarmed if telephone line fails	
8	Reserved	

Dialer Options 1

Location	177	Refer to page 52
1	Dialer reporting functions allowed	
2	Remote arming by telephone	
4	Answering machine bypass only when armed	
8	Use Bell 103 for FSK format (disabled – CCITT v21)	

Dialer Options 2

Location	178	Refer to page 53
Default		0
1	Open/Close Reports only after alarm	
2	Open/Close Reports in STAY Mode allowed	
4	Delay siren until transmission complete	
8	Extend wait for handshake from 30 sec to 60 sec	

Dialer Options 3

Location	179	Refer to page 53
Default		2
1	Set DTMF dialing pulses to 1 digit/sec	
2	Lockout telephone line fail alarm	
4	Change decadic dialing to 60/40	
8	Reserved	

Alarm Link Options

Location	180	Refer to page 41
1	Upload/download allowed	
2	Callback phone number required for upload/download	
4	Exit upload/download connection on alarm	
8	Reserved	

Installer Code

Location	181 to 184	Refer to page 54
Default		1 2 3 4

User Codes

Location	185 to 264	Refer to page 54
User Code 1		Locations 185 to 189
Default		2 5 8 0 10
User Code 2		Locations 190 to 194
Default		15 15 15 15 2
User Code 3		Locations 195 to 199
Default		15 15 15 15 2
User Code 4		Locations 200 to 204
Default		15 15 15 15 2
User Code 5		Locations 205 to 209
Default		15 15 15 15 2
User Code 6		Locations 210 to 214
Default		15 15 15 15 2
User Code 7		Locations 215 to 219
Default		15 15 15 15 2
User Code 8		Locations 220 to 224
Default		0 15 15 15 3
Radio Code 9		Locations 225 to 229
Default		15 15 15 15 2
Radio Code 10		Locations 230 to 234
Default		15 15 15 15 2
Radio Code 11		Locations 235 to 239
Default		15 15 15 15 2
Radio Code 12		Locations 240 to 244
Default		15 15 15 15 2
Radio Code 13		Locations 245 to 249
Default		15 15 15 15 2
Radio Code 14		Locations 250 to 254
Default		15 15 15 15 2
Radio Code 15		Locations 255 to 259
Default		15 15 15 15 2
Radio Code 16		Locations 260 to 264
Default		15 15 15 15 2

User Code Priority Levels

Priority	Description
0	Arm/disarm
1	Arm only
2	Arm/disarm and Open/Close Reports
3	Arm only and Close Report
4	Arm/disarm and code to isolate
6	Arm/disarm, code to isolate, and Open/Close Reports
8	Arm/disarm and Master Code functions
10	Arm/disarm, Master Code functions, and Open/Close Reports
12	Arm/disarm, Master Code functions, and code to isolate
14	Arm/disarm, Master Code functions, code to isolate, and Open/Close Reports

Day Alarm Zones

Location	265	Refer to page 56
Default		0
1	Zone 1	
2	Zone 2	
4	Zone 3	
8	Zone 4	

EOL Resistor Value

Location	266	Refer to page 56
0	No EOL resistor	
1	1K (brown, black, red)	
2	1K5 (brown, green, red)	
3	2K2 (red, red, red)	
4	3K3 (orange, orange, black, brown) 1%	
5	3K9 (orange, white, red)	
6	4K7 (yellow, white, red)	
7	5K6 (green, blue, red)	
8	6K8 (blue, grey, black, brown) 1%	
9	10K (brown, black, orange)	
10	12K (brown, red, orange)	
11	22K (red, red, orange)	
12	Reserved	
13	Reserved	
14	Split EOL (3K3/6K8) with tamper (1K)	
15	Split EOL (3K3/6K8) 1% resistors	

Zones

Location 267 to 378	Refer to page 58
Zone 1	Locations 267 to 273
Default	2 0 0 1 14 1 1
Zone 2	Locations 274 to 280
Default	1 0 0 1 14 1 1
Zone 3	Locations 281 to 287
Default	1 0 0 1 14 1 1
Zone 4	Locations 288 to 294
Default	1 0 0 1 14 1 1
Zone 5	Locations 295 to 301
Default	0 0 0 1 14 1 1
Zone 6	Locations 302 to 308
Default	0 0 0 1 14 1 1
Zone 7	Locations 309 to 315
Default	0 0 0 1 12 1 1
Zone 8	Locations 316 to 322
Default	9 0 0 1 12 1 1
Zone 9	Locations 323 to 329
Default	15 0 0 1 14 1 1
Zone 10	Locations 330 to 336
Default	15 0 0 1 14 1 1
Zone 11	Locations 337 to 343
Default	15 0 0 1 14 1 1
Zone 12	Locations 344 to 350
Default	15 0 0 1 14 1 1
Zone 13	Locations 351 to 357
Default	15 0 0 1 14 1 1
Zone 14	Locations 358 to 364
Default	15 0 0 1 14 1 1
Zone 15	Locations 365 to 371
Default	15 0 0 1 14 1 1
Zone 16	Locations 372 to 378
Default	15 0 0 1 14 1 1

Each zone contains seven locations. The first three locations determine how the zone operates:

Zone Type	Zone Pulse Count	Zone Pulse Count Time

The next two locations contain zone options:

Zone Options 1	Zone Options 2

The last two locations contain reporting information:

Report Code	Dialer Options

Zone Types

These are the zone types available:

Zone Type	Description
0	Instant
1	Handover
2	Delay-1
3	Delay-2
4	Reserved
5	Reserved
6	24-Hour Medical
7	24-Hour Panic
8	24-Hour Holdup
9	24-Hour Tamper
10	Reserved
11	Keyswitch
12	24-Hour Burglary
13	24-Hour Fire
14	Chime only
15	Zone not used

Zone Pulse Count Settings

Program the pulse count settings for each zone from 0 to 15.

Zone Pulse Count Time

Zone pulse count time is the time frame or period over which the number of pulses must register.

20 ms Loop Response		150 ms Loop Response	
Option	Time (sec)	Option	Time (sec)
0	0.5	8	20
1	1	9	30
2	2	10	40
3	3	11	50
4	4	12	60
5	5	13	90
6	10	14	120
7	15	15	200

Zone Options 1

Option	Description
1	Lockout siren/lockout dialer
2	Delay alarm reporting
4	Silent alarm
8	Sensor watch

Zone Options 2

Option	Description
1	Isolated in STAY Mode 1
2	Zone isolation allowed
4	Forced arming allowed
8	Enable Zone Restore Report

Zone Dialer Options

Option	Description
0	No report required
1	Receiver 1
2	Receiver 2
4	Receiver 1 and 2
8	Receiver 2 only when Receiver 1 fails

Zone Descriptions

Use this table as a reference to indicate what each zone is connected to.

Zone	Description
1	
2	
3	
4	
5	
6	
7	
8	

Swinger Shutdown Count for Siren

Location	379	Refer to page 64
Default		3

Swinger Shutdown Count for Dialer

Location	380	Refer to page 64
Default		6

Zone Status – Zone Tamper Report

Location	381 to 382	Refer to page 65
Default		0 0
Location 381	Zone Tamper Report	
Location 382	Zone Tamper Restore Report	

Zone Status – Walk Test Report

Location	383 to 384	Refer to page 65
Default		0 0
Location 383	Walk Test Enable Report	
Location 384	Walk Test Disable Report	

Zone Status – Bypass Reports

Location	385 to 386	Refer to page 65
Default		9 8
Location 385	Zone Bypass Report	
Location 386	Zone Bypass Restore Report	

Zone Status – Trouble Reports

Location	387 to 388	Refer to page 65
Default		2 3
Location 387	Zone Trouble Report	
Location 388	Zone Trouble Restore Report	

Zone Status – Sensor Watch Reports

Location	389 to 390	Refer to page 66
Default		4 5
Location 389	Sensor Watch Report	
Location 390	Sensor Watch Restore Report	

Zone Status – Alarm Restore Code

Location	391	Refer to page 66
Default		14

Zone Status Reporting Options

Location	392	Refer to page 66
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

RF Supervision Time

Location	393	Refer to page 66
Default		0
Location 393	Increments of 6 hr (0 to 90 hr)	

RF Low Battery Report

Location	394 to 395	Refer to page 66
Default		6 8
Location 394	RF Low Battery Report	
Location 395	RF Low Battery Restore Report	

RF Receiver Trouble Report

Location	396 to 397	Refer to page 66
Default		7 9
Location 396	Tens digit	
Location 397	Units digit	

RF Receiver Trouble Restore Report

Location	398 to 399	Refer to page 67
Default		7 11
Location 398	Tens digit	
Location 394	Units digit	

RF Dialer Options

Location	400	Refer to page 67
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

Open/Close Reports

Location	401 to 402	Refer to page 67
Default		11 12
Location 401	Opening Report	
Location 402	Closing Report	

Open/Close Reporting Options

Location	403	Refer to page 67
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

Codepad Duress Report

Location	404	Refer to page 67
Default		6

Codepad Panic Report

Location	405 to 406	Refer to page 67
Default		7 15

Codepad Fire Report

Location	407 to 408	Refer to page 68
Default		7 14

Codepad Medical Report

Location	409 to 410	Refer to page 68
Default		7 13

Codepad Reporting Options

Location	411	Refer to page 68
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

System Status – AUX Power Supply Fail Report

Location	412 to 413	Refer to page 68
Default		10 3

System Status – AUX Power Supply Fail Restore Report

Location	414 to 415	Refer to page 68
Default		10 8

System Status – AC Fail Report

Location	416 to 417	Refer to page 68
Default		10 2

System Status – AC Fail Restore Report

Location	418 to 419	Refer to page 68
Default		10 7

System Status – Low Battery Report

Location	420 to 421	Refer to page 69
Default		10 1

System Status – Low Battery Restore Report

Location	422 to 423	Refer to page 69
Default		10 6

System Status – Access Denied

Location	424 to 426	Refer to page 69
Default		6 7 12
Location 424	Code retries	
Location 425	Reporting code – tens digit	
Location 426	Reporting code – units digit	

System Status Reporting Options

Location	427	Refer to page 69
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

Test Reporting Time

Location	428 to 434	Refer to page 69
Default		0 0 0 0 7 1 0
Location 428	Hour of the day – tens digit	
Location 429	Hour of the day – units digit	
Location 430	Minute of the day – tens digit	
Location 431	Minute of the day – units digit	
Location 432	Test Report code – tens digit	
Location 433	Test Report code – units digit	
Location 434	Repeat interval in days	

Test Reporting Dialer Options

Location	435	Refer to page 70
0	No report required	
1	Receiver 1	
2	Receiver 2	
4	Receiver 1 and 2	
8	Receiver 2 only when Receiver 1 fails	

Output Configurations

Location	436 to 465	Refer to page 70
Output 1	Locations 436 to 441	
Default for horn speaker	1 14 0 0 0 0	
Output 2	Locations 442 to 447	
Default for Fire Alarm verification	2 7 10 2 1 5	
Strobe	Locations 444 to 453	
Default for strobe (reset in 8 hr)	2 0 6 4 0 8	
Relay	Locations 454 to 459	
Default for sirens running	1 15 1 0 0 0	
Codepad	Locations 460 to 465	
Default for entry/Exit Warning and Delay Alarm	0 13 2 1 0 1	

Outputs are programmed with four parameters in six locations:

Event Type		Polarity	Time Base		Time Multiplier	

Entry Time 1

Location	466 to 467	Refer to page 78
Default		4 1
Location 466	Increments of 1 sec (0 to 15 sec)	
Location 467	Increments of 16 sec (0 to 240 sec)	

Entry Time 2

Location	468 to 469	Refer to page 78
Default		8 2
Location 468	Increments of 1 sec (0 to 15 sec)	
Location 469	Increments of 16 sec (0 to 240 sec)	

Exit Time

Location	470 to 471	Refer to page 78
Default		12 3
Location 470	Increments of 1 sec (0 to 15 sec)	
Location 471	Increments of 16 sec (0 to 240 sec)	

Entry Guard Time for STAY Mode

Location	472 to 473	Refer to page 78
Default		0 0
Location 472	Increments of 1 sec (0 to 15 sec)	
Location 473	Increments of 16 sec (0 to 240 sec)	

Delay Alarm Reporting Time

Location	474 to 475	Refer to page 78
Default		0 0
Location 474	Increments of 1 sec (0 to 15 sec)	
Location 475	Increments of 16 sec (0 to 240 sec)	

Sensor Watch Time

Location	476 to 477	Refer to page 66
Default		0 0
Location 476	Increments of days (tens digit)	
Location 477	Increments of days (units digit)	

Codepad Lockout Time

Location	478	Refer to page 79
Default		0
Location 478	Increments of 10 sec	

Siren Run Time

Location	479	Refer to page 79
Default		5
Location 479	Increments of 1 minute	

Siren Sound Rate (Slow <- Sound -> Fast)

Location	480	Refer to page 79
Default		7

Auto Arming Pre-Alert Time

Location	481	Refer to page 79
Default		1
Location 481	Increments of 5 min	

Auto Arming Time

Location	482 to 485	Refer to page 79
Default		0 0 0 0
Location 482	Hour of the day – tens digit	
Location 483	Hour of the day – units digit	
Location 484	Minute of the day – tens digit	
Location 485	Minute of the day – units digit	

Auto Disarming Time

Location	486 to 489	Refer to page 79
Default		0 0 0 0
Location 486	Hour of the day – tens digit	
Location 487	Hour of the day – units digit	
Location 488	Minute of the day – tens digit	
Location 489	Minute of the day – units digit	

Kiss-Off Wait Time

Location	490	Refer to page 80
Default		3
Location 490	Increments of 500 ms	

Speaker Beep Volume

Location	491	Refer to page 80
Default		13
0	No beeps	
15	Loudest beeps	

System Options 1

Location	492	Refer to page 80
1	Bosch Security Systems, Inc. smart lockout allowed	
2	Horn speaker monitor	
4	Strobe indications for radio arm/disarm	
8	Assign button 4 on transmitter to operate STAY Mode 1	

System Options 2

Location	493	Refer to page 81
Default	0	
1	Codepad Panic to be silent	
2	Codepad Fire to be silent	
4	Codepad Medical to be silent	
8	Access denied (code retries) to be silent	

System Options 3

Location	494	Refer to page 81
1	AC fail after 1 hour (disabled – after 2 min)	
2	Ignore AC fail	
4	Pulse count handover allowed	
8	Handover delay to be sequential	

System Options 4

Location	495	Refer to page 82
Default	0	
1	Panel to power up disarmed (if power reset)	
2	Arm/disarm tracking on power up	
4	Internal crystal to keep time	
8	Night arm station, or RE005 installed	

Consumer Options 1

Location	496	Refer to page 82
Default	0	
1	Test reports only when armed	
2	Test report after siren reset	
4	Auto arm in STAY Mode 1	
8	STAY indicator to display Day Alarm status	

Consumer Options 2

Location	497	Refer to page 83
1	Codepad display extinguishes after 60 sec	
2	Single button arming allowed (AWAY/STAY Modes 1 and 2)	
4	Single button disarming allowed (STAY Modes 1 and 2)	
8	Alarm memory reset on disarm	

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Consumer Options 3

Location	498	Refer to page 83
1	Codepad fault beeps allowed	
2	Use digit 3 for Codepad Duress Alarm (instead of digit 9)	
4	Alarms activate sirens and strobe outputs in STAY Mode 1 and 2	
8	Zone Tamper Alarm to be silent	

Radio Input Options

Location	499	Refer to page 83
Default	0	
1	DSRF Receiver	
2	Latching keyswitch input	
4	Momentary keyswitch input	
8	Reserved	

Partitioning Options 1

Location	500	Refer to page 85
Default	0	
1	First to open/last to close reporting	
2	Area 1 codepad connected to data terminal	
3	Reset sirens from any area allowed	
4	Master codepad to display AUX indicator when online	

Partitioning Options 2

Location	501	Refer to page 85
Default	0	
1	Lock Area 1 to Receiver 1 and Area 2 to Receiver 2	
2	User Code allowed to arm/disarm both areas at the same time	
4	Reserved	
8	Reserved	

Zone Allocations Enabled for Area 1 and Area 2

Location	502 to 517	Refer to page 86
Default		0 0 0 0 0 0 0 0
Location 502	Area 1 – Zone 1 indicator	
Location 503	Area 1 – Zone 2 indicator	
Location 504	Area 1 – Zone 3 indicator	
Location 505	Area 1 – Zone 4 indicator	
Location 506	Area 1 – Zone 5 indicator	
Location 507	Area 1 – Zone 6 indicator	
Location 508	Area 1 – Zone 7 indicator	
Location 509	Area 1 – Zone 8 indicator	
Location 510	Area 2 – Zone 1 indicator	
Location 511	Area 2 – Zone 2 indicator	
Location 512	Area 2 – Zone 3 indicator	
Location 513	Area 2 – Zone 4 indicator	
Location 514	Area 2 – Zone 5 indicator	
Location 515	Area 2 – Zone 6 indicator	
Location 516	Area 2 – Zone 7 indicator	
Location 517	Area 2 – Zone 8 indicator	
0	Not mapped for this LED	
1	This LED used, a zone is mapped to it	

Zone Allocations for Area 1 and Area 2

Location	518 to 533	Refer to page 85
Default		0 0 0 0 0 0 0 0
Location 518	Area 1 – Zone 1 indicator	
Location 519	Area 1 – Zone 2 indicator	
Location 520	Area 1 – Zone 3 indicator	
Location 521	Area 1 – Zone 4 indicator	
Location 522	Area 1 – Zone 5 indicator	
Location 523	Area 1 – Zone 6 indicator	
Location 524	Area 1 – Zone 7 indicator	
Location 525	Area 1 – Zone 8 indicator	
Location 526	Area 2 – Zone 1 indicator	
Location 527	Area 2 – Zone 2 indicator	
Location 528	Area 2 – Zone 3 indicator	
Location 529	Area 2 – Zone 4 indicator	
Location 530	Area 2 – Zone 5 indicator	
Location 531	Area 2 – Zone 6 indicator	
Location 532	Area 2 – Zone 7 indicator	
Location 533	Area 2 – Zone 8 indicator	
0-15	Mapping zone 1-16 to this LED	

User Code Allocations

Location	534 to 549	Refer to page 86
Default		0 0 0 0 0 0 0 0
		0 0 0 0 0 0 0 0
Location 534	User Code 1	
Location 535	User Code 2	
Location 536	User Code 3	
Location 537	User Code 4	
Location 538	User Code 5	
Location 539	User Code 6	
Location 540	User Code 7	
Location 541	User Code 8	
Location 542	User Code 9	
Location 543	User Code 10	
Location 544	User Code 11	
Location 545	User Code 12	
Location 546	User Code 13	
Location 547	User Code 14	
Location 548	User Code 15	
Location 549	User Code 16	

Domestic Telephone Numbers

Location	550 to 597	Refer to page 43

Reserved

Location	598	

RF Options

Location	599	Refer to page 88
Default	0	

1	Sound siren on RF receiver fail
2	Sound siren on RF receiver tamper/jamming
4	Unseal zone that fails supervision (if supervision is enabled)
8	Enable RF jamming monitoring

RF Device Mapping Option

Location	600 to 615	
	Location	**Default**
Map RF Device 1	600	1
Map RF Device 2	601	1
Map RF Device 3	602	1
Map RF Device 4	603	1
Map RF Device 5	604	1
Map RF Device 6	605	1
Map RF Device 7	606	1
Map RF Device 8	607	1
Map RF Device 9	608	1
Map RF Device 10	609	1
Map RF Device 11	610	1
Map RF Device 12	611	1
Map RF Device 13	612	1
Map RF Device 14	613	1
Map RF Device 15	614	1
Map RF Device 16	615	1
0	**Mapping Disable**	
1	**Mapping Enable**	

RF Device Mapping (Devices 1 to 8)

Location	616 to 623	Refer to page 89
	Location	**Default**
Map RF Device 1 to Zone (1 to 16)	616	00
Map RF Device 2 to Zone (1 to 16)	617	01
Map RF Device 3 to Zone (1 to 16)	618	02
Map RF Device 4 to Zone (1 to 16)	619	03
Map RF Device 5 to Zone (1 to 16)	620	04
Map RF Device 6 to Zone (1 to 16)	621	05
Map RF Device 7 to Zone (1 to 16)	622	06
Map RF Device 8 to Zone (1 to 16)	623	07
0-15	Mapping RF device to zone 1-16	

RF Device Mapping (Devices 9 to 16)

Location	624 to 631	Refer to page 89
	Location	**Default**
Map RF Device 9 to Zone (1 to 16)	624	08
Map RF Device 10 to Zone (1 to 16)	625	09
Map RF Device 11 to Zone (1 to 16)	626	10
Map RF Device 12 to Zone (1 to 16)	627	11
Map RF Device 13 to Zone (1 to 16)	628	12
Map RF Device 14 to Zone (1 to 16)	629	13
Map RF Device 15 to Zone (1 to 16)	630	14
Map RF Device 16 to Zone (1 to 16)	631	15
0-15	Mapping RF device to zone 1-16	

RF Device Signal Strength (Devices 1 to 8)

Location	801 to 808	Refer to page 110
Default		0 0 0 0 0 0 0 0
Location 801	Device 1	
Location 802	Device 2	
Location 803	Device 3	
Location 804	Device 4	
Location 805	Device 5	
Location 806	Device 6	
Location 807	Device 7	
Location 808	Device 8	
0-15	Mapping RF Device to Zone 1-16	

RF Device Signal Strength (Devices 9 to 16)

Location	809 to 816	
	Location	**Default**
Signal Strength for RF Device 9	809	0
Signal Strength for RF Device 10	810	0
Signal Strength for RF Device 11	811	0
Signal Strength for RF Device 12	812	0
Signal Strength for RF Device 13	813	0
Signal Strength for RF Device 14	814	0
Signal Strength for RF Device 15	815	0
Signal Strength for RF Device 16	816	0

Reserved

Location	836 to 837
Default	
Location 836	
Location 837	

Country Code

Location	838 to 839	Refer to page 89
	Location	**Default**
Country Code (tens digit)	838	0
Country Code (units digit)	839	2

Disable Factory Default

Location	900	Refer to page 39
0	Defaulting enabled	
15	Defaulting disabled	

System Time

Location	901 to 904	Refer to page 80
Default		0 0 0 0
Location 901	Hour of the day – tens digit	
Location 902	Hour of the day – units digit	
Location 903	Minute of the day – tens digit	
Location 904	Minute of the day – units digit	

System Date

Location	905 to 910	Refer to page 80
Default		0 1 0 1 0 1
Location 905	Day of the month – tens digit	
Location 906	Day of the month – units digit	
Location 907	Month of the year – tens digit	
Location 908	Month of the year – units digit	
Location 909	Year – tens digit	
Location 910	Year – units digit	

26.0 Country Codes

The PSTN provides a programmable line interface to meet international telephone line requirements. This program meets various country PTT standards.

Country	Code	Country	Code	Country	Code	Country	Code	Country	Code
Argentina	0 1	Poland	4 1	Liechtenstein	6 3	Gabon	6 5	Papua New Guinea	6 5
Australia	0 2	Portugal	4 2			Gambia	6 5	Paraguay	6 5
Austria	0 3	Romania	4 3	Afghanistan	6 5	Ghana	6 5	Rwanda	6 5
Belgium	0 4	Russian Federation	4 4	Albania	6 5		6 5	St. Lucia	6 5
Brazil	0 5	Saudi Arabia	4 5	Andorra	6 5	Grenada	6 5	Samoa Eastern	6 5
Bulgaria	0 6	Serbia and Montenegro	4 6	Angola	6 5	Guatemala	6 5	San Marino	6 5
Canada	0 7	Singapore	4 7	Antigua and Barbuda	6 5	Guinea	6 5	Sao Tome and Principe	6 5
China	0 8	Slovakia	4 8	Azerbaijan	6 5	Guyana	6 5	Saint Vincent	6 5
Colombia	0 9	Slovenia	4 9	Bahamas	6 5	Haiti	6 5	Senegal	6 5
Croatia	1 0	South Africa	5 0	Bangladesh	6 5	Vatican	6 5	Seychelles	6 5
Cyprus	1 1	Spain	5 1	Barbados	6 5	Honduras	6 5	Sierra Leone	6 5
Czech Republic	1 2	Sweden	5 2	Belize	6 5	Iran	6 5	Solomon Is	6 5
Denmark	1 3	Switzerland	5 3	Benin	6 5	Iraq	6 5	Somali	6 5
Egypt	1 4	Taiwan, China	5 4	Bhutan	6 5	Ivory Coast	6 5	Sri Lanka	6 5
Estonia	1 5	Thailand	5 5	Bolivia	6 5	Jamaica	6 5	Sudan	6 5
Finland	1 6	Turkey	5 6		6 5	Kenya	6 5	Suriname	6 5
France	1 7	United Kingdom	5 7	Botswana	6 5	Kiribati	6 5	Swaziland	6 5
Germany	1 8	United States	5 8	Brunei	6 5	Kuwait	6 5	Tajikistan	6 5
Greece	1 9	Venezuela	5 9	Burkina-faso	6 5	Laos	6 5	Tanzania	6 5
Hong Kong, PRC	2 0	Vietnam	6 0	Burma	6 5	Lesotho	6 5	Togo	6 5
Hungary	2 1			Burundi	6 5	Liberia	6 5	Tuvalu	6 5
India	2 2	Armenia	6 2	Cambodia	6 5	Libya	6 5	Uganda	6 5
Indonesia	2 3	Belarus	6 2	Cameroon	6 5	Madagascar	6 5	United Arab Emirates	6 5
Ireland	2 4	Georgia	6 2	Cape Verde	6 5	Malawi	6 5	Uruguay	6 5

Country	Code	Country	Code	Country	Code	Country	Code	Country	Code
Italy	2 5	Jordan	6 2	Central African Republic	6 5	Maldives	6 5	Uzbekistan	6 5
Japan	2 6	Kazakhstan	6 2	Chad	6 5	Mali	6 5	Vanuatu	6 5
Korea, South	2 7	Kyrgyzstan	6 2	Chile	6 5	Marshall Islands	6 5	Yemen	6 5
Latvia	2 8	Moldova	6 2	Comoros	6 5	Mauritania	6 5		
Lithuania	2 9	Oman	6 2	Congo	6 5	Mauritius	6 5		
Luxembourg	3 0	Pakistan	6 2	Costa Rica	6 5	Micronesia	6 5		
Macedonia	3 1	Qatar	6 2	Cuba	6 5	Monaco	6 5		
Malaysia	3 2	Syria	6 2	Djibouti	6 5	Mongolia	6 5		
Malta	3 3	Ukraine	6 2	Dominica Rep.	6 5	Mozambique	6 5		
Mexico	3 4			East Timor	6 5	Namibia	6 5		
Netherlands	3 5	Algeria	6 3	Ecuador	6 5	Nauru	6 5		
New Zealand	3 6	Bahrain	6 3	El Salvador	6 5	Nepal	6 5		
Nigeria	3 7	French Polynesia	6 3	Equatorial Guinea	6 5	Nicaragua	6 5		
Norway	3 8	Iceland	6 3	Eritrea	6 5	Niger	6 5		
Peru	3 9	Israel	6 3	Ethiopia	6 5	Palau	6 5		
Philippines	4 0	Lebanon	6 3	Fiji	6 5	Panama	6 5		

Notes

Index

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