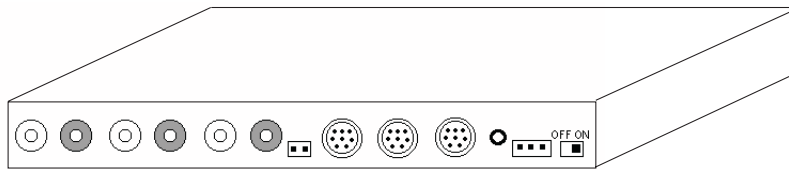


Directed[®]
V I D E O

OWNER'S GUIDE
INSTALLATION GUIDE



Video Multi-Control Unit

MODEL MCB1000

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Limited One-Year Warranty

For a period of ONE YEAR from the date of purchase, Directed Electronics, Inc. ("DIRECTED") promises to the original purchaser to repair or replace, free of cost, with a comparable reconditioned model any **VIDEO MULTI-CONTROL UNIT** (hereafter the "UNIT"), which proves to be defective in workmanship or material defect under normal use, provided the following conditions are met: the unit was purchased and installed by an authorized DIRECTED dealer; the unit remains in the vehicle in which the unit was originally installed; and the unit is returned to DIRECTED. The unit in question must be returned to DIRECTED postage paid and must be accompanied by a clear, legible copy of the bill of sale bearing the following information:

- Date of Purchase
- Your Full name and address
- Authorized dealer's company name and address
- Type of unit installed
- Year, make, model, and color of the automobile
- Automobile license number
- Vehicle Identification number
- Installation receipts

All components other than the unit, including and without limitation the remote control, cables and installation accessories, carry a 60-day warranty from the date of purchase of the same.

This warranty is automatically void if the unit's date code or serial number is defaced, missing or altered; the unit has been modified or used in a manner contrary to its intended purpose; or the unit has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defects in materials or construction. This warranty is nontransferable and does not apply to any unit that has been modified or used in a manner contrary to its intended purpose and does not cover batteries. This warranty **does not cover labor costs** for the removal, diagnosis, troubleshooting or reinstallation of the unit. For service on an out-of-warranty product a flat rate fee by model is charged. Contact

your authorized dealer to obtain the service charge for your unit.

TO THE MAXIMUM EXTENT ALLOWED BY LAW, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DIRECTED DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING DEALERS OR INSTALLERS. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DIRECTED OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DIRECTED SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DIRECTED DEALER'S PURCHASE PRICE OF THE UNIT. DIRECTED SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE AS DESCRIBED ABOVE. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State. DIRECTED does not and has not authorized any person or entity to create for it any other obligation, promise, duty or obligation in connection with these UNITS.

Safety Instructions

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK AND ANNOYING INTERFERENCE, USE ONLY THE INCLUDED HARDWARE.

DIRECTED ELECTRONICS, INC. DISCLAIMS ANY LIABILITY FOR ANY BODILY INJURY, INCLUDING FATALITIES, OR PROPERTY DAMAGE THAT MAY RESULT FROM ANY IMPROPER OR UNINTENDED USES OF THIS PRODUCT.

DO NOT MAKE MODIFICATIONS THAT WILL COMPROMISE ANY OF THE VEHICLES SAFETY EQUIPMENT. MODIFYING OR CONNECTING TO WIRES FOR THE BRAKE OR LIGHTING SYSTEM COULD CAUSE POTENTIALLY HAZARDOUS DRIVING SITUATIONS.

DO NOT MOUNT THIS OR ANY OTHER COMPONENT IN FRONT OF OR NEAR THE PASSENGER AIR BAG. EXPLOSIVE AIR BAG DEPLOYMENT COULD THROW A COMPONENT TOWARD THE PASSENGER CAUSING INJURY.

Read this manual in its entirety before beginning the installation. It has important information about safety hazards during vehicle operation.

This system is designed and intended for installation by MECP certified installers. It requires tools, equipment and product installation techniques common to the Mobile Electronics indus-

try; therefore it is not recommended that the consumer try to install this system. Installations performed by unqualified persons could result in damage to the vehicles electrical system. Please consult with your authorized retailer to have this system installed.

Important Safeguards

1. It is dangerous for the vehicle operator to watch the video while driving and, in most cases, it is illegal for the vehicle operator to use a Mobile Video system while driving. Please be a safe driver. Any viewing by the driver during vehicle operation could cause a collision or injury.
2. This unit does not have any consumer-repairable components. Any attempts to alter this product could result in fire or electric shock. Repairs performed by anyone other than an authorized repair facility will void the warranty.
3. The only replaceable component to this system is the optional TV tuner (TVM300), and should only be installed by an authorized retailer.
4. If the system stops working normally, discontinue operation immediately and consult your authorized retailer for service.
5. Operate the system in a safe manner. Excessively high volume levels that impair your ability to hear noises from outside the vehicle can be a hazard to yourself and other motorists.
6. Before attempting to make adjustments to the system, move the vehicle to a safe place away from traffic and stop. Driving while distracted can cause accidents and injuries.

Important Information

FCC NOTICE

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

YOUR WARRANTY

Your warranty registration must be completely filled out and returned within 10 days of purchase. Your product warranty will not be validated if your warranty registration is not returned. Make sure you receive the warranty registration from your dealer. It is also necessary to keep your proof of purchase, which reflects that the product was installed by an authorized dealer.

Features

The MCB1000 Multi-Controller Module is designed to be the centerpiece of a Mobile Multi-Media System.

With AV inputs for up to four sources (with TVM300 TV tuner) and three AV outputs it can operate as three separate video systems at the same time.

The universal IR remote can command any or all sources from each of the systems monitors.

The Directed ESP/ESP2 security systems can be integrated with on-screen programming and trigger information

FEATURES

- Infrared remote control.
- Remote IR input from hidden source unit.
- Source on-screen display for all zones.
- 3 external AV inputs for VCR, DVD, or Video gaming.
- 3 independently controlled AV output zones.
- 1 internal AV input for optional TV tuner.
- Antenna or cable-ready TV tuner.
- FM modulator control.
- Audio input gain controls.
- ESP/ESP2 Security System port for OSD of programming and trigger reporting.

ACCESSORIES

- Multi-Control Unit.
- Universal Remote Control x 1.
- Batteries for Remote Control x 2.
- 5M Din-Din Cables x 3.
- 5M Din-RCA Input Cables x 2.
- 5M ESP/ESP2 Cable x 1.
- 5M FM Modulator Control Cable x 1.
- IR Eye with cap Cable x 1.
- Power Cable x 1.
- Mounting Screws x 4.

Note: This manual makes reference to optional Directed Video parts not included with this product.

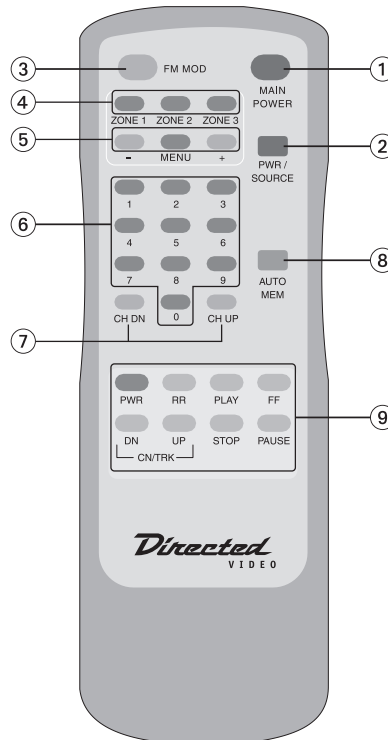
Universal Remote Control

REMOTE CONTROL OPERATION

1. **MAIN POWER** - Turns power to the MCB1000 on/off.
2. **PWR/SOURCE** - Turns monitor power on/off and changes the video source.
3. **FM MOD** - Turns the power to the RFM100 FM modulator on/off if connected to the MCB1000 FM modulator control output.
4. **ZONE BUTTONS** - Selects which monitor zone of the MCB1000 the remote control will operate.
5. **MENU/ADJUST BUTTONS** - Accesses the setup menu and hardware programming menus for the MCB1000.

NOTE: Refer to the On-screen Programming section for programming information.

6. **NUMERIC BUTTONS** - Use to choose specific TV channels.
7. **CHDN/CHUP** - Changes channels if the TVM300 TV tuner is connected.
8. **AUTO MEM** - Activates the auto channel learn of the TVM300 TV tuner.
9. **VCR CONTROL** - Controls the basic functions of the VCR.



REMOTE CONTROL BATTERY INSTALL/REPLACE

1. Slide battery compartment cover out from back of remote control.
2. Insert two AAA batteries.
3. Slide battery compartment cover back in.

Basic Operation

The RC100 can control the functions of the MCB 1000 zone monitors, the TVM300 TV tuner, the VC2010 VCR, and the VC2050 VCR.

To operate a specific monitor, the remote controls zone button (4) for that monitor must first be selected.

TURN THE MCB1000 ON/OFF

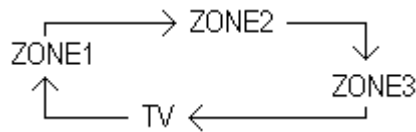
- Press the **MAIN POWER** (1) button to turn the MCB1000 on/off.

TURN ZONE MONITORS ON/OFF

- Press the **ZONE** (4) button for the monitor you want to turn on.
- Press the **PWR/SOURCE** (2) button to turn the monitor on. Press the **PWR/SOURCE** (2) button for more than three seconds to turn the monitor off.

SELECTING A SOURCE

- With the zone monitor on, press the **PWR/SOURCE** (2) button for less than three seconds to toggle through all connected video sources.



PROGRAMMING MENU

- All on-screen programming can be performed using the MENU/ADJUST (5) buttons. Refer to the *On-screen Programming* section for programming information.

AUDIO THROUGH VEHICLE SOUND SYSTEM

- Only available with the RFM100 connected.
- Select the zone that the RFM100 is connected to. Press the **FM MOD** (3) button. Set the vehicles radio to the correct frequency and the audio from that source will be heard through the vehicles sound system.

USING THE TV TUNER

MEMORIZING CHANNELS

- With the TV tuner as the source, press the **CHDN/CHUP** (7) buttons. The channel will move up or down one channel at a time. Press and hold to tune through channels at a rapid rate.

CHANGING CHANNELS

- With the TV tuner as the source, press the **AUTO MEM** (8) button. The TV tuner will start searching for stations, adding to memory any channels within reception range.

NUMERIC BUTTONS

- Channels can be directly selected by using the Numeric (6) buttons. When the channel number is selected, it will appear on the screen for a few seconds then the TV tuner will change to the selected channel.

ANTENNA/CATV

- When in an area where cable is available the TVM300 can accept up to 125 channels of CATV input. Refer to the programming menu to change from Antenna to CATV.

VCR CONTROLS BUTTONS

The VCR control buttons (9) will operate Directed video's VC2010 and VC2050 Video Cassette Recorders

- **PWR button** - Turns the VCR power on/off
- **RR button**
 - Press in stop mode to fast rewind the tape.
 - Press in play mode to rewind search.
- **Play button** - Press to begin tape playback
- **FF button**
 - Press to fast-forward the tape when in stop mode.
 - Press to forward search the tape in play mode.
- **CN/TRK buttons**
 - Press to manually adjusts tape tracking when in play mode.
 - Press to change the TV channels. Only available of the VCR has a built in TV tuner.
- **Stop button** - Press to stop tape playback.
- **Pause button**
 - Press to pause tape playback.

- Press again to resume normal tape playback
- Press repeatedly when tape is paused to advance one frame at a time.
- Press and hold when tape is paused for three seconds to activate slow motion playback

ON-SCREEN PROGRAMMING

The MCB1000 hardware functions and on-screen display can be customized at the time of installation.

On-screen programming is only available when integrating with Directed's HVM500, RVM560, RVM680 and RVM700 video monitors. For a complete guide to On-screen Programming see the Owner/Installation guide for your Directed Video Monitor.

The Expanded Menu switch on the MCB1000 module must be on for the Setup Menu to appear on screen.

Please use the Hardware Options Menu below for more information.

HARDWARE OPTIONS MENU

SELECTION	DESCRIPTION AND OPERATION
POWER AUTO OFF	<ul style="list-style-type: none"> ■ Select to choose POWER AUTO OFF or POWER LAST STATE. ■ POWER AUTO OFF - When the key is turned on the system power will remain off, regardless of the system on/off state when the key was turned off. ■ POWER LAST STATE - When the key is turned on the system will automatically return to the power on/off state it was in when the key was turned off.
FM MODULATOR	<ul style="list-style-type: none"> ■ Select to let the MCB1000 know an FM modulator is connected. ■ FM MODULATOR - allows the universal remote to turn

	<ul style="list-style-type: none"> the FM modulator on/off. ■ NO FM MODULATOR - FM modulator control is defeated. ■ This FM Modulator function only applies when the RFM100 is connected.
ANTENNA TV	<ul style="list-style-type: none"> ■ Select to choose Antenna or Cable input to TVM300. ■ Select ANTENNA TV when the TVA10 antenna is connected to the TVM300. ■ Select CATV when using a cable TV connection to the TVM300.
CATV STD	<ul style="list-style-type: none"> ■ Choose between three types of cable TV setups. ■ CATV STD - standard cable system for cable-ready TV's. ■ CATV HRC - for non-cable ready TV's. ■ CATV IRC - for non-cable ready TV's.

Installation

INSTALLATION PRECAUTIONS

1. This product is designed for installation into vehicles with standard (-) 12 volt ground electrical systems.
2. All components should be installed in a manner that will not interfere with the normal operation of the vehicle.
3. Route all wires and cables so they cannot be pinched, punctured, or chaffed by sharp metal or screws during reassembly or vehicle operation.
4. Disconnect the battery's negative terminal or remove any fuses from circuits that are affected before the installation.
5. Components should not be installed on areas of high moisture, dust, or heat, and should not be exposed to direct sunlight.
6. All wiring connections should be made using solder and tape or quality solderless connectors. Never leave bare wires. Always terminate unused wires.

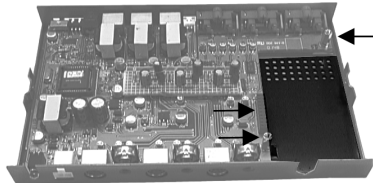
7. Before drilling, always check behind panels for clearance to factory wires, hoses, gas tanks, or brake lines.
8. Fuses should only be replaced with like fuses of the same value. If the replacement fuse fails, discontinue operation and contact your authorized retailer.

INSTALLING THE TVM 300

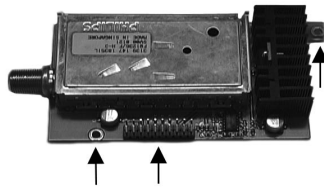
Installing the TVM300 requires working on the PC board of the MCB1000. Only a MECP Certified technician should perform this installation.

1. Disconnect all power wires and cables from the MCB1000 before beginning this installation. Failure to do so could result in fire or damage to the MCB1000 circuitry.
2. Remove the Philips head screws at both ends of the MCB1000 module and remove the cover.
3. Locate the open rectangular area in the corner of the PC board. This is the mount-

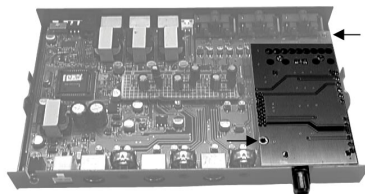
ing location. Note the location of the female 20-pin connector.



4. Position the TVM300 over the mounting location and check alignment of the antenna connector slot in the case, the 20-pin connector, and the two machine screw mounts.



5. Carefully align the TVM300 to the 20-pin connector and press down firmly until the TVM300 mounting brackets align with the machine screw mounts.



6. Secure the TVM300 to the circuit board with the supplied machine screws.

7. Verify that the TVM300 is secured and reinstall the MCB1000 module cover.
8. Complete the installation/reinstallation of the MCB1000. Verify all connections are correct according to the instructions.
9. Be sure to attach the TV antenna, then test the system operation.

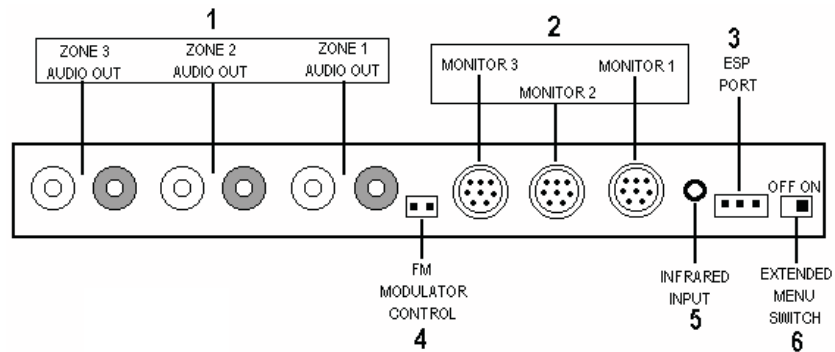
TV RECEPTION WARNING

Television reception in an automobile is constantly affected due to vehicle movement around obstructions and high-energy sources. Location, weather, automobile construction, and installation can all affect reception.

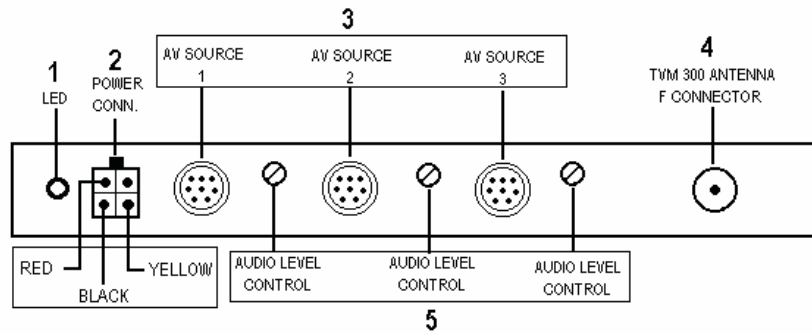
Possible areas of poor reception include:

- Hospitals
- Military bases
- Airports
- High power wires
- Large buildings
- Distance from transmitter

Wire and Cable Connections



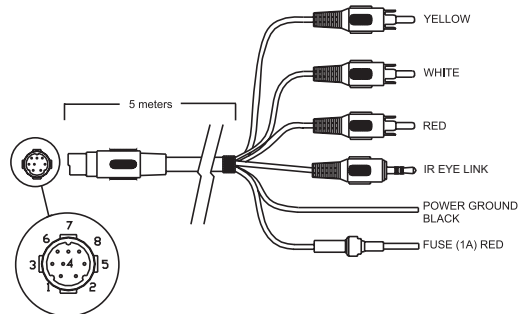
1. **Audio out** - Use these outputs for stereo audio signal to IR wireless headphones or an FM modulator. The audio zones correspond to the same monitor zones so any time a source is changed the audio will follow.
2. **Monitor zones** - These eight-pin DIN plugs are audio and video outputs. Using the VDC100, they plug directly into the Directed Video line of overhead and head-rest monitors. They include stereo audio signal, video signal, IR signal, and data signal for ESP/ESP2 communication.
3. **ESP/ESP2 Port** - This three-pin port is for adding the ESP/ESP2 security system with two-way communication. It allows information to flow between the security system and the MCB 1000. User-programmable features of the ESP/ESP2 systems can be changed using on screen menus. Security system violations can be reported on screen with the name of the violated zone or sensor displayed.
4. **FM Modulator control** - This plug is used for controlling power to the RFM100 FM modulator. The MCB1000 will turn the RFM 100 power on/off by the ignition switch or the system operator can turn the FM modulator on/off by remote control.
5. **Infrared input** - This is a 3.5mm pin plug for a remote IR eye. The optional IR 100 Infrared remote receiver can be added to the system to allow full control from any location in the vehicle.
6. **Extended menu switch** - Set this switch to the ON position and a special Setup Menu for the installer will appear on screen with the rest of the menus. It is designed allow the installer to customize the system hardware operation, program the Directed ESP/ESP2 security system trigger names, and name the AV zones for the on-screen display. Set the switch to the OFF position and the Setup Menu no longer appears with the on-screen menus. Refer to the *On-screen Programming* guide for further information.



Capabilities Diagram.

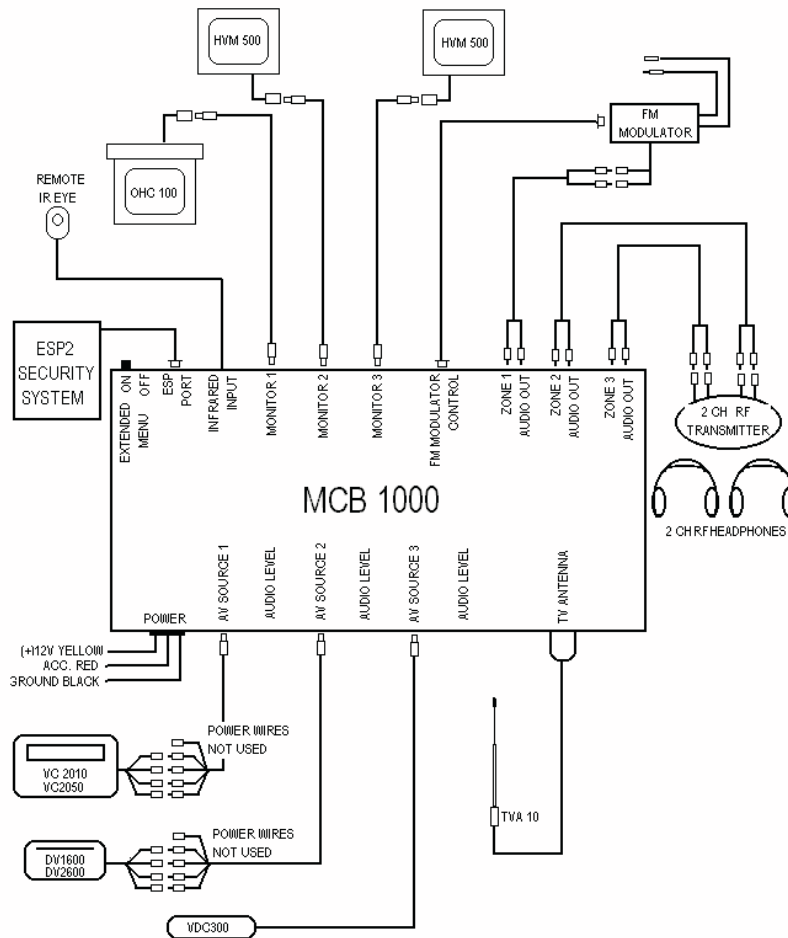
1. **Indicator Led** - Indicates power on/off
2. **Power connector:**
 - RED - Accessory power. Connect to (+) 12 volt wire that turns on/off with the ignition.
 - YELLOW - Constant power. Connect to (+) 12 volt wire that has constant power.
 - BLACK - Connect to (-) chassis ground.
3. **AV source** - These are eight-pin DIN connectors for three of the AV input zones. Each connector provides input/outputs for video, stereo audio, and Infrared remote operation. For a guide to the capabilities of the MCB 1000 refer to the *System*
4. **TV antenna connector** - This is a standard F-type TV antenna connector. It can be connected to with Directed Video's TVA 10 telescoping antenna for broadcast TV or a standard cable TV connection.
5. **Audio level controls** - These are adjustable source audio input level controls. When adjusting the system, all source inputs should be matched for consistent volume level when changing sources.

AV SOURCE DIN TO RCA



Low current only, or else DO NOT connect to source main power.

System Capabilities Diagram



Specifications

MAIN UNIT

Product	Multi-Zone Audio/Video/TV system
Power requirement	12.5 Vdc (11-15Vdc)
Power consumption	700 mA in operation/60 mA standby
Audio input	1 volt rms max
Audio output	1.0 volt rms DIN/RCA
Video input	1 volt p-p 75 ohms
Video output	1 volt p-p 75 ohms
Dimensions	19.7cm x 13cm (7.75" x 5.125")
Temp range	35-115 degrees farhenhiet

UNIVERSAL REMOTE CONTROL

Power source	3 volts DC 2x AAA Batteries
Infrared range	App. 2M (6.5 ft)

The company behind this system is Directed Electronics, Inc.

Since its inception, Directed has had one purpose, to provide consumers with the finest vehicle security, car stereo products, rear seat entertainment, and accessories available. The recipient of more than 20 patents in the field of advanced electronic technology, Directed is ISO 9001 registered.

Quality Directed Electronics products are sold and serviced throughout North America and around the world.

Call **(800) 274-0200** for more information about our products and services.



DEI is an ISO 9001 registered company.

Directed® is committed to delivering world-class quality products and services that excite and delight our customers.



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