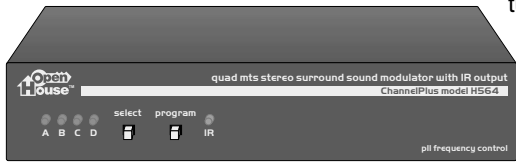


ChannelPlus Modulators

Models H542, H544, H562 and H564 are digitally-tuned video modulators that convert any baseband video and audio signal to a user-selected UHF, or Ultraband CATV channel. An internal quartz crystal reference oscillator and PLL circuitry ensure drift-free performance. The user selects the output frequency (channel) using the "select" button to choose which modulator and the "program" button to enter the number of the desired channel. Any TV connected to the output via coax can receive the signals, when the TV is tuned to the proper channel. In addition, Models **H562** and **H564** encode both audio channels using the MTS stereo standard. Stereo sound and surround sound information will be received by any MTS compatible television receiver.

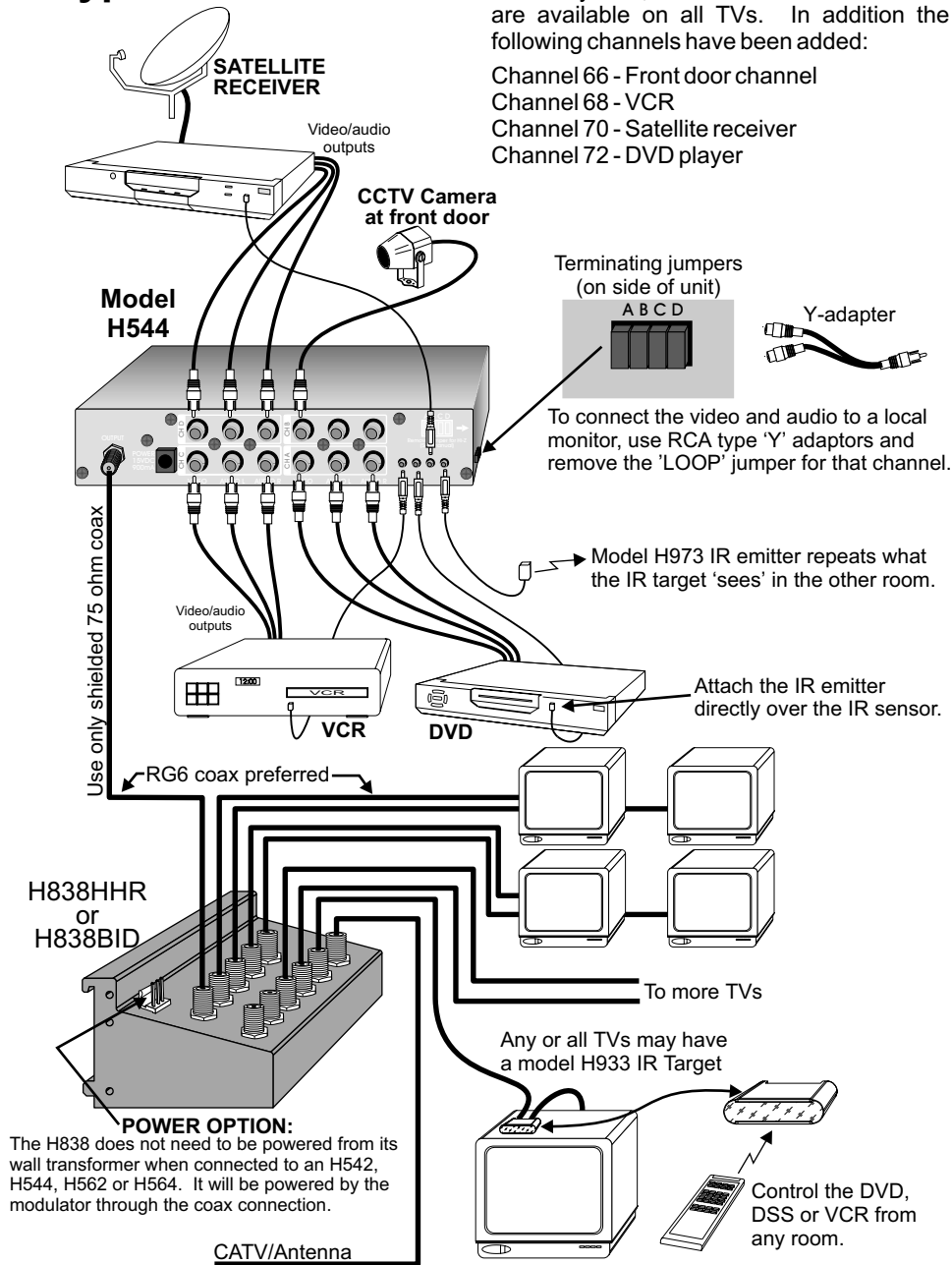


Models available:

Model H542
2 channel modulator with IR
Model H544
4 channel modulator with IR

Model H562
2 channel MTS modulator with IR
Model H564
4 channel MTS modulator with IR

Typical Installation



Things To Watch For:

No picture ... Verify that the video source is on and is producing a video signal. Check that the TV and the modulator are tuned to the same channel. For example, if the modulator is broadcasting on UHF channel 16, make sure the TV is on UHF 16 rather than CATV 16. UHF 16 and CATV 16 are at different frequencies.

Weak ChannelPlus UHF channel ... If the TV has a separate UHF input, be sure that it is connected.

LEDs blink ... You need to have one unused channel space between modulated channels. The display will blink if you have made an 'illegal' choice. See the section on programming.

Herringbone interference on modulator channel (diagonal lines): You may have chosen a channel number that is not completely vacant. Distant UHF stations may not be watchable, but will cause interference if you try to create a new channel at the same frequency. Also, cable companies often have extra signals where there should be none. Try moving the modulator channel to another number. You may have to add a low pass filter to remove the cable company noise. If the filter does not work, try adding a DC-block to remove common mode interference.

Herringbone interference on many channels, including modulator channels (disappears when you remove the CATV/antenna feed): The RF amplifier can be overloaded by abnormally strong signals. Often, you can cure the problem with a simple attenuator. Use a variable attenuator and try to find a signal level where the interference just disappears. Sometimes, the problem is far stronger than the rest. In this case, attenuating all of the signals with a simple attenuator may cause the desired stations to be weak (snowy). You must reduce the strength of the only offending station. A common FM trap will help if the problem is a nearby FM tower. If the problem is a nearby TV station, often the station management can provide suitable filters.

Audio volume is low ... The left and right audio inputs are combined for monaural. For proper audio level, both right and left inputs must be used. If you have a mono source, connect it to both right and left inputs using an RCA 'Y' connector.

No Stereo (H562 and H564 only) ... When using the TV outputs to send audio to a home theater system, be sure the TV is in the stereo mode for external speakers. Consult the TV manual, this is often confusing and is different for different TV brands.

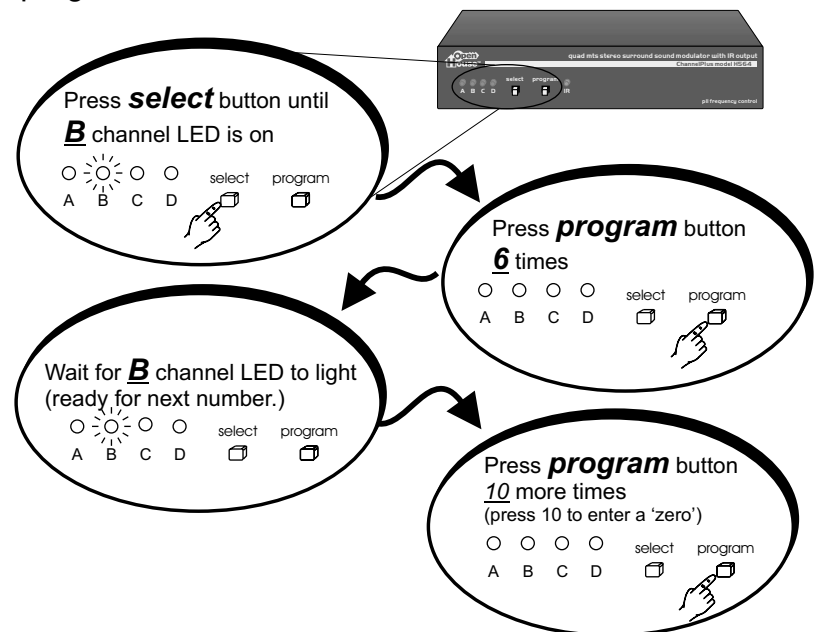
No color on ChannelPlus channels ... You may have chosen the incorrect cable standard. Not all televisions can accommodate the 1.25MHz frequency difference between the H and I cable standards. See the section on programming.

Programming

To program a new channel first press the **Select** push button to choose which channel to change. Then program the new channel using the **Program** push button to enter channel digits. This new channel should be an unused channel. It should have no interference or trace of a picture - just "snow". There must also be one unused channel below the selected channel to avoid interference. Below is a simple step by step example of how to program a channel - cable channel 60:

Programming Example:

To program modulator **B** to channel **60**



Cable HRC and IRC considerations:
Most cable services use standard or IRC frequency assignments. This is the default for OpenHouse modulators. However, if the cable services use HRC or the TV appears to search for the "created channel", program the channel injector for HRC.

For HRC enter a 98. Reset to IRC by entering 99.

Entries 98 and 99 are for setting HRC or IRC only. They do not change the channel number. They can be entered on any modulator channel, A, B, C or D, and affect all channel assignments for that unit. Cable channels must either be all IRC or all HRC.

Specifications: typical @ 25°C ± 5°C

Inputs	video	1 Vp-p @ 75Ω	
	audio	1 V rms @ 47kΩ	
Video performance	differential gain	4%	
	differential phase	<4°	
	signal/noise	55 dB	
RF output	standard	UHF	CATV
	channel ranges	14-64	65-125 (excluding 95-99)
	output level	+25 dBmV	
	IM distortion	-60 dBC	
	alternate channel	-45dBC @ 12MHz	
Power supply	modulator model	H542	H544 H562 H564
	output current	600mA	900mA 900mA 900mA
	power supply part number	350-079	350-082 350-082 350-082
	output voltage	15 VDC	
	input power	105-125 VAC	
MTS audio performance (H562 & H564 only)	frequency range	20Hz - 12kHz	
	signal/noise	65 dB	
	separation	25 dB @ 1000Hz	
	surround sound	Compatible with Dolby full logic surround sound	
	noise reduction	Certified dbx	

DECLARATION OF CONFORMITY

THIS DEVICE COMPLIES WITH PART 15 OF THE 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 UNDESIRABLE OPERATION.

Installation requirements:

FCC classifies this product under part 15 of its rules as a "television interface device". Systems designed using television interface devices have the following legal requirements:
1) The modulated channel signal strength may not exceed 15.56dBmV at any television. *Federal Regulation 47CFR15.115(b)(1)(i).*
2) If an antenna is used in the system, the modulated channel signal strength may not exceed -51dBmV at the antenna input port. *Federal Regulation 47CFR15.115(c)(4).*

For the Installer:

The system you design must comply with these regulations. As the installer, you are responsible. The easiest way to be fully compliant is to use a ChannelPlus coax panel. ChannelPlus panels have the necessary isolation from the modulator input ports to the antenna input port and gain characteristic from the modulator input ports to the television output ports. These features will make your modulator comply with the above requirements. The **Typical Installation** shown is fully compliant.

Good ...
 Typical room - phone, TV
 Media center - phone, satellite receiver, AV modulators
 Home office - phone, TV, cable modem
 Better ...
 Typical room - phone, TV, ethernet
 Media center - phone, TV, ethernet, satellite receiver, AV modulators
 Home office - phone, TV, ethernet, cable modem
 Best ...
 Typical room - phone, TV, ethernet, satellite receiver
 Media center - phone, TV, ethernet, satellite receiver, AV modulators, hi-speed data
 Home office - phone, TV, ethernet, satellite receiver, cable modem, hi-speed data

	Good	Better	Best
Typical Room	1 Cat-5 1 RG-6	2 Cat-5 1 RG-6	2 Cat-5 2 RG-6
Media Center	1 Cat-5 3 RG-6	2 Cat-5 3 RG-6	3 Cat-5 3 RG-6
Home Office	1 Cat-5 2 RG-6	2 Cat-5 2 RG-6	3 Cat-5 3 RG-6

Wiring a house for OpenHouse
 The cables in an OpenHouse run from the various rooms of the house directly to the service center location. (This is known as 'home run' wiring.) Two types of wire are used for communication and entertainment: Cat-5, 4-UTP (4 Unshielded Twisted Pairs) wire handles data or 1 to 4 telephone lines. RG-6 coax handles television (antenna or cable), satellite dish, cable modem, or AV modulator signals. (An AV modulator creates new TV channels for front door camera, DVD player, a VCR or a satellite receiver.) We recommend the following pre-wire schemes. Run these wires from the service center to the rooms indicated.

Video Modulators
 Models H542, H544, H562 & H564



3001 Enterprise Street, Brea, CA 92821-6213, U.S.A.
 714-996-4100 * 800-999-5225 * FAX 714-996-4900 * www.channelplus.com

Warranty

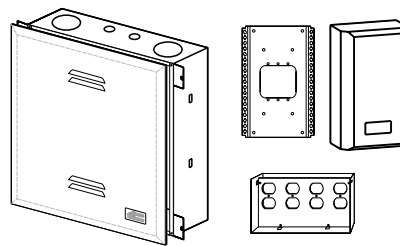
Multiplex Technology, Inc. warrants this product to be free from defects in materials and workmanship for a period of one year from the date of purchase or MTI will repair, or at its option, replace the defective product. To obtain warranty service, call MTI for a return material authorization (RMA) number and return the product prepaid to Multiplex Technology, Inc., 3001 Enterprise Street, Brea, CA 92821, Attention: Customer Service. Please put the RMA number on the outside of the carton.

Any implied warranty arising from the sale of the product including implied warranties of merchantability and fitness for purpose are limited to the warranty stated above. MTI shall not be responsible for losses or damages or expenses, whether direct, consequential or incidental arising from the use of or the inability to use this product. Some states do not allow limitations on how long the implied warranty lasts or the exclusion or limitation or incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which may vary from state to state.



Compatible

ChannelPlus Enclosures, Modules, Accessories & Wall Plates

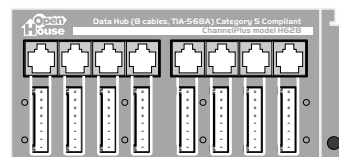
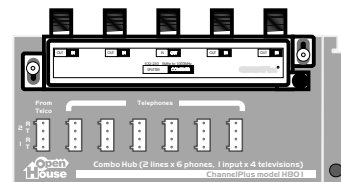


Service center enclosures

A full line of OpenHouse compatible enclosures, from simple, inexpensive mounting plates to high capacity in-wall cabinets. AC outlets can be mounted inside the cabinets using a UL listed accessory.

Starter systems

RF splitters and telephone punch downs. When it is time to upgrade, just snap this module out and replace with one of more of the more sophisticated units.

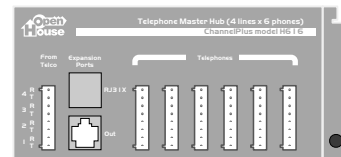


Data hubs

Termination blocks for the CAT-5 cables, Ethernet hubs. Bring the Internet to any room in the home. Or create a home data network.

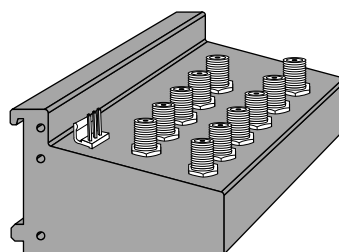
Telephone hubs

Connections for 1-4 phone lines to every room. Starter hub adds RJ-31X jack for security system dialer.



Wall plates

Wall plate systems for all rooms. The typical room gets TV and telephone. The Home office wall plate adds data ports. The media center wall plate adds satellite feeds.

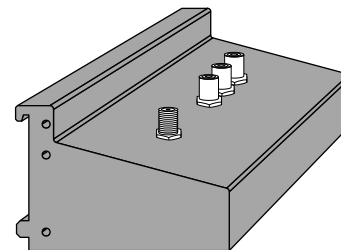


Coax panels

Distribute antenna or cable TV to every room of the house. Some models include bi-directional amplifiers for interactive cable systems. Some models include modulator inputs and IR engines.

AV modulators (for service center)

Create a new TV channel for a front door camera. Some models feature Cat-5 input connections.

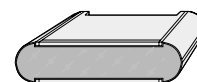


AV modulators (for media center)

Create new TV channels for DVD, VCR, or a satellite receiver. These modulators sit in the media center. Some offer true MTS stereo.

IR Accessories

Control video devices from any room.



New ChannelPlus products are added all the time. Visit our website to learn more: www.channelplus.com