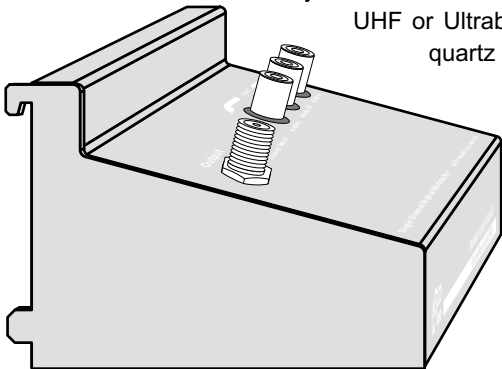
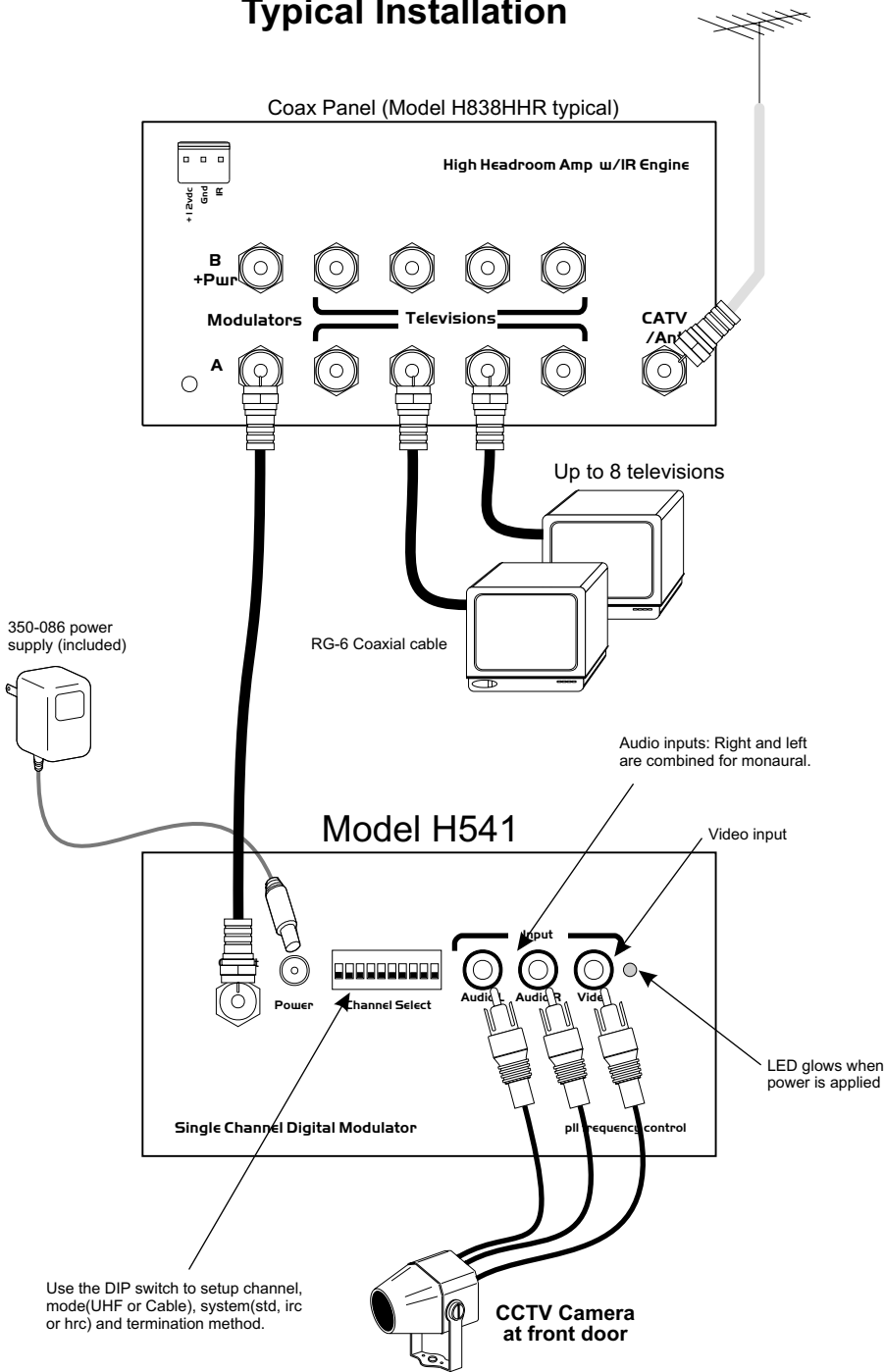


ChannelPlus Video Modulator

The **H541 modulator** is a digitally tuned video modulator that converts 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 DIP switch on the front panel. Any TV connected to the output via coax can receive the signal, when tuned to the proper channel.



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.

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.

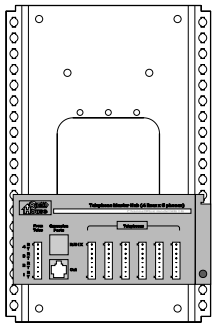
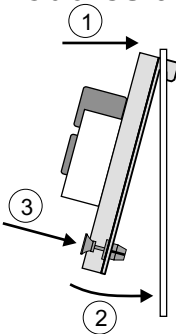
Herringbone interference on many channels, including modulator channels (disappears when you remove the CATV/antenna feed): The RF amplifier can be overloaded by abnormally strong signals. Often, you can cure the problem with a simple attenuator. Use a variable attenuator and try to find a signal level where the interference just disappears. Sometimes, the problem is one station 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 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.

OpenHouse™ modules attach from the top

- 1) Hook from the top
- 2) Swing into place
- 3) push button to lock



Programming the H541

Set the DIP switches from the following guide:

- Set desired mode: UHF, CATV std, CATV irc or CATV hrc.
- Set channel: Find the desired UHF or CATV channel and set.
- Set termination: For normal operation (75Ω termination) select NORM. When connecting video to a local monitor using a 'Y' adaptor set for LOOP (Hi-Z).

UHF/CATV

14/65	30/81	46/102	62/118
15/66	31/82	47/103	63/119
16/67	32/83	48/104	64/120
17/68	33/84	49/105	65/121
18/69	34/85	50/106	66/122
19/70	35/86	51/107	67/123
20/71	36/87	52/108	68/124
21/72	37/88	53/109	69/125
22/73	38/89	54/110	
23/74	39/90	55/111	UHF
24/75	40/91	56/112	CATV STD
25/76	41/92	57/113	CATV IRC
26/77	42/93	58/114	CATV HRC
27/78	43/94	59/115	
28/79	44/100	60/116	LOOP
29/80	45/101	61/117	NORM

Programming Examples

- UHF channel 23, normal termination (75 Ω)
- Cable channel 116 (standard), loop through termination (Hi-Z)
- UHF channel 65, normal termination (75 Ω)
- Cable channel 65 (HRC), normal termination (75 Ω)

Specifications: typical @ 25°C ± 5°C

Inputs	video	1 Vp-p @ 75 Ω	
	video termination (switch selectable)	75Ω in normal mode (NORM) >1MΩ in loop through mode (LOOP)	
	audio	1 V rms @ 47kΩ L & R inputs combined for monaural	
Video performance	differential gain	4%	
	differential phase	<4°	
	signal/noise	55 dB	
RF output	standard	UHF	CATV
	channel ranges	14-69	65-125 (excluding 95-99)
	output level	+25 dBmV (85dBuV)	
	IM distortion	-60 dBC	
	alternate channel	-45dBC @ 12MHz	
Power supply	model number	350-086	
	output current	300mA	
	output voltage	15 VDC	
	input power	105-125 VAC	

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 UNDESIRE

Installation requirements:

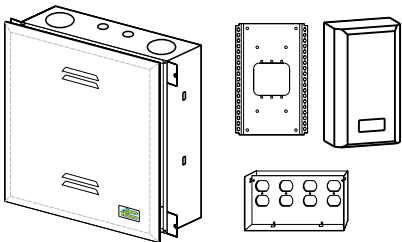
- FCC classifies this product under part 15 of its rules as a "television interface device". Systems designed using television interface devices have the following legal requirements:
- 1) The modulated channel signal strength may not exceed 15.56dBmV at any television. *Federal Regulation 47CFR15.115(b)(1)(i).*
 - 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 above is fully compliant.

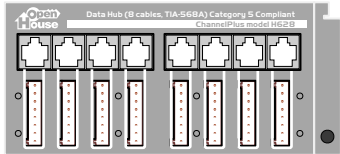
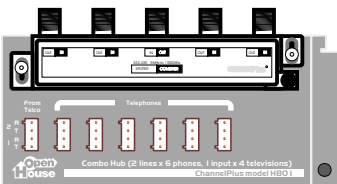


ChannelPlus Enclosures, Modules, Accessories & Wall Plates



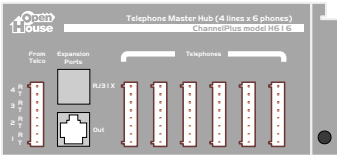
Service center enclosures
A full line of OpenHouse compatible enclosures, from simple, inexpensive mounting brackets to high capacity in-wall cabinets. AC outlets can be mounted inside the cabinets using a UL listed accessory.

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.

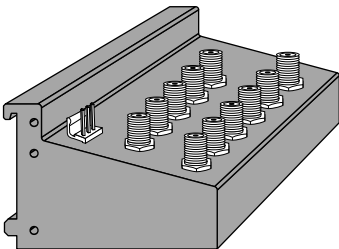


Data hubs
Termination blocks for CAT-5 cables & Ethernet hubs. Bring the Internet to any room in the home. Or create a home data network. Share printers or data.

Telephone hubs
Connections for up to 4 phone lines to every room. Master hub includes RJ-31X jack for security system dialer. Expansion hubs increase telephone locations 8 at a time.

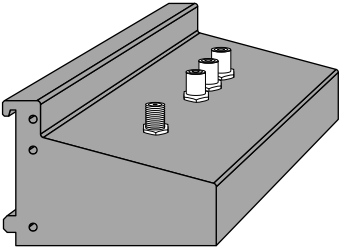


Wall plates
Wall plate systems for all rooms. The typical room gets TV and telephone. The Home office wall plate adds data ports. The media center wall plate adds satellite feeds.



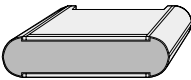
Video amplifier hubs
Distribute antenna or cable TV to every room of the house. Some models include bi-directional amplifiers for interactive cable systems. Some models include modulator inputs and IR engines.

Camera modulators (for service center)
Create a new TV channel for a front door, pool area, or baby's room cameras. Some models feature Cat-5 input connections.



Entertainment modulators (for media center)
Create new TV channels for DVD, VCR, and a satellite receiver. These modulators sit in the media center. Some models offer true MTS stereo with surround sound.

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



www.channelplus.com

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.

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

- 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

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
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.