

Warranty

Multiplex Technology, Inc. warrants this products 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.

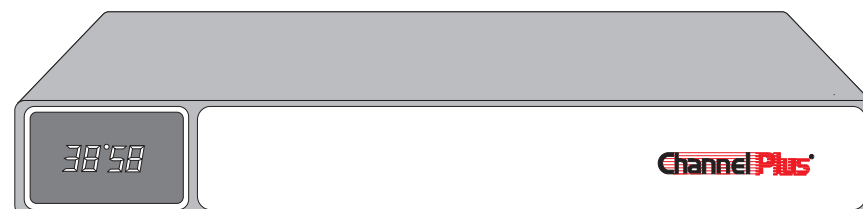
Please put the RMA number on the outside of the carton.

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.

Channel Plus®

PERFORMANCE MULTI-ROOM VIDEO

Modulator Installation Manual



"D" Series: Frequency-Agile Modulators

**Models:
D1VA, D2VA, D1VA PAL & D2VA PAL
6315 MTS Stereo Modulator**

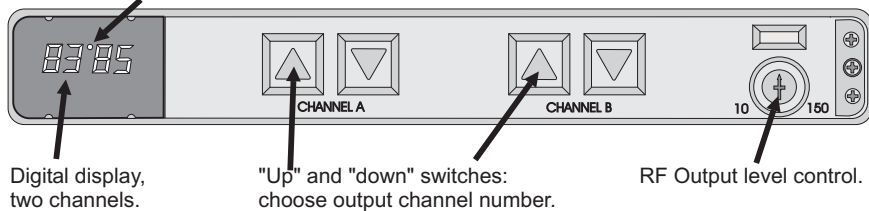
 **multiplex®**
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"D" Series Modulator Controls and Connections

The ChannelPlus "D" Series are digitally-tuned video modulators that convert any baseband video and audio signal to a user-selected UHF, Ultraband CATV, Japan or PAL channel. An internal temperature-compensated quartz crystal reference oscillator and PLL circuitry ensure drift-free performance. The user selects the output frequency (channel) using the "up" and "down" buttons while observing the digital display on the front panel. Any TV connected to the output via coax can receive the signals, when the TV is tuned to the proper channel.

Front panel - cover removed

Power LED: power is on. Modulator should be left on. There is no power switch.

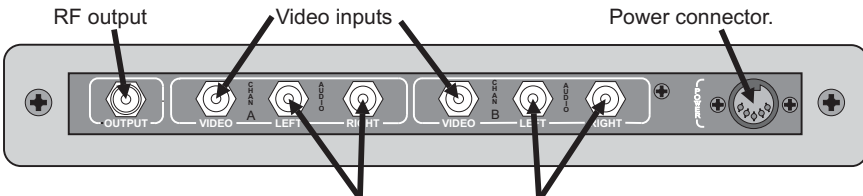


Digital display, two channels.

"Up" and "down" switches: choose output channel number.

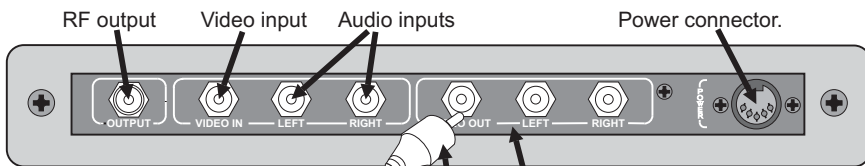
RF Output level control.

Rear panel - D2VA (D1VA and PAL units are similar)



Audio inputs: Right and Left are combined for monaural.

Rear panel - 6315 MTS stereo modulator



The model 6315 is a single channel MTS stereo video modulator. Stereo video sources (DVD players, LV players, VCRs) will provide stereo with dbx noise reduction on all TVs in the house. The 6315 is compatible with modern surround sound processors.

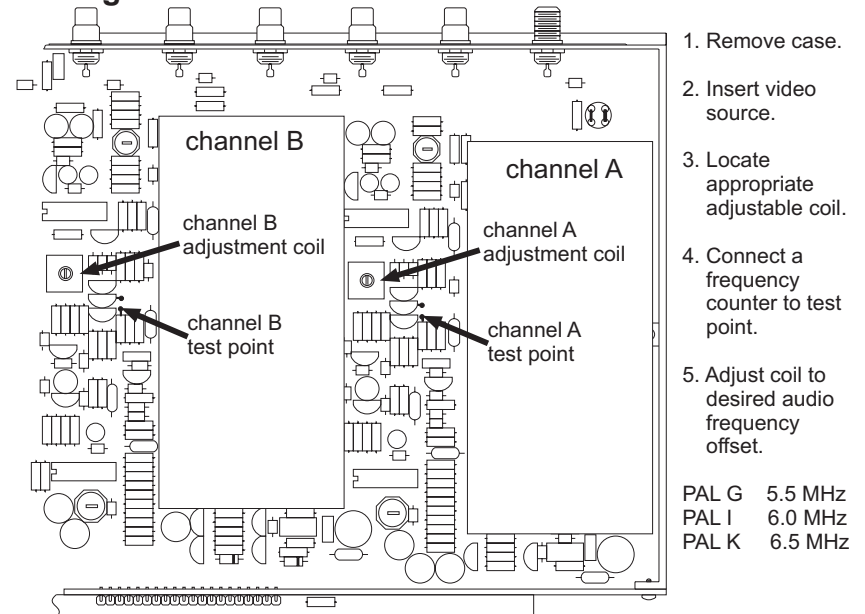
Loop-thru outputs to send video and audio inputs to a local monitor. When the loop-thru is not being used, the supplied 75 ohm terminator must be installed in the "Video Out" connector.

Specification: typical @ 25°C ± 5°C

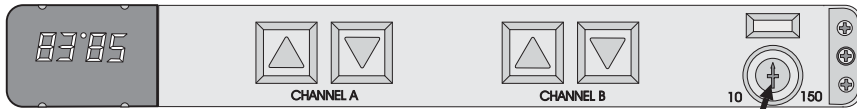
"D" Series modulators

Inputs	standard	UHF	CATV	JPN	PAL G, H, I
	video		1 Vp-p @ 75Ω		
audio		1 V rms @ 47kΩ			
Video performance	differential gain	< 2% (0.2 dB)			
	differential phase	< 3°			
	signal/noise	65 dB			
RF output	channel ranges	14-60	65-117	13-59	21-56
	output level	+30 dBmV (90dBuV)			
	IM distortion	-60 dBc			
	alternate channel	-45dBc @ 12MHz			
power supply	model number	350-026		350-030	
	input power	105-125 VAC		210-230VAC	
	power consumption	8 watts			
	output voltage	26.0 VAC CT @ 400mA 13.5 VAC CT @ 400mA			
MTS audio performance model 6315 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			

Tuning the Oscillator



PAL G	5.5 MHz
PAL I	6.0 MHz
PAL K	6.5 MHz



RF Output level control.

Things to watch for:

Display blinks ... You need to have one unused channel space between channels. The display will blink if you have made an 'illegal' choice.

Herringbone interference on ChannelPlus channel (diagonal lines) ... You may have chosen a channel number that is not completely vacant. Distant UHF stations may be un-watchable, but will cause interference if you try to 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 ChannelPlus channel to another number. You may have to add a low pass filter to remove cable company noise.

Herringbone interference on many channels (disappears when you remove the modulator) ... The high output of the ChannelPlus modulator can overdrive many RF amplifiers. Reduce the RF output using the front panel control.

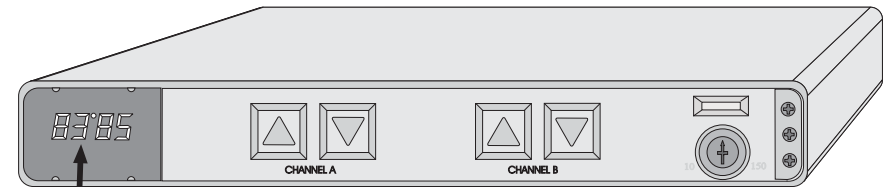
Audio volume is low on D1VA or D2VA modulator ... The left and right audio inputs are combined for monaural. For proper audio level, both right and left inputs must be used. If you have a mono source, connect it to both right and left inputs using an RCA 'Y' connector.

Audio volume is low on 6315 MTS stereo modulator ... There is little you can do here, other than turn up the volume. Here is what is happening:

- In broadcast television, the audio is compressed: The soft sounds are amplified to be almost as loud as the loud sounds. The technical measure of this is dynamic range, the ratio of loudest to softest sounds. The dynamic range of video devices such as DVD and LV players is very great. Since most of a typical movie consists of 'soft' sounds, the audio will seem quieter than normal television channels. (This is also why commercials, which are the most compressed, seem louder than the program they accompany.)
- To appear to be at the same volume as broadcast channels, the audio level in a modulator is normally increased. In the model 6315, this high signal level would overdrive the MTS circuits and surround sound performance would suffer.

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.

Front panel controls

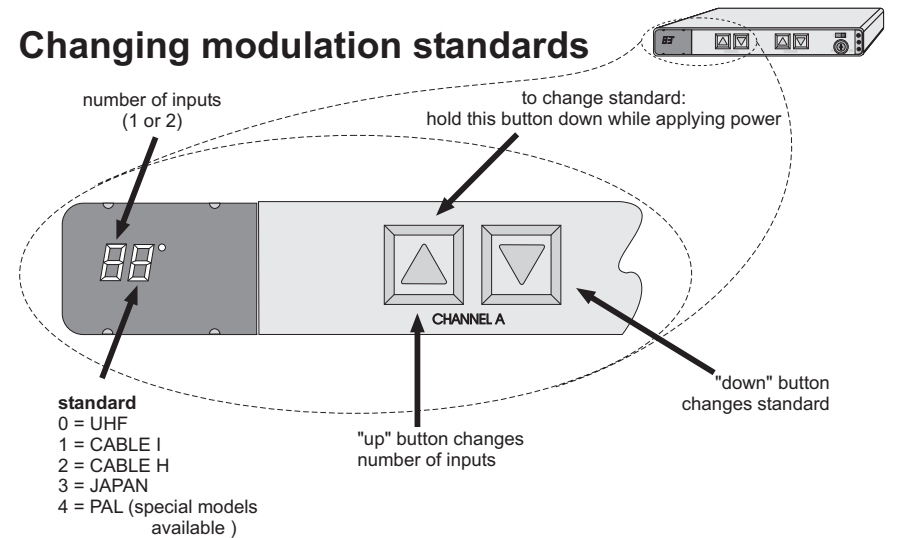


Display indicates the selected channel numbers. When no video signal is present, the display for that channel will not remain lit.

Press the up or down button to set channel number

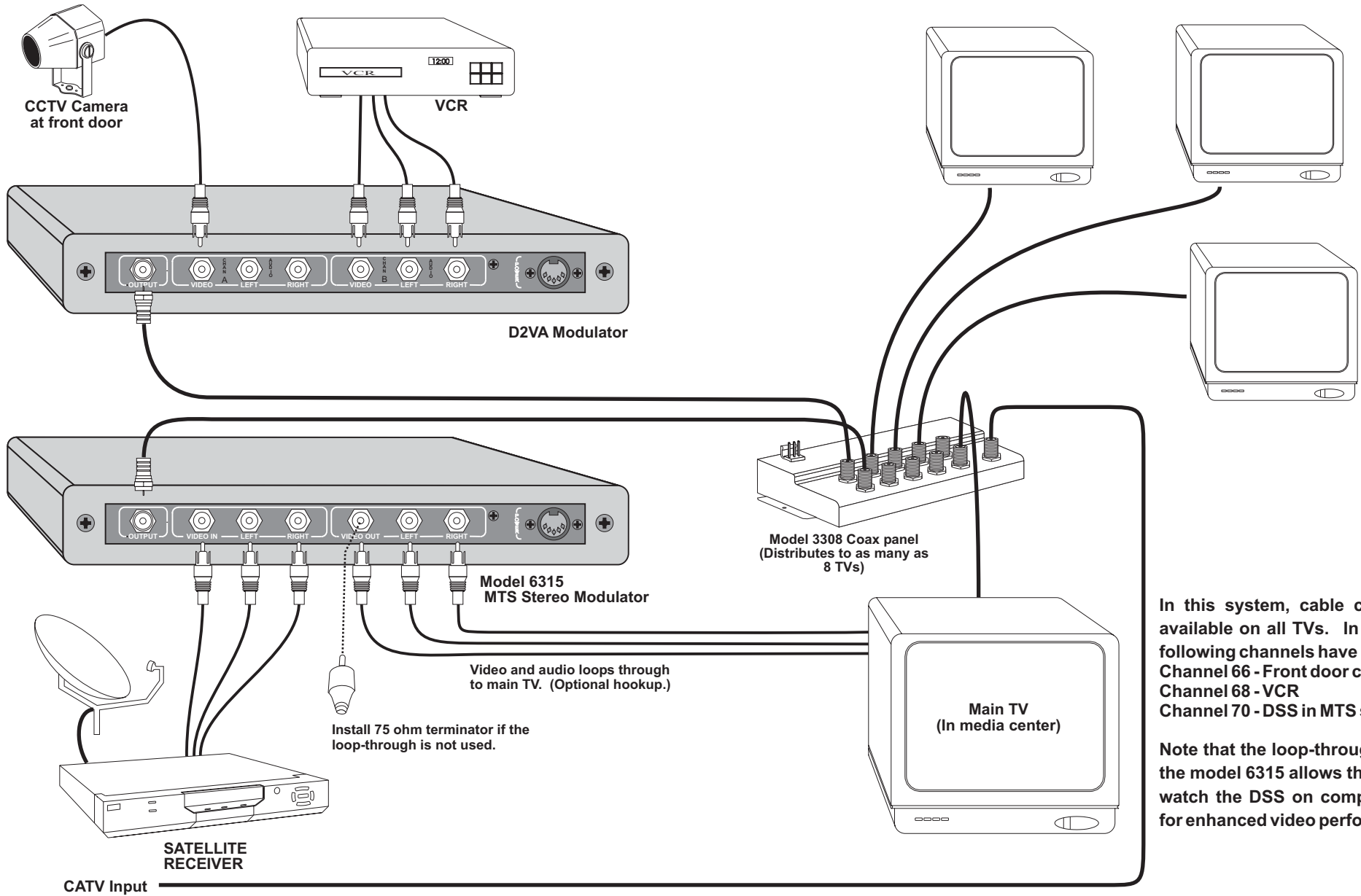
To increase output level

Changing modulation standards



- Using the supplied transformer, apply power while pushing the channel A "up" selector button. The unit will remain in the modulation standards programming mode until power is removed.
- Choose the number of inputs (1 or 2) with the channel A "up" selector button.
- Choose the standard to modulate your source(s): UHF, Cable I, Cable H, Japan or PAL using the channel A "down" selector button. After 5 seconds these settings will be written to permanent memory. The display will blink once when this happens.
- Remove power. Restore power. The unit is now in normal operating mode.

System Diagram



In this system, cable channels are available on all TVs. In addition the following channels have been added:
Channel 66 - Front door channel
Channel 68 - VCR
Channel 70 - DSS in MTS stereo

Note that the loop-through option on the model 6315 allows the main TV to watch the DSS on composite video, for enhanced video performance.