

HMMS

Fixed Channel SAW Filtered Modulator

HMMS SPECIFICATIONS:

RF	Output Channels	CATV 2-117, UHF 14-59
	Output Level	45dBmv (min)
	Range:	12Db (adj)
	A/V carrier ratio	-9 to -20dB
	Visual Carrier Stability	±5KHz
	Aural Carrier Offset	±4.5MHz
	Aural Carrier Stability	±1 KHz
	Spurious Outputs(dBc)	-62 dBc
	C/N Ratio (in-band)	-62 dBc
	Broadband Noise(dBc)	-95
Visual	Min Video Input	.5Vp-p
	Frequency Response	±1dB (50Hz to 4.2 MHz)
	Video S/N	60dB
	Hum Ratio	-60dB
	Differential Gain	3%
	Differential Phase	2 degree
	Group Delay	75nsec
AURAL	Input Requirements	200MV (25khz dev)
	Input Impedance	10Kohm
	Frequency Response	±1 dB: 50Hz-15Khz:
	Distortion (THD)	1%
	Pre-Emphasis	75usec

Installation Instructions:

1. Slide the model HMMS unit into the HMR rack
2. Power up the modulator by connecting the 3 pin power plug from the HMPS to power jack in the rear of the HMMS.
3. Allow the HMMS to warm up for at least 30 minutes
4. Connect a spectrum analyzer or field strength meter to the modulator RF OUT port
5. Turn the RF output adjustment on the front of the modulator to get desired output level
6. Turn the A/V adjustment to set the audio carrier 12 to 17 dB below the video carrier
7. Remove analyzer or field strength meter from the modulator RF OUT port
8. Connect baseband audio and video signals to the AUDIO IN and VIDEO IN ports respectively
9. Connect modulator RF output to television/monitor. (Make sure to use the proper size attenuator between the modulator and television so as not to overdrive the television)
10. Turn on television and set to modulator channel
11. Turn the AUDIO adjustment on the front of the modulator to set the sound on the television equal in volume to an off-air channel
12. Turn the VIDEO adjustment to set the video modulation.
Over-modulation causes buzzing sounds, overly bright scenes, and distorted pictures.
Under-modulation results in pictures with dull white levels and dark colors.
13. Remove television/monitor and attenuator from the modulator RF OUT port.
14. Connect modulator RF OUT port to the RF input of the head-end system

IMPORTANT!!

WARNING: Holland Electronics does NOT represent this product to be WATERPROOFED. To reduce risk of electrical shock, fire hazard, or damage to the unit, do not expose to rain or moisture.

CAUTION: To prevent electric shock, do not use this plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

NOTE TO INSTALLER: This reminder calls the system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

**WARNING:
TO PREVENT FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS UNIT
TO RAIN OR MOISTURE**



HOLLAND ELECTRONICS LLC LIMITED WARRANTY

Holland ELECTRONICS LLC, warrants that the product enclosed with this Limited Warranty statement will conform to the manufacturer's specifications and be free of defects in the workmanship and material for a period of five years (5) from the date of original purchase.

WARRANTY PROCEDURE:

If the product appears to be defective contact Holland Electronics LLC at (805) 339-9060. We will analyze the problem and offer solutions to prevent removing the unit from service. If the unit is to be returned for evaluation, you will be issued a Return Material Authorization (RMA) number.

Holland Electronics LLC will, at its option, repair or replace the defective unit, under warranty, without charge for parts or labor. This repair will be subject to charges if signs of tampering or misuse are detected. Incoming shipping costs will be the customer's responsibility. Returns will not be accepted without an RMA number.

The warranty and remedy provided above are exclusive and in lieu of all other express warranties and unless stated herein, any statements or representations made by any other person or firm are void. The duration of any implied warranties of merchantability or fitness for a particular purpose on this product shall be limited to the duration of the express warranty set fourth above. Except as provided in this written warranty, Holland Electronics LLC shall not be liable for any loss, inconvenience, or damage, including direct, special, incidental, or consequential damages, resulting from the use or inability to use this product, whether resulting from breach of warranty or any other legal theory.

Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To arrange for Warranty Service: Call Holland Electronics LLC (805) 339-9060