



WAVEGUIDE FROM ANTENNA FEEDHORN TO RECEIVER INPUT

IRX13-SERIES PHASE-LOCK LOW NOISE INDOOR RECEIVERS

- **Low-Noise, Phase-Locked, 80 Channels**
- **Digital Ready, Low Phase Noise**
- **Designed for Integrated System Use**
- **Five Models, Upgradeable**

PRODUCT APPLICATION:

Cable AML manufactures low noise, digital-ready, state of the art receivers in three versions: the IRX series for indoor operation, the ORX series for outdoor operation, and the SRX series configured with the downconverter mounted outdoors on the antenna feed, and the VHF processor located indoors.

The IRX is a one piece receiver housing the Downconverter and VHF Processor modules in the same compact, rack mountable enclosure.

The IRX, like all Cable AML receivers, is digital-ready (64 QAM, QPSK, or other digital modulation formats). The low noise distortion characteristics of the IRX series receivers are a significant improvement over previous designs. The receiver is phase-locked to the transmitter by a low phase noise CW pilot tone transmitted in the 72 to 76 MHz spectrum. Diagnostic and status monitoring can be performed directly at the receiver, or remotely via the VHF unit's monitor interface connector.

The IRX Receiver can be configured with various LNA, Microwave AGC, and VHF AGC options (see the Model Designation Table). Receiver upgrades involving these options can be performed in the field with minimum down time.



IRX RECEIVER

Receiver	
Input Frequency ² :	12.7 to 13.25 GHz
Output Frequency ² :	54 to 550 MHz
Video Channel Capacity:	80 Channels
Output Connector:	Type "F"
Input Connector:	WR-75 Waveguide
Temperature Range:	60° to 100°F (16° to 38°C)
Primary Power:	120/240 VAC, 50/60Hz (per customer specification)
Weight:	18.5 lb. (8.4 kg)
Dimensions:	19" W x 7" H x 12" D (48.3cm x 17.8cm x 30.5 cm)

Receiver Specification Table	Model				
	-000	-101	-111	-201	-211
Noise Figure (dB):	13.0	5.5	6.0	4.5	5.0
Composite Third-Order³ (C/CTB, dB):	70.0	74.0	72.0	74.0	74.0
Composite Second-Order³ (C/CTB, dB):	61.0	63.0	63.0	67.0	67.0
Microwave AGC Dynamic Range:	N/A	N/A	15.0	N/A	15.0
VHF AGC Dynamic Range (dB):	N/A	13.0	13.0	13.0	13.0
Gain (nominal, dB)⁴:	25.0	24.0	24.0	31.0	31.0
Gain Flatness (dB):	1.5	1.5	1.5	1.5	1.5
Nominal Output Level:	28.0	28.0	28.0	28.0	28.0

Model Number Designation Table:

IRX13-XXX

LNA

Microwave AGC

VHF AGC

0 = No LNA
 1 = Single Stage LNA
 2 = Dual Stage LNA

0 = No
 1 = Yes

0 = No
 1 = Yes

¹ Specifications subject to change without prior notice.

² Other frequencies available.

³ 72 channel loading, C/N = 56 dB.

⁴ Gain for input level such that C/N = 56 dB.