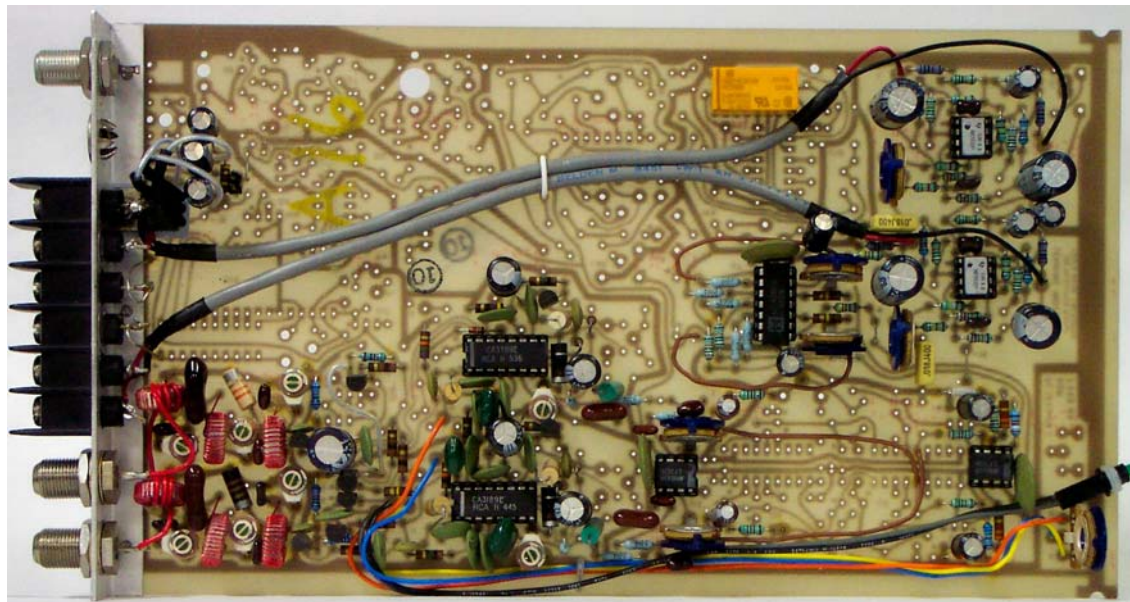


FMR679A



A.T.I.S. RECEIVER DEMODULATOR

INSTRUCTION BOOK
IB 122205

FMR679S

A.T.I.S. READER

DESCRIPTION

The FMR679A A.T.I.S. READER demodulates the Morse Code signal that identifies Transmitters accessing Satellite Transponders, enabling a Ground Station to positively identify the source of a video signal being received by an Earth Station.

These Morse Code signals must be modulated onto a 7.1 MHz or 8.3 MHz subcarrier by direction of the Federal Communications Commission. The A.T.I.S. READER is available with 7.1 and 8.3 MHz subcarrier demodulators. The switch over from one to the other is automatic.

The A.T.I.S. signal contains the following information about the transmitting station:

1. The FCC designated Station Call Sign consisting of up to 7 characters.
2. The telephone number of the transmitting Earth Station (10 characters).
3. A unique 10 digit serial number to specifically identify the particular transmitter that is accessing the Satellite Transponder.
4. Any additional information desired to be sent by the Up-Link so long as the entire message length does not exceed 30 seconds.

The FCC further specifies that the subcarrier deviation be ± 25 KHz, that the modulation frequency be between 400 Hz and 2000 Hz, and the message rate be 15 to 25 words per minute.

The subcarrier input to the A.T.I.S. READER is derived from the COMPOSITE OUTPUT of the satellite receiver being monitored. The audio output enables a person trained to read International Morse Code to read the A.T.I.S. message.

OPERATION

The A.T.I.S. READER consists of the following sub-sections:

1. Dual three pole subcarrier filter (7.1 and 8.3 MHz).
2. Dual buffer amplifiers.
3. Dual FM demodulator with squelch.
4. Dual 75uS De-emphasis and second buffer amplifiers.
5. Dual balanced audio driver amplifiers.

OPERATION (cont.)

All five sub-sections are built into the PC card. This PC card is designed to fit into the PMS610 Power Supply and Mainframe. Up to three cards can fit into one PMS610 19" panel, occupying one rack space (1.75").

Front panel controls consist of a subcarrier squelch control for both frequencies. This may be adjusted in the field by observing Green Squelch LED "ON" indicator so that the LED is ON when a subcarrier is present and "OFF" when the Satellite receiver is turned to an unoccupied channel.

On the rear panel there is a six position screw terminal to connect to the Audio Output. The Composite Output of the Satellite Receiver must be connected to the "Subcarrier input. The "Audio Output" connectors on the barrier strip enables the operator to listen to the Morse Code signal being received and thus also to ascertain whether a clear signal exists.

Once the "Squelch" control has been set, no further adjustment should be necessary. Just be sure that the control is not set "to the edge" of operation, but rather to go fully "ON" when a subcarrier is received.

INSTALLATION

Unpack and observe closely for any damage that may have occurred in shipment. Report to Carrier if need be.

Mount into desired location in Rack, preferably near the Satellite Receivers.

Connect the power cord to the 120 VAC, 60 Hz power source. Observe that the green LED "POWER ON" does light up.

Connect a BNC coaxial patch cord between the "SUBCXR INPUT" and the "Composite Output" of the satellite receiver to be monitored. If there are many receivers to be monitored, it is best to connect the A.T.I.S. READER to the output port of a Routing Switcher so that any satellite receiver may be switched to the A.T.I.S. READER by remote control.

The Operator can now to listen to the Morse Code directly, that audio signal is available at the "Audio Output" on the back panel barrier strip.

MAINTENANCE

No routine maintenance is required. We strongly recommend that Operators do not attempt any internal adjustments since there are no operational adjustments under the top lid of the A.T.I.S. READER. Please call the Factory at 800-235-6960 if any problems become evident.