

RF-652**LF/MF/HF RECEIVER
MULTICOUPLER**

*designed for
shipboard use*



The RF-652 LF/MF/HF Receive Multicoupler is a receive system multicoupler designed for shipboard use which provides extremely low distortion in the presence of very strong interfering signals.

With a single 35-foot whip or other broadband antenna, this multicoupler provides up to eight LF/MF and eight HF output ports. The operating frequency range, 10 kHz to 30 MHz, supports the frequency coverage of the RF-590A and R-2368/URR LF through HF receivers. The RF-652 can be used with an RF-591A Series Preselector which automatically selects between LF/MF and HF antenna ports when used with the RF-590A or R-2368/URR.

The RF-652 LF/MF and HF paths are developed by an input diplexer network which provides low-pass and high-pass filter selectivity for the respective signal paths. Both the LF/MF and HF paths contain power splitters to provide the eight LF/MF and eight HF output ports while at the same time providing isolation between receivers. The passive HF hybrid power splitter is designed for high power with low distortion. The LF/MF splitter is also a passive, low distortion network.

Any signal at the antenna input that exceeds the antenna overload threshold level of 200 Vrms causes the overload indicator to illuminate and the input to disconnect. A second detection circuit also protects the LF/MF path.

The RF-652 is used with either individual LF/MF or HF receivers, or with an RF-591A Preselector installed to provide automatic switchover from LF/MF to HF output ports. This prevents the need for antenna patch panels.



Electrical

- **Frequency Range**
 LF/MF Ports: 10 kHz to 1.70 MHz
 HF Ports: 2 MHz to 30 MHz
- **Number of Ports**
 8
- **Insertion Loss**
 LF/MF Ports: 19 dB maximum*
 HF Ports: 11 dB maximum*

 *Insertion loss is consistent with Quasi Minimum Noise (QMN) limitations in this frequency range
- **Input VSWR**
 1.5:1 maximum (50 ohms nominal)
- **LF/MF Port HF Attenuation**
 50 dB minimum (2.0 to 30 MHz)
- **HF Port LF/MF Attenuation**
 20 dB minimum (1.5 to 1.7 MHz)
 40 dB minimum (<1.5 MHz)
- **Intermodulation Distortion**
 Third order distortion products will be 75 dB down from either of two 50 Vrms input signals between 2 and 30 MHz
- **RF Input Overload**
 10 kHz to 1.7MHz: Protection circuits open the LF signal paths for input levels above 25 Vrms
 2 to 30 MHz: Protection circuits open the antenna input for input levels above 200 Vrms
- **Maximum RF Input Power**
 100 Watts
- **Maximum Input Voltage**
 500 Vrms open circuit

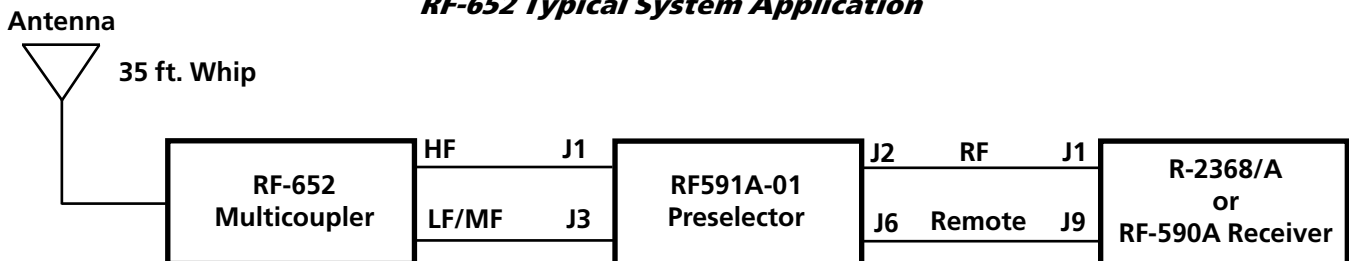
Installation

- **Power Requirements**
 115/230 VAC +10%, 47 to 63, 10 Watts maximum
- **Antenna Input**
 1, C Type connector
- **Outputs**
 16, N Type connectors
- **Dimensions**
 7.0H x 19.0W x 20.0D inches
 (17.8H x 44.9W x 50.8D cm)
- **Weight**
 30 lb (13.6 kg)

Environmental

- **Temperature**
 Operating: -10 to 55°C;
 Storage: -62 to +71°C
- **Humidity**
 Meets MIL-STD-810C Method 507, Procedure IV, 95% relative humidity
- **Shock**
 Meets MIL-S-901C Grade A, Type A, Class I, hard mount
- **Vibration**
 Meets MIL-STD-167-1, Type I, hard mount

RF-652 Typical System Application



Specifications are subject to change without notice.

