

RF-591A-01**DIGITAL
PRE/POSTSELECTOR**

*the ultimate in rapidly
tuned selectivity for
difficult collocated HF
systems applications*

Operable as either a preselector or a postselector, the digitally tuned RF-591A provides the high selectivity needed for difficult collocated HF system designs, together with the tuning speeds necessary for modem communications protocols such as automatic link establishment (ALE).

As a preselector, the RF-591A provides the extra receive system selectivity required when operating in the presence of strong undesired signals. The unit rejects these interfering out-of-band signals and thus prevents distortion and overload in an associated receiver, while amplifying desired signals to enhance performance. In the presence of a strong in-band signal, the RF-591A automatically switches to a low gain mode to prevent the receiver from being over driven. If RF input signals exceed safe operating limits, circuits in the RF-591A activate to protect the unit. Selectable inputs are provided for use with either a single all-band antenna, or separate LF/MF and HF antennas.

When used as a postselector, the RF-591A significantly reduces transmitter broadband noise and spurious outputs, and thus minimizes interference to receivers with antennas located in close proximity. The unit is also configurable to operate with a transceiver, performing both preselector and postselector functions, with the signal path automatically switched by the transceiver keyline.

Tuning is by either front-panel control or remote control. The parallel BCD remote control interface allows fully automatic tuning when used with RF-590A LF/MF/HF-SSB Receivers.



General

Frequency Range	Bandpass Filter: 2.0 to 30 MHz Lowpass Filters: 10 kHz to 2.0 MHz
Bandpass Filter Selectivity	>60 dB at $\pm 10\%$ from tuned frequency
Noise Figure	High Gain: 10 dB nominal Low Gain: 20 dB nominal
Overall Gain	High Gain: 6 dB nominal, 2 dB minimum; Low Gain: -7 dB nominal, -11dB minimum
Intermodulation	Input Third Order Intercept Point In-band: +30 dBm $\pm 5\%$: +60 dBm $\pm 10\%$: +70 dBm
RF Overload Trip Points	In-band: 10 Vrms nominal; Out-of-band: 100 watts nominal
Maximum RF Input	300 Vrms
Impedance	50 ohms unbalanced, VSWR <3.2:1
Tuning Time	10 ms maximum
Remote Control	Parallel BCD

Environmental

Temperature	-10° to +55°C (operating); -62° to +71° C (non-operating)
Humidity	95% (non-condensing)
Shock	MIL-S-901, Grade A, Class I, Lightweight
Vibration	MIL-STD-167-1, Type I

Installation

Power Supply	115/230 VAC, $\pm 10\%$, 47-63 Hz
Power Consumption	50 watts
Size	3.5 H x 19.0 W x 20.0 D inches (8.9 H x 48.3 W x 50.8 D cm)
Weight	23 lb (10.5 kg)

Accessories for the RF-591A-01 Pre/Postselector

RF-553-01 Receiver Control Adapter for RF-590A

When installed in RF-590A Receiver, enables the RF-591A-01 to be remotely controlled by RF-590A.

10215-6970 Remote Interface Adapter for R-2368 Series

When installed in the R-2368 Series Receivers, enables the RF-591A-01 to be remotely controlled by the receiver.

10141-0018 Rack Mount Kit

Slide Kit for standard rack mounting

10323-0023 Shock Mount Kit

Special shock mounting hardware for rugged environment (MIL-S-901)

Specifications are subject to change without notice.

