

CHAPTER 1

DESCRIPTION

1.1 OVERVIEW

The SelectAmp NBPCS-900-3 bi-directional channelized paging repeater provides selective frequency amplification of user specified frequencies in the 901-902, 930-931, and 940-941 MHz Narrowband PCS bands. The unit can be configured with up to three channelizers allowing the user to configure the unit to suit their needs. The channelizers are available in two versions: a 930 MHz, 12.5 kHz Bandwidth version intended for POCSAG/FLEX and a 940 MHz, 50 kHz Bandwidth version intended for ReFLEX. Frequency selection, gain adjustment and fault monitoring is accomplished with monitor and control circuitry and firmware.

Within this manual, "Forward Channel" refers to the RF signal path from the base station to the pager and the "Reverse Channel" refers to the RF signal path from the pager to the base station.

1.2 ELECTRICAL SPECIFICATIONS

Table 1-1 below contains the electrical specifications.

Table 1-1 Electrical Specifications	
Parameters	Specification
Frequency Range	Forward (930) = 928 – 932 MHz. Forward (940) = 938 – 942 MHz. Reverse = 897 – 903 MHz.
Composite Output Power	Forward = 1 Watt. Reverse = 500 mWatts.
Output 1 dB Compression Point	Forward = 4 Watts. Reverse = 1.3 Watts.
Power Gain Fwd Channels Rev Channel	50 to 95 dB nominal, adjustable from front panel. 50 to 85 dB nominal, adjustable from front panel.
Third Order Output IP3	Forward = +51 dBm. Reverse = +43 dBm.

1.2 ELECTRICAL SPECIFICATIONS (CONT.)

Table 1-1 (Cont.) Electrical Specifications	
Parameters	Specification
Forward 1 dB Bandwidth: 930 MHz, POCSAG/FLEX Channelizer 940 MHz, ReFLEX Channelizer	12.5 kHz. 50 kHz.
Reverse 3 dB Bandwidth	897 – 903 MHz.
Group Delay	Forward = $\leq 30\mu\text{s}$ Reverse = $\leq 2\mu\text{s}$
Adjacent Channel Rejection: 930 MHz, POCSAG/FLEX Channelizer 940 MHz, ReFLEX Channelizer	≥ 30 dB @ $F_o \pm 12.5$ kHz. ≥ 30 dB @ $F_o \pm 55$ kHz.
RF Port Impedance	50 ohms nominal.
Maximum Input Signal Without damage	-30 dBm with gain set for minimum on all channels.
AC Input Power	100 to 240 VAC, 50/60 Hz, 3A $\frac{1}{4}$ " x $\frac{1}{4}$ " 240V 3A SLO-BLOW FUSE
Status	Front panel indicators.
Remote Fault Monitoring	Contact Closure: Normal = contacts closed (approx 23 Ω). Fault = contacts open.

1.3 MECHANICAL SPECIFICATIONS

Table 1-2 below contains the mechanical specifications.

Table 1-2 Mechanical Specifications	
Parameters	Specification
Size	Amplifier: Height: 13.3 cm (5.25 inches). Width: 48.3 cm (19 inches). Depth: 48.3 cm (19 inches).
Weight	Amplifier: 40 lbs (18.2 kg).
Mounting	Table top mount (rubber feet included) or 19" Rack Mount (slides optional).
Power Connections	AC Power cord supplied with unit.
RF Connections	Type N female.
Remote Fault Connection	Type RJ-11, Pins 2,3.

1.4 ENVIRONMENTAL SPECIFICATIONS

Table 1-3 below contains the environmental specifications for the Band Selective Amplifier.

Table 1-3 Environmental Specifications	
Parameters	Specification
Temperature Range (Operating)	Operating: 0° to +50°C Storage: -20° to +70°C.
Humidity Range (Operating)	10% to 90% non-condensing.
Environmental Protection	None.

1.5 TECHNICAL ASSISTANCE

Technical assistance on this or any other Andrew product is available 24 hours per day through:

Andrew Customer Service
Telephone: 1-800-255-1479
Fax: 1-972-952-0019