

Datasheet / Manual

SP 400 / Item no.: 1034-NF



Product description

The SP 400 is a selective receive preamplifier with transmit / receive switching. It provides adjustable gain, low noise and good large-signal response. At low transmission power, the transmission / reception switching can be realized by means of a built-in VOX circuit. This amplifier is built with a GaAs MMIC of the latest technology on high quality microwave substrate in SMD technology.

The band pass at the output of the amplifier ensures good band selection, so that all signals that lie outside the useful band are effectively suppressed. This amplifier has a UV-resistant plastic housing that protects against splash water and galvanized mast clamps with stainless steel screws for attachment to the antenna mast.

Connection notes

The amplifier is installed in the vicinity of the antenna system with the sockets facing downwards by means of the supplied mast clamps on the antenna mast. The ANT jack is connected to the antenna by a short low attenuation coaxial cable. The TRX socket is connected via a coaxial cable to the antenna socket of the transceiver, which outputs a LNA remote power supply. For transceivers that do not have an LNA power supply, a pre connected bias-tee can be used for the remote feed of the amplifier.

In this case, the amplifier is fed by the DC-switch e.g. DCW 5000pro permanently. The transmit- / receive switching is done with the HF VOX circuitry when the transmit signal is output from the transceiver. In the case of a direct supply via the UHF socket, a shielded supply line must be used in order to prevent the transmission of the signal into the station power supply and further into the transceiver. At high transmission powers in installations with a power amplifier, the transmit- / receive switching must be realized with a sequencer e.g. DCW 2004 B. In order not to degrade the high signal strength of the receiver, it is advisable to switch off the internal preamplifier of the transceiver when using the mast preamplifier. If it can not be switched off, then the gain of the SP 400 can be infinitely reduced if necessary by up to 10 dB. The adjusting screw for this is located under the plastic hood in a hole in the tinplate housing of the preamplifier.

Technical data:

Frequency range:	70 -71 MHz
Gain, variable:	9 -18 dB
Noise figure, typ.:	0,7 dB
OIP3:	25 dBm
Max. switching capacity with HF VOX:	200 W PEP 100W / CW, FM, WSJT, FT8
Transferable power when using a sequencer:	750 W PEP 400 W / CW, FM, WSJT, FT8
Insertion loss:	0,03 dB
Connection standard:	N-Female
DC input local:	UHF-Female
Remote feed:	N-Female
Operating voltage:	12V -14V
Current consumption typ.:	260 mA
Mast diameter:	max. 58 mm
Switching time (TX->RX):	0,50 sec.
Switching time (RX->TX):	0,02 sec.

Notes on environmental protection



Electrical and electronic devices may not be disposed of with household waste. This must be handed in separately at collecting points, or returned to the point of sale. Packaging materials must be separated and disposed of through the municipal waste by material type.

Maintenance

Do not open the unit. It does not contain any parts needing maintenance. If you need help regarding technical matters, please contact support@ssb-electronic.com. For a lowest possible noise figure of the complete system, set preamp to maximum gain.

Safety, Warranty

Not suitable for children! The packaging material and the device may contain small parts which may be swallowed. Repairs may only be performed by qualified personnel.,

Opening the device, or improper use will void any warranty claims. No guarantee will be given.

The device applies to the Low Voltage Directive 2006/95/EG, as well as to 2004/108/EG, 2002/96/EG, 1999/44/ EG.

Declaration of Conformity

The CE mark is a free trade mark. It does not guarantee any product features. The product does apply all relevant regulations within the scope of 94/62/EG.

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