Data sheet / Instructions for use

SP Space / Item no.: 1037-SP

Product description

The SP Space is a selective receiving preamplifier for 400 MHz to 402 MHz with transmit / receive switching. It offers adjustable gain, low noise figure and good large-signal behavior. In the case of low transmission powers, the transmit / receive switchover can be implemented using a built-in HF VOX circuit. This amplifier is built with a GaAs MMIC of the latest technology on a high quality microwave substrate in SMD technology. The band pass at the output of the amplifier ensures a good band selection so that all signals that are outside the useful band are effectively suppressed. This amplifier has a splash-proof, UV-resistant plastic housing and galvanized mast clamps with stainless steel screws for attachment to the antenna mast.

Connection instructions

The amplifier is installed on the antenna mast near the antenna system with the connection sockets pointing downwards using the mast clamps supplied. The ANT socket is connected to the antenna by a short low-loss coaxial cable. The TRX socket is connected via a coaxial cable to the antenna socket of the transceiver, which outputs an LNA remote power supply. In the case of transceivers that do not have an LNA power supply, a DC remote feeder, which is connected upstream of the antenna line, can be used to feed the amplifier remotely. In this case, the amplifier is permanently supplied with 13.8 V voltage via the DC switch, for example DCC 5000 pro, and the transmit / receive switchover is carried out using the HF VOX circuit of the preamplifier when the transmit signal is output by the transceiver. In the case of direct supply via the UHF socket, a shielded supply line must be used to prevent the transmission signal from entering the station power supply and further into the transceiver. With high transmission powers in systems with a power amplifier, the transmit / receive switchover must be implemented with a sequencer, for example DCW 2004 B. In order not to impair the large-signal strength of the receiver, it is advisable to switch off the internal preamplifier of the transceiver when using the mast preamplifier. If it cannot be switched off, the gain of the SP Space can be continuously reduced by up to 10 dB if necessary. The set screw for this is located under the plastic cover in a hole in the tinplate housing of the preamplifier.

Technical specifications:

Frequency range:	400 MHz – 402 MHz
Noise figure, typ:	1.1 dB
Gain, variable:	10 - 20 dB
Switching capacity:	HF-VOX 100 W
Transferable power with the use of a sequencer:	500 W PEP 300 W / FM, Digital
Insertion loss TX:	0,15 dB
Connection standard:	N-female
DC input local: Remote supply:	UHF-female N-female TRX
Operating voltage:	12V-15V
Power consumption typ.:	330 mA
Mast diameter:	max. 58 mm
Switching time (TX->RX):	0,02 s.
Switching time (RX->TX):	0,02 s.

Note on environmental protection

Electrical and electronic devices must not be disposed of with household waste. These are to be handed in at specially set up collection points or at the point of sale. Packaging materials are to be separated and disposed of with household waste according to the type of material.

Service

If you have technical problems or need service, please contact us by email: support@ssb-electronic.com

Security, warranty

The product is unsuitable for children. The packaging material and the device may contain small parts that can be swallowed.
Repairs may only be carried out by specialised personnel, however, opening the device or improper use will invalidate any warranty claims. No guarantee will be given.
The device applies to the General Product Safety Regulation (EU) 2023/988 as also 2014/30/EU, 2012/19/EU, 2011/83/EU.

Declaration of Conformity

This document declares that the above product complies with all regulations relevant to the product within the scope of the directives (EU) 2023/988, 2014/30/EU and 2014/53/EU of the EU Council.

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