

# Data sheet / instructions for use



## MHP-70 PRO/ Item no.:1067-PRO



The MHP 70 PRO is a low-noise, large-signal mast preamplifier with transmit/receive switching. It is intended for use in medium and high power transmitting and receiving stations. Based on the LNA 70, the MHP 70 PRO has two high-quality coax relays from Radiall with N connections. The preamplifier input is protected with an amplitude limiter. The amplifier's input and output networks are sized so that both connections have an accurate 50 ohm impedance with very good S22 and S11. This will not detune the antenna system. This ensures optimal gain from the antenna. The Radiall relays we use meet the highest requirements and are used in aviation and military. This usually allows 1,5 kW of transferable power to be achieved. The maximum transferable power is 7kW @ 10 MHz, which is reduced depending on the frequency, temperature and ambient air pressure (altitude). When used in the ICAS (Intermittent Commercial and Amateur Service) amateur radio sector, this corresponds to 1500 W PEP power. This value must be reduced during continuous operation, e.g. through digital operating modes or radio telex. In these cases, depending on the duty cycle, the power can be reduced to 750 W when connected with a sequencer. This data can only be achieved by using this high-quality relay.

### Technical Data

Frequency range:	430-440 MHz
Noise figure, typ.:	0,7...0,8 dB
Gain, typ.:	> 20 dB
Admissible power:	1500 W PEP to SWR < 2
Insertion loss:	0,3 dB
Max. RX Input:	23 dBm
Operation voltage:	13,8 V – 15,0 V
Current consumption, typ.:	800 mA
Temperature range	-40°C to 60°C
Connection standard:	N-connector female
DC - input	Remote supply
Mast diameter	Max. 58 mm

### Connection instructions

Attach the amplifier directly to the antenna mast near the antenna system using the included mast clamps. The connection sockets must be directed downwards, otherwise rainwater can penetrate the device. The antenna input ("ANT" socket) of the amplifier should be connected to the antenna system using the shortest possible, low-loss coaxial cable, e.g. Ecoflex 10 or Ecoflex 15. The VSWR should be 1:1.5 or better.

**Attention:** The "TRX" socket goes towards the transmitter using a remote power supply and a sequencer with at least 25 ms delay. **If this is not possible with the device, it is better to use an external sequence control!** Otherwise there is a risk of damaging

the preamplifier, especially when using FM. For power amplifiers without sequence control with LNA remote supply, an external sequence control, e.g. DCW 2004 B, is strongly recommended. There is internal protection for short-term operating moments in the event of incorrect switching (less than 50 watts).

**Attention:** Switching over the amplifier may only be carried out without power! The MHP 70 PRO may only be operated with a sequence control (e.g. sequencer DCW 2004 B). Transmission operation without a sequence control causes damage to the device!

### 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 through the municipal waste by material type.

### Maintenance

Do not open the device. The device contains no serviceable parts. If you have any technical questions or need service, please contact us by email: [technik@ssb-electronic.de](mailto:technik@ssb-electronic.de).

### 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.

### Declaration of Conformity



It is hereby declared that the above mentioned product complies with all regulations relevant to the product within the scope of the Radio Equipment Directive RED 2014/35/EU as well as the EMC Directive 2014/30/EU and RoHS 2011/65/EU.

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