



Microwapp™ HR 10A, 10B

Microwave Transverters for Radio Amateur Activities

NEW and SURPRISING DEVICE to expand radio-amateur activity into microwave bands, without mastering the technology or having special equipment!

Microwapp™ HR series outdoor microwave transverters produced by the BTV company represent an integrated production program for microwave bands from 2,5 to 24 GHz. The program is a radio-amateur-community-oriented program. The concept as well as practical constructional design of transverters is characteristic of the fact that the so-called work "from fire" may be carried out on microwave bands as opposed to the currently predominating practice. The point of the design consists in the fact that the outdoor microwave transverter protected against dust, rain and snow (IP54 protection) together with parabolic antenna form a conceptual assembly unit. This solution, which is unique in radio-amateur practice, reduces usual losses of microwave energy in orders when using indoor transverter and outdoor antennae as well as the most expensive coaxial cable with the least loss.

Microwapp™ HR transverters consist of an outdoor unit with integrated parabolic antennae with adjustable polarization and an indoor unit, which is, in fact, represented only by a power supply unit with supply switch, input and output N connector and mains socket outlet. The indoor unit is a part of the assembly unit. On the contrary, all transverter electronics are integrated in the outdoor part.

In general terms, microwapp™ HR transverters are designed to collaborate with standard UHF transceivers for a band of 70 cm with European range 430-440 MHz. The transverter's frequency plan is designed so that resulting frequencies for reception and transmission correspond to frequency sections, wherein according to European conventions routine as well as competitive radio-amateur operation takes place.

When observing the recommended interconnection procedure for a transceiver with transverter, it is not required to retune or adjust anything else. Through a single interconnection of your transceiver and microwapp™ HR transverter you will acquire a good-quality device for work on microwave bands. In order to use the technical priorities of the described transverter perfectly, we recommend installing it on the mast with the use of a rotator enabling motion of the microwapp™ HR compact unit in two planes, with motion understood in azimuth as well as in elevation. When using a microwapp™ HR transverter on a temporary station it is possible to power the transverter by means of direct-current power supply 12 V via inverter DC/AC 12/230 V.

There is 1 W on the waveguide output of a microwapp™ HR 10A transverter, which together with integrated basic parabola amounts to equivalent isotropically radiated power (EIRP) of 250 W. The EIRP is 2,5 kW for the 10B (10 W) model.

technical specifications

Typ	HR10A	HR10B
Model	HR10A	HR10B
RF Frequency Range	10368-10370 MHz	10368-10370 MHz
IF Frequency Range	433-435 MHz	433-435 MHz
Optional IF Range	432-434 MHz	432-434 MHz
IF Input Power	4W max.	4W max.
Receiver Gain	20 dB, adjustable	20 dB, adjustable
Receiver Noise Figure	1.2 dB	1.2 dB
Transmitter RF Output Power	1 W	10W
Spurious/Image Suppression	60 dB min.	60 dB min.
PTT Input	ground contact/12V	ground contact/12V
Primary Power	230V AC, 50 Hz	230V AC, 50Hz
Primary Current Load	0.1 A typ. (TX)	0.3A typ. (TX)
Internal DC Voltage	48VDC	48VDC
DC Current Load	0.4 A typ. (TX)	1.2A typ. (TX)
IF Connector	"N" Female	"N" Female
Size, mm	560x510x410	560x510x410
Weight	13.4 kg	18.4 kg
Antenna Gain	27 dB	32 dB
Antenna Diameter	350 mm, 13.8"	650 mm, 25.6"

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