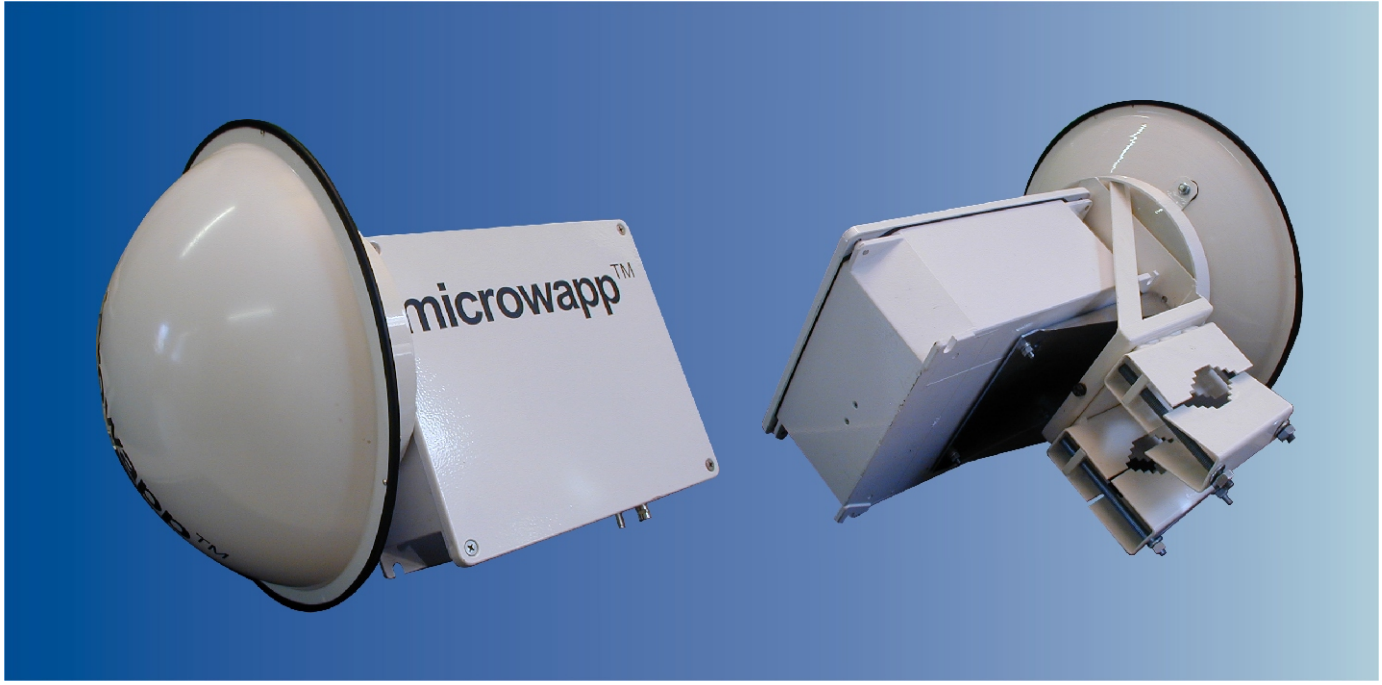
professional telecommunication Systems and Services



microwapp™ HR 5A, 5B

Microwave Transverters for Radio Amateur Activities

NEW and SURPRISING DEVICE to expand radio-amateur activity into microwave bands… this time at 5.6 GHz band

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 5A transverter, which together with integrated basic parabola amounts to equivalent isotropically radiated power (EIRP) of 100 W. The EIRP is 1 kW for the 5B (10 W) model.

Technical parameters

Frequency band:	5760-5770 MHz	(IARU Reserved)
Operation Modes:	CW, SSB, FM	
Modulation :	defined by indoor transceiver	
Transmitter Output Power:	1 W for HR 10A, 10 W for HR 10B	
RF Input Power from Transceiver:	10 W max. (adjustable)	
Polarization:	H / V	selectable
Antenna :	350 mm parabolic antenna	(attached), 20 dB gain
Receiver Noise Figure:	1.2 dB typ.	
AC Power: 230 V, 50 Hz	or DC Power: 13.8 VDC	
Indoor Transceiver :	430-440 MHz	

edit 4/2007

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Technical parameters

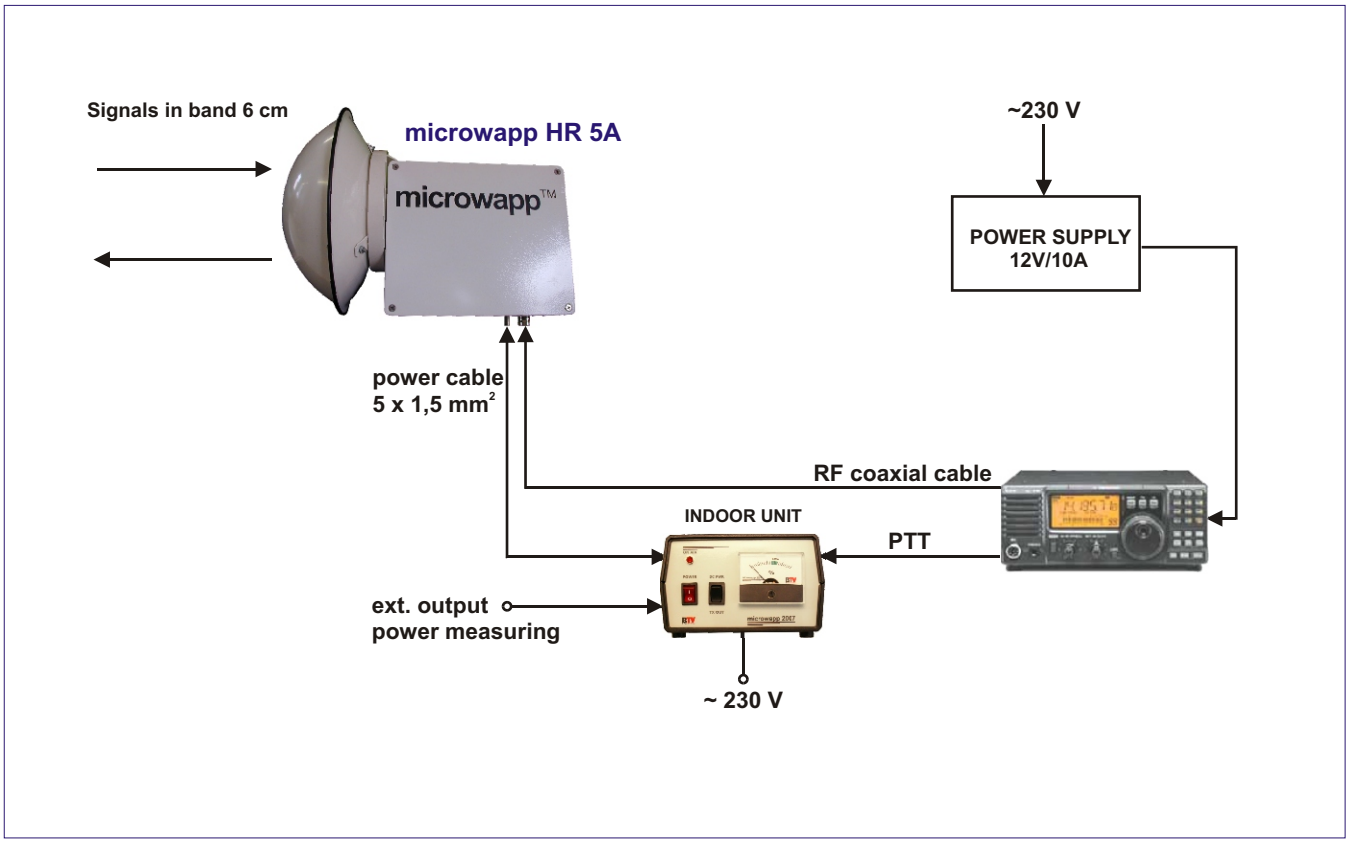
Operation Temperature :	-25 to +50 deg.C	
Size:	230 x 200 x 140 mm	(plus antenna)
Weight	13,4 kg	(plus antenna 4 kg)

Frequency table

HAM frequency range	Wave length	Band used section	Useful range of transceiver 430 MHZ
5650 ÷ 5850 MHz	~ 6 cm	5760 - 5762 MHz	433 - 435 MHz 432 - 434 MHz

Microwave transverter diagram

microwapp HR 5A



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