Technical Description

DCF77 Multi-Antenna Output

7317

Safety information

The safety regulations and technical data are important for the smooth running of the devices and the protection of people and equipment. Strict compliance with these regulations is required. In case of non-compliance with these regulations the guarantee and warranty claims for the device expire. There is no liability for possible consequential damages.

Safety of the Devices

The production of this device follows the latest technological standards and safety regulations.

The device must not be assembled by anyone but trained personnel. Please make sure that all the connected cables are laid and fixed properly. The device is to be run with the supply voltage stated on the identification plate only.

Only trained personnel or specialists may operate the device.

Repair on opened devices must not be carried out by anyone but specially trained staff or by the ***hopf*** Elektronik GmbH company.

If the maintenance work requires the opening of a device or if a fuse needs changing the device must be separated from all voltage supplies.

If there are reasons to believe that the operational safety can no longer be guaranteed the device must be taken out of service and labelled accordingly. The safety may be impaired when the device does not operate properly or if it is obviously damaged.

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DCF77 Multi-Antenna Output

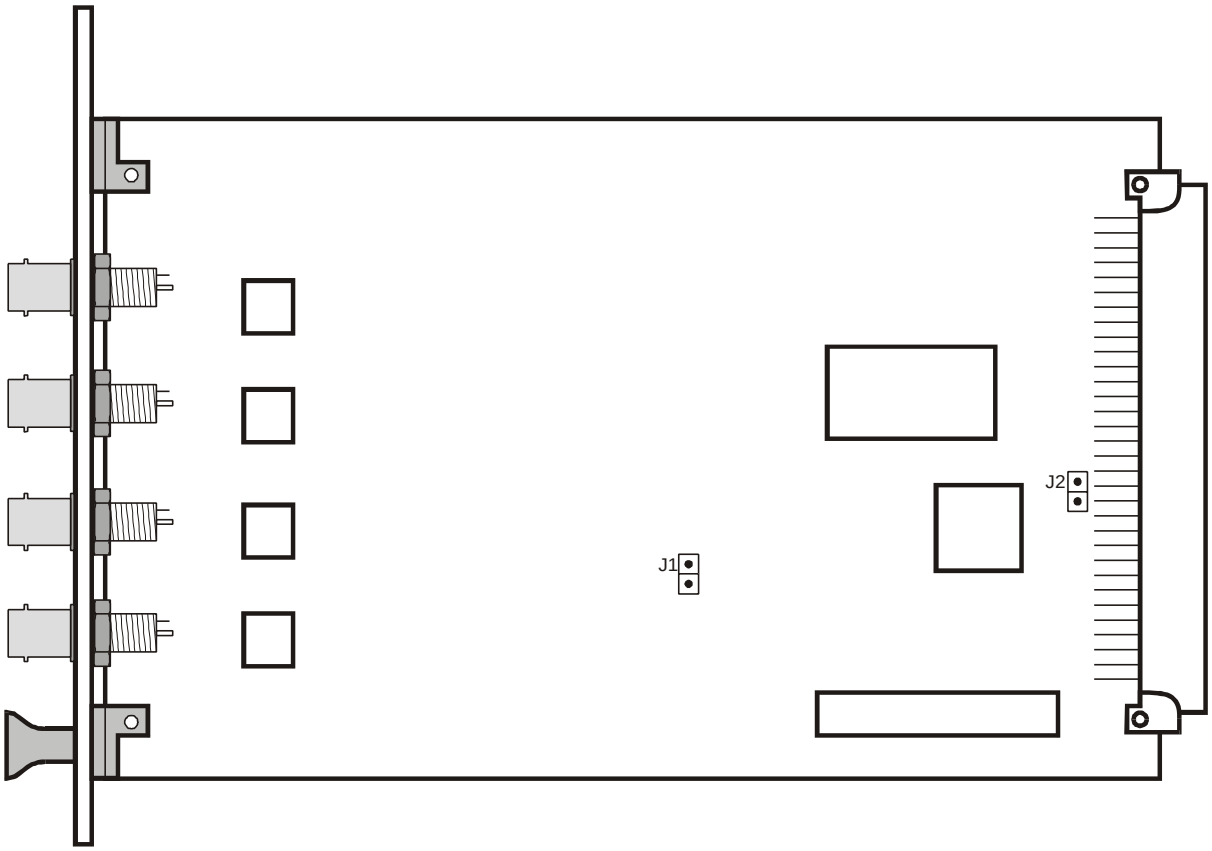
The board 7317 is a functional board for the system 7001. It contains 4 potential separate DCF77 simulated antenna outputs.

The system bus contains the DCF77 carrier frequency of 77,5 kHz in square format and the simulated DCF77-pulse. The signals on the board are mixed in a pre-amplifier step. At the exit of this step the amplitude-modulated DCF77 signal is available and put out via the following potential separate amplifiers to the BNC-connectors in the front panel. Our company sets the amplitude modulation with a potentiometer to 75-80% dip.

Every output from the board 7317 can be connected to DCF77 systems instead of a DCF77 antenna. The output signal of board 7317 corresponds to the output signal of the *hopf* DCF77 antennas. However, independent of the DCF77 reception field strength at side the amplitude of the DCF77 signal supplied by the board 7317 can be configured to specified values (3 mV_{pp} / 20 mV_{pp}).

The output level at BNC 1 to BNC 4 is reduced from 20 mV_{pp} to 3 mV_{pp} if jumper J1 is closed (standard ex works - jumper1 is closed).

The different operating modes can be select by jumper J2. If the jumper is closed the board runs in 7001/6841 mode. Otherwise the board runs in 6842/6855 mode.



J1	Output signal
closed	3 mV_{ss}
opened	20 mV_{ss}

J2	Mode
closed	7001/6841
opened	6842/6855

Technical Data

output signal:	DCF77 amplitude-modulated frequency
output level (at load):	3 mV_{pp} / 20 mV_{pp}
output impedance:	50 Ohm
ohm resistance:	390 Ohm
input voltage:	5V DC
frequency deviation of the carrier frequency	± 10 ppm
accuracy of the carrier dip	± 2 msec on DCF77-reception signal
freewheel accuracy	± 2 ppm after control of the system 7001
special designs:	hardware alterations according to customer specifications are available.