

15 kHz UHF Wireless Reporter Transmitter for outside broadcast applications



Diport 10/4

Wireless reporter equipment

Most journalists using wireless equipment would argue for lighter and more robust units that are straightforward to use and have a good reach. The Diport 10/4 meets all of these requirements.

The Diport 10/4 is a UHF reporter-transmitter housed in a small solid one-piece machined aluminium case.

The aluminium material in combination with the built-in 'smart' battery, certainly makes it lightweight.

The aluminium construction guarantees optimum shielding between the transmitter and receiver circuitry, resulting in a unit so rugged and stable that it will withstand any physical damage.

Great care has been taken to ensure simple operation. Four push-buttons on the front of the unit enable access to all functions and 32 available user-presets with pre-defined combinations of RX and TX frequencies.

The reach is determined by the permissible transmission power as well as the sensitivity of the receiver in combination with the type of antenna and the way it is set-up. The best reception is ensured if an optional second receiver is implemented as this achieves true diversity.

Diport10/4: UHF reporter transmitter The Diport 10/4 is a UHF reporter-transmitter with built-in VHF or UHF narrowband talk-back receiver. The transmitter has a dbx^(TM)-type compressor, which together with the plug-in expander in the WLR402-receiver forms a noise-reduction circuit. This feature ensures two things: an acceptable audio signal when the receiver antenna signal is low and under optimal circumstances it boosts the audio quality up to CD-level!

The Diport 10/4 is battery operated. The battery can be charged either internally or using an external charger.

Alternatively, the unit can also be powered from an external source. The switch on the microphone enables the P(ush) T(o) T(alk) facility to switch on the RF power. The LCD display monitors all vital functions.

WLR402: Broadband true diversity receiver The WLR402 is a broadband receiver designed to operate in the UHF-band ranging from 470 to 900 MHz, with a 30 MHz switching bandwidth. The use of a dbx^(TM) companding-system ensures excellent audio quality. To make the receiver 'true diversity' a second receiver front-end and IF-stage can be added. This eliminates so called 'dead spots', which are present when mobile transmitters generate indirect signals.

The antenna-amplifier compensates for cable loss if the antenna cabling is too long.

Proven concept using state-of-the-art technology!

The Diport 10/4 is available in two different versions:

- Diport 10/4 TR: Equipped with both a UHF transmitter and VHF or UHF talk-back receiver
- Diport 10/4 T: Equipped only with a UHF transmitter

Options to be installed inside a Diport 10/4:

- HiDyn (™) type 1 or 2 expander
- 48 V microphone phantom voltage generator

Options for the WLR402 broadband receiver

- WLR402.0 Racksystem 19" / 1HU with psu and controlboard to accommodate 2 RX-boards
- WLR402.2 diversity RX-board
- 12 V antenna phantom voltage

Available accessories

- PS-2/220 V power supply 220 VAC >16 VDC incl. DB-9 all metal connector
- PS-2/12 V power supply 12 VDC > 6 VDC incl. DB-9 all metal connector
- MB-1 modular carrying bag (blue) with shoulder-adapter for antenna
- SM-1 Cadex 'smart' charger suitable to charge a single Li-Ion or Li-Polymer battery
- SM-2+ Cadex 'smart' charger suitable to charge two Li-Ion or Li-Polymer batteries (including 'conditioning' function)



Technical Specifications Diport 10/4

TRANSMITTER UHF

RF OUT

Frequency range	550...900 MHz
Available versions	⊙: 540...740 MHz ⊙: 700...900 MHz
Frequency switching bandwidth	200 MHz
Frequency presets	64
Minimum frequency stepsize	12,5 kHz
Frequency stability	2 ppm (-10...+55° C)
Frequency deviation	45 kHz nom. / 75 kHz peak
RF output	max. 5 Watt (+37 dBm) 3 Watt nominal
RF output power range	100 mW, 600 mW and 3 W
Spurious suppression	> 80 dBc
Harmonic suppression	> 80 dBc

ANTENNA

Output impedance	50 ohm
Connector	TNC socket, unbalanced

MIC IN

Input sensitivity	XLR-5 female - 54 dBu
Input impedance	600 ohm
Gain range	30 dB
Input attenuator	20 dB
Phantom voltage	48 VDC (optional)
Headphones output power	1 Watt @ 32 ohm
Lowpass filter	150 Hz (12 dB/oct.)
Noise reduction	dbx (™) or HiDyn (optional)

TALKBACK RECEIVER UHF (optional-either UHF or VHF)

RF IN (UHF model)

Frequency range	410...470 MHz
Switching bandwidth	60 MHz
Channel bandwidth	20 kHz (other bandwidth on request)
Frequency presets	64
Minimum frequency stepsize	12,5 kHz
RF sensitivity	< 0,4 µV @ 20 dB SINAD CCITT
Reference frequency stability	2 ppm (-10...+55° C)
Frequency deviation	1,8 kHz nom. / 2,5 kHz peak
IF1	45 MHz
IF2	455 kHz
IF selectivity	> 70 dB (20 kHz channel spacing)
Image rejection	> 70 dB
Intermodulation rejection	> 70 dB (typical 75 dB)
Blocking	> 90 dB (@ 2µV emf wanted signal)

RF IN (VHF model)

Frequency range	140...190 MHz
Switching bandwidth	50 MHz
Channel bandwidth	20 kHz (other bandwidth on request)
Frequency presets	64
Minimum frequency stepsize	12,5 kHz
RF sensitivity	< 0,4 µV @ 20 dB SINAD CCITT
Reference frequency stability	2 ppm (-10...+55° C)
Frequency deviation	1,8 kHz nom. / 2,5 kHz peak
IF1	45 MHz
IF2	455 kHz
IF selectivity	> 70 dB (20 kHz channel spacing)
Image rejection	> 70 dB
Intermodulation rejection	> 70 dB (typical 75 dB)
Blocking	> 90 dB (@ 2µV emf wanted signal)

ANTENNA

Input impedance	50 ohm
Connector	TNC socket, unbalanced

AUDIO

Frequency range	300 Hz...3 kHz
Headphones output power	1 Watt max. @ 32 ohm
SINAD	> 40 dB (@ 10µV emf)
HiDyn	2 : 1 expander (optional)
Headphones out	6,3 mm jack plug

GENERAL

CONTROL

Micro-processor 8-bit Communication	20 MHz RS-232 (19200 baud)
LCD-display	2 x 16 characters with backlight

PRESETS

Global presets	32
Contained information	all TX- and RX-parameters



BATTERY OPERATION

Battery	6 Ah Li-Ion
Operating voltage range	10 to 16 V
Discharge	-10° to 50° C
Charging	0° to 45° C
Charging time	4 hours
Weight	450 gram

EXTERNAL POWER SUPPLY OPERATION

Input voltage	10...16 V
Current	2,5 Am
Connector	standard 2,1 mm DC socket

CHARGING POWER SUPPLY

Input voltage range	16 VDC (charging only)
Power consumption	2 Amp max. (charging only)
Connector	standard 2,1 mm DC socket

POWER CONSUMPTION TX + RX

Stand-by (RX + TX)	250 mA max.
100 mW RF	400 mA max.*
600 mW RF	600 mA max.*
3 W RF	1500 mA max.*
	* (depending on frequency)

DIMENSIONS AND WEIGHT

Front	166 x 74 mm (B x H)
Depth	193,5 mm
Weight (nett)	2,4 kg
Weight (incl. battery)	2,9 kg

ENVIRONMENTAL

Shock resistance	MIL STD 810E for shock & crash hazard, except the front of the Diport 10/4.
Dust and water resistance	IP54 (Diport 10/4 inside carrying bag with front cover on top).

ETSI STANDARDS

Broadband Audio RF Analogue	ETTS 300 454
Narrowband RF Analogue	ETTS 300 086
EMC	ETTS 300 445

Technical Specifications for WLR402 broadband receiver

These specifications can be found on a separate datasheet.



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