

DRB 32

Digital Radio Box



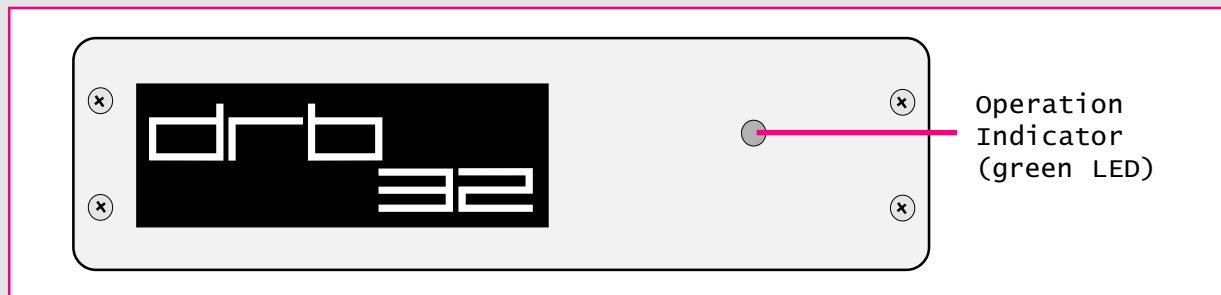
© 2007 NTI

Universal reception up to 30MHz using PC & soundcard

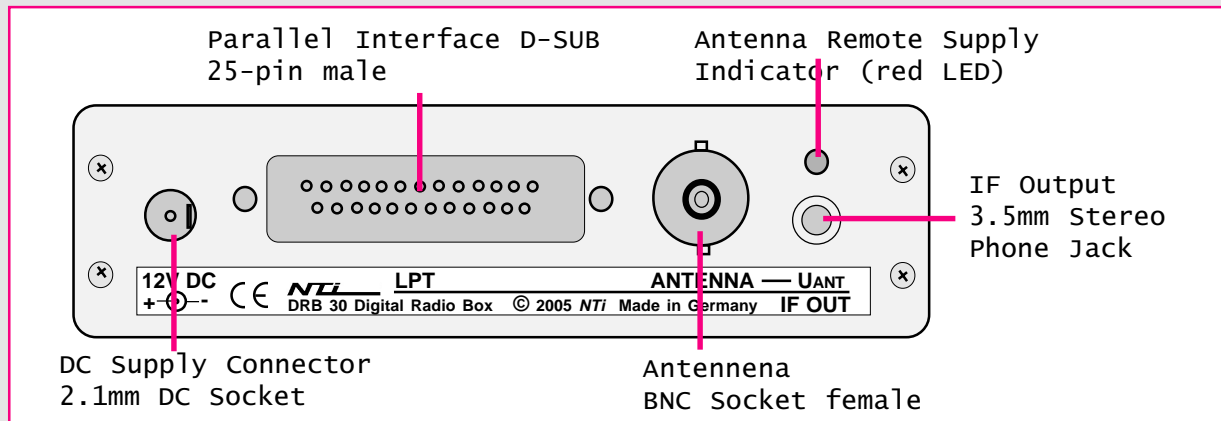
Instructions DiRaBox

The DiRaBox DRB 32 is a computer-controlled black box receiver without own operating elements. Computer control is provided by the rear panel parallel interface port (LPT). Only the outer connectors have to be connected to the appropriate devices.

Front Panel:



Rear Panel:



Technica Data

Tuning Frequency: 30KHz - 30MHz (continous)

Tuning Steps: 1/5/10/50/100/500Hz & 1/5/9/10KHz selectable

Antenna Jacket / Impedance: BNC-socket / 50Ohms & additional remote supply voltage 9V via 470 Ohms serial resistor for an optional active antenna (switchable)

Max. Allowed Antenna Level : +10dBm typ. / saturation at -15dBm typ.

Noise Floor (0.15-30MHz BW 2.3KHz): Standard -131dBm (0.06µV) & HighIP -119dBm (0.25µV) typ.

Intermodulation-free Dynamic Range: Standard >97dB & HighIP >95dB typ.

Third-Order Intercept Point IP3 (@7.00 & 7.20MHz) Standard: +14dBm & HighIP +24dBm typ.

In-Band-Blocking: > 88dB typ. (20KHz offset / interference signal -33dBm & desired signal -121dBm=S1)

DDS-related Spurious Reception Attenuation: > 70dB

Strongest Interference Products (Level): 22.520MHz (-90dBm); 11.260MHz (-100dBm); 15.010MHz (-100dBm)

Mirror Frequency Supression: >60dB/1. IF (typ. 30dB/2.IF)

IF-Supression (@45MHz / 1.IF): > 85dB

Image Frequency Rejection: >65dB / 1.IF (LO + 45MHz)

Standard: >57dB / 2.IF (In-Band -24KHz)

Premium: >70dB / 2.IF (In-Band -24KHz)

12KHz-IF Output: Bandwidth 15KHz (-6dB) via 3.5mm stereo phone jack socket

PC Control Port / LPT: D-SUB (25-pin SUB-D male connector)

Power Supply / Connector: 12 - 15V DC max. 200mA / 2.1mm DC power socket (positive inner)

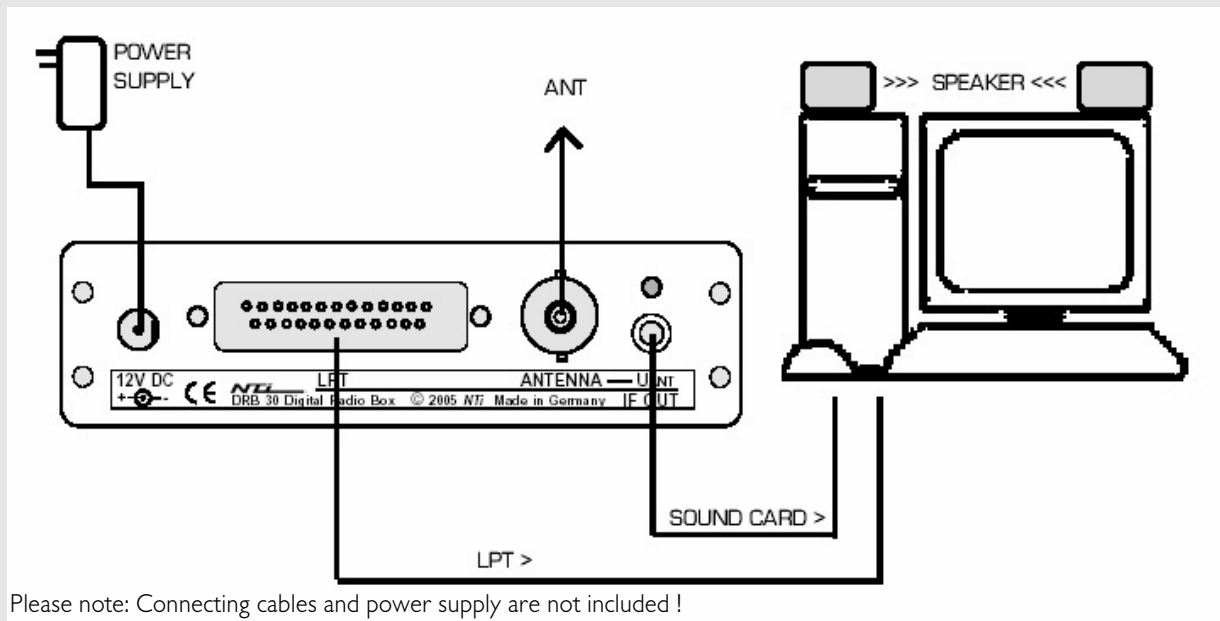
Operating Temperature: 0 - 40°C

Dimensions / Weight: 112 x 71 x 31mm / 0.15kg

Available on request: Selected version DRB 32 PREMIUM with guaranteed DRM-SNR > 40dB

Optional USB interface: Plugable USB to parallel port adapter DRB USB ADP for control via USB

Connections



Please note: Connecting cables and power supply are not included !

- **PC:** Parallel Interface LPT (25pin D-SUB male/female cable) & Sound Card / LINE input (2x 3.5mm stereo phone plug)

- **Antenna:** BNC (2x male)

Optional: Active antenna with power supplied via the antenna cable . For more details refer below.

- **Power supply:** Plug-power supply 12-15V DC min. 200mA (2.1mm); positive inner, negative outer

Please note: The signal quality of the DiRaBox corresponds to the quality of the connected power supply (output voltage ripple).

Simple and unstabilized plug-power supplies are insufficient. We recommend therefore stabilized power supplies or shielded switching power supplies.

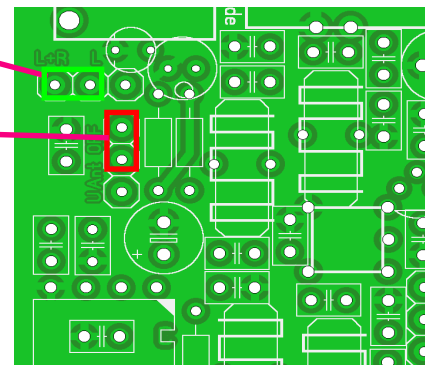
- **Audio output:** Sound is provided by the soundcard via connected earphones or by loudspeaker.

Optional Internal Jumper Settings

IF output stereo phone jack
Left + Right(L+R) >>> Default
or only left channel (L)

Remote voltage supplied via antenna socket
(BNC) for an optional active antenna
OFF >>> Default

When set to ON: Additional remote supply voltage 9V via 470 Ohms serial resistor (short circuit limiter).
The red rear panel LED "U ANT" lights up simultaneously.
If the antenna cable is short-circuited the red LED will fade !



Spectral Display

When running SDR software with a spectral display please note:

- The DRB 32 second IF value is 12KHz, therefore every signal tuned by the DiRaBox Control Panel software is displayed at the 12KHz marking position.
- Due to the 15KHz IF bandwidth the passband range is +/- 7.5KHz around the 12KHz center frequency.

