

# DRB 30

## Digital Radio Box



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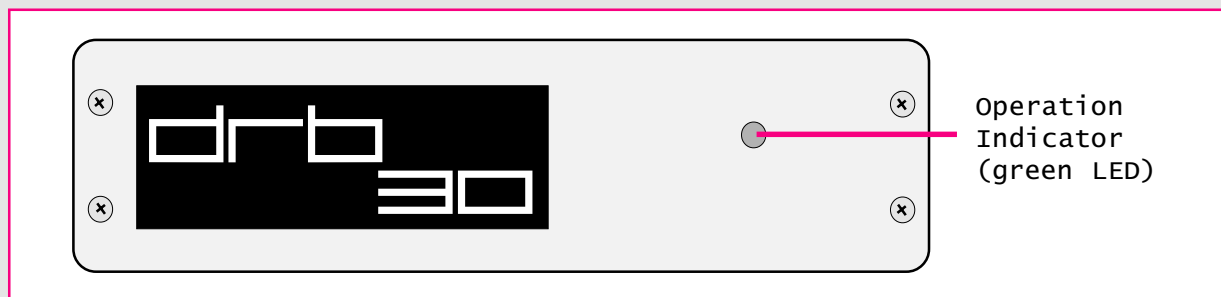
Universal reception up to 30MHz using PC & soundcard

## Instructions DiRaBox

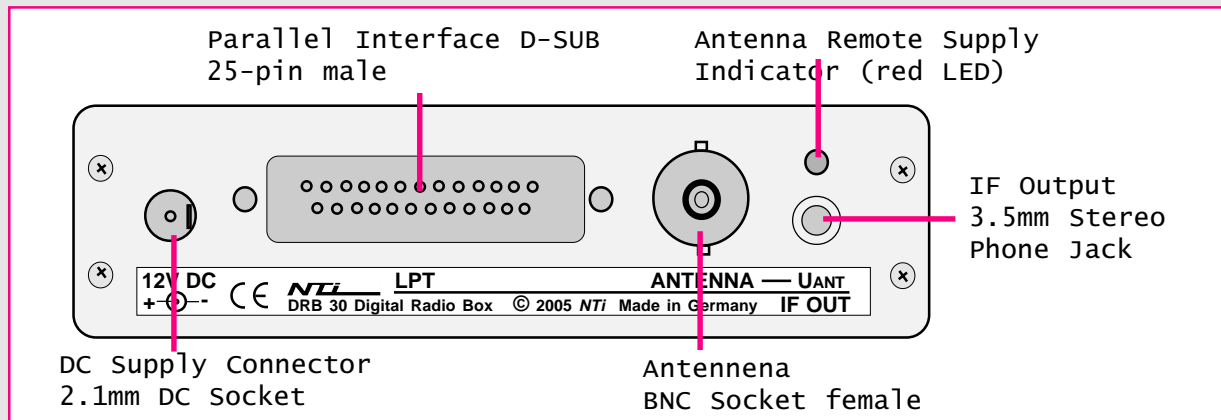
The DiRaBox DRB 30 is a computer-controlled black box receiver without own operating elements. Computer control is provided by the rear panel parallel interface port (LPT). Only the outer connectors have to be connected to the appropriate devices.

*Please note: For error-free operation it is necessary to connect the power supply after starting up the ControlPanel software. If problems occur please disconnect the power supply for some seconds which causes a hardware reset.*

### Front Panel:



### Rear Panel:



### Technica Data

Tuning Frequency: 30KHz - 30MHz (continuous)

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. Antenna Level (damage): +10dBm

Sensitivity (0.15-30MHz): -124dBm (0.15µV) typ. noise floor / MDS

Intermodulation-free Dynamic Range: > 95dB typ.

Third-Order Intercept Point IP3: +14dBm typ. (10.10 & 10.20MHz)

DDS-related Spurious Reception Attenuation: > 70dB

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

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

IF Suppression: > 80dB

10KHz-IF Output: Bandwidth 15KHz (-6dB) via 3.5mm stereo phone jack socket

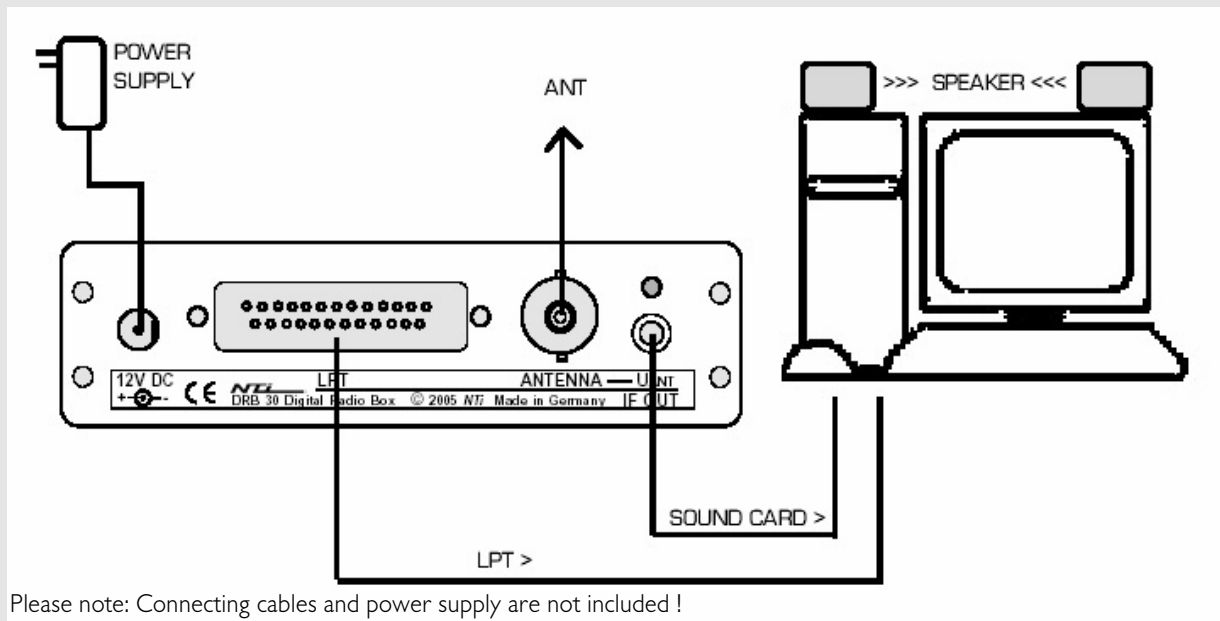
PC Control Port / LPT: D-SUB (25-pin SUB-D male connector )

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

## Connections



- **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).

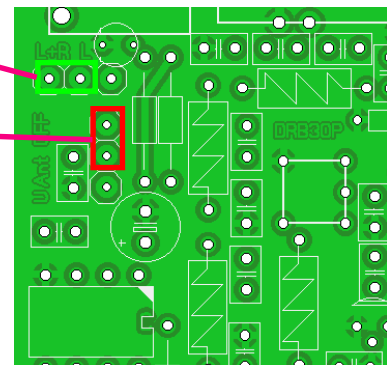
Simple and unstabilized plug-power supplies are insufficient. We recommend therefore stabilized power supplies or shielded switching power supplies.

- **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 30 second IF value is 10KHz, therefore every signal tuned by the DiRaBox Control Panel software is displayed at the 10KHz marking position.
- Due to the 15KHz IF bandwidth the passband range is +/- 7.5KHz around the 10KHz center frequency.

