

TEL1-40kTTL

Telemetry transmission of TTL pulses from 4Hz to 40kHz
Range 300-500m

User Manual



Set contains:



1x TEL1-TTL-40k-TX (Transmitter) 1x TEL1-TTL-40k-RX (Receiver)
1x 4dB transmitting antenna, 1x 4dB receiving antenna,
2x DC power cable, 1x AC/DC converter (for receiver)

Transmitter



Front side view

TNC output for antenna

BNC input for TTL signal

Power supply input
(10–30V DC)



Rear side view



+4dB
Antenna

Receiver



Front side view

TNC output for antenna

BNC output for TTL signal

Power supply input
(10–30V DC)

Field strength display



Rear side view



+4dB
Antenna

Specifications

Transmitter

Power supply voltage: 10 - 30V DC
 Power consumption: 0.5W
 Input signal level: TTL
 Connector type: TNC
 Weight: 435g
 Dimensions: 105 x 105 x 45
 (without connectors)

Receiver

Power supply voltage: 10 - 30V DC
 Power consumption: 1.35W
 Output signal level: TTL (0V, 5V)
 Output impedance: 2k Ω
 Connector type: TNC
 Weight: 490g
 Dimensions: 105 x 105 x 45
 (without connectors)

Transmitter antenna

Cable: RG 058-PE (length 4m)
 Gain: +4dB (rel. to $\lambda/4$ antenna)
 Frequency range: 410-470MHz
 Mounting: Magnetic socket
 Length: 400mm
 Connector type: TNC
 Weight: 600g (without cable)

Receiver antenna

Cable: RG 058-PE (length 4m)
 Gain: +4dB (rel. to $\lambda/2$ antenna)
 Frequency range: 410-470MHz
 Mounting: Magnetic socket
 Length: 400mm
 Connector type: TNC
 Weight: 600g (without cable)

Transmission

Transmission range: up to 500m
 (line-of-sight connection)
 Transmission power: 10mW
 Transmission delay: 35 μ s (constant)
 Carrier frequencies: 433.3, 433.7, 434.1 or
 434.5 (simultaneous operation
 of up to 4 systems possible)

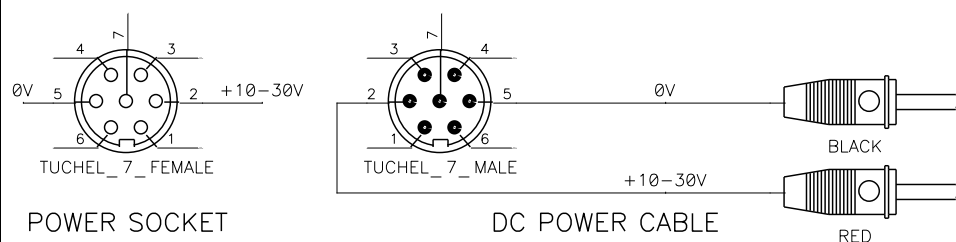
Environmental

Operating temperature: -10 - 70 $^{\circ}$ C
 Storage temperature: -20 - 70 $^{\circ}$ C
 Humidity: 20 - 80% (non-condensing)
 Vibration: 5g
 (Mil Standard 810C, Curve C)
 Shock: 100g (in any direction)

Accuracy for interference-free connection:

DC power cable

Pin assignment:

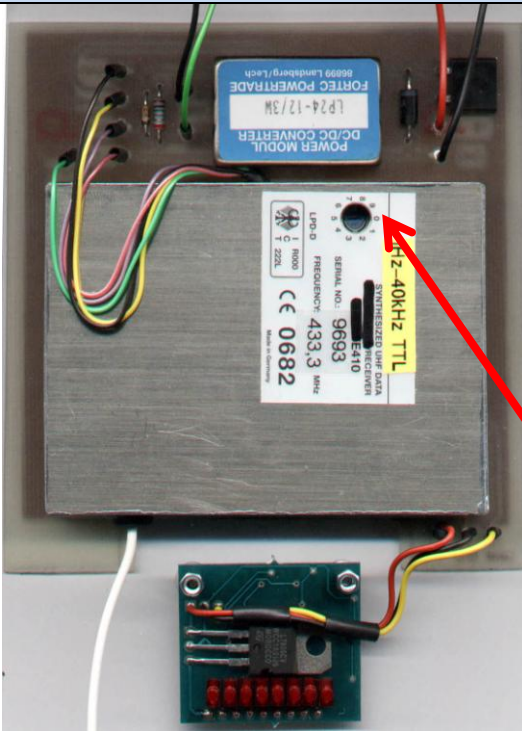


Note

Avoid any contact of the magnetic socket of the antennas with the transmitter or receiver, because the ferrite cores of the internal band filters will be premagnetized and change their center frequency. For transportation put every time an iron plate on the magnetic socket area to absorb the magnetic field strength.

Change the Carrier frequency of TEL1 TTL 40k

TEL1-TTL-40k receiver



1. Switch off the power of transmitter and receiver.
2. Open the housing
3. Select with a screw driver on both systems the switch. Each must have the same position!!
4. Close the housing
5. Than power on the system

Version: 4--HF channels (Standard)

Pos. 0 = 433.3 MHz

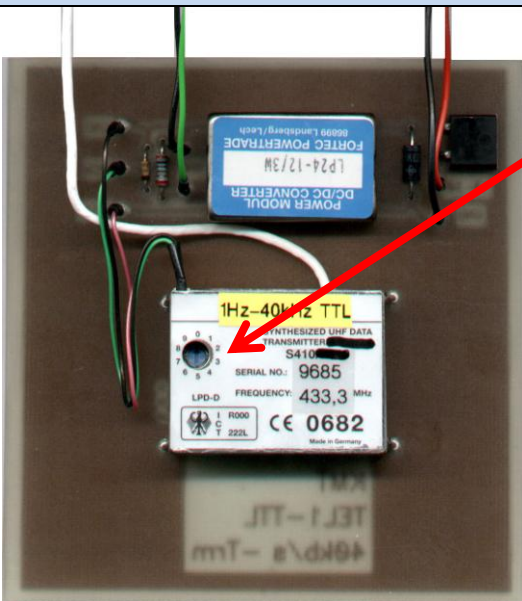
Pos. 1 = 433.7 MHz

Pos. 2 = 434.1 MHz

Pos. 3 = 434.5 MHz



TEL1-TTL-40k transmitter



Version: 8-HF channels

Pos. 0 = 432,5 MHz

Pos. 1 = 432,9 MHz

Pos. 2 = 433.3 MHz

Pos. 3 = 433.7 MHz

Pos. 4 = 434.1 MHz

Pos. 5 = 434.5 MHz

Pos. 6 = 434,9 MHz

Pos. 7 = 435,3 MHz

To change the frequency, power ON/OFF is required!!