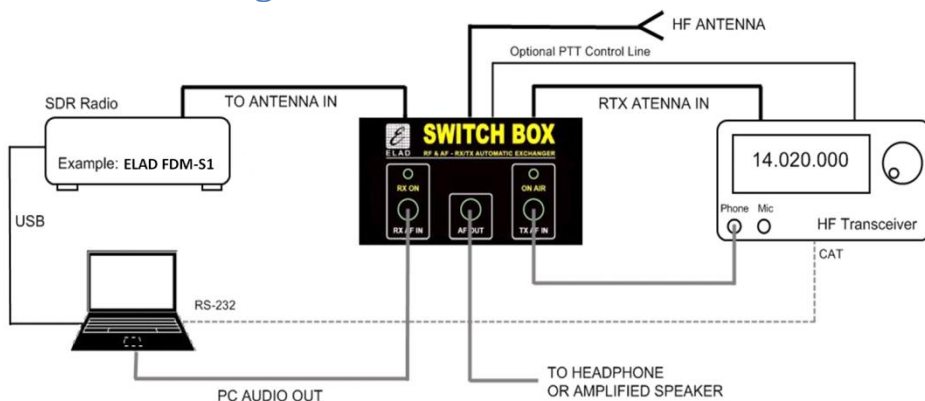


SWITCH BOX

RF & AF - RX/TX Automatic Exchanger

USER MANUAL

SDR Radio Configuration



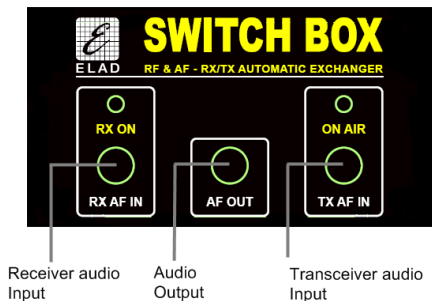
SWITCH BOX Overview

Automatic T/R switch that senses RF power (100 W) and switches your antenna from receive to transmit path using a relay. Two operating mode: manual and automatic.

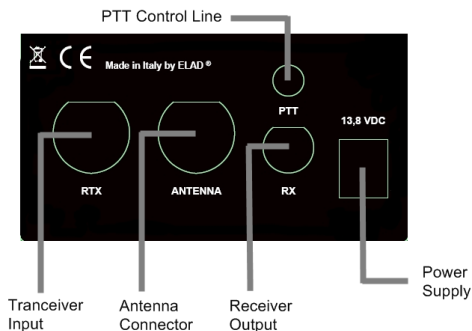
Technical Specifications

- Impedance: 50Ω
- Frequency range: DC -160MHz
- Maximum TX power: 100W
- RF sense threshold:<10mW (1.8MHz-30MHz tested)
- ON time < 20ms / Release time: < 190ms
- Insertion loss: < 0.3dB @ 144MHz (0.2dB typical)
- RX isolation: > 38dB @ 144MHz (40dB typical)
- Gas discharge protection
- Power supply: 13.8V DC 200mA

Front Panel



Rear Panel



Manual Mode

Connect the PTT control line of your transceiver to PTT RCA connector on SWITCH BOX rear panel. By grounding PTT, RTX input is connected to the antenna and TX AF IN in the front panel is connected to AF OUT. When RTX is connected to the antenna, RX input is grounded for better isolation.

If PTT is open, the antenna is switched to RX output and AF OUT is connected to RX AF IN.

Automatic Mode

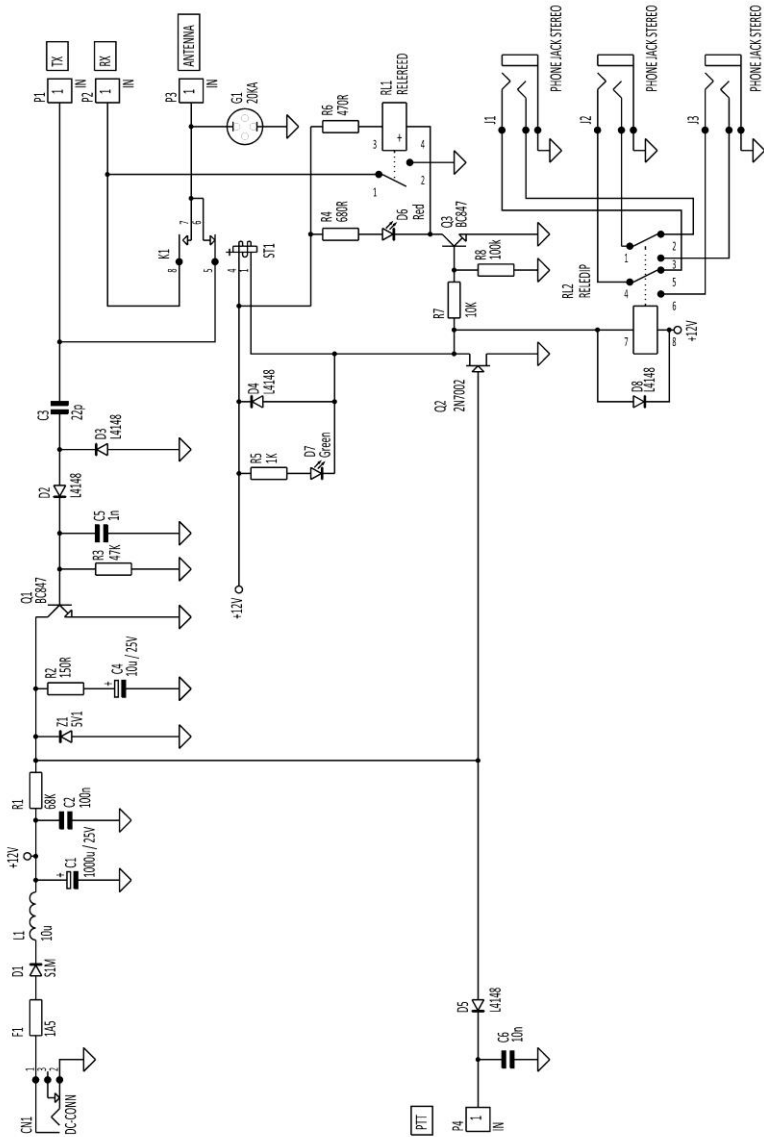
Don't connect PTT control line. When SWITCH BOX senses RF power in RTX input, it automatically switches RTX to antenna, otherwise the antenna is connected to RX.

Note: When SWITCH BOX is not powered, RTX is connected to the antenna to avoid transceiver damage.

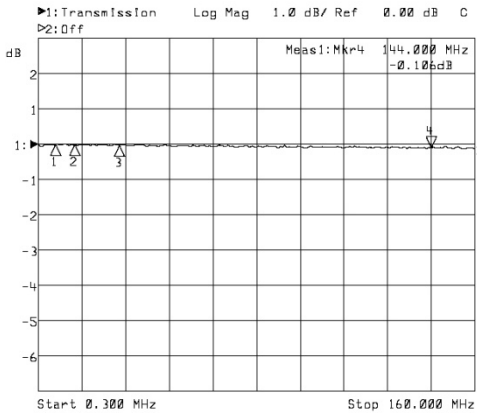
Lightning Protection

ELAD SWITCH BOX provides gas discharge protection on the antenna input, this is a good solution but is not enough to ensure a complete protection for your system.

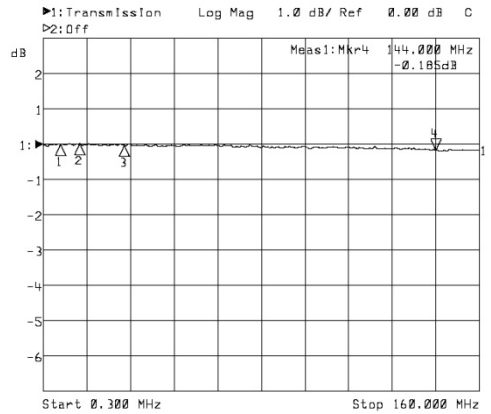
Schematic Diagram



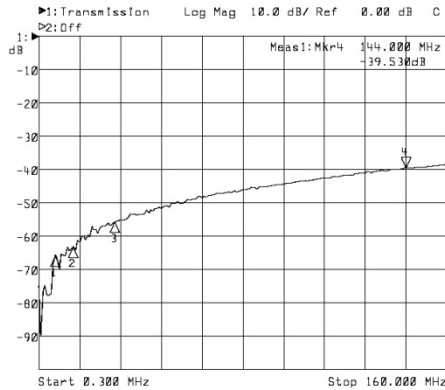
RTX INSERTION LOSS



RX INSERTION LOSS



RX ISOLATION



Package Content

- 1 ELAD SWITCH BOX
- 2 Mini 1/8" 3.5 mm stereo jack cable
- 1 BNC – BNC RG58 Cable
- 1 DC Plug Cable (CA-PLUGDC)