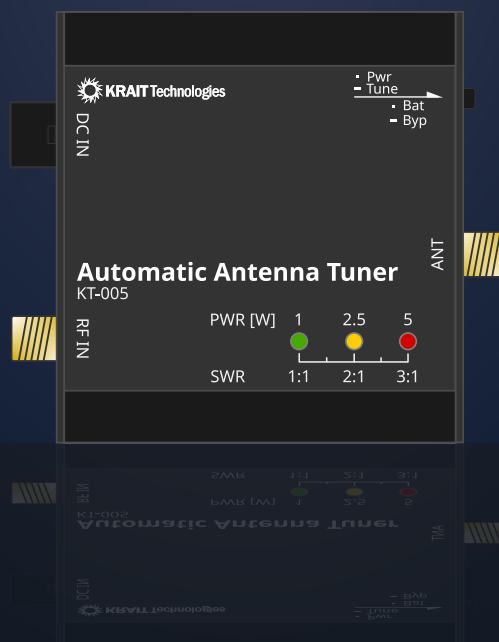


World's Smallest QRP Automatic Antenna Tuner

54 x 55 x 24 mm



Actual size

KT-005

QRP Automatic Antenna Tuner

FEATURES

- **World's smallest QRP Automatic Antenna Tuner (ATU) available on the market**
- Designed to be compatible electrical/mechanical with the QCX-mini® and QMX-mini® transceivers from QRP Labs®
- Great choice for all operators looking for the best portable equipment (POTA, SOTA,...)
- ATU can work with any type of radio in any mode (SSB, CW, PSK, WSPR,...)
- Auto Power off function for zero current consumption when tuned
- High grade (Fujitsu) reliable mechanical latch type relay
- Durable lightweight aluminum housing: black anodised with laser-engraved symbols
- SMA female sockets for maximum miniaturization
- LED indicators for RF power level, VSWR value, battery voltage
- Low-battery detection when powered by a 9V battery
- Two control buttons for easy operation
- Reverse polarity protection

SPECIFICATIONS

- Matching impedance range: 16 ~ 150 R to 50 R
- Tuning accuracy: VSWR 1.5:1 or less*
- Network type: L-network with series L and shunt C
- C shunt is switched between the transmitter and antenna side
- 32 768 possible matching states due to 15 relays inside
- Minimum operating power: 0.5 W for autotuning
- Maximum operating power: 5 W (+37 dBm)
- Frequency range: 1.8–30 MHz
- Input impedance: 50 R
- Tuning time: 2-3 seconds (maximum 15 seconds)
- Current draw: up to 25 mA during tuning; 0.000 mA when tuned
- Dimensions: 54 x 55 x 24 mm; 2.1 x 2.2 x 0.9 in (W x H x D)**
- Weight: 0.11 kg (3.88 oz)
- Connectors type: SMA female
- DC input: 5.5 x 2.1 male
- Power supply requirement: 7...18 VDC
- Operatable temperature: -10°C to +60°C; +14°F to +140°F

*) except for half-wavelength or multiple-half-wavelength antennas
 **) without connectors

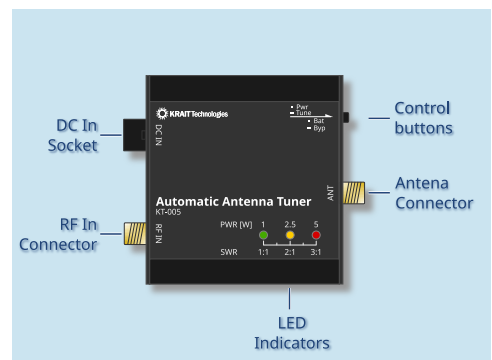
ORDERING

- KT-005KB - kit for self-assembly with all SMT/THT/mechanical components
- KT-005AB - assembled and startup ATU in black housing ready to use



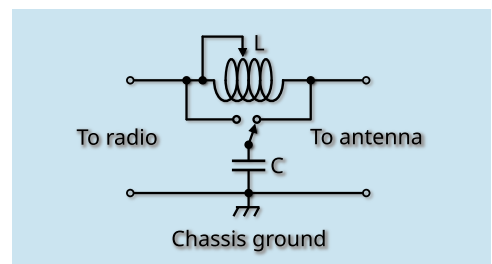
Example of using Automatic Antenna Tuner (KT-005) with QCX-mini transceiver

LAYOUT



- On the left side:
 - DC input connector
 - RF input connector
- On the right side:
 - ANT output connector
 - two control buttons
- Three LEDs on the top side

CIRCUIT DIAGRAM



- Used topology use one variable inductor and one variable capacitor
- The switchable capacitor together with the inductor can handle all possible loads (covers most of the Smith Chart)

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