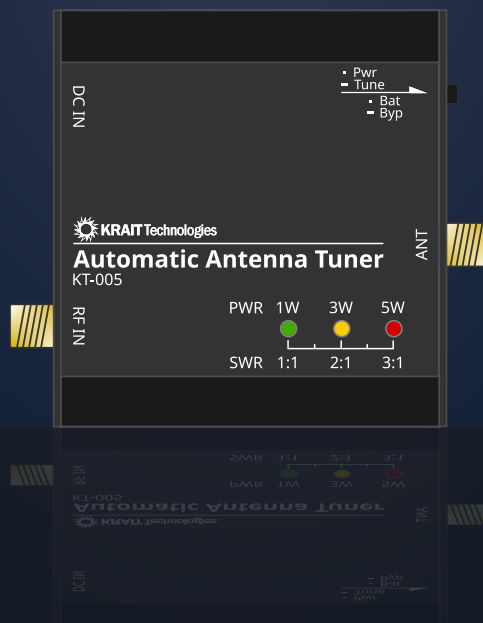


**World's Smallest
QRP Automatic Antenna Tuner
54 x 55 x 24 mm**



Actual size

FEATURES

- **The world's smallest QRP Automatic Antenna Tuner (ATU) available on the market**
- Designed to be electrical and mechanical compatible with the QCX-mini®, QDX® and QMX® transceivers from QRP Labs®
- Great choice for all operators looking for the best portable equipment (POTA, SOTA, IOTA and others)
- ATU can work with any type of radio and any mode (CW, WSPR, SSB, PSK, FT-8 and others)
- Auto Power Off function for zero current consumption when tuned
- High grade (Fujitsu) reliable mechanical latch type relays
- 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 operating from 9 V battery (6F22)
- Two control buttons for easy operation
- Reverse polarity protection

SPECIFICATIONS

- Matching impedance range: 5–500 R unbalanced*
- Tuning accuracy: less than 1: 1.5 VSWR**
- 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: 5.0 W (+37 dBm)
- Frequency range: 1.8–30 MHz
- Input impedance: 50 R
- Tuning time: 3–5 seconds average (15 seconds maximum)
- Current draw: up to 30 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: 0.107 kg (3.77 oz)
- Connectors type: SMA female (50 R)
- DC input: 5.5 x 2.1 male (positive polarity)
- Power supply requirement: 8...18 VDC
- No built-in battery (no restriction on air transport)
- Operable temperature: -25 °C to +60 °C; -13 °F to +140 °F

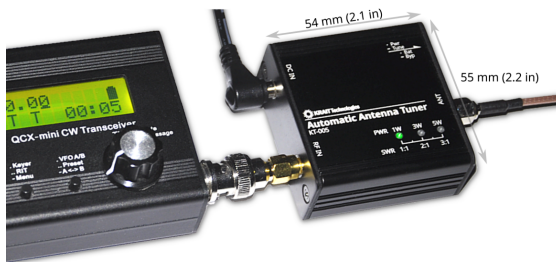
*) for 160 m and 80 m operation the matching range is smaller

***) except for half-wavelength or multiple-half-wavelength antennas

****) without connectors

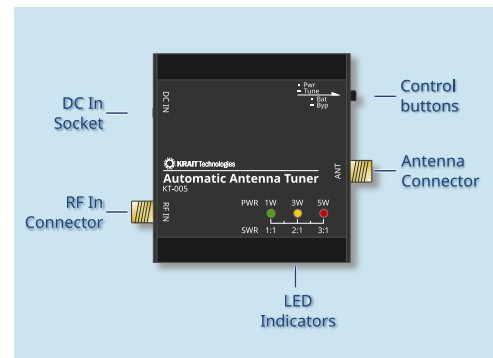
ORDERING

- KT-005A - assembled ATU in black aluminum enclosure - ready to use
- KT-005KE - kit for self-assembly (SMT components populated with programmed microcontroller) with THT/mechanical components/enclosure
- KT-005K - kit for self-assembly (SMT components populated with programmed microcontroller) with THT/mechanical components
- KT-005E - aluminum enclosure with engraved symbols and light pipes



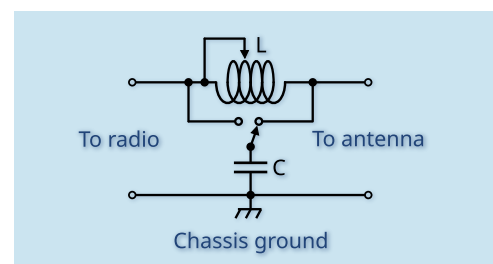
Example of using Automatic Antenna Tuner (KT-005) with QCX-mini transceiver

LAYOUT



- On the left side:
 - DC input connector
 - RF input connector (50 R)
- On the right side:
 - ANT output connector
 - two control buttons
- Three LED indicators on the top side

CIRCUIT DIAGRAM



- The network topology of the ATU uses a variable inductor and a variable capacitor
- The switchable capacitor together with the switchable inductor can match most possible loads impedances (covers most of the Smith Chart)

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