

CAT-283

Antenna Tuner
144/430MHz

Thank you for your purchasing our product. This product is made under the stringent quality control. Should there be any breakage in transit, please do not hesitate to contact the shop you purchased this product. For your safety, read this manual carefully for proper handling and operation before using.

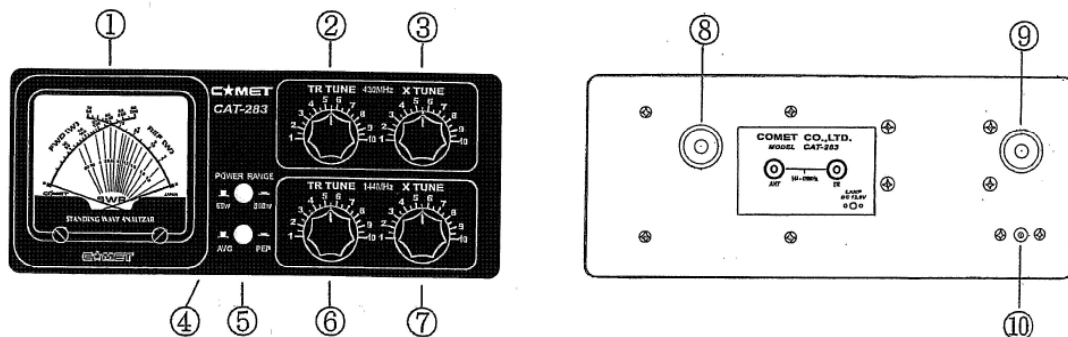
Features

- CAT-283 covers a freq range 144MHz/430MHz. It handles up to 250W. The built-in duplexer helps tuning of each 144/430MHz separately.
- Cross Needle Display shows FWD, REF and SWR simultaneously. Also, separate meter for convenient placement.
- Beautifully illuminated when connected to the power supply.

⚠ Precautions for using

- Keep the transmitting power at 10W or less to protect a transceiver from the reflected power.
- Do not input 250W or more, otherwise it causes a serious damage.
- Tune the antenna first in case the antenna SWR is outside 15-200.
- Never attempt to apply 15V or more to External Source Terminal. Failure to follow this might cause breakdown.

● Appearance & Components



- ① **Display Meter** For indicating FWD, REF and SWR.
- ② **TR TUNE (430MHz)** Variable Capacitor for Impedance on the transceiver side.
- ③ **X TUNE (430MHz)** Variable Capacitor for Impedance on the Antenna side.
- ④ **Power Range button** for changing the max power of FWD.
- ⑤ **AVG/PEP Switch** AVG reads Average Voltage and PEP reads Peek Envelop Power.
- ⑥ **TR TUNE (144MHz)** Variable Capacitor for Impedance on the transceiver side.
- ⑦ **X TUNE (144MHz)** Variable Capacitor for Impedance on the Antenna side.
- ⑧ **ANT Connector** SO-239 type Connector for the Antennas or Dummy Loads.
- ⑨ **TR Connector** SO-239 type Connector for the Power of Antenna
- ⑩ **External Source Terminal** For connecting Stabilized Power Supply for Display illumination.

● How to connect

Connect 50Ω Coax cable, such as 3D2V or 5D2V etc., to TR Connector, according to the above fig. Also, connect a coax cable for Antenna to ANT Connector.

* In case you use a dual band antenna, both frequencies are available at one terminal.

● Specifications

Frequency Range : 125~210MHz / 400~450MHz

Input Impedance : 50Ω

Output Impedance Range : 15~200Ω

Max. Input Power : 250W (FM)

Min. Power for SWR measurement : approx.6W

Tolerance : +/- 10% at full scale

SWR Range : 1.0 ~ ∞

Connector : M-J type (SO-239)

Power for illumination : DC 11~15V approx.250mA

Dimensions : (W) 218 x (H) 93(98) x (D) 120(152) [mm]

Weight : approx. 1.4kg

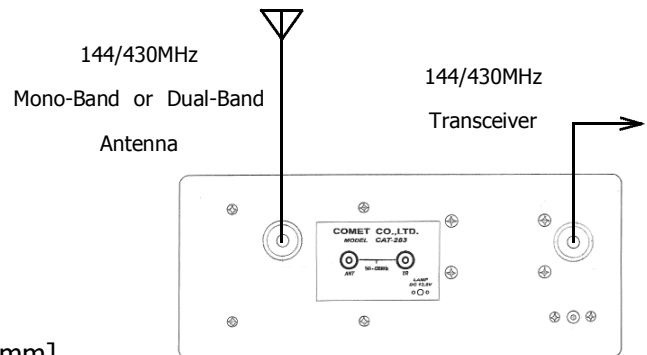


Fig. Connection Diagram

● How to use

Follow the below procedure.

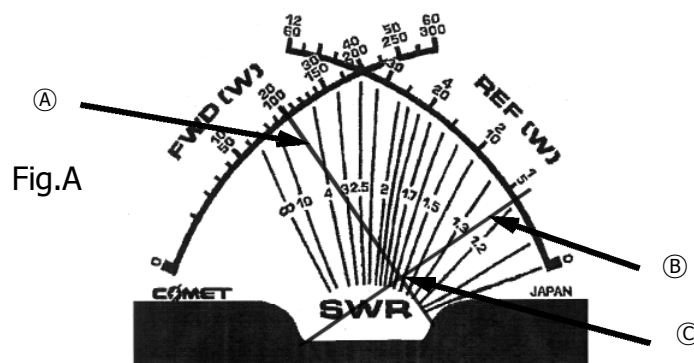
1. Keep the power of transceiver 10W or less.

*Turn up the power gradually once the antenna and transceiver match.

Switch the Power Range either 30 or 60W, according to the power of transceiver.

Operation outside the power range might cause serious damage.

2. For 144MHz, turn ⑥ and ⑦ switch to tune. For 430MHz, turn ② and ③ switch to tune. Refer to the below chart. *The below chart is the data at 50.
3. ① indicates Traveling Wave and ② indicates Reflected Wave while transmitting.
③ at ① and ② indicates SWR. (Fig.A)
4. Turn "TR Tune" and/or "X Tune" switch to minimize the value of ③



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Appearance and specifications are subject to change without notice.