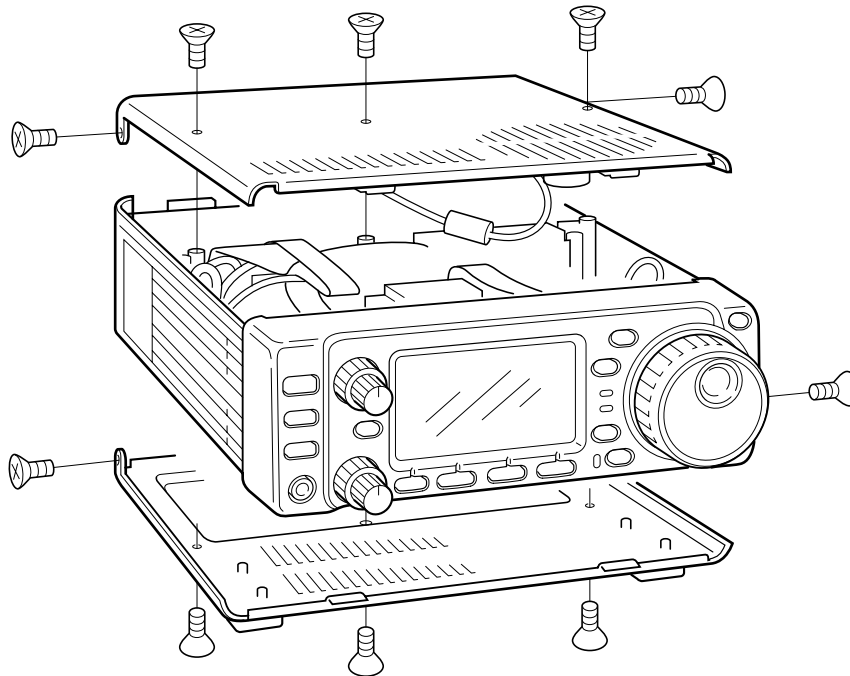


10 OPTIONAL INSTALLATIONS/SETTINGS

■ Opening the transceiver case

To remove the transceiver case unscrew the 10 screws (5 in the top panel and 5 in the bottom panel) as shown in the diagram below.

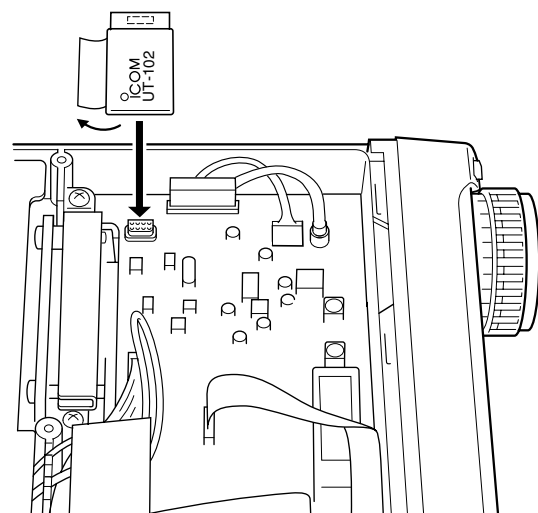
Caution: Disconnect the DC power cable from the transceiver before performing any work on the transceiver.



■ UT-102 VOICE SYNTHESIZER UNIT

The UT-102 announces the accessed band's frequency, mode, etc. (S-meter level can also be announced—p. 55) in a clear, electronically generated voice, in English (or Japanese).

- ① Remove the top cover as shown above.
- ② Connect the UT-102 as shown in the diagram at right (label side up).
- ③ Replace the top cover.

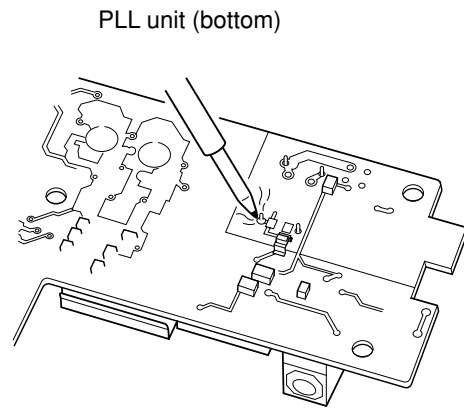
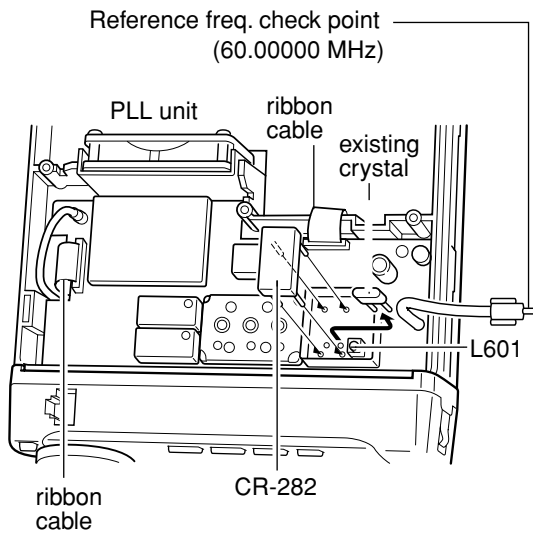


■ CR-282 HIGH-STABILITY CRYSTAL UNIT

By installing the CR-282, the total frequency stability of the transceiver will be improved.

CR-282 frequency stability: ± 0.5 ppm
 (−30°C to +60°C;
 −22°F to +140°F)

- ① Remove the bottom cover as shown on the opposite page.
- ② Remove the 5 screws and 2 flat cables holding the PLL unit in place.
- ③ Remove the existing crystal unit.
- ④ Put the CR-282 in the space available as shown in the diagram.
- ⑤ Adjust the reference frequency at L601 using a frequency counter (60.00000 MHz).
- ⑥ Return the shield case and bottom cover to their original positions.



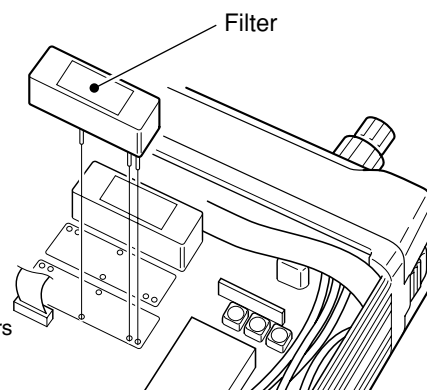
■ IF filters

Several IF filters are available for the IC-706MKIIG. Choose a filter most appropriate to your operating needs.

Note: After filter installation, specify the installed filter using initial set mode (items 9, 10). Otherwise, the installed filter will not function properly.

FL-100 CW NARROW FILTER	500 Hz/−6 dB
FL-101 CW NARROW FILTER	250 Hz/−6 dB
FL-103 SSB WIDE FILTER	2.8 kHz/−6 dB
FL-223 SSB NARROW FILTER	1.9 kHz/−6 dB
FL-232 CW/RTTY NARROW FILTER	350 Hz/−6 dB

- ① Remove the top cover as shown on the previous page.
- ② Install the desired filter as shown in the diagram below.
 - These filters can be installed in either direction.
- ③ Replace the top cover.

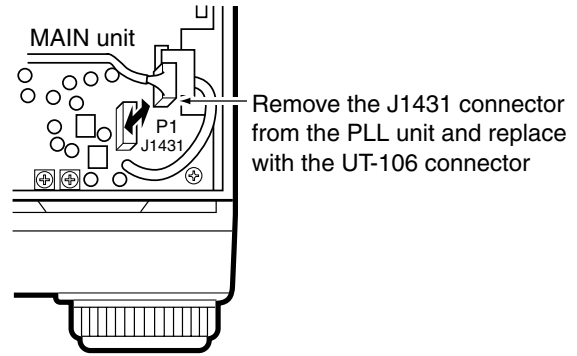


Spaces for 2 optional filters available.

■ UT-106 DSP RECEIVER UNIT

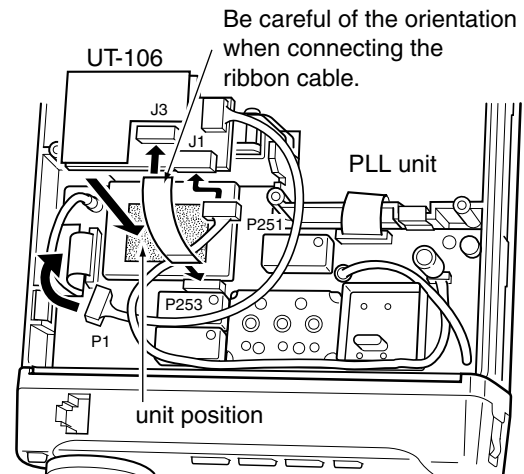
◇ Installation

- ① Open the transceiver case as shown on p. 59.
- ② Remove the 4-pin connector (P251) from J1413 on the MAIN unit (top side) and plug it into J1 of the UT-106 on the PLL unit (bottom side).
- ③ Plug the 4-pin connector (P1) from the UT-106 into J1413 on the MAIN unit.
- ④ Plug the supplied ribbon cable into J3 on the UT-106 and J253 on the PLL unit.
 - Be careful of the orientation of the ribbon cable.
- ⑤ Attach the UT-106 to the PLL unit, using the existing guide for alignment, as illustrated at right.
- ⑥ Reassemble the transceiver.



◇ Operation

Refer to the instructions supplied with the UT-106 for operating details.



■ MB-72 CARRYING HANDLE

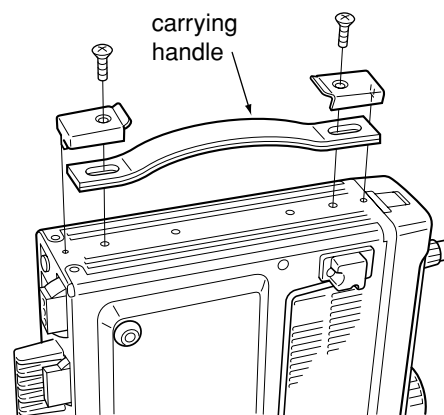
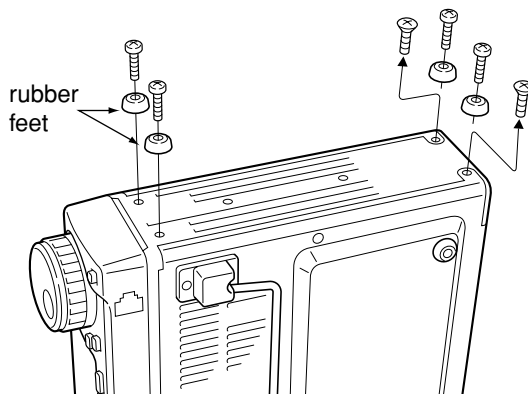
The optional MB-72 CARRYING HANDLE IS CONVENIENT when carrying the transceiver for DX'peditions, field operation, etc.

- ① Remove the 2 screws from the right side of the transceiver as shown below.
- ② Replace those with 2 supplied screws plus rubber

feet and additionally attach 2 more supplied screws (including rubber feet) as shown below.

- When replacing the 2 screws at the rear, be sure to squeeze the top and bottom covers together to ensure proper alignment.

- ③ Attach the MB-72 to the left side of the transceiver as shown below.



■ AT-180 internal switch description

The optional AT-180 has 3 operating conditions for HF band operation. Select a suitable condition according to your antenna system.

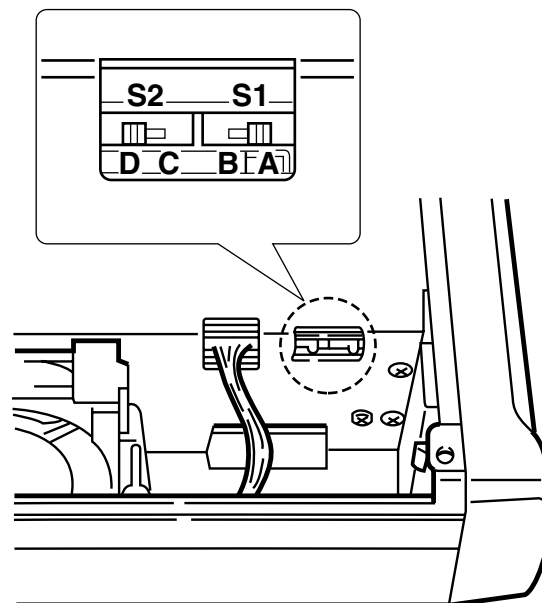
- ① Remove the top cover of the AT-180.
- ② Set the tuner switches to the desired positions according to the table below.

SW	Position	Operation
S1	A (default)	The tuner operating condition is set by S2 described below.
	B	THROUGH INHIBIT The tuner tunes the antenna even when the antenna has poor SWR (up to VSWR 3:1 after tuning). In this case, manual tuning is necessary each time you change the frequency although the tuner automatically starts tuning when the VSWR is higher than 3:1. This setting is called "through inhibit," however, the tuner is set to "through" if the VSWR is higher than 3:1 after tuning.
S2	C	TUNER SENSITIVE CONDITION The tuner tunes each time you transmit (except SSB mode). Therefore, the lowest SWR is obtained at any given time. For SSB mode, the same condition as the "D" position.
	D (default)	NORMAL CONDITION The tuner tunes when the SWR is higher than 1.5:1. Therefore, the tuner activates only when tuning is necessary.

• Specifications for the AT-180

- Frequency coverage : 1.9–54 MHz
- Input impedance : 50 Ω
- Maximum input power : 120 W
- Minimum tuning power : 8 W
- Matching impedance : 16.7–150 Ω (HF band)
range 20–125 Ω (50 MHz band)
- Tuning accuracy : Less than SWR 1.5:1
- Insertion loss : Less than 1.0 dB
(after tuning)
- Power supply : 13.8 V DC/1 A (supplied from the transceiver's ACC socket)
- Dimensions (mm/in) : 167(W)×58.6(H)×225(D)
6⁹/₁₆(W)×2⁵/₁₇(H)×8⁷/₈(D)
- Weight : 2.4 kg; 5 lb 4 oz
- Supplied accessories : coaxial cable (1 m),
ACC cable (DIN 13 pins)

• AT-180 inside top cover



• Connector information for ACC(2) socket



PIN NO./NAME	DESCRIPTION
① 8 V	Regulated 8 V output. (10 mA max.)
② GND	Connects to ground.
③ SEND	Input/output pin. Goes to ground when transmitting (20 mA max). When grounded, transmits.
④ BAND	Band voltage output. (Varies with amateur band; 0 to 8.0 V).
⑤ ALC	ALC output voltage (–4 to 0 V).
⑥ NC	No connection.
⑦ 13.8V	13.8 V output when power is ON (1 A max).