

■ Unpacking

After unpacking, immediately report any damage to the delivering carrier or dealer. Keep the shipping cartons.

For a description and a diagram of accessory equipment included with the IC-7000, see 'Supplied accessories' on p. i-1 of this manual.

■ Selecting a location

Select a location for the transceiver that allows adequate air circulation, free from extreme heat, cold, or vibrations, and away from TV sets, TV antenna elements, radios and other electromagnetic sources.

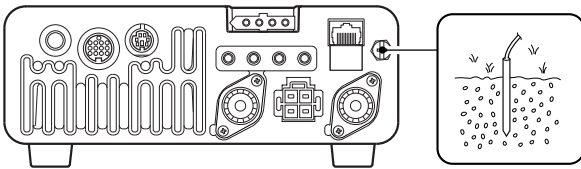
The base of the transceiver has an adjustable stand for desktop use. Set the stand to one of two angles depending on your operating conditions. (see description on right hand page)

■ Grounding

To prevent electrical shock, television interference (TVI), broadcast interference (BCI) and other problems, ground the transceiver through the GROUND terminal on the rear panel.

For best results, connect a heavy gauge wire or strap to a long, buried copper rod. Make the distance between the [GND] terminal and ground as short as possible.

⚠ WARNING: NEVER connect the [GND] terminal to a gas pipe or electric conduit, since the connection could cause an explosion or electric shock.

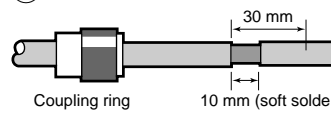
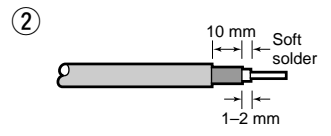
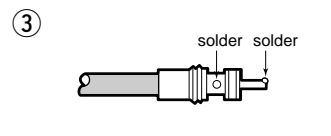
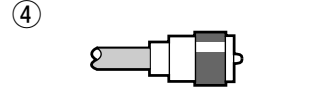


■ Antenna connection

For radio communications the antenna is of critical importance for output power and sensitivity. Use well-matched 50-ohm antennas and coaxial feedline. An SWR (standing wave ratio) of 1.5:1 or lower is recommended when transmitting.

⚡ CAUTION: Protect your transceiver from lightning by using a lightning arrestor.

PL-259 CONNECTOR INSTALLATION EXAMPLE

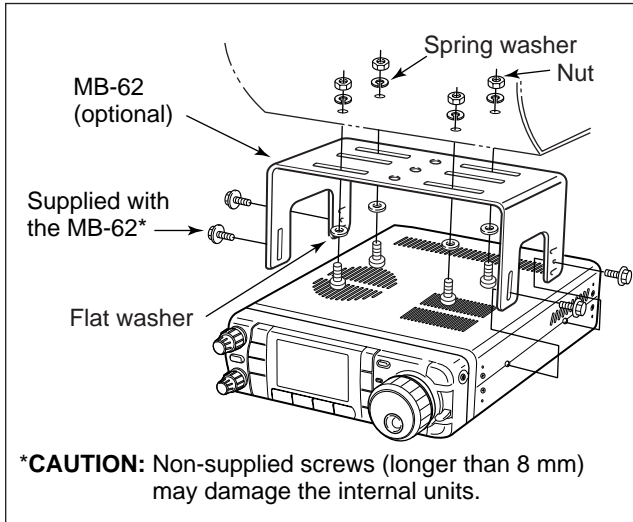
- ①  Slide the coupling ring down. Strip the cable jacket and soft solder.
- ②  Strip the cable as shown at left. Soft solder the center conductor.
- ③  Slide the connector body on and solder it.
- ④  Screw the coupling ring onto the connector body.

ANTENNA SWR

Each antenna is tuned for a specified frequency range and SWR increases outside that range. When the SWR is higher than approx. 2.0:1, the transceiver's power drops to protect the final transistors. In this case, an antenna tuner is used to match the transceiver and antenna. Low SWR allows full power for transmitting even when using the antenna tuner. The IC-7000 has an SWR meter to monitor the antenna SWR continuously.

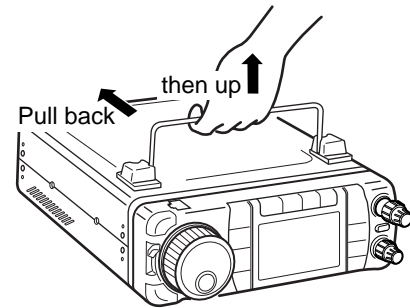
■ Installation

◇ Single body mounting



◇ Stand

To raise the stand:
With the transceiver upside down, pull the stand towards the rear panel and then upwards, as illustrated below.

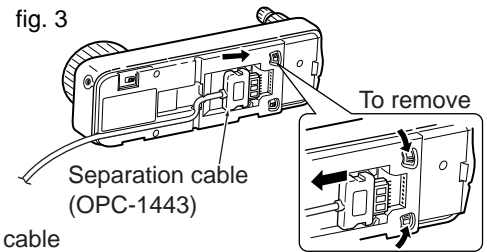
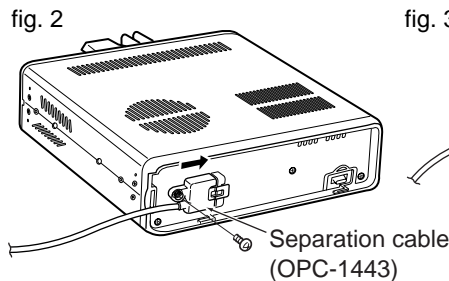
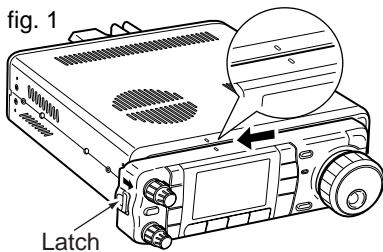


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◇ Front panel separation

- ① While pulling the front panel latch towards you, slide the front panel to the left (fig. 1).
- ② Attach the optional OPC-1443 to the main body and tighten the supplied screw as in fig. 2.
- ③ Attach the other end of the OPC-1443 to the detached front panel as in fig. 3.

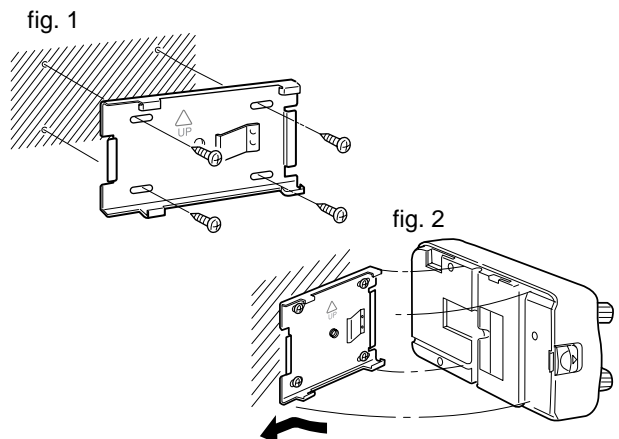
CAUTION: NEVER detach/attach the front panel when connecting the DC power supply (or battery). Be sure to disconnect the DC power cable from the [13.8 V] socket on the transceiver rear panel.



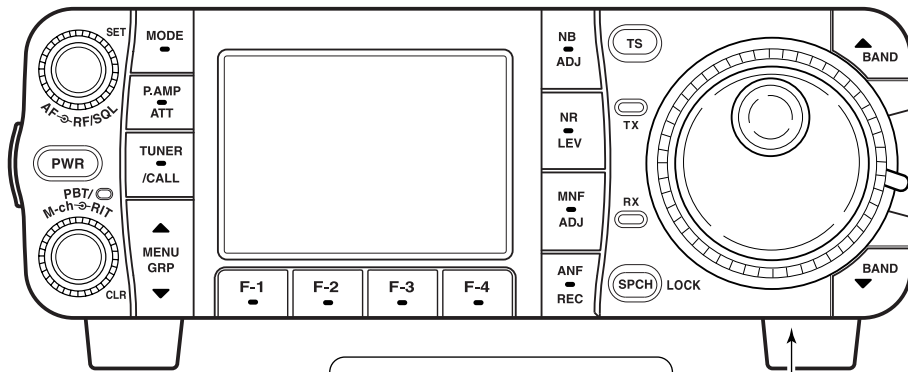
◇ Front panel mounting

- ① Attach the MB-105 to a flat surface using the four supplied screws (fig. 1).
- ② Fix the detached front panel to the MB-105 as illustrated in fig. 2.

BE CAREFUL to mount the MB-105 so that the front panel attaches with the correct side up.



Required connections



MICROPHONE (p. 10)

HM-151

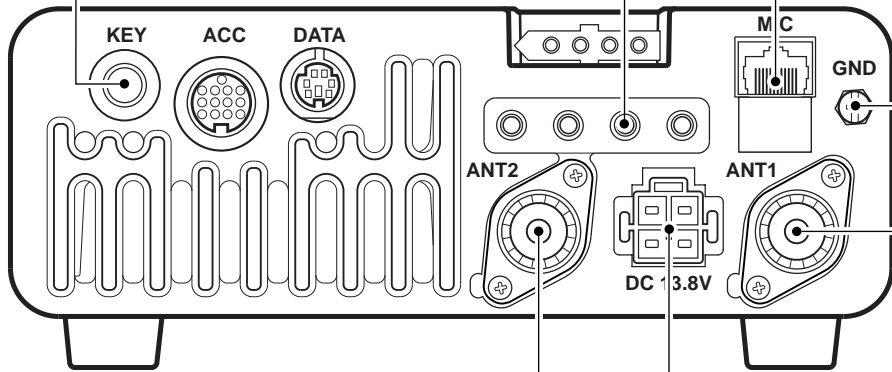
GROUND (p. 15)

Use the heaviest gauge wire or strap available and make the connection as short as possible.

Grounding prevents electrical shocks, TVI and other problems.

STRAIGHT KEY

RTTY TERMINAL UNIT (p. 23)



2 m/70 cm ANTENNA

DC POWER SUPPLY (p.19)

AC outlet A DC power supply

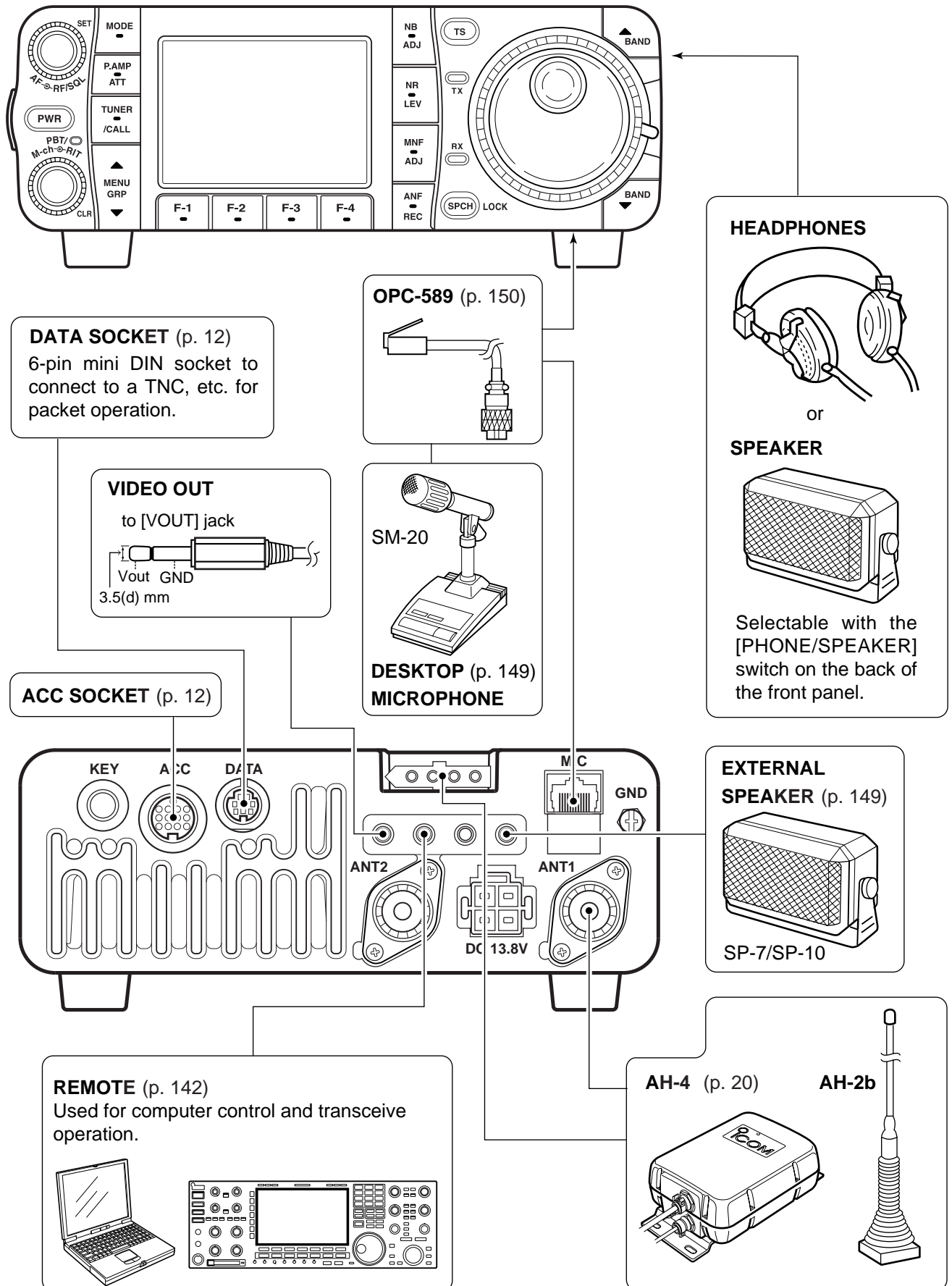
13.8 V; at least 25 A

Red Black

⊕ ⊖

HF/50 MHz ANTENNA

Advanced connections



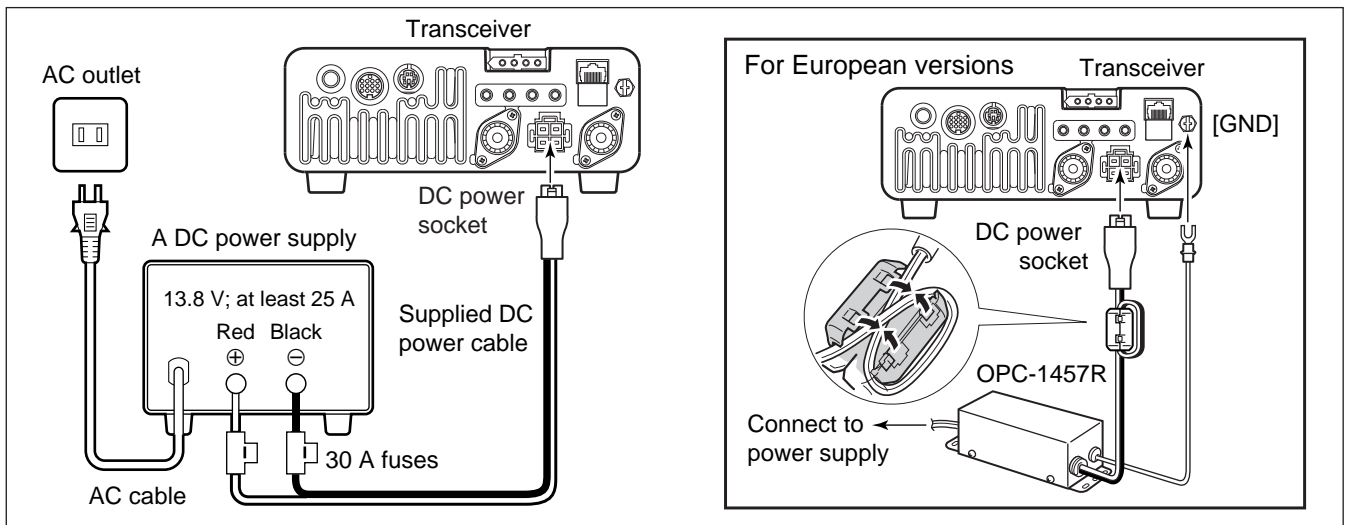
■ Power supply connections

Use the DC power supply with a 25 A capacity when operating the transceiver with AC power. Refer to the diagrams below.

CAUTION: Before connecting the DC power cable, check the following important items. Make sure:

- The **[POWER]** switch is OFF.
- Output voltage of the power source is 12–15 V.
- DC power cable polarity is correct.
 - Red : positive ⊕ terminal
 - Black : negative ⊖ terminal

■ Connecting a DC power supply



■ Battery connections

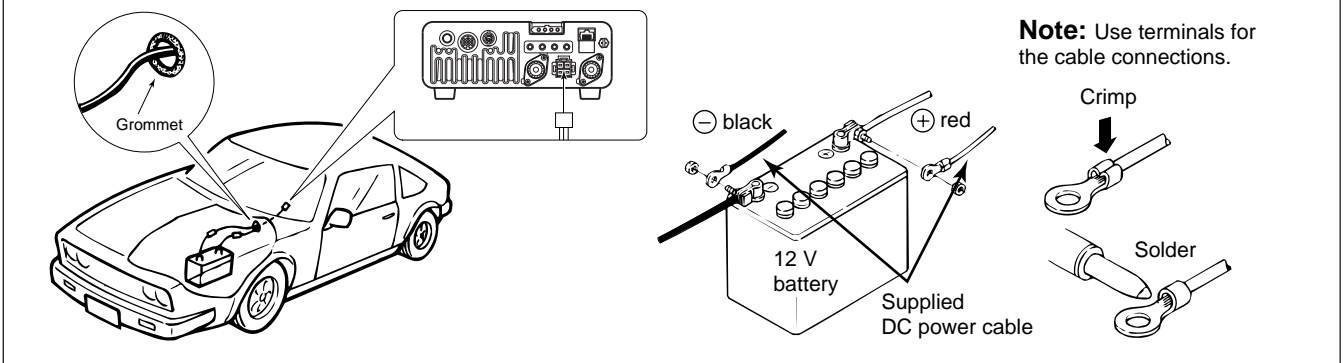
- **⚠ WARNING NEVER** connect to a battery without supplying a DC fuse, otherwise a fire hazard occurs.
- **NEVER** connect the transceiver directly to a 24 V battery.

The transceiver may not receive well on some frequencies when installed in a hybrid vehicle, or any type of electric vehicle (fuel cell vehicle). This is because vehicle's electric components such as the inverter system generate a lot of electric noise.

- **DO NOT** use a cigarette lighter socket as a power source when operating in a vehicle. The plug may cause voltage drops and ignition noise may be superimposed onto transmit or receive audio.
- Use a rubber grommet when passing the DC power cable through a metal plate to prevent a short circuit.

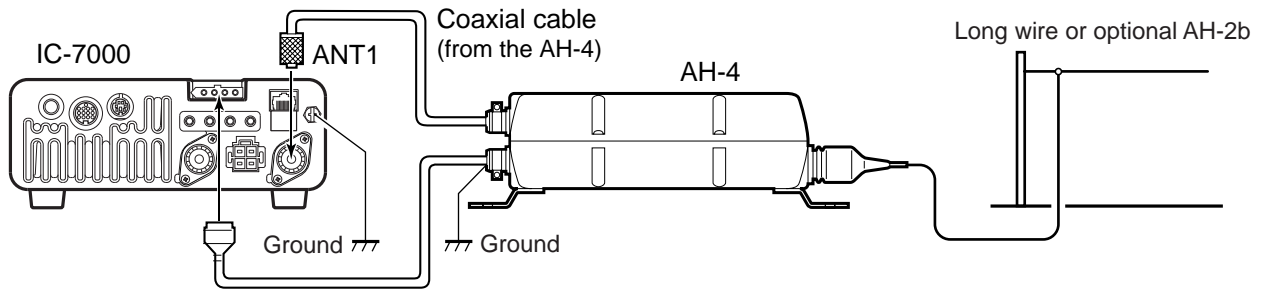
IMPORTANT!
Detailed installation notes for Icom mobile transceivers to be fitted into vehicles are available. Contact your Icom dealer or distributor.

CONNECTING A VEHICLE BATTERY

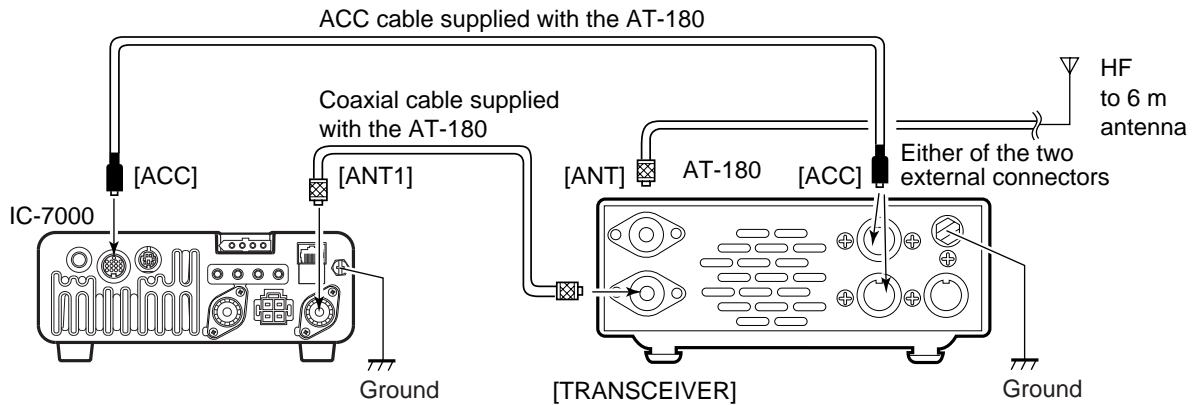


External antenna tuners

CONNECTING THE AH-4

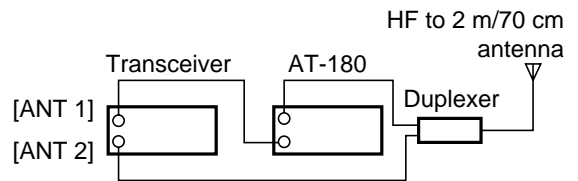


CONNECTING THE AT-180



- Turn the IC-7000's power OFF when connecting the AT-180, otherwise, the CPU may malfunction and the AT-180 may not function properly.
- The OPC-742 is required when using both the AT-180 and a 2m/70cm linear amplifier.

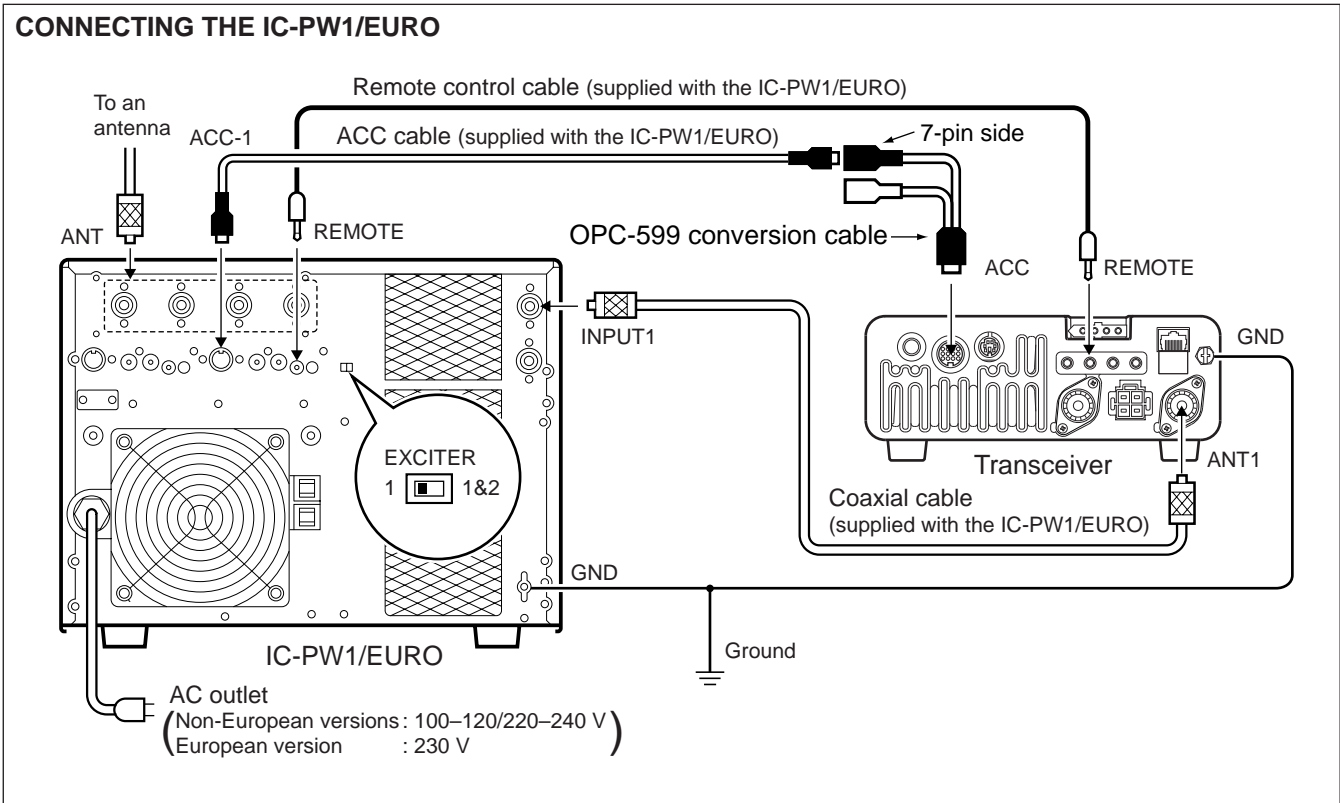
- Do not connect [ANT2] to the AT-180. When using an HF to 2m/70cm dual or wide-band antenna, use a duplexer between the AT-180 and antenna since 2 m/70 cm signals do not pass through the AT-180.



Linear amplifier connections

Use the [ANT1] connector when connecting an HF/50 MHz linear amplifier.

CONNECTING THE IC-PW1/EURO

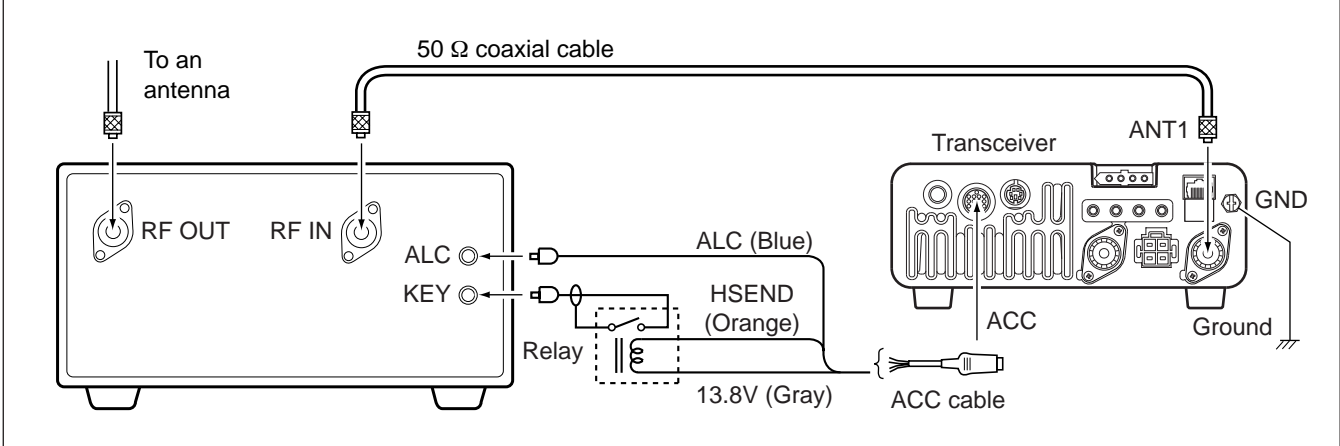


CONNECTING A NON-ICOM LINEAR AMPLIFIER

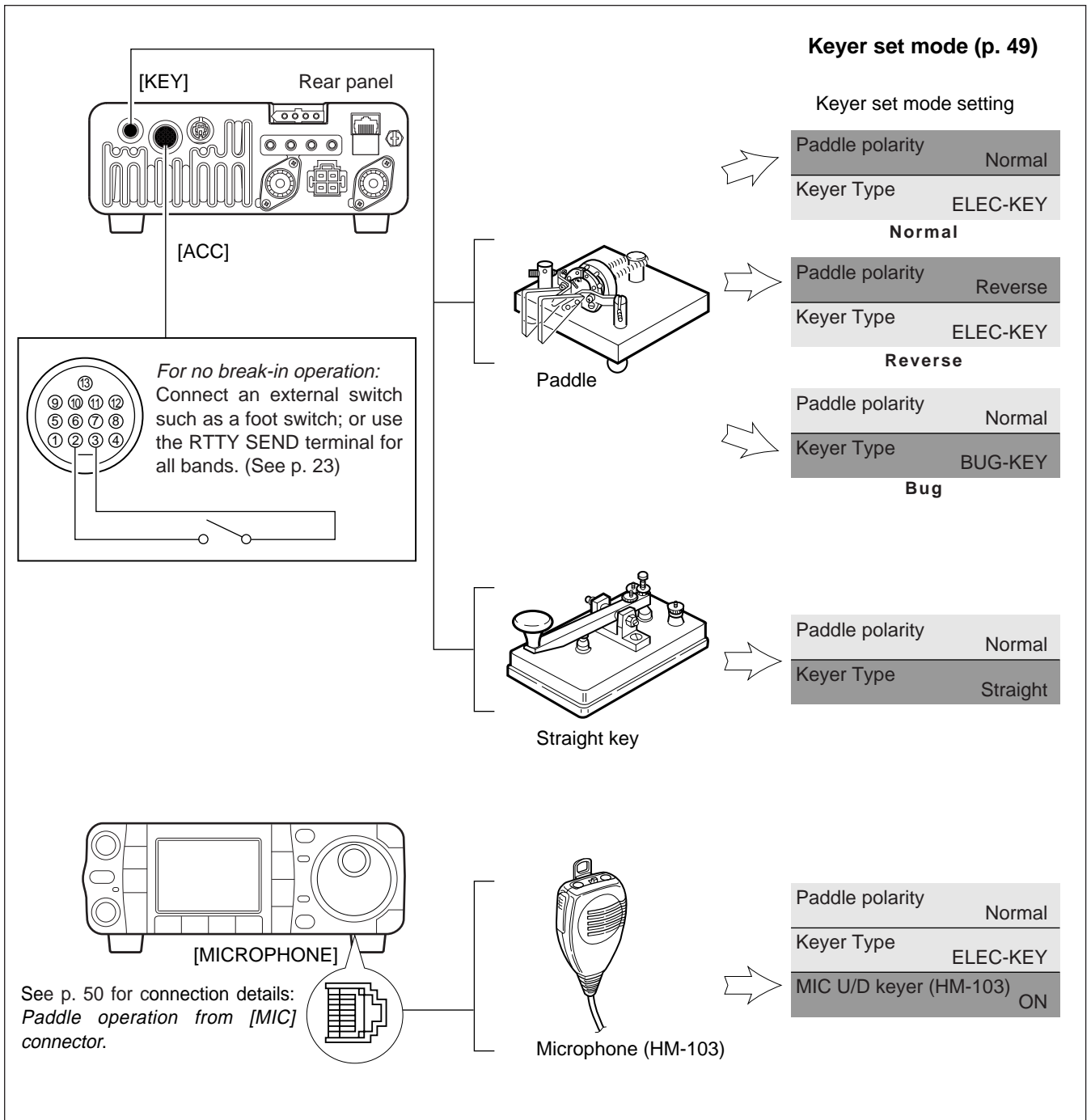
⚠ WARNING:

- Set the transceiver output power and linear amplifier ALC output level referring to the linear amplifier instruction manual. Be sure the linear amplifier keying circuit control voltage is compatible with the IC-7000, before connecting to the HSEND line (ACC cable).
- The ALC input level must be in the range 0 V to -4 V, and the transceiver does not accept positive voltage. Non-matched ALC and RF power settings could cause a fire or damage the linear amplifier.

- The IC-7000 SEND line (ACC connector pin 3) is rate at 16 V/200 mA DC. If this level is exceeded, a larger external relay must be used.

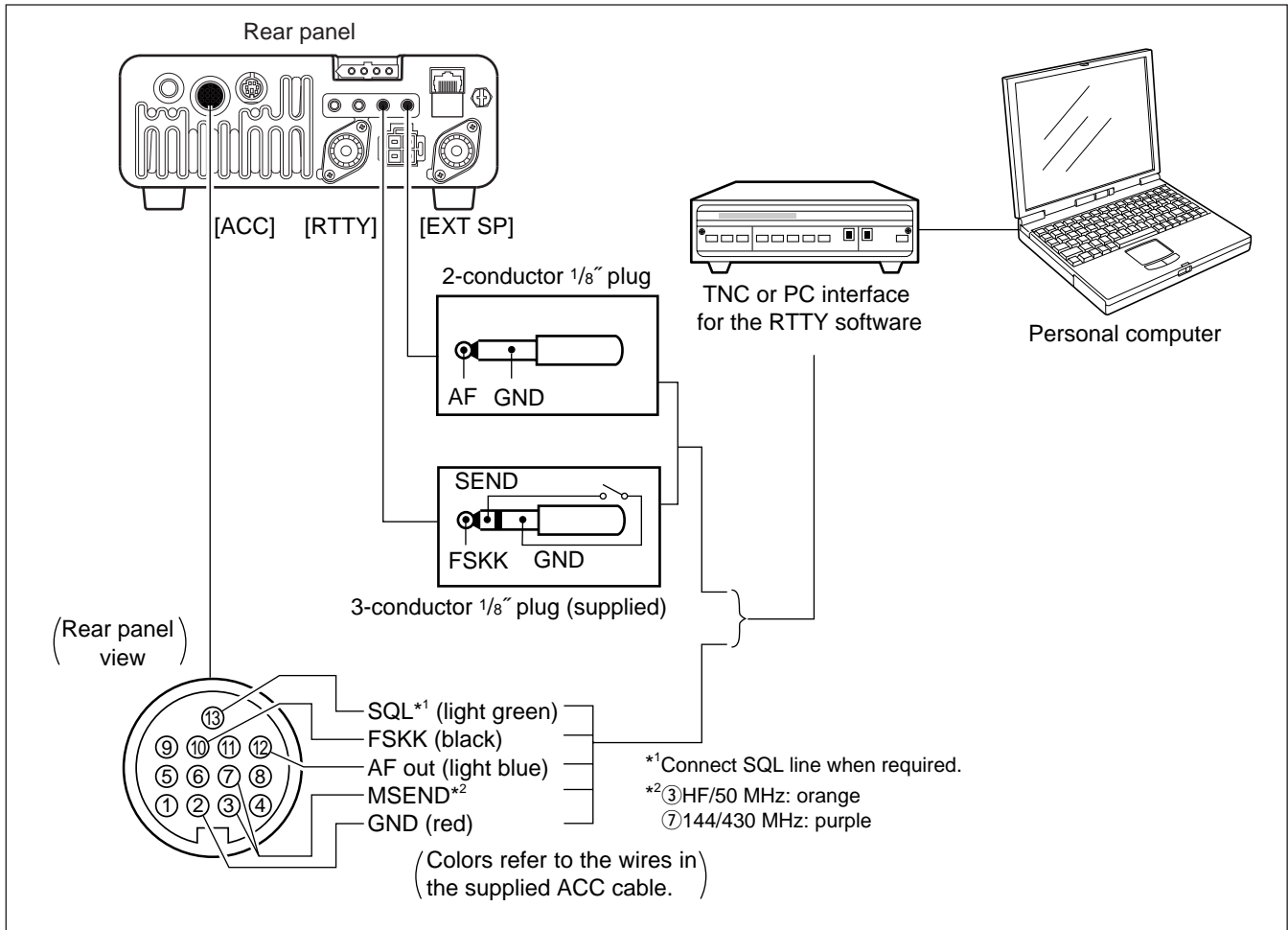


■ Connections for CW

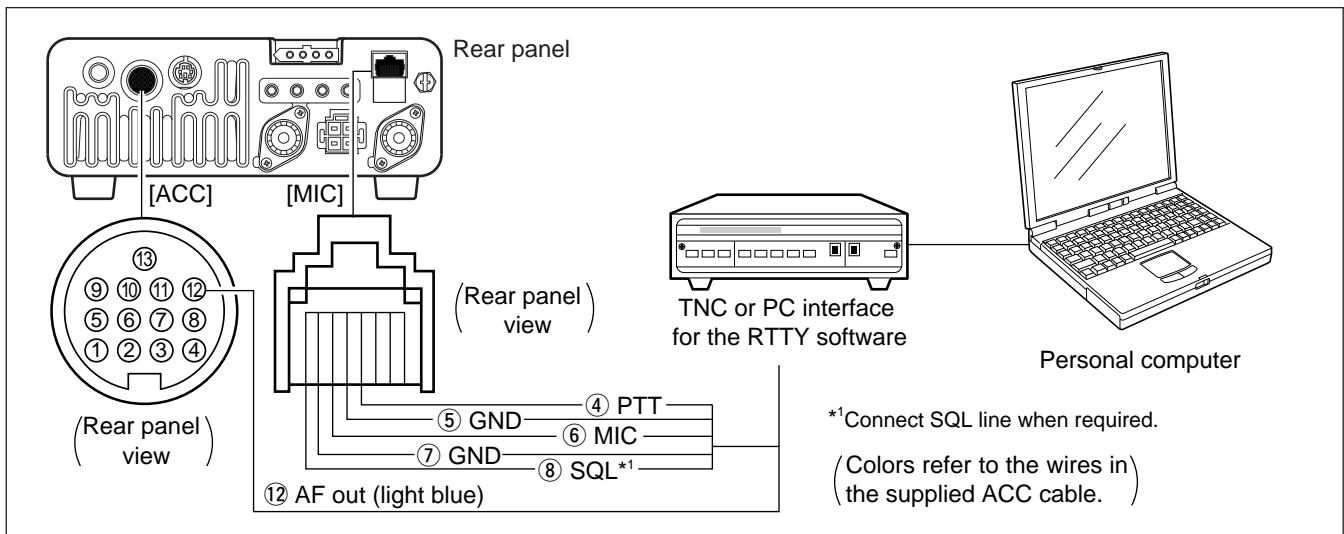


■ Connections for RTTY

◇ Connections for RTTY (FSK)

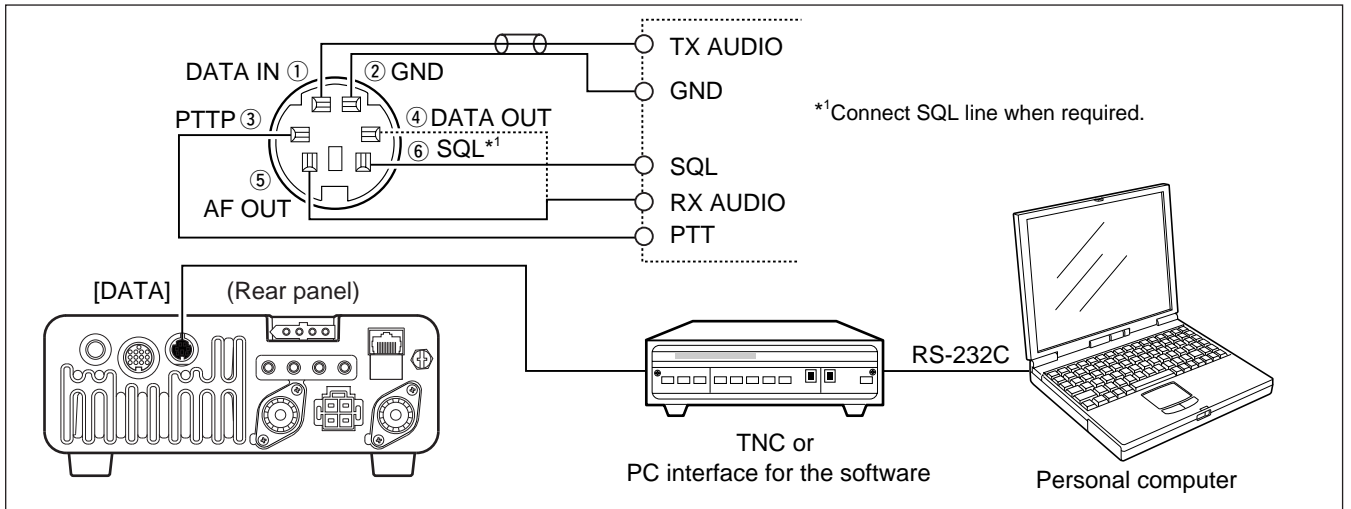


◇ Connections for RTTY (AFSK)

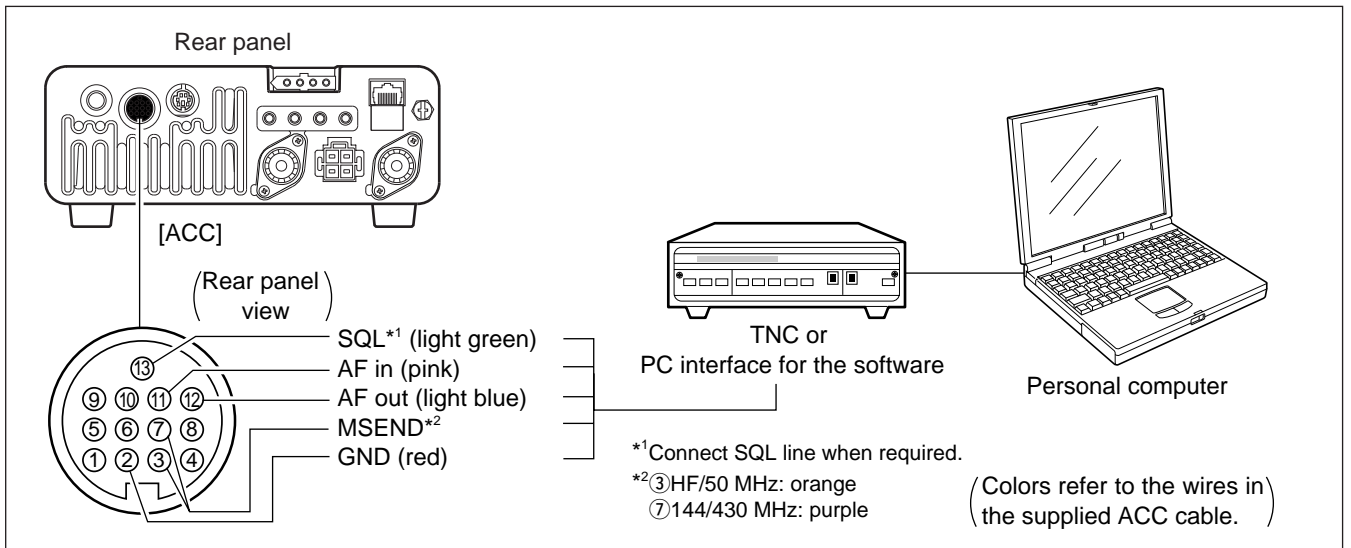


■ Connections for packet, SSTV or PSK31

◇ When connecting to [DATA] socket



◇ When connecting to [ACC] socket



◇ When connecting to [MIC] connector

