

Thank you for purchasing this new interface.

1. SPECIFICATIONS and ACCESSORIES

1-1. SPECIFICATIONS

Operating temperature	- 20°C ~ + 60°C
Dimensions	140W × 40H × 140D mm
(Projections included)	141W × 45H × 150D mm
Weight	850 g
Power requirements	13.8 VDC ± 15%
Current drain (IF-20 only)	Less than 1 A
(Receive mode with no signal)	
Output	More than 1.5 W (across 8 ohms load 5% distortion)
Ext. Speaker impedance	8 ohms

Circuit and ratings are subject to change without notice due to advancement in technology.

1-2. ACCESSORIES

Unpack your new equipment carefully, and confirm that the accessories listed below are included in the box.

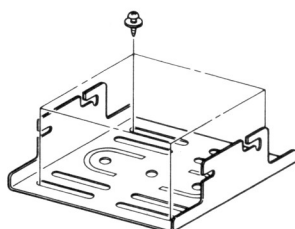
Mobile Bracket	J29-0437-03.....	1 ea.
Stack plate (L)	J21-4266-04.....	2 ea.
Stack plate (R)	J21-4267-04.....	2 ea.
Mounting Kit	N99-0332-05	1 ea.
SEMS Screw		8 ea.
Self tapping Screw		4 ea.
Flat Washer.....		4 ea.
Lead with terminals.....	E30-2156-05.....	3 ea.
Connecting Cable.....	E30-2146-05.....	2 ea.
Instruction Manual	B50-8283-XX	1 copy
Warranty Card (U.S.A. version, European version)		1 ea.

2. INSTALLATION and CONNECTION

2-1. INSTALLATION

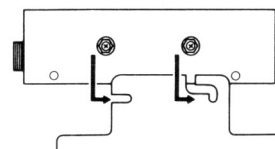
When installing this equipment in a vehicle consider ease of operation and safety when selecting the location for the mounting bracket.

1. Secure the Bracket using the supplied Flat Washers and Self tapping Screws (4 pieces each).

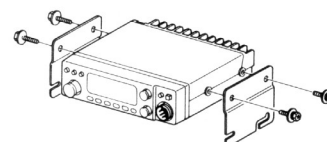


2. Attach the 4 SEMS screws loosely to the IF-20.

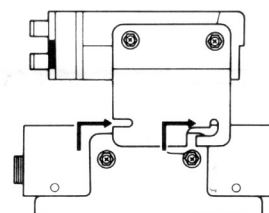
3. Align the grooves in the bracket with the IF-20's screws and slide the IF-20 to the rear.



4. Attach the stack plates with the 4 SEMS screws, that are supplied with transceiver, loosely to the transceiver.

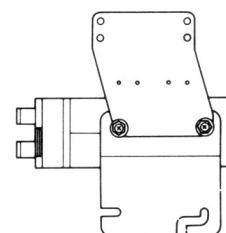


5. Align the grooves in the stack plates with the IF-20's rear screws and slide the IF-20 to the rear.



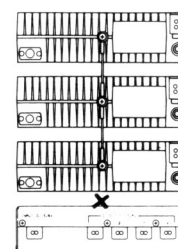
6. Repeat steps 4 and 5 to attach the next transceiver.

7. If you wish to stack 3 or 4 transceivers, use the stack plate supplied with transceivers.



8. Hold the transceivers in place and tighten all the SEMS screws.

9. To reduce the possibility of alternator noise, be sure to connect the supplied ground wire to the rear panel of the transceiver, as shown.



CAUTION:

To prevent injury and other trouble when installing more than 2 transceivers with IF-20 in a vehicle **DO NOT SUSPEND THE BRACKET**, place the unit on the floor.

2-2. CONNECTION

CAUTIONS (Mobile installation):

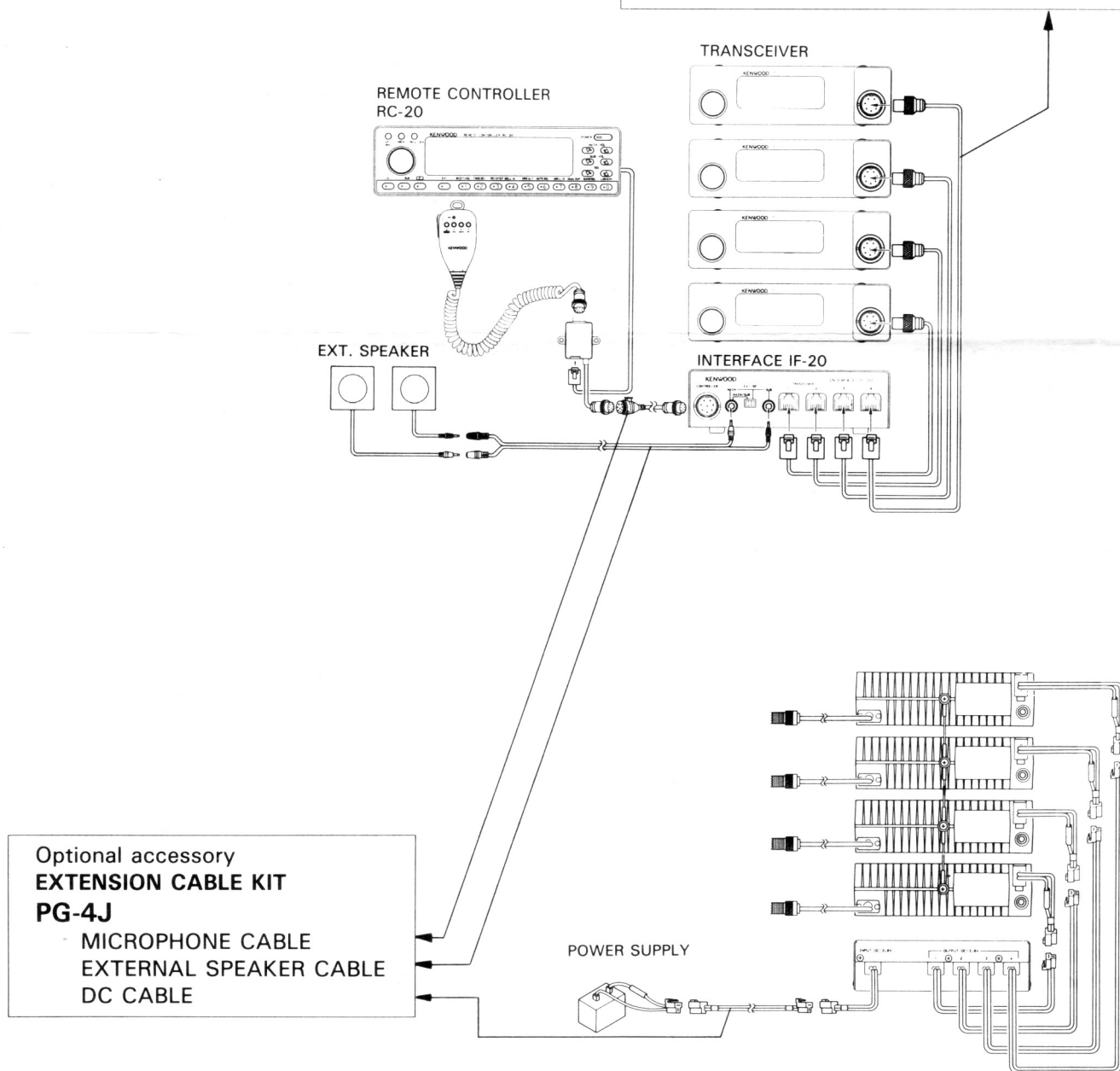
1. Before installing the power cable, be sure to remove the negative lead from the battery for safety.
2. After installation and wiring, be sure to double check for correct installation before reconnecting the negative lead to the battery terminal.
3. After completing the wiring, wrap the fuse holder with heat resistant tape to protect against heat and moisture.
4. **All antenna brackets must be grounded to the car body.** Attach the antennas securely, referring to the antenna installation instructions provided with the antenna.

CAUTIONS (Fixed station):

1. Before connecting and disconnecting the power connector, be sure to turn off the power switches of both the transceiver and the DC power supply.
2. Never connect the AC power cable to the AC outlet until all other connections have been made.

Optional accessory INTERFACE CONNECTING CABLE PG-4H

For use when connecting more than 2 transceivers to the IF-20.



CAUTION:

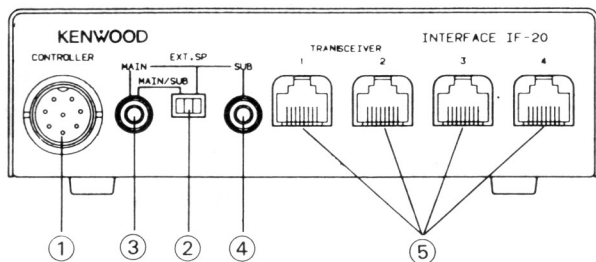
Noise may be generated by contact between antenna connectors. Connectors must be separated from each other to avoid generating interference.

CAUTION:

Connect the DC power connector of the transceiver to the **IF-20 DC OUTPUT** connector.

3. OPERATION

3-1. OPERATING CONTROLS



① **RC-20 cable connector**

Connect the RC-20 control cable to this connector.

② **External speaker switch**

This switch is used to select either the MAIN and/or SUB external speaker. Details are tabulated in **Diagram 1**.

CAUTION:

To avoid a pop in the speaker you should turn off the RC-20 power switch when changing the external speaker switch setting.

③ **MAIN (MAIN/SUB) EXT.SPEAKER jack**

④ **SUB EXT.SPEAKER jack**

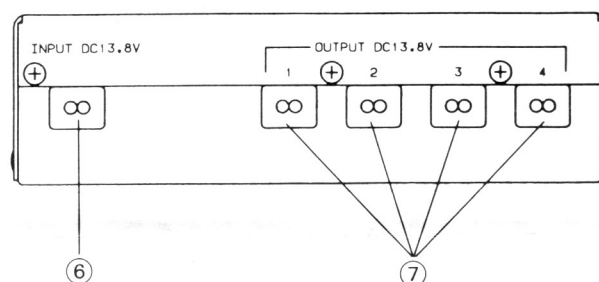
⑤ **Connector**

Connect the supplied connecting cable to this jack, and the other end of the connector cable to the transceiver.

The initial state of the IF-20 provides for the following conditions:

You should connect the transceiver that you want displayed on the MAIN band so that it has a lower connector number than the SUB band. For example: If you are connecting two transceivers and you want transceiver A to the MAIN band you should connect it to connector 1, 2, or 3. Transceiver B, which will be your initial SUB band transceiver, should be connected to a correspondingly higher number jack. If we had selected jack number 2 for the MAIN band we would then want to attach transceiver B to connector 3 or 4. We wouldn't want to connect it to jack 1 because the IF-20 would then assume that we wanted transceiver B to be the MAIN band instead of the SUB band.

Use this procedure only until you become familiar with the IF-20/RC-20. Once you have become familiarized with the operation of these devices the actual hookup won't matter, since you will be able to program the RC-20 to accept any transceiver that is attached to the IF-20 as the MAIN or SUB band.



⑥ **13.8 VDC POWER INPUT connector**

Connect the supplied DC Power Cable to this connector. Pay close attention to the polarity; red is positive and black is negative.

⑦ **13.8 VDC power OUTPUT connector**

Connect the DC Power Cable of the transceiver to this connector.

Diagram 1

External speaker	Select the MAIN (MAIN/SUB) EXT.SPEAKER jack	Select the SUB EXT.SPEAKER jack
Not connected	Audio signals from both bands will be heard from the IF-20 internal speaker. ●	Audio from the currently displayed band will be heard from IF-20 internal speaker.
Connect a speaker to MAIN jack	Audio signals from both bands will be heard from the external speaker. ●	Audio from the currently displayed band will be heard from the external speaker.
Connect a speaker to SUB jack	Audio signals from both bands will be heard only from the IF-20 internal speaker. The external speaker is not active.	Audio from the currently displayed band will be heard from IF-20 internal speaker. Voice of not displayed band will be heard from the external speaker. ●
Connect two speakers to both jack	Audio signals from both bands will be heard from external speaker connected to the MAIN jack.	Audio from the currently displayed band will be heard from the external speaker connected to the MAIN jack. Audio from the not displayed band will be heard from the external speaker connected to the SUB jack. ●

●: Recommended connection

3-2. INITIAL OPERATION

1. Turn OFF the power supply, RC-20, IF-20, and transceivers.
2. Turn ON the power supply.
3. Turn ON the transceiver's power switch.
4. Turn ON the Remote Controller RC-20's power switch.

3-3. NORMAL OPERATION

● MOBILE STATION

RC-20's power switch automatically controls the transceiver (ON/OFF).

CAUTION:

The following transceivers cannot be turned ON or OFF by the RC-20 power switch.

TM-221A/221E

TM-321A

TM-421A/421E

TM-521A/521E

TM-621A

● FIXED STATION

1. Turn ON the power supply.
2. Turn ON the Remote Controller RC-20's power switch.

3-4. MICROPROCESSOR MEMORY BACK-UP

A lithium battery is contained in the IF-20. The battery life is estimated at 5 years. When the battery has been exhausted erroneous information might appear in the display.

Lithium battery replacement should be performed by an authorized KENWOOD service facility, or your authorized KENWOOD dealer.

3-5. OPTIONAL ACCESSORIES

EXTENSION CABLE KIT

PG-4J

MICROPHONE CABLE (Approx. 3 m)

EXTERNAL SPEAKER CABLE (Approx. 3 m)

DC CABLE (Approx. 4 m)

INTERFACE CONNECTING CABLE

PG-4H

For use to connect more than 2 transceivers with IF-20.