

***Handsfree Kit
for CM-H888/H777
Portable Cellular
Telephone***

Operation/Installation/Connection

QN-888HFK

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Before installing your CM-H888/H777 Portable Cellular Telephone in a vehicle, please read this manual thoroughly and retain it for future reference.

Features

The QN-888HFK Handsfree Kit is designed to allow your portable cellular telephone to be used as a mobile telephone in your vehicle.

With this kit installed in a vehicle:

- You can talk without picking up the phone (handsfree mode).
- You can get unlimited talk time using external DC.
- You can turn the phone on/off by turning the vehicle's ignition switch on/off.

Precautions

When using your portable cellular telephone in a vehicle, please observe the following rules. Failure to follow these instructions may lead to serious personal injury and possible property damage.

- Secure the phone in your vehicle so as to prevent damage to the phone and personal injury in the event of an accident.
- Vehicle electronic devices (such as electronic fuel injection, electronic cruise control, electronic anti-skid brakes) may interfere with the proper operation of your phone. Likewise, your phone may interfere with the operation of these devices. Have your vehicle checked by qualified service personnel for any interference. See "Rules and Regulations" and "Safety Precautions" in the manual supplied with your CM-H888/H777 Portable Cellular Telephone for further advice.
- When attaching or detaching an external antenna, turn off all power to the phone.
- Remove the phone from your vehicle when the vehicle is being jump-started or the battery is being recharged.

Safety Precautions

Driving

Check the laws and regulations on the use of cellular telephones in the areas where you drive. Always obey them. Also, when using your phone while driving, please:

- give full attention to driving,
- use handsfree operation, if available, and
- pull off the road and park before making or answering a call if driving conditions so require.

Blasting areas

To avoid interfering with blasting operations, turn your unit OFF when in a "blasting area" or in areas posted: "Turn off two-way radio." Construction crews often use remote control RF devices to set off explosives.

Potentially explosive atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere. It is rare, but your phone or its accessories could generate sparks. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

Do not transport or store flammable gas, liquid, or explosives in the compartment of your vehicle which contains your phone or accessories.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

Antenna care and replacement

Do not use the phone with a damaged antenna. Replace a damaged antenna immediately. Take your phone to an authorized service center for repair.

Use only the supplied or approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, and violate FCC regulations.

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For instructions on operation, please refer to the manual supplied with your CM-H888/H777 Portable Cellular Telephone.

Using Handsfree or Handset Mode

Handsfree Mode

After connecting the phone and placing it into the holder, you can speak into the handsfree microphone and listen to the other party through the handsfree speaker while keeping both hands on the steering wheel.

Caution

You should stop the vehicle in a safe place when you want to make a call. When talking from a moving vehicle is unavoidable, use the handsfree microphone so that you may always concentrate on traffic conditions.

When you use handsfree mode

- It is recommended that you use speed dialing to simplify key operations.
- Exercise extreme caution with traffic conditions.
- Drive in the slow lane.
- Try to talk slower and louder than usual.
- Keep conversations brief.

If vehicle or road noise is too loud while talking in handsfree mode

Use handset mode, when background noise makes it difficult for either party to converse in handsfree mode.

Notes

- It is not necessary to extend the phone's antenna when using handsfree mode.
- Use the phone in handsfree mode (not in handset mode) while driving the car, so that you can concentrate on traffic conditions.

Handset Mode

You can use the phone by lifting it out of the handsfree adaptor. Use the phone itself for the call. Though powered by the handsfree adaptor, the handsfree microphone and speaker will not operate.

Notes

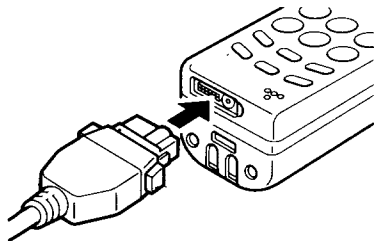
- It is not necessary to extend the phone's antenna when using handset mode.
- Stop and park the car in a safe place when using handset mode.

Using the Phone in a Vehicle

By attaching your CM-H888/H777 to the handsfree kit installed in a vehicle, you can use the phone inside the vehicle as in ordinary portable use. For operation of the phone, refer to the CM-H888/H777 cellular telephone operating instructions.

Attaching the Phone to the Handsfree Adaptor

- 1 Remove the connector cover and firmly insert the connector into the terminal.

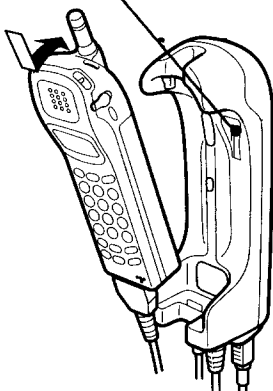


Note

To connect to the handsfree kit, remove the connector cover from the phone. Attach the connector cover to the place indicated in the illustration for step 2. When removing the phone from the kit, replace the connector cover to prevent dust from entering the connector.

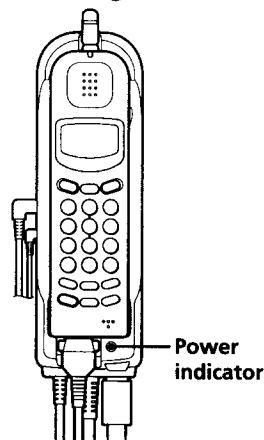
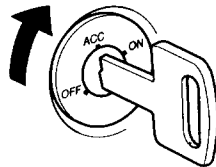
- 2 Latch the lower part of the main body to the claws of the adaptor and push the upper part until it clicks.

Attach the connector cover here.

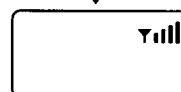
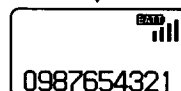
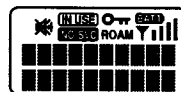


- 3 Turn on the vehicle's ignition switch.

The power indicator on the adaptor lights up and the phone is turned on automatically.



- 4 Check that the displays appear as shown below.



Notes

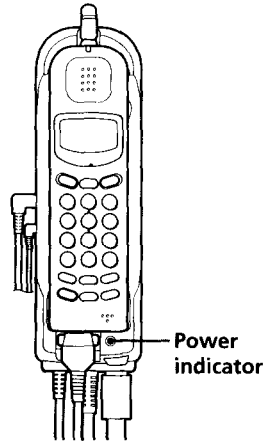
- The adaptor supplies DC power for operating the phone in your car while charging the battery.
- If you turn off the vehicle's ignition during a call, the power of the phone remains on so that you can continue talking. The power is turned off when you terminate the call.

Backlighting

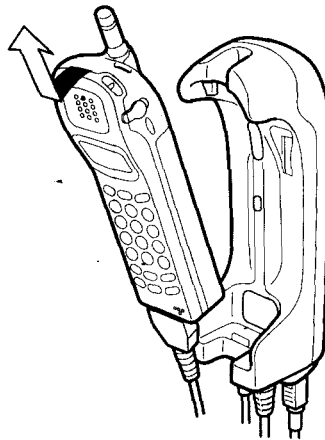
The backlight helps you view buttons and display in dark places. Backlighting is always active even if "Back Light" is set to "Off" in the function menu.

Detaching the Phone From the Handsfree Adaptor

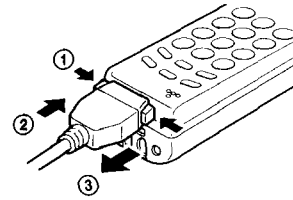
- 1 Turn off the ignition switch of the vehicle.
The power of the phone is automatically turned off.
The power indicator goes off.



- 2 Pull forward the upper part of the main body and lift the phone.



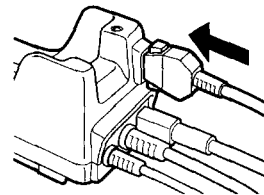
- 3 Hold down the yellow buttons on both sides connector ①, push in ②, then pull out connector ③.
Never pull the curled cord itself.



Note

If ignition sense is not used, failing to remove the CM-H888/H777 from the handsfree adaptor could kill the vehicle battery if left overnight. Check that the power indicator is off when leaving your vehicle.

- 4 Insert the curled cord connector in its original position in the adaptor.

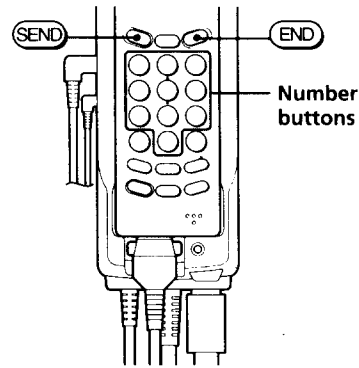


Note

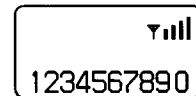
When the connector on the phone is not connected with the curled cord connector, remove the connector cover from the adaptor. Then replace the connector cover on the phone, to prevent dust from entering the connector.

Making Calls in Handsfree Mode

In handsfree mode, you can talk without pulling out the antenna.



- 1 Enter the phone number using number buttons.
The entered number appears on the display.

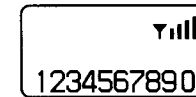


- 2 Press **SEND**.
You will hear the ring tone through the handsfree speaker.
If the call goes through, the IN USE indicator lights up and the talk time appears.



- 3 When the other party answers, speak into the handsfree microphone.
You will hear the other party's voice through the handsfree speaker.

- 4 Press **END** to end the call.
The IN USE indicator goes off and the number you dialed appears.

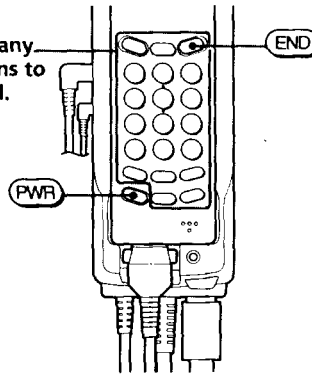


Note

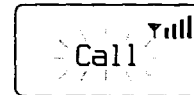
If you turn off the vehicle's ignition during a call, the power of the phone remains on so that you can continue talking. The power is turned off when you terminate the call.

Receiving Calls in Handsfree Mode

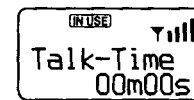
You can press any of these buttons to answer the call.



When the ringer sounds, the incoming indicator begins flashing. "Call" blinks in the display.

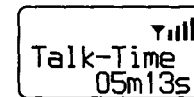


- 1** Press any button except **(PWR)** to answer the call.
The IN USE indicator lights up.



- 2** Speak into the handsfree microphone.
You can talk by simply speaking into the handsfree microphone.
You hear the other party's voice through the adaptor's speaker.

- 3** Press **(END)** to end the call.
The IN USE indicator goes off and the standby display appears.
The banner appears if it has been set.



Notes

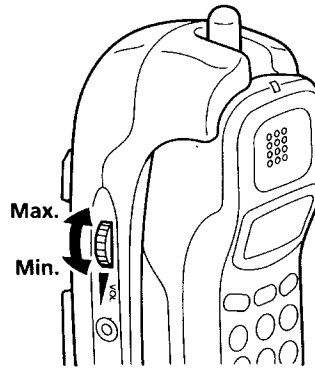
- If you turn off the vehicle's ignition during a call, the power of the phone remains on so that you can continue talking. The power is turned off when you terminate the call.
- When you receive calls while driving, it is recommended that you use "Auto Answer" (see page 13) for your safety.

Adjusting the Speaker Volume

The speaker volume control (VOL) is on the left side of the adaptor. Adjust the volume of the hands-free speaker by rotating the control.

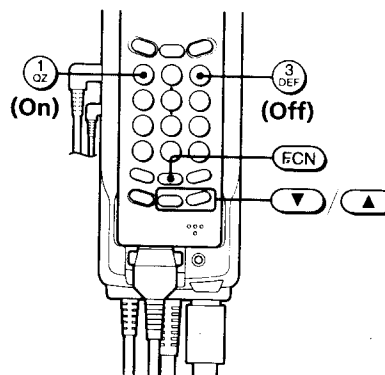
Notes

- When you use the phone in a vehicle, turn off radio or stereo, roll up the windows, and set the air conditioner to the low setting in order to reduce background noise.
- If EXT MUTE is connected, the volume of any audio equipment is automatically lowered when making or receiving a call.



Setting Auto Answer

If you turn auto answer on, it answers a call after two rings. This item is only available when the phone is connected to the Handsfree Kit.



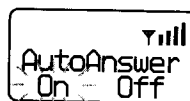
- 1 Press **FCN** to enter function mode.



- 2 Press **▼** or **▲** to select "AutoAnswer."
The current setting flashes.



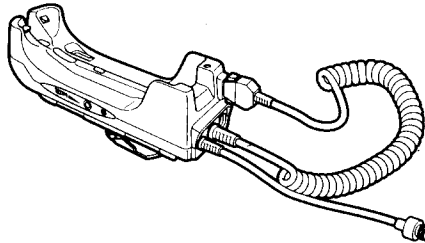
- 3 Press **1 OZ** (On) or **3 DEF** (Off).
The phone beeps and the previous display returns.



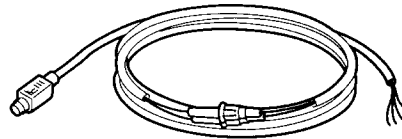
Unpacking the Handsfree Kit

Unpack your hands-free kit and check the contents listed below. If there is something missing, please contact the nearest Sony dealer.

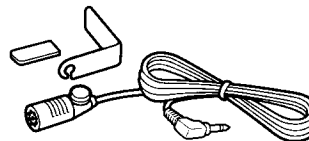
Handsfree adaptor
with curled cord, plate and mounting bracket
(1)



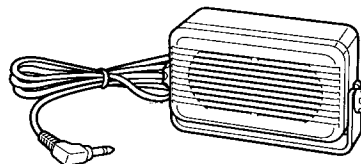
Power cable
(1)



Handsfree microphone
with clip
(1)
Double-sided adhesive tape
(1)



Handsfree speaker
(1)



Tapping screws 4 × 16
(6)



Precautions for Installation

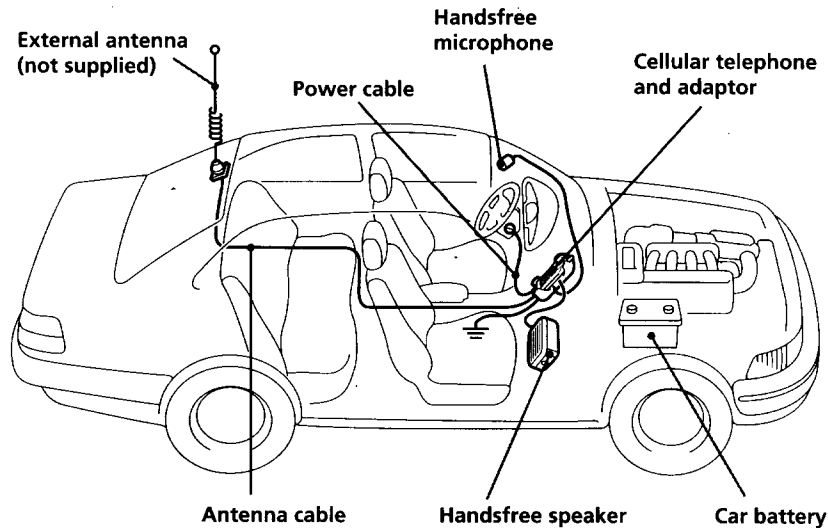
- Choose the mounting location carefully so that the handsfree kit will not interfere with normal driving operations, and will not be exposed to direct sunlight or to hot air from the vehicle's heater.
- The handsfree kit should not be installed directly over any type of wire (e.g., electrical or connecting wire) or pipeline (e.g., for fuel, oil, air conditioning, etc.).
- The QN-888HFK handsfree kit is designed for vehicles with a negative ground 12 V electrical system only. For vehicles with a negative ground 24 V electrical system, use a voltage regulator.
- After installation, be sure that all the components are secured and do not move while the vehicle is in motion or as it comes to a stop.
- After installation, check that the power cable and external antenna cable do not interfere with the opening and closing of the doors and trunk, or with the movement of the sun visor, steering wheel, brakes, gear shift, or seats. Also, make sure that all of the cables operate properly.
- Use the specified fuse for wiring.
- If you are uncertain about how to install your cellular telephone, please consult your nearest Sony dealer.

Before Installation

Where to Install

It is recommended that you have a trained professional install the handsfree kit in your vehicle. If you install the kit yourself, position the components in the vehicle so that they will not interfere with any driving operations. When you install the handsfree kit, depending on installation conditions.

Positioning of Components

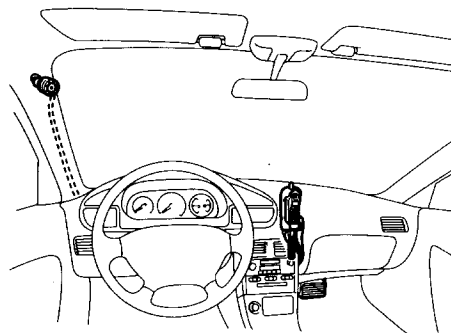


Handsfree adaptor:

- Install so that driving operations are not interfered with.
- Install so that you can easily pick up the phone.
- Secure with the mounting bracket or plate.

Handsfree microphone:

- Attach to the vehicle's door post trim above the driver.
- Connect the cable to the handsfree adaptor.



Handsfree speaker:

- Install so that driving operations are not interfered with.
- Connect the cable to the handsfree adaptor.

Note

We recommend that for best performance the handsfree speaker be located approximately 20 inches (50 cm) or more from the handsfree microphone.

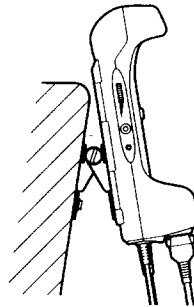
Installing the Handsfree Adaptor

Install the handsfree adaptor so that operation is easy and driving is not obstructed. In addition, install so that cables do not obstruct driving.

Install the adaptor in either of the following two ways.

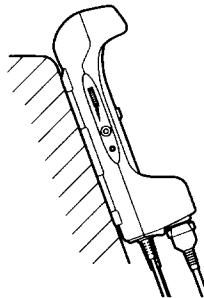
Installing the adaptor using the mounting bracket (see page 18)

The angle of the adaptor can be adjusted.



Installing the adaptor directly using the plate (see page 22)

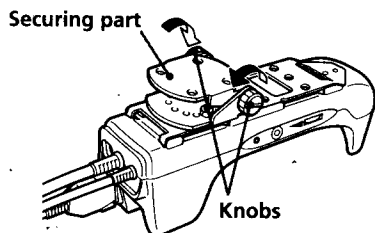
First, remove the bracket from the plate.



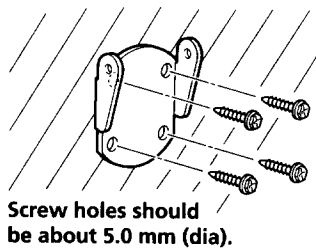
Installing the Adaptor Using the Mounting Bracket

For information on changing the attaching position and angle of the mounting bracket, see page 18 (right) and page 19.

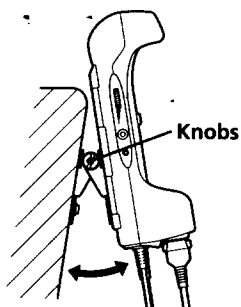
- 1 Unscrew the knobs on both sides of the mounting bracket to detach the securing part.



- 2 Attach the securing part of the bracket to the vehicle using the screws (4 x 16, supplied).



- 3 To attach the adaptor, loosely attach the securing part to the rest of the bracket.

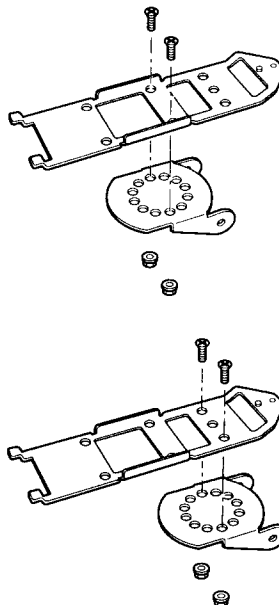


Adjust the tilt of the adaptor, then tighten the knobs

To change the attaching position of the bracket

You can attach the bracket to the plate in three positions.

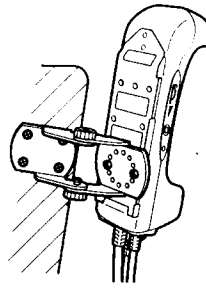
First, remove the bracket (see page 21) and select one of the three positions for the bracket.



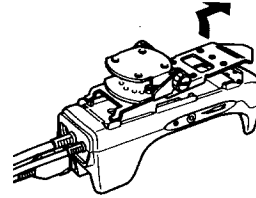
To change the angle of the adaptor

You can select an angle for the bracket on the plate by securing the machine screws using the different holes.

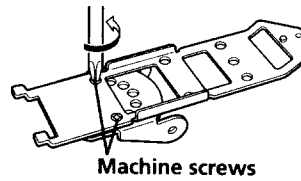
You can change the position of the securing part after removing the plate.



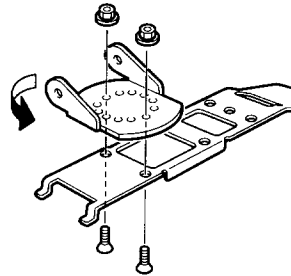
- 1** Remove the plate from the adaptor.
Refer to "To remove the plate" (see page 20).



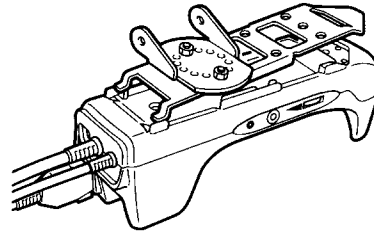
- 2** Unscrew the two machine screws (M3×8) that attach the securing part of the bracket to the plate.



- 3** Change the angle of the securing part of the bracket, then secure with the two machine screws.



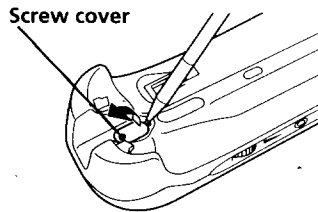
- 4** Attach the plate to the adaptor.
Refer to "To attach the plate" (see page 20).



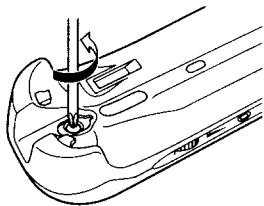
Removing/Attaching the Plate

To remove the plate

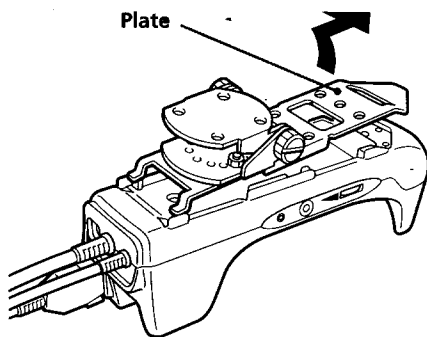
- 1 Remove the screw cover using a pin or similar instrument.



- 2 Turn the screw counterclockwise with a Phillips-head screwdriver until the plate is detached.

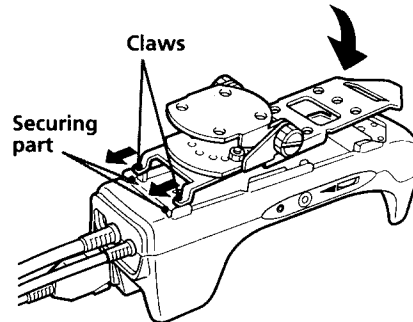


- 3 Lift up the plate and unlatch the two claws from the securing part.

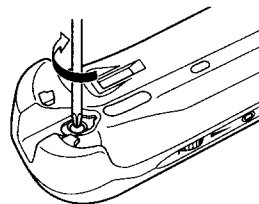


To attach the plate

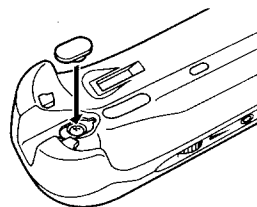
- 1 Latch the two claws of the plate to the rear side of the securing part and secure them.



- 2 Turn the front screw clockwise with a Phillips-head screwdriver until the plate is secured.

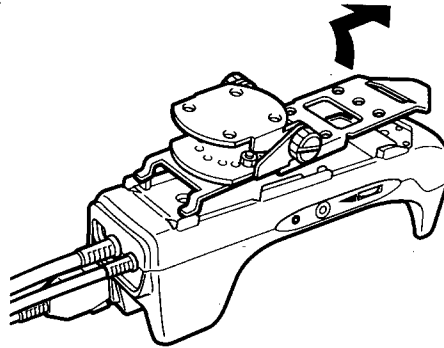


- 3 Attach the screw cover to the screw.

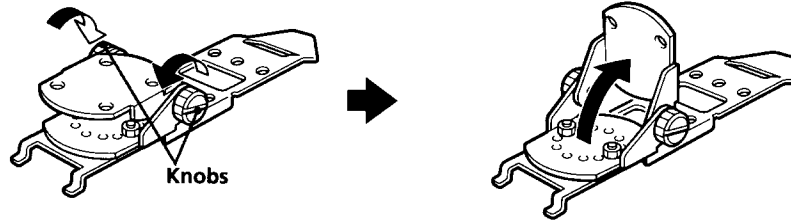


Removing the Mounting Bracket

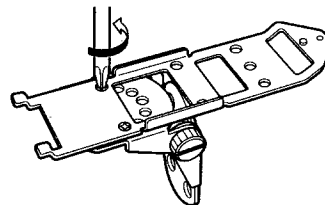
- 1 Remove the plate from the adaptor.
Refer to "To remove the plate" (see page 20).



- 2 Loosen knobs on both sides of the mounting bracket and lift the securing part.

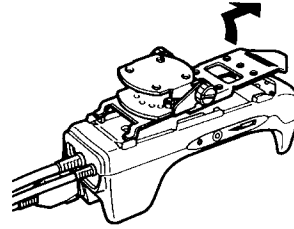


- 3 Unscrew the screws which secure the mounting bracket to the plate using a Phillips-head screwdriver.

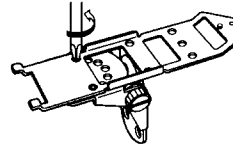


Installing the Adaptor Directly Using the Plate

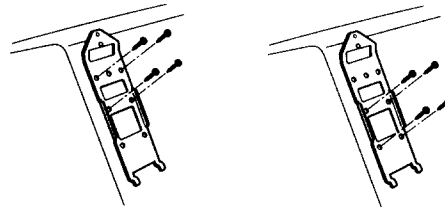
- 1** Remove the plate from the adaptor.
Refer to "To remove the plate" (see page 20).



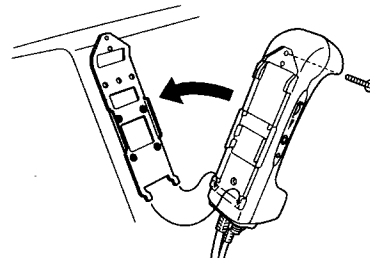
- 2** Remove the bracket from the plate.
Refer to "Removing the Mounting Bracket" (see page 21).



- 3** Attach the plate with the four tapping screws (4 × 16, supplied) using the two center holes and two top or bottom holes.



- 4** Attach the adaptor to the plate.
Refer to "To attach the plate" (see page 20).



Connecting the Handsfree Kit

Precautions for Connection

- The QN-888HFK is designed only for vehicles with a negative ground 12 V electrical system.
- Turn off the ignition.
- Before making electrical connections for the phone, disconnect the car battery to prevent a possible short circuit.
- Connect the green and red power input wires only after all other wires have been connected.
- Do not cut the power cable.
- Make firm connections.

Make the following connections

- (1) Wires of power cable to the vehicle:
 - If the vehicle ignition has an ACC position:
 - Black wire (GND) to a metallic part of the vehicle.
 - Skyblue wire (EXT MUTED: Mutes the audio sound automatically when making / receiving calls) to the audio system if applicable.
 - Green wire to the ACC position.
 - Red wire (13.2 V) to the positive terminal of the car battery.
 - If the vehicle ignition does not have an ACC position:
 - Black wire (GND) to a metallic part of the vehicle.
 - Skyblue wire (EXT MUTED) to the audio system if applicable.
 - Green wire to the ON position of the ignition.
 - Red wire (13.2 V) to the positive terminal of the car battery.
- (2) Connectors for the speaker and microphone (connect male to female).
- (3) TNC connector for an external antenna (not supplied).
- (4) Curled cord connector to the cellular phone.

Notes on connecting EXT MUTED (Skyblue wire)

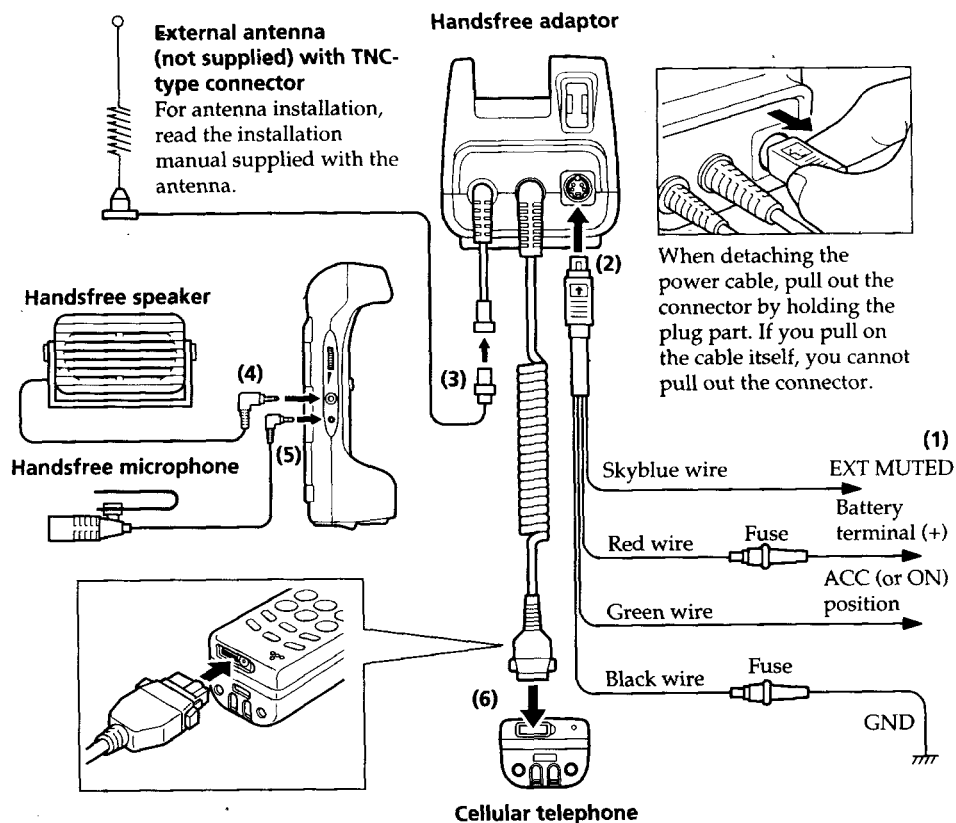
- An impedance of less than 200 ohms results when EXT MUTED is on (during calls).
- The circuit becomes open and an impedance of greater than 100 kilohms results when EXT MUTED is off (during standby).

Caution

Exceeding the below values results in the protection circuit operating and switching off this function.

- Maximum input voltage is 16.0 V
- Maximum input current is 60 mA

Connection Diagram



Notes on cable routing

- If possible, use existing slots and channels in the vehicle for connection.
- Route the cables so that they will not get tangled or pinched.
- Route the cables so that they will not catch on your feet.
- Route the cables so that they will not cause electrical interference.
- Be sure that the cables will not interfere with the movement of seats, pedals, emergency brakes, etc.
- Be sure that the cables will not get damaged when you move the seats.