ICOM INSTRUCTIONS

VHF MOBILE TRANSCEIVER
IC-F5010 Series
UHF MOBILE TRANSCEIVER
IC-F6010 Series

Thank you for choosing this Icom product.
READ ALL INSTRUCTIONS carefully and completely before using this product.

IMPORTANT

This instruction manual contains important operating instructions for the following models:
- VHF MOBILE TRANSCEIVERS
  IC-F5011, IC-F5012, IC-F5013, and IC-F5013H
- UHF MOBILE TRANSCEIVERS
  IC-F6011, IC-F6012, IC-F6013, and IC-F6013H

This instruction sheet includes some functions that are usable only when they are preset by your dealer. The transceiver may have other functions and operations that are not described in this instruction sheet. Ask your dealer for preset function details.

Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:
- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightning, other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom transceivers with any equipment that is not manufactured or approved by Icom.

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EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

ABOUT CE AND DOC

Hereby, Icom Inc. declares that the versions of IC-F5012 and IC-F6012 which have the "CE" symbol on the product, comply with the essential requirements of the Radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address:
https://www.icomjapan.com/support/

DISPOSAL

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.

About E-marking: Detailed installation notes for Icom mobile transceivers to be fitted into vehicles are available. Please contact your Icom dealer or distributor.

ABOUT UKCA DOC

To obtain the UKCA Declaration of Conformity, please contact Icom UK Limited by email at info@icomuk.co.uk or alternatively call + 44(0) 1227 741741.

PRECAUTIONS

⚠ **WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠ **WARNING! NEVER** operate the transceiver during a lightning storm. It may result in an electric shock, cause a fire or damage the transceiver. Always disconnect the power source and antenna before a storm.

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V battery. This could damage the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver might be damaged.

⚠ **WARNING! NEVER** place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

CAUTION: NEVER expose the transceiver to rain, snow or any liquids.

CAUTION: Conform that all connectors and jacks are dry and clean before attachment. Exposing them to dust or water will result in serious damage to the transceiver.

NEVER place the transceiver in an insecure place to avoid inadvertent use by unauthorized persons.

DO NOT place or leave the transceiver in areas with temperatures below –25°C (–13°F) or above +55°C (+131°F) for the European version, or –30°C (–22°F) or above +60°C (+140°C) for other versions, or in areas subject to direct sunlight, such as the dashboard.

DO NOT place or leave the transceiver in direct sunlight or in areas outside of the specified temperature range: –25°C (–13°F) ~ +55°C (+131°F) for the European version, or –30°C (–22°F) ~ +60°C (+140°C) for other versions.

DO NOT operate the transceiver without running the vehicle's engine. The vehicle's battery will quickly run out when the transceiver transmits while the vehicle's engine is OFF.

DO NOT place or leave the transceiver in excessively dusty environments.

DO NOT place the transceiver against walls. Otherwise heat dissipation will be obstructed.

DO NOT use harsh solvents such as Benzine or alcohol when cleaning, as they damage the transceiver's surfaces.

Use the specified microphone only. Other microphones have different pin assignments and may damage the radio.

BE CAREFUL! The transceiver will become hot when operating continuously for long periods of time.

For European versions

CAUTION: Hot surfaces. **DO NOT** touch the transceiver's surface after continuously transmitting for long periods of time. The transceiver's chassis radiates heat, and it will become hot to protect the power amplifier unit from overheating. Touching it may cause a burn.

DÉFINITIONS EXPLICITES

TERME	DÉFINITION
⚠ AVERTISSEMENT !	Risque de blessures corporelles, d'incendie ou de choc électrique.
MISE EN GARDE	Risque de dégât matériel.
REMARQUE	La non prise en compte peut entraîner des désagréments. Absence de risque de blessures corporelles, d'incendie ou de choc électrique.

PRÉCAUTIONS

⚠ **AVERTISSEMENT! NE JAMAIS** connecter l'émetteur-récepteur a une alimentation CA au risque de provoquer un incendie ou un choc electrique.

⚠ **AVERTISSEMENT! NE JAMAIS** utiliser l'émetteur-récepteur durant un orage. Cela risquerait de provoquer un choc électrique, un incendie ou d'endommager l'émetteur-récepteur. Toujours débrancher la source d'alimentation et l'antenne avant une tempête.

⚠ **AVERTISSEMENT! NE JAMAIS** brancher l'émetteur-récepteur sur une source d'alimentation de plus de 16 V CC. **NE JAMAIS** émettre lorsque le coupleur est activé (ON), alors qu'aucune antenne n'est raccordée, au risque d'endommager gravement l'émetteur-récepteur.

⚠ **AVERTISSEMENT! NE JAMAIS** couper le câble d'alimentation CC entre la prise CC à l'arrière de l'émetteur-récepteur et le porte fusible. L'émetteur-récepteur peut être endommagé par la suite en cas de connexion inappropriée.

⚠ **AVERTISSEMENT! NE JAMAIS** placer l'émetteur-récepteur à un emplacement où il pourrait gêner le fonctionnement normal du navire ou provoquer des blessures corporelles.

ATTENTION: NE JAMAIS exposer l'émetteur-récepteur à la pluie, à la neige ou à tout autre liquide.

ATTENTION: Confirmez que tous les connecteurs et les prises sont secs et propres avant la fixation. Les exposer à la poussière ou l'eau se traduira par de graves dommages à l'émetteur-récepteur.

NE placez **JAMAIS** l'émetteur-récepteur dans un endroit non sécurisé pour éviter toute utilisation par des personnes non autorisées.

NE PAS utiliser ou placer l'émetteur-récepteur dans des zones où la temperature est inférieure à –25°C (–13°F) ou supérieure à +55°C (+131°F) pour la version européenne, ou inférieure à –30°C (–22°F) ou supérieure à +60°C (+140°F) pour les autres versions, ou dans des zones soumises au rayonnement solaire direct, telles le tableau de bord.

NE PAS utiliser un emetteur-recepteur embarque avec le moteur du vehicule arrete. La batterie du véhicule sera rapidement épuisé lorsque la radio transmet lorsque le moteur du véhicule est éteint.

NE PAS placer l'émetteur-récepteur dans un environnement excessivement poussiereux ou en plein soleil.

NE PAS placer l'émetteur-récepteur contre un mur pour ne pas gêner la dispersion de la chaleur.

NE PAS utiliser de solvants agressifs tels que l'essence ou l'alcool pour nettoyer le l'émetteur-récepteur, en raison des risques d'endommager la surface du l'émetteur-récepteur.

Utiliser exclusivement un microphone Icom (fourni d'origine ou en option). La repartition des broches des microphones des autres fabricants est différente et leur connexion à l'IC-F5011/IC-F5012/IC-F5013/IC-F5013H/IC-F6011/IC-F6012/IC-F6013/IC-F6013H peut endommager l'émetteur-récepteur. Placer l'émetteur-récepteur hors de portée des enfants pour éviter toute utilisation inopinée.

FCC INFORMATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modifications to this transceiver, not expressly approved by Icom Inc., could void your authority to operate this transceiver under FCC regulations.

SAFETY TRAINING INFORMATION



Your Icom radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "Occupational Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the "General Population" in an uncontrolled environment.

• For compliance with FCC and Industry Canada RF Exposure Requirements, the transmitter antenna installation shall comply with the following two conditions:

1. The transmitter antenna gain shall not exceed 0 dBi.

2. IC-F5011/IC-F5013H:
   The antenna is required to be located outside of a vehicle and kept at a distance of 57 centimeters or more between the transmitting antenna of this device and any persons during operation.
   For small vehicle as worst case, the antenna shall be located on the roof top at any place on the centre line along the vehicle in order to achieve 57 centimeters separation distance. In order to ensure this distance is met, the installation of the antenna must be mounted at least 57 centimeters away from the nearest edge of the vehicle in order to protect against exposure to bystanders.
   IC-F6011/IC-F6013H:
   The antenna is required to be located outside of a vehicle and kept at a distance of 41 centimeters or more between the transmitting antenna of this device and any persons during operation.
   For small vehicle as worst case, the antenna shall be located on the roof top at any place on the centre line along the vehicle in order to achieve 41 centimeters separation distance. In order to ensure this distance is met, the installation of the antenna must be mounted at least 41 centimeters away from the nearest edge of the vehicle in order to protect against exposure to bystanders.

3. IC-F5011/IC-F5013H:
   Transmit only when people outside the vehicle are at least the recommended minimum distance of 136 centimeters away from the properly installed antenna. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements in the applicable RF exposure compliance standards.
   IC-F6011/IC-F6013H:
   Transmit only when people outside the vehicle are at least the recommended minimum distance of 117 centimeters away from the properly installed antenna. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements in the applicable RF exposure compliance standards.



To ensure that your expose to RF electromagnetic energy is within the FCC and IC allowable limits for occupational use, always adhere to the following guidelines:

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC and IC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.
- **DO NOT** transmit for more than 50% of the total radio use time ("50% duty cycle"). Transmitting more than 50% of the time can cause FCC and IC RF exposure compliance requirements to be exceeded. The radio is transmitting when the status indicator lights red. You can cause the radio to transmit by pushing the "PTT" switch.
- **Electromagnetic Interference/Compatibility**
  During transmissions, your Icom radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

INFORMATION FCC

Cet équipement a été testé et reconnu conforme aux limites fixées pour un appareil numérique de classe A, conformément au point 15 de la réglementation FCC. Ces limites assurent une protection raisonnable contre les interférences nuisibles lorsque l'équipement est utilisé dans un environnement commercial. Cet équipement génère une énergie de radio fréquence, utilise et rayonner et s'il n'est pas installé et utilisé conformément au manuel d'instruction, peut causer des interférences nuisibles aux communications radio. Le fonctionnement de cet équipement dans une zone résidentielle est susceptible de causer des interférences nuisibles lorsque l'utilisateur doit corriger les interférences à ses propres frais.

MISE EN GARDE: Tout changement ou modification, non expressément approuvé par Icom Inc., peut annuler l'autorisation de l'utilisateur à utiliser cet appareil conformément à la réglementation FCC.

INFORMATION SUR LA FORMATION À LA SÉCURITÉ



Votre radio Icom produit une énergie électromagnétique de radiofréquences (RF), en mode de transmission. Cette radio est conçue pour un «usage professionnel seulement» et classée comme tel, ce qui signifie qu'elle doit être utilisée uniquement dans le cadre d'un travail par des personnes conscientes des dangers et des mesures visant à minimiser ces dangers. Elle N'EST PAS conçue pour une «utilisation grand public», dans un environnement non contrôlé.
• Afin de satisfaire aux exigences de la FCC et d'Industrie Canada en matière d'exposition aux RF, il est nécessaire que l'antenne soit installée conformément aux deux conditions suivantes:

1. Le gain de l'antenne du radio émetteur ne doit pas dépasser 0 dBi.

2. IC-F5011/IC-F5013H:
   Il faut que l'antenne émettrice de cet appareil soit placée à l'extérieur d'un véhicule et tenue éloignée d'au moins 57 centimètres de toute personne pendant le fonctionnement. Dans le pire des cas, pour un petit véhicule, l'antenne doit être placée sur le toit, n'importe où dans l'axe central du véhicule, afin de respecter une distance de 57 cm du bord le plus rapproché du véhicule et ainsi éviter que les personnes présentes soient exposées.
   IC-F6011/IC-F6013H:
   Il faut que l'antenne émettrice de cet appareil soit placée à l'extérieur d'un véhicule et tenue éloignée d'au moins 41 centimètres de toute personne pendant le fonctionnement. Dans le pire des cas, pour un petit véhicule, l'antenne doit être placée sur le toit, n'importe où dans l'axe central du véhicule, afin de respecter une distance de 41 cm du bord le plus rapproché du véhicule et ainsi éviter que les personnes présentes soient exposées.

3. IC-F5011/IC-F5013H:
   Émettre uniquement lorsque les personnes à l'extérieur du véhicule se trouvent à au moins la distance minimale recommandée de 136 cm de l'antenne correctement installée. Cette distance de sécurité assurera que les personnes soient placées suffisamment loin d'une antenne correctement fixée à l'extérieur pour satisfaire aux exigences en matière d'exposition aux RF, en vertu des normes de conformité applicables.
   IC-F6011/IC-F6013H:
   Émettre uniquement lorsque les personnes à l'extérieur du véhicule se trouvent à au moins la distance minimale recommandée de 117 cm de l'antenne correctement installée. Cette distance de sécurité assurera que les personnes soient placées suffisamment loin d'une antenne correctement fixée à l'extérieur pour satisfaire aux exigences en matière d'exposition aux RF, en vertu des normes de conformité applicables.



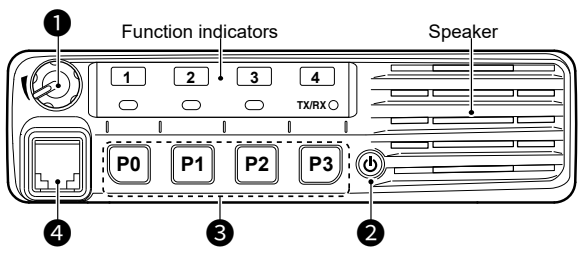
Afin de vous assurer que votre exposition à une énergie électromagnétique de RF se situe dans les limites permises par la FCC pour une utilisation grand public, veuillez en tout temps respecter les directives suivantes:

- **NE PAS** faire fonctionner la radio sans qu'une antenne appropriée y soit fixée, car ceci risque d'endommager la radio et causer une exposition supérieure aux limites établies par la FCC. L'antenne appropriée est celle qui est fournie avec cette radio par le fabricant ou une antenne spécialement autorisée par le fabricant pour être utilisée avec cette radio.
- **NE PAS** émettre pendant plus de 50% du temps total d'utilisation de l'appareil (« 50% du facteur d'utilisation »). Émettre pendant plus de 50% du temps total d'utilisation peut causer une exposition aux RF supérieure aux limites établies par la FCC. Lorsque le voyant DEL rouge s'allume, cette radio est en train d'émettre. La radio émettra si vous appuyez sur le bouton du microphone.
- **Interférence électromagnétique et compatibilité**
  En mode de transmission, votre radio Icom produit de l'énergie de RF qui peut provoquer des interférences avec d'autres appareils ou systèmes. Pour éviter de telles interférences, mettez la radio hors tension dans les secteurs où une signalisation l'exige. NE PAS faire fonctionner l'émetteur dans des secteurs sensibles au rayonnement électromagnétique tels que les hôpitaux, les aéronefs et les sites de dynamitage.

PANEL DESCRIPTION

NOTE: Different functions may have been assigned to the keys by your dealer, except for the Power key.

◇ Front panel



❶ AF VOLUME CONTROL KNOB [VOL]
Rotate the knob to adjust the audio output level.
ⓘ Minimum audio level is preset.

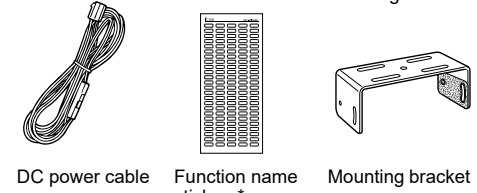
❷ POWER KEY [⏻]
Push to turn the transceiver ON or OFF.
ⓘ The following optional functions are available at power ON:
- Automatic scan start
- Password prompt

❸ DEALER-PROGRAMMABLE KEYS
Required functions can be independently programmed by your dealer.

❹ MICROPHONE CONNECTOR
Connect the supplied or optional microphone.

CAUTION: DO NOT connect non-specified microphones. The pin assignments may be different and may damage the transceiver.

◇ Function indicators



❶ CHANNEL INDICATOR
- Indicates the operating channel.
- Blinks when receiving a signal during a scan.
- All indicators blink while entering the start up password.

❷ TX/RX INDICATOR
- Lights red while transmitting.
- Lights green while the channel is busy (receiving).
- Blinks orange when the matching 2-tone or 5-tone call is received.
- Alternately blinks green and red when a programming error has occurred.

❸ ACTIVATED KEY INDICATORS (P0/P1/P2)
Lights when a assgined key function is activated.

NOTE: When the supplied DC voltage is high, all indicators blink. Check the DC voltage.

◇ Microphone

The supplied or optional microphone has a PTT switch and a hanger hook.
ⓘ The following functions are available when the microphone is ON or OFF hook, depending on the presetting:
- Automatic scan starts when you put it ON hook.
- Scan is cancelled when you take it OFF hook.
- Scan is paused when you take it OFF hook.
- Automatically selects the Priority channel when you take it OFF hook.
- Sets to the Inaudible mode (mute state) when you put it ON hook.
- Sets to the Audible mode (unmute state) when you take it OFF hook.

SUPPLIED ACCESSORIES

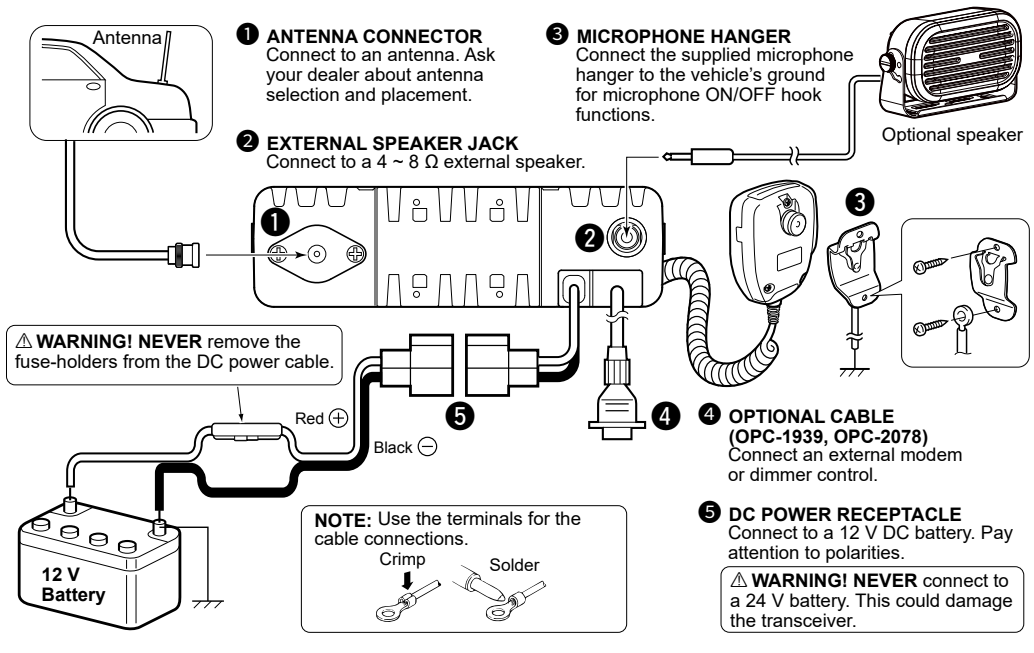
* Used for labelling the programmable function keys according to their assinged functions.

NOTE: Some accessories are not supplied, or the shape is different, depending on the transceiver version.

ANTENNA

A key element in the performance of any communication systems is the antenna. Contact your dealer for information regarding antennas and how to install them.

REAR PANEL CONNECTION



BASIC OPERATION

◇ Turning ON the transceiver

1. Push [⏻] to turn ON the transceiver.
2. If the transceiver is preset for a start up password, enter the digit codes as directed by your dealer.
   ⓘ The keys shown below can be used for password entry. The transceiver detects numbers in the same block as identical. Therefore "01234" and "56789" are the same.

KEY	P0	P1	P2	P3	⏻
NUMBER	0 5	1 6	2 7	3 8	4 9

NOTE: If all channel indicators still blink after entering 4 digits, the entered code number may be incorrect. Turn OFF the transceiver and re-enter your password.

◇ Selecting a channel

There are several methods to select channels, and they may differ, depending on the presetting.

To select an operating channel:
- Push [CH Up] or [CH Down].
- Push one of [MR-CH 1] ~ [MR-CH 4].

AUTOMATIC SCAN TYPE:
Channel setting is not necessary for this type. When turning ON the transceiver, it automatically starts scanning, and stops when a signal is detected.

◇ Receiving and transmitting

Receiving:
1. Push [CH Up] or [CH Down] to select a channel.
2. When receiving a call, rotate [VOL] to adjust the audio output level to a comfortable listening level.

NOTE: Depending on the presetting, the transceiver automatically transmits the microphone audio for the preset period of time, when a matching RX code signal is received.

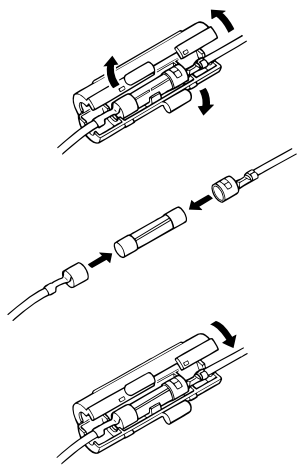
Transmitting:
1. Wait for the channel to become clear to avoid interference.
   ⓘ The channel is busy when the busy icon is displayed.
2. Take the microphone OFF from the hook.
   - The Audible mode is selected.
   - A priority channel may be automatically selected.
3. While holding down [PTT], speak at your normal voice level.
4. Release [PTT] to receive.

IMPORTANT: To maximize the readability of your signal:
1. After pushing [PTT], pause briefly before you start speaking.
2. Hold the microphone 5 to 10 cm (2 to 4 inches) from your mouth, then speak at your normal voice level.

FUSE REPLACEMENT

Fuses are installed in the supplied DC power cable. If a fuse blows, track down the source of the problem, repair it, and then replace the damaged fuse with a new rated one.
ⓘ Fuse rating: 250 V 10 A
or 20 A (depending on the version)

NOTE: Use only specified fuses (10 A or 20 A).
25 W transceiver: 10 A, 45 W or 50 W transceivers: 20 A



Fuse rating explanation

Fuse coding: FUSE 250 V 10 A
Fuse voltage rating:250 Volts
Fuse current rating: 10 Amperes

CLEANING

If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

OPTIONS

- **OPC-1132A, OPC-347** DC POWER CABLE
  2 fuse holders are attached. USE only a 20 A fuse.
  OPC-1132A: 3 m (9.8 ft)
  OPC-347: 7 m (23 ft)
- **OPC-1939, OPC-2078** ACC CABLE
  Connects to an external terminal.
  OPC-1939: D-sub 15-pin, an external level converter (user supplied) is required.
  OPC-2078: D-sub 25-pin, built-in level converter
- **HM-152, HM-152T, HM-148G, HM-148T,** HAND MICROPHONE
  HM-152: Hand microphone
  HM-152T: DTMF microphone
  HM-148G: Self ground heavy duty microphone
  HM-148T: Self ground heavy duty DTMF microphone
- **HM-249** HANDSFREE MICROPHONE
- **SM-26** DESKTOP MICROPHONE
- **SP-30, SP-35, SP-35L** EXTERNAL SPEAKER
  Input impedance: 4 Ω
  SP-30: Rated input: 20 W, Maximum input: 30 W
  SP-35, **SP-35L**: Rated input: 5 W, Maximum input: 7 W
- **UT-108R** DTMF DECODER UNIT
  Provides pager and code squelch capabilities.
- **UT-109R/UT-110R** VOICE SCRAMBLER UNIT
  Non-rolling type (UT-109R) and Rolling type (UT-110R) voice scrambler units provides higher communication security.

ⓘ Some options may not be available in some countries. Ask your dealer for details.

FREQUENCY RANGE AND OUTPUT POWER

(For the European versions)

Model	Frequency Range	Output Power
VHF Mobile Transceiver IC-F5012	136–174 MHz	25 W
UHF Mobile Transceiver IC-F6012	400–470 MHz	25 W

- Channel spacing:12.5 kHz/20 kHz/25 kHz