

**ICOM**

**60<sup>th</sup>**  
Anniversary

# Marine Products

European Edition





# VHF Handheld Transceivers



AIS screen



DISTRESS button



## AIS Traffic Information, Now in Your Hand

VHF MARINE TRANSCEIVER WITH DSC & AIS  
**IC-M94DE**

### FEATURES

- Built-in AIS and DSC combination adds further assurance for safety at sea
- 6 W RF output power
- 1500 mW powerful audio output
- Icom common UI offers intuitive operation
- Simplified navigation function and MOB
- 10 hours (approx.) of long operating time
- Float'n Flash™

• Active noise canceling technology • IPX7 waterproof  
 • Integrated GNSS • 50 waypoint memories • Dual-watch and Tri-watch functions • Favorite channel function • AquaQuake™ prevents audio degradation from a water-logged speaker • Supports 4-digit channels  
 \* Available functions may be subject to local regulations

### Supplied Accessories

- BP-306 battery pack • BC-251 battery charger
- AC adapter\* • MB-133 belt clip
- FA-SC59V antenna • Hand strap

\* May differ depending on the transceiver version.



## Slim, Stylish, Powerful VHF with Professional Features

VHF MARINE TRANSCEIVERS  
**IC-M73EURO PLUS**  
**IC-M73EURO**

### FEATURES

- Last call voice recording\*
- Active noise cancelling technology\*
- Bass Boost Function\*
  - IPX8 advanced waterproofing
  - 6 W RF output, 700 mW loud audio
  - 17 hours of long lasting operating time with BP-245H

\* available in IC-M73EURO PLUS version only.

• Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • AquaQuake™ • Auto power save • Priority and normal scan • Tag scan and favorite channel function • Optional speaker-microphones, HM-167/HM-202 • Supports 4-digit channels  
 \* Available functions may be subject to local regulations.

### Supplied Accessories

- BP-245H battery pack • BC-210 battery charger
- BC-123SE\* AC adapter • MB-103 belt clip
- FA-S64V\* antenna • CP-25H\* cigarette lighter cable
- Hand strap

\* May differ or not supplied, depending on the transceiver version.



## Buoyant 6 Watt VHF with up to 12 Hours of Operation

VHF MARINE TRANSCEIVER  
**IC-M37E**

### FEATURES

- Large keys and easy-to-grip design
- 6 W RF output power
- 700 mW audio output
- More than 12 hours of long-lasting operating time with BP-296
- Channel history function stores the last five channels
- Float'n Flash™

• IP57 dust-protection and waterproof protection • Low Battery Alert function • Voice Loud and Mute function • Dualwatch and Tri-watch functions • Instant access to Ch 16 and call channel • AquaQuake™ • Favorite channel function • Optional speaker-microphone, HM-213 • Supports 4-digit channels  
 \* Available functions may be subject to local regulations.

### Supplied Accessories

- BP-296 battery pack • BC-235 desktop charger
- BC-217SE\* AC adapter • MB-133 belt clip
- FA-SC59V antenna • Hand strap

\* May differ or not supplied, depending on the transceiver version.



# VHF Handheld Transceivers



Marine Blue

Black

## Buoyant, Lightweight and Smart Features

### VHF MARINE TRANSCEIVER IC-M25EURO

#### FEATURES

- Slim, lightweight with high performance
- Large LCD and intuitive user interface
- USB charging (Micro-B type)
- Float'n Flash™
- 11 hours of long operating time
- 5 W RF output, 700 mW clear audio
- IPX7 waterproof protection

• Dual watch and Tri-watch function • Instant access to Ch 16 and call channel • Favorite channel function • Auto scan function\* • AquaQuake™ • 2-step power save • Built-in 3 hours rapid charger • Optional speaker-microphone, HM-213 • Supports 4-digit channels

\* Available functions may be subject to local regulations.

#### Supplied Accessories

- AC adapter and USB cable\* • MB-133 belt clip
- Antenna • Hand strap • Battery cell is built-in

\* May differ or not supplied, depending on the transceiver version.

## Compact VHF Marine with 100 PMR Channels

### VHF MARINE TRANSCEIVER IC-M85E

#### FEATURES

- Compact and lightweight
- 100 programmable PMR channels\*  
\* Appropriate licence is required.
- Automated emergency alarm with Man Down, Lone Worker and MOB Alarm functions
- 700 mW loud audio
- IP67 dust-tight and waterproof

• Built-in voice scrambler compatible with UT-112/A (Legal use depends on country) • Built-in CTCSS and DTCS tones • Dual watch and Tri-watch functions • Instant access to Ch 16 and call channel • AquaQuake™ • Tag scan and favorite channel function • 21 hours of long battery life (TX:RX:Standby=5:5:90.) • Self check function • MIL-STD rugged construction • Internal VOX capability for hands-free operation • Variety of audio accessories • Supports 4-digit channels

\* Available functions may be subject to local regulations.

#### Supplied Accessories

- BP-294 battery pack • BC-227 rapid charger • BC-123SE\* AC adapter
- MBB-3 belt clip • FA-SC58V antenna • Hand strap

\* May differ or not supplied, depending on the transceiver version.



# Intrinsically Safe



## ATEX Intrinsically Safe Marine Radio

### VHF MARINE TRANSCEIVER IC-M87ATEX (1 W)

#### FEATURES

- ATEX Certifications  
Gas: II 2G Ex ib IIA T3 Gb  
(Tamb=-20°C to +55°C)
- Tough and compact body
- Marine and land channel groups
- 22 programmable land channels
- Built-in voice scrambler\*

• IPX7 waterproof protection • Dual watch and Tri-watch functions • Instant access to Ch. 16 and call channel • Auto power save • Auto scan function • Tag scan function • Optional speaker-microphone, HM-138 • Supports 4-digit channels

\* May differ depending on the transceiver version.

#### Supplied Accessories

- BP-227AX battery pack • BC-152N battery charger
- BC-147SE\* AC adapter • MB-86 belt clip

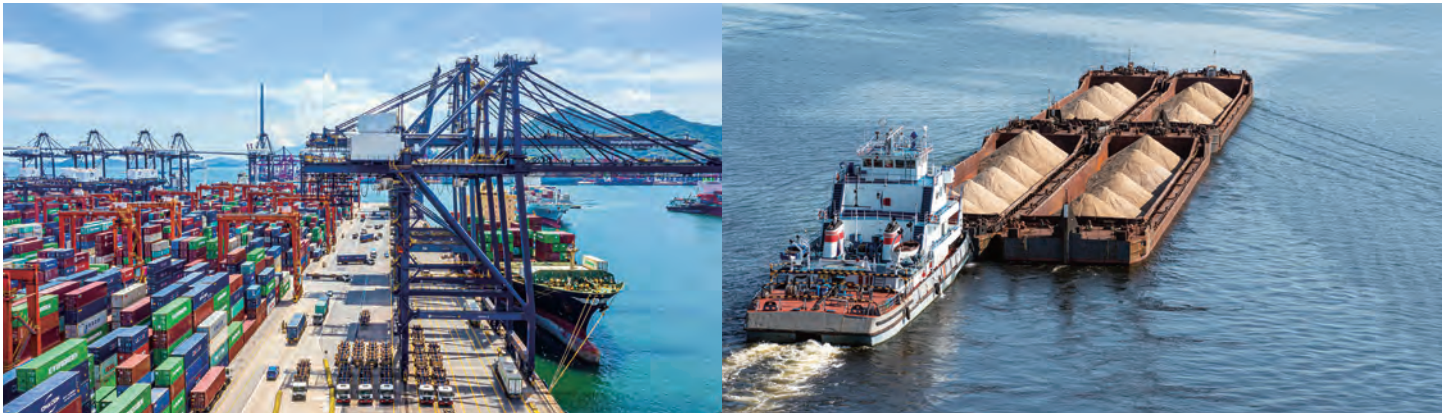
\* DO NOT use the transceiver with any other equipment not specified in the option list (Pages 13-14).

\* Please ask your dealer to ensure the ATEX ratings are acceptable for the intended place of use.



# VHF/LTE Hybrid Handheld Transceiver

## VHF Marine and LTE Hybrid for Offshore and Onshore Communication

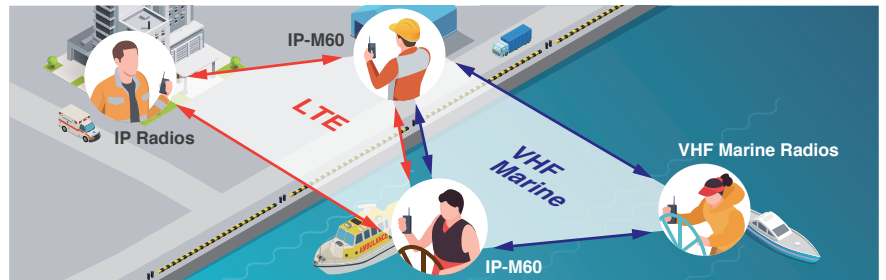


VHF MARINE/LTE HYBRID IP TRANSCEIVER

### IP-M60

#### FEATURES

IP-M60 is a Dual mode hybrid transceiver that provides nationwide coverage\*1 over LTE networks and equivalent functions of Icom's handheld VHF marine transceivers



- Receives both the communications from a LTE radio group and a VHF marine channel at the same time (audio mixed)
- Easy to answer calls with independent PTT buttons (Main/Sub) for VHF marine or LTE
- Main PTT can also work as the universal answer-back for a quick response
- In addition to these dual mode functions, transmit mode selection (VHF marine/LTE) depending on GPS location can be programmed
- The Relay function\*2 transfers the voice to the other mode. It extends coverage range of communication.

#### Relay Function LTE ↔ IP-M60 ↔ VHF Marine



- Wireless operation with built-in Bluetooth® capability
- Push an emergency button\*3 to alert in the LTE talk group
- Simultaneous TalkListen™ in LTE mode
- IP67 dust-tight and waterproof protection
- LTE mode is compatible with Icom IP transceivers\*4

**Talk Listen**  
Simultaneous

\*1 Coverage area depends the LTE network provider.

\*2 The Relay function may be prohibited in some countries.

Please check the legal requirements in your country before using this function.

\*3 Emergency button is for LTE mode function, not for the VHF marine mode.

\*4 Compatible products are IP501H, IP503H, IP501M, IP730D, IP740D, etc.



HYBRID  
LTE X Marine VHF



# VHF Fixed Mount Transceivers

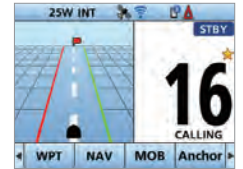
## Integrated Class-D DSC VHF Marine Radio with Smartphone App Control

VHF MARINE TRANSCEIVER

# IC-M510E EVO



Stand-by screen



Navigation screen



Night mode screen

### FEATURES

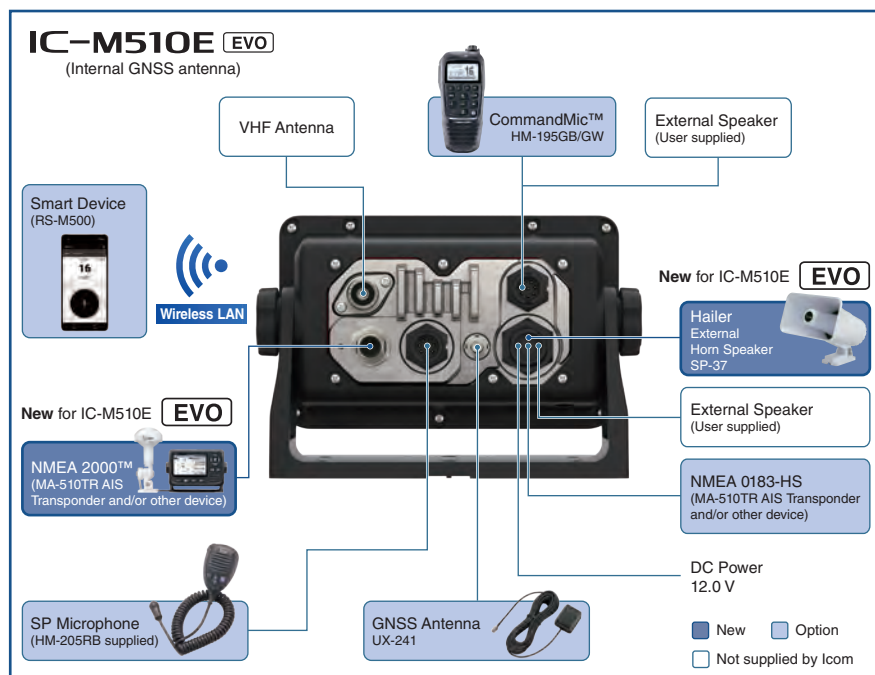
- Built-in NMEA 2000™ connectivity and Two-way Hailer/RX Hailer function
- Up to 3 smart devices\*1 can connect wirelessly as microphones and intercoms with some simple function control available
- Sleek and slim design suit for either panel or trunnion mounting
- Class leading 15 W (typical) audio output (external speaker)
- Wide viewing angle colour TFT LCD
- Integrated AIS receiver and AIS plotter\*2 (AIS data can be input/output through NMEA 2000™ or NMEA 0183-HS.)

- Simplified Navigation function to a specified waypoint or AIS target
- Active Noise Cancelling technology
- Voice scrambler with optional UT-112A
- Integrated GNSS receiver (Automatically select internal antenna or UX-241 external antenna)
- Effortlessly switch Day and Night display modes with the DISP key
- NMEA 0183-HS (High Speed) Version 1.01 connectivity (38.4 kbps)
- IP68 dust-tight and waterproofing (1 m depth water for 60 minutes)
- Foghorn
- Dualwatch and Tri-watch functions
- Instant access to Ch 16 and Call channel
- Tag scan and favorite channel functions
- AquaQuake™ prevents audio degradation

\*1 Optional RS-M500 (for Android™/iOS™) app needs to be downloaded. DSC operation is not available with the RS-M500 app.

\*2 AIS receiver is not included depending on the transceiver version. Please ask your dealers for details.

## SYSTEM OVERVIEW



## IC-M510E

Most features are equivalent to IC-M510E EVO. NMEA 2000™ connectivity and Two-way Hailer/RX Hailer function are available with the optional wireless interface box, CT-M500.



### IC-M510E Separate Configuration





# VHF Fixed Mount Transceivers

## Premium Class D DSC VHF Radio with System Flexibility

### VHF MARINE TRANSCEIVER **IC-M605EURO**



AIS	
CLASS A	43100
CPA: 0.1nm	
TCPA: -5.4min	
SOG: 0.0kt	
COG: 313.3°	
RMG: 1.7nm	
BRG: 102.0°	

AIS plotter

TARGET LIST (93)		
MMSI/Name	RNG	BRG
DAIEMARU NO.3	3.3	154
GYOKO MARU	3.4	147
MIRAI	3.4	249
TOKUYO MARU NO21	3.9	259

AIS target list



Night mode



### FEATURES

- Wide viewing angle, high contrast 4.3 inch colour TFT LCD
- Remote control with up to three Command Head™/CommandMic™
- Integrated AIS receiver (AIS RX data can be output through NMEA 0183-HS)
- Intuitive user interface
- Class leading receiver performance (Selectivity and IMD: 80 dB typ.)
- 15 W loud audio and 30 W two-way hailer
- Built-in Class D DSC

- NMEA 2000™ and NMEA 0183-HS connectivity • Active Noise Cancelling • Last call voice recording
- Optional Voice Scrambler, UT-112A • Built-in GNSS receiver (GNSS antenna supplied)
- NMEA 0183-HS (High Speed) Version 1.01 connectivity (38.4 kbps) • IPX8 advanced waterproof (1m depth water for 60 minutes) • Fog horn • Dualwatch and Tri-watch functions • Instant access to Ch 16 and Call channel
- Tag scan and favorite channel functions • AquaQuake™ prevents audio degradation from a water-logged speaker
- Display and keypad backlighting • Supports 4-digit channels



Up to three HM-229, CommandMic™ and/or RC-M600, Command Head™ capable.

## Easy to Hear! Class D DSC Transceiver

### VHF MARINE TRANSCEIVER **IC-M423GE**



CommandMic™, HM-195 series capable



### FEATURES

- Intuitive user interface and white backlight display
- 10 W loud audio, public address and foghorn
- Optional HM-195GB/GW CommandMic™
- Built-in Class D DSC

- IPX7 waterproof • Active Noise Cancelling • Built-in GNSS receiver (GNSS antenna supplied) • RX speaker function
- Speaker-microphone, HM-205B • Supports 4-digit channels



# VHF Fixed Mount Transceivers

## Up to Three CommandMic™ Capable, Black Box Transceiver

### VHF MARINE TRANSCEIVER **IC-M510BB**



\* Above photo includes optional CommandMic™. One CommandMic™ is supplied with the IC-M510BB.

#### FEATURES

- Full remote control and intercom (up to three CommandMic™)
- DSC, DISTRESS button on the back of the CommandMic™
- Integrated AIS receiver
- NMEA 2000™ and NMEA 0183-HS connectivity
- Integrated GNSS receiver (GPS) with external GNSS antenna\*
- Active Noise Canceling for RX and TX audio
- Internal 13 W Hailer and Foghorn
- DSC remote interface to control from other device or PC (EN 300 338-8 compatible)
- Two minutes last call voice recording
- IPX7 Waterproof

\* External GPS antenna is included with the EUR version.



DISTRESS button



## Class D DSC Black Box Transceiver Up to Two CommandMic™ Capable

### VHF MARINE TRANSCEIVER **IC-M410BB**

#### FEATURES

- Full remote control and intercom (up to two CommandMic™)
- DSC, DISTRESS button on the back of the CommandMic™
- NMEA 2000™ and NMEA 0183-HS
- Integrated GNSS receiver (GPS) with external GNSS antenna\*
- Active Noise Canceling for RX and TX audio
- Internal 13 W Hailer and Foghorn
- IPX7 Waterproof

\* External GPS antenna is included with the EUR version.



\* Above photo includes optional CommandMic™. One CommandMic™ is supplied with the IC-M410BB.



# VHF Fixed Mount Transceivers

## High Performance and Compact Body

### VHF MARINE TRANSCEIVER **IC-M330GE**



Photo shows IC-M330GE black version.



Photo shows IC-M330GE white version. (Available depending on country)

#### FEATURES

- Ultra compact body (WxHxD; 156.5 x 66.5 x 88.2 mm)
- Built-in Class D DSC • Uncompromised receiver performance
- Dynamic clear audio from bass to treble
- Easy-to-read full dot-matrix display

- IPX7 waterproof • Intuitive user interface
- Built-in GNSS receiver (GNSS antenna supplied) (IC-M330GE only\*)
- Supports 4-digit channels
- \* IC-M330E (without GNSS receiver) also available depending on the country.



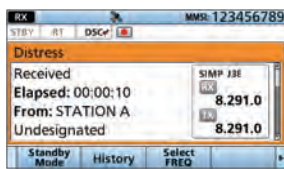
Size comparison between the IC-M330GE and IC-M423GE



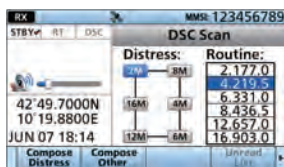
# MF/HF Marine Transceiver

## Long Range Communications Beyond the Horizon

### MF/HF MARINE TRANSCEIVER **IC-M804**



Example of received Distress screen



DSC Scan screen



Photo includes optional AT-141 Antenna Tuner.

#### FEATURES

- Built-in ITU Class E DSC and Distress button for an emergency
- Dedicated DSC watch-keeping receiver • Wide viewing angle, high contrast 4.3-inch colour TFT LCD
- Intuitive user interface • NMEA 2000™ and NMEA 0183-HS connectivity
- Integrated GNSS receiver, and supplied GNSS antenna with 5 m cable • Two minutes Instant Replay Memory
- Matching design with the IC-M605EURO VHF marine transceiver

- 125 W (4.0 - 27.5 MHz, PEP) of RF output at AT-141 tuner output • Optional AT-141 automatic antenna tuner • IPX7 waterproof remote controller and corrosion resistant main unit
- 0.5 - 29.999 MHz continuous receiver coverage • Channel scan, Channel Resume scan and Program scan • Advanced RF direct sampling system
- Display and keypad backlighting • 12 or 24 V DC power source (depending on version) • Programmable microphone button





# Marine Radar

## Simplified ARPA, AIS Target Plotting and DSC Information Display

### COLOUR TFT MARINE RADAR **MR-1010R II**



2 ft Radome Scanner

#### FEATURES

- 10.4-inch colour TFT display (480 × 640 dots)
- 36 NM range, 4 kW radome scanner
- Intuitive user interface
- Multi-language interface (Arabic, English, French, Italian, Portuguese, Spanish and Turkish)
- AIS Overlay and Favorite AIS functions\*1
- Simplified ARPA (Automatic Radar Plotting Aids) function\*1
- DSC Information function\*1 • True Trail function\*1
- TLL (Target Latitude Longitude) function\*1

\*1 External bearing, speed, position, waypoint, variation, AIS and DSC data is (are) required, when you use these functions.



## Class B AIS Transponder

### Risk Management and Navigation Function in One Package

#### CLASS B AIS TRANSPONDER **MA-510TR**



#### FEATURES

- Navigation function guides you to the specified waypoints or AIS targets
- Wide viewing angle and high-luminance 4.3-inch colour IPS TFT display
- NMEA 2000™ and NMEA 0183-HS connectivity
- Compatible with 12 V and 24 V power sources
- Man Overboard (MOB) function
- AIS data can be output from a USB cable connector\*1
- Silent mode switches off the AIS transmitter for security and privacy
- You can pick up AIS targets on the display and send Individual DSC Calls\*2
- Multi-language interface (English, French, Indonesian, Spanish and Vietnamese)
- Collision Alarm function
- Anchor Watch function
- GNSS antenna supplied

\*1 A third party application and a connection cable are required.

\*2 A compatible Icom VHF radio (IC-M605EURO, IC-M510E, IC-M423GE, IC-M510BB, IC-M410BB or IC-M330GE) is required.

# GMDSS

Global Maritime Distress and Safety System

The Global Maritime Distress and Safety System (GMDSS) is the International radio safety system for ships mandated by the International Maritime Organization (IMO). The GMDSS system provides automated distress alerting and distress communication service with location information.

## Class A DSC VHF Radio with Wide Viewing Angle Colour TFT LCD

VHF MARINE TRANSCEIVER

### GM600



PS-310 DC-DC converter

## Reliable Long Distance MF/HF Communication

MF/HF MARINE TRANSCEIVER

### GM800



#### FEATURES

- Meets the GMDSS VHF and MF/HF radio requirements for SOLAS ships
- ITU Class A DSC
- Dedicated DSC watch receiver
- Large and high contrast 4.3-inch colour TFT LCD
- Intuitive user interface for straightforward operation
- 10 W audio output power with external speaker (for GM600)
- Certified for European Marine Equipment Directive (MED)
- Remote Distress alarm
- Printer connector (Centronics IEEE1284)
- IEC 61162-1 interface for GNSS receiver
- Optional automatic antenna tuner, AT-141 (#65, for GM800)
- Output power: 150 W<sup>\*1</sup> PEP into 50 Ω (at radio terminal, GM800)
- Built-in 24 V DC-DC converter (GM800)
- Optional handset, HS-98 (#15, for GM600)
- Supplied handset, HS-98 (#15, for GM800)
- IPX7 waterproof for front panel (GM600), for controller (GM800)
- Supports 4-digit channels

\*1 125 W (4.0–27.5 MHz) (at tuner-output) 85 W (1.6–3.999 MHz) (at tuner-output)

**Please Note:** HS-98 (#15 is supplied, #17 is an option) and AT-141 (#65) MUST BE USED with GM800 for MED certification compliance.



# Options and Combinations meet the Marine Equipment Directive

Options and its version MUST BE USED to conform the MED certification compliance.



## GMDSS Portable for Survival Craft

### SURVIVAL CRAFT 2-WAY RADIO IC-GM1600E

#### FEATURES

- Meets strict environmental requirements for GMDSS
- 2 W output power for long lasting battery
- Primary (non-rechargeable) lithium battery pack, BP-234
- Highly visible yellow-coloured body

- Instant access to Ch 16 and call channel
- Auto power save • 4-step battery indicator

#### Included Accessories

- BP-252 battery pack • BC-173 battery charger
- BC-147SE AC adapter • MB-103Y belt clip
- FA-S61V antenna (Fixed type) • Neck strap

**Please Note:** BP-234 MUST BE USED with IC-GM1600E to comply with the GMDSS requirements.

### OPTIONS for GM600 (#25)

#### MUST USE for MED

##### DC-DC CONVERTER



**PS-310 (#11)** 24 V input  
**PS-310 (#12)** 12 V input  
Provides stable 12.6 V DC output

#### MED CERTIFIED OPTIONS

##### HANDSET



**HS-98 (#16)**  
Comes in handy for listening privacy on board.

##### HAND MICROPHONE

**IPX7**



**HM-214V (#12)**  
#17 is supplied.

**Please Note:** PS-310 (#11 or #12) MUST BE USED with GM600 for MED certification compliance.

### OPTIONS for GM800 (#21)

#### MUST USE for MED

##### AUTOMATIC ANTENNA TUNER

**IPX6**



**AT-141 (#65)**  
45 frequency memories for shorter tuning time.

**Please Note:** The complete GMDSS installation for MF/HF DSC (Class A) and telephony additionally requires the optional antenna tuner, AT-141 (#65).

##### SHIELDED CONTROL CABLE



**OPC-1465 (#01)**  
10 m cable.  
Use with AT-141.

##### MOUNTING BRACKET



**MB-108 (#01)**  
(Photo shows installation example.)

##### FLUSH MOUNT KITS

**MB-75 (#01)**



#### MED CERTIFIED OPTIONS

##### HANDSET



**HS-98 (#17)**  
#15 is supplied.

##### HAND MICROPHONE

**IPX7**



**HM-214H (#13)**

##### EXTERNAL SPEAKER



**SP-24E (#18)**  
Input impedance: 4 Ω.  
Maximum input power: 7 W.

### OPTIONS for IC-GM1600E

#### MUST USE for MED

##### <For survival craft> LITHIUM BATTERY PACK



**BP-234 (#01)**  
9.0 V/3300 mAh primary battery pack for GMDSS survival craft radio.

**Please Note:** BP-234 MUST BE USED with IC-GM1600E for GMDSS requirement.

##### <For on-board use> RECHARGEABLE Li-Ion BATTERY PACK



**BP-252 (#01)**  
7.2 V/1000 mAh (min), 1050 mAh (typ.)  
Same as supplied with some versions.

##### REGULAR CHARGER

**BC-173 (#01)**



**BC-147SE (#59)**



Regularly charges the battery pack, BP-252 in 10 hours (approx.).

# Satellite PTT Radios



## What is Satellite PTT?

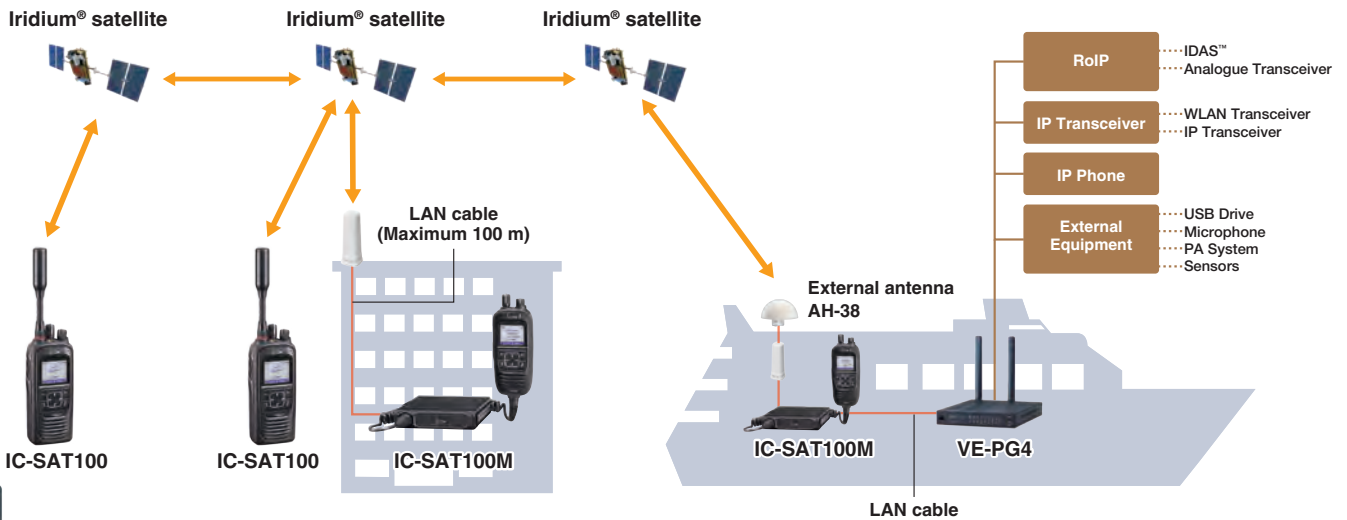
SATELLITE PTT (Push-To-Talk) is a transceiver that uses the Iridium® satellite network. It can be used as a communication device in remote, isolated areas and the sea where there are no mobile phones or communications infrastructure. Even if the terrestrial network infrastructure is rendered unusable by human or natural disasters, SATELLITE PTT can provide a stable back-up, independent from other networks.

One-to-Many Communications

Total Global Coverage, including the Poles \*1

Real-Time, Low-Latency Communication

Conventional Radios and IP Phones Interconnection \*2



### SATELLITE PTT IC-SAT100

- Emergency key on the top panel
- IP67 dust-tight and waterproof protection
- 1500 mW of powerful audio
- 14.5 hours of long lasting battery life\*3
- Short Data Message
- Voice Recording function
- Built-in Bluetooth® capability\*4
- SMA type antenna connection
- USB charging
- AES 256-bit encryption for security

### SATELLITE PTT IC-SAT100M

- Emergency key on the top panel
- Satellite communication in-vehicle and in-building
- LAN cable (maximum 100 m) connects antenna and main unit
- Supplied multi-functional speaker-microphone
- Power supply requirement: 13.2 V/26.4 V DC
- Antenna: IP67, microphone: IP55, main unit: IP54
- 1500 mW audio output from speaker-microphone (External SP can be connected)
- Short Data Message
- Voice Recording function
- Built-in Bluetooth® capability\*4
- AES 256-bit encryption for security



Antenna Unit



\*1 Subscription contracts are required for using the IC-SAT100/M. Depending on the country or region, carrying and/or use of the IC-SAT100/M may be prohibited.

\*2 Optional VE-PG4 RoIP gateway and OPC-2412 connection cable are required for the IC-SAT100.

Optional VE-PG4 RoIP gateway and a LAN cable are required for the IC-SAT100M.

\*3 TX : RX : standby = 5 : 5 : 90. \*4 Version without Bluetooth® capability also available. Ask your dealer for details.

**Please Note:** The IC-SAT100M is primarily designed for base station use. Additional environmental protection is expected for use outside the scope.



## Optional Accessories (for the IC-SAT100)

### Docking Station for In-Vehicle Use



**DOCKING STATION**  
**BC-247**  
Charger cradle for in-vehicle and in-building use. 12/24 V battery compatible.

**ONE-TOUCH ANTENNA CONNECTOR**  
**FA-S103U**  
Easily replace the antenna tip to an external antenna. (SMA to BNC)

**EXTERNAL ANTENNA**  
**AH-40**  
Magnet mount antenna with 1.5 m coaxial cable.

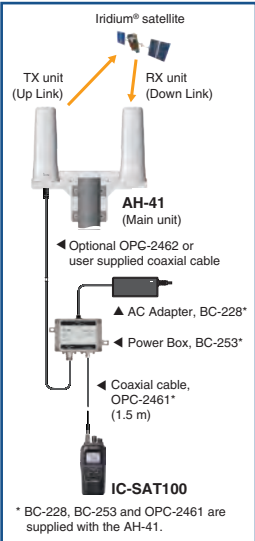
**SPEAKER-MICROPHONE**  
**HM-222H**  
Use the HM-222H (or an external headset) to transmit, while the radio is attached to the BC-247.

### Active Antenna for In-Building Use



**EXTERNAL ANTENNA**  
**AH-41**  
Maximum 169 m\* coaxial cable for installing in a clear location to obtain a line-of-sight path to the satellite.

\* Use optional OPC-2462 (59 m) or user supplied coaxial cable (Max. 169 m) to meet Iridium® performance requirements, and comply with FCC regulations.



\* BC-228, BC-253 and OPC-2461 are supplied with the AH-41.



**HEADSET VS-3**  
Bluetooth® headset



**MULTI-CHARGER BC-214N\*1**  
Charges up to six batteries (with/without transceivers) at the same time.(BC-157S, AC adapter supplied.)



**COAXIAL CABLE OPC-2422**  
Coaxial cable (5D-HFA) for the AH-40. 5 m



**EXTERNAL ANTENNA AH-38**  
Pole mount passive antenna. OPC-2113 coaxial cable separately required.



**COAXIAL CABLE OPC-2113\*2**  
Coaxial cable (5D-HFA) for the AH-38. 10 m



**COAXIAL CABLE OPC-2462**  
Coaxial cable (5D-HFA) for the AH-41. 59 m

\*1 The AD-140 charger adapters are supplied with the BC-214N, depending on the charger version.  
\*2 Use optional OPC-2113 or user supplied coaxial cable (Max. 45 m) to obtain a line-of-sight path to the satellite.

For more information check the Icom website:

## Optional Accessories (for the IC-SAT100M)



**EXTERNAL SPEAKER SP-30**



**EXTERNAL SPEAKERS SP-35 / SP-35L**  
SP-35: 2 m cable  
SP-35L: 6 m cable



**HEADSET VS-3**  
Bluetooth® headset



**AC ADAPTER BC-157S**  
12 V/7.5 A output for use with the main unit.



**ANTENNA AH-40**  
Magnet mount antenna 1.5 m coaxial cable for in-vehicle use.



**EXTENSION CABLE OPC-2429**  
Extension cable for use with supplied speaker-microphone 2 m



**COAXIAL CABLE OPC-2422**  
Extension cable between the AH-40 and the radio. 5 m

### IC-SAT100/M Short Data Message Applications for Android™ /iOS™ devices

**SHORT DATA MESSAGE APPLICATION**  
**RS-SAT100**

This application lets a user send and receive a short data message from a phone through the satellite. Use Bluetooth® connection between the radio and Android™/iOS™ device.

**Features**

- Easy texting similar to a chat or SNS application using a large display and keyboard on the Android™/iOS™ device
- Download free on Google Play™ or App Store



# Wireless LAN Transceiver System

## Simultaneous TalkListen™ for Full-Duplex Communication That Works Over a WLAN Network



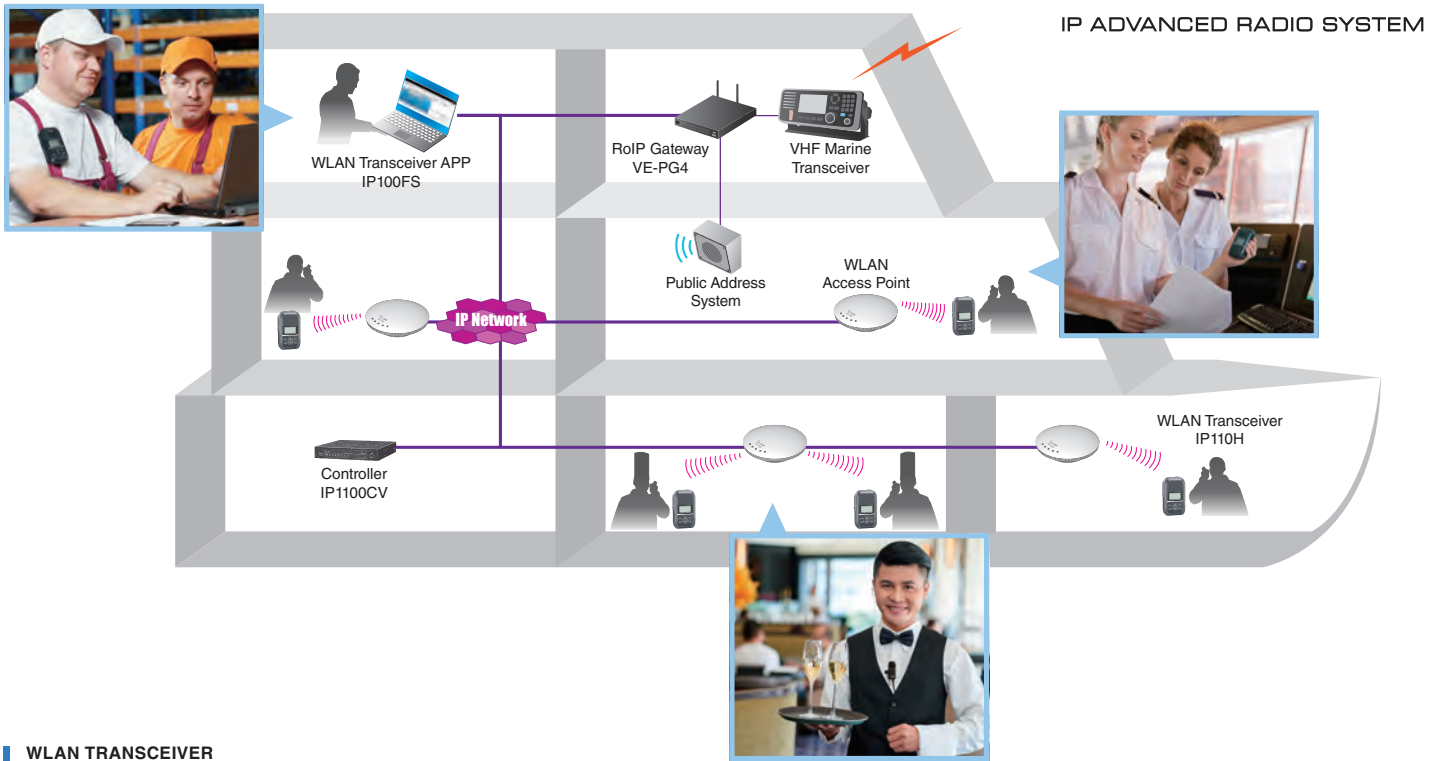
### System Features

Wireless Communication System for Ships Crew

Individual, Group or Area Communication

Simultaneous TalkListen™ **Talk Listen™**  
Simultaneous

Interconnect between VHF Marine Transceiver and Public Address System



### WLAN TRANSCEIVER IP110H

- Licence-free communication terminal
- WPA2, WPA-Enterprise security
- Optional Bluetooth® headset, VS-3
- IP67 waterproof and dust-tight
- Compact 57 × 96.9 × 25.1 mm body and 146 g (approximate) lightweight
- Vibration alert function for incoming calls
- 1000 mW loud audio from internal speaker
- Motion/Stationary Detection, Man Down and Lone Worker functions



### WLAN TRANSCEIVER CONTROLLER IP1100CV

- The IP1100CV controls all terminal configurations and voice traffic
- Capable of controlling up to 300 terminals (including IP100FS)



### WLAN TRANSCEIVER APP IP100FS

(Supplied with USB flash drive for use as a USB hardware key)

- The IP100FS can communicate with WLAN transceivers from a PC
- The IP100FS can obtain location information of each IP110H based on connection to access points
- Can be installed on a Windows™ based tablet PC as well as laptop PC





















### ROIP GATEWAY VE-PG4









- Versatile radio over IP gateway linking land mobile radios, WLAN transceivers, IP phone systems and external devices
- WLAN transceiver controller (Equivalent to the IP1100CV function) built-in, capable of controlling up to 50 WLAN transceivers
- IDAS™ Conventional and NXDN™ Type-D multi-site trunking connection










# Optional Accessories for Handheld Transceivers

MODEL NAME	BATTERY CASES			BATTERY PACKS					
	BP-291 LR6 (AA)x5 cells	BP-297*1 LR03 (AAA)x3 cells	BP-227AX (Li-ion) For intrinsically safe radios 74 V/1850 mAh (min.) 1950 mAh (typ.)	BP-306 (Li-ion) 7.2 V/2280 mAh (min.) 2400 mAh (typ.)	BP-245H (Li-ion) 7.2 V/2000 mAh (min.) 2150 mAh (typ.)	BP-296 (Li-ion) 3.6 V/2200 mAh (min.) 2350 mAh (typ.)	BP-294 (Li-ion) 7.2 V/3050 mAh (min.) 3150 mAh (typ.)	BP-252 (#01) (Li-ion) 7.2 V/1000 mAh (min.) 1050 mAh (typ.)	BP-234 (#01) (Lithium) 9.0 V/3300 mAh (non-rechargeable)
IC-M94DE									
IC-M73EURO				✓					
IC-M37E		✓							
IC-M25EURO*2									
IC-M85E	✓							✓	
IC-M87 ATEX			✓						
IC-GM1600E								✓ (On-board use only)	✓ (For survival craft)
IP-M60									

MODEL NAME	BATTERY PACK	DESKTOP CHARGERS							
	BP-303 (Li-ion) 7.2 V/3200 mAh (min.) 3350 mAh (typ.)	BC-251 Rapid charger	BC-210*7 Rapid charger	BC-235 Desktop charger	BC-219N*7 Rapid charger	BC-225*7 Intelligent rapid charger	BC-226*4 Connectable type. Connects up to six BC-226 units.	BC-227*7 Rapid charger	BC-152N*3 Regular charger
IC-M94DE									
IC-M73EURO		✓		✓					
IC-M37E				✓					
IC-M25EURO									
IC-M85E					✓	✓	✓	✓	
IC-M87 ATEX									✓
IC-GM1600E									
IP-M60	✓						✓	✓	

MODEL NAME	DESKTOP CHARGER	MULTI-CHARGERS		AC ADAPTERS				
	BC-173 (#01) Regular charger	BC-214N*5 *7 Rapid charger	BC-238*6 Rapid charger	BC-123SE/SUK 12 V/1 A, Straight plug	BC-123SE/SUK 12 V/1 A, L-shape plug	BC-147SE 12 V/330 mA	BC-157S 12 V/7.5 A	BC-228 15 V/4 A
IC-M94DE								
IC-M73EURO					(Use with BC-251)			
IC-M37E			(AD-138 installed)		(Use with BC-210)			
IC-M25EURO								
IC-M85E		(Use #63, AD-132N installed)		(Use with BC-226)	(Use with BC-219N, BC-225 or BC-227)		(Use with BC-214N)	(Use with BC-226)
IC-M87 ATEX						(Use with BC-152N)	✓	
IC-GM1600E	(For BP-252, On-board use only)					(Use #59, Use with BC-173, On-board use only)		
IP-M60		(Use #63, AD-132N installed)		(Use with BC-226)			(Use with BC-214N)	(Use with BC-226)

MODEL NAME	USB CHARGER	USB CABLE	CIGARETTE LIGHTER CABLES		DC POWER CABLE	READER SOFTWARE	
	BC-217SE 5 V/1 A	BC-258E/V 5 V/2 A	OPC-2394	CP-25H	CP-23L	OPC-515L	RS-BC225
IC-M94DE							
IC-M73EURO				(Use with BC-251)		(Use with BC-210)	
IC-M37E	(Use with BC-235)			(Use with BC-210)			
IC-M25EURO	✓	(Use with OPC-2394)	✓				
IC-M85E				✓ (Use with BC-219N, BC-225 or BC-227)	✓ (Use with BC-219N, BC-225 or BC-227)		(Use with BC-225)
IC-M87 ATEX							
IC-GM1600E							
IP-M60							

\*1 The IC-M37E floats when used with most common brand AAA batteries. Battery weight varies by manufacturer. Please check your IC-M37E for buoyancy in a shallow area when using AAA batteries.

\*2 As the Lithium-ion battery pack (3.7 V 1500 mAh) is built-in to the IC-M25EURO, the user cannot change the battery pack.

\*3 The battery charger must not be used in an explosive atmosphere. \*4 An AC adapter should be purchased separately. BC-123S (straight plug version) for single unit or BC-228 for multiple connections.

\*5 AD-132N is supplied with the BC-214N, depending on version. \*6 DC power cable is supplied with the BC-238, depending on version. \*7 AC adapter supplied depending on version.

# Optional Accessories for Handheld Transceivers

MODEL NAME	SPEAKER-MICROPHONES								
	HM-228 Waterproof	HM-165 Waterproof	HM-202 Waterproof	HM-167 Waterproof	HM-213 Waterproof	HM-222H Waterproof	HM-236 Waterproof	HM-138 Waterproof	HM-184H Waterproof
IC-M94DE	✓	✓							
IC-M73EURO			✓	✓					
IC-M37E					✓				
IC-M25EURO					✓				
IC-M85E						✓	✓		
IC-M87 ATEX								✓	
IC-GM1600E									
IP-M60						✓			✓

MODEL NAME	TIE-CLIP MICROPHONES		HEADSETS				PTT SWITCH CABLE	EARPHONES	
	HM-238MC Waterproof	HM-163MC	HS-94 Earhook type with boom microphone	HS-95 Neck arm type	HS-97 Throat microphone type	VS-3 Bluetooth® headset	VS-5MC Manual PTT/VOX operation	EH-15B 2.5 mm plug	SP-26 2.5 mm plug Tube earphone
IC-M94DE									
IC-M73EURO									
IC-M37E									
IC-M25EURO									
IC-M85E		✓	(Use with VS-5MC)	(Use with VS-5MC)	(Use with VS-5MC)		✓	(Use with HM-163MC)	(Use with HM-163MC)
IC-M87 ATEX									
IC-GM1600E									
IP-M60	✓		(Use with VS-5MC)	(Use with VS-5MC)	(Use with VS-5MC)	✓	✓	(Use with HM-238MC)	(Use with HM-238MC)

MODEL NAME	EARPHONES				ACC ADAPTERS		BELT CLIPS		BELT HANGER
	SP-27 3.5 mm plug Tube earphone	SP-28 2.5 mm plug	SP-29 3.5 mm plug	SP-40 3.5 mm plug	AD-118 6-Pin Hirose plug adapter	AD-135 3.5 mm jack earphone adapter	MB-86 MB-136 Swivel type	MB-98 MB-103 MB-133 MBB-3 Alligator	MB-96N Swivel type
IC-M94DE									
IC-M73EURO								(Use MB-133)	
IC-M37E							(Use MB-86)	(Use MB-103)	✓
IC-M25EURO								(Use MB-133)	
IC-M85E	(Use with HM-222H or AD-135)	(Use with HM-163MC)	(Use with AD-135)	(Use with AD-135)	✓	✓	(Use MB-136)	(Use MBB-3)	✓
IC-M87 ATEX							(Use MB-86)	(Use MB-98)	
IC-GM1600E									
IP-M60	(Use with HM-222H)	(Use with HM-238MC)	(Use with HM-222H)	(Use with HM-222H)			(Use MB-136)	(Use MB-133)	✓

MODEL NAME	BELT HANGERS		CARRYING CASES			ANTENNA
	MB-96F Fixed type	MB-96FL Long type	LC-187 Charging is possible while the case is attached	LC-188	LC-195	FA-S59V FA-S64V FA-SC58V FA-SC59V
IC-M94DE	✓	✓				FA-SC59V
IC-M73EURO	✓	✓				FA-S59V or FA-S64V
IC-M37E						FA-SC59V
IC-M25EURO						FA-SC59V
IC-M85E	✓	✓	✓	✓		FA-SC58V
IC-M87 ATEX	✓					FA-S59V
IC-GM1600E						
IP-M60	✓	✓			✓	FA-S59V

: Applicable   
  : Not applicable

The IC-M87 ATEX Intrinsically Safe model should only be used with the specified Intrinsically Safe approved options. Some options may not be available in some countries. Please ask your dealer for details.



# Optional Accessories for Fixed Mount Transceivers and Others

## VHF FIXED MOUNT TRANSCEIVERS

MODEL NAME	HAND MICROPHONES			COMMAND HEAD™	COMMANDMIC™			HORN SPEAKER	HANDSET
	HM-205B/RB Speaker microphone	HM-235B/W	HM-214V (#12)	RC-M600	HM-229B/W	HM-195B/SW With Distress Button	HM-195GB/GW With Distress Button	SP-37	HS-98 (#16)
IC-M605EURO	✓ (Use with HM-205RB)			✓	✓			✓	
IC-M510E EVO	✓ (Use with HM-205RB)					✓	✓	✓	
IC-M423GE	✓ (Use with HM-205B)					✓	✓	✓	
IC-M510BB						✓	✓	✓	
IC-M410BB						✓	✓	✓	
IC-M330GE		✓ (Same as supplied)						✓	
GM600 (#25)			✓ (#17 is supplied)						✓

MODEL NAME	FRONT PANEL COVER	CONVERSION CABLES			EXTENSION CABLES			DC-DC CONVERTER	FLUSH MOUNT KITS
	MBZ-1	OPC-2384 12-pin to 8-pin for use with CommandMic™	OPC-2522L L-type conversion adapter cable	OPC-2523L L-type conversion adapter cable	OPC-2377 10 m cable	OPC-1541 6.1 m cable for use with CommandMic™ and rear microphone connection	OPC-1000 6.1 m cable for use with rear microphone connection.	PS-310 (#11) 24 V input PS-310 (#12) 12 V input	MB-75, MB-132 MBF-5, MBF-7 MBF-9 Photo shows MB-75
IC-M605EURO		✓ (Use with HM-229B/W)	✓ (Use with HM-205RB)	✓ (Use with CommandMic)	✓ (Use with RC-M600)	✓ (Use with CommandMic HM-205RB)	✓ (For use with HM-205RB)		✓ (Use with MB-132 or MB-75)
IC-M510E EVO	✓		✓ (Use with HM-205RB)	✓ (Use with HM-195 series)		✓ (Use with CommandMic HM-205RB)	✓ (For use with HM-205RB)		✓ (Use with MBF-7 or MBF-9)
IC-M423GE				✓ (Use with HM-195 series)		✓ (Use with CommandMic)			✓ (Use with MB-132)
IC-M510BB				✓ (Use with HM-195 series)		✓ (Use with CommandMic)			
IC-M410BB				✓ (Use with HM-195 series)		✓ (Use with CommandMic)			
IC-M330GE									✓ (Use with MBF-5)
GM600 (#25)							✓		

MODEL NAME	VOICE SCRAMBLER	GNSS ANTENNA	SOFTWARE
	UT-112A Total of 32 voice scramble codes available	UX-241 5 m cable	RS-M500*1 For Android™/ iOS™ device
IC-M605EURO	✓	✓ (Same as supplied)	
IC-M510E EVO	✓	✓	✓
IC-M423GE			
IC-M510BB		✓*2	
IC-M410BB		✓*2	
IC-M330GE			
GM600 (#25)			

\*1 Free download app for Android™/iOS™. Download on Google Play™/App Store.  
\*2 External GNSS antenna is included with the IC-M510BB and M410BB EUR versions.

## AIS TRANSPONDER

MODEL NAME	FLUSH MOUNT KITS	
	MB-75	MB-132
MA-510TR	✓	✓

## MARINE RADAR

MODEL NAME	SYSTEM CABLE
	OPC-2340 30 m
MR-1010RII	✓

## MF/HF FIXED MOUNT TRANSCEIVERS

MODEL NAME	HAND MICROPHONE	HANDSET	EXTERNAL SPEAKER	ANTENNA TUNER	SHIELDED CONTROL CABLE	MOUNTING BRACKET	FLUSH MOUNT KITS
	HM-214H Waterproof	HS-98	SP-24E	AT-141 IPX6	OPC-1465 10 m	MB-108	MB-75
IC-M804	✓ (Use #13)	✓ (Use #18)	✓ (Use #02)	✓ (Use #64)	✓ (Use with AT-141)	✓	✓
GM800 (#21)	✓ (Use #13)	✓ (Use #17, #15 is Supplied)	✓ (Use #18)	✓ (Use #65)	✓ (Use #01, Use with AT-141)	✓ (Use #01)	✓ (Use #01)

✓ : Applicable      □ : Not applicable





# Optional Accessories for Wireless LAN Transceivers

## WLAN TRANSCEIVERS

MODEL NAME	CHARGER STAND	AC ADAPTER	SPEAKER-MICROPHONES		EARPHONE-MICROPHONE	HEADSETS			
	BC-257 Connects up to four BC-257 units. 	BC-228 15 V/4 A For BC-257 multiple connection 	HM-186PI 	HM-228 Water proof 	HM-179PI 	VS-3 Bluetooth® headset 	HS-94 Earhook type with boom microphone 	HS-95 Neck-arm type 	HS-97 Throat microphone type 
IP110H	(Use with OPC-2480*1/ BC-228)	(Use with BC-257)	✓	✓	✓	✓	✓ <sup>2</sup> (Use with OPC-2133)	✓ <sup>2</sup> (Use with OPC-2133)	✓ <sup>2</sup> (Use with OPC-2133)

\*1 OPC-2480 is a USB Type-C™ cable, which is supplied with the IP110H.

\*2 HS-94, HS-95 and HS-97 headsets are simplex operation only.

MODEL NAME	EARPHONE	PLUG ADAPTER CABLES		BELT CLIP
	SP-16PIBW 	OPC-2132 2-pin microphone adapter 	OPC-2133 	MBB-1 Alligator type 
IP110H	✓	✓	✓	✓

# Specifications for Handheld Transceivers

## HANDHELD TRANSCEIVERS

	IC-M94DE	IC-M73EURO	IC-M37E	IC-M25EURO	IC-M85E	
<b>Frequency range (Unit: MHz)</b>	TX: 156.000–161.450 RX: 156.000–163.425 CH70: 156.525 AIS: 162.025	TX: 156.000–161.450 RX: 156.000–163.425	TX: 156.000–161.450 RX: 156.000–163.425	TX: 156.000–161.450 RX: 156.000–163.425	TX: 156.000–161.450 RX: 156.000–163.425 PMR TX/RX: 136–174	
<b>Dimensions (projections not included; W × H × D)</b>	60.9 × 145.8 × 43.8 mm	52.5 × 125 × 30 mm	59.7 × 140.5 × 38.7 mm	56.6 × 134.2 × 30.5 mm	56 × 92 × 36.2 mm	
<b>Weight (approximate)</b>	357 g (With BP-306, antenna and MB-133)	320 g (With BP-245H, MB-103 and FA-S64V)	293 g (with BP-296, FA-SC59V and MB-133)	218 g (With MB-133 and antenna)	281 g (With BP-294, FA-SC58V and MBB-3)	
<b>Current drain (approximate)</b>	<b>Transmit (High)</b>	1.5 A	1.5 A	2.75 A	2.3 A	1.5 A
	<b>Max. audio</b>	350 mA (External SP) 700 mA (Internal SP)	250 mA (External SP) 450 mA (Internal SP)	200 mA (External SP) 400 mA (Internal SP)	200 mA (External SP) 400 mA (Internal SP)	450 mA
<b>Audio output power</b>	<b>External SP</b>	200 mW (8 Ω load)	200 mW (8 Ω load)	200 mW (4 Ω load)	200 mW (4 Ω load)	700 mW typical (8 Ω load @ 1 kHz)
	<b>Internal SP @ 1 kHz</b>	1500 mW typical (8 Ω load)	700 mW typical (8 Ω load)	700 mW typical (8 Ω load)	700 mW typical (8 Ω load)	700 mW typical (12 Ω load)
<b>RF output power</b>	6 W/1 W	6 W/3 W/1 W/0.5 W* (* For only FRG version)	6 W/1 W	5 W/1 W/0.5 W* (* For only FRG version)	5 W/3 W/1 W	
<b>Operating time (approximate)</b>	10 hours (with BP-306)*1	Plus version 17 hours Basic version 20 hours (with BP-245H)*1	12 hours (with BP-296)*1	11 hours (with built-in battery)*1	21 hours (with BP-294)*1	
<b>AIS Receiver</b>	Built-in	–	–	–	–	

Measurements made in accordance with EN 302-885 for IC-M94DE. EN 301-178 for IC-M73EURO, IC-M37E and IC-M25EURO. EN 301-178 and EN 300 086 for IC-M85E.

\*1 Typical operation, TX:RX:Stand-by=5:5:90

	IC-M87 ATEX	IC-GM1600E	
<b>Frequency range (Unit: MHz)</b>	TX: 156.000–161.450 RX: 156.000–163.425	TX/RX: 156.300–156.875	
<b>Dimensions (projections not included; W × H × D)</b>	62 × 97 × 39 mm (with BP-227AX)	65 × 145 × 44 mm	
<b>Weight (approximate)</b>	280 g (with BP-227AX)	385 g (With BP-234)	
<b>Current drain (approximate)</b>	<b>Transmit (High)</b>	0.7 A typical	1.0 A/0.7 A (2 W/1 W)
	<b>Max. audio</b>	200 mA typical	200 mA typical
<b>Audio output power</b>	<b>External SP</b>	200 mW (8 Ω load)	200 mW (8 Ω load)
	<b>Internal SP @ 1 kHz</b>	200 mW (8 Ω load)	350 mW typical (8 Ω load)
<b>RF output power</b>	1/0.5 W	2 W/1 W	
<b>Operating time (approximate)</b>	19 hours (with BP-227AX)*2	Specified as IMO Res. MSC.149 (77)	
<b>AIS Receiver</b>	–	–	

Measurements made in accordance with EN 301-178 and EN 300 086 for IC-M87 ATEX. EN 301-178-2, EN 300 086 and IEC61097-12 for IC-GM1600E.

\*2 Conventional mode. 5:5:90 duty cycle, power save ON.

	IP-M60	
<b>LTE /3G Network</b>	LTE (4G): B1, B3, B7, B8, B20 W-CDMA: B1, B8	
<b>Frequency range (Unit: MHz)</b>	VHF Marine: TX: 156.000–161.450 RX: 156.000–163.425	
<b>Dimensions (projections not included; W × H × D)</b>	61.7 × 140.5 × 42.8 mm (with BP-303)	
<b>Weight (approximate)</b>	320 g (with BP-303)	
<b>Current drain (approximate)</b>	<b>Transmit (High)</b>	VHF Marine (5 W): 1.6 A
	<b>Max. audio</b>	520 mA (Internal SP)
<b>Audio output power</b>	<b>External SP</b>	1500 mW typical (8 Ω load with HM-222H) 1000 mW typical (8 Ω load with other SP)
	<b>Internal SP @ 1 kHz</b>	1500 mW typical (8 Ω load)
<b>RF output power</b>	VHF Marine: 5W/1W LTE: 0.25 W (rated output power)	
<b>Operating time (approximate)</b>	VHF Marine: 13 hours (5 W) LTE: up to 24 hours	

Measurements in according to 3GPP TS-36 for LTE and EN301-178 for Marine channels.

# Specifications for Fixed Mount Transceivers

## VHF FIXED MOUNT TRANSCEIVERS

		IC-M605EURO	IC-M510E EVO	IC-M423GE	IC-M510BB	IC-M410BB	IC-M330GE	GM600
Frequency range (Unit: MHz)	Transmit	156.025–161.425	156.025–161.425	156.000–161.450	156.025–161.425	156.025–161.425	156.000–162.000	156.025–161.600
	Receive	156.300–162.000	156.050–162.00	156.000–163.425	156.050–162.000	156.050–162.000	156.000–163.425	156.025–162.000
	DSC (CH 70)	156.525	156.525	156.525	156.525	156.525	156.525	156.525
	AIS	161.975, 162.025	161.975, 162.025*1	–	161.975, 162.025	–	–	–
Power supply requirement		13.8 V DC (10.8–15.6 V DC)	12.0 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)	12.0 V DC (10.8–15.6 V DC)	12.0 V DC (10.8–15.6 V DC)	13.8 V DC (10.8–15.6 V DC)	24 V DC (21.6–31.2 V DC)*2 12 V DC (10.8–15.6 V DC)*3 (negative ground)
Dimensions (W × H × D; projections not included)		274 × 114 × 121.5 mm	175 × 110 × 53 mm	180 × 82 × 119.9 mm	M510BB 216 × 79 × 113 mm HM-195 675 × 144.5 × 37 mm	M410BB 216 × 79 × 113 mm HM-195 675 × 144.5 × 37 mm	156.5 × 66.5 × 88.2 mm	274 × 114 × 121.5 mm
Weight (approximate)		1.5 kg	730 g	1.2 kg	IC-M510BB 890 g HM-195 400 g	IC-M410BB 870 g HM-195 400 g	730 g	1.6 kg
Current drain	Transmit (High)	6.0 A max.	5.0 A max.	5.5 A	5.5 A	5.5 A	5 A	3.3 A*2
	Max. audio	8.0 A max. (Ext SP, RX hailer ON, HM-229 × 3)	7.3 A (Ext SP, RX hailer ON, HM-195) 1.6 A (M510E EVO only)	5 A typ. (Ext SP, RX SP ON) 1.5 A (Internal SP)	4.5 A (HM-195 × 3, RX hailer) 1.5 A (HM-195 × 1)	4.0 A (HM-195 × 2, RX hailer) 1.5 A (HM-195 × 1)	1 A	2.0 A*2
Sensitivity	Voice (20 dB SINAD)	–5 dBμ emf typical	–5 dBμ emf typical	–5 dBμ emf typical	Less than –2 dBμ emf	Less than –2 dBμ emf	–5 dBμ emf typical	–7 dBμ emf typical
	DSC (1% BER)	–3 dBμ emf typical	–1 dBμ emf typical	–4 dBμ emf typical	–7 dBμ emf typical	–7 dBμ emf typical	–5 dBμ emf typical	–7 dBμ emf typical
	AIS (20% PER)	–	–114dBm emf typical	–	–115 dBm typical	–	–	–
Inter-modulation	Voice	75 dB	75 dB	68 dB	68 dB	68 dB	68 dB	75 dB
	DSC (1% BER)	73 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	73 dBμ emf
Audio output power (10% dist./4 Ω load)		15 W (Ext. speaker)	15 W (Ext. speaker) 20 W typ. (RX hailer) 25 W typ. (Hailer)	10 W (Ext. speaker)	2 W (HM-195) 13 W (RX hailer)	2 W (HM-195) 13 W (RX hailer)	2 W	10 W (Ext. speaker) 2 W (Int. speaker)
RF output power		25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W	25 W/1 W
NMEA interface		NMEA 2000™, NMEA 0183-HS × 2	NMEA 2000™, NMEA 0183-HS	NMEA 0183™	NMEA 2000™, NMEA 0183-HS	NMEA 2000™, NMEA 0183-HS	NMEA 0183™	IEC 61162-1
AIS Receiver		Built-in	Built-in*1	–	Built-in	–	–	–

Measurements made in accordance with EN 301 025 V2.2.1 or V2.3.1 for IC-M605EURO, IC-M510E, IC-M423GE, IC-M510BB, IC-M410BB and IC-M330GE. EN301 925 for GM600.  
\*1 Only for the AIS version. \*2 With PS-310 (#11). \*3 With PS-310 (#12).

## MF/HF FIXED MOUNT TRANSCEIVERS

		IC-M804	GM800
Frequency range (Unit: MHz)		TX: 1.6 – 27.5000 (ITU marine channels) RX: 0.5 – 29.9999 (continuous) DSC: 2.1875, 4.2075, 6.3120, 8.4145, 12.5770, 16.8045	
Mode	RX/TX	J3E (USB), J2B (AFSK), F1B (FSK)	J3E (USB), F1B (FSK)
	RX only	J3E (LSB), A1A (CW), H3E (AM)	J3E (LSB), J2B (AFSK), A1A (CW), H3E (AM)
	DSC	F1B	F1B
Power supply requirement		12 V DC (10.8 – 15.6 V), 24 V DC (21.6 – 31.2 V) (negative ground)	24 V DC (21.6 – 31.2 V DC) (floating ground)
Dimensions (projections not included; W × H × D)	Main unit	367 × 95 × 260 mm	
	Controller	274 × 114 × 86 mm	
Weight (approx.)	Main unit	8.6 kg	
	Controller	760 g	
Current drain	Transmit (Max. power)	Less than 40 A (at 12 V)* / Less than 20 A (at 24 V)*	
	Receive (Max. audio)	Less than 6.0 A (at 12 V) / Less than 3.0 A (at 24 V)	
Sensitivity	J3E, A1A (20 dB SINAD)	30 dBμV emf (0.5 – 1.5999 MHz) 8 dBμV emf (1.6 – 29.9999 MHz)	30 dBμV emf (0.5–1.5999 MHz) 16 dBμV emf (1.6–3.9999 MHz) 11 dBμV emf (4.0–29.9999 MHz)
	J2B, F1B (1% error rate)	0 dBμV emf (1.6 – 29.9999 MHz)	3 dBμV emf (1.6–2.0999 MHz) 0 dBμV emf (2.1–27.5000 MHz)
	H3E (20 dB SINAD)	44 dBμV emf (0.5 – 1.5999 MHz) 24 dBμV emf (1.6 – 3.9999 MHz)	44 dBμV emf (0.5–1.5999 MHz) 30 dBμV emf (1.6–3.9999 MHz)
	DSC (J2B) (1% error rate)	0 dBμV emf	0 dBμV emf
Audio output power		4.0 W with 4 Ω load	
RF output power		85 W PEP (1.6 – 3.9999 MHz) (at Tuner output) 125 W PEP (4.0 – 27.5000 MHz) (at Tuner output)	150 W PEP into 50 Ω (at radio terminal) 85 W (1.6–3.9999 MHz) (at Tuner output) 125 W (4.0–27.5000 MHz) (at Tuner output)

Measurements made in accordance with EN300 373-1 for GM800 and EN 303 402 for IC-M804.  
\* at 1.1 kHz and 1.7 kHz two tones.

# Specifications for AIS, Radar, and Satellite PTT

## AIS TRANSPONDER

		MA-510TR
Frequency range (Unit: MHz)	161.5000 – 162.025 (AIS), 156.525 (DSC)	
Type of emission	16K0G2B (AIS), 16K0G2B (DSC)	
Power supply requirement	12 V or 24 V DC nominal (9.6 – 31.2 V DC)	
Dimensions (projections not included; W x H x D)	166.2 x 110.2 x 92.5 mm	
Weight (approximate)	700 g	
Current drain	Transmit	1.5 A
	Receive	0.7 A
Sensitivity (20% error rate)	Less than -110 dBm	
Intermodulation rejection	More than -36 dBm (AIS), More than -39 dBm (DSC)	
RF output power	2 W	

## MARINE RADAR

DISPLAY UNIT	MR-1010RII
Display	10.4-inch colour TFT LCD
Resolution (H x V)	480 x 640 dots
Minimum range	25 m (at 1/8 NM range)
Maximum range	36 NM
Power supply requirement	12 V or 24 V DC (10.2 – 42 V DC)
Dimensions (projections not included; W x H x D)	301 x 323.5 x 119.2 mm
Weight (approximate)	4.3 kg
Usable temperature range	-15°C to +55°C
Power consumption (approximate)	55 W
Available scanner unit	60 cm radome

SCANNER UNIT	MR-1010RII	
Type	60 cm radome	
Peak output power	4 kW	
Rotation speed	24, 36 rpm typical	
Beamwidth	Horizontal	4° typical
	Vertical	22° typical
Sidelobe	-22 dB typical	
Transmission frequency	9410 MHz ±30 MHz	
Dimensions (Projections not included; W x H x D)	640 x 256 x 640 mm	
Weight (approximate)	8 kg	
Usable temperature range	-25 °C to +70 °C; -13 °F to +158 °F	
Connection cable	15 m (OPC-2341)	

Measurements made in accordance with IEC62287-1.

## SATELLITE PTT

	IC-SAT100	IC-SAT100M
Frequency Range	1616–1626.5 MHz	1616–1626.5 MHz
Talkgroups	15 (Max.)	15 (Max.)
Dimensions (W x H x D; Projections are not included)	57.8 x 135 x 32.8 mm	Antenna unit (with RF unit): 76.8 x 200 x 76.8 mm, Main unit: 125 x 29 x 156.5 mm
Weight (approximate)	360 g	Antenna unit (with RF unit): 600 g, Main unit with microphone: 1.2 kg
IP Rating	IP67	IP67 (Antenna unit), IP55 (mic), IP54 (main unit)
Operating Time (Hours)	14.5	N/A
Display	Yes	Yes
Keypad	Limited	Limited
AF Output Power (Internal SP)	1500 mW typical	1500 mW typical
Encryption	AES	Yes
Vibration Alert	Yes	N/A
Voice Recorder	Yes	Yes
Bluetooth® Capability*	Yes	Yes
GPS Receiver	Yes	Yes
Short Data Message	Yes	Yes
Emergency Call	Yes	Yes
PoE Capability	N/A	Yes
I/O Control Port	USB, 14-PIN ACC	D-SUB, LAN, Ignition sense

\* Version without Bluetooth® capability also available. Ask your dealer for details.

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All stated specifications are subject to change without notice or obligation.

Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

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