





# VHF Handheld Transceivers



AIS screen



DISTRESS button



## AIS Traffic Info, 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™ function

• 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™ function

• 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



## Slim, Lightweight with High Performance

### VHF MARINE TRANSCEIVER IC-M25EURO

#### FEATURES

- Slim, lightweight with high performance
- Large LCD and intuitive user interface
- USB charging (Micro-B USB type)
- Float'n Flash™ function
- 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 Marine VHF 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.

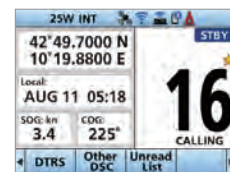




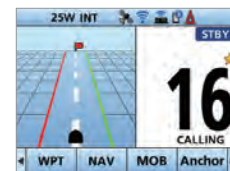
# VHF Fixed Mount Transceivers

## Class-D DSC VHF Marine Transceiver with Smartphone App Control

VHF MARINE TRANSCEIVER  
**IC-M510E**



Stand-by screen



Navigation screen



Night mode screen

### FEATURES

- Up to 3 smart devices\*1 can be connected as wireless microphones with some simple function control available
- CT-M500 optional external interface box for NMEA 2000™ connectivity and Two-way Hailer/PA function
- 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.)
- Sleek, slim design, least depth ever for least mounting effort (rear panel depth reduced nearly 50% vs IC-M506GE)

53.6 mm (approx.)



Slim depth

\*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.

- Simplified Navigation function to a specified way-point 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)
- Class leading 15 W (typical) audio output (External speaker)
- NMEA 0183-HS (High Speed) Version 1.01 connectivity (38.4 kbps)
- IP68 dust-tight and waterproofing (1 m depth water for 60 minutes)
- Fog horn (CT-M500 required)
- Dualwatch and Tri-watch functions
- Instant access to Ch 16 and Call channel
- Tag scan and favorite channel functions
- AquaQuake™ prevents audio degradation

## SYSTEM OVERVIEW

### Wireless Connectivity through Integrated Wireless LAN

VHF MARINE TRANSCEIVER  
**IC-M510E**



NMEA 0183 External Speaker



Rear Microphone



COMMANDMIC™



GNSS antenna



Wireless LAN

### For Simplified Remote Operation

REMOTE CONTROL SOFTWARE  
**RS-M500**

- Mic/Speaker
- Scan ON/OFF
- CH/SQL changing
- PTT operation
- Intercom function



### For NMEA 2000™ and Hailer/PA Function

WIRELESS INTERFACE BOX  
**CT-M500**



NMEA 2000™



Horn Speaker

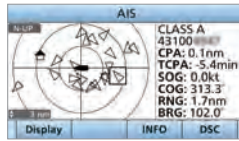




# VHF Fixed Mount Transceivers

## Premium Class D DSC VHF Radio with System Flexibility

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



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-112/A • 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 • Dual watch 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-Use and Even Easier to Hear!

### 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 • Black or super white colour version • Speaker-microphone, HM-205B/SW • Supports 4-digit channels



# VHF Fixed Mount Transceivers

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

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



#### FEATURES

- Full remote control with up to three COMMANDMIC™ (One COMMANDMIC™ is supplied with the IC-M510BB)
- COMMANDMIC™ can be installed up to 18.3 m, 60 ft away from the RF unit
- “Distress” button on the back of the COMMANDMIC™ (Class D DSC built-in)
- DSC remote interface to control from other device or PC (EN 300 338-8 compatible)
- Integrated AIS receiver (AIS plotter screen and target list are displayed on the COMMANDMIC™)
- NMEA 0183-HS and NMEA 2000™ networking capability
- 15 W Loud Hailer/Fog Horn



Installation example



- Active Noise Cancelling
- Up to two minutes last call voice recording
- Built-in GNSS receiver (GNSS antenna supplied)
- IPX7 waterproof protection for COMMANDMIC™ and RF unit (1 m depth water for 30 minutes)
- 10 W amplifier for external horn speaker connection
- Dual watch 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 COMMANDMIC's speaker
- Display and keypad backlighting
- Supports 4-digit channels
- Compatible with the MA-510TR AIS transponder

## Black Box Transceiver When Space is at a Premium

### VHF MARINE TRANSCEIVER **IC-M400BBE**

#### FEATURES

- Space saving, fully functional VHF/DSC
- Built-in Class D DSC
- Controlled by COMMANDMIC™ HM-195B/SW/GB/GW\*
- 10 W loud audio, public address and foghorn

- IPX7 waterproof
- Intuitive user interface
- Active Noise Cancelling
- Built-in GNSS receiver (GNSS antenna supplied)

\* HM-195B/SW/GB/GW may be sold separately, depending on version.







# VHF Fixed Mount Transceivers

## Top Performance Ultra Compact VHF

### 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 • Active Noise Cancelling
- 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.



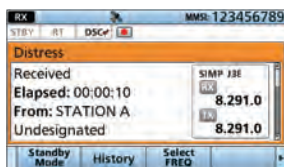
Size comparison between the IC-M330GE and IC-M423GE



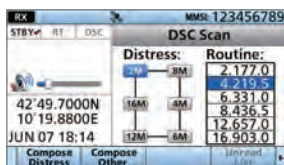
# MF/HF Marine Transceiver

## 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 x 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 Simplified Navigation 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™, 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-M400BBE or IC-M330GE) is required.





# Wireless LAN Transceiver System

## Full-Duplex Communication That Works Over a Wireless LAN and IP Network



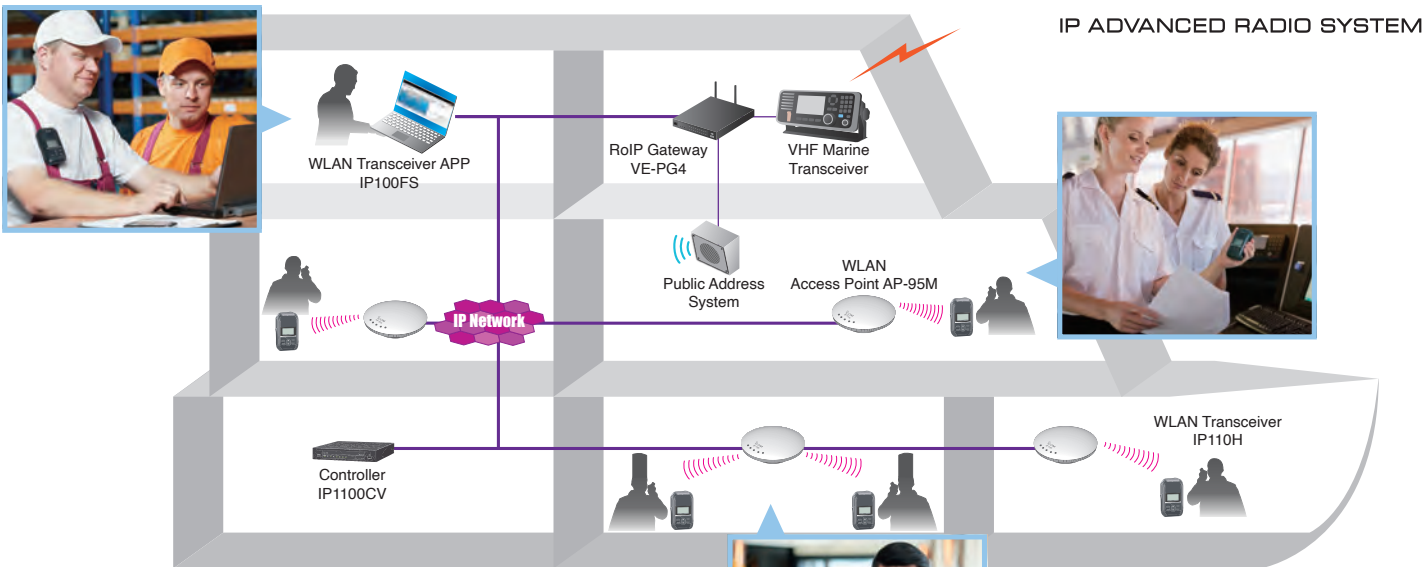
### System Features

Wireless Communication System for Ships Crew

Individual, Group or Area Communication

Simultaneous TalkListen™ Function

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 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



### WLAN TRANSCEIVER CONTROLLER IP1100CV

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



### WLAN ACCESS POINT AP-95M

- IEEE 802.11 a/b/g/n/ac compliant
- PoE (Power over Ethernet) capability
- Optional RS-AP3, access point management software



### 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



# 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)
- Optional automatic antenna tuner, AT-141 (for GM800)
- Currently in compliance testing to latest MED certification\*1 (as of September 2022)
- Remote Distress alarm
- Printer connector (Centronics IEEE1284)
- IEC 61162-1 interface for GNSS receiver
- Output power: 150 W\*2 PEP into 50 Ω (at radio terminal, GM800)
- Built-in 24 V DC-DC converter (GM800)
- Optional handset, HS-98 (#16, for GM600)
- Supplied handset, HS-98 (#17, for GM800)
- IPX7 waterproof for front panel (GM600), for controller (GM800)
- Supports 4-digit channels

\*2 125 W (4.0–27.5 MHz) (at tuner-output) 85 W (1.6–3.999 MHz) (at tuner-output)  
**Please Note:** PS-310 MUST BE USED with GM600 for MED requirements. The complete GMDSS installation for MF/HF DSC (Class A) and telephony additionally requires the optional antenna tuner, AT-141.

\*1 Ask your Dealer for the latest details regarding installation requirements in your country.



# Intrinsically Safe Radio



## GMDSS Portable for Survival Craft

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

#### FEATURES

- Meets strict environmental requirements for GMDSS
- 2W 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.



IC-F51ATEX



IC-F61ATEX



## ATEX Intrinsically Safe PMR Channels

VHF TRANSCEIVER

**IC-F51** ATEX (1 W)

UHF TRANSCEIVER

**IC-F61** ATEX (1 W)

#### FEATURES

- **ATEX Certifications**  
Gas: II 2G Ex ib IIA T3 Gb (Tamb=-20°C to +55°C)
- **IP67 dust-tight and waterproof protection**
- **Built-in 2-Tone, 5-Tone, CTCSS and DTCS**
- Lone Worker function • BIIS 1200 capability • MDC 1200 compatibility • Eight DTMF autodial memories • Compact body; 56 (W) × 97 (H) × 36.4 (D) mm • Optional speaker-microphone, HM-138 • 136-174 and 400-470 MHz, 1 W

#### Supplied Accessories

- BP-227AX, battery pack • MB-98, belt clip • Antenna



## ATEX Intrinsically Safe Marine Radio

VHF MARINE TRANSCEIVER

**IC-M87** ATEX (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.

# Satellite PTT Radios



## What is Satellite PTT?

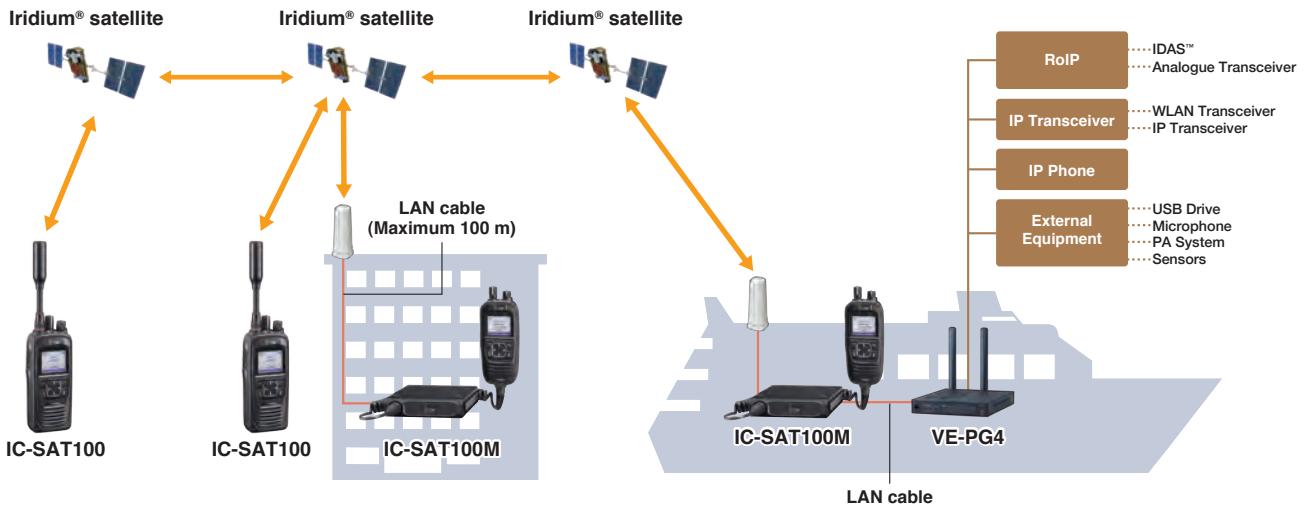
SATELLITE PTT (Push-To-Talk) is a two-way radio system that uses the Iridium® satellite network. It can be used as a communication tool in remote, isolated areas and at sea where there are no mobile phones or communications infrastructure. Even if the terrestrial network infrastructure is rendered unusable 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 (with RF 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® also available. Ask your dealer for details.





**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.

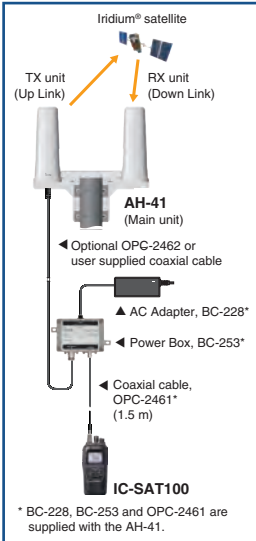
**SPEAKER-MICROPHONE**  
**HM-222H**  
 Use the HM-222H (or an external headset) to transmit, while the radio is attached to the BC-247.

**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

# 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 7.4 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/2100 mAh (min.) 2250 mAh (typ.) 	BP-252 (Li-ion) 7.2 V/1000 mAh (min.) 1050 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-234 (Lithium) 9.0 V/3300 mAh (non-rechargeable) 
IC-M94DE				✓					
IC-M73EURO					✓				
IC-M37E		✓					✓		
IC-M25EURO*2									
IC-M85E	✓							✓	
IC-F51 ATEX IC-F61 ATEX			✓						
IC-M87 ATEX			✓						
IC-GM1600E						✓ (On-board use only)			✓ (For survival craft)










\*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.

MODEL NAME	DESKTOP CHARGERS								
	BC-251 Rapid charger 	BC-210*7 Rapid charger 	BC-235 Desktop charger 	BC-173 Regular 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-F51 ATEX IC-F61 ATEX									✓
IC-M87 ATEX									✓
IC-GM1600E				✓ (for BP-252)					

\*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.










MODEL NAME	MULTI-CHARGERS			AC ADAPTERS				
	BC-214N*5 *7 Rapid charger 	BC-238*6 Rapid charger 	BC-121N*3 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					✓ (Use with BC-251)			
IC-M73EURO					✓ (Use with BC-210)			
IC-M37E		✓ (AD-138 installed)						
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-F51 ATEX IC-F61 ATEX			✓ (Use with AD-100)			✓ (Use with BC-152N)	✓ (Use with BC-121N)	
IC-M87 ATEX			✓ (Use with AD-100)			✓ (Use with BC-152N)	✓ (Use with BC-121N)	
IC-GM1600E						✓ (Use with BC-173, On-board use only)		










MODEL NAME	USB CHARGER	USB CABLE	CHARGER ADAPTERS	CIGARETTE LIGHTER CABLES		DC POWER CABLES		READER SOFTWARE	
	BC-217SE 5 V/1 A 	BC-258E/V 5 V/2 A 	OPC-2394 	AD-100 	CP-25H 	CP-23L 	OPC-515L 	OPC-656 	RS-BC225 
IC-M94DE					✓ (Use with BC-251)				
IC-M73EURO					✓ (Use with BC-210)		✓ (Use with BC-210)		
IC-M37E	✓ (Use with BC-235)								
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-214N)	✓ (Use with BC-225)	
IC-F51 ATEX IC-F61 ATEX				✓ (Use with BC-121N)					
IC-M87 ATEX				✓ (Use with BC-121N)					
IC-GM1600E									

\*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.












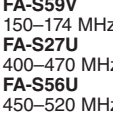
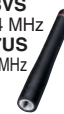
# Optional Accessories for Handheld Transceivers

MODEL NAME	SPEAKER-MICROPHONES								TIE-CLIP MICROPHONE
	HM-228 <b>Waterproof</b> 	HM-165 <b>Waterproof</b> 	HM-202 <b>Waterproof</b> 	HM-167 <b>Waterproof</b> 	HM-213 <b>Waterproof</b> 	HM-222 <b>Waterproof</b> 	HM-236 <b>Waterproof</b> 	HM-138 <b>Waterproof</b> 	HM-163MC 
IC-M94DE	✓	✓							
IC-M73EURO			✓	✓					
IC-M37E					✓				
IC-M25EURO					✓				
IC-M85E						✓	✓		✓
IC-F51 ATEX IC-F61 ATEX								✓	
IC-M87 ATEX								✓	
IC-GM1600E									

MODEL NAME	HEADSETS			PTT SWITCH CABLE	EARPHONES				
	HS-94 Earhook type with boom microphone 	HS-95 Neck arm type 	HS-97 Throat microphone type 	VS-5MC Manual PTT/VOX operation 	EH-15B 	SP-26 2.5 mm plug SP-27 3.5 mm plug Tube earphone  <small>Photo shows SP-26</small>	SP-28 2.5 mm plug 	SP-29 3.5 mm plug 	SP-40 3.5 mm plug 
IC-M94DE									
IC-M73EURO									
IC-M37E									
IC-M25EURO									
IC-M85E	✓ <small>(Use with VS-5MC)</small>	✓ <small>(Use with VS-5MC)</small>	✓ <small>(Use with VS-5MC)</small>	✓	✓ <small>(Use with HM-163MC)</small>	✓*1	✓ <small>(Use with HM-163MC)</small>	✓ <small>(Use with HM-222 or AD-135)</small>	✓ <small>(Use with HM-222 or AD-135)</small>
IC-F51 ATEX IC-F61 ATEX									
IC-M87 ATEX									
IC-GM1600E									

\*1 SP-26:for use with HM-163MC. SP-27:for use with HM-222 or AD-135.

MODEL NAME	ACC ADAPTERS		BELT CLIPS		BELT HANGERS		
	AD-118 6-Pin Hirose plug adapter 	AD-135 3.5 mm jack earphone adapter 	MB-86 MB-136 Swivel type  <small>Photo shows MB-86</small>	MB-98 MB-103/103Y MB-133 MBB-3 Alligator  <small>Photo shows MB-133</small>	MB-96N Swivel type 	MB-96F Fixed type 	MB-96FL Long type 
IC-M94DE				✓ <small>(Use MB-133)</small>		✓	✓
IC-M73EURO			✓ <small>(Use MB-86)</small>	✓ <small>(Use MB-103)</small>	✓	✓	✓
IC-M37E				✓ <small>(Use MB-133)</small>			
IC-M25EURO				✓ <small>(Use MB-133)</small>			
IC-M85E	✓	✓	✓ <small>(Use MB-136)</small>	✓ <small>(Use MBB-3)</small>	✓	✓	✓
IC-F51 ATEX IC-F61 ATEX			✓ <small>(Use MB-86)</small>	✓ <small>(Use MB-98)</small>		✓	
IC-M87 ATEX			✓ <small>(Use MB-86)</small>	✓ <small>(Use MB-98)</small>		✓	
IC-GM1600E				✓ <small>(Use MB-103Y)</small>			

MODEL NAME	CARRYING CASES		ANTENNAS		
	LC-187 Charging is possible while the case is attached 	LC-188 	FA-S59V FA-S64V FA-SC58V FA-SC59V  <small>FA-S59V (left) &amp; FA-S64V (right)</small>	FA-S24V 136–150 MHz FA-S59V 150–174 MHz FA-S27U 400–470 MHz FA-S56U 450–520 MHz 	FA-S62VS 150–162 MHz FA-S63VS 160–174 MHz FA-S57US 450–490 MHz 
IC-M94DE			FA-SC59V		
IC-M73EURO			FA-S59V or FA-S64V		
IC-M37E			FA-SC59V		
IC-M25EURO			FA-SC59V		
IC-M85E	✓	✓	FA-SC58V		
IC-F51 ATEX IC-F61 ATEX				✓	✓
IC-M87 ATEX			FA-S59V		
IC-GM1600E					

: Applicable     : Not applicable    The IC-F51/F61 ATEX and 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

	HAND MICROPHONES			COMMAND HEAD™	COMMANDMIC™			HORN SPEAKER	HANDSET
MODEL NAME	HM-205B/RB/SW Speaker microphone	HM-235B/W	HM-214V	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	(Use with HM-205RB)				✓	✓	✓	✓	
IC-M423GE	(Use with HM-205B/SW)					✓	✓	✓	
IC-M510BB							✓	✓	
IC-M400BBE						✓	✓	✓	
IC-M330GE		(Same as supplied)						✓	
GM600			(Same as supplied)						✓

	INTERFACE BOX	FRONT PANEL COVER	CONNECTION CABLE	EXTENSION CABLES		DC-DC CONVERTER	FLUSH MOUNT KITS	VOICE SCRAMBLER	
MODEL NAME	CT-M500 For NMEA 2000 and hailer/RX speaker	MBZ-1	OPC-2384 12-pin to 8-pin for use with COMMANDMIC™	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 (#01) 24 V input PS-310 (#02) 12 V input	MB-75 MB-132 MBF-5 MBF-7 Photo shows MB-75	UT-112/A Total of 32 voice scramble codes available
IC-M605EURO			(Use with HM-229BAW)	(Use with RC-M600)	(Use with COMMANDMIC, HM-205RB)	(For use with HM-205RB)	(Use with MB-132, MB-75)	✓	
IC-M510E	✓	✓			(Use with COMMANDMIC, HM-205RB)	(For use with HM-205RB)	(Use with MBF-7)	(Use UT-112A)	
IC-M423GE					(Use with COMMANDMIC)		(Use with MB-132)		
IC-M510BB					(Use with COMMANDMIC)				
IC-M400BBE					(Use with COMMANDMIC)				
IC-M330GE							(Use with MBF-5)		
GM600						✓			

	GNSS ANTENNA	SOFTWARE
MODEL NAME	UX-241 5 m cable	RS-M500* For Android™/iOS™ device
IC-M605EURO	(Same as supplied)	
IC-M510E	✓	✓
IC-M423GE		
IC-M510BB	(Same as supplied)	
IC-M400BBE		
IC-M330GE		
GM600		

\* Free download app for Android™/iOS™. Download on Google Play™/App Store.

## AIS TRANSPONDER

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

## MARINE RADAR

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

## MF/HF FIXED MOUNT TRANSCEIVERS

	HAND MICROPHONE	HANDSET	EXTERNAL SPEAKER	ANTENNA TUNER	SHIELDED CONTROL CABLE	MOUNTING BRACKET	FLUSH MOUNT KITS
MODEL NAME	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	✓ (Use #13)	✓ (Use #17)	✓ (Use #02)	✓ (Use #45)	✓ (Use with AT-141)	✓	✓

✓ : Applicable      □ : Not applicable






# Optional Accessories for Wireless LAN Transceivers

## WLAN TRANSCEIVERS

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

	EARPHONE	PLUG ADAPTER CABLES	BELT CLIP
<b>MODEL NAME</b>	<b>SP-16PIBW</b> 	<b>OPC-2132</b> 2-pin microphone adapter 	<b>OPC-2133</b> 
<b>IP110H</b>	✓	✓	✓

# Specifications for 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 x H x D)</b>		60.9 x 145.8 x 43.8 mm	52.5 x 125 x 30 mm	59.7 x 140.5 x 38.7 mm	56.6 x 134.2 x 30.5 mm	56 x 92 x 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-F51 ATEX	IC-F61 ATEX	IC-M87 ATEX	IC-GM1600E
<b>Frequency range (Unit: MHz)</b>		TX/RX: 136–174	TX/RX: 400–470	TX: 156.000–161.450 RX: 156.000–163.425	TX/RX: 156.300–156.875
<b>Dimensions (projections not included; W x H x D)</b>		56 x 97 x 36.4 mm (with BP-227AX)		62 x 97 x 39 mm (with BP-227AX)	65 x 145 x 44 mm
<b>Weight (approximate)</b>		295 g (with BP-227AX)		280 g (with BP-227AX)	385 g (With BP-234)
<b>Current drain (approximate)</b>	<b>Transmit (High)</b>	0.7 A	0.8 A	0.7 A typical	1.0 A/0.7 A (2 w/1 W)
	<b>Max. audio</b>	300 mA		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>	500 mW typical (8 Ω load)		200 mW (8 Ω load)	350 mW typical (8 Ω load)
<b>RF output power</b>		1 W		1/0.5 W	2 W/1 W
<b>Operating time (approximate)</b>		16.5 hours (with BP-227AX)*2		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 300 086 for IC-F51 ATEX, F61 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.

## VHF FIXED MOUNT TRANSCEIVERS

		IC-M605EURO	IC-M510E	IC-M423GE	IC-M510BB	IC-M400BBE	IC-M330GE	GM600
<b>Frequency range (Unit: MHz)</b>	<b>Transmit</b>	156.025–161.425	156.025–161.425	156.000–161.450	156.025–161.425	156.000–161.450	156.000–162.000	156.025–161.600
	<b>Receive</b>	156.300–162.000	156.300–161.925	156.000–163.425	156.050–162.000	156.000–163.425	156.000–163.425	156.025–162.000
	<b>DSC (CH 70)</b>	156.525	156.525	156.525	156.525	156.525	156.525	156.525
	<b>AIS</b>	161.975, 162.025	161.975, 162.025*1	–	161.975, 162.025	–	–	–
<b>Power supply requirement</b>		13.8 V DC (10.8–15.6 V DC)	13.8 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)	13.8 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)
<b>Dimensions (W x H x D; projections not included)</b>		274 x 114 x 121.5 mm	175.0 x 110.0 x 53.6 mm	180 x 82 x 119.9 mm	M510BB 216 x 79 x 113 mm HM-195 675 x 144.5 x 37 mm	M400BBE 216 x 79 x 125 mm HM-195 675 x 144.5 x 37 mm	156.5 x 66.5 x 88.2 mm	274 x 114 x 121.5 mm
<b>Weight (approximate)</b>		1.5 kg	750 g (Not included microphone)	1.2 kg	IC-M510BB 890 g HM-195B/SW 400 g	IC-M400BBE 830 g HM-195B/SW 400 g	730 g	1.6 kg
<b>Current drain</b>	<b>Transmit (High)</b>	6.0 A max.	5.0 A max.	5.5 A	5.5 A	5.5 A	5 A	3.3 A*2
	<b>Max. audio</b>	8.0 A max. (Ext SP, RX hailer ON, HM-229 x 3)	3.3 A max.	5 A typ. (Ext SP, RX SP ON) 1.5 A (Internal SP)	4.5 A (HM-195 x 3, RX hailer) 1.5 A (HM-195 x 1)	3.5 A	1 A	2.0 A*2
<b>Sensitivity</b>	<b>Voice (20 dB SINAD)</b>	–5 dBμ emf typical	–5 dBμ emf typical	–5 dBμ emf typical	Less than –2 dBμ emf	–5 dBμ emf typical	–5 dBμ emf typical	–7 dBμ emf typical
	<b>DSC (1% BER)</b>	–3 dBμ emf typical	–1 dBμ emf typical	–4 dBμ emf typical	–7 dBμ emf typical	–4 dBμ emf typical	–5 dBμ emf typical	–7 dBμ emf typical
	<b>AIS (20% PER)</b>	–	Less than –107dBm	–	–115 dBm typical	–	–	–
<b>Inter-modulation</b>	<b>Voice</b>	75 dB	75 dB	68 dB	68 dB	68 dB	68 dB	75 dB
	<b>DSC (1% BER)</b>	73 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	68 dBμ emf	73 dBμ emf
<b>Audio output power (10% dist./4 Ω load)</b>		15 W (Ext. speaker)	15 W typ. (Ext. speaker)	10 W (Ext. speaker)	2 W (HM-195B/SW) 13 W (RX Speaker)	2 W (HM-195B/SW) 10 W (RX Speaker)	2 W	10 W (Ext. speaker) 2 W (Int. speaker)
<b>RF output power</b>		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
<b>NMEA interface</b>		NMEA 2000, NMEA 0183-HS x 2	NMEA 2000*4 NMEA 0183-HS	NMEA 0183	NMEA 2000, NMEA 0183-HS	NMEA 0183	NMEA 0183	IEC 61162-1
<b>AIS Receiver</b>		Built-in	Built-in*1	–	Built-in	–	–	–

Measurements made in accordance with EN 301 025-2, -3 for IC-M605EURO, IC-M510E, IC-M423GE, IC-M510BB, IC-M400BBE and IC-M330GE. EN301 925 for GM600.

\*1 Only for the AIS version. \*2 With PS-310 (#01). \*3 With PS-310 (#02). \*4 CT-M500 required



# Specifications for MF/HF Transceivers, AIS and RADAR

## MF/HF FIXED MOUNT TRANSCEIVERS

		IC-M804	GM800
<b>Frequency range (Unit: MHz)</b>		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	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
<b>Mode</b>	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
<b>Power supply requirement</b>		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)
<b>Dimensions (projections not included; W x H x D)</b>	Main unit	367 x 95 x 260 mm	367 x 95 x 260 mm
	Controller	274 x 114 x 86 mm	274 x 114 x 86 mm
<b>Weight (approx.)</b>	Main unit	8.6 kg	8.6 kg
	Controller	760 g	760 g
<b>Current drain</b>	Transmit (Max. power)	Less than 40 A (at 12 V)*/ Less than 20 A (at 24 V)*	Less than 20 A*
	Receive (Max. audio)	Less than 6.0 A (at 12 V)/ Less than 3.0 A (at 24 V)	Less than 3.0 A
<b>Sensitivity</b>	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
<b>Audio output power</b>		4.0 W with 4 Ω load	4 W with 4 Ω load
<b>RF output power</b>		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.

## AIS TRANSPONDER

		MA-510TR
<b>Frequency range (Unit: MHz)</b>		161.5000 – 162.025 (AIS), 156.525 (DSC)
<b>Type of emission</b>		16K0GXW (GMSK) (AIS), 16K0G2B (DSC)
<b>Power supply requirement</b>		12 V or 24 V DC nominal (9.6 – 31.2 V DC)
<b>Dimensions (projections not included; W x H x D)</b>		166.2 x 110.2 x 92.5 mm
<b>Weight (approximate)</b>		700 g
<b>Current drain</b>	Transmit	1.5 A
	Receive	0.7 A
<b>Sensitivity (20% error rate)</b>		Less than – 110 dBm
<b>Intermodulation rejection</b>		More than – 36 dBm (AIS), More than – 39 dBm (DSC)
<b>RF output power</b>		2 W

Measurements made in accordance with IEC62287-1.

## MARINE RADAR

DISPLAY UNIT	MR-1010RII
<b>Display</b>	10.4-inch colour TFT LCD
<b>Resolution (H x V)</b>	480 x 640 dots
<b>Minimum range</b>	25 m; 82 ft (at 1/8 NM range)
<b>Maximum range</b>	36 NM
<b>Power supply requirement</b>	12 V or 24 V DC (10.2–42 V DC)
<b>Dimensions (projections not included; W x H x D)</b>	301 x 323.5 x 119.2 mm
<b>Weight (approximate)</b>	4.3 kg
<b>Usable temperature range</b>	–15°C to +55°C
<b>Power consumption (approximate)</b>	55 W
<b>Available scanner unit</b>	2 ft (60 cm) radome

SCANNER UNIT	MR-1010RII	
<b>Type</b>	2 ft (60 cm) radome	
<b>Peak output power</b>	4 kW	
<b>Rotation speed</b>	24, 36 rpm typical	
<b>Beamwidth</b>	Horizontal	4° typical
	Vertical	22° typical
<b>Sidelobe</b>	–22 dB typical	
<b>Transmission frequency</b>	9410 MHz ±30 MHz	
<b>Dimensions (Projections not included; W x H x D)</b>	640 x 256 x 640 mm	
<b>Weight (approximate)</b>	8 kg	
<b>Usable temperature range</b>	–25 °C to +70 °C; –13 °F to +158 °F	
<b>Connection cable</b>	15 m; 49.2 ft (OPC-2341)	

## SATELLITE PTT

	IC-SAT100	IC-SAT100M
<b>Frequency Range</b>	1616–1626.5 MHz	1616–1626.5 MHz
<b>Talkgroups</b>	15 (Max.)	15 (Max.)
<b>Dimensions (W x H x D; Projections are not included)</b>	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
<b>Weight (approximate)</b>	360 g	Antenna unit (with RF unit): 500 g, Main unit with microphone: 1.2 kg
<b>IP Rating</b>	IP67	IP67 (Antenna unit (with RF unit)), IP55 (mic), IP54 (main unit)
<b>Operating Time (Hours)</b>	14.5	N/A
<b>Display</b>	Yes	Yes
<b>Keypad</b>	Limited	Limited
<b>AF Output Power (Internal SP)</b>	1500 mW typical	1500 mW typical
<b>Encryption</b>	AES	Yes
<b>Vibration Alert</b>	Yes	N/A
<b>Voice Recorder</b>	Yes	Yes
<b>Bluetooth® Capability*</b>	Yes	Yes
<b>GPS Receiver</b>	Yes	Yes
<b>Short Data Message</b>	Yes	Yes
<b>Emergency Call</b>	Yes	Yes
<b>PoE Capability</b>	N/A	Yes
<b>I/O Control Port</b>	USB, 14-PIN ACC	D-SUB, LAN, Ignition sense

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

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