



# A price-performance winner

#### Submersible (1m depth for 30 min.)

The IC-M32 has the same superior waterproof\* protection, as all of its siblings in the Icom range. Such a level of waterproofing makes the IC-M32 the class leader.

\* Equivalent to IPX7. (1m depth/30min.)

#### Simple to use keypad

9 large buttons on the front panel provide user-friendly operation. The independent volume and channel select buttons are located on the front panel for convenient, one-handed operation.

#### Large LCD with backlighting

The backlit, easy to see LCD displays channel numbers clearly. The volume level and squelch level are both graphically shown in the display.

#### **Optional Li-ion battery pack**

The new optional Li-Ion battery pack, BP-241, provides 11 hours of operating time\*. Li-Ion batteries allow flexible charging and have almost no memory effect.

\* Tx:Rx:Stand-by duty ratio=5:5:90

#### TAG scan system

Icom's TAG scan system makes scanning easy—add or delete channels at the push of a button.

#### **Additional features**

- Instant Ch.16 and call channel access
- Powerful 5 W output power
- Dualwatch and Tri-watch functions
- 2-step power saver
- Rapid charge capability available with optional BC-119N or BC-121N
- Auto WX alert function (U.S.A. version only)



# Big screen, tough body and it's submersible too!

#### Extra-large LCD display

The extra large LCD (35x24 mm;  $13/8 \times 15/16$  in. dimensions) is incorporated into the design allowing easy viewing of channel display and status. Bright LCD backlighting is great for night time operation.

#### Submersible (1m depth for 30 min.)

The IC-M2A is built submersible to repel all forms of water.

\* Equivalent to IPX7. (1m depth/30 min.)

#### Desktop charger supplied

The BC-150 is a simple, drop-in style desktop charger. Screw holes have been cast in, allowing the charger to be installed most anywhere. Charge the battery while its connected to or separated from the radio.

#### Simple operation

Well spaced, clearly labelled buttons provide easy, one-handed access to frequently used functions. The M2A is truly an easy to use radio!

#### **Additional features**

- Swivel belt clip, MB-87 standard
- · 4-step battery life indicator
- Dualwatch and Tri-watch functions
- Normal, priority and TAG scanning
- One-touch access to Ch.16 and Ch.9
- 2-step power saver
- Key lock function
- S-meter shows the signal strength of the received signal
- Auto WX alert function (U.S.A. version only)



VHF MARINE TRANSCEIVER
IC-M2A



# Powerful, Stylish, Submersible Plus More

#### Compact body, great "form factor"

A compact design, hourglass body-shape, and comfortable side grips give the IC-M72 an outstanding "form factor" – it's easy to use with just one hand!

#### 6W RF output, long lasting battery

The IC-M72's 6W of transmit power can carry a conversation a long way. A large capacity 2000mAh Lithium-Ion battery allows for 15–16 hours of operation under normal conditions\*.

\* Tx:Rx:Stand-by=5:5:90 with BP-245.

#### Impressive Force5Audio

The M72's impressive audio output (600mW typ.\*) is loud enough to hear in most any marine environment — even over loud engine noise. (\* 10% distortion,  $8\Omega$  load)

#### Submersible PLUS (IPX8)

The IC-M72 offers Icom's best-ever protection against water intrusion. This radio has been tested to survive after being submersed in 1.5m (4.9ft) depth of water for 30 minutes.

#### Additional features

- Built-in voice scrambler compatible with UT-112\* \*Depending on version
- · Large, high resolution LCD display
- Auto scan function to start scanning, when receiving no signal for a preset time
- AquaQuake water draining function ejects water from speaker grill
- 4-step battery power indicator
- Dualwatch and Tri-watch functions
- · Auto WX alert function
- Instant Ch.16 and Ch.9 access
- Auto power save



# Compact size, for commercial or recreational use

#### Tough and waterproof

The IC-M88 is built tough to withstand hazardous environments. Even if it is dropped into water, its waterproof construction\* will protect it from harm.

\* Equivalent to IPX7. (1m depth/30min.)

#### Simple operation

The volume/power knob combines with 6 clearly labeled front panel buttons to maximize simplicity of operation. A large, clear LCD with backlighting and backlit buttons make night time operation easy.

#### Li-lon battery for long battery life

With the standard battery pack, the IC-M88 provides up to 15 hours of operating time.\* Also, no worries about 'memory effect' of the battery with Li-lon technology.

\* Tx:Rx:Stand-by= 5:5:90 with BP-227.

#### Intrinsically safe versions

Versions are available that conform to the intrinsically safe rating of the FMRC. See the specification pages for the details.

#### 22 programmable channels

The IC-M88 has 22 programmable channels reserved for land use (146–174MHz).\* Wide/narrow channel spacing is programmable for each channel, and CTCSS and DTCS signaling is built-in.

\* Appropriate license will be required.

#### **Additional features**

- Instant access to Ch.16 and Ch.9
- Simple add/delete TAG scanning
- Monitor button opens squelch
- Auto power save Key lock function
- 4-step battery indicator
- Auto WX alert function (U.S.A. version only)



VHF MARINE TRANSCEIVER

IC-M88



# Commercial grade marine and land mobile radio

#### Tough and submersible

The IC-M90 is a submersible (1m depth for 30 min.), reliable, commercial grade radio. The speaker outputs loud and clear audio even after being drenched by water.

\* Equivalent to IPX7.

# Large well lablled buttons with positive action

Very large backlit keys provide positive button action for sure operation, even when wearing heavy gloves. The transparent buttons are printed from the bottom side.

#### Wide viewing angle LCD

A wide viewing angle, high intensity LCD is used in the IC-M90, offering bright, easy to read characters. The bright LED indicator on top of the front panel shows the operating status clearly.

# 100 programmable channels for land mobile use

The IC-M90 is suitable for both marine and land mobile applications. Up to 100 programmable channels are available for land mobile use (146–174MHz).\* Each channel is programmable with CTCSS and DTCS tone signaling and wide/narrow channel bandwidth.

\* Appropriate license will be required.

#### **Additional features**

- · Built-in voice scrambler
- Optional VOX headsets and waterproof speaker microphone
- Auto WX scan and WX Alert function
- Instant access to Ch. 16 and Ch. 9
- · Simple add/delete TAG scanning
- Monitor button and squelch shift function
- Optional Li-Ion battery pack

VHF MARINE TRANSCEIVER

IC-M90

# GMDSS portable for survival craft

# Meets strict environmental requirements for GMDSS

The IC-GM1600 meets temperature, thermal shock, vibration and drop resistant (from 1 m height) requirements. After passing those environmental tests, the IC-GM1600 retains 1m depth waterproof construction as specified by IMO resolution A.809(19) and other related regulations.

# Superior low temperature characteristic Lithium battery pack

For survival craft use, the optional BP-234 (non-rechargeable) 3300mAh lithium battery pack provides more than 8 hours\* of operating time even at -20°C.

\* Tx:Rx:Stand-by=6:6:48.

## Large keypad with positive button action

Large buttons and knobs provide tactile feedback for positive operation.

#### Wide viewing angle LCD display

A wide viewing angle, high intensity LCD offers extra clear, easy to read characters. The bright LED indicator on the top of panel shows the operating condition clearly.

# Easy to operate even for unskilled operators

Operation instructions are printed on the rear panel. All operations can be made with one hand.

#### **Additional features**

- One touch access to Channel 16 and call channel
- Highly visible yellow colored body
- Optional VOX headset for on-board use
- Optional waterproof speaker microphone, HM-125



SURVIVAL CRAFT 2-WAY RADIO

IC-GM1600



Available in black or white.

VHF MARINE TRANSCEIVER
IC-M602

#### **Built-in ITU Class-D DSC**

An independent receiver continuously watches Ch. 70 while using another channel. A single antenna connector allows VHF and Ch. 70 operation.

# Simultaneous connection of two COMMANDMICII™s

Allows 2nd and/or 3rd station or intercom function and controls most IC-M602 functions. (Except DSC, hailer, fog horn operation)

#### NMEA Input/Output

NMEA output allows you to plot your own or another ship's position data on a PC or navigation equipment.

#### 22 Watt 2-way Hailer capability

When connected to a hailer horn, communication with other boats, deck hands or marina officials is easy.

#### Other features

- Submersible; 1m depth for 30 minutes. Equivalent to IPX7 (except cables)
- Superior receiver performance
- Auto fog horn function
- Large LCD with dot-matrix characters
- Detachable Smart-speaker-microphone
- Instant access to Ch.16 and Ch.9
- Auto WX alert function (U.S.A. version only)
- Optional Voice Scrambler, UT-112

#### **Built-in ITU Class-D DSC**

# 25W hailer/RX speaker and fog horn capability

When connected to a hailer horn, the IC-M504 (or optional COMMANDMICIII) can call another ship or person. The RX speaker function allows you to monitor the radio audio from the hailer. Four fog horn patterns are available for the automatic fog horn.

#### **Submersible PLUS**

The IC-M504 has improved water tight protection and extends the limit to 1.5m depth for 30 minutes, equivalent to IPX8 water proof protection standard.

#### New COMMANDMICIII™

Allows 2nd station or intercom function and controls all IC-M504 functions including DSC, hailer and fog horn operations.

#### Large, full dot matrix display

#### Other features

- NMEA Input/Output
- Rear panel microphone connection
- Superior receiver performance
- Instant access to Ch.16 and Ch.9
- Big bass sound speaker
- Auto WX alert function (U.S.A. version only)
- Optional Voice Scrambler, UT-112

# Feature rich with a user friendly focus!











Available in black or gray.

VHF MARINE TRANSCEIVER

IC-M504

## Fully featured compact submersible radio



**VHF MARINE TRANSCEIVER** 

IC-M422

Position request and position report

When connected to an external GPS receiver, the position request and position report functions allow you to exchange the ships position information. The received position information can be plotted on navigation equipment that has NMEA input.

# Public address (PA) and RX speaker functions

When connected to an external loud speaker or hailer, you can make an announcement to crew members on the boat via the hand microphone. The RX speaker function allows you to monitor the radio audio from the loud speaker or hailer.

#### **Built-in DSC meets RTCM SC101**

Submersible (1m depth for 30 min.)\*

\* Equivalent to IPX7. (Except cables.)

#### Optional COMMANDMICII™

#### Other features

- Force 5 Audio for superior speaker audio
- One touch access to Scan button
- · Dualwatch and Tri-watch functions
- LCD backlighting and key illumination
- Auto WX alert function (U.S.A. version only)

#### Large channel indication

The large, easy to see display has 27x43 mm (1½6x15% in) dimensions. 10-character channel names and all settings are displayed at the same time.

#### **Built-in DSC meets RTCM SC101**

The DSC watch function monitors Ch 70, while receiving another channel. Position data is automatically exchanged between the two stations. Up to 30 DSC IDs are stored.

Submersible (1m depth for 30 min.)\*

\* Equivalent to IPX7. (Except cables.)

#### Optional COMMANDMICII™

The COMMANDMICII™ makes it convenient for using the IC-M402 from a separate cabin or tower.

#### Other features

- Force 5 Audio for improved speaker audio
- · One touch access to Scan button
- Dualwatch and Tri-watch functions
- Position indication in seconds with GPS receiver (GPS receiver is not included)
- · LCD backlighting and key illumination
- Auto WX alert function (U.S.A. version only)

# Easy to see! And even easier to hear!



Available in black or white.

VHF MARINE TRANSCEIVER
IC-M402

Upgraded Versions

# Fixed mote and the state of the

Fixed mount price-performance winner!

- Force 5 Audio
- Submersible (1m depth for 30 min.)\*
   \* Equivalent to IPX7. (Except cables.)
- Built-in DSC meets RTCM SC101
- Large backlit LCD
- Auto WX alert function (U.S.A. version only)
- GPS connection (NMEA input)
- External speaker connection

VHF MARINE TRANSCEIVER
IC-M302

## Full control 2nd station for IC-M504

- Up to 18.3m (60ft) of freedom with two optional extension cables, OPC-1541
- All IC-M504 functions including DSC, hailer, fog horn and intercom (between M504) available
- 45mm (d) speaker delivers loud and clear sound
- 2.8W (typ.) external speaker terminal
- User friendly "jog dial" interface
- Full dot-matrix LCD with 7-step dimmer setting
- Submersible PLUS (1.5m depth for 30 min.)
   \* Equivalent to IPX8.





# 2nd/3rd station capability for IC-M602, M422 & M402



- 2nd/3rd station capability\*
   \* IC-M504, M422, M402: 2nd station only. IC-M602: Two units can be attached.
- Come with a 6.1m cable and up to two optional extension cable, OPC-999 available
- Submersible (1m depth for 30 min.)
   \* Equivalent to IPX7.
- 4-step LCD and keypad backlighting
- Slim dimensions (31.4mm depth)
- Remote power On/Off, PA and Rx speaker functions when used with IC-M422



# Advanced DSP marine radio with compact remote head



Photo shows the IC-M802 U.S.A. version.

# HF MARINE TRANSCEIVER IC-M802

#### **Digital Signal Processor**

The digital IF filter provides flexible filter settings for narrow bandwidth signals without having to install an optional filter.

#### **Built-in ITU Class E DSC\***

The IC-M802 conforms to Class E DSC requirements, vital for your safety at sea.

\* U.S.A. and Canadian versions only.

#### One touch e-mail button\*

The e-mail button allows quick access to the pre-programmed e-mail frequency list.

\* U.S.A. and Canadian versions only.

#### Automatic antenna tuner, AT-140

The optional AT-140 easily connects to the radio without opening the casing. The tuner through function can be used with the AT-140.

#### Other features

- 4×8-inch remote controller and 4×4-inch external speaker
- · Large LCD with dot matrix characters
- Channel and Group dials offer easy channel selection and operation
- Powerful 150W (PEP) output
- 0.5 to 29.9999MHz wideband receiver
- DIN and RS-232C connectors for external equipment
- NMEA 0183 interface included
- 1035 ITU, 160 programmable and 160 e-mail\* channels are available
   \* U.S.A. and Canadian versions only.
- U.S.A. and Canadian versions on
- Built-in 2-tone alarm function\*
   General version only.

#### Alphanumeric readout

Seven characters can be programmed into each memory channel to conveniently display station names or ship names for simplified operation.

#### 150W output power

A large cooling fan system, in combination with the aluminum chassis, allows conditions for transmission at a full 150W\* (PEP) RF output power—even during demanding RTTY (radio teletype) operation.

\* 60W (PEP) above 24 MHz bands.

#### Other features

- General coverage receiver
- Terminals for frequency/mode control via NMEA interfacing
- Automatic tuning function
- · Large, front-mounted speaker
- Weather fax ready
- Backlight control
- CW full break-in and semi break-in
- 2-tone alarm built-in (Optional depending on version)
- 1136 channels available

# Worldwide communications at an affordable price



# A favorite among SSB marine radio operators



HETRANSCEIVER IC-M700PRO

#### Simplified operation

Channel selection is quick and easy to access with large, independent Group and Channel knobs. Each panel button has only 1 function. The large easy to read display shows channel (or frequency) and operating status at a glance.

#### **Data operation capability**

The powerful 150W\* (PEP) transmitter provides long distance communication, and ensures that power is always available to you—even during demanding RTTY (radio teletype) or e-mail operation.

\*60W (PEP) above 24MHz bands.

#### Other features

- Optional automatic antenna tuner, AT-140/ AT-130, matches the radio to your antenna
- 0.5 to 29.9999MHz wide band general coverage receive
- Channel knob allows the user to tune specific frequencies around a memory channel
- 2 DIN connectors for external equipment connection—linear amplifier, FSK terminal, e-mail modem, etc.
- 2-tone alarm built-in (Optional depending on version)
- NMEA 0183 interface included

#### Simple operation with keypad

A minimum of buttons and knobs provide superior feature selectability. The 10 keypad allows you to enter an operating frequency or a memory channel number directly. VFO mode is available for continuous frequency operation.

#### General coverage receive

The IC-718 and IC-78 cover 0.03–29.999999MHz\* in SSB, CW, RTTY and AM modes. The 1st receiver mixer provides superior receiver sensitivity, rejecting nearby interfering signals.

\* Guaranteed range: 0.5-29.999999MHz

#### Front mounted loud speaker

With the speaker facing the operator, audio sounds can be clearly heard without impediment during operation.

#### Other features

- 101 memory channels
- VOX (Voice Operated Transmission)
- Digital S/RF meter
- Band stacking register
- IF shift interference rejection
- Optional AF DSP capabilities (IC-718 only)
- Squelch/RF gain control
- Optional automatic antenna tuner, AT-140 available (IC-78 only)

# Reliable long distance communications



Photo shows the IC-78.

The IC-78 and IC-718 are not certified for marine use in the U.S.A. by the FCC.

HFTRANSCEIVERS
IC-78 IC-718

# Easy operation under all conditions

#### Up to 36 NM observation range

The 60cm (2ft) radome scanner provides

up to 36 NM (nautical miles) of observation range with the powerful 4kW magnetron.



Radome Scanner for MR-570R

#### High-contrast 5.7" LCD display

The compact 5.7" display is convenient for pleasure boats, where space is limited.

#### 4 types of operating modes

The true motion,\* North-up, Course-up and Heading-up modes are available.

\* True motion requires additional bearing and position data.

#### **Waypoint indication**

When connected to a GPS or other navigation system,\* the waypoint indication is shown on the screen (with ship's position in Lon/Lat and distance to the point).

\* NMEA 0183, N+1, AUX data output required.

#### Multiple language selection

Menu indications can be selected from English, Spanish, Portuguese, Chinese, and Korean as per your preference.

#### And more features

- Automatic tuning and automatic GAIN
- · Rain clutter and automatic sea clutter
- Switchable pulse-width
- Off-center function
- Interference Reduction
- · Zoom function expands the targets
- NMEA 0183 format output



- Electrical Plotting Aid (EPA) allows you to plot 10 targets and forecast the courses
- CPA (Closest Point Approach) and TCPA (Time to Closest Point Approach) alarm
- Man Overboard point (MOB)



### LCD MARINE RADAR MR-570R

# High resolution over long ranges

#### Powerful 4kW output power

#### 8-level bright picture on 10-inch monochrome green CRT

10-inch high-resolution CRT display has excellent contrast in low-light conditions. All indications can be read very clearly.

MR-1000TII: 120cm open array scanner observes up to 48nm

MR-1000RII: 60cm radome scanner observes up to 36nm



Open Scanner for MR-1000TII (left) and Radome Scanner for MR-1000RII (right)

#### **ATA** (Automatic Tracking Aid)

The ATA function allows you to plot up to 10 targets and the radar continues to track the targets automatically. Used together with the CPA (Closest Point of Approach) and/or the TCPA (Time to CPA) alarm, reliable collision avoidance increases user's safety at sea.

#### Power saver function

Power saver function pauses the scanning for a preset time and conserves battery consumption. When used with the zone alarm function, the CRT display is turned off until an object enters the programmed alarm zone.

#### Other features

- Waypoint Indication
- Man Overboard (MOB) function
- · Alarm zone setting

- Automatic calibration
- English and Korean indication for display
- 2 EBLs (Electronic Bearing Lines) and 2 VRMs (Variable Range Markers)
- Head-up, North-up, Course-up, and True motion\*
- \* North-up and course-up require external bearing data. True-motion requires external bearing and position/speed data.



**CRT MARINE RADARS** MR-1000RII • MR-1000TII

# **OPTIONS FOR VHF HANDHELD TRANSCEIVERS**

	BATTER	Y CASES			В	ATTERY PACK	S		
MODEL NAME	BP-223 AA(LR6)×6 cells	BP-226 AA(LR6)x5 cells Water resistance, equivalent to IPX4	<b>BP-224</b> 7.2V/750mAh (Ni-Cd)	<b>BP-225</b> 7.2V/1100mAh (Ni-Cd)	<b>BP-227</b> 7.2V/1700mAh (Li-lon)	BP-227FM 7.2V/1700mAh (Li-lon)	BP-234 9.0V/3300mAh (Lithium: non- rechargeable)	BP-241 7.4V/1150mAh (Li-lon) Charge with BG-162.	<b>BP-245</b> 7.4V/2000mAh (Li-Ion)
IC-M32	V		V					<b>/</b>	
IC-M2A	· ·		~						
IC-M72									V
IC-M88		~			~	(For Intrinsically safe use)			
IC-M90	V		V	~				V	
IC-GM1600			(On-board use only)	(On-board use only)			(For survival craft)		

			DES	KTOP CHARG	ERS		MULTI-CHARGER
MODEL NAME	BC-119N Rapid charger Cannot charge BP-241.	BC-150 Regular charger Cannot charge BP-241.	BC-152 Regular charger	BC-158 Regular charger Cannot charge BP-241.	BC-162 Rapid charger Charges BP-241, BP-224 and BP-225.	BC-166 Regular charger	BC-121N Rapid charger Cannot charge BP-241.
	ECOV.						
IC-M32	V	~			V		V
IC-M2A	V	· ·					V
IC-M72	V					V	V
IC-M88	V		<b>'</b>				V
IC-M90	V			V	~		V
IC-GM1600	(On-board use only)			(On-board use only)			(On-board use only)

		CHA	RGER ADAPT	ERS		AC AD	APTERS	
MODEL NAME	AD-100	AD-103	AD-109	AD-114	<b>BC-145</b> 16V/1A	<b>BC-147</b> 12V/300mA	<b>BC-157</b> 12V/7A	
						8)	18	
IC-M32		(Use with BC-119N/BC-121N)			(Use with BC-119N/BC-162)	(Use with BC-150)	(Use with BC-121N)	
IC-M2A		(Use with BC-119N/BC-121N)			(Use with BC-119N)	(Use with BC-150)	(Use with BC-121N)	
IC-M72				(Use with BC-119N/BC-121N)	(Use with BC-119N)	(Use with BC-166)	(Use with BC-121N)	
IC-M88	(Use with BC-119N/BC-121N)				(Use with BC-119N)	(Use with BC-152)	(Use with BC-121N)	
IC-M90			(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-162)	(Use with BC-158)	(Use with BC-121N)	
IC-GM1600			(Use with BC-119N/BC-121N; On-board use only)		(Use with BC-119N; On-board use only)	(Use with BC-158; On-board use only)	(Use with BC-121N; On-board use only)	

: Applicable : N	Not applicable
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## **OPTIONS FOR VHF HANDHELD TRANSCEIVERS**

	CIGARETTE LIGHTER CABLE	DC POWE	R CABLES	SPEAKER MI	CROPHONES		HEADSETS	
MODEL NAME	CP-17L	OPC-515L	OPC-656	HM-125 Submersible	HM-138 Submersible	<b>HS-94</b> *¹ Earhook type with boom microphone	HS-95*1 Behind-the-head type	HS-97*1 Throat microphone type
			d.	0	9	0		6
IC-M32	(Use with BC-119N/BC-150)	(Use with BC-119N/BC-150)	(Use with BC-121N)					
IC-M2A	(Use with BC-119N/BC-150)	(Use with BC-119N/BC-150)	(Use with BC-121N)					
IC-M72	(Use with BC-119N)	(Use with BC-119N)	(Use with BC-121N)	~		(Use with OPC-1392)	(Use with OPC-1392)	(Use with OPC-1392)
IC-M88	(Use with BC-119N/BC-152)	(Use with BC-119N/BC-152	(Use with BC-121N)		· ·			
IC-M90	(Use with BC-119N/BC-158)	(Use with BC-119N/BC-158)	(Use with BC-121N)	<b>V</b>		(Use with OPC-1392)	(Use with OPC-1392)	(Use with OPC-1392)
IC-GM1600	(Use with BC-119N/BC-158; On-board use only)	(Use with BC-119N/BC-158 On-board use only)	(Use with BC-121N; On-board use only)	(On-board use only)		(Use with OPC-1392; On-board use only)	(Use with OPC-1392; On-board use only)	(Use with OPC-1392; On-board use only)

<sup>\*1</sup> HS-94, HS-95, and HS-97 are not waterproof.

	HEADSET ADAI	PTER CABLE				BELT CLIPS			
MODEL NAME	OPC-1392		MB-68	MB-74N	MB-86	MB-87	MB-98	MB-103	MB-103Y
								W O O	
IC-M32			<b>V</b>	~		V			
IC-M2A			~	~		~			
IC-M72	V				V			~	
IC-M88					V		~		
IC-M90	V				V			~	
IC-GM1600	(On-board use only)				V				V

	ΙFΔΤΙ	HER BELT HAN	IGERS	VOICE SC	RAMRI FR		
MODEL NAME	MB-96	MB-96N	MB-96F	UT-112 compatibility Total of 32 voice scramble codes available	TAMBLE II		
IC-M32	V		(Use with MB-68/MB-74N)				
IC-M2A	V		(Use with MB-68/MB-74N)				
IC-M72		~	(Use with MB-103)	Built-in, depending version			
IC-M88		~	(Use with MB-98)	Built-in for IS version			
IC-M90		V	(Use with MB-103)	Already built-in			
IC-GM1600		~	(Use with MB-103Y)				

: Applic	cable	: Not applicabl
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## **OPTIONS FOR VHF FIXED MOUNT TRANSCEIVERS**

		HAND MICI	ROPHONES		СОММА	NDMIC™	EXT	TENSION CAB	LES
MODEL NAME	HM-126RB/RG	HM-136B/W	HM-141B/W/G	HM-150B/SW	HM-157B/SW	HM-162B/SW		OPC-1541	OPC-1542
						16	6.1 m; 20 ft	6.1 m; 20 ft	For rear panel Mic. connection
					Ø				
IC-M602		~			V		(Use with HM-157B/SW)		
IC-M504	~				~	~	(Use with HM-157B/SW)	(Use with HM-162B/SW)	(Use with HM-126RB/RG)
IC-M422				<b>V</b>	~		(Use with HM-157B/SW)		
IC-M402			<b>V</b>		~		(Use with HM-157B/SW)		
IC-M302			~						

	FLUSH MO	DUNT KITS	DUST	COVER	EXT	ERNAL SPEAK	ERS	VOICE SC	RAMBLER
MODEL NAME	MB-69	MB-75	MB-92		SP-5	SP-10		UT-112 Total of 32 voice scramble codes available	
IC-M602		V						<b>V</b>	
IC-M504		<b>'</b>			~	<b>'</b>		~	
IC-M422	V				V	V			
IC-M402	~		V		<b>V</b>	~			
IC-M302	V		<b>V</b>						

## **OPTIONS FOR HF MARINE TRANSCEIVERS**

	DC POWER	RSUPPLY	ANTENNA ELEMENT	FOLDED DIPOLE ANTENNA	ANTENNA	MATCHERS	1A	NTENNA TUNE	RS
MODEL NAME	PS-125 13.8V/25A		AH-2b	AH-710	MN-100	MN-100L	AH-4 (Matches amateur bands only)	AT-130	AT-140
IC-M802				<b>/</b>	<b>/</b>	<b>/</b>		<b>/</b>	<b>/</b>
IC-M710				V	<b>'</b>	V		~	~
IC-M700PRO				V	<b>V</b>	<b>V</b>		V	~
IC-78	V		(Use with AH-4)	~	~	~	~	~	~
IC-718	V		(Use with AH-4)	V			<b>V</b>		

: Applicable : Not applicable

# **OPTIONS FOR HF MARINE TRANSCEIVERS**

	ANTENNA TUNER	SHIELDED CON	TROL CABLES	HANDSET	НАН	ND MICROPHO	NES	DESKTOP MICROPHONES		
MODEL NAME	AT-180 (Matches amateur bands only)	OPC-566	OPC-1147/N 10m; 32.8ft	HS-50	EM-101	Нм-135	HM-36	SM-6	5M-20	
IC-M802		(Use with AT-130)	(Use with AT-140)			V				
IC-M710		(Use with AT-130)	(Use with AT-140)	~	~					
IC-M700PRO		(Use with AT-130)	(Use with AT-140)	V	V					
IC-78		(Use with AT-130)	(Use with AT-140)				<b>✓</b>	<b>'</b>	~	
IC-718	<b>/</b>						<b>V</b>	<b>/</b>	<b>V</b>	

	EXTERNAL SPEAKERS F				FLUSH MOUNT KIT	MOBILE BRACKET	CARRYING HANDLE	REMOTE CONTROLLER	SEPARATION CABLE
MODEL NAME	SP-20	SP-21	SP-23	SP-24	MB-75	IC-MB5	MB-23	RC-25	<b>OPC-1106</b> 5m; 16.4ft
	To the second se		10 mg	G,			000		O
IC-M802				~	~			V	<b>'</b>
IC-M710									
IC-M700PRO									
IC-78	V	<b>'</b>	<b>V</b>			~	<b>V</b>		
IC-718	<b>V</b>	<b>/</b>	~			~	<b>/</b>		

	LINEAR AMPLIFIER	ACC CABLE ADAPTER	CI-V CONVERTER			
MODEL NAME	IC-PW1 (Not certified for marine use in the U.S.A. by the FCC)		CT-17			
IC-M802						
IC-M710						
IC-M700PRO						
IC-78			~			
IC-718	V	~	~			

MODEL NAME	FL-100 CW/RTTY (FSK) NARROW FILTER 500Hz/–6dB	455kHZ FILTERS FL-52A: 500Hz/-6dB FL-53A: 250Hz/-6dB FL-222: 1.8kHz/-6dB FL-257: 3.3kHz/-6dB	UT-95 2-TONE ALARM UNIT Provides an alarm func- tion.	band's frequency, oper-	UT-106 DSP UNIT Provides AF DSP capability, such as noise reduction and auto notch function.	
IC-M802						
IC-M710	<b>✓</b>		(Already built-in to some versions)			
IC-M700PRO	<b>✓</b>		(Already built-in to some versions)			
IC-78		<b>✓</b>		V	V	<b>✓</b>
IC-718		V		<b>V</b>	<b>V</b>	V

<b>/</b>	: Applicable	: Not applicabl

## **SPECIFICATIONS**

#### **VHF HANDHELD TRANSCEIVERS**

		IC-M32	IC-M2A	IC-M72	IC-M88	IC-M90	IC-GM1600
Frequency range (Unit:MHz)		Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx:156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275 146–174 (LMR; Tx/Rx)	Tx: 156.025–157.425 Rx: 156.050–163.275 146–174 (LMR; Tx/Rx)	156.300–156.875 (Tx/Rx)
Dimensions (projections not included; W×H×D)		61×135×41 mm 2 <sup>13</sup> / <sub>32</sub> ×5 <sup>5</sup> / <sub>16</sub> ×1 <sup>5</sup> / <sub>8</sub> in	61×135×41 mm 2 <sup>13</sup> / <sub>32</sub> ×5 <sup>5</sup> / <sub>16</sub> ×1 <sup>5</sup> / <sub>8</sub> in	52.5×125×30 mm 2 <sup>1</sup> / <sub>16</sub> ×4 <sup>29</sup> / <sub>32</sub> ×1 <sup>3</sup> / <sub>16</sub> in	62×97×39 mm 2 <sup>7</sup> / <sub>16</sub> ×3 <sup>13</sup> / <sub>16</sub> ×1 <sup>17</sup> / <sub>32</sub> in	65×145×44 mm 2 <sup>9</sup> / <sub>16</sub> ×5 <sup>23</sup> / <sub>32</sub> ×1 <sup>23</sup> / <sub>32</sub> in	65×145×44 mm 2 <sup>9</sup> / <sub>16</sub> ×5 <sup>23</sup> / <sub>32</sub> ×1 <sup>23</sup> / <sub>32</sub> in
Weight (approx.)		360g; 12.7oz (With BP-224) 300g; 10.6oz (With BP-241)	360g; 12.7oz (With BP-224)	280g; 9.9oz (With BP-245)	280g; 9.9oz (With BP-227)	410g; 14.5oz (With BP-225) 350g; 12.3oz (With BP-241)	
	Transmit (High)	1.5A typical	1.5A typical	1.7A/1.5A typ. (6W/5W)	1.6A typical	1.6A typical	1.0A/0.7A (2W/1W)
Current drain	Max. audio	200mA typical	200mA typical	400mA typical	200mA typical	200mA typical	200mA
	Power save	20mA typical	20mA typical	30mA typical	20mA typical	20mA typical	_
Sensitivity (at 12dE	3 SINAD)	0.25μV typical	0.25μV typical	0.22μV typical	0.25μV typical	0.25μV typical	0.25μV typ. (USA version)
Intermodulation re	ejection	70dB typical	70dB typical	70dB typical	70dB typical	70dB typical	70dB (USA), 68dB (GEN)
Audio output pow	er (10% dist./ 8Ω load)	350mW typical	350mW typical	600mW typical	350mW typical	350mW typical	350mW typical
RF output power		5/1W	5/3/1W	6/3/1W 5/3/1W (Aus version)	5/3/1W	5/3/1W	2/1W

Measurements made in accordance with TIA/EIA603 for IC-M32, M2A, M72, M88 and M90. TIA/EIA603 and FCC Part 80.271 or ETS300-225-3 for IC-GM1600.

#### **VHF FIXED MOUNT TRANSCEIVERS**

		IC-M602	IC-M504	IC-M422	IC-M402	IC-M302
Frequency range (Unit:MHz)		Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275
Power supply requ	irement	13.8V DC ±15%	13.8V DC ±15%	13.8V DC ±15%	13.8V DC ±15%	13.8V DC ±15%
Dimensions (projections not included; W×H×D)		220×110×109.4 mm 8 <sup>21</sup> / <sub>32</sub> ×4 <sup>11</sup> / <sub>32</sub> ×4 <sup>5</sup> / <sub>16</sub> in	165×110×123.2 mm 6 <sup>1</sup> / <sub>2</sub> ×4 <sup>11</sup> / <sub>32</sub> ×4 <sup>25</sup> / <sub>32</sub> in	164×78×139.3 mm 6 <sup>15</sup> / <sub>32</sub> ×3 <sup>1</sup> / <sub>16</sub> ×5 <sup>15</sup> / <sub>32</sub> in	153×67×141.6 mm 6 <sup>1</sup> / <sub>32</sub> ×2 <sup>5</sup> / <sub>8</sub> ×5 <sup>9</sup> / <sub>16</sub> in	153×67×132 mm 6 <sup>1</sup> / <sub>32</sub> ×2 <sup>5</sup> / <sub>8</sub> ×5 <sup>3</sup> / <sub>16</sub> in
Weight (approx.)		1.35kg; 3.0lb	1.45kg; 3.2lb	1.07kg; 2.4lb	900g; 2.0lb	825g; 1.8lb
Current drain	Transmit (High)	5.2A typical	5.5A	5.5A	5.5A	5.5A
Current drain	Max. audio output	1.2A typical	1.5A	1.5A	1.5A	1.5A
Sensitivity (at 12dB	SINAD)	0.32μV	0.22μV typical	0.22μV typical	0.22μV typical	0.22μV typical
Intermodulation re	jection	80dB	80dB	70dB	70dB	70dB
Audio output powe	Audio output power (10% dist. $/4\Omega$ load)		4.5W typical	4.5W typical	4.5W typical	4.5W typical
RF output power	RF output power		25/1W	25/1W	25/1W	25/1W

Measurements made in accordance with TIA/EIA 603.

#### **HF MARINE TRANSCEIVERS**

		IC-M802	IC-M710	IC-M700PRO	IC-78 IC-718	
Frequency range (Unit:MHz)			0, 4.0–4.9999, 6.0–6.9999, 8.0–8.9999 199, 18.0–19.9999, 22.0–22.9999, 25. 19		Tx: 1.6–29.9999* Rx: 0.03–29.9999 (Guaranteed: 0.5–29.9999)	
Power supply requ	uirement	13.6V DC ±15% (negative ground)	13.6V DC ±15% (negative ground)	13.6V DC ±15% (negative ground)	13.8V DC ±15% (negative ground)	
Dimensions (projections not included; W×H×D)		$\begin{array}{c} \text{Main unit: } 240\times94\times238.4 \text{ mm;} \\ 9^{7}/_{16}\times3^{11}/_{16}\times9^{3}/_{8} \text{ in} \\ \text{Controller unit: } 220\times110\times84.4 \text{ mm;} \\ 8^{21}/_{32}\times4^{11}/_{32}\times3^{5}/_{16} \text{ in} \end{array}$	291.4×116.4×315 mm 11 <sup>15</sup> / <sub>32</sub> ×4 <sup>19</sup> / <sub>32</sub> ×12 <sup>13</sup> / <sub>32</sub> in	291.4×116.4×315 mm 11 <sup>15/</sup> <sub>32</sub> ×4 <sup>19</sup> / <sub>32</sub> ×12 <sup>13</sup> / <sub>32</sub> in	240×95×239 mm 9 <sup>7</sup> / <sub>16</sub> ×3 <sup>3</sup> / <sub>4</sub> ×9 <sup>13</sup> / <sub>32</sub> in	
Weight (approx.)		Main unit: 4.7kg; 10.4lb, Controller unit: 570g; 1.3lb	7.9kg; 17.4lb	7.9kg; 17.4lb	3.8kg; 8.4lb	
Current drain	Transmit (High)	30A typ. at max. power	30A at max. power	30A at max. power	20A typ. at max. power	
Current drain	Max. audio output	3.0A	2.5A	2.5A	2.0A	
Sensitivity (at 10dB S/N; 1.8–29	9.999MHz)	J3E, A1A, J2B, F1B : 0.5μV H3E : 3.2μV	J3E, J2B, F1B, R3E, A1A (12dB SINAD) : 0.5μV H3E : 3.2μV	J3E, J2B, R3E, A1A (12dB SINAD) : 0.5μV typ. H3E : 2.2μV typ.	SSB, CW, RTTY : 0.16μV AM : 2.0μV typ.	
Selectivity		J3E, R3E, J2B, A1A : 2.4kHz/–6dB 3.6kHz/–60dB	J3E, R3E, J2B, A1A : 2.3kHz/–6dB 4.2kHz/–60dB	J3E, R3E, J2B, A1A : 2.3kHz/–6dB 4.2kHz/–60dB	SSB, CW, RTTY : 2.1kHz/–6dB 4.5kHz/–60dB AM : 6.0kHz/–6dB 20kHz/–60dB	
Audio output pow	er (10% dist/ 4Ω load)	4.0W	4.5W	5W typical	2.0W (10% dist / 8Ω load)	
RF output power (PEP) (output power differs depending on version)		150/60/20W	150/60/20W (below 24MHz) 60/20W (above 24MHz)	150/60/20W (below 24MHz) 60/20W (above 24MHz)	SSB, CW, RTTY : 2–100W AM : 2–40W	

#### **SPECIFICATIONS**

#### MARINE RADARS

			MR-570R	MR-1000RII	MR-1000TII	
al	Minimum range		25m (when measurement range is <sup>1</sup> / <sub>8</sub> NM)	25m (when measurement range is <sup>1</sup> / <sub>8</sub> NM)	25m (when measurement range is <sup>1</sup> / <sub>8</sub> NM)	
General	Maximum rar	nge	36NM	36NM	48NM	
ဗီ	Power supply	y requirement	10.2-42V DC	10.2-42V DC	10.2-42V DC	
	Power consu	mption	47W	60W	70W	
	Display (pixel	ls)	5.7" monochrome LCD (320×240)	10" monochrome CRT (640×480)	10" monochrome CRT (640×480)	
a a	Usable tempe	erature range	-15°C to +55°C; +5°F to +131°F	-15°C to +55°C; +5°F to +131°F	-15°C to +55°C; +5°F to +131°F	
Display	Dimensions (W×H×D) (projections not included)		186×203×103 mm 7 <sup>5</sup> / <sub>16</sub> ×8×4 <sup>1</sup> / <sub>16</sub> in	269×264×258 mm 10 <sup>19</sup> / <sub>32</sub> ×10 <sup>13</sup> / <sub>32</sub> ×10 <sup>5</sup> / <sub>32</sub> in	269×264×258 mm 10 <sup>19</sup> / <sub>32</sub> ×10 <sup>13</sup> / <sub>32</sub> ×10 <sup>5</sup> / <sub>32</sub> in	
	Weight (approx.)		2kg; 4.4lb	6.5kg; 14.3lb	6.5kg; 14.3lb	
	Туре		60cm (2ft) slotted wave-guided array in radome	60cm (2ft) slotted wave-guided array in radome	120cm (4ft) slotted wave-guided array	
	Peak output power		4kW (PEP) 4kW (PEP)		4kW (PEP)	
	Rotation speed		24/36/48rpm typ.	24/36/48rpm typ.	24/36/48rpm typ.	
	Horizontal		4° typ.	4° typ.	2° typ.	
Scanner	Beamwidth	Vertical	22° typ.	22° typ.	25° typ.	
car	Intermediate	frequency	60MHz 60MHz		60MHz	
0	Transmission	n frequency	9410MHz ±30MHz	9410MHz ±30MHz	9410MHz ±30MHz	
	Usable tempe	erature range	-25°C to +70°C; -13°F to +158°F	-25°C to +70°C; -13°F to +158°F	-25°C to +70°C; -13°F to +158°F	
	Dimensions (projections not included)		607(Ø)×243(H) mm 23 <sup>29</sup> / <sub>32</sub> (Ø)×9 <sup>9</sup> / <sub>16</sub> (H) in	607(Ø)×243(H) mm 23 <sup>29</sup> / <sub>32</sub> (Ø)×9 <sup>9</sup> / <sub>16</sub> (H) in	1205(d)/381(H) mm* <sup>1</sup> 47 <sup>7</sup> / <sub>16</sub> (d)×15(H) in	
	Weight (approx.)		9kg; 19.8lb	8kg; 17.6lb	17kg; 37.5lb	
Cables	Connection of between display	eable length ay and scanner	10m; 32.8ft (OPC-1075, standard) 20m; 65.6ft (OPC-1077, option) 30m; 98.4ft (OPC-1078, option)	15m; 49.2ft (OPC-989, standard) 20m; 65.6ft (OPC-1077, option) 30m; 98.4ft (OPC-1078, option)	20m; 65.6ft (OPC-1189, standard*²) 20m; 65.6ft (OPC-1077, option) 30m; 98.4ft (OPC-1078, option)	
				*	Diameter of rotation/height	



#### Applicable U.S. Military Specifications

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	MIL-810 C Method, Proc.	MIL-810 D Method, Proc.	MIL-810 E Method, Proc.	MIL-810 F Method, Proc.	IC-M602	IC-M302	IC-M32	IC-M2A	IC-M88	IC-M90
Low Pressure Storage (Altitude)	500.1 I	500.2 I	500.3 I	500.4 I	~	~	~	~	~	~
Low Pressure Operation (Altitude)	-	500.2 II	500.3 II	500.4 II	~	~	~	~	V	~
High Temp. Storage	501.1 I	501.2 I	501.3 I	501.4 I	~	~	~	V	V	~
High Temp. Operation	-	501.2 II	501.3 II	501.4 II	~	~	~	~	V	~
Low Temp. Storage	502.1 I	502.2 I	502.3 I	502.4-3 I	~	~	~	~	V	V
Low Temp. Operation	-	502.2 II	502.3 II	502.4-3 II	~	~	~	~	~	~
Temp. Shock	503.1 I	503.2 I	503.3 I	503.4 I	~	~	~	~	~	~
Solar Radiation	505.1 I	505.2 I	505.3 I	505.4 I	~	~	~	~	V	~
Rain Blowing	506.2 I	506.2 I	506.3 I	506.4 I	~	~	V	~	V	~
Rain Drip	506.2 II	506.2 III	506.3 III	506.4 III	~	~	V	~	V	~
Humidity Induced	507.1 I	507.2 II	507.3 II,	507.4	~	~	V	~	V	~
Humidity Aggravate	507.1 II	507.2 III	507.3 III	307.4	~	~	V	~	V	~
Salt Fog	509.1 I	509.2 I	509.3 I	509.4	~	~	~	V	V	~
Dust Blowing	510.1 I	510.2 I	510.3 I	510.4 I	~	~	~	~	V	~
Immersion	512.1 I	512.2 I	512.3 I	512.4 I						~
Vibration	514.2 VIII, X	514.3 I	514.4 I	514.5 I	~	V	~	~	V	~
Shock Functional	516.2 I	516.3 I	516.4 I	516.5 I	V	V	<b>V</b>	~	V	~
Shock Transit Drop	516.2 II, IV	516.3 IV	516.4 IV	516.5 IV	V	V	<b>V</b>	V	V	~

The IC-M2A has been tested to and passed MIL-810 C. D. and E requirements only. The IC-M72, M504 and M422 are under evaluation.

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



URL: http://www.icom.co.jp/world/index.html

\*2 Peeled for connection with MR-1000TII

Approved intrinsically safe classifications for the IC-M88 intrinsically safe version.

Intrinsically safe : Class I, II, III, Division 1, Groups C, D, E, F, G

Non-incendive : Class I, Division 2, Groups A, B, C, D Hazardous locations when used with Icom BP-227FM battery pack. "Max. Temp. T3C at 40°C". The HM-138 is an approved accessory for use with Intrinsically Safe versions.

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