ICOM

Marine Products

SIMPLY THE BEST









Compact marine, commercial or recreational

Tough and waterproof

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

* Equivalent to JIS Grade 7. (1m depth/30min.)

Simple operation

6 clearly labelled buttons on the front panel and the volume/power knob 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, you can get up to 15 hours of operating time.* Also, no worries about 'memory effect' of the battery with Li-Ion technology.

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

Optional speaker-microphone

An optional waterproof* speaker-microphone, the HM-138, provides reliable operation. * Equivalent to JIS Grade 7. (1m depth/30min.)

22 free channels for land use

The IC-M88 has 22 free 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 may be required.

Additional features

- Instant access to Ch.16 and Ch.9
- Simple add/delete TAG scanning
- Monitor button opens squelch
- 2-step power saver Key lock function
- 4-step battery indicator

VHF MARINE TRANSCEIVER

Auto WX alert function (U.S.A. version only)

Marine radio that set the standard that others look up to

Ergonomic design, waterproof

The IC-M1V is waterproof*, and its ergonomic size, 52.5×129×30 mm (21/16×53/32×13/16 in), layout and lightweight, only 280g (9.9oz), make it extremely convenient to use.

* Equivalent to JIS Grade 7 (1m depth/30 min.)

Powerful, long hours of operation

5W of powerful output power and long 15 to 16 hours* of operating time are possible with the standard Lithium Ion battery pack. * Tx:Rx:Stand-by=5:5:90 with BP-215L.

Optional speaker-microphone

A waterproof* speaker-microphone plugs right in to the waterproof jack on top of the IC-M1V. Go where its wet without fear!

* Equivalent to JIS Grade 7 (1m depth/30 min.)

Alphanumeric indication

A large, easy-to-read backlit LCD shows channel number and names. Up to 10-characters can be assigned.

Additional features

- · Supplied battery charger stands by itself or can be mounted to a wall
- · Fast, "TAG" scanning
- Self check function
- Remaining battery power indicator
- Dual/Tri-watch functions
- Auto WX alert function (U.S.A. version only)
- Instant Ch.16 and Ch.9 access
- Optional voice scrambling capability (not available in some countries)
- Auto backlit for LCD and front panel keys











Big screen, tough body and it's waterproof too!

Extra-large LCD display

The extra large LCD (35x24 mm; $1\frac{3}{8}\times^{15}16$ in. dimensions) is incorporated into the design allowing easy viewing of channel display and status. Bright LCD backlighting is great for night time operation.

Waterproof construction*

The IC-M2A is built waterproof to repel all forms of moisture.

* Equivalent to JIS Grade 7. (1m depth/30 min.)

Desktop charger supplied

The BC-150 desktop charger is a simple drop-in charger. It has screw holes to fix to various places and also a catch to fix the battery with the BC-150 with/without the transceiver. So you can leave it alone to charge even in choppy seas.

Simple operation

Well spaced, clearly labelled buttons provide easy, one-handed access to frequently used functions. The IC-M2A does not require complicated operation to use it efficiently and to its maximum potential.

Additional features

- Swivel belt clip, MB-87 standard
- 4-step battery life indicator
- Dual/Tri-watch function
- Normal, priority and tag scanning
- One-touch access to Ch.16 and Ch.9
- 2-step power saver
- Key lock function

VHF MARINE TRANSCEIVER

IC-M2A

- S-meter shows the signal strength of the received signal
- Auto WX alert function (U.S.A. version only)

A cost performance winner

Simple operation

Icom's easy to use ergonomic layout with clearly labelled buttons extends throughout our handheld range. The simple push of one button controls each function. Channel selection is a snap with the up/down keys.

Large LCD with backlighting

The extra large LCD and superior contrast and backlighting make viewing easy on your eyes. And with key backlighting, operation at night is not a problem.

Water-resistant construction*

Water-resistant, non-corrosive construction, including water-tight gaskets for the control knob and antenna connector.

* Equivalent to JIS Grade 4.

'Tag' scan system

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

Alkaline battery* ready

Alkaline batteries can be used as a convenient backup to rechargeable Ni-Cds. Keep an extra set of alkaline batteries on board for temporary operation or emergencies. * Water-resistance is maintained using alkaline cells.

Additional features

- One-touch selection of Ch. 16 and Ch. 9
- Powerful 5 W output power
- Dual watch and tri-watch
- Receive WX channels with a WX alert function (U.S.A. version only)
- Compact size







GMDSS portable for survival craft

Conforms to IMO A 809 (19) and A 694 (17)

The IC-GM1500 complies with the demanding requirements of IMO resolution A 809 (19) and A 694 (17) for survival craft radios.

Long-life battery

For IMO survival craft use, the CM-176 (nonrechargeable) 3600mAh lithium battery pack provides more than 24 hours* of operation at 25°C. For the U.S.A. version, the CM-165, rechargeable 1200mAh Ni-Cd battery pack, is available for 8 hours* of operation. * Tx:Rx:Stand-by=10:10:80.

Waterproof

For the IC-GM1500, waterproof means resistance to water intrusion even while completely submerged—prevents water entry for at least 5 minutes at a depth of 1m.

Compact and rugged body

The IC-GM1500 is compact at $68.5 \times 45.3 \times 215$ mm ($2^{11}/16 \times 1^{25}/32 \times 8^{1/2}$ in)*. Drop resistant construction protects it from damage when dropped from a height of 1m onto any surface.

* With CM-176; not including antenna.

Simple operation

A minimum number of buttons and controls with tactile feedback provide user-friendly operation.

Additional features

- Instant access to Ch.16
- All simplex, VHF marine channels are included
- Auto LCD backlighting
- Lock function

SURVIVAL CRAFT 2-WAY RADIO

IC-GM1500

Low battery indicator



A"waterproof" portable that really is waterproof!

Waterproof protection*

Imagine wading through shallow water to secure a safety line and suddenly realizing your transceiver is attached to your belt! No problem for the IC-M15—even total submersion in salt or fresh water is OK.

* Equivalent to JIS Grade 7 (1m depth/30 min.)

Large, easy-to-use buttons and controls

Each button is large and clearly labelled so that operation, even while wearing gloves, is a breeze.

Rugged construction

One-piece, cylindrical housing over a diecast aluminum frame provides the durability and dependability needed in the demanding marine environment.

Additional features

- One-touch access to Ch.16 and the programmable call channel*
- Power saver function
- Easy-to-read LCD with backlighting
- Lock function
- Optional voice scrambler unit for private communications
- Scan functions*
- 5 W output power
- Dual/tri-watch functions*
- All necessary VHF marine channels* plus 24 memories and 1 call channel
- * Availability varies according to version.

Not available in the U.S.A.







Both black and white versions available.



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 COMMANDMIC[®]s

Allows 2nd and/or 3rd station or intercom function.

NMEA Input/Output

NMEA output allows you to plot own/other 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 or marina staff is easy.

Other features

- Waterproof construction equivalent to JIS Grade 7 (1m /30min.; 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

4×6", flush-mount design

With its slim dimensions (depth), it will easily fit into your cabin console or dashboard. With full dot matrix characters, settings can be easily read under any lighting conditions.

DSC meets RTCM SC101

The "DISTRESS" button can transmit a formatted distress alert with your position and time. Up to 40 distress IDs are available. 40 received messages can be stored.

Waterproof protection

With a waterproof rating equivalent to JIS Grade 7, IC-M502 withstands the wettest conditions (1 m/30 min.; except cables).

Optional COMMANDMIC®

The COMMANDMIC[®] allows you to remotely control all functions of the IC-M502 (except DSC operation) from up to 21m (70ft) away.

Other features

- Supplied audible 'Smart-speaker-mic.'
- Simple 'TAG' scanning function
- Instant access to Ch.16 and Ch.9
- 8 backlit levels for LCD and keypad
- Optional voice scrambler unit for privacy
- Auto WX alert function (U.S.A. version only)





VHF MARINE TRANSCEIVER

IC-M502

Easy to see! Easy to hear!



Both black and white versions available. Photo shows the IC-M402.



Large channel indication

The large, easy to see display has 27x43 mm ($11/16\times15\%$ 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. The position request function indicates a caller's position. Up to 30 DSC IDs are memorized.

Rugged waterproof construction*

The IC-M402/S is designed to work for many years in all conditions the marine environment can throw at it!

* Equivalent to JIS Grade 7 (1m/30 min; except cables)

Optional COMMANDMIC®

The COMMANDMIC[®] makes it convenient for using the IC-M402 from a separate cabin or tower from up to 21m (70ft) away. * Available with IC-M402 only.

Other features

- Dual and tri-watch functions
- Position indication with GPS receiver (GPS receiver is not included)
- LCD backlighting and key illumination
- Auto WX alert function (U.S.A. version only)

Flush-mount design

Flush mounting into an instrument control panel or similar flat surface is a snap with the uniquely designed mounting 'lip'.

Simple operation

Controls and buttons are clearly labelled, providing intuitive operation and a large, easy-to-read display measuring 20×60 mm ($11/16\times15\%$ in) indicates all necessary information at a glance.

Remote function microphone

The microphone allows you to conveniently change channels or select output power without using the front panel buttons.

Other features

- Auto WX alert function (U.S.A. version only)
- Icom's 'Tag' scan system
- Dual/tri-watch functions
- Instant access to Ch.16 and Ch.9
- Up/down keys for channel selection
- Low battery indicator
- Backlit for LCD

Easy, reliable operation



VHF MARINE TRANSCEIVER

IC-M45

Both black and white versions available.

Advanced DSP marine radio with compact remote head



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



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 you to make a quick link to your coast station/server. * 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
- 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



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 operation is available for continuous frequency operation.

General coverage receive

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

* Guranteed 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.





Easy operation under all conditions

LCD MARINE RADAR **MR-570R**

- Powerful 4kW output power
- High contrast 5.7 inch LCD display
- 60cm radome scanner observes up to 36nm
- Multiple language indication English, Spanish, Portugese, Chinese and Korean
- External GPS and Compass data input with NMEA0183, N+1, AUX format



Radome Scanner for MR-570R

High Resolution over long ranges

- Bright 8-level picture on 10-inch monochrome green CRT
- Powerful 4kW output power
- Two types of scanner units MR-1000T : 120cm open array scanner obeserves up to 48nm MR-1000R : 60cm radome scanner observes up to 36nm
- Multiple language indication English, Spanish, Portugese and Korean
- External GPS and Compass data input with NMEA 0183, N+1, AUX format

Not available in the U.S.A.







Fully integrated GPS,

- Splash resistant body equivalent to JIS Grade 4
- 500W powerful dual frequency video sounder Up to 640m (2000ft) water depth range available.
- Built-in 12-channel GPS, differential GPS ready



NAVIONICS is a registered trademark of NAVIONICS S.p.A.

OPTIONS FOR VHF HANDHELD TRANSCEIVERS

	B	ATTERY CASE	S			BATTER	Y PACKS		
MODEL NAME	BP-204 AA(R6)×6 cells	BP-223 AA(R6)×6 cells	BP-226 AA(R6)×5 cells	BP-215L 7.4V/1800mAh (Li-Ion)	BP-224 7.2V/750mAh (Ni-Cd)	BP-227 7.2V/1700mAh (Li-lon)	CM-138 7.2V/900mAh (Ni-Cd)	CM-139 7.2V/1200mAh (Ni-Cd)	CM-165 7.2V/1200mAh (Ni-Cd)
IC-M88			 ✓ 			~			
IC-M1V				~					
IC-M2A		v			 ✓ 				
IC-M3A	 ✓ 								
IC-GM1500									~
IC-M15							~	 ✓ 	

	BATTERY PACKS	DES	KTOP CHARG	ERS	MULTI-CHARGER		BATTERY	CHARGERS	
MODEL NAME	CM-176 12V/3600mAh (Lithium: non- rechargeable)	BC-119N Rapid charger	BC-150 Regular charger	BC-152 Regular charger	BC-121N Rapid charger	AD-43	AD-49	AD-95	
IC-M88		v		~	v				
IC-M1V		v			v			~	
IC-M2A		 ✓ 	 ✓ 		~				
IC-M3A									
IC-GM1500	 ✓ 	v			v		~		
IC-M15		~			v	v			

		CHARGER	ADAPTERS				AC ADAPTERS	5	
MODEL NAME	AD-68	AD-100	AD-102	AD-103	BC-122 12V/200mA	BC-124 12V/7A	BC-145 16V/1A	BC-147 12V/300mA	BM-95 12V/300mA
			ľ (\$ \ }		8)	
IC-M88		(Use with BC-119N/BC-121N)				(Use with BC-121N)	(Use with BC-119N)	(Use with BC-152)	
IC-M1V			(Use with BC-119N/BC-121N)		(Use with AD-95)	(Use with BC-121N)	(Use with BC-119N)		
IC-M2A				(Use with BC-119N/BC-121N)		(Use with BC-121N)	(Use with BC-119N)	(Use with BC-150)	
IC-M3A									
IC-GM1500	(Use with BC-119N/BC-121N)					(Use with BC-121N)	(Use with BC-119N)		(Use with AD-49)
IC-M15	(Use with BC-119N/BC-121N)					(Use with BC-121N)	(Use with BC-119N)		(Use with AD-43)

OPTIONS FOR VHF HANDHELD TRANSCEIVERS

	WALL CH	IARGERS	CIGARE	TTE LIGHTER	CABLES		DC POWE	R CABLES	
MODEL NAME	BC-110D/V 12V/200mA	BC-131A 12V/100mA	CP-1	CP-12L w/noise filter	CP-17L	OPC-254L	OPC-515L	OPC-656	
		12 7/100114				8.L	ele ele	S	
IC-M88					(Use with BC-119N/BC-152)		(Use with BC-119N/BC-152)	(Use with BC-121N)	
IC-M1V					(Use with AD-95/BC-119N)		(Use with AD-95/BC-119N)	(Use with BC-121N)	
IC-M2A					(Use with BC-119N/BC-150)		(Use with BC-119N/BC-150)	(Use with BC-121N)	
IC-M3A	(IC-M3A GEN version)	(IC-M3A U.S.A. version)		 ✓ 		 ✓ 			
IC-GM1500			(Use with AD-49)		(Use with BC-119N)		(Use with BC-119N)	(Use with BC-121N)	
IC-M15			(Use with AD-43)		(Use with BC-119N)		(Use with BC-119N)	(Use with BC-121N)	

	MOUNTING BRACKET			BELT	CLIPS			SPEAKER MI	CROPHONES
MODEL NAME	MB-25 Wall type	MB-68	MB-74	MB-79	MB-86	MB-87	MB-88	HM-125 Waterproof	HM-138 Waterproof
	1			J				8	Ż
IC-M88				 ✓ 	v				 ✓
IC-M1V							~	 ✓ 	
IC-M2A		 ✓ 	v			~			
IC-M3A		v	v			~			
IC-GM1500	~								
IC-M15	~								

	VOI	CE SCRAMBL	ERS			
MODEL NAME	UT-79 128 analog voice scramble codes available	UT-98 128 analog voice scramble codes available	UT-112 Total of 32 voice scramble codes available			
	them with	TOTAL OF SE	how or m			
IC-M88						
IC-M1V		(Version 02)	 ✓ 			
IC-M2A						
IC-M3A						
IC-GM1500						
IC-M15	~					

: Applicable

OPTIONS FOR VHF FIXED MOUNT TRANSCEIVERS

		HAND MICH	ROPHONES		COMMANDMIC®	EXTENSION CABLE	FL	USH MOUNT KITS	
MODEL NAME	HM-124B/W	HM-126B/W	HM-129B/W	HM-136B/W	HM-127B/W Waterproof	OPC-999 6 m; 20 ft	MB-69	MB-75	
					V	Ņ	· Dela		
IC-M602				~	~	(Use with HM-127B/W)		V	
IC-M502		 ✓ 			~	(Use with HM-127B/W)		 ✓ 	
IC-M402			~		~	(Use with HM-127B/W)	~		
IC-M402S			~				~		
IC-M45A	~						~		

	EXTERNAL	SPEAKERS	VOICE SCI	RAMBLERS			
MODEL NAME	SP-5	SP-10	UT-98 128 analog voice scramble codes available	UT-112 Total of 32 voice scramble codes available			
IC-M602			 ✓ 	~			
IC-M502	~	~	~	 ✓ 			
IC-M402	~	~					
IC-M402S	~	~					
IC-M45A	 ✓ 	~					

OPTIONS FOR HF MARINE TRANSCEIVERS

	DC POWER	R SUPPLIES	ANTENNA ELEMENT	FOLDED DIPOLE ANTENNA	ANTENNA	MATCHERS	1A	NTENNA TUNE	RS
MODEL NAME	PS-60 13.6V/30A	PS-125 13.8V/25A	AH-2b	AH-710	MN-100	MN-100L	AH-4	AT-130	AT-140
IC-M802	~			~	 ✓ 	V		~	~
IC-M710	~			~	~	~		~	~
IC-M700PRO	 ✓ 			 ✓ 	~	 ✓ 		~	~
IC-78		~	~	~	~	~	~	~	~
IC-718		~	~	~			 ✓ 		

OPTIONS FOR HF MARINE TRANSCEIVERS

	ANTENNA TUNER	SHIELDED CON	NTROL CABLES	HANDSET	HAN	ND MICROPHO	NES	DESKTOP MI	CROPHONES
MODEL NAME	AT-180	OPC-566	OPC-1147	HS-50	EM-101	HM-135	HM-36	SM-6	SM-20
			0	C S		8	Ð		J
IC-M802		(Use with AT-130)	(Use with AT-140)			~			
IC-M710		(Use with AT-130)	(Use with AT-140)	~	~				
IC-M700PRO		(Use with AT-130)	(Use with AT-140)	~	~				
IC-78		(Use with AT-130)	(Use with AT-140)				~	~	~
IC-718	 ✓ 						 ✓ 	 ✓ 	v

		EXTERNAL	SPEAKERS		MOBILE BRACKET	CARRYING HANDLE	REMOTE CONTROLLER	SEPARATION CABLE	LINEAR AMPLIFIER
MODEL NAME	SP-7	SP-20	SP-21	SP-24	IC-MB5	MB-23	RC-25		IC-PW1 (Not certified for marine use in the U.S.A. by the FCC)
IC-M802				v			~	~	
IC-M710									
IC-M700PRO									
IC-78	 ✓ 	~	~		 ✓ 	 ✓ 			
IC-718	 ✓ 	 ✓ 	 ✓ 		 ✓ 	 ✓ 			~

	ACC CABLE ADAPTER	CI-V CONVERTER				
MODEL NAME	OPC-599	CT-17				
IC-M802						
IC-M710						
IC-M700PRO						
IC-78		~				
IC-718	 ✓ 	 ✓ 				

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.	VOICE SYNTHESIZER Announces an accessed band's frequency, oper-	UT-106 DSP UNIT Provides AF DSP capa- bility, such as noise re- duction and auto notch function.	
IC-M802						
IC-M710	 ✓ 		(Already built-in to some versions)			
IC-M700PRO	 ✓ 		(Already built-in to some versions)			
IC-78		 ✓ 		 ✓ 	v	v
IC-718		 ✓ 		 ✓ 	✓	v

: Applicable

: Not applicable

SPECIFICATIONS

VHF HANDHELD TRANSCEIVERS

		IC-M88	IC-M1V	IC-M2A	IC-M3A	IC-GM1500	IC-M15	
Frequency range (Unit:MHz)	Tx: 156.025–157.425 Rx: 156.050–163.275 146–174 (LMR; Tx/Rx)	Tx: 156.025–157.425 Rx: 156.025–163.275	Tx: 156.025–157.425 Rx: 156.050–163.275	Tx: 156.025–157.425 Rx: 156.025–163.275	156.300–156.875 (Tx/Rx)	Tx: 156.025–157.425 Rx: 156.025–163.275	
Dimensions (projections not included; W×H×D)		$\begin{array}{c} 62{\times}97{\times}39 \text{ mm} \\ 2^{7}\!/_{16}{\times}3^{13}\!/_{16}{\times}1^{17}\!/_{32} \text{ in} \end{array}$	52.5×129×30 mm $2^{1}/_{16}$ ×5 $^{3}/_{32}$ ×1 $^{3}/_{16}$ in	61×135×41 mm 2 ¹³ / ₃₂ ×5 ⁵ / ₁₆ ×1 ⁵ / ₈ in	58×140.5×43.5 mm 2 ⁹ / ₃₂ ×5 ¹⁷ / ₃₂ ×1 ²³ / ₃₂ in	$68.5\!\!\times\!\!165.5\!\!\times\!\!45.3$ mm $2^{11}\!/_{16}\!\!\times\!\!6^{1}\!/_{2}\!\!\times\!\!1^{25}\!/_{32}$ in	62×150×44 mm 2 ¹³ / ₃₂ ×5 ²⁹ / ₃₂ ×1 ¹¹ / ₁₆ in	
Weight		280g; 9.9oz (With BP-227)	280g; 9.9oz (With BP-215L)	360g; 12.7oz (With BP-224)	410g; 14.4oz	515g; 1.1lb (with CM-165)	460g; 1.0lb (with CM-138)	
	Transmit (High)	1.6A typ.	1.5A typ.	1.5A typ.	1.6A typ.	1.5A	3.0A	
Current drain	Max. audio	200mA typ.	200mA typ.	200mA typ.	230mA typ.	500mA	600mA	
	Stand-by	20mA typ.	20mA typ.	20mA typ.	60mA typ.	15mA typ.	15mA typ.	
Sensitivity (at 12dE	SINAD)	0.25µV typ.	0.25μV typ.	0.25μV typ.	0.25μV typ.	0.35µV (at 20dB SINAD)	0.35μV typ.	
Intermodulation re	ejection	70dB typ.	70dB typ.	70dB typ.	70dB	68dB	60dB	
Audio output powe	er (With an 8 Ω load)	350mW typ.	350mW typ.	350mW typ.	500mW	500mW	500mW	
RF output power		5/3/1W	5/1/0.5W	5/3/1W	5/1W	2/0.8W	5/0.7W	

Measurements made in accordance with EIA-152C and EIA-204D(E).

VHF FIXED MOUNT TRANSCEIVERS

		IC-M602	IC-M502	IC-M402 IC-M402S	IC-M45		
Frequency range (l	Jnit: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: 156.025–163.275		
Power supply requ	irement	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 $8^{21}_{32} \times 4^{11}_{32} \times 4^{5}_{16}$ in	165×110×84.4 mm 6 ¹ / ₂ ×4 ¹¹ / ₃₂ ×3 ⁵ / ₃₂ in	153×67×141.6 mm 6 ¹ / ₃₂ ×2 ⁵ / ₈ ×5 ⁹ / ₁₆ in	152×67×140 mm 6×2 ⁵ / ₈ ×5 ¹ / ₂ in		
Weight		1.35kg; 3.0lb	1.13kg; 2.5lb	900g; 2lb	900g; 2lb		
Current drain	Transmit (High)	5.2A typ.	6.0A	6.0A	6.0A		
Current urain	Max. audio output	1.2A typ.	1.2A	1.2A	1.2A		
Sensitivity (at 12dB	SINAD)	0.32μV	0.25μV	0.25μV	0.22μV		
Intermodulation re	jection	80dB	80dB	70dB	70dB		
Audio output power (With a 4Ω load)		5W typ.	3.5W typ.	4.5W typ.	4.0W typ.		
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 (U	Jnit:MHz)		9, 4.0–4.9999, 6.0–6.9999, 8.0–8.999 199, 18.0–18.9999, 22.0–22.9999, 25 19		Tx: 1.6–29.9999* Rx: 0.03–29.9999 (Guaranteed : 0.5–29.9999)			
Power supply requ	irement	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 inclu	uded; W×H×D)	$\begin{array}{l} \mbox{Main unit: } 240 \times 94 \times 238.4\ \mbox{mm;} \\ 9^{7}{}_{16} \times 3^{11}{}_{16} \times 9^{3}{}_{8}\ \mbox{in} \\ \mbox{Controller unit: } 220 \times 110 \times 84.4\ \mbox{mm;} \\ 8^{21}{}_{32} \times 4^{11}{}_{32} \times 3^{5}{}_{16}\ \mbox{in} \end{array}$	291.4×116.4×315 mm 11 ^{15/} ₃₂ ×4 ^{19/} ₃₂ ×12 ^{13/} ₃₂ in	291.4×116.4×315 mm 11 ^{15/} ₃₂ ×4 ^{19/} ₃₂ ×12 ^{13/} ₃₂ in	240×95×239 mm 9 ^{7/₁₆×3^{3/}4×9^{13/}₃₂ in}			
Weight		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; except	: 0.5–1.7999MHz)	J3E, A1A, J2B, F1B :0.5μV H3E :3.2μV	J3E, J2B, F1B, R3E, A1A (12dB SINAD) : 0.5µV H3E : 3.2µV	J3E, J2B, F1B, R3E, A1A:0.5μV H3E:3.2μV	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 powe	er (With a 4 Ω load)	4.0W	4.5W	4.5W	2.0W (with a 8Ω load)			
RF output power (F (output power differs	PEP) 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			

*IC-78 : Not guaranteed for some frequency bands. IC-718 : Restriction may be applied depending on version.

SPECIFICATIONS

MARINE RADAR

			MR-1000R	MR-1000T	MR-570R
al	Minimum ran	ge	25m (when measurement range is ¹ / ₈ NM)	25m (when measurement range is ¹ / ₈ NM)	25m (when measurement range is ¹ / ₈ NM)
General	Maximum rar	nge	36NM	48NM	36NM
ő	Power supply	/ requirement	10.2-42V DC	10.2-42V DC	10.2-42V DC
	Power consu	mption	50W	60W	47W
	Display (pixel	s)	10" monochrome CRT (640×480)	10" monochrome CRT (640×480)	5.7" monochrome LCD (320×240)
Š	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 ((projections n	W×H×D) ot included)	269×264×258 mm 10 ¹⁹ / ₃₂ ×10 ¹³ / ₃₂ ×10 ⁵ / ₃₂ in	269×264×258 mm $10^{19}/_{32}$ ×10^{13}/_{32}×10^{5}/_{32} in	186×203×103 mm 7 ⁵ / ₁₆ ×8×4 ¹ / ₁₆ in
	Weight		6.5kg; 14.3lb	6.5kg; 14.3lb	2kg; 4.4lb
	Туре		60cm (2ft) slotted wave-guided array in radome	1.2m (3.9ft) slotted wave-guided array	60cm (2ft) slotted wave-guided array in radome
	Peak output	power	4kW (PEP)	4kW (PEP)	4kW (PEP)
	Rotation spe	ed	24–48rpm typ.	24–48rpm typ.	24-48rpm typ.
_	_	Horizontal	4° typ.	2° typ.	4° typ.
Scanner	Beamwidth	Vertical	22° typ.	25° typ.	22° typ.
car	Intermediate	frequency	60MHz	60MHz	60MHz
S	Transmissio	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 n	ot included)	607(d)×243(H) mm 23 ^{29/} ₃₂ (d)×9 ⁹ / ₁₆ (H) in	1205(d)×381(H) mm 47 ⁷ / ₁₆ (d)×15(H) in	607(d)×243(H) mm 23 ^{29/} ₃₂ (d)×9 ^{9/} ₁₆ (H) in
	Weight		9kg; 19.8lb	17kg; 37.5lb	9kg; 19.8lb
Cables	Connection of between display	able length ay and scanner	15m; 49.2ft (OPC-989, standard) 20m; 65.6ft (OPC-1077, option) 30m; 98.4ft (OPC-1078, option)	20m; 65.6ft (OPC-1189, standard) 30m; 98.4ft (OPC-1078, option)	10m; 32.8ft (OPC-1075, standard) 20m; 65.6ft (OPC-1077, option) 30m; 98.4ft (OPC-1078, option)

MARINE PLOTTER/SOUNDER

			FP-561					
	Display (pixe	ls)	5.6" TFT color LCD (320×234)					
	Power suppl	у	11-30V DC					
	Power consu	Imption	22W					
	Usable temp	erature range	$\pm 0^{\circ}$ C to +50°C; +32°F to 122°F					
General	Dimensions (projections n	(W×H×D) ot included)	186×203×102 mm					
Ger	Weight		2.2kg					
		Water depth	m (meter), FT (feet), FM (fathom)					
	Unit of	Water temperature	°C, °F					
		Speed	KT (knots), km/h, Ml/h (miles/h)					
		Distance	NM (nautical miles), km, MI (miles)					
GPS	Receive syst	em	12 parallel-channel, all-in view					
ß	Data renewe	d interval	1 sec.					
	Scale setting	l	16 steps					
Ŀ	Plotting inter	val	5 sec. to 60 min., 0.01-9.99NM*					
Plotter	No. of track r	nemories	5000					
₫	No. of route	memories	20 (50 points/route)					
	Color presen	tation	7 colors					
	Ultrasonic fro	equencies	50kHz, 200kHz					
er	Output powe	r	500W rms					
nnc	Depth ranges	6	5-640m* in 8 colors indication					
Video sounder	Measurable w	ater temperature range	$\pm 0^{\circ}$ C to +40°C; +32°F to 104°F					
leo	Measurable v	essel speed range	0.0–99.9KT*					
Vic	Bottom expa	nsion ranges	5, 10, 20 or 40m*					
	Phase shift r	anges	1–640m*					

* Selectable in each unit



Applicable U.S. Military Specifications loom makes rugged products that meet MIL-STD requirements and strict environmental standards as follows.

Standard	Low pressure					ten	Hig npe		ure			ter	Lc npe		ure				nperature So shock radia				olar atio	'n	Rain			
Method/ Procedure	0.1/I	0.2/I,	0.3	0.4/I,	1	501.2/I	5	6.	τ <u>.</u>	4	5	2	2.2	2.3	2.3	4.2	1.5	503.2/I	3.3	3.4	5.1	5.2	5.3	505.4/I	6.1/I,	6.2/I,	506.3/I, II	506.4/I, II
Applicable MIL-810 series	С	D	Е	F	С	D	D	Е	Е	F	С	D	D	Е	Е	F	С	D	Е	F	С	D	E	F	С	D	Е	F
IC-M88		ļ	1	ļ																			ļ					
IC-M1V							V		V				r		V													
IC-M2A	V	V	1	r	V	~	V	V	V	V	V	V	~	V	V	V	V	V	V	V	V	V	r	V	~	V	V	~
IC-M3A			-																									
IC-M45																												

Standard	н	lum	idit	y	;	Salt	fo	9	Vibration					Shock						
Method/ Procedure	507.1/I, II	507.2/II, III	507.3/III	507.4	09.1	509.2/I	09.3	509.4	514.2/VIII	514.2/X	514.3/I	514.4/I	514.5/I	516.2/I	516.2/II, V	516.3/I, IV	516.4/I	516.4/IV	516.5/I, IV	
Applicable MIL-810 series	С	D	Е	F	С	D	Е	F	С	С	D	Е	F	С	С	D	Е	Е	F	
IC-M88		1							V	V	r	V	V	V	V	r	V	V	2	
IC-M1V									~	r	r	V	V	V	V	V	V	V		
IC-M2A	~	r	V	r	V	V	r	V	~	V	r	V	V	V	V	r	V	r	٢	
IC-M3A										~	~	~	~	~		~	~			
IC-M45										V	V	V	V	V		V	V			



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