# STANDARD HORIZON

Nothing takes to water like Standard Horizon

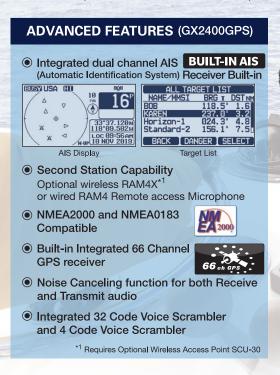


# MARINE COMMUNICATIONS - PRODUCT CATALOG 2023



# **Fixed Mount VHF Radios**

## POWER, PERFORMANCE, RELIABILITY





#### **MATRIX NMEA2000 GPS**

FIXED MOUNT DSC VHF WITH NMEA2000 & BUILT-IN AIS / GPS RECEIVER, 30W PA/ FOG, RAM4/RAM4X COMPATIBLE





BUILT-IN AIS GPS TUCLASSO





▶ Supplied Accessories: Power Cord, Mounting Bracket, USB Cable and Dust Cover

Body color: Black











DISTRESS an POS Polling



















- Meets ITU-R M.493-15 Class D (Digital Selective Calling)
- Separate Receiver for CH70 (Receiving DSC Calls)
- NMEA0183 Connectivity
- AIS/AIS SART target display: MMSI, Call Sign, Ship Name, BRG, DST, SOG and COG
- E2O (Easy to Operate) Icon & Menu System
- Preset key stores up to 10 favorite channels
- Intercom Feature between the Radio and an Optional Second Station
- Programmable Scan, Priority Scan, and Multi Watch
- · DSC position request and report functions
- GPS Compass, Waypoint and GPS status pages
- Enter, Save, and Navigate to a waypoint using the Compass page
- Navigation (LAT/LON, Time, SOG and COG) information is shown on display
- Programmable CPA (Closest Point of Approach) or TCPA (Time to Closest Point of Approach) collision avoidance alarms
- Commercial grade receiver (Spurious & Image rejection better than 80dB)
- 30 Watt PA/Loud Hailer with programmed fog signals and listen back
- GM (Group Monitor) Using DSC Group position Calling
- MOB (Man over Board) Operation
- · Excellent Visibility with Busy LED Indicator
- · Selectable Night Mode Display
- NOAA Weather Channels with Weather Alert

#### Icon Function List

















Included













Usability ▶



















Included







LOUD HAILER

Features ▶

















Connectibity >



#### **EXPLORER Series**

FIXED MOUNT MARINE VHF COMPATIBLE WITH NMEA 2000

(1850



ITU CLASS D

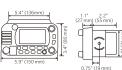
FIXED MOUNT MARINE VHF

**<1800GPS** 



▶ Supplied Accessories: Power Cord and Mounting Bracket

Body color: ● Black ○ White Available in Black or White



































- Meets ITU-R M.493-15 Class D DSC (Digital Selective Calling)
- Separate Receiver for CH70 (Receiving DSC Calls)
- Ultra-slim and compact Rear case design (D=3.3", 82mm)
- Built-in Integrated 66 Channel GPS receiver (GX1800GPS)
- NMEA2000 Compatible (GX1850)
- NMEA 0183 Connectivity • E2O (Easy to Operate) Icon & Menu System
- Preset key stores up to 10 favorite channels
- Second Station Remote Microphone (Optional RAM4 SSM-70H)
- Intercom Feature between the Radio and an Optional Second Station

- Programmable Scan, Priority Scan, and Multi Watch
- Automatic DSC polling of up to 6 ships GPS positions
- GPS Compass, Waypoint and GPS status pages\*2
- Enter, Save, and Navigate to a waypoint using the Compass page\*2
- $\bullet$  Navigation (LAT/LON, SOG, and COG) information shown on display  $\!\!\!^{\star2}$
- GM (Group Monitor) Using DSC Group position Calling
- MOB (Man over Board) Operation
- Selectable Night Mode Display
- Noise canceling microphone with channel change selection, 16/S and H/L keys
- NOAA Weather channels with weather Alert

#### **ECLIPSE Series**

FIXED MOUNT MARINE VHF WITH GPS

1400GPS





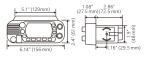
GPS TUCLASSO

FIXED MOUNT MARINE VHF

(1400

▶ Supplied Accessories: Power Cord and Mounting Bracket

Body color: ● Black ○ White Available in Black or White









- Meets ITU-R M.493-14 Class D DSC (Digital Selective Calling)
- Separate Receiver for CH70 (Receiving DSC Calls)
- Ultra-Compact Case design (6.14"Wx2.4"Hx3.94"D, 156mm×61mm×100mm)
- Built-in Integrated 66 Channel GPS receiver (GX1400GPS)
- NMEA 0183 Connectivity
- E2O (Easy to Operate) Icon & Menu System
- Preset key stores up to 10 favorite channels























- Programmable Scan, Priority Scan, and Multi Watch
- Automatic DSC polling of up to 6 ships GPS positions
- DSC test call and Auto DSC channel change selection
- NMEA Input and Output Connections to a Compatible GPS Chart Plotter
- Programmable soft keys
- Noise canceling microphone with channel change selection, 16/S and H/L keys
- NOAA weather channels with weather Alert

#### Fixed Mount VHF Radio Accessories

	Microphone / Cable			Access Point / GPS Antenna			Cover	External Speaker	Hail / PA	Speaker	Bracket
Model	SSM-72H Wireless Remote Access Microphone RAM4X'5	SSM-70H Remote Access Microphone RAM4	CT-100 23ft (7m) extension cable for SSM-70H/CMP31	SCU-38 External GPS antenna with 16ft (5m) of cable	SCU-30 Wireless Access Point for SSM-72H (RAM4X) 5ft (1.5m) of cable	SCU-31 External GPS antenna with 49ft (15m) of cable	Dust Cover	MLS-410SP External Speaker	220SW 130mm Round PA/hailing horn 30W 4 Ohm	240SW W224 × H163mm Rectangular PA/ hailing horn 40W, 4 Ohm	Flush mount bracket
GX2400GPS	•	•	•	•	•		HC2400	•	•	•	MMB-84
GX1850		•	•			•	HC1600	•			MMB-97
GX1800GPS		•	•	•		•	HC1600	•			MMB-97
GX1400GPS				•		•	HC1100	•			MMB-84
GX1400						•	HC1100	•			MMB-84

# Floating Handheld VHF Radios

Ergonomic Design with the Most Advanced Features Leading with Class H DSC & GPS Marine Communications

#### **ADVANCED FEATURES**

- Built-in Integrated 66 Channel **GPS** receiver
- Rounded Case design provides excellent handheld comfort and easy front panel operation
- Professional grade construction meets MIL-STD-810F



- ITU-R M.493-14 Class-H DSC (Digital Selective Calling) & Built-in dedicated CH70 DSC call receiver
- Oversized Full-dot Matrix Display & E2O (Easy to Operate) Icon/Menu System









Group Monitor

 Noise Canceling function for both Receive and Transmit audio

- Supplied with 7.4V 1800mAh Li-ion battery
- Built in FM Broadcast Radio Receiver



Solid Black







CAT460 Antenna, SBR-13LI 7.4V 1800mAh Li-ion Battery Pack SBH-32 Charger Cradle, SAD-25 AC Adapter, E-DC-19A DC Cable with Cigarette Lighter Plug for SBH-32, SBT-13 Alkaline Battery Case (AAA × 5), CLIP-22 Belt Clip, Hand Strap and T9101648 USB Cable

#### Body color: Navy Blue Solid Black

Available in Navy Blue or Solid Black

Overall Dimensions: 2.60"x5.43"x1.50" (66mm x138mm x 38mm Weight: 10.94oz (310g) (with: SBR-13LI, Hand Strap & Antenna)

- Extended Range 6W Transmit Power Output (Selectable 6/2/1W)
- 700mW Loud Audio Output
- Preset key stores up to 10 favorite channels
- Scanning operation and Multi-Watch (Dual Watch and Triple Watch)
- CH16/S Quick Access (S: Sub-channel)
- 11 hours operating time with supplied Li-ion Battery\*1
- NOAA Weather channel with weather Alert
- Selectable Night Mode Display
- GM (Group Monitor) using DSC Group position Calling



- DSC Test Calling and Auto DSC Channel Change Selection
- · Automatically poll the GPS positions of vessels using DSC
- Equipped with DSC DISTRESS Alert Transmission button
- Navigation (LAT/LON, SOG, and COG) information shown on display
- Waypoint Navigation: Navigate to the stored locations using the compass screen
- Navigate to the location of a DSC Distress Call using the Compass Page
- . MOB (Man over Board) Operation
- Water Activated Emergency Strobe Light
- Integrated 32 Code Voice Scrambler and 4 Code Voice Scrambler
- micro USB Data Port for NMEA sentence output, configuration of the transceiver settings and downloading GPS logger data

#### Handhald VHF Radio Accessories

Tall	aneia viii	naulo	Accessorie	3							
	Antenna	/ Adapter	Bat	tery			Battery Charger			Belt cli	p / Holster
	SRA-19B VHF Marine Antenna	CN-3 BNC-SMA Adapter	Rechargeable	Alkaline Battery tray	Cradle	AC Adapter	SAD-27 USB AC Adapter	USB Cable USB Type-A to USB Type-C Charging Cable	DC Cable (with Cigarette Lighter Plug)	Belt Clip	SHB-110 Quick Release Holster
Model		& Kin	COX OF					Charging Cable	8		
HX890	●*2	•	SBR-13LI 1800mAh Li-Ion*2	SBT-13 (5 x AAA)*2	SBH-32*2	SAD-25*2			E-DC-19A*2	CLIP-22*2	
HX320	●*2	•	2100mAh (Dealer replaceable)		SBH-49*2		●*2	●*2		CLIP-22*2	•
HX210	●*2	•	1850mAh (Dealer replaceable)		SBH-25*2	SAD-25*2			E-DC-19A*2	CLIP-22*2	
HX40	•*2	•	1850mAh (Dealer replaceable)		SBH-27*2	SAD-25*2			F-DC-19A*2	CLIP-19*2	

<sup>1</sup> Based on Duty Cycle =(TX)5:(RX)5: (Standby)90, with 6W TX Power, GPS:ON, DSC:ON, Battery Save:ON(50%) 2 The same as the supplied accessory





COMPACT FLOATING VHF HANDHELD WITH BLUETOOTH® CAPABILITY





















#### ► Supplied Accessories:

SRA-19B Antenna, SAD-27 USB AC Adapter, SBH-49 Charger Cradle, USB Type-A to USB Type-C Charging Cable, CLIP-22 Belt Clip and Hand Strap

Overall Dimensions: 2.36"  $\times$  5.24"  $\times$  1.65" (60mm  $\times$  133mm  $\times$  42mm) Weight:

10.23oz (290g) (with: Hand Strap, Belt Clip & Antenna)

- Floating
- Compact Case design (2.36"W × 5.24"H × 1.65"D, 60mm × 133mm × 42mm)
- 6W transmit power output (Selectable 6/2.5/1W)
- 700mW Loud Audio Output
- Preset key stores up to 10 favorite channels
- Easy to Operate Menu System
- Scanning operation and Multi-Watch (Dual Watch and Triple Watch)
- CH16/S Quick Access (S: Sub-channel)
- Built-in Lithium Polymer Battery Pack (7.4V, 2100mAh)
- NOAA Weather Channels with Weather Alert
- Bluetooth® Wireless Operation
- USB (Type-C) Charging system
- FM Broadcast Radio Receiver
- Water activated light



#### COMPACT FLOATING VHF HANDHELD





















#### ▶ Supplied Accessories:

SRA-19B Antenna, SBH-25 Charger Cradle, SAD-25 AC Adapter, E-DC-19A DC Cable with Cigarette Lighter Plug, CLIP-22 Belt Clip and Hand Strap

Overall Dimensions:  $2.36^{\circ}\times5.20^{\circ}\times1.57^{\circ}\ (60\text{mm}\times132\text{mm}\times40\text{mm})$  Weight:  $9.88oz\ (280g)\ (with: Hand Strap, Belt Clip \& Antenna)$ 

- Floating
- Compact Case design (2.36"W × 5.20"H × 1.57"D, 60mm × 132mm × 40mm)
- 6W transmit power output (Selectable 6/2.5/1W)
- 600mW Loud Audio Output
- Preset key stores up to 10 favorite channels
- Easy to Operate Menu System
- Scanning operation and Multi-Watch (Dual Watch and Triple Watch)
- CH16/S Quick Access (S: Sub-channel)
- Built-in Lithium Polymer Battery Pack (7.4V, 1850mAh)
- . NOAA Weather Channels with Weather Alert
- FM Broadcast Radio Receiver · Water activated light

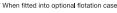


#### ULTRA COMPACT VHF HANDHELD



























#### ► Supplied Accessories:

SRA-19B Antenna, SBH-27 Charger Cradle, SAD-25 AC Adapter, E-DC-19A DC Cable with Cigarette Lighter Plug, SHB-19 Belt Clip and Hand Strap

Overall Dimensions: 2.05" × 3.74" × 1.3" (52mm × 95mm × 33mm)

Weight: 8.1oz (230g) (with: Hand Strap, Belt Clip & Antenna)

- Floating (When fitted into optional flotation case)
- Ultra-Compact Case design (2.05"W × 3.74"H × 1.3"D, 52mm × 95mm × 33mm)
- 6W transmit power output (Selectable 6/2.5/1W)
- 600mW Loud Audio Output
- Preset key stores up to 10 favorite channels
- Easy to Operate Menu System
- Scanning operation and Multi-Watch (Dual Watch and Triple Watch)
- CH16/S Quick Access (S: Sub-channel)
- Built-in Lithium Polymer Battery Pack (7.4V, 1850mAh)
- NOAA Weather Channels with Weather Alert
- FM Broadcast Radio Receiver

	Case	/ Hanger	Speaker Microphone / Headset / Earpiece Microphone								
Model	SHC-29 Flotation Case	SCH-11 Belt Clip Hanger	SSM-21A Submersible speaker microphone with earphone jack	SSM-17H Speaker microphone	MH-73A4B Submersible speaker microphone	CMP460 Submersible speaker microphone	SEP-10A Earphone for SSM-21A	SSM-BT10 Bluetooth® Headset	SSM-64A Vox Headset	SSM-517A Earpiece/ microphone	
HX890		•	•	•	•	•	•		•	•	
HX320		•	•	•	•	•	•	•	•	•	
HX210		•	•	•	•	•	•		•	•	
HX40	•	•	•	•	•	•	•		•	•	

# Commercial Grade Marine VHF

### BUILT BY PROFESSIONALS FOR PROFESSIONALS

#### **ADVANCED FEATURES**

- Capable of connecting two wired RAM4 or one wired RAM4 and four wireless RAM4X\*1 optional microphones
- Integrated NMEA 2000 interface supporting all PGNs for Navigation, GPS, AIS and DSC functions
- Integrated Dual Channel AIS Receiver
- GPS Compass, Waypoint and GPS status pages
- Dual Zone 25W PA/Loud Hailer with preprogrammed fog signals and listen back
- Submersible IPX8 (5 feet or 1.5 meters for 30 minutes)
- Integrated 32 Code Voice Scrambler and 4 Code Voice Scrambler

\*1 Requires Optional Wireless Access Point SCU-30



#### **Fixed Mount VHF Radio**

FIXED MOUNT VHF WITH NMEA 2000 AND INTEGRATED DUAL CHANNEL AIS RECEIVER

# **QUANTUM AIS**



ITU CLASS D

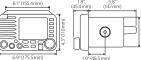
DSC

► Supplied Accessories: Hand Microphone, Power Cord, Mounting Bracket, USB Cable









- Meets ITU-R M493-14 Class D DSC (Digital Selective Calling)
- NMEA 2000 and NMEA 0183 compatible
- · AIS/AIS SART target display: MMSI, Call Sign, Ship Name, BRG, DST, SOG and COG
- Front panel microphone can be connected to rear panel and extended 20 feet using MEK-4 mic extension kit
- E2O (Easy to Operate) Icon & Menu System
- · User customizable soft keys for easy menu operation
- Programmable CPA or TCPA collision avoidance alarms

- Commercial grade receiver (Spurious & Image rejection better than 80dB)
- Local/Distance receiver Attenuator
- · Noise canceling for both transmit and receive audio
- Intercom Feature between the Radio, RAM4 and wireless RAM4X
- Integrated Voice Recorder to playback up to two minutes of RX (receive) audio
- · Selectable Night Mode Display
- GM (Group Monitor) using DSC Group Position Call
- MOB (Man Overboard) Operation
- . NOAA Weather channels with weather Alert

#### Loud Hailer

30W DUAL ZONE LOUD HAILER

► Supplied Accessories: Mounting Bracket Power Cord and Dust Cover







for the Front panel





- PA/Hailer 30W output with Listen Back
- Dual Zone Forward, Aft or Both
- 6 Preprogrammed Fog Signals: Underway, Stop, Sail, Tow, Anchor and Aground
- Horn and Siren
- Noise canceling microphone
- Easy push button control
- · 2W Loud internal speaker audio Output
- Compatible with optional MLS-410LH intercom speaker with IC1 and IC2 Push-to-Alert Button
- · Adjustable Backlight



#### COMMERCIAL GRADE VHF WITH LMR CHANNELS





**INTRINSICALLY SAFE** 

INTRINSICALLY SAFE INFORMATION:
The HX400IS, SBR-45LIIS Li-lon battery pack and optional
SSM-21A and CMP460 speaker microphones meet the
ANSVUL 913-5th Ed.
Requirements for: Class I: Flammable Gases, Vapors, or
Liquids Div. 1 Group C (Ethylene) Group D (Propane) Class II:
Combustible Dusts Div. 1 Group E (Metals) Group F (Coal)
Group G (Grain) Class III: Ignitable Fibers and filings

▶ Supplied Accessories (HX400/HX400IS):

CAT460 Antenna, SBR-45LI (HX400) 7.2V 3200mAh/SBR-45LIIS (HX400IS) 7.2V 3200mAh Li-Ion Battery Pack, SBH-36 Charger Cradle, SAD-25 AC Adapter, E-DC-19A DC Cable with Cigarette Lighter Plug (HX400 only), CLIP-22 Belt Clip and Hand Strap

Overall Dimensions (HX400/HX400IS): 2.24"  $\times$  5.24"  $\times$  1.57" (57mm  $\times$  133mm  $\times$  40mm) Weight: 12.3oz (350g) (with: SBR-45LI (HX400)/SBR-45LIIS (HX400IS), Belt Clip & Antenna)





▶ Supplied Accessories:

CAT460 Antenna, SBR-41LI 7.4V 1750mAh Li-Ion Battery Pack, CD-48 Charger Cradle, SAD-25 AC Adapter, E-DC-19A\*2 DC Cable with Cigarette Lighter Plug and CLIP-920 Belt Clip

\*2 US version only

Overall Dimensions: 2.24"  $\times$  5.24"  $\times$  1.3" (57mm  $\times$  133mm  $\times$  33mm) Weight: 11.3oz (320g) (with: SBR-41LI, Belt Clip & Antenna)





- Selectable 5 and 1 Watt transmit power output • Marine VHF with 40 Programmable Land Mobile Channels 134MHz to 174MHz
- 700mW Loud Audio Output
- Supplied with 3200mAh Li-Ion battery (HX400 only)
- Built-in Noise canceling microphone
- Voice Scrambler
- Scanning operation and Multi-Watch (Dual Watch and Triple Watch)
- Certified Intrinsically Safe (HX400IS only)
- · Supplied with Intrinsically safe 3200mAh Li-Ion battery (HX400IS only)





- Selectable 5 and 1 Watt transmit power output
- Marine VHF with 40 Programmable Land Mobile Channels 134MHz to 174MHz
- 700mW Loud Audio Output
- Supplied with 7.4V 1750mAh Li-Ion battery
- Scanning operation and Dual Watch





#### Fixed Mount VHF Radio and Loud Hailer Accessories

The dividual VIII Thadic and Edda Haller Modessories									
		Micropho		Access Point	/ GPS Antenna				
Model	SSM-72H Wireless Remote Access Microphone RAM4X*3	SSM-70H Remote Access Microphone RAM4	CT-100 23ft (7m) extension cable for SSM-70H	MEK-4 Microphone Extension Kit 20ft (6m)	SCU-30 Wireless Access Point for SSM-72H (RAM4X) 5ft (1.5m) of Cable	SCU-31 External GPS Antenna with 49ft (15m) of Cable			
GX6000	•	•	•	•	•	•			
VLH-3000A									
	Bracket	External Speaker			Hail / PA Speaker				
	MMB-84	MI 0 4400D							
Model	Flush Mount Bracket	MLS-410SP External Speaker	MLS-410PA External Speaker with 10W amplifier	MLS-410LH Loud Hailer Intercom Speaker (with CALL button)	220SW 130mm Round PA/hailing horn 30W 4 Ohm	240SW W224 × H183mm Rectangular PA/hailing horn 40W 4 Ohm			
Model GX6000			External Speaker	Loud Hailer Intercom Speaker	130mm Round PA/hailing horn	W224 x H163mm Rectangular PA/hailing horn			

#### Handheld VHF Radio Accessories

	Ante		Battery			Battery Charger				
	CAT460 VHF Marine Anter	CN-3 BNC-SMA A			Alkaline Battery tray	Cradle	AC Adapte		Cable garette Lighter	SAD-1460 6 Unit Multi Charger
Model				<b>U</b>	1				de la company de	
HX400	●*5	•		*5 3200mAh Li <b>-l</b> on	FBA-42 (6 x AA)	SBH-36*5*6	SAD-25	5 *7	E-DC-19A*5	•
HX400IS*4	●*5	•		R-45LIIS*5 Safe 3200mAh Li-lon		SBH-36*5*6	SAD-25	5 *7		•
HX380	●*5	•		SBR-41LI*5 1750mAh Li-Ion FBA-4		CD-48*5	SAD-25		E-DC-19A	
		,	Speaker M	icrophone / Vox He	adset / Earpiece Mic	rophone		Belt o	lip / Hanger	Case
Model	SSM-21A*4 Submersible speaker microphone with earphone jack	CMP460*4 Submersible speaker microphone	SSM-17H Speaker microphone	MH-73A4B Submersible speaker microphone	SEP-10A Earphone for SSM-21A	SSM-64A Vox Headset	SSM-517A Earpiece/microphone		SCH-11 Belt Clip Hanger	Leather Case and Nylon Case SHC-18: Leather Case w / belt loop and shoulder strap SHC-19: Leather Case w / swivel SHC-20: Nylon Case
HX400	•	•	•	•	•	•	•	CLIP-22*5	•	•
HX400IS*4	•	•						CLIP-22*5	•	
HX380							•	CLIP-920*5		

<sup>\*3</sup> Requires optional Wireless Access point (SCU-30) 
\*4 Intrinsically Safe Version 
\*5 The same as the supplied accessory

<sup>\*6</sup> Requires SAD-25 \*7 Requires SBH-36

#### FIXED MOUNT VHF AND LOUD HAILER SPECIFICATIONS

#### **Fixed Mount VHF Radios**

MODEL	GX6000	GX2400GPS	GX1850/GX1800GPS	GX1400GPS/GX1400
GENERAL				
Frequency Range	Marine Band	Marine Band	Marine Band	Marine Band
	156.025 - 163.275 MHz	156.025 - 163.275 MHz	156.025 - 163.275 MHz	156.025 - 163.275 MHz
Input Voltage	13.8 VDC ±20 %	13.8 VDC ±20 %	13.8 VDC ±20 %	13.8 VDC ±20 %
Current Drain	Standby: 0.55 A	Standby: 0.55 A	Standby: 0.45 A	Standby: 0.3 A
	Receive: 0.9 A	Receive: 0.9 A	Receive: 0.8 A	Receive: 1.2 A
	Transmit: 5.0 A (Hi), 1.0 A (Lo)	Transmit: 5.0 A (Hi), 1.0 A (Lo)	Transmit: 5.0 A (Hi), 1.0 A (Lo)	Transmit: 5.0 A (Hi), 1.0 A (Lo)
Overall Dimensions	6.9"W × 4.3"H × 6.8"D	7.1"W × 3.1"H × 6.0"D	5.9"W × 3.4"H × 3.3"D	6.14"W × 2.4"H × 3.94"D
	(175.5W x 110H x 173.3D mm)	(180W x 80H x 152.6D mm)	(150W x 85H x 82D mm)	(156W × 61H × 100D mm)
Flush-Mount	6.2"W x 3.7"H x 6.2"D	6.3"W × 2.6"H × 6.2"D	5.4"W × 2.8"H × 3.4"D	5.15"W x 1.97"H x 4.72"D
Dimensions	(158W × 94H × 158D mm)	(161W × 65H × 157D mm)	(138W x 73H x 95D mm)	(131W × 50H × 120D mm)
Weight	3.7 lbs (1.66 kg)	3.3 lbs (1.5 kg)	2.1 lbs (940 g)	1.8 lbs (800 g)
PA/FOG Power Output	25 W with listen back	30 W with listen back /30 W no listen back	-	-
TRANSMITTER				
RF Output	25 W (Hi), 1 W (Lo)	25 W (Hi), 1 W (Lo)	25 W (Hi), 1 W (Lo)	25 W (Hi), 1 W (Lo)
Conducted Spurious Emissions	Less than -80 dBc (Hi), -66 dBc (Lo)	Less than -80 dBc (Hi), -66 dBc (Lo)	Less than -80 dBc (Hi), -66 dBc (Lo)	Less than -80 dBc (Hi), -66 dBc (Lo)
Frequency Stability	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)
FM Hum and Noise	50 dB	50 dB	50 dB	50 dB
RECEIVER (for Voice	and DSC)			
Sensitivity (12 dB SINAD)	0.30 μV	0.30 µV	0.25 µV	0.25 μV
Spurious and Image Rejection	80 dB for Voice (75 dB for DSC)	80 dB for Voice (75 dB for DSC)	75 dB for Voice (75 dB for DSC)	75 dB for Voice (70 dB for DSC)
Intermodulation and Rejection	80 dB for Voice (75 dB for DSC)	75 dB for Voice (75 dB for DSC)	75 dB for Voice (70 dB for DSC)	70 dB for Voice (70 dB for DSC)
Audio Output	10 W	4.5 W	4.5 W	4.5 W
DSC Format	Class D ITU-R M.493-14	Class D ITU-R M.493-15	Class D ITU-R M.493-15	Class D ITU-R M.493-14
RECEIVER (for AIS)				
Sensitivity	0.5 µV	0.5 μV	-	-
Spurious and Image Rejection	70 dB for AIS	70 dB for AIS	-	-
Intermodulation and Rejection	70 dB for AIS	70 dB for AIS	-	-
NMEA Input/Output				
NMEA 2000	Compatible	Compatible	Compatible (GX1850)	-
NMEA 0183	Input: GGA, GLL, GNS, RMC, GSA	Input: GGA, GLL, GNS, RMC, GSA and GSV (4800 bps)	Input: GGA, GLL, GNS, RMC, GSA	Input: GGA, GLL, GNS, RMC, GSA
4800 Baud Selected	and GSV (4800 bps)	Output: DSC, DSE, GGA, GLL, GNS,	and GSV (4800 bps)	and GSV (4800 bps)
	Output: DSC, DSE, GGA, GLL, GNS, RMC,	RMC, GSA and GSV (4800 bps)	Output: DSC, DSE, GGA*1, GLL*1, GNS*1,	Output: DSC, DSE, GGA*2, GLL*2, GNS*
	GSA and GSV (4800 bps)	AIS Output: VDM (38400 bps)	RMC*1, GSA*1 and GSV*1 (4800 bps)	RMC*2, GSA*2 and GSV*2 (4800 bps)
NMEA 0183-HS	Input: GGA, GLL, GNS, RMC, GSA	Input: GGA, GLL, GNS, RMC, GSA	Input: GGA, GLL, GNS, RMC, GSA	Input: GGA, GLL, GNS, RMC, GSA
38400 Baud Selected	and GSV (38400 bps)	and GSV (38400 bps)	and GSV (38400 bps)	and GSV (38400 bps)
	Output: DSC, DSE, GGA, GLL, GNS, RMC,	Output: DSC, DSE, GGA, GLL, GNS,	Output: DSC, DSE, GGA*1, GLL*1, GNS*1,	Output: DSC, DSE, GGA*2, GLL*2, GNS
	GSA, GSV and VDM (38400 bps)	RMC, GSA and GSV (38400 bps)	RMC*1, GSA*1 and GSV*1 (38400 bps)	RMC*2, GSA*2 and GSV*2 (38400 bps)
	AIS Output: VDM (38400 bps)	AIS Output: VDM (38400 bps)		

#### Loud Hailer

MODEL	VLH-3000A
GENERAL	
Input Voltage	13.8 VDC ±20 %
PA Horn Output	30W: 2ch (at 4 ohm 10 % distortion)
Intercom Output	4W: 2ch (at 4 ohm 10 % distortion)
Listen-Back Input Level	2 mV
AF Output	
EXT SPK Output	4 W
	(at 4 ohm 10 % distortion)
INT SPK Output	2 W
	(at 8 ohm 10 % distortion)
Mic sensitivity	10 mV
Drain current	7 A (MAX) when Forward
	and Aft Horns are used.
Idle current	300mA
Operating temperature	-4° F to +131° F (-20° C to +55° C)
Storage temperature	-22° F to +158° F (-30° C to +70° C)
Water integrity	IPX7 (3 ft for 30 min)
performance	for the front panel
Overall Dimensions	7.1"W x 4.3"H x 5.5"D
	(180W × 110H × 140D mm)
Flush mount	6.5"W × 3.6"H × 4.5"D
dimensions	(165W × 92H × 115D mm)
Weight	2.97 lbs (1.35 kg)

#### **GPS Specifications**

MODEL	GX2400GPS/ GX1800GPS/GX1400GPS
Channels	66 channels
Sensitivity	Less than =147 dBm
Time to First Fix	1 min typical (@Cold Start)
	5 sec typical (@Hot Start)
Geodetic Datum	WGS84
SBAS Correction	WAAS, EGNOS, MSAS and GAGAN

## HANDHELD VHF SPECIFICATIONS

\*2 GX1400GPS only

\*1 GX1800GPS only

MODEL	HX890	HX320	HX210	HX40	HX400/HX400IS	HX380
GENERAL			<u>'</u>	<u>'</u>	<u>'</u>	
Frequency Range	Marine Band	Marine Band	Marine Band	Marine Band	Marine Band: 156.025 - 163.275 MHz	Marine Band: 156.025 - 163.275 MHz
	156.050 - 163.275 MHz	156.025 - 163.275 MHz	156.025 - 163.275 MHz	156.025 - 163.275 MHz	LMR Band: 134 - 174 MHz	LMR Band: 134 - 174 MHz
Battery type / Capacity	Li-lon 1800 mAh	Lithium Polymer 2100 mAh (Built-in)	Lithium Polymer 1850 mAh (Built-in)	Lithium Polymer 1850 mAh (Built-in)	Li-lon 3200 mAh	Li-lon 1750 mAh
Input Voltage	7.4 VDC	7.4 VDC	7.4 VDC	7.4 VDC	7.2 VDC	7.4 VDC
Current Drain	Standby: 130 mA (GPS On),110 mA (GPS Off)	Standby: 100 mA	Standby: 60 mA	Standby: 100 mA	Standby: 50 mA	Standby: 50 mA
	Receive: 380 mA (MAX AF Output)	Receive: 330 mA (MAX AF Output)	Receive: 330 mA (MAX AF Output)	Receive: 330 mA (MAX AF Output)	Receive: 320 mA (MAX AF Output)	Receive: 320 mA (MAX AF Output)
	Transmit: 1.6 A / 1.0 A / 0.7 A	Transmit: 1.6 A / 1.0 A / 0.7 A	Transmit: 1.6 A / 1.0 A / 0.7 A	Transmit: 1.6 A / 1.0 A / 0.7 A	Transmit: 1.6 A / 0.8 A	Transmit: 1.6 A / 0.8A
	(6 W / 2 W / 1 W)	(6 W / 2.5 W / 1 W)	(6 W / 2.5 W / 1 W)	(6 W / 2.5 W / 1 W)	(5 W / 1 W)	(5 W / 1 W)
Overall Dimensions	2.60"W × 5.43"H × 1.50"D	2.36"W × 5.24"H × 1.65"D	2.36"W × 5.20"H × 1.57"D	2.05"W x 3.74"H x 1.3"D	2.24"W × 5.24"H × 1.57"D	2.24"W x 5.24"H x 1.3"D
	(66W × 138H × 38D mm)	(60W x 133H x 42D mm)	(60W x 132H x 40D mm)	(52W × 95H × 33D mm)	(57W × 133H × 40D mm)	(57W × 133H × 33D mm)
Weight	10.94 oz (310 g)	10.23 oz (290 g)	9.88 oz (280 g)	8.1 oz (230 g)	12.3 oz (350 g)	11.3 oz (320 g)
	(w/SBR-13LI, Hand Strap,	(w/ Hand Strap,	(w/ Hand Strap,	(w/ Hand Strap,	(w/SBR-45LI/SBR-45LIIS,	(w/SBR-41LI,
	Belt Clip & Antenna)	Belt Clip & Antenna)	Belt Clip & Antenna)	Belt Clip & Antenna)	Belt Clip & Antenna)	Belt Clip & Antenna)
TRANSMITTER						
RF Output	6 W / 2 W / 1 W (@7.4 V)	6 W / 2.5 W / 1 W (@7.4 V)	6 W / 2.5 W / 1 W (@7.4 V)	6 W / 2.5 W / 1 W (@7.4 V)	5 W / 1 W (@7.2 V)	5 W / 1 W (@7.4 V)
Conducted Spurious Emissions	Less than 0.25 μW	Less than 0.25 µW	Less than 0.25 µW	Less than 0.25 μW	-75 dBc Typical	At least 36 dBm below
Frequency Stability	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)	±3 ppm (-4° F to +140° F)	±2.5 ppm (-22° F to +140° F)	±2.5 ppm (-22° F to +140° F)
FM Hum and Noise	40 dB	40 dB	40 dB	40 dB	40 dB	40 dB
RECEIVER						
Sensitivity (12 dB SINAD)	0.25 μV	0.25 μV	0.25 μV	0.25 μV	0.25 µV	0.25 μV
Selectivity	12 kHz / 25 kHz (-6 dB / -60 dB)	12 kHz / 25 kHz (-6 dB / -60 dB)	12 kHz / 25 kHz (-6 dB / -60 dB)	12 kHz / 25 kHz (-6 dB / -60 dB)	12 kHz / 25 kHz (-6 dB / -60 dB)	12 kHz / 25 kHz (-6 dB / -60 dB)
Audio Output	700 mW	700 mW	600 mW	600 mW	700 mW	700 mW
DSC Format	Class-H ITU-R M.493-14	-	-	-	-	-
NMEA Output	DSC, DSE, GGA, GLL,	-	-	-	-	-
	RMC, GSA and GSV					
GPS						
Channels	66 channels	-	-	-	-	-
Sensitivity	Less than -147 dBm	-	-	-	-	-
Time to First Fix	1 min Typical (@Cold Start)	-	-	-	-	-
	5 sec Typical (@Hot Start)					
Geodetic Datum	WGS84	-	-	-	-	-
SBAS Correction	WAAS, EGNOS, MSAS and GAGAN	-	-	-	-	1-

Standard Horizon reserves the right to make changes and enhancements to products at our discretion. Current specifications are therefore subject to change without notice.

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