

CHIRP Sonar Technology

GARMIN[®]





THE POWER OF SIMPLE™

The power of simple is what happens when very complex, sophisticated technology is made extremely easy for you to use. Garmin is dedicated to making your time on the water more fun, more rewarding...more simple. And you will definitely find the power of simple in all the new Garmin marine products coming your way in 2013.

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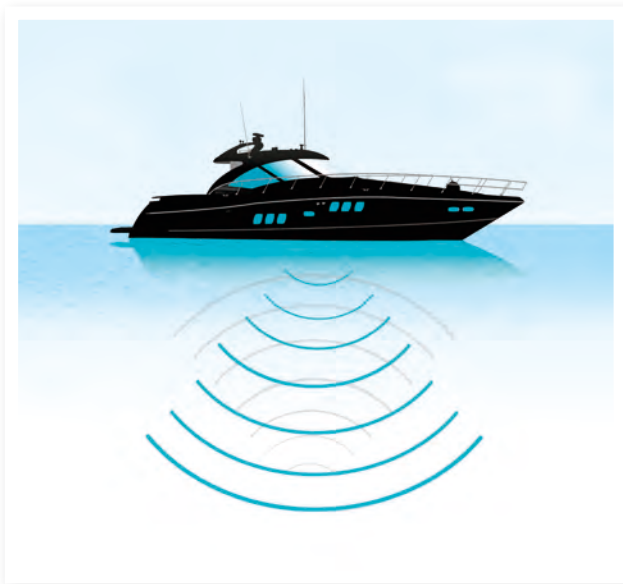


What is CHIRP?

CHIRP is the most sophisticated sonar technology available for use by the fishing and boating public. The word itself is an acronym for Compressed High-Intensity Radiated Pulse.

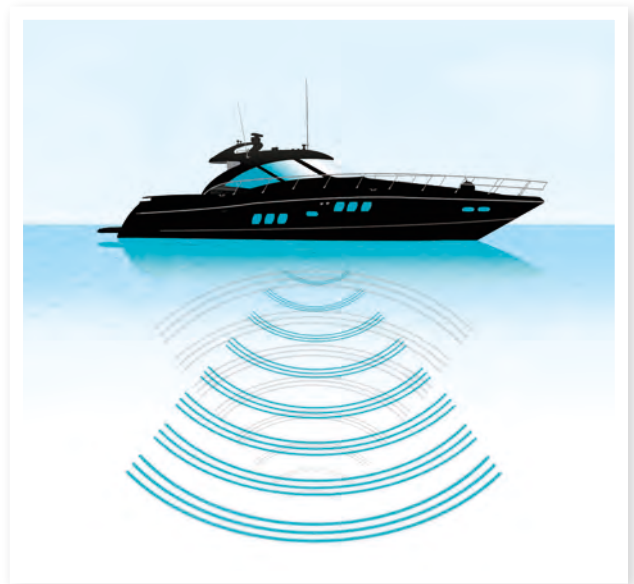
Standard Sonar

Standard sonar sends 1 single frequency at a time. Since the only feedback is from this 1 single frequency, there is little information to work with, limiting the clarity and resolution available with standard sonar.



CHIRP Sonar

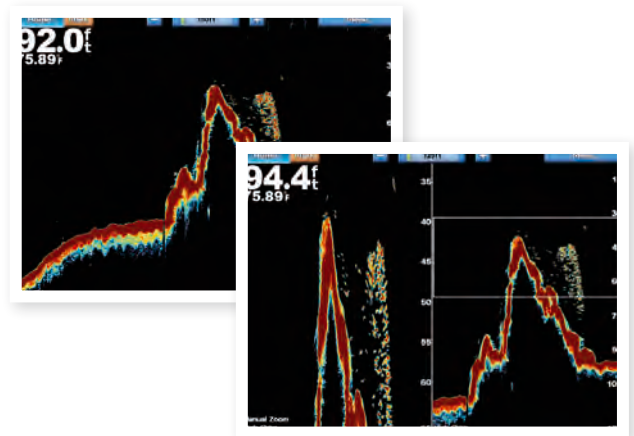
Instead of sending just 1 single frequency, CHIRP sends a continuous sweep of frequencies ranging from low to high. CHIRP sonar technology then interprets frequencies individually upon their return. Since this continuous sweep of frequencies provides CHIRP with a much wider range of information, CHIRP sonar is able to create a much clearer, higher resolution image.



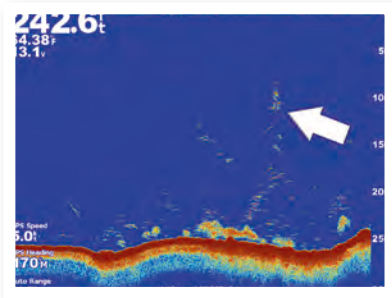
Why Garmin CHIRP?

The key to CHIRP sonar is the interpretation of the data retrieved. The better the data interpretation, the better the screen image.

Compare un-doctored screen images provided by actual Garmin sonar owners to any other CHIRP sonar images you have seen. We think you'll agree that when it comes to CHIRP sonar technology, Garmin is creating products that interpret CHIRP sonar data the best.

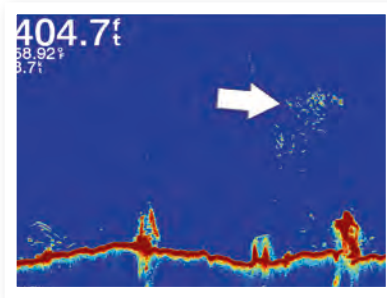


Advantages of CHIRP



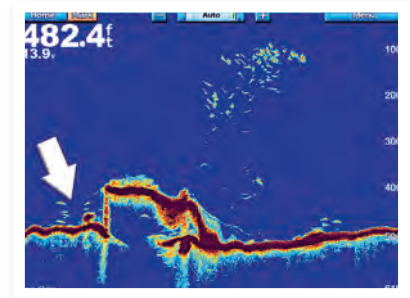
Improved resolution

Improved target resolution enables you to actually see individual baitfish separately.



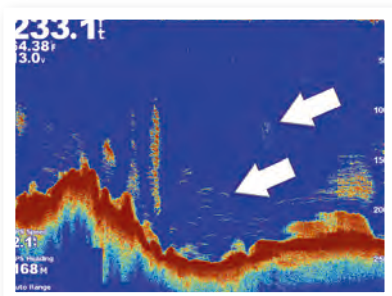
More data

A sweep of tones delivers more data, providing a much higher resolution, clearer depiction of targets on screen.



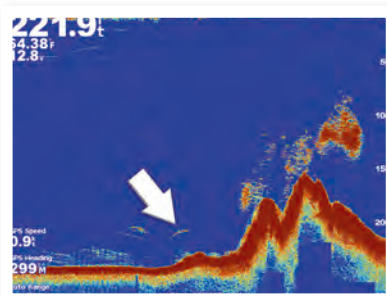
Intelligent

Each frequency reacts differently to structure densities to create a clearer image of what's below.



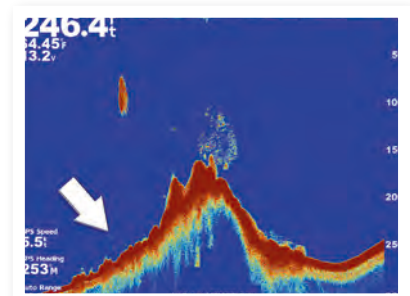
Clear difference

Improved target resolution enables you to differentiate between big fish and tight clusters of baitfish.



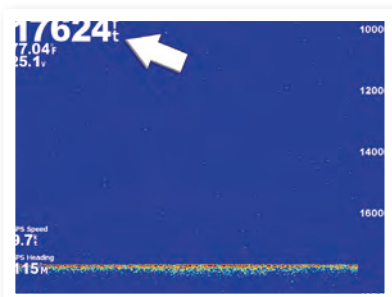
Double power

CHIRP doubles the power put on the target.



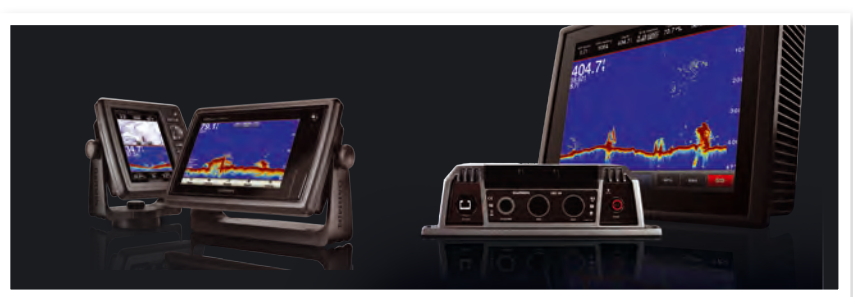
Close bottom view

Improved target resolution enables you to distinguish fish hovering just above bottom.



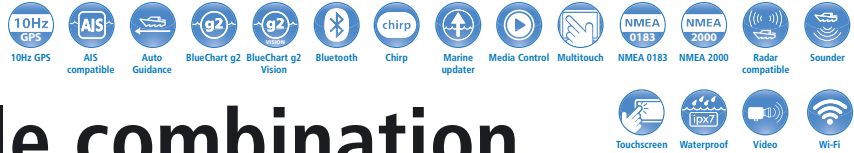
Go deep

With a wide range of powerful transducers the GSD 26 is able to take you down to depth as deep as 5 000 meters.



CHIRP Capable Products

Garmin CHIRP Sonar capable products fits all depths - inland, coastal and seriously deep sea fishing. From the powerful standalone combos GPSMAP 527xs and 721xs to the network capable GSD 26 - all powerfully simple to use.



An unbeatable combination



GPSMAP 721xs, have a crisp 7" capacitive LED colour display, offering multitouch and excellent visibility, even in bright sunlight. The large, clear menu is designed for quick and convenient use. GPSMAP 721xs also offers a powerful digital sounder incorporating Spread-Spectrum CHIRP technology with potential output power of 600W RMS at depths of down to 600 m. In addition, it has the option to connect engine, fuel, VHF and autopilot via NMEA 2000, as well as radar.

Main functions	Sounder functions
<ul style="list-style-type: none"> 7" LED-lit WVGA touchscreen with multitouch High-sensitivity 10 Hz GPS/GLONASS receiver Viewable in strong sunlight Wireless communication via Wi-Fi and Bluetooth® Media integration with Fusion - control your Fusion marine stereo via your Garmin Fast processor for rapid zooming, panning and updating of the image NMEA 0183 and NMEA 2000 Robust and waterproof (IPX7) 2 slots for microSD cards. One for BlueChart and one for user data Three different installation options - bracket-, flush- or flat-mounted 	<ul style="list-style-type: none"> Supports dual frequency mode (50/200kHz) or dual beam mode (77/200 kHz) Built in highly acclaimed HD-ID™ sonar technology which also includes built-in Spread-Spectrum CHIRP sonar capability Sounder output: 500W Dual Beam Sounder, up to 1kW (RMS) on Traditional Sounder and 600W on CHIRP Depth: 600 metres (pending sounder and transducer used) updating of the sounder image See-Thru® technology; shows both strong and weak echoes at the same time Sonar recording Advanced target searching with Chirp technology



Compact power pack



GPSMAP 527xs have a crisp 5" VGA display with perfect legibility in bright sunlight and complete darkness. It works at 10Hz to update position and heading 10 times per second, and have a powerful processor delivering excellent performance, unbeatable map processing and panning. When used with a compatible CHIRP transducer (sold separately), GPSMAP 527xs displays crystal-clear sonar images to help find the next hidden fishing spot, ship wreckage or diving location.

Main functions	Sounder functions
<ul style="list-style-type: none"> Crisp 5" VGA display, 640 x 480 pixels High-sensitivity 10 Hz GPS/GLONASS receiver Viewable in strong sunlight Wireless communication via Wi-Fi and Bluetooth® Media integration with Fusion - control your Fusion marine stereo via your Garmin Fast processor for rapid zooming, panning and updating of the image NMEA 0183 and NMEA 2000 Robust and waterproof (IPX7) 2 slots for microSD cards. One for BlueChart and one for user data Three different installation options - bracket-, flush- or flat-mounted 	<ul style="list-style-type: none"> Supports dual frequency mode (50/200kHz) or dual beam mode (77/200 kHz) Built in highly acclaimed HD-ID™ sonar technology which also includes built-in Spread-Spectrum CHIRP sonar capability Sounder output: 500W Dual Beam Sounder, up to 1kW (RMS) on Traditional Sounder and 600W on CHIRP Depth: 600 metres (pending sounder and transducer used) UltraScroll®: rapid updating of the sounder image See-Thru® technology; shows both strong and weak echoes at the same time Sonar recording Advanced target searching with Chirp technology

Revolutionary deep-water sounder

GSD 26 takes serious sport fishing to new depths. Its revolutionary spread spectrum technology gives sport anglers the best of both worlds - better target separation in deep waters and the option of tuning to specific frequencies to target certain species of fish. It also offers optimal target definition, bottom contour analysis and signal noise suppression at greater depths, gives users faster screen updates and instantaneous interpretation of what's below.



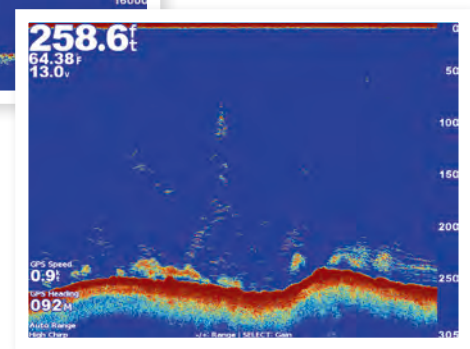
Main functions	
<ul style="list-style-type: none"> The GSD 26 digital sounder incorporates revolutionary digital Spread Spectrum technology Works with a dual-channel single receiver The dual transmitter allows simultaneous and independent dual frequency display Powerful digital signal delivers fantastic signal reproduction and performance in deep water Manually adjustable frequency from 28 kHz to 210 kHz 	<ul style="list-style-type: none"> Optional output power between 300W and 3kW Compatible with Airmar's new transducers with Chirp technology Waterproof (IPX6)

Spread Spectrum

Spread Spectrum for extreme depths



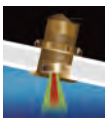





Instead of using a single frequency like traditional sonar, Spread Spectrum with Chirp technology sweeps each pulse through a range of frequencies to deliver shallow-water-like target separation at extremely deep depths and at low frequencies.

Garmin Spread Spectrum with Chirp technology used on the GSD 26 not only gives better target separation and resolution at extraordinary depths, but also allows fishermen to dial into specific frequencies to target certain species of sport fish. It offers significantly better target definition, bottom contours and noise suppression at greater depths than traditional models, and a more timely interpretation of what's below for safer navigation and better fishing.










The images show the fantastic target separation and depth capabilities of Spread Spectrum Chirp technology. To be able to reach depths more than 5 000 meters at a boat speed close to 10 knots says something about this great technology and the GSD 26 from Garmin.

Transducer guide

Mounting Style	Picture	Description	Garmin P/N	Freq. (kHz)	Power	Beam-width (°) LF/HF (-3dB)	Max Depth (m.)	Depth/Speed/Temp	# of Pins	Cable Length (m.)	Adapter Req'd?	Supported Deadrise/Transom Angles	Garmin comments
SPREAD SPECTRUM WITH CHIRP TECHNOLOGY TRANSDUCERS FOR USE WITH THE GARMIN GSD26, GPSMAP 527XS, & GPSMAP 721XS													
Transom Mount		Airmar TM265LH	010-11646-20	42-65 & 130-210	1kW	16-25/6-10	914	D,T	Bare wires	11	No	3-21 degree deadrise	Best performing and only 1kW transom mount. Excellent deep-water performance and exceptional bottom and water column detail.
		Airmar TM265LM	010-11650-20	42-65 & 85-135	1kW	16-25/11-16	914	D,T	Bare wires	11	No	3-21 degree deadrise	
		Airmar TM150M	010-11928-20	95-155	300W	26/17	457	D,T	8	11	No	3-20 degree deadrise	New for 2013! * Requires separate install kit for trolling motor mount application.
Thru-Hull		Airmar B150M with 0° tilt	010-11927-20	95-155	300W	26/17	457	D,T	8	11	No	0-7 degree deadrise	Entry Level Chirp solution. Provides good depth capability and good target separation. New for 2013!
		Airmar B150M with 12° tilt	010-11927-21	95-155	300W	26/17	457	D,T	8	11	No	8-15 degree deadrise	
		Airmar B150M with 20° tilt	010-11927-22	95-155	300W	26/17	457	D,T	8	11	No	16-24 degree deadrise	
		Airmar B75H with 0° tilt	010-11634-20	130-210	600W	15/9	243	D,T	8	11	No	0-7 degree deadrise	New for 2013!
		Airmar B75H with 12° tilt	010-11634-21	130-210	600W	15/9	243	D,T	8	11	No	6-15 degree deadrise	
		Airmar B75H with 20° tilt	010-11634-22	130-210	600W	15/9	243	D,T	8	11	No	16-24 degree deadrise	
		Airmar B75M with 0° tilt	010-11636-20	80-130	600W	24/16	243	D,T	8	11	No	0-7 degree deadrise	
		Airmar B75M with 12° tilt	010-11636-21	80-130	600W	24/16	243	D,T	8	11	No	6-15 degree deadrise	
		Airmar B75M with 20° tilt	010-11636-22	80-130	600W	24/16	243	D,T	8	11	No	16-24 degree deadrise	
		Airmar B75L with 0° tilt	010-11635-20	40-75	300W	32/21	243	D,T	8	11	No	0-7 degree deadrise	
		Airmar B175H with 0° tilt	010-11937-20	130-210	1kW	6-10	914	D,T	8	11	No	0-7 degree deadrise	New for 2013! Step up to 1kW without a fairing! Flushmounted bronze housing protrudes less than 1/4" outside hull and can sit on trailer rollers/bunks without damage. Tilted element inside the transducer accommodates all hull deadrises and eliminates the need for a fairing block. Low, medium, and high frequency versions provide maximum flexibility for the choice of frequencies. Excellent for fiberglass and wood hulls.
		Airmar B175H with 12° tilt	010-11937-21	130-210	1kW	6-10	914	D,T	8	11	No	8-15 degree deadrise	
		Airmar B175H with 20° tilt	010-11937-22	130-210	1kW	6-10	914	D,T	8	11	No	16-24 degree deadrise	
		Airmar B175M with 0° tilt	010-11939-20	85-135	1kW	11-16	914	D,T	8	11	No	0-7 degree deadrise	
		Airmar B175M with 12° tilt	010-11939-21	85-135	1kW	11-16	914	D,T	8	11	No	8-15 degree deadrise	
		Airmar B175M with 20° tilt	010-11939-22	85-135	1kW	11-16	914	D,T	8	11	No	16-24 degree deadrise	
		Airmar B175L with 0° tilt	010-11938-20	40-60	1kW	16-25	914	D,T	8	11	No	0-7 degree deadrise	
		Airmar B175L with 12° tilt	010-11938-21	40-60	1kW	16-25	914	D,T	8	11	No	8-15 degree deadrise	
		Airmar B175L with 20° tilt	010-11938-22	40-60	1kW	16-25	914	D,T	8	11	No	16-24 degree deadrise	
		Airmar B265LH	010-11645-20	42-65 & 130-210	1kW	16-25/6-10	914	D,T	Bare wires	11	No	0-20 degree deadrise	Essentially combines two B175s in one housing. Excellent deep-water performance and exceptional bottom and water column detail.
		Airmar B265LM	010-11647-20	42-65 & 85-135	1kW	16-25/11-16	914	D,T	Bare wires	11	No	0-20 degree deadrise	
	Airmar R109LH	010-11642-20	38-75 & 130-210	2kW	'9x23/4-8	2438	D,T	Bare wires	14	No	0-25 degree deadrise	2kW in a slightly smaller package than the R509LH. Very narrow-beam at both low and high frequencies for excellent deep water performance.	
	Airmar R509LH	010-11640-20	28-60 & 130-210	2-3kW	'5x9-11x23/4-8	3048	D,T	Bare wires	21	No	0-25 degree deadrise	Best deep water performance, highest power. Very narrow-beam at both low and high frequencies for excellent deep water performance. One transducer covers popular fishing frequencies - 28, 38, 50 and 200 all in one transducer. Not the best choice for those who primarily fish in shallow water.	

Listed maximum depth values are for reference only as these are subject to change pending sea state, water temperature, water salinity and bottom structure.

Transducer guide, Accessories & Specifications

Mounting Style	Picture	Description	Garmin P/N	Freq. (kHz)	Power	Beam-width (°) LF/HF (-3dB)	Max Depth (m.)	Depth/Speed/Temp	# of Pins	Cable Length (m.)	Adapter Req'd?	Supported Deadrise/Transom Angles	Garmin comments
In-Hull		Airmar M265LH	010-11644-20	42-65 & 130-210	1kW	16-25/6-10	914	D	Bare wires	11	No	0-30 degree deadrise	Best performing and only 1kW in-hull. Excellent deep-water performance and exceptional bottom and watercolumn detail. Narrow beam provides crisp image detail. Not for cored-hull vessels.
		Airmar R111LH	010-11643-20	38-75 & 130-210	2kW	10x19/4-8	914	D,T	Bare wires	14	No	0-25 degree deadrise	In-hull version of the R109LH. Very narrow-beam at both low and high frequencies for excellent deep water performance. Not for cored-hull vessels.
		Airmar R599LH	010-11641-20	28-60 & 130-210	2-3kW	9x23/4-8	3048	D	Bare wires	21	No	0-22 degree deadrise	In-hull version of the R509LH. Best deep water performance, highest power. Very narrow-beam at both low and high frequencies for excellent deep water performance. Not best choice for fishing shallow water. Not for cored-hull vessels.
Pocket Mount		Airmar PM265LH	010-11811-20	42-65 & 130-210	1kW	16-25/6-10	914	D,T	Bare wires	11	No	Installation Dependant	Popular choice for boat builders. Pocket mount version of the B265LH.
		Airmar PM265LM	010-11812-20	42-65 & 85-135	1kW	16-25/11-16	914	D,T	Bare wires	11	No	Installation Dependant	Popular choice for boat builders. Pocket mount version of the B265LM.
		Airmar R111LH	010-11643-20	38-75 & 130-210	2kW	10x19/4-8	2438	D,T	Bare wires	14	No	Installation Dependant	Pocket mount version of the R109LH. Very narrow-beam at both low and high frequencies.
		Airmar CM599LH	010-11813-20	28-60 & 130-210	2-3kW	9x23/4-8	3048	D,T	Bare wires	21	No	Installation Dependant	Pocket mount version of the R599LH. Very narrow-beam at both low and high frequencies. Not best choice for fishing shallow water.
Accessories		Trolling Motor adapter kit	010-11957-00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	New for 2013! Used with 010-11928-20.

GPSMAP® 721xs

Part Number	Description
010-11967-00	Bail Mount (Replacement)
010-11969-00	2nd Mount Station
010-11970-00	Power Cable
010-11972-00	Protective Cover
010-11976-00	Bezel
010-11978-00	Flush Mount Kit
010-12059-00	SD Card Door (Replacement)

GPSMAP® 527xs

Part Number	Description
010-11966-00	Bail/Swivel Mount
010-11970-00	Power Cable
010-11971-00	Protective Cover
010-11974-00	Bezel
010-11977-00	Flush Mount Kit
010-12057-00	SD Card Door (Replacement)

GSD 26

Specifications	GSD 26
Physical size	363 W x 100 H x 274 D mm
White line	Yes
Waterproof according to standard	IPX6
Ultrascroll	Yes
Compatible with Dual Frequency transducers	Yes
Autogain technology	Yes
Power supply	10-35 V
Power consumption	5-94 W
Max. depth	3,000 m
Fish symbol ID	Yes
Frequency	50/200KHz, 80/200KHz
Max. transducer angle Dual Frequency	45/10°
Depth Controlled Gain	Yes
See Thru compatible	Yes
Output power	Up to 3 kW
CANet compatible	No
Garmin Marine Network compatible	Yes

GSD 26

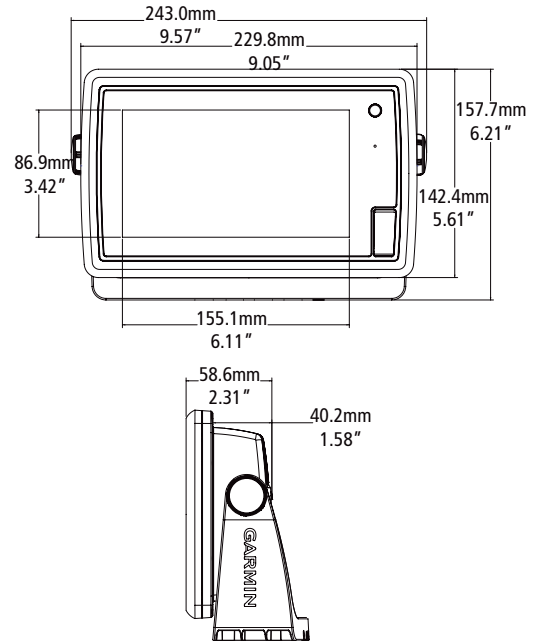
Part Number	Description
010-11425-07	Marine Power Cable, 10A, Threaded, 2-pin
010-11823-00	Terminal Lid, GSD 26 (replacement)
010-11823-01	Replacement cordgrips

Specifications & dimensions

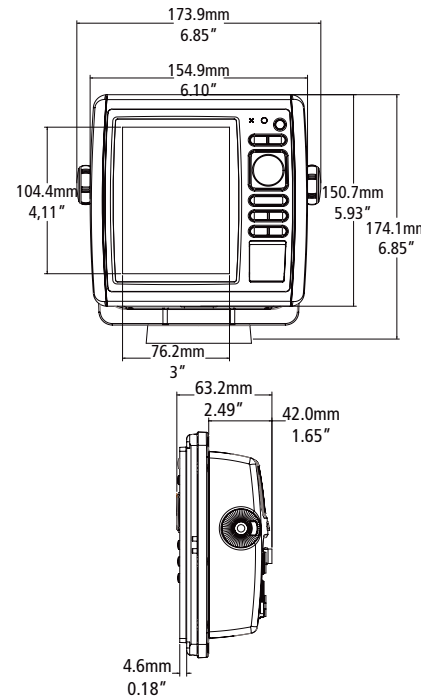
GPSMAP® 721xs & 527xs

Specifications	GPSMAP 721xs	GPSMAP 527xs
Receiver	10Hz, 32 channels, internal	10Hz, 32 channels, internal
Number of waypoints	5000	5000
Number of routes	100	100
Preprogrammed map	Basemap with satellite images	Basemap with satellite images
BlueChart g2 compatible	Yes	Yes
BlueChart g2 Vision compatible	Yes	Yes
Support AIS	Yes	Yes
Supports DSC	Yes	Yes
Display size	7" diag	5" diag
Display type	WVGA	VGA
Display resolution	800 x 480	640 x 480
Touchscreen	Yes (multitouch)	No
Standard GPS antenna	Internal (input for external)	Internal (input for external)
Auto Guidance (g2 Vision)	Yes	Yes
TracBack function	Yes	Yes
Number of track points	50 000	50 000
Alarm	Yes	Yes
Waterproof according to standard	IPX 7	IPX 7
Remote control	No	No
Ultrascroll	Yes	Yes
Garmin Marine Network compatible	No	No
WAAS/EGNOS	Yes	Yes
Dual Frequency sounder	Yes	Yes
Max. depth (sounder)	600 m (751xs)	600 m
Frequency (sounder)	50/200kHz or 77/200kHz	50/200kHz or 77/200kHz
Output power	Up to 1 kW (RMS) Dual Frequency	Up to 1 kW (RMS) Dual Frequency
Video input	Yes	No
Compatible with Garmin Radar	Yes	No
Marine chart in 3D perspective (g2 vision)/ view (g2)	Yes	Yes
Solar & lunar calendar	Yes	Yes
Alphanumeric keys	No	No
Area waypoints	Yes	Yes
Tidal information	Yes	Yes
Power supply	10-32 V	10-32 V
Power consumption 12V	9,6 W (751xs) 7,2 W (751)	9,6 W (557xs) 7,2 W (557)
Interface input/output	2 NMEA 0183 inputs, 2 NMEA 0183 outputs, NMEA 2000, Video input	2 NMEA 0183 inputs, 2 NMEA 0183 outputs, NMEA 2000

GPSMAP® 721xs



GPSMAP® 527xs







The Global Leader In Satellite Navigation

From roots in aviation and marine, where accurate navigation is critical for safety, Garmin has expanded to become the leader in GPS technology. Garmin is now a global household name in the automotive, aviation, marine, outdoor and fitness markets.

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