VS825SD

Underwater Viewing System

User Manual

www.MarCumtech.com

INTRODUCTION

Thank you for purchasing the VS825sd underwater viewing system from MarCum Technologies. The VS825sd offers several technologies that are the first of their kind, making this system the most technilogically advanced underwater viewing system available.

Using technology such as an 8" Solar Intelligent-H2D display will deliver the sharpest, most vivid display, even in bright sunlight. Color Kill technology allows you to switch between a Color or Black and White image on demand, while maintaining crisp screen resolution. On-Screen displays of Camera Direction, Depth, Temp and Battery Voltage take all the guess work out of your camera position so your new VS825sd can be used to hunt for underwater treasures, locate the "spot on the spot", observe fish in their natural habitat or learn how fish reacto to your lure or bait presentation. The applications are endless, and it's never been easier or more fun to view.

600v x 800h Solar-Intelligent, H2D LCD monitor - equipped with a sophisticated, thermostatically controlled heater to enhance your viewing experience in winter conditions. The daylight viewable monitor requires no sunshield while viewing outdoors. Although classified as daylight viewable, it is recommended that you use the provided visor and turn the monitor away from direct sunlight when using outdoors during the day. The ultra-thin monitor housing is sealed with a rubber gasket and all plug-in connections are potted to protect the internal electronics from the harsh elements.

Sony CCD Super HAD II Camera - .01 lux - Sony's next generation low-light camera. In order to create an ultra-clear, nearly HD picture, there needs to be a matching high quality camera. This camera offers a 90° angle of view, giving the user a wide coverage area for maximium visibility.

The Manta camera design matches the high quality Sony Super HAD II – Switchable CCD camera to adjustable high intensity white LEDs. This lighting option incorporates MarCum's exclusive Darkwater lighting technology.
Dark-water technology greatly reduces particulate reflection and increases viewing distance by positioning the lights above and behind the actual camera lens. The Manta camera incorporates internal ballast weights within the camera housing. The amount of weight is ideal for trolling at low speeds or keeping the camera tracking smooth in current. For added open water stability or to use as a down view camera, the fin (included) snaps into the rear of the Manta camera housing with ease.

Color Kill Technology – Switch between Color and Black and White on demand
OSD – On Screen Displays of: Direction, Depth, Temp and Battery Voltage 75 feet of high strength, flexible camera cable
Manta camera design utilizing Darkwater technology lighting system Super high intensity white LED lights for low light viewing
Front keypad control panel for one-touch menu and on-screen display
Removable down-viewing and trolling fin
Video Output jack for attaching to external monitor or recording device 90° cable connections to prevent cable wear
Padded soft pack encompasses internal molded case that stores battery, camera cable, and Manta camera. Provides for maximum portability and protection
9.0 amp 12v rechargeable battery. This battery will provide up to 11 hours of continuous use during ideal conditions. Battery run time will vary depending on the condition of the battery, use of underwater LED lighting, level of screen backlight (brightness) and LCD heater system.

Automatic 1-amp, 3 stage battery charger Full 1 Year Warranty
Removable visor to improve daylight viewing

Getting Started

The VS825sd has been set-up and tested at the factory before being placed into its retail packaging. Remove the VS825sd from the packaging and place it on a level surface with the MarCum Technologies logo facing towards you and right side up. Once opened, loosen the knobs on either side of the gimbal bracket (at the base of the monitor) by turning each one counter-clockwise. Make sure to loosen the knobs a considerable distance. Then depress both knobs by pushing inwards and hold in place. This releases the lock on the monitor angle. While depressing the knobs with the base of your palms use the index fingers of each hand and gently lift the monitor up to the desired viewing position and release tension on the gimbal knobs. Once you have set the monitor to the desired viewing angle, gently tighten the knobs until they are snug. The battery, camera and cable are now accessible behind the monitor. It's easiest to remove the hook and loop straps and unzip the soft pack case.

The battery has a wiring harness with "piggyback" terminals attached. The power cord from the monitor attaches to this; the positive (red) terminal should already be attached. You should only have to attach the negative (black) wire to the negative terminal, and you're ready to go. The other cord coming from the battery is the port to attach your battery charger, more on that in the section on charging. There is no reason for you to disconnect any of these wires unless you are going to remove/replace the battery.

To turn ON the VS825sd, press the power key which is located on the keypad on the lower left side on the front of the monitor. After pressing the power key, a small red LED indicator light (located next to the power button) will turn ON. The monitor should now be displaying the image being transmitted from the camera. The camera can now be unwrapped from the cable spool and deployed into the water to the desired depth.

The depth of field (distance the camera can see underwater) depends on the clarity of the water and available light at the depth the camera is used. In clear water, the depth of field can be many feet but in cloudy or muddy water the depth of view can be reduced to only a few inches due to particles suspended in the water. Dirty or muddy water and/or low light penetration can detract from the quality of the color picture. Optimum color quality will result from clear water and adequate light penetration.

Adjusting the Monitor and On-Screen Display (OSD) Settings

MONITOR SCREEN ADJUSTMENTS

The VS825sd monitor has six different adjustments that can be made to enhance the image on the monitor to the user's preference. (Note: The VS825sd has been pre-set with factory defaults for normal viewing.)To access the settings menu, press the menu key on the digital keypad. The settings menu will be displayed on the screen (note: if you wait too long before selecting and adjustment, the menu screen will time out and disappear).

To change between on-screen adjustment choices

When making adjustments for Brightness, Contrast, Sharpness, Color, Color Kill and Backlight, press the menu key to get to your desired monitor adjustment option. The selected on-screen adjustment will be highlighted on the LCD screen. To change the settings within a selected menu, use the UP and DOWN arrows located on the far right of the digital keypad. After pressing your selected menu option, the main menu will disappear from the center of the screen, and your selected menu option will appear on the bottom of the screen. You will now be able to easily adjust and see the screen adjustments you are making. As you select UP or DOWN to make your adjustments, you will see the numbers of the selected adjustment increase or decrease

depending on the arrow direction you are depressing. To accept the changes, release the UP/DOWN arrow and settings will be saved. Once the settings are adjusted properly, the on-screen menu will shut off automatically.
Occasionally, you may find that one of your settings will not adjust. By simply scrolling through the menu options and coming back to the setting that wouldn't adjust a second time, you will automatically reset the internal timer, enabling that setting to be adjusted.

Brightness – This increases how bright the individual pixels on your screen will illuminate. Different lighting conditions and water clarity will affect how you may want the brightness to be set. Too much "Brightness" can cause the image to have a washed-out look. To increase the overall brightness, you may want to use the "Backlight" feature [See below]

Contrast – Contrast is the difference in brightness between lightest and darkest tones in a picture. A picture with too much contrast has highlights (lighter tones) that are too bright with no detail, and shadow areas that are too black. A picture with too little contrast looks dull, with no true blacks and more grayish highlights. Different water clarities coupled with the amount of light available will affect the contrast. Adjust the contrast to the desired setting for the best overall picture.

Sharpness – Sharpness is the amount of high-frequency detail in the image. Adjust the sharpness according to personal preference. (Note: increasing the contrast can give an impression of increased sharpness, so try this first).

Color – Increasing the color saturation will increase the vividness but can make the picture look darker overall. Decreasing the color saturation will make the colors look washed out and gray.

Color-Kill – This feature allows you to switch between super high-res color, and black and white with the push of a button. To access Color Kill, pressing the UP/DOWN arrows after this menu option is highlighted, will select either ON/OFF which will chance the display image from Color to Black and White and back again. For viewing in low-light, dirty water, or after dark, Black and White viewing is recommended for optimal viewing.

Clear or good water clarity and daylight viewing is optimal for viewing in color. NOTE: The Color-kill feature will turn on automatically when the camera's light sensor doesn't detect enough light for optimal color viewing. This can happen in low light conditions, in deep water, or when the ice is very thick and/or covered with snow.

Backlight – This enables the user to increase or decrease the overall brightness of the monitor without using the "Brightness". As a general guideline, set the Backlight at its highest setting when outdoors. When in a darkened ice fishing shelter, the highest Backlight setting may be brighter than necessary, so dialing this setting back may be desirable.

ON-SCREEN DISPLAY (OSD) FUNCTIONS

The MarCum VS825sd underwater viewing system includes the most technically advanced features available in an underwater fishing camera. This system incorporates a variety of sensors and an On Screen Display (OSD), capable of displaying water temperature, water depth, battery voltage, and the relative direction heading of the camera.

The Manta camera contains a digital temperature sensor, a pressure sensor for measuring camera depth, and an electronic compass sensor used to determine the heading of the camera. The monitor base includes an additional compass sensor used to determine the heading of the monitor. The OSD circuit, which includes the control panel with the DISPLAY and F/C buttons, receives data from the camera, calculates the "relative" heading of the camera, and displays

temperature, depth, voltage, and heading. The heading is displayed around the perimeter of the screen indicates which direction the camera is pointing “relative” to the direction the monitor is facing. For this indication to be accurate, the camera must be suspended by the cable, and the monitor must be on a level surface. If either the camera or the monitor rotates, so will the arrow. An arrow at the top center of the screen indicates that the camera and monitor are facing in the same direction. An arrow at the left indicates the camera is pointing to the left relative to the direction the monitor is facing. Down indicates behind, and right indicates to the right. The arrow will move around the perimeter of the screen indicating all positions. The corners correspond to relative angles at the 45 degree marks. When enabled, the temperature, voltage, and depth are also displayed along the top.

Display: Each press of the OSD/DISPLAY button will toggle the unit through its various display modes:
Mode 1 (Direction, temperature, depth) – default
Mode 2 (Direction and depth)
Mode 3 (Direction only)
Mode 4 (all OSD off)

F/C: Each press of the F/C button will alternate the units between Fahrenheit and Celsius, and Fresh and Salt water. In addition, with each initial press of the F/C button, the battery voltage and current water mode, either Fresh or Salt, is displayed briefly.

CALIBRATION: The systems contain sensors which measure water temperature, relative direction, and depth. The temperature sensor is pre- calibrated. The compass sensor may be calibrated with a sophisticated calibration routine contained within the microprocessor software. The Depth sensor automatically calibrates itself, and can optionally be manually zeroed. Compass Calibration: Pressing and holding both buttons simultaneously for several seconds will cause the unit to enter Compass Calibration mode. This is only necessary if the user suspects the camera or monitor compasses have become magnetized for some reason, or if the direction appears to be incorrect. Tilt of the camera, such as “nose down”, or “nose up”, will also cause direction errors. Calibration can be used to compensate for a change in tilt, such as from the addition of weights or attachment of fins.

Step 1 – Before proceeding further, make sure the camera is suspended and hanging freely on the cable. Make sure it is not swinging or rotating. The monitor must be on a level surface. Press F/C to enter Step 2.

Step 2 – Without swinging or tilting, slowly rotate the camera on its cable 2 full revolutions. You may rotate it first one full revolution, then return to where it started, and then rotate one full revolution the other way. Carefully, without tilting the camera, return it to its initial position, then press F/C to enter Step 3. You will notice the first two columns of numbers on the screen have changed.

Step 3 – Prepare the monitor for rotating on a level surface and press F/C to enter Step 4.

Step 4 – Slowly rotate the monitor on a level surface two full revolutions. You will now notice that the last two columns of numbers on the screen have changed. Press F/C to store the new calibration and exit Compass Calibration. The display will briefly indicate “STORING”

The compass sensors are now calibrated. To exit Compass Calibration and return to the previous calibration, press DISPLAY while at Step 1. Pressing DISPLAY at any time after Step 1, i.e. Steps 2, 3, or 4, will exit Compass Calibration. And return to the factory default settings. The numbers on the screen can be largely ignored. The digits in the first two rows indicate raw

compass data coming from the sensors, the third row indicates calculated sensor offsets, and the fourth row indicates compass sensor scale factors. You will notice these numbers change as either the camera or monitor is rotated.

Depth Calibration: Since the depth sensor is sensitive to barometric pressure changes, it is automatically zeroed each time the unit is turned on. If the unit is turned on while the camera is already under water, the previous stored zero is automatically recalled. If the depth display ever indicates a non-zero depth with the camera out of the water, possibly due to a change in barometric pressure, a quick press of both buttons will force the display to zero.

Lighting: The VS825sd utilizes super high intensity white LED lights. The VS825sd incorporates Darkwater technology which greatly reduces particulate reflection and increases viewing distance by positioning the lights above and behind the actual camera lens.

To turn the lighting system ON, press the key titled LIGHTS, located on the digital keypad on the front of the monitor. By pressing the key, a small green LED light to the right of the button will be illuminated. This indicates that the high intensity white LED lights are ON. To turn the lighting system OFF, press the light button a second time. When the lights are first turned ON, they will be at the lowest intensity level setting. To increase the lighting intensity press the UP arrow key on the right side of the digital keypad. There are (4) intensity level settings from low to high. To decrease the intensity of the lights while the lights are ON, press the down key on the right side of the digital keypad (note: the lights always come on at the lowest intensity level). The amount of LED light required will depend on the clarity and amount of particulates in the water. Darker, stained water will require more light while clear water will have sufficient light penetration therefore decreasing the need for LED intensity.

Utilizing the RCA Jack: On the back of the monitor, there is a yellow RCA jack. This can be used to attach a larger monitor, or an external recording device. There are many compact recording devices available that will work great for capturing video. Be aware that the video signal coming from the RCA jack is “analog”, and most recording devices nowadays are “digital”. This means that you will likely need a device that will convert the signal from analog to digital in order to record. Any large retailer specializing in consumer electronics will have these devices, and they are inexpensive and easy to use. It is amazing how much more you see “the second time around” when you review recordings at home!

ICE FISHING APPLICATION

The VS825sd can be used to search for that perfect weed line or locate the crib or rock pile where fish will generally school, entertain the kids, or as the perfect tool to enhance your ice fishing experience. To use as a search tool, drill a series of holes through the ice in the location you’re interested in fishing. The VS825sd is small enough to hold in your arms while walking from hole to hole. Drop the camera down each hole in search for the best spot or until you locate fish. Keep your eye on the directional and depth indicators to pinpoint the fish’s hideout. Once you’ve located the spot, drill a hole 3 or 4 feet away from the hole you’re actually going to fish in. Set the VS825sd on the ice and lower the camera down the second hole. To assist in keeping the camera at the desired depth and direction, it is recommended that an Automatic Camera Panner be used. Once you send a lure or bait down and locate it with the VS825sd, you’re ready to fish. The depth, direction and temp indicators on theVS825sd can be changed at any time by pressing the OSD/ Display button.

The VS825sd also includes a down viewing fin that snaps into the back of the Manta camera. Once the fin is attached, the camera cable can be inserted through the cutout at the rear of the fin and locked into place. It is recommended that you leave about six inches of excess cable, forming a loop, before locking the cable into place. The camera can now be lowered into the

hole to view what is directly below you. This can be very helpful while fishing in shallow water.

OPEN WATER APPLICATION

To locate fish, look for treasure or find that perfect spot, simply turn the camera power ON and drop the Manta camera into the water. If you're drifting with the wind or using a trolling motor with the VS825sd, attach the supplied trolling fin to the rear of the Manta Camera for added stability. The internal weight is enough to keep the camera down while the fin assists in keeping The Manta Camera tracking straight through the water. The direction, temp and depth indicator combined with the solar intelligent H2D display makes this the ultimate search tool. Learn in minutes what would normally take a lifetime to reveal through traditional sonar. Moving along at speeds of 1 mph or less will give the best viewing opportunities. It is a good idea to have a GPS and/or a marker buoy at hand to quickly mark any hotspots for future reference. This is a great way to learn new ice fishing hotspots. Imagine finding a rock pile that no one else on your lake knows about! Always use extra caution when viewing around underwater obstructions like boulders, cribs, or wrecks. If the camera becomes hung up, back up from the direction you were traveling from and slowly try to back the camera out of the snag. DO NOT pull directly upward with force unless all other avenues have been pursued.

If you spend a lot of time using your viewing system from your boat, it is inevitable that you will encounter some weather. While your VS825sd system is designed to be used in a variety of conditions in the outdoors, it is recommended that anytime you experience precipitation that is more than a light rain, you should immediately turn off and stow your entire viewing system. At no time should the monitor be in direct contact with large amounts of water. Should your viewing system become wet, it is unlikely that any harm will come to it, but make sure you get the entire system completely dried out as soon as possible.

Installing and Using the Visor

Your VS825sd package includes a visor that was custom designed to fit snugly around the monitor. This visor will help to shroud the monitor and improve your viewing during sunny conditions. The visor is easily attached or removed by using the hook and loop fasteners. It is strongly advised that you install the hook side of the hook and loop fastener to the monitor while still at home. Make sure the monitor is clean, warm, and dry. Peel the "hook" tape from the visor, and then peel the tape backing off. You may now apply the sticky side of the tape around the perimeter of your monitor. The "loop" portion of the fastener on the visor may now be married to the hook tape on the monitor, providing shade for those sunny days.

Battery Charging

Your MarCum system comes with a 3-stage battery charger. This style of charger is proven to be most effective and easiest to use of all charging systems available. Because this is a 3-stage charger, there is no danger of overcharging your battery. When properly cared for, a sealed lead acid battery will last for at least a couple of years. Batteries are made to be used, and they need to be used to make the most of them. The most important thing you can do is promptly recharge your battery after each use. Not charging your battery immediately after use is the number one thing that leads to battery failure.

For safety reasons, it is recommended that you place your system on a flat, hard surface like cement or tile when charging it, away from any flammable materials. Be sure to disconnect the charger from the wall when not in use, and avoid leaving your battery hooked up to the charger for extended periods of time.

When you get home from a trip, put your battery on charge right away and leave it there overnight, or for around 8-12 hours. Likewise, on the night before an ice fishing trip put it on the

charger again, just to make sure. Again, there is no danger of overcharging your battery. We often talk to people who hesitate to charge their battery after each use for fear that the battery will develop a “memory” and this will lead to a shortened run time – THIS IS FALSE!!! ALWAYS CHARGE YOUR BATTERY AFTER EACH USE!!! Be sure to use the charger that came with your system, or a similar one that is between .5 amp and 1 amp. Using a larger charger, like you would use on a car, truck, RV, or boat is likely to cause damage to the battery. There is really no danger of overcharging your battery with a low amp charger, and most chargers automatically go into “maintenance mode” once a full charge has been achieved.

TO CHARGE YOUR BATTERY:

Your battery has a wiring harness attached to it that has “piggyback” terminals on it, enabling you to keep the power cord from the unit attached to the battery at all times, as well as having the wiring harness with receptacle for your charger attached at all times. To charge, simply couple the end of the charger with the end of the wiring harness. It is normal for a green light to appear on the charger at this time if the charger is plugged into the battery only. It is also normal for the light on the charger to be green if it is plugged into the wall. When it is plugged into the wall and battery, you will see a red LED light appear on the charger. If the light is red, the battery is being charged. When your battery is fully charged, this red light should change to green. If it is time to go fishing and the light has not turned green, go fish and try to allow a longer charging period next time.

Batteries are an expendable item, and must be replaced periodically. The batteries that we use are the “Sealed Lead Acid” variety, they are 12 volts, and range from 7 to 9 amps. The more amps the battery has, the longer it will run on a full charge. Your Marcum can be powered off of any battery that is 12 volts, even a large automotive or deep cycle battery.

If you need to remove the battery, slide the power cord leads from the battery. Remove the strap that is holding the battery in place and lift the battery out. To replace the battery, place a new battery of similar specifications into the battery compartment and secure it with the Velcro strap and re-connect the positive and negative terminals.

BATTERY CHARGER TROUBLESHOOTING

A majority of inquiries that come to our office are battery or battery charger related. Battery failure can be caused by a fault in the charging system, and many times the issue is with the fuse on the wiring harness. If you suspect your battery is not being charged, follow these troubleshooting tips:

1.) When the charger is plugged into the WALL ONLY it should show a green light. If there is no light showing, confirm that the outlet is good. If the outlet is good, it is very likely that the charger itself is faulty.

2.) If the charger is plugged into the BATTERY ONLY it should show a green light. If it does not show a green light, it is likely that the charger is not making contact with the battery. The most likely reason for this is a faulty fuse on the wiring harness. This fuse is a 2-amp automotive fuse, and it should be replaced with a 2 or 3-amp fuse available anywhere that sells auto parts. The fuse can blow out if there is a short in the charging system, or if the plug end of the wiring harness comes in contact with a battery terminal.

3.) When the charger is plugged into both the wall AND the battery, there should be a red light showing on the charger. A red light showing indicates that the charger is in contact with the battery and is actively charging the battery. Once the battery has reached a voltage level that is considered “fully charged” the red light should change to green. If after 24 hours the light has not changed to green there is no cause for alarm! Remember that when the light is red, the battery

is being charged, and you will be able to use your system.

If it has been over 24 hours and the light is not green, the first thing you should do is unplug the charger and turn on your monitor. The VS825sd has a built-in voltmeter; you turn it on by pressing the OSD/DISPLAY button on the lower control panel. How different batteries will react with a charger isn't 100% possible to predict, but after 24 hours your battery should be charged to around 13 volts. If your unit turns on and has a voltage level over 12 volts, there is no need for concern, you should go fishing! If it is not at or above 12 volts after charging you should consider replacing your battery.
If your charger is plugged into the wall and battery, and you get a blinking light on the charger, it is very likely that the battery is faulty and should be replaced.

PRODUCT PERFORMANCE SPECIFICATIONS

Battery……..12 volt DC, 9.0 amp
Charger……1 amp
Camera Image Sensor……..1/3" Sony SUPER HAD II CCD
(Switchable: Color/Black and White)
Resolution……800 horizontal lines
Light Sensitivity……..01 lux
Field of View……....90 degrees
Monitor……..8" 4:3 aspect TFT LCD (600v x 800h)
Current Draw……600 – 1200mA, varies depending
on which functions are being used

One Year Warranty

MarCum warranties this product to be free from defects in materials and workmanship for one year from the date of purchase. This warranty applies to customers who properly complete the online product registration form found on the MarCum Technologies Website: www.marcumtech.com/support

If you are unable to use the internet, please fill out and submit the enclosed warranty registration card to be eligible for the one year warranty. MarCum Technologies will repair or replace any components that fail in normal use. Failures due to abuse, misuse, unauthorized alteration, modification, or repair are not covered. The warranty is valid only for the original owner who purchases the unit from an authorized dealer. An original sales receipt dated within the warranty period is required for all warranty claims.

In an effort to best serve our customers, MarCum Technologies has set a standardized battery warranty policy. Battery warranty coverage requires a proof of purchase. Please see our website, www.marcumtech.com/support, for full details.

How to Obtain Service

If your unit is malfunctioning, check the FAQ section of our website. You may find that the solution to your problem is something you can resolve yourself.

If you need to send it in, there is no need to contact our office. Getting repairs is as simple as going to our website, clicking on the support tab, and then filling out the Warranty Service Form. If your unit is under warranty, be sure to attach a picture/scan of your proof of purchase with date included.

If your system is out of warranty, it is a simple as going to our website and filling out a MarCum non-warranty form. Once you have completed the non-warranty form, package the unit as described on the website and ship it to us. All non-warranty repair pricing is determined after the system is received by us.

There is no need for an authorization or reference number, just make sure that you have included your contact info and a brief description of the issue on a note in the box.

If you do not have the ability to use the Internet, you may also fill out the service request form included in the box with your unit. If you enclose this form in the box with your unit there is no need to contact our office, just include the filled out form in the shipping box.

Some people are more comfortable calling for shipping instructions. During peak ice season, we sometimes receive a high volume of calls, making it impossible to get to all customers who phone in. For this reason, strongly consider using the on-line form or email rather than calling. In your email, please provide your name, complete address, and phone #. Please indicate what model MarCum you have, approximate date of purchase, and what has gone wrong with it.

Please send your email inquiries to **service@versae.com**

If you are unable to use email or internet, you may call us at 763-512-3987. Our office hours are Monday – Friday, 8 – 4 Central Time.
International callers may use 888-778-1208.

OUR ADDRESS:

MARCUM TECHNOLOGIES
ATTN: SERVICE DEPT.
3943 QUEBEC AVE NORTH
MINNEAPOLIS, MN 55427

The customer is responsible for shipping costs associated with returning the unit to MarCum Technologies. MarCum will pay for shipping the repaired unit back to the customer while it is still under warranty. All out of warranty services will be charged a fee for service and shipping which must be paid in advance. The unit should be securely packed and shipped “pre-paid freight” and insured to MarCum Technologies. It is the customer’s full responsibility to track their products sent out in the mail or other forms of delivery service.

MarCum Technologies will not be liable for packages lost en route to us. Unless specified otherwise, do not include batteries or other accessories when returning the product for repair. MarCum Technologies will not be responsible for lost or damaged accessories. Turnaround time can vary, on average it is about 1 week.

These are some other great systems from MarCum. These items can be purchased from one of our many fine retailers, or direct from us at marcumtech.com

Camera Panner This is a must-have for anyone using an underwaterviewing system. The Camera Panner allows the user to maintain the camera at a desired depth and use the remote to “pan” right and left 360 degrees to view the entire area. The panner is powered by two “C” batteries.

M-5 The most advanced flasher-sonar ever built, the MarCum "M" Series offers brushless, dead-quiet operation with dazzling bright and crisp color definition of bottom,fish,baitfish and your lure, all illuminated on the highest resolution display available in a commercial grade flasher. Acurate .75-inch target seperation distinctly identifies each individual object on the screen, so you can clearly discern the minuscule separation of a bluegill about to kiss your ice jig.

LX-7 The LX-7 Digital Sonar takes DNA from other fine Marcum sonars –you might say it was “bred” for excellence. Because the LX-7 is digital, we can pack it full of more features than have ever been found in an ice sonar before. With an 8” customizable dashboard display, superior target separation, 12- level interference rejection, dual-beam transducer, expandable zoom, and much, much more, the LX-7 is the perfect combination of macro features and micro precision.

Showdown 5.6 The Showdown 5.6 Digital Fish Finder delivers unmatched system performance and offers the most intuitive and easy to use system on the market. You will now spend more time actually fishing, less time trying to figure out how to use and interpret what your sonar unit is showing you. The ShowDown’s Auto Depth Range feature means there’s no switching between various depth ranges. The Showdown 5.6 immediately locks on to the proper depth range, while also displaying digital depth at all times. Other standard features include Adjustable Zoom, Sensitivity, Range, and Noise Reduction.

www.MarCumtech.com

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MarCum User Manuals are available for downloads from
www.MarCumtech.com

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