

TCR *COLOR-1*



ALL THE BENEFITS OF
COLOR FOR FRESHWATER
FISHING.

OPERATIONS MANUAL



HUMMINBIRD[®]

Absolutely Brilliant Technology!

Congratulations on choosing Humminbird, America's #1 name in depth sounders. Your new Humminbird is designed for years of enjoyable, trouble-free use. We encourage you to read this operations manual carefully in order to get full benefit of your Humminbird and all its features. If you have any questions, call our Customer Service Hotline:

PARTS CHECKLIST

To properly install and use your new Humminbird, be sure all these parts are enclosed:

TCR Color-1 depth sounder	1
High-speed Sensor	1
Sun shield	1
Gimbal mounting bracket	1
Mounting knobs	2
11½' power cable	1
Mounting hardware kit	1

Important: Complete and return your warranty card immediately.

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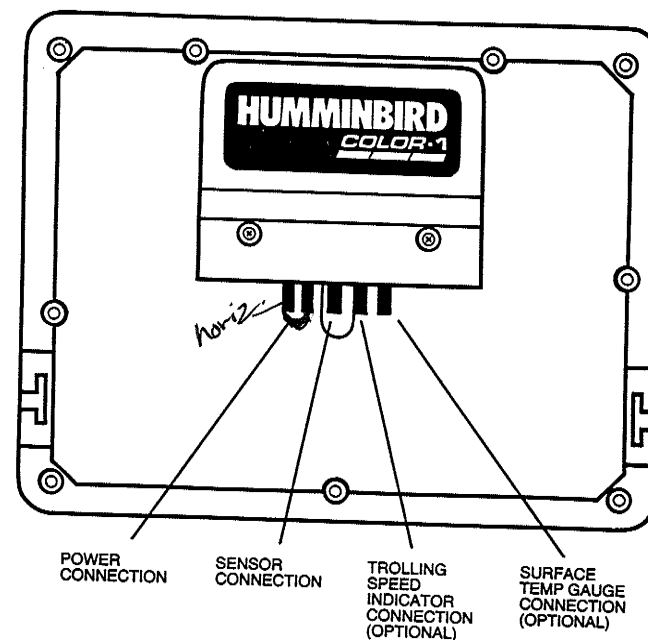
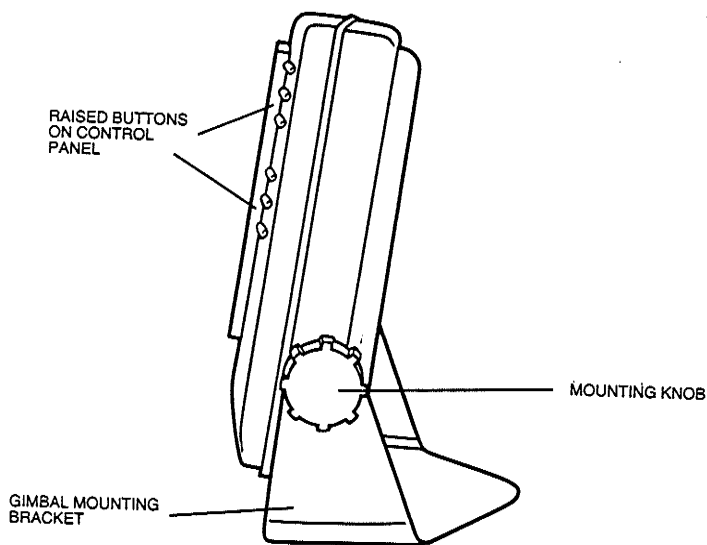
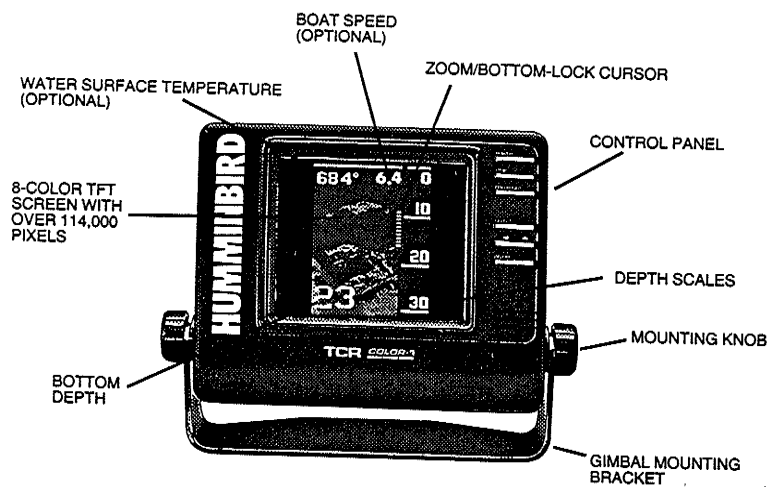
CARE AND SAFETY TIPS

Please read these important guidelines and keep them for future reference.

- **Do not attempt to repair the TCR Color-1 yourself.** Because of **high voltage** within the unit, repairs should be performed by authorized Humminbird technicians only.
- Keep the TCR Color-1 away from heat sources, such as **heaters or direct sunlight, with temperatures higher than 120 degrees F.**
- Have sunshield in place during daylight operation. Your unit will be easier to see and shielding direct sunlight from the screen will prolong the life of the TFT display.
- Allow plenty of space at the sides, top and rear of the unit when mounting it, for adequate ventilation and for easy removal.
- Never leave your TCR in a closed car or trunk, especially in extreme temperatures.
- Your TCR Color-1 is completely waterproof—that means you can simply hose it off to remove dirt and salt.
- Clean the display screen with a soft damp cloth *only*. Never use chemical cleaners or solvents to clean the case or screen because they will damage the plastic surfaces.
- Periodically check the gold connector contacts on the back of the TCR to see that they are clean. Deposits, particularly from salt water, can cause a faulty connection and interfere with the performance of your unit.
- Keep the TCR Color-1 away from magnetic fields such as those created by speakers, radar transmitters or large transformers.
- Periodically clean the face of your Sensor to remove deposits that can severely reduce the power output and sensitivity of the unit.
- Turn your TCR off when you're not using it. This will conserve power and prolong the life of the TFT display and backlight.

WARNING: This device should not be used as a navigation aid to prevent collision, grounding, boat damage or personal injury. When the boat is moving, submerged objects will not be seen until they are already under the boat, or bottom depth may change too quickly to allow time for the boat operator to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

FEATURES AND FUNCTIONS



Specifications:

Operating Frequency	455 KHz
Power Requirement	12 volts
Power Cable Length	11½'
Sensor (standard)	SHS-6S-16
Sensor Cone Angle	High-Definition, high-speed
Sensor Cable Length	16 degrees
Depth Ranges	20'
Zoom Ranges	0-15', 0-30', 0-60', 0-120', 0-180', 0-240'
Mounting (standard)	7½', 15', 30', 60'
Unit Construction	gimbal/swivel mount
Dimensions	high-impact polycarbonate case
Display	9½"W × 7½"H × 2¼"D
Viewing Area	backlighted liquid crystal TFT, 8 colors
Matrix Configuration	3"W × 4"H
	239 × 480 pixels

OPTIONS AND ACCESSORIES

SENSORS

Sensor exchange program:

Your new Humminbird comes with a high-speed, transom-mounted, 16-degree High-Definition Sensor as standard equipment.

Model #	Sensor Type	Cone Angle
SHS-6S-16	High-speed	16 degrees

Optional 40-degree Sensor and switch:

The 16-degree Sensor supplied with your TCR Color-1 gives the best depth performance and detail of bottom and structure. You may also want to add a wide-angle Sensor to use in combination with the standard Sensor. The optional 40-degree Sensor offers broader bottom coverage which is ideal for shallow water, but it may not operate as deep because the transmitted power is being spread over a larger area. Also, the wider beam will not show as much detail as the 16-degree Sensor.

If you buy the optional 40-degree Sensor, mount both Sensors on your boat, using the switch provided with the wide-angle Sensor to select either the 16-degree or the 40-degree cone angle. This is especially useful in locating and then positioning the boat over structure. The wide beam can be used to find the structure, then the narrow beam is used to more accurately position the boat. (Note: only one unit or Sensor can be used at a time.)

Model #	Sensor Type	Cone Angle
SHS-6S-40	High-speed with switch	40 degrees

ACCESSORIES

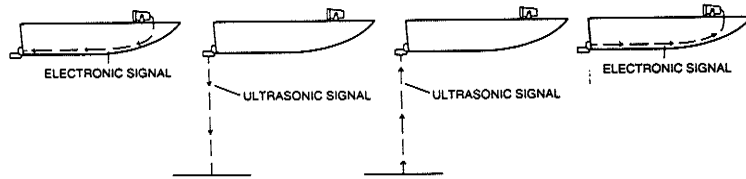
Item	Model #	Description
Surface Temp Gauge	TG-TCR	Displays surface temperature of 25-99.9 F. in tenths on unit's screen; easy-to-install temp probe included.
Trolling Speed Indicator	TSI-TCR	Displays speed up to 75 mph on screen, in tenths; easy-to install paddle wheel included.
Sensor Extension Cable	EC-6S	10' extension cable does not interfere with performance or accuracy.
Sensor Switches	SS1-6	Allows switching of one TCR between two Sensors; cables and connectors included.

REPLACEMENT PARTS

Power cable	PC-11
Gimbal/swivel mount	GM-LCR 4 x 6

HOW SONAR WORKS

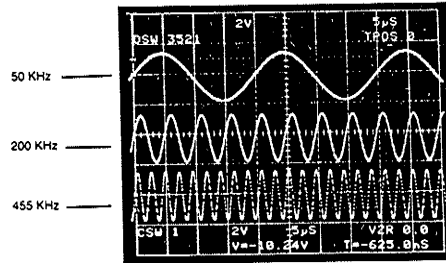
Humminbird depth sounders work on the basic principles of sonar. An electronic signal generated in the unit is changed to an ultrasonic signal by the transducer or Sensor, which sends the signal toward the bottom. The signal travels downward until it strikes either the bottom or an object above the bottom. Then, signals or echoes bounce back to the Sensor, which receives them and changes them back to electronic signals that can be displayed on the unit's screen.



Why 455 KHz?

Deepwater depth sounders have long used 50 KHz for best deepwater performance, but they suffer with poor definition. Shallow-water units use a higher-frequency 200 KHz system for better target separation and detail. But TCR technology takes high definition to a new level with its exclusive 455 KHz operation.

What does that mean to the fisherman? TCRs have twice the frequency, three times the power (1600 watts, peak to peak) and twice the detail of other units. You can clearly separate fish from the bottom and from structure, and you can see individual fish in a way that ordinary depth sounders just can't show them. Quite simply, you see more fish with more detail!

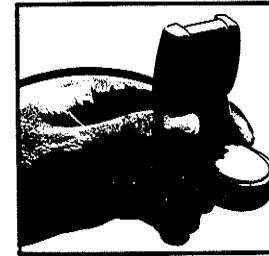


Compact, High-Definition Sensor.

To send and receive this higher-frequency signal, we developed a new High-Definition Sensor. You can immediately see the difference between our 455 KHz Sensor and older 200 KHz transducers.

Our new Sensor is so compact, it's a snap to install. It's designed for superior

high-speed performance, and because of its small size, you'll have less problem with drag, turbulence or rooster-tails. This new Sensor is actually less likely to be damaged by debris, yet performs with all the accuracy you expect from Humminbird.



MOUNTING THE SENSOR

Parts involved:

High-speed Sensor
 Template (provided in rear of this manual)
 Mounting base
 Mounting arm
 Sensor mounting hardware
 Allen wrenches (provided)

Tools you'll need:

Drill
 Phillips head screwdriver
 Pen or pencil
 Silicone sealant

Sensor Mounting Options:

- A. **Transom Mount**—The Humminbird high-speed Sensor allows the Sensor element to be mounted below the bottom of the boat hull keeping the Sensor out of turbulent water and ensuring good high-speed operation. The Sensor will absorb the blow of any obstruction by rotating up, without harming the Sensor, or your boat. The Sensor can be re-engaged by simply rotating the Sensor down and snapping it back in place.
- B. **Inside Hull Mount**—The high-speed Sensor can be mounted inside the hull (without pivot assembly) using a proper 2-part epoxy, such as Humminbird's Epoxy Kit. Even though there is some loss of signal in shooting through the hull, your TCR will perform well with this type of installation. Do not shoot through the hull of an aluminum boat.

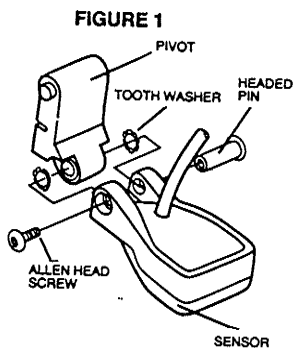
The TCR will operate well at high speeds with a properly mounted Sensor. Remember, a Sensor will not work transmitting through air or through air bubbles.

FOR BEST RESULTS . . .

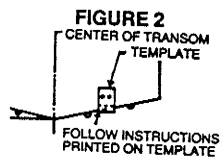
Read all the mounting instructions before you begin the installation. The High-Definition Sensor is designed and sized to be very easy to mount. However, the overall performance of your unit can be greatly affected by the Sensor installation, so be sure to follow the instructions carefully.

A. TRANSOM MOUNTING PROCEDURE

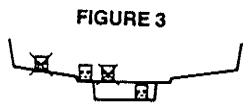
Mounting Location: It is important that the Sensor be mounted on the transom where water flow is in constant contact with the Sensor. You may want to observe the rear of the boat while it is moving through the water to determine the best mounting location.



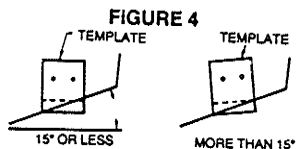
1. Attach the pivot to the Sensor by using the #8-32 allen-head screw, headed pin and tooth washers, according to Figure 1. Do not completely tighten the allen screw yet.



2. Position the template at the bottom of the boat transom as shown in Figure 2, following the directions printed on the template. Keep in mind that, when mounted, the bottom of the Sensor should be at least $\frac{1}{8}$ " below the bottom of the transom, but the top of the Sensor must not be below the bottom of the transom.

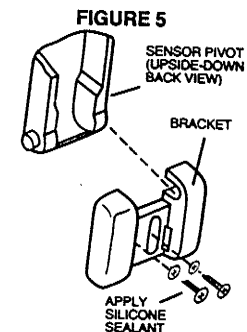


NOTE: If your boat has a stepped transom below the main transom, we recommend mounting the Sensor there, as shown in Figure 3, for good readings at very high speeds.

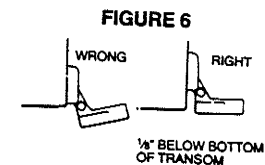


NOTE: If your boat has more than a 15-degree dead-rise angle, you will need to mount your Sensor slightly off parallel with the water, as shown in Figure 4, for best performance.

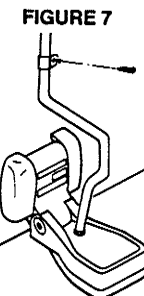
3. Mark and drill the 2 holes as shown, and attach the bracket assembly with the screws provided. Be sure the screws are centered in the slots. Do not drill for the lower hole yet!
4. Apply a silicone sealant between the screw heads and the bracket to keep water from leaking into the hull of your boat.



5. Adjust the Sensor's running angle so that it's parallel with the bottom of the boat hull. Then tighten down the allen-head screw that holds the Sensor to the pivot. Be sure that all screws are tightened completely.
6. Check the mounted Sensor to see that it is positioned as described in Step 2. If any adjustments are needed, the slotted mounting bracket can easily be moved up or down by loosening the screws. When you are satisfied with the location of your sensor, you can add the lower screw for added security.



7. Install the cable clamps by drilling $\frac{1}{8}$ " holes and using the clamps and screws provided. Be sure to run the cable to the side of the Sensor, not in the center, to prevent damage to the cable. After running the Sensor for several hours, the parts will be fully seated and it may be necessary to retighten the pivot screw.



NOTE: If you have taken advantage of Humminbird's Sensor exchange program, your new Sensor will come with mounting instructions.

B. INSIDE HULL MOUNTING PROCEDURE

Warning: Humminbird cannot guarantee maximum depth performance when the Sensor is mounted inside the hull (transmitting and receiving through the hull of the boat) because there will be some loss in signal strength. The amount of the loss will be determined by the hull construction, thickness of the hull and the location of the Sensor.

NOTE: An Epoxy Kit (stock #EPK) is available from Humminbird. This Epoxy Kit has been formulated for inside hull Sensor installation.

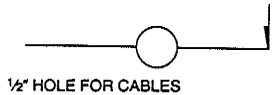
1. Select as flat an area as possible near the aft and center of boat where the hull is thin and not double. If the bottom has a runner down the center of the boat, select an area to one side of the runner, but as close to the runner as possible.
2. Clean the inside of the boat with lacquer thinner in the area Sensor is to be mounted. Outside of boat in this area should also be cleaned. (Not with lacquer thinner).
3. Put approximately one inch of water in the bottom of the boat.
4. Put Sensor in the water. The bottom of the Sensor should be in a flat area and should be in good contact with the bottom of the boat.
5. Operate the TCR with the boat operating at high speed. The Sensor may have to be moved in order to find an area where satisfactory operation is observed.
6. When an area is found that produces satisfactory operation, mark the location of the Sensor.
7. Remove the water and Sensor and clean the marked area and the bottom of the Sensor thoroughly.
8. Using the Humminbird Epoxy Kit or equivalent, mix an ample amount of epoxy without causing it to bubble and pour it in the area the Sensor is to be mounted. The puddle should be larger than the bottom of the Sensor.
9. Coat the bottom of the Sensor with epoxy, then put in the center of the puddle and push down on Sensor while moving it around in a circular motion. This forces out any air bubbles that may be trapped between the bottom of the Sensor and the hull of the boat.
10. Let epoxy cure—then the Sensor is ready to operate. No water is now required in the bottom of the boat and gas and oil that is spilled inside the boat will not degrade performance as it will if the Sensor is placed only in water.

Caution: Do not use silicone seal or any soft adhesive to bond the Sensor to the hull. This will reduce the sensitivity of the unit.

CAUTIONS

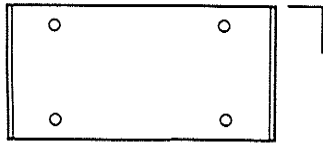
1. Occasionally the "eye" of your Sensor may become dirty from storage or from contact with oils present in boats or marina environments. (Oil will cause the "eye" to lose the intimate contact with the water which is necessary for efficient operation.) The "eye" may be cleaned with liquid detergent.
2. Improper installation of the Sensor can alter the efficiency and accuracy of the entire system.
3. If your boat or Sensor is out of the water for a period of time, it may take a short period of time for the Sensor to become thoroughly "wetted" when returned to the water. Also, re-entry may cause turbulence which will create air bubbles on the "eye" of the Sensor. The bubbles will disappear in a short time or can be removed by rubbing the Sensor "eye" with the fingers while the Sensor is in the water.

FIGURE 8



1/2" HOLE FOR CABLES

AT LEAST 4" BEHIND BRACKET



FRONT OF BRACKET

FIGURE 9

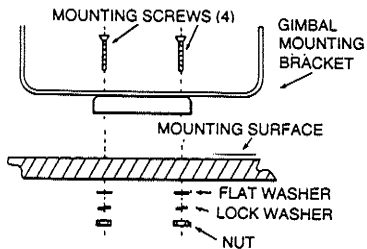
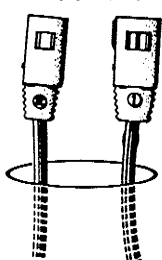


FIGURE 10



MOUNTING THE TCR COLOR-1

Parts involved:

TCR Color-1
Gimbal mounting bracket
Mounting knobs
Mounting hardware kit
Power cable
Sensor cable

Tools you'll need:

Phillips-head screwdriver
Drill
Ruler
Pencil or pen
12-volt DC power source
2-amp fuse

FOR BEST RESULTS . . .

Your TCR Color-1 should be mounted on a flat, sturdy surface, allowing plenty of room at the sides, top and back for the installation, and for removing the unit when needed. Also, be sure that the mounting location is not near any magnetic fields or heat sources—these conditions can affect the performance of your TCR.

1. Set the mounting bracket on the mounting surface.
2. Mark 1/4" holes for the mounting bolts.
3. At least 4" behind the bracket, mark a 1/2" hole to run the cables through.
4. Set the mounting bracket aside and drill the holes as marked.
5. Mount the bracket as shown in Figure 9, using the mounting hardware that is supplied with your TCR Color-1. Be sure that the slots at the top of the bracket point toward the rear.

NOTE: If your boat doesn't allow access underneath the mounting surface, you may substitute self-threading stainless steel screws in place of the nuts and bolts we supply.

6. Pull the Sensor cable up through the rear 1/2" hole, and push the power cable down through the hole, leaving the "connector" ends above the mounting surface. If you are also installing the optional Surface Temp Gauge and/or Trolling Speed Indicator, pull their cables up through the hole in the same way.

STOP: If your Sensor cable is not long enough, extension cables are available. See the "Options and Accessories" section in this manual.

7. Included with your TCR is a hole cover to "dress" the 1/2" hole and to hold the cables securely. Pull out enough cable to complete the installation, and install the hole cover.
8. To connect the power cable to the 12-volt DC power source, we recommend that you wire the TCR through your fuse panel; however, if your boat doesn't have a fuse panel, you can wire the power cable to the battery with an in-line 2-amp fuse. For safety, do not connect directly to the battery. Attach the black lead to the negative (-) terminal, and wire the red lead through the 2-amp fuse to the positive (+) terminal.

NOTE: Do not use any power cable other than the one provided with your TCR Color-1.

9. It's easy to connect the cables to the TCR Color-1. The power cable is identified by a "1" on the plug. The Sensor has a "2" on its plug. If you are installing the optional Trolling Speed Indicator, you'll find a "3" on its plug. The optional Surface Temp Gauge has a "4" on the plug.
10. Insert each plug into the cable carrier with their numbers oriented as shown in Figure 13.

Caution: Do not attempt to insert cables into carrier except as shown.

10. When each cable connector is firmly seated in the carrier, assemble the carrier and its cover, and attach to the back of the unit according to Figure 14.
11. Mount the TCR on the bracket as shown in Figure 15 by loosening the mounting knobs and slipping the unit into the bracket. Be sure to keep the rubber washers between the bracket and unit. Tighten the knobs to hold the TCR in viewing position.

NOTE: Use the sun shield included with your TCR Color-1. It will improve your ability to see the readings on the screen, and snaps easily into place.

FIGURE 11

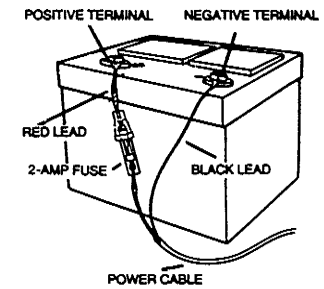
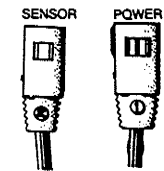


FIGURE 12



CARRIER ORIENTED WITH NUMBERS UP

FIGURE 13

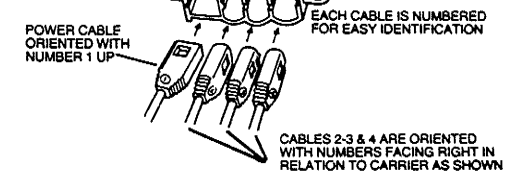
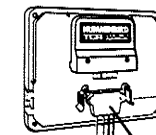
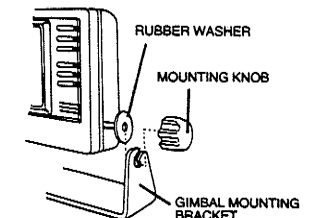


FIGURE 14



CARRIER SIMPLY PLUGS INTO UNIT

FIGURE 15



TESTING THE INSTALLATION

Once you've installed your TCR Color-1, Sensor and cables, it's time to test the installation. This testing should be done on the water, since that is the only way to check your Sensor's performance.

Test Your TCR

With your boat at idle, turn the unit on. The TCR will perform a "self test" on its electronics to make sure everything is operating properly, and then it will select the right depth range and sensitivity level for the conditions. Momentarily, you'll see the reading start to "march" across the screen from right to left.

Test Your Sensor Installation

Increase your boat speed to ensure that you get a continuous bottom reading as the boat moves. Your TCR Color-1 and its Sensor are designed to operate at up to 75 mph, so feel free to test them at very high speeds.

If the TCR Color-1 performs well at idle or slow speeds, but the display is not continuous at higher speeds, then the Sensor is not installed properly. Air bubbles or turbulence from the boat hull are passing across the face of the Sensor, blocking the transmitted signal. Following the instructions in "Mounting The Sensor," you can make simple adjustments that should take care of the problem. Do not install the lower screw into your sensor bracket until you are satisfied with the location of the sensor.

NOTE: Should problems occur during your tests, first consult the "Before You Call For Service" section in this manual for trouble-shooting tips from the Humminbird engineers. If you don't find the solution there, call our toll-free Customer Service Hotline listed on page 2.

BUILT-IN SIMULATOR

To help you learn to use your new unit, Humminbird has built a simulator into the TCR Color-1. The simulator will display a typical underwater scene, and will allow you to use the controls for practice.

There are two ways to activate the simulator. As with all TCRs you can, with the unit turned off, hold the power button for about 2 seconds, until a chirping sound begins. When you release the button, the built-in simulator will be on and ready for your practice session. You can also turn the simulator on by selecting the display speed screen and then pressing the on/off button. To disengage the simulator, press the on/off button again or simply turn the unit off and back on again.

READING THE TCR COLOR-1 SCREEN

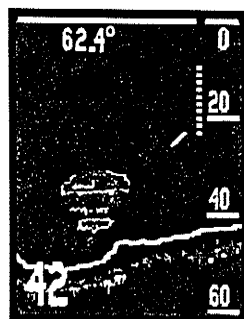
TFT Display:

Unlike color video depth sounders that use large picture tubes, the TCR Color-1 features a liquid crystal TFT display—the leading edge in LCD technology. The TFT screen has over 114,000 pixels, so small that they can hardly be seen by the naked eye. These individual red, green and blue pixels are each controlled by a Thin Film Transistor (TFT). Signals to the more than 114,000 transistors create the unit's high-resolution, 8-color picture.

Colors:

If you've never used an 8-color depth sounder before, you'll be amazed at all the information and detail it provides. The 8 colors stand for signal strengths from weakest to strongest. You can clearly distinguish small fish, large fish, structure and bottom by learning the colors and the signal strengths they represent.

COLOR		SIGNAL
Blue Mode	Black Mode	
Deep blue	Black	None (water)
Light blue	Deep blue	Weakest
Green	Light blue	
Purple	Green	
Yellow	Purple	
Red	Yellow	Stronger (large fish)
Black	Red	Strongest (bottom or heavy structure)



White, the 8th color, is reserved for displaying the depth scales, and for outlining the bottom reading. If you have installed the optional Surface Temp Gauge and/or Trolling Speed Indicator, you'll see the temperature and speed readings displayed in white at the top of the screen.

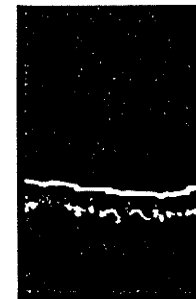
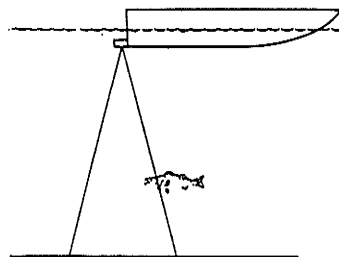
Color Bar:

Press the color bar button to display the color bar on the screen. It's a handy reminder of the signal strength that each color represents. The color bar will appear on the left side of the display, and will remain there until you press the color bar button again to turn it off.

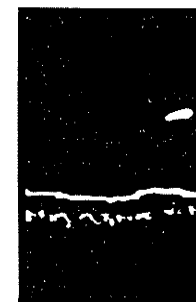
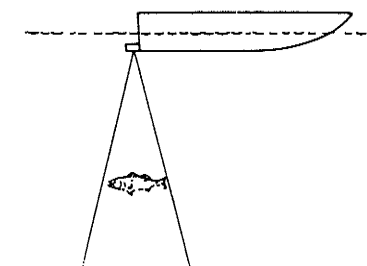


Readings:

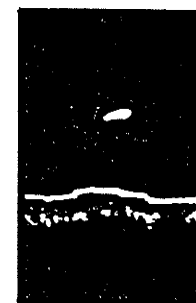
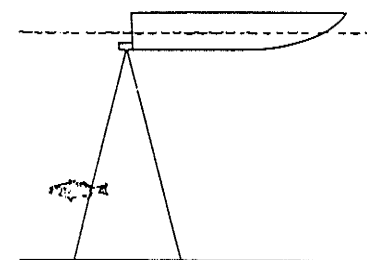
Most readings will have a "core" color surrounded by other colors. This is because the signal strength changes as you move over an object.



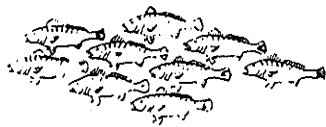
As a fish begins to enter the cone angle, its signal is weak and is displayed in a "weak" color such as light blue or green.



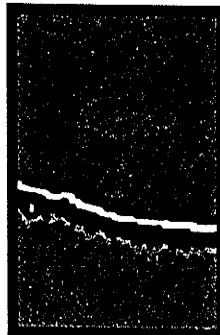
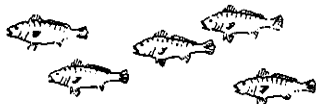
As you move directly over the fish, putting it in the center of the cone, the signal gets stronger and changes to "stronger" colors until it creates a core. The core color is the strongest signal return from the fish.



As you move past the fish, its signal gets weaker and decreases back to the weakest colors until the fish leaves the cone angle.



Schools of fish are displayed as "clouds" of color. You can tell how close together the fish are by the color of the cloud.



Dense schools will show you a stronger color, while schools that are more spread out will have a weaker signal.

Also, keep in mind that some fish will give you a stronger signal than normal because of their air bladder size and their bone structure.

Of course, the best way to learn to read your TCR is to use it—especially in familiar locations. If you know what's underwater and can see it displayed on the screen, then you're on your way to being an experienced TCR user.

OPERATING THE TCR COLOR-1

Your new TCR Color-1 offers unique automatic features, as well as many adjustable ones. If you're learning to operate the TCR Color-1 with its simulator, follow the directions listed at "Built-In Simulator" on page 17, and then come back to this page. If you're learning to use your TCR Color-1 using actual, on-the-water readings, proceed with the following instructions.

Power On/Off: (power button)

Pressing this button once turns the TCR Color-1 on. Pressing it once again turns it off. When the unit is turned off, holding this button down for about 2 seconds activates the built-in simulator.



Stop: (stop button)

By pressing this button once, you can stop or "freeze" the display. Pressing the button once again re-starts the display at its previous speed setting.



Color Bar: (color bar button)

You can call up the color bar on the screen by pressing this button once. The color bar will appear on the far left side of the screen, and will remain there until you press the button again to turn it off.



Select System: (4 buttons)

The TCR Color-1 Select System commands an amazing number of functions with only four buttons: Select, Up and Down arrows, and On/Off.

When you press the Select button, each function appears in a block on the screen with easy-to-understand instructions for using the function. You use the Up and Down arrows and the On/Off button to adjust the functions. Then, the instructions disappear, returning the display to its full screen reading.

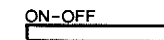
Select System functions are "active"; that is, the last function displayed on the screen can be adjusted without pressing the Select button again. This is valuable in 2 ways.

Example 1: Re-adjusting a function.

If bottom alarm was the last function used, you can adjust it again by pressing one of the arrow buttons or the On/Off button.

Example 2: Often-used function.

If you think you'll be using zoom often, you can go to the zoom function, let the instructions disappear, and then activate the zoom when you need it simply by pressing On/Off.



Also, certain settings are stored in memory and are retained when the power is turned off and back on again—sensitivity, bottom alarm depth, bottom alarm on/off, screen color and depth units.

The following describes the functions and how to use them, in order of appearance after you turn the unit on.

1. Sensitivity

Automatic setting: on, "O" or previous setting
As conditions change, the computer will automatically increase or decrease the sensitivity setting. You can manually increase or decrease the automatic setting from a range of "+5" to "-5". This level will maintain itself automatically for as long as you have the unit on, as a result of the TCR's Sensitivity Bias feature. For example, if you set the sensitivity at "+2," the sensitivity will remain 2 settings higher than the normal automatic settings until you change it again.



2. Depth Range

Automatic setting: on
The TCR Color-1 automatically finds the bottom, and then sets and displays the ideal depth range when you turn the unit on. If you choose to leave the auto range change on, the depth ranges will change automatically. Or, you can turn the auto change off, allowing you to change the depth range manually. With auto change off you can also select an additional depth range of 360 feet. Depending on conditions, and installation, this additional depth range may exceed the TCR Color-1's capabilities.



3. Bottom Alarm

Automatic setting: off
Use the On/Off button to activate the alarm, and the arrow keys to adjust the depth at which the alarm will sound. You'll hear a continuous chirping sound when the bottom is within the area that you've defined with the alarm cursor. This is a great feature to use to alert you to shallow water, or to maintain your position over structure.

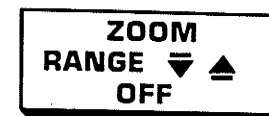


4. Fish Alarm

Automatic setting: off
The fish alarm is easily activated by pressing the On/Off button. This 6-level alarm can be set to sound for all fish, or to ignore weaker signals and alarm only for stronger signals, such as those from larger fish. This is based on the order of colors on the color bar. For example, you can set the alarm for signals that are purple or stronger, ignoring the weaker light blue and green signals. The arrow keys are used to set the fish alarm levels.



You can also adjust the volume of the fish alarm by using the On/Off button. When you turn the alarm on, you'll see "ON LOUD" displayed in the instructions. Pressing On/Off once again gives you the "ON SOFT" setting. Pressing the button a third time turns the fish alarm off.



5. Zoom

Automatic setting: off
When zoom is activated by pressing On/Off, it creates a "window" of expanded, up-close information. The cursor at the right of the screen can be moved up or down with the arrow buttons. When the zoom is activated, the "window" marked by the cursor is expanded to the full size of the display. The exact depths of the upper and lower limits of the zoom window are displayed as depth scales, while the digital read-out in the bottom left corner reminds you of the water's depth.

The size of the zoom window changes as the depth range changes. The window displays 7½ feet of up-close readings in the 15' and 30' ranges, 15 feet in the 60' and 120' ranges, 30 feet in the 180 range and 60 feet in the 240 range and 360 range.

Keep in mind that, using your arrow buttons, you can move the zoom window while the zoom is activated, without having to press Select again.



6. Bottom-Lock

Automatic setting: off
You can easily turn on the bottom-lock with the On/Off button and see up-close zoom readings in reference to the bottom. The size of the Bottom Lock window is selectable using the up and down arrow keys. Window sizes of 15, 30 and 60 feet are selectable.

The zoom window will automatically move up or down to stay on the bottom. This is an ideal feature for finding structure or locating fish near the bottom.



7. Display Speed

Automatic setting: highest speed
The speed at which the TCR display moves depends on the display speed setting, and it is easily changed by pressing the Up arrow for a faster setting and the Down arrow for a slower setting. Generally speaking, the higher speed settings allow faster updates, while slower speeds provide more information. With this screen you can also activate the built-in simulator. Using the on/off button you can turn the simulator on or off at any point of operation.

BRIGHTNESS
BLUE 2 ▼ ▲
UNITS: FEET

8. Brightness

Automatic setting: brightness, 7 or greater; color, blue mode or previous setting
 The brightness and the colors displayed on the TCR Color-1 screen can be changed to suit your personal preference or the current sunlight level. You can choose a deep blue background with a black bottom reading, or a black background with a red bottom reading. Then, you can adjust the brightness with 9 "Blue" settings and 9 "Black" settings.

With this screen, you can also change the way the depth is measured and displayed. The TCR Color-1 is automatically set for depth readings in feet. But, using the On/Off button, you can choose to see depth displayed in feet, meters or fathoms.

Depending on the measurements you have chosen, your optional temperature and speed measurements will also change as shown in the chart below.

Depth	Temp	Speed
Feet	Fahrenheit	Miles per hour
Meters	Celcius	Knots
Fathoms	Fahrenheit	Knots

BEFORE YOU CALL FOR SERVICE . . .
Troubleshooting Tips From The Humminbird Engineers

Problems	Solutions
Nothing happens when you press the "power" button.	Check your power cable connection and fuse. Be sure the power cable is properly connected to the battery—red lead to the positive (+) terminal, black lead to the negative (-) terminal.
No bottom reading on the display when you press the "power" button.	Check the Sensor cable connection on the back of the unit. Make sure the Sensor is not sitting above the water.
Gaps in bottom reading in very shallow water. Depth scale automatically changes to a deeper range in very shallow water.	This is normal in water depths of 1 foot or less, because the automatic range control can't lock onto the bottom in water this shallow.
The unit comes on before you press the "power" button. The unit will not turn off when you press the "power" button.	Check your Sensor cable—if the outer insulating jacket has been cut and the cable is touching metal, you will need to repair it with electrical tape.
Gaps in bottom reading at high speeds.	Your Sensor is probably mounted too high, allowing air and bubbles under the face. Adjust the position of the Sensor following the instructions in the "Mounting The Sensor" section of this manual.
The display shows excessive noise at high speeds and high sensitivity.	The Sensor is mounted too close to the propeller and is being affected by air bubbles from the prop. Move the Sensor away from the propeller to improve performance.
The bottom reading disappears during a hard turn.	This is normal because the Sensor comes out of the water in a hard turn, and will correct itself automatically.
The screen begins to fade out.	Check your battery to see that it's fully charged, since the TCR will not operate properly on less than 12 volts.
The digital depth read-out turns red.	This happens when the Sensor comes out of the water during a sharp turn, causing the TCR to temporarily lose the bottom. The read-out should become white again when you end the sharp turn.

SHOULD YOU NEED SERVICE

If, after reading the troubleshooting guide, you determine your Humminbird needs factory service, please attach the following information to the unit and send to the address below.

Name (Please Print)

Street Address

City State Zip

Unit Purchase Date

Home Telephone Work Telephone

Please describe briefly the problem:

Units will be repaired and returned ~~to you~~
All units out of warranty will be returned C.O.D.
If you are including a check, please attach it to the unit.

Techsonic Industries, Inc.
Service Department
Three Humminbird Lane
Eufaula, AL 36027

