

DF2120PX Operator's Manual



Thank you for purchasing the HawkEye™ Portable Sonar System, and welcome to the innovations of NorCross Marine Products, Inc.

ENJOY YOUR FREEDOM...



Before You Venture Outdoors

Get to know the fishing regulations and habits of the fish that you are targeting by visiting your local tackle center, bait shop, library, or website. A little research can be a valuable lesson, that will allow you to utilize the fish finding features of the DF2120PX to make fishing more enjoyable for you, and your fishing buddies.

Installing the Battery

1. Open the battery cap by unscrewing the cap opposite the display, counter-clockwise
2. Install the 9 volt battery. Be certain to align the battery as per Figure 1.
3. Insert the battery into the depth sounder housing, terminal side down, and turn the cap clockwise until snug.

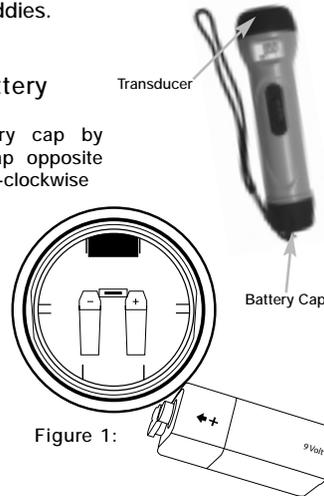


Figure 1:

Installing the Wrist/Safety Strap

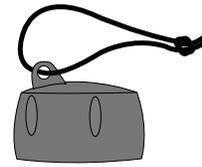


Figure 2:

Fasten the wrist/safety strap to the hook built into the battery cap. (Figure 2). Use the strap to fasten the DF2120PX to your wrist, or any object that will prevent accidental damage or loss during use. ALWAYS attach the DF2120 to your person while snorkeling or SCUBA diving as the unit will float to the surface if released.

Switching the Readings From English to Metric

1. Remove the battery as per the instructions in the "Installing the Battery" section of this manual.
2. While holding the DF2120PX as per Figure 3, use a small screwdriver, or other slender object, to reach into the battery compartment and move the switch to the left for Metric readings, or to the right for English readings.
3. Replace the battery as per the instructions in the "Installing the Battery" section of this manual.

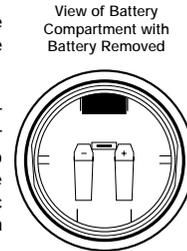


Figure 3:

USING THE DF2120PX

Obtaining Depth Readings (Depth Reading Mode)

1. Place the transducer side of the DF2120PX into the water, or as per the instructions for Ice Fishing or Shoot-Thru, and move the activation switch away from the display and release.
2. The current water depth will be indicated on the display (Figure 4), and will continue to update 4 times per second.
3. There is no need to turn OFF the DF2120PX. Once removed from the water, or a reading is not obtained, the display will flash the last depth reading obtained for 5 seconds, and then turn off.



Figure 4:

Obtaining Fish Readings

1. If a fish is detected while in the Depth Reading Mode, a fish icon will illuminate on the display (Figure 5).
2. A blinking fish icon may represent the presence of a school of fish moving through the sonar beam.



Figure 5:

Obtaining Temperature Readings

To activate the temperature sensor, move the activation switch away from the display and release TWO times. The Temperature Sensor is located on the transducer side of the DF2120PX Housing (Figure 6).

1. To obtain air temperature readings, hold the DF2120 in your hand and activate the temperature sensor as per the above instructions. The current air temperature will be displayed on the LCD for 5 seconds (Figure 6).
2. To obtain water temperature readings, place the temperature probe into the water and activate the temperature sensor. The current water temperature will be displayed for 5 seconds.
3. The DF2120PX will also read the temperature of any object from 14°F (-10° C) to 122°F (50° C) by simply pressing the temperature sensor against the object and activating the sensor as per the instructions above.

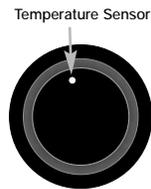


Figure 6:



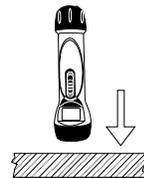
Figure 7:

WARNING: Never press the temperature sensor or the DF2120PX housing against any object which is thought to be hotter than 122°F (50°C) as damage to the DF2120PX may occur.

Using the DF2120PX for Ice Fishing

1. Clear away snow to expose the ice surface, making sure the surface is smooth.
2. Place a small amount of liquid water on the ice and set the transducer side of the depth sounder on the water allowing the unit to freeze to the ice (Figure 7)
3. If there are any air pockets between the unit and ice, or the water below the ice, the depth sounder will not work properly and will require you to try another spot, or cut a hole in the ice to use. You can also use the instructions in sections (b) or (c) of the "To Shoot-Thru the Hull of a Boat" section on the next page. Be certain to not allow the water to freeze around the unit if you use the "plastic bag" (c) method.
4. To remove the DF2120PX from the frozen ice:
 - (a) gently tap the unit at the base with your hand.
 - (b) If it will not come loose, spray a small amount of water on the ice surface around the base and repeat steps (a) and (b) until the transducer is easily removed.

Figure 7:



WARNING: Never use a blunt object to strike the unit as this may cause damage to the sensitive internal electronics.

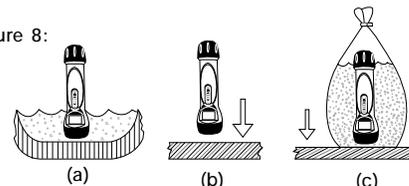
Using the DF2120PX Thru a Boat Hull?

The DF2120PX's advanced sonar capabilities allows it to "shoot thru" the bottom of a boat or canoe. The hull must be made out of solid fiberglass, or a maximum of 1/8" aluminum, and be in direct contact with the water, with no air pockets. The unit will not work thru wood, plastic, or any composite material.

To "Shoot-Thru" the hull of a boat, do one of the following (Figure 8)

- a) place the transducer in .5 inches of water against the hull bottom.
- b) coat the face of the transducer with petroleum jelly and press it against the hull bottom with a twisting motion.
- c) place the transducer in a plastic bag that is full of water and place against the hull bottom.
- d) refer to our website for more advanced instructions.

Figure 8:



Scanning for Depth Changes or Fish (SideScan™)

The DF2120PX has the ability to be used as a sideways scanning sonar depth sounder/fish finder to search for drop-offs and hiding fish under docks, weeds, or vegetation.

1. Activate the unit as per the instructions in the "Using the DF2120PX" Section.
2. Place the unit perpendicular to the water to obtain a correct depth reading.
3. Once a correct reading is obtained, move the unit around in a scanning motion (similar to using a flashlight). Keep in mind that the sonar signals must be directed at a solid surface that is within 120 Ft (36.5 M) to function properly. You must be certain to aim the unit at an object, or the bottom within this range.



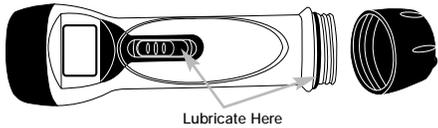
Using the DF2120PX for Diving

The DF2120PX is waterproof to 50 Ft (15.2 M), allowing you to use it as a range finder or temperature gauge for snorkeling or diving. Keep in mind that the sonar signals must be directed at a solid surface that is within 120ft (36.5 M) to function properly. You must be certain to aim the unit at an object, or the bottom within this range. ALWAYS be certain to attach the Wrist/Safety Strap to your person, as the DF2120PX will float to the surface if released.



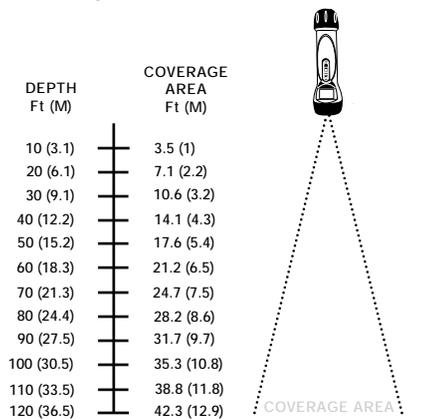
Care of Your DF2120PX

1. Clean the unit with fresh water and dry-off before storing.
2. Remove the battery from the unit to prevent battery leakage and corrosion.
3. Store the depth sounder in a cool, dry place. Never leave it in temperatures over 120 degrees Fahrenheit as the extreme temperatures can damage the electronic components. Regular care must be taken to ensure that the Activation switch is properly maintained as build-up of salt, sand, dirt, etc. will make the switch inoperable. Regularly coat the switch with a non-water based lubricant (WD-40®), Petroleum Jelly (Vaseline®), etc to protect it from corrosion or moisture that would freeze during cold weather operation. Also be certain to regularly lubricate the battery door seal with Petroleum Jelly to ensure the integrity of the seal.



It is suggested that you keep the unit in temperatures above 14 degrees Fahrenheit (-10 degrees Celsius) during operation. When using the DF2120PX in temperatures below freezing, it is important that you lubricate the switch as per the above instructions.

4. I'm Not Getting A Reading While Trying to "Shoot-Thru" My Boat Hull or Ice?
Shooting-Thru the hull of a boat/canoe or ice can be a difficult, as hidden air pockets will prevent you from obtaining a reading. Make certain that the hull or ice is solid from the surface to the water with no air bubbles and/or gaps. Shooting thru composite hulls (plastic) or cloudy ice is not possible as the tiny air bubbles are usually present in these situations.
5. How Much Underwater Area Does the DF2120PX Cover (Cone Coverage)



I'm Having a Problem, What Do I Do?

Do not attempt to repair the unit yourself. There are no user serviceable parts inside, and opening the unit (other than the battery cap) will void the warranty. Before contacting NorCross (888-Norcross) to return the unit for service, please visit our website at www.norcrossmarine.com for troubleshooting information.

1. Nothing Happens When I Turn the Power On.
Make sure that you have installed a good battery as per the instructions in the "Installing the Battery" in this manual. You may also need to test the battery in another device to insure it is a good battery. If in doubt, replace the battery with a battery from a newly opened package.

Below freezing temperatures are extremely harsh on the electronic components within the DF2120PX. It is important that you keep the unit in temperatures above 14 degrees Fahrenheit (-10 degrees Celsius) during operation. This may require you to keep the DF2120X in a jacket pocket or other warm place in-between uses.
2. The Depth Reading Is "---"
Make sure that you are operating the unit in depths between 2.5 and 120 feet (1 to 36 Meters). Be aware that the depth is measured in the direction that the unit is pointed. Holding the unit perpendicular to the water surface will ensure accurate readings.

If your trying to shoot trough Ice or a Boat Hull, make sure that you are following the instructions precisely. The most common cause for incomplete readings using these methods is air between the transducer and the water surface. If in doubt, try operating the depth sounder directly in the water as per the instructions in the "Obtaining Depth Readings" section of this manual (make sure the depth is between 2.5' and 120' (1 to 36 Meters)

3. I See Fish Under the Unit, but Nothing Appears on the Display
As with the depth reading, the DF2120PX will not detect any objects that are closer than 2.5 feet from the unit. If you're operating in water that is less than 3 feet deep, it is recommended to discontinue use of the depth sounder.
4. The Switch Does Not Move
Corrosion, Dirt and below freezing temperatures are extremely hard on the waterproof activation switch. If the switch freezes during cold weather operation, allow the unit to warm up to above freezing, and apply lubricant as directed.
5. The Depth Reading is Incorrect
Make sure the you are pointing the depth sounder perpendicular to the water when trying to obtain depth readings. Extremely heavy vegetation may confuse the sonar of the DF2120PX causing it to misinterpret the depth. If you are certain that the readings are incorrect under these conditions, discontinue use.

While using the DF2120PX for ice fishing, be certain that there is not a double layer of ice which will cause the DF2120 to confuse the bottom for the second layer of ice. Under these circumstance, depth and fish readings will only represent the water conditions between the two layers of ice.

Frequently Asked Questions?

1. How Long Will the Batteries Last?
Total usage life of one set of batteries depends on the operation of the unit. The average overall life, based on normal use is between 25 and 30 hours of operation or 100 individual readings.
2. Is My DF2120PX Waterproof?
The unit is completely waterproof and can be taken to depths up to 50 Feet (15.2 Meters) while diving. Before submersing the unit in water always check to make sure that the battery cap is tight. Always remember to lubricate the switch as per the instructions within this manual.
3. If I Drop My DF2120PX will it Float?
Yes, the DF2120PX has positive buoyancy to float it to the surface if released. This means it will float to the surface if released while using it for snorkeling or SCUBA diving (the DF2120 is water tight to depths up to 50 Feet (15.2 Meters). A lanyard or anchor line is required to secure the DF2120PX to your person while using it for diving.

NORCROSS 2 YEAR LIMITED WARRANTY

To be eligible for warranty coverage your fish finder must have a copy of the Warranty Registration Card on file with NorCross Marine Products, Inc., so be sure to submit the included registration card within 10 days of purchase. You may also register on our website.

NorCross Marine Products, Inc. warrants, to the original purchaser, this product to be free from defects in materials and workmanship for Two (2) Years from the date of purchase. If the unit fails to perform as described in the product's written specifications, due to a defect in materials or workmanship, we will repair it free of charge to the customer for parts or labor. The customer, however, is responsible for any costs associated with returning the unit to NorCross. This warranty is void if damage or malfunction is due to abuse, misuse, accident, failure to reasonably maintain, improper installation or use, or unauthorized alteration or repairs. Norcross retains the exclusive right to repair or replace the unit at its sole discretion, and holds this right as the exclusive remedy available to the customer against NorCross for any defect, mal-

function, or non-conformity concerning the product, or for any loss or damage resulting from any other cause whatsoever. Norcross will respond to all warranty claims within a reasonable time after receipt of the unit from the original purchaser, with such response time not to exceed thirty days without written notification of delay to customer.

To obtain warranty service, securely pack the unit, and mail prepaid via insured post to: NorCross Marine Products, Inc., Warranty Department, 1629 Prime Court - Suite 800, Orlando, FL 32809. A copy of the original sales receipt is required as the proof of purchase for warranty repairs. A copy of the Warranty registration card must also be on file with NorCross Marine Products, Inc., so be sure to submit the included registration card within 10 days of purchase. Please be sure to include your name, address, email address, and a daytime phone number within the package.

1629 Prime Court, Suite 700
Orlando, FL 32809
PH: (407) 581-2614
Fax: (407) 422-0501
Toll Free: 888-NorCross
Email: customerservice@norcrossmarine.com



SPECIFICATIONS

Unit Dimensions	7"H x 2"W x 2"D
Display Type	Liquid Crystal
Display Window Size	15/16" x 5/8"
Backlighting	Green SoftGlow™
Power Requirement	One - 9 Volt Battery
Units of Measure	Feet and Meters
Depth Range Max.	120 feet (36 Meters)
Depth Range Min.	2.5 feet (1 Meter)
Waterproof Limit	50 Feet (15 Meters)
Transducer Frequency	200 kHz
Transducer Beam Angle	20 degrees
Operational Temperature Range	18° F to 120° F (-8 to 49 °C)

WARNING!!!!

This depth sounder should not be used as a navigational aid to prevent grounding, boat damage, or personal injury. Always operate the boat at slow speeds in unfamiliar water, or if you suspect shallow water or submerged objects, as water depth may change too quickly to allow time for you to react.

WARNING:
Disassembly of the electronic components within this unit may result in exposure to lead in the form of solder, which is known to the state of California to cause cancer, birth defects, and other reproductive harm.