



ATTENTION:

Damage do to neglect or accidental damage is not warrantable

IMPACT WARNING:

Impact to the front knobs will cause the knobs or front plate to fracture, resulting in leakage.

Such damage is not warrantable.

CABLE STRESS:

If you hip-mount the 1280X, leave slack in the cable so as not to pull cable taunt at end of sweep.

Damage to coil cable at housing connection **is not warrantable** if a result of repetitive, excessive stress.

2 - YEAR LIMITED WARRANTY

Register your warranty on-line for a chance to win a FREE DETECTOR.

For details, visit www.fisherlab.com

Proof of purchase is required to make a claim under this warranty.

NOTE TO CUSTOMERS OUTSIDE THE U.S.A.

This warranty may vary in other countries, check with your distributor for details.
Warranty does not cover shipping costs.

According to FCC part 15.21 Changes or Modifications made to this device not expressly approved by the party responsible for compliance could void the users authority to operate this equipment.

This device complies with FCC Part 15 Subpart B Section 15.109 Class B.

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1280-X Aquanaut

Automatic Metal Detector for Sea, Surf or Shore



Operating Manual

CONTENTS

About Your 1280-X	pg. 3
Assembly	pg. 4
Setting Up	pg. 5
Hipmounting.....	pg. 6
Control Panel	pg. 7
Discrimination Points	pg. 8
Searching	pg. 10
Pinpointing	pg. 12
Target Recovery	pg. 13
Recovery Tools.....	pg. 15
Operating Tips.....	pg. 16
Battery Replacement	pg. 18
Battery Recharging	pg. 20
Maintenance	pg. 22
Battery Door Gasket: Orientation	pg. 23
Searchcoils.....	pg. 24
Headphones	pg. 24
Where to Hunt in the U.S.....	pg. 25
Treasure Hunter's Code of Ethics	pg. 26
Specifications	pg. 27

SPECIFICATIONS

Length

Collapsed..... 33" 8" Coil 10.5" Coil

Weight

Complete (with headset)Lbs. 5.4 lbs.¹

Searchcoil 2.6 lbs.¹

Control Housing..... 2.3 lbs.¹

Frequency

VF-Search.....2.4 KHz, Quartz Crystal Controlled

Audio Target Response 400 Hz Unipolar²

Headset

Type Piezo Electric, Custom Designed

Interchangeable No

Visual Target Response..... Light Emitting Diode (LED)

Search Mode..... VF-Discrimination, Slow Motion³

Salt Water Operation..... Yes

Fresh Water Operation Yes

Land Operation..... Yes

Searchcoil

Type Concentric, Co-Planar

Diameter 8" or 10.5"

Shielding..... 100% E.S.I.⁴

Interchangeable No

Hipmounting Belt Clip for Detachable Control

Housing

Submersible..... To 250 Feet

Batteries..... (8) 1.5 Volt AA Penlight

Battery Life

Carbon Zinc 30-50 Hours¹

Alkaline 60-80 Hours¹

2-Year Limited Warranty

Notes:

1. Approximate.
2. Pulsegate Unipolar Audio Processing. Advanced Fisher circuitry which allows silent operation below "audio threshold tone" with no loss in sensitivity.
3. The 1280-X is a "motion" detector while in the search mode. The searchcoil must be moving at least slightly to detect a target.
4. Electro-Static-Insulated to eliminate certain types of false signals.

TREASURE HUNTER'S CODE OF ETHICS

LETS PRESERVE OUR TREASURED SPORT!

Laws governing the use of metal detectors are becoming more and more common. In many countries, the use of metal detectors is illegal or severely restricted. Don't let this happen in your area.

- Always check Federal, State, County and local laws before searching.
- Respect private property and do not enter private property without the owner's permission.
- Take care to refill all holes and leave no damage.
- Remove and dispose of any and all trash and litter found.
- Appreciate and protect our inheritance of natural resources, wildlife and private property.
- Act as an ambassador for the hobby, use thoughtfulness, consideration and courtesy at all times.
- Never destroy historical or archaeological treasures.
- All treasure hunters may be judged by the example you set; always conduct yourself with courtesy and consideration of others.

ABOUT YOUR DETECTOR

Fisher Research Laboratory has been producing rugged, high quality, high performance metal detectors since 1931, longer than any other company in the world. Your 1280-X Aquanaut is a product of that proud heritage. Designed for deep sea treasure hunting, the 1280-X will also do the job in fresh water or on land.

The 1280-X is easy to use. No fine tuning, no threshold tone and no complicated "ground-adjustment". Just turn it on, set the volume, sensitivity and trash discrimination controls, and you probably won't have to touch the knobs again. The 1280-X automatically tunes itself to changing ground conditions and salt water, rejects most small pieces of junk and detects valuable targets all at the same time.

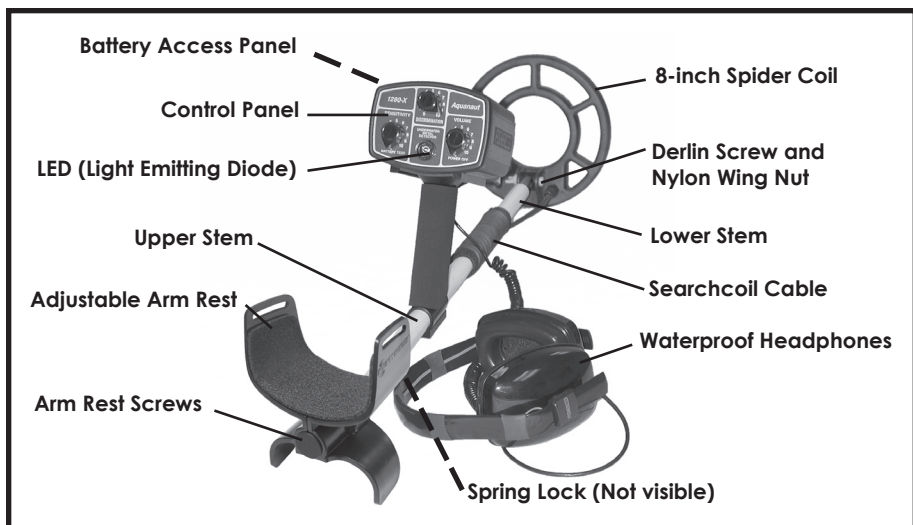
The 1280-X is rugged. The searchcoil is light-weight glass-bead epoxy filled. The shaft is fiberglass reinforced ABS. The control housing is injection molded ABS. The state-of-the-art Piezo Electric headset was designed especially for the 1280-X. And the entire unit is submersible to 250 feet.

The 1280-X is a "motion" detector, meaning the searchcoil must be in motion to detect a target. However, the motion required is slight and unlike earlier "motion" detectors, you'll be able to almost completely stop the coil for accurate pinpointing.

Your 1280-X is a precision metal detector designed and manufactured by the oldest and proudest name in the business. Take good care of it, read this instruction manual carefully and you're in for some exciting treasure hunting. If you have any questions, suggestions or make any big finds, drop us a line. We want to hear from you. In the meantime...

Happy Hunting!
Fisher Research Laboratory

ASSEMBLY



Please save all packing materials for later shipping. Most important, notice the styrofoam face plate cover. Impact to the knobs will break the shafts and result in leakage. Repack with styrofoam cover.

1. Remove the headphone, handle and searchcoil assemblies from the shipping carton. Be careful not to damage the foam rubber inserts or put any strain on the cable connections.
2. Adjust the stem to the approximate length you will be using, extended for stand-up use or, as short as possible for diving. To extend the lower stem, push in the spring lock, pull out the lower stem and let the spring lock snap into another hole.
3. If you will be using the 1280-X on the handle, and not body mounted, wind the searchcoil cable around the handle assembly as shown in the diagram above. Secure the cable with the two Velcro straps included with your 1280-X. Make sure there is some slack at the control housing end and enough slack at the other end to attach the searchcoil.
4. Remove the Derlin bolt and nylon wing nut from the searchcoil. Line up the hole in the stem between the two holes in the searchcoil "ears". Attach the coil to the stem with the bolt and wing nut and finger tighten.

Where To Use Your Metal Detector In The U.S.

National Forest and Federal Lands—Metal detecting is allowed only by special permit acquired from the federal government. Each area has a district office.

Corps of Engineers, Lakes, Shorelines and Lands—Permission has been granted only on predisturbed sites, such as beaches and attached swimming areas. New Corps lakes and lands must be okayed by the main office of the Army Corps of Engineers. Each area has a district office.

State Parks and Lands—Some state parks are open to metal detecting, but some are not. Always check with the park ranger before attempting to use your detector.

Bureau of Land Management (BLM) Lands—Some areas are open for metal detecting, and some are not. Always check with the district office.

City or County Park Lands—Most are open to metal detecting unless notice is given by a sign or city ordinance. When in doubt, always check with the city's Parks and Recreation Department.

Public School Grounds—Most are open to metal detecting unless notice is given by a sign, city ordinance, law enforcement official, or school employee. You should always check with the school office first.

Privately Owned Lands (Private Property)—Permission required. And it is always best to have the permission in writing.

Historically Marked Lands or Sites—Metal detecting is not allowed. Don't even think about it.

SEARCHCOILS

The 1280-X is available with either the standard 8 inch "Spider" coil or the 10.5 inch "Spider" coil. As a general rule, the 8 inch coil is preferred for tight spots, fast moving surf and high density trash areas. For normal conditions however, the 10.5 inch coil will cover a little more ground with each sweep and will give slightly more depth 5 to 20 percent in air, less in soil, depending on target size and mineralization. The most noticeable depth improvement will be on large targets in non-mineralized soil.

The coils are not interchangeable since each instrument is factory tuned to each coil. However you may have your 1280-X retrofitted by the factory, phone or write for details.

USING HEADPHONES

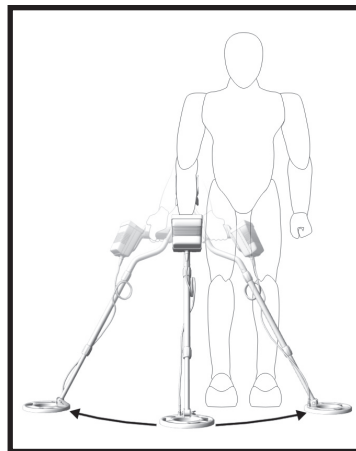
The 1280-X is supplied with permanently attached waterproof headphones. They cannot be removed by the user. If they are damaged or need service, you must return the entire detector assembly to the factory repair or replacement.

Headphones improves battery life, and prevents the sounds from annoying bystanders. It also allows you to hear subtle changes in the sound more clearly, particularly if searching in a noisy location. For safety reasons, do not use headphones near traffic or where other dangers are present. This device is to be used with interconnecting cables/headphone cables shorter than three meters.

SETTING UP

FOR LAND OR SHALLOW WATER (See Figure 2-A)

Put the headphones around your neck to keep them out of the way while making the following adjustments.



A. Extended stem for land or shallow water



B. Short stem for diving

Figure 2. Setting up. When the stem length is properly adjusted, the 1280-X is balanced for sweeping in a tight semicircle. Always overlap your swings by at least 50%

1. Adjust the length and coil angle so that the searchcoil rests flat on the ground about 6 inches in front of and slightly to the right of your right foot (to the left of your left foot for left handers.) Your arm should be straight and relaxed with the handle grip held firmly but comfortably. Remember, as you increase the shaft length, you also increase the strain on your wrist and arm. The 1280-X is balanced for comfortable searching in a tight semicircle around the front of the operator.
2. Leave enough slack in the coil cable to allow the coil to swivel as far as it can in either direction. The coil wing nut should be tight enough to prevent the coil from moving.
3. You should now be able to move into your "search" position by leaning slightly forward and raising the searchcoil approximately 1-inch above the ground. Your arm should still be straight and the coil should be parallel to the ground, about 12 inches in front of your foot. The coil angle may have to be slightly readjusted at this point.

FOR DIVING (see Figure 2-B)

The recommended setup for underwater use is the shortest possible stem length with the searchcoil adjusted parallel to the sea bed or lake bottom. Keep the headphones around

HIPMOUNTING

For almost effortless treasure hunting, the control housing is easily removed from the handle and attached to a belt clip. "Hipmounting" the 1280-X in this manner takes half the weight off the handle and allows the land or shallow water Treasure Hunter to search much longer without arm fatigue.

1. Grasp the handle grip firmly with one hand and the control housing with the other.
2. Slide the control housing off the mounting bracket by pulling it towards you.
3. Slide the belt clip into grooves on the bottom of the control housing. This is a snug fit and you'll have to bend the belt clip slightly. Make sure the narrow end of the clip goes into the grooves first and the short hooked side faces out.
4. Unwrap enough of the coil cable to allow for searching. **Leave enough cable slack to avoid yanking the cable at the connections to case & cable.**
5. Slip the control housing onto your belt, left side for right handers, right side for left-handers.

CAUTION: Hipmounting is not recommended for underwater use. The searchcoil cable may become entangled with a submerged object, making it difficult for the diver to resurface quickly in case of emergency.

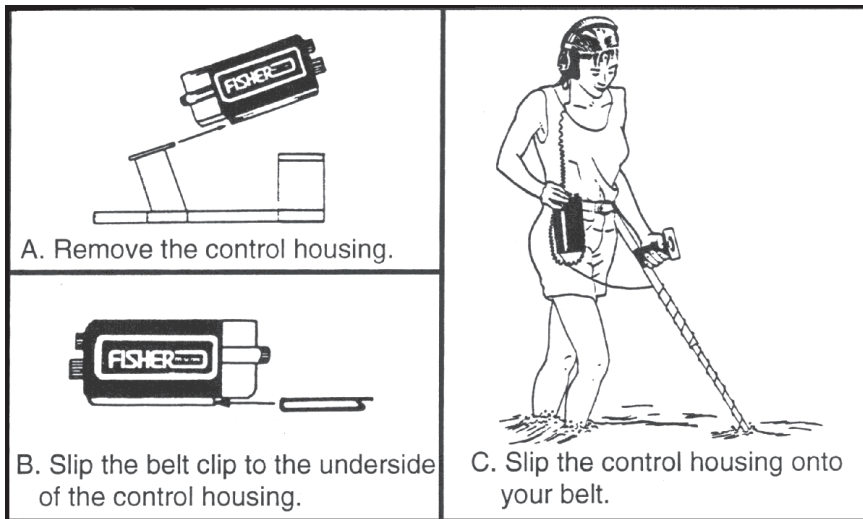


Figure 3. You can hipmount your 1280-X by sliding the control housing from the handle and attaching it to your belt. This reduces the weight of the stem, creating nearly effortless hunting.

BATTERY DOOR GASKET: ORIENTATION

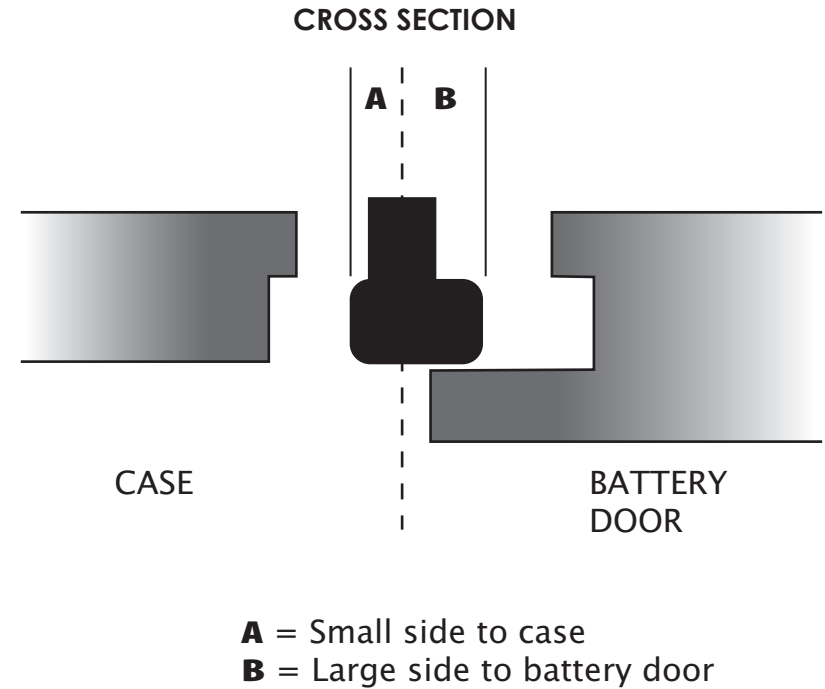


Figure 9. Battery door gasket installation

The rubber gasket, which fits into the battery door, must be installed **with the larger protrusion (B), toward the battery door.**

If you remove the gasket for cleaning, re-install correctly. Improper installation will result in leakage.

MAINTENANCE

CLEANING

Hose down your 1280-X with clean fresh water whenever you've had it on the beach or in the water. Pay particular attention to the following areas:

1. Stem adapter. Sand or dirt between the coil "ears" and stem adapter will literally grind away the ears and adapter.
2. Headphone. The ear pads may be removed, rinsed and squeezed out to remove any seawater salt build up. Rinse out the cups to keep the vent holes clear. **NOTE:** These vent holes *MUST* be kept clear when diving to equalize ear pressure.
3. Between the upper and lower stems. Sand, silt or fine dirt will cause the lower stem to freeze up.
4. Control Panel. Rinse the area under the three knobs thoroughly.
5. Battery Cover. Always clean and dry the area around the battery cover seal before opening.

BATTERY COMPARTMENT

1. Remove the battery cover and check for water after each use in water.
2. Keep the sealing surfaces of the battery cover and control housing clean and free of scratches and nicks. Remove and clean the neoprene gasket frequently. Lubricating the gasket is not recommended. Cleaning the gasket should only be done by using mild soap and warm water. Do not use petroleum jelly or silicone grease at any time.

STORAGE

Remove the batteries from the battery pack when storing your 1280-X for extended periods to prevent damage caused by battery leakage.

Never leave your 1280-X in an auto trunk or even in a closed passenger compartment during hot weather. Temperatures in excess of 120°F are possible which could damage electronic components and ruin the batteries.

CONTROL PANEL

1. **POWER/VOLUME CONTROL:** Turns the power on and off. Also controls the target response volume in the headphones. The volume control should be set no louder than comfortable when the searchcoil is passed over a large, close target.
2. **DISCRIMINATION CONTROL:** A full range trash rejection control. All types of metal are detected at the zero level and most small pieces of trash are eliminated at the maximum level of ten.
3. **LED:** The clear plastic window between the SENSITIVITY and VOLUME controls contains an LED (Light Emitting Diode) which flashes red when a target is detected or the batteries are being tested.
4. **BATTERY TEST/SENSITIVITY CONTROL:** Checks battery condition and controls the sensitivity to targets. A setting of 10 gives maximum sensitivity and is used for most treasure hunting conditions. To check the batteries, turn the VOLUME control to 10 and click the BATTERY TEST/SENSITIVITY control momentarily in and out of the "Battery Test" position. Fully charged batteries will give a loud tone in the earphones and a bright red light in the LED window. Weak batteries will give a faint tone and a dim light. It's time to replace the batteries when the light goes out.



Figure 4. Control Panel

DISCRIMINATION POINTS

By adjusting the DISCRIMINATION control you will be able to ignore (or "reject") small pieces of metallic trash and ground minerals while detecting valuable targets. The lowest setting at which an object is rejected is referred to as the object's "discrimination point". Discrimination points are determined by such factors as size, shape, depth, type of metal and ground mineralization.

1. Scatter some sample targets such as coins, pull tabs and small pieces of foil on the ground 1 to 2 feet apart.
2. Turn the SENSITIVITY control to 9.*
3. Turn the DISCRIMINATION control to zero.
4. Put the headset on and turn the POWER ON-OFF/ VOLUME control to about 6.
5. Hold the searchcoil about 2 inches above and parallel to the ground. Move it slowly over the samples and note the sharp loud response as you pass over each one. Keep in mind that the 1280-X is a motion detector and responds only when the searchcoil (or the target) is moving.
6. Increase the DISCRIMINATION control to a setting of 3 and again pass over the targets. Repeat this process at settings of 4,5,6 and so on to 10. You will note that as you increase the level of discrimination, the 1280-X will reject some targets and continue to respond to others. You have now determined the discrimination points for the rejected objects. For example, the small nail discrimination point may be at 4 and the pull tab discrimination point at 6.
7. Some objects such as shallow bottle caps, bent pull tabs or trash less than 2 inches from the coil may be difficult to reject. The 1280-X will instead respond with a strong broken signal which will usually disappear if the searchcoil is raised slightly. (The strong signal of a good target will just get weaker when the coil is raised.)
8. The 1280-X will remain silent when some objects are rejected, however other objects may "snap, crackle and pop" as they are rejected. This is a perfectly normal response indicating that the powerful discrimination circuitry is doing its job.

BATTERY RECHARGING

1. Install the nicad batteries.
2. Plug the charger into your auto cigarette lighter socket and the small cable into the 1280-X RECHARGE JACK.
3. The batteries will begin charging immediately.
4. An overnight charge with the engine off may give only 6-8 hours of battery life. A full charge may take as long as 48 hours (less with the engine running). For this reason, the Auto Recharger may best be used for OCCASIONAL "Booster" charges (see Recharging, paragraph 2, above).
5. Do not charge over 48 hours.

BATTERY RECHARGING

Rechargeable nicad batteries may take as many as 1,000 recharges, however they do have some limitations you should be aware of:

1. Nicads will last only about half as long as standard carbon-zinc batteries before recharging is required.
2. Nicads may develop a "memory" if you give them repeated "booster" charges. In other words, if you charge your batteries over and over again for only three hours at a time, the batteries will eventually only hold a three-hour charge.
3. Nicads may reverse polarity if discharged too far and will not recharge. Don't leave your detector on and don't continue to operate it more than an hour after the battery check tone goes silent.

The optional 1280-X recharge kit includes (1) battery pack, (8) nicad batteries, (1) 110v, 60 cycle home recharger and (1) 12v negative-ground auto cigarette lighter recharger.

110-VOLT RECHARGER

1. Remove and disconnect the nicad battery pack from the 1280-X Control Housing.
2. Connect the recharger battery lead to the battery pack.
3. Plug the recharger into a wall outlet and the batteries will begin to recharge immediately.
4. The small green light in the charger will stay on during the entire charge cycling indicating that all connections have been made and the charger is working.
5. A full charge will take approximately 24 hours. Do not charge over 48 hours

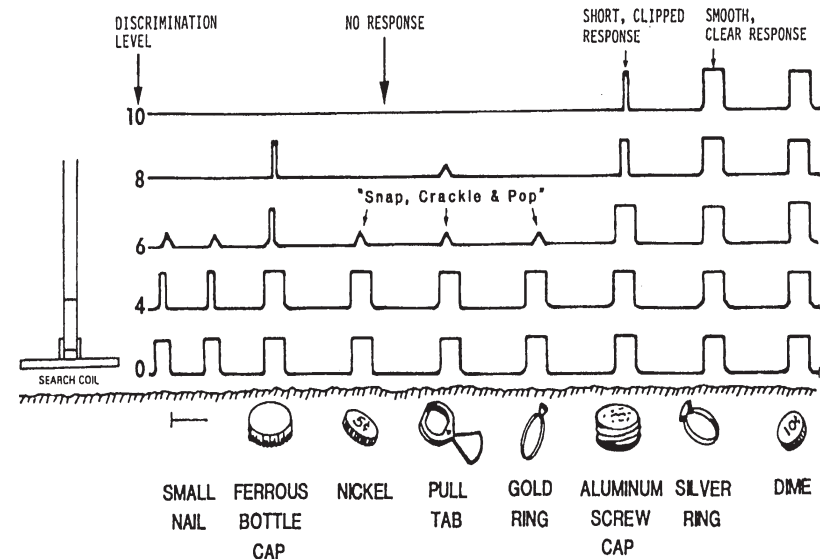
12-VOLT AUTO RECHARGER

(Use only with 12v negative ground system.)

DISCRIMINATION POINTS

9. Large pieces of trash such as beer cans or jar lids may sound like good targets no matter what you do. With a little practice, however, you will be able to tell the difference between a large target and a small coin sized object.
10. The diagram below shows some of the different target responses you may expect at different levels of discrimination. Note that as you increase the discrimination level, you progressively eliminate more targets including some good ones, such as nickels and gold rings.

* At the maximum sensitivity level of 10, you may hear some static or "circuit noise". As a general rule, hold the searchcoil in the air and set the sensitivity at 10. If the circuit noise is annoying, reduce the sensitivity to 8 or 9.



NOTE: The discrimination levels shown are typical values only and may vary from detector to detector.

Figure 5. Typical 1280-X audio responses over 1 inch deep targets with searchcoil sweeping 1 to 2 inches above ground.

SEARCHING

Good search techniques remain the same whether you're using your 1280-X in the desert or on the bottom of the ocean.

1. Decide how much discrimination you want to use.
 - a. In relatively non-trashy areas you may wish to search at zero discrimination. In this manner, your 1280-X is at its most sensitive and will detect all metal targets within its range. Once an object is detected, you can increase the discrimination level for further target identification.
 - b. In trashy areas, it is generally easier to search at a higher level of discrimination (at the pull tab discrimination point for example). This way you will detect mostly good targets and can lower the discrimination level for pinpointing (zero discrimination will produce the strongest signal on small or deep targets).
2. Search slowly and systematically, sweeping in a tight semi-circle.
3. Keep the coil parallel to, and as close to the ground as practical.
4. Overlap your sweeps at least 50%
5. Search in a methodical manner. Pay close attention to where you're going and where you've been.
6. Keep the searchcoil moving at a comfortable rate.

NOTE:

Other motion detectors may require a very rapid sweep for

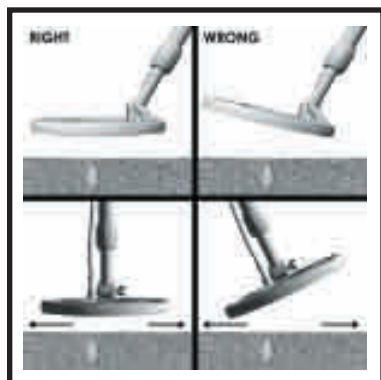


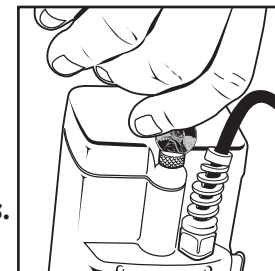
Figure 6. Keep the coil parallel and as close to the ground at all times

BATTERY REPLACEMENT

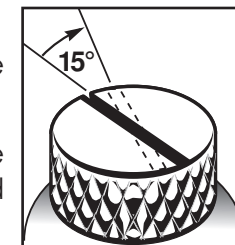
VERY IMPORTANT

Follow these instructions carefully to avoid getting water in the battery compartment.

1. Tuck in the wires. Do not pinch them in the seal when closing.
2. Tighten the knobs SECURELY.
 - a. Use a coin.
 - b. Tighten by hand FIRMLY. Use maximum MANUAL force.
 - c. Do Not use a tool.
 - d. Do Not use a screwdriver.
Torque Specification is 8 in-pounds.



3. If you have removed the gasket, see page 23 for installation instructions.
An improperly installed gasket = a water leak!
4. Submerge the detector in water for 1/2 hour.
 - a. Remove from water.
 - b. Dry off the detector
 - c. Remove the battery door
 - d. Verify that no water has entered.
This step is necessary to insure that you are applying enough force to the screws.
5. If you cannot tighten the screws securely by hand, then use a screwdriver.
 - a. Tighten the screw a maximum additional rotation of 15° beyond the hand-tightened position.



6. Lithium grease is installed between the contact surfaces of the thumb-screw and insert in the case.
 - a. Do not wipe off the grease.
 - b. With usage, the grease may wear off.
 - c. Without grease, the thumb-screw may seize up after tightening. If this happens, reapply a small amount of lithium grease between the contact surfaces.

BATTERY REPLACEMENT

Eight 1.5V size AA batteries (not included) are located in the rear section of the Control Housing. The batteries are sealed off from the electronics so that accidental water leakage into the battery compartment will not damage the circuitry.

1. Remove the battery cover by partially unscrewing the two knurled thumb screws with a coin. (The knurled knobs are “captive screws” and are not to be removed from the battery cover.)
2. Remove the battery pack from the Control Housing and disconnect the battery lead connector. Be very careful not to put any undue strain on the battery leads.
3. Remove the batteries from the battery packs. Note the polarity markings inside the pack and install fresh batteries.
4. Reconnect the battery lead.
5. Insert the battery pack into the Control Housing with the connector toward the top of the compartment.
6. Make sure the O-Ring and both sealing surfaces are clean before reinstalling the battery cover.

DO NOT MIX OLD AND NEW BATTERIES

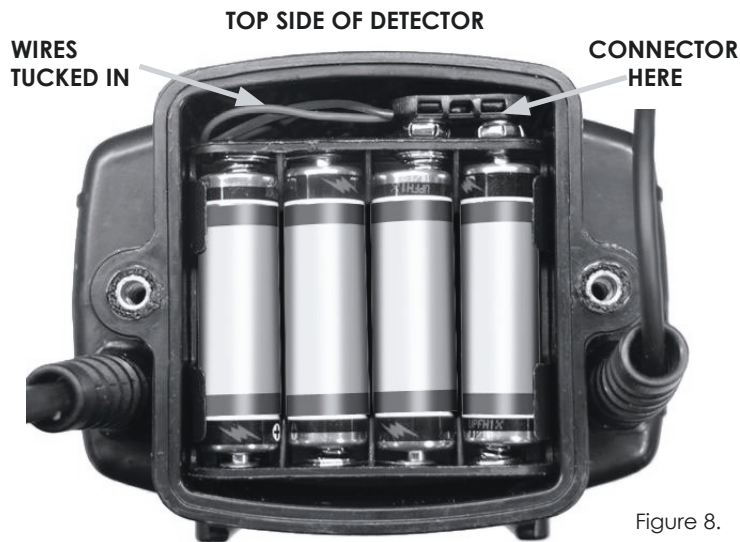


Figure 8.

SEARCHING

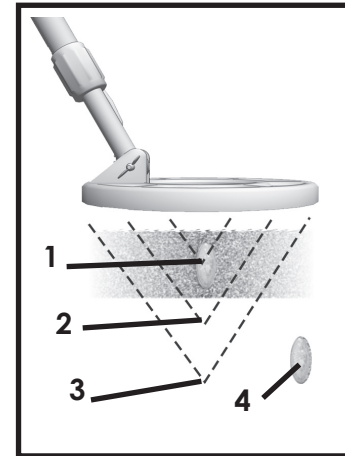


Figure 7. Searchcoil Detection Pattern

1. Minimum Depth
 - a. Very slow or fast sweep speed.
 - b. Discrimination set at “10.”
2. Good Depth
 - a. Moderate sweep speed.
 - b. Discrimination set at “5.”
3. Maximum Depth
 - a. Moderate sweep speed.
 - b. Discrimination set at “0.”
4. Missed Target
Many targets within the range of your 1280-X will not be detected unless you closely overlap your swings.

maximum sensitivity. If you try that with your 1280-X, you'll actually lose sensitivity.

PINPOINTING

Pinpointing takes practice. The more time you spend with your 1280-X, the faster and more accurate you'll become.

1. Once a buried target is indicated by the tell-tale "Beep" of the 1280-X, continue moving the searchcoil from side-to-side across the target in a narrower and narrower search pattern.
2. When you have narrowed your search pattern as much as you can and still hear the target, stop the searchcoil.
3. Now, move the coil slowly forward and then straight back towards you a couple of times. Stop the coil over the area where you get the loudest response.
4. Move the coil slowly left to right to left one more time, zeroing in on the loudest target response.
5. Stop the coil over the area of loudest response and rest it on the ground.
6. Your target should be directly below the center of the searchcoil.
7. For very strong signals, you may improve your pinpointing accuracy by adding one or more of the following steps.
 - a. Lift the coil until the signal is barely heard.
 - b. Reduce the sensitivity level.
 - c. Increase the discrimination level.
 - d. Rest the coil on the ground and move it back and forth very slowly.
8. For very weak signals try the following:
 - a. Move the coil closer to the ground.
 - b. Increase the sensitivity level.
 - c. Decrease the discrimination level.
 - d. Speed up the sweep rate slightly.

OPERATING TIPS

find anything under either one, you're probably over a nail or some other elongated ferrous object. But a coin on edge will give the same response and there's lots of coins on edge down there. In either case, the target will be between the beeps or, if you sweep at right angles to your original direction, you'll receive a single beep directly over the target.

10. You may hear some static at a sensitivity level of 10. This is normal, however if it is too loud or annoying, reduce the sensitivity level to about 8 or 9, just enough to eliminate most of the static.
11. When in doubt about the probable identity, dig it up.

OPERATING TIPS

1. Keep the searchcoil cable wound snugly around the stem when diving around coral or jagged rocks to keep it from snagging.
2. Divers should make sure the drain holes in the headset are unobstructed. Better yet, wait until you're on the bottom before putting them on and take them off before surfacing.
3. Divers should also keep the searchcoil at least two feet away from their body. Metal gear (weights, gauges, tanks, etc.) will be detected by the 1280-X if held too close.
4. Practice pinpointing. There's nothing sacred about the method described in this manual. Many 1280-X users have developed their own pinpointing methods.
5. False signals may be caused by rapidly moving surf, highly mineralized or trashy ground, large or irregular shaped trash and bumping or raising the searchcoil very fast. A false signal will generally sound suspicious to the experienced treasure hunter. It may be very faint, or very sharp and abrupt with static. Often when you go back over the same spot a false signal will simply disappear. You may reduce the number of false signals you get by increasing the discrimination level and/or reducing the sensitivity level.
6. If you're wading or hunting on land, hold your digging tool behind your back or above your waist. Your 1280-X is sensitive enough to sound off each time you sweep your coil beneath it.
7. There is some sensitivity loss at the higher levels of trash rejection. The greater the ground mineralization, the higher the sensitivity loss. For example, you may be able to detect a penny 6 inches deep at zero discrimination, but you may be able to detect it no deeper than 5-inches at the pull tab discrimination point.
8. Some objects such as shallow bottle caps, bent pull tabs or trash less than 2 inches from the coil may be difficult to reject. The 1280-X will instead respond with a strong broken signal which will usually disappear if the coil is speeded up or raised slightly.
9. If you hear two beeps very close together and can't

TARGET RECOVERY

Once you have pinpointed a target, your objective is to recover it quickly and neatly, leaving virtually no trace of your excavation. There are almost as many ways to do this as there are treasure hunters. Whatever works best for you is good enough as long as you don't break any laws or leave your search area looking like a World War II Battlefield.

Generally speaking, beachcombers and underwater treasure hunters do little if any damage to the environment while recovering targets. However, if you plan to use your 1280-X on land, your target recovery method can be very important. The "screwdriver" and "plugging" methods described here are two of the most important and successful.

WHICHEVER TOOL OR METHOD YOU CHOOSE, REMEMBER THAT RESPONSIBLE TREASURE HUNTERS TAKE PRIDE IN THEIR ABILITY TO LEAVE SOIL AND VEGETATION INTACT AND UNDamAGED.

SCREWDRIVER METHOD

The screwdriver method of recovery is an excellent choice in areas where knives and/or plugging are not allowed, or in dry lawns where plugging would almost certainly result in brown, dead spots. This method will take more practice, however the results will be worth the extra effort.

1. Once you have located your target, gently probe the area with a screwdriver or a dull probe until you have pinpointed its exact location.
2. Insert the screwdriver into the ground until it just touches your target.
3. Back the screwdriver out just a quarter of an inch or so.
4. Rotate the screwdriver until you have made a cone shaped hole approximately 2 to 3 inches in diameter at the top.
5. Carefully pry out your target from the bottom of the cone with the screwdriver.
6. Recheck the target area with your 1280-X.
7. Scrape any loose dirt back in the hole. Close it up by

inserting the screwdriver into the ground next to the hole and pulling in towards the center. Do this 4 to 5 times around the edge of the hole until it is no longer visible.

PLUGGING METHOD

This method of recovery is not allowed in many areas and should never be used in dry lawns or in very hot weather. A good rule of thumb is... "When in doubt, don't plug". It's a good way to recover deep targets however in moist soil where plugging is allowed and when done properly.

1. Once your target has been pinpointed, lay the 1280-X down (still turned on) so that the searchcoil is within easy reach but not close enough to detect your digging tool.
2. Cut a cone shaped plug about 3 inches in diameter and at least 3 inches deep.
NOTE: *If you're in a park or lawn maintained by a power mower, don't cut a cone - the mower may pull it back up. Instead cut a deep, square, un-pointed plug.*
3. Remove the plug, being careful not to scatter loose dirt.
4. Examine the plug and the hole for your target.
5. If the target is not readily visible, pass the plug across the front or back of the searchcoil. If the target is in the plug, you will get an immediate response from the 1280-X.
NOTE: This procedure will be successful only if:
 - a. You have removed any rings, watches, etc.
 - b. The DISCRIMINATION level is low enough to detect your target.
 - c. You move the plug as close as possible across the searchcoil.
6. If the target is in the plug, carefully dissect the plug until you have recovered it. Try not to damage roots or disturb the surface of the plug.
7. If the target is not in the plug, check the dirt in and around the hole.
8. Recheck the hole and the area around the hole with

- your 1280-X if you still can't find it.
9. Once you have recovered the target, check the area again. Two or more coins are often found in the same spot.
 10. Scrape all loose dirt back in the hole, reinsert the plug and press it firmly in place with your foot.

RECOVERY TOOLS

1. Sandscoops designed especially for beachcombers and shallow water treasure hunters are available at many metal detector outlets.
2. Divers use a variety of recovery tools depending on the condition of the sea bed or lake bottom. A sturdy dive knife will suffice in packed mud or small rocks. Most divers prefer to use their hands in loose sand and professional treasure hunters often use an air hose fed by a surface compressor to blow away loose sand, gravel or mud.
3. For land recovery, a sturdy hunting knife with a 5" blade will suffice in most soils. A high quality, double edged "survival" knife is an even better choice (and more expensive) since it will be almost impossible to bend or break.
CAUTION: *Using a jack knife without a locking blade is a good way to lose a finger.*
4. A heavy duty, blunt screwdriver is commonly used for shallow targets where digging or "plugging" is objectionable.