

# X7 Hand Held Metal Detector Kit

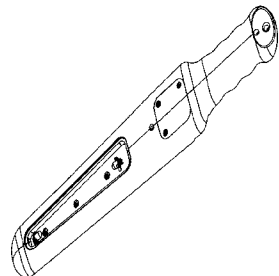
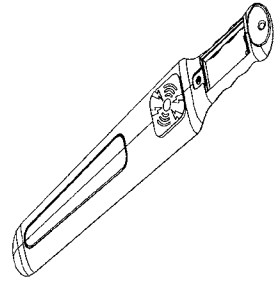
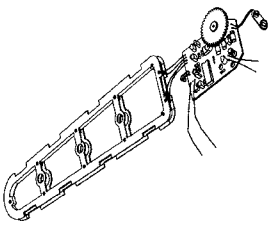
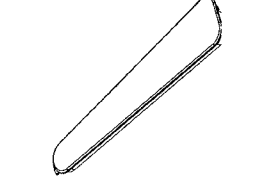
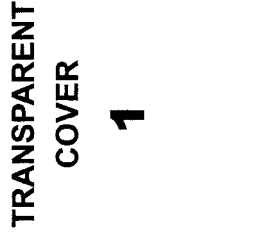
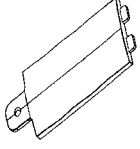
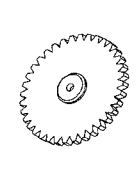


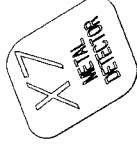




No. MX-700K

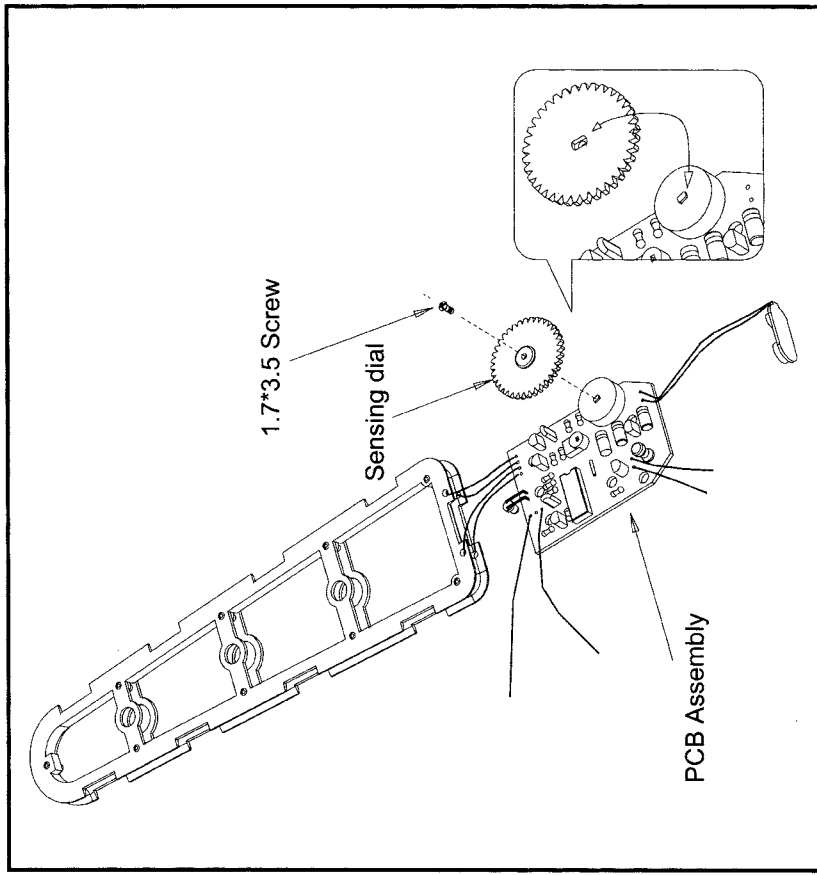
OWNER'S MANUAL – Please read before using this equipment

Hunt for treasure in your back yard or at the beach with your X7 Hand Held Metal Detector. You can also use it as security guard equipment to check your buddies. Now, you can build your own powerful X7 Hand Held Metal Detector easily following few simple steps and instructions in this manual. Using the components that came with this kit and a Philips-type screwdriver. Your X7 Hand Held Metal Detector contains a sensitive built-in electronic circuit that requires extreme care when assembling it and operates it.

## CONTENTS OF KIT

## IMPORTANT: ADULT SUPERVISION REQUIRED

				
<b>TOP HANDLE ASSEMBLY</b> <b>1</b>	<b>BOTTOM HANDLE ASSEMBLY</b> <b>1</b>	<b>PCB SENSING COIL ASSEMBLY</b> <b>1</b>	<b>TRANSPARENT COVER</b> <b>1</b>	
				
<b>BATTERY COVER</b> <b>1</b>	<b>SENSING DIAL</b> <b>1</b>	<b>WRIST STRAP</b> <b>1</b>		
				
<b>PVC TUBE</b> <b>5</b>	<b>STICKER</b> <b>1</b>	<b>2.3 x 8 mm SCREW</b> <b>4</b>		
				
<b>2.6 x 6 mm SCREW</b> <b>3</b>	<b>2.0 x 6 mm SCREW</b> <b>1</b>	<b>1.7 x 3.5 mm SCREW</b> <b>1</b>		



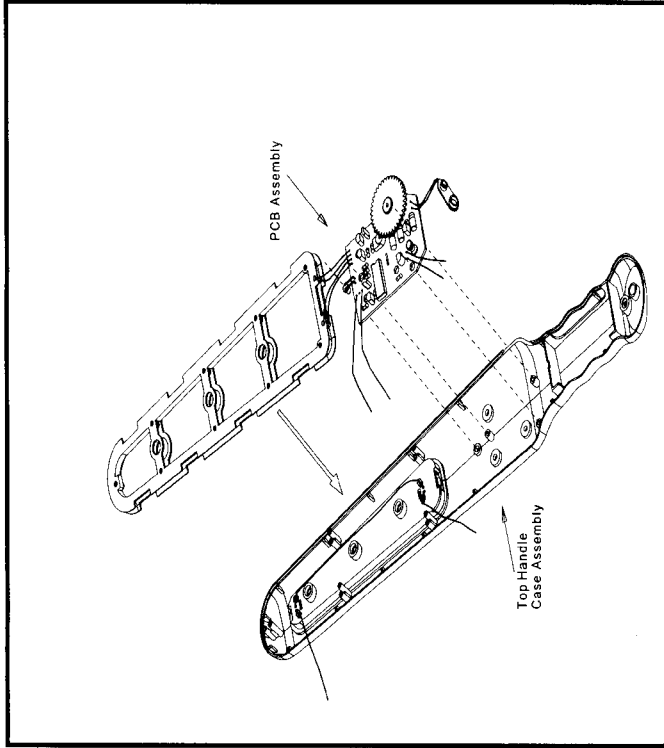
## ASSEMBLY

### STEP 1

SECURE THE SENSING DIAL ON TO THE PCB SENSING COIL ASSEMBLY TIGHTLY WITH 1.7 x 3.5mm SCREW. (SEE DIAGRAM AT THE RIGHT)

**STEP 2**

PLACE THE PCB SENSING COIL ASSEMBLY INTO THE TOP HANDLE CASE AS DIAGRAM SHOWN BELOW.



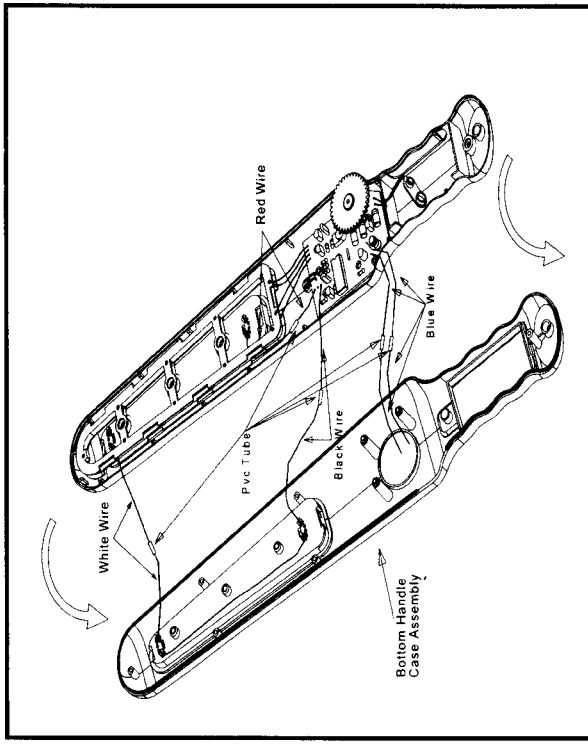
TAKE EXTRA CARE, DO NOT TWIST THE COIL OR THE WIRES CONNECTING WITH THE PCB ASSEMBLY. MAKE SURE THE SENSING COIL PLACED INTO ITS POSITION CORRECTLY AND FLATLY.

**STEP 4**

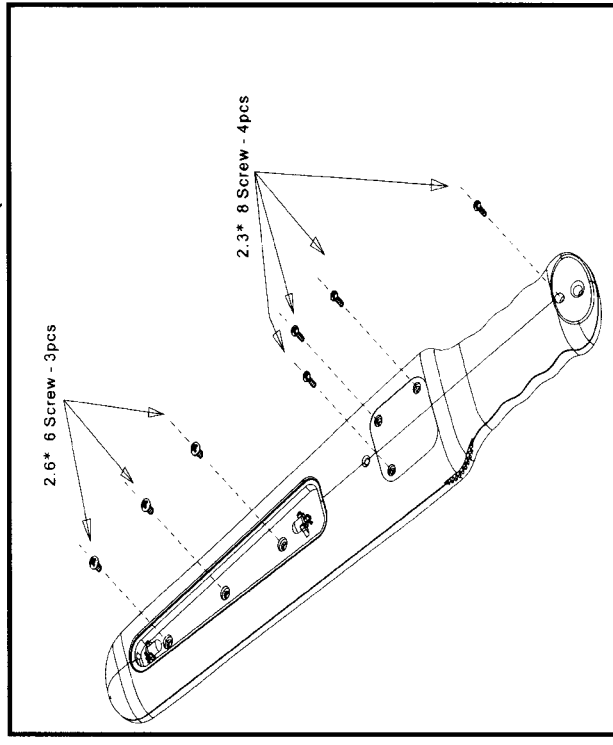
ASSEMBLE THE TOP HANDLE CASE WITH THE BOTTOM HANDLE CASE. USE THE SPECIFIED SCREWS AS PICTURE SHOWN TO SECURE THE CASES TOGETHER. (SEE DIAGRAM AT RIGHT)

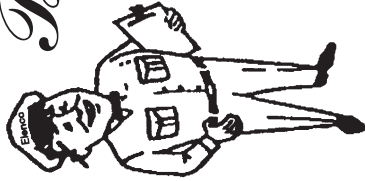
**STEP 3**

MATCH THE COLOR OF WIRES AND CONNECT THEM. FIRST, SLIDE A PVC TUBE OVER THE WHITE WIRE ON THE BOTTOM HANDLE THEN TWIST BOTH WHITE WIRES ON TOP/BOTTOM HANDLES TIGHTLY, AND SLIDE THE PVC TUBE TO COVER THE TWISTED JOINT.



FOLLOW THE SAME PROCEDURE TO CONNECT THE REST WIRES. BE SURE THE COLOR OF WIRES ARE MATCHED. (SEE DIAGRAM AT TOP)

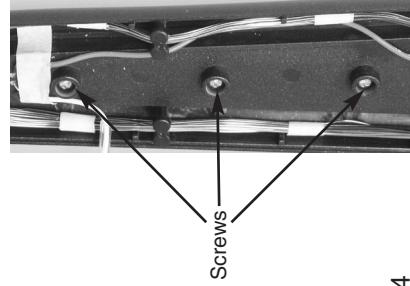




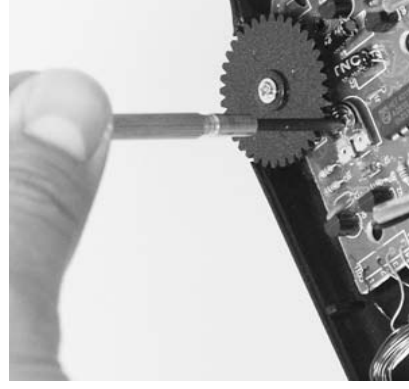
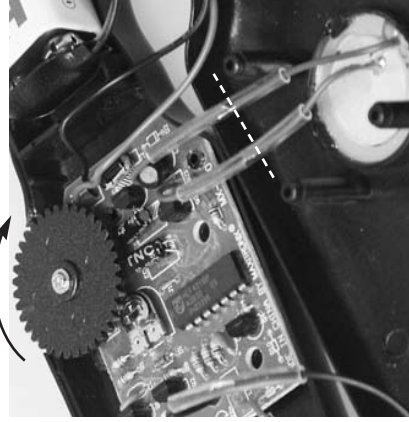
## MX-700K

### Step 4 additional instructions

1. Cut the tubing for the buzzer down to 1" length.
2. After making all the wiring connections, perform the following procedure for proper calibration:
  - a. Connect a new 9V battery to the battery snap.
  - b. Insert the three screws into the case as shown.
  - c. Turn the unit on and rotate the wheel to the center position.
  - d. Using a small flat head screwdriver, toothpick or tweezers, turn the pot fully counter-clockwise, then turn slowly clockwise until the buzzer begins to sound. Remove the three screws and proceed to the next step.

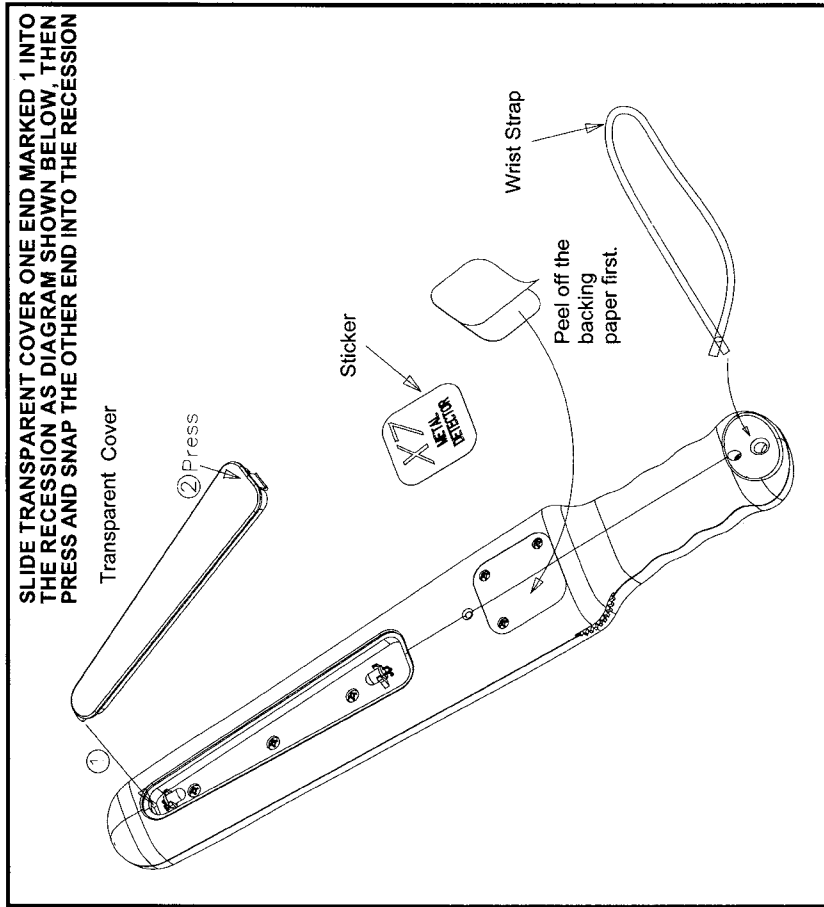


Center position



## STEP 5

CAREFULLY SNAP THE TRANSPARENT COVER IN, PLACE THE STICKER ON AND TIE THE WRIST STRAP THROUGH THE HOLE WITH A KNOT. (SEE DIAGRAM BELOW)



## WARNING!

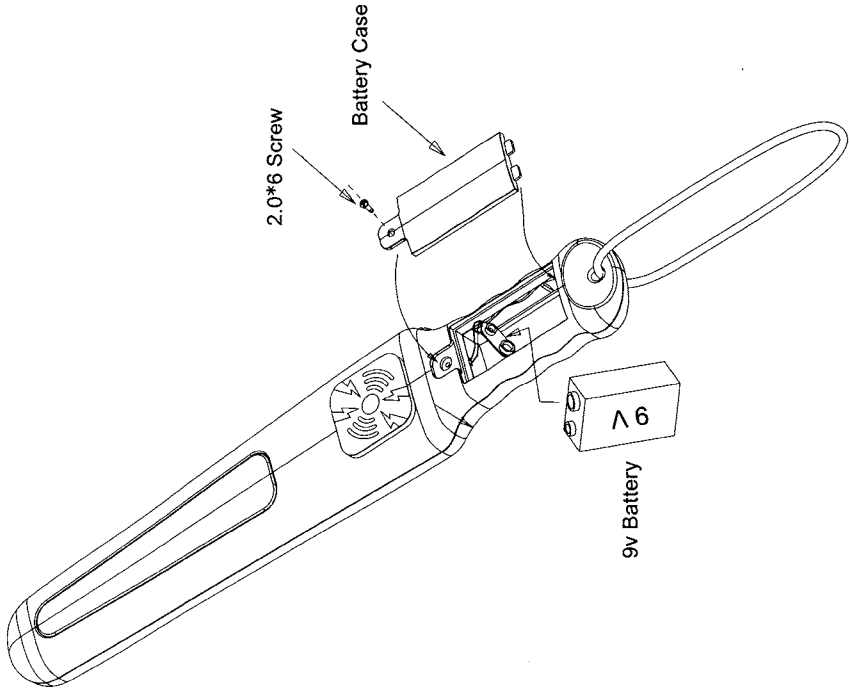
DISPOSE OF THE OLD BATTERY PROMPTLY AND PROPERLY. DO NOT BURN OR BURY THEM.

IF YOU DO NOT PLAN TO USE THE METAL DETECTOR FOR A MONTH OR LONGER, REMOVE THE BATTERY. BATTERIES MAY LEAK CHEMICALS THAT CAN DAMAGE ELECTRONIC PARTS.

## STEP 6

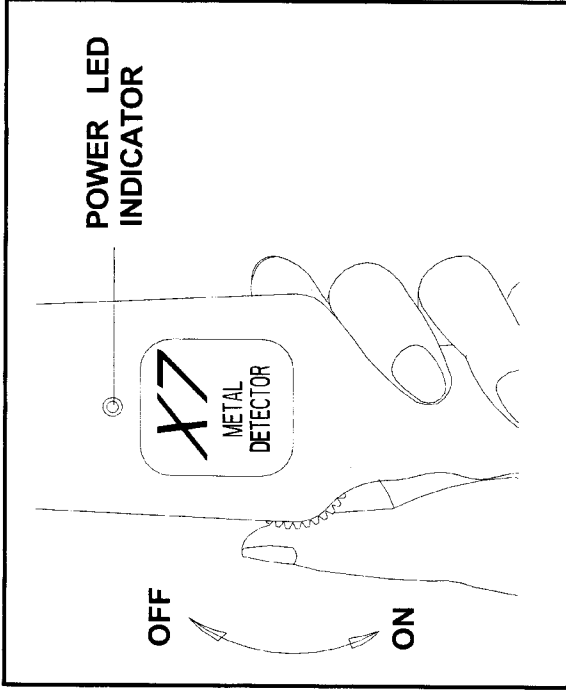
YOUR METAL DETECTOR REQUIRES **ONE 9-VOLT BATTERY** (NOT SUPPLIED). FOR THE BEST PERFORMANCE AND LONGEST LIFE, WE RECOMMEND ALKALINE BATTERY. USE ONLY A FRESH BATTERY AND RECOMMENDED TYPE.

1. BEFORE INSTALLING THE BATTERY, MAKE SURE THE SENSING DIAL IS OFF.
2. POSITION THE BATTERY CONNECTOR SO ITS CONNECTORS ARE ALIGNED PROPERLY (THE BATTERY FITS ONLY ONE DIRECTION). SNAP THE BATTERY CONNECTOR OVER THE BATTERY TERMINALS AND MAKE SURE THEY ARE BOTH CONNECTED PROPERLY.
3. PLACE THE BATTERY IN THE BATTERY COMPARTMENT AND SCREW THE BATTERY COVER WITH THE 2.0 x 6MM SCREW ONTO THE CASE IN PLACE PROPERLY.



## OPERATION

1. KEEP THE DETECTOR AWAY FROM ANY METAL OBJECTS, AND THEN TURN THE DETECTOR'S SENSING DIAL/POWER SWITCH COUNTERCLOCKWISE UNTIL IT CLICKS TO TURN THE DETECTOR ON. THE POWER GREEN INDICATOR LED LIGHTS UP.
2. SLOWLY TURN THE SENSING DIAL AND STOP ONCE YOU HEAR THE BEEP SOUNDS, THEN SLOWLY TURN IT BACK (CLOCKWISE) UNTIL THE BEEP SOUND STOP.  
**IMPORTANT:** AS SOON AS THE BEEPS SOUND STOP, DO NOT TURN THE SENSING DIAL ANY MORE TO GAIN THE BEST POSITION. IF YOU DO, THE METAL DETECTOR SENSITIVITY WEAKENS.
3. ALWAYS TEST THE DETECTOR BEFORE OPERATION. SWEEP THE METAL DETECTOR ACROSS A KNOWN METAL OBJECT, AND VERIFY DETECTION WITH AUDIO AND VISUAL FLASHING LIGHT FEEDBACK.
4. THE METAL DETECTOR MUST BE IN MOTION. START SEARCHING BY SWEEPING THE DETECTOR ACROSS THE TARGET AREA, TO DETECT THE PRESENCE OF METAL.
5. WHEN THE METAL DETECTOR COMES CLOSER TO A METAL OBJECT, IT BEEPS AND THE RED LED FLASHER TURNS ON. WHEN YOU MOVE THE METAL DETECTOR AWAY FROM THE METAL OBJECT, THE BEEP SOUND STOPS AND THE RED LED FLASHER TURNS OFF.
6. FOR THE BEST RESULT, SWEEP THE DETECTOR OVER THE SUBJECT, WITH A SMOOTH, EVEN MOTION, ABOUT ONE-INCH FROM THE SUBJECT.
7. TO TURN OFF THE METAL DETECTOR, TURN THE DETECTOR'S SENSING DIAL/POWER SWITCH CLOCKWISE UNTIL IT CLICKS.



## HOW A METAL DETECTOR WORKS

THE OPERATION OF METAL DETECTORS IS BASED UPON THE PRINCIPLES OF ELECTROMAGNETIC INDUCTION. METAL DETECTORS CONTAIN ONE OR MORE INDUCTOR COILS THAT ARE USED TO INTERACT WITH METALLIC ELEMENTS ON THE GROUND. A PULSING CURRENT IS APPLIED TO THE COIL, WHICH THEN INDUCES A MAGNETIC FIELD (FIGURE A). WHEN THE MAGNETIC FIELD OF THE COIL MOVES ACROSS METAL, THE FIELD INDUCES ELECTRIC CURRENTS (CALLED EDDY CURRENTS) IN THE METAL. THE EDDY CURRENTS INDUCE THEIR OWN MAGNETIC FIELD, WHICH GENERATES AN OPPOSITE CURRENT IN THE COIL (FIGURE B), WHICH INDUCES A SIGNAL INDICATING THE PRESENCE OF THE METAL.

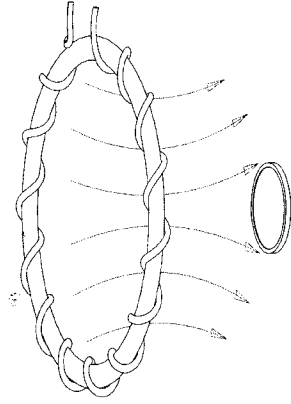


FIGURE A

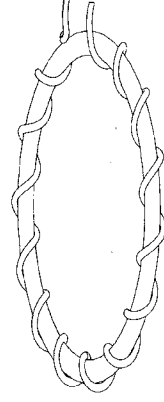


FIGURE B

**IMPORTANT**

Do not mix old and new batteries.  
Do not mix alkaline, standard (Carbon-zinc), or rechargeable (Nickel-cadmium) batteries.

**MAINTENANCE & CARE**

HOW TO ENJOY YOUR METAL DETECTOR FOR A LONG TIME:

- KEEP THE METAL DETECTOR DRY. IF IT GETS WET WIPES IT DRY IMMEDIATELY.
- USE AND STORE THE METAL DETECTOR ONLY IN NORMAL TEMPERATURE ENVIRONMENTS.
- HANDLE THE METAL DETECTOR GENTLY AND CAREFULLY. DO NOT DROP IT.
- KEEP THE METAL DETECTOR AWAY FROM DUST AND DIRT.
- WIPE THE METAL DETECTOR WITH A DAMP CLOTH OCCASIONALLY TO KEEP IT LOOKING NEW.

**TROUBLE SHOOTING**

WHEN THE DETECTOR DOES NOT WORK PROPERLY, CHECK THE BATTERY POWER. REPLACE A NEW ALKALINE BATTERY WHEN THE BATTERY POWER BECAME WEAK OR DEAD.

WHEN THE DETECTOR DOES NOT WORK PROPERLY, CHECK AND MAKE SURE THE BATTERY TERMINALS ARE SECURELY AND CORRECTLY CONNECTED WITH THE BATTERY CONNECTOR.

**WARNING!**

- MODIFYING OR TAMPERING WITH THE METAL DETECTOR'S INTERNAL COMPONENTS CAN CAUSE A MALFUNCTION.
- CHANGING OR MODIFYING THE INTERNAL CIRCUITS BOARD WILL CAUSE A DEFECTIVE THAT IS PROHIBITED STRICTLY.
- AVOID TO OPERATE YOUR METAL DETECTOR IN EXTREME COLD OR WARM AREAS, SUCH LIKE BELOW 32F(0C) OR ABOVE 113F(45C) AS THE DETECTING SENSITIVENESS WILL BE WEAKENED DRASTICALLY.