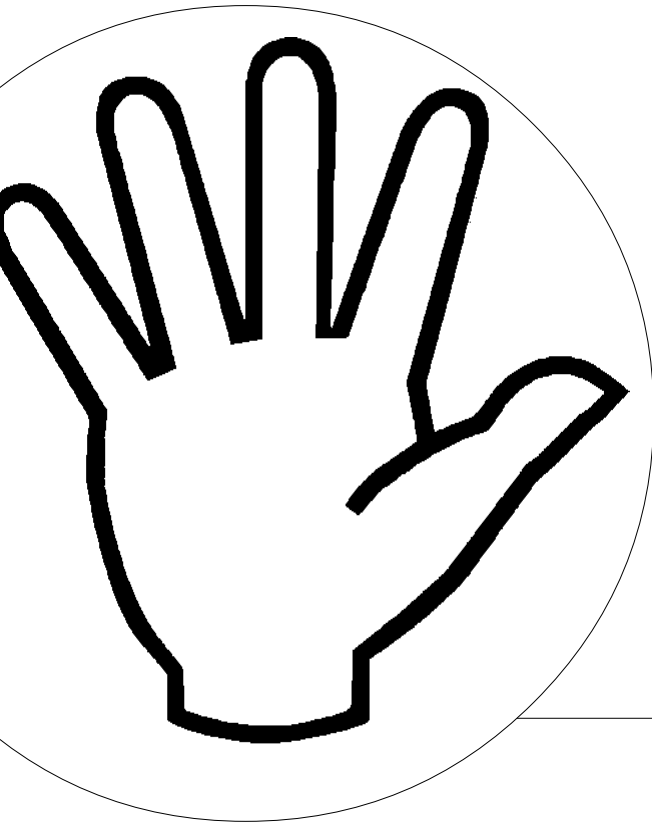




7

User Info

This chapter provides a glossary of terminology, user guides, technical specifications, warranty and repair details and troubleshooting tips.



HELPFUL HINTS

user tips

These tips are provided to enhance your personal use of the Explorer II. They are intended to work together with the information and instructions appearing elsewhere in the manual.

Batteries It is normal for the tip of the rechargeable battery to get warm while charging because the current regulator is mounted inside the battery pack.

Using headphones extends battery life. The speaker draws significant current from the battery for short amounts of time. Using the headphones when the battery voltage is low (when the battery indicator's level starts decreasing) helps in getting the most out of the battery.

Noise Cancel It is best if you perform a Noise Cancel with the search coil in the position used for detection. This is because the interference picked up in a vertical position can be different from the interference picked up in the horizontal orientation.

In competitions, where several Explorer IIs have to work nearby, it might be best to select the channels manually.

If you want to know what channel has been chosen by the detector after a Noise Cancel, go into the Advanced mode in Main Menu > Options > NOISE and look at the number displayed. If you do a Noise Cancel while in that menu, you have to go out of the menu and back to get the new channel number.

Clearing saved patterns If you want to clear one or more patterns from the SAVE DISCRIM menu, do the following:

STEP 1 Go to SELECT menu and select CLEAR.

STEP 2 Go to the SAVE menu and save cleared screen into the locations you want.



- Choosing the right Tone** Make sure that you start with the Main Menu > Audio > Sounds > CONDUCT selected and the threshold level and the volume are appropriate for your environment (i.e. for headphones or speaker use, ambient noise etc.)
- STEP 1** Adjust the threshold 'hum' to a tone you are comfortable with using the Main Menu > Audio > Tone > TH. TONE. This tone should be the lowest tone you can still hear clearly.
- STEP 2** Using two targets you are likely to often seek which display a difference of 1 or 2 on the digital reading, adjust Main Menu > Audio > Tone > Variability so you can hear the difference between one and the other.
- STEP 3** Select a target with high conductivity (giving a high number on the digital display) and wave it past the coil. Adjust Main Menu > Audio > Tone > Limits for a pitch as high as possible but still within the range where you can hear well.

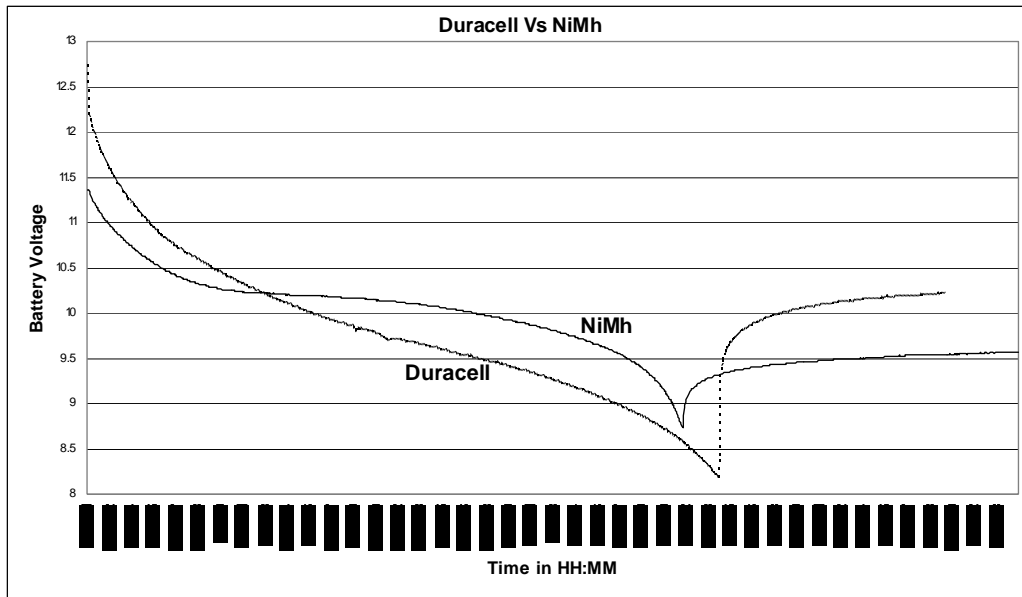
- Setting your own reject target patterns** If you want the detector to reject targets (for example to make a new pattern for bottle caps, suitable for your conditions):
- STEP 1** Prepare a number of targets from the category you want to reject (bottle caps).
- STEP 2** Go to Advanced Learn and start with an all black screen.
- STEP 3** Select Learn Accept (the flashing tick) and pass the coil over the bottle caps until the detector accepts them.
- STEP 4** Go to SAVE (press the shift button next to the SAVE icon) and save to the location you want (e.g. S4). The Smartfind thumbnail will display your pattern.

Now that this pattern has been saved, you can use it to construct your own discrimination pattern by:

- Going to SELECT menu and choosing CLEAR. For instance, construct this personal discrimination pattern by accepting coins with a tick and rejecting your newly learnt bottlecaps pattern (S4) with a cross.
- If you want to improve the pattern, use Advanced Edit to modify the clear (accepted) area.

BATTERY PERFORMANCE COMPARISONS

The average life-span for both good quality alkaline and NiMH rechargeable batteries under constant use is compared on the graph below. This graph assumes the backlight is turned off and headphones are being used.



Note: The backlight adds about 8% to the current consumption of the detector.



USER PREFERENCES

SETTING	RANGE	FACTORY PRESET	USER A	USER B
Detector mode	Quickstart, Advanced	Quickstart	●	●
Sensitivity function	Semi-auto, Manual	Semi-auto		
Sensitivity value	1–32	16		
Threshold	0–40	20		
Discrimination function	Iron Mask, Discrim	Discrim		
Iron Mask value	-16–0	-6		
Noise channel*	1–11	5		
Display type	Smart, Digital, Learn (Adv.), Edit (Adv.)	Smart		
Display size	Normal, Full screen	Normal		
Display contrast	1–10	5		
Learn cursor size	Small, Medium, Large	Large		
Edit frame size	Small, Medium, Large	Small		
Audio Volume Max. limit	0–10	10		
Audio Volume Gain	1–10	5		
Audio Th. Tone Lowest	1–10	5		
Audio Tone Variability	1–10	8		
Audio Tone Limits	1–10	10		
Audio Sounds	Const, Conduct, Ferrous	Conduct		
Options Response	Normal, Audio 1, Audio 2, Audio 3	Normal		
Options Recovery Fast	On, Off	Off		
Options Recovery Deep	On, Off	Off		

Minelab suggests that you record your preferences using a pencil, or make photocopies of this table.

*Noise channel is selected automatically by the Noise Cancel shortcut button or manually through Main Menu > Options > NOISE selection. ● This option cannot be saved into User A or User B. Selections not saved: Backlight status, Pinpoint.

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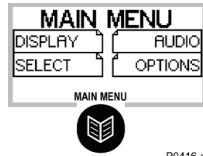
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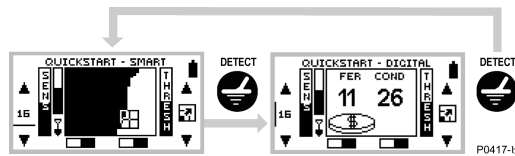


CONTROL PANEL BUTTON FUNCTIONS

MAIN MENU



QUICKSTART MODE



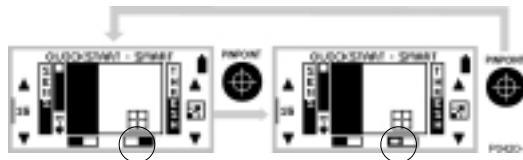
IRON MASK



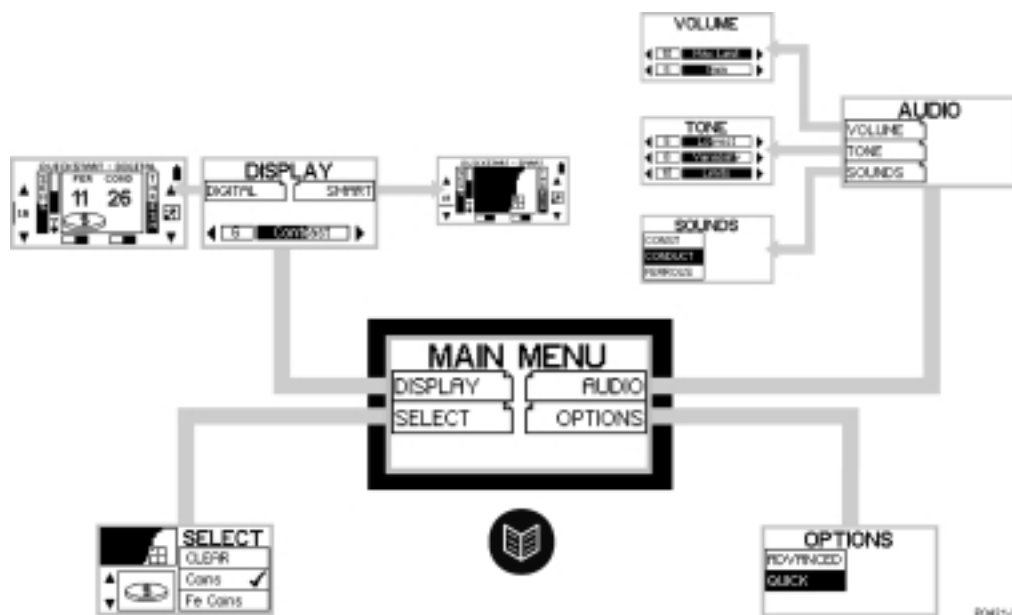
ADVANCED MODE



PINPOINT



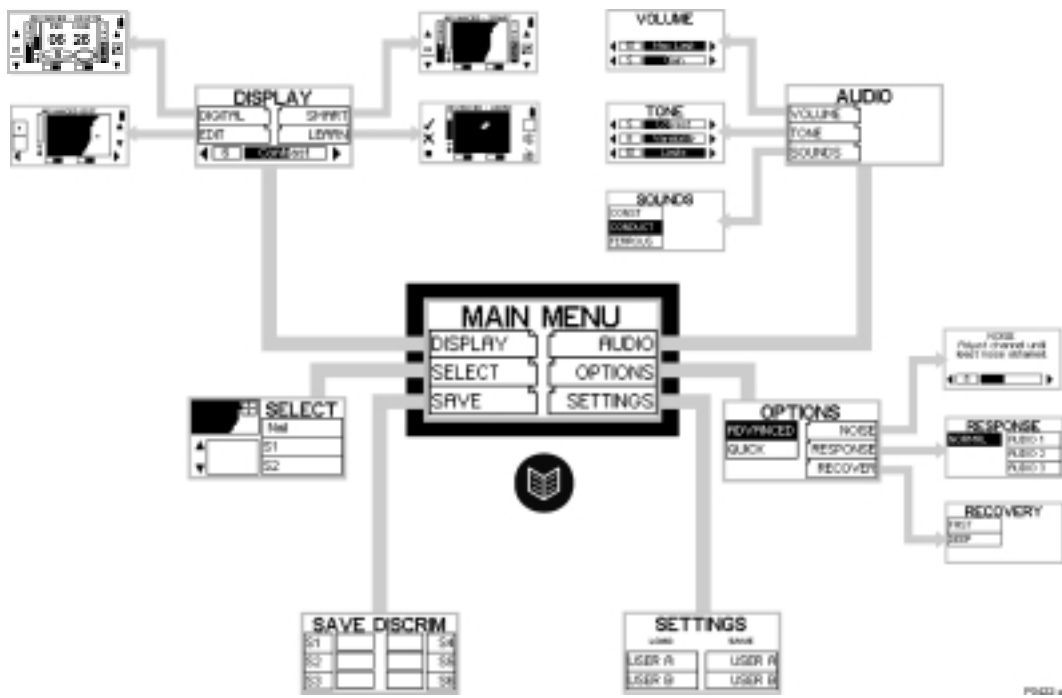
QUICKSTART MENU STRUCTURE



PO42-5



ADVANCED MENU STRUCTURE



TROUBLESHOOTING

FAULT	SOLUTION
Detector does not start at all	<ul style="list-style-type: none"> • Check the state of the batteries and battery connections. • Ensure battery pack lid is completely closed. • If using alkaline batteries, check whether they have been loaded in the right polarity and correct if necessary.
Detector starts, but it switches off by itself	<ul style="list-style-type: none"> • Check the state of the batteries. If necessary, try starting with batteries known to be in good condition. • Detector may be too hot. Allow detector to cool down in a shaded area. • Try starting the detector with search coil disconnected. If the detector starts normally, check the state of the coil cable. If it is damaged, replace the coil. Otherwise return detector for repairs.
No sound	<ul style="list-style-type: none"> • Unplug the headphones. If there is sound in the speaker but not in the headphones, check the headphones and their connection. • Check the AUDIO menu's Max Limit (a setting of 0 is silent). • If there is no sound in the speaker or the headphones but the detector appears to work normally otherwise, return the detector for repairs.
Erratic Noises	<ul style="list-style-type: none"> • Press the NOISE CANCEL shortcut button or manually select a quiet channel in the Advanced Main Menu > Options > NOISE. • Reduce the Sensitivity. • Change the orientation of the coil to the vertical plane and rotate to see if there is a position where the noise is reduced. If this is the case, it means that there is a source of interference nearby which must be avoided. • Check battery charge and battery connections. • Ensure coil connector is tightened firmly. • Check headphones and their connection. • Check for sand or grit between coil cover and coil.
No Target Response	<ul style="list-style-type: none"> • Ensure the detector is turned on. • Check headphones and their connection. • Check coil connection. • Check discrimination level. No signal will be given if target is within black area of screen.



SERVICE REPAIR FORM

Today's Date _____

Detector Model _____ Serial No. _____

Purchased From _____

Purchase Date _____

Faulty Part(s): _____

Description of Fault: _____

If necessary, use the space provided overleaf to continue your description of the fault.

Owner's Name _____

Address _____

Phone Day () _____ Home () _____

Fax () _____ Email _____



WARRANTY

Repairs

In the unfortunate circumstance that the detector needs to be returned to Minelab for service, please fill out the Minelab Service Repair Form (or a photocopy of the same) and enclose it with the detector.

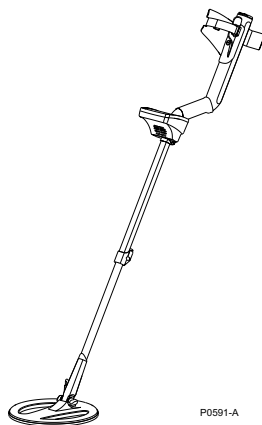
Please supply as much detail about the fault as possible. This will assist our service engineers to rectify the problem quickly and efficiently.

There is a two-year parts and labour warranty for the electronic control box of the Explorer II. The search coil has a one year parts and labour warranty. Refer to the supplier or Minelab for service, either in or out of warranty. The Minelab warranty does not cover damage caused by accident, misuse, neglect, alteration, modifications, or unauthorized service.

For specific details of the Minelab warranty, please refer to the detector's 'Product Warranty Card'.

NOTE This warranty is not transferable, nor is it valid unless the enclosed warranty registration card is returned to Minelab or your Minelab dealer within 14 days of the original purchase.

TECHNICAL SPECIFICATIONS FOR THE MINELAB EXPLORER II



Length unextended	43 inches (1100mm)
Length extended	55 inches (1358mm)
Shipping weight	3 lb 7 oz (1700g) excluding batteries
Coil	10.5 inches (264mm). "Double D" waterproof
Audio inputs	Internal speaker and headphones
Headphone input	$\frac{1}{4}$ inch (6.3mm) 100 Ω stereo jack
Transmission	Full Band Spectrum. Simultaneous 28 frequency transmission ranging from 1.5kHz – 100kHz
Ground rejection	Ground compensation – advanced digital filtering
Discrimination	Smartfind™ Two-Dimensional Discrimination
Visual display	64 x 128 pixel liquid crystal display (LCD) control panel
Batteries	12V Alkaline (8 x 1.5 AA cells not included) 1600 or 1800 mAh NiMH sealed battery pack
Optional accessories	1600 or 1800 mAh NiMH battery pack (spare); Car charger; Coil covers; Mains charger; Control Box Cover
Patents	US 4890064, US 5537041, US 5506506



EXPLORER II MODEL

USER FUNCTIONS (SOFTWARE)

Custom select discrimination	Yes
Saved Discrim patterns	6
Learn Function (accept/reject)	Yes
Edit function targets	Yes
Auto Noise Cancel (scanning)	Yes
Manual Noise Cancel	Yes
User saved settings (audio, tones, etc)	Current, User A, User B
Response	Normal, Audio 1,2,3
Recovery	Selectable (Fast & Deep)

GLOSSARY OF TERMS

- Advanced mode** The Explorer II's advanced operating mode. Advanced mode provides additional features and options to Quickstart.
- Alloy** A substance which is composed of two or more metals (an alloy may also include non-metals).
- Camlock** Lever which releases or locks detector's assembly components. The Explorer II's upper and lower shafts are held together by the shaft camlock. This shaft assembly is fixed to the control box by the control box camlock.
- Conductivity** A measure of the ability of a target to allow eddy currents induced by the transmitter.
- Control box** Encloses the electronic components necessary to generate and interpret signals transmitted from the search coil and provide user access to functions via the control panel.
- Control panel** This panel, which is the front of the control box, houses the display screen and provides press-button access to all of the detector's operating functions.
- Digital** One of Explorer II's displays. Digital rates an object's conductivity and ferric content as a figure between 0 and 31. Digital also displays an icon representing the possible target.
- Discrimination** The ability of a metal detector to identify the user's desired target and eliminate signals from undesirable material. The Explorer II can be programmed to discriminate against unwanted targets in either Iron Mask or Discrim.



GLOSSARY OF TERMS

Discrimination pattern A two-dimensional pattern made up of shaded and clear regions of the Smartfind screen. Characteristics of a target are used to determine its position on a two-dimensional display. A discrimination pattern is typically a target pattern modified by the user to accept or reject certain objects through the use of combined targets from the SELECT menu or created in Advanced mode's LEARN or EDIT displays.

Edit One of Explorer II's Advanced displays. Edit allows the user to customize an existing discrimination pattern to match preferred target characteristics.

Ferrous Composed of or containing iron. A ferrous object is one that is predominantly or completely iron. Ferrous objects (e.g. nails) are usually not desired by the detectorist.

Full Band Spectrum (FBS) Simultaneous 28 frequency transmission ranging from 1.5kHz to 100 kHz. This range in frequencies means that the signal received from the detector coil is analyzed from a wide range of responses.

Full screen Target details shown on the full screen with display border and the other screen elements removed. An icon at the center right of screen switches to full screen display.

Ground compensation The ability of the detector to compensate for the effects of ground mineralization.

Handle assembly Part of the detector made up of the control box, handle and armrest.

Inductance The electrical property of a metal target to oppose variations of the magnetic field. This characteristic is referred to as ferrous content in Smartfind.

GLOSSARY OF TERMS

Iron Mask One of the Explorer II's Smartfind displays. The Iron Mask function rejects objects with ferrous properties. This level of ferrous rejection is represented with a dark 'curtain' which moves across the horizontal dimension of the Smartfind screen as the Iron Mask is adjusted.

Learn One of Explorer II's Advanced displays. Learn allows the user to accept or reject certain targets to create a personalized discrimination pattern.

Mineralized ground Ground containing certain minerals which can cause false signals to be given. Mineralized ground is handled automatically by the Explorer's ground compensation.

Nickel Metal Hydride (NiMH) Nickel Metal Hydride batteries are the modern equivalent of older NiCad (Nickel Cadmium) batteries. NiMH batteries have a longer life-span and are not affected by memory to the same degree.

Non-ferrous Not containing iron. Non-ferrous objects or non-magnetic metals (such as silver or copper coins, gold jewelry, etc).

Pinpoint Function allowing an object to be precisely located. Pinpoint overrides the automatic motion detection and discrimination settings of the Explorer II.

Quickstart mode The Explorer II's basic operating mode.

Recovery Recovery, one of the Explorer II's Advanced options, allows the user to modify the way the discrimination process works and affects the audio and display responses to target characteristics.

Response The signal or audible indication of a target. Also a menu affecting the audio response of the detector.

Search coil The search coil is the circular plate swept across the ground surface during detecting. It transmits electromagnetic signals into the ground and receives the response.

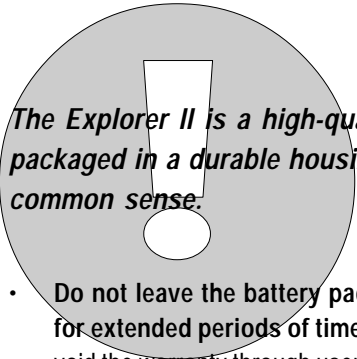


GLOSSARY OF TERMS

- Sensitivity** The detector's level of response to a target in the presence of ground noise and/or electromagnetic disturbance.
- Shaft assembly** An adjustable assembly made up of the upper and lower shaft connected by camlocks. The shaft assembly connects the search coil to the handle assembly.
- Shift buttons** The three buttons at either side of the display screen are called shift buttons. They allow selection of adjacent menu items, movement of screen slider controls and adjustment of settings.
- Shortcut buttons** Black buttons on the control panel which offer quick access to the functions and settings most likely to be used during detector operation. Noise Cancel, Iron Mask, Pinpoint and Detect are all shortcut buttons.
- Slider control** Visual representation of setting adjustments for a particular function (e.g. screen contrast). Settings may be adjusted with shift buttons at either side of the display screen.
- Smartfind** One of the Explorer II's displays. Smartfind visually represents target details using two-dimensional discrimination.
- Threshold (hum)** The audible level of sound emitted when no target is detected is the threshold. This threshold hum is the background sound made as the Explorer II operates. Threshold can be set anywhere between no sound (silent) and loud.

DETECTOR CARE AND SAFETY

take care



The Explorer II is a high-quality electronic instrument, finely engineered and packaged in a durable housing. Taking proper care of the detector is mostly common sense.

- **Do not leave the battery pack in the Explorer II handle when the detector is not in use for extended periods of time.** Damage caused by leaking batteries could be severe and would void the warranty through user negligence.
- If temperatures are very high, **do not leave the detector in excessive heat for longer than necessary.** Covering it when not in use will help protect it. Try to avoid leaving it in a closed car trunk or in a car sitting in sunlight.
- The control box has been designed to resist moisture. However, Minelab advises protecting the control box in extreme conditions. Obviously the control box should not be dropped into water.
- **Never allow the detector to come into contact with gasoline or other petroleum-based liquids.**
- **Keep the detector clean and dry** and avoid getting sand and grit into the shafts or fastenings (e.g. yoke bolt and camlocks). Do not use solvents to clean the detector. Use a damp cloth with mild soap detergent.
- **Ensure the coil cable is in good condition and not subject to undue stress.**
- **Search coil.** The Explorer coil is not interchangeable with any previous Minelab model.
- **Flat or faulty batteries cause many detector problems.** Ensure that only quality alkaline batteries are used, and that they are replaced when you hear the warning signal through the headphones or speaker.
- **Do not dispose of battery pack in fire** (contact local authorities for disposal/recycling). Do not attempt to disassemble or short circuit the battery pack.
- **Take precautions when transporting or storing the detector.** Although the detector is constructed from the highest quality materials and has undergone rigorous durability tests, the display screen could be prone to scratching or serious damage if not treated with due care.

