Locating Equipment

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RD7200

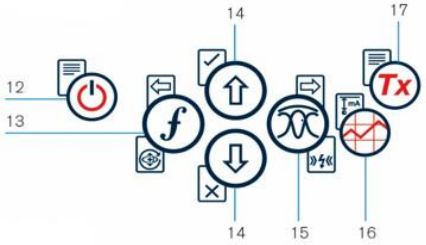
RD7200 Manual

https://support.radiodetection.com/hc/en-gb/articles/360052074812-RD7200-System-Overview

RD7200 Hardware Layout

1. Keypad
2. LCD with auto backlight
3. Haptic (vibration) feedback
4. Speaker
5. Battery compartment
6. Accessory connector
7. Headphone connector
8. Bluetooth module antenna
9. SWING Warning system
10. Optional Lithium-Ion battery pack
11. USB connector (inside the battery compartment)
12. Power key : Switches the unit on and off. Opens the locator menu
13. Frequency key : Selects frequency. Closes sub-menu.
14. Up and down arrows : Adjusts the locator signal gain. Scrolls through the menu options.
15. Antenna key : toggles Peak, Peak+, Null and Guidance modes. Opens a sub-menu.
16. Indicates the signal strength and Peak marker
17. Signal strength: Numerical indication of signal strength.
18. Null / Proportional Guidance arrows: Indicates the location of the line relative to the locator.
19. Battery icon: Indicates the battery level
20. Gain readout
21. Volume icon: Displays the volume level
22. Radio Mode: Indicates when Radio Mode is active.
23. Power Mode: Indicates when Power Mode is active.
24. Accessory indicator: Indicates when an accessory is connected.
25. A-Frame icon: Indicates when the A-Frame is connected.
26. Frequency / current / menu readout.
27. Antenna mode icon: Indicates antenna selection: Peak, Null, Peak+ and Guidance Mode (model dependent).
28. Sonde icon: Indicates that the signal source is from a sonde.
29. Line icon: Indicates that the signal source is from a line.
30. Compass indicator: Shows the direction of the located cable relative to the locator.
31. Transmitter standby indicator.
32. Depth readout.


8200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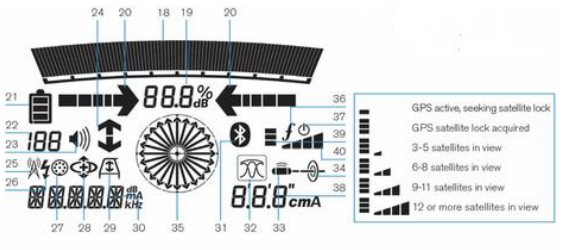
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27 28 29 30 35 31 32 33
GPS active, seeking satellite lock
GPS satellite lock acquired
3-5 satellites in view
6-8 satellites in view
9-11 satellites in view
12 or more satellites in view

RD8200

RD8200 Manual

https://support.radiodetection.com/hc/en-gb/articles/360052707931-RD8200-Locator-overview

RD8200 Hardware Layout

1. Keypad
2. LCD with auto backlight
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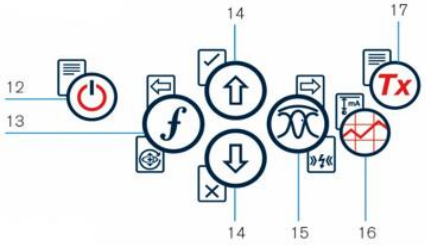
8200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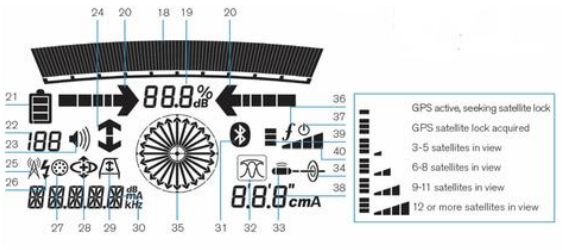
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Geophysical Survey Systems, Inc. GPR

Ground Penetrating Radar

Geophysical Survey Systems, Inc. GPR

Utility Scan Manual

What is Ground Penetrating Radar?

- Ground Penetrating Radar (GPR), also called georadar or ground probing radar.
- GPR uses three main components: a control unit, an antenna, and a power supply.
- GSSI GPR systems can operate on various power sources, including small rechargeable batteries, vehicle batteries, or standard 110/220-volt outlets, with connectors and adapters available for each. The featured unit can run on an internal rechargeable battery or external power.

Active Frequencies

Active frequencies are applied to a buried conductor using the transmitter. The transmitter can apply a signal using these methods:

Induction Clamp

An optional signal clamp can be connected to the transmitter and clamped around a cable or pipe to apply the transmitter signal. This method of applying the transmitter signal is particularly useful on insulated live wires and removes the need to disconnect the supply to the cable. Clamps are available up to 8.5” / 215mm in diameter.

When to use Induction clamps:

- Clamps can be used where:
  - Several cables or pipes run in close proximity to each other.
  - A cable or pipe is accessible at an inspection hole or manhole.

Connecting an Induction clamp:

1. Put the clamp connector into the accessory socket on the front of the RD7200 locator.
2. Place the clamp around the pipe or cable and switch the locatoron.
3. Set the frequency to the same as that on the transmitter.
4. Put the clamp around each cable in turn and note the bar graph response. Compare the strength of response from each cable. The cable with a substantially stronger response than the others will be the cable to which the transmitter signal has been applied.

Direct Connection

In Direct Connection, you connect the transmitter output directly to the utility. The transmitter will then apply a discrete signal which you can locate using the locator. This is the preferred method of applying a transmitter signal to a utility and in the majority of applications will apply a stronger signal to the utility, which may increase the locate distance.

To directly connect to a non-energized conductive utility:

1. Switch the transmitter off.
2. Connect the Direct Connection lead into the transmitter accessory socket.
3. Clip the red connection lead to the utility ensuring that the area around the connection is clean and that a positive connection is achieved.
4. Clip the black connection lead as far away as possible and at 90° to the ground stake or suitable ground point nearby ensuring that a positive connection is achieved.
5. Switch the transmitter On.
6. The display will show the Direct Connection lead connected icon.

Choice of Frequency

- **512 kHz**
  - This low frequency is most useful for line tracing and identification over long distances. It does not couple easily to unwanted lines.

    but
  - It is too low for induction, and it falls within the band of power frequency harmonic interference.
- **8 kHz**
  - This medium frequency is the most useful general-purpose signal, high enough for induction, outside the power frequency interference band, and with limited coupling to wanted lines.

    but
  - It may not be high enough to impose a strong signal on small diameter line like telecom cables.
- **33 kHz**
  - This higher frequency is easily applied by induction to most lines, so is very useful for initial search. It travels on small diameter lines.

    but
  - It couples more easily to unwanted lines and loses its strength over shorter distances than lower frequencies.
- **100+ kHz**
  - This very high frequency range deals with the difficult cases – induction onto small diameter lines in dry sandy soil, and short lengths of cable. It is very easy to apply by induction

    but
  - It couples very easily to unwanted lines and does not travel far.