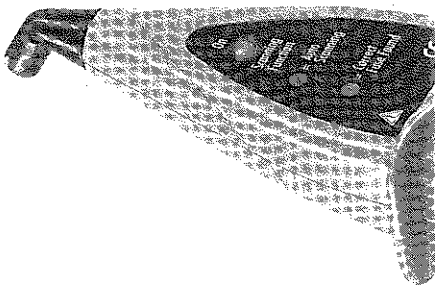
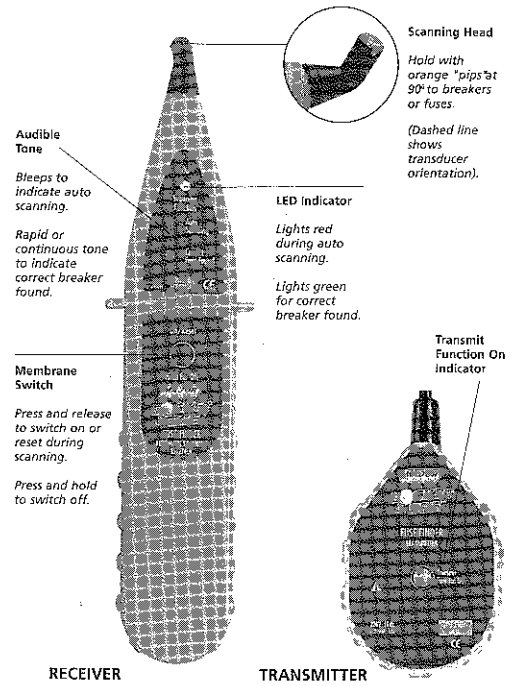
MAJOR TECH

SOCKET & SEE™



FFCB100
Instruction Manual



Battery installation

The fuse finder receiver is powered by a 9v Alkaline battery (not supplied) type PP3/MN1604/6F22 or equivalent.

To install a battery remove the screw (do not lose it!) and cover on the rear of the receiver enabling access to the battery compartment.

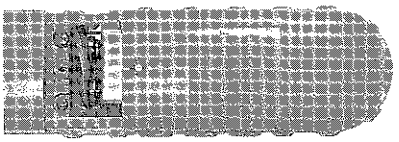
Fit the 9v Battery observing correct polarity.

Replace cover and screw.

The transmitter is mains powered and does not require a battery.

When battery power is low the red scanning function LED will operate with an orange colour and the beeping tone will have a longer duration. The battery will have around 20% of its capacity left at this stage and will shortly require replacement.

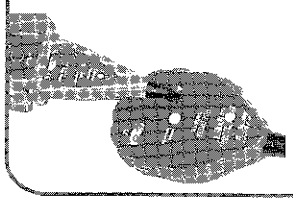
Remove screw (do not lose it) and slide off cover to replace batteries.



Pre-use check

Before use prove that the unit is functioning correctly. To do this switch the receiver on and firstly check that the LED is red and a steady beeping tone is emitted. If either of these functions is not present replace the battery in the receiver before proceeding. When battery power is low the red scanning function LED will operate with an orange colour and the beeping tone will have a longer duration. The battery will have around 20% of its capacity left at this stage and will shortly require replacement.

Connect the transmitter to the mains and move the scanning head over the face of the transmitter. The frequency of the beeping should become very rapid or change to a continuous tone and the LED should turn Green when the scanning head is detecting a signal "hotspot" (this is good practice for scanning, as the indication is similar to finding the correct fuse at the board.) If this indication can not be obtained the unit should be withdrawn from service and returned to Kew Technik for examination.



Run the scanning head over the transmitter to check check the Fuse Finder is operating correctly.

Transmitter

There is no switch for the transmitter. It will automatically start the injection of the test signal upon connection to a mains supply.

Receiver

The membrane switch on the receiver has 3 functions - On / Reset / Off.

Push and immediately release the switch when the receiver is off - this will turn the unit on with a steady bleeping and red LED indicating that the scanning function is in progress.

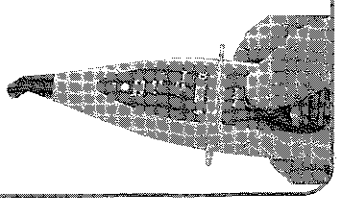
Push and immediately release the switch when the receiver is on - this will reset all scanning function memories to zero, ready to start again, with a steady beeping and red LED. Always use the reset function away from the distribution board so that no signal is present during reset.

Push and hold switch down for over 1 second - this will turn the receiver off.

Note: To maximise battery life an auto-power off function is incorporated in the receiver which will turn the receiver off after three minutes of inactivity. To resume testing after this period just turn the unit on as described above.

Press and release to switch on or reset.

Press and hold to switch unit off.



Warning

The Socket & See Fuse Finder is designed for use by suitably qualified personnel familiar with electrical supply systems.

Before using your Fuse finder please read these instructions and safety warnings. Failure to comply with the safety warnings or use of the unit in a manner not specified by Major Tech may result in serious injury or damage to equipment.

When testing at light fittings or bare wires if at all possible switch off the power before making connections or disconnecting.

Take care not to touch unshielded contacts when using the test lead adaptor.

Connect red lead to live and black to neutral. Switch the power back on. Test method as above. USE EXTREME CAUTION.

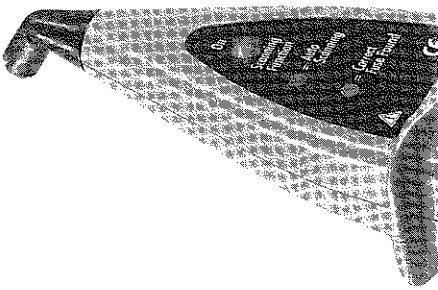
Only use in dry conditions (See specification section).

Always prove that the transmitter and receiver are functioning before use (see pre-use check).

CE

BS EN 61010-1

PLEASE SEE ADVICE FOR BEST PERFORMANCE IN THESE INSTRUCTIONS.



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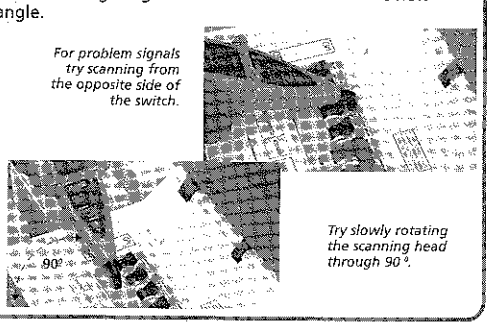
Advice for best performance

Due to the differing designs of circuit breakers it may sometimes be unclear from the above procedure which of two breakers the strongest signal comes from, particularly if it appears to come from a boundary area between two adjacent breakers. In the event of this occurring one of the following variations should enable clear identification.

a.) Scan the breaker on the opposite side of the switch (after resetting the receiver). The strongest signal may be found at the top of the breaker.

b.) Rotate the receiver (after resetting) through 900to set the orange pips on the insert of the black scanning head to come towards being in line with the breaker. At some point a stronger signal will be found - scan at the new angle.



For problem signals try scanning from the opposite side of the switch.

Try slowly rotating the scanning head through 90°.

Fuse finding process

1.Plug the transmitter into the socket under test and switch the socket on. The red LED on the transmitter should light.

2.Go to the consumer unit or fuse box. Turn on the receiver. A steady beeping tone will be emitted and the LED on the receiver will light red to indicate automatic scan.

3.Place the scanning head in contact with the face of the circuit breakers or fuses at a right angle to the direction of the breaker body and run the scanning head steadily along the row(s) of circuit breakers. The frequency of the beeping will increase to a very rapid or continuous tone and the LED will turn from red to green when the receiver encounters a stronger signal.

Important. The first stronger signal you encounter may not be the strongest there is. Do not stop scanning when a stronger signal is first encountered. Because the scanning technology used is comparative, it is essential to continue scanning all of the breakers that may protect the outlet under test.

4.Repeat the scan of the row of breakers. With each sweep the receiver will automatically adjust it's sensitivity and disregard weaker signals.

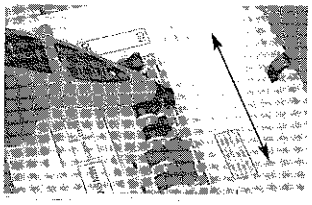
5.Continue scanning until the correct indication (rapid or continuous tone and LED lit green) is given only when the scanning head is over one breaker or fuse. This is the breaker protecting the circuit that the transmitter is plugged into.

6.Turn the circuit in question off and the receiver will revert toa red LED display and steady beeping.

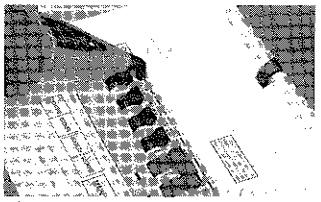
7.Confirm the correct breaker has been selected by checking that the red LED on the transmitter is no longer lit.

Sometimes we have noticed a problem (mainly occuring on split distribution boards). Some fluorescent light fitting circuits give an inconsistent amplifying effect to the detection signal resulting in a false signal. But obviously the breaker concerned will be rated considerably less than the typical rating of breakers feeding socket outlets, so can safely be ignored.

Continue scan slowly across the face of the circuit breakers or fuses.



Scan with the scanning head in constant contact with the circuit breakers or fuses.



Principles of automatic scanning

The scanning head uses a ferrite transducer to detect the signal and like a portable radio varying the angle at which the receiver is held (in relation to the breaker) will affect the strength of the signal received. As the receiver works by comparing the strength of signal received from one breaker with another it is essential to compare like with like. Observe the following for best results

Do not let the scanning head wander around. To operate well the automatic scanning memory needs a consistent signal.
Keep the black scanning head at the same angle relative to the breakers or fuses for the duration of the test.
Keep the head in contact with the breakers during each sweep to ensure consistency in the proximity of the head to the breaker.
Test only the same side of each breaker during a test. Pay particular attention to this when testing a vertically hung panel which may have neighbouring breakers mounted in opposite directions.
Always reset the receiver (away from the distribution board) before changing any test condition.
Above all scan with confidence

Switch functions

Maintenance

The battery is the only user serviceable component.

Cleaning

Wipe the exterior surface of the transmitter and receiver with a damp cloth or cleansing wipe. Do not use solvents. Dry thoroughly before use.

Standards

This unit complies with the under noted directives. Compliance has been demonstrated by testing to the requirements of thestandards listed.

EMC Directive 89 336/EEC (as amended by 92/31/EEC and93/68EEC). Test standard used: EN 61326:1998 Electrical equipment for measurement, control and laboratory use.

Low Voltage Directive 73/23/EEC. Test standard used EN 61010-1:1993 Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements.

Specification

For use on 230 v 50Hz Mains supply.
Current consumption: <20 mA.
Environmental use conditions: Temperature 0-40°C
Humidity: <95% non-condensing.
Calibration: The microprocessor is self-calibrating, no other form of calibration is necessary.
This product is EMC and LVD compliant.
Environmental use conditions: Temperature 0-30°C
Calibration: The microprocessor is self-calibrating, no other form of calibration is necessary.

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