- 8 JUL 1980

LOCATOR 5B
Description and Use

1 **DESCRIPTION** Locator 5B is a portable device for the location and identification of cable pairs in the internal cabling of buildings; it is unsuitable for use in the external cable network.

Each locator unit is capable of operation in either a "send" or "receive" mode and two units are jointly used in cable pair location; a complete kit comprising two locator units with associated test cords in a single carrying case is issued as "Locator 5B/1".

The locator unit is housed in a plastics case approximately 143 mm x 73 mm x 32 mm weighing 256 gm; it is powered by a battery (Battery, Dry No.33) housed in a compartment within the unit case. One end of the case carries two jacks (marked SEND and RECEIVE) for connection of test cords and a transducer within the unit gives audible indication of received test tone.

Insertion of a test cord plug in either the SEND or RECEIVE jack switches the unit "ON".

IT IS IMPORTANT THAT TEST CORDS ARE DISCONNECTED WHEN THE UNIT IS NOT IN USE.

2 **USE** Locator 5B can be used,

(a) to locate and identify a specific pair within a cable,

(b) to locate a cable or cable termination block carrying a specific pair,

(c) as a continuity tester on circuits up to 1000 ohms loop resistance.

Tests (a) and (b) require 2 locator units (one in "Send" mode, one in "Receive" mode); test (c) requires only one unit (in the "Send" mode). In the "Send" mode, the locator unit operates as an oscillator producing a tone of 600 Hz interrupted approximately 10 times per second; in the "Receive" mode it acts as a detector of the test tone giving an audible indication from its built-in transducer.

Brief instructions on the operation of Locator 5B are given on a label on the unit; these are repeated below in slightly greater detail.

2.1 Location and identification of a cable pair

(i) Plug a test cord into the SEND jack of one unit and apply the test tone across the "known" end of the cable pair.

(ii) At the distant end, plug the probe cord into the RECEIVE jack of the other unit and touch the probe tip on each tag, screw or bared wire until the tone is heard at its loudest.

Copyright reserved

(iii) Final identification is proved by short circuiting the pair being tested with the probe tip; if (and only if) it is the pair carrying the test tone, indication will cease at the receiving end but will be given at the sending end (see 2.3). If a clear identification cannot be made, or if other pairs are to be identified, the receiving locator unit may be changed to the "Send" mode and applied to another pair for location by the first unit (changed to "receive"). Experience will indicate the best method.

2.2 Location of a cable or cable termination

(i) Apply test tone to a cable pair in the normal way (unit in "Send" mode).

(ii) With the other unit in "Receive" mode, connect one leg of the test cord to earth and hold the other leg of the test cord in one hand. The tone can be detected by searching over the cables or cable fanning with the other hand. It is unnecessary actually to touch any of the conductor terminations.

If difficulty is encountered, the sending locator unit may be applied between earth and the test pair, but this method of connection should be avoided if there is a risk of interference with adjacent working circuits.

2.3 Continuity Testing With a locator unit in the "send" mode, short-circuiting the test cord results in the test tone being switched to the transducer in the sending locator. This is the principle applied in the identification of cable pairs in 2.1 (iii).

It may also be used as a check of electrical continuity in other wiring, by applying one of the test clips to each end of a conductor. It should not, however, be relied upon as an indication of dc continuity within equipment circuitry since misleading results can occur.

3 MAINTENANCE *Apart from battery changing and simple cord repairs, no maintenance should be attempted on Locators 5B.*

If the output level of the tone is low and/or the tone sounds distorted, the battery should be changed. Access is gained to the battery compartment by slackening the screw (in the end of the unit case opposite to the end carrying the jacks) sufficiently to allow the cover (marked "BATTERY") to be removed and the battery ("Battery", Dry No.33) to be lifted out. Reasonable care should be taken to avoid straining the battery lead whilst disconnecting or connecting a battery and the compartment cover should be replaced and secured before operating the unit.

Should the fault symptoms persist after change of battery, the test cords should be examined for loose connections or breaks which can easily be rectified.

Locator units or cords which do not respond to these simple faulting procedures should be handed in for exchange. A label should be firmly attached to each item indicating the fault symptoms.

THQ/ME/RCS2.6.2 E N D