

UNIT AUXILIARY APPARATUS No. 103A.  
 FOR TERMINATING INTER-P.B.X. PRIVATE CCTS. AND INTER-P.B.X. EXTENSIONS  
 AT SWITCHBOARDS CB873., AT3796 AND NI070.  
 SIGNALLING GROUP J. S.C.D.C.

N995

PAGE 1-3  
 ISSUE A

TABLE 1.

| ITEM           | RATE BOOK TITLE                   |
|----------------|-----------------------------------|
| C1, C2         | CAPACITOR PAPER No. 7725          |
| C3             | CAPACITOR PAPER No. 7700          |
| MRI, MR2       | RECTIFIER ELEMENT No. 1/2A2       |
| A              | RELAY HIGH SPEED No. 3/412AS      |
| DD             | RELAY No. 17190                   |
| LA             | RELAY POLARISED No. 2B/108.       |
| LR             | RELAY No. 6369                    |
| OG             | RELAY No. 8295                    |
| P              | RELAY No. 9141                    |
| SR             | RELAY No. 3567                    |
| R1, R2, R3     | RESISTOR COIL No. 9-200 $\Omega$  |
| R4, R5, R6, R7 | RESISTOR COIL No. 9-300 $\Omega$  |
| R8             | RESISTOR COIL No. 12-600 $\Omega$ |
| R9             | RESISTOR COIL No. 12-100 $\Omega$ |
| T1             | TRANSFORMER No. 3/216A            |
| SC             | STRIP CONNEXION No. 121A          |

TABLE 2

ADJUSTMENT OF HIGH SPEED RELAY No. 3/412AS

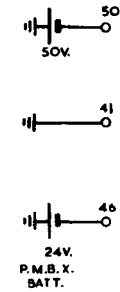
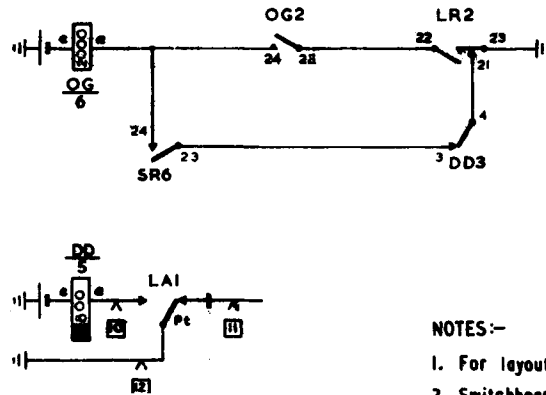
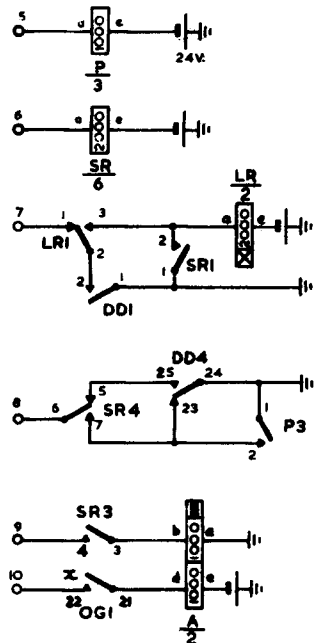
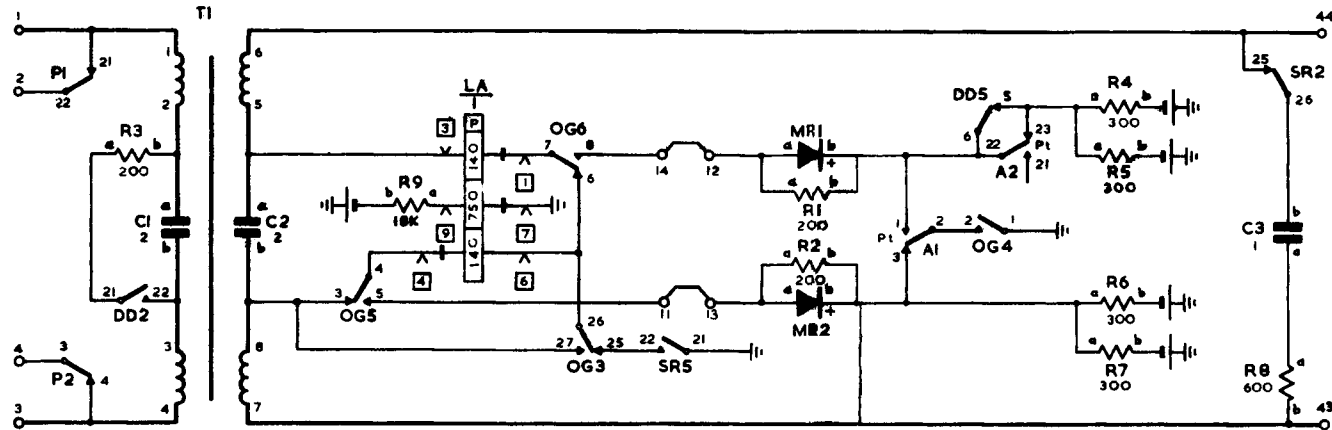
| SPECIAL MECHANICAL ADJUSTMENTS  | CURRENT VALUES WINDINGS a-b+d-e |                  |                       |
|---|---------------------------------|------------------|-----------------------|
|   | CONDITION                       | TEST VALUES (mA) | RE-ADJUST VALUES (mA) |
| RESIDUAL 8-9 MILS<br>TRAVEL 4-7 MILS<br>ADJUST LEVER SPRING TO<br>MEET CURRENT TESTS<br>FOR MAINTENANCE<br>PROCEDURE REFER TO<br>E.I. TELES. AUTO. B 5178 | SATURATE                        | 23               | -                     |
|   | HOLD                            | -                | -                     |
|   | RELEASE                         | 3.8              | 4.0                   |
|   | NON-OP.                         | -                | -                     |
|   | OPERATE                         | 7.8              | 7.4                   |

TABLE 3

ADJUSTMENT OF RELAY POLARISED No. 2B/108

| MECHANICAL ADJUSTMENTS                        | D.C. CURRENT VALUES |              |           |              |           |              |           |
|---|---------------------|--------------|-----------|--------------|-----------|--------------|-----------|
|   | CONDITION           | WDG. 1 (1-3) |           | WDG. 2 (4-6) |           | WDG. 3 (7-9) |           |
|   |                     | TEST         | RE-ADJUST | TEST         | RE-ADJUST | TEST         | RE-ADJUST |
| IN ACCORDANCE WITH<br>E.I. TELES. AUTO. B5174 | SATURATE            | 33.5         | 33.5      | 33.5         | 33.5      | 25           | -         |
|   | NON-OP.             | -            | -         | -            | -         | -            | -         |
|   | OPERATE             | 3.0          | 2.35      | 3.0          | 2.35      | 2.3          | -         |

|                            |       |                                    |            |
|----------------------------|-------|------------------------------------|------------|
| P.O.<br>TELECOMMS.<br>HQS. | ISSUE |                                    |            |
|                            |       | PAPER - W<br>CIRCLTN.:-<br>GENERAL |            |
|                            |       | A PAGE 3 ADDED. <i>J.L.R.</i>      | 9. 7. 69.  |
|                            |       | <i>J.L.R.</i>                      | 18. 3. 69. |
|                            |       | TD2.4.1. SECTION                   |            |



NOTES:-

1. For layout of U.A.A. see Drg. 92928.
2. Switchboard Terminating details are Dgms. as follows.,

|             |        |                 |
|-------------|--------|-----------------|
| Switchboard | CB 873 | AT 3796 & N1070 |
| Dgm. No.    | N772   | N 777           |

3. For wiring of unit see Diagram LD 202.

U.A.A. 103A USED WITH SWITCHBOARD CB 873 (SEE ALSO N 772).

OUTGOING CALL FROM SWBD. When plug is inserted in jack earth via auxiliary springs and tag 6 operates relay SR, SR 6 operates relay OG via DD3 and LR2. SRI operates relay LR (slow operate) SR 4 operates calling indicator (supy) from earth via DD 4 normal. OGlx operates relay A via dial key KD and SR 3 operated. OG 3, OG 5 and OG 6 prepare Inter-P.B.X. circuit for an outgoing call. AI sends call signal to distant P.A.B.X. (earth "A" battery "B") which returns dial tone on seizure. Dial key is operated and operates relay P, P 1 and P 2 disconnect speech circuit. Operator now commences to dial, A responds to dial pulses, A 1 alternates battery and earth to 'A' and 'B' lines. Dial key restored at end of dialling P releases P 1 and P 2 restore speech circuit. When P.A.B.X. answers (extn. or operator) earth is applied to 'A' and 'B' lines at P.A.B.X. this causes LA to operate, LA 1 operates DD, DD 4 disconnects supervisory indicator, DD2 completes a loop across tip and ring, DD 5 operated with A 2 operated prevents a heavy current drain from battery via R 4 and R 5 in parallel to earth at OG 4.

CLEARDOWN. If the P.M.B.X. operator clears first, (on receipt of a clear from the local extension), plug is removed SR releases, SR 3 releases A, A 1 and A 2 reverse battery and earth to P.A.B.X. this releases the P.A.B.X. if the call is to an extension, or gives a clear to P.A.B.X. operator if call is via manual board. When P.A.B.X. clears earth on 'A' and 'B' is replaced by a loop formed by the coils of the signalling relay, LA releases, LA 1 releases DD, DD 1 releases LR, LR 2 releases OG. OG 5 and OG 6 connect relay LA coils in series across the Inter-P.B.X. line. If the P.A.B.X. clears first earth off 'A' and 'B' lines releases LA, LA 1 releases DD 1, DD 4 operates supervisory indicator. When P.M.B.X. operator removes plug SR releases and the clear-down sequence is as before.

INCOMING CALL. Call signal from P.A.B.X. earth 'A' battery 'B' LA operates, LA 1 operates DD, DD 4 operates calling indicator via LR 1 normal. Operator plugs in to answer, SR operates via auxiliary springs, SR 1 operates LR, LR 1 releases indicator, SR 5 gives answer signal to P.A.B.X. (earth on 'A' and 'B' lines).

CLEARDOWN. If P.M.B.X. clears first plug removed, SR releases, SR 5 removes earth from 'A' and 'B' giving clear to P.A.B.X. When P.A.B.X. clears earth 'A' battery 'B' is removed, LA releases, LA 1 releases DD, DD 1 releases LR. If, P.A.B.X. clears first reversal of polarity of 'A' and 'B' lines releases LA, LA 1 releases DD, DD 4 operates supervisory indicator. P.M.B.X. operator removes plug SR releases, SR 1 releases LR.

PROHIBITION. If an attempt is made to extend an Exchange Line on a Private circuit, earth from sleeve of Exchange jack via cord circuit operates P, P 1 and P 2 disconnect speech circuit, P3 maintains clear signal.

U.A.A. 103A. USED WITH SWITCHBOARD AT 3796 OR N 1070 (SEE ALSO N 777).

Operation of unit is the same as for CB 873 with the following exceptions. When dial key is operated P does not operate, instead dial common to cord circuit is disconnected. When DD operates DD 1 operates calling indicator and DD 2 extends supervisory loop to cord circuit tip and ring.