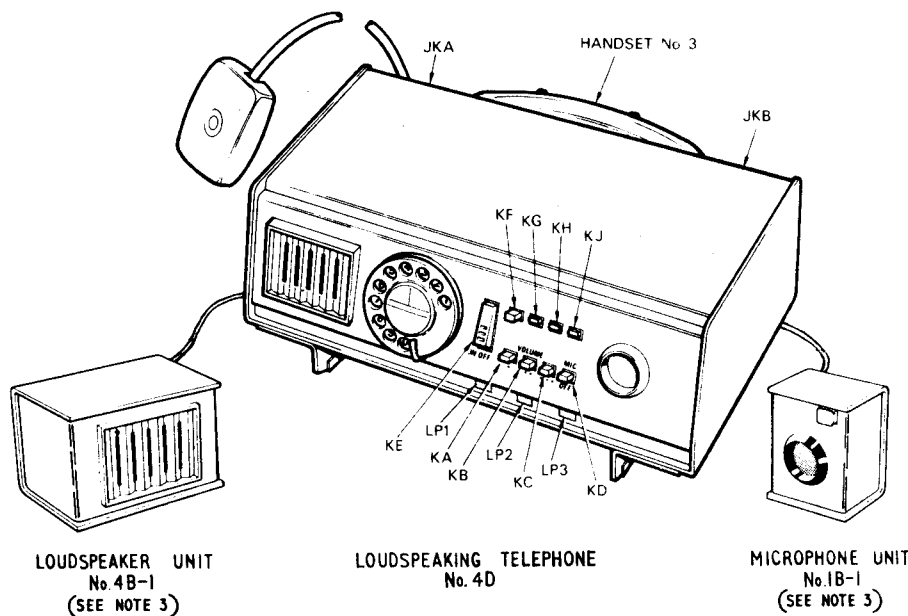


LOUDSPEAKING TELEPHONE No.4D

TABLE TELEPHONE WITH PROVISION FOR 1-4 PRESS-BUTTONS FOR USE ON AUTOMATIC SYSTEMS

N4475
PAGE 1-13
ISSUE C



LOUDSPEAKER UNIT
No. 4B-1
(SEE NOTE 3)

LOUDSPEAKING TELEPHONE
No. 4D

MICROPHONE UNIT
No. 1B-1
(SEE NOTE 3)

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BUZZER No. 32C-3

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P.M.B.X. EXTENSION WITH C-WIRE SIGNALLING

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(OBSOLESCENT)

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FIG. 1

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OTHER REFERENCES

GENERAL INFORMATION — TI C3 B2000

INSTALLATION — TI C3 B2004

MAINTENANCE — TI E5 B2806

AUXILIARY UNITS — DGM. N848

REMOTE HANDSET — DGM. N813

EXTENSION PLANS 105, 105A N4507

EXTENSION PLANS 107, 107A N4509

N4549

N4649

NOTES:—

POWER

- The Loudspeaking Telephone No.4D requires a power supply of 50V. D.C. This may be provided by a Power Unit No.86B or by a power lead from the P.B.X.

LOUDSPEAKER ATTENUATOR

- The terminals on the left of the amplifier may be strapped in HIGH or LOW positions, the strap should normally be in the HIGH position but if, due to poor room acoustics, speech from the loudspeaker becomes mutilated, use of the LOW strapping may help.

EXTENSION UNITS

- Microphone Unit No.1B-1 (Diagram N4456) plugs into Socket JKB. Loudspeaker Unit No.4B-1 (Diagram N4457) plugs into Socket JKA. JKA and JKB are in the plastic bag inside the instrument. If required they should be fitted into the holes in the back panel and wired as shown on Page 3. JKA, having 4 wires goes behind the loudspeaker in the loudspeaking telephone. When JKA is fitted the strap between Terminals 5 and 6 of the amplifier should be removed.

AUXILIARY FITTINGS

- The Loudspeaking Telephone No.4D can be used with the auxiliary fittings shown on Diagram N848 with the exception of:—
Adapters, Local Battery No.4, No.7 and No.8. Lamp Fitting No.16A and No.17A and Lamp Signalling Unit No.1 and No.2.

- The press-buttons used with Loudspeaking Telephone No.4D are shown in Fig.1, Page 2. A bag containing one of each of these is enclosed in the Loudspeaking Telephone No.4D to save requisitioning the buttons. Buttons recovered when facilities are changed should be returned to the bag, which should be kept in the loudspeaking telephone.

- A hank bush is provided on the chassis of the Loudspeaking Telephone No.4D to accommodate a Buzzer No.32C-1. Buzzer No.32C-3 may be fitted as shown in Fig.8 on Page 4.

PHONE RINGER

- Sometimes, when working from vibrator or transistor ringing, operation of the tone ringer may be unsatisfactory (e.g. likely when used as P.M.B.X.4 extension). In such cases fit Resistor Coil No.35A 3.9k in place of Strap T4-T5. On Extension Plans fit resistor in main instrument only.

PRECAUTIONS

- Resistors R7 & R8 run hot. Avoid wires touching them.
- Take care to replace all screws withdrawn. Failure to do may cause faulty operation.
- The fixed microphone is a special transducer matched to an attenuator. It is not available as a maintenance spare.

PO TELECOMMS HQRS			
PAPER:— W	ISSUES	C	PAGES 3 & 4 REDRAWN. PAGES 3-13 WERE PAGES 6-13 AND 3-5 RESPECTIVELY. PAGES 11-13 MADE YELLOW. PAGES 1-6, 8 & 9 NOTES AMENDED. MINOR AMENDMENTS. E.S. <i>r.h. mason</i> TD 7.1.2
DISTN:— GENERAL		B	LST 4A (MK1) AND (MK2) LST 4D (MK1) AND EXTENSION PLANS ADDED. MINOR AMENDMENTS. R.H.S. TD 2.3.2
			8.5.79
			26.3.71

FIG. 1. PRESS-BUTTONS.

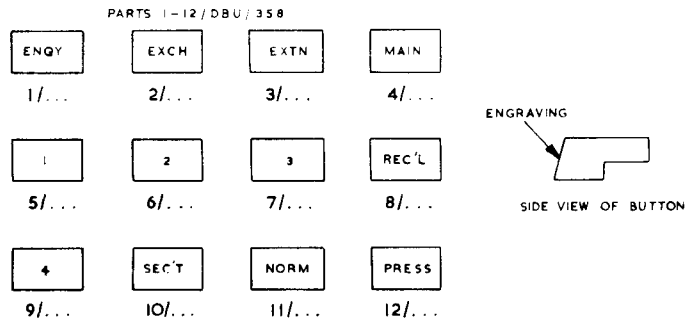


FIG. 2. LATCH SETTINGS.

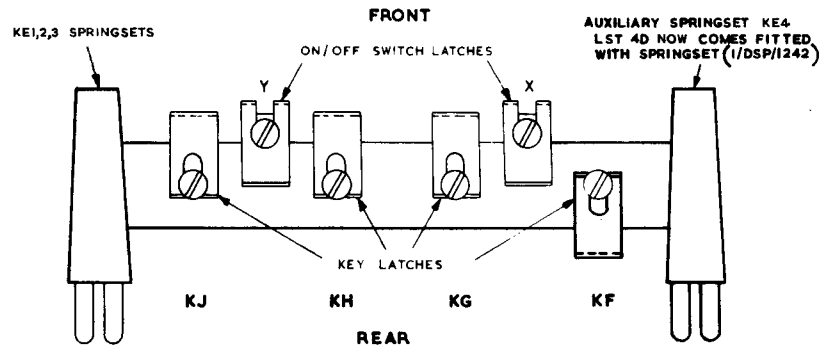


FIG. 3. VOLUME CONTROL LATCH SETTINGS.

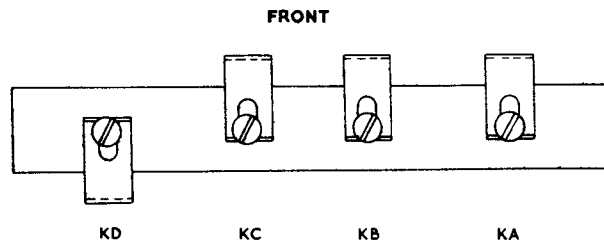
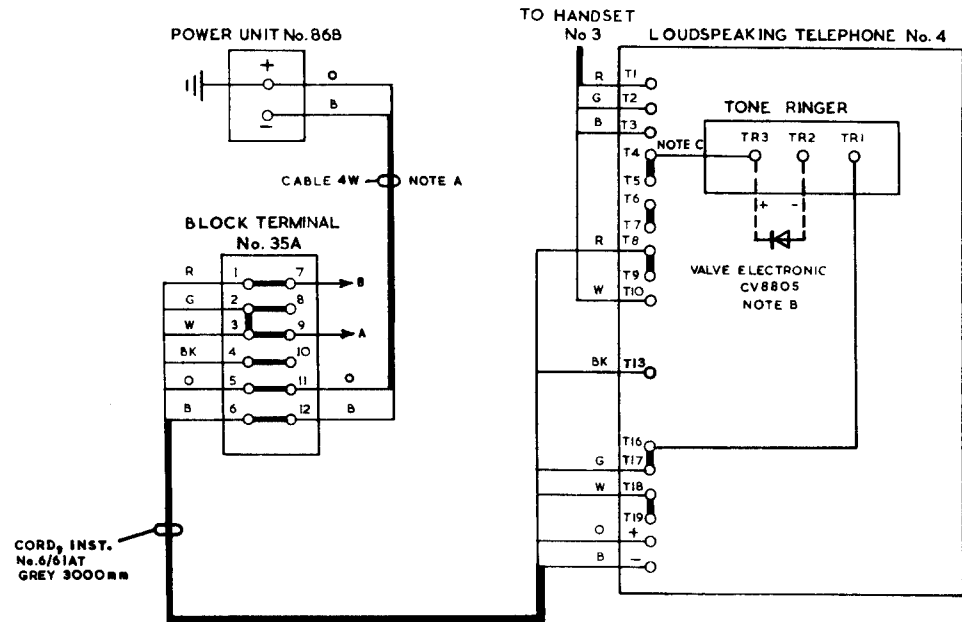


FIG. 4. DIRECT LINES.



ADDITIONAL ITEMS REQUIRED:- POWER UNIT No. 86B NOTE A
VALVE ELECTRONIC CV8805 (FOR U.A.X.5) NOTE B

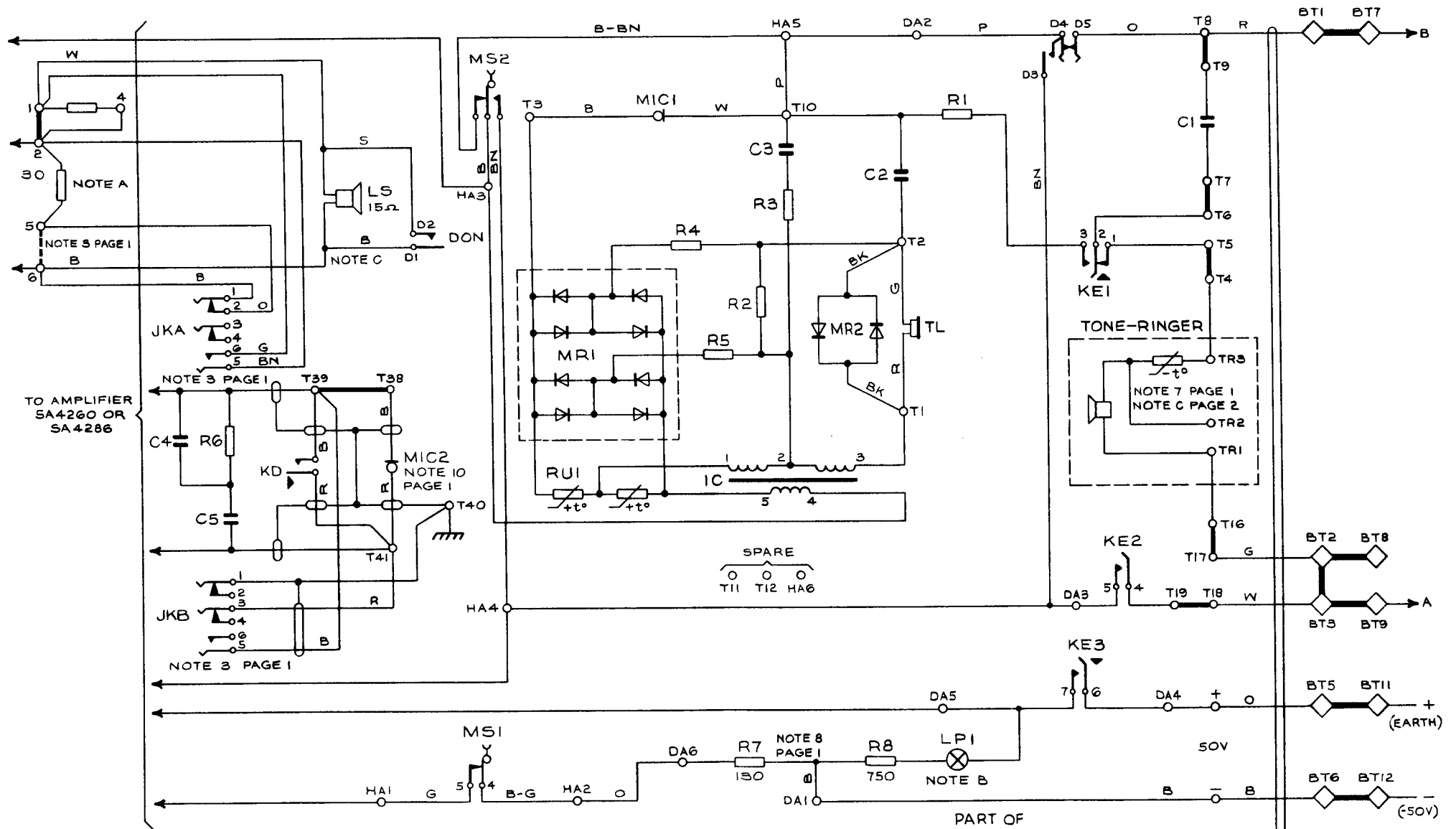
NOTES FOR FIG. 4

- Power supply either from Power Unit No. 86B or 50v power lead from the P.B.X.
- In U.A.X. areas with vibrator ringing, provide and fit Valve Electronic CV8805. (Applies only with Tone Ringers No.6A, not with Tone Ringers No.9A).
- Some early Loudspeaking Telephones No.4D may have T4 incorrectly connected to TR2 instead of TR3. This should be rectified. The terminals of Tone Ringers No.6A may be marked T instead of TR. Tone Ringers No.9A have no alternative connexion and no labelled terminals. Both No.6A and No.9A Tone Ringers are currently in use. See also Note 7 on Page 1.

NOTES FOR FIGS. 2-3.

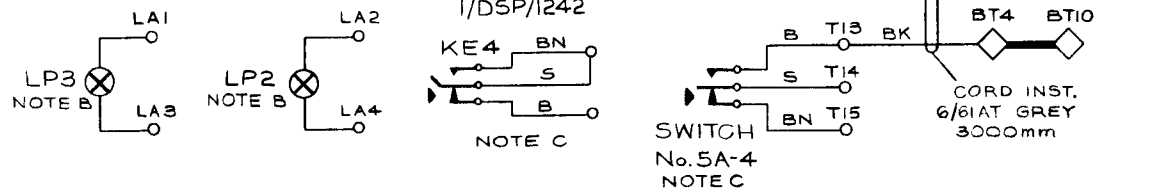
- The latching mechanism forms an integral part of the Loudspeaking Telephone No. 4. The upper row of press buttons (KF, KG, KH, KJ) provides identical facilities to those of Telephone No. 710 (DGM.N848), with the on/off switch (KE) of the loudspeaking telephone providing the release, instead of the gravity switch.
- The latch settings for press-buttons KA,KB,KC,KD are shown in FIG. 3, as issued, and should not be altered.
- The latch settings for press-buttons KF KG KH KJ are as given for Telephone No.710 (DGM N848)
- When an independently locking and unlocking button is required the latch should be in the non-locking setting like KF in Fig.2 and part 1/DBU/262 with part 1/DPI/205 should be fitted.
- If another button is fitted solely to release a locked press-button, its plunger must be supported by a part 1/DST/26.

FIG.5 LOUDSPEAKING TELEPHONE No.4D CIRCUIT DIAGRAM.



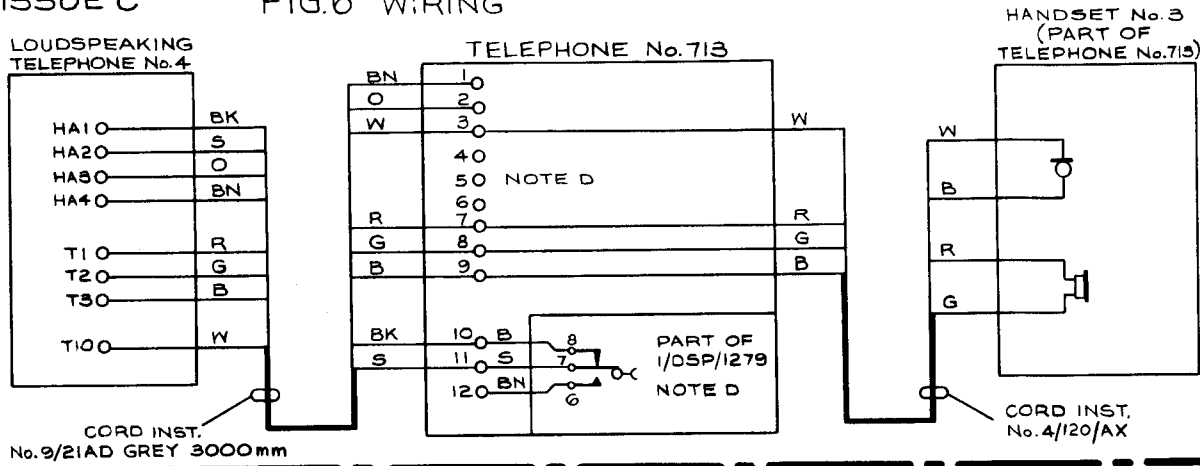
NOTES:—

- A STRAPS ARE SHOWN IN THE 'HIGH' POSITION AS ISSUED. FOR 'LOW' POSITION REMOVE THE STRAP BETWEEN 1 & 2 AND REPLACE BETWEEN 2 & 3.
- B LAMPS LP2 & LP3 NOT FITTED. LAMP LPI IS LAMP No.41F
- C ON SOME EARLY MODELS KE4 SPRINGSET AND SOMETIMES KF SPRINGSET WERE NOT FITTED. ALSO DON SPRINGS WERE ACROSS TL INSTEAD OF LS.



FITTING REMOTE HANDSET

FIG.6 WIRING



FITTING BUZZER No.32C-3

FIG.8 SHOWING FIXING OF BUZZER No.32C-3

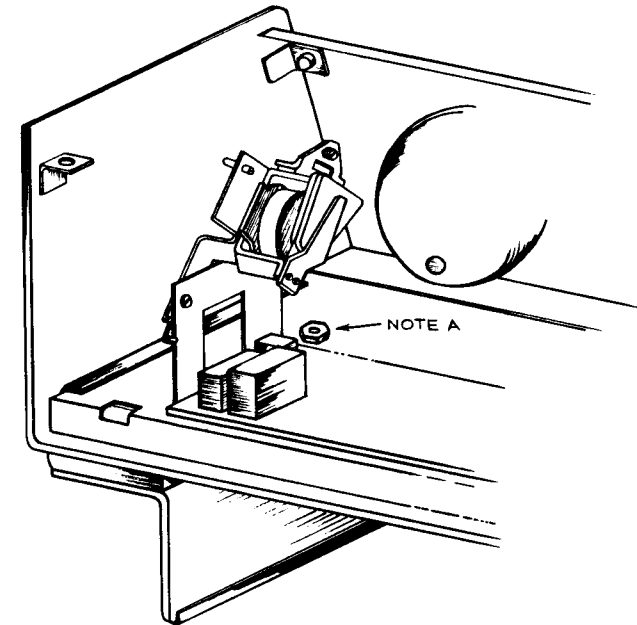
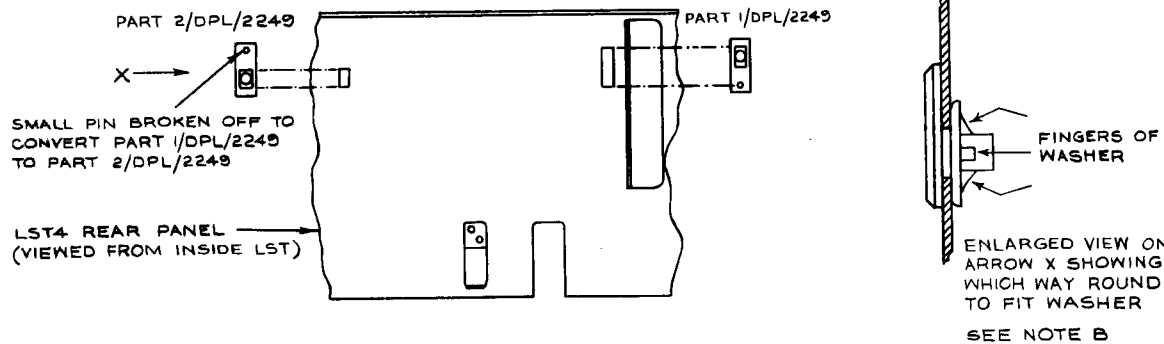


FIG.7 BLOCKING HOLES IN REAR PANEL



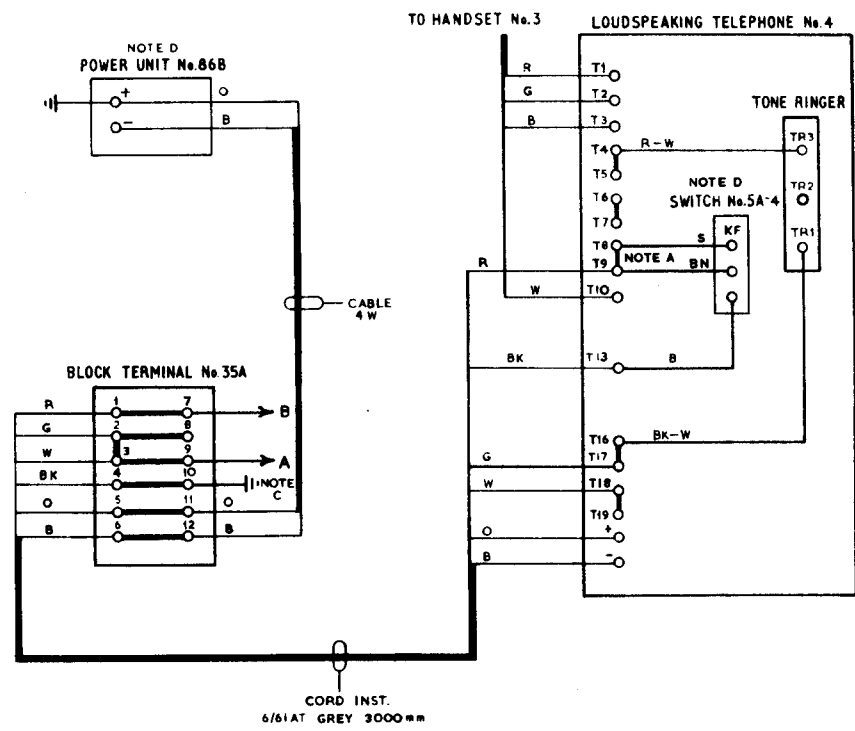
ADDITIONAL ITEMS REQUIRED
TELEPHONE No. 713
PART 1/DSP/1279
CORD INST. No. 9/21AD GREY 3000mm
KIT No. 284A

NOTES FOR FIGS. 6 & 7

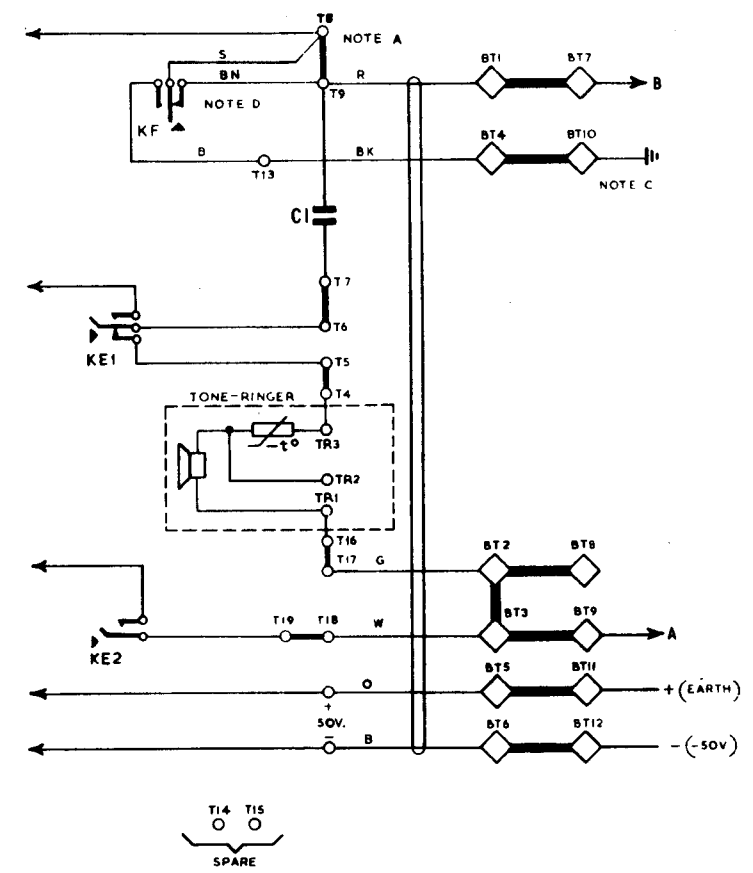
- A REMOVE THE REAR PANEL AND TAKE OFF THE HANDSET RESTS BY UNDOING THE NUTS ON THE INSIDE OF THE PANEL.
- B REMOVE THE MICROSWITCH AND INSERT PARTS 1 AND 2/DPL/2249 AS SHOWN IN FIG. 7. THESE PARTS ARE IN KIT No. 284A. TO CONVERT A PART 1/DPL/2249 TO A PART 2/DPL/2249 BREAK OFF THIN PIN. IN SOME KITS THIS IS ALREADY DONE.
- C DISCONNECT HANDSET CORD FROM TERMINALS T1, T2, T3 AND T10 OF LST AND REMOVE THIS HANDSET.
- D FIT PART 1/DSP/1279 AND CHANGE WIRING OF TELEPHONE No. 713 HANDSET AS SHOWN. COMPLETE WIRING AS SHOWN.
- E REFIT REAR PANEL TO LST.
- F SECURE SPARE LEADS ON SPARE TERMINALS OR INSULATE WITH TAPE TO AVOID RISK OF ELECTRICAL CONTACT WITH OTHER PARTS OF TELEPHONE.
- G FOR INTERNAL WIRING OF TELEPHONE No. 713 SEE DIAGRAM N813.

NOTE A THE PREFERRED BUZZER IS BUZZER No. 32C-1 WHICH FITS ON THE HANK BUSH SHOWN.

FIG.9. TWO WIRE P.B.X. EXTENSION WITH RECALL.

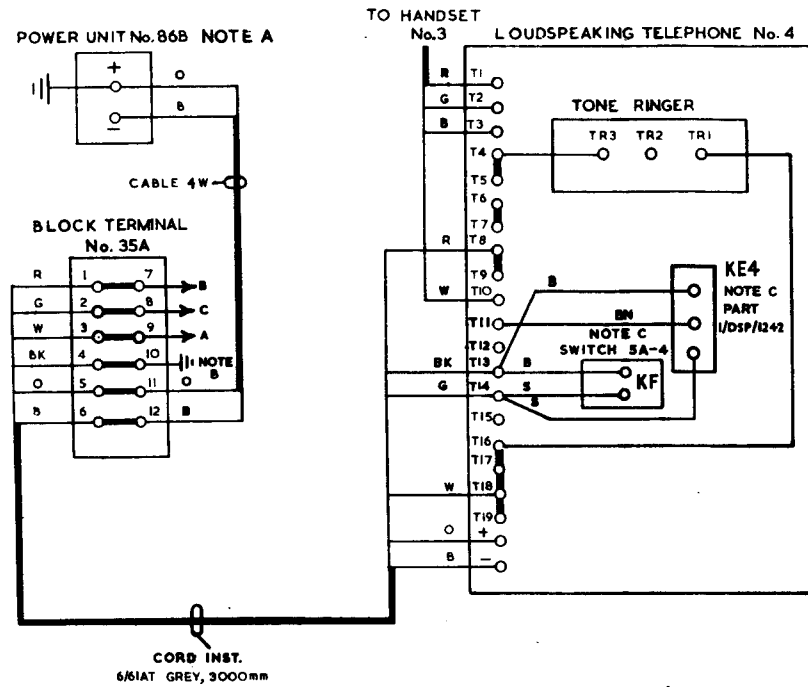


ADDITIONAL ITEMS REQUIRED
Power Unit No.86B Note B
For old instruments see Note D



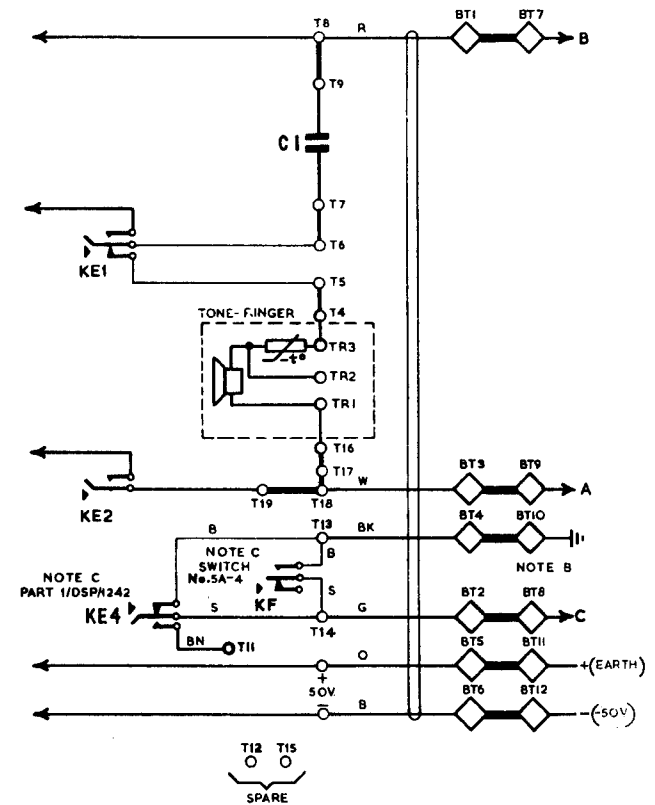
- NOTES FOR FIG.9.
- A. For earth loop recall, retain strap between T8 & T9.
For one line earth, loop disconnect recall, remove strap between T8 & T9.
 - B. Power supply either from Power Unit No.86B or 50V. power lead from the PBX.
 - C. Do not use the mains earth for signalling purposes.
 - D. Loudspeaking Telephone No.4D now comes with Switch No. 5A-4 fitted.
When adding recall to an old instrument Switch No.5A-4 may have to be supplied.

FIG.10. P.M.B.X. EXTENSIONS WITH C-WIRE SIGNALLING.



ADDITIONAL ITEMS REQUIRED.

Power Unit No.86B Note A
For old Instruments see Note C



NOTES FOR FIG.10

- A Power supply either from Power Unit No.86B or 50V power lead from the PBX.
- B Do not use the mains earth for signalling purposes.
- C Loudspeaking Telephone No.4D now comes fitted with Part 1/DSP/1242 and Switch No.5A-4. If using an old instrument they may have to be supplied.

FIG.11. EXTENSION PLANS 105,105A—INTERNAL EXTENSIONS.

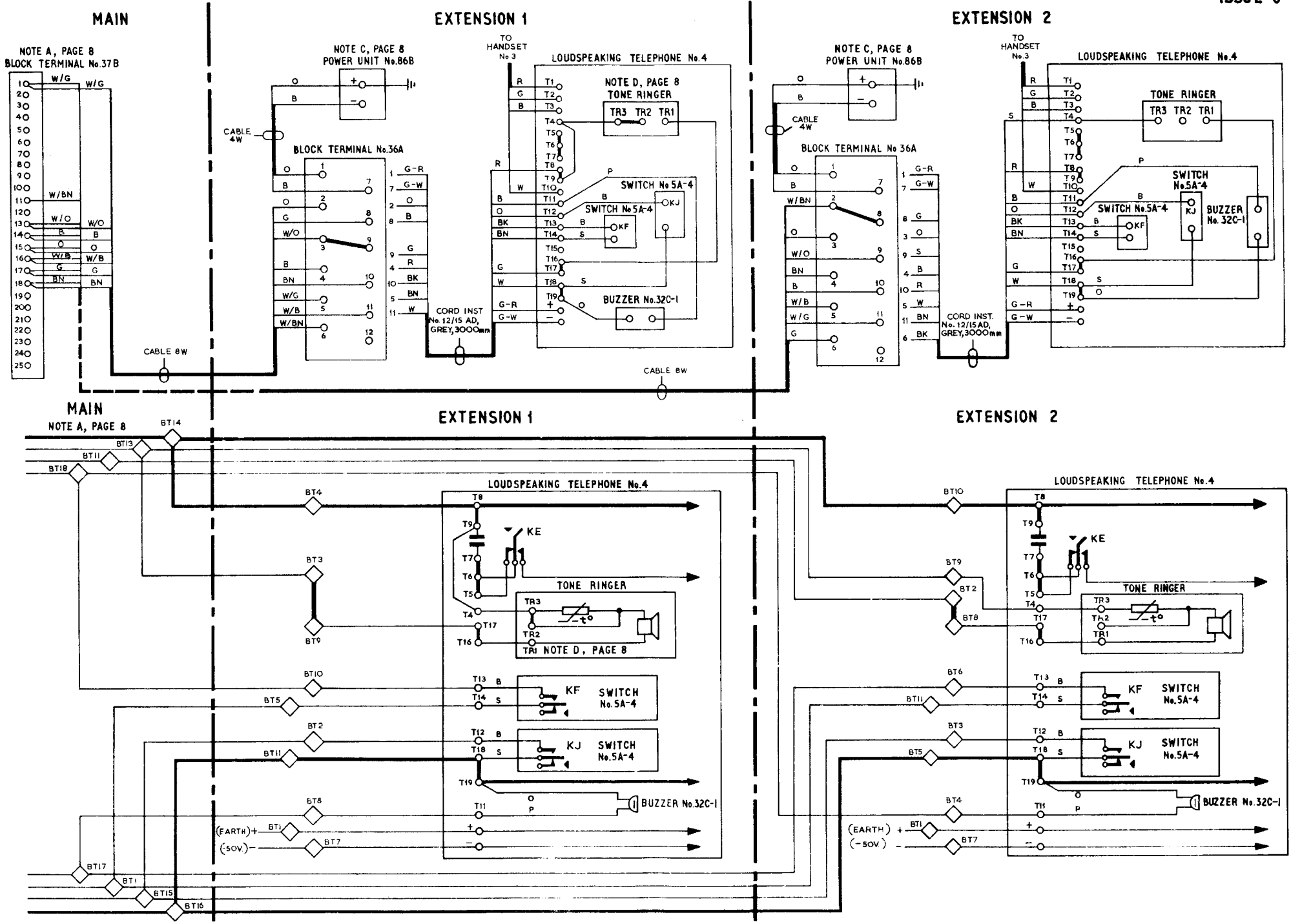
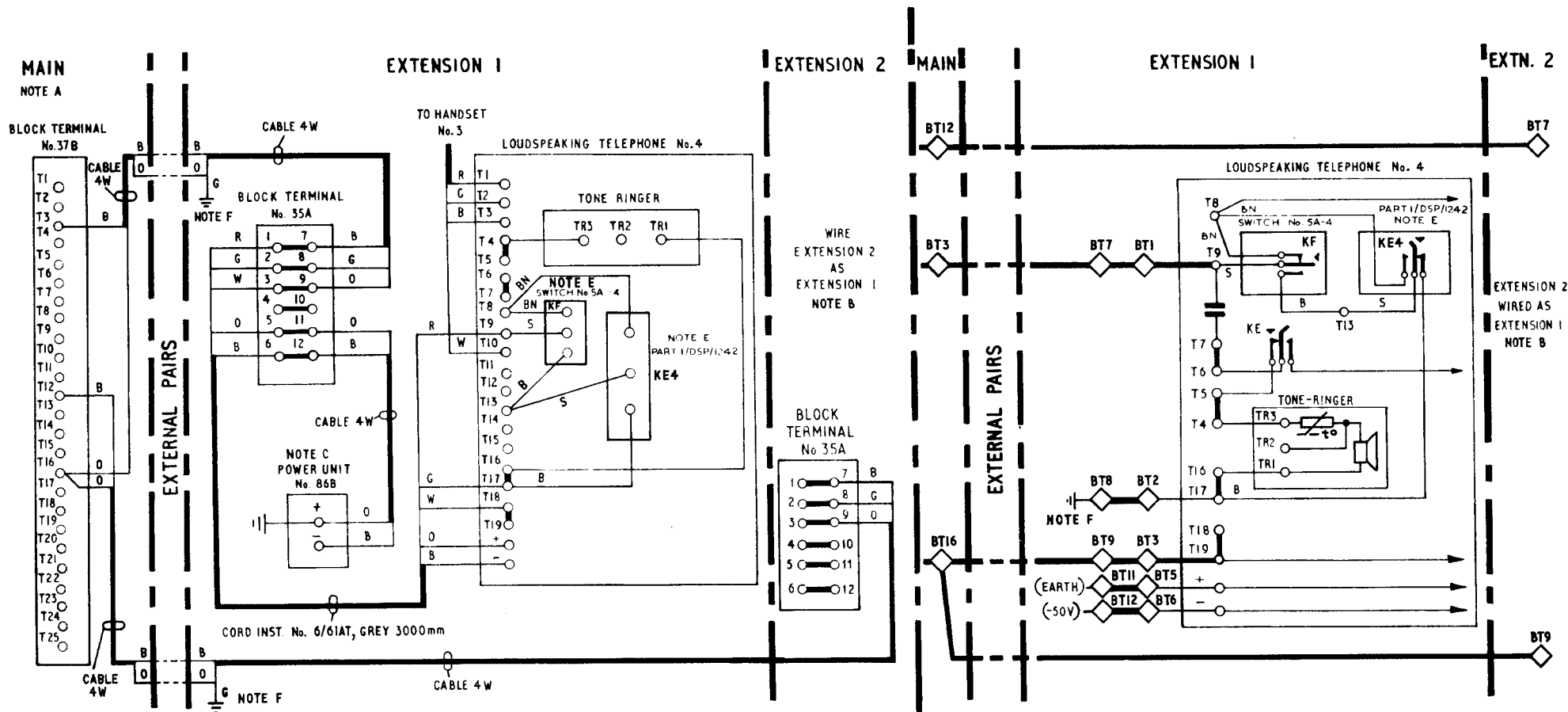


FIG. 12. EXTENSION PLANS 105,105A EXTERNAL EXTENSIONS.



NOTES FOR FIGS. 11,12

- A. Wire Main Installation as shown in Diagram N4507.
- B. If only one extension is an LST4, wire other extension as shown in Diagram N4507.
- C. Power supply either from Power Unit No. 86B or 50V power lead from the PBX.
- D. Strap Terminal TR2 to Terminal TR3 at Extension 1 only and then only if Extension 2 is an LST4 (applies only if Tone Ringer is a No.6A, not if it is a No.9A. Also terminals may be designated T.. instead of TR..).
- E. LST 4D now comes fitted with Part 1/DSP/1242 and Switch No.5A-4. For some old instruments they have to be supplied.
- F. Do not use the mains earth for signalling purposes.

ADDITIONAL APPARATUS REQUIRED

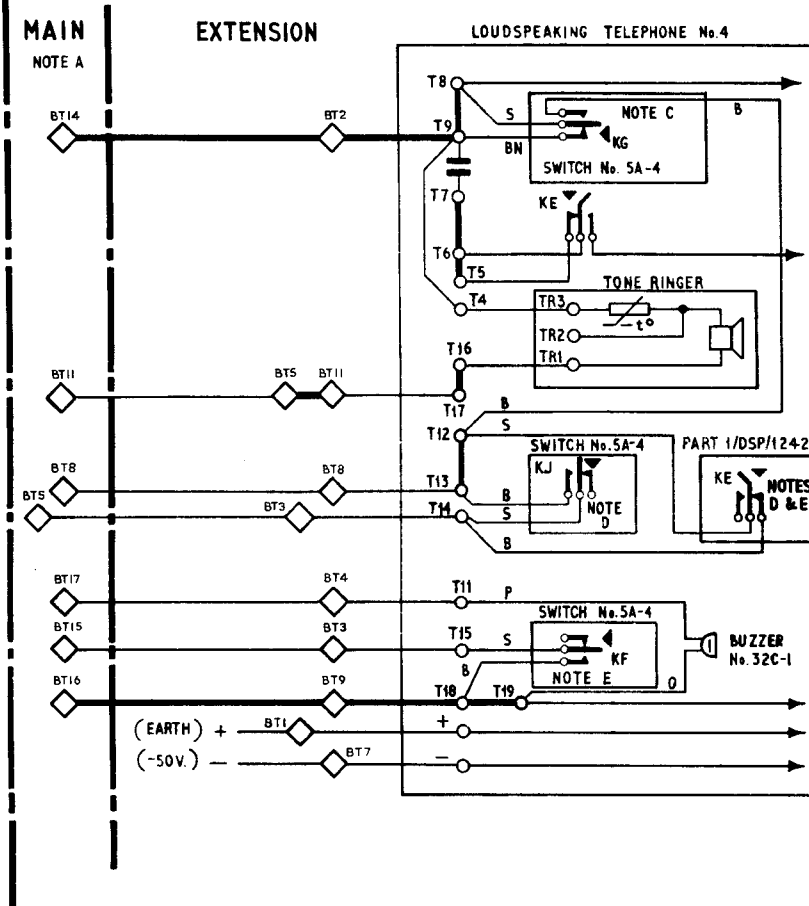
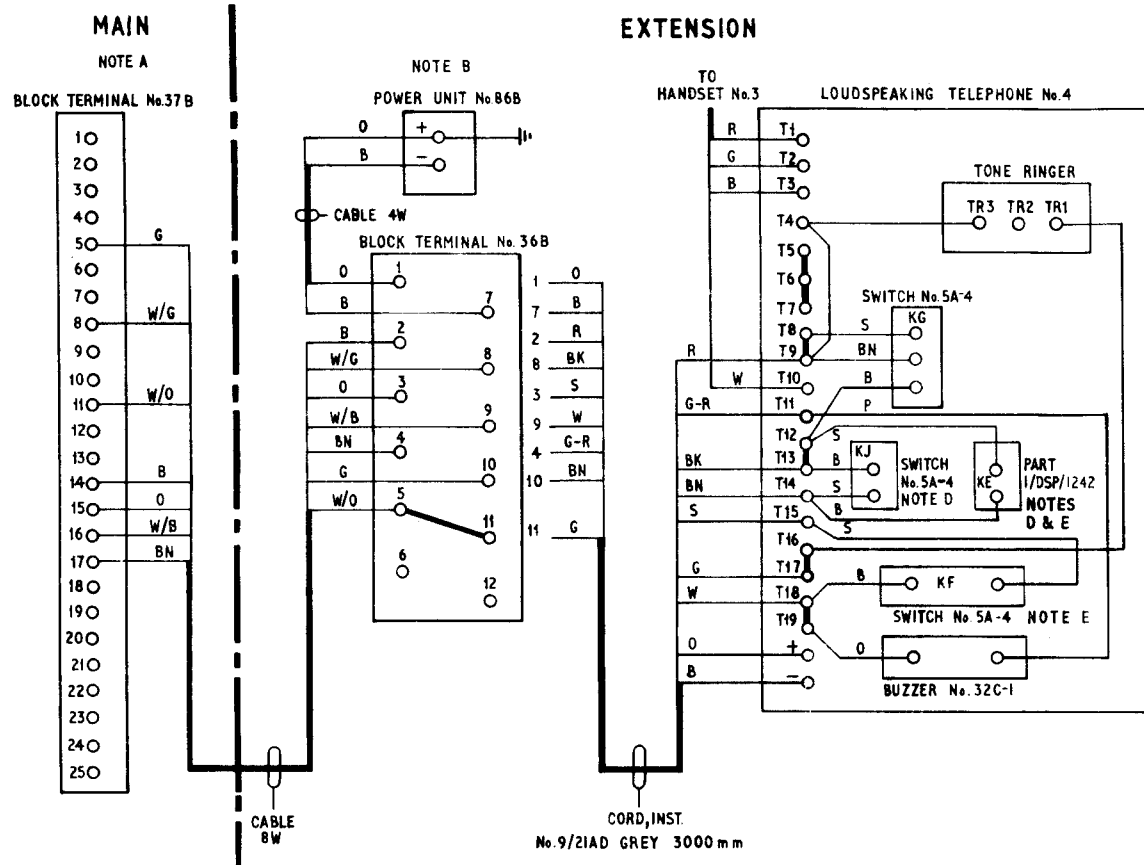
INTERNAL EXTENSION

- Buzzer No. 32C-1
- Switch No. 5A-4
- Cord Inst. No.12/15AD Grey 3000mm
- Block Terminal No. 36B
- Power Unit No.86B Note C

EXTERNAL EXTENSION

- Power Unit No.86B Note C
- For old instruments see Note E

FIG.13. EXTENSION PLANS 107,107A-INTERNAL EXTENSION, WITH OR WITHOUT RECALL.



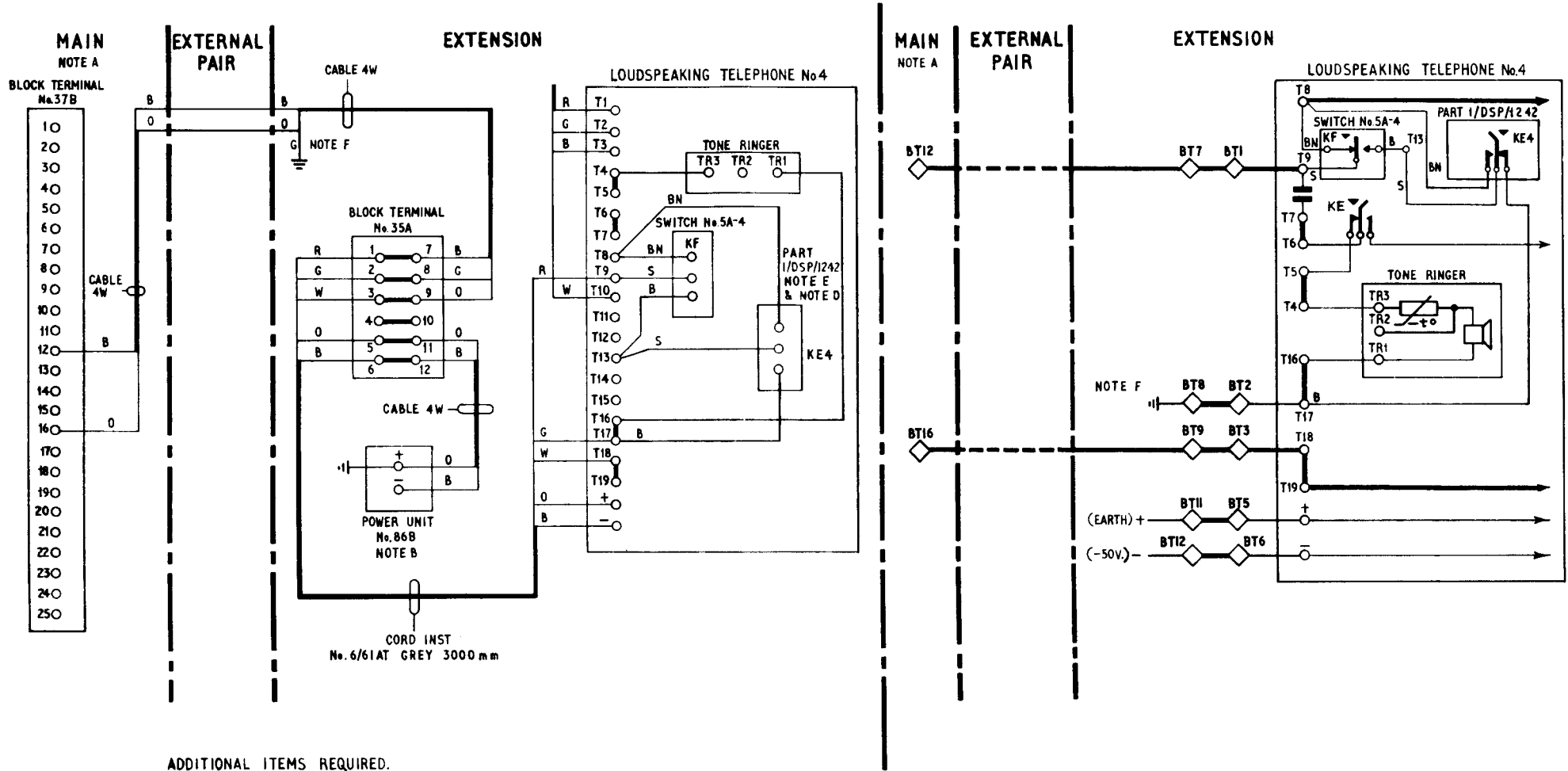
NOTES FOR FIGS.13,14

- A. Complete the main installation as shown on appropriate N diagram (N4509-without recall; N4549-2 wire recall; N4649-3 wire recall).
- B. Power supply either from power unit No.86B or 50V. power lead from the PBX.
- C. Provide and fit switch No.5A-4, KG, only on 2 wire recall. Remove strap between terminals T8 & T9 for one line earth, loop disconnect recall; retain strap for earth loop recall.
- D. Provide and fit switch No.5A-4, KH, only on 3 wire recall. Use Part 1/DSP/1242 only where C-wire used for signalling other than recall.
- E. LST 4D now comes fitted with Part 1/DSP/1242 and Switch No.5A-4, KF. For some old instruments they may have to be supplied.
- F. Do not use the mains earth for signalling purposes.

ADDITIONAL ITEMS REQUIRED.

- Cord Inst. No.9/21 AD, grey, 3000mm.
- Buzzer No.32C-1.
- Switch No.5A-4. Notes C, D.
- Part 1/DSP/1242 if required, Note D.
- Power Unit No.86B. Note B.
- Block Terminal No.36B.
- For old instruments see Note E.

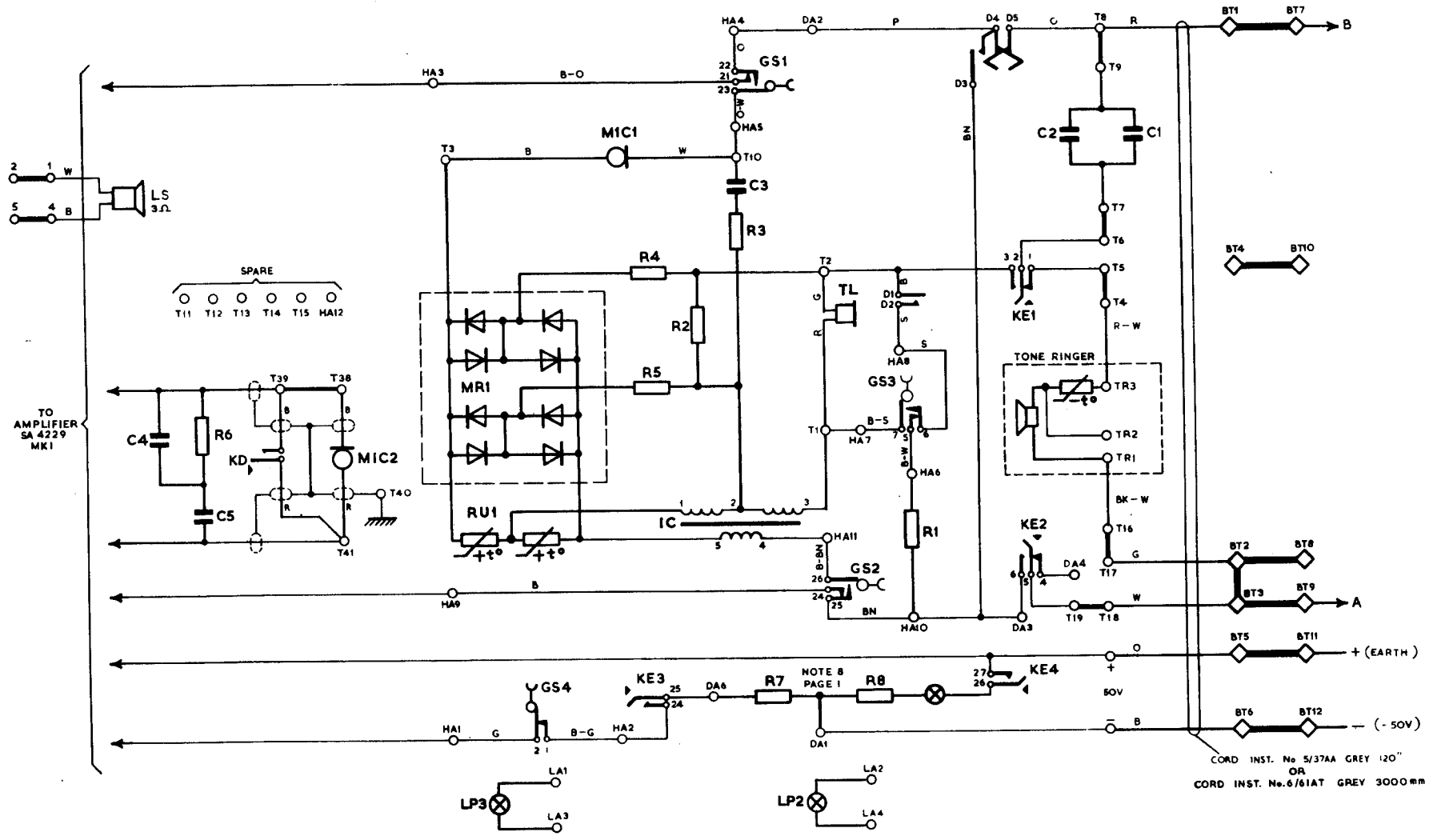
FIG. 14. EXTENSION PLANS 107, 107A - EXTERNAL EXTENSION.



ADDITIONAL ITEMS REQUIRED.
Power Unit No.86B Note B.
For old instruments see Note E on Page 9.

NOTES:— See Page 9.

FIG. 15 LOUDSPEAKING TELEPHONE No.4A-1 MK1.
CIRCUIT DIAGRAM CONNEXIONS AS ISSUED.



Note:-
A. L.S.T. No.4A.... MK1 below serial No.1870 are not wired for LP2 & LP3

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PAPER:- Y	ISSUE		
	C	PAGES 3 & 4 REDRAWN. PAGES 3-13 WERE PAGES 6-13 AND 3-5 RESPECTIVELY. PAGES 11-13 MADE YELLOW. PAGES 1-6, 8 & 9 NOTES AMENDED. MINOR AMENDMENTS. E.S.	8.5.79
DISTN: GENERAL	B	LST4A (MK1) & (MK2), LST4D (MK1) AND EXTENSION PLANS ADDED. MINOR AMENDMENTS. R.H.S.	26.3.71

FIG. 16 LOUDSPEAKING TELEPHONE No. 4A-1 MK1A
CIRCUIT DIAGRAM, CONNEXIONS AS ISSUED.

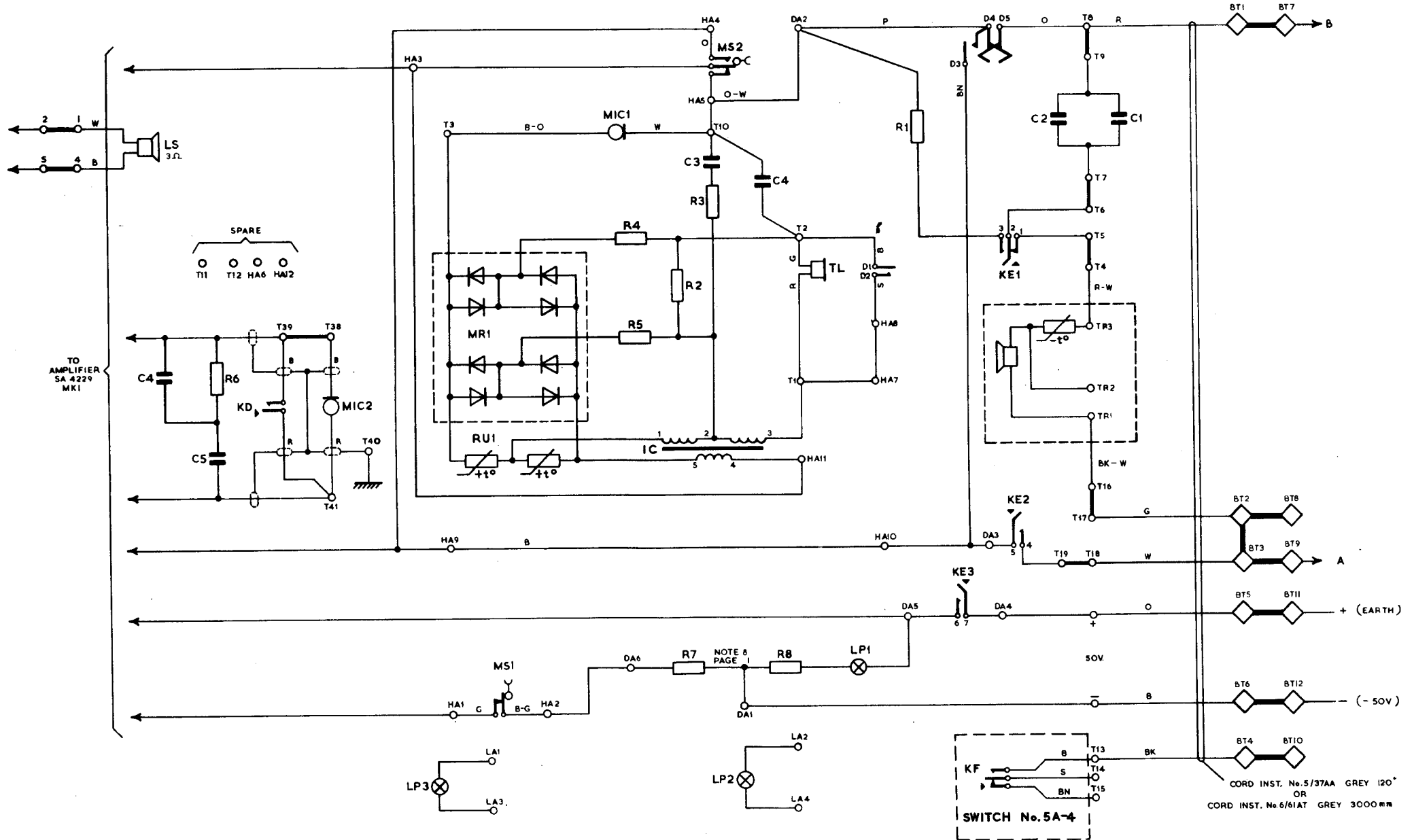
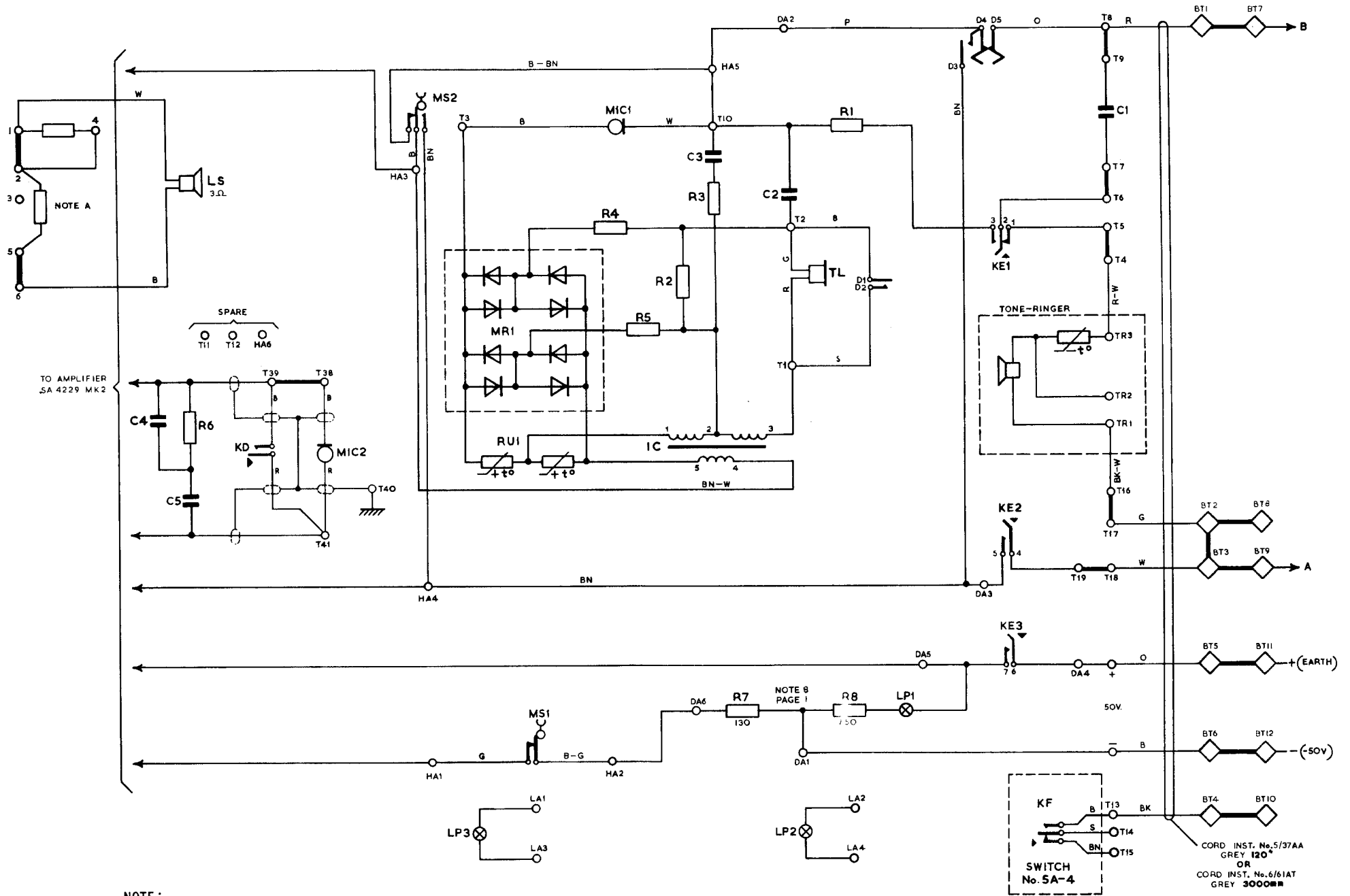


FIG.17. LOUDSPEAKING TELEPHONE No.4A-1 MK2.
CIRCUIT DIAGRAM, CONNEXIONS AS ISSUED.



NOTE:-
A: Straps are shown in the HIGH position as issued.
For LOW position remove the strap between 1 & 2 and replace between 2 & 3.