

KX-30™ INTERCOM EXPANDER KEY TELEPHONE UNIT

1. GENERAL

1.01 The KX-30 Intercom Expander provides a transfer function for expanding a ten-station intercom system. No additional intercom is necessary to provide for expansion. The KX-30 expands an intercom system in 30 station increments up to 90 stations. One KX-30 expands a ten-station system up to 30 stations, two expand it up to 60 stations and three expand it up to 90.

2. DESIGN FEATURES

2.01 The KX-30 was designed to expand a Melco KT-10X Tone Intercom, a KC-10X Combination Intercom or a KR-10X Rotary Intercom. Units issued after January 1978 have the capability of expanding a Western Electric 424-B or 424-C KTU Rotary Dialing Intercom in the Western Electric 641A Panel. In this application, the addition of a 624A Panel and 444A Expansion Unit is not required.

NOTE: Units with the capability described above have side labels dated 1-78 and/or cable plugs with yellow and green markings. Units issued previous to this change have labels dated 9-76 or earlier and cable plugs marked only with yellow.

2.02 The KX-30:

- is used to expand Melco KT-10X, KR-10X or KC-10X or W.E. Co. 424-C intercoms.
- mounts adjacent to 200-series panel-mounted key telephone equipment or on a wall adjacent to the equipment cabinet.
- connects through its plug with a standard A25B or equivalent 25 pair connector cable.
- operates from a standard key system power supply.
- utilizes two-digit codes.

2.03 Any three of digits 1 — 9 may be assigned as transfer; that is, as first digits of two-digit numbers.

3. INSTALLATION

3.01 Mount the KX-30 in an apparatus cabinet equipped with 7" x 1.5" mounting space, in a relay rack or on a wall.

3.02 Attach an A25B or equivalent 25-pair connector cable to the KX-30 plug with the clamp provided. Terminate cable on a 66-type connecting block.



Fig. 1

3.03 Cross-connect R0-R9 and XL from the intercom to the KX-30 as shown in Figure 2. Transfer leads A, B and C XFR of the KX-30 may be connected to any R () X leads of the intercom to become first digits of two-digit numbers.

3.04 Connect A0-A9, B0-B9 and C0-C9 to station R leads to agree with station number assignments. Connect ground to all B or RG leads

on station blocks. Verify that there are no R leads shorted to ground.

3.05 When the KX-30 is used to expand a Western Electric 424-B or 424-C in the 641A panel, make the following connections in addition to those described above (see Fig. 4).

- a. connect KX-30 lead XL to 641A lead J.
- b. connect KX-30 lead TD to 641A lead TD.
- c. connect KX-30 B BAT to 641A lead BR.

3.06 Connect B BAT to unfiltered key telephone power supply.

3.07 Test for lamp and bell or buzzer signaling to all stations.

3.08 Transfer groups are designated as Group A, Group B and Group C. When activated by a directing digit, a group will remain operated by the externally controlled latch circuit. Momentary interruption of the latch circuit by means of the hook switch or an end of the signal function will restore the operated group to a normal or a disconnect condition.

NOTE: *When an intercom is connected to other units which add features, such as two-link operation, flashing lamps, and do-not-disturb, all associated units must be served by the same power supply and all grounds must be common.*

4. MAINTENANCE

4.01 If the KX-30 does not function, check R leads to bells or buzzers for opens or shorts to ground.

4.02 Test the system by substituting another KX-30.

4.03 No provision is made for field adjustment or repair. If defective return unit to supplier.

4.04 The KX-30 is warranted against manufacturing and material defects. If it becomes defective within the warranty period it will be

repaired or replaced at no charge. See the Melco Warranty Service Policy for return and repair details.

5. SPECIFICATIONS

Operating voltage range,
A and B BAT -18 to -28V DC
-24V DC nom

Current
(-24V DC) 0 ma idle
90 ma operated

Relay contact ratings
lamp 2 amps at 10V DC
P.C. 2 amps at 28V DC
ringing signal 0.5 amp at 10V AC
to 105V AC ringing
(Protection provided by Intercom.)

Operating temperature 0° to 55°C
32° to 122°F

Operating humidity 0 to 95%

Mounting Apparatus cabinet
or wall

Connections A25B or equivalent
25 pair connector cable

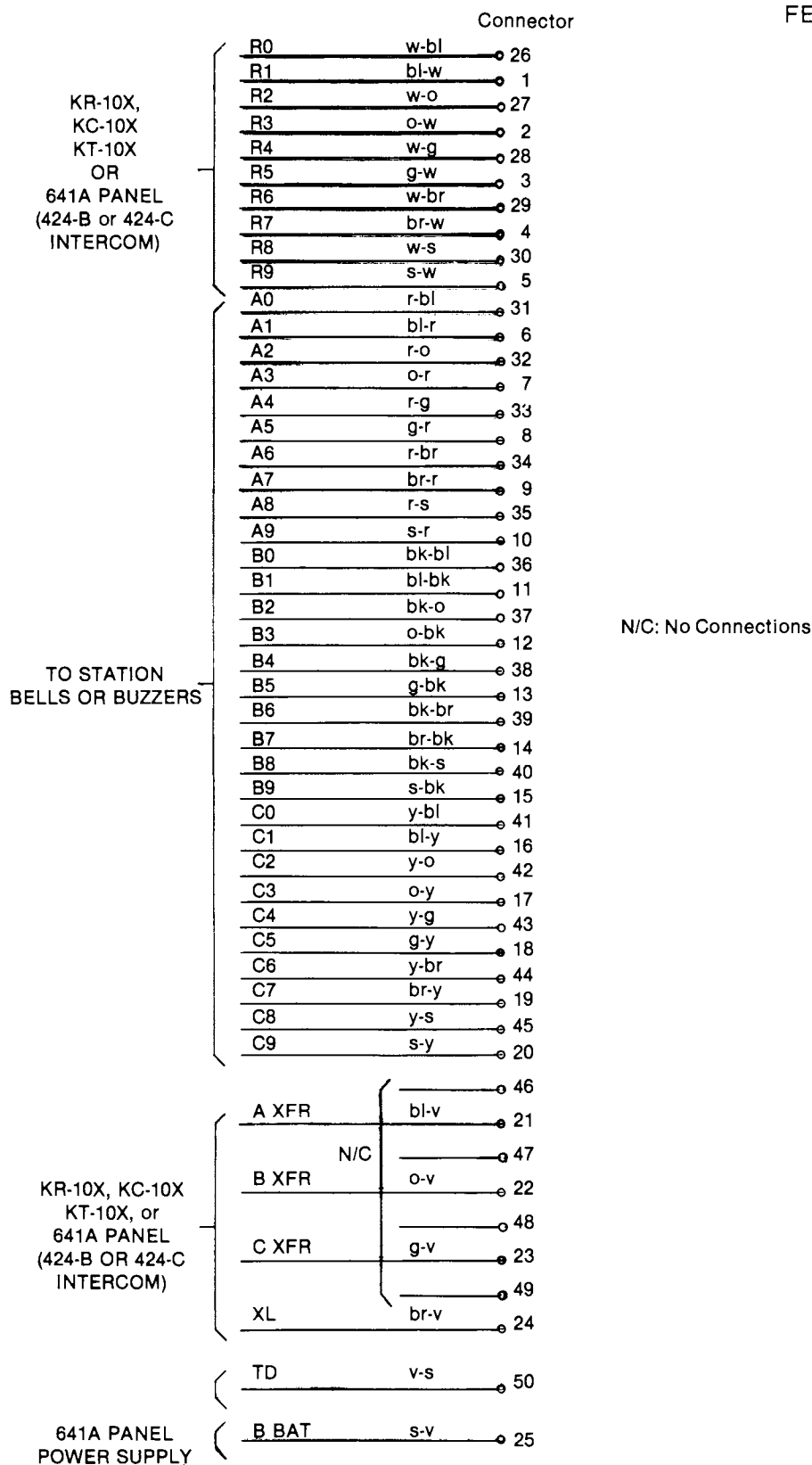
Housing Epoxy coated aluminum

Dimensions 7" x 4.8" x 1.5"

6. ORDERING GUIDE

6.01 Order the KX-30 as follows:
(QTY) KX-30 120039 UNIT TEL KEY
from your local supplier or distributor.

6.02 For technical information on the KX-30 or any Melco product call or write:
MELCO LABS, INC.
P.O. Box 6909
Bellevue, Washington 98008-0909
(206) 643-3400
TWX: 910-443-3040

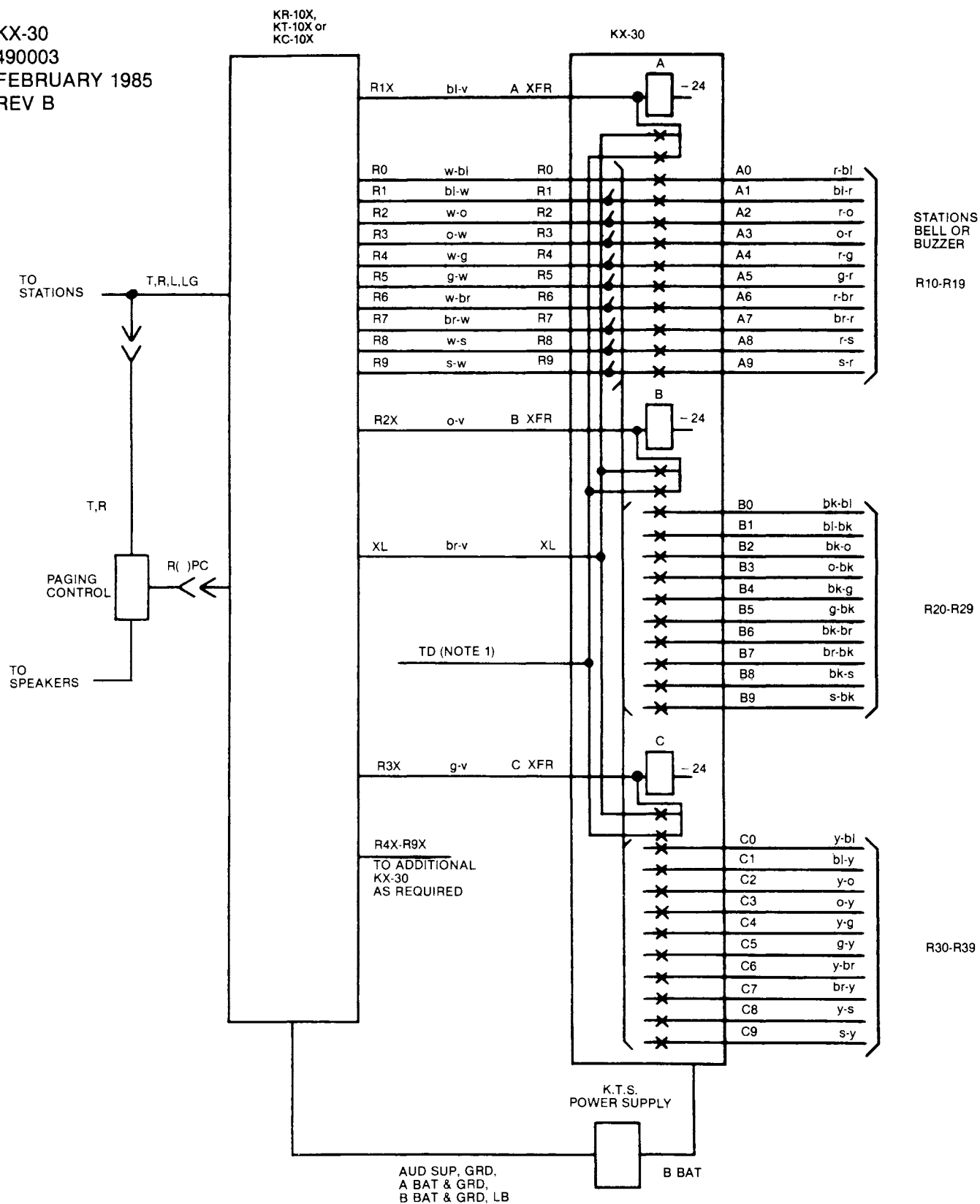


NOTES:

1. LEAD TD USED WHEN EXPANDING ELECTRIC 424-B OR 424-C IN THE 641A PANEL (SEE PARA. 3.05).

Fig. 2 — Connections for KX-30 with Intercom.

KX-30
490003
FEBRUARY 1985
REV B



NOTES:

1. LEAD TD IS NOT USED WITH MELCO INTERCOMS.

Fig. 3 — Application Schematic of KX-30 with Intercom.

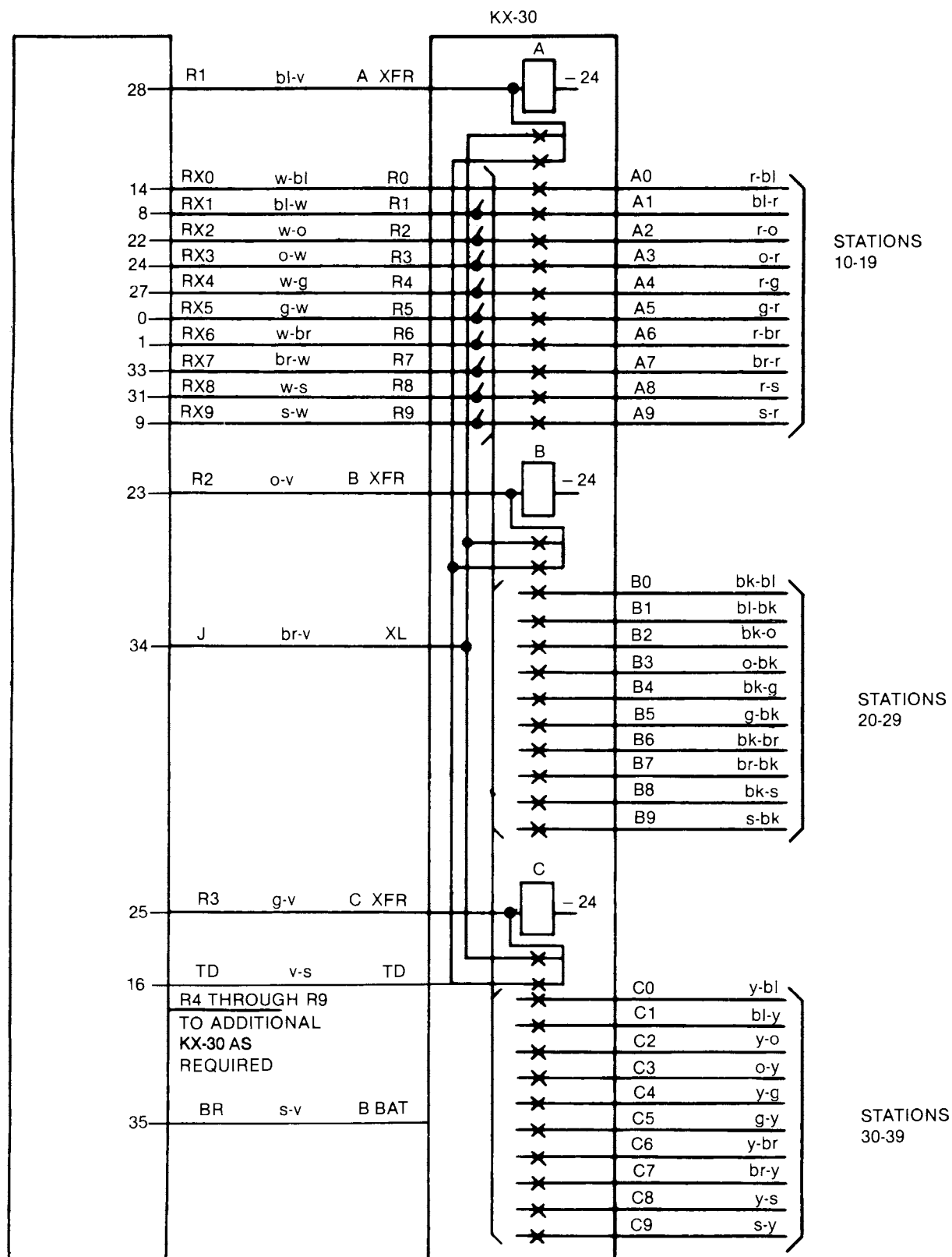


Fig. 4 — Application Schematic of KX-30 with W.E. Co. 424B or 424C Intercom.

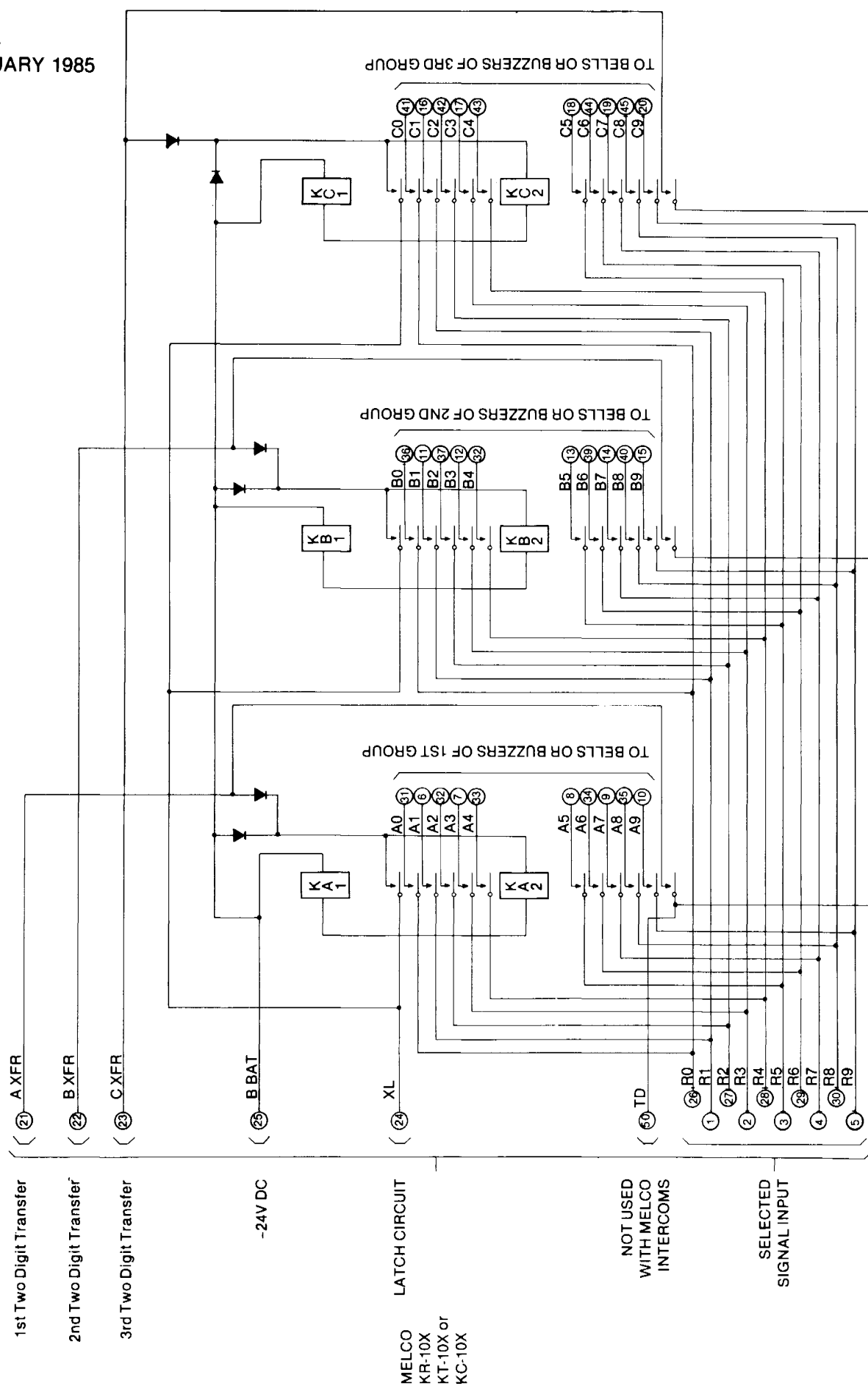


Fig. 5 — Functional Schematic of KX-30.

KX-38™ INTERCOM EXPANSION UNIT — KTU FOR USE WITH KL-19A TWO-LINK INTERCOM

1. GENERAL

1.01 The KX-38 expands the KL-19A Two Link Intercom for key telephone systems from 19 to 38 stations. All stations of the expansion unit operate in the same manner as stations of the KL-19A.

1.02 The KL-19A/KX-38 combination provides up to 38 intercom stations. It has two talking paths, one private and one common. It furnishes dial tone, busy tone, ringback tone, interrupted ringing and flashing lamps. Station signaling is fully selective and local conferencing is dial accessed.

1.03 Paging is available with the addition of one or more paging access or paging amplifier circuits. All stations, both links, conferencing and paging are available from every telephone through a single pick-up button of the key telephone.

1.04 This device has received Registration Number AQT9PZ-68321-KX-N under Part 68 of FCC Rules and Regulations.

2. DESIGN FEATURES

2.01 The KX-38:

- adds 19 intercom stations to the KL-19A.
- provides the same station features as the KL-19A.
- connects to the KL-19A with one B25A or equivalent 25-pair expansion cable.
- utilizes power from the KL-19A through the expansion cable.
- connects to the additional 19 stations with two single A25B or equivalent 25-pair connector cables.
- mounts in a relay rack, in an equipment cabinet or on a backboard.

3. OPERATION OF THE KL-19A/KX-38

FIRST CALL

3.01 A call can be placed whenever the intercom pick-up button is not lighted. To place a call, a station user presses the intercom button,

comes off-hook and hears dial tone through the first talking link. All station lamps light and auxiliary contacts EC1-EC3 operate. After the station number is dialed, the caller hears ringback tone and the called station receives interrupted ringing and flashing lamp. When the called station or any other station answers, the call is switched to the second, private link. All intercom station lamps go dark indicating that another call can be made and contacts EC1-EC3 restore.

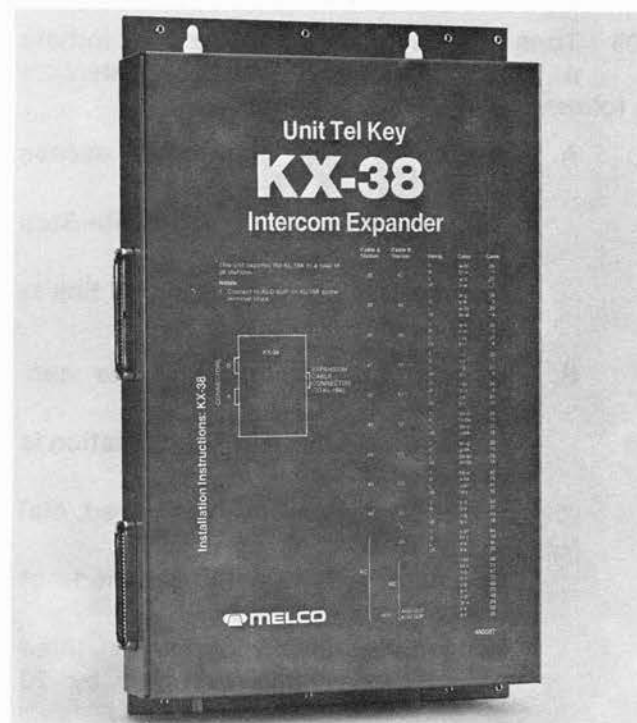


Fig. 1

SECOND CALL

3.02 Operation for the second call is the same as for the first, except that the call stays on the first link and is not private. Intercom station lamps remain on, indicating the system is busy, and contacts EC1-EC3 remain operated. The second call remains on the first link until the second link becomes idle. If the second link becomes idle before the first, the call on the first link switches to the second link. All lamps go out and contacts EC1-EC3 restore. If the first link becomes idle before the second link, all lamps go out and contacts EC1-EC3 restore. Whenever the lamps are out, a call can be made.

BUSY TONE

3.03 When a station is talking on the second link and a second intercom call to that station is attempted, the KL-19A will furnish busy tone to the second caller.

ANSWERING

3.04 An intercom call may be answered by any telephone connected to the KL-19A or KX-38.

LOCAL CONFERENCE (5 stations max)

3.05 Tone or rotary dialing stations may initiate a local conference with the intercom as follows:

A. Dial 60, the local conference access number.

- Receive dial tone. Proceed with Step B.
- Receive busy tone . . . second link is busy. Try later.

B. Dial each station to be in the conference.

- Receive dial tone after each station is dialed.
- If less than 4 stations are called, dial 60 again.
- Originator will hear three periods of ringback tone.
- Called stations will receive three periods of ringing followed by 20 seconds of flashing lamp.
- If all called stations answer, all will switch to the second link when the last one answers.
- If all called stations do not answer, there will be a 20-second waiting period. Then all off-hook stations will switch to the second link.

C. Proceed with the conference.

PAGING

3.06 To access paging, the originator presses the intercom pick-up button, comes off-hook and dials the access code for the paging

area desired. The page is made and the originator replaces the handset.

4. INSTALLATION

NOTE: *Disconnect the power from the KL-19A before the expansion cable is connected or removed.*

4.01 Mount the KX-38.

4.02 Disconnect the power from the KL-19A.

4.03 Connect the KL-19A to the KX-38 with the expansion cable. It should not be longer than 5 feet.

4.04 Connect the KX-38 cables A and B to the connecting blocks for the additional stations.

4.05 Make the station and audible signal supply connections.

4.06 Test each station for off-hook functions and signaling.

5. MAINTENANCE

5.01 If the KX-38 does not function properly, verify all connections. Examine the cable connectors and plugs for corrosion, dirt or inadequate contact pressure. Test the system by replacing the KX-38 with another of known serviceability.

5.02 The KX-38 is warranted against manufacturing and material defects. If it fails within the warranty period, it will be repaired or replaced without charge. See the Melco Warranty Service Policy for repair and return information.

6. SPECIFICATIONS

Operating temperature 0° to 50°C
32° to 122°F

Operating humidity 0 to 95%
noncondensing

Housing epoxy coated aluminum

Weight 3 lbs., 4 oz.

Connector cables two single A25B
(not furnished) and one B25A

7. ORDERING GUIDE

7.01 Order as follows:

(QTY) 120249 KX-38 INTERCOM EXPANDER

from your local supplier or distributor.

7.02 For further information or assistance on the KX-38 or the KL-19A, call or write:

MELCO

P.O. Box 6909

Bellevue, WA 98008-0909

(206) 643-3400

TWX: 910-443-3040

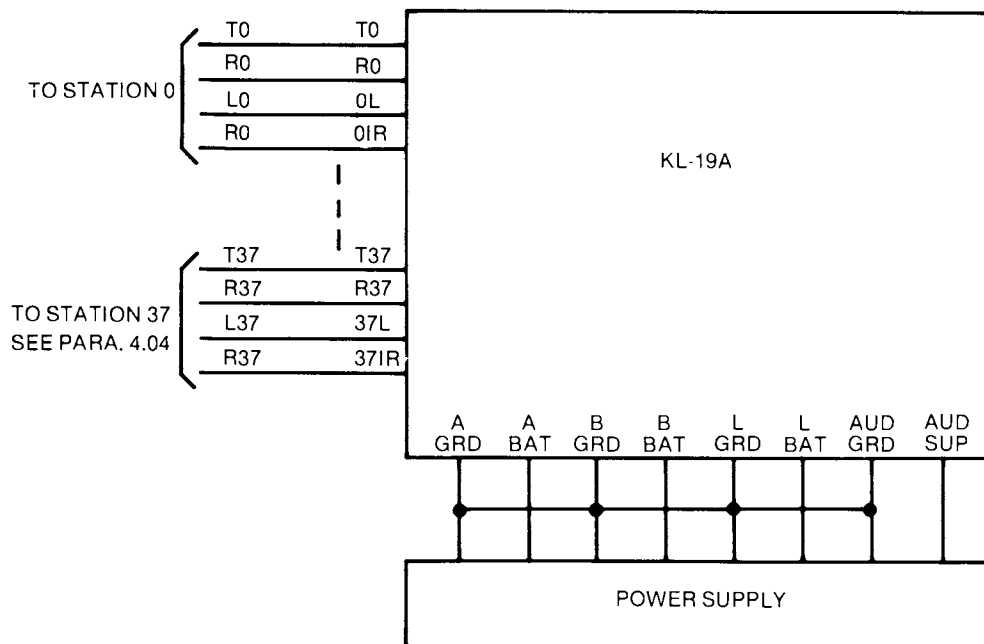


Fig. 2 — KL-19A Station Connections.

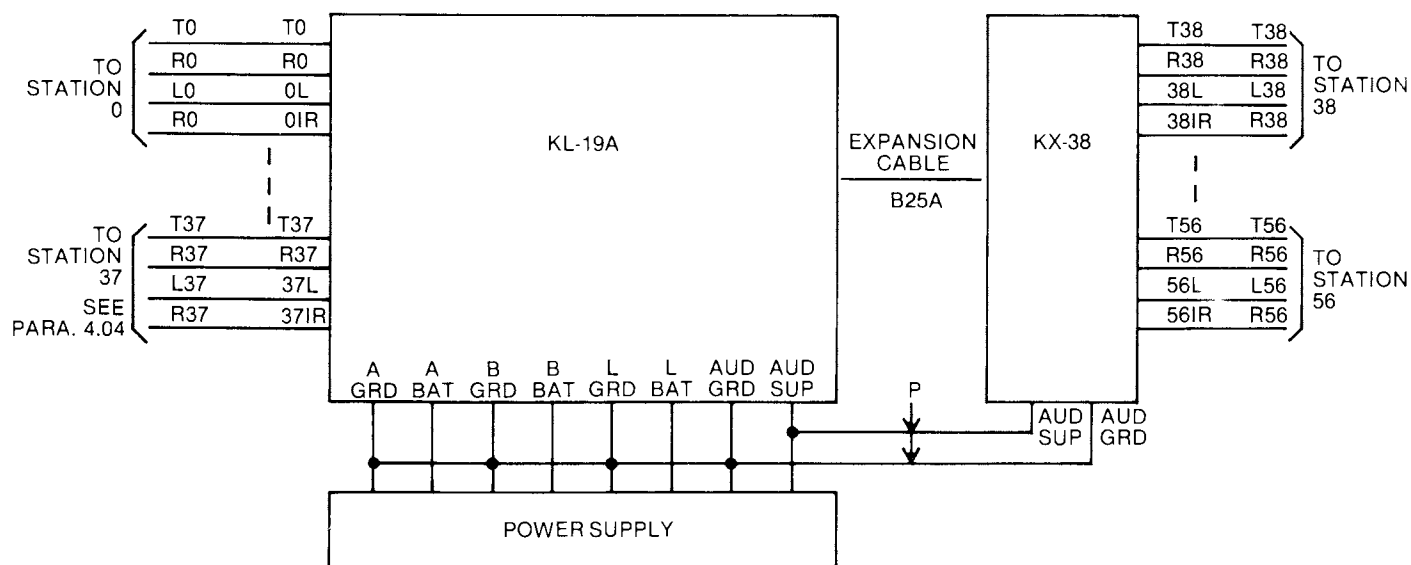
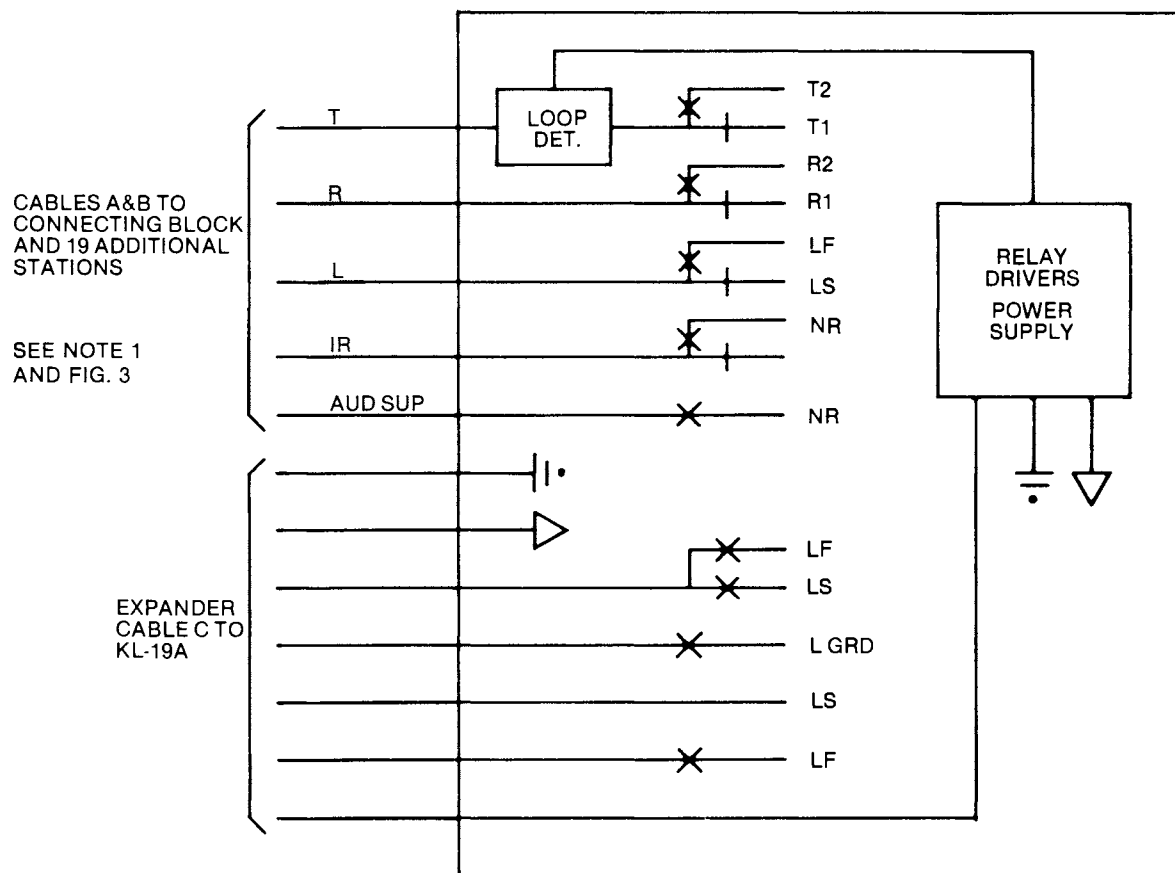


Fig. 3 — KL-19A Connections for KL-19A with KX-38 Expansion Unit.



NOTES:

1. AUDIBLE SUPPLY TO AUD SUP TERMINAL OF KL-19A.

Fig. 4 — Condensed Functional Schematic of KX-38.

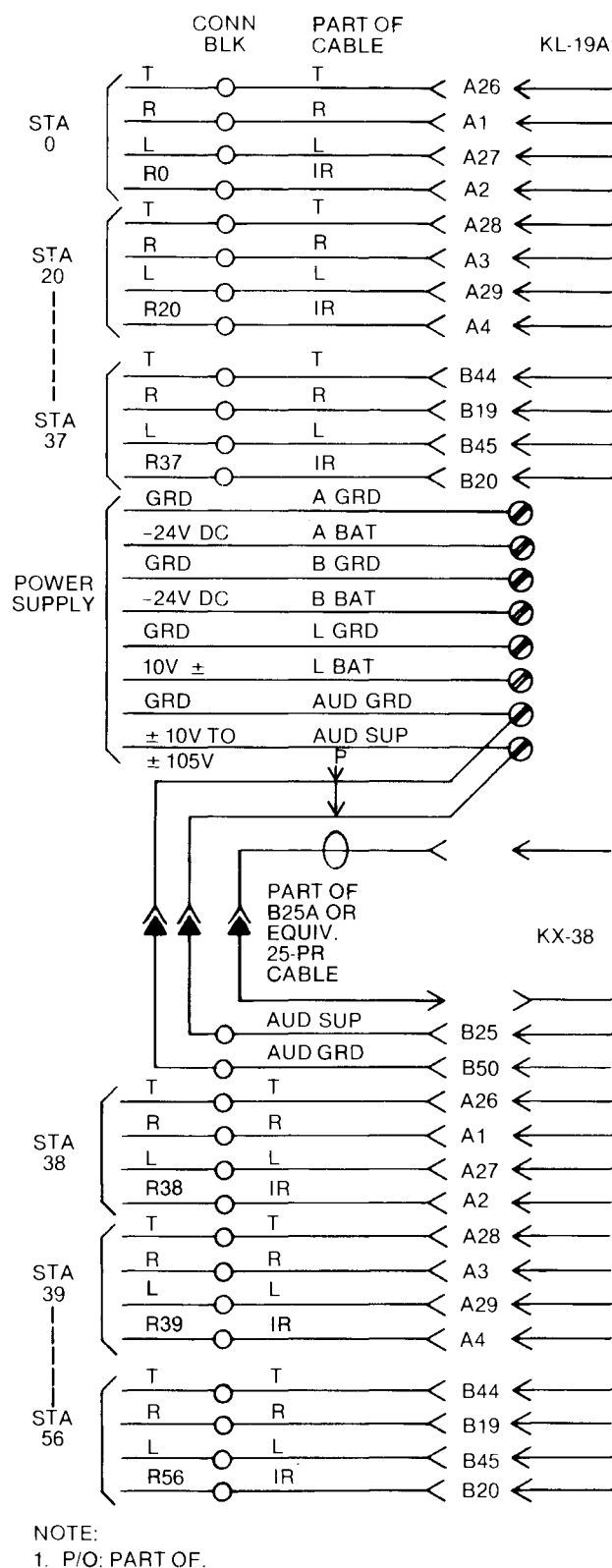
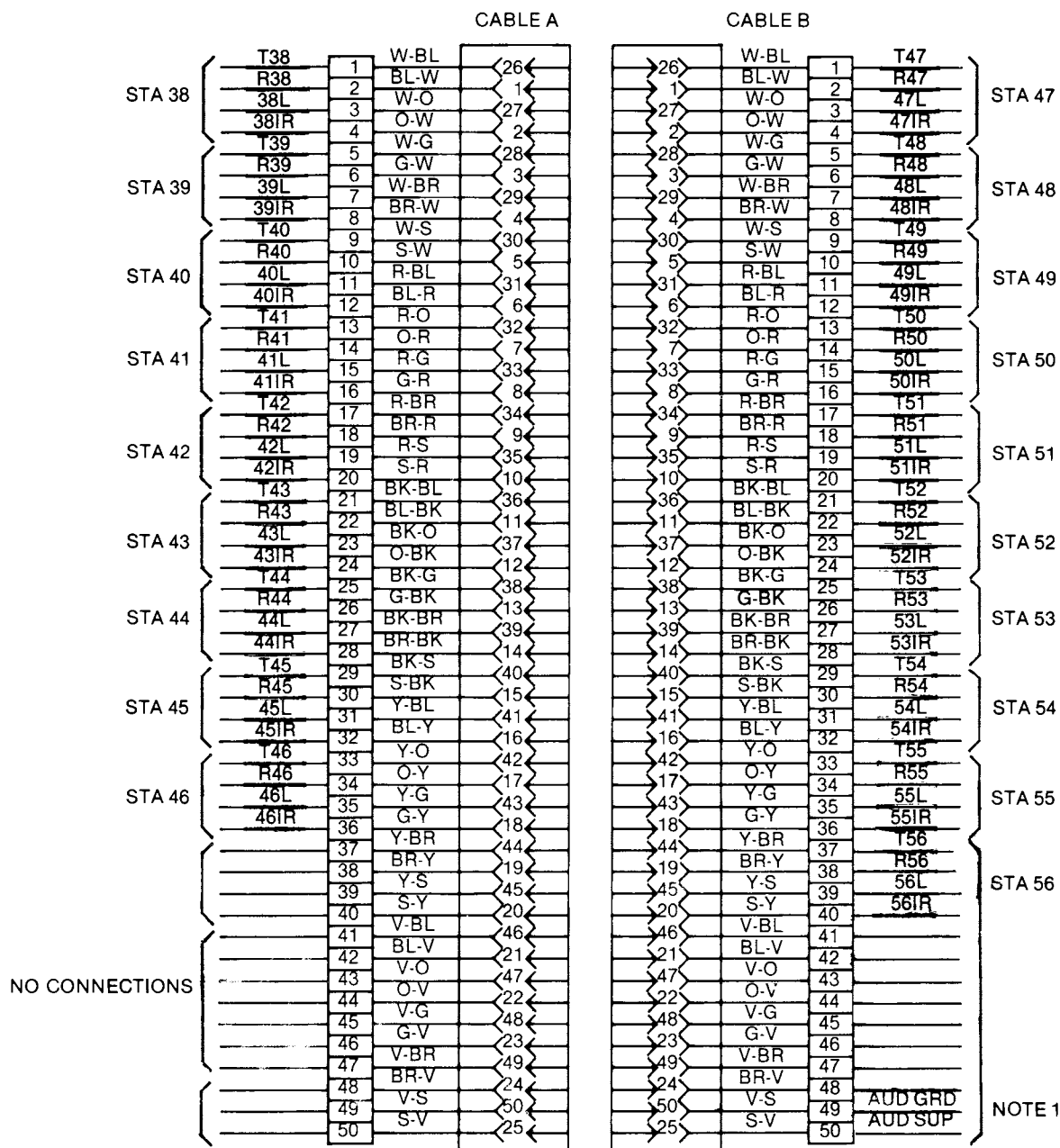


Fig. 5 — Connections, KL-19A Intercom and KX-38 Expander.



NOTES:

1. CONNECT V/S-S-V PAIR OF CABLE B FROM TERMINALS OF KX-38 CONNECTING BLOCK TO AUD SUP AND AUD GRD SCREW TERMINALS OF KL-19A.

Fig. 6 — KX-38 Connections. Additional Stations 38 Through 56 and Audible Supply.

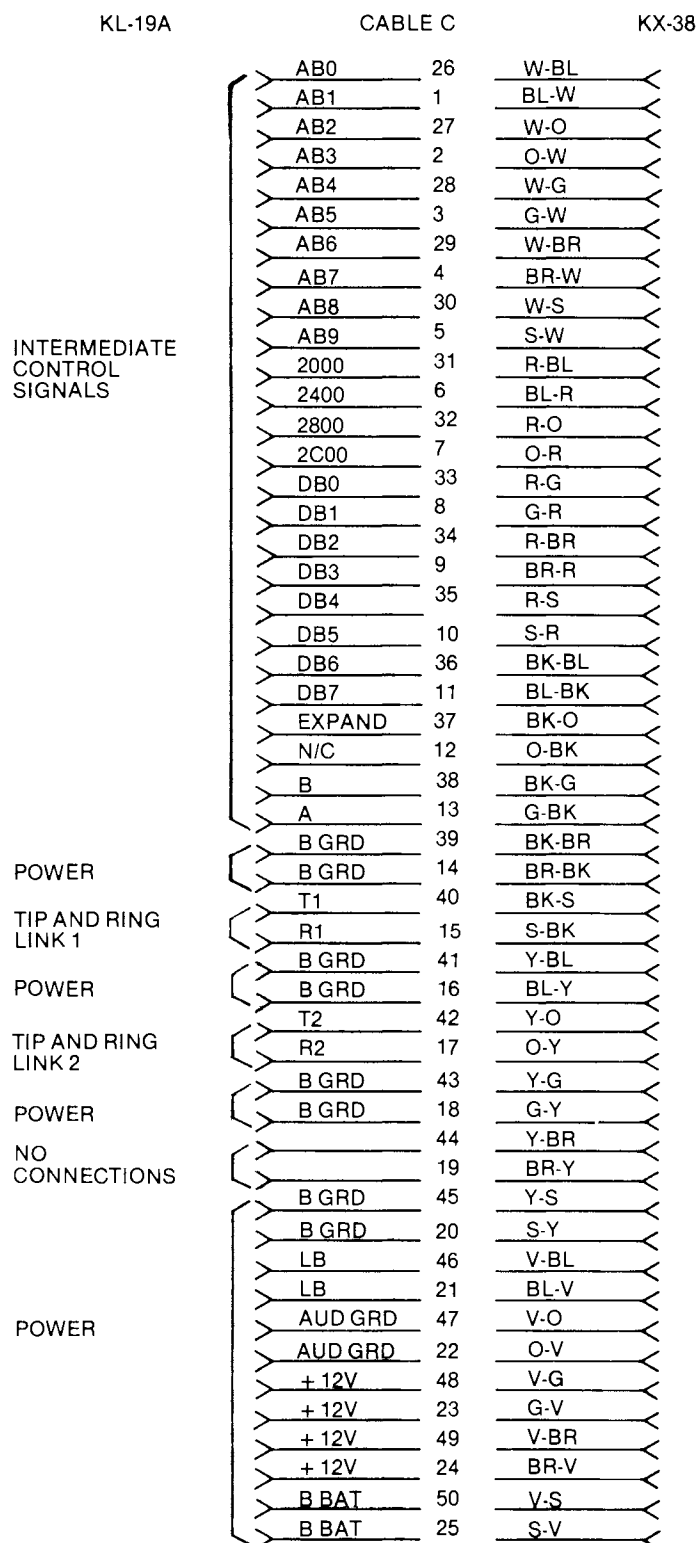


Fig. 7 — A25A Connecting Cable KL-19A Intercom to KX-38 Expander.