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INTRODUCTION

This manual provides the information required to install and maintain the PRO-XL 1032 Electronic Key Telephone System. Areas covered include standard precautions relating to lightning and proper handling of electronic circuit boards, technical specifications, site selections, hardware installation and programming.

It is necessary that the installer read this document prior to beginning installation.

A User's Guide is provided with each phone.

Special care has been taken during the design of the PRO-XL 1032 to reduce the time required to install the system. Through careful quality manufacturing, many steps have been eliminated from installation and programming.

The KSU is shipped with the MAU card, the POWU card, and 8STU card and a 6COU card in place. This basic equipment will accommodate six C.O. lines and eight stations using any combination of basic handsfree phones and speakerphones.

There are five options:

1. SMDRU Card - which provides station message detail recording (SMDR).
2. 8STU Card - three additional circuit boards, providing 8 stations each, brings system total to 32 stations.
3. PFTU Unit - Power Failure Transfer Unit is externally mounted.
4. 4COU Card - providing 4 additional C.O. lines, brings system total to 10 C.O. lines.
5. DSS/BLF Console

The programming of system functions, timings and features have been simplified to save additional time. Simple charts provide all the information necessary to program the system from Station 10.

We sincerely believe you will find the PRO-XL 1032 to be the easiest 1032 you have ever installed and that your customers will enjoy years of trouble-free service from this system.

LIGHTNING

Lightning, static charges in the atmosphere, will always discharge through the strongest available earth ground.

Telephone equipment usually has several entrances through which lightning can enter and damage its electronic components such as AC power, C.O. lines and off premise extensions. Usually all of the protective devices must be grounded to be effective. Additionally, the KSU frame is usually grounded. Often, different earth grounds are used for each type of device.

With several entrances, each grounded to a different earth ground, lightning damage to the equipment is caused by the differences in the potential of each ground. Some of the static charge can jump the protector having a lower ground potential and go through the equipment to a ground having a higher potential.

To prevent problems caused by grounds with different potentials, it is imperative to bond all grounds with size 10 AWG or larger copper wire to balance the potential of all grounds.

Note: A good ground potential is less than 5 ohms.

HEARING AID COMPATIBILITY

FCC rules prohibit the use of non-hearing-aid-compatible telephones in the following locations:

1. Any public or semi-public location where coin-operated or credit card telephones may be found.
2. Elevators, highways and tunnels (automobile, subway, railroad or pedestrian) where a person with impaired hearing might be isolated in an emergency.
3. Places where telephones are specifically installed to alert emergency authorities such as fire, police or medical assistance personnel.
4. Hospital rooms, residential health care facilities, convalescent homes and prisons, specifically where telephones are used for signaling life-threatening or emergency situations if alternative signaling methods are not available.
5. Work stations for hearing-impaired personnel.
6. Hotel, motel, apartment lobbies; in stores where telephones are used by patrons to order merchandise; in public transportation terminals where telephones are used to call taxis or to reserve lodging or rental automobiles.
7. Hotel and motel rooms. At least ten percent of the rooms must contain hearing-aid-compatible telephones; or contain jacks for plug-in hearing-aid-compatible telephones which will be provided to hearing-impaired customers upon request.

PARTS LIST

<u>ITEM</u>	<u>QUANTITY</u>	<u>ACCESSORIES PROVIDED</u>
PRO-XL 1032 KSU	1	Fuse; 125V 6.3 AMP (provided in the KSU)
	4	+M4.1 x 32S Wood Screws for mounting KSU
	2	SKB-2M 1032 Cable Tie
	1	PRO-XL 1032 Installation Manual
	1	PRO-XL 1032 User's Guide Directory Card
PRO-XL 1032 HF-EKT	1	PRO-XL 1032 User's Guide Directory card
PRO-XL 1032 SPK-EKT	1	PRO-XL 1032 User's Guide Directory card
PRO-XL 1032 BLF-EKT	1	PRO-XL 1032 User's Guide Directory card
DSS/BLF Console	1	-M3x8S Tapping Screw Directory Card
8STU Card	2	S/C24x90BD (1.25) Flat Cable
	1	Cable Tie
	4	Stand-Offs A
	4	+M3x8S Screw
	2	Stand-Offs D
SMDRU Card	2	LCBS-16N Spacer
	1	S/C13x90BD (1.25) Flat Cable
	2	+M3x8S Screw
	2	PCB-4L Spacer
	1	Cable Tie
4COU Card	1	S/C20x90BD Flat Cable
	1	S/C24x90BD Flat Cable
	1	8x70 Ribbon Cable
	4	Stand-Offs D
	4	+M3x8S Screw
PFTU	1	1-pair PFTU Cord
	4	-M3.1x25S Wood Screw

TECHNICAL SPECIFICATIONS

KSU SPECIFICATIONS

Size:	15.7" High, 19.0" Wide, 3.0" Deep (399 mmH x 482 mmW x 76 mmD)
Weight:	10.7 Pounds (4.8 Kg.)
Power:	Input: 117 VAC Output: 24 VDC
Fuses:	4 AAC (125V)
Basic Card:	MAU Main Control Unit 8STU 8-Station Unit 6COU 6-Central Office Interface Unit POWU Power Unit
Optional:	8STU 8-Station Expansion Unit PFTU Power Failure Transfer Unit (mounted externally) 4COU 4-Central Office Interface Unit SMDRU
Terminals:	Female Amphenol Connector for C.O. Lines. One RS232C Connector for SMDR Amphenol Connector for Telephone Stations One RJ14C Modular Jack for Music-On-Hold and External Paging Screw for KSU Grounding

TECHNICAL SPECIFICATIONS

TELEPHONE SPECIFICATIONS

Type:	PRO-XL 1032 HF-EKT Basic Handsfree Telephone PRO-XL 1032 SPK-EKT Speakerphone PRO-XL 1032 BLF-EKT Busy Lamp Telephone
Size:	4.1" High, 7.7" Wide, 8.9" Deep (103mmH x 196 mmW x 225 mmD)
Weight:	2.2 Pounds (1 kg.)
Connection:	4-Conductor RJ14C Modular Jack
Cabling:	4-Conductor, Non-shielded Twisted Pair Cable.
Maximum Cable Run:	900 Feet for 22 AWG Cable 700 Feet for 24 AWG Cable

DSS/BLF CONSOLE SPECIFICATIONS

Size:	3.15" High, 7.7" Wide, 8.9" Deep (80 mmH x 196 mmW x 225 mmD)
Weight:	1.2 Pounds (0.7 kg.)
Connection:	12 Pin Connector
Cabling:	No Additional Cabling Required

PRE-SURVEY

The PRO-XL 1032 KSU should be wall mounted. Consider the following factors when selecting a site for the installation of the KSU:

LOCATION OF THE KSU CABINET

1. An isolated 117 volt AC power outlet with equipment ground, (3rd wire ground), must be within six feet of the KSU.
2. It is recommended that the telco RJ21X jack be placed no more than 25 feet from the KSU.
3. Stations should be located no farther from the KSU than:
 - 900 feet for 22 AWG cable
 - 700 feet for 24 AWG cable
4. Space should be allowed for accessing and servicing the KSU.
5. The KSU should be located in a well ventilated area having a temperature range of from 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
6. The site selected should be dry (humidity below 90%) and the KSU should not be located beneath pipes because of the possibility that leaks or condensation may cause damage.
7. The area must be free of corrosive gases, excessive chemical or industrial dust. If possible, the KSU should be away from copying machines, fax machines or large electrical motors.
8. A good cold water pipe ground should be accessible to the KSU.

INSTALLATION OF THE KEY SERVICE UNIT (KSU)

Note: As is the case with any electronic equipment, the installer must discharge to ground any static electricity on his or her body before handling the KSU.

INSTALLATION STEPS

1. Survey the premises for proper location of KSU. See PRE-SURVEY page.
2. Level and mount KSU on a wall mounted $\frac{3}{4}$ " piece of plywood, using the screws provided. Refer to SELECTING A SITE FOR THE KSU and the figure below.
3. Properly ground the KSU. See GROUNDING THE KSU below.
4. Bond all grounds with 10 AWG copper wire (cold water ground, power neutral, separate ground rod, telco ground, etc.)
5. Install surge protector, field provided.
6. Plug the KSU into the 117V receptacle.
7. Verify that the LED on the MAU card is flashing.
8. Unplug the KSU.
9. Install any optional circuit cards required (refer to appropriate sections).
10. Programing may begin. Refer to page 29 for programing instructions.

GROUNDING THE KSU

IMPORTANT: PLEASE READ THE "LIGHTNING" PAGE

The KSU should be grounded using 10 AWG or larger copper wire. Recommended choices for grounding: 1st choice is copper cold water pipe (Caution should be taken that no plastic was used in this water line), 2nd choice is power neutral ground, 3rd choice is best available other ground.

CAUTION: Do not use 3rd wire ground at receptacle as it may not be bonded to the power company ground rod.

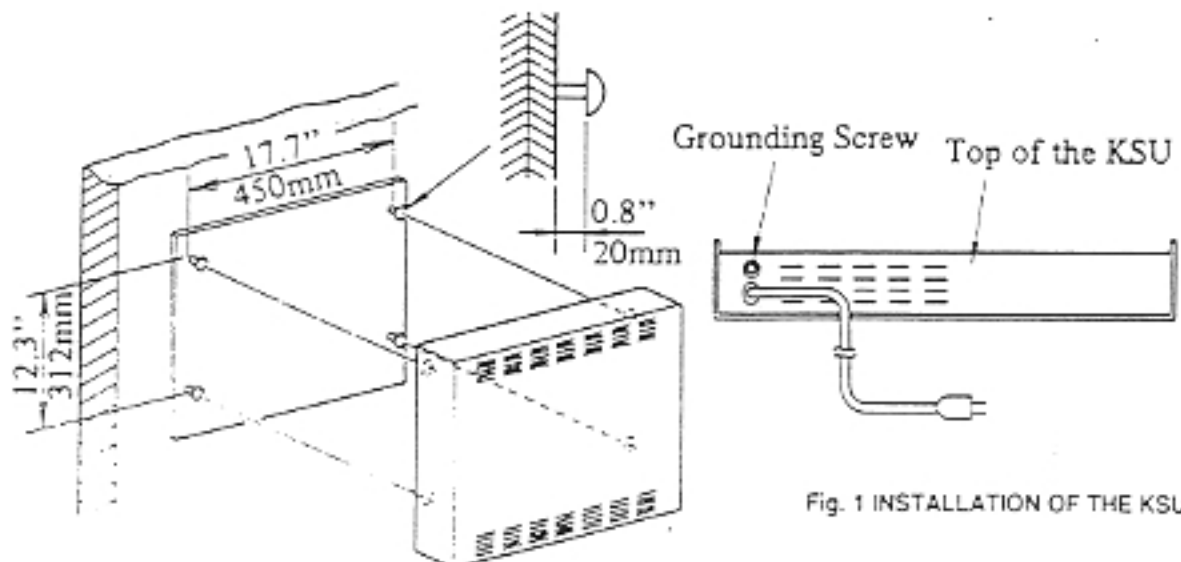
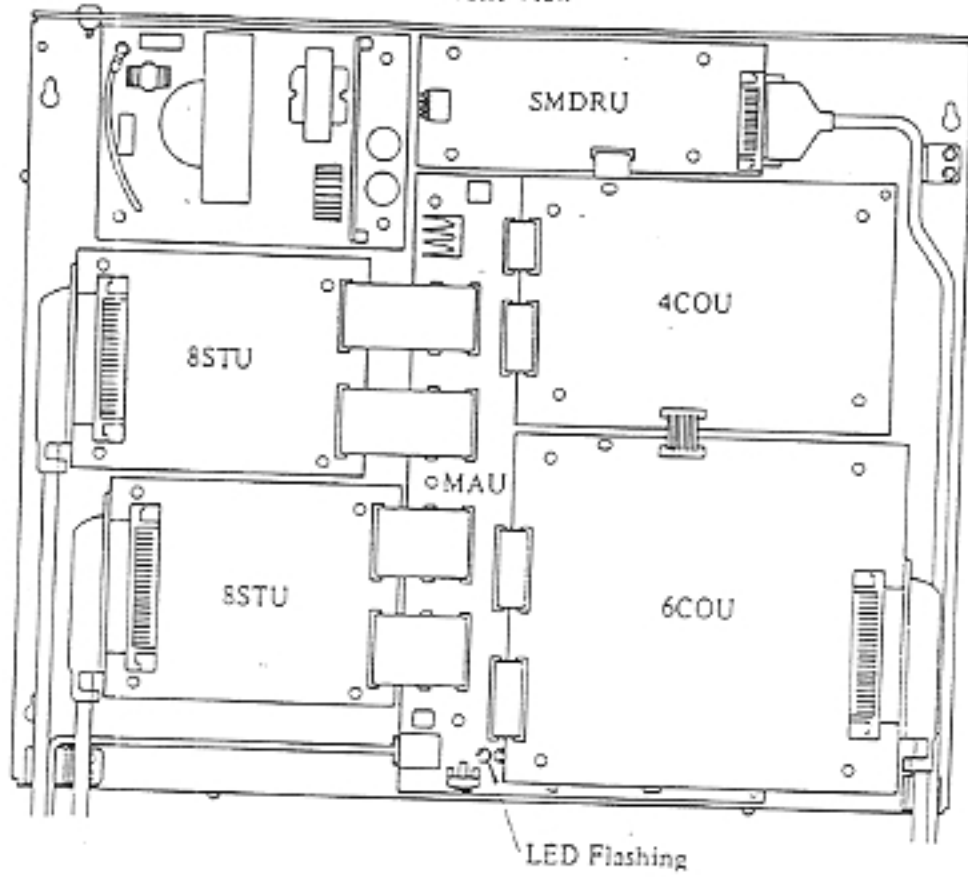
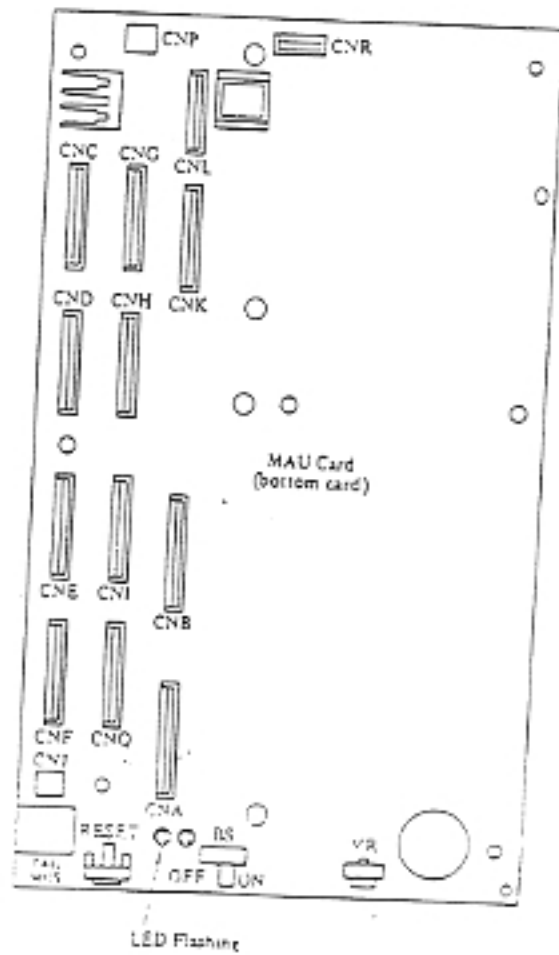
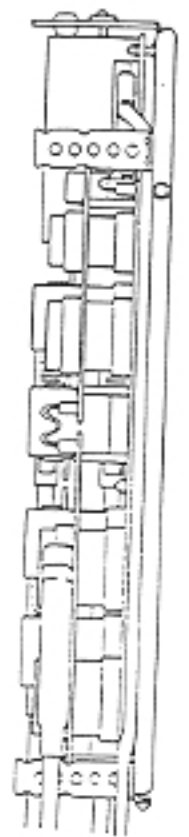


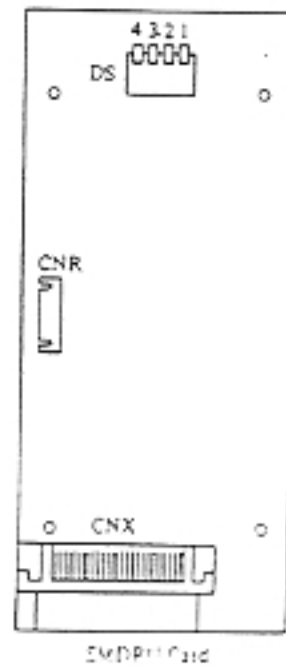
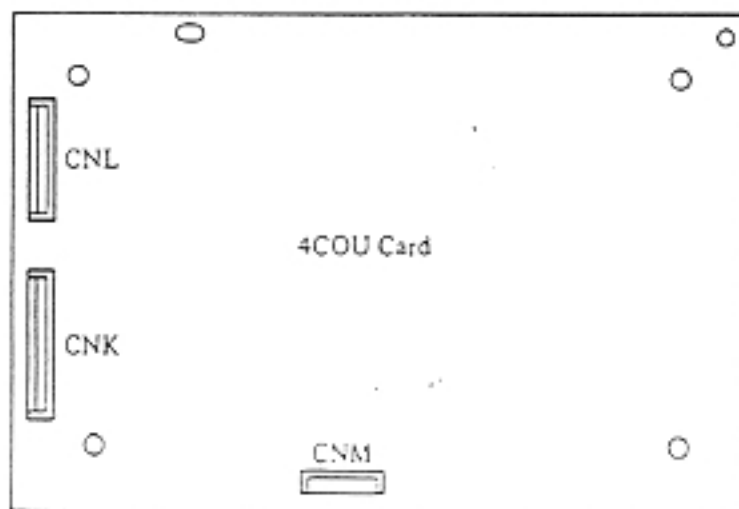
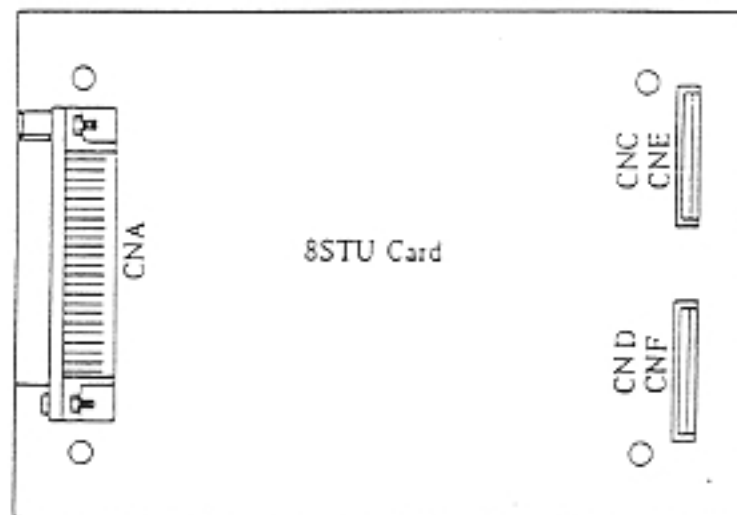
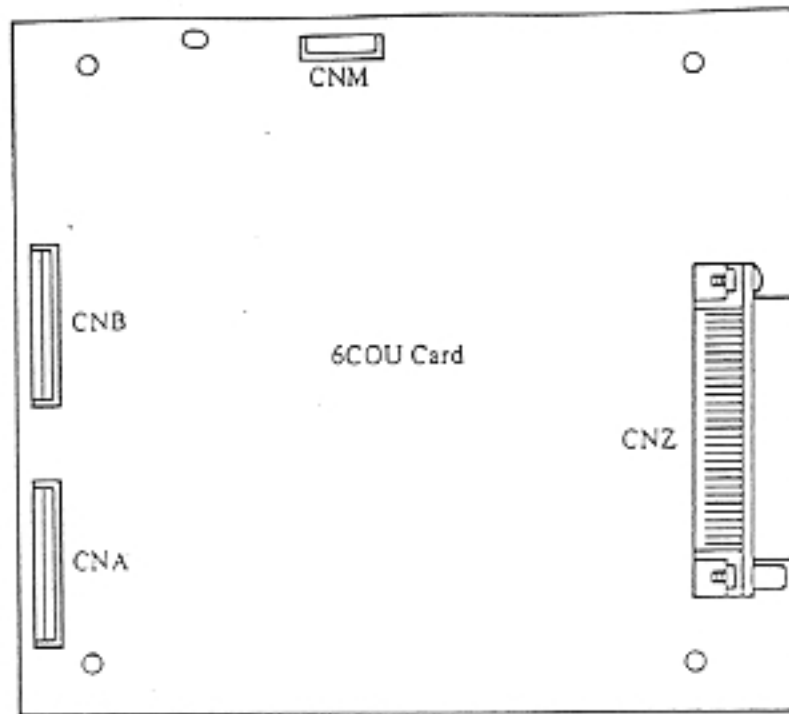
Fig. 1 INSTALLATION OF THE KSU

Front View



Side View





CONNECTION OF TELEPHONE STATIONS

Install an MDF near the KSU using 1 to 4 66M blocks and brackets. Route a 2-pair cable (twisted wire) from the MDF to each telephone. Mount an RJ14C jack near each telephone location. Connect each telephone to the MDF using a 2-pair cable (twisted wire).

Connect the MDF to the 8STU card using 25-pair cables as shown below.

- ACCESSORIES:
- Amphenol Connectors - one for each 66M block
 - MDF - 2 66M blocks and brackets, one for each 8 stations
 - RJ14C Jacks - one for each station
 - 25-pair cable - one for each 8 stations
 - 2-pair cable (twisted wire) - one for each station

Note: Asuzi Part No. QTM can be used in place of 66M Block, bracket and 25-pair cable.

INSTALLATION STEPS

1. Referring to Table A on facing page, connect one end of a 25-pair cable to an amphenol connector. (Connects to "CNA" on 8STU card in KSU. See figure below.)
2. Connect the other end of the 25-pair cable to the MDF 66M block. (See Table A.)
3. Mount an RJ14C jack near each telephone station. (See figure A.)
4. Connect one end of the 2-pair cable (twisted wire) to the MDF (66M block) and the other end to the RJ14C telephone jack. (See table A and Figure B.)
5. Using the D4BU mounting cord furnished with the telephone set, connect the telephone to the RJ14C jack.
6. Repeat steps 4 & 5 to connect each remaining telephone.
7. Repeat steps 1 & 5 to connect each expansion eight telephone stations.

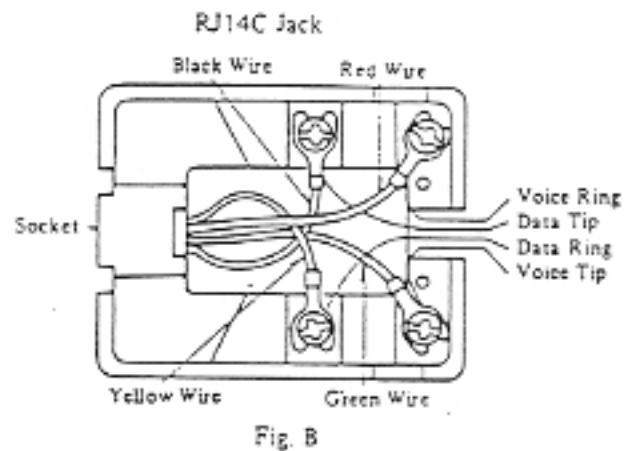
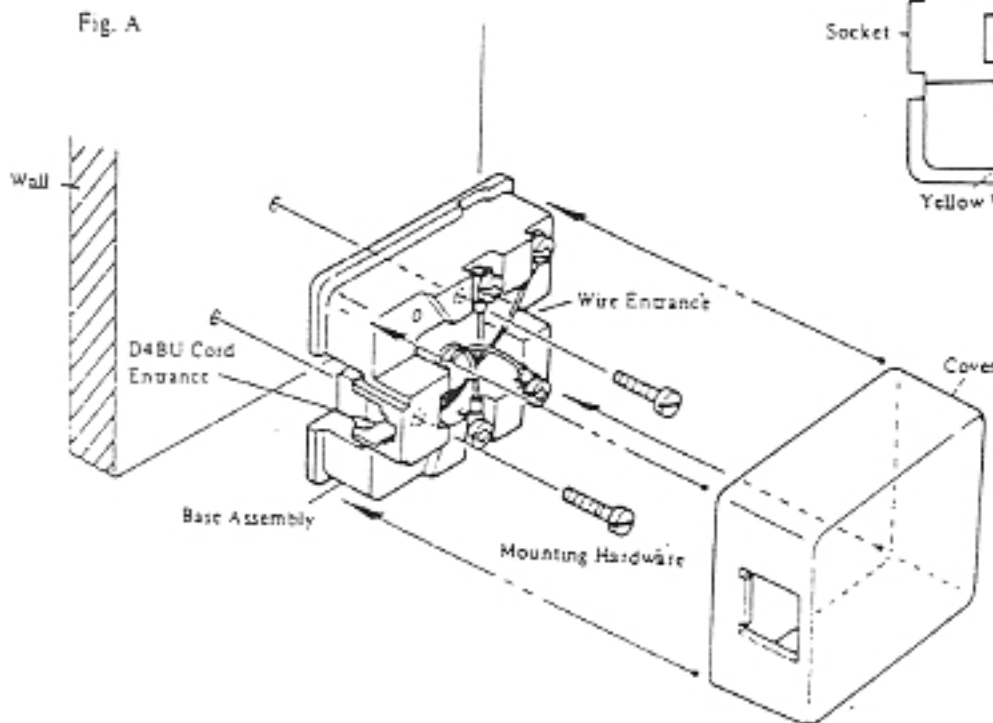


Fig. 2 CONNECTION OF TELEPHONE STATION

TABLE A

PIN NO.	LEAD DESIG	CABLE TO KSU	CABLE TO EKT	STA. NO.	
26	VT	WH-BL	GN	10	1st 8-STU
1	VR	BL-WH	RD	(18)	2nd 8-STU
27	DT	WH-OR	BK	(26)	3rd 8-STU
2	VO	OR-WH	YL	(34)	4th 8-STU
28	VT	WH-GN	GN	11	1st 8-STU
3	VR	GN-WH	RD	(19)	2nd 8-STU
29	DT	WH-BR	BK	(27)	3rd 8-STU
4	DR	BR-WH	YL	(35)	4th 8-STU
30	VT	WH-SL	GN	12	1st 8-STU
5	VR	SL-WH	RD	(20)	2nd 8-STU
31	DT	RD-BL	BK	(28)	3rd 8-STU
6	DR	BL-RD	YL	(36)	4th 8-STU
32	VT	RD-OR	GN	13	1st 8-STU
7	VR	OR-RD	RD	(21)	2nd 8-STU
33	DT	RD-GN	BK	(29)	3rd 8-STU
8	DR	GN-RD	YL	(37)	4th 8-STU
34	VT	RD-BR	GN	14	1st 8-STU
9	VR	BR-RD	RD	(22)	2nd 8-STU
35	DT	RD-SL	BK	(30)	3rd 8-STU
10	DR	SL-RD	YL	(38)	4th 8-STU
36	VT	BK-BL	GN	15	1st 8-STU
11	VR	BL-BK	RD	(23)	2nd 8-STU
37	DT	BK-OR	BK	(31)	3rd 8-STU
12	DR	OR-BK	YL	(39)	4th 8-STU
38	VT	BK-GN	GN	16	1st 8-STU
13	VR	GN-BK	RD	(24)	2nd 8-STU
39	DT	BK-BR	BK	(32)	3rd 8-STU
14	DR	BR-BK	YL	(40)	4th 8-STU
40	VT	BK-SL	GN	17	1st 8-STU
15	VR	SL-BK	RD	(25)	2nd 8-STU
419	DT	YL-BL	BK	(33)	3rd 8-STU
16	DR	BL-YL	YL	(41)	4th 8-STU

VT = Voice Tip
 VR = Voice Ring
 DT = Data Tip
 DR = Data Ring



INSTALLATION OF C.O. LINES

INSTALLATION STEPS

1. Connect one end of the 25-pair double-amphenol-ended cable to "CNZ" on the 6COU card in the KSU.
2. Connect the other end of the 25-pair double-amphenol ended cable to the RJ21X connector provided by telephone company as shown in the following table.

Accessories: 25-pair double-amphenol-ended cable, field provided maximum length - 25 Feet

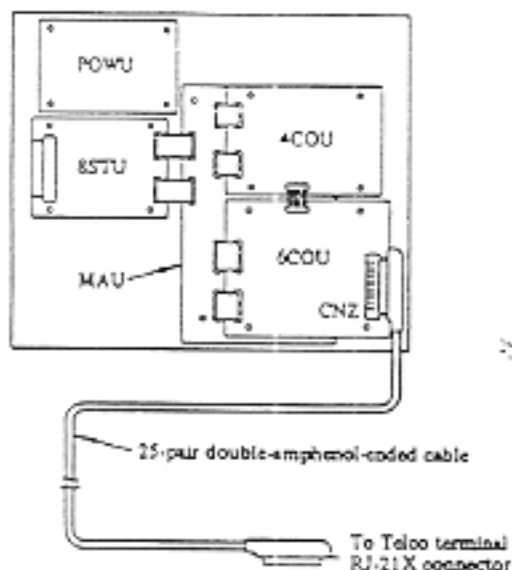
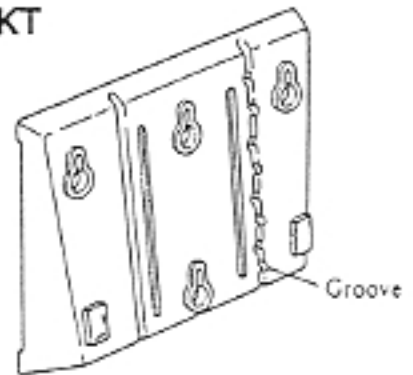


Fig. 3 INSTALLATION OF C.O. LINES

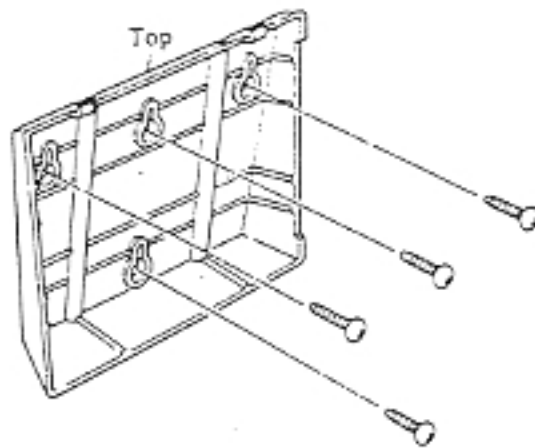
PIN No.	LEAD DESIGNATION	CABLE TO KSU
26 1	CO- 1 TIP RING	WH-BL BL-WH
27 2	CO- 2 TIP RING	WH-OR OR-WH
28 3	CO- 3 TIP RING	WH-GR GR-WH
29 4	CO- 4 TIP RING	WH-BR BR-WH
30 5	CO- 5 TIP RING	WH-SL SL-WH
31 6	CO- 6 TIP RING	RD-BL BL-RD
32 7	CO- 7 TIP RING	RD-OR OR-RD
33 8	CO- 8 TIP RING	RD-GR GR-RD
34 9	CO- 9 TIP RING	RD-BR BR-RD
35 10	CO- 10 TIP RING	RD-SL SL-RD

WALL MOUNTING AN EKT

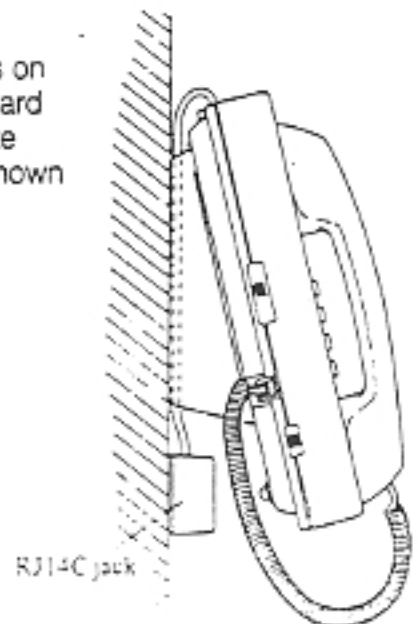
1. Route the modular line cord through the groove on the surface of the sub-base before mounting it on the wall. See figure at right.



2. Mount the sub-base on the wall.



3. Mount the telephone on the sub-base by first inserting its two top spring-action tabs into the appropriate holes on the bottom of the telephone. Pull the telephone downward slightly and snap the two lower tabs into the appropriate holes. The side view of a wall-mounted telephone is shown in figure at the right.



PROPER HANDLING OF CIRCUIT BOARDS

Special care must be taken when handling electronic components or cards. It is always necessary to discharge static electricity acquired from your clothing or through movement over carpeting, etc. This static electricity is discharged by touching an earth ground.

Any electronic circuit board is very sensitive to and may be damaged by static charges, extreme humidity levels, moisture or extreme temperatures. The handling of electronic components on a card or the wiring between components will cause damage due to static charges or moisture from your hand.

Close proximity to certain types of electrical equipment such as copying machines, fax machines, electrical motors, etc. will also damage electronic components. Certain copying and fax machines distribute a fine chemical mist that may build up and cause corrosion on electronic components.

Due to the sensitive nature of all circuit boards, it is strongly recommended that each board remain in its antistatic plastic bag until ready for installation. Special care should be taken not to drop or stack circuit boards. Never attempt to field-repair a circuit board.

IMPORTANT: Never install or remove ribbon cables or circuit boards from electronic equipment while the power is on.

INSTALLATION OF EXPANSION 8STU CARD (OPTIONAL)

The basic PRO-XL 1032 KSU is shipped with the MAU card, one 8STU card and 6COU card in place. This provides six C.O. lines and eight station-interface circuits.

To expand the system to thirty-two stations, three 8STU cards must be added to the KSU.

INSTALLATION STEPS

1. The KSU must be unplugged from AC power.
2. To install the first expansion 8STU, secure the first 8STU card to the stand-offs. Using the two 24x90BD flat cables, connect "CNE" on the MAU card to "CNE" on the 8STU card and "CNF" on the MAU card to "CNF" on the 8STU card.
3. To install the second expansion 8STU, insert four metal stand-offs through the basic 8STU card and secure the second expansion 8STU card to the stand-offs. Using the two 24x90BD flat cables, connect "CNG" on the MAU card to "CNE" on the 8STU card and "CNH" on the MAU card to "CNF" on the 8STU card.
4. To install the third expansion 8STU, insert four metal stand-offs through the first expansion 8STU card and secure the third expansion 8STU card to the stand-offs. Using the two 24x90BD flat cables, connect "CNI" on the MAU card to "CNE" on the 8STU card and "CNQ" on the MAU card to "CNF" on the 8STU card.
5. Run an amphenol connector from each 8STU card to its corresponding MDF (66M block) using 25-pair cable.

CAUTION: DO NOT install or remove flat cables while power is on.

Note: Asuzi Part No. QTM can be used in place of 66M block and 25-pair cable.

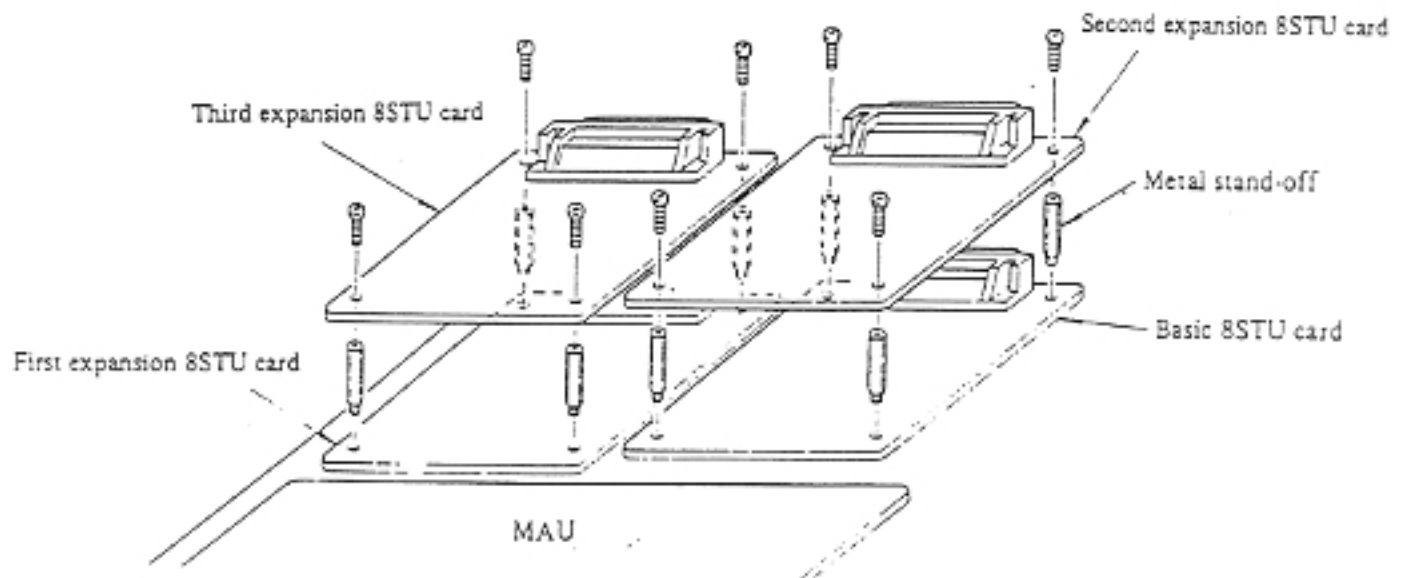


Fig. 4 INSTALLATION OF EXPANSION 8STU CARD

INSTALLATION OF THE SMDRU CARD (OPTIONAL)

One optional SMDRU card must be added to the system when SMDR is desired.

INSTALLATION STEPS

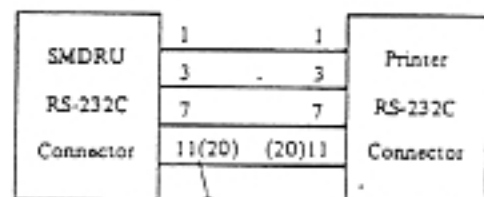
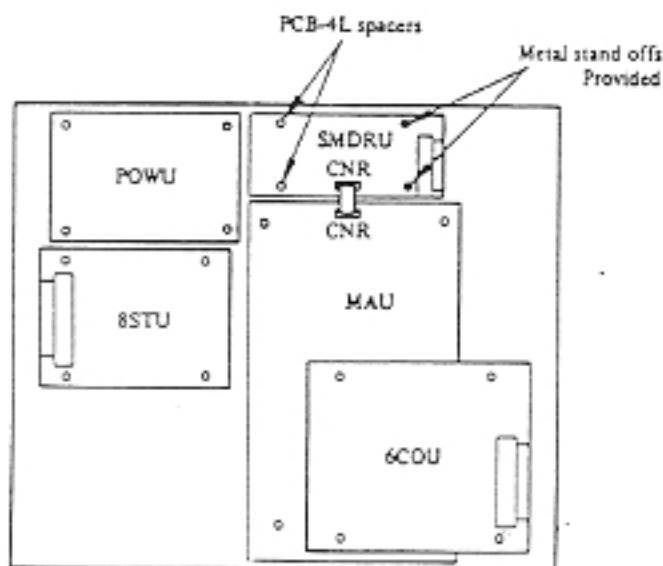
1. The KSU must be unplugged from AC power.

Note: If the 4COU card has already been installed in KSU, you must remove it. Install the SMDRU card and then replace the 4COU card.

2. If not already provided, install two PCB-4L spacers on the KSU as shown in the figure below.
3. Secure the SMDRU card to the two metal stand-offs and two spacers.
4. Using the 13x90BD flat cable furnished with the SMDRU card, connect "CNR" on the SMDRU card to the "CNR" on the MAU card.
5. Connect the RS-232C connector on the SMDRU card to the printer using the four wires as shown in the figure below.
6. Set the DS switch to select the speed to the printer (bit/sec) and to back up memory of clock during power failure.

DS 1 on: 300 b/s
 DS 2 on: 600 b/s
 DS 3 on: 1200 b/s
 DS 4 on: battery switch

Note: We recommend the use of an OKIDATA model LM-182 printer, using a standard RS232C cable.



Pin No.

PIN NUMBER

Pin 1: Frame Ground
 Pin 3: Receive Data
 Pin 7: Signal Ground
 Pin 20: Data Terminal Ready

Fig. 5 INSTALLATION OF THE SMDRU CARD

INSTALLATION OF THE POWER FAILURE TRANSFER UNIT (PFTU) (OPTIONAL)

When a power failure occurs, the PFTU (optionally installed) switches three C.O. lines in the PRO-XL 1032 system to three single-line telephones.

- ACCESSORIES:
- 3-pair Modular Cord
 - D4BU Cord
 - 1-pair cord, furnished with the PFTU
 - +M3.1x25S wood screws, furnished with the PFTU
 - 25-pair double-amphenol-ended cable
 - 25-pair amphenol to six-position modular jack adaptor

INSTALLATION STEPS

1. Remove the cover of the PFTU.
2. Using the screws provided, mount the PFTU to plywood through the keyhole slots on the rear of the box.
3. Mount an Amphenol to modular jack adaptor to plywood. (Adaptor must use 3 pair per jack. 4 modular jacks would allow connection to the 10 C.O. Lines.)
4. Unplug the KSU from AC power.
5. Using the 25-pair double-amphenol-ended cable, connect "CNZ" on the MAU card to the modular jack adaptor. Refer to figure on following page.
6. Using the 3-pair modular cord, connect "TK" on the PFTU to the first position on the six-position modular jack adaptor.
7. Using the 1-pair cord, connect "CNJ" on the MAU card to "CNJ" on the PFTU.
8. Connect the C.O. lines to "TC" on the PFTU. Cabling configurations are as follows:

GN and RD = CO lines 1, 4, 7 and 10
YL and BK = CO lines 2, 5 and 8
WH and BL = CO lines 3, 6 and 9

The first PFTU installed switches CO lines 1, 2, 3.

The second PFTU switches CO lines 4, 5, 6.

The third PFTU switches CO lines 7, 8, 9.

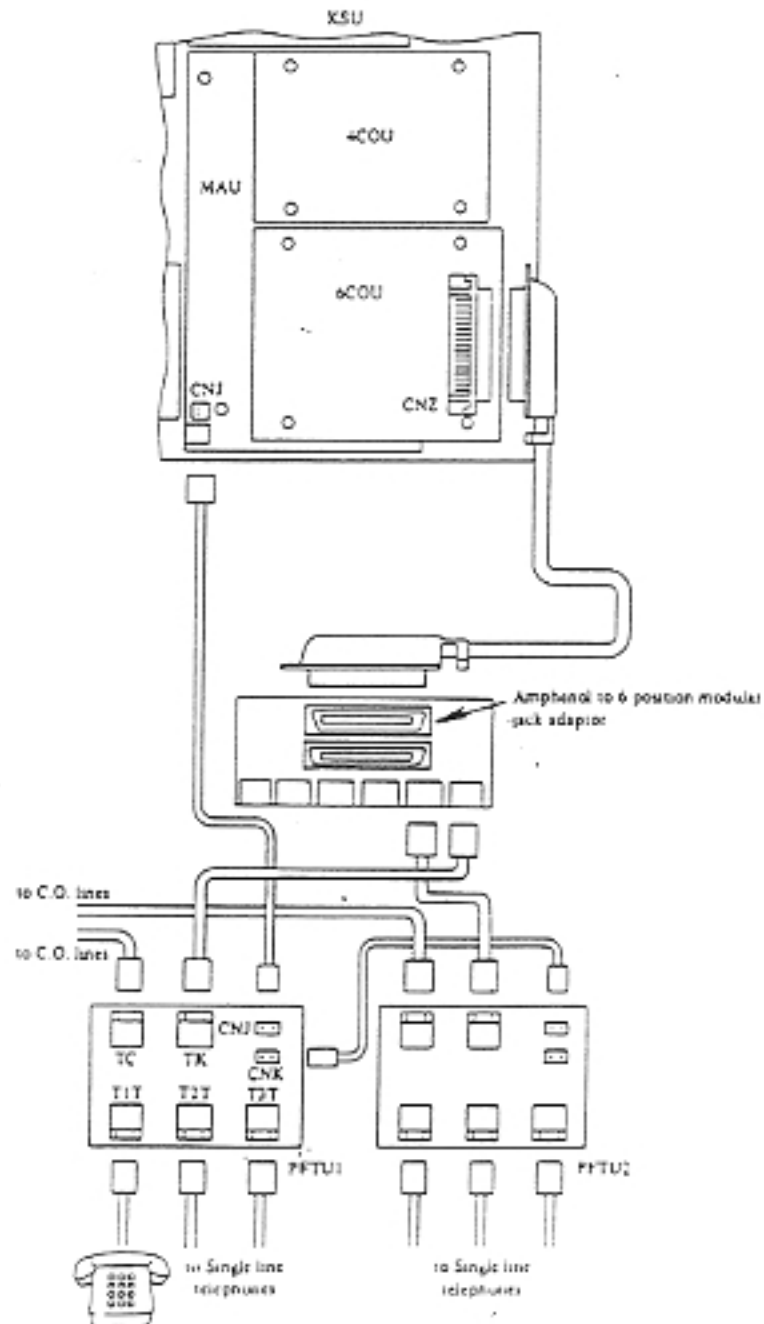
The fourth PFTU switches CO line 10.

9. Using a D4BU cord, connect a single-line telephone to "T1T" on the PFTU. Connect the second single-line telephone to "T2T", etc.

INSTALLATION OF SECOND PFTU

INSTALLATION STEPS

1. Using the 3-pair modular cord, connect "TK" on the PFTU to the second position on the six-position modular jack adaptor.
2. Connect C.O. lines 4, 5 and 6 to "TC" on the PFTU.
3. Using the 1-pair cord, connect "CNK" on PFTU-1 to "CNJ" on PFTU-2.
4. Connect the single line telephones to PFTU-2 as explained in step number 9 above.

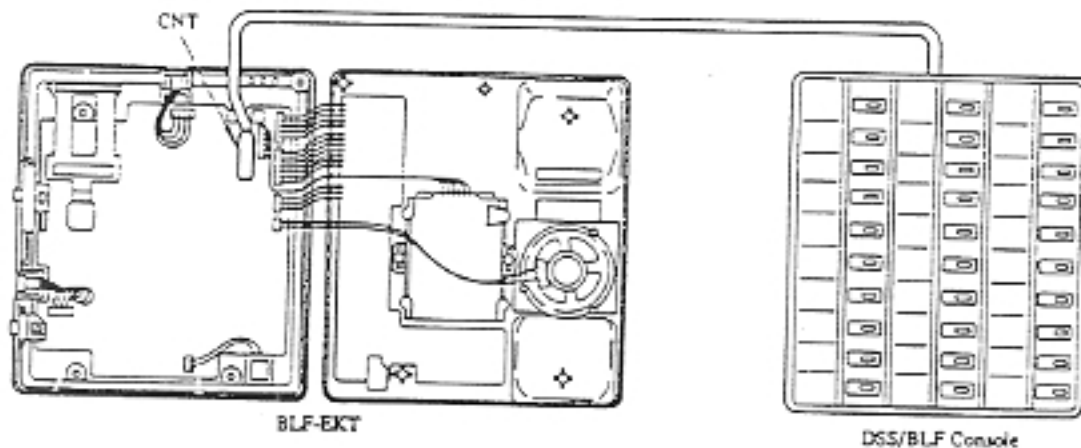


INSTALLATION OF THE DSS/BLF CONSOLE

A maximum of four DSS/BLF consoles can be installed per PRO-XL 1032 system.

INSTALLATION STEPS

1. Turn the BLF-EKT over and remove the four screws from the bottom.
2. Lift the bottom (base) of the BLF-EKT and carefully lay it to the side of the top of the telephone with its component side up.
3. Bring the cable from the DSS/BLF console through the opening provided on the BLF-EKT and secure cable holder using +M3x8S tapping screw furnished with DSS/BLF Console.
4. Insert the 12-pin connector to "CNT" in the BLF-EKT.
5. Reassemble telephone and secure with the four screws from the bottom.



CONNECTION OF CUSTOMER-PROVIDED EQUIPMENT

TO CONNECT AN EXTERNAL MUSIC SOURCE FOR MUSIC-ON-HOLD

The music-on-hold and background music features are provided by connecting a customer-provided music source to the MAU card in the KSU.

INSTALLATION STEPS

1. Unplug the KSU from the AC power.
2. Connect a 2-pair modular cord to the "MUS" (PAG) jack on the MAU card and the other end of the modular cord to any RJ14C jack.
3. Using a 2 conductor cable, connect the customer provided music source to the Red and Green wires in the RJ14C jack.
4. Call into system and be place on HOLD to adjust volume. Adjust volume and tuning on the MAU card at "VR". Also adjust volume and tuning at the music source.

Note: Amplified music source required.

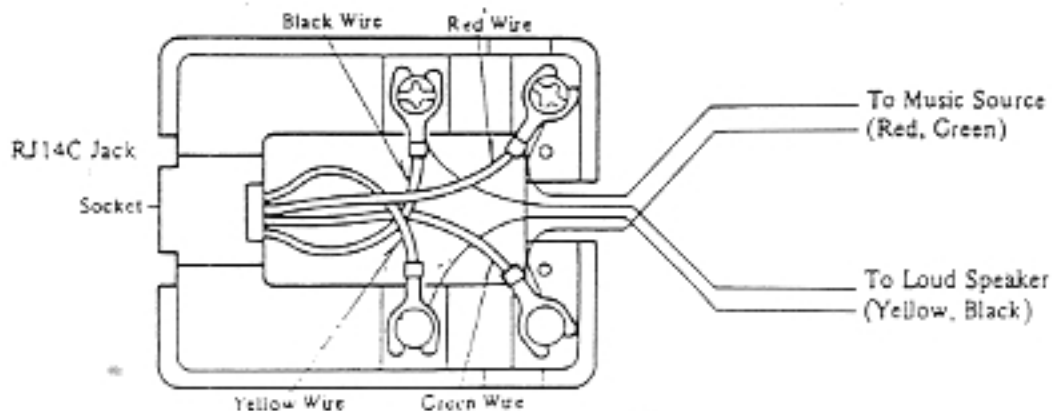
TO CONNECT EXTERNAL PAGING SYSTEM

When external paging is used, announcements can be heard on customer-provided amplifier and loudspeakers by dialing Intercom Code 59.

INSTALLATION STEPS

1. Unplug the KSU from the AC power.
2. Connect a 2-pair modular cord to the "PAG" (MUS) jack on the MAU card and the other end of the modular cord to an RJ14C jack.
3. Using a 2 conductor cable, connect the customer provided music source to the Black and Yellow wires in the RJ14C jack.
4. Dial Intercom Code 59 to test.

Note: Output impedance = 500 OHMS
Output level = 200mV



TO TRANSFER NIGHT RINGING TO EXTERNAL PAGING SYSTEM AND/OR TO ADD EXTERNAL PAGE TO ZONE PAGE WITH CALL PICKUP

The Pro-XL 1032 system has the capability to transfer night ringing over the external paging system. It also has the capability to connect the external paging system to any zone page with meet me answer.

Note: Meet me answer will work by pressing SET and dialing 1 when paging system is connected to terminals NR in a station and that station is programmed in zone 51 - 58. External page is then connected to one of these zones and not 59.

INSTALLATION STEPS

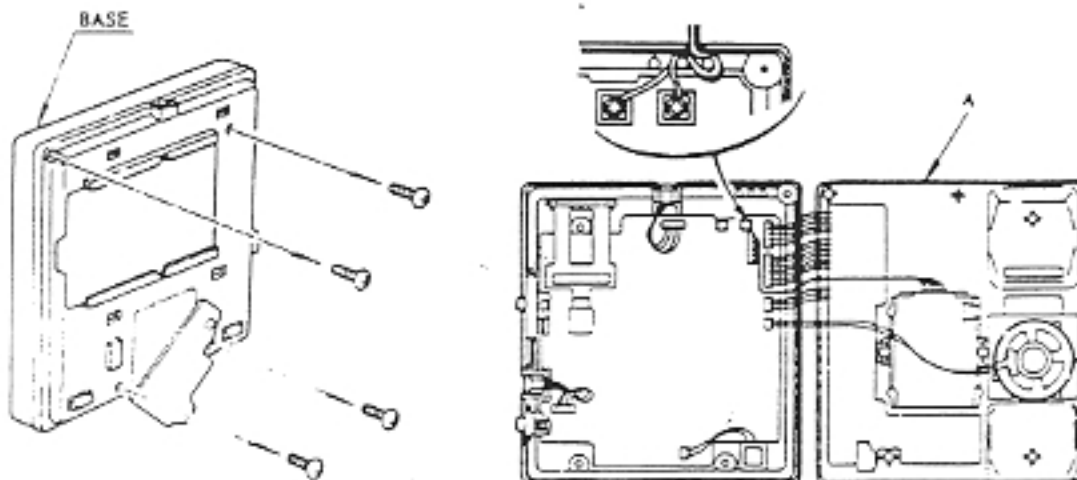
1. Unplug the modular line cord from the telephone.
2. Turn the telephone over, remove the wedge, then remove the four screws from the bottom of the telephone base.
3. Lift the base (bottom) of the telephone and carefully lay it to the side of the top of the telephone with its component side up.
4. Route the cable from the customer-provided amplifier through knock-out A on the cover. Connect the cable to screw terminals NR on the EKT circuit board.

Note: NR terminal has a thirty-two ohm output. Depending upon the amplifier used, a matching transformer may be required.

Note: The amplifier may be connected to the NR terminal of any EKT of your choice.

5. To achieve night ringing over the customer-provided external page, simply program this station for night ringing.
6. To group external page with zone page, simply program this station in the Zone desired. To answer this page, pickup at any station and press SET and dial 1.

REMINDER: The external speakers are connected to the speaker in this particular station. Therefore, the dialing confirmation tones and the handsfree conversations will be heard over the external speakers.



MEMORY SUPPORT BATTERY

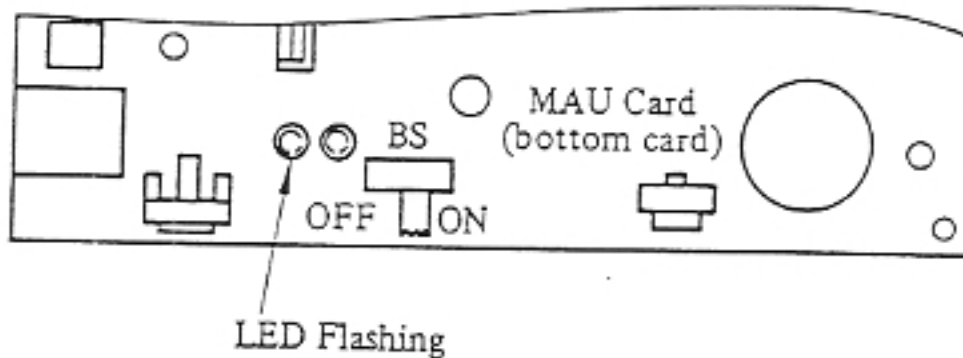
Before programming features, set the Battery Switch (Memory Battery Switch) on the MAU card to the ON position.

When a power failure occurs, the programmed services are immediately backed up by the lithium battery provided on the MAU card.

The life of the memory backup battery is ninety (90) days if the Battery Switch is left ON and the System is without power.

Be sure that the Battery Switch is OFF during transit to save the battery life. Under normal operation when the System is ON and the Battery Switch is ON, the backup battery will last ten years as the memory is backed up by the system power.

The System cannot be operated while being programmed.



PROGRAMMING PARAMETERS

At the time of System Installation, the features listed below must be programmed according to the specifications of the customer.

FEATURE	CHOICES
1. Hold Recall Interval	1, 2 or 3 minutes, or no hold recall
2. Inter Digit Pause	500, 700, 800 or 1100mS
3. DTMF Tone Interval	Duration of DTMF tones sent on tone C.O. line
4. Recall/Flash	Recall, C.O. line. Flash, PBX extension
5. PBX Outside Access Code	7, 8, 9 or 0
6. Rotary/Tone by Line	Rotary or Tone
7. C.O. Line/PBX Line	Behind PBX or C.O. line or combination
8. Outgoing Call Restriction by C.O. Line	System Wide - Restricted or Not Restricted
9. Master Phone Number	Master phone can be programmed by system programming. The following feature can be accessed from only master phone: <ul style="list-style-type: none">a. Night transfer on/offb. Registration of common speed dialc. External BGM on/offd. SMDR time and date set
10. Pause Interval	The duration of the "Programmable Pause" used in speed dialing can be set from one to fifteen seconds.
11. Prepause Time for Automatic CO Access	One to fifteen seconds
12. Timing of Call for SMDR	Program the time interval allowed to pass before the SMDR will begin timing a call.

PROGRAMMING PARAMETERS (continued)

FEATURE	CHOICES
13. Digit Timer for SMDR	Program the length of time the KSU will wait between digits before recording a "Number Dialed" for the SMDR.
14. Flexible Ringing Assignment	By station or by C.O. line
15. Toll Restriction and Outgoing Call Restriction	By station - Class A, B, C, or D
16. First Digit Restriction	Class "B" restriction can be programmed to not restrict numbers beginning with 0 or 1 or both.
17. Night Transfer	By station - Ring or No Ring
18. Tenant Group Assignment	12 Tenant Groups
19. Zone Page	By station - No page or 1 to 8 zones
20. Number of Digits Allowed	1 to 15 digits
21. Restricted 3 Digit Sequences	Ten 3-digit
22. Tenant Group	Restricted C.O. line by Tenant Group
23. Tenant Group Restriction	<ul style="list-style-type: none"> a. Cannot access lines b. Can access incoming and calls on hold only c. Can access calls on hold only d. No restriction
24. Automatic Access and Trunk Queuing Restriction	By C.O. line
25. Ringing Line Preference	On/Off

WIRING CHECK

When installing a PRO-XL 1032 system you may use a DSS/BLF to check the status of the connection between the KSU and each station.

1. Plug power cord into an AC outlet.
2. At the DSS/BLF console, press SET key and dial 00 plus (*). Observe the BLF lamps on the DSS/BLF console.
 - a. A steady lamp indicates = a station which is properly connected
 - b. A flashing lamp indicates = a station that is not connected properly or not connected at all
3. In order to return to normal operation, lift and replace handset.

Note: Please allow 5 to 6 seconds for this to occur.

PLACING THE SYSTEM IN PROGRAM MODE

The following steps are performed to place the system in the programming mode:

Note: WHILE IN THIS MODE, CALLS CANNOT BE PLACED OR RECEIVED. If the system is being programmed for the first time, perform all the steps listed below.

1. Make sure the AC power cord is plugged into the outlet.
2. Make sure Station 10 is connected.
3. On Station 10, press SET, dial 0, 9, (*) and press HOLD. (SET, 0, 9, (*), HOLD) wait for the MUTE LED to flash. (8 times per second.)
4. Program each feature, one after the other, in accordance with the following paragraph.

CLEARING THE PROGRAMMED FEATURES AND SPEED DIAL NUMBERS

To clear all the programmed features and speed dial numbers, proceed as follows:

1. At Station 10, press SET, dial 0, 9, (*) and press HOLD, (SET, 0, 9, (*), HOLD) and wait for the MUTE LED to flash. (8 times per second)
2. Dial 9, 0, 0, 0. Program features and speed dial numbers are now cleared.
3. Dial 9, 0, 9, 0.

CLEARING THE PROGRAMMED FEATURES

To clear all programmed features proceed as follows:

1. At Station 10, press SET, dial 0, 9, (*) and press HOLD, (SET, 0, 9, (*), HOLD) and wait for the MUTE LED to flash. (8 times per second)
2. Dial 9, 0, 0, 1. Program features are now cleared. (Speed dial numbers are not affected)
3. Dial 9, 0, 9, 0.

PROGRAMMING

Once the system is in programming mode, the actual programming is performed at Station 10. Programming consists of keying the access code for the desired feature, then pressing the proper combination of line, intercom keys or two digit codes on the dial pad to light the required LEDs.

The same access code may be assigned to several features. All features using the same code may be programmed at the same time without rekeying the code.

After programming each particular ACCESS CODE, the HOLD key must be pressed in order to register the desired features.

1. Enter the four digit ACCESS CODE of the first feature on the keypad of Station 10. When pressing the first digit of the ACCESS CODE, the MUTE LED changes to slow flashing, and when pressing the fourth digit the MUTE LED is extinguished.
2. Observe the keypad. The lighted LEDs indicate how that feature is presently programmed.

PROGRAMMING (continued)

3. To program the feature for the desired option, determine which LEDs should be lighted and which should be extinguished.
4. To light an LED, press the associated line, intercom button or 2-digit DIAL CODE.
5. To extinguish an LED, press the associated line, intercom button or 2-digit DIAL CODE.
6. Repeat steps 4 and 5 until the desired combination of LEDs are lit and all others are dark.
7. After programming for a particular ACCESS CODE is completed, press HOLD. The LEDs extinguish. The MUTE LED flashes rapidly.

Note: The HOLD key must be pressed in order to register each ACCESS CODE in memory.

8. To program the next feature, determine the correct ACCESS CODE and repeat steps 1 through 7.

NOTE: Make sure that the MUTE LED is flashing before entering a new ACCESS CODE. If it is not flashing, make sure that the HOLD key has been pressed in order to insure that the last ACCESS CODE programmed has been registered in memory.

TAKING THE SYSTEM OUT OF PROGRAM MODE

To restore the system to operating mode after all programming is complete, proceed as follows:

1. At Station 10 press the HOLD key to make sure that your last entry has been registered. The MUTE LED flashed rapidly.
2. Dial 9, 0, 9 and 0. The MUTE LED extinguishes. The system is now operational.
3. Check the operation of the system to ensure that each feature, each C.O. line, and each station has been properly programmed.

PROGRAMMING OF FEATURES

ACCESS CODE	FEATURE TO BE PROGRAMMED	OPTION	CO1 LED	CO2 LED	CO3 LED	INT LED	FACTORY SET
0000	HOLD/RECALL TIME	No Recall	-	-	-	-	•
		1 Minute	ON	-	-	-	
		2 Minutes	-	ON	-	-	
		3 Minutes	ON	ON	ON	ON	
0010	MINIMUM PAUSE BETWEEN DIGITS (Rotary CO line only)	1100mS ESS	-	-	ON	-	•
		800mS XBAR	-	-	-	-	
		700mS STEP	-	-	-	ON	
		500mS STEP	-	-	ON	ON	
0020	PBX PAUSE NUMBER (Must be programmed when any C.O. Line is assigned as a PABX Line in access code 5XX0.)	None	-	-	-	-	•
		7	ON	-	-	-	
		8	-	ON	-	-	
		9	-	-	ON	-	
		0	-	-	-	ON	
0021	AUTOMATIC ACCESS AND TRUNK QUEUING RESTRICTION BY LINE (Turn on LED to restrict queuing feature) (Trunks that are un-installed in the system must best restricted to eliminate incorrect line selections.)	None	-	-	-	-	•
		CO 1	ON	-	-	-	
		CO 2	-	ON	-	-	
		CO 3	-	-	ON	-	
		CO 4	-	-	-	ON	
0030		CO 5	ON	-	-	-	
		CO 6	-	ON	-	-	
		CO 7	-	-	ON	-	
		CO 8	-	-	-	ON	
0031		CO 9	ON	-	-	-	
		CO 10	-	ON	-	-	

Note: - = OFF

ACCESS CODE	FEATURE	OPTION	DIAL CODE	LED INDICATION				ACCESS CODE	DIAL CODE	LED CO 1
				CO 1	CO 2	CO 3	INT			
0040	MASTER STATION #	STA 10	00	-	-	-	-	0041	00	-
		STA 11	01	ON	-	-	-		00	-
		STA 12	02	-	ON	-	-		00	-
		STA 13	03	ON	ON	-	-		00	-
		STA 14	04	-	-	ON	-		00	-
		STA 15	05	ON	-	ON	-		00	-
		STA 16	06	-	ON	ON	-		00	-
		STA 17	07	ON	ON	ON	-		00	-
		STA 18	08	-	-	-	ON		00	-
		STA 19	09	ON	-	-	ON		00	-
		STA 20	10	-	ON	-	ON		00	-
		STA 21	11	ON	ON	-	ON		00	-
		STA 22	12	-	-	ON	ON		00	-
		STA 23	13	ON	-	ON	ON		00	-
		STA 24	14	ON	ON	ON	ON		00	-
STA 25	15	ON	ON	ON	ON	00	-			
0040		STA 26	00	-	-	-	-	0041	01	ON
		STA 27	01	ON	-	-	-		01	ON
		STA 28	02	-	ON	-	-		01	ON
		STA 29	03	ON	ON	-	-		01	ON
		STA 30	04	-	-	ON	-		01	ON
		STA 31	05	ON	-	ON	-		01	ON
		STA 32	06	-	ON	ON	-		01	ON
		STA 33	07	ON	ON	ON	-		01	ON
		STA 34	08	-	-	-	ON		01	ON
		STA 35	09	ON	-	-	ON		01	ON
		STA 36	10	-	ON	-	ON		01	ON
		STA 37	11	ON	ON	-	ON		01	ON
		STA 38	12	-	-	ON	ON		01	ON
		STA 39	13	ON	-	ON	ON		01	ON
		STA 40	14	-	ON	ON	ON		01	ON
		STA 41	15	ON	ON	ON	ON		01	ON

Note: Factory Setting for the MASTER STATION is Station 10 and only one phone may be programmed as the MASTER STATION. MASTER STATION is able to access features such as Night Transfer, Speed Dial Numbers, External BGM, and setting the date/time for SMDR features.

ACCESS CODE	FEATURE TO BE PROGRAMMED	OPTION	DIAL CODE	LED INDICATION				FACTORY SET
				CO1	CO2	CO3	INT	
0050	PAUSE INTERVAL (For Speed Dialing)	1 sec.	00	-	-	-	-	
		1 sec.	01	ON	-	-	-	
		2 sec.	02	-	ON	-	-	
		3 sec.	03	ON	ON	-	-	
		4 sec.	04	-	-	ON	-	
		5 sec.	05	ON	-	ON	-	
		6 sec.	06	-	ON	ON	-	
		7 sec.	07	ON	ON	ON	-	
		8 sec.	08	-	-	-	ON	
		9 sec.	09	ON	-	-	ON	
		10 sec.	10	-	ON	-	ON	
		11 sec.	11	ON	ON	-	ON	
		12 sec.	12	-	-	ON	ON	
		13 sec.	13	ON	-	ON	ON	
		14 sec.	14	-	ON	ON	ON	
15 sec.	15	ON	ON	ON	ON			
0060	FLASH/RECALL INTERVAL	20mS	00	-	-	-	-	
		40mS	01	ON	-	-	-	
		60mS	02	-	ON	-	-	
		80mS	03	ON	ON	-	-	
		100mS	04	-	-	ON	-	
		200mS	05	ON	-	ON	-	
		300mS	06	-	ON	ON	-	
		400mS	07	ON	ON	ON	-	
		500mS	08	-	-	-	ON	
		600mS	09	ON	-	-	ON	
		700mS	10	-	ON	-	ON	
		800mS	11	ON	ON	-	ON	
		900mS	12	-	-	ON	ON	
		1000mS	13	ON	-	ON	ON	
		2000mS	14	-	ON	ON	ON	
3000mS	15	ON	ON	ON	ON			

Note: - = OFF

ACCESS CODE	FEATURE	OPTION	DIAL CODE	LED INDICATION				FACTORY SET
				CO1	CO2	CO3	INT	
0061	TIMING OF CALL FOR SMDR	1 sec.	00	-	-	-	-	.
		5 sec.	01	ON	-	-	-	
		9 sec.	02	-	ON	-	-	
		13 sec.	03	ON	ON	-	-	
		17 sec.	04	-	-	ON	-	
		21 sec.	05	ON	-	ON	-	
		25 sec.	06	-	ON	ON	-	
		29 sec.	07	ON	ON	ON	-	
		33 sec.	08	-	-	-	ON	
		37 sec.	09	ON	-	-	ON	
		41 sec.	10	-	ON	-	ON	
		45 sec.	11	ON	ON	-	ON	
		49 sec.	12	-	-	ON	ON	
		53 sec.	13	ON	-	ON	ON	
		57 sec.	14	-	ON	ON	ON	
		61 sec.	15	ON	ON	ON	ON	

Note: Program the time interval allowed to pass before the SMDR will begin timing a call.

ACCESS CODE	FEATURE TO BE PROGRAMMED	OPTION	DIAL CODE	LED INDICATION				FACTORY SET
				CO1	CO2	CO3	INT	
.1	PREPAUSE TIME FOR AUTOMATIC CO ACCESS	(1 sec.)	00	-	-	-	-	.
		1 sec.	01	ON	-	-	-	
		2 sec.	02	-	ON	-	-	
		3 sec.	03	ON	ON	-	-	
		4 sec.	04	-	-	ON	-	
		5 sec.	05	ON	-	ON	-	
		6 sec.	06	-	ON	ON	-	
		7 sec.	07	ON	ON	ON	-	
		8 sec.	08	-	-	-	ON	
		9 sec.	09	ON	-	-	ON	
		10 sec.	10	-	ON	-	ON	
		11 sec.	11	ON	ON	-	ON	
		12 sec.	12	-	-	ON	ON	
		13 sec.	13	ON	-	ON	ON	
		14 sec.	14	-	ON	ON	ON	
15 sec.	15	ON	ON	ON	ON			
0001	FIRST DIGIT RESTRICTION FOR CLASS B OF TOLL RESTRICTION	0 and 1	-	-	-	-	-	.
		1	CO1	ON	-	-	-	
		0	CO2	-	ON	-	-	
		NONE	CO1,2	ON	ON	-	-	

Note: The PREPAUSE TIME FOR AUTOMATIC CO ACCESS feature selects the pre-pause time when using speed dialing or last number redial.

Note: FIRST DIGIT RESTRICTION FOR CLASS B OF TOLL RESTRICTION allows you to program the system to accept or reject the numbers 0 and 1.

3-DIGIT TOLL RESTRICTION

TABLE A

Access Code	3-Digit Number to Restrict		
	Digit #1	Digit #2	Digit #3
7000			
7100			
7200			
7300			
7400			
7500			
7600			
7700			
7800			
7900			

Factory set: None

VISUAL DISPLAY OF NUMBERS IN 3-DIGIT TOLL RESTRICTION TABLE (FOR CONFORMATION ONLY)

TABLE B

Digit #	LED Indication			
	CO1	CO2	CO3	INT
1	ON	-	-	-
2	-	ON	-	-
3	ON	ON	-	-
4	-	-	ON	-
5	ON	-	ON	-
6	-	ON	ON	-
7	ON	ON	ON	-
8	-	-	-	ON
9	ON	-	-	ON
0	-	ON	-	ON
None	-	-	-	-
*	ON	ON	-	ON
#	-	-	ON	ON

To program a 3-digit number for restriction, key in the 4-digit access code. Then enter the 3-digit number using the dial pad.

Note: Indicator LED's are not lit but can be confirmed by taking the following STEPS listed below and referencing Table B.

- Step 1 Dial ACCESS CODE, the first digit will be displayed.
- Step 2 Press SET KEY, the second digit will be displayed.
- Step 3 Press SET KEY, the third digit will be displayed.

Note: To cancel 3-digit number for restriction press INT key, then each digit. The digits must be displayed to verify cancellation has been done properly.

ACCESS CODE 1YY1
OUTGOING CALL RESTRICTION BY STATION

Station Programmed																ACCESS KEY		
																CO1	CO2	
0	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	OPTION	LED	LED
																Class A	OFF	OFF
																Class B	ON	OFF
																Class C	OFF	ON
																Class D	ON	ON

ACCESS CODE 1YY1
OUTGOING CALL RESTRICTION BY STATION

Station Programmed																ACCESS KEY		
																CO1	CO2	
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	OPTION	LED	LED
																Class A	OFF	OFF
																Class B	ON	OFF
																Class C	OFF	ON
																Class D	ON	ON

Note: YY = Station Number
Factory set: No Restriction

	CO LINE	BEHIND PBX
Class A	No Restriction	No Restriction
Class B	All of the following are disabled: 1. Dialing 0 and number 2. Dialing 1 and number 3. Dialing more than programmed digits (refer to access code 0051) 4. Dialing programmed 3-digit number (reference access codes 7000-7900)	All of the following are disabled: 1. Dialing PBX access code, 0 and number 2. Dialing PBX access code, 1 and number 3. Dialing PBX access code and more than programmed digits 4. Dialing PBX access code and programmed 3-digit number
Class C	Dialing out on all CO lines is disabled	Dialing PBX access code and any number is disabled
Class D	Dialing out on all CO lines is disabled except through system speed-dial	Dialing PBX access code and any number is disabled except through system speed-dial

In Class B, private speed-dial is toll-restricted, system speed-dial is not toll-restricted.

ACCESS CODE	FEATURE TO BE PROGRAMMED	OPTION	DIAL CODE	LED INDICATION				FACTORY SET
				CO1	CO2	CO3	INT	
0051	NUMBER OF DIGITS TO BE ALLOWED (Class B)	NONE	00	-	-	-	-	
		1 Digit	01	ON	-	-	-	
		2 Digits	02	-	ON	-	-	
		3 Digits	03	ON	ON	-	-	
		4 Digits	04	-	-	ON	-	
		5 Digits	05	ON	-	ON	-	
		6 Digits	06	-	ON	ON	-	
		7 Digits	07	ON	ON	ON	-	
		8 Digits	08	-	-	-	ON	
		9 Digits	09	ON	-	-	ON	
		10 Digits	10	-	ON	-	ON	
		11 Digits	11	ON	ON	-	ON	
		12 Digits	12	-	-	ON	ON	
		13 Digits	13	ON	-	ON	ON	
		14 Digits	14	-	ON	ON	ON	
15 Digits	15	ON	ON	ON	ON			

ACCESS CODE 5XXO LINE PARAMETERS
PULSE OR TONE BY LINE

1. Outgoing call restriction
2. CO or PBX line
3. Tone or Pulse

C.O. Lines Programmed

1	2	3	4	5	6	7	8	9	10	Access Key	LED OFF	LED ON
										CO3	Not Restricted	Restricted
										CO2	CO Line	PABX
										CO1	Tone	Pulse
										INT	Not Used	Not Used

Note: XX = CO Line

Factory Set: Tone, CO Line, Not Restricted

ACCESS CODE 2YY0
FLEXIBLE RINGING ASSIGNMENT (CO's 1 - 4)

Stations Programmed

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	ACCESS KEY	LED OFF	LED ON
																CO1	CO 1 No Ring	CO 1 Ring
																CO2	CO 2 No Ring	Co 2 Ring
																CO3	CO 3 No Ring	CO 3 Ring
																INT	CO 4 No Ring	CO 4 Ring

ACCESS CODE 2YY0
FLEXIBLE RINGING ASSIGNMENT (CO's 1 - 4)

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	ACCESS KEY	LED OFF	LED ON
																CO1	CO 1 No Ring	CO 1 Ring
																CO2	CO 2 No Ring	Co 2 Ring
																CO3	CO 3 No Ring	CO 3 Ring
																INT	CO 4 No Ring	CO 4 Ring

ACCESS CODE 2YY1
FLEXIBLE RINGING ASSIGNMENT (CO's 5 - 8)

Stations Programmed

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	ACCESS KEY	LED OFF	LED ON
																CO1	CO 5 No Ring	CO 5 Ring
																CO2	CO 6 No Ring	CO 6 Ring
																CO3	CO 7 No Ring	CO 7 Ring
																INT	CO 8 No Ring	CO 8 Ring

Note: YY = Station Number
Factory Set: Station 10 rings on all CO Lines

ACCESS CODE 2YY1
FLEXIBLE RINGING ASSIGNMENT (CO's 5 - 8)

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	ACCESS KEY	LED OFF	LED ON
																CO1	CO 5 No Ring	CO 5 Ring
																CO2	CO 6 No Ring	CO 6 Ring
																CO3	CO 7 No Ring	CO 7 Ring
																INT	CO 8 No Ring	CO 8 Ring

ACCESS CODE 2YY2
FLEXIBLE RINGING ASSIGNMENT (CO's 9 - 10)

Stations Programmed

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	ACCESS KEY	LED OFF	LED ON
																CO1	CO 9 No Ring	CO 9 Ring
																CO2	CO10 No Ring	CO10 Ring
																CO3	Not Used	Not Used
																INT	Not Used	Not Used

ACCESS CODE 2YY2
FLEXIBLE RINGING ASSIGNMENT (CO's 9 - 10)

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	ACCESS KEY	LED OFF	LED ON
																CO1	CO 9 No Ring	CO 9 Ring
																CO2	CO10 No Ring	CO10 Ring
																CO3	Not Used	Not Used
																INT	Not Used	Not Used

Note: YY = Station Number

Factory Set: Station 10 rings on all CO lines

ACCESS CODE 3YY0
ASSIGNMENT OF STATIONS TO TENANT GROUPS

Stations Programmed

0	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	OPTION	DIAL CODE	LED INDICATION			
																		CO1	CO2	CO3	INT
																None	00	-	-	-	-
																Group 1	01	ON	-	-	-
																Group 2	02	-	ON	-	-
																Group 3	03	ON	ON	-	-
																Group 4	04	-	-	ON	-
																Group 5	05	ON	-	ON	-
																Group 6	06	-	ON	ON	-
																Group 7	07	ON	ON	ON	-
																Group 8	08	-	-	-	ON
																Group 9	09	ON	-	-	ON
																Group 10	10	-	ON	-	ON
																Group 11	11	ON	ON	-	ON
																Group 12	12	-	-	ON	ON

ACCESS CODE 3YY0
ASSIGNMENT OF STATIONS TO TENANT GROUPS

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	OPTION	DIAL CODE	LED INDICATION			
																		CO1	CO2	CO3	INT
																None	00	-	-	-	-
																Group 1	01	ON	-	-	-
																Group 2	02	-	ON	-	-
																Group 3	03	ON	ON	-	-
																Group 4	04	-	-	ON	-
																Group 5	05	ON	-	ON	-
																Group 6	06	-	ON	ON	-
																Group 7	07	ON	ON	ON	-
																Group 8	08	-	-	-	ON
																Group 9	09	ON	-	-	ON
																Group 10	10	-	ON	-	ON
																Group 11	11	ON	ON	-	ON
																Group 12	12	-	-	ON	ON

Note: Do not press CO 1, 2, 3 or INT to program Dial Access Code
Factory Set: None

ACCESS CODE 3YY1
ZONE PAGING GROUP

Stations Programmed

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	OPTION	DIAL CODE	LED INDICATION			
																		CO1	CO2	CO3	INT
																None	00	-	-	-	-
																Group 1	01	ON	-	-	-
																Group 2	02	-	ON	-	-
																Group 3	03	ON	ON	-	-
																Group 4	04	-	-	ON	-
																Group 5	05	ON	-	ON	-
																Group 6	06	-	ON	ON	-
																Group 7	07	ON	ON	ON	-
																Group 8	08	-	-	-	ON

ACCESS CODE 3YY1
ZONE PAGING GROUP

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	OPTION	DIAL CODE	LED INDICATION			
																		CO1	CO2	CO3	INT
																None	00	-	-	-	-
																Group 1	01	ON	-	-	-
																Group 2	02	-	ON	-	-
																Group 3	03	ON	ON	-	-
																Group 4	04	-	-	ON	-
																Group 5	05	ON	-	ON	-
																Group 6	06	-	ON	ON	-
																Group 7	07	ON	ON	ON	-
																Group 8	08	-	-	-	ON

Note: Do not press CO 1, 2, 3 or INT to program Dial Access Code
Factory Set: None

ACCESS CODE 4YY0
NIGHT TRANSFER RINGING/RINGING LINE PREFERENCE

Stations Programmed

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	ACCESS KEY	LED OFF	LED ON
																CO1	Night Transfer OFF	Night Transfer ON
																CO2	Ringling Line Preference OFF	Ringling Line Preference ON
																CO3	Not Used	Not Used
																INT	Not Used	Not Used

ACCESS CODE 4YY0
NIGHT TRANSFER RINGING/RINGING LINE PREFERENCE

Stations Programmed

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	ACCESS KEY	LED OFF	LED ON
																CO1	Night Transfer OFF	Night Transfer ON
																CO2	Ringling Line Preference OFF	Ringling Line Preference ON
																CO3	Not Used	Not Used
																INT	Not Used	Not Used

Note: YY = Station Number. If a station desires Ringing Line Preference, you must also program that station to ring.

Factory Set: No stations will ring in Night Transfer
No stations have Ringing Line Preference

PROGRAMMING OF FEATURES

ACCESS CODE	FEATURE TO BE PROGRAMMED	OPTION	CO1 LED	CO2 LED	CO3 LED	INT LED	FACTOR SET
0011	DS RATIO	55mS	ON	-			
		75mS	-	-			.
	FLASH/RECALL (OF C.O. Line)	Flash (PABX) Recall (CO)	- -	ON -			.
TENANT TYPE	Cannot access CO's				-	-	.
	Can access line on HOLD				ON	-	
	Restrict outgoing calls				-	ON	
	No restriction				ON	ON	

Note: - = OFF

EXPLANATION OF TENANT TYPE

OPTION	REMARKS
Cannot access CO's	Can only access C.O. lines in your tenant group.
Can access line on HOLD	Tenant groups can retrieve any line on HOLD in any other tenant group but restricts retrieval of incoming and outgoing calls on any other tenant group's lines. Outgoing calls on your own tenant group lines are allowed.
Restrict outgoing calls	Allows tenant groups to retrieve incoming calls and calls on HOLD in any other tenant group, but restricts outgoing calls on any other tenant group's lines. Outgoing calls on your own tenant group lines are allowed.
No restriction	No tenant groups have been established.

ACCESS CODE 6XX0
 RESTRICTION OF C.O. LINES TO TENANT GROUPS
 (GROUPS 1 - 4)

C.O. Lines Programmed

1	2	3	4	5	6	7	8	9	10	Tenant Group	Access Key	LED OFF	LED ON
										Group 1	CO1	Restricted	Not Restricted
										Group 2	CO2	Restricted	Not Restricted
										Group 3	CO3	Restricted	Not Restricted
										Group 4	INT	Restricted	Not Restricted

ACCESS CODE 6XX1
 RESTRICTION OF C.O. LINES TO TENANT GROUPS
 (GROUPS 5 - 8)

C.O. Lines Programmed

1	2	3	4	5	6	7	8	9	10	Tenant Group	Access Key	LED OFF	LED ON
										Group 5	CO1	Restricted	Not Restricted
										Group 6	CO2	Restricted	Not Restricted
										Group 7	CO3	Restricted	Not Restricted
										Group 8	INT	Restricted	Not Restricted

ACCESS CODE 6XX2
 RESTRICTION OF C.O. LINES TO TENANT GROUPS
 (GROUPS 9 - 12)

C.O. Lines Programmed

1	2	3	4	5	6	7	8	9	10	Tenant Group	Access Key	LED OFF	LED ON
										Group 9	CO1	Restricted	Not Restricted
										Group 10	CO2	Restricted	Not Restricted
										Group 11	CO3	Restricted	Not Restricted
										Group 12	INT	Restricted	Not Restricted

Note: XX = CO Line
 Factory Set: Not restricted, all LED's on

HOW TO PROGRAM TENANT SERVICE

Tenant Service must be programmed in three (3) steps:

Step 1 Assignment of Stations to Tenant Groups (Code 3YY0) - assigns station to one of twelve Tenant Groups.

EXAMPLE: To assign stations 10 and 11 to Tenant Group 1 (after "set, 0, 9, (*), Hold"), dial the following:

```

3  10  0  -  01  -   SET   -   01  -  HOLD
   (STA 10) (Group) (To Automatically (Group)
                   1      Advance To Next  1
                   Station. Station 11)
    
```

To assign stations 12 and 13 to Tenant Group 2

```

3  12  0  -  02  -   SET   -   02  -  HOLD
   (STA 12) (Group) (To Automatically (Group)
                   2      Advance To Next  2
                   Station. Station 13)
    
```

Stations 10 and 11 are now in Tenant Group 1 and
Stations 12 and 13 are now in Tenant Group 2.

Step 2 Restriction of C.O. Lines to Tenant Groups - assigns CO lines to Tenant Group and restricts or unrestricts Tenant Groups from accessing other Tenant Groups.

EXAMPLE: Restrict COs 5 and 6 from Tenant Group 1 and restrict COs 1 and 2 from Tenant Group 2 with no restriction on CO 3 and 4.

```

6  05  0  -   CO1  -  HOLD
   (CO5)      (Group)
                   1
                   Restricted
    
```

```

6  06  0  -   CO1  -  HOLD
   (CO6)      (Group)
                   1
                   Restricted
    
```


6 01 0 - CO2 - HOLD

(CO1) (Group)
2
Restricted

6 02 0 - CO2 - HOLD

(CO2) (Group)
2
Restricted

Tenant Group 1 is now restricted from accessing COs 5 and 6. Tenant Group 2 is now restricted from accessing COs 1 and 2. No restrictions have been applied to COs 3 and 4.

Step 3 Tenant Type - used with Step 2 to define type of restriction (if any), for a phone assigned to a Tenant Group. Allows access to certain types of calls between Tenant Groups. RESTRICTIONS APPLY TO ALL GROUPS.

EXAMPLE: Restrict access between groups to "no outgoing calls". (COs ringing in and COs on hold can be accessed)

0011 - INT - HOLD

("No outgoing calls")
Restriction

COs on hold or ringing in can be accessed by phones in any Tenant Group. Tenant Group 1 phones can access Tenant Group 2 COs, only if the COs are on hold or ringing in. No outgoing calls are allowed.

FINAL INSPECTION

BEFORE TURNING THE SYSTEM OVER AS OPERATIONAL:

1. Check each circuit board, including optional boards, to be sure that they are installed securely.
2. Verify that all C.O. line cables are connected to telco RJ21X connector and "CNZ" in the KSU.
3. Verify that proper gas protection has been installed and grounded on all C.O. lines and cables to other buildings.
4. Ensure that all telephone station cables are connected to telephone sets and the KSU at the MDF.
5. Ensure that the programming of the various features required by the customer have been done properly according to the instructions provided.
6. Ensure that the KSU has been properly grounded according to the instructions provided.
7. Ensure that the power cord from the KSU is properly connected and surge protection is in place.
8. Ensure that the "L0" and "L1" LEDs on the MAU card are flashing. This indicates that the Central Processing Unit (CPU) incorporated in the MAU is functioning properly.

SYSTEM RESET

Occasionally the erroneous or random operation of the function keys of the telephones causes the PRO-XL 1032 system or several telephones to malfunction.

Such malfunctioning is corrected by resetting the system. To reset the system, simply unplug AC power for more than three seconds and then plug it in again, or press the RESET button located on the MAU card. See figure below.

CAUTION: When resetting the system, be sure that none of the stations are being used, as the reset operation disconnects all external or intercom calls in progress.

WARNING: This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.