ITT Telecommunications

Key
Telephone
Systems
Guide

ITT

Telecommunications Division

1978

KEY TELEPHONE SYSTEMS GUIDE 1978

Sales & ordering reference guide for 1A2 style key telephone systems, including K-501, K-512A, K-36, K-76 systems and all major KTU's.

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Multiline Key Telephone Systems

Multiline key telephone systems can be depended upon to provide the most economical, convenient, and efficient telecommunications for businesses, industries, and offices requiring 3 to 20 CO/PBX lines and 6 to 54 stations.

Such a system permits a number of telephones to share a number of lines without the need for a switchboard or attendant. A person at any station in the system can answer, hold, transfer, or originate calls on any line by operating buttons on the telephone.

Lamps on each telephone indicate the status of all connected lines, whether idle, busy, on hold, or with an incoming call. This assures prompt, correct answering of incoming calls and avoids interruptions of calls in progress.

In addition to providing efficient use of telephones and outside lines, a system may also include intercom and other auxiliary features.

Advantages of a Multiline Key Telephone System

- Each telephone has access to a group of lines. This assures optimum utility of all telephones.
- Each line is connected to a group of telephones. This assures maximum use of each CO/PBX line.
- A conference arrangement of two or three parties is made simply by having the parties involved to "pick up" the same line.
- One telephone is used for inside and outside calls. Avoids desk clutter.
- Visual signals ensure prompt,correct answering of incoming calls and avoid interruptions of calls in progress.
- Calls can be transferred from one telephone to another--day or night.
- The Hold feature permits holding one or more outside lines while another line is used, or while other functions are performed--such as seeking information or briefing another person before transferring a call to him. This can reduce the number of call-backs.
- A secretary or receptionist can handle all calls and transfer them to the desired party.
- The exclusion feature permits confidential calls to be made.
- Private lines may be installed between key systems to permit any station in one system to be connected to any station in another system or between a key system and a remote station.
- Optional features can be added to some systems, such as music-on-hold, voice paging, tone and voice signaling with handsfree answer-back on intercom, and background music.
- A busy-lamp field may be installed at the central answering location to indicate busy stations.
- A direct-station-selection console with busy-lamp field may be included at the central answering location in K-76A Call Announcing systems.

1
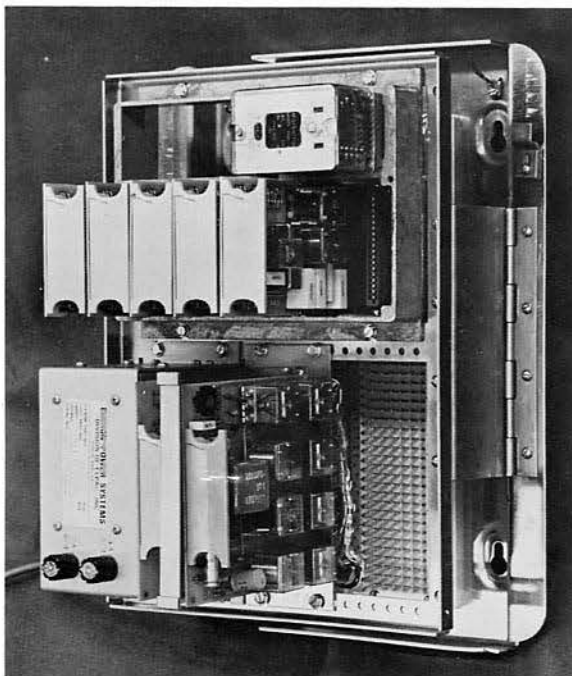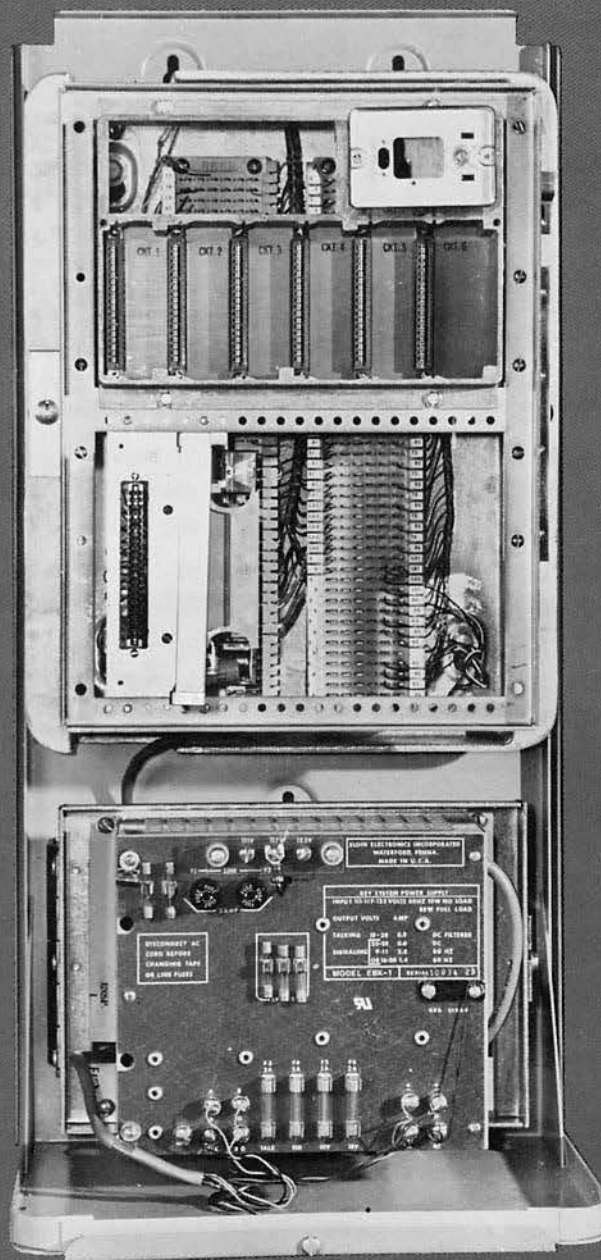
K-501A
Key
Telephone
Systems

K-501A09-OOP. Shown expanded to 18 rotary stations and with five CO/PBX line cards in place. The intercom expansion card and CO/PBX line cards are not furnished with the Basic KSU.

2

6 Line, 36-Station Capacity

The basic K-501A Key Service Unit consists of a back-board assembly, an equipment mounting frame, and a cover. The backboard assembly includes punch-down connecting blocks which provide convenient connecting points for incoming lines and station cable. The equipment mounting frame is hinged and latched to the backboard and swings open to permit access to all connections. A card panel, mounted on the equipment frame, includes six 18-pin card connectors to accept K400-type Key Telephone Units and an electromechanical interrupter which controls timing for visual and audible signals. The KSU is factory wired between connecting blocks, interrupter, and card connectors. Line KTUs are plugged in as needed.

The K-501A KSU is offered in two cabinet sizes: a wall-mounted unit which consists of the basic unit plus a plastic cover; and as a floorstand unit which includes the basic unit mounted in a floorstand with additional space for a power supply, with a plastic cover. The floor-stand unit can be floor, wall, or shelf mounted.

The K-501A KSU is offered with three intercom options; less dial intercom, equipped with 9-station dial intercom, or equipped with 18-station dial intercom. The KSU without dial intercom does not include an intercom cable. (See ordering information.)

The 9-station intercom can be expanded to 18-station capacity by adding a K-160B card. It can be adapted for pushbutton dialing by adding a 182666-101 T-T Adapter Kit.

The 18-station intercom can be expanded to 36-station capacity by adding one K-160B card for each nine stations to be added. It can be adapted for pushbutton dialing by adding two printed circuit cards, K166A and K166B.

Other optional features are shown in the "Ordering Information" Table on pages 6 and 7.

TECHNICAL SUMMARY

Power Input . . . . 111, 117, or 123 Vac, 60 Hz
Maximum Number of CO/PBX Lines 6
Maximum Number of Stations . . . . 36†

APPROXIMATE DIMENSIONS; inches, (cm)

	Height	Width	Depth
Wall Unit:	17 (43)	14 (36)	11 (28)
Floorstand Unit:	28 (71)	13 (33)	12 (31)

†Additional lamp power may be required if total number of lamps in system exceeds 70. A maximum of 20 stations may be connected to any one CO or PBX line.

ORDERING INFORMATION, K-501A KEY SERVICE UNITS
(See pages 6 and 7 for Ordering Information on KTUs)

POWER SUPPLY	ROTARY INTERCOM		
	NONE (Intercom can be added)	9 DIAL CODES (Expandable to 18)	18 DIAL CODES (Expandable to 36)
6-Line Capacity Key Service Units, Wall Cabinet			
None	501A00-101	501A09-101	501A18-101
182141-101*	501A00-OOP	501A09-OOP	
6-Line Capacity Key Service Units, Floorstand Cabinet. (Can be Wall or Shelf Mounted.)			
None	501A00-OOF	501A09-OOF	501A18-OOF
180125-101*	501A00-OFP	501A09-OFP	501A18-OFP
180125-102**	501A00-FPG	501A09-FPG	501A18-FPG

*Does not include ringing generator. (For buzzer signaling only.)
**Includes ringing generator. (For buzzer or ringer signaling.)

K-512A
Key
Telephone
Systems

13-Line, 36-Station Capacity
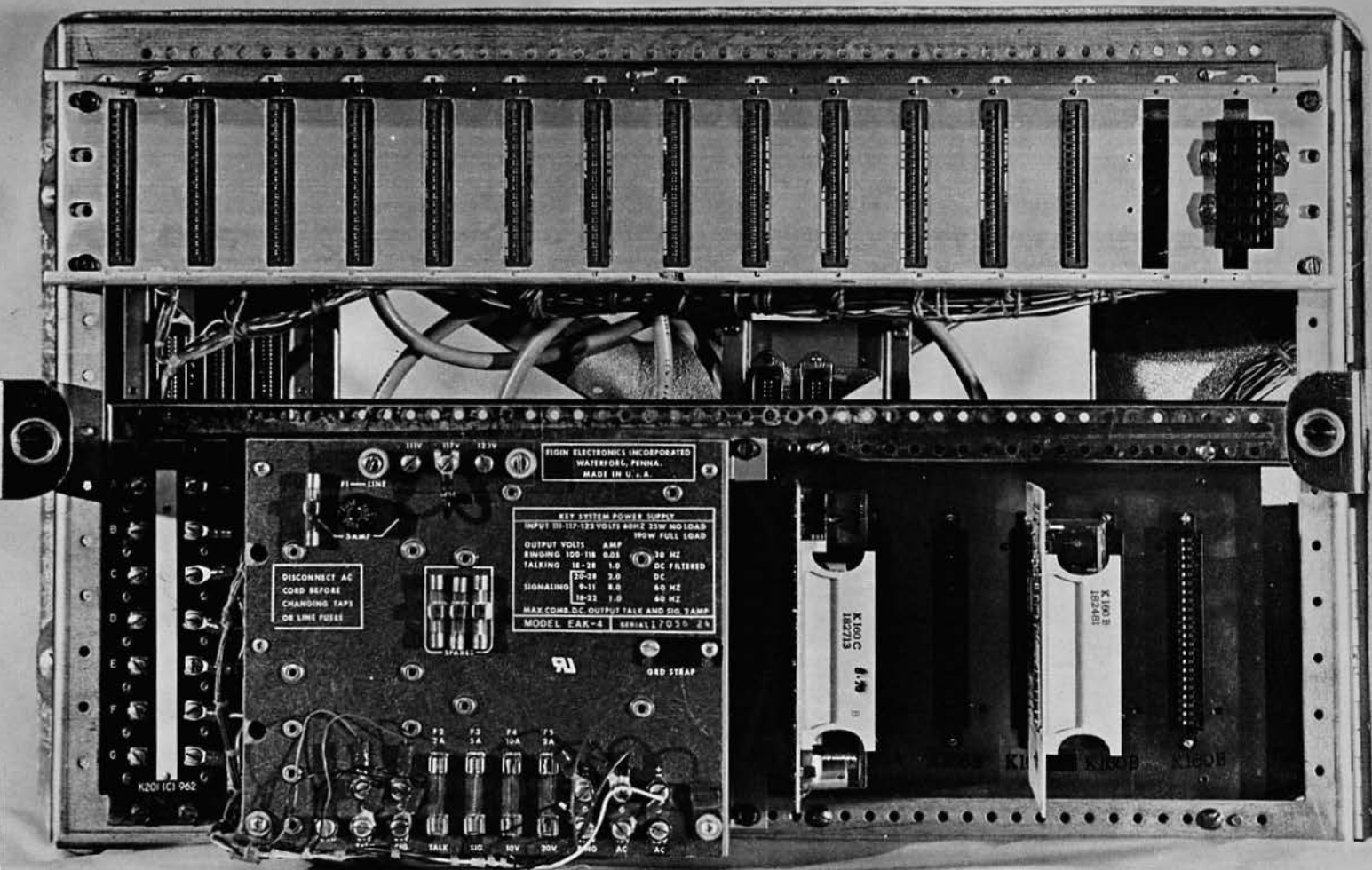
The basic K-512A Key Service Unit (KSU) consists of a backboard assembly, an equipment mounting frame, and a cover. External connections are made at 50-contact plugs located on the backboard. The equipment mounting frame is hinged and latched to the backboard and swings open to permit access to all connections. A card panel, mounted on the equipment frame, includes thirteen 18-pin card connectors to accept K400-type Key Telephone Units and an electromechanical interrupter which controls timing for visual and audible signals. The KSU is factory wired between connecting plugs, interrupter, and card connectors. Line KTUs are plugged in as needed.

The K-512A KSU offers a new convenience for installers: Pins 3, 12 and 18 of each card connector are brought out to individual contacts of the 50-pin plugs to facilitate Music-on-Hold and ringing via a separate lead when these features are used. If a KTU requiring "A"

Battery to pin 18 is installed, this connection can be made at the interconnect blocks.

The K-512A KSU is offered with three intercom options; less dial intercom, equipped with 9-station dial intercom, or equipped with 18-station dial intercom. KSUs without dial intercom do not include an intercom cable. (See ordering information.)

The 9-station dial intercom is expandable to 18 stations by adding a K-160B card and can be adapted to accept pushbutton (tone) dialing by adding a 182666-101 T-T Adapter Kit.

The 18-station dial intercom is expandable to 36 stations in increments of nine by adding a K160B card per 9 stations and can be adapted to accept pushbutton dialing by adding two printed circuit cards, (K166A and K166B).

TECHNICAL SUMMARY

Power Input . . . . 111, 117, or 123 Vac, 60 Hz
Maximum Number of CO/PBX Lines 13
Maximum Number of Stations 36*

APPROXIMATE DIMENSIONS; inches (cm)　　Height　　Width　　Depth
　　　　　　　　　　　　　　　　　　　　　　　17 (43)　　27 (69)　　11 (28)

*Additional lamp power may be required if total number of lamps in the system exceeds 200. A maximum of 20 stations may be connected to any one CO or PBX line.

ORDERING INFORMATION, K-512A KEY SERVICE UNITS
(See pages 6 and 7 for Ordering Information on KTUs)

| POWER SUPPLY	ROTARY INTERCOM		
	NONE (Intercom can be added)	9 DIAL CODES (Expandable to 18)	18 DIAL CODES (Expandable to 36)
None	512A00-101	512A09-101	512A18-101
180715-101	512A00-OPG	512A09-OPG	512A18-OPG

NOTE:　Power supply includes Ringing Generator.

ORDERING INFORMATION, KTUs AND ASSOCIATED EQUIPMENT FOR K501A AND K512A KSUs

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
To Provide Access to CO or PBX LINE. (One KTU required per line.)	000400-OOD or 000400-OOE	KTU, CO/PBX Line, standard (18-contact PC card.) KTU, CO/PBX Line. Equipped to facilitate Music-on-Hold and ringing via a separate lead when desired. (Music-on-Hold requires one K403A KTU per six lines and a low-level music source.) (18-contact PC card.)
To Add Music-on-Hold (One required for each six CO/PBX lines to have music-on-hold.)	000403-OOA	KTU, MOH. Used with K400E CO/PBX Line KTU and a low-level music source. (18-contact PC card.)
To Provide Privacy on Outside Calls. (One required for each two CO/PBX lines to be excluded. Each of its two circuits provides privacy for one preselected line at one preselected station.)	000405-OOA	KTU, 2-Line Exclusion. Permits a station to temporarily disconnect other phones in the key system from one or two preselected lines. Requires a K359A or K259B Card Panel for installation. (20-contact PC card.) NOTE: To provide privacy for all phones on all lines, order telephones with code suffix-"76M"

To Add Pushbutton Dialing To:
    K501A09, K512A09
 	
    K501A18, K512A18
	182666-101
	
	182516-101
	182520-101
		KIT, T-T Adapter, for K307A KTU. (Includes cable and plug for plugging into K307A KTU and T-T cards listed below.)
		CARD, T-T Detector, (K166A)
		CARD, T-T Translator, (K166B)

To Add Intercom Stations:	182481-101	CARD, Dial Intercom Expansion, 9-codes, (K160B).

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
To Add Off-Premise Station(s) to Intercom or to a Predetermined CO/PBX Line.	000346-OOA	KTU, Off-Premise Line. Will serve six off-premise phones, (standard two-wire sets).
To Connect Two Key Systems To Allow Telephones in One Key System To Be Connected To Telephones In Another Key System.	000414-OOA or 000415-OOA	KTU, Manual Tie Line. Two required per tie line, one at each key system. Requires a K259B or K359A Card Panel for mounting. A non-locking signaling button is required at each connected station (20-contact PC card.) KTU, Automatic Tie Line. Two required per tie line, one at each key system. Signaling is automatic (18-contact PC Card.)
To Connect A Remote Station To A Key System.	000416-OOA	KTU, Station Line. One required per station line. (Station phone can be a 2-wire manual set.) Signaling to station is manual, signaling from station is automatic. Requires a K259B or K359A Card Panel. (20 contact PC Card.)
To Add KTU Connectors (See pages 24 and 25 for description of units.)	000359-OOA 000259-OOB 182615-102 182029-101	PANEL, 1-Card. For 18- or 20-pin KTUs. PANEL, 2-Card. For 18- or 20-pin KTUs. MOUNTING ASSEMBLY, 4-Card. For 18-pin KTUs only. Includes cable, two 50-pin plugs, and plug mounting bracket. MOUNTING ASSEMBLY, 4 Card. Provides 4 unwired 18-pin card connectors in a housing surround.
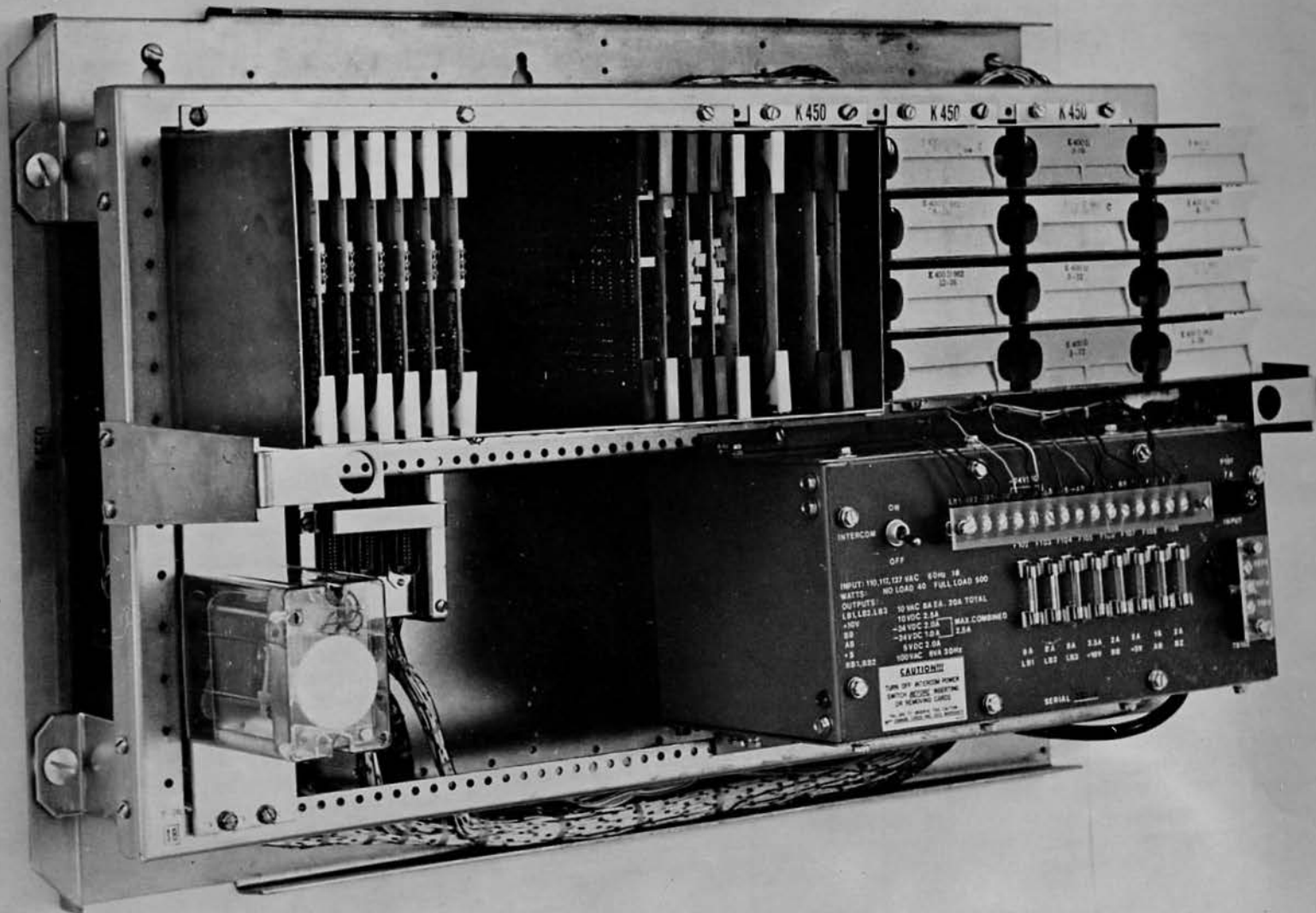
K-36A
Key
Telephone
Systems

12-Line, 36-Station Capacity*
With Private Multilink Intercom

The K-36A key telephone system has a capacity of 12 CO/PBX lines and 36 dial-selective intercom stations. The intercom provides two, or optionally four, simultaneous and private talking links. The design is completely solid state--utilizing miniature components, integrated circuits, and transistors. The equipment consists of a prewired key service unit with plug-in switching units to provide various services and features.

The Key Service Unit includes a backboard with four 50-contact plugs for external connections, an equipment frame with card connectors for twelve 400-type line KTUs and 20 intercom KTUs, a power supply, a heavy-duty interrupter (P/N 190478-102) and a removable cover. It is designed for wall mounting. A plywood mounting board (P/N 181589-101) is offered as an optional item and should be used when mounting the KSU on a flat surface to provide clearance between the KSU cover and the mounting surface.

INTERCOM FEATURES

- Up to four simultaneous and private talking links on intercom with link expansion in increments of two.
- Lamp flashing and interrupted ringing at the called station. Busy and ring tones at the calling station.
- Full privacy on all intercom calls.

- Single-line telephones can be used for intercom stations with limited access to one, two, or three outside lines. One optional KTU, (K411A), is required for each outside line to be accessed. Single line sets require separate signal and talk pairs.

CALL ANNOUNCING WITH HANDSFREE ANSWER-BACK

A K-36A key system can include call announcing with handsfree answerback. If this feature is desired, stations to be signaled in this manner must be provided with a 174B Call Announcer and the Station Line KTU used must be a 3641-2. (See Ordering Information.)

TECHNICAL SUMMARY

Power Input .... 115 Vac, 60 Hz
Maximum Number of CO/PBX Lines 12*
Maximum Number of Stations 36*
Station Expansion Increment 3
Maximum Number of Links 4
Link Expansion Increment 2

APPROXIMATE DIMENSIONS

Height: 19 inches, (48 cm)
Width: 29 inches, (74 cm)
Depth: 11 inches, (28 cm)

*Capacity can be increased to 20 CO/PBX lines or to 54 intercom station codes without requiring additional cabinets.

ORDERING INFORMATION, K-36A KEY TELEPHONE SYSTEM

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
Standard Key Service Unit (Items can be ordered separately as listed in right hand column.)	36A118-200	KSU, equipped for 18-station, 2-link rotary-dial intercom. (Wired for 4 links and 36 stations.) Includes the following items: 1--181579-102 Basic KSU (Includes one 182120-101 Power Supply and one 182246-101 Heavy Duty Interrupter.) 1--181585-101 KTU, Interrupter 1--181584-101 KTU, Tone 1--181582-101 KTU, Common Control #1 1--181583-191 KTU, Common Control #2 1--181581-101 KTU, Link (2-links) 6--181851-101 KTU, Station, (3641-1), (3-station circuits per KTU.)
To Add Stations (One KTU For Each 3 Stations To Be Added)	181851-101 181580-101	KTU, 3-Station. Returns busy tone when called station is off-hook. (CK-3641-1) KTU, 3-Station. Returns busy tone when called station is on intercom. (CK-3641)
To Add Call Announcer Stations. (One KTU for each 3 stations to be added.)	183024-101	KTU, 3-Station. For stations equipped with K174B Call Announcers. (CK-3641-2). Call Announcers must be separately ordered.

ORDERING INFORMATION, K-36A KEY TELEPHONE SYSTEM (continued)

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
To Add Links	181581-101	KTU, Link. Provides 2 links. (Maximum number of links per system is 4). (CK-3642)
To Add Pushbutton Dialing	181586-101 181587-101	KTU, Detector. One required per system. (CK-353) KTU, Translator. One required per system. (CK-354)
To Add Off-Premise Station To Intercom or To A Predetermined CO/PBX Line	000346-OOA	KTU, Off-premise station. Six 2-wire sets can be connected. (18-contact PC card.)
To Provide Access To A Voice Paging System	000410-OOA	KTU, Paging Adapter. Provides dial access to a paging amplifier from the intercom stations. One required per system. (18-contact PC card.)
To Provide Access To CO or PBX Line (One KTU Required Per CO or PBX Line)	000400-OOD 000400-OOE	KTU, CO/PBX Line, standard. KTU, CO/PBX Line, equipped for Music-On-Hold, (requires one K-403A per six K-400E KTUs and a low level music source), and signaling through a separate lead.
To Add Add-On Conferencing	000411-OOA	KTU, Add-On Conference. Permits intercom stations which normally do not have access to an outside CO/PBX line to be conferenced with an outside call. Maximum of one KTU recommended for a 2-link system and maximum of three recommended for a 4-link system. (18-contact PC card.) (NOTE: This feature is accessed by dialing its assigned intercom number.)
To Add Music-On-Hold	000403-OOA	KTU, Music-On-Hold. One required for each 6 CO/PBX lines. Used in conjunction with K-400E CO/PBX line KTUs and a low level music source. (18-contact PC card.)
To Add Tie Lines Between Key Systems	000414-OOA 000415-OOA	KTU, Manual Tie Line. Two required per tie line, one at each key system. Requires a K-259B or K-359A Panel for mounting. A non-locking signaling button is required at each connected station. (20-contact PC card.) KTU, Automatic Tie Line. Two required per tie line, one at each key system. DC signaling is automatic. (18-contact PC card.)

| ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
To Add Station Lines	000416-OOA	KTU, Station Line. One required per station line. Requires a K-259B or K-359A Panel for mounting. (20-contact PC card.)
To Add KTU Connectors	182615-102*	CARD MOUNTING ASSEMBLY. Provides four 18-pin connectors for additional CO/PBX line KTUs. Includes cable and plugs. (See page 25)
	182029-101*	CARD MOUNTING ASSEMBLY. Provides four unwired 18-pin card connectors.
	000259-OOB	PANEL, 2-card. Each panel will accept two plug-in KTUs (20-contact connectors.)
	000359-OOA	PANEL, KTU Mounting for one plug-in KTU. (20-contact connector.)
To Increase Station Capacity	182342-101*	KTU, expansion. Provides connectors for six additional station KTUs, (18 stations).
Miscellaneous	181589-101	MOUNTING BOARD, K-36A KSU.
	181670-101	POWER SUPPLY, Auxiliary. For use with CK-615 Power Supply.
	0174**-OOB	Call Announcer
Fuses	182087-101	FUSE KIT, C.A.C. Power Supply
	182087-102	FUSE KIT, Elgin Power Supply

*Capacity can be increased to 20 CO/PBX lines or to 54 intercom station codes without requiring additional cabinets.

Maximum number of lamps, not including intercom lamps, is 432.

A maximum of 20 busy lamps may be connected to any one CO or PBX line.

Station Cards, (CK-3641 series), dated 2-78 and later will permit connecting a maximum of four telephones, (lamp appearances), per station line. Earlier units will permit connecting two telephones per station line.

**Call Announcer Colors: 00-Black; 05-Moss Green; 13-Beige; 15-White; 44-Light Ash; 45-Cocoa Brown.
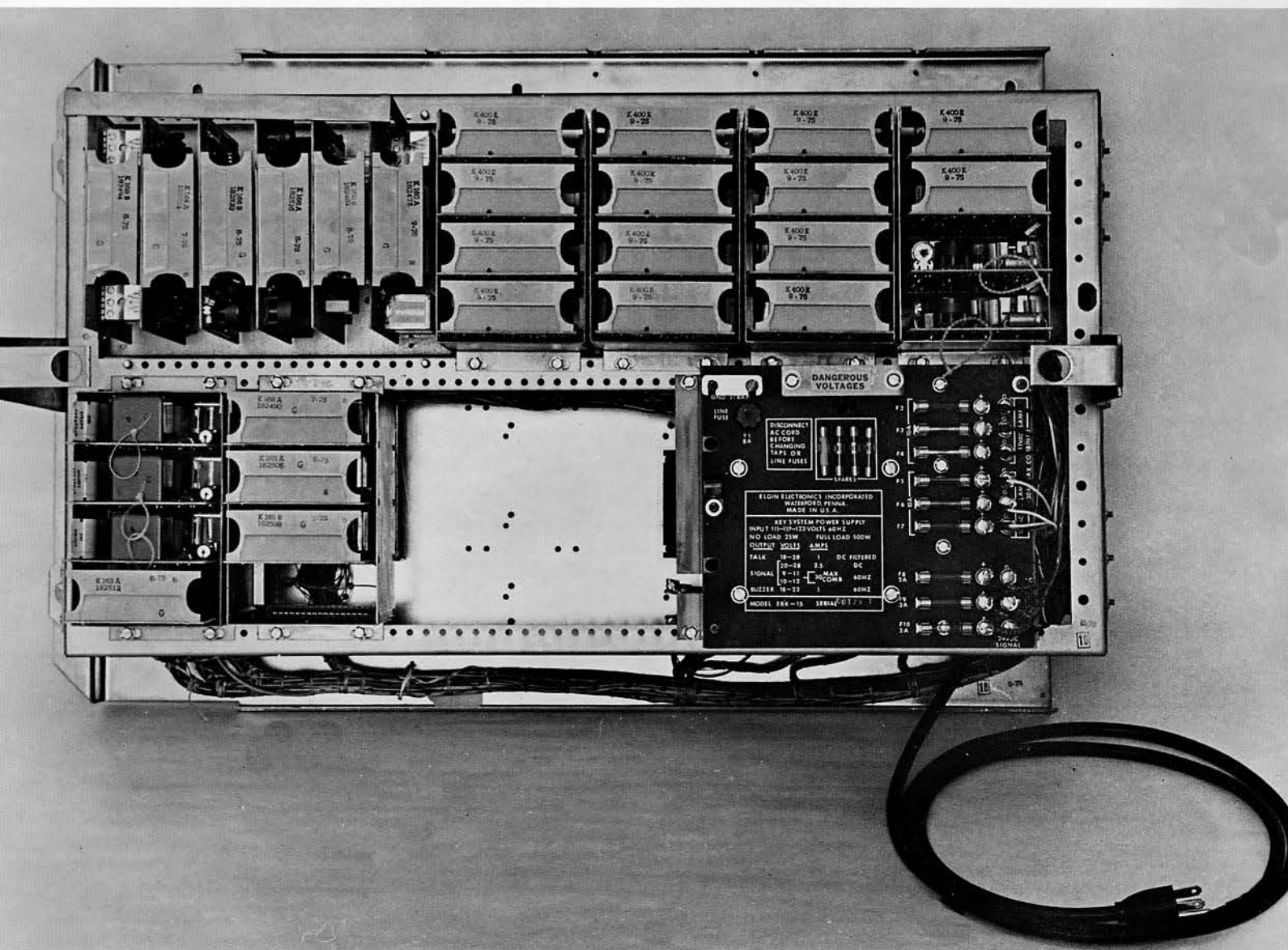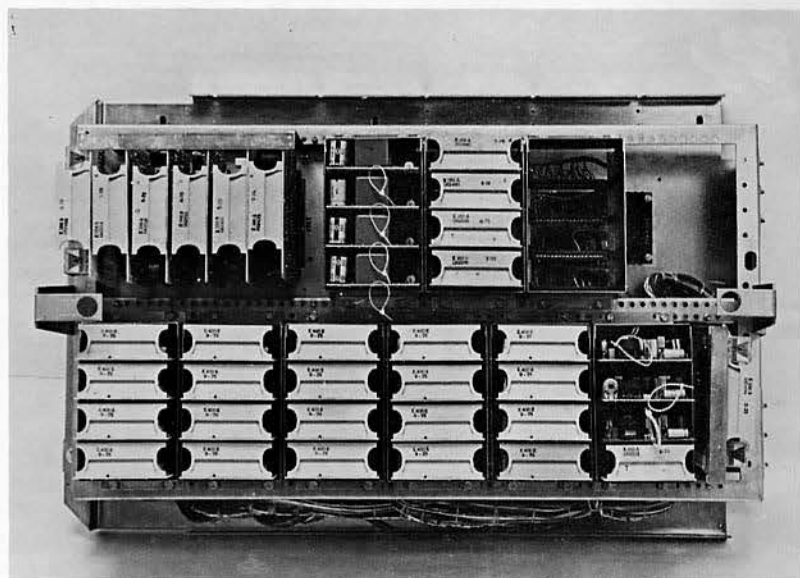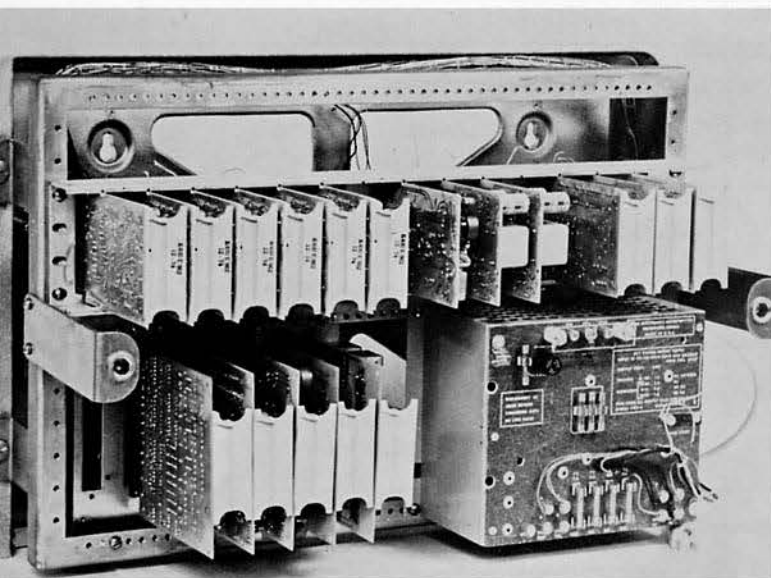
K-76A Key Telephone Systems

Featuring Multilink Dial Intercom with Tone-and-Voice Signaling with Handsfree Answer-Back.

The K-76A Series of Key Telephone Systems is offered in three configurations. All systems provide similar features, the chief differences being in line and station capacity and number of intercom links.

All systems provide standard key system functions and features and are used with standard key telephones and will accept standard 400-type KTUs.

Each intercom link requires a dedicated button at each connected phone. A lamp under each intercom button indicates the status of its associated link whether idle, busy, or an intercom call being placed, (common equipment busy).

A desirable feature of the K-76A intercom is provision for tone and voice signaling with handsfree answerback from the called station. This feature requires a 174B Call Announcer to be installed at each station to be signaled in this manner.

SIMPLIFIED INSTALLATION

Each Key Service Unit is factory wired so that all features and functions are provided by KTUs which plug into dedicated slots. An Intermediate Termination consisting of a number of 66-type connecting blocks, (not provided), is required for line and station connections. Connections between the KSU and the Intermediate Termination are made by several 25-pair cables, (not provided), standard-wired with a 50-pin connector on one end. The connector end plugs into the KSU, and the other end is fanned out on the connecting blocks.

CHOICE OF SIGNALING ARRANGEMENTS

Any of three signaling arrangements can be used: (1) tone-and-voice signaling only; (2) mixed, tone-and-voice signaling at some stations and ringers at other stations; and (3) ringers-only signaling. Mixed signaling and ringers-only signaling will require optional equipment--see "ORDERING INFORMATION" Table.

CALL ANNOUNCING WITH HANDSFREE ANSWER-BACK

On intercom calls, the Call Announcer at the dialed station emits a single tone burst, and its light emitting diode, (LED), illuminates to indicate it is active. The caller's voice can then be heard through the Call Announcer, and the called party can "answer-back" handsfree via his Call Announcer from several feet away. The Call Announcer will remain active for 16-seconds, (32 seconds at installer's option). If a longer conversation is required, the called party simply picks up his handset and presses the flashing link button and converses via the handset.

FEATURES

- Permits use of standard key telephones, rotary or pushbutton dial.

- Permits use of standard 400-type KTUs.

- Visual signals indicate status of CO/PBX lines and intercom links.

- Three sizes; 7-, 14-, and 20-line and 18-, 36-, and 54-station capacities.

- Two, three, or four simultaneous talking paths, (links), for intercom. The 4-link system can be expanded to six links.

- Intermittent tone signaling on CO/PBX calls when Call Announcers are used.

- Tone-and-voice signaling at the called station on intercom. A station can be signaled even when off-hook.

- Handsfree answer-back from the called station on intercom. (through the station Call Announcer.)

- Outside calls have a different tone from intercom calls.

- Prewired dedicated slots for all KTUs.

- Other features are shown in ORDERING INFORMATION table.

TECHNICAL SUMMARY

Power Input . . . . 115 Vac, 60 Hz
Number of CO/PBX Lines . . . . 7, 14, or 20
Number of Stations . . . . 18, 36, or 54*
Number of Intercom Links . . . . 2, 3, or 4

*A maximum of 20 stations may be connected to any one CO or PBX line.

APPROXIMATE DIMENSIONS; inches (cm)

	Height	Width	Depth
System I	17 (43)	27 (69)	11 (28)
System II	19 (48)	29 (74)	11 (28)
System III	19 (48)	29 (74)	11 (28)

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ORDERING INFORMATION, K-76A KEY TELEPHONE SYSTEM

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
System I 7-Line Capacity; 18-Station, 2-Link Rotary Intercom	76A218-101 Includes following KTUs: 182473-101 182481-101 182485-101 182524-101 182506-101	KSU, 76A System I KTU, Dial Intercom, (K160A). KTU, Dial Intercom, (K160B). KTU, Intercom Link, (K162B), (2 Used) KTU, Tone Signaling, (K164A). KTU, Voice Signaling, (K165A).
System II 14-Line Capacity; 36-Station, 3-Link Rotary Intercom	76A336-101 Includes following KTUs: 182473-101 182481-101 182485-101 182512-101 182524-101 182506-101 182508-101 182490-101 182494-101	KSU, 76A System II KTU, Dial Intercom, (K160A). KTU, Dial Intercom, (K160B). KTU, Intercom Link, (K162B), (3 Used) KTU, Interrupter, (K163B). KTU, Tone Signaling, (K164A). KTU, Voice Signaling, (K165A). KTU, Voice Signaling, (K165B). KTU, Transfer, (K168A). KTU, Transfer, (K168B).
System III 20-Line Capacity; 54-Station, 4-Link Rotary Intercom	76A454-101 Includes following KTUs: 182473-101 182481-101 182485-101 182512-101 182524-101 182506-101 182490-101 182494-101 182508-101	KSU, 76A System III KTU, Dial Intercom, (K160A). KTU, Dial Intercom (K160B). KTU, Intercom Link, (K162B). (4 Used) KTU, Interrupter, (K163B). KTU, Tone Signaling, (K164A). KTU, Voice Signaling, (K165A). KTU, Transfer, (K168A). (2 Used) KTU, Transfer, (K168B). (2 Used) KTU, Voice Signaling, (K165B).
CO/PBX Line Service	000400-OOD 000400-OOE	KTU, CO Line, Standard. KTU, CO Line, equipped to facilitate Music-on-Hold and ringing through a separate lead.
Music-on-Hold	000403-OOA	KTU, Music-on-Hold. One required for each six CO or PBX lines. Used in conjunction with K400E Line Card KTUs and a low- level music source.
To Add Pushbutton Dialing	182516-101 182520-101	KTU, T-T Detector (K166A). One required. KTU, T-T Translator (K-166B). One required.

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ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
Intermittent Tone Signaling On Intercom Instead Of Tone- And- Voice-Signaling-with- Handsfree-Answerback --At Discretion of the Calling Party	182502-101	KTU, Intermittent Tone Signaling (K-169A). One required.
Ringers-Only Signaling	182512-101	KTU, Interrupter (K163B). Order for System I only; it is included in Systems II and III. A ring generator supply must be separately provided for all systems.
Mixed Signaling. (Call Announcers at Some Stations and Ringers at Other Stations.)	182498-101	KTU, Ring Transfer, (K170A). One required. System I will require a 182512-101 Interrupter KTU, (K-163B), also. System II will require a 182615-101 Card Mounting Assembly. System III will require a 182615-102 Card Mounting Assembly. (A ring generator supply must be separately provided for all systems.)
Voice Paging with Music Muting. (Through Customer- Owned PA System.) Voice Paging Without Music Muting Is Standard. (For Systems Using Call Announcers.)	182583-101	KTU, Signal, (K-161A). One required. System II will require a 182615-101 Card Mounting Assembly. System III will require a 182615-102 Card Mounting Assembly.
All-Call Paging with or Without Background Music (Through Call Announcers) (Dial Accessed) See Page 17	182779-101 182765-101	KTU, AC/BM. Provides interface for 4 Call Announcers. Can be expanded to 44 stations by adding one 182765-101 card per 8 stations. CARD, AC/BM Extender, 8 stations. The use of more than 10 Call Announcers will require an additional power supply to provide -24 V dc, (filtered), at .075 amps per call announcer. (See Ordering Information on Page 17.)
Zone Paging or 5-Station Conference Alert Using Call Announcers.	182583-101	KTU, Signal, (K-161A). One required. System II will require a 182615-101 Card Mounting Assembly. System III will require a 182615-102 Card Mounting Assembly.
Transfer of Ringing Location For Night Answering	182498-101	KTU, Ring Transfer, (K-170A). One required, System II will require a 182615-101 Card Mounting Assembly. System III will require a 182615-102 Card Mounting Assembly.

ITEM OR FEATURE	ORDERING NUMBER	DESCRIPTION
Expansion Units (See pages 24 and 25 for description of units.)	000359-OOA 182615-101 182615-102	Card Mounting Assembly. Provides one 20-pin card connector with 7-foot (213 cm) stub cable. Card Mounting Assembly. Provides four 18-pin card connectors wired to a 124-inch (315 cm) cable with two 50-contact plugs. Card Mounting Assembly. (Similar to 182615-101 except includes a mounting bracket for the two plugs and cable is 100 inches (254 cm) long.)
"Speaker" For Tone-And-Voice Signaling	0174**-OOB	CALL ANNOUNCER. One required per station to be signaled by Tone-and-Voice. (One Call Announcer can serve several phones in its immediate vicinity.)
Direct Station Selection/ Signaling with Busy Lamp Field	0176**-OOA 0176**-OOB	DSS CONSOLE, 30 Buttons/Busy Lamps DSS CONSOLE, 50 Buttons/Busy Lamps (DSS Consoles will operate with Call Announcers only--they will not signal ringer stations.)
Mounting Board	181589-101	Plywood Panel to facilitate mounting System II or System III KSU.

16

K-76A All-Call Background Music (AC/BM) Unit

For Use with K76A Call-Announcing Key Telephone Systems.

The All-Call/Background-Music Unit is designed for use in K76A call-announcing key telephone systems using K-174B Call Announcers. It will provide dial access to all Call Announcers, or to a predetermined group of Call Announcers, simultaneously for voice paging. If desired, it will provide background music through station Call Announcers. Provision is made to individually remove music from any station that does not desire it. If more than 10 Call Announcers are connected, an external power supply must be separately supplied. If background music is desired, a low-level music source must be separately provided also.

All-Call paging is initiated by dialing the intercom number assigned to the All-Call feature. The music is removed from stations programmed for background music, and the calling party can be heard over all Call Announcers.
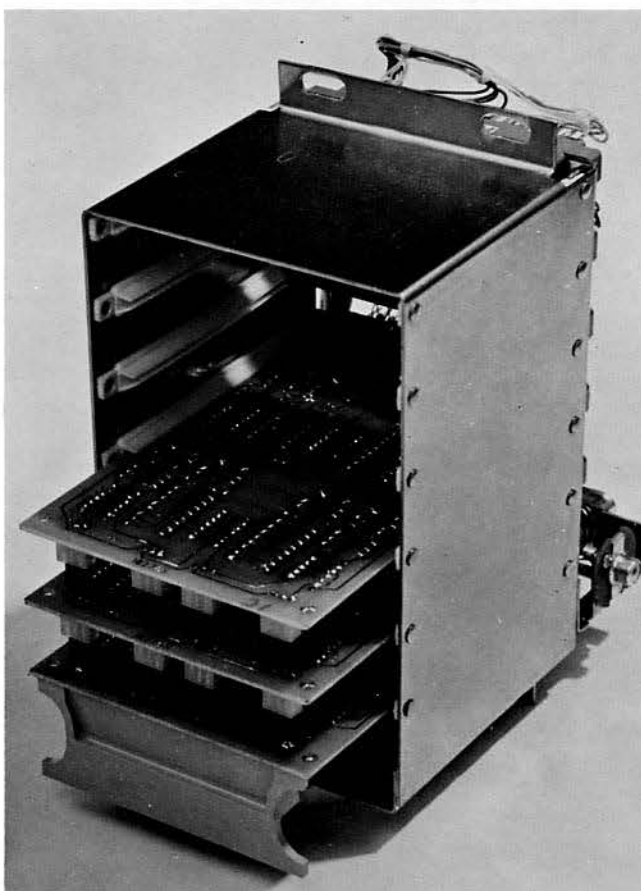
An intercom call to any station causes the music to that station only to be removed. The called station changes to a transmit-receive mode, and normal Call Announcer operation ensues. When the call is terminated, the called station reverts to receive only and music is restored.

TECHNICAL SUMMARY

```
Power Requirement ....................... -24 V dc, Filtered, .075 amp per station*
Number of Stations .......... Maximum of 44. (Basic Unit, 4; each Extender Card, 8.)
Mounting Space          Width:   4 inches (10 cm)
                        Height:  7 inches (18 cm)
                        Depth:   Forward of Mounting Flange; 36½ inches (17 cm)
                                 Behind Mounting Flange; 3½ inches (9 cm)
```

*Power for 10 Call Announcers can be supplied from the key system power supply. If more than 10 Call Announcers are connected, additional power must be separately provided. See "Ordering Information."

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
182779-102 182765-101	AC/BM Unit, (4 Stations.) Card, AC/BM Extender, (8 Stations.) NOTE: The AC/BM Unit will accept five Extender Cards.
180182-101 182141-101	Cabinet. (See page 29 for description.) Power Supply. Will provide power for 19 Call Announcers for AC/BM operation.

17

Dial Selective Intercom Circuits

Rotary Dial Selective Intercom Circuit, K-307A

The K307A KTU is designed for use in a K501A or K512A Key Service Unit to provide rotary dial selective intercom. It provides a single common talking path for all stations in a system and single digit dial-selection of, and signaling to, 9 stations. It provides for busy lamp signal at all stations and a single-spurt of audible signal at the called station only. It can be expanded to 18-station capacity by the addition of one K160B card. A connector is provided for the additional card.

The K-307A unit includes a mounting panel with two card connectors to accept one K160C Dial Intercom Card and one K160B Dial Intercom Expansion Card. The K160C (9 codes) card is included--the K160B card (9 additional codes) must be separately ordered when required. No hold feature is provided, but the circuit is not disconnected until both parties hang up, (last party clear). When adding a K-307A to a K-501A KSU, order cable P/N 183044-101. When adding a K-307A to a K-512A KSU, order cable P/N 183045-101.

Pushbutton Dial Adapter Kit for K-307A, (182666-101)

The Pushbutton Dial Adapter Kit, P/N 182666-101, is a 2-card unit designed for use with the K307A KTU to permit use of pushbutton dial phones as intercom stations. Rotary dial phones can also be used in the system. The Kit includes the K166A and K166B cards. Includes a plug-ended cable that plugs into the K-307A KTU. Not usable with a K-207C KTU.

Rotary and Pushbutton Dial Selective Intercom Circuit (K-357A)

The K357A KTU is designed for use in a K501A or K512A Key Service Unit to provide rotary and pushbutton dial selective intercom. It provides a single common talking path for all stations in a system and single digit selection of, and signaling to, nine stations. Intercom can be expanded to 18, 27, or 36 station capacity by the addition of one K160B card for each additional nine stations. Slots are provided to accept the additional cards. The K357A KTU provides for busy lamp signal at all stations and a single spurt of audible signal at the called station only. No hold feature is provided, but the circuit is not disconnected until both parties hang up, (last party clear). When adding a K-357A to a K-501A KSU, order cable P/N 183035-101. When adding a K-357A to a K-512A KSU, order cable P/N 183046-101.

18
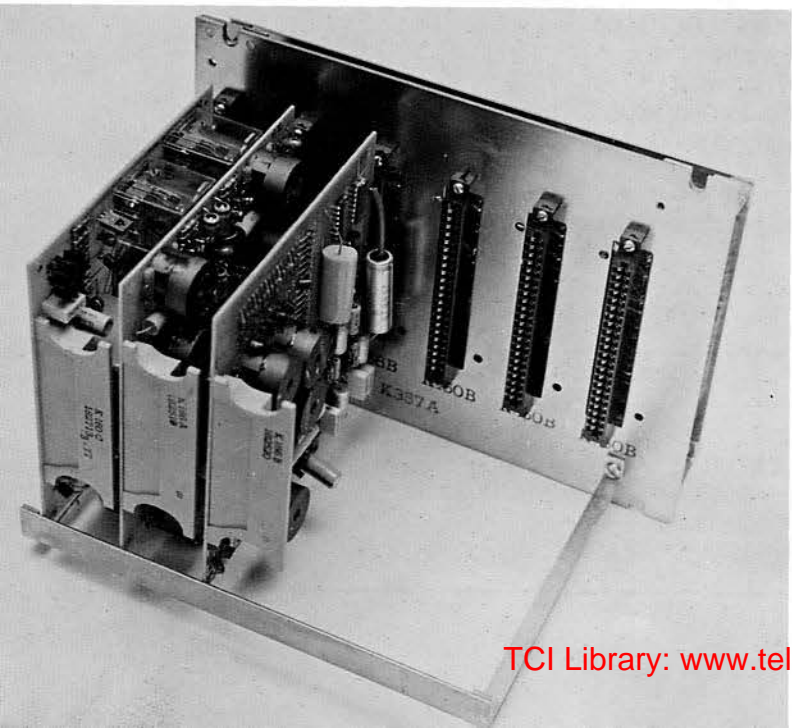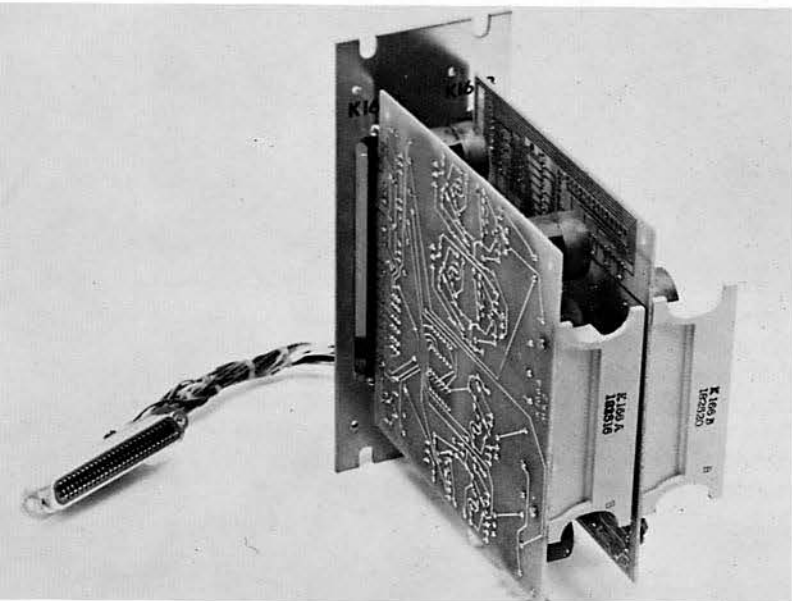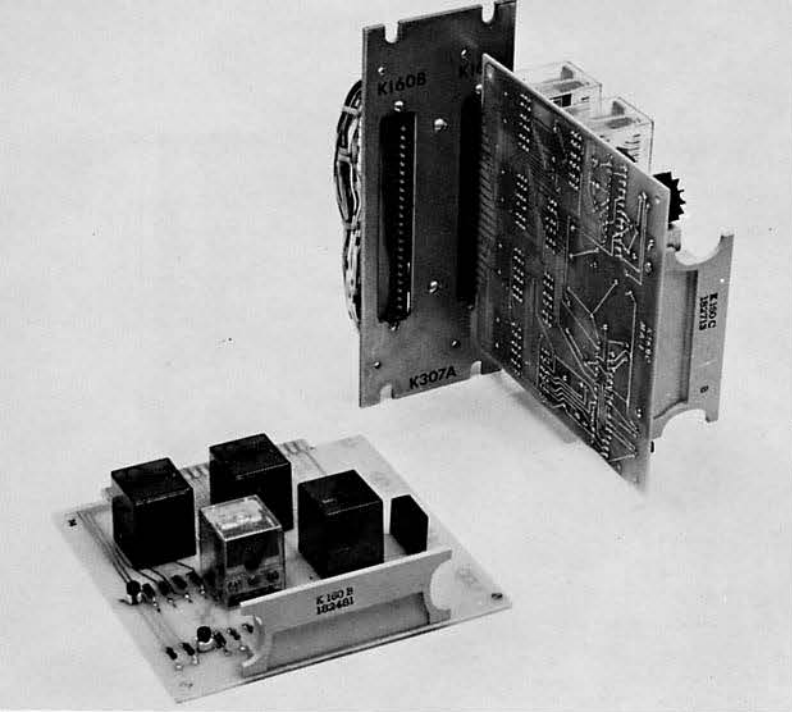
Dial Selective Intercom Circuits
Rotary Dial Selector KTU, (K-207C1)
(Not Illustrated.)

The K-207C1 is the basic component of a K-6A rotary dial-selective intercom. This unit provides a single common talking path for all stations in a key telephone system and single-digit dial selection of, and signaling to, nine intercom stations. It provides for busy lamp signal at all stations and a single spurt of audible signal at the called station only. No hold feature is provided. Mounting width is approximately 5¼ inches, (13 cm). For new installations, the K-307A KTU, page 18, is recommended.

Transfer Circuit For K-207 KTU, (K-216A1)
(Not Illustrated.)

The K-216A1 KTU is used with a K-207 KTU to expand existing rotary dial-selective intercom beyond the 9-code capacity. Each K-216A1 unit expands intercom capacity by nine additional codes. Mounting width is approximately 3 inches (8 cm).

Transfer Circuit for K-347C KTU, (K-316A).
(Not Illustrated.)

This KTU plugs into a K-347C KTU to expand push-button dial selective intercom from 10 dial codes to 19 dial codes.

TECHNICAL SUMMARY

	K207C1	K307A	K357A	182666-101
Power Requirements	-24 V Talk 10 Vac 105 V, 30 Hz*	-24 V Talk 10 Vac 105 V, 30 Hz*	-24 V Talk 10 Vac 105 V, 30 Hz*	Supplied from K-307A KTU
Number of Stations	9	9	9	-
Expansion Increment	9	9 (total 18)	9 (total 36)	-
Dimensions: Inches (cm)				
Width	5¼ (13)	2¾ (7)	9¼ (24)	2¼ (6)
Height	7 (18)	7 (18)	7 (18)	7 (18)
Depth**	8 (20)	8 (20)	8½ (22)	8 (20)

*105 V, 30 Hz is required only when ringers are used for intercom signaling.
**5 inches (13 cm) forward of mounting flange.

ORDERING INFORMATION

CODE/NUMBER	DESCRIPTION
000307-OOA	KTU, Rotary-Dial Intercom, 9 codes. (Includes K160C Card.)
000357-OOA	KTU, Pushbutton and Rotary-Dial Intercom, 9 codes. (Includes K160C, K166A, and K-166B Cards.)
182481-101	CARD, Dial Intercom Expansion, (K160B), 9 codes.
182713-101	CARD, Dial Intercom, (K-160C), 9 codes. (Included with K-307A, K-357A).
182516-101	CARD, T-T Detector (K166A). (Included with K357A, 182666-101)
182520-101	CARD, T-T Translator (K166B). (Included with K357A, 182666-101)
182666-101	ADAPTER KIT, T-T, For K307A KTU (Includes K-166A and K-166B cards.)
183035-101	CABLE ASSEMBLY; to install a K-357A in a K-501A KSU
183044-101	CABLE ASSEMBLY; to install a K-307A in a K-501A KSU
183045-101	CABLE ASSEMBLY; to install a K-307A in a K-512A KSU
183046-101	CABLE ASSEMBLY; to install a K-357A in a K-512A KSU
000207-OC1	KTU, Intercom Selector, Rotary Dial
000216-OA1	KTU, Transfer Circuit for K207C1 KTU.
000316-OOA	KTU, Transfer Circuit for K-347C KTU when expanding from 10 to 19 dial codes. (Note: The K-347C KTU has been discontinued.)
180255-101	CARD, Auxiliary for K-347B when expanding from 9 to 18 dial codes. (Note: The K-347B KTU has been discontinued.)
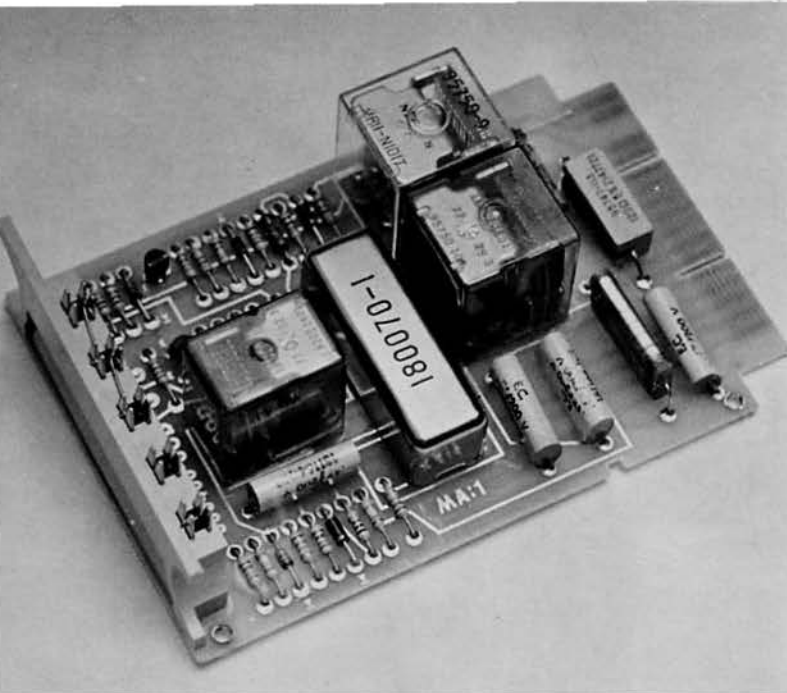
K-400D Line Card KTU

This unit provides for line pickup and hold and for control of visual and audible signals as follows:

(1) Flashing line lamp on incoming calls.

(2) Steady line lamp on answered or outgoing calls.

(3) Winking lamp, or optional steady lamp, on held calls.

(4) Intermittent audible signal, or optional continuous audible signal, on incoming calls.

(5) Operation, without visual signals, under local power failure conditions.
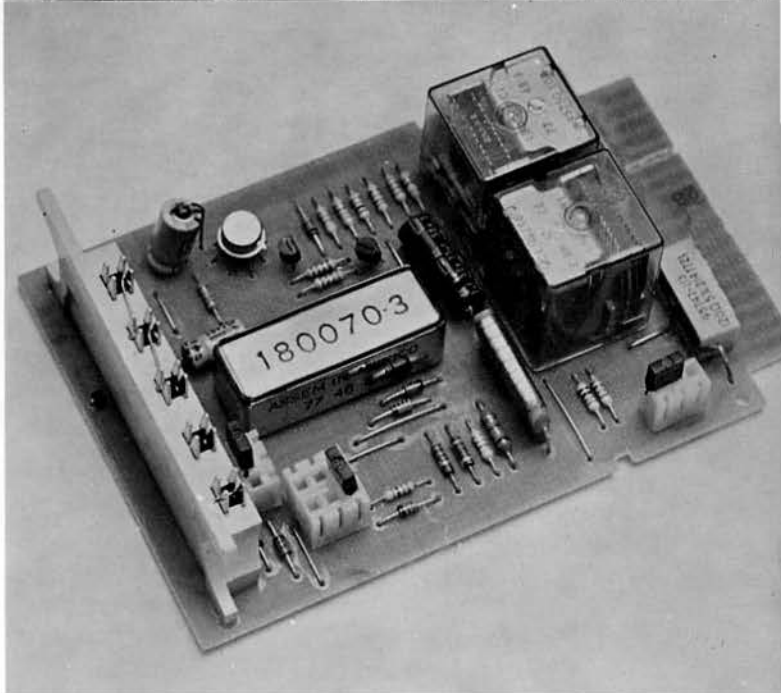
K-400E Line Card KTU

This KTU provides for line pickup and hold and for control of visual and audible signals as follows:

(1) Flashing line lamp on incoming calls.

(2) Steady line lamp on answered or outgoing calls.

(3) Winking lamp, or optional steady lamp, on held calls.

(4) Intermittent audible signal, or optional continuous audible signal, on incoming calls.

(5) Bridged ringing, divided ringing, ringing from a separate lead to ring side of line, or direct ringing from a -24 Vdc source.

(6) Operation without visual signals under local power failure conditions.

The K-400E provides for ringing by a separate lead when required and is designed to work in conjunction with a K403A KTU and a low-level music source to provide music-on-hold. It is equipped with a light emitting diode (LED) that indicates when the card is busy.

ORDERING INFORMATION

These 18-contact plug-in units are to be installed in a Key Service Unit as required--one unit for each CO or PBX line coming into the key telephone system. No more than 20 stations should be connected to any one CO or PBX line or the busy lamp contact may be overloaded.

| CODE	DESCRIPTION
000400-OOD	KTU, CO/PBX Line Card
000400-OOE	KTU, CO/PBX Line Card

20
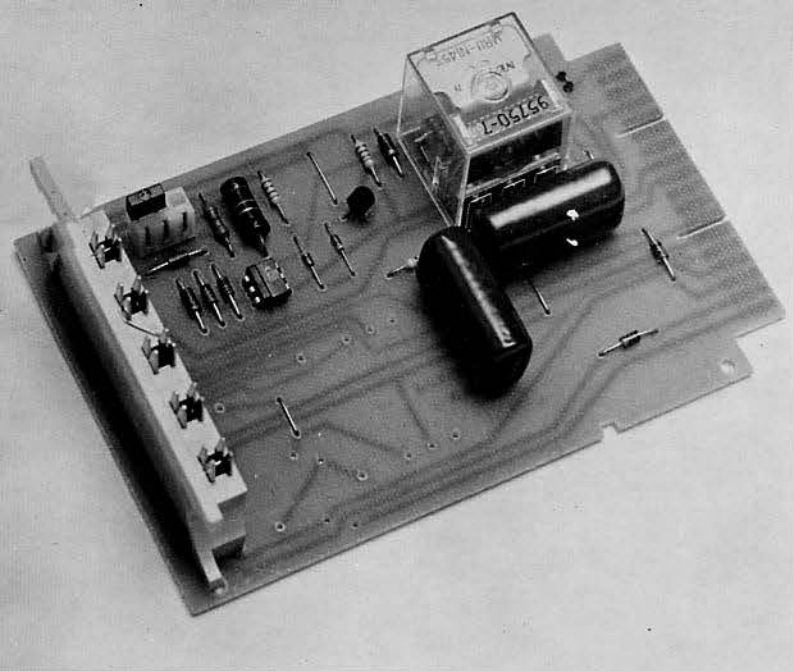
Manual Intercom Card, K401B

This 18-contact card plugs into any of the connectors on the KSU panel to provide talking battery and busy lamp signal for manual intercom. The KTU can be installed to provide a common talking path for all stations in the key system or to provide a private talking path between two stations. It is recommended that not more than six stations be included in a manual intercom system. Manual intercom requires an external signaling arrangement using buttons and buzzers.

Paging Adapter KTU, K-401PA

The K-401PA KTU is an 18-contact plug-in unit that permits dial access to a paging system from each intercom station in a K501 or K512 key telephone system. (For use with 207C, 307A, or 357A Intercom KTUs or any common-talk, single-spurt signaling intercom circuit.)
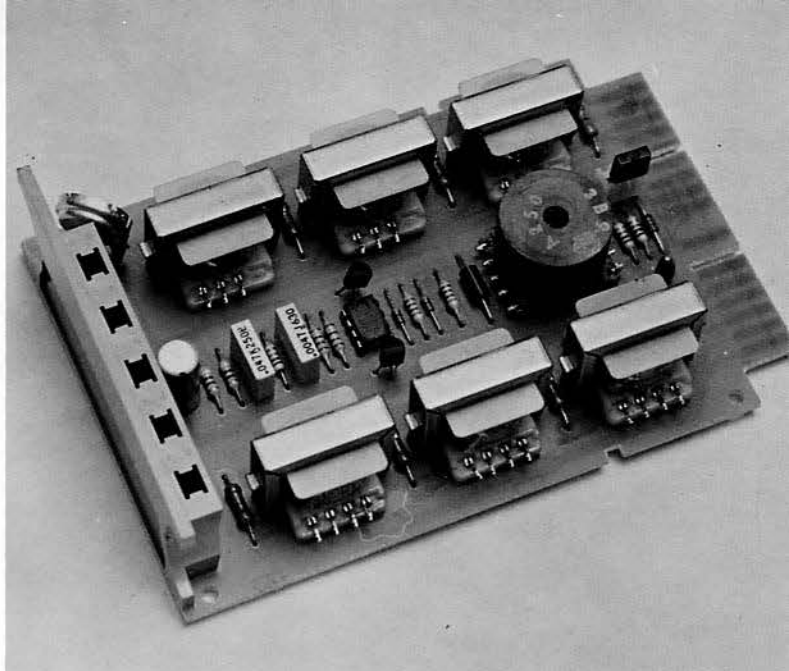
Music-On-Hold KTU, K-403A

This unit is used in conjunction with K-400E CO/PBX line card KTUs and a low-level music source to provide music-on-hold for a maximum of six lines. A K-259B 2-card panel or a K-359A 1-card panel can be used to install the K-403A. If a card connector in the KSU panel is used, the wires must be disconnected from it and the connector rewired for the K-403A KTU.

ORDERING INFORMATION

CODE	DESCRIPTION
000401-OOB	KTU, Manual Intercom
000401-OPA	KTU, Paging Adapter
000403-OOA	KTU, Music-On-Hold

21
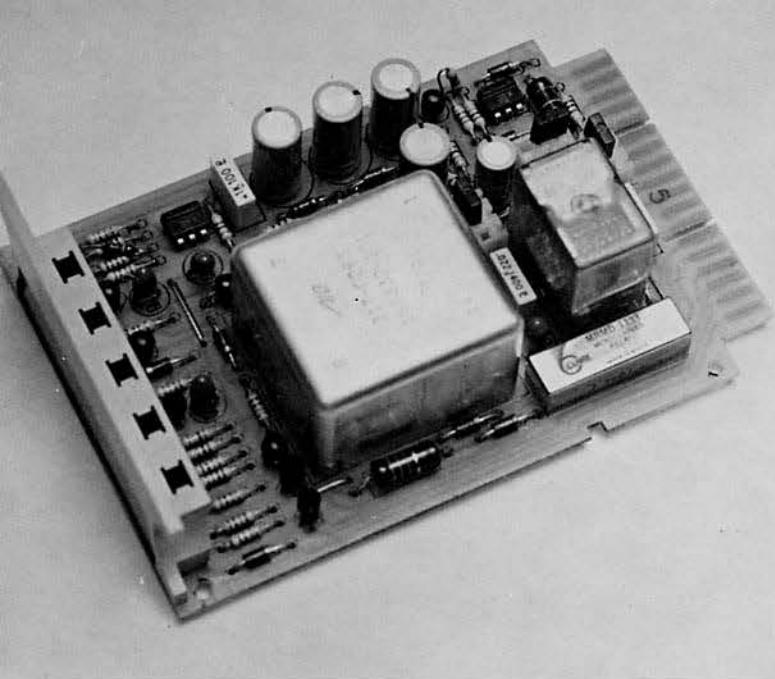
Off-Premise Station Line Circuit (K346A KTU)

The K-346A KTU is a plug-in unit designed for use in a Key Telephone System to permit adding off-premise stations, (standard two-wire telephone sets), to the dial intercom system or to a predetermined CO line. When used in a K-36A Key Telephone System, the off-premise station can be an intercom station with access to Add-On-Conference lines, (CO or PBX lines), via K-411A KTUs. A maximum of six telephones (2-wire sets) may be connected in parallel across the circuit. Maximum loop for the circuit is 1200 Ohms. If a minimum of 23 ma dc is required, the loop resistance is limited to 500 Ohms.
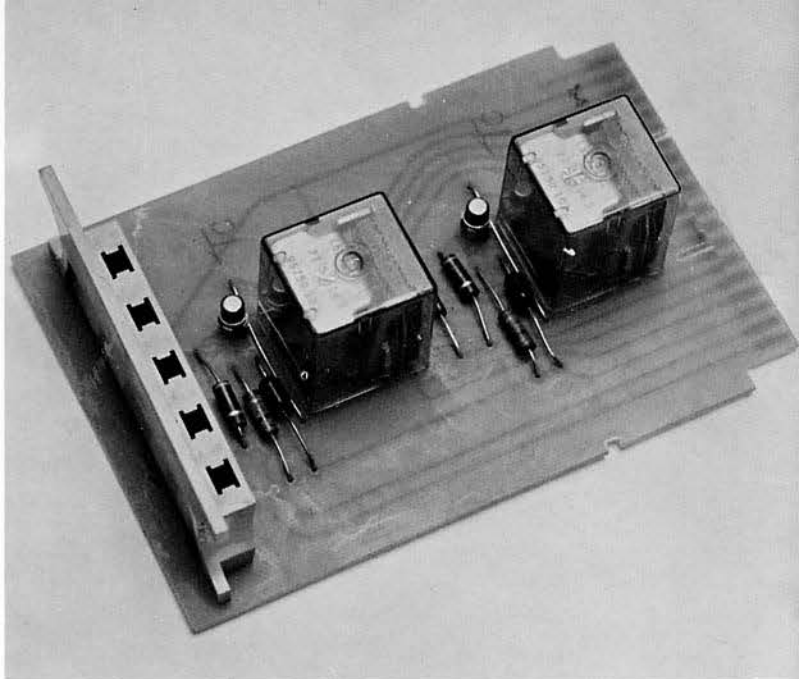
## Semi-Automatic Exclusion, (K-405A KTU)

Semi-automatic exclusion permits a key system station to temporarily disconnect other key system phones from one or more preselected lines. The K-405A KTU provides semi-automatic exclusion for two CO or PBX lines with the following functions and features:

(1) Lamp signal to indicate when exclusion feature is in operation.

(2) A single key at the exclusion station can control exclusion of several lines when more than one K-405A KTU is used. This can be a converted pickup button on the telephone.

(3) The exclusion feature can be released without losing the call by operating the hold button.

(4) Automatic release of exclusion feature when exclusion station hangs up.

The K-405A KTU is designed to be plugged into a K-259B 2-card panel or a K-359A 1-card panel. It will not plug into the 18-contact connectors provided on the KSU Card Panels, as it requires a 20-contact connector.

ORDERING INFORMATION

CODE	DESCRIPTION
000346-OOA	KTU, Off-Premise Station Line
000405-OOA	KTU, Exclusion
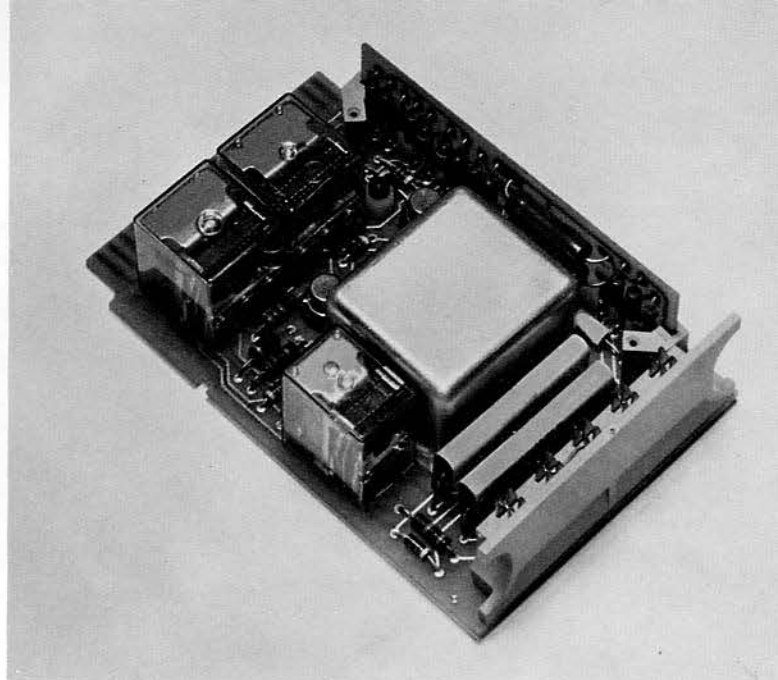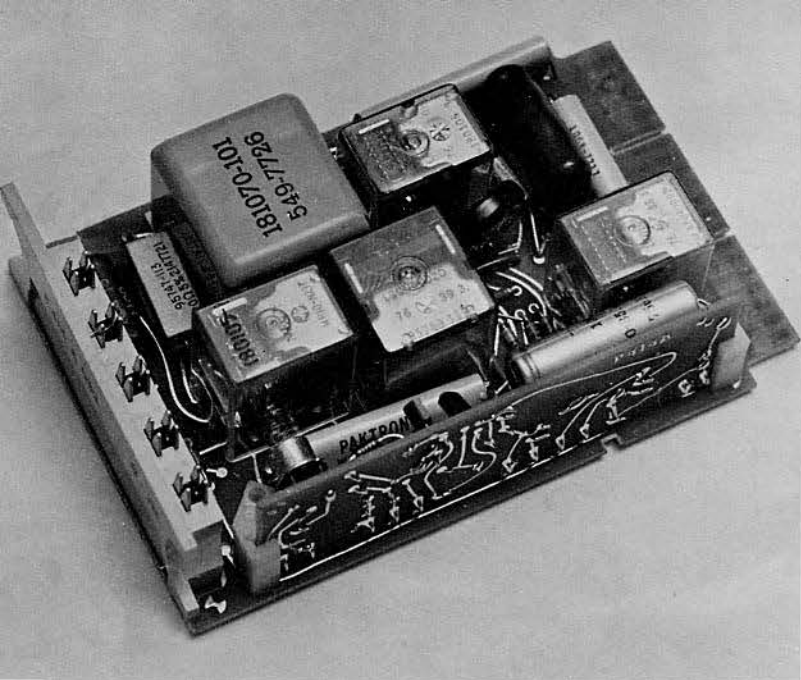
Private Line Circuits

Ringdown Tie Line Circuit, K-414A KTU

The K414A KTU is a 20-contact plug-in unit that permits manual signaling and talking between two key telephone systems. The circuit provides for visual and audible signals, time-out on unanswered incoming calls, and audible ringback to the calling station. The K414A KTU requires a K259B or K359A Card Panel for mounting, and two KTUs are required per tie line, one at each key system. A non-locking signaling button is required at each connected station.

## Automatic Tie Line Circuit, K-415A KTU

The K415A KTU is an 18-contact plug-in unit that permits signaling (automatic) and talking on a designated line between two key systems by lifting the telephone handset and pressing the button associated with the line. Two KTUs are required for each tie line, one at each key system. Provides for visual and audible signals, time-out on unanswered incoming calls, audible ringback to the calling station, and hold feature.

Station Line Circuit, K-416A KTU

The K416A KTU is a 20-contact plug-in unit that permits signaling and talking on a line between a key system and a distant station. Signaling to the distant station is manual and signaling from the distant station is automatic. Provides for visual and audible signals and audible ringback at the key system station only. One KTU is required per station line. The distant station can be a standard 2-wire telephone less dial. The K416A KTU requires a K259B or K359A Card Panel for mounting.

ORDERING INFORMATION

| CODE	DESCRIPTION
000414-OOA	KTU, Ringdown Tie Line
000415-OOA	KTU, Automatic Tie Line
000416-OOA	KTU, Station Line
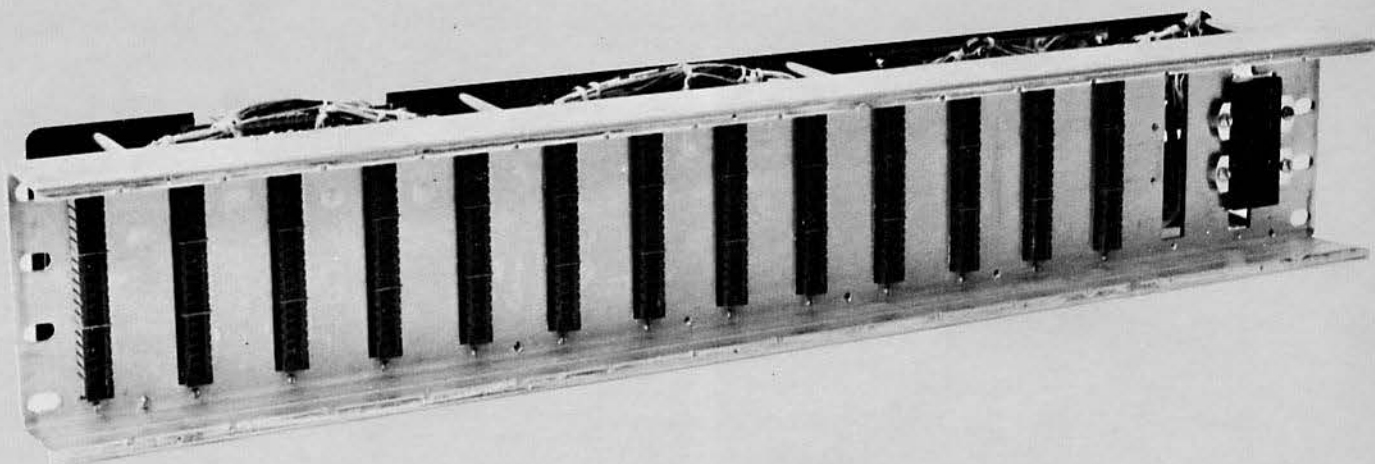
Card Mounting Assemblies

13-Card Panels; K-584C, Less Interrupter; K-584C1 with Interrupter.

These panels are designed for use in large centralized K-1A2 Key Telephone System installations. Each panel will accept thirteen K-400 type KTUs and one 190478-101 interrupter. Two 584 type panels may be used together with one interrupter. Mounts on standard commercial 23-inch rack.

Three 50-contact plugs at the rear of the unit are factory wired to thirteen 18-pin connectors in the panel. Plugs number one and two include wiring for five lines each, and plug number three includes wiring for three lines plus an individual contact to pin 18 of each card connector. An Intermediate Terminal is required for interconnecting incoming lines, station cable, power supply cable, and cable from the K-584 panel. Approximate dimensions in inches, (cm) are: width, 23 (58); Height, 4 (10); Depth, 4½ (12). Mounting hole centers are 22⅜ inches, (57 cm) measured horizontally.
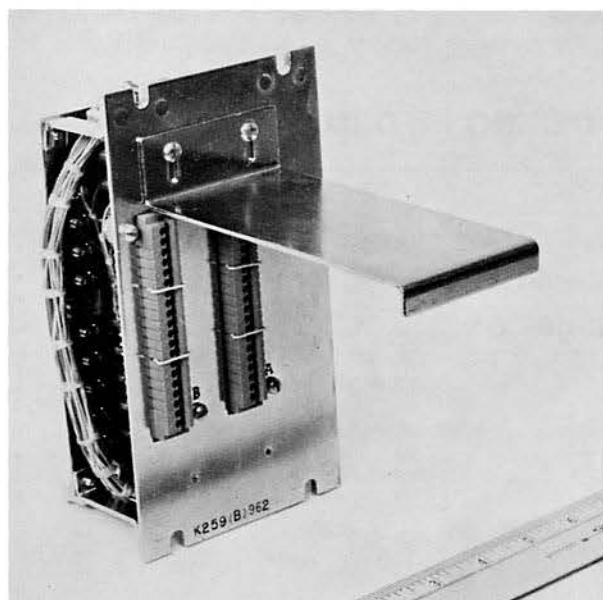
K-259B 2-Card Panel

This panel provides two 20-contact connectors to accept plug-in KTUs with 18 or 20 contacts. The connectors are factory wired to screw terminals on the rear of the panel. Ten extra screw terminals are provided on the terminal strip to be used for tie points as required by the application. A card retainer is provided and is secured with two machine screws. Mounting width is approximately 3½ inches, (9 cm).

K-359A 1-Card Panel

This panel provides one 20-contact connector to accept a plug-in KTU, and includes a 7-foot (213 cm) stub cable. Mounting width is approximately 1½ inches, (4 cm).

24
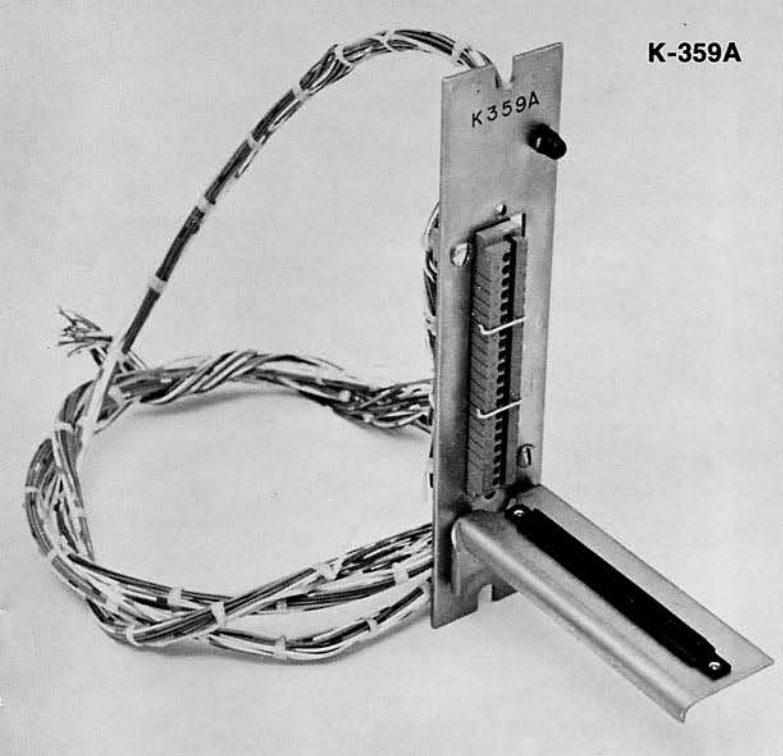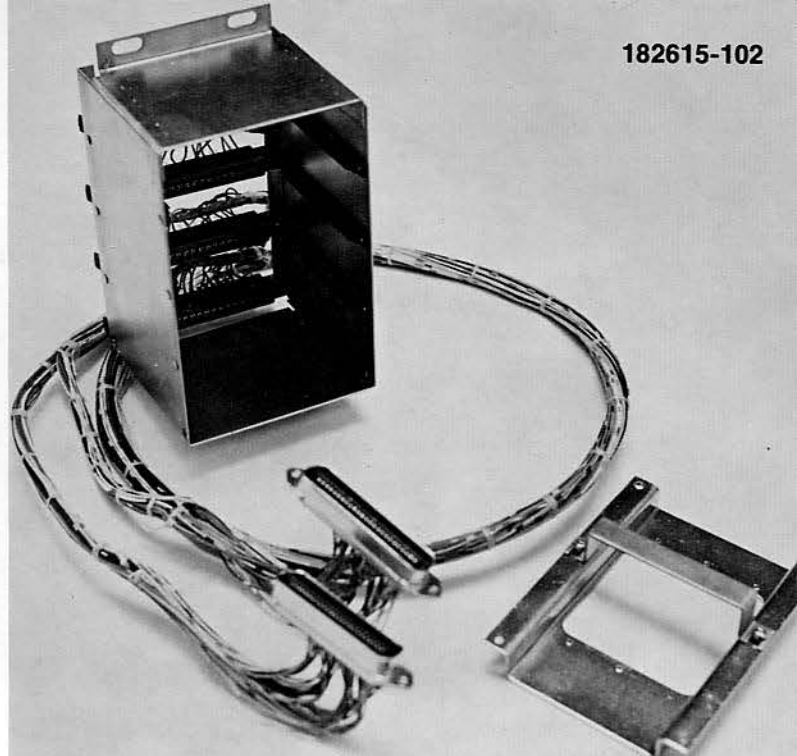
182615 Card Mounting Assemblies

These card mounting assemblies are intended for use in K76A Key Telephone systems to provide mounting slots for optional KTUs. However, the assemblies can be used with other K-1A2 key telephone systems.

The 182615-101 unit was designed for use with K76A system 2 and includes four 18-pin connectors, a housing surround, and a 124 inch, (315 cm), cable terminated in two 50-contact plugs.

The 182615-102 unit is similar to the 182615-101 unit except it is equipped with a 100 inch, (254 cm), cable terminated in two 50-contact plugs, and includes a bracket with mounting hardware for securing the two plugs to the KSU backboard or other surface.

Mounting width is approximately 4 inches, (10 cm).

182029-101 Card Mounting Assembly, 4-Card.

This unit consists of four unwired 18-pin connectors, a housing surround and attaching hardware. Mounting width is approximately 4 inches. (10 cm).

ORDERING INFORMATION

CODE	DESCRIPTION
000259-OOB	Panel, 2-card, (20-contact connectors.)
000359-OOA	Panel, 1-card, (20-contact connectors.)
000584-OOC	Panel, 13-card, (18-contact connectors.)
000584-OC1	Panel, 13-card. Includes 190478-101 interrupter. (Interrupter described on page 26.)
182029-101	Card Mounting Assembly, 4-card. (18-contact connectors.)
182615-101	Card Mounting Assembly, 4-card. (18-contact connectors.)
182615-102	Card Mounting Assembly, 4-card. (18-contact connectors.)
190478-101	Interrupter.
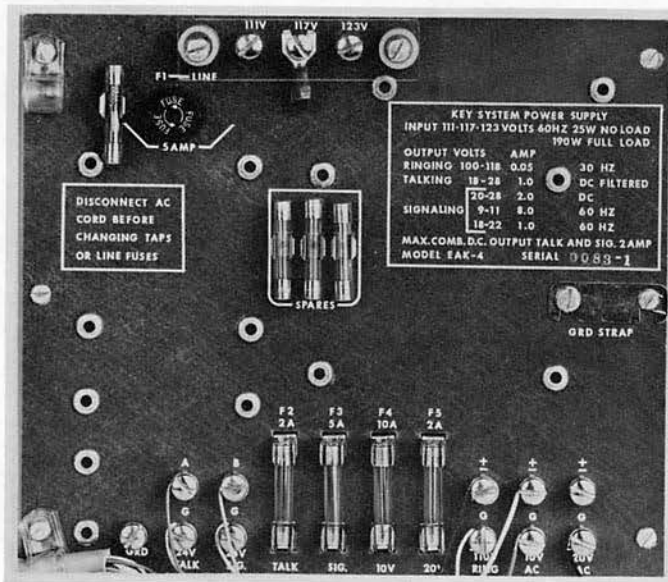
APPROXIMATE DIMENSIONS IN INCHES (cm)

	Height	Width	Depth
180125-101	7 (18)	9½ (24)	4¾ (12)
180125-102	7 (18)	9½ (24)	4¾ (12)
181670-101	7 (18)	10 (25)	7 (18)
180715-101	7 (18)	9½ (24)	4 (10)
182120-101	7 (18)	13 (33)	7½ (20)***
182141-101	7 (18)	3½ (9)	4½ (11)
182557-101	7 (18)	9½ (24)	7½ (20)***
182558-101	7 (18)	13 (33)	7½ (20)***
182559-101	7 (18)	13 (33)	7½ (20)***

***5 (13) forward of mounting flange

Power Supplies

Following is a table that lists power supplies used in ITT key telephone systems and their nominal specifications. All units include power cord, terminal screws, and mounting screws. The units have flanges with 5⅝ inches (14.3 cm) between hole centers for mounting on standard key system equipment frames.

SPECIFICATIONS

Part No.	Where Used	Input Voltage 60 Hz	A-Battery -24V dc	B-Battery -24V dc	Lamp Battery +10 V dc	Lamp Battery 10 V ac	BZ 20 V ac	RN Voltage 30 Hz	Other
180125-101	K-501A	111, 117, 123	0.9A	0.6A	-	2.8A	1.4A	-	
180125-102	K-501A	111, 117, 123	0.9A	0.6A	-	2.8A	1.4A	100-118, .05A	
181670-101†	K-36A (Aux)	117	-	-	-	20A	-	-	
180715-101	K-512A	111, 117, 123	1.A	2A	-	8A	.5A	110, .05A	
182120-101	K-36A	110, 117, 127	1.5A	4A	2.5A	20A	2A	85-120, .1A	+5 V dc, 2A
182141-101	K-501A	104-125	1.4A	-		5A*	2A*	-	
182557-101	K-76A, I	111, 117, 123	1.5A	2A	-	8A**	1A	-	11 V ac, 8A**
182558-101	K-76A, II	111, 117, 123	1.5A	2.5A	-	30A**	1A	-	11 V ac, 30A**
182559-101	K-76A III	111, 117, 123	1.5A	3.A	-	40A**	1A	-	11 V ac, 40A**

*Total of 50 volt-amperes for 10 V ac and 20 V ac
**Total for 10 V ac and 11 V ac
†Includes 190478-102 Interrupter

Interrupters

The interrupters are used in various models of ITT key service units to provide control of visual and audible signals to the stations.

Part No.	Used on	Motor	Switch Ratings @ 10 V ac, 60 Hz	Interruptions Per Minute (IPM) Switch No. 1	2	3	4	5	6	7	8
95742-101	K-501A	10V, 60 Hz	2.5A	15	15	60	60	120	-	-	-
190478-101	K-512A	10V, 60 Hz	7A	15	15	15	60	60	60	120	120
190478-102	K-36A	10V, 60 Hz	14A	15	15	15	60	60	60	120	120

No. 94752-101 includes a printed wiring card for external connection. The 190478-101 and 190478-102 include a 21-pin plug. (H. B. Jones P-321 AB)
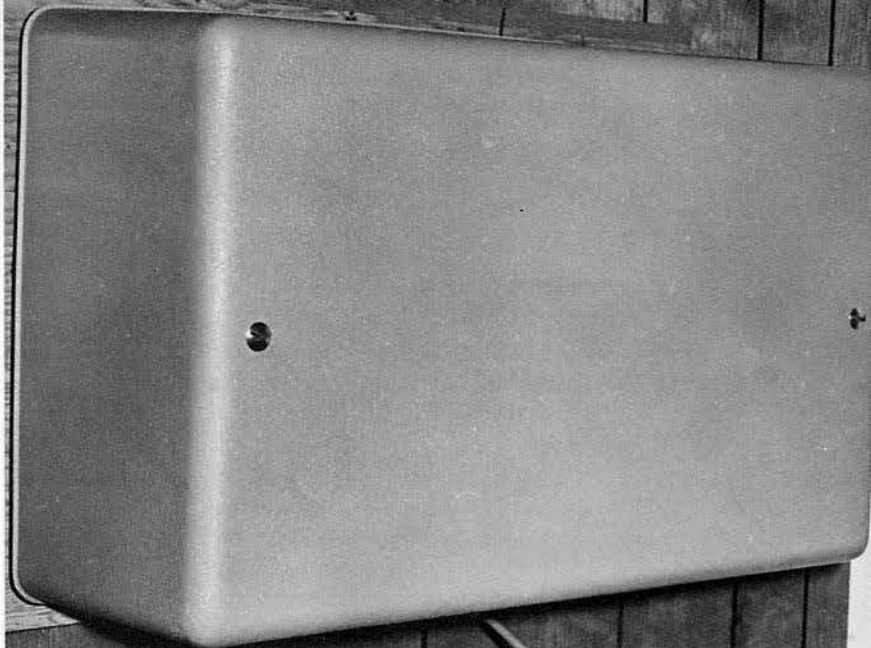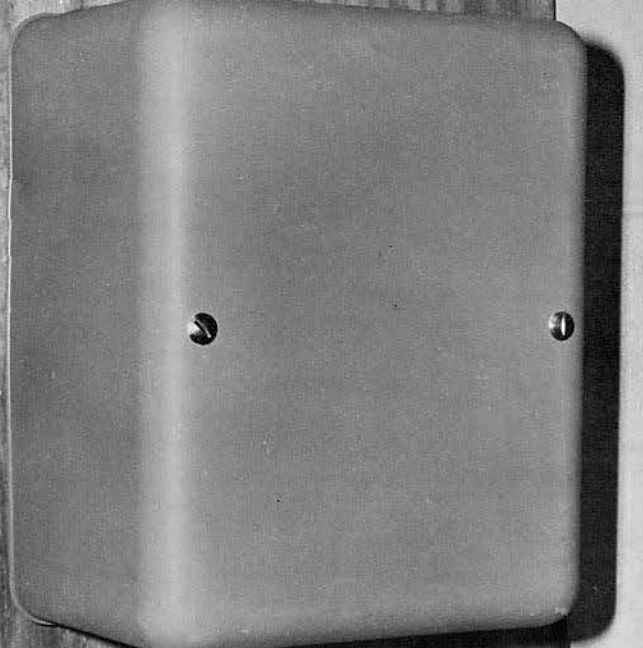
Equipment Cabinets

Each of these equipment cabinets consists of an Apparatus Mounting and a Cover. The Apparatus Mounting includes a backboard and an equipment frame which is hinged and latched to the backboard. The equipment frame swings out gate fashion from the backboard to permit easy access to all connections. Covers are constructed of plastic and include two fasteners which lock or unlock with ¼ turn. Apparatus Mountings and Covers may be ordered separately.

Cabinet No. 86426-101

Consists of one 79600-101 Apparatus Mounting and one 79601-102 Cover. Overall dimensions are approximately 10½ inches (27 cm) deep, 17 inches (43 cm) high, and 26 inches (66 cm) wide.

Cabinet No. 180180-101

Consists of one 86420-102 Apparatus Mounting and one 79601-102 Cover. Overall dimensions are approximately 10½ inches (27 cm) deep, 17 inches (43 cm) high and 26 inches (66 cm) wide.

Cabinet No. 180182-101

Consists of one 86440-104 Apparatus Mounting and one 86434 Cover. Overall dimensions are approximately 10½ inches (27 cm) deep, 16½ inches (42 cm) high, and 13 inches (33 cm) wide.

Cover No. 79601-102

Plastic cover equipped with two fasteners. Intended for use on Apparatus Mounting 79600-101 or 86420-102.

Cover No. 86434-101

Plastic cover equipped with two fasteners. Intended for use on Apparatus Mounting 86440-104.

ORDERING INFORMATION

CODE	DESCRIPTION
	CABINETS
86426-101	Cabinet, plywood backboard, 23" frame (58 cm)
180180-101	Cabinet, aluminum backboard, 23" frame (58 cm)
180182-101	Cabinet, aluminum backboard, 10½" frame (27 cm)
	APPARATUS MOUNTINGS
79600-101	Apparatus Mounting, 14 x 23 inch (36 x 58 cm) frame (Plywood Backboard)
86420-102	Apparatus Mounting, 14 x 23 inch (36 x 58 cm) frame (Aluminum Backboard)
86440-104	Apparatus Mounting, 14 x 10½ inch (36 x 27 cm) frame (Aluminum Backboard)
	COVERS
79601-102	Cover, 10" D x 17" H x 26" W, (25 x 43 x 66 cm)
86434-101	Cover, 10" D x 16½" H x 13" W, (25 x 42 x 33 cm)

Apparatus Mountings

Apparatus mountings include a backboard and an equipment frame which is hinged and latched to the backboard. The equipment frame is designed for mounting two rows of KTUs and similar apparatus. Pertinent dimensions are shown in the accompanying diagram.

Apparatus Mounting No. 79600-101

Consists of a plywood backboard, a hinged equipment frame and two cover brackets. The equipment frame opens from left to right.
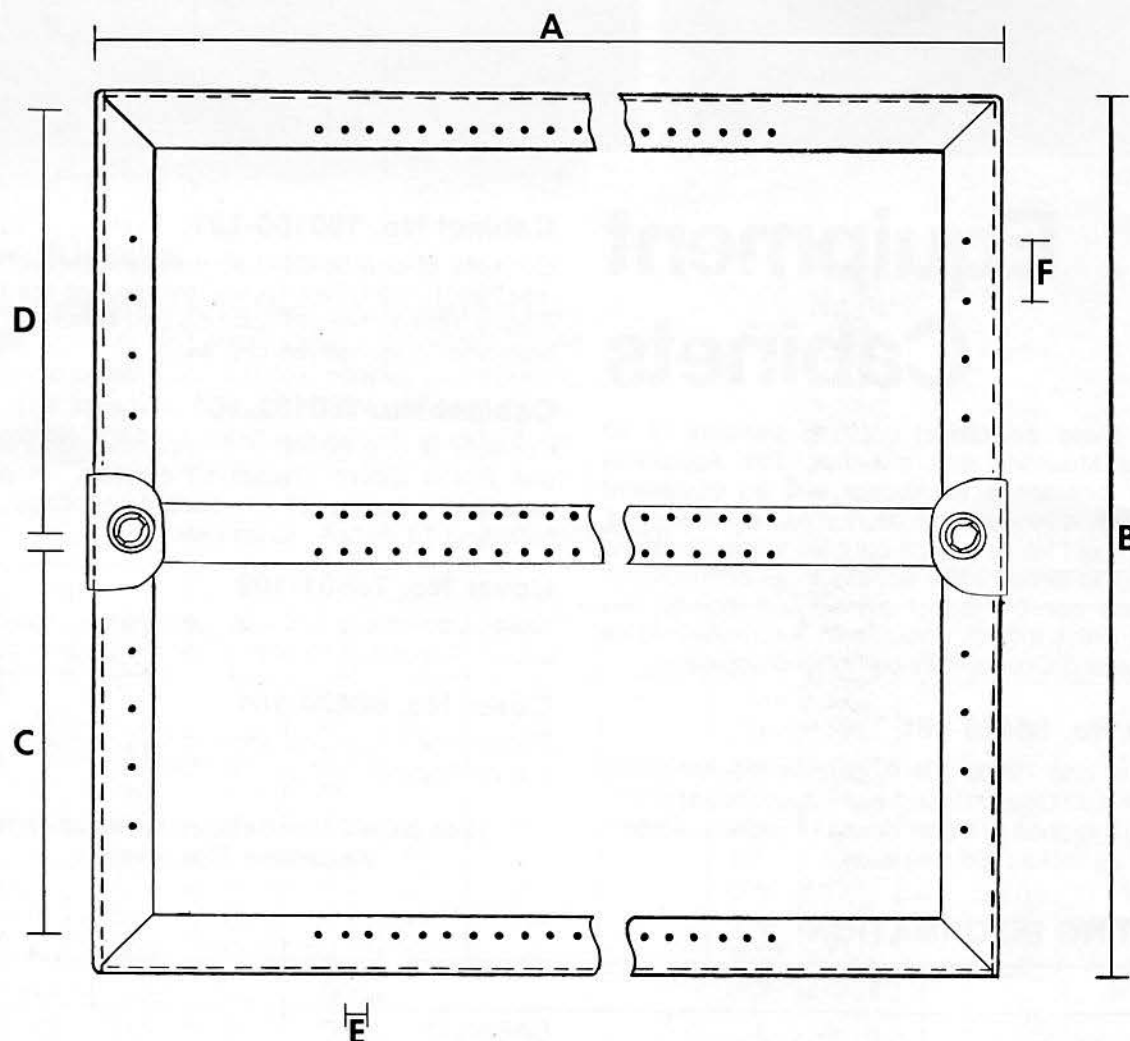
Apparatus Mounting No. 86420-102

Consists of a cast aluminum backboard, a hinged equipment frame and two cover brackets. The equipment frame opens from left to right.

Apparatus Mounting No. 86440-104

Consists of a cast aluminum backboard, a hinged equipment frame and two cover brackets. The equipment frame opens from left to right, however, it can be field modified to open from right to left.

(See page 27 for Ordering Information.)

APPROXIMATE DIMENSIONS OF APPARATUS MOUNTING FRAMES

DIMENSION		79600-101 and 86420-102	86440-104
A	Width (Usable)	23 inches (58 cm)	10¼ inches (27 cm)
B	Height (Usable)	14 inches (36 cm)	14 inches (36 cm)
C	Hole Centers*	5⅝ inches (14.3 cm)	5⅝ inches (14.3 cm)
D	Row Height*	7 inches (18 cm)	7 inches (18 cm)
E	Hole Spacing	7/16 inch (1.1 cm)	7/16 inch (1.1 cm)
F	Hole Spacing	1 inch (2.54 cm)	1 inch (2.54 cm)

*Standard for key equipment with 7-inch (18 cm) mounting flange.

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Summary of Key Service Units and Typical Options

FUNCTION OR FEATURE		SYSTEM	501A	512A	36A	76A-1	76A-2	76A-3
		PAGE NO.	2,3	4,5	8,9	12,13	12,13	12,13
CO/PBX Line Capacity:	6		S	-	-	-	-	-
	7		-	-	-	S	-	-
	12		-	-	S	-	-	-
	13		-	S	-	-	-	-
	14		-	-	-	-	S	-
	20		-	-	(O)*	-	-	S
Intercom Station Capacity:	9		O	O	-	-	-	-
	18		O	O	S	S	-	-
	36		O	O	O	-	S	-
	54		-	-	(O)*	-	-	S
Number of Intercom Links:	1		O	O	-	-	-	-
	2		-	-	S	S	-	-
	3		-	-	-	-	S	-
	4		-	-	O	-	-	S
	6		-	-	-	-	-	(O)
Intercom Signaling Mode:								
Low-Voltage Buzzers			S	S	-	-	-	-
Ringers			O	S	S	(O)	(O)	(O)
Call Announcers			-	-	O	S	S	S
Mixed Ringers and Call Announcers			-	-	O	(O)	(O)	(O)
Privacy on Intercom Calls			-	-	S	-	-	-
Pushbutton (Tone) Dialing on Intercom			O	O	O	O	O	O
Voice Paging without music cut-off			O	O	O	S†	S†	S†
Voice Paging with music cut-off			O	O	O	O†	O†	O†
All-Call Paging with or without Background Music using Call Announcers			-	-	-	O†	O†	O†
Add-On Conferencing			-	-	O	-	-	-
DSS Console/Busy-Lamp Field			-	-	-	O†	O†	O†
Music-On-Hold			O	O	O	O	O	O
Private Lines			O	O	O	O	O	O

S = Standard

O = Optional

(O) = Optional, requires additional facilities

(O)* = Both options cannot be included in one system

† = For systems using Call Announcers