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GTE AUTOMATIC ELECTRIC

NORTHLAKE, ILLINOIS 60164 / TELEPHONE (312) 562-7100

Printed in U.S.A. • Catalog 11,000 • 15M

SINGLE-LINE TELEPHONES

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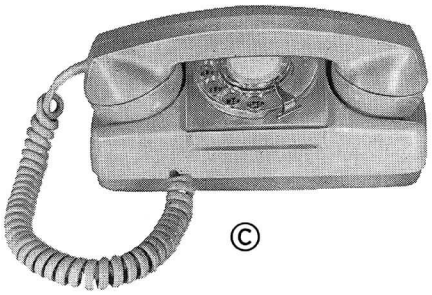

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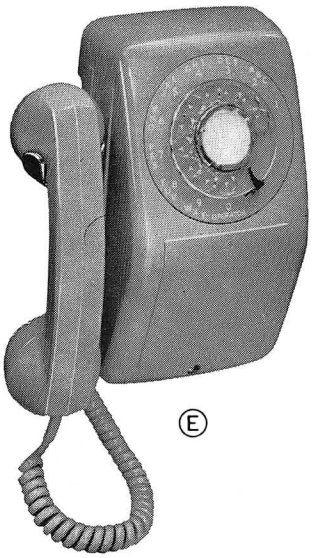

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Ⓐ 80E DESK TELEPHONE

Our new standard desk telephone, designed with economy in mind. It comes in just 5 housing colors, with 13 interchangeable colored paper facemats. You can offer a wide selection of color options, while keeping telephone stocking costs way down. Converts quickly and easily from rotary dial to Touch Calling. Just snap in the right faceplate and switch a strap on the transmission network. The transmission network features time-saving push-on terminals, so a screwdriver is not needed to make wiring changes. Our new 80E is a beautiful idea for your cost-reduction program. To order, see page M-4.

Ⓑ STYLELINE® TELEPHONE

Our popular dial-in-handset phone now comes in a grand total of 16 colors—more colors than ever before, to help you sell more extensions than ever before. The Styleline phone also features superior dependability. Its rigid transmission network printed wiring card is far less susceptible to damage than the flexible card used in similar instruments. For simple installation and maintenance, the handset cord is plug-ended at both ends; line cord is plug-ended at base end. An optional lighted dial is available. To order, see page M-5.

TECHNICAL LITERATURE AVAILABLE:

GTEP 997-152-800—Shop Procedure

GTEP 473-422-200—Type 980 Styleline Rotary Dial Handset—Description, Installation and Maintenance

GTEP 473-422-201—Type 980 Styleline Touch Calling Handset—Description, Installation and Maintenance

Ⓒ 182-A STARLITE® DESK PHONE

Compact, lightweight, stylish enough for any setting—yet rugged enough to withstand heavy use in offices. An optional electroluminescent dial light allows dialing in a dark room. Can be adjusted from dim to bright. Single line cord serves both the telephone and dial light, which simplifies installation. A recess below the dial plate provides a convenient pick-up grip. To order, see page M-6.

TECHNICAL LITERATURE AVAILABLE:

GTEP 473-220-201—Installation and Field Maintenance—Rotary Dial

GTEP 473-220-202—Installation and Field Maintenance—Touch Calling

GTEP 997-015-800—Shop Procedure

Ⓓ 192-A WALL COMPACT TELEPHONE

Combines the features of the Starlite desk phone with the advantages of wall mounting. The result is a lightweight, compact phone, popular for areas with limited space. Handy handset rest holds handset when user leaves the phone momentarily—no need to leave handset dangling. To order, see page M-6.

TECHNICAL LITERATURE AVAILABLE:

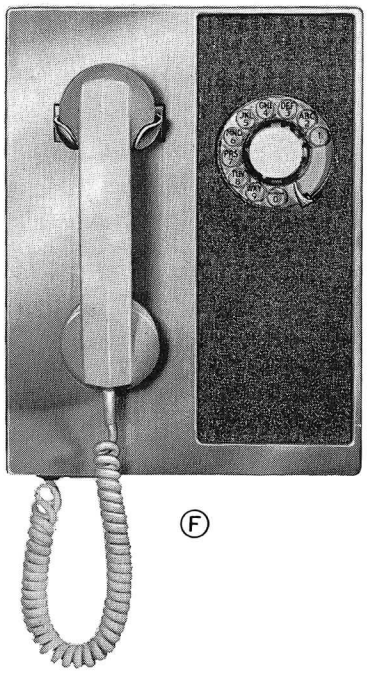
GTEP 473-310-201—Installation and Field Maintenance—Rotary Dial

GTEP 473-310-202—Installation and Field Maintenance—Touch Calling

GTEP 997-015-800—Shop Procedure

Prices on request.

SINGLE-LINE TELEPHONES



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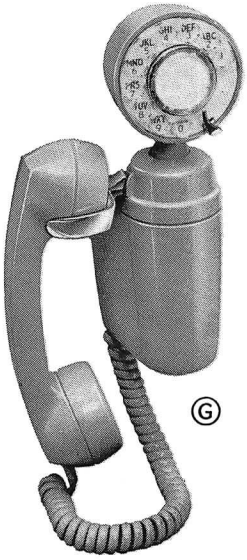

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Ⓔ90-M WALL TELEPHONE

Handset can't be dragged, brushed or knocked off-hook. The cradle holds handset securely—helps keep off-hook trouble calls down. No problem with broken hooks—the tough, chrome-plated cradle mounts securely on a sturdy shaft which turns in a long bearing-bracket. Side-mounted handset fits snugly against wall. When subscriber leaves phone temporarily, handset can be hung safely behind cradle, not left to dangle. To order, see page M-6.

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-300-200—Installation and Maintenance
GTEP 997-110-800—Shop Procedure

Ⓕ95 PANEL TELEPHONE

A prestige instrument that commands a premium rate. Saves space, gives a modern built-in look. Fits flush against the wall in a steel mounting box recessed 2 in. in the wall; permits back-to-back mounting in apartment buildings. Available in silvertone or browntone brushed aluminum, with white or ivory handset. Six interchangeable colored vinyl inserts customize the Panel Phone for any installation. Adhesive backing allows quick color changes without changing out the entire instrument. To order, see page M-7.

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-404-200—Installation and Field Maintenance
GTEP 997-100-801—Shop Procedure

Ⓖ183 SPACE-MAKER® TELEPHONE

This handy telephone mounts on desk, wall, or any other vertical surface. Adjustable dial tilts back to 45°, rotates 360°, locks in place at any point. Hookswitch swings in a 180° arc, locks in seven positions. The Space-Maker phone may be used as an extension, or with Type 33 compact ringer box as a complete subscriber's station. To order, see page M-7.

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-301-200—Installation and Field Maintenance
GTEP 997-120-800—Shop Procedure

Ⓗ881-A SPEAKERPHONE

Provides convenient hands-free conversation. Words are transmitted clearly, even when spoken at substantial distances. The 881-A is completely self-contained. All components, including microphone and speaker, are mounted inside. There are four control buttons: RECALL, MUTE, ON and OFF. RECALL terminates a call and reaccesses the line without having to hang up. MUTE cuts the microphone out of the circuit while a speakerphone call is in progress, to prevent transmission of a private conversation to the other party on the line. ON and OFF are used to switch from speaker to handset operation. To order, see page M-8.

ORDERING INFORMATION FOR ALL SINGLE-LINE TELEPHONES FOLLOWS⟶

Prices on request.

ORDERING SINGLE-LINE TELEPHONES

To quickly find the complete ordering number for any telephone, follow the 5 steps below. Add each suffix to the ordering number.

Example Steps	Equipment	Ordering Number
1	Type 80E Telephone	**HC-802**
2	Beige	**10**
3	Special Service (none offered)	**0**
4	Rotary Dial, ABC Number Plate	**C**
5	Straight-Line Ringer, with adjustment lever	**SA**

Complete Ordering Number: **HC-802100-CSA**

HOW TO ORDER TYPE 80E DESK TELEPHONES

Step	Description	Ord. No.
1 Phone	Type 80E Telephone	**HC-802**
2 Color	Basic Black	**00**
	Beige	**10**
	Basic White	**19**
	Antique White	**21**
	Espresso Brown	**22**
	(All phones include matching facemat and clear plastic faceplate.)	
3 Special Service	None Offered. (NOTE: This suffix must be included in complete ordering number.)	**0**
4 Rotary Dial or Touch Calling	Rotary Dial: 1–0 Number Plate	**A**
	ABC Number Plate	**C**
	SATT A Party Identification	**D**
	SATT B Party Identification	**E**
	Touch Calling Unit: 12-button ABC	**J**
	Dial Blank	**B** (note 1)
5 Ringer	Straight-Line, with adjustment lever	**SA**
	16.6-Hz. harmonic	**16**
	20-Hz. harmonic or decimonic	**20**
	25-Hz. harmonic	**25**
	30-Hz. harmonic or decimonic	**30**
	33.3-Hz. harmonic	**33**
	40-Hz. decimonic	**40**
	42-Hz. harmonic	**42**
	50-Hz. harmonic	**50**
	50-Hz. decimonic	**51**
	54-Hz. harmonic	**54**
	60-Hz. decimonic	**60**
	66-Hz. harmonic	**66**
	66.6-Hz. harmonic	**67**
	Without Ringer	**XX**

NOTE 1: Dial blank telephone available only with straight-line ringer (BSA).

80E CONVERSION KIT

Modifies old Type 80 phones to look like smart, new Type 80E instruments. Adds years to the life of old phones—helps keep customers happy. Order kit, housing and facemat (see page M-8). (NOTE: If converting Type 80 telephone of one color to look like Type 80E telephone of a different color, order new handset shell, handset cord and line cord.)

HH-880028-1 Conversion Kit.

HD-480033- 80E Housing. Add suffix to indicate color:

—AA Basic Black **—AB** Beige **—AM** Basic White
—AN Antique White **—AY** Espresso Brown

80E DIAL BLANK CONVERSION KIT

Includes everything required, including basic white facemat and clear plastic protective faceplate. Ordering Number: **HH-880030-1**

Prices on request.

HOW TO ORDER STYLELINE® TELEPHONES

HANDSET

Steps	Description	Ordering No.
1 Handset	Handset Assembly	**ND-980**
	With Rotary Dial, non-lighted	
	With Rotary Dial, lighted (for use only with lighted version of desk base)	
	With Touch Calling Unit, non-lighted	
2 Color	Basic Black	**00**
	Beige	**10**
	Avocado	**12**
	Ivory	**13**
	Lemonade	**17**
	Basic White	**19**
	Antique White	**21**
	Espresso Brown	**22**
	Tropic Green	**23**
	Electric Blue	**24**
	Tangerine	**25**
	Candy Apple Red	**26**
	Porcelain Blue	**27**
	Sunny Yellow	**28**
	Autumn Gold	**29**
	Light Blue	**30**
3 Special Service	None Offered. (NOTE: This suffix must be included in complete ordering no.)	**0**
4 Rotary Dial or Touch Calling	Rotary Dial:	
	Non-Lighted ABC Number Plate	**C**
	Lighted ABC Number Plate (for use only with lighted version of desk base)	**M**
	Touch Calling (12-button) ABC	**J**
5	(NOTE: This suffix must be included in complete ordering no.)	**XX**

BASE

Steps	Description	Ordering No.
1 Base	Desk Base Assembly, with 7-ft. Line Cord and 6-ft. Handset Cord	**ND-981**
	Wall Base Assembly, with 12-ft. Handset Cord	**ND-982**
2 Color	Basic Black	**00**
	Beige	**10**
	Avocado	**12**
	Ivory	**13**
	Lemonade	**17**
	Basic White	**19**
	Antique White	**21**
	Espresso Brown	**22**
	Tropic Green	**23**
	Electric Blue	**24**
	Tangerine	**25**
	Candy Apple Red	**26**
	Porcelain Blue	**27**
	Sunny Yellow	**28**
	Autumn Gold	**29**
	Light Blue	**30**
3 Special Service	None Offered. (NOTE: This suffix must be included in complete ordering no.)	**0**
4 Lighted or Non-lighted	Desk Base, for use with lighted rotary dial handsets	**X**
	Desk or Wall Base, for use with non-lighted rotary dial or Touch Calling handsets	**N**
5 Ringer	Straight Line	**SL**
	Without Ringer	**XX**

Prices on request.

HOW TO ORDER TYPES 182-A AND 192-A TELEPHONES

Steps	Description	Ordering No.
1 Phone	Type 182-A Starlite® Desk Telephone with coiled cord	**ND-820**
	Type 192-A Wall Compact Telephone with coiled cord	**ND-920**
2 Color	Basic Black	**00**
	Beige	**10**
	Avocado	**12**
	Ivory	**13**
	Turquoise (Lt. Green)	**15**
	Yellow (Type 192-A Wall Compact only)	**17**
	Pink	**18**
	Basic White	**19**
	Lt. Blue	**30**
3 Message Waiting Lamp	Without message-waiting lamp (standard)	**1**
	Without message-waiting lamp (use when ordering lighted dial for Type 192-A Wall Compact only)	**2**
	With message-waiting lamp (for hotel/motel)	**3**
	With message-waiting lamp (use when ordering lighted dial for Type 192-A Wall Compact only)	**4**
4 Rotary Dial or Touch Calling	Rotary Dial (non-lighted):	
	1-0 Number Plate	**A**
	No Dial (blank)	**B**
	ABC Number Plate	**C**
	SATT A Party Identification	**D**
	SATT B Party Identification	**E**
	Rotary Dial (lighted):	
	1-0 Number Plate	**K**
	ABC Number Plate	**M**
	SATT A Party Identification	**N**
	SATT B Party Identification	**P**
	Touch Calling Unit (12-button) ABC(includes D-780988 Adapter Plate)	**J**
5 Ringer	Without ringer	**XX**
	Type 46 Straight-Line Miniature Ringer (16.6 to 33.3 cps.) (NOTE: Type 182-A with ringer and non-lighted rotary dial is not stocked.)	**SL**

HOW TO ORDER TYPE 90-M WALL TELEPHONES

Steps	Description	Ord. No.
1 Phone	Type 90-M Wall Telephone	**ND-902**
	Type 90-M Wall Telephone with Subscriber Hooklatch for multi-party lines	**ND-912**
2 Color	Basic Black	**00**
	Beige	**10**
	Dark Green	**12**
	Ivory	**13**
	Turquoise (Light Green)	**15**
	Yellow	**17**
	Pink	**18**
	Basic White	**19**
3 Special Service	None Offered. (NOTE: This suffix must be included in complete ordering number.)	**0**
4 Rotary Dial	1–0 Number Plate	**A**
	No Dial (Blank). (NOTE: Blank dial telephones available only with straight-line ringer.)	**B**
	ABC Number Plate	**C**
	SATT A Party Identification	**D**
	SATT B Party Identification	**E**
5 Ringer	Straight-Line, with Adjustment Lever	**SA**
	Without Ringer	**XX**

NOTE: Frequency ringers, and ringer with vacuum tube for superimposed ringing and adjustment wheel, are available for use with Type 90-M telephones. Order Type 48 High Impedance Ringers, on page M-19.

Prices on request.

HOW TO ORDER TYPE 95 PANEL TELEPHONES

Steps	Description	Ordering No.
1 Phone	Type 95 Telephone with coiled cord	**ND-950**
2 Color	Silvertone with white handset and cord. Order facemats separately (see below)	**19**
	Browntone with ivory handset and cord. Order facemats separately (see below)	**13**
3 Special Service	None offered. (NOTE: This suffix must be included in complete Ordering No.)	**0**
4 Dial or Touch Calling	Rotary Dial:	
	1–0 Number Plate (Silvertone color is not stocked)	**A**
	Alphabetical Number Plate	**C**
	SATT A Party Identification	**D**
	SATT B Party Identification	**E**
	Touch Calling Unit (12-button) ABC	**J**
5 Ringer	Straight-line	**SA**
	16.6-Hz. Harmonic	**16**
	20-Hz. Harmonic or Decimonic	**20**
	25-Hz. Harmonic	**25**
	30-Hz. Harmonic or Decimonic	**30**
	33.3-Hz. Harmonic	**33**
	40-Hz. Decimonic	**40**
	42-Hz. Harmonic	**42**
	50-Hz. Harmonic only	**50**
	50-Hz. Decimonic only	**51**
	54-Hz. Harmonic	**54**
	60-Hz. Decimonic	**60**
	66-Hz. Harmonic	**66**
	66.6-Hz. Harmonic	**67**
	Without Ringer	**XX**

ACCESSORIES

D-48358-A Wall Mounting Box for Panel telephone. Complete with mounting hardware, protective cover, and mounting instructions.

550728 Mounting Brackets for mounting Panel telephone wall housing during prewiring. 5/8-in. steel strap formed to fit between studs. 5/8-in. holes spaced every 7/8-in.

550729 Mounting Brackets (two fixed and two adjustable) for mounting Panel telephone in existing walls. Eliminates need to frame wall opening. Used with Wall Mounting Box.

D-780955-A Decorative Silvertone Blank Panel and four screws to cover mounting box when subscriber doesn't require Panel telephone.

D-780943-A Six Color Inserts with hole for rotary dial: Beige, White, Turquoise (blue), Tangerine (orange), Mocha (brown), Yellow.

D-781048-A Six Color Inserts with holes for 12-button Touch Calling Unit: Beige, White, Turq. (blue), Tangerine (orange), Mocha (brown), Yellow.

HOW TO ORDER TYPE 183 SPACE-MAKER® TELEPHONES

Steps	Description	Ord. No.
1 Phone	Type 183 Space-Maker Telephone with coiled cord	**NB-830**
2 Dial	1–0 Number Plate	**A**
	No dial (blank)	**B**
	Alphabetical Number Plate	**C**
	SATT A Party Identification	**S**
	SATT B Party Identification	**D**
3 Color	Basic Black	**A**
	Ivory	**E**

Prices on request.

HOW TO ORDER TYPE 881-A SPEAKERPHONES

Steps	Description	Ord. No.
1 Phone	Type 881-A Speakerphones, desk model	**ND-881**
2 Color	Basic Black	**00**
	Beige	**10**
	Basic White	**19**
	(All phones include matching facemat and clear plastic faceplate.)	
3 Special Service	None Offered. (NOTE: This suffix must be included in complete ordering number.)	**0**
4 Rotary Dial or Touch Calling	Rotary Dial (ABC letter/number designation on facemat)	**C**
	Touch Calling Unit: 12-button ABC	**J**
5 Ringer	Straight-Line Ringer	**SL**

ACCESSORIES

NUMBER CARDS AND COVERS FOR ALL SINGLE-LINE TELEPHONES

S-430926 Adhesive Dial Number Card, for all telephones except the 980 Styleline phone. Color, gray. Strip of 4, 125 strips per pkg.

S-434002 Adhesive Dial Number Card Cover, for above. Acetate. Strip of 4, 125 strips per pkg.

D-530400-A Number Card for all Touch Calling phones except the 80E and 881-A. Also for use with rotary dial 980 Styleline phones. Strip of 45.

D-530394-AR Plastic Cover for above. 25 per pkg.

HD-530033-A Number Label for Touch Calling 80E and 881-A phones.

HD-530032-A Number Label Cover for above.

REPLACEMENT FACEMATS AND FACEPLATES FOR TYPES 80E AND 881-A TELEPHONES

***HD-530029-AXR** Facemats for ABC rotary dial 80E.
***HD-530046-AXR** Facemats for 1-0 rotary dial 80E.
***HD-530030-AXR** Facemats for Touch Calling 80E.
***HD-530045-XR** Facemats for ABC rotary dial 881-A.
***HD-530044-XR** Facemats for Touch Calling 881-A.

*Suffix X stands for color; substitute with appropriate color suffix:

A-Basic Black **D**-Apple Green **G**-Gold **K**-Blue
B-Espresso Brown **E**-Tan **H**-Red **M**-Basic White
C-Antique White **F**-Burnt Orange **J**-Yellow **N**-Avocado
O-Clear with black nomenclature (rotary dial 80E only) **Q**-Beige
P-Clear with white nomenclature (rotary dial 80E only)

NOTE: All facemats are shipped in standard packages of 5.

HD-780076-A Faceplate for rotary dial 80E.
HD-780075-A Faceplate for Touch Calling 80E.
HD-780112-A Faceplate for rotary dial 881-A.
HD-780118-A Faceplate for Touch Calling 881-A.

BACKBOARDS FOR TYPES 980, 192-A AND 90-M WALL TELEPHONES

Used when replacing larger wall phone, so large wall area previously covered won't show. For mounting to wall, electrical box or SE-63A pre-wire bracket. Furnished with hardware for mounting telephone to backboard.

Ord. No.	Color	Ord. No.	Color
S-550436	Avocado	**S-550447**	Light Beige
S-550437	Sand Beige	**S-550448**	Party Pink (Lt. Pink)
S-550438	Basic Black	**S-550449**	Lemonade (Lt. Yellow)
S-550441	Ivory	**S-550392**	Electric Blue
S-550442	Pink	**S-550393**	Tropic Green
S-550439	Light Blue	**S-550395**	Tangerine
S-550444	Yellow	**S-550396**	Porcelain Blue
S-550440	Lt. Green (Turquoise)	**S-550397**	Espresso Brown
		S-550398	Sunny Yellow
S-550445	Dark Green	**S-550399**	Antique White

TYPE 890 TELEPHONE
DATA RETRIEVAL SUBSET

The Type 890 is a special computer connected telephone with audio response capabilities.

Access to a computer is established using the rotary dial. The Touch Calling unit serves as a data input device to add new data, or to retrieve previously recorded information. The asterisk and number mark buttons are for special coding arrangements. The audio response of stored data is heard through the handset. NOTE: For data retrieval, a W. E. Co. 403A data receiver, or equivalent, is required at the receiving end.

The Type 890 may be used as a standard telephone to place and receive calls. A Type 46 SL ringer responds to 16–33 cps ringing current.

Dimensions: 5-in. high, 9¼-in. wide, 7½-in. deep. Printed wiring card, self-compensating transmission unit.

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-420-100—Description
GTEP 473-420-200—Installation and Field Maintenance

Ordering Number: **NB-890XXCSL** (with straight-line ringer)
NOTE: XX in above ordering number stands for color. Substitute with the appropriate color code:

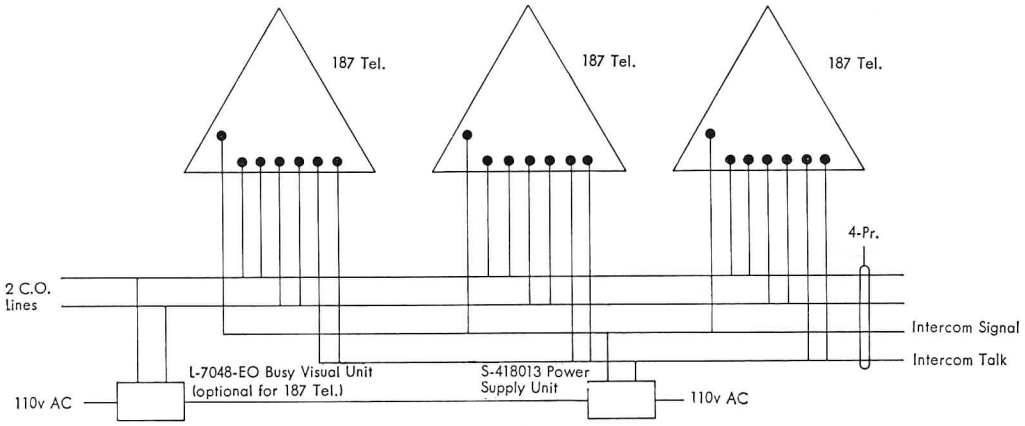
00-Basic Black **11**-Med. Gray **15**-Turquoise (Lt. Green)
10-Beige **12**-Dk. Green **19**-Basic White

Prices on request.

CONVENIENCE SYSTEMS

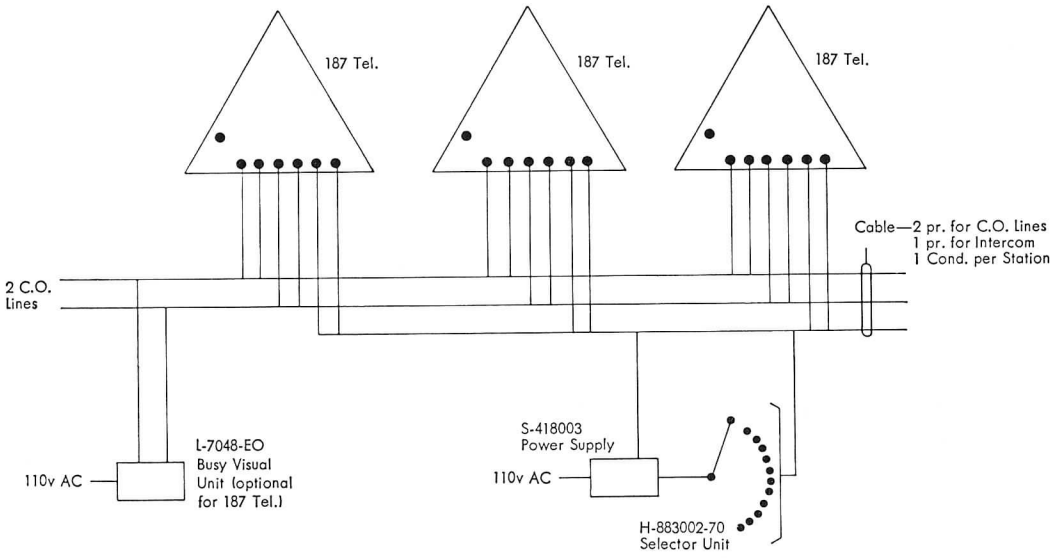
Type 187 Multi-Line telephones (see page M-10) provide two C.O. lines and intercom service or three C.O. lines for small businesses at low cost. Installation is quick and simple by a family of plug-ended/connector-ended cables. Little or no auxiliary relay equipment is necessary to provide intercom.

2 C.O. LINES, COMMON TALKING, MANUAL SIGNALING INTERCOM



S-418013	Power supply unit	each	**$31.50**
L-7048-EO	Busy visual control unit (for Type 187 phone)	each	**6.55**
S-410963	Busy visual control unit (for Type 87-A phone)	each	**57.50**
FD-1068-AB	External buzzer per station (for Type 87-A phone)	each	**4.70**
FD-1068-AF	Internal buzzer per station (for Type 187 phone)	each	**1.55**

2 C.O. LINES, COMMON TALKING, DIAL SIGNALING INTERCOM—ROTARY DIAL ONLY



H-883002-70	Dial selector unit	each	**$70.65**
H-884900-1	Mounting bracket for dial selector unit	each	**5.85**
S-418003	Power supply (FD-1040-CP)	each	**89.96**
L-7048-EO	Busy visual control unit (for Type 187 phone)	each	**6.55**
S-410963	Busy visual control unit (for Type 87-A phone)	each	**57.50**
FD-1068-AB	External buzzer per station (for Type 87-A phone)	each	**4.70**
FD-1068-AF	Internal buzzer per station (for Type 187 phone	each	**1.55**

TYPE 187 MULTI-LINE TELEPHONES FOR CONVENIENCE SYSTEMS

THREE LINES, VISUAL AND AUDIBLE SIGNALING, EXTENSION EXCLUSION

This self-contained telephone offers the convenience of a multi-line system, but requires no auxiliary relay units.

Line and hold keys are provided for 3 lines—any combination of central office and intercom. The 187 phone may be used with several similar instruments to provide a trunk-connected intercom system, or with a PABX/PBX system. Clear plastic line keys light on ringing current to indicate an incoming call. When a busy-visual control unit is used, the associated lamp glows steadily to indicate a busy line. Hold keys are interlocked with associated line keys and restore on hang-up.

A non-locking push key is used when several phones use a common local intercom line. Low voltage power supply is required to provide signaling and transmission current. Key can also be used to signal a secretary.

A non-locking pushbutton recalls the operator if it is necessary to transfer a call.

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
GTEP 473-513-100, Description.
GTEP 473-513-200, Installation and Field Maintenance.
GTEP 997-220-800, Shop Procedure.

Steps	Description	Ordering No.
1 Phone	Type 187 Desk Telephone with 6-ft. plug-ended line cord	**ND-874**
	Type 187 Wall Telephone with 6-ft. plug-ended line cord	**ND-974**
2 Color	Black	**00**
	Beige	**10**
	White	**19**
3 Key Assembly	Without exclusion key	**0**
	With exclusion key	**1**
4 Rotary Dial or Touch Calling	Rotary Dial. (Letter/Number designations on face plates. Order face plates separately.)	**A**
	Touch Calling Unit (12-button) ABC	**J**
5 Ringer	Straight-line Ringer	**SL**
	Ringer and Buzzer	**RB**
	Without Ringer or Buzzer (stocked only in beige and white with rotary dial)	**XX**
	Common Audible Signal	**CA**
	Common Audible Signal and Buzzer	**CB**

FACE PLATES (ORDER SEPARATELY)

D-781007 For Rotary Dial, 1-0.
D-781006 For Rotary Dial, ABC.
D-781011 For Touch Calling Unit (12-button).

Add Appropriate Color Suffix:

B Beige
C Med. Gray
D Med. Green
F Vermilion (Bright Red)
J Yellow
K Med. Blue
L Flamingo (Pink-Orange)
M White
P Gold
R Brown
S Silver
X Clear (with black letters/numbers)

ACCESSORIES

HH-880008-1 Adapter Plate and hardware, for mounting Types 187 and 186 telephones to outlet box or Type 63A junction box.

S-430926 Adhesive Dial Number Card, gray (strip of 4, 125 strips per pkg).

S-434002 Adhesive Dial Number Card Cover, clear acetate (strip of 4, 125 strips per pkg).

D-530304-A Designation Strips (strip of 6).

D-530400-A Number Card for Touch Calling Unit (strip of 45).

D-530394-AR Plastic Cover for Touch Calling Number Card (pkg of 25).

D-56613-A Power Supply Unit, for up to 5 intercom stations, plus busy-visual lamps. Transistorized unit supplies 10V AC for busy-visual lamps and intercom signaling; 20V AC for signaling; 8.2V DC for intercom. Requires 110–120V AC. 3 x 4 x 7 inches. Beige cover.

L-7048-EO Busy-Visual Control Unit. Provides low voltage power to activate incandescent lamp in phone to indicate busy line. Serves up to 5 stations (15 lamps). Six-foot cord with 3-prong plug. Input: 110–120V AC. Output: 10V 60-Hz. 5¼ x 5¼ x 2$\frac{1}{16}$ in. Ivory cover.

Prices on request.

TYPE 85 TWO-LINE TELEPHONES

TWO-LINE PICKUP, EXTERNAL SIGNALING, EXTENSION EXCLUSION

Businesses that need no more than two lines will find this phone a useful instrument. Several options are available with a combination push-turn key and exclusion pushbutton. These options provide, at lower cost, a variety of special features and services. No auxiliary relay units are required.

TYPE 85-A

Factory-wired for 2-line pickup. Equipped with a push-turn key for answering or placing calls on either of 2 lines. The nonlocking push feature operates an external signaling device. Phone is equipped with one ringer wired across line one. If a ringer is required for line two, any standard ringer box can be installed.

Optional wiring (by installer): Single-line ringer cutoff, single-line extension cutoff, single-line extension cutoff with ringer transfer, external signal control, extension exclusion with line shorting.

TYPE 85-B

Equipped with 2 pushbuttons under handset. One button excludes all extensions from the line; other button restores extensions. Extensions are also restored automatically on hang-up. NOTE: Only parent phone can be equipped with extension exclusion. Two-line pickup can be provided as a wiring option. Extension exclusion is not possible when 2-line pickup is used.

TYPE 85-C

Equipped with both push-turn key for 2-line pickup, and 2 pushbuttons for extension exclusion. Hold on one line can be provided as a wiring option.

TYPE 85-D

Factory-wired for 2-line pickup and hold on line one. Equipped with push-turn key and 2 push-buttons.

TECHNICAL LITERATURE AVAILABLE: GTEP 473-502-200, Installation and Field Maintenance.
GTEP 997-160-800, Shop Procedure.

Steps	Description	Ordering No.
1 Phone	Type 85 Telephone with coiled cord	**NC-852**
2 Color	Black	**00**
	Beige	**10**
	Med. Gray	**11**
	Dk. Green	**12**
	Turquoise (Lt. Green)	**15**
	White	**19**
3 Key Assembly	Type 85-A (push-turn key only)	**1**
	Type 85-B (pushbuttons only)	**2**
	Type 85-C (push-turn key and pushbuttons)	**3**
	Type 85-D (push-turn key and holding bridge)	**4**
4 Dial	1–0 Number Plate	**A**
	No dial (blank)	**B**
	Alphabetical Number Plate	**C**
5 Ringer	Straight-line, with adjustment lever	**SA**

NOTE: Frequency ringers are available for use with Type 85 telephones.
Order Type 45 High Impedance Ringers, on page M-19.

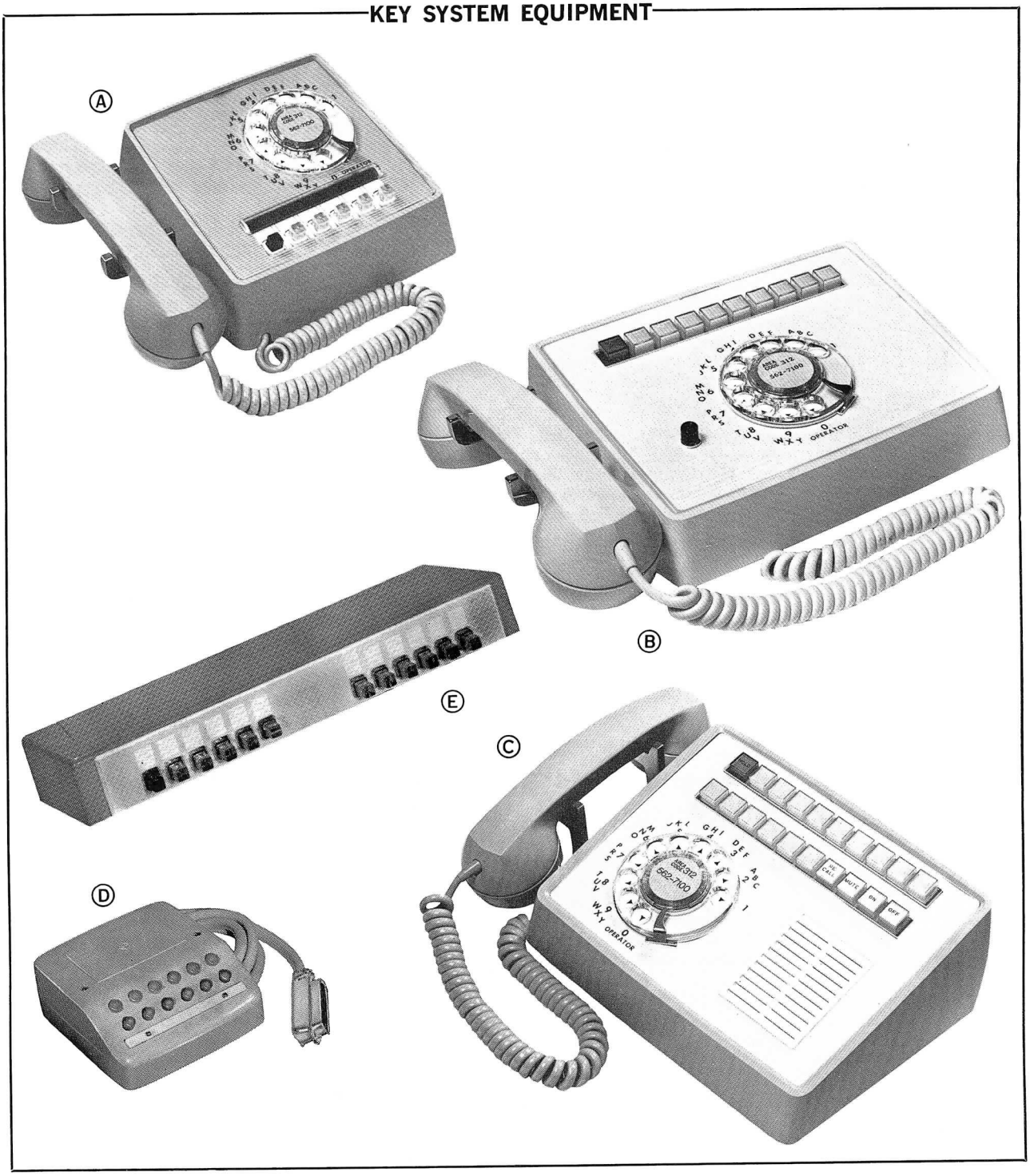
ACCESSORIES

H-885525-1 Type 85-C Inductive Holding Bridge Kit, for field conversion of Type 85-C to Type 85-D.

HH-880019-1 Grounding Pushbutton Conversion Kit.

Prices on request.

KEY SYSTEM EQUIPMENT



Ⓐ 186 TELEPHONE WITH LED KEYSET—5 LINES, ONE HOLD

The 186 is for use with our 10A2, 10A1 and 10A key systems, and is compatible with WE 1A2, 1A1 and 1A systems. New light-emitting diodes (LED's) located above the designation strip indicate incoming calls and lines in use. LED's last longer than incandescent lamps and seldom need replacement.

50-conductor plug-ended line cord makes installation easy and permits flexibility of location. A self-compensating network automatically balances for short or long loop to assure best quality transmission.

An optional exclusion lever provides complete privacy on the first line by temporarily disconnecting all extension phones from that line. Excluded stations are automatically reconnected on hang-up. To order, see opposite page.

TECHNICAL LITERATURE AVAILABLE:

GTEP 997-210-800—Shop Procedure.

(B) 102A TELEPHONES

Type 102A telephones can be used with our 10A1 and 10A2 key systems, the 16A intercom, and the new 17A key system. They can also be used with comparable systems of other makes such as the WE 1A1, 1A2 and 6A.

The 102A comes with either 10 buttons (9 lines and hold) or 20 buttons (19 lines and hold). Buttons not needed for lines can be used for signaling, intercom, or special features.

The 102A phone is available with a multi-party conferencing keyset*, signaling and paging amplifier*, automatic button restoral on hang-up, programmable keystrip for changing line appearances without wiring changes, and recall button for signaling PABX attendant or operator.

The interior of the 102A is readily accessible, for easy servicing. Quick-connect "push-on" terminals for components on transmission card save soldering, screwdriver work and time. To order, see page M-14.

*Only when phone is ordered for use with 17A Key System.

TECHNICAL LITERATURE AVAILABLE:

GTEP 473-514-100—Description and Installation

(C) 882-A MULTI-LINE SPEAKERPHONES

Type 882-A Speakerphones provide convenient hands-free conversation for key systems. These phones can be used with our 10A1, 10A2 and 17A key systems, with the 16A intercom, and with comparable key systems of other manufacturers.

The 882-A comes in 10- and 16-button desk models, and a 10-button wall model. Ten-button models can handle up to 9 lines and hold; the 16-button model can handle up to 15 lines and hold. Buttons not needed for lines can be used for signaling, intercom or other special features, depending on the key system arrangement.

All models also have 4 control pushbuttons: RECALL, MUTE, ON and OFF. RECALL terminates a call and reaccesses the line without having to push another line button. MUTE cuts the microphone out of the circuit while a speakerphone call is in progress, to prevent transmission of a private conversation to the other party on the line. ON and OFF are used to switch from speaker to handset operation.

Electret microphone gives improved voice reproduction. Conversations are detected and transmitted clearly, even when words are spoken from substantial distances.

Other features include 3-party conferencing and automatic line button restoral on hang-up.

A 6-foot 50-conductor connector-ended cable is provided with the 9-line model, and a 100-conductor dual connector-ended cable with the 15-line model. Each phone also comes with a 6-foot 2-conductor spade-ended silver-satin-colored power cable and low voltage transformer. To order, see page M-14.

80E SINGLE-LINE PHONE FOR USE WITH KEY SYSTEMS

Our standard 80E desk telephone is available equipped with a 6-conductor line cord for use as a single-line station in any 10A1, 10A2 or 16A key system. See page M-2 for complete description, and page M-4 for ordering information.

(D) 86-A KEY ADAPTER

Converts standard phones to keyset operation. For use with our 10A2, 10A1 and 10A key systems, or WE 1A2, 1A1, 1A systems. Lamps indicate incoming calls and busy line. Mounts on desk or flat vertical surfaces. To order, see page M-14.

(E) 6050 AND 6051 KEYSETS

Six- or 12-button units adapt standard phones for use with 10A2, 10A1 and 10A key systems. Provides same operation and supervision as types 186 or 102A key phones. Operates in conjunction with plug-ended running cables. For left- or right-hand edge mounting. Each pickup key is convertible to signal key. To order, see page M-15.

HOW TO ORDER TYPE 186 TELEPHONES WITH LED KEYSETS

Steps	Description	Ord. No.
1 Phone	Type 186 Desk Telephone with 6-ft. plug-ended line cord	**HC-866**
	Type 186 Wall Telephone with 6-ft. plug-ended line cord	**HC-966**
2 Color	Basic Black	**00**
	Beige	**10**
	Basic White	**19**
	(All phones include matching facemat and clear plastic faceplate.)	
3 Key Assembly	H-hold; P-pickup; Ps-pickup convertible to signal	
	HPPPsPsPs: Without exclusion key	**0**
	With exclusion key	**1**
	PPPPsPsPs: Without exclusion key	**2**
	With exclusion key	**3**
4 Rotary Dial or Touch Calling	Rotary Dial (ABC letter/number designations on faceplates)	**A**
	Touch Calling Unit (12-button, ABC)	**J**
5 Ringer	Straight-Line Ringer	**SL**
	Ringer and Buzzer	**RB**
	Buzzer	**BA**
	Without Ringer or Buzzer	**XX**

NOTE: All telephones include line designation strip. Number cards for Touch Calling phones must be ordered separately; number card cover is included with the phone. With rotary dial phones, both number card and cover are included as part of the dial assembly.

ACCESSORIES

HD-530013-A Designation Strip.
D-530400-A Number Card for Touch Calling (strip of 45).
D-530394-AR Plastic Cover for above (pkg of 25).
FD-1068-AF Buzzer.

Prices on request.

ACCESSORIES FOR OLDER TYPE 186 TELEPHONES

HH-880036-1 Conversion Kit, for replacing incandescent line lamps with new LED keyset. Order faceplate and facemat separately (see M-15).
D-530304-A Designation Strips (strip of six).
D-530400-A Number Card for Touch Calling telephones (strip of 45).
D-530394-AR Plastic Cover for Touch Calling number card (pkg. of 25).
FD-1068-AF Buzzer for Type 186 telephone.
D-781005-† Faceplate, rotary dial, 1-0.
D-781004-† Faceplate, rotary dial, ABC.
D-781010-† Faceplate, Touch Calling.

†Add color suffix: **-B** Beige, **-C** Med. Grey, **-D** Med. Green, **-F** Vermilion (Bright Red), **-J** Yellow, **-K** Med. Blue, **-L** Flamingo (Pink-Orange), **-M** White, **-P** Gold, **-R** Brown, **-S** Silver, **-X** Clear (with black letters/numbers)

HOW TO ORDER TYPE 102A TELEPHONES

Steps	Description	Ord. No.
1 Phone	Type 102A Desk Telephone with 6-ft. 50-conductor plug-ended line cord	**ND-865**
	Type 102A Wall Telephone	**ND-965**
2 Color	Basic Black	**00**
	Beige	**10**
	Basic White	**19**
	(All phones include matching facemat and clear plastic faceplate.)	
3 Key Assembly	10-button (desk and wall models)	**1**
	20-button (desk model only)	**2**
4 Rotary Dial or Touch Calling	Rotary Dial	**C**
	Touch Calling Unit	**J**
5 Ringer	Ringer and Buzzer	**RB**
	Signaling Paging Amplifier and Conference Keyset, only for phone to be used with Type 17A Key System. (Available only on 10-button desk model. Scheduled for availability on 20-button desk model January, 1976.)	**RA**

ACCESSORIES

HD-590007-C Conferencing Keyset. To modify 102A telephone for use with 17A key system. Provides multi-line conferencing.
HD-530028-A Replacement Tabs for 10-button 102A telephone. Includes one "HOLD" tab. The remainder are blank line tabs. For 20-button 102A telephones, order two sets.
HD-530037-A Replacement Tabs for 10-button 102A telephone, for use with 17A key system. Includes one "HOLD" tab and two "INTERCOM" tabs. The remainder are blank line tabs. For 20-button 102A telephones, order two sets.

HOW TO ORDER TYPE 882-A MULTI-LINE SPEAKERPHONES

Steps	Description	Ord. No.
1 Phone	Type 882-A Multi-Line Speakerphone, desk model	**ND-885**
	Type 882-A Multi-Line Speakerphone, wall model	**ND-995**
2 Color	Basic Black	**00**
	Beige	**10**
	Basic White	**19**
	(All phones include matching facemat and clear plastic faceplate.)	
3 Key Assembly	9-Line (10-button) (desk and wall models)	**1**
	15-Line (16-button) (desk model only)	**2**
4 Rotary Dial or Touch Calling	Rotary Dial	**C**
	Touch Calling Unit	**J**
5 Ringer	Ringer and Buzzer	**RB**
	Signaling Paging Amplifier and Conference Keyset, only for phone to be used with Type 17A Key System. (Scheduled for availability November, 1975.)	**RA**

ACCESSORIES FOR 882-A PHONES

HD-530028-A Key Designation Tabs.
HD-560014-A Buzzer.

HOW TO ORDER TYPE 86-A KEY ADAPTERS

Steps	Description	Ord. No.
1 Key Adapter	Plug-ended Key Adapter with 6-ft. cord	**L-7046**
2 Key Assembly	H-hold; P-pickup; Ps-pickup convertible to signal HPPPsPsPs key assembly	**C**
3 Color	Black	**A**
	Beige	**B**
	Med. Gray	**C**
	Dk. Green	**D**
	Turquoise (Lt. Green)	**G**
	White	**M**

Prices on request.

HOW TO ORDER TYPES 6050 AND 6051 KEYSETS

TWELVE-BUTTON UNITS

Eleven pickup keys; one hold. Type 6051-A.

L-7047-CA	Black
L-7047-CB	Beige
L-7047-CC	Med. Gray
L-7047-CD	Dk. Green
L-7047-CG	Turquoise (Lt. Green)
L-7047-CM	White

Twelve pickup keys; no hold. Type 6051-B.

L-7047-DA	Black
L-7047-DB	Beige
L-7047-DC	Med. Gray
L-7047-DD	Dk. Green
L-7047-DG	Turquoise (Lt. Green)
L-7047-DM	White

SIX-BUTTON UNITS

Five pickup keys; one hold. Type 6050-A.

L-7047-AA	Black
L-7047-AB	Beige
L-7047-AC	Med. Gray
L-7047-AD	Dk. Green
L-7047-AG	Turquoise (Lt. Green)
L-7047-AM	White

Six pickup keys; no hold. Type 6050-B.

L-7047-BA	Black
L-7047-BB	Beige
L-7047-BC	Med. Gray
L-7047-BD	Dk. Green
L-7047-BG	Turquoise (Lt. Green)
L-7047-BM	White

REPLACEMENT FACEPLATES AND FACEMATS FOR ALL KEY SYSTEM TELEPHONES

HD-780122-A Faceplate, clear plastic, for rotary dial 186 telephone, with ABC letter/number designations.

HD-780122-B Faceplate, clear plastic, for 12-button Touch Calling 186 telephone.

HD-530048-* Facemats for rotary dial 186 telephone (5 per pkg).

HD-530049-* Facemats for Touch Calling 186 telephone (5 per pkg).

HD-780085-A Faceplate, clear plastic, for 10-button rotary dial 102A telephone, with ABC letter/number designations.

HD-780086-A Same as above, but for 20-button model.

HD-780087-A Faceplate, clear plastic, for 10-button Touch Calling 102A telephone.

HD-780088-A Same as above, but for 20-button model.

HD-530023-* Facemats for 10-button rotary dial 102A telephone (5 per pkg).

HD-530022-* Same as above, but for 20-button model (5 per pkg).

HD-530026-* Facemats for 10-button Touch Calling 102A telephone (5 per pkg).

HD-530025-* Same as above, but for 20-button model (5 per pkg).

HD-780114-A Faceplate, clear plastic, for 9-line (10-button) rotary dial 882-A Multi-Line Speakerphone, with ABC letter/number designations.

HD-780113-A Same as above, but for 15-line (16-button) model.

HD-780115-A Faceplate, clear plastic, for 9-line (10-button) Touch Calling 882-A Multi-Line Speakerphone.

HD-780116-A Same as above, but for 15-line (16-button) model.

HD-530039-* Facemats for 9-line (10-button) rotary dial 882-A Multi-Line Speakerphone (5 per pkg).

HD-530038-* Same as above, but for 15-line (16-button) model (5 per pkg).

HD-530041-* Facemats for 9-line (10-button) Touch Calling 882-A Multi-Line Speakerphone (5 per pkg).

HD-530040-* Same as above, but for 15-line (16-button) model (5 per pkg).

***Add color suffix:** **-AR** Basic Black, **-BR** Espresso Brown, **-CR** Antique White, **-DR** Apple Green, **-ER** Tan, **-FR** Burnt Orange, **-GR** Gold, **-HR** Red, **-JR** Yellow, **-KR** Blue, **-MR** Basic White, **-NR** Avocado, **-QR** Beige

LOUD-SPEAKING CONVERSION EQUIPMENT

TO ADAPT

TYPES 80E AND 186 TELEPHONES

TO SPEAKERPHONE OPERATION

Adapts regular 80E and 186 phones for loud-speaking use. (If desired, phone can be used in the normal manner.) Equipment consists of loudspeaker unit, transmitter unit, power transformer and dial conversion kit. Transmitter unit contains omni-directional microphone, preamplifier, on/off indicator light, on/off/mute switch and volume control. Power transformer uses 115V AC. Dial conversion kit consists of dial with two extra shunt springs (required for loud-speaking operation) and mounting hardware. Replaces regular dial in 80E or 186 telephone.

417601	Loudspeaker Unit, beige, with 14-ft. cord	each	**$122.28**
417602	Same as above, black	each	**122.28**
417603	Same as above, white	each	**122.28**
428197	Transmitter Unit, beige, with 14-ft. cord	each	**41.88**
428198	Same as above, black	each	**41.88**
428199	Same as above, white	each	**41.88**
428148	Power Transformer	each	**3.45**
HH-880038-1	Dial Conversion Kit	each	**1.60**

Prices on request.

TIP PARTY INDUCTORS AND RESISTORS—FOR ANI SERVICE

D-284327-A Resistor for 2nd party service. For AE SATT dial equipment only. Use with all rotary dial phones with part nos. beginning with NB and NC.....each **$ .96**

D-284686-A Inductor and Bracket. For Touch Calling Starlite® phones (without ringers*) with part nos. beginning with NB, and for rotary dial or Touch Calling Starlite® phones (without ringers*) with part nos. beginning with NC.....each **1.80**

D-284686-C Inductor and Bracket. For rotary dial or Touch Calling Types 80, 90-M, 95, 183 phones with part nos. beginning with NC.....each **1.80**

H-888041-1 Conversion Kit. Used to establish tip party ANI service on standard telephones without center tap position on transmission network. For rotary dial Types 182-A, 183, 192-A phones with part nos. beginning with NB.....each **4.05**

HH-880018-1 Same as above, except for rotary dial Types 80, 90M, 95 phones with part numbers beginning with NB.....each **3.05**

*A Type 46 Ringer can be used instead of D-284686-A Inductor and Bracket. A center tap on the ringer coil provides the necessary inductive mark.

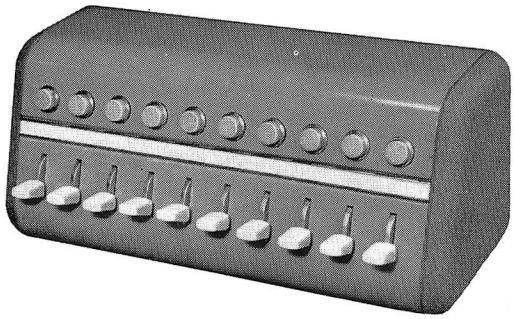
SECRETARIAL ANSWERING UNITS

The Secretarial Answering Unit permits a secretary to answer and hold calls on up to 20 lines by merely flipping the appropriate 3-way key.

Units are completely self-contained and require no extra equipment, except standard single-line phone for secretary. Plug-ended line cord on Secretarial Answering Unit makes installation quick and easy.

Positive, uniform ringing under all conditions is assured by new electronic circuitry. Each ringing signal produces a timed half-second tone.

Reliable noise suppression is provided by a new thick-film electronic network. Dial pulses and other interference are effectively squelched. And a voltage-doubler action provides increased sensitivity to low-level ringing signals.



TECHNICAL LITERATURE AVAILABLE ON REQUEST:
GTEP 489-651-110—Description

H-889671-1 6-line unit, beige.....each **$150.00**
H-889671-2 6-line unit, gray.....each **150.00**
H-889671-3 10-line unit, beige.....each **215.00**
H-889671-4 10-line unit, gray.....each **215.00**
H-889671-5 20-line unit, beige.....each **405.00**
H-889671-6 20-line unit, gray.....each **405.00**

Outdoor Housing with Type 90-M Telephone

OUTDOOR TELEPHONE HOUSINGS

Weatherproof cast aluminum-alloy housing with gray finish. Spring-loaded door closes on stainless steel hinge pins; held closed by magnetic latch. Weatherproof lock with built-in shutter keeps out rain.

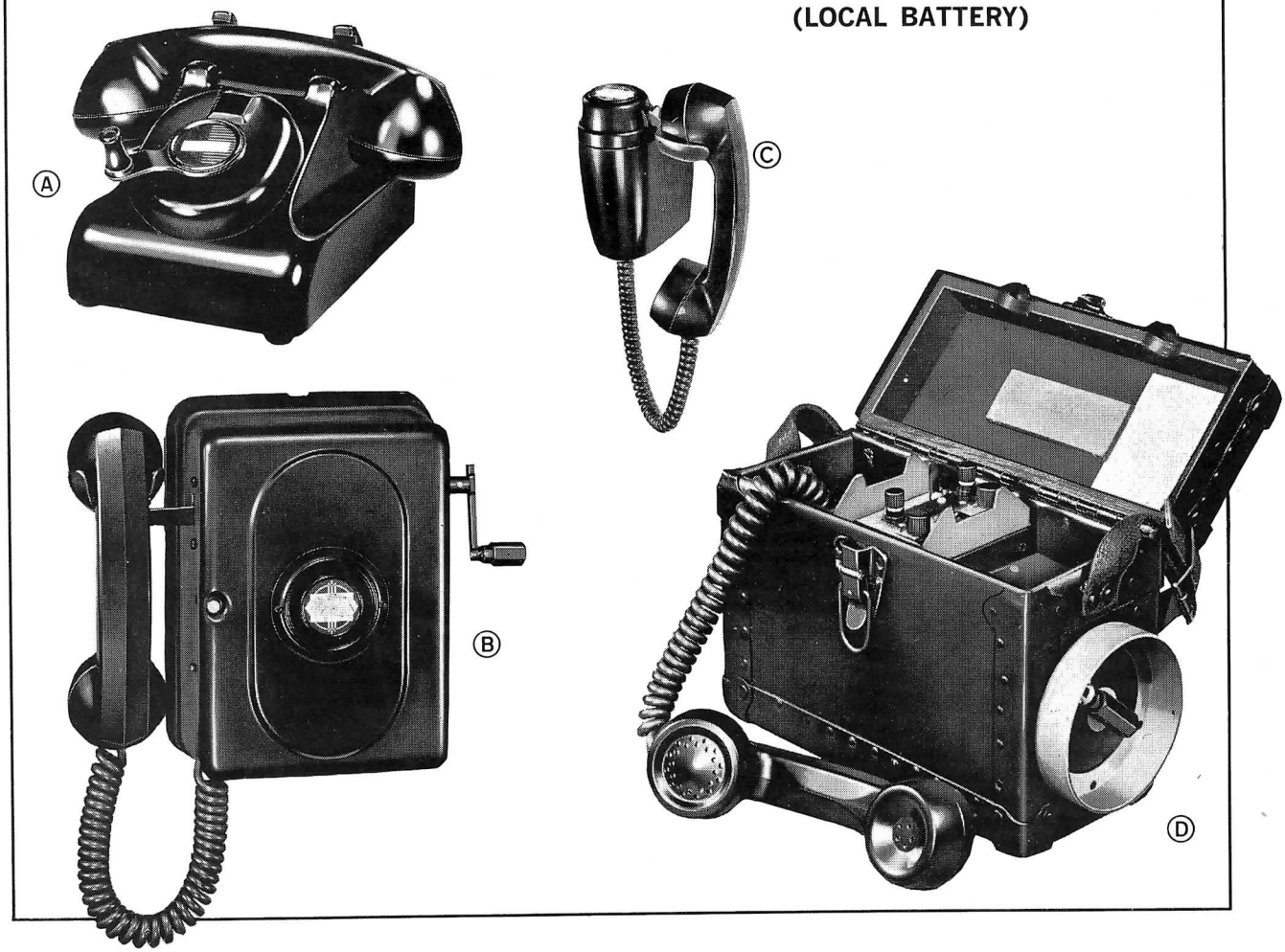
Housing can be mounted on any flat surface or on a pole. Install any standard wall phone in housing. (NOTE: Phone not supplied.) Cord clamp prevents handset cord from being damaged when closing door. Clamp also prevents cord from bunching up under handset, causing an off-hook condition.

Dimensions: 16″ high, 11⅝″ wide, 6$\frac{5}{32}$″ deep.

D-48356-A Outdoor Housing, brackets for pole mounting, screws for phone mounting, keys and installation instructions.....each **$78.65**

Prices are subject to change without notice.

RAILROAD TELEPHONES (LOCAL BATTERY)



Ⓐ TYPE 900 MAGNETO TELEPHONES

Conventional local battery phone for either wall or desk installation. Easy conversion to common-battery service. For dial operation, add dial to each phone. Equipped with ringing condenser. Hookswitch latch allows monitoring of party lines, conserving batteries. Does not use high efficiency circuit or pushbutton handset. Black.

NL-12707-A	Magneto Telephone with 1000-ohm ringer	**$117.00**
NL-12806-A	Same as above, but with hookswitch.	**On App.**
NL-12707-B	Magneto Telephone with 1600-ohm ringer	**107.75**
NL-12806-B	Same as above, but with hookswitch..	**109.25**
NL-12707-C	Magneto Telephone with 2500-ohm ringer	**117.00**
NL-12806-C	Same as above, but with hookswitch..	**118.65**

For Dial Conversion

D-84820-C	Type 51-A Dial, 1-0 Number Plate....	**4.95**
D-84821-C	Type 51-A Dial, ABC Number Plate...	**4.95**

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-414-200—Description and Installation
GTEP 473-414-900AE—Modification to Dial or Battery Operation.

Ⓑ TYPE 60 TELEPHONES

Install in siding booths. Die-formed metal housing protects internal parts. Equipped with pushbutton handset. Black. 9¾″ high, 11½″ wide, 5″ deep.

L-658-B2	With high-impedance ringer	**118.00**
L-658-B3	Without ringer; with Waystation Filter...	**134.60**
L-658-B4	Without ringer, filter or generator.....	**68.05**

TYPE 80 TELEPHONES

For use on desks in the yard or shop offices, in railroad business cars, and in pump or compressor stations. Equipped with pushbutton handset. Rugged, lightweight black plastic housing. Requires magneto-battery box for signaling.

L-8009-B2	With high-impedance ringer	**$43.05**
L-8009-B3	Without ringer; with Waystation Filter...	**59.25**

Ⓒ TYPE 183 TELEPHONES

Compact Space-Maker® model—ideal for use on dispatcher's circuits. Equipped with pushbutton handset. Handset cradle swings 180°, locks in 7 positions. Mounts on desk, wall, post or column. Angle mounting bracket included. 5½″ high, 6″ wide, 3½″ deep overall. For connection to dispatcher's line, order phone only. For message circuits, order both phone and ringer box. Requires magneto-battery box for signaling.

L-8308-B2	Type 183 Phone (local battery).....	**23.55**
L-1508-XXXA	Type 33 Compact Ringer Box.....	**1.50**
D-56566-B	Straight-Line Ringer.....	**5.95**

Ⓓ TYPE 10-A PORTABLE TELEPHONES

Connects to message or dispatcher circuit with Universal Line Pole. Equipped with pushbutton handset. Meets AAR specifications. 8¼″ high, 13″ wide, 5⅛″ deep. 10½ lbs. Black.

L-7036-A1	With generator and bell	**186.15**
L-7036-A5	With generator, bell and Waystation Filter	**217.30**
L-7036-A2	Less generator, ringer and filter.....	**113.20**
L-7036-A0	With generator; less ringer and filter....	**162.50**
L-7036-A4	With generator and filter; less ringer....	**190.60**

RAILROAD TELEPHONES (LOCAL BATTERY)—CONTD.

SELF-CONTAINED BOOTH TELEPHONES

For use in wayside booths. Consists of Type 60 phone and battery box for two dry cells, mounted on hardwood backboard with connecting wires concealed and protected. 20½" high, 11½" wide, 5¾" deep.

L-659-B2 With generator and high-impedance ringer..... **$170.60**

L-659-B3 Without ringer; with generator and Waystation Filter..... **188.90**

L-659-B4 Without generator, filter and ringer... **On App.**

MAGNETO BATTERY BOXES

Used as companion to Type 80 or 183 Railroad telephones for complete service on message circuits. Houses a magnet generator. Delivers powerful ringing signals even on long, heavily-loaded lines. Space for two No. 6 dry cells or a two-cell unit battery (not included).

Measures 9 in. high, 9½ in. wide, 4½ in. deep. Black plastic.

L-594-DO Magneto box (without batteries)..... **On App.**

801 HAND TEST TELEPHONE

Long-lasting, easy to use and shock-resistant. International safety orange housing. High-tensile test cords have abrasion-resistant jackets. A 3-position switch and high impedance coupling circuit permit monitoring data transmission without interference.

TECHNICAL LITERATURE AVAILABLE: GTEP 100-203-100—Description

Complete SxS Test Telephone

L-9078-DO Hand Test Telephone, complete with SxS test cord HD-540067-A. Comes pre-assembled, on special order only **37.20**

FOR OUTSIDE PLANT

L-9078-A1 Installation/Repair model, with lineman's test cord. 4'4", 2-conductor cord has insulation-piercing alligator clips on one end, spade terminals on other end. Easy to connect to terminals on Type 66 block **$37.90**

HD-540073-A Replacement Lineman's Test Cord.. **On App.**

FOR INSIDE PLANT

L-9078-BO C.O./PABX model, with resistor cord. 2-in., 2-conductor cord has plug on one end, spade terminals on other. Mode switch inserts 1500 ohms resistance to simulate long loop. Uses accessory cords listed below..... **36.65**

HD-570008-A Replacement Resistor Test Cord.... **5.70**

Accessory Cords

HD-540016-B 5-ft., 2-cond. cord with 2-contact plug, fits switch test jacks..... **7.40**

HD-540019-B Same as above, but with 4-contact plug and shorting pushbutton to test for circuit seizure **9.35**

HD-540045-A 5-ft. cord with switchboard plug.... **9.10**

HD-540062-A 4'4" cord with banana plugs **8.80**

FOR INSIDE PLANT—SPECIALIZED REQUIREMENTS

L-9078-CO Hand Test Telephone, less cord. Order complete cords below..... **31.50**

Complete Cords

HD-540067-A 5-ft., 2-cond. cord with 2-contact plug, fits switch test jacks..... **6.30**

HD-540065-A Same as above, but with 4-contact plug and shorting pushbutton to test for circuit seizure..... **8.25**

HD-540068-A 5-ft. cord with switchboard plug.... **7.55**

HD-540064-A 4'4" cord with banana plugs..... **On App.**

ACCESSORIES

HH-880022-1 Belt-Hook Kit, to attach 801 to flat belt..... **$2.95**

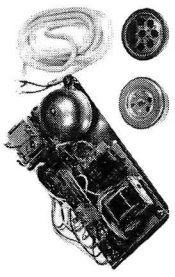
HD-150045-A Insulation-Piercing Alligator Clip, to update older outside plant test phones and cords. Connects to terminals on Type 66 block. Two required per phone or cord..... **1.65**

S-571983 Alligator Clip for inside plant testing. Slips over banana plug on Accessory Cord HD-540062-A or Complete Cord HD-540064-A. Non-insulated. Order two per cord .....Per 100 **9.31**

S-571984 Same as above, but insulated. Per 100 **12.84**

HH-880026-1 Polarity Indicator Kit. Modifies 801 phones to give quick, positive identification of T & R leads by means of an indicator lamp..... **4.00**

MODIFICATION KIT



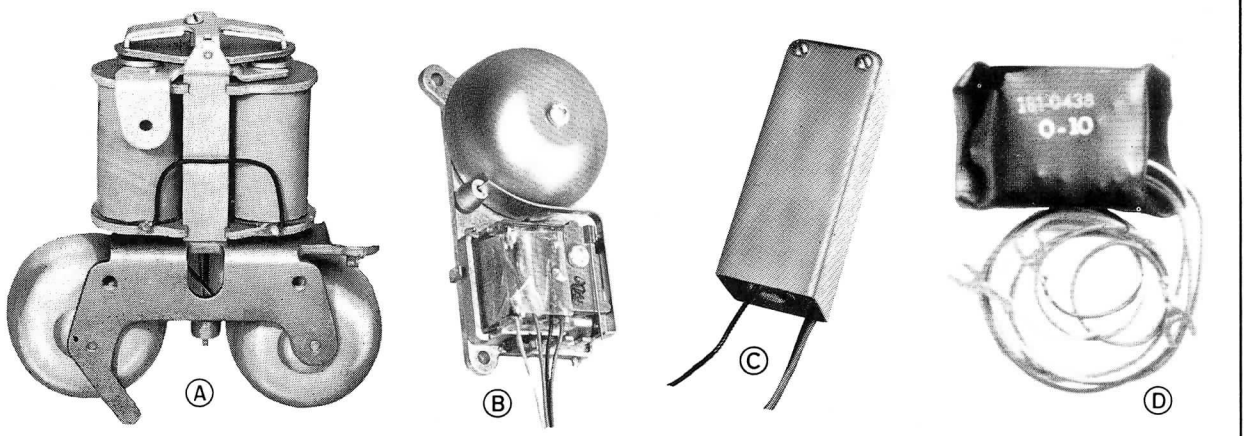
FOR ANTIQUE/DECORATOR TELEPHONE HOUSINGS

Converts antique/decorator phones into useful instruments. Compatible with US-4, US-5 and similar housings conforming to Bell System specifications. Kit contains transmitter unit, transmitter connector with wire leads, receiver unit, Type 46 SL ringer, transmission network and support spacer, hookswitch assembly, plastic hookswitch plunger adapter, wire shield (plastic cover for hookswitch assembly), internal wiring harness, dial wiring harness, dial spacers, and all mounting hardware. If a ringer is desired when an antique phone is installed on party line, use an externally mounted Type 33 ringer box. (A type 51-A screw terminal dial must be ordered separately. Wrapped wire terminal dial is not suitable.)

S-320104 .....each **$27.90**

Prices are subject to change without notice.

RINGERS AND ACCESSORIES



Ⓐ TYPE 45 HIGH IMPEDANCE RINGERS

For 80, 80E, 85, 90-M, 95 phones, and Type 33 Compact Ringer Box. Condenser and coil are factory tuned. Impedance 160,000 ohms at 1000 Hz. With mounting hardware, instructions and capacitor. For harmonic, decimonic and synchromonic frequencies. Provides 2,000 ohms tap for ANI.

D-56548-C16R	16.6-Hz	each	**$4.10**
D-56548-C20R	20-Hz	each	**4.10**
D-56548-C25R	25-Hz	each	**4.10**
D-56548-C30R	30-Hz	each	**4.10**
D-56548-C33R	33.3-Hz	each	**4.10**
D-56548-C40R	40-Hz	each	**4.10**
D-56548-C42R	42-Hz	each	**4.10**
D-56548-C50R	50-Hz	each	**4.10**
D-56548-C51R	50-Hz Decimonic only	each	**4.10**
D-56548-C54R	54-Hz	each	**4.10**
D-56548-C60R	60-Hz	each	**4.10**
D-56548-C66R	66-Hz	each	**4.10**
D-56548-C67R	66.6-Hz	each	**4.10**
D-56548-CVAR	Ringer with Adjustment Wheel for superimposed ringing. Vacuum tube not included.	each	**4.00**
D-52144A	Vacuum Tube	each	**9.55**

TYPE 48 HIGH IMPEDANCE RINGERS

Single-magnet, single-coil, double-gong, straight-line. For Types 80, 80E, 85, 90-M, 95 telephones, and Type 33 Compact Ringer Box. Provides 2,650 ohms tap for ANI.

HD-560010-ASAR	Type 48 Ringer	each	**3.50**
HH-880040-1	Conversion Kit to add volume control lever to Type 90-M phones when installing Type 48 Ringer	each	**.35**
HH-880041-1	Same as above, but for Type 33 Compact Ringer Boxes.	each	**.35**

Ⓑ TYPE 33 COMPACT RINGER BOXES

For use with Type 182 Starlite® and Space-Maker® phones. 5¼ x 5¼ x 2⅛ in.

L-1508-XXX Ringer Box and cover only ..... each **1.50**

Add the Appropriate Suffix to Ordering Number:

A	Black	**G**	Turquoise (Lt. Green)	**L**	Pink
B	Beige			**M**	White
C	Med. Gray	**J**	Yellow	**P**	Lt. Yellow
D	Dk. Green	**K**	Lt. Blue	**T**	Avocado
E	Ivory				

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
GTEP 473-810-200—Installation.

D-780992-A Adapter Plate for conduit mounting ..... each **2.60**

TYPE 42 HIGH IMPEDANCE RINGERS

For Type 86 and 87-A telephones. Single-coil, double-gong.

D-56560-ASLR Straight-line ..... each **$3.50**

ADAPTER KITS FOR MOUNTING TYPES 90-M, 192-A, 186 AND 187 TELEPHONES AND TYPE 33 RINGER BOXES

Outlets can be pre-wired or wired as needed. Eliminates external wiring. Station equipment can be mounted on existing electrical outlet boxes. Adapter plate mounts on a 4-in. square or 4-in. octagonal outlet box; 2x4-in. handy box; 4 11/16-in. square outlet box; Suttle 63-A junction box.

Zinc plated .065-in. strip steel. Rounded edges.

D-780992-A	For Type 90-M telephone and Type 33 ringer box	each	**2.60**
D-780998-A	For Type 192-A telephone	each	**.83**
D-780907-A	For Types 186 and 187 Telephones	each	**1.45**

Ⓒ TYPE 46A MINIATURE STRAIGHT-LINE RINGERS

Internal ringer for Types 182-A, 192-A, 186, 187, 890, 981 and 982 telephones. Responds to frequency range of 16.6-30 cps.

HD-560007-ASLR ..... each **3.50**

VINCENT RARE GAS RELAYS

Reduces noise caused by power induction on lines where divided ringing is used. Provided with single-hole mounting clip.

S-426904 Type RTC. Wt., ¼ lb. ..... each **7.98**

Ⓓ RINGER ISOLATION DEVICE

Maintenance-free solid-state replacement for gas tube relays. Eliminates noise caused by divided ringers. Restores line balance. Disconnects ringer, except during ringing periods. One device required at each subscriber location; one device serves any number of phones within the subscriber premises. Ringing frequency range, 16-66 CPS. Built-in d.c. blocking capacitor prevents false trouble reports during line insulation tests. For indoor or outdoor surface mounting.

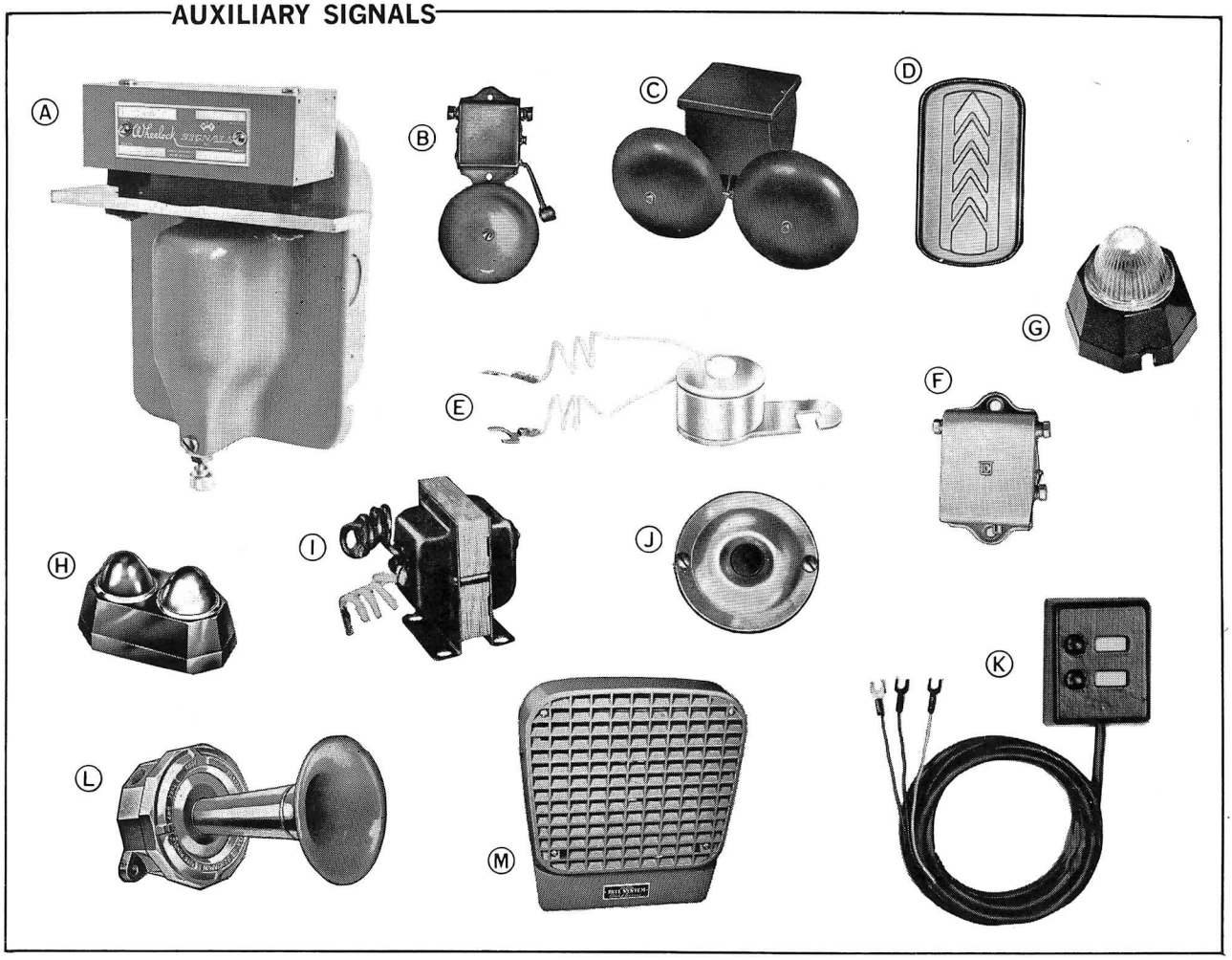
S-426866 ..... each **17.00**

Ⓔ COOK RINGER ISOLATOR

For use on two-party and multi-party lines. Electronic switch isolates ringer from ground in on-hook condition. Prevents induced commercial power from causing objectionable line noise. Isolates ringer from longitudinal voltages up to 200 volts. Mounts inside phone in a few minutes. Solid-state components eliminate the maintenance and low temperature problems associated with ringer isolators.

S-426867 181-0438 Ringer Isolator ..... each **8.23**

AUXILIARY SIGNALS



(A) CHIMES

Pleasant-sounding signal for executive offices, banks, department stores, hospitals. Chime bar pitch, 980 cycles per second. 70 db at 4 ft.; adjustable volume. Dimensions: 3¼ x 4 x 2⅛ in. Chimes supplied with backbox with ½-in. knockouts on all sides. Also available with cast adapter plate for mounting on 4-in.-square outlet box. (Available on special order: Voltages 3, 6, 12, 48, 110, 220 a.c., 60-Hz.; voltages 3, 6, 12, 110 d.c.)

Ordering No.	Rated Volts	Current Drain, Amps	Coil Resistance, Ohms	Ship. Wt., Lbs.	Price Each
S-423326	24 a.c. (60 Hz.)	0.25	34	6	**$17.72**
S-423327	24 d.c.	0.30	92	6	**19.68**
S-423328	48 d.c.	0.16	300	6	**18.05**

(B) BELLS

With tight-fitting bug- and dust-proof covers, grounded frames, external insulated binding posts. Chrome cover with zinc-plated base. 72.5 db at 3 ft. Gong diameter, 3 in. Dimensions: 5⅞ x 3½ x 1 in. Wt., ½ lb.

Ordering No.	Volts	Std. Pkg.	Price Each
S-421390	10–20 d.c. 18–30, 60 Hz. a.c.	4	**6.40**
S-421392	6–8 d.c. 8–10, 60 Hz. a.c.	6	**7.00**

(C) LOUD-RINGING BELLS

High-impedance bells with 6-in. gongs. For outdoor installation. Cast aluminum box, black finish. Impedance, 160,000 ohms at 1000 Hz. Dimensions: 8¾ x 12¾ x 4½ in.

Ordering No.	Frequency	Condenser Capacitance Mf.	Price Each
D-56559-ASL	Straight-Line	.4	**$24.75**
D-56559-A16	16.6-Hz.	.7	**26.95**
D-56559-A20	20-Hz.	.7	**26.95**
D-56559-A25	25-Hz.	.3	**26.95**
D-56559-A30	30-Hz.	.2	**26.95**
D-56559-A33	33.3-Hz.	.2	**26.95**
D-56559-A40	40-Hz.	.2	**26.95**
D-56559-A42	42-Hz.	.08	**26.95**
D-56559-A50	50-Hz. Harmonic	.1	**26.95**
D-56559-A51	50-Hz. Decimonic	.1	**26.95**
D-56559-A54	54-Hz.	.1	**26.95**
D-56559-A60	60-Hz.	.08	**26.95**
D-56559-A66	66-Hz.	.08	**26.95**
D-56559-A67	66.6-Hz.	.08	**26.95**

(D) EDWARDS BELLS AND BUZZERS

For surface or concealed wiring, with insulated and concealed binding posts. Bell, 5¼ x 3 x 1 in.; buzzer, 2¾ x 1¾ x 1 in. Both for standard 6–8 volt 60-Hz. a.c. or 3–6V DC circuits.

Ordering No.	Description	Std. Pkg.	Wt., Lbs. per Pkg.	Price Each
S-421391	Bell	60	6	**2.05**
S-422885	Buzzer	100	2¼	**1.65**

Prices are subject to change without notice.

(E) TELEPHONE AUXILIARY BUZZER

Maintenance-free miniature buzzer for use with, or in place of, ringer in Type 86 key phone. Fastens to dial mounting screws. No contacts to pit or burn. Adjustable volume control. No radio frequency interference. Operating voltage: 6–10 volts, 60-Hz. a.c. Dimensions: 1¼ x ½ x ¾ in.

Ordering No.	Std. Pkg.	Ship. Wt., Lbs.	Price Each
S-422906	250	12	**$.78**

(F) EDWARDS LUNGEN BUZZERS

Bug- and dust-proof. Adjustable for wide volume range.

Ordering No.	Volts	Decibels at 3 Ft.	Dimensions, Inches	Std. Pkg.	Wt., Lbs.	Price Each
S-422888	24 d.c.	71.5	1 21/32 x 1 15/32 x ½	6	⅛	**4.80**
S-422889	48 d.c.	71.5	1 21/32 x 1 15/32 x ½	3	⅛	**6.85**
S-422890	6–8 d.c. 8–10, 60-Hz. a.c.	71.5	1 21/32 x 1 15/32 x ½	10	⅛	**4.80**
S-422891	6–8 d.c. 8–10, 60-Hz. a.c.	74	2⅛ x 1 13/16 x 19/32	10	¼	**4.55**
S-422886	6–8 d.c. 8–10, 60-Hz. a.c.	75	2⅝ x 2 3/16 x ¾	10	¼	**4.85**

(G) RINGING VISUAL SIGNALS

Connects easily to phone with 2-conductor interior wire. Operates directly from ringing current of phone (65 volts or more). Clear plastic dome, black plastic base. (Amber dome and gray base available on special order.) Dimensions: 2¼ x 2¼ x 2½ in.

S-427510 Std. pkg., 80; lbs. per pkg., 14.....each **5.60**

(H) BUSY VISUAL SIGNAL

For use where visual signal is required to indicate line in use or for switchboard signaling. NOTE: Requires Busy Signal Relay Box L-715-AO and ringing transformer. Uses standard switchboard lamps. Available with any dome color combination and gray base on special order.

Single Dome Signals

Ordering No.	Dome Color	Dimensions, Inches	Base Color	Std. Pkg.	Wt., Lbs. per Pkg.	Price Each
S-427499	White	2¼ x 2¼ x 2¼	Black	80	14	**2.75**
S-427506	White	2¼ x 2¼ x 2¼	Beige	80	14	**2.75**
S-427501	Red	2¼ x 2¼ x 2¼	Black	80	14	**2.75**
S-427505	Red	2¼ x 2¼ x 2¼	Beige	80	14	**2.75**
S-427500	Green	2¼ x 2¼ x 2¼	Black	80	14	**2.75**
S-427504	Green	2¼ x 2¼ x 2¼	Beige	80	14	**2.75**

2-Dome Signals

S-427502	Green/Red	3⅞ x 2⅛ x 2¼	Black	72	30	**4.20**

3-Dome Signals

S-427503	White/ Green/Red	5⅜ x 2⅛ x 2¼	Black	40	15	**5.47**

BUSY SIGNAL RELAY BOXES

Contains d.c. relay to be connected in series with one side of telephone line. Relay operates on 48-volt line voltage. Used with extension phones to indicate busy line. Operates when handset is removed at any station on the line and closes circuit to associated signal lamp, D-94090.

L-715-AO.....each **15.40**

CONTINUOUS TELEPHONE SIGNALING UNITS

Consists of a.c. relay, which operates on straight-line central-battery or magneto ringing current. It closes a local circuit to a signal which operates until relay is released. Relay contacts carry 5 amperes at 110v., a.c. In case for indoor or outdoor installation.

CRT-TC-40.....each **34.84**

BUZZERS AND HARDWARE

For Internal Mounting

FD-1068-AF Buzzer (15–20V AC) for internal mounting in Types 86, 186, 187 and 860-A phones.....each **$1.55**

H-883001-5 Buzzer mounting hardware for Type 86 phone.....each **1.05**

H-883001-8 Buzzer mounting hardware for Type 860-A phone.....each **.89**

HD-560014-A Buzzer for internal mounting in Type 102A phone.....each **1.10**

(I) AUXILIARY SIGNAL TRANSFORMERS

Operates small or large auxiliary bells, buzzers, or chimes. U.L. listed. Input: 115V, 60-Hz. a.c. Output: 6, 12 or 18V, 60-Hz. a.c. Capacity: 10 watts.

S-428153 Std. ctn., 10. Ship. wt., 1 lb.....each **2.85**

(J) EDWARDS PUSHBUTTONS

S-426618 For surface mounting. Satin brass with black button. Std. pkg., 50.....each **.75**

S-426619 For flush mounting in ⅝-in. diam. hole; depth, ¾ in. Polished chrome rim with ivory center. Spring clip holds button in place. Rim is 3/32 in. wide. Std. pkg., 30.....each **.60**

(K) SUTTLE PUSHBUTTON AUXILIARY SIGNALS

With paper inserts and clear plastic strip for button identification. Matching 6-ft. 22-ga. flexible cord. For use with 6-48 volt power supply. Stocked in beige; also available in black, gray, blue-beige.

S-426621 One button, without cord or cork pads. 1¾ x 1 3/16 x ⅝ in. Std. pkg., 500. Lbs. per pkg., 16.....each **.66**

S-426622 Two buttons, 3-cond. cord. 2⅛ x 1¾ x 1¼ in. Std. pkg., 100. Lbs. per pkg., 100.....each **3.55**

S-426624 Four buttons, 5-cond. cord. 3¼ x 1¾ x 1¼ in. Std. pkg., 50. Lbs. per pkg., 22.....each **4.75**

S-426628 Eight buttons, 9-cond. cord. 3¼ x 3½ x 1¼ in. Std. pkg., 40. Lbs. per pkg., 31.....each **7.50**

(L) BENJAMIN HOWLERS

60-Hz. a.c. All are available in 12, 24, 115, 230 volts, 60-Hz. a.c.; also 6, 115, 250 volt d.c.

Weatherproof—With cast aluminum threaded ring and joint sealed by live rubber gasket. Baked-on gray enamel finish.

S-424992 7-in. single-bell, 24 volts, 0.8 amps....each **17.86**

S-424993 7-in. single-bell, 115 volts, 0.2 amps...each **17.86**

S-424994 19½-in. double-bell, 115 volts, 0.2 amps.....each **23.80**

Non-Weatherproof—Threaded ring construction and plug-in wiring for quick, easy installation.

S-424990 7-in. single-bell, 115 volts, 0.2 amps...each **15.53**

S-424991 19½-in. double-bell, 115 volts, 0.2 amps.....each **20.99**

(M) WHEELOCK SIGNALS

For auxiliary signal systems, code call systems and ringing signals in noisy areas; for indoor or outdoor use. All signals can be mounted in common housing, light olive-gray finish. With 2-conductor cord and plug. Dimensions: 10 x 11⅝ in.; 5-in. projection from wall. Order back box separately. To order signals, back boxes and relays, see page M-22.

AUXILIARY SIGNALS—CNTD.

HOW TO ORDER WHEELOCK SIGNALS

Chime—Single-stroke gong. 250 cycle-per-second pitch.

Ord. No.	Type	Volts	Hz.	Amps	Price Ea.
S-423325	SR9	115	60	0.40	**$ 45.36**

Horn—Energy peak, 1500–3000 cycles per second. Sound output, 105 db at 4 ft. May be surface-mounted, no backboard needed.

S-424940	1	115	60	0.45	**15.76**

(NOTE: Other voltages available on special order.)

Bells—Pitch, 580 cycles. Min. vol., 98 db in loud position.

Ord. No.	Type	Volts	Hz.	Amps	Price Ea.
S-421485	*VR6 vibrating bell	115	60	0.12	**$27.07**
S-421480	SR6 single-stroke bell	115	60	0.35	**25.10**

*Provided with an output level adjustment capable of controlling the volume over a range of at least 8 db. The adjustment is not capable of a complete cutoff.

Loudringing Bells—For outdoor use in explosive atmosphere or hazardous location. Coil resistance, 500 ohms.

S-421472	CVXG-10	90	20	0.07	**136.74**

Type HG2

Back Boxes

Equipped with surface power receptacle, lugs to engage mounting screws of a signal case, and hinge loops to permit swinging open the case while supporting the front assembly. Can be surface mounted without a backboard. For use with Types SR9, VR6, SR6 or Type 1 signals.

S-422331 Type HG2, indoor, dual potential. With 4-ft. 2-conductor power cord terminated in 2-blade plug to connect to commercial power outlet..... each **$ 9.38**

S-422330 Type HG1, indoor, single potential..... each **11.17**

S-422333 Type WHG2, outdoor, dual potential. With 4-ft. 3-conductor power cord, terminated in 3-blade plug and weather cap, to connect to commerical weatherproof power outlet. Insertion of plug grounds signal housing. With rain hood..... each **22.75**

S-422332 Type WHG1, outdoor, single potential. With rain hood..... each **16.65**

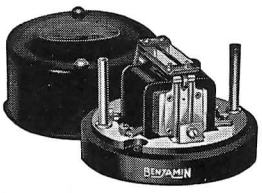
Relays

Relay unit is mounted within an enclosed case and fits into mounting brackets in Types HG2 and WHG2 back boxes. With 2-conductor cord and plug, and receptacle to accept cord from signal unit. Specify volts, cycles and amperes.

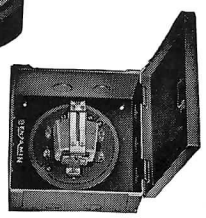
Ordering Number	Type	Operating Volts	D.C. Coil Resistance, Ohms	Current Drain, Amps	Price Each
S-426915	RX1419	39–90, 20 Hz., a.c.	4400	.009	
		30–40, 60 Hz., a.c.	900	.020	**$19.74**
		18–48 d.c.	4400	.011	

BENJAMIN TELECODE RELAYS

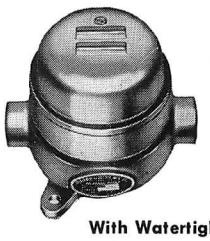
Relays activate loud-sounding signal extensions of telephone ringing circuits. Contact capacity, 0.8 amps at 110 v. 3,000 ohms. Will operate 5 vibrating-type howlers.



For Panel Mounting



With Pressed Steel Box



With Watertight Box

For Panel Mounting

Ord. No.	Description	Wt., Lbs.	Price Each
S-426911	Without capacitor.....	2½	**$12.83**

With Pressed Steel Box For General Indoor Use

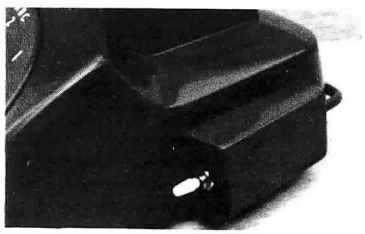
S-426909	Without capacitor.....	5¼	**19.72**
S-426912	With capacitor.....	6	**22.37**

With Explosion-Proof Box—UL listed as suitable for Class 1, Group D; Class 11, Groups F and G hazardous locations; Class 111 locations. Construction similar to watertight box, except cover is heavy red brass.

S-426914	With capacitor.....	11¼	**30.42**

With Watertight Box—For use where equipment is subjected to rough handling and the deteriorating effects of non-combustible dust and vapors. Box has cast-iron cadmium-plated base. Diameter, 5⅛″; height, 4²⁹⁄₃₂″. Hubs tapped ½″ straight through, standard; tapped ¾″ when specified.

S-426917	Without capacitor.....	7½	**21.09**
S-426919	With capacitor.....	8¼	**27.30**



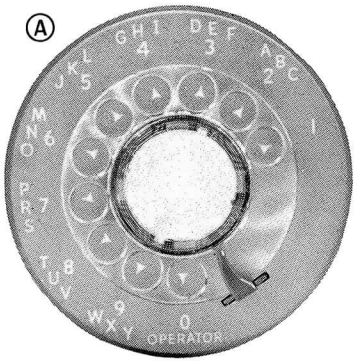
MINIATURE TRANSFER KEY

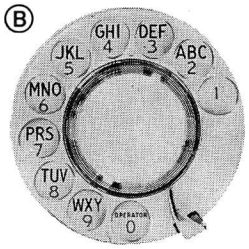
DPDT key used for switching one phone to two different lines, connecting two phones to one line, etc. Self-adhesive base attaches directly to telephone. Unit is also compatible with many telephone cords, cables and mounting brackets now in use. Compact unit measures 2⅝″ long, 1⅜″ wide, ⅞″ high. Black plastic cover is stocked; green, white, yellow, pink, red, ivory, blue, gray, turquoise and beige also available.

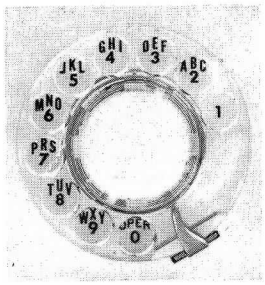
S-425600 Miniature Transfer Key, black.....each **$6.12**

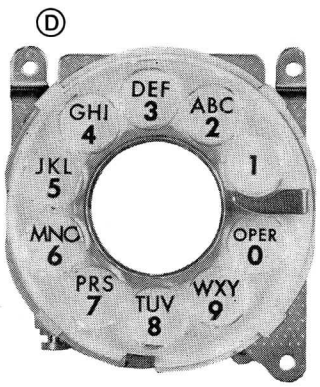
Prices are subject to change without notice.

DIALS









Ⓐ TYPE 52 DIAL ASSEMBLIES

One-piece extended number plate is an integral part of the dial assembly. Plastic fingerwheel maintains overall color harmony. Dials for ivory, yellow and white phones have black letter/number designations; all other dials have white designations.

D-84901 Alphabetical number plate..... **$5.25**
D-84900 1-0 number plate..... **5.25**

Add color suffix to ordering number:

A-Black	**E**-Ivory	**K**-Lt. Blue
B-Beige	**G**-Turquoise (Lt. Green)	**L**-Pink
D-Dk. Green	**J**-Yellow	**M**-White

Conversion Kit For Type 52 Dial

H-886062-1 Converts GTE AE Type 52 dial for use on WE, ITT or SC Type 500 telephones..... **.66**

Ⓑ TYPE 51-A DIAL ASSEMBLIES

White enameled metal number plate. With black arrows, black letters or red or black numerals. One-piece clear plastic fingerwheel.

D-84875-A Arrow plate. For Type 80E phones, and early Type 80 phones with separate extended number rings (D-530113-A or D-530138-A)..... **4.95**
D-84821-C Alphabetical number plate, for phones without extended number plates..... **4.95**
D-84820-C 1-0 number plate, for phones without extended number plates..... **4.95**

ANTIQUE TELEPHONE DIAL ASSEMBLIES

Same as Type 51-A dial assemblies, but with chrome or gold fingerwheels and accessories.

D-84870-C Antique Telephone Dial Assembly with chrome fingerwheel and accessories **4.95**
D-84870-N Antique Telephone Dial Assembly with gold fingerwheel and accessories..... **5.25**

Ⓒ TYPE 54 DIAL ASSEMBLIES
For Starlite® Telephone Only

Plastic coated aluminum. Gray opaque except for circular portion under holes of fingerwheel. Electroluminescent lamp shines through circular section. Lamp requires 110 v., a.c. One-piece clear plastic fingerwheel. Wire wrapped terminals.

D-84935-A Lighted Dial with ABC number plate.. **7.45**
D-84935-X Non-lighted Dial with ABC number plate **4.95**
D-84942-A Lighted Dial with 1-0 number plate..... **6.75**
D-84942-X Non-lighted Dial with 1-0 number plate..... **4.95**

Ⓓ TYPE 154-A MINIATURE DIAL ASSEMBLIES
For Styleline® Phone Only

The Type 154-A incorporates all the features of the Types 51 and 52 dials, except SATT party identification. Moveable fingerstop eliminates the space between 1 and 0, resulting in a smaller dial but with standard-sized finger holes. Available with or without electroluminescent lamp for lighted dial.

D-84993-A Lighted Dial with alphabetical number plate.....each **$7.45**
D-84993-AX Non-lighted Dial with alphabetical number plate.....each **4.95**

HOW TO ORDER SATT DIALS SEPARATELY

NOTE: SATT A dials are furnished with pins set in all 3 lobe positions; SATT B dials are furnished with pins set in the No. 1 lobe position. Lobe position can be changed at the time of installation.

For Types 80, 85, 86, 87, 87-A, 90, 90-M Telephones

SATT System	Color-Order Suffix	
SATT A **D-84915**	Black-**A3** Beige-**B3** Med. Gray-**C3** Dk. Green-**D3** Ivory-**E3** Red-**F3**	Turq. (Lt. Green)-**G3** Yellow-**J3** Lt. Blue-**K3** Pink-**L3** White-**M3**
SATT B **D-84916**	Black-**A1** Beige-**B1** Med. Gray-**C1** Dk. Green-**D1** Ivory-**E1** Red-**F1**	Turq. (Lt. Green)-**G1** Yellow-**J1** Lt. Blue-**K1** Pink-**L1** White-**M1**

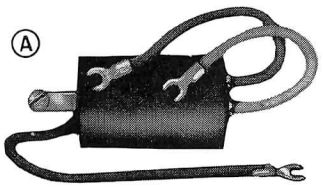
For Types 182, 182-A, 192-A Telephones

Ordering Number	Description
D-84936-A3	SATT A, Lighted
D-84936-X3	SATT A, Non-Lighted
D-84937-A1	SATT B, Lighted
D-84937-X1	SATT B, Non-Lighted

For Types 95, 183, 860-A, 880 Telephones

D-84885-A3 SATT A
D-84887-A1 SATT B

DIAL ACCESSORIES



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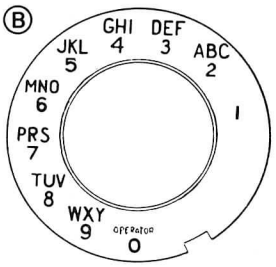

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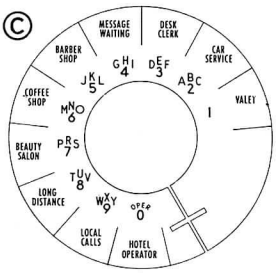

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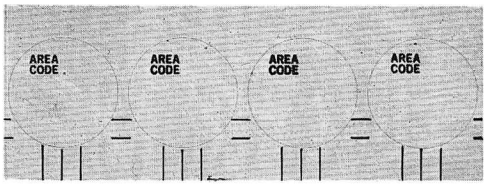

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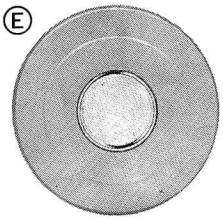


Ⓔ

DIAL LUBRICANT

For mechanisms which may be required to operate at low temperatures. Compatible with plastics. Rust protection.

H-78612-79 2-ounce container . . . . . each **$.88**
H-78612-80 1-gallon container . . . . . each **39.50**

DIAL TOOLS

H-886316-1 Tool for removal of one-piece plastic dial fingerwheel . . . . . each **$.28**
H-25937 End wrench for dial. For governor nut and large impulse cam nut . . . . . each **1.80**
H-16480 Socket wrench for dial. For small impulse cam nut . . . . . each **3.23**
H-16290-7 Dial pliers. For adjusting dial springs and governor . . . . . each **3.68**

PLASTIC FINGERWHEELS

For replacing most GTE Automatic Electric plastic and metal fingerwheels, except for those of the Styleline® phone.

HD-780059-BR Bulk package of 120 fingerwheels and fastening screws . . . . . pkg. **16.80**
HD-780059-AR Single fingerwheel and screw in plastic envelope . . . . . each **.15**

Ⓐ RADIO-SUPPRESSOR FOR DIALS

Can be connected to any dial. Serves the same purpose as Type 51-A Radio Suppressor Dial, D-84844-C. Mounts within the telephone housing. Three connecting cords and screw terminal provided. $1\frac{1}{4}$x$\frac{3}{4}$x$\frac{5}{16}$ in.

H-46526-1 . . . . . each **$5.85**

Ⓑ TYPE 51-A DIAL NUMBER PLATES

		1 to 99	100 & Over
D-53772-A	Alphabetical Number Plate. White background, red figures and black letters . . . . . each	**$.33**	**$.28**
D-53146-A	Numbered 1–0 in black . . . . . each	**.30**	**.25**
D-53211-A	1–0 and Operator . . . . . each	**1.05**	**1.05**
D-530114-A	Point-Marking Dial Plate. White arrows on black. For Type 51-A dials used with extended number rings . . . . . each	**.30**	**.25**
D-530227-A	Same as D-530114-A, except black arrows on white background. each	**.30**	**.25**

Ⓒ HOTEL/MOTEL DIAL RINGS AND TABS

Customized decals for every hotel/motel customer. Several styles available. Shown is Type DPAE-1. To order, contact your GTE AE marketing representative.

Ⓓ NUMBER CARDS AND COVERS

S-430926 Adhesive Dial Number Card, gray (strip of 4, 125 strips per pkg.). pkg. **$1.86**
S-434002 Adhesive Dial Number Card Cover. Acetate overlay disc protects dial number card (strip of 4, 125 strips per pkg.) . . . . . pkg. **1.44**
D-530400-A Number Card for all Touch Calling telephones except, 80E, plus Styleline® rotary dial and Touch Calling handsets (strip of 45) . . . . . strip **.28**
D-530394-AR Plastic Cover for above (25 per pkg.) . . . . . pkg. **4.35**
HD-530033-A Number Card for Type 80E Touch Calling Telephone (50 per pkg.) . . . pkg. **.15**
HD-530032-A Plastic Cover for above (50 per pkg.) . . . . . pkg. **.25**

Ⓔ DIAL BLANKS

For manual, convertible phones. Furnished with number card, plastic cover and mounting parts.

D-49607-A For Types 40, 43, 47 and 83 telephones. Black plastic . . . . . each **$.88**
D-53091-A White number card for dial blank . . . . . each **.033**
D-53094-A Clear plastic cover for dial blank . . . . . each **.011**
D-49995 For Types 80, 85 and 90 telephones . . . . . each **.83**

Add Appropriate Color Suffix to D-49995

AR	Black	**ER**	Ivory	**KR**	Lt. Blue
BR	Beige	**GR**	Turquoise (Lt. Green)	**LR**	Pink
DR	Dk. Green	**JR**	Yellow	**MR**	White

DIAL MOUNTING CUPS
For All Type 51 Dial Assemblies

One-piece cast aluminum cup for mounting dial at a 25-degree angle on a horizontal or vertical surface. A dial adapter plate and machine screws for attaching dial to cup, plus wood screws for fastening cup to table or switchboard are supplied. Black finish.

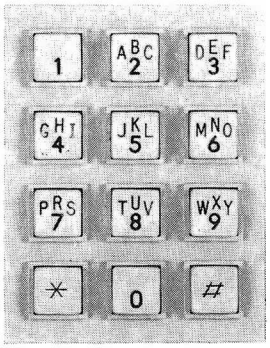
D-49312-AR . . . . . **Each $2.00**

Prices are subject to change without notice.

DIAL SWITCH LOCK

Controls placement of outgoing calls on Types 80, 85, 186, 187, 860 and 863 rotary dial or Touch Calling phones. Includes 2 keys.

S-425690 ..... each **$2.15**



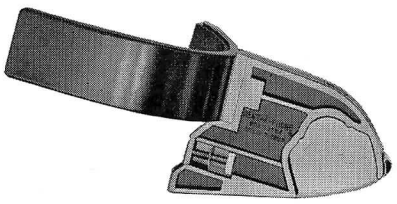
TOUCH CALLING UNITS

D-840000-A ABC Touch Calling Unit with tone generator..... **$21.95**

D-840000-C ABC Touch Calling Keyset without tone generator..... **10.05**

D-840000-AR ABC Touch Calling Unit with tone generator and Mounting Bracket Kit, to adapt older 10-button Touch Calling phones to new unit. For use with Types 80, 95, 182-A, 192-A, 186 and 187 telephones.... **22.95**

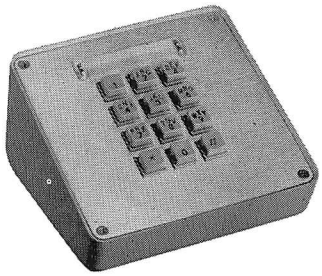
REST-A-PHONES



A telephone rest adjustable for left or right shoulder. Three-point suspension holds phone at correct height and angle. Cradle lined with urethane foam. Will not soil clothing. Fits all standard phones. Weighs 1.2 oz.

S-424891	Black..... each	**$1.50**
S-424893	Dk. Green..... each	**1.50**
S-424892	Gray..... each	**1.50**
S-424890	Beige..... each	**1.50**
S-424894	Ivory..... each	**1.50**

TYPE I TOUCH CALLING UNIT ADAPTERS



Converts standard self-compensating rotary dial phones to provide the same multi-frequency, end-to-end signaling service as the Type 890 Data Retrieval Subset. For use with a telephone-connected computer with audio response capabilities. See Type 890 Telephone, page M-8. For wall or desk mounting.

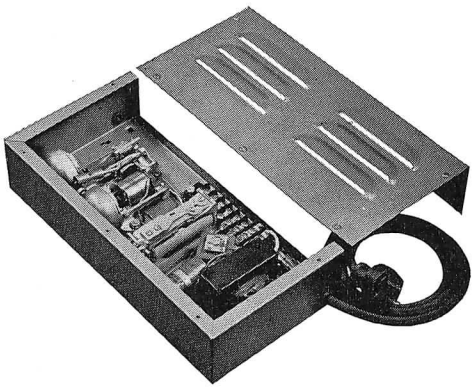
HD-840102-A Black, with 9'4½" cord..... **$38.50**

HD-840102-B Beige, with 9'4½" cord..... **38.50**

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
GTEP 473-821-400—Connections

EXTENSION RELAY RINGING UNITS

FREQUENCY RINGING



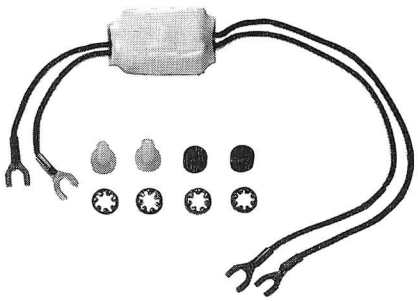
Provides extra ringer on lines that have reached ringer capacity. Principal use is to operate signals, bells, gongs, horns or any device that requires 110 volt, 60 cycle, a.c.

Consists of traffic type telephone ringer, relay and one-to-one isolation transformer. Metal box, 12x6x2½ in., houses the components. Equipped with cord and plug for connecting to 110 volt, 60 Hertz, a.c., receptacle. Power requirements for the devices operated can be up to 35 watts.

NL-17022..... each **$50.85**

Add the Appropriate Letter Suffix to Ordering Number

G—33⅓ Hertz Ringer	**M**—30 Hertz Ringer	**S**—16 Hertz Ringer
H—50 Hertz Ringer	**N**—42 Hertz Ringer	**T**—20 Hertz Ringer
J—66⅔ Hertz Ringer	**P**—54 Hertz Ringer	**U**—60 Hertz Ringer
K—16⅔ Hertz Ringer	**R**—66 Hertz Ringer	**V**—40 Hertz Ringer
L—25 Hertz Ringer		



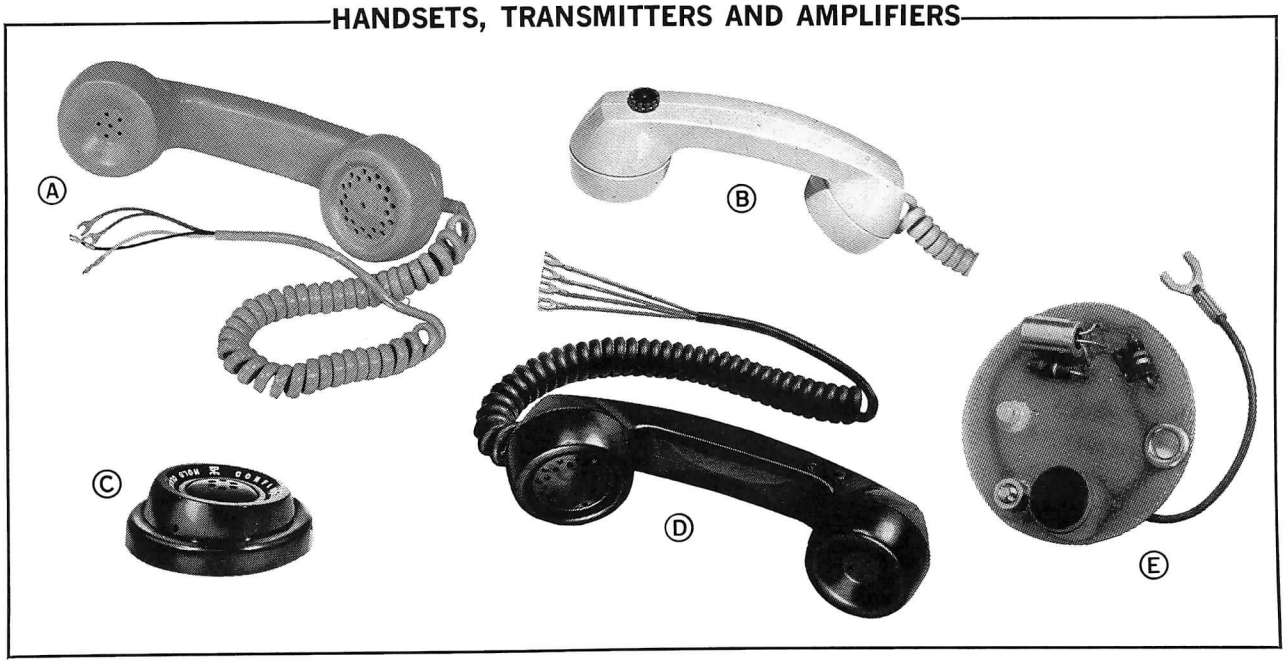
ORBIT LONG-LOOP AMPLIFIERS

FOR USE WITH DIAL-IN-HANDSET TELEPHONES

Tiny amplifier brings long-range loop capability to both rotary dial and Touch Calling dial-in-handset phones. Provides 7db transmitter gain with good sidetone performance. Operates on loop currents of 15-35Ma. Loop range, 1500–2500 ohms.

PA-239A2 Long-Loop Amplifier ..... each **$11.50**

HANDSETS, TRANSMITTERS AND AMPLIFIERS



Ⓐ TYPE 811 HANDSETS

Standard handset, for use with any self-compensating GTE Automatic Electric telephone. With retractile or armored cord.

L-9054-D* Type 811 Handset in choice of 14 colors, with matching 6-ft. retractile cord. Add color suffix, below... **$ 7.95**
L-9054-W* Same as above, but with 12-ft. cord **8.65**
L-9079-CA Type 811 Handset, black, with 24-in. armored cord..... **13.00**
L-9079-CB Same as above, beige..... **On App.**

***Color Suffixes**

A Basic Black **G** Turquoise (Lt. Green) **N** Antique White
B Beige **J** Yellow **T** Avocado
C Med. Gray **K** Blue **W** Parchment Tan
D Dk. Green **L** Pink **Y** Espresso Brown
E Ivory **M** White

Ⓑ TYPE 820 SOUND-BOOSTER HANDSETS

For use with any self-compensating GTE Automatic Electric or WE telephone. A small knob increases sound of caller's voice. Available in 11 colors with matching retractile cords in 2 lengths. Amplifier is powered from d.c. voltage across the transmitter and does not penalize supervisory limit of loops. Provides 28db gain on loops of 0–1300 ohms.

L-9075-D* Type 820 Handset with matching 6-ft. retractile cord. Add color suffixes, below.. **$32.50**
L-9075-W* Same as above, but with 12-ft. cord..... **33.15**

***Color Suffixes**

A Basic Black **D** Dk. Green **J** Yellow **M** White
B Beige **E** Ivory **K** Lt. Blue **T** Avocado
C Med. Gray **G** Turquoise (Lt. Green) **L** Pink

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-803-200—Installation and Field Maintenance

ANTI-NOISE TRANSMITTERS

Reduces extraneous noise and side-tone picked up by standard self-compensating telephone transmitter. Eliminates minor noise problems. Fits within handset.

D-38386-A..... **$3.85**

Ⓒ ROANWELL NOISE-CANCELING TRANSMITTERS

Recommended in areas of extreme noise where the user would normally raise his voice. The noise-canceling transmitter replaces the complete transmitting unit and mouthpiece on GTE AE Type 810 and 811 Handsets. Minimum order of colored units, 2. Ship. wt., 4 oz.

Standard Output—18 db Average

S-428160 For AE Types 40, 43, 47, 50 telephones. Model R-CO. Black.....each **$10.89**

High Output—15 db Average
For Phones Using Types 810 and 811 Handsets

S-428173 Black.....each **$17.41**
428172 Beige.....each **17.41**
428174 Lt. Blue.....each **17.41**
428175 Med. Gray.....each **17.41**
428176 Dk. Green.....each **17.41**
428177 Ivory.....each **17.41**
428178 Pink.....each **17.41**
428180 Turquoise (Lt. Green).....each **17.41**
428181 White.....each **17.41**
428182 Yellow.....each **17.41**

Ⓓ TYPE 841 PUSHBUTTON HANDSETS

Equipped with pushbutton switch that opens transmitter circuit to eliminate side-tone. Factory-wired to permit field conversion from push-to-talk to push-to-listen service. Pushbutton switch can also be wired to control operation of remotely located equipment, such as a dictation machine. Adaptable to all GTE AE self-compensating telephones.

L-9077-* Type 841 Pushbutton Handset. Add color suffix..... **$11.00**

***Color Suffixes**

DA Basic Black **DD** Dk. Green **DJ** Yellow **DM** White
DB Beige **DE** Ivory **DK** Lt. Blue
DC Med. Gray **DG** Turquoise (Lt. Green) **DL** Pink

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-801-200—Installation
GTEP 473-801-210—Description & Maintenance

Prices are subject to change without notice.

PROCTOR RECEIVER AMPLIFIER

For Use with
Type 980 Styleline® Dial-In-Handset Telephones

Receiver amplifier boosts sound level for hard-of-hearing persons using rotary dial Styleline handset. Mounts inside handset, with volume control protruding near the receiver end. Amplifies a caller's voice up to 19dB.

S-420611 P-0446 Receiver Amplifier and mounting hardware.....each **$24.50**

(E) TRANSISTORIZED LONG-LOOP AMPLIFIERS

(Shown on pg. M-26)

For use with any GTE AE telephone with self-compensating network. Provides 7 db effective transmitting gain on long loop. Useful on loops of 1500–2500 ohms. Eliminates booster battery and repeaters. No central office modifications required—permits field conversion. NOTE: Amplifies only transmitter output. Does not affect receiver. Very long loops may require external voice frequency repeater.

S-420620 For mounting in Type 810 handset..... **$11.00**
420621 For base mounting in any telephone. With polarity guard..... **13.00**

HEADSETS

(A) AUDIOSEARS OPERATORS' HEADSET

Lightweight, rugged. Adjustable boom and mike housing. WE 52-SW equivalent. With 5-ft. vinyl cordset.

S-713049 1400PL Operator's Headset..... **$22.25**

(B) PACIFIC PLANTRONICS MINIATURE HEADSETS for PBX and PABX Supervisors and Operators

Rugged and dependable—withstands rough handling during continuous use. Adaptation of space flight design. Unprecedented transmission clarity. Weighs less than 2 ounces. Headset transducer capsule can be clipped to bow of ordinary eyeglass frame. Includes headband, plastic ear pieces (various sizes), lanyard, amplifier, plug equivalent to WE 289B or 396A, retractile cord, instruction book, storage case.

S-713051 Type MS-50/T55-2 Operator's Headset with 10-ft. cord..... **$58.09**
S-713056 Type MS-50/T61-12-1 Supervisor's Headset with locking push/talk switch and 10-ft. cord..... **81.87**
412822 Type MS-50/T62-10-2 Supervisor's Headset with locking push/talk switch on separate leads. Six wires. 15-ft. cord... **87.81**

(C) OPERATORS' HEADSETS

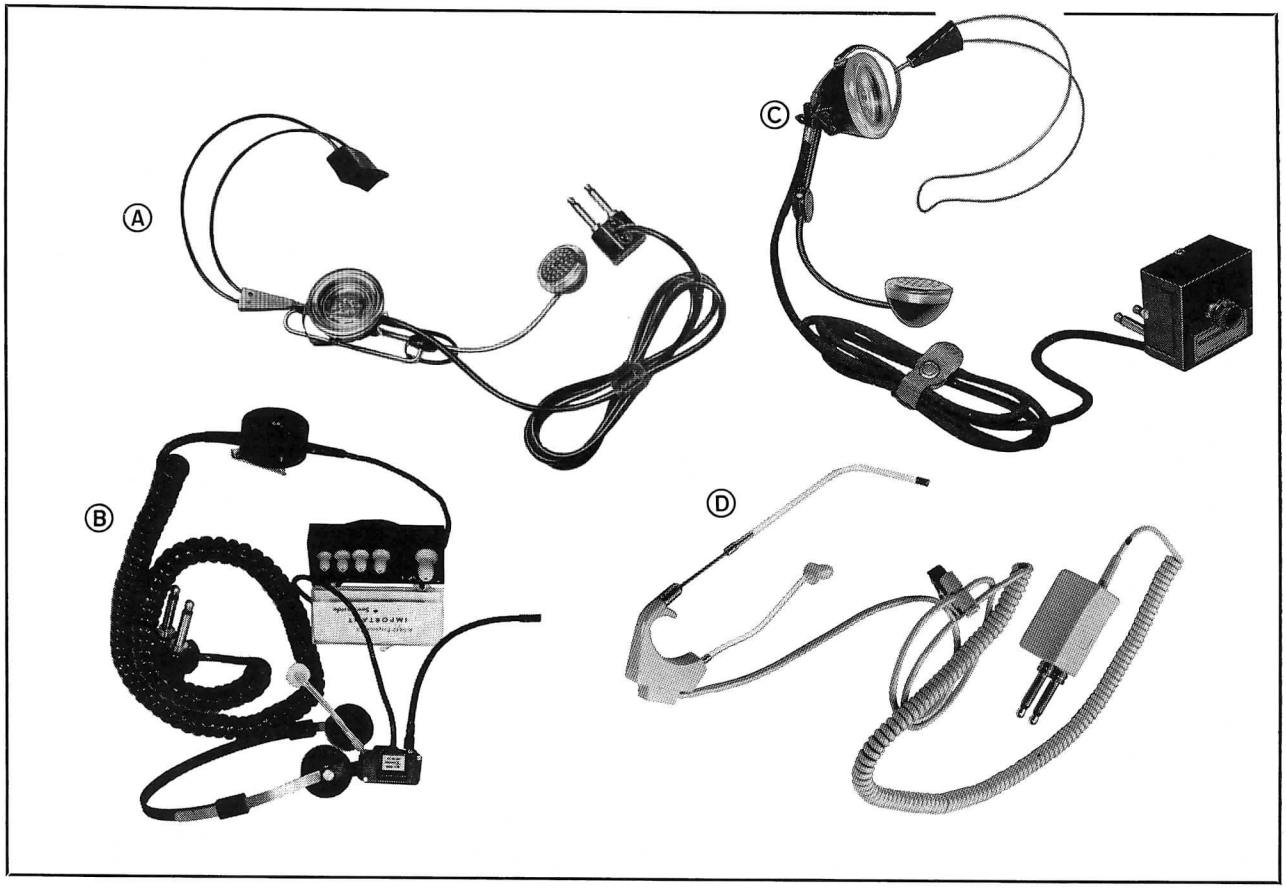
Can be furnished with a transistorized amplifier unit for noisy locations or hard-of-hearing operators (see photo).

S-713050 Headset with spade-tip cord and plug. Equal to WE 52-SW headset..... **$26.15**
713054 Type SS-15135-1 Headset with amplifier unit..... **On App.**
SS-15135-30 Amplifier Unit, for use on WE 52-AW headset..... **66.00**
RN-1C Roanwell Noise-Canceling Transmitter for use with R-52-AW headsets. Red **10.50**

(D) PACIFIC PLANTRONICS STARSET HEADSET

Weighs less than ½ ounce. No headband needed—set rests on ear. Automatically reduces background noise. Sound power limiting eliminates abrupt sounds. Compatible with all standard telephone equipment, switchboards and PABX's. Includes cords, storage cradle, 6 sizes of plastic eartips, lanyard, cable clamp, left- and right-hand bow clips.

S-713058 Type HS0108-1-B, with 10-ft. coiled cord. **$65.01**
S-713059 Type HS0108-4-B, with 5-ft. straight cord **65.01**
S-713060 Type HS0108-5-B, with 7-ft. straight cord **65.01**



OPERATOR'S JACK BOX KIT

Adapts both standard and key phones for use with an operator's headset. (Headset not included in kit.)

425619 Type MO-20140 Kit..... **On App.**
L-7032-AO Headset only..... **27.10**

TECHNICAL LITERATURE AVAILABLE:
GTEP 473-010-200—Installation

PACIFIC PLANTRONICS HEADSET JACK ADAPTER KITS

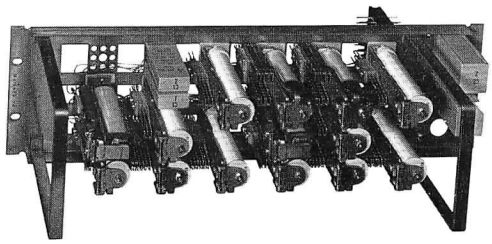
FOR TYPES 80, 186, 187, 860 AND 860B TELEPHONES

Adapts specified dial and Touch Calling phones for headset operation. Turning key selects handset or headset operation. Pressing key flashes hookswitch. Solid-state printed-circuit amplifier assembly boosts headset transmitter output to same level as carbon handset transmitter.

S-425635 Jack Adapter Kit (includes mounting hardware)..... **30.80**

SUBSCRIBER TRANSFER SERVICE

SWITCH CALLS TO ANY DESIGNATED STATION—NO CALLS GO UNANSWERED



Enables customers to switch business calls to home phones, or any other designated station. No calls go unanswered. It's a helpful service for physicians, dentists, etc., as well as businessmen who don't employ a secretary and are often away from their office.

Subscriber Transfer Service connects the customer to a transfer unit located in the central office. To switch calls to his home phone or answering service, the subscriber simply turns a transfer key on either a Type 85-A telephone, with turn key, or on a separate transfer switch key used with a standard phone. All incoming calls are then automatically routed to the home phone or answering service. When the transfer key is operated, ringers sound at both phones. This prevents loss of calls from failure to restore transfer key at the business office.

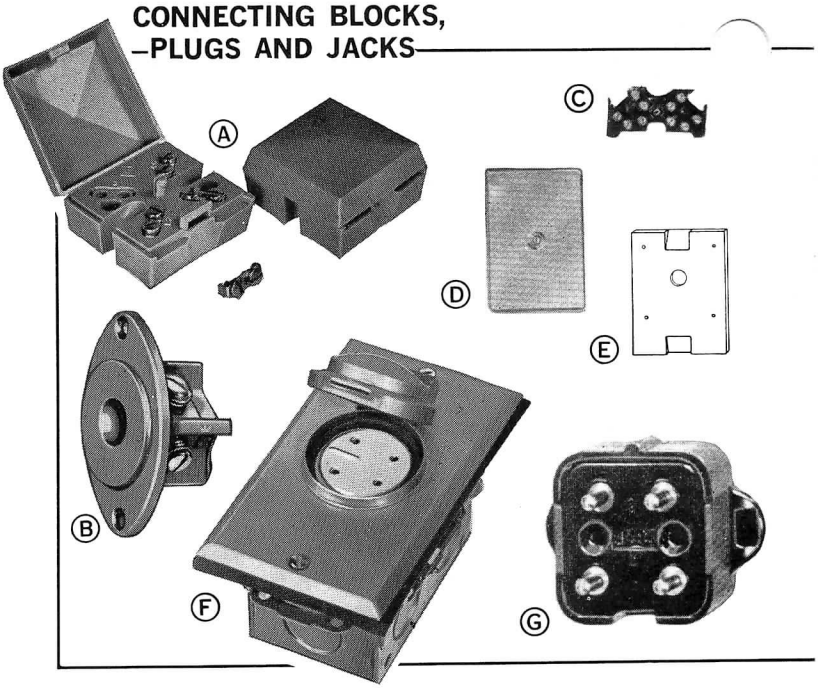
NOTE: Both business and residence telephones must be connected to individual lines. Ringers of each telephone must respond to the same ringing frequency.

The transfer unit is self-contained and compact; mounts on a convenient 19-in. relay rack. Switching equipment consists of six relays for each subscriber. Subscriber Transfer Service is for use in 48-volt automatic exchanges with or without SATT detection service.

DH-75470-72-A For two subscribers. Mounts on WE 19-in. racks. RK-3 mounting .... each **$136.00**

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
217-250-100, Description.
217-250-200, Installation.
217-250-300, Maintenance.

CONNECTING BLOCKS, —PLUGS AND JACKS



Ⓐ TELEPHONE CONNECTING BLOCKS

D-150207-A Type 14 (four points), ivory .....each **.28**
D-150290-A Type 15 (five points), ivory.....each **.33**

Ⓑ FLUSH-MOUNTED CONNECTING BLOCKS

For permanent, pre-wired, non-portable installations. Used with Type 63A junction box, Type 60 mounting ring and Type 16A face plate. Also used with Type 19A face plate and Type 43A bracket. Type 47D can be installed directly in drywall without junction box. Stocked in ivory. Also available in gray and brown.

S-550503 Type 47C. 12-terminal; up to 6 pair. 2¼ x 1½ x 2 in. Std. pkg., 250.....each **1.87**
S-550504 Type 47D. 4-terminal; up to 2 pair. 2¼ x 1½ x ¾ in. Std. pkg., 300 ....each **.70**

Ⓒ TYPE 44A CONNECTING BLOCK

Order covers and mounting backboards separately.

S-550515 10-terminal block. Wt. per 100, 10 lbs. each **.54**

Ⓓ NON-SHORTING PLASTIC COVERS

Ordering No.	Type	Color	Capacity Type 44A Blocks	Wt., Lbs. per 100	Price Each
S-551101	101A	Beige	1	4	**$.27**
S-551103	101C	Beige	2–3	11	**.30**
S-551104	101D	Beige	4	12	**.45**

Ⓔ PLASTIC MOUNTING BACKBOARDS

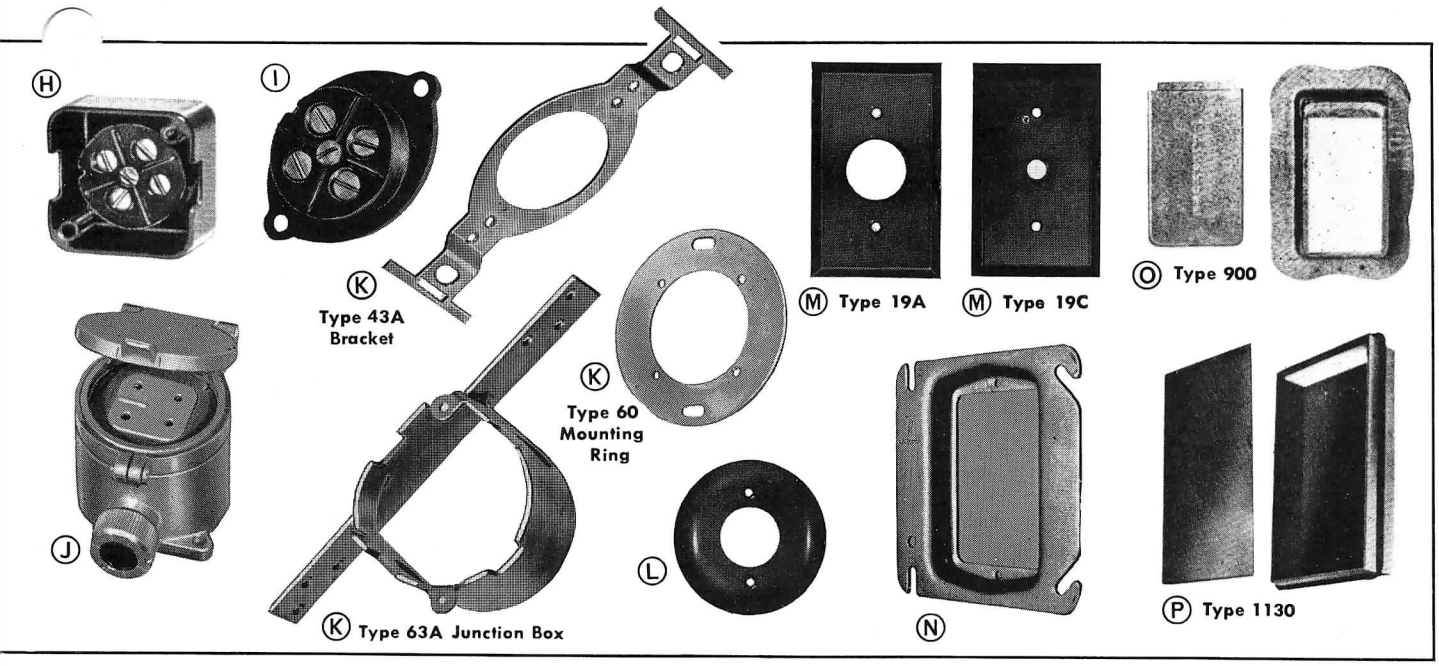
Ordering No.	Type	Color	Capacity Type 44A Blocks	For Plastic Cover	Wt., Lbs. per 100	Price Each
S-550401	168D	Beige	1	S-551101	5	**$.22**
S-550402	168E	Beige	2–3	S-551103	12	**.34**
S-550403	168F	Beige	4	S-551104	18	**.52**

Ⓕ TYPE 16152 OUTDOOR PORTABLE JACK ASSEMBLIES

Face plate is anodized heavy-gauge aluminum. Fiber-impregnated rubber gasket provides a watertight seal on masonry, wood or other uneven surface. A standard 2x2x3-in. electrical box with ½" knockouts on all sides. Heavy spring-loaded cover is equipped with a sponge rubber gasket that acts as a weatherproof seal. Contains Type 493A phone jack mounted on Type 43A bracket. Accepts 283B plug. With adapters for mounting in sheet rock or similar wall material.

S-553616 4½ x 2¾ x 2½ in. Std. pkg., 32.....each **5.84**

Prices are subject to change without notice.



(G) TYPE 283B PORTABLE PHONE PLUGS

For indoor and outdoor use. Fits Types 404B, 548A jacks and 550A jack assemblies. Solid brass prongs molded into plastic base. Non-shorting shatter-proof molded plastic cover. Stocked in ivory. Also available in beige, light olive gray, brown, white, pink, turquoise blue, turquoise green.

S-426446 Ivory plug. Std. pkg., 100.....per 100 **$48.00**

(H) TYPE 404B PORTABLE PHONE JACKS

For surface mounting. May also be flush mounted in any standard electrical box using Type 44 bracket and Type 19B face plate. Molded plastic shell contains 4 meshed helical spring connectors with screw terminals. Stocked in ivory. Also available in beige, light olive gray and brown.

S-553608 Ivory jack. Std. pkg., 100.....per 100 **63.00**

(I) TYPE 548A PORTABLE PHONE JACKS

For flush mounting. Used with Types 43A bracket and 19A face plate in any standard electrical box. Also used in pre-wired installations with the Type 63A junction box, Type 60 mounting ring and Type 16A face plate. Stocked in ivory. Also available in beige, light olive gray and brown.

S-553609 Ivory jack. Std. pkg., 100.....per 100 **80.00**

(J) TYPE 16151 OUTDOOR PORTABLE JACK ASSEMBLIES

Rust-proof aluminum and stainless steel housing. Spring-loaded gasketed cap assures moisture-proof seal. Contains Type 493A jack. Accepts 283B or 505A plug. May be mounted for wire entrance from top, bottom or either side. Wire entrance coupling contains neoprene bushing. Cover may be rotated to any position. 3½ x 2½ x 2¼ in.

S-553618 Std. pkg., 72.....each **5.75**

(K) MOUNTING ACCESSORIES FOR PORTABLE JACKS

All items are heavy-gauge zinc-chromate-finished steel.

Type 43A Bracket. Ends may be removed to fit any cover. For Types 493A and 548 jacks, or 47B, C, D connecting blocks. Requires 19A, B, or C face plate. 4⅛ x 1¾ x ¼ in.

S-550724 Std. pkg., 500.....per 100 **30.00**

Type 63A Stud-Mounted Junction Box. For pre-wired installations of portable jacks and Types 47C and D connecting blocks.

S-550710 5½ x 2¼ x 1⅜ in. Std. pkg., 100.....each **.50**

Type 60 Mounting Ring. For direct drywall installation of portable jacks, or Types 47C and D connecting blocks with Type 16 face plate. Also used to install these units in the Type 63A stud-mounted junction box.

S-556695 O.D., 2⅞ in.; mtg. cent., 2⅜ in. Std. pkg., 1000.....each **$ .19**

(L) TYPE 16 PLASTIC FACE PLATES

Supplied with Type 60 ring. May be mounted directly in drywall or pre-wired installations using Type 63A junction box. With mounting screws. Stocked in ivory. Also available in beige, light olive gray and brown.

S-556171 Type 16A. Use with Type 548A phone jack. Std. pkg., 100.....per 100 **40.00**

S-556167 Type 16D. Blank, to cover unused pre-wired junction boxes. Std. pkg., 100.....per 100 **40.00**

(M) TYPE 19 PLASTIC FACE PLATES

With mounting screws. Stocked in ivory. Also available in beige, light olive gray and brown.

Type 19A. Use with Type 548A jack, Types 47C and D connecting blocks, and Type 43A bracket for mounting in any standard electrical box.

S-556170 Std. pkg., 100.....per 100 **27.00**

Type 19C. Use with old style Type 47B connecting block and Type 43A bracket in existing electrical outlet box, or for installations where small cord hole is desired in an outlet box cover.

S-556169 Std. pkg., 100.....per 100 **27.00**

(N) OUTLET BOX COVER

Used in prewiring to assure that outlet plates will be flush with wall surface.

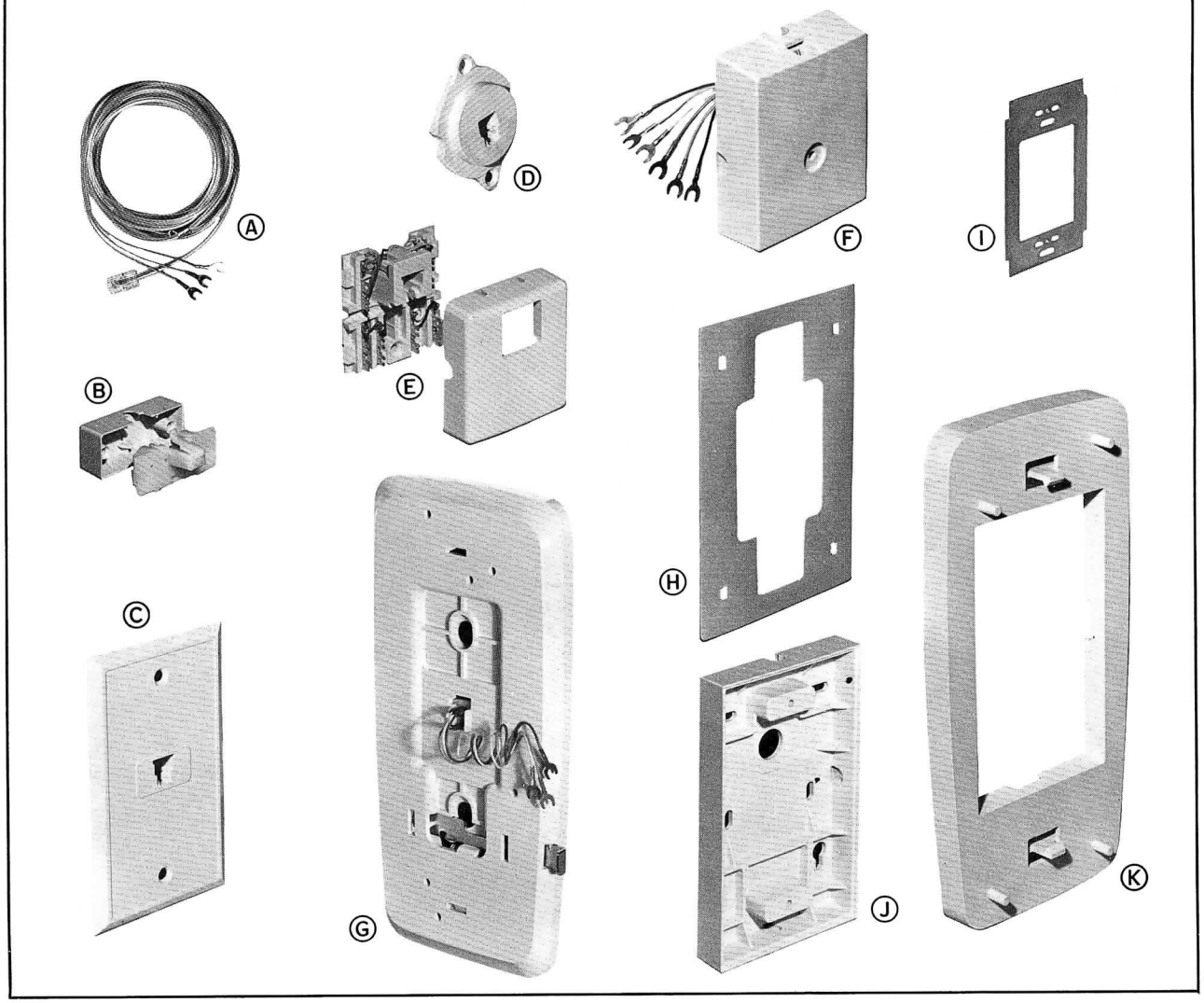
S-551111 For ½" wall thickness. Std. pkg., 100.....per 100 **12.00**

S-551112 For ¾" wall thickness. Std. pkg., 50.....per 100 **14.03**

FLUSH MOUNTING BUILDING SERVICE BOXES

	Ordering No.	Type	Dimensions, Inches	Back Plate	Std. Carton	Wt., Lbs.	Price Each
(O)	**S-550712**	900	7x 3¾x2	Open	50	40	**$ 1.66**
	S-550713	1020-GT	4½x14½x2⅝	Drilled	25	60	**3.88**
(P)	**S-550714**	1130	25x14½x4½	Drilled	2	36	**18.84**

PHONE MART MINI-PLUGS AND JACKS



The Phone Mart concept of telephone service eliminates a multitude of service trips. The customer comes in to a telephone company store, selects the phone he wants, takes it home and plugs it into a pre-wired outlet.

A new line of specialized hardware permits the use of plug-ended phones. All hardware is Bell-system compatible. The key item is a mini-plug (A) on the telephone line cord. If the cord is spade-ended, a retrofit plug (B) with a snap-on cover is used.

Desk Phone Hardware. When a desk phone is to be installed at a new location, the plug can be used with a flush-mounted wall jack (C) with a cover like a standard wall outlet, or with a less-conspicuous mini-outlet (D). The mini-plug can also be used with a terminal block (E) with a built-in jack.

When a desk phone is installed at a location having an existing terminal block, a jack assembly (F) replaces the terminal block cover.

Wall Phone Hardware. A plastic adapter plate (G) attaches to the baseplate of the phone. The adapter plate connects to a wall jack (same as wall jack (C)), which is fastened to a standard recessed wall box (use wall mask (H) and adjusting plate (I), as needed), or to a surface-mounted wall box (J) with spacer ring (K).

TECHNICAL LITERATURE AVAILABLE ON REQUEST: GTEP 491-300-100—Installation Instructions

(A) LINE CORDS WITH MINI-PLUGS

Ordering Number	Conductors	Length, Ft.	For Use With Phone	Price Each
HD-540130-A	3	7	Type 80	**$.81**
HD-540130-B	3	14	Type 80	**1.50**
HD-540130-C	3	7	Type 182	**.81**
HD-540130-D	3	14	Type 182	**1.50**
HD-540130-G	3	25	Type 80	**2.31**
HD-540130-H	3	25	Type 182	**2.31**
HD-540130-J	3	7	Type 981	**1.25**
HD-540130-K	3	14	Type 981	**1.93**
HD-540130-L	3	25	Type 981	**2.76**
HD-540131-C	5	7	Type 182	**1.13**
HD-540131-D	5	14	Type 182	**2.22**
HD-540131-H	5	25	Type 182	**3.70**
HD-540131-J	5	7	Type 981	**1.93**
HD-540131-K	5	14	Type 981	**3.01**
HD-540131-L	5	25	Type 981	**4.51**

Prices are subject to change without notice.

(B) RETROFIT PLUGS

Ord. No.	Description	Price Each
HD-570032-A	With 4 contacts	**$.43**
HD-570032-B	With 6 contacts	**.54**
HD-570032-C	With 3 contacts	**.37**

(C) FLUSH-MOUNTED WALL JACKS

HD-660030-DS	4-wire	**.72**
HD-660030-ES	6-wire	**.86**
HD-370025-A	Locking Pin for mounting wall phone to jack. Std. pkg., 20	**.05**
HD-170011-A	Shim Washer, for use with above locking pin, to compensate for uneven wall	**.006**

(D) WALL JACKS WITH MINI-OUTLETS

HD-660035-A	4-wire. For use with Type 16A Face Plate (see page M-29)	**.54**
HD-660035-B	Same as above, 6-wire	**.66**

(E) TERMINAL BLOCKS WITH BUILT-IN JACKS

HD-660031-D	4 contacts. With quick-connect terminals and snap-on cover	**.68**
HD-660031-E	Same as above, 6 contacts	**.79**

(F) JACK ASSEMBLIES

HD-660014-D	4-wire	**$.38**
HD-660014-E	6-wire	**.48**
HD-731060-A	Wall Block Adapter Bracket, for use with Types 13, 14, 15 or 3M 4110 wall blocks	**.13**

(G) WALL PHONE ADAPTER PLATES

HD-781005-B	For Type 90 Telephone	**1.91**
HD-781013-B	3-conductor, for Types 192 and 982 Phones	**1.77**

(H) WALL MASK

HD-180004-A	Wall Mask	**.14**

(I) ADJUSTING PLATE

HD-731080-A	Adjusting Plate, to correct for non-vertical outlet boxes	**.21**

(J) WALL BOX

HD-480031-A	Wall Box	**.45**

(K) SPACER RINGS

HD-650016-A	For Type 90 Telephone	**.75**
HD-650017-A	For Types 192 and 982 Telephones	**.63**

MODEL AO-3 ELECTRONIC SECRETARY® ANSWER-ONLY AUTOMATIC TELEPHONE ANSWERING SET

Automatically answers calls with a recorded announcement that can be changed as often as desired. Microphone permits recording of announcement on a small tape cartridge. Old announcement erased as new one is recorded. Two-tone beige-gray. 4¾ x 11 x 7½ in. Uses 115V AC.

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
- GTEP 478-120-200—Installation and Field Maintenance
- GTEP 997-400-500—Shop Procedure, Mechanical Tests
- GTEP 997-400-501—Shop Procedure, Electrical Tests
- GTEP 997-400-800—Shop Procedure, Replacement Parts

WW-785-15 Model AO-3. Wt., 20 lbs.
WW-775-15 Model RAO-3. Enables remote changing of recorded announcement. Wt., 22 lbs.

Prices on Request

PARTY LINE ADAPTERS

FOR ELECTRONIC SECRETARY® ANSWERING UNITS AO-3, LP-TDC, SP-2, FP, LP-3

For use on party lines. Adapter responds only to ringing frequency associated with a specific telephone number, causing the answering unit to function only when that number is called. Not available with straight-line or superimposed ringers.

TECHNICAL LITERATURE AVAILABLE:
- GTEP 478-105-100—Description
- GTEP 478-105-200—Installation

H-888859-* Party Line Adapter, 5¼ x 7 x 2⅞ in. ..... each **$62.35**

*Add suffix for ringing frequenty desired:

Suffix	Freq.	Suffix	Freq.	Suffix	Freq.	Suffix	Freq.
10	16	**6**	30	**7**	42	**12**	60
4	16⅔	**1**	33⅓	**2**	50	**9**	66
11	20	**13**	40	**8**	54	**3**	66⅔
5	25						

SW-1A SWITCH UNITS

Enables one telephone answering set to answer calls on 2 trunks. Used where traffic on either line is not heavy enough to justify another answering set. Requires 115V AC, 60-Hz. power outlet.

WW-779-15 ..... each **$82.50**

TECHNICAL LITERATURE AVAILABLE:
- GTEP 478-105-115—Description

REPLACEMENT TAPES

Order by part number, description and length (in seconds or feet). If not specified, standard lengths will be shipped.

WW-5102-44	Announcement Tape Cartridge for LP, LP-TD and LP-TDC. 30-second tape standard; optional tapes, 30 seconds to 3 minutes. each	**$4.40**
WW-7540-44	Announcement Tape for LP-3, 3-minute capacity ..... each	**2.64**
WW-5325-44	Announcement Tape for FP and RFP. Standard tape: 20 seconds announcement message, 30 seconds incoming message. Optional tapes: total time, 3 minutes, split as required between announcement and incoming ..... each	**4.40**
WW-7081-44	Incoming Recording Tape for LP-3, 2-hour capacity ..... each	**3.67**
WW-4286-44	1200-ft. Recording Tape for LP, LP-TD, LP-TDC and FP (see technical literature for capacity) each	**7.70**
WW-5764-44	Recording Tape for RFP, one-hour capacity ..... each	**9.02**
WW-5607-44	2400-ft. reel of tape for MR-2 .... each	**16.30**
WW-5088-44	Tape Cartridge for AO-3. One-minute tape standard; optional, 30 seconds to 5 minutes ..... each	**4.40**
WW-5999-44	Tape Cartridge for Sentry 2 and 2A. 90-second tape standard; optional, 60 seconds to 3 minutes .. each	**4.40**

TYPE 985-B ELECTRONIC SECRETARY® TELEPHONE ANSWERING AND RECORDING SET

Type 985-B Electronic Secretary set is a regular telephone plus an automatic-answering-and-recording machine, all in one compact unit. It can deliver a recorded announcement, take messages and play them back for the subscriber. The unit features a Styleline® telephone handset and simple pushbutton controls.

The 985-B can be used as an answer-and-record or answer-only machine. It uses tape cassettes for flexibility in message handling. Several announcements can be prerecorded and saved for future use. Incoming message cassettes can be saved for future reference, taken home, mailed and played back on any regular cassette player.

Announcements are recorded by using the telephone handset and can vary in length up to 25 seconds. Unit can be set to record callers' messages in varying lengths, from 30 to 60 seconds. Optional long-message voice-control feature allows recording a message up to 30 minutes long. Calling party control eliminates listening to blank and dial tone signals when caller hangs up upon completion of his message. Precise indexing of recorded messages by built-in 3-digit counter, plus fast forward and rewind, permit quick, easy, selective playback.

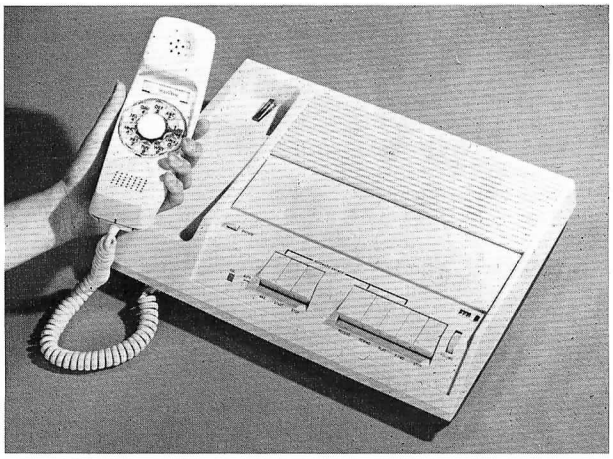
The unit plays back recorded messages through a built-in speaker, leaving the hands free for notetaking. The speaker is also used for checking announcements. Calls are never lost. The 985-B signals an incoming call, even if messages are being dictated, checked or played back.

An optional monitor speaker allows screening of incoming calls. The subscriber can listen to calls as they come in and answer them himself if he wishes.

A Remote Callback Adapter Unit allows a customer to dial his 985-B set from any telephone and hear messages that have been recorded during his absence.

The 985-B plugs into any standard 60Hz, 115V AC power outlet. It will work on single-party lines, with key systems, extensions and 2-party divided ringing. Line cord connects to telephone line in normal manner.

TECHNICAL LITERATURE AVAILABLE ON REQUEST:
GTEP 478-140-900—Installation and Maintenance



WW-950-15* Type 985-B Electronic Secretary Set, avocado; with handset, announcement tape cassette, incoming record tape cassette and power supply.
WW-951-15* Same as above, except ivory.
WW-960-15* Same as WW-950-15, but without handset.
WW-961-15* Same as WW-951-15, but without handset.
WW-970-15 Monitor Speaker, avocado.
WW-971-15 Monitor Speaker, ivory.
WW-8441-44 Additional Announcement Tape Cassette.
WW-8442-44 Additional Incoming Record Tape Cassette.
WW-8472-1 Replacement Power Supply for 985-B.
WW-125-15 Remote Callback Adapter Set. Consists of remote callback unit, 14⅞″ W x 11½″ D x 5⅜″ H, with 12V DC .75 AMP power supply; 30-minute tape cassette; and 2-button tone oscillator, to hold next to remotely located telephone handset transmitter, to signal 985-B.
WW-131-15 Additional Tone Oscillator (required if more than one person will need remote access to the 985-B).
WW-9267-1 Replacement Power Supply for remote callback unit.

***Add suffix -VC** for long-message voice-control feature.

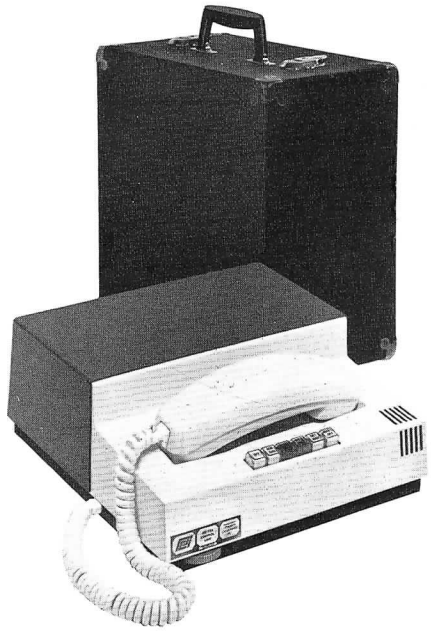
TYPE 987 CAAR

Type 987 CAAR—Centralized Automatic Answering and Recording equipment for the central office—can cut installation and maintenance costs dramatically. See brochure C-1240 for more information.

PC-50A PORTABLE CONFERENCE SET

Permits 2-way audience participation in a call placed over the telephone network. Three microphones (one built-in and two remote) allow use in a classroom or small auditorium. Can also be used for one-way communication, using built-in speaker with volume control. Provides output of both transmitted and received signals to a public address system. Use Styleline® handset with self-contained dial for regular private conversation. (Order handset separately. See page M-5.)

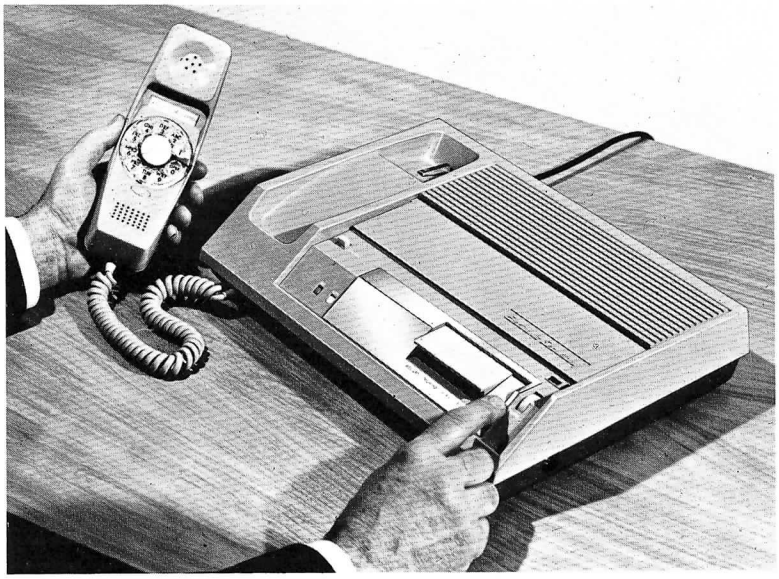
417031 Portable Conference Set, including carrying case..... **On App.**



Prices on request.

TYPE 986-A RECORDING TELEPHONE

- **Compact Telephone and Two-Way Recorder**
  Provides regular telephone service . . . and it can record both sides of any call. Recording can be stopped or started at any point.
- **Dictation Machine**
  Dictation can be recorded using the handset. No extra equipment is required, and telephone service is not interrupted. The unit signals an incoming call, even if recordings are being dictated or played back.
- **Easy to Install**
  Can be plugged into any standard 60Hz, 115V AC power outlet. Line cord connects to telephone line in normal manner. All components plug in. Works with all American-made telephone handsets having a self-contained rotary dial or Touch Calling unit. Equipped with a buzzer for signaling incoming calls. Provision is made for internal mounting of GTE Automatic Electric Type 46 miniature ringer, if desired. (See page M-19 for ordering information.)



OPERATING FEATURES

Modern cassettes drop into place, eliminating time-consuming tape threading. Total recording capacity, 30 minutes.
Recordings are played back through a built-in speaker with volume control, leaving the hands free for notetaking.
Optional monitor speaker permits a large group to hear the other end of a telephone conversation in progress.
Automatic beep tone complies with Federal regulations for recording 2-way conversations.
Precise indexing of recorded messages. Built-in 3-digit counter, plus fast forward and rewind, permit quick, selective playback.
Optional supervisory relay permits recording conversations made on extension phone (total loop must not exceed 500 ohms).

Ord. No.	Description
WW-100-15	Type 986-A Recording Telephone, avocado; with plug-in handset, 2 recording cassettes and power supply.
WW-101-15	Same as above, except ivory.
WW-110-15	Same as WW-100-15, but without handset.
WW-111-15	Same as WW-101-15, but without handset.
WW-970-15	Monitor Speaker, avocado.
WW-971-15	Monitor Speaker, ivory.
WW-9181-63	Modification Kit for adding optional supervisory relay.
WW-8442-44	Additional Recording Tape Cassette.
WW-8472-1	Replacement Power Supply.

Prices on Request

RECORDER CONTROLLERS

Self-contained Recorder Controller connects to customer-owned equipment to record telephone conversations. Provides a beep tone which meets FCC requirements. Electronic solid state circuitry. UL approved. Mounts on side of desk or other flat surface. Beige plastic housing. 4 1/16 in. high; 1 1/2 in. wide; 7 3/8 in. deep, including key.
SE-500 . . . . . each **$99.50**

ELECTRONIC SENTRY® WARNING UNITS

Electronic Sentry unit connects to the telephone line and to a detecting device—thermostat, pressure gauge, fluid level indicator, or any control capable of closing a switch. When it activates the equipment, a pre-determined number is dialed, and a recorded message is repeated several times, after which the warning unit disconnects. The process is repeated at intervals until the reported condition is corrected or the unit is turned off.

Electronic Sentry units come in two versions. One transmits a single warning message; the other distinguishes between two emergency situations, dials the appropriate number and transmits the proper warning message.

Optional battery provides emergency power, should commercial power fail.

WW-122-15	Single-message Warning Unit (Model 3), complete with telephone handset.
WW-129-15	Single-message Warning Unit, less handset.*
WW-128-15	Two-message Warning Unit (Model 3-2), complete with telephone handset.
WW-130-15	Two-message Warning Unit, less handset.*
WW-9325-63	Battery Modification Kit (optional).

*Order when WE or Stromberg Carlson handset is to be used.

Extra Message Tape Cassettes

WW-9372-44	45-second.
WW-9374-44	60-second.
WW-9241-44	90-second.
WW-9379-44	180-second, one number (use when only one number is to be called).
WW-9456-44	Same as above, but for two numbers.
WW-9457-44	Same as above, but for three numbers.

Handset-type Control Panel with Directory Panels

ENTERPHONE™ SYSTEM

Enterphone provides telephone communication between building tenants and the lobby. It also enables tenants to control the entrance with their telephones. They can screen their callers and admit only those they wish.

A tenant can answer Enterphone calls from a main telephone or extension. There is no need for a speaker in the suite, as with an ordinary intercom system. High-grade voice reproduction and dependable operation are assured since standard telephone equipment is used.

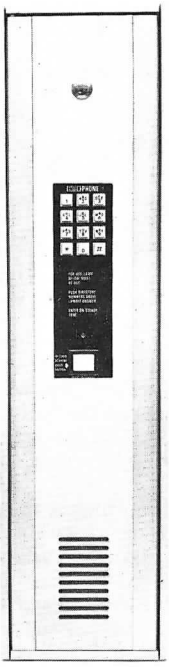
An Enterphone system is provided as part of telephone service. The apartment telephone can have rotary dial or Touch Calling operation, and can control several entrances. Installation is simple and economical as the system makes use of existing telephone wiring. For building management, Enterphone service means a more secure building, no intercom investment, and no maintenance obligations.

Equipment includes a control panel and one or more directory panels for the lobby entrance, a control unit to be located near the building terminal box, and connecting cable. The control panel is equipped with a telephone-type keypad, and either a telephone handset or a speaker/microphone combination, as desired. The directory panel contains tenants' names and either suite numbers or a numerical code.

Applications include apartment buildings, dormitories, warehouses, private clubs, institutions, office buildings and military installations—wherever security is important.

ENTERPHONE FEATURES

- **Keypad Convenience.** To call a tenant, visitor selects the desired party and keys out his number on the keypad. No hunting for individual suite buttons.
- **Simple, Economical Installation.** System supplied as complete packaged unit, ready to install. There is no need for costly building renovations—no special wiring. Existing telephone wires are used. Just one 20-conductor cable connects entrance control panel to common matrix equipment.
- **Modular Construction.** Entrance control panel can be mounted with any number of directory panels as a unit, or installed at a remote location.
- **Minimum Cut-Out Work.** One wall cut-out is required for entrance control panel; directory panels surface-mount.
- **Vandal-Proof Design.** All external components are securely fastened from inside of panel; all panels lock in place. Handset is attached to control panel by an armored cord.
- **No Off-Hook Problems.** Enterphone control unit resets itself for another call if handset is left off-hook, if insufficient digits are dialed, or if a non-existent number is called.
- **Equipment Economy.** Second and third entrances require only an additional control panel each, directory panels and connecting cable. No additional common equipment is required.



Speaker/microphone-type Control Panel

ENTERPHONE EQUIPMENT

Entrance Panels

There are two basic types of entrance panels: the control panel and the directory panel. The control panel comes with either a standard telephone handset with armored cord, or a speaker/microphone unit. The handset model is available from stock; the speaker/microphone model is optional. Both include a keypad, transmission card and inservice lamp. (In the case of the speaker/microphone model, an illuminated reset button serves as both inservice lamp and hookswitch.) All entrance panels are anodized, brushed aluminum.

Control Unit

The control unit consists of:

a) Common relay equipment, printed-wiring tone and timer card and miscellaneous circuit components, mounted in a Type 10A2 key equipment cabinet, protected by a sound-proof fiberglass cover.

b) Line relay bars and relays (one for each tenant). Each bar has 123-conductor, 24-gauge, 35-foot length of cable.

Relay bars mount on hinged iron frame in control cabinet. Relay bars may be ordered equipped with 10 line relays (expansible to 20) or equipped with 20 line relays. Single relays may be ordered. Relays switch tenants' lines from central office to foyer calls or vice versa.

Cable runs from control unit to main distribution box.

DTMF Touch Calling Receiver

DTMF receiver permits use of the Enterphone system when one or more tenants have Touch Calling phones. Receiver converts DTMF tones to marks recognized by the relay switching equipment. Receiver may be mounted externally or in the Enterphone control cabinet.

Power Supply

Order an RT-7, RT-5 or RT-5M Lorain power supply, or equivalent.

ENTERPHONE™ ORDERING INFORMATION

Ordering No.	COMMON CONTROL EQUIPMENT FOR BASIC INSTALLATION	Price Each
S-410802	Equipment Cabinet (26¼ x 17¾ x 9½ in.), with common equipment and maintenance drawings. Wired to accept 100 line relays, which will serve 100 apartments. (Only 80 line relays can be accommodated if Touch Calling receiver is mounted inside cabinet.) Order line relay bars separately	$875.00
S-410801	Equipment Cabinet only. For use when installation exceeds line relay capacity of above cabinet. Accommodates maximum of 8 line relay bars (160 line relays)	135.00
S-410422	10-line Relay Bar, expansible to 20. With strapping block, 35-ft. cable stub (123 cond.)	170.00
S-410423	20-line Relay Bar. With strapping block, 35-ft. cable stub (123 cond.)	320.00
S-414201	Single-line Relay Kit, to expand S-410422 from 10 to 20 lines. One required for each line	9.25
S-416730	Touch Calling Receiver with 15-ft. cable stub (12 cond.). Can mount in equipment cabinet S-410802 or externally, if desired	495.00
S-418007	Lorain RT-7 Power Supply for 20-Hz. ringing	343.28
S-418005	Lorain RT-5 Power Supply for 30-Hz. ringing	237.81
S-418006	Lorain RT-5M Power Supply for multi-frequency ringing (5 frequencies)	626.85
S-426856	Postal Lock Relay Kit (postal authorities to provide lock). Permits mailman to enter building with key to actuate door-locking mechanism. One required per system	11.00
434509	Extra Set of Maintenance Drawings for common control equipment	14.00
S-415949	Test Set for entrance control panel (both pushbutton and keypad types)	75.00
	ENTRANCE EQUIPMENT FOR BASIC INSTALLATION	
S-415946	Handset-type Entrance Control Panel, less handset. Complete with shipping container, frame, panel door, instruction label, cord anchor block and in-service lamp	135.00
L-9073-CAR	Type 811 Black Handset (435386) with armored cord	12.00
415947	Speaker/Microphone-type Entrance Control Panel. Complete with shipping container, frame, panel door, instruction label and in-service lamp	280.00
S-415948	Directory Panel. Complete with frame, panel door, 800 letters, 200 numbers, 55 tenant instruction cards and 55 rubber name carriers	90.00
S-422334	Back-box Assembly, consisting of rough-in box and frame for mounting entrance control panel	32.00
S-414565	Keypad Matrix "A", with 10-ft. cable stub (100 cond.). Complete with plate, four card connectors, a control card, two selection digit cards and maintenance drawings	245.00
S-414566	Keypad Matrix "B", with 10-ft. cable stub (100 cond.)	90.00
S-423115	Matrix Selection Digit Card	65.00
S-423116	Matrix Auxiliary Digit Card	55.00
S-424141	L-shaped Side Extension for entrance control panel. (Order two if directory panels are to be mounted separately from control panel.)	6.50
S-425630	Postal Lock Kit for control panel. Complete with plate, microswitch and mounting details. One required for each control panel that has a postal lock	7.95
434510	Extra Set of Maintenance Drawings for entrance equipment and associated matrix	8.25
	EXTRA EQUIPMENT FOR MORE THAN ONE ENTRANCE	
S-426855	Door Lock Control Relay (one required for each second and third entrance)	15.00
S-425623	Third Door Selection Relay Kit (one required for third entrance)	17.00
	REPLACEMENT EQUIPMENT	
S-416750	Common Control Relay Equipment, less cabinet	705.00
S-430904	Tone and Timer Card	60.00
	Touch Calling Receiver Cards:	
S-410867	Low-band Detector	115.00
S-410868	Relay and Timer	125.00
S-410869	Filter and Limiter	125.00
S-410870	High-band Detector & Power Supply	115.00
S-439291	Entrance Control Panel Keypad Only	7.00
S-439292	Entrance Control Panel Keypad and Buffer Card	60.00
S-437390	In-service Lamp for Handset-type Entrance Control Panel	4.00
437391	In-service Lamp with Reset Button for speaker/microphone-type entrance control panel	8.00
S-434804	Directory Letter & Number Font (800 letters and 200 numbers)	31.00
S-430905	Matrix Control Card	90.00
S-423115	Matrix Selection Digit Card	65.00
S-423116	Matrix Auxiliary Digit Card	55.00

LITERATURE

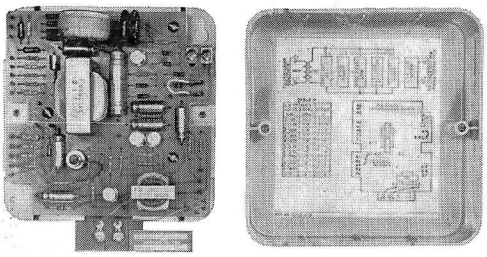
C-1146-B Sales Circular.

CI-481-134, Issue 3
Tenants Instruction Card, "How to Use Your Enterphone System."

GTE Practices 481-217-103
Description and installation.

GTE Practices 481-217-501
Testing and maintenance.

GTE AUTOMATIC ELECTRIC VOICE AND DATA COUPLERS



Data Coupler and Cover

Voice coupler's R-F suppressor reduces radio frequency voltage introduced into the line from a customer's transmitter. Peak limiter prevents extremely high amplitude signals from the customer's equipment from being introduced into the telephone system and prevents high amplitude line signals from reaching customer's equipment. Transformer provides isolation from ground potentials of the customer's side of the coupler.

Data coupler's suppressor limits lightning and power surges to 18V across the customer's interface terminals. Low pass filter attenuates frequencies above the telephone passband, reducing crosstalk and interference with carrier circuits.

L-7049-A Voice Coupler.....each **$14.50**
L-7050-A Data Coupler.....each **45.25**

TECHNICAL LITERATURE AVAILABLE:

GTEP 478-500-100—Voice Coupler, Description and Installation

GTEP 555-001-100—Data Coupler, Description and Installation

RECORDER-CONNECTORS

Provides high impedance bridging connection, transmission path with amplification and AVC, and automatic 15-second beep tone.

S-410960 19645-2 Recorder Connector.....each **150.00**
S-428148 Precision Components 2012B-60 Transformer. Mounts in standard 115V outlet. Provides 16.2V at 132 MA. U.L. approved. Beige....each **3.45**

1001A AND 1001D DATA COUPLERS

For both data and voice communications. Unit provides the data access arrangement (DAA) and Network Control Signaling Unit as described in appropriate tariffs.

Type 1001A—With voltage interface for use with terminal equipment which cannot tolerate the contact bounce and electromagnetic radiation associated with contact closure devices. Meets voltages as specified in Electronics Industries Association Standard RS-232-B. Provides a call-delay timer on incoming calls to permit proper operation of automatic message accounting equipment. Not for use with tone dialing. End-to-end signaling is permitted after call is set up.

Type 1001D—Provides timed delay on all calls to protect automatic message accounting. Requires 20–28V DC power at 100 ma.

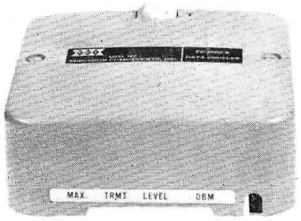
S-411123 PC-1001A Data Coupler.....each **115.00**
S-411165 PC-1001D Data Coupler.....each **115.00**

TYPE 20445 ALARM COUPLERS

Model L1 lets customer monitor progress of an alarm call. Model L2 also lets customer test and control alarm system from a remote Touch Calling phone. Requires 18±3 volts AC or DC. For wall mounting.

S-411128 PC-20445 Model L1 Alarm Coupler.each **$136.00**
S-411131 PC-20445 Model L2 Alarm Coupler.each **208.75**

PRECISION COMPONENTS PC-1000A AND PC-1000B DATA COUPLERS



PC-1000B is for data and voice. PC-1000A is line-powered. PC-1000B requires transformer. Both for wall mounting.

S-411137 PC-1000A Data Coupler.....each **$ 84.00**
S-411119 PC-1000B Data Coupler.....each **117.50**
S-428148 PC-2012B-60 Transformer.....each **3.45**

RECORDER COUPLERS

For use with customer-provided recording equipment, with 1- or 2-party service. Coupler automatically answers incoming calls; couples recorded announcement from customer unit to phone line; reverses direction of transmission at end of announcement to enable recording of incoming message; transmits beep tone to line at start and end of recording period; disconnects from line at end of automatic cycle, or at end of predetermined timing interval, in the absence of speech. Should the customer decide to enter an automatically answered call, he can reset the coupler's automatic cycle by using a remote start switch located on his own equipment. For wall mounting. Connect to a 3-wire grounded 115V AC outlet.

S-411127 PC-19522-L2 Recorder Coupler.....each **$168.25**

PC-20721 STATION COUPLERS

For customer-provided answering sets, message recorders, dictation machines, alarm systems, repertory dialers, intercom systems and extension phones connected to single-party CO or PBX lines. Provides DC isolation and high voltage surge protection. AC or DC powered. For wall or shelf mounting.

Ord. No.	Description	Each
S-411136	Type PC-20721-1 Station Coupler.....	**$134.50**
S-411174	Type PC-20721-2 Station Coupler with voice-control circuit, for use when CO does not provide calling-party disconnect signal.....	**190.00**
S-411175	Type PC-20721-3 Station Coupler. Limits average power delivered to CO from customer equipment to −12dBm.	**190.00**
S-411176	Type PC-20721-4 Station Coupler with ring supply circuit, for use where local ringing power is required for extension phones.....	**178.50**
S-411161	Type PC-20721-5 Station Coupler with pulse corrector and ring supply circuits, for use where extension phones are required, and per cent break correction of dial pulses from customer equipment served by SxS office is required.....	**232.00**
S-411162	Type PC-20721-6 Station Coupler with pulse corrector circuit, for use where customer alarm systems and dialers require per cent break correction when served by SxS offices.....	**201.50**
S-411181	Type PC-20721-7 Station Coupler with pulse corrector and limiter circuits, to limit average power delivered from customer equipment to SxS office to −12dBm.....	**242.60**

Prices are subject to change without notice.