

The AutoMatic TelePhone*

1. GENERAL

1.01 *Part A* contains identification, installation, connection, and operation information for the Model 1000T-01, -03, and -05 AutoMatic TelePhone from the American Telecommunications Corporation. *Part B* contains identification, installation connection, and operation information for the Model 1000TR-01, -03, and -05 Remote AutoMatic TelePhone from the American Telecommunications Corporation.

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

1.03 The instructions in this section assume that the instrument contains components installed at time of manufacture.

Part A—The AutoMatic TelePhone

2. IDENTIFICATION

2.01 The Model 1000T AutoMatic TelePhone answers incoming telephone calls, transmits a prerecorded announcement, and records messages received from calling parties. Integrated units (refer to Table A) may also be used as standard telephones. Adjunct units do not have the standard telephone feature.

2.02 The AutoMatic TelePhone is available in black with simulated wood grain trim, and a brushed aluminum faceplate.

2.03 For ordering purposes, refer to the part numbers listed in Table A.

2.04 The operating controls and features shown in Fig. 1 and 2 are described in Table B.

A. Features and Specifications

2.05 The main features of the AutoMatic TelePhone are the following.

- Automatic recording of messages of any number or length for up to 20 minutes of cumulative total time.
 - Automatic transmission of 18-second outgoing announcement.
 - Capability of checking and changing the announcement message.
 - Monitoring of incoming calls when desired.
 - Front-panel indicator displays total minutes of recorded messages.
 - Manual rewind allows complete or partial rewind making playback from midtape possible if desired.
 - External, self-contained, wall plug power supply provides low voltage input.
 - Separate tape heads and drive motors for message and announcement functions.
 - Reel-to-reel message tape mechanism with stationary tape heads.
 - Telephone-style pushbutton controls.
 - Modular plugs and jacks for handset and line cord connections.
 - External adjustment of ring delay.
 - Equipped with polarity guard across dial.
- 2.06** The electrical, physical, and performance specifications are listed in Table C.
- 2.07** A complete Western Electric/ATC parts cross-reference is listed in Table D.

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NOTICE

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TABLE A

ORDERING INFORMATION FOR AVAILABLE MODELS

Model Type	Faceplate
	BRUSHED ALUMINUM
Adjunct, Non-Remote: Model No.:	1000T-015
Adjunct, Remote: Model No.:	1000TR-015
Rotary, Non-Remote: Model No.:	1000T-035
Rotary, Remote: Model No.:	1000TR-035
Pushbutton, Non-Remote: Model No.:	1000T-055
Pushbutton, Remote: Model No.:	1000TR-055

TABLE B
OPERATING CONTROLS

(See Figs. 1 and 2)

ITEM NO. (FIG. 1)	DESCRIPTION
1	(DIAL MOUNTING PANEL) Depending on model type, this panel may house a PUSHBUTTON dial, a rotary dial, or be plain without provision for a dial.
2	(PHONE-NO. PANEL) Area contains window for displaying station phone number.
3	(ON LIGHT) Comes on when the ON button is depressed. If the ON light blinks on and off, this indicates that the unit has received and recorded an incoming message. The blinking stops when the condition is changed by depressing any other button.
4	(IN-USE LIGHT) This light comes on when either internal drive motor is activated by depressing either REWIND, PLAY, RECORD, or CHECK, or during the automatic answer cycle when the set is answering a call. It goes out at the end of any of the above cycles.
5	(REWIND BUTTON) When depressed, and held down, causes tape on the take-up spool to be rewound onto the supply spool. The MINUTES indicator will return to "0" minutes when tape is fully rewound. When both REWIND and PLAY buttons are simultaneously held down, tape is erased while rewinding.

TABLE B (CONTD)
OPERATING CONTROLS

ITEM NO. (FIG. 1)	DESCRIPTION
6	(PLAY BUTTON) When depressed, actuates the forward tape drive motor and allows play-back of recorded messages to be heard in the handset receiver. When both <u>PLAY</u> and <u>REWIND</u> buttons are simultaneously held down, tape is erased while rewinding.
7	(ON BUTTON) When depressed, places the unit in the automatic answering mode, allowing automatic answering of any incoming calls.
8	(OFF BUTTON) When depressed, removes incoming 12-volt power from the circuit, and restores telephone handset to normal telephone use on Models 1000T-035, 1000TR-035, 1000T-055, and 1000TR-055 (integrated units).
9	(RECORD BUTTON) When depressed, and held down, allows recording (by speaking into handset) of desired 18 second outgoing announcement (see NOTE 1, page 12). Continue to hold down record button until <u>IN USE</u> light goes off to assure erasure of old announcement. To erase announcement, without recording a new announcement or background noise: hold hand over mouthpiece, and depress <u>RECORD</u> button until <u>IN USE</u> light goes off.
10	(CHECK BUTTON) When depressed, allows user to check the outgoing announcement by hearing it played back through the handset receiver.
11	(MINUTES INDICATOR) Indicates the total number of minutes of messages recorded.
12	(RINGS ADJUSTMENT) This screwdriver adjustment is used to adjust the time from the beginning of the ring cycle until The AutoMatic TelePhone answers the call.

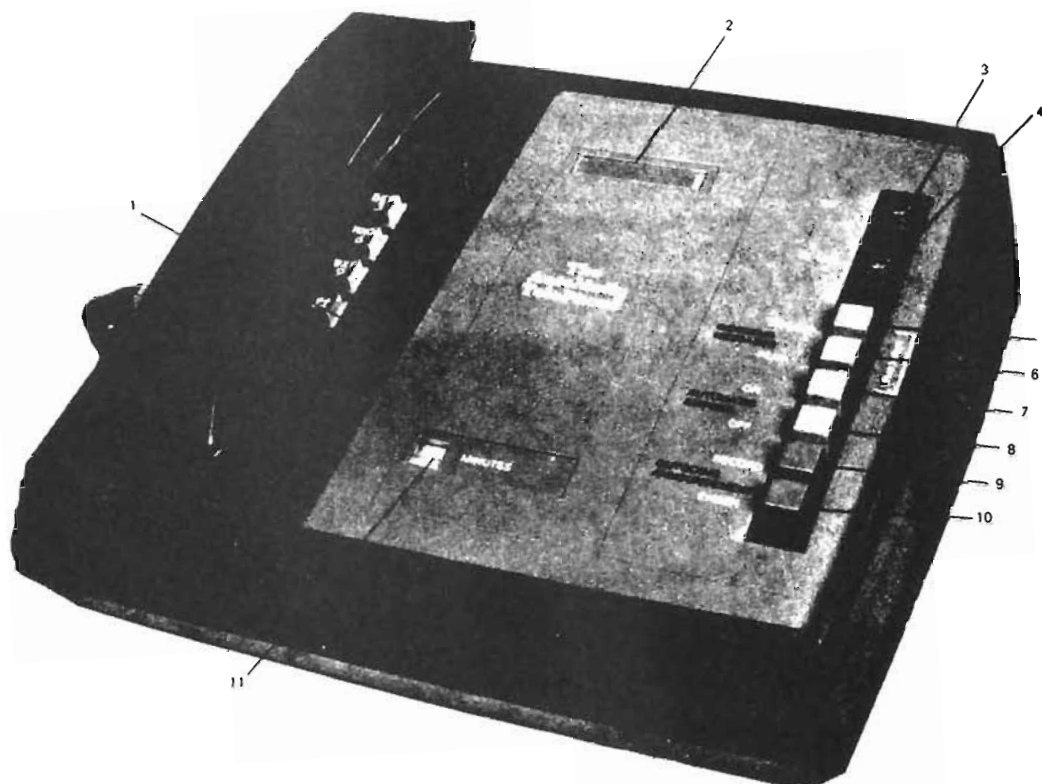


Fig. 1—Operating Controls

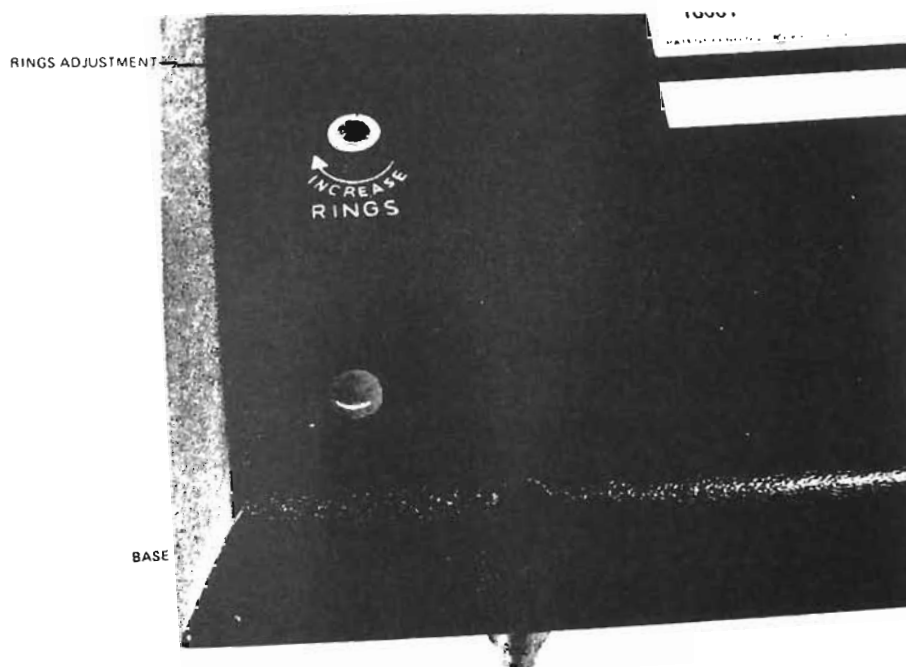


Fig. 2—Rings Adjustment

TABLE C
MODEL 1000T SPECIFICATIONS

GENERAL

Standard Equipment:	Basic Automatic Telephone D.C. Power Supply User's Instruction Manual	Modular Handset with Cord Modular Telephone Line Cord
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Dimensions: 10-1/4 L x 10-3/4 W x 4-3/8 H

Weight: Adjunct Version	6 lbs.
Integrated Version	7 lbs.

ELECTRICAL:

Power: 105-130 v.a.c./60 Hz, 11 watts (non-remote) or 16.5 watts (remote).

Frequency Response: 300-2800 Hz (6 dB Band Pass)
(Record and Playback Amplifiers)

Signal-to-Noise Ratio: 35 dB (or more)

Harmonic Distortion: Playback Amplifier: Less than 5% at -6 dBm output on telephone line.

Record Amplifier: Less than 5% at -10 dBm input from telephone line.

Announcement Level: -6 dBm \pm 4 dB at 600 ohms on ring and tip leads using a test tone at 800 Hz.

Message Recording Level: -45 dBm to 0 dBm (0.0043 to 0.8 volts) at 600 ohms on ring and tip leads.

Automatic Gain Control: Compression of 40 dB input variation into 5 dB, or less, output variation.

Attack Time, less than 25 ms

Release Time, 2-2.5 sec.

Voice Control Sensitivity: Detects speech signals ranging from -45 to 0 dB across ring and tip.

Disconnect occurs if signals are absent or fall below -50 dB for 10 to 15 sec.

**Transfer and Disconnect "Beep"
Tones**

Frequency 1400 Hz \pm 10%

Level -14 to -8 dBm on ring and tip leads

Duration 0.75 \pm 0.25 Seconds

TABLE C (CONTD)
MODEL 1000T SPECIFICATIONS

Calling Party Control (CPC):

Delay Time	Calling Party Control (CPC) circuit not enabled for first 1.5 seconds.
Line Current	Minimum of 20 ma dc required through telephone line during automatic answer cycle.
Disconnect Time	CPC circuit responds to telephone line interruption of: Standard Unit - Reject < 300 msec Accept > 600 msec Strapping Option 1 – Reject < 50 msec Accept > 140 msec 2 – Reject < 5 msec Accept > 8 msec

Ring-Up Requirements:

Minimum Voltage	35 volts rms at 20 Hz.
Dial Tap Interference	No response to transients generated by dialing 10 random numbers on the same line.
Response Time	3 seconds max. at 60 volts, 20 Hz, when adjusted to minimum delay.

**Telephone Line Circuit
DC Current Carrying Capacity:**

125 ma

Key Phone Operation:

Normally-open contact set, designated A and A1, is provided on all units.

Contact Arcing:

All inductive loads are shunted by diodes or RC-networks.

NOTE: All of the above specifications are valid at 70°F ambient with 105-130 v.a.c. line voltage.

MECHANICAL

Tape Drive:	Two 12 volt dc motor drives using two capstans.
Message Tape:	AGFA #PE88 (0.15 in. wide)
Announce Tape:	AGFA #PE88 (0.15 in. wide)
Tape Speed:	Approx. 1.2 in./sec.
Announcement Recording Capacity:	18 seconds.
Message Recording Capacity:	20 minutes
Wow and Flutter:	Less than 1% NAB, weighted from 1-150 Hz
Ambient Temperatures:	Operating 40° to 120°F Storage -40° to 150°F
Metal Finish:	Coated or treated to provide a stable anti-corrosion finish.

3. INSTALLATION AND CONNECTIONS

3.01 Installation of the AutoMatic TelePhone consists of selecting operating modes, connecting the set to the telephone wall plug (Fig. 3), and applying power to the set.

3.02 Voice Control Mode: In the Voice Control Mode, the AutoMatic TelePhone hangs up 12 seconds after the calling party either stops talking, or the conversion drops below a usable level.

3.03 Calling Party Control Mode: In the Calling Party Control Mode, The AutoMatic TelePhone hangs up when the calling party releases the line. Calling Party Control is normally operational.

3.04 Calling Party Control (CPC) Disconnect Time: CPC disconnect time measures open intervals on the line. The AutoMatic TelePhone is preset at the factory to ignore opens less than 300 millisecond and disconnect from the line on opens greater than 600 millisecond.

A. Connecting the AutoMatic TelePhone

Note: The AutoMatic TelePhone is not intended for PARTY LINE hookup.

3.05 The AutoMatic TelePhone comes with a modular telephone line cord that will plug into a modular jack or into a 225A adapter which will connect into a standard four prong wall mounted jack (Fig. 3).

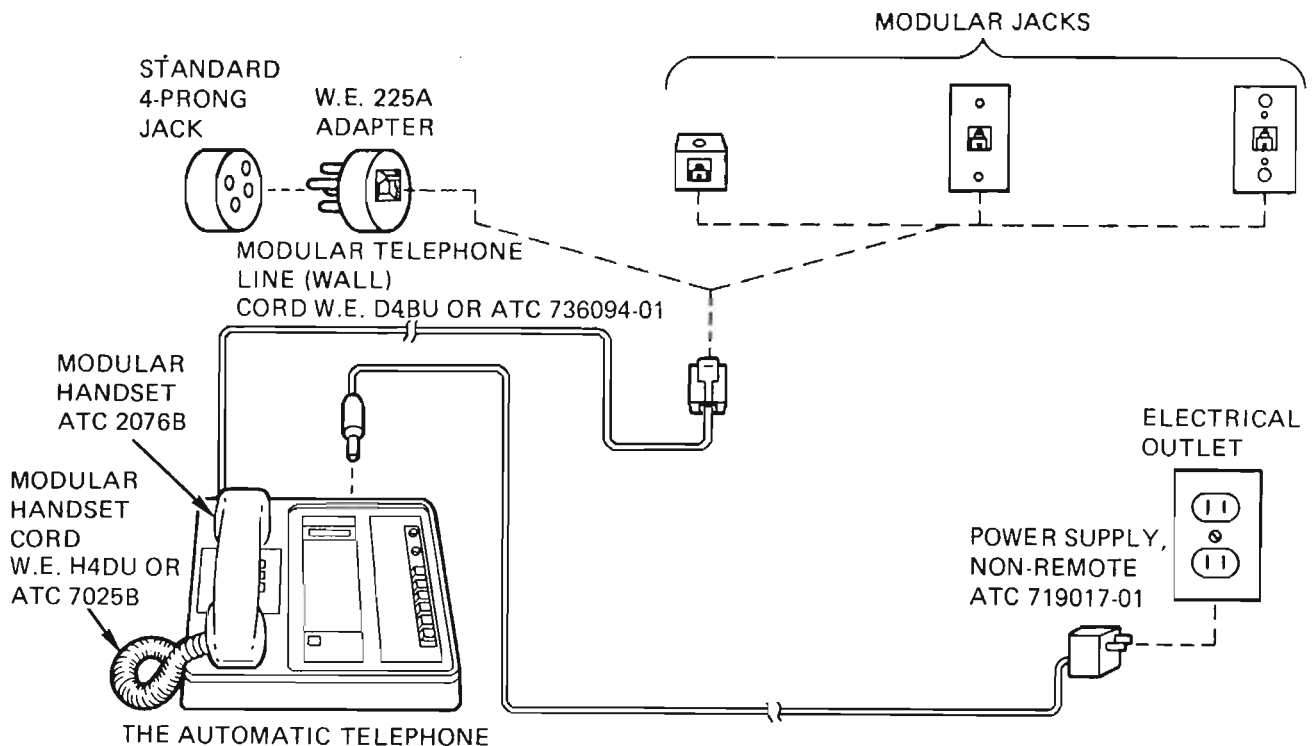


Fig. 3—Model 1000T Connection Diagram

3.06 Referring to Fig. 3, locate The AutoMatic TelePhone near a Telephone Company installed jack (either a standard 4-prong jack or a minimodular jack) and near a standard 115 volt ac outlet which is not controlled by an ON-OFF switch. Connect The AutoMatic TelePhone as follows.

- (1) If the telephone wall jack is modular, insert the modular mounting plug directly into the jack. If the jack is a standard four prong type, use a 225A adapter.
- (2) Plug the opposite end of the modular line cord into the mating jack at the back of the set.
- (3) Connect the modular handset cord to the handset and the jack on the front left-hand side of The AutoMatic TelePhone.
- (4) Insert the plug of the power supply cord into the mating jack on the back of the set. Now insert the prongs of the power supply transformer (ATC #719017-01) into the 105-130 volt ac, 60 Hz power receptacle previously selected.

An adjunct unit colocated with a telephone set may be plugged into a 267A (single line bridged) adapter

which in turn is plugged into a modular connecting block. If the adjunct is to be located separately from a telephone set it may be plugged directly into a modular connecting block.

3.07 The AutoMatic TelePhone is now ready to operate. Perform the installation checkout procedure described in paragraph 4.01 before leaving the set with the subscriber.

B. Key System Installation

3.08 Contact closure is provided in all units for shorting A (black) and A1 (yellow) connections in Key System installations (Fig. 4, 5, and 6). These contacts close when The AutoMatic TelePhone answers a call and remain closed throughout the answer cycle. This option is enabled by making a single wire connection as defined in Note 3 of Fig. 4 and Note 5 of Fig. 5 and 6. To make these connections, first remove the cover and dial from The AutoMatic TelePhone. Note that the A1 lead (Y) is insulated and stored. It should be connected to the slate (s) or yellow (y) and violet (v) leads, which are already connected with a white connector, as described in the previously mentioned notes.

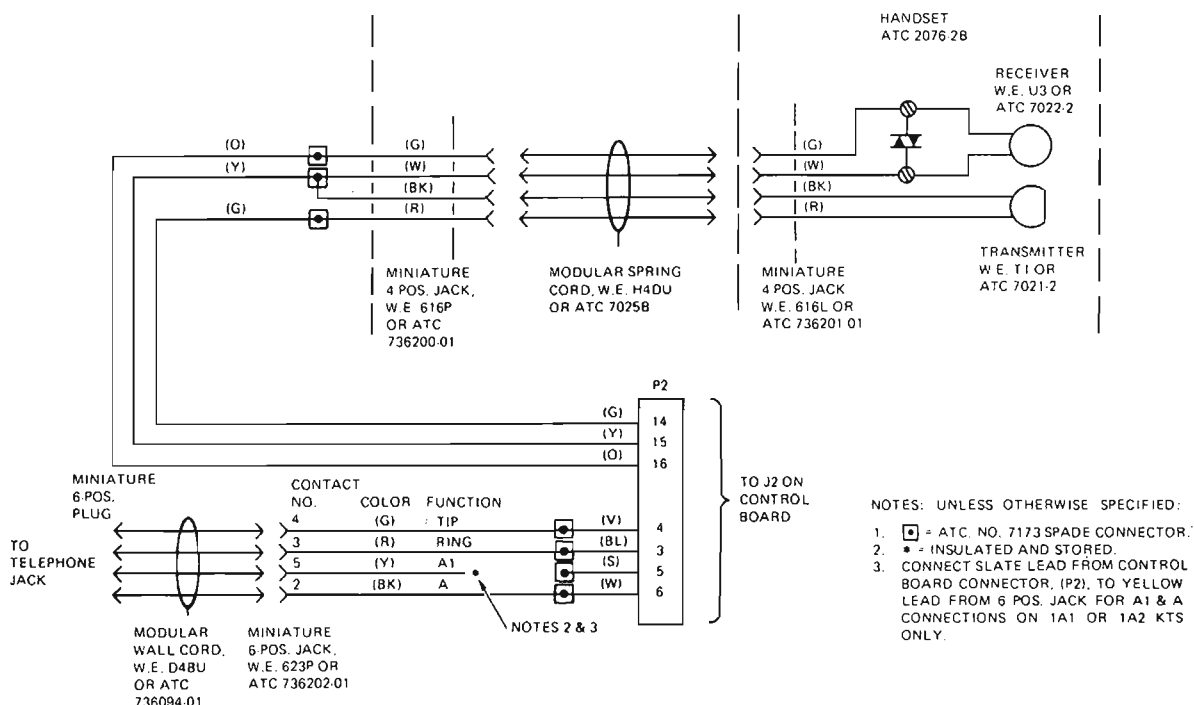


Fig. 4—Model 1000T Connection for Adjunct Unit

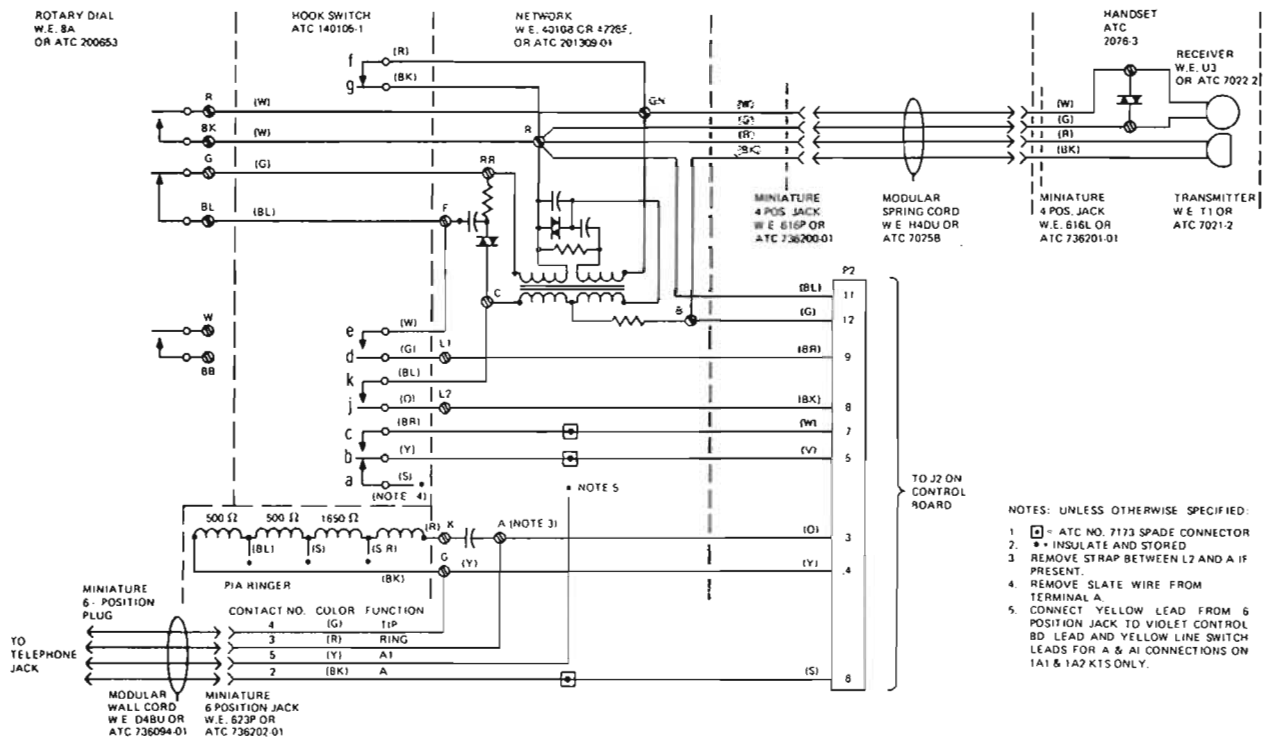


Fig. 5—Model 1000T Connections for Rotary Dial

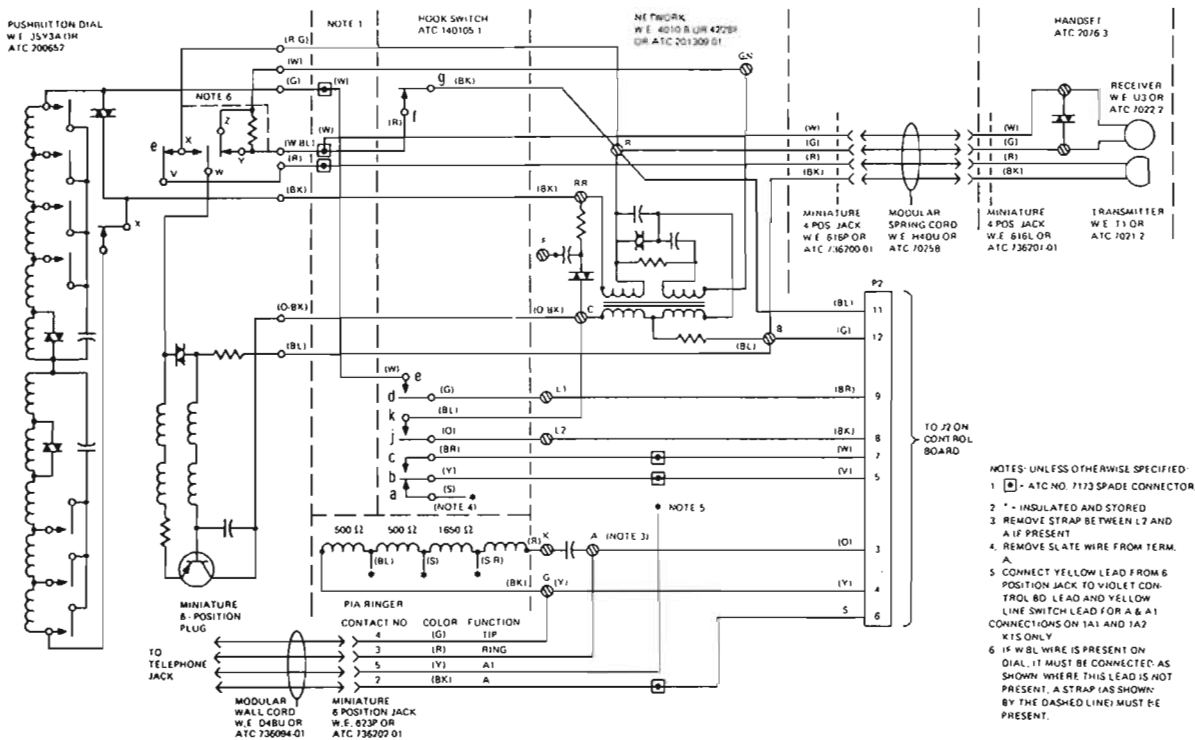


Fig. 6—Model 1000T Connections for Pushbutton Dial

4. OPERATION

A. Installation Checkout Procedure

Note: For instruction and proper understanding of The AutoMatic TelePhone functions, take the subscriber through the following procedure, step by step. Where not otherwise suggested, have the subscriber perform each operation (use the handset, press the buttons, etc.). Read and/or explain the procedure to the subscriber one step at a time and make sure that he or she knows what to do, what to expect, and what to look for.

4.01 Proper hookup and operation should be checked by the following procedure.

- (a) Depress the **ON** button and verify that the **ON** light comes on. Explain to the subscriber that this indicates that the set is ready to receive incoming calls. If the light does not come on, check for proper connection at the wall power receptacle and the power input to the set.

- (b) Check the ANNOUNCEMENT RECORD feature as follows.

- (1) Pick up the handset and place it in the normal speaking position.
- (2) Depress and hold down the **RECORD** button, speak into the handset, and record the following announcement:

“ Hello...Thank you for calling the...We can't take your call personally right now, but we are providing you with The AutoMatic TelePhone so you won't have to keep calling back. You may leave a message when you hear the tone signal. We will return your call soon. Thank you for calling, and here is your tone.”

- (3) At the end of the announcement and when the **IN USE** light goes off, release the **RECORD** button. The length of the announcement should be close to but never more than 18 seconds.

- (4) Check the announcement by depressing the **CHECK** button and listening in the handset.

- (c) Check the AUTOMATIC ANSWER feature as follows.

- (1) If the **MINUTES** indicator is not at “0,” depress and hold down the **REWIND** button until the indicator reaches 0 minutes and the **IN USE** light goes out.
- (2) Place the set in the AUTOMATIC ANSWER mode by depressing the **ON** button.
- (3) Arrange for incoming call to the subscriber's phone and instruct the caller to do the following.

- (a) Listen to the outgoing announcement of the subscriber set.
- (b) Leave a message about 15 to 30 seconds long.
- (c) Hang up at the end of the message.

- (4) Check the MONITORING feature of the set by listening to the incoming call, picking up the handset after the **IN USE** light comes on, indicating that the set has answered the call. The **IN USE** light should come on after the number of rings selected by the RINGS adjustment (see paragraph 4.03, Note 5). Listen to the incoming call and verify the following.

- (a) The set answers (**IN USE** light comes on).
- (b) The outgoing announcement is playing out (as heard in the handset).
- (c) The BEEP tone is sounded.
- (d) Following the tone signal at the end of the announcement, the **ON** light begins blinking.
- (e) This indicates the calling party is leaving or left a message. The incoming message can be monitored in the handset.
- (f) If in the Voice Control mode, the **IN USE** light goes out about 12 seconds after the calling party hangs up. If in the Calling Party Control (CPC) mode (and the Central Office offers CPC), the **IN USE**

light goes out as soon as the calling party hangs up. The **IN USE** light going out indicates that the message taking tape has stopped and the set has gone "on-hook."

(d) Check the **PLAYBACK** features as follows.

(1) Depress the **REWIND** button until the **MINUTES** indicator has returned to "0" minutes and the **IN USE** light goes out.

(2) Place the handset in the listening position and depress the **PLAY** button. Listen to the message previously recorded.

(e) Check the **INCOMING MESSAGE ERASE** feature as follows.

(1) Simultaneously depress and hold down the **PLAY** and **REWIND** buttons until the **MINUTES** indicator returns to "0" and the **IN USE** light goes out. Release the button.

(2) Verify erasure of message by depressing the **PLAY** button while listening from the handset. No message material should be heard.

(f) Check the **OUTGOING ANNOUNCEMENT ERASE** features as follows.

(1) Depress and hold down the **RECORD** button until the **IN USE** light goes out (in about 18 seconds). Release the **RECORD** button.

(2) While listening from the handset depress the **CHECK** button. Verify that none of the previously recorded announcement is heard.

4.02 This completes the installation check. Before releasing the AutoMatic TelePhone to the subscriber, erase all recorded material from the set.

4.03 At this point, acquaint the subscriber with the User's Manual. Offer to assist the subscriber in recording the outgoing announcement before leaving.

B. Operational Notes

Note 1: (ANNOUNCEMENT TIME) The recorded outgoing announcement must be no longer than 18 seconds, and not appreciably less. The continuous-loop announcement tape takes 18 seconds to cycle. If the announcement is longer than 18 seconds, the end of it will not be recorded. If it is appreciably shorter than 18 seconds, the time interval from the end of the announcement to the talk-tone signal will be too long. The caller could begin to talk too soon, causing that portion of the message to go unrecorded.

Note 2: (REWIND LIMIT SWITCH) A rewind limit switch operates in conjunction with MESSAGE tape drive mechanism. It automatically removes power from this tape drive motor and turns off the **IN USE** light when this tape is completely rewound, although the **REWIND** button may still be depressed.

Note 3: (FORWARD LIMIT SWITCH) The forward limit switch operates in conjunction with the MESSAGES tape drive mechanism. It turns off the **IN USE** light when the end of the spool is reached from either (1) recording the full 20 minutes of message or (2) playing back the entire spool. At the forward limit of the spool, the set will no longer answer an incoming call.

Note 4: (DISCONNECT TONE) If the calling party fails to talk for 12 seconds, or The AutoMatic TelePhone records the full 20 minutes of messages, the caller will receive a disconnect signal. This indicates that the answering set has disconnected from the telephone line.

Note 5: (**RINGS** ADJUSTMENT) The time from the beginning of the ring cycle of an incoming call, until The AutoMatic TelePhone answers the call and the **IN USE** light comes on, can be adjusted as desired. This adjustment is made by turning the **RINGS** adjustment (flat-bit screwdriver adjustment) located on the bottom of the set. Turn it clockwise to increase ring time delay or counterclockwise to shorten ring time delay.

Note 6: (RING LOUDNESS CONTROL—Integrated Units Only) The ringer loudness

control is accessible through the base enclosure of The AutoMatic TelePhone.

TABLE D
WESTERN ELECTRIC/ATC
PART NO. CROSS REFERENCE

ITEM	ATC P/N	W.E. P/N
Modular Line (Wall) Cord	736094-01	D4BU-29
Modular Handset (Spring) Cord	7025B (BLK)	H4DU-03
Telephone Dial (rotary)	200653	8AA
Telephone Dial (push button)	200652	35Y3A
Receiver	7022-2	U3
Transmitter	7021-1	T1

Part B—The Remote AutoMatic TelePhone

5. IDENTIFICATION

5.01 The Remote AutoMatic TelePhone incorporates all of the standard features of The AutoMatic TelePhone. In addition, The Remote AutoMatic TelePhone allows a distant caller to receive recorded messages over a telephone line. The caller activates The Remote AutoMatic TelePhone with two specially coded commands ("message" and "erase") from a hand-held transmitter, the Model 1000 PC Pocket Coder (Fig. 7). After receiving the recorded messages over the telephone line, the caller may either erase the messages or leave them intact and record new messages.

5.02 The codes are factory-programmed in the Pocket Coder and The Remote AutoMatic TelePhone unit. One of 6 codes is selected for each Pocket Coder/Remote AutoMatic TelePhone for security purposes.

5.03 On a message command from the Pocket Coder, the unit automatically rewinds and plays back all of the messages on the tape. The unit then switches to the standard MESSAGE RECORD mode.

5.04 On an erase command from the Pocket Coder, the unit automatically goes on-hook and rewinds while erasing the tape. The erase cycle is completed when the unit reaches the beginning of the tape. The unit then returns to the AUTOMATIC ANSWER mode.

5.05 The Remote AutoMatic TelePhone is available in the Models described in the Part 1. The model numbers are the same as for The AutoMatic TelePhone, but with the addition of an "R" suffix. For example, the model number for a black adjunct Remote AutoMatic TelePhone unit is 1000TR-01. See Table E for ordering information for pocket coders.

5.06 Except for the power supply unit ratings, The Remote AutoMatic TelePhone specifications are identical to The AutoMatic TelePhone specifications. The power supply unit (ATC P/N 719030-1) provides The Remote AutoMatic TelePhone unit with 16-volt ac, 60-Hz power. Note that the power supplies for the remote and nonremote units are **NOT** interchangeable.

6. INSTALLATION, CONNECTION, AND OPERATION

6.01 To check the operation of the Pocket Coder, press the MESSAGE and ERASE buttons (see Fig. 7) and verify that both cause a command tone to be audible at the speaker. The Pocket Coder is powered by a 15-volt battery (Eveready No. 504 or equivalent). Normal battery life is one year and replacement is the customers responsibility.

6.02 To install and check the operation of The Remote AutoMatic TelePhone unit, proceed as follows.

- Connect the telephone mounting cord to the telephone line.
- Plug the power supply unit jack into The Remote AutoMatic TelePhone, then connect the two-pole power plug to an electrical outlet.
- Press the REWIND button to rewind the message tape. Hold the REWIND button down until the IN USE light turns off.
- Press the AUTOMATIC ANSWER ON button. Check the Automatic Answering feature by

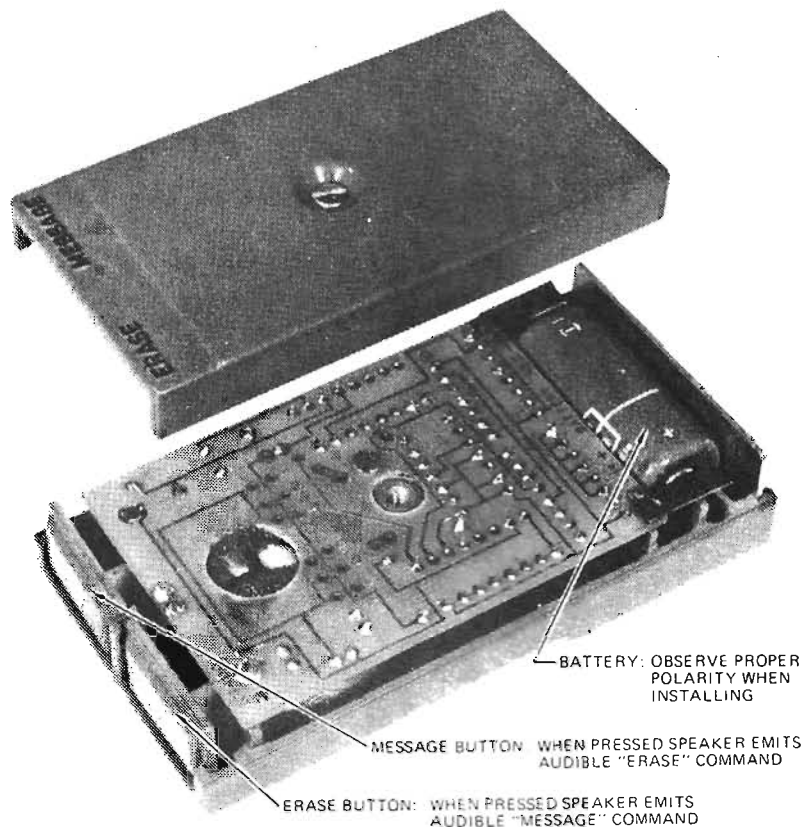


Fig. 7—Pocket Code, Model 1000

calling the unit from another telephone and recording a message.

(e) Call the unit again. At the beep tone after the recorded announcement, place the speaker of the Pocket Coder against the handset transmitter and press the Pocket Coder MESSAGE button for two seconds. Verify that the unit plays back the message recorded in Step (d).

(f) Record another message.

(g) Repeat Step (e) and verify that both of the accumulated messages are played back. Place the speaker of the Pocket Coder against the handset transmitter and press the Pocket Coder

ERASE button for two seconds. Verify that the unit goes on-hook.

(h) Return to The AutoMatic TelePhone and verify that the MINUTES indicator reads 0. Press the PLAY button and verify that the tape is blank.

6.03 When The AutoMatic TelePhone is called, if the ERASE button is accidentally pressed first (before the MESSAGE button), a message protection feature treats this "erase" command as a "message" command. As a result, messages are played back just as if the MESSAGE button had been correctly pressed first. The *next* acutation of the ERASE button *will* erase the tape.

TABLE E
POCKET CODER ORDERING INFORMATION (NOTE)

MODEL NO.	COMCODE NO.
1000PC21	402159610
1000PC22	402159628
1000PC23	402159636
1000PC24	402159644
1000PC25	402159651
1000PC26	402159669

Note: Pocket Coder (last two digits of model number indicate frequency as specified on bottom of set).*

- * These Pocket Coders are only ordered as additions or replacements. Additional Pocket Coders ordered initially with a remote access set should specify comcode 401957345.