

ELECTRONIC SECRETARY® MODEL RFP
INSTALLATION AND FIELD MAINTENANCE

	CONTENTS	PAGE
1.	GENERAL	1
2.	INSTALLATION	2
	Location	2
	Power Supply	2
	Connections	2
	Loading Announcement Tape	3
	Loading Playback Tape	4
	Testing	4
3.	DESCRIPTION OF OPERATION	4
	Dictate Announcement	5
	Check Announcement	6
	Automatic Operation (remote play feature not utilized)	7
	Automatic Answer-Remote Play	8
	Automatic Answer-Remote Play - Repeat Message	9
	Automatic Answer-Remote Play - Marker Tone Disconnect	9
	Automatic Answer-Remote Play - Rewind Erase	10
	Manual Rewind and Playback of Recorded Messages	10
	Manual Rewind Erase Operation	11
4.	FIELD MAINTENANCE	11

1. GENERAL

1.01 This section covers the installation and field maintenance for the ELECTRONIC SECRETARY® Model RFP, Telephone Answering Set.

1.02 The Model RFP (see Figure 1) is an automatic telephone answering and recording device. This unit is able to answer the telephone with the customer's recorded announcement message, record the caller's message, and play it back to the customer over a telephone connection.

1.03 The customer records his own announcement message on the endless tape cartridge contained in the unit, and may play it back through the loudspeaker to "check-it." When the Model RFP is set for "automatic" operation, this recorded message will be automatically transmitted to the calling party. Following the announcement message, a single-beep tone signals the caller to record a message, and, 30 seconds later, a double-beep tone lets the caller know his recording time is over. To hear the accumulated messages, the customer may wait until he returns to his office where he may manually playback all of the

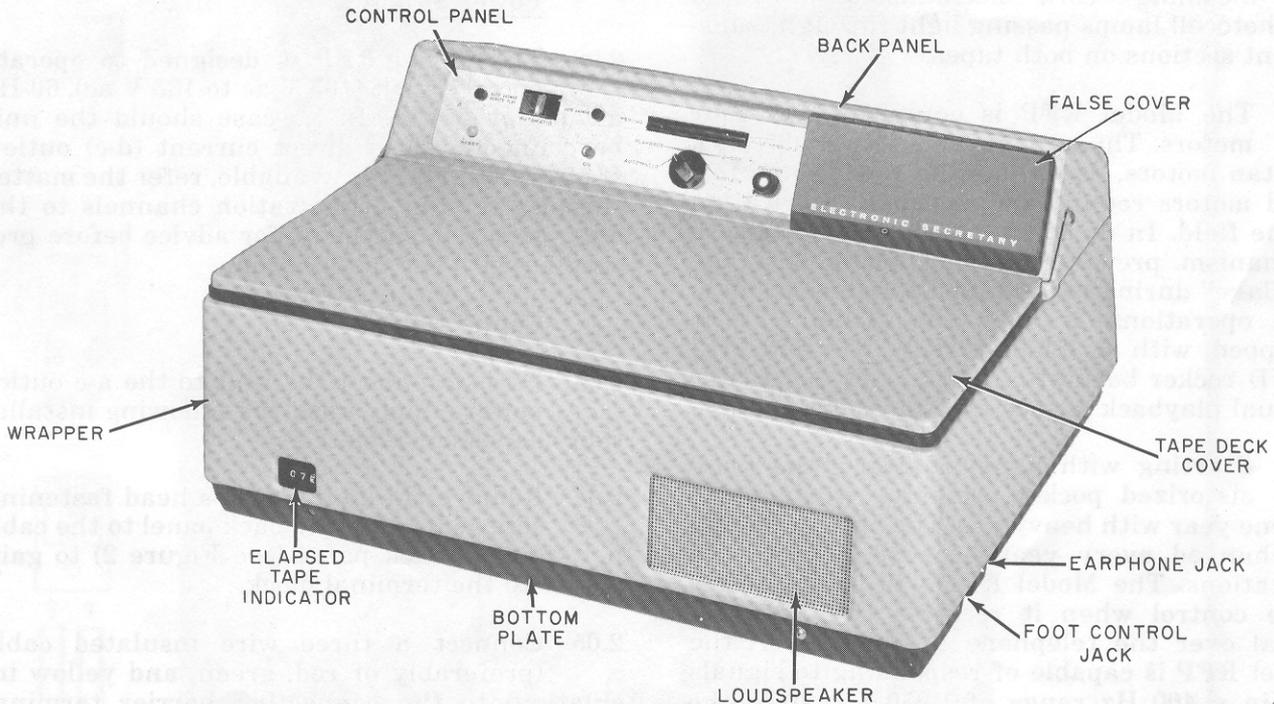


Figure 1. Model RFP (Front view).

Copyright © 1968 Automatic Electric Company

recorded messages. However, if it is inconvenient for the customer to return to his office, he may simply call his telephone number from any telephone, and, at the appropriate moment, gain control of the Model RFP answering set by means of a "seize tone" signal played into the telephone transmitter from his pocket size oscillator. Once the customer seizes control of the Model RFP, he can cause it to automatically rewind and playback all messages recorded in his absence. If, while listening to his messages, he should miss a word or a number he can backspace and replay that portion as often as necessary. After listening to the messages, the customer can rewind and erase the recording tape completely, resetting the unit to full capacity. All this can be done with the tone emitted by the pocket oscillator.

1.04 The standard announcement tape cartridge supplied with the Model RFP delivers a 20 second announcement message. Other capacities are available. The incoming message tape is able to record as many as 120 thirty-second messages from callers.

1.05 The Model RFP has a recording speed of 3-7/8 inches per second, it weighs approximately 70 pounds and is 10-1/2 inches high, 21-1/2 inches wide, and 16-1/2 inches deep.

1.06 Cycling of the machine is controlled by photocells, located in the announcement and incoming-record mechanisms, activated by photocell lamps passing light through transparent sections on both tapes.

1.07 The Model RFP is equipped with four motors. The announcement and playback capstan motors, as well as the rewind and forward motors require no additional lubrication in the field. In addition, an electrical fail-safe mechanism prevents any possibility of tape "spillage" during rewind, fast forward, or playback operations. Finally, the Model RFP is equipped with a FAST-FORWARD and REWIND rocker bar switch, for easier and faster manual playback of incoming messages.

1.08 Starting with a new battery, the transistorized pocket oscillator will operate for one year with heavy use. The battery should be changed every year because of shelf-life limitations. The Model RFP will switch to remote control when it receives the 1,950 Hz signal over the telephone line. However, the Model RFP is capable of responding to signals within a 400 Hz range of 1,950 Hz, since the pocket oscillator seize tone signal is adjustable.

2. INSTALLATION

Location

2.01 Locate the Model RFP in accordance with the considerations outlined below. If the customer's wishes cannot be followed, explain the reason.

- (a) The Model RFP may be located within easy reach of the customer's telephone set; however, this is not essential.
- (b) A satisfactory location would be a desk or a table sufficiently strong to support the Model RFP's weight of approximately 70 pounds. (The unit is intended for desk or table installation, and need not be fastened.)
- (c) A desk or table location where the ventilation is not entirely restricted is adequate. (Avoid locations that might subject the unit to excessive moisture, heat, or vibration.)
- (d) Locate the Model RFP within the restrictions of the power cord. (The Model RFP is equipped with an 8-foot power cord and plug for connecting to standard a-c outlets.)

Power Supply

2.02 The Model RFP is designed to operate on a 117-volt (105 V ac to 135 V ac), 60-Hz a-c power outlet. In no case should the unit be connected to a direct current (d-c) outlet. If only d-c current is available, refer the matter through regular organization channels to the engineering department for advice before proceeding with the installation.

Connections

- 2.03 Do not connect the unit to the a-c outlet power supply until the following installation has been completed.
- 2.04 Remove the four Phillips head fastening screws holding the back panel to the cabinet, remove back panel (see Figure 2) to gain access to the terminal block.
- 2.05 Connect a three wire insulated cable (preferably of red, green, and yellow insulation) to the connecting barrier terminal block TB401. Connect red (ring) lead to L1,

green (tip) to L2, and yellow (ground) to G. (See Figure 2.) Secure the cable clamp and replace the back panel.

2.06 Connect the other end of the three-wire cable to the telephone line at the telephone connecting block as indicated for the type of service desired (see Table 1).

2.07 For 10A1 and 10A2 (or 1A1) key system installations, connect the A and A1 terminals on the connecting block TB401 to the A and A1 terminals on the telephone block (see Figure 2).

Loading Announcement Tape

2.08 Place announcement message cartridge on "D" shaped spindle. Pull tape out of cartridge and thread around guide pillars and into slot (see Figure 3). Pull back pressure roller assembly and thread tape between rubber pressure roller and capstan. Pull tape gently to take up slack. Release pressure roller assembly. Plug in power cord and rotate OFF-VOLUME switch to "ON." The unit will advance the tape, stopping when the lower window reaches the photocell.

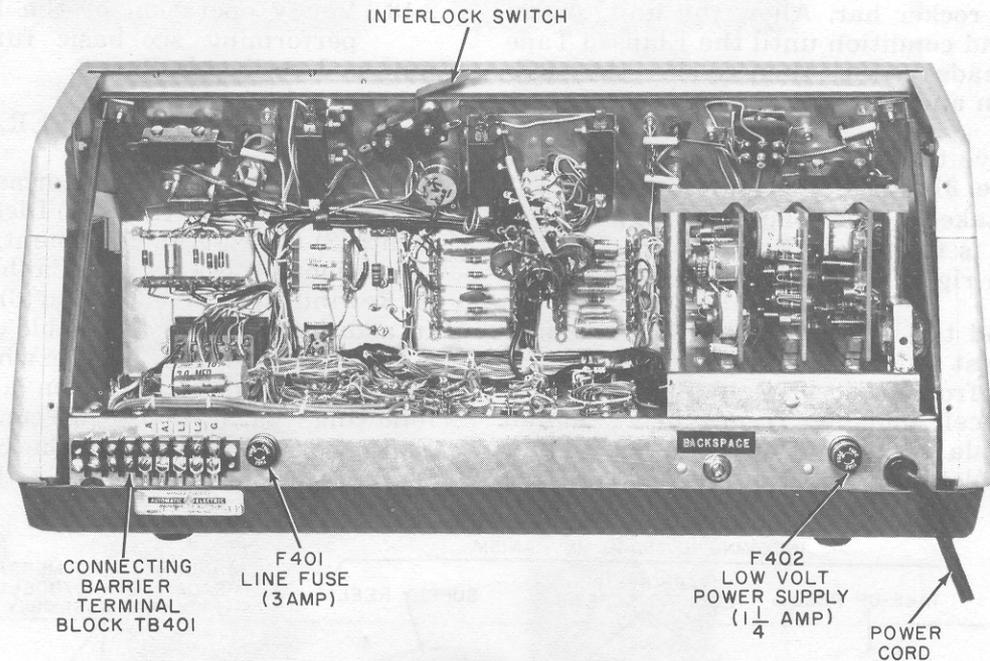


Figure 2. Model RFP (Rear view - back panel removed).

Table 1. Telephone Line Connections

Type of Service	Red L1	Green L2	Yellow Grd
Individual, PBX, and other Bridged-Ringer Service	Ring	Tip	Tip
*2 Party Selective Service			
Ring Party	Ring	Tip	Grd
Tip Party	Tip	Ring	Grd
*Remove strap between terminal L-2 and G at answering set.			

NOTE: If the tape is not positioned properly when the equipment (OFF-VOLUME switch) is turned "ON," the unit will either start running, or a continuous 1,400 Hz tone signal will be heard. To correct this condition, turn the unit off, and re-position the announcement tape.

Loading Playback Tape

2.09 To set the Elapsed Tape Indicator, turn the SELECTOR knob to the "PLAYBACK" position. Depress and hold the "RESET" button while pressing the "REWIND" side of the rocker bar. Allow the unit to run in the rewind condition until the Elapsed Tape Indicator reads "9-7-0," then release the "RESET" button and rocker bar.

2.10 Remove the tape reel locking screws (see Figure 3). Place the empty reel on the left hand (take-up) reel platform. Be sure side one of reel is facing up. Place the full reel of tape on the right hand (supply) reel platform.

2.11 Thread the free end of the tape behind the first guide pillar (see Figure 3), then around the front of second guide pillar, erase head, photocell housing, record head, behind the last guide pillar, and between the rubber pressure roller and capstan. Insert the free

end of the tape into the hub slot of the take-up reel, then wind reel manually one or two turns clockwise.

2.12 Depress and hold the "RESET" button while depressing the "FAST FORWARD" side of rocker bar. Release both when the Elapsed Tape Indicator reads slightly below "0-1-0." Turn the SELECTOR knob to the "AUTOMATIC" answer position. The unit will continue to run until the Elapsed Tape Indicator reads "0-1-0." The unit will then be ready for automatic answer operation.

Testing

2.13 Verify operation of the Model RFP by performing six basic functions of the unit as described in Part 3.

3. DESCRIPTION OF OPERATION

3.01 The Model RFP performs the following six basic functions: (1) Dictate Announcement; (2) Check Announcement; (3) Automatic Operation; (4) Automatic Callback Operation; (5) Rewind and Playback; and (6) Rewind Erase. In addition, the unit is capable of remaining in a standby condition, during which the unit is ON but waiting to perform a function. The following paragraphs in conjunction with Figures 3 and 4, explain the basic functions. The information contained in this part should

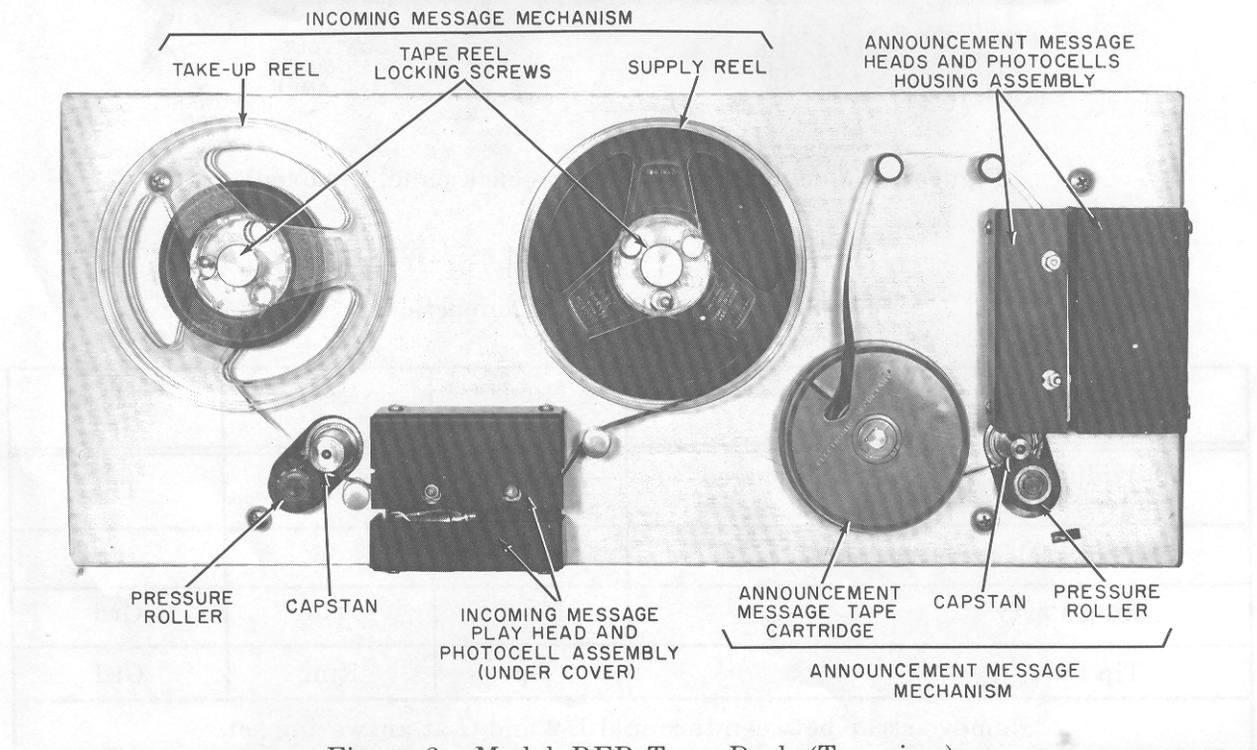


Figure 3. Model RFP Tape Deck (Top view).

be referred to when instructing the customer on the operation of his unit.

Dictate Announcement

3.02 Prepare the unit as follows:

- (1) "OFF-VOLUME" control turned until "ON" lamp lights.
- (2) Lift black cover on control panel and insert microphone into MICROPHONE jack.
- (3) SELECTOR knob turned to "DICTATE."

3.03 In the standby condition a transparent window in the lower track of the announcement tape allows light from a lamp to pass through to a photocell which, through relay operation, keeps the latching path to the announcement capstan motor open.

3.04 Depress "DICTATE-CHECK" button and hold depressed momentarily (until the "START" lamp remains lit without holding the button depressed). This will energize the announcement capstan motor and light the "START" lamp. The announcement capstan motor drives the capstan which advances the announcement tape. As the lower transparent window moves past the photocell, an opaque portion follows.

3.05 The opaque portion of tape passes in front of the photocell blocking the light. This results in relay action which keeps the announcement capstan motor running, by closing its latching path, and keeps the "START" lamp lit.

3.06 When the SELECTOR knob was turned to the "DICTATE" position, it connected circuitry necessary to energize the power supply and completed recording paths to the announcement record head.

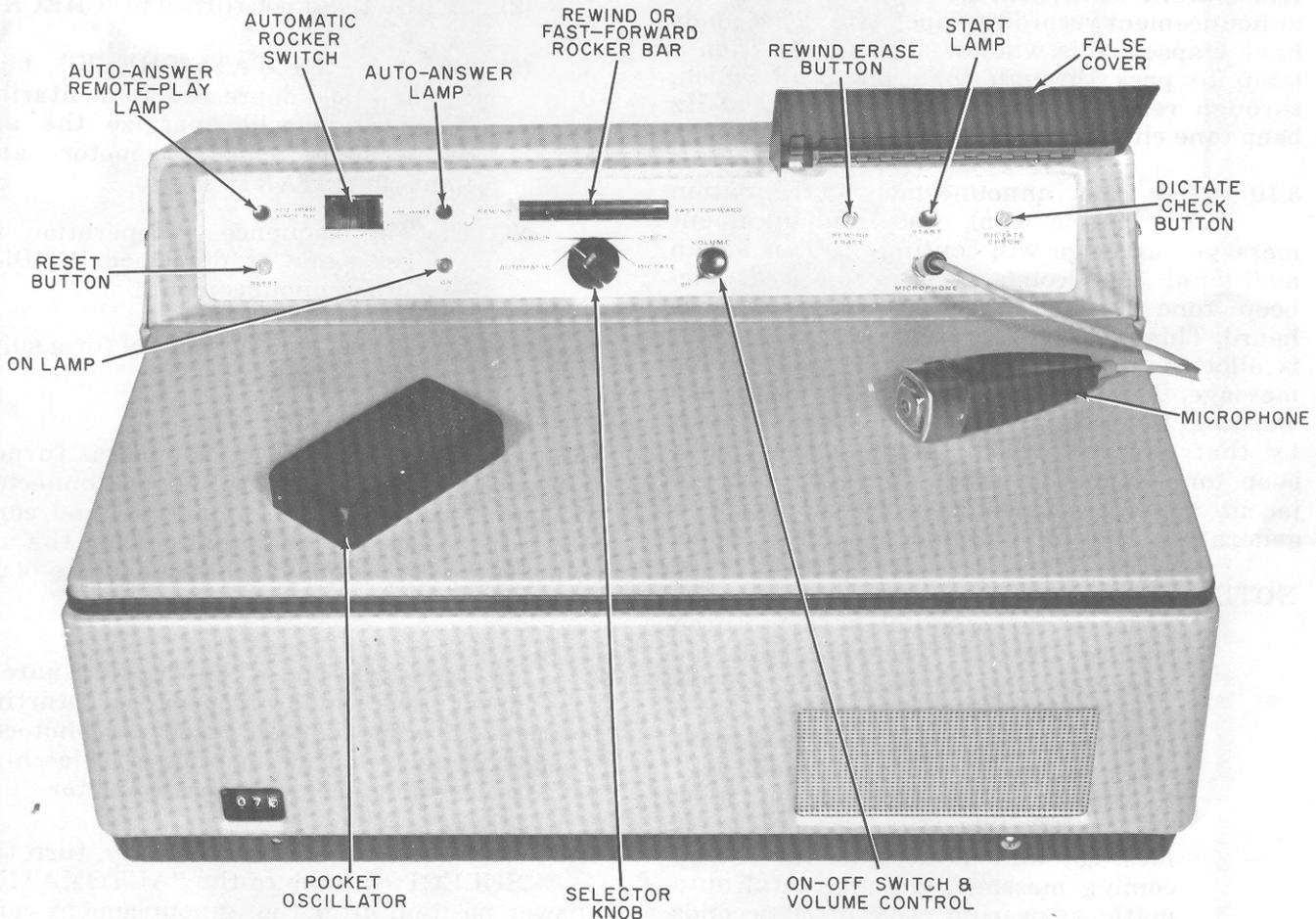


Figure 4. Model RFP - Control Panel.

3.07 The unit will now record signals from the microphone for a length of time determined by the announcement message cartridge used. (Message is dictated in normal voice with microphone about 8 to 12 inches from mouth and must be completed upon hearing the single audible beep tone.) Remove the microphone after completing announcement message.

3.08 The announcement cartridge determines the length of time allotted for recording the announcement message and the calling party's message. The length of recording that can be placed on the announcement cartridge is determined by the transparent window spacing on the tape. The standard cartridge will allow 20 seconds for the announcement message and 30 seconds for the calling party's message.

3.09 The end of the announcement record time is indicated by a single audible 1,400 Hz beep tone heard through the playback speaker. This tone (mid-cycle tone) is controlled by a transparent window in the upper track of the announcement recording tape. After 20 seconds have elapsed, this window allows light from a lamp to pass through to a photocell which, through relay action, energizes the 1,400 Hz beep tone circuitry.

3.10 After the announcement termination tone (single-beep), the announcement message cartridge will continue to run for an additional 30 seconds, whereupon a double-beep tone (predisconnect warning tone) is heard. This interval represents the time which is allotted for the calling party to record his message. The double-beep tone (predisconnect warning tone) is generated and transmitted by that circuitry which produces the single-beep tone (mid-cycle tone). However, two adjacent upper track windows are employed in generating the predisconnect warning tone.

NOTE: The maximum automatic answering cycle is three minutes. This three-minute interval includes both the announcement message time and the incoming message time. Unless otherwise specified, the standard cartridge shipped with the Model RFP telephone answering unit will allow 20 seconds for the announcement message and 30 seconds for the incoming message, giving a total automatic answering cycle of 50 seconds. When ordering an announcement message cartridge other than the

standard, specify in seconds, the time required for both the announcement and incoming messages.

3.11 The announcement capstan motor will continue operating (after the double-beep predisconnect warning tone) until the lower track transparent window reappears to signal the end of the cycle. Relay action resulting from photocell activation breaks the latching path to both the announcement capstan motor and the "START" lamp ending the cycle.

Check Announcement

3.12 After the double-beep tone, the recorded announcement may be checked by performing the following procedures:

- (1) "OFF-VOLUME" control turned until "ON" lamp lights.
- (2) SELECTOR knob turned to "CHECK."
- (3) Depress "DICTATE-CHECK" button and hold depressed momentarily. This action will energize the announcement capstan motor and light the "START" lamp.

NOTE: The sequence of operation is the same as described in "Dictate Announcement."

- (4) Adjust the volume control for a suitable listening level.

3.13 When the SELECTOR knob was turned to the "CHECK" position, it connected the power supply to the amplifiers and completed the necessary audio paths from the announcement record-playback head to the playback speaker.

3.14 The cycle will end when the transparent lower track window returns to its starting position, allowing light to reach the photocell which, through relay action, breaks the latching path to the announcement capstan motor.

3.15 If the recording is satisfactory, turn the SELECTOR knob to the "AUTOMATIC" answer position after the announcement cartridge has completed the entire cycle of operation.

Automatic Operation (remote play
feature not utilized)

3.16 If the announcement message has already been dictated, and it is satisfactory, then the preparation can be reduced to steps (1), (5), and (6) of Paragraph 3.17.

3.17 Prepare the unit as follows:

- (1) "OFF-VOLUME" control turned until "ON" lamp lights.
- (2) Check the announcement message to be certain it is appropriate.
- (3) SELECTOR knob turned to "PLAY-BACK" position.
- (4) "REWIND" side of rocker bar depressed until Elapsed Tape Indicator reads any number between "0-0-9" and "0-0-1."
- (5) SELECTOR knob turned to "AUTOMATIC" answer position. (The Model RFP will continue running until Elapsed Tape Indicator reads "0-1-0" when the unit will stop prepared for "AUTOMATIC" answer operation.)
- (6) "AUTO ANSWER" side of AUTOMATIC rocker switch depressed. In this instance, the Model RFP is used for the automatic fixed play (FP) operation only, without the remote callback feature.

3.18 When ringing current is applied across terminals L1 and L2, relay action starts the announcement capstan motor. The motor drives the announcement capstan which advances the announcement tape until the transparent lower track window passes from the photocell housing and the opaque portion enters in. The motor operates until the lower track window reappears to terminate the automatic answer - fixed play cycle.

3.19 The opaque portion of the announcement tape passes in front of the lower track photocell resulting in relay action which completes a latching circuit to the announcement capstan motor, and energizes the power supply, whose output is fed to the audio amplifiers. In addition, a holding bridge is connected across the telephone line, thus establishing an audio path from the announcement record-playback

head to telephone terminals L1 and L2 through the audio amplifiers. The audio path remains in this "out-message" condition until an upper track window in the announcement tape appears in front of the upper track photocell.

3.20 The customer's announcement message is now delivered to the calling party, and, near its end, the listener is asked to begin recording his message, at the sound of the single-beep tone (mid-cycle tone).

3.21 At the end of the announcement message, the mid-cycle transfer begins. Light passing through an upper track window energizes the upper track photocell which, through relay action, connects power to the 1,400 Hz tone oscillator. The oscillator now generates the mid-cycle tone which is amplified then delivered to the telephone line, signaling the calling party to begin recording his message. In addition, the level of the mid-cycle tone recorded is lowered in the audio amplifier, and a second relay is energized to accomplish the mid-cycle transfer.

3.22 The second relay alters the audio path by connecting the telephone line audio to the input of the record amplifier, while other contacts join the output of the record amplifier to the incoming record head. At the same time, the recorder's bias oscillator is energized, producing an output which combines with the output of the audio amplifier to drive the incoming message record head. The audio path is now in the incoming record condition and will record the calling party's message. The unit will remain in this condition until the reappearance of the lower track start-stop window.

3.23 Before the reappearance of the lower track window on the announcement tape, two upper track windows appear in order to allow two 1,400 Hz predisconnect warning tones to be delivered to the telephone line. The two windows operate the 1,400 Hz tone oscillator as described in Paragraph 3.21. The double tone lets the calling party know his recording time is over.

3.24 The lower track window reappears immediately after the two upper track windows at the end of the recording period. Resulting relay action resets the ring up circuit, stops the announcement motor, and returns the unit to standby.

NOTE: If the Model RFP had been placed in the "AUTO ANSWER-REMOTE PLAY" function, instead of the "AUTO ANSWER" (fixed-play) function, by the front panel AUTOMATIC rocker switch, then the relay action noted in Paragraph 3.24 would be delayed for approximately 8 seconds. This 8-second period is used to begin the automatic answer-remote play (callback) function. It is only during this period that the unit can be seized remotely by receiving an incoming tone signal played into a telephone from a customer's pocket oscillator.

Automatic Answer-Remote Play

3.25 If the announcement message has already been dictated, and it is satisfactory, then the preparation can be reduced to steps (1), (5), and (6) of Paragraph 3.26.

3.26 Prepare the unit as follows:

- (1) "OFF-VOLUME" control turned until "ON" lamp lights.
- (2) Check the announcement message to be certain it is appropriate.
- (3) SELECTOR knob turned to "PLAYBACK" position.
- (4) "REWIND" side of rocker bar depressed until Elapsed Tape Indicator reads any number between "0-0-9" and "0-0-1."
- (5) SELECTOR knob turned to "AUTOMATIC" answer position. (The unit will continue running until Elapsed Tape Indicator reads "0-1-0," when the unit will stop prepared for the automatic answer-remote play operation.)
- (6) "AUTO ANSWER-REMOTE PLAY" side of AUTOMATIC rocker switch depressed.

3.27 To make a test call, prepare the Model RFP for automatic answer-remote play operation as described in Paragraph 3.26 and call the unit from any standard telephone set. The telephone call will apply ringing current across terminals L1 and L2 resulting in relay action that starts the announcement capstan motor, energizes the audio amplifier power

supply, and connects a holding bridge across the telephone line. The latter completes an outgoing message audio path from the announcement head, through the audio amplifiers, to terminals L1 and L2.

3.28 The announcement message is now delivered to the telephone line, and after its termination, the mid-cycle tone is delivered (single-beep).

3.29 An upper track window appearing at the end of the announcement message starts the mid-cycle shift by initiating relay action resulting in generation of the mid-cycle tone and activation of the recording bias oscillator. In addition, a mid-cycle transfer relay establishes an incoming message audio path from telephone terminals L1 and L2, through the audio amplifier, to the incoming message record-playback head. The unit will now record the customer's incoming-message.

3.30 After the mid-cycle tone, the unit has switched to incoming-record. It is necessary to leave a message for the entire duration of the incoming record cycle. This message serves as a marker message for the customer, letting him know that he has heard all recorded messages up to his own. At the end of the incoming-record period, the predisconnect warning tone is heard (double-beep).

3.31 Immediately after the predisconnect warning tone, the lower track window reappears and begins to return the unit to standby. However, a timing circuit delays this process for approximately 8 seconds, the remote callback seize time. During this interval, relay operation prepares the callback seize circuitry and a seize relay for operation should the Model RFP receive a seize signal during this time.

3.32 When the predisconnect warning tone is heard, apply the pocket oscillator to the telephone transmitter, and depress the tone button. The oscillator will emit a tone signal (1,950 Hz seize tone). When the lower frequency (1,400 Hz) acknowledgement tone is heard in the telephone receiver, the pocket oscillator seize tone must then be terminated. Upon termination of the seize tone, the Model RFP will automatically rewind to the beginning end of the recording tape, and will then playback to the telephone line all messages left on the unit.

NOTE: Once the caller seizes the unit for remote operation, he has complete

control of the rewind-playback and rewind-erase functions, and he can switch the unit to any of these operations at any time.

3.33 When the pocket oscillator is applied to the telephone and its tone button depressed (during the 8-second remote call-back seize time) the tone signal (1,950 Hz) will be received at terminals L1 and L2. If the signal is of the proper frequency and duration, the tuned seize amplifiers will amplify it and filter off any unwanted stray signal frequencies. The amplified and filtered signal operates seize relay control circuits resulting in relay actuation that seizes the unit to remote-control operation by the calling party.

3.34 Power is connected to the tone oscillator (1,400 Hz) which operates and provides a recognition or acknowledgement tone to the caller, to let him know the unit has responded to the seize signal.

3.35 Upon termination of the seize tone, pulsing and ratchet relay operation occurs that switches the Model RFP to the rewind function. The purpose of the ratchet relay is to electrically switch the unit from the play function to the rewind function alternately. When the unit is initially seized, it always starts remote operation in the rewind function.

3.36 After the unit has been seized and it switches to the rewind function, and is allowed to remain in this function, it will rewind to the beginning of the recording tape, where it will automatically switchback to the playback function. This switchback to the playback function is initiated by a clear leader in the beginning portion of the recording tape. Whenever the leader allows light to activate the photocell in the record head, resulting relay action disconnects power to the rewind circuits and allows the unit to run only in the playback function during remote operation.

3.37 When the unit was initially seized, a portion of the seize tone was recorded on the recording tape and serves as a marker. When this tone is played back during the remote playback function, it causes the unit to disconnect from the telephone line, to momentarily backspace approximately one turn of the take-up reel while erasing the recorded seize tone, and then to revert to automatic callback standby condition.

Automatic Answer-Remote Play-Repeat Message

3.38 At times, the caller may want to listen again to a message, or a portion of a message. If this is the case, the caller can rewind any portion of a message and listen to it again by performing the following procedure, Paragraphs 3.39 and 3.40.

3.39 Apply the pocket oscillator to the telephone transmitter and depress the tone button. When the lower frequency acknowledgement tone is heard in the receiver, release the tone button. The Model RFP will immediately switch from the playback function to the rewind function due to the operation of pulsing and ratchet relays.

3.40 To switch the unit back to the playback function, reapply the pocket oscillator tone to the telephone transmitter. When the acknowledgement tone is heard again, terminate the transmitted tone. The unit will immediately switchback to the playback function due to the operation of pulsing and ratchet relays.

Automatic Answer-Remote Play-Marker Tone Disconnect

3.41 If it is desired to leave the recorded messages from previous calls on the Model RFP, no further remote operation is necessary. Simply hang up the handset upon hearing the recorded marker message left previously. The unit will automatically disconnect, and revert back to the automatic answer-remote play standby condition, by the customer marker tone, after the marker message.

3.42 When the customer was initially seizing the unit to remote operation, a portion of the seize tone was recorded on the incoming message record tape. This segment of recorded seize tone, recorded after the customer's marker message, serves as an electronic marker for the unit, and when the unit plays this marker tone back to itself, the unit automatically disconnects itself from the telephone line, rewinds and erases the portion of tape containing the marker tone signal, breaks all latch paths, and reverts to standby.

NOTE: The caller has an option of either allowing the Model RFP to disconnect by playback of the marker tone or placing the unit in the rewind-erase function. To rewind-erase remotely, the following procedure is necessary.

Automatic Answer-Remote Play - Rewind Erase

3.43 After all messages have been heard, and upon hearing the beginning of the marker message, apply the pocket oscillator to the telephone transmitter, and depress the tone button. When the lower frequency recognition tone is heard (in approximately 3 seconds), do not terminate the transmitted seize tone. With approximately 6 seconds of uninterrupted seize tone, the unit will latch into rewind-erase. The indication to the caller that the unit has switched to the rewind-erase function is the sudden termination of the returning lower frequency recognition tone in the telephone receiver. Release the tone button of the pocket oscillator after hearing the termination of the returning tone. The Model RFP will rewind and erase all messages on the recording tape from the point where it latches into rewind-erase operation. When the clear leader at the beginning of the recording tape enters the incoming record head and photocell assembly, it will reset the Model RFP back to the automatic answer-remote play standby condition, thus, restoring full recording capacity to the unit.

3.44 Re-applying the seize tone signal from the pocket oscillator (after the Model RFP has been initially seized) and holding the tone continuously for approximately 6 seconds allows the tone signal to permit operation of a timing circuit. The timing circuit actuates a relay that establishes the necessary circuits for rewind-erase operation. The unit proceeds to rewind and erase all recordings up to the beginning of the recording tape, where the transparent window splice is located. Light passing through the window energizes a photocell, which through relay action, stops the rewind motor and breaks all latching paths, which in turn causes the unit to revert to the automatic answer-remote play standby condition. The tape transport continues to run in the playback function, advancing the transparent leader until the opaque recording tape reappears in front of the photocell, when the unit stops in standby and is ready for more calls.

NOTE: After the unit has been remotely switched to the rewind-erase function by the pocket oscillator, the caller no longer has remote control of the unit's functions. To re-establish control, the customer must call again and seize the unit once more.

Manual Rewind and Playback of Recorded Messages

3.45 Prepare the unit as follows:

- (1) Check the Elapsed Tape Indicator to see if messages have been received. If a message has been left on the unit, the indicator will show some number other than "0-1-0."
- (2) SELECTOR knob turned to the "PLAYBACK" position.

3.46 Depress and hold depressed the "REWIND" side of the "FAST FORWARD - REWIND" rocker bar switch until the Elapsed Tape Indicator reads "0-1-0." (Should you rewind the tape past "0-0-0" on the indicator, into the "9-9-9" region, the automatic stop feature will cut power to the tape mechanism and the "ON" lamp. To re-establish power, depress and hold depressed the RESET button while pressing the "FAST FORWARD" side of the rocker bar switch. Release both when the Elapsed Tape Indicator reads past "0-0-0".) The message will now be heard through the playback speaker. Adjust the volume control for a suitable listening level.

3.47 Depressing the "REWIND" side of the rocker bar actuates a switch which energizes a relay that applies power to operate the rewind motor.

3.48 Upon releasing the "REWIND" side of the rocker bar, two switches, operated by the SELECTOR knob in the "PLAYBACK" position, complete an a-c path to the tape transport mechanism and causes relay action that puts the play section of the tape transport mechanism into operation. The playback capstan motor now operates.

3.49 The audio switching necessary for playback operation is done by the SELECTOR switch. An audio message path is completed through the SELECTOR switch from the incoming message record head, to the audio amplifiers, to the playback speaker.

3.50 The Model RFP is designed to be called only in the automatic function. When the unit is in any of its other functions (dictate, check, playback), a switch, mechanically connected to the SELECTOR knob, breaks the a-c path to the announcement capstan motor, thus preventing a caller from ringing the unit into cycle while it is being used in dictate, check, or playback.

3.51 Whenever the Model RFP is switched to the playback function, and the rocker bar is pushed to either "FAST FORWARD," or "REWIND" operation, and released, the unit will always revert to the playback function.

3.52 When playback is completed, rewind until the Elapsed Tape Indicator reads slightly below "0-1-0" (between "0-0-0 and 0-1-0"). Rotate selector knob to the AUTOMATIC position. The Model RFP is now ready to automatically answer more calls.

NOTE: As new messages are received and recorded, the old messages will automatically be erased. It is suggested, however, to erase all old messages manually after playback has been completed, to clear the tape.

Manual Rewind Erase Operation

3.53 Prepare the unit as follows:

- (1) "OFF-VOLUME" control turned until the "ON" lamp lights.
- (2) SELECTOR knob turned to the "PLAYBACK" position.
- (3) Lift the black cover on the right side of the front panel.

3.54 Depress and hold depressed the REWIND-ERASE button and hold for duration of rewind (until "0-1-0" is reached on the Elapsed Tape Indicator) if it is desired to erase all recorded messages.

3.55 The REWIND-ERASE button completes an a-c path to the rewind motor and the tape transport mechanism causing the tape transport to run in rewind. In addition, it energizes the playback erase head by establishing a d-c current path to it.

4. FIELD MAINTENANCE

4.01 To help insure good customer relations, maintenance involving dismantling of the unit should not be undertaken on the customer's premises. In addition to checking obvious trouble sources such as loose power or telephone line terminations, perform the maintenance operations outlined in the following paragraphs.

4.02 Inspect the tapes to assure they are not kinked or scratched, and that the spliced joints are secure. No foreign material should be present on the tape surfaces except for the lubricant applied at the time of manufacture. The clear areas on the tapes should be reasonably clean. Should tape condition be otherwise, replace with a new loaded tape cartridge.

4.03 Assure that the capstans, pressure roller surfaces, pillars and heads are clean. If cleaning is required, remove the tape cartridges from the mechanism. Use a soft lintless cloth moistened with denatured alcohol to clean the surfaces.

4.04 When in the mechanisms, the tapes should move freely around the pillars and heads. Assure that the tape does not bind in the cartridge.