# 28 Cabinet for Automatic Send-Receive Teletypewriter Sets

## Adjustments

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### 1. General

1.01 This section has been revised to include recent engineering changes and additions, and to rearrange the text so as to bring the section generally up-to-date. Since this is an extensive revision, marginal arrows ordinarily used to indicate changes have been omitted.

1.02 This section contains the specific requirements and adjustments for the 28 cabinet for automatic send-receive teletypewriter sets.

1.03 Maintenance procedures apply only to mechanisms of a particular design, or to certain models of 28 cabinets for automatic send-receive teletypewriter sets.

1.04 The adjustments of each unit are arranged in a sequence that should be followed if a complete readjustment of the unit were undertaken. The tools and spring scales required to perform these adjustments are listed in the applicable section. After an adjustment is completed, be sure to tighten any nuts or screws that are loosened. The adjusting illustrations indicate tolerances, positions of moving parts, spring tensions and the angles at which scales should be applied when measuring spring tensions. If a part mounted on shims is removed, the number of shims used at each of its mounting screws should be noted so that the same number is replaced when the part is remounted.

1.05 References made to left or right, up or down, front or rear, etc apply to the unit in its normal operating position as viewed from the front.
Figure 1 - Model 28 Cabinet for Automatic Send-Receive Set
2. BASIC UNIT

2.01 Cabinet

THE DOME SHOULD BE CENTERED ON THE CABINET FROM RIGHT TO LEFT AND PLACED APPROXIMATELY 0.050 INCH FROM THE FRONT EDGE OF CABINET OR SO THE EXTRUDED PORTIONS OF THE LEFT FRONT DOOR AND RIGHT FRONT CROSS BAR LINE UP.

TO ADJUST

1. DISCONNECT THE UPSTOP LATCH ARM ON RIGHT SIDE OF DOME. THEN PIVOTING DOME REARWARDLY OVER THE BACK, PRY END OF TORSION BARS OUT OF HOLE AND SLIP OUT FROM REAR BRACKET IN DOME.

NOTE: IF NECESSARY TO CHECK REQUIREMENT, REMOVE BLANK CONTROL PANEL.

DOME LATCH

1. REQUIREMENT
   WITH THE DOME LATCHED THERE SHOULDN'T BE A SLIGHT PRESSURE ON THE RUBBER BUMPER.

TO ADJUST
LOosen PIVOT SCREWS ON BOTH RIGHT AND LEFT LATCHES. POSITION LATCHES TO PROVIDE SOME TO 0.032 INCH BETWEEN EACH LATCH AND ITS LATCHING SURFACE AND LOCK THE SCREWS. POSITION RUBBER BUMPER TO PROVIDE 0.030 TO 0.045 INCH BETWEEN DOME AND CABINET AND SECURE THE BUMPERS. A SLIGHT PRESSURE SHOULD LATCH THE DOME.

2. REQUIREMENT
IT SHOULD NOT BE POSSIBLE TO DEPRESS THE DOME LATCH BUTTON COMpletely INTO THE DOME.

TO ADJUST
POSITION THE LATCH TOWARD THE OUTSIDE SURFACE OF DOME WITH MOUNTING SCREWS LOOSENED. PIVOT DOME OPEN REARWARDLY OVER BACK OF CABINET. REPLACE ENDS OF TORSION RODS BY SLIDING THE STRAIGHT PORTION OF RODS UNDER BRACKET ON THE GUSSET IN CORNERS OF THE DOME, UNTIL BENT END OF ROD SLIPS INTO RETAINING HOLE IN FRONT OF BRACKET. PIVOT DOME FORWARD, AND REPLACE UPSTOP LATCH ARM ON RIGHT SIDE OF DOME AND SECURE IN PLACE WITH SCREW AS BEFORE.
TORSION BAR

(1) REQUIREMENT—WHEN THE CLOSED DOME IS RELEASED FROM ITS LATCHES THE TORSION BARS SHOULD LIFT THE DOME ABOVE THE FRONT EDGE OF CABINET MIN. 7 INCHES——MAX. 9 INCHES

(2) REQUIREMENT—WHEN DOME IS STARTED DOWN BY SLIGHT PUSH FROM ITS FULLY OPENED POSITION IT SHOULD NOT CLOSE OR LATCH. NOTE: READJUST DOME IF MORE APPARATUS IS ADDED.

TO ADJUST
TURN THE SHOULDER NUTS ON THE EYE BOLTS CLOCKWISE TO INCREASE THE SPRING TORQUE, AND COUNTERCLOCKWISE TO DECREASE THE SPRING TORQUE.
2.04  Cabinet (continued)

**TOP DOORS (RIGHT AND LEFT)**

**REQUIREMENT**
The doors should set squarely and uniformly on the contour of the dome.

**TO ADJUST**
Position each door with its hinge mounting screws loosened.

![Diagram of top doors]

**TOP MIDDLE DOOR**

**REQUIREMENT**
The door should rest flat and squarely on the dome. The reinforcement channel should fit over its guide bracket in the dome.

**TO ADJUST**
Remove the spring detent from center of dome and position the door with its hinge mounting screws and bracket mounting screws loosened.

**RIGHT FRONT DOOR**

**REQUIREMENT**
The right and left edges of the right front door should be even with the right top door. With the door closed it should rest flat on the horizontal surface of the dome.

**TO ADJUST**
Remove the thumb screws, latches, and springs from the door, and position the door with its mounting screws loosened.
2.05 Cabinet (continued)

(1) REQUIREMENT
THE DOOR SHOULD SET SQUARELY ON ITS OPENING IN THE DOME AND FLAT ON THE DOME.
TO ADJUST
REMOVE LATCH THUMB SCREW AND LATCH, REMOVE TORSION SPRING ANCHOR POST. POSITION THE DOOR WITH ITS HINGE MOUNTING SCREWS LOOSENED.

(2) REQUIREMENT
THE TORSION SPRING SHOULD RAISE THE DOOR UPWARD UNTIL STOPPED BY ITS STOP GUIDE BEFORE IT REACHES A VERTICAL POSITION.
TO ADJUST
ROTATE THE TORSION SPRING POST TO ACQUIRE SUFFICIENT LIFTING POWER. POSITION THE GUIDE STOP WITH ITS MOUNTING SCREW LOOSENED.

(3) REQUIREMENT
THE DOOR LATCH SHOULD HAVE SUFFICIENT LATCHING SURFACE ON ITS BRACKET AND SHOULD HOLD THE DOOR CLOSED REASONABLY TIGHT.
TO ADJUST
POSITION ITS ADJUSTING BRACKET HORIZONTALLY WITH ITS MOUNTING SCREWS LOOSENED. MODIFY UP OR DOWN POSITION OF BRACKET IF NECESSARY.
NOTE: THE REQUIREMENTS FOR PAPER GUIDE AND WINDOW GIVEN HEREIN ALSO APPLY WHERE THE CABINET IS EQUIPPED WITH A FORM GUIDE INSTEAD OF A PAPER GUIDE.

WINDOW REQUIREMENT
AS THE RIGHT FRONT DOOR IS BEING OPENED OR CLOSED THE PAPER GUIDE SHOULD CLEAR THE WINDOW BY 1/16 INCH

TO ADJUST
POSITION THE WINDOW WITH ITS RETAINER MOUNTING SCREWS LOOSENED.

PAPER GUIDE REQUIREMENT
WITH THE RIGHT TOP DOOR CLOSED, THE BOTTOM EDGE OF THE PAPER GUIDE SHOULD BE MIN. 7/64 INCH --- MAX. 9/64 INCH BELOW THE BOTTOM EDGE OF THE SURFACE OF THE WINDOW IN THE RIGHT FRONT DOOR.

TO ADJUST
POSITION THE PAPER GUIDE WITH ITS MOUNTING SCREWS LOOSENED.

LAMP POSITION REQUIREMENT
CLEARANCE BETWEEN EACH LAMP AND ITS LENS OR THE DOME MIN. 1/16 INCH

TO ADJUST
POSITION LAMP HOLDER ON ITS BRACKET WITH MOUNTING SCREWS LOOSENED.
2.07 Cabinet (continued)

CRADLE

(1) REQUIREMENT

UNDER NORMAL LOAD, THE TOP OF THE CRADLE RAILING SHOULD BE 2 INCHES $\pm$ 1/32 INCH FROM THE SHELF ON THE CABINET.

TO ADJUST

LOOSEN THE LOCK NUTS ON VIBRATION DAMPENER NO. 1, 2, AND 3 ON TOP OF THE LEFT AND RIGHT RAILS. LOOSEN THE NUT ON THE LOWER END OF STUD IN MOUNT NO. 4. ROTATE THE ADJUSTING STUDS UNTIL THE RAILS HAVE REACHED THE DESIRED HEIGHT. TIGHTEN ALL NUTS PREVIOUSLY LOOSENED.

(2) REQUIREMENT

THE FRONT RAIL SHOULD BE POSITIONED APPROXIMATELY 3-11/32 INCH $\pm$ 1/32 INCH FROM AND PARALLEL TO THE FRONT OF THE CABINET.

TO ADJUST

POSITION THE BASE RAIL ASSEMBLY WITH ITS FOUR MOUNTING SCREWS AND TWO LOCATING ECCENTRICS LOOSENED AFTER POSITIONING THE RAIL ASSEMBLY TO DESIRED POSITION, ROTATE THE ECCENTRICS AGAINST THE REAR RAIL AND LOCK IN POSITION.
LEFT FRONT CROSS BAR

NOTE:
The front cross bar brackets are located at the factory and should not be disturbed unless it is necessary to remove for replacement. Should they however be removed replace as follows:

REQUIREMENT
The adjustable cross bar brackets should be positioned 0.050 from the front edge of the cabinet body cross bar.

GROUND...

COPYHOLDER

REQUIREMENT
There should be sufficient tension on the line guide to prevent it from slipping down its shaft. It should also hold the copy in place.

TO ADJUST
Remove the mounting screws or nuts from the shaft and turn the shaft so as to increase the spring tension. Replace the shaft mounting post.

TRANSMITTER HOUSING

REQUIREMENT
The housing mounting bracket on the left front cross bar should be positioned to provide a minimum of 0.020 inch between the housing and the transmitter unit.
ARMATURE SPRING TENSION
REQUIREMENT
MIN. 1/2 OZ. ---- MAX. 1 OZ.
TO PUSH THE ARMATURE AGAINST THE CORE (VERTICALLY)

REMOTE SIGNAL BELL
REQUIREMENT
ARMATURE HELD AGAINST THE MAGNET CORE. CLEARANCE BETWEEN THE ARMATURE BALL AND THE BELL
MIN. 0.020 INCH
MAX. 0.035 INCH
TO ADJUST
BEND THE ARMATURE EXTENSION, BELOW THE ARMATURE SPRING

CHAD CHUTE AND CHAD BIN ASSEMBLIES -
(AUTOMATIC SEND-RECEIVE SET)
REQUIREMENT
WHEN CHAD BIN IS INSERTED ON SLIDE PLATES, THE CABINET DOOR SHOULD CLOSE WITHOUT INTERFERING WITH CHAD BIN.
TO ADJUST
USING THE SLACK IN THE MOUNTING SCREW BODY HOLES, POSITION THE CHAD CHUTE AND THE CHAD BIN LEFT AND RIGHT SIDE PLATES.

MOUNTING SCREWS

CHAD BIN

MOUNTING SCREWS LEFT AND RIGHT SIDE PLATES

CHAD BIN SHELF

LOWER RIGHT DOOR PANEL
MESSAGE TRAY POSITION
REQUIREMENT
THE THREE-SHELF MESSAGE TRAY SHOULD
BE POSITIONED SO AS NOT TO INTERFERE
WITH THE CABINET DOME TORSION BARS.
TO ADJUST
POSITION THE SHELVES WITH THEIR MOUNTING
SCREWS LOOSENED.