28 TELETYPewriter CABINETS

REQUIREMENTS AND ADJUSTMENTS

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1. GENERAL

1.01 This section contains the requirements
and adjustments for 28 teletypewriter

1.02 This section is reissued to include the
adjustment requirements for the 28H and
28J teletypewriter cabinets. Requirements and
adjustments of teletypewriter cabinet features,
formerly covered in other sections, have been
transferred to this section.

1.03 The 28A through 28E and 28J cabinets are
for use with the 28KSR and 28RO. The
28F, 28G, and 28H cabinets are for use with the
28ASR.

1.04 The figures in this section show the ad-
justing tolerances, positions of moving
parts, and spring tensions. The illustrations
are arranged so that the adjustments are in the
sequence that would be followed if a complete
readjustment of the apparatus were being made.
Where an illustration shows interrelated parts,
the sequence that should be followed in checking
the requirements and making the adjustments
shown is indicated by the letters (A), (B), (C),
etc.
2. REQUIREMENTS AND ADJUSTMENTS

A. 28A through 28E and 28J Teletypewriter Cabinets

2.01 Dome, Dome Catch, and Small Door Catch

NOTE: THE FOLLOWING ADJUSTMENTS ARE MADE AT THE FACTORY AND SHOULD NOT BE DISTURBED UNLESS THERE IS REASON TO BELIEVE THAT THE PARTS ARE OUT OF ADJUSTMENT OR HAVE BEEN DISASSEMBLED.

(A) DOME

(1) REQUIREMENT
THE DOME SHOULD BE CENTERED ON THE CABINET FROM RIGHT TO LEFT AND PLACED MIN. 3/16 INCH MAX. 1/4 INCH FROM THE FRONT EDGE OF THE CABINET.

TO ADJUST
POSITION THE DOME WITH THE SIX NUTS WHICH SECURE THE DOME HINGES TO THE DOME LOOSENED. TIGHTEN THE NUTS.

(2) REQUIREMENT

TO ADJUST
POSITION THE DOME DOWNWARD WITH THE SIX NUTS WHICH SECURE THE DOME HINGES TO THE CABINET LOOSENED. TIGHTEN THE NUTS.

(B) DOME CATCH

(1) REQUIREMENT

(2) REQUIREMENT
THE DOME CATCH SHOULD UN-LATCH WHEN THE CATCH BUTTON IS DEPRESSED NO DEEPER THAN THE OUTER SURFACE OF THE DOME.

TO ADJUST
BEND THE TWO DOME CATCHES.

(C) SMALL DOOR CATCH

(1) REQUIREMENT
THE SMALL DOOR SHOULD SECURELY LATCH.

(2) REQUIREMENT
WHEN THE DOOR IS RELEASED FROM ITS CATCH IT SHOULD SPRING OPEN AT LEAST 1/2 INCH.

TO ADJUST
BEND THE SMALL DOOR CATCH. RECHECK REAR OF DOOR TO MAKE CERTAIN IT IS FLUSH WITH OR SLIGHTLY ABOVE THE DOME.
2.02 Small Door, Detent Arm, Detent Bracket and Counterbalance

(A) SMALL DOOR REQUIREMENT

THE SMALL DOOR SHALL BE CENTERED FROM RIGHT TO LEFT. IT SHALL BE POSITIONED SO AS TO PROVIDE A LIGHT TIGHT SEAL BETWEEN THE RUBBER GASKET AND THE LEDGE OF THE DOME AT ALL POINTS.

TO ADJUST

LOosen THE TWO NUTS THAT SECURE DETENT BRACKET TO DOME BRACKET. LOOSEN THE TWO NUTS THAT SECURE DETENT ARM TO HINGE EXTENSION. LOOSEN THE FOUR NUTS THAT SECURE DOOR HINGES TO DOME BRACKET. PUSH HINGES AGAINST DOME BRACKET AND TIGHTEN THE FOUR NUTS THAT SECURE HINGES TO DOME BRACKET. LOOSEN THE THREE NUTS THAT SECURE HINGE EXTENSION TO DOOR. SLIDE DOOR TO ITS EXTREME FORWARD POSITION AND POSITION CENTRALLY FROM SIDE TO SIDE WITH 1/32-INCH MINIMUM CLEARANCE ON EACH SIDE. POSITION THE DOOR SO THAT IT IS FLUSH WITH OR NO MORE THAN 3/32 INCH ABOVE THE DOME. DOOR IS TO BE PARALLEL TO DOME WITHIN 3/32 INCH. TIGHTEN THE THREE NUTS THAT SECURE HINGE EXTENSION TO DOOR. IF THE ABOVE REQUIREMENTS CANNOT BE MET LOOSEN THE FOUR NUTS THAT FASTEN DOOR HINGES TO HINGE EXTENSION. POSITION DOOR FLUSH WITH OR SLIGHTLY ABOVE DOME SO THAT THE ABOVE REQUIREMENTS ARE MET. TIGHTEN THE FOUR NUTS.

(B) DETENT ARM AND DETENT BRACKET REQUIREMENT

WITH THE DOME CLOSED, THE SMALL DOOR SHOULD SPRING OPEN AT LEAST 1/2 INCH WHEN RELEASED FROM ITS CATCH. THE SMALL DOOR SHOULD REMAIN IN ITS DETENTED POSITION WHEN THE DOME IS OPENED INTO ITS FULLY RAISED POSITION.

TO ADJUST

POSITION THE DETENT ARM AND THE DETENT BRACKET BY MEANS OF THEIR ELONGATED MOUNTING HOLES. TIGHTEN THE FOUR NUTS.

(C) COUNTERBALANCE REQUIREMENT

THE DOME SHOULD REMAIN IN ITS MAXIMUM OPEN POSITION AND NOT CLOSE UNLESS MOVED MANUALLY.

TO ADJUST

TURN THE SPRING ADJUSTING SCREW.
2.03 Copyholder, Window, Paper Guide, Indicator Lamp, and Copy Lamp

Note 1: For the window and paper guide requirements on cabinets equipped with sprocket-feed typing units, refer to the section covering 28 typing unit requirements and adjustments.

Note 2: Copyholder requirement does not apply for the 28D typewriter cabinet.

(A) 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 line guide shaft and turn the shaft so as to increase the spring tension. Remount the shaft and tighten screws or nuts.

(B) WINDOW AND PAPER GUIDE

(1) REQUIREMENT
The paper guide on small door should clear the window when the door is opened or closed.
Min. 0.080 inch  Max. 0.080 inch

To adjust: Position window with its retainer screws loosened.

(2) REQUIREMENT
With small door closed, the bottom edge of the paper guide should be Min. 7/64 inch  Max. 9/64 inch below bottom surface of window.

To adjust: Position the paper guide with its mounting screws loosened.

(C) INDICATOR LAMP REQUIREMENT
Clearance between indicator lamp and lens - approximately 1/16 inch.

To adjust: Position lamp holder on its bracket with mounting screws loosened.

(D) COPY LAMP REQUIREMENT
Clearance between copy lamp and cover approximately 1/16 inch.

To adjust: Position lamp holder on its bracket with its mounting nut loosened.
B. 28F, 28G, and 28H Teletypewriter Cabinets

2.04 Dome and Dome Latch

**DOME REQUIREMENT**

The dome should be centered on the cabinet from right to left and placed approximately 0.050 inch from the front edge of the cabinet.

To adjust position the dome with the screws, which secure the dome hinge to the cabinet, loosened.

**NOTE:** If necessary to check requirement, remove blank control panel.

**DOME LATCH REQUIREMENT**

With the dome closed and touching the cabinet, the dome latches should be latched with a clearance of minimum some max. 0.015 inch between the latching surface of each latch and its latching surface of the cabinet.

To adjust position each latch with its mounting screw loosened.
2.05 Torsion Bar and Doors

The torque necessary to hold the dome properly varies according to the weight of the dome and shall be adjusted to prevent the dome from latching when it falls freely of its own weight. The dome shall come to rest no more than 9 inches above the right-hand front edge of the console body.

To adjust:
- Turn the shoulder nuts on the eye bolts clockwise to increase the spring torque, and counterclockwise to decrease the spring torque.

Top Doors (Right and Left)

Requirement:
- The doors shall set squarely and uniformly on the contour of the dome.

To adjust:
- Position each door with its hinge mounting screws loosened.
- Remove the spring detent from center of dome and position the door with its hinge mounting screws and bracket mounting screws loosened.

Top Middle Door

Requirement:
- The door shall rest flat and squarely on the dome. The reinforcement channel shall 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 shall be even with the right top door, with the door closed it shall 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.
2.06 Window, Paper Guide, and Left Front Door

Note 1: For the window and paper guide requirements on cabinets equipped with sprocket-feed typing units, refer to the section covering 28 typing unit requirements and adjustments.

Note 2: 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.
2.07 Lamp Position and Copyholder

**Note:** Copyholder requirement does not apply for the 28H Teletypewriter Cabinet.

![Diagram of lamp position and copyholder]

**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.

**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 line guide shaft and turn the shaft so as to increase the spring tension. Remount the shaft and tighten screws or nuts.
2.08 Cradle Assembly

CRADLE

(1) REQUIREMENT
UNDER NORMAL LOAD, THE TOP OF THE CRADLE RAILING SHALL BE 2 INCHES FROM THE SHELF OF 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 SHALL BE POSITIONED APPROXIMATELY 3-11/32 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.
2.09 Transmitter-Distributor Housing: There shall be a clearance of min 0.020 inch between the transmitter-distributor housing and the transmitter-distributor unit.

Note 1: To adjust, position the transmitter-distributor housing bracket on the left front crossbar.

Note 2: The front crossbar brackets are positioned at the factory and should not be disturbed unless it is necessary to remove them for replacement. However, should they be removed, replace them to meet the following requirement: The adjustable crossbar brackets shall be positioned 0.050 inch from the front edge of the cabinet body crossbar.

2.10 Tape-beater Assembly (28F Teletypewriter Cabinet)
C. All Teletypewriter Cabinets (If So Equipped)

2.11 Remote Signal Bell and Cradle Mechanisms

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

CRADLE
REQUIREMENT
TOP OF HINGE BRACKET PARALLEL TO TOP OF HINGE BAR.
TO ADJUST
TURN STOP SCREW WITH LOCK NUT LOOSENED.

HINGE BAR
STOP SCREW
LOCK NUT
HINGE BRACKET
2.12 Low-paper and Paper-out Mechanisms

LOW-PAPER AND PAPER-OUT SPRING TENSION REQUIREMENT
MIN. 1/4 OZ.
MAX. 1-1/2 OZ.
TO PULL THE LOW-PAPER AND PAPER-OUT LEVERS UP TO A POINT WHERE THE SWITCHES OPERATE.

2.13 End-of-Form Alarm Mechanism

END-OF-FORM LEVER REQUIREMENT
END-OF-FORM LEVER SHALL MOVE FREELY BETWEEN TYPING UNIT AND PAPER GUIDE ON THE CABINET. CHECK WITH DOME CLOSED AND SMALL DOOR OPEN.

TO ADJUST
POSITION END-OF-FORM LEVER FORWARD OR BACKWARD WITH ITS CLAMP SCREWS LOOSENED AND UP OR DOWN WITH END-OF-FORM ASSEMBLY MOUNTING SCREWS LOOSENED.

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2.14 Offset Copyholder

(A) PIVOT ARM AND LINE GUIDE

(1) REQUIREMENT
There shall be sufficient tension on the pivot arm to hold it in the desired position.
To adjust
Tighten the bearing plate mounting screws.
(If shims are required, remove them.)

(2) REQUIREMENT
There shall be sufficient tension on the line guide to prevent it from slipping down its pivot arm.
To adjust
Remove the lower bearing plate. Remove the screw from the bottom of the pivot arm. Slip the line guide off the pivot arm. Rotate the bushing in the line guide to increase the tension of the torsion spring. Reassemble.

(B) COPY HOLDER BRACKET AND TOP BRACKET ALIGNMENT ON TABLE MOUNTED CABINET (NOT ILLUSTRATED)

Requirement
With lower bracket in forward position, the hole in the top bracket shall align with the top hole in copyholder bracket.
To adjust
Position lower bracket along its elongated mounting holes by means of its two nuts.

2.15 Directory Holder

DIRECTORY HOLDER (TABLE CABINET)

Requirement
The directory holder shall fit snugly against the wall of the cabinet.
To adjust
Loosen the four bottom inner set of nuts which secure the shock mounts and the holder. Push the holder against the wall of the cabinet and tighten the nuts.