

◆“DATASPEED*” 40 DISPLAY MONITOR (40MN101 and 40MN201)

ADJUSTMENTS AND LUBRICATION ◆

CONTENTS	PAGE
1. GENERAL	1
2. ELECTRICAL ADJUSTMENTS....	2
Horizontal Centering.....	3
Master Brightness	4
Focus	5
Vertical Size	5
Vertical Linearity	6
Horizontal Size	6
Horizontal Linearity	7
Yoke Orientation	7
Display Centering	8
3. MECHANICAL ADJUSTMENTS ...	8
Tube Tilt Mechanism.....	8

1. GENERAL

1.01 This section provides the adjustment procedures for the DATASPEED 40 display monitor (40MN101 and 40MN201) (Fig. 1).

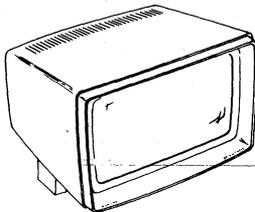


Fig. 1—DATASPEED 40 Display Monitor

1.02 ◆ This section is being reissued to include a 40MN201 monitor code, revision to the focus adjustment and a new horizontal centering adjustment on the interface/amplifier assembly. Revision arrows are used to emphasize the more significant changes. ◆

1.03 The electrical adjustments are to be made with the monitor housing removed and the heat sink lowered. Refer to Section 582-213-701 to perform these operations.

Danger: Wear safety glasses when the monitor housing is removed, and observe all safety precautions to avoid accidental electrical shock or breakage of the cathode ray tube.

1.04 To make the electrical adjustments, the monitor should be operated as part of a full edit DATASPEED 40 KD Set, or equivalent (Fig. 2).

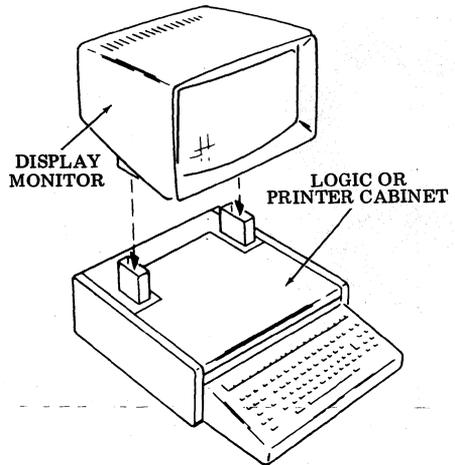


Fig. 2—Typical Display Monitor Arrangement

1.05 Most of the electrical adjustments require a test pattern (Fig. 3) on the display tube face consisting of the character “E” (or equivalent) in all positions around the perimeter of the display.

*Registered Trademark of AT&TCo.

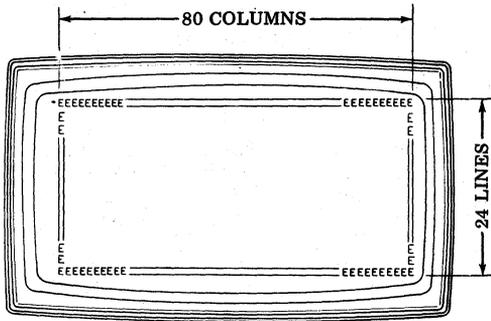
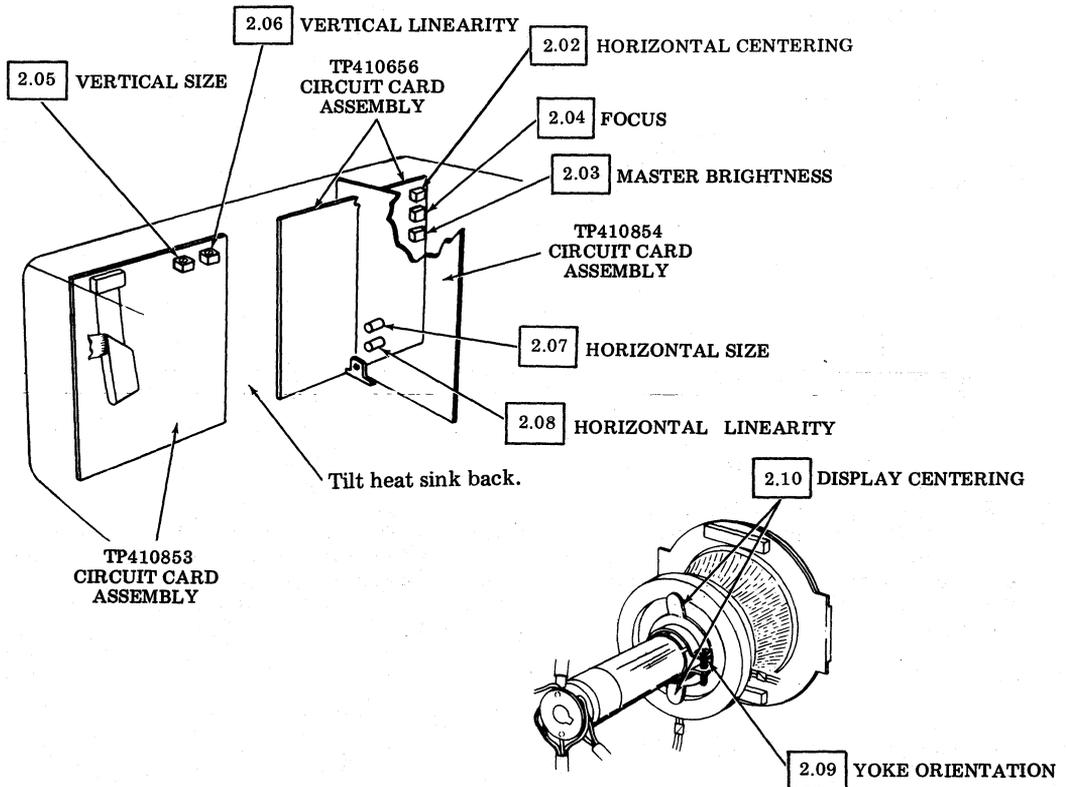


Fig. 3—Display Test Pattern

1.06 No lubrication is required in the display monitor.

2. ELECTRICAL ADJUSTMENTS

2.01 The number alongside each adjustment (Fig. 4) indicates the paragraph covering the respective adjustment.



◆ Fig. 4—Electrical Adjustments ◆

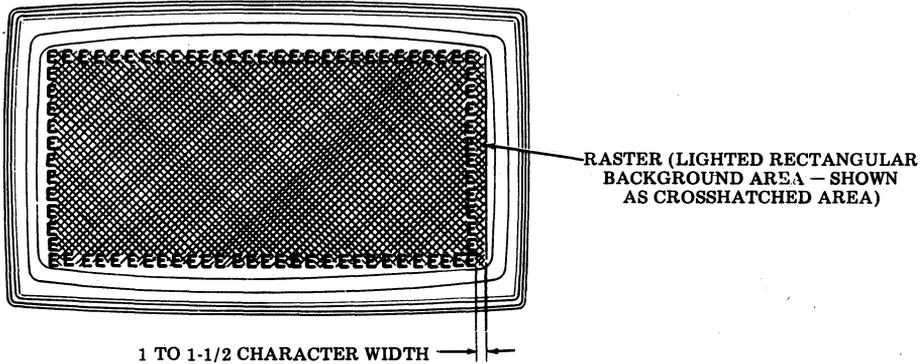
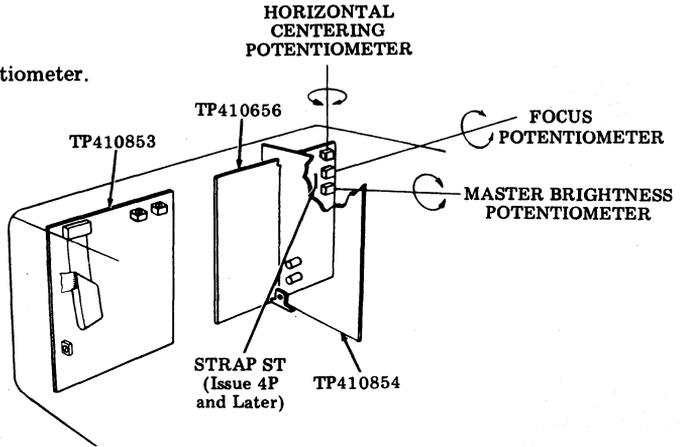
2.02 ♦ Horizontal Centering ♦

Requirement (TP410656 Issue 5A and later)

The space between the 80th character and the right edge of the raster shall be 1 to 1-1/2 character width (gauged by eye) after a three minute warmup.

To Adjust

Rotate horizontal centering potentiometer.

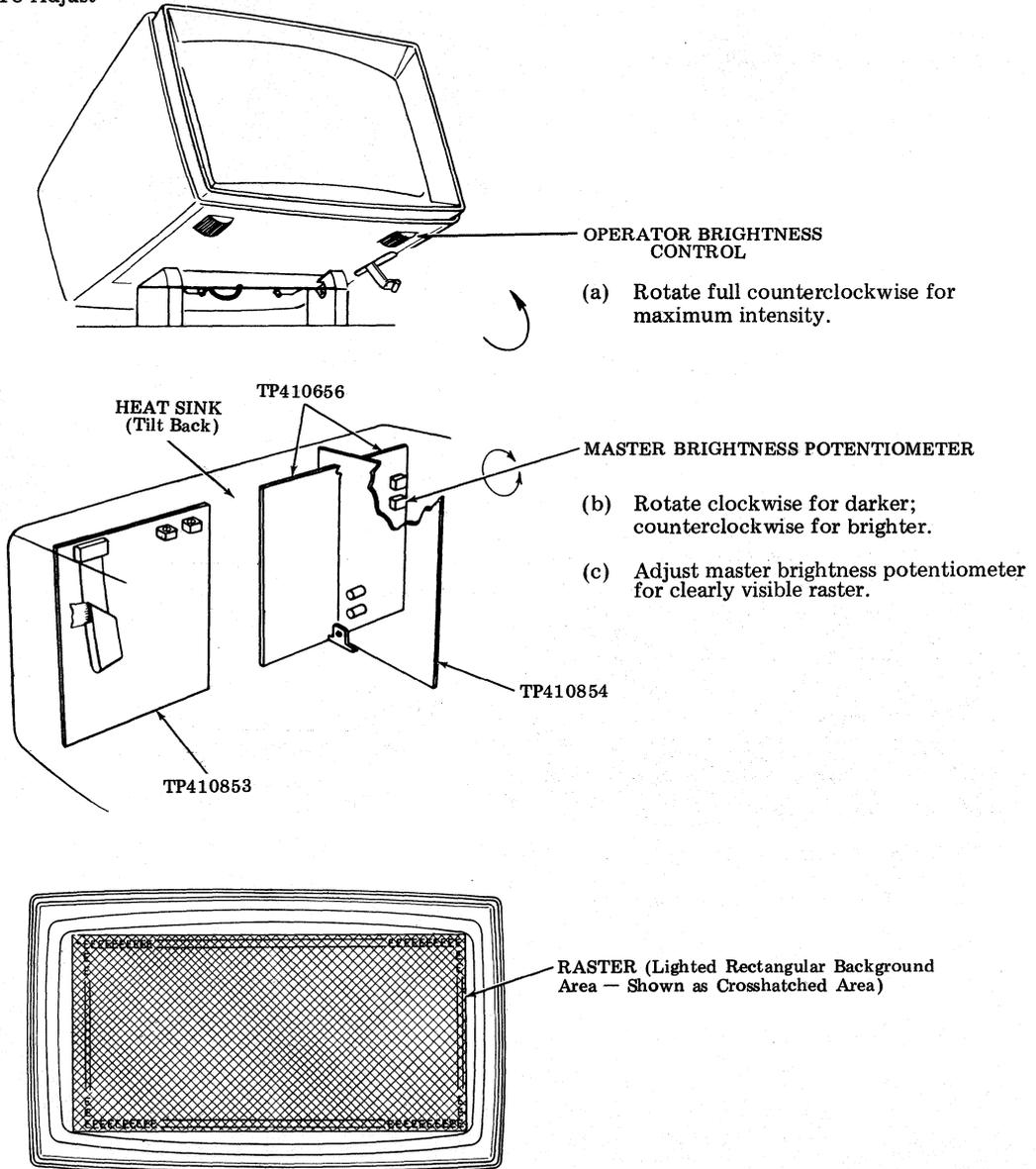


2.03 Master Brightness

Requirement

After a 3-minute warm-up, the raster (lighted rectangular background) shall be clearly visible (not brilliant) with operator brightness control turned full counterclockwise to maximum intensity.

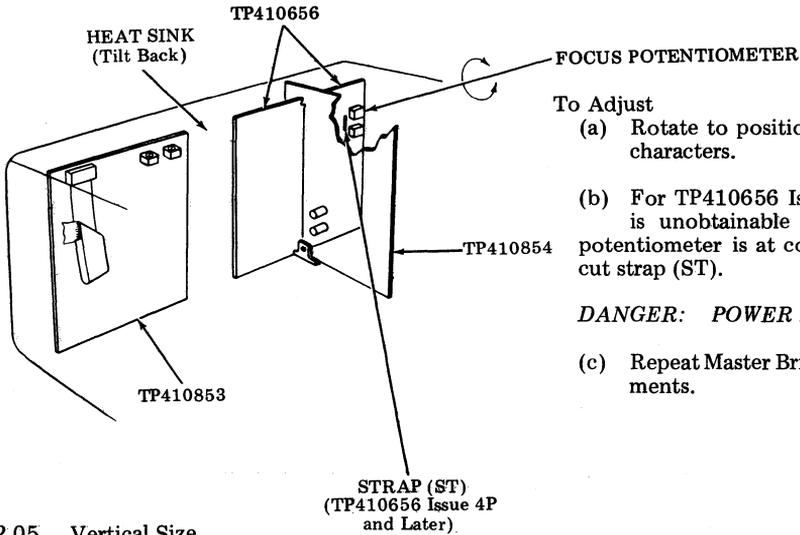
To Adjust



2.04 Focus

Requirement

The display characters shall be well defined.



To Adjust

- (a) Rotate to position giving sharpest display characters.
- (b) For TP410656 Issue 4P and later, if focus is unobtainable and sharpest setting of potentiometer is at counterclockwise extreme, cut strap (ST).

DANGER: POWER DOWN FIRST.

- (c) Repeat Master Brightness and Focus adjustments.

2.05 Vertical Size

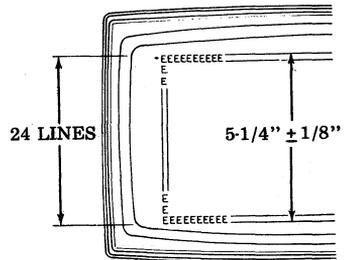
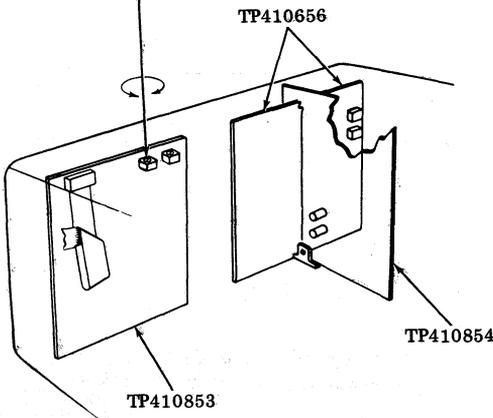
Requirement

After a 3-minute warm-up, the height of the 24 lines shall be 5-1/4 inches $\pm 1/8$ inch.

To Adjust

Rotate clockwise to decrease; counterclockwise to increase.

VERTICAL SIZE POTENTIOMETER



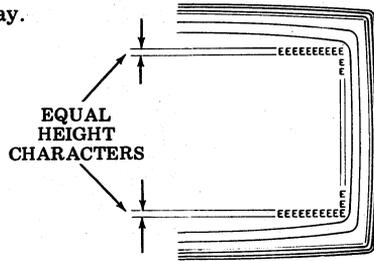
2.06 Vertical Linearity

Requirement

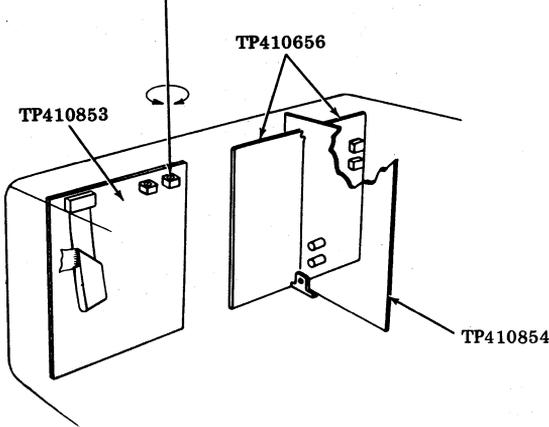
Character height shall be uniform throughout the display.

To Adjust

Rotate clockwise to decrease top row;
counterclockwise to decrease bottom.



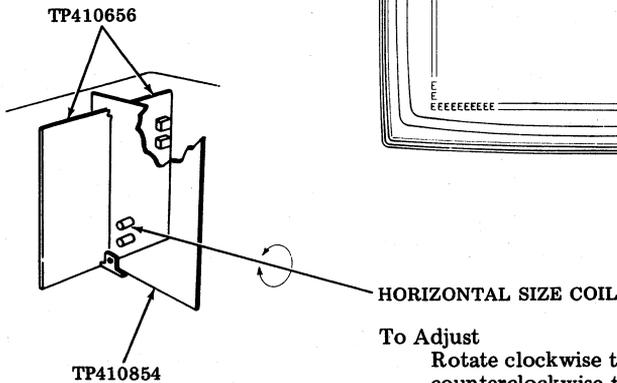
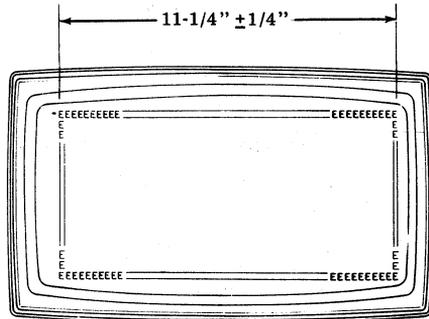
VERTICAL LINEARITY POTENTIOMETER



2.07 Horizontal Size

Requirement

After a 3-minute warm-up, the width of 80 characters shall be 11-1/4 inches $\pm 1/4$ inch.



HORIZONTAL SIZE COIL

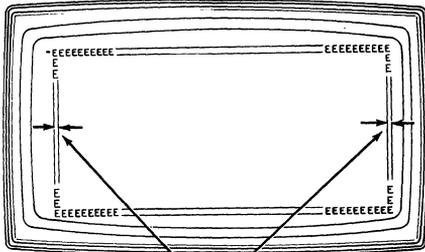
To Adjust

Rotate clockwise to decrease width;
counterclockwise to increase width.

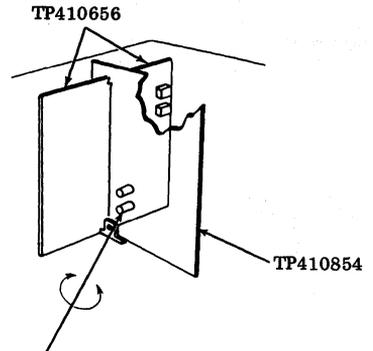
2.08 Horizontal Linearity

Requirement

Character width shall be uniform throughout the display as gauged by eye.



EQUAL WIDTH CHARACTERS
(Gauged by Eye)



HORIZONTAL LINEARITY COIL

To Adjust

- (a) Rotate for uniform width characters.
- (b) Check and refine (if necessary) 2.07 Horizontal Size adjustment.

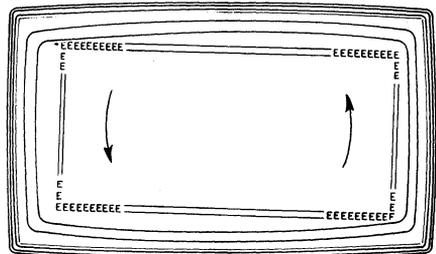
2.09 Yoke Orientation

Requirement

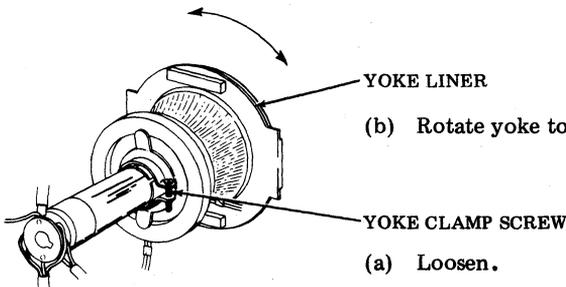
The rectangular display area shall be aligned (rotationally) to the cathode ray tube face.

Warning: High voltages are present at the yoke. Handle only by the yoke liner. The neck of the CRT is fragile. Be careful not to strike the glass with screwdrivers, etc. Do not overtighten the yoke clamp screw.

To Adjust



Rotate yoke to align display.



YOKE LINER

YOKE CLAMP SCREW

- (b) Rotate yoke to align display with CRT face.

- (a) Loosen.

- (c) Do not overtighten.

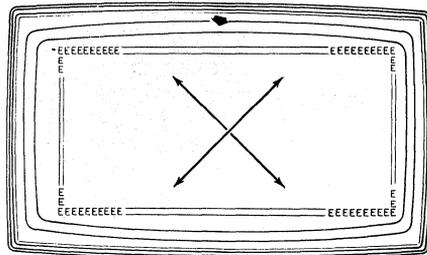
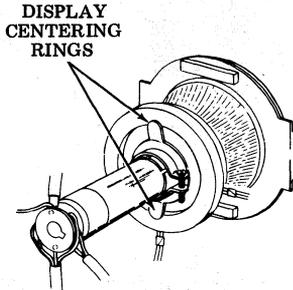
2.10 Display Centering

Requirement

The display (80 characters by 24 lines) shall be centered on the CRT face as gauged by eye.

To Adjust

Rotate two centering rings by tabs.



Display movement as centering rings are rotated.

3. MECHANICAL ADJUSTMENTS

3.01 Tube Tilt Mechanism

Requirement (Early Design — Wheel Type)

Backlash shall be minimum between the tube tilt gear and rack without binding throughout tilt range.

To Adjust

Note: The early design wheel type tube tilt mechanism is replaced in current design by a lever type tube tilt mechanism which does not require adjustment. If any of the wheel type tube tilt components require replacement, install TP402286 Modification Kit to provide improved lever type tilt mechanism. Reference Specification 50816S.

