

SECTION 4

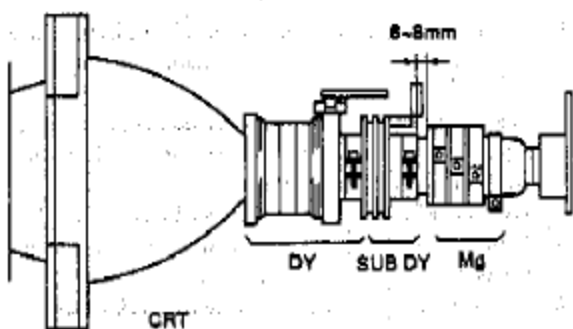
SET-UP ADJUSTMENTS

Note:

- When exchanging CRT, fit tightly DY to CRT, set neck assembly position and adjust.
- Service mode is released when the power is turned OFF.

4-1. NECK ASSEMBLY INSTALLATION

1. Fit DY tightly to CRT funnel first and then tightly fit Sub DY.
2. Temporary install 2-pole and 4-pole magnet assembly 6-8mm away from left DY.
3. Installing CB board.



4-2. DISPLAY INCLINATION ADJUSTMENT BY MAIN DY

1. Turn on the power switch of the set and the power key of the remote commander.
2. Press the **TEST** key for five seconds, and press the arrow **▲** key to set the service man mode.
3. Press **SKEW**, and use the **▲** and **▼** keys to set the V direction data of R, G, B to "128".

R- $\left[\begin{array}{l} \text{H: --} \\ \text{V: 128} \end{array} \right.$ G- $\left[\begin{array}{l} \text{H: --} \\ \text{V: 128} \end{array} \right.$ B- $\left[\begin{array}{l} \text{H: --} \\ \text{V: 128} \end{array} \right.$

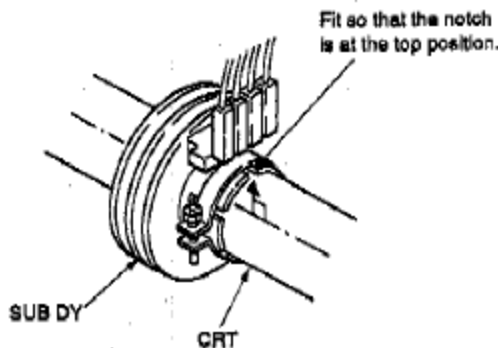
4. Rotate the main DY, and adjust the inclination of the display.
 - If the red CRT has been replaced, output the green and red cross hair patterns, and adjust the horizontal lines of the cross hair pattern to the green CRT which have been adjusted.
 - If the green or blue CRT have been replaced, output the cross hair patterns as above, and output the two colors of the CRT that was replaced and other CRT which have been adjusted, and adjust the horizontal lines of the cross hair pattern to the CRT which have been adjusted.
5. Secure the main DY in place after completing the adjustments.

Note 1. Be sure to adjust the main DY after the V direction data of **SKEW** has been adjusted to "128".

Note 2. Adjust so that the horizontal lines of the cross hair pattern coincide. (The vertical lines are adjusted during SKEW adjustments, after the main DY has been adjusted.)

4-3. SUB-DY ADJUSTMENT

1. Fit to main DY and set at the mechanical center.

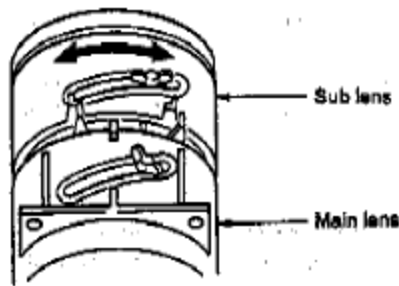


4-4. GREEN LENS FOCUS ADJUSTMENT

1. Use the commander to select an input not connected to a signal, and set it into a non signal condition. (To set $f_{H}=34$ kHz.)
2. Press the **TEST** key for five seconds, and press the **▲** key next to set the service man mode. (Not required when already in the service man mode).
3. Press the **TEST** key, and output the H pattern.
4. Adjust "CONTR" and "BRT" of PICTURE CONTROL, and set CONTR: 50 BRT: 50.
5. Press the CUT OFF **R** and **B** keys, and set to green (single color).
6. Loosen the screw of the main lens of green, rotate the lens so that the H pattern at the center of the screen becomes the clearest, and tighten the screw once more.

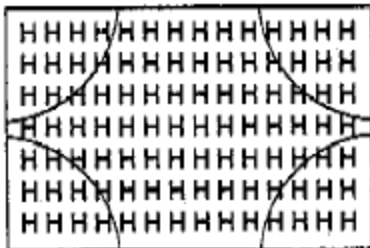
* Pay attention to the center of the screen.
(Around \bigcirc in the figure below)





- Loosen the screw of the green sub lens, and rotate the lens so that the H pattern on the screen becomes the clearest. Then, tighten the screw once again.

* At this time, adjust the areas in the figure below so that the focus at the four corners are uniform.



- Repeat 6. to 7. two to three times, and adjust so that the H pattern on the whole screen is clear.

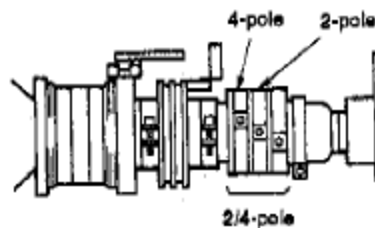
4-5. RED LENS FOCUS ADJUSTMENT

- Press the CUT OFF **[G]** and **[B]** keys of the commander, and set to red (single color).
- Adjust as in the green lens focus adjustment.

4-6. BLUE LENS FOCUS ADJUSTMENT

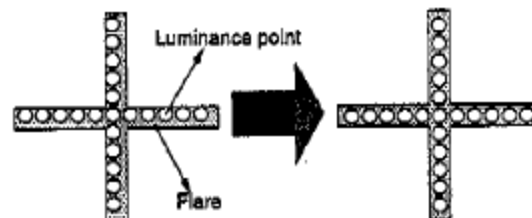
- Press the CUT OFF **[R]** and **[G]** keys of the commander, and set to blue (single color).
- Adjust as in the green lens focus adjustment.

4-7. GREEN 2/4-POLE ADJUSTMENT



- Use the commander to select an output not connected to a signal, and set it into a non signal condition. (To set $f_s=34$ kHz)
- Press the **[TEST]** key for five seconds, and press the **[▲]** key to set the service man mode (Not required when already in service man mode). Press the **[RESET]** key, and set CONTR:MAX, BRT:50.
- Press the CUT OFF **[R]** and **[B]** keys, and set to green (single color).
- Press the **[TEST]** key, and output the cross hair pattern.
- Rotate the green focus VR of the focus pack slightly to the left of the JUST point, and adjust so that there is flare on the cross hair pattern.
- Adjust the 2-pole magnet so that the luminance point lies at the center of the flare.

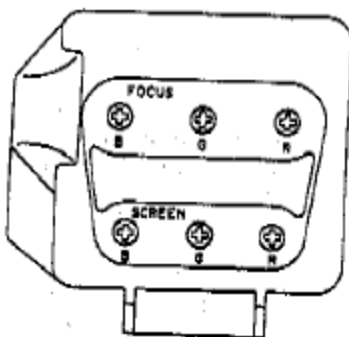
* Adjust so that the luminance point lies at the center of the flare.



- Press the **[TEST]** key and output the dot pattern.
- Rotate the green focus VR of the focus pack slightly to the right of the JUST point, and over-focus the dot.
- Adjust the 4-pole magnet so that the dot becomes round.



10. Repeat steps 4. to 9. and perform tracking as required.
11. Set the focus to JUST.



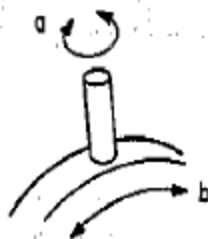
4-8. RED 2/4-POLE ADJUSTMENT

1. Press the CUT OFF **G** and **B** keys of the commander and set to red (single color).
2. Perform as in the green 2/4-pole adjustment.

4-9. BLUE 2/4-POLE ADJUSTMENT

1. Press the CUT OFF **R** and **G** keys of the commander and set to blue (single color).
2. Perform as in the green 2/4-pole adjustment.

Note: Method of adjusting the 2/4-pole



- a Modulates the power of the magnetic force
b Modulates the direction of the magnetic force.

To adjust the 2-pole or 4-pole, rotate the knob in the direction shown a and then in the direction shown b, and adjust to optimum.

4-10. GREEN ELECTRIC FOCUS ADJUSTMENT

1. Use the commander to select an input not connected to a signal, and set it into a non signal condition.
(To set $f_{sc}=34$ kHz)
2. Press the **TEST** key continuously for five seconds, and press the **▲** key to set the service man mode.
(Not required if already in the service man mode.)
3. Press the **RESET** key and set CONTR: 80, BRT: 50.
4. Press the CUT OFF **R** and **B** keys, and set to green (single color).
5. Rotate the GREEN volume of the focus pack, and adjust so that the H pattern is the clearest.

4-11. RED ELECTRIC FOCUS ADJUSTMENT

1. Press the CUT OFF **G** and **B** keys of the commander and set to red (single color).
2. Adjust as in the green electric focus adjustment.

4-12. BLUE ELECTRIC FOCUS ADJUSTMENT

1. Press the CUT OFF **R** and **G** keys of the commander, and set to blue (single color).
2. Adjust as in the green electric focus adjustment.

Note 1: The brightness in the blue electric focus adjustment changes according to its focus point. The brightest spot is at the JUST point.

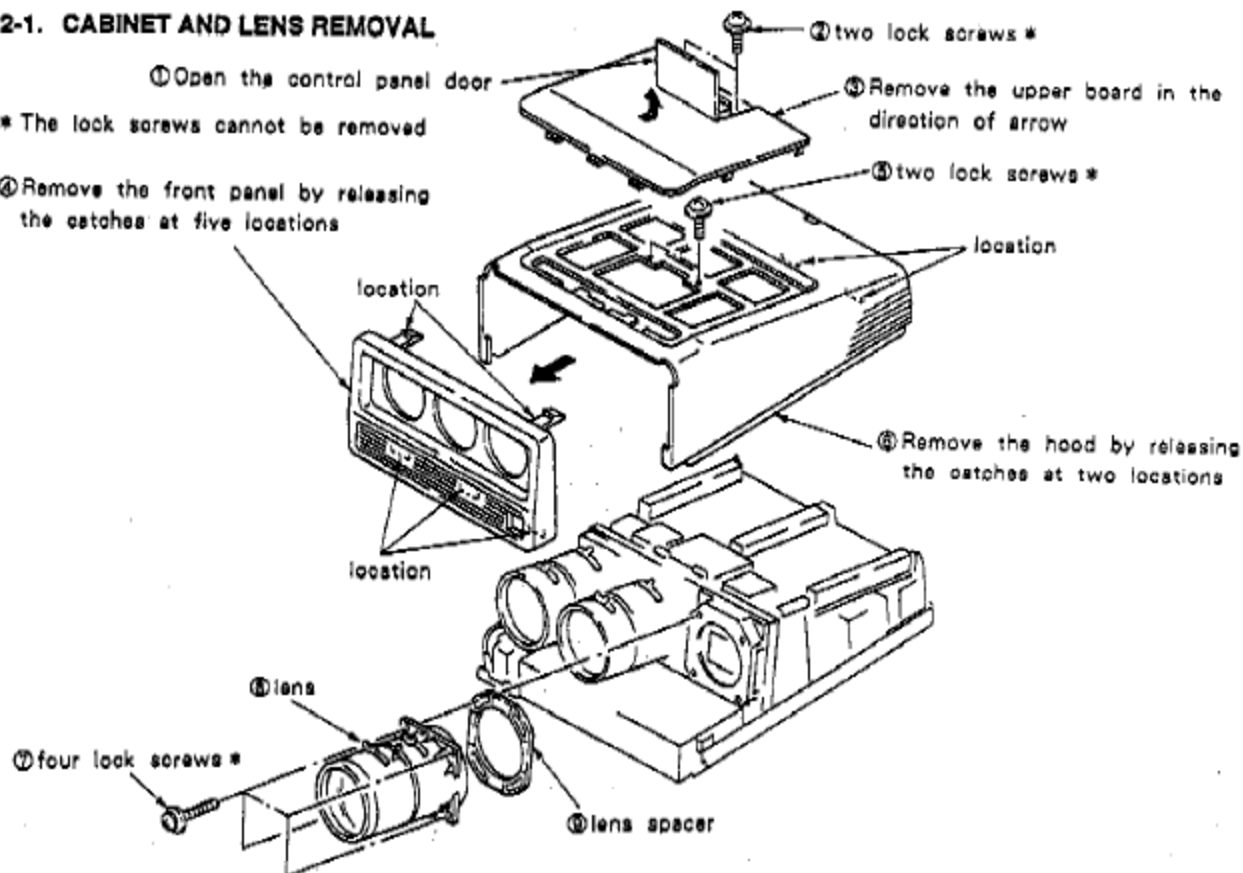
Note 2: When the blue electric focus adjustment has been performed, the brightness of blue will change and the W/B may shift. Do not adjust unless the CRT has been replaced.

SECTION 2 DISASSEMBLY

2-1. CABINET AND LENS REMOVAL

- ① Open the control panel door
* The lock screws cannot be removed

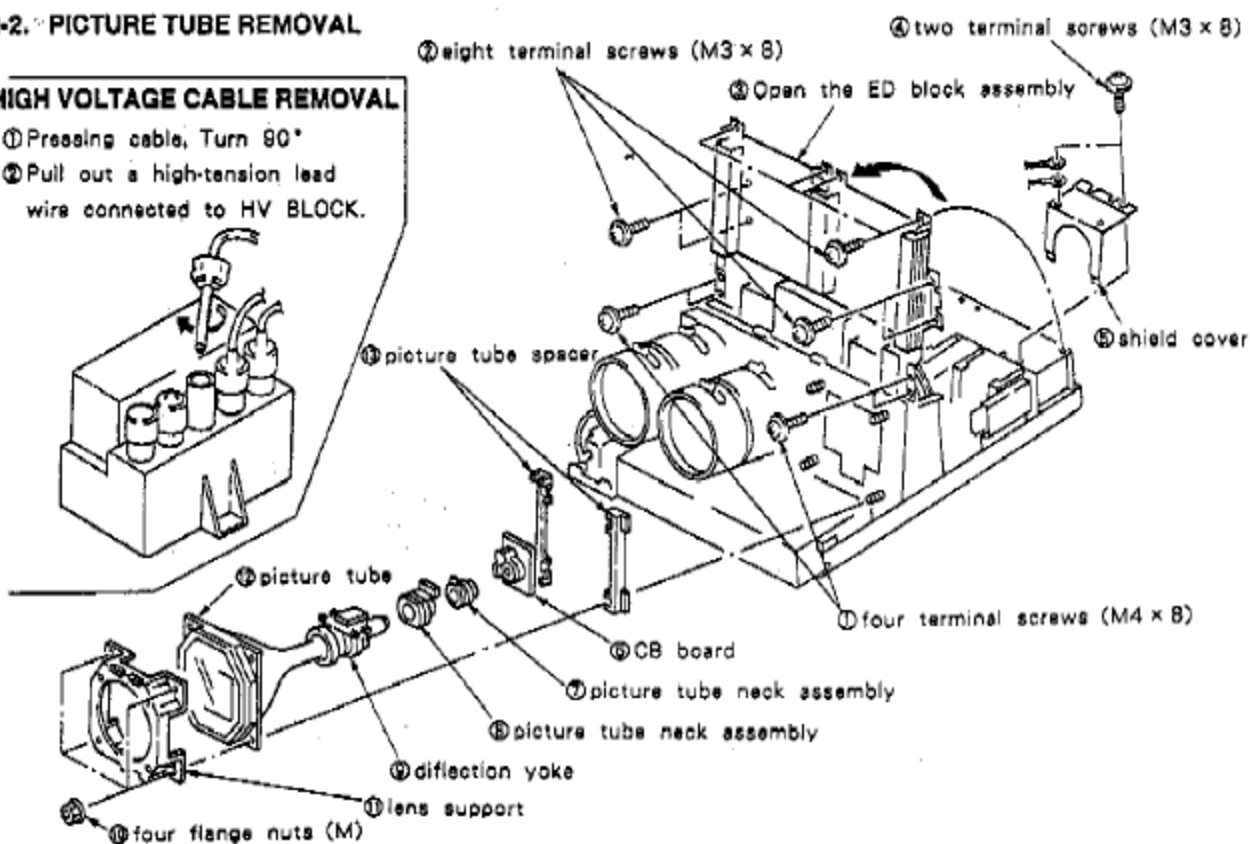
- ② Remove the front panel by releasing the catches at five locations



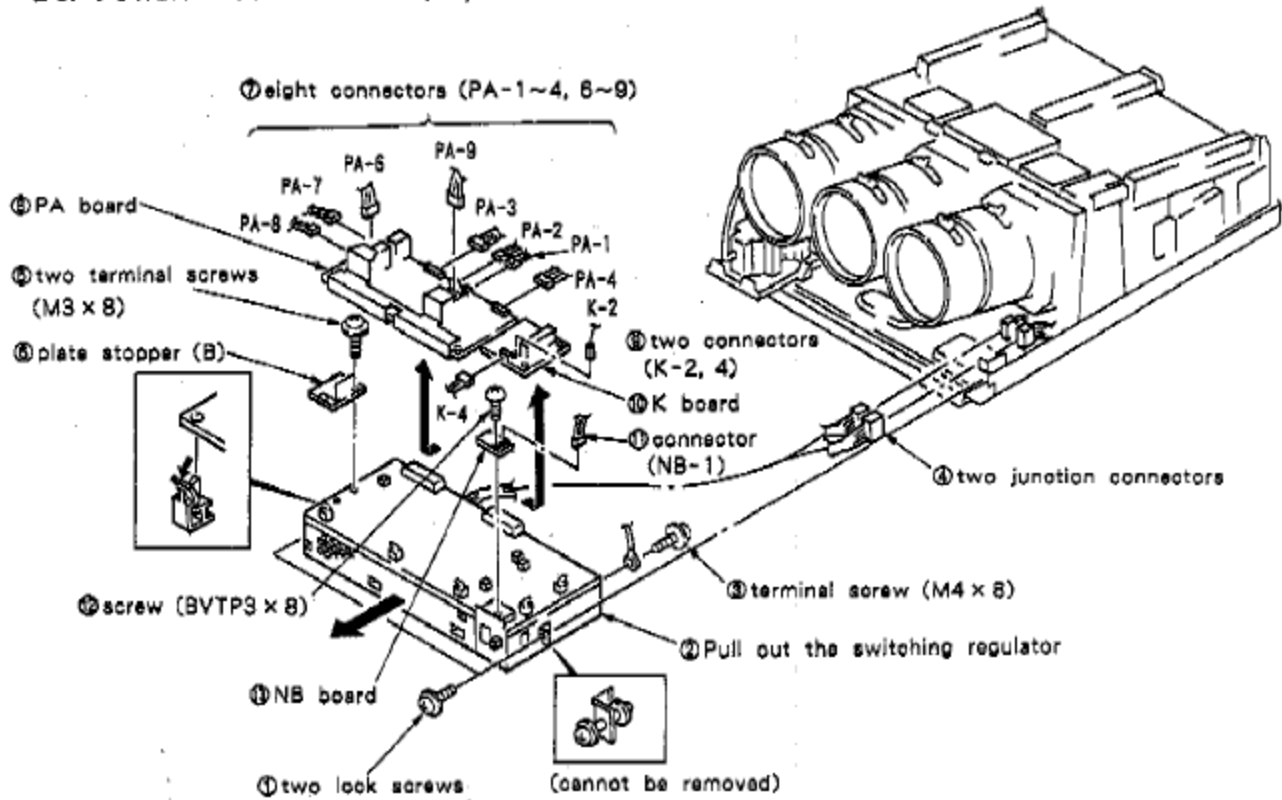
2-2. PICTURE TUBE REMOVAL

HIGH VOLTAGE CABLE REMOVAL

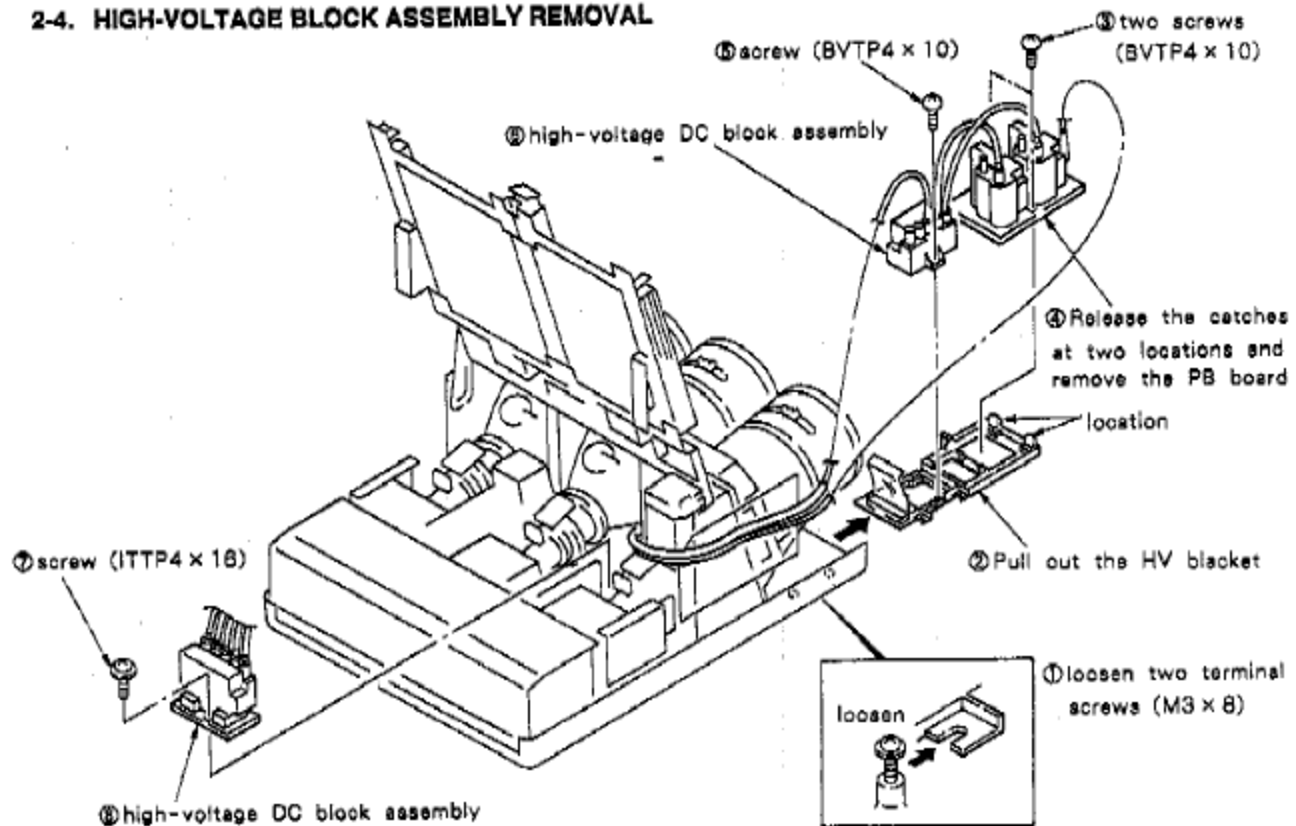
- ① Pressing cable, Turn 90°
② Pull out a high-tension lead wire connected to HV BLOCK.



2-3. POWER BLOCK REMOVAL (PA, K AND NB BOARDS)



2-4. HIGH-VOLTAGE BLOCK ASSEMBLY REMOVAL



1-19. DATA RESET

There are two possibilities for data reset, the data reset and factory reset.

Previous data reset

The data are reset to the previously saved data (the data before the adjustment).

Factory reset

The data are reset to the factory preset level. The factory reset can be performed after the previous data reset.

How to Reset the Data

1 Select the adjustment mode to be reset.

2 Press the ◀ and ▶ keys simultaneously.
The following display appears.

```

SIZE ADJ
R__

REGISTRATION RED
DATA RESET MODE
Do you wish to return to
previously* saved data?

YES: 
NO: 
  
```

* Check that "previously" is displayed here.

(ex. To reset all the red registration adjustment data to the previously saved data)

3 Press the ▲ key.

```

SIZE ADJ
R__

REGISTRATION RED
DATA RESET MODE
Reset complete!

ADV:    
  
```

All the red registration adjustment data will be reset to the previously saved data.
(Previous data reset)

4 Press the ◀ and ▶ keys simultaneously again.
The following display appears.

```

SIZE ADJ
R__

REGISTRATION RED
DATA RESET MODE
Do you wish to return to
factory* preset data?

YES: 
NO: 
  
```

* Check that "factory" is displayed here.

(ex. To reset all the red registration adjustment data to the factory preset level)

5 Press the ▲ key.
All the red registration adjustment data will be reset to the factory preset level.
(Factory reset)

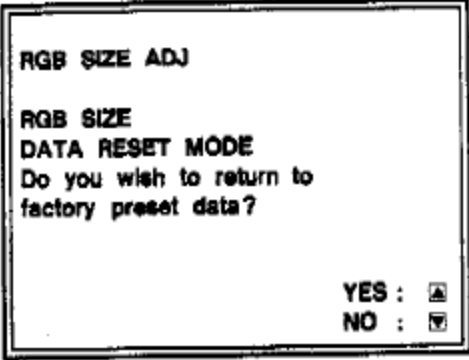
Resetting the Registration Standard Data to the Factory Preset Levels

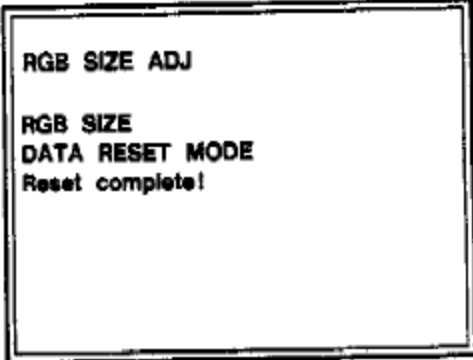
If the registration data were adjusted and saved, you need reset the data to the factory preset levels before starting the registration adjustment.

<p>1 Press the CENT R and B keys simultaneously to enter the green centering adjustment mode.</p>	<p>5 Press the ADJ R key and then perform the factory reset operation. The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data are reset to the factory preset levels.</p>
<p>2 Follow steps 2 to 5 on page 103. The centering adjustment data of the red, green and blue signals are reset to the factory preset levels.</p>	<p>6 Press the ADJ B key and then perform the factory reset operation. The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data are reset to the factory preset levels.</p>
<p>3 Press the SIZE key.</p>	<p>7 Press the BLKG key.</p>
<p>4 Press the ADJ G key and then perform the factory reset operation. The SIZE, LIN, SKEW, BOW, KEY, PIN and ZONE adjustment data are reset to the factory preset levels.</p>	<p>8 Press the TEST key and then perform the factory reset operation. The UPPER, LOWER, LEFT and RIGHT blanking adjustment data are reset.</p>

The resetting of the standard data to the factory preset levels is complete. Then start the registration adjustment.

RGB SIZE/SHIFT

- 1** Press the **RGB SIZE** or **SHIFT** key.
- 2** Press the **◀** and **▶** keys simultaneously.
The following on-screen display appears on the screen.


RGB SIZE ADJ
RGB SIZE
DATA RESET MODE
Do you wish to return to
factory preset data?
YES : ▲
NO : ▼
- 3** Press the **▲** key.
The following on-screen display appears on the screen to confirm that
resetting was completed.
To keep the current setting instead of resetting, press the **▼** key.


RGB SIZE ADJ
RGB SIZE
DATA RESET MODE
Reset complete!