

**SONY**

AUTO SET-UP PROBE

**BKM-14L**



安全のための注意事項を守らないと、人身事故になる  
ことがあります。

**OPERATION AND MAINTENANCE MANUAL**

**1st Edition**

**Serial No. 10,001 and Higher**

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注：本製品は修理対象外製品です。

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**Note** :This unit cannot be repaired.

# SECTION 1

## GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

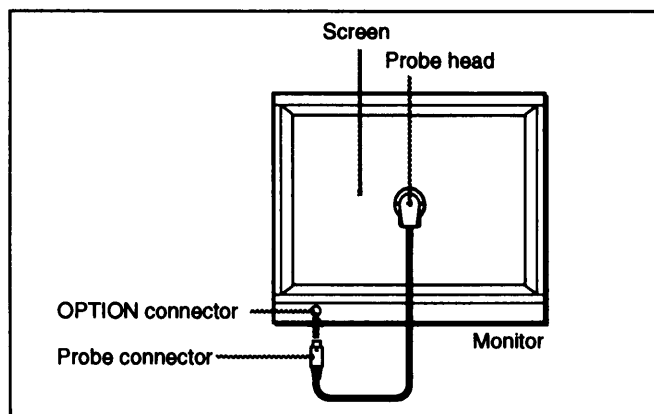
### Outline

The BKM-14L Auto Set-Up Probe is a white balance adjustment probe designed for use with BVM series monitors. This probe has the following features.

- Compatible with the BVM-20E1U/20F1U/20E1E/20F1E/14E1U/14F1U/14E1E/14F1E/14E5U/14F5U/14E5E/14F5E monitor (Software of version 1.1 or later is necessary.)
- The auto set-up function allows automatic white balance adjustment.
- A color analysis function that indicates chromaticity values (x and y) and luminance (Y) makes color matching of monitors convenient.
- Handy and easy to use.

### Operation

Plug the probe connector into the OPTION connector on the front of the monitor, and firmly press the probe head onto the monitor screen so that it is held on the screen by the suction pad.



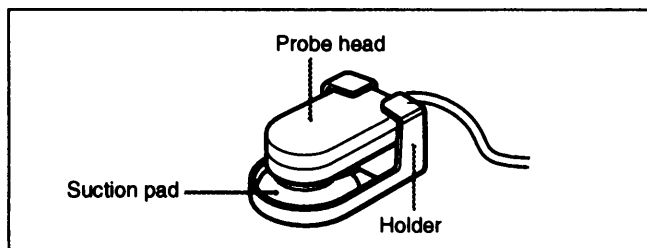
Use the monitor on-screen menu to operate the probe. For details on the operation, refer to the operation manual for the monitor being used.

### Notes on operation

- Do not touch the sensor and connector with your finger or a metal object.
- Do not bend, drop or subject the probe to violent shocks.
- Avoid heat, moisture and direct sunlight.
- If the inner surface of the suction pad is contaminated, there is a possibility it will not adhere to the screen. Remove any contamination from the pad before pressing the probe head onto the monitor screen.

### Using the Holder

When the probe is not used, place it in the holder supplied with the probe.



### Specifications

|                       |   |
|-----------------------|---|
| Luminance range       | 1 to 200 cd/m <sup>2</sup>  |
| Accuracy              | Y: $\pm 3\%$<br>x, y: $\pm 0.004$<br>Only when the probe calibration points D65 and D93 are measured under the luminance of 40 cd/m <sup>2</sup> .            |
| Repetition accuracy   | Y: $\pm 1\%$<br>x, y: $\pm 0.002$ ( $3 \text{ cd/m}^2 \leq Y \leq 200 \text{ cd/m}^2$ )<br>x, y: $\pm 0.005$ ( $1 \text{ cd/m}^2 \leq Y < 3 \text{ cd/m}^2$ ) |
| Mass                  | 135 g (4 oz)  |
| Operating temperature | 0 to 40°C (32 to 104°F)   |
| Operating humidity    | 10 to 85% (no condensation)   |
| Storage temperature   | -20 to +50°C (-4 to +122°F)   |
| Accessories supplied  | Holder (1)<br>Operation Manual (1)  |

Design and specifications are subject to change without notice.

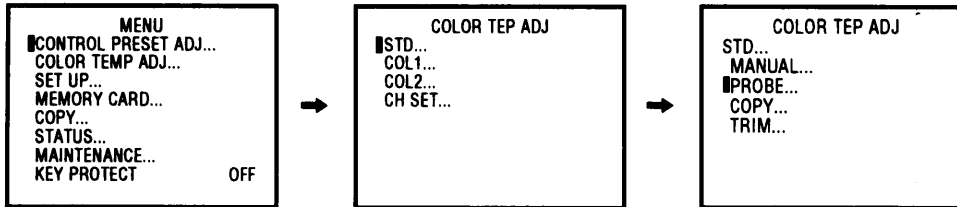
## SECTION 2

### OPERATION CHECK

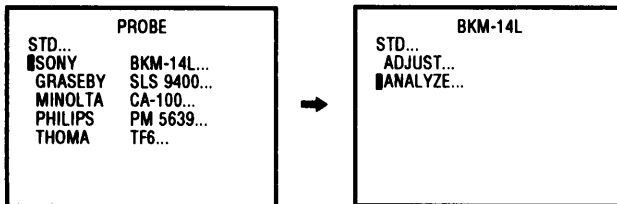
- 2-1. Select the incorporated white signal, and adjust the color temperature of the monitor to D65 ( $x=0.313$ ,  $y=0.329$ ) and the luminance to  $100\text{cd/m}^2$  using the calibrated color analyzer. (To select the incorporated white signal, press "093" INPUT button.)

Concerning the adjustment method for the color temperature of the monitor, refer to the COLOR TEMP ADJ menu (menu number 200-2xx) in the O & M Manual of the monitor unit.

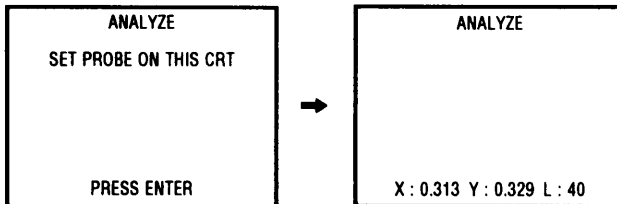
- 2-2. Adjust the contrast control, then set the luminance to  $40\text{cd/m}^2$  and record the x and y values of the color analyzer.  
 2-3. Connect the BKM-14L to the OPTION terminal at the front of the monitor.  
 2-4. Select the /ADJUST COLOR TEMP.../STD.../PROBE... menu.



- 2-5. Select the /BKM-14L.../ANALYZE menu.



- 2-6. Attach the BKM-14L to the CRT and press the ENTER button.



If the above screen is not displayed after 30 seconds or more, disconnect the connector from the OPTION terminal and connect it again, then press the ENTER button. If the symptom does not change, the monitor is defective.

- 2-7. If the difference between the x and y values displayed and the x and y values recorded in step 2-3 is more than 0.010, calibration has to be performed.

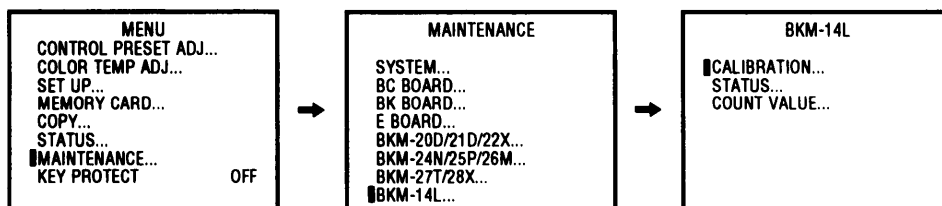
**Note :** This unit cannot be repaired.

## SECTION 3 CALIBRATION

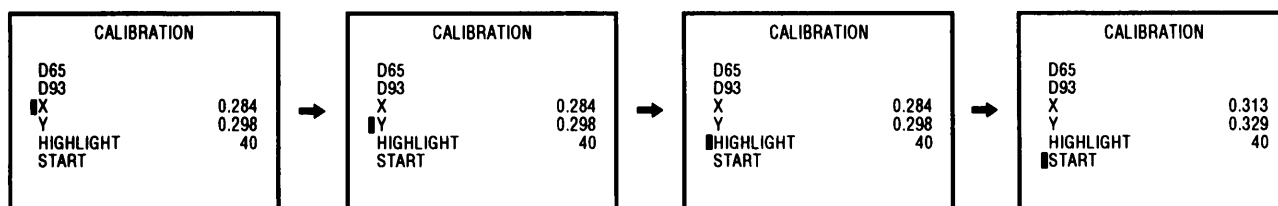
- 3-1. Set the PRESET value of contrast and bright to "1000", then select the internal white signal, and adjust the STD color temperature of the monitor to D65 ( $x=0.313$ ,  $y=0.329$ ) and the luminance to  $100\text{cd/m}^2$ , the COL1 color temperature to D93 ( $x=0.284$ ,  $y=0.298$ ) and the luminance to  $100\text{cd/m}^2$  using the calibrated color analyzer.

Concerning the setting of PRESET value and the adjustment method for the color temperature of the monitor, refer to the "Control preset adjustment of picture adjusting knob (CONTROL PRESET ADJ menu)" (menu number 100-1xx) and the "Color temperature adjustment (COLOR TEMP ADJ menu)" (menu number 200-2xx) in the O & M Manual of the monitor unit.

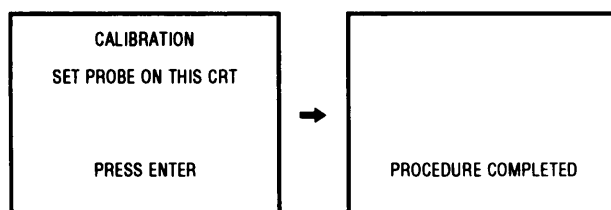
- 3-2. Set the color temperature of the monitor to STD, then set the luminance to  $40\text{cd/m}^2$  adjusting the contrast control and record the  $x$  and  $y$  values of the color analyzer.
- 3-3. Connect the BKM-14L to the OPTION terminal of the monitor.
- 3-4. Select the /MAINTENANCE.../BKM-14.../CALIBRATION... menu.



- 3-5. Select X and input the  $x$  value recorded in step 2-3.
- 3-6. Select Y and input the  $y$  value recorded in step 2-3.
- 3-7. Select HIGHLIGHT and input "40".
- 3-8. Select START.

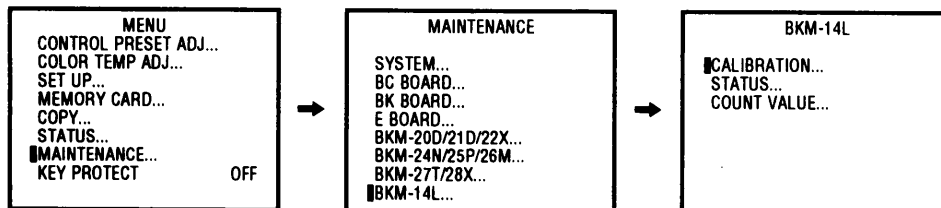


- 3-9. Attach the BKM-14L to the CRT and press the ENTER button.
- 3-10. Wait until "PROCEDURE COMPLETED" is displayed at the bottom of the screen.



3-11. Set the color temperature of the monitor to COL1, then set the luminance to 40cd/m<sup>2</sup> adjusting the contrast control and record the x and y values of the color analyzer.

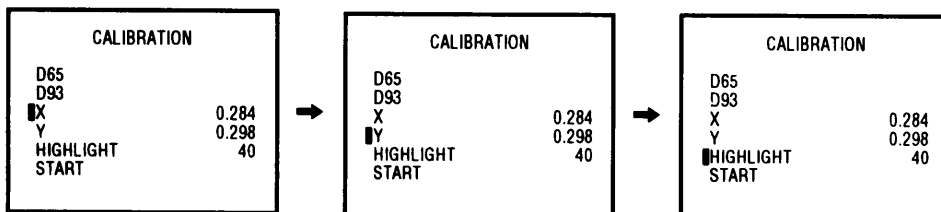
3-12. Select the /MAINTENANCE.../BKM-14.../CALIBRATION... menu.



3-13. Select X and input the x value recorded in step 3-11.

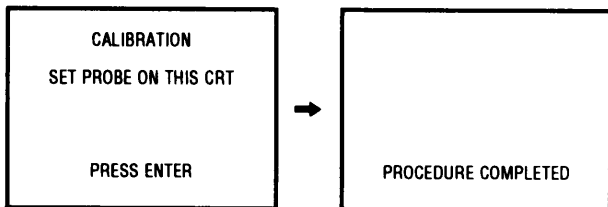
3-14. Select Y and input the y value recorded in step 3-11.

3-15. Select START.



3-16. Attach the BKM-14L to the CRT and press the ENTER button.

3-17. Wait until "PROCEDURE COMPLETED" is displayed at the bottom of the screen.



3-18. Select the /ADJUST COLOR TEMP.../STD.../PROBE.../BKM-14L.../ANALYZE menu.

3-19. Adjust the contrast control and set the luminance to 40cd/m<sup>2</sup>.

3-20. Confirm that the difference between the display value of screen and the measurement value with a color analyzer becomes within  $\pm 0.004$  recorded by x and y values. If the difference between the x and y values becomes more than  $\pm 0.004$ , the monitor is defective.

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