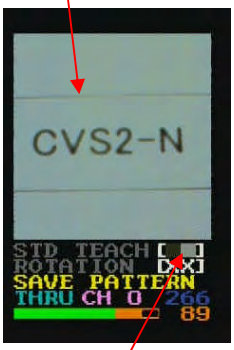
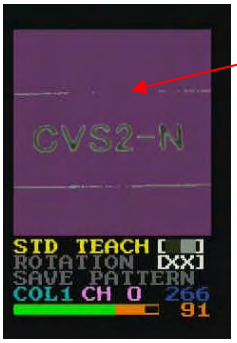
## Color Selection Know-how for Position/Magnification/Rotation Compensation

If the position/rotation compensation is hard to stabilize, it is because of unstable detection of compensation colors.

### (1) Detection color out of the image area

When there is the same color with the detection color inside and outside the detection area, the barycentric coordinate for position compensation cannot be calculated.

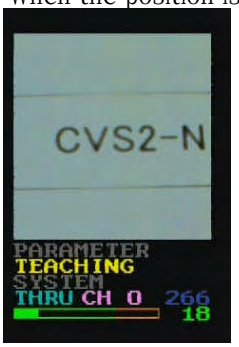


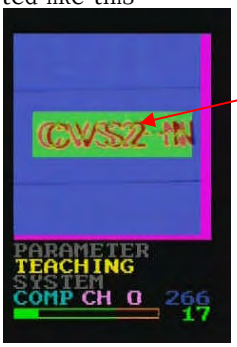




Thin lines are detected discontinuously.

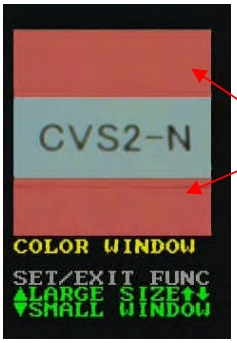
The black color of the character is set to the position compensation color.

When the position is shifted like this…




The position compensation is not successful.
(The red part showing poor correspondence)



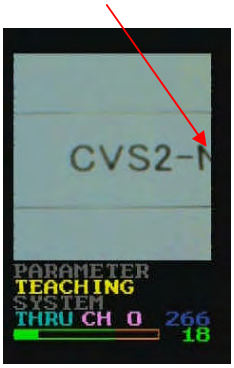

By COLOR WINDOW (specifying color detection area),
apply setting so that the color in the unnecessary area is not detected.

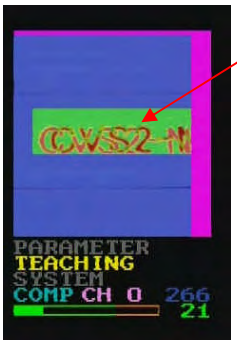
Area in which the color is not detected

Register the screen again by SAVE PATTERN.
(This is necessary because the pixels of the position compensation color have changed from that initially registered in STD TEACH, to cause erroneous barycentral coordinate.)
The position compensation operates correctly.
(Red part is decreased)

## (2) The detection color is out of the image area.

When a part of the color registered as position compensation color runs over the screen;

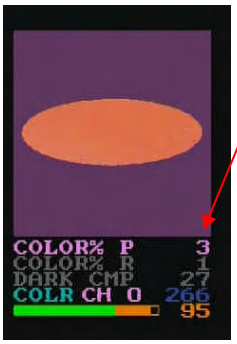



Since the barycentric coordinate of the position compensation is shifted, the position compensation does not work correctly. (much red part showing low correspondence)

## (3) The detection color range is too narrow to be detected.

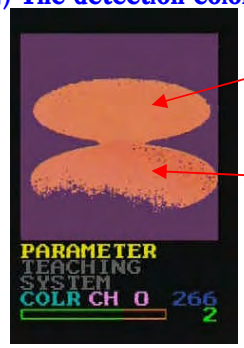
When the detection color does not cover all the colors to be selected, the barycentric coordinate becomes erroneous.




Increase the COLOR % P(color margin for position compensation) of the setting value to completely cover the colors to be selected.

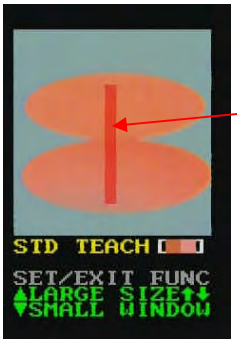
※When COLOR% P/R is changed, the barycentric coordinate can be shifted from the initial registration. When this happens, carry out SAVE PATTERN again.

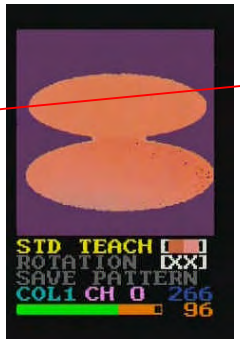
## (4) The detection color covers wide range, including other colors.




Only this part is supposed to be detected as a target.

However, this part is erroneously detected since it is similar color.



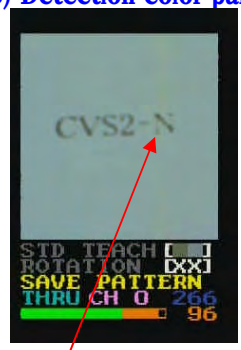



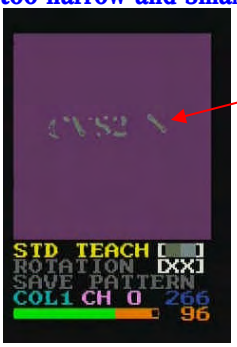

Try select both colors like this.

Or, apply setting as…

- Narrow the color detection window
- Narrow the color width for selection (WIDE/NARROW)
- Set to exclude the color from unnecessary area in COLOR WINDOW

## (5) Detection color part is too narrow and small to allow stable detection.



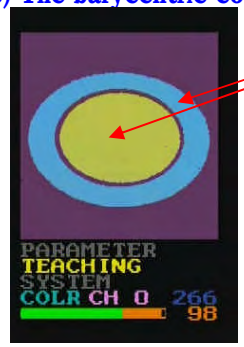




The color of narrow part is not selected.

The thin characters are displayed gray by being mixed with the next color part.

Even though the magnification compensation is activated, the magnifying rate varies depending on the pixel number, to cause much error.
When the pixels of detection target color varies, the magnification compensatic is not recommended.

## (6) The barycentric coordinates for rotation compensation are close, to cause errors.



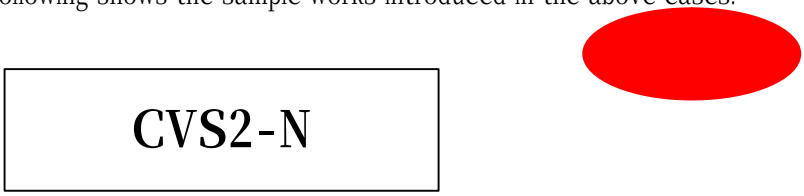

When the barycentric coordinates of two colors for rotation compensation are similar, a correct compensation is not possible due to errors.

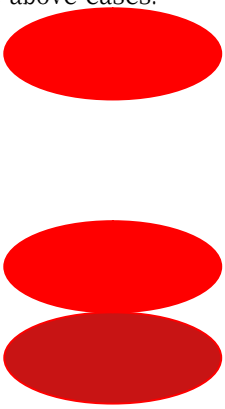
Perform position compensation teaching by setting ADJ POS=4 to 28, to apply rotation compensation at necessary angles.

## (7) The colors used for rotation compensation are left.

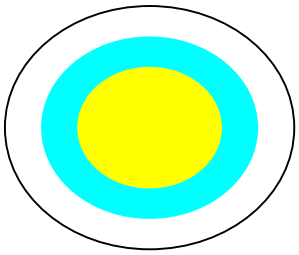
Colors used for rotation compensation should be deleted. If carelessly leaving the colors may influence the compensation much.
When the rotation compensation has once been tried but switched to position compensation, do not forget to delete the colors used for rotation compensation. (To delete, select ROTATION and press [EXIT] for more than 3 seconds.)

The following shows the sample works introduced in the above cases.



CVS2-N



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