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# RGB-IIA INTERFACE CARD

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## DIRECTORY

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### INSTALLATION INSTRUCTIONS

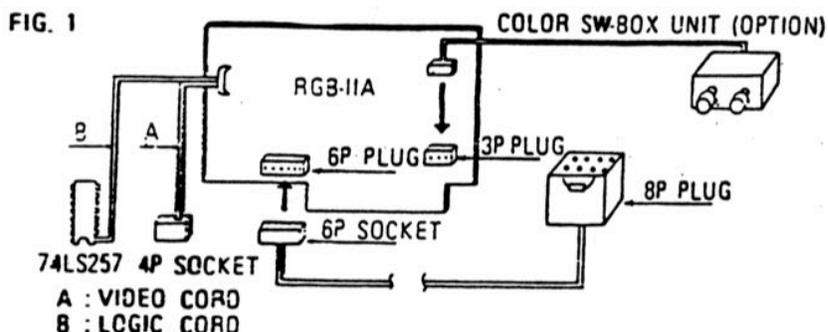
RGB-IIA is an exclusive-use interface card for connecting the RGBVISION monitor to an APPLE II computer.

Through the use of the RGB-IIA, it is possible to display the 16 full colors of the APPLE II computer, on the RGBVISION monitor (RGB separated signal monitor).

Use of the optional Color SW-box allows you to specify the color of the screen and characters in 16 different ways and display them in the desired color arrangement by simply turning a switch.

### INSTALLATION

RGB-IIA comes with a set of interface card and connecting cables(Fig.1)



1 Turn OFF the power supply SW of the APPLE-II computer and remove the top cover of the computer cabinet.

2 Using a low wattage soldering iron and resin core solder, connect together the jumper marked "7", as shown in(Fig.2), and repeat this process for the jumper marked "8". Be careful not to overheat the jumpers or the surrounding PCB, nor to drop excess solder into the cabinet.

3 Inspect the PCB type connector on the RGB-IIA module to make sure that it is clean and the contacts are bright. Then insert the module into mother-board slot 7 which is located at the right end of the mother PCB, making certain that it is fully bottomed in the RC.card connected.

FIG. 2

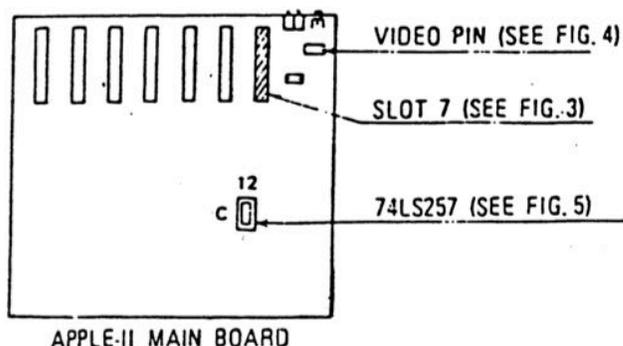
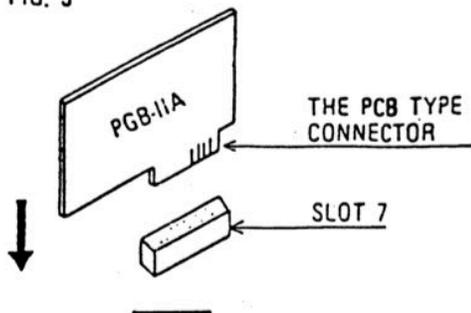


FIG. 3



4 Locate the video output connector on the rear of the computer cabinet. Directly in front of this connector is a short row of electrical components, and then a row of four vertical pins which are located nearest to the video jack. Connect the video cord from the RGB-IIA module to the second pin from the right end of this row, as shown in (Fig. 4.) Connect the video cord A (with connector) of RGB-IIA to the video pin of the APPLE-II computer.

**WARNING**

It is very important that step 4 be followed exactly. Connecting the RGB-IIA video cord to any other pin in this row may damage the computer, the RGB-IIA or both.

FIG. 4

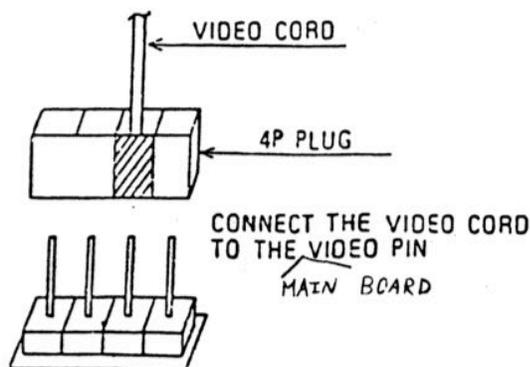
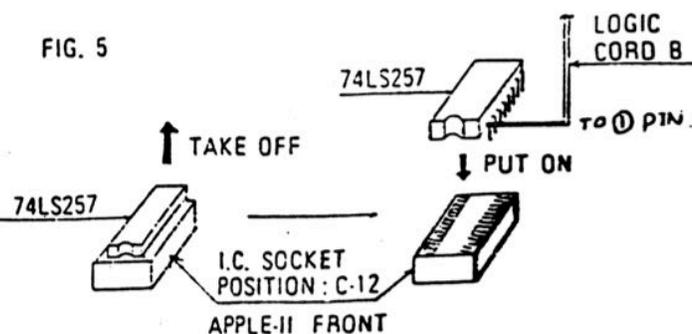


FIG. 5



5 Replace IC chip 74LS257 which is at C-12 position on the main board of the APPLE-II computer with the chip equipped with logic cord B supplied as an accessory. Pay attention to the position and direction at the location of replacement.

- 6 Plug the end of the connecting cable with the six pin connectors into the mating connector on the RGB-IIA module.
- 7 Route the connecting through a convenient opening in the rear of the computer cabinet **close to the module**, and plug the eight pin end of the cable into the mating connector on the RGBVISION monitor.
- 8 Set the monitor mode selector-switch to the "II" position.
- 9 Recheck each installation operation (steps 2 through 7) before processing further.
- 10 Replace the computer cover and turn on the A.C. power to both the computer and the monitor.
- 11 Adjust the RGBVISION monitor to obtain a satisfactory picture (refer to Operator's Manual).
- 12 If there appears any abnormality in the quality of the video display, recheck steps 2,3,4,7&10, particularly watching for cold solder joints and dirty contacts. If the display is still not satisfactory, return the RGB-IIA module and the monitor to the dealer from whom they were purchased.

**NOTE**

The appearance of some APPLE II disk and/or high-resolution characters may not be as sharply defined as may be expected. This is a characteristic of "GR" mode and high-resolution "GR" mode. The vast majority of your programs and displays will not be affected by this, nor will the output to most other peripheral display devices. In this case, reading of high-resolution characters becomes possible by operating the optional Color SW-box.

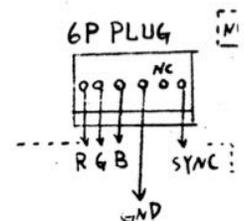
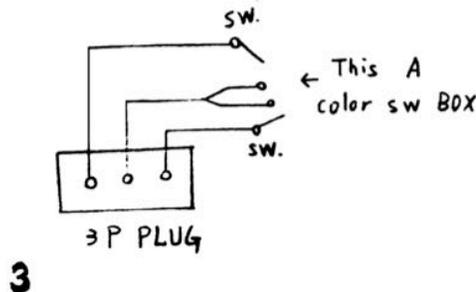
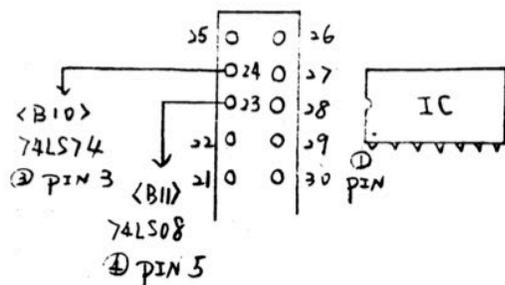
**OPTION**

**Color SW-box**

By operating two switches, the color graph and characters projected by the APPLE-II computer can be given 2-color display (for instance, like the green monitor) and this two-color combination can be freely selected from 16 combinations according to your desired color arrangement. We strongly recommend the use of this optional Color SW-box.

**MAIN BOARD:**

SLOT 7: 24 PIN--->TO < B10 > 74LS74 ③ PIN 3  
 23 PIN--->TO < B11 > 74LS08 ④ PIN 5



## C O L O R   S W - B O X

COLOR SW-BOX is an optional unit for exclusive-use of RGB-IIA interface card. Through the use of this unit, you can specify a desired color combination of the screen and characters from 16 combinations.

When APPLE-II Computer is connected to RGB vision Monitor (RGB Separate Signal Monitor) by using RGB-IIA interface card, and color graphic software which has been made by the composite signal monitor is displayed, sometimes a phenomenon may occur in which characters are difficult to read. This phenomenon occurs due to a difference in characteristics of the monitor, and does not mean that there are problems in RGB-IIA and RGBvision. COLOR SW-BOX has been developed to solve this problem. If you depress switch A (black), the color graphic and characters displayed on the screen change into two-color display, thereby vividly displaying the characters. If you further depress switch B (blue) in this state, 16 color combinations for the screen and characters can be obtained, so that you can use the RGBvision as a monochrome monitor with colors you desire.

### INSTALLATION METHOD

1. Turn off the power supply switch of APPLE-II and remove the top cover.
2. Remove RGB-IIA from APPLE-II and connect the 3P plug which is at the lower right position on the RGB-IIA board to the 3P socket of COLOR SW-BOX (Fig.1). If you make mistakes in the direction of the connector, no connection will be possible, which please note.

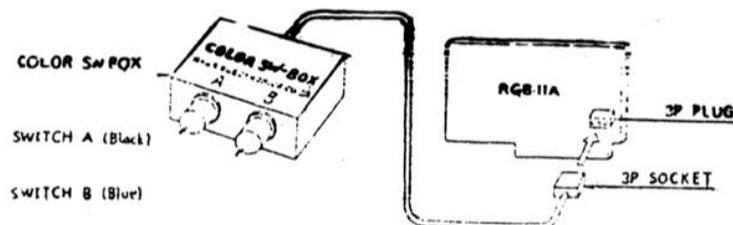


Fig. 1

### USING METHOD

#### 1. SWITCH A

When APPLE-II Computer is used at the "GR" mode and characters in the program, etc., are difficult to read, depress switch A (black). Then you can obtain two-color display, and characters can be vividly displayed. If you depress the switch A again, the computer will return to the original "GR" mode.

#### 2. SWITCH B

Set APPLE-II Computer to the LOW-RES "GR" mode and the High-RES mode and depress switch A (black) and thereafter switch B (blue). Then the colors of the screen and characters will change into 16 combinations in proportion of the number of times of switch B depressions. If you use APPLE-II Computer in the "TEXT" mode, you can use it regardless of switch A. The coloring table is shown in Table.

### 3. DIP SWITCH (Installed on RGB-IIA Board)

Through the change-over operation of the DIP switch, you can specify and colors you want for the screen and characters which appear first when you turn on the power supply switch of APPLE-II Computer. Even in such case, you can utilize the function of switch B.

Colors can be set by changing over the 4 switch patterns of the DIP switch, and the color correspondence table is given in Table. At normal times, the DIP switch is set to code (NO.0). The DIP switch is installed in the lateral direction at the upper left of RGB-IIA interface card.

#### EXAMPLE:

If you want specify code (NO.10), change over the switches as shown in Fig.2.

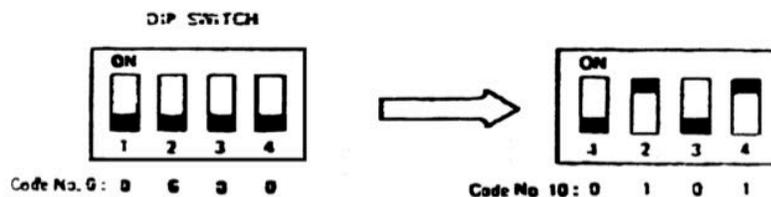


Fig. 2

COLOR CORRESPONDENCE TABLE

Code No.	Screen	Characters	DIP Switch No.			
			1	2	3	4
0	Black	White	0	0	0	0
1	Black	Green	1	0	0	0
2	Black	Yellow	0	1	0	0
3	Black	Green	1	1	0	0
4	Black	Blue	0	0	1	0
5	Black	Gray	1	0	1	0
6	Dark green	White	0	1	1	0
7	Dark green	Yellow	1	1	1	0
8	Dark red	White	0	0	0	1
9	Dark red	Yellow	1	0	0	1
10	Dark blue	Yellow	0	1	0	1
11	Blue	White	1	1	0	1
12	Ultramarine	Red	0	0	1	1
13	Ultramarine	Light blue	1	0	1	1
14	Mud yellow	Yellow	0	1	1	1
15	Light blue	Black	1	1	1	1

ON: 1, OFF: 0