

TAXAN

**RGB INTERFACE CARD
FOR APPLE-IIe AND APPLE-II PLUS**

MODEL RGB-IIB PATENT P

KAGA ELECTRONICS CO., LTD.

INSTRUCTION MANUAL

RGB-IIB INTERFACE CARD

RGB-IIB is an exclusive-use interface card for connecting the RGBvision monitor to the APPLE-II PLUS or the APPLE-IIe computer.

Through the use of the RGB-IIB, it is possible to display the 16 full colors provided the APPLE-II PLUS or the APPLE-IIe computer on the RGBvision monitor (RGB separated signal input monitor).

The RGB-IIB provides the unique function of specifying the colors of characters in the "TEXT" mode in 8 different ways and display them in any desired color arrangement by simply turning the provided ROTARY-SW.

[A] INSTALLATION

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

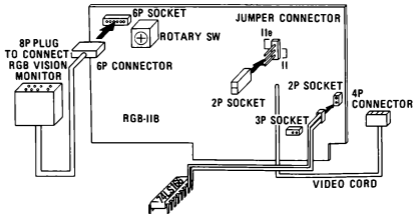


FIG. 1

- 1** Turn OFF the power supply SW of APPLE-II PLUS or the APPLE-IIe computer and remove the top cover of the computer cabinet.
- 2** Installation of the RGB-IIB I/F card differs between the APPLE-IIe NTSC, PAL VERSION and the APPLE-II PLUS. The card must be installed to the computer according to that machines instruction manual.

1. APPLE-II PLUS

- (1) Using a low wattage soldering iron and resin core solder, connect the jumper marked "7" as shown in Fig. 3. Repeat this process for the jumper marked "8". Be carefull not to overheat the jumper or the surrounding PCB, nor to drop excess solder into the cabinet.

(Note): This procedure is not required to the APPLE-II-EURO PLUS.

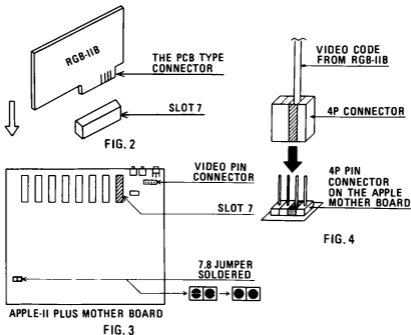
- (2) Inspect the PCB type connector on the RGB-IIB module to make sure that it is clean and the contacts are bright. Then insert the module into mother-board SLOT 7 which is located at the right end of the mother PCB, making certain that it is fully bottomed in the P.C. card connector as shown in Fig. 2.

- (3) Set the jumper connector on the RGB-IIB board to the "II" position (Fig. 1).

- (4) Connect the video cable on the RGB-IIB board to the video output connector on the APPLE-II PLUS computer mother board. Plug the 4P video cable connector (Fig. 1) on the RGB-IIB board into the matching second pin from the right of the 4P video pin connector (Fig. 4) on the APPLE-II PLUS mother board (Fig. 3).

WARNING

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



2. APPLE-IIe NTSC 110V AC Version

- (1) Using a low wattage soldering iron and resin core solder connect together the jumper marked "X7" as shown in Fig. 5 be carefull not to overheat the jumper or the surrounding PCB, nor to dorop exess solder into the cabinet.
- (2) Inspect the PCB type connector on the RGB-IIB 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 P.C. card connector as shown in Fig. 2.
- (3) Set the jumper connector on the RGB-IIB board to the "Ile" position (Fig. 1).
- (4) Connect the video cable on the RGB-IIB board to the video output connector on the APPLE-IIe computer board. Plug the 4P video cable connector (Fig. 1) on the RGB-IIB board into the matching second pin from the front of the 4P video pin connector (Fig. 6) on the APPLE-IIe mother board (Fig. 5).

WARNING

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

- (5) 14.31818 MHz master timing signal is sent from the APPLE IIe mother board. Remove IC 74LS166 (Fig. 5) from section F-5 on the APPLE-IIe mother board and install the annexed 74LS166 with a connector cord. Then, connect the 2P plug on the opposite side of the 2P socket on the RGB-IIB board.

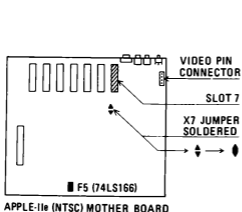


FIG. 5

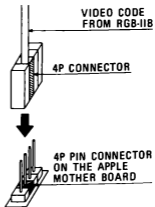


FIG. 6

3. APPLE-IIe PAL 220/240 V AC Version

- (1) Using a low wattage soldering iron and resin core solder, connect together the jumper marked "X7" as shown Fig. 7. Be careful not to overheat the jumper or the surrounding PCB, nor to drop excess solder into the cabinet.
- (2) Inspect the PCB type connector on the RGB-IIB 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 P.C. card connector as shown in Fig. 2.
- (3) Set the jumper connector on the RGB-IIB board to the "Ile" position (Fig. 1).
- (4) Set the C-10 DIP switch (Fig. 7) on the APPLE-IIe mother board to the "ON" position.
- (5) Connect the video cable on the RGB-IIB board to the video output connector on the APPLE-IIe computer mother board. Plug the 4P video cable connector (Fig. 1) on the RGB-IIB board into the matching second pin from the left end of the 4P video pin connector (Fig. 8) on the APPLE-IIe mother board (Fig. 7).
- (6) 14.31818 MHz master timing signal is sent from the APPLE-IIe mother board. Remove IC 74LS166 from section C-13 on the APPLE-IIe mother board and install the annexed 74LS166 (Fig. 7) with a connector cord. Then, connect the 2P plug on the opposite side of the 2P socket on the RGB-IIB board. (Fig. 1)

P.S. Certain color signal patterns may cause a flicker like ripples in the "HGR" mode. If this flicker is disturbing, pick up the video signal from pin 6 of IC 74LS10 in the D-12 section of the APPLE-IIe mother board. This will enable you to see the screen more clearly.

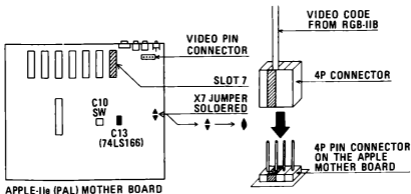


FIG. 7

FIG. 8

- 3** Plug the end of the connecting cable with the six pin plug into the mating six pin socket on the RGB-IIB module.
- 4** 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 RGB-vision monitor.
- 5** Set the monitor mode selector-switch to the "II" position.
- 6** Recheck each installation operation (step 2 through 5) before processing further.
- 7** Replace the computer cover and turn ON the AC power to both the computer and the monitor.
- 8** Adjust the RGB-vision monitor to obtain a satisfactory picture (refer to OWNER'S GUIDE).
- 9** If any abnormality appears in the quality of the video display, recheck steps 2, particularly watching for cold solder joints and dirty contacts. If the display is still not satisfactory, return the RGB-IIB module and the monitor to the dealer from whom they were purchased.

[B] USING METHOD OF ROTARY-SWITCH

Through the switching operation of the ROTARY-SW, you can specify colors you want for the screen and characters in the "TEXT" mode which appear when you first turn on the power supply switch of APPLE-II PLUS computer. Colors can be set by switching the position of the ROTARY-SW, and the color correspondence table is given below. At normal time, the ROTARY-SW is set to CODE (NO. 0).

COLOR CORRESPONDENCE TABLE

CODE NO.	SCREEN	CHARACTERS	SWITCH POSITION
0	Black	White	0, 8
1	Black	Green	1, 9
2	Black	Orange	2
3	Black	Yellow	3
4	Black	Blue	4
5	Dark red	Yellow	5
6	Aqua	Black	6
7	Dark blue	Aqua	7

[EXAMPLE]

If you want to specify CODE (NO. 5), change over the switches as shown in Fig. 5.

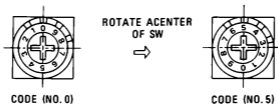


FIG. 9

[C] OPTIONAL FUNCTION

RGB-IIB provides a terminal for the installation of screen mode select switch. When the APPLE-II PLUS and the APPLE-IIe computer is connected to RGB vision monitor via the RGB-IIB interface card, sometimes characters are difficult to read in "HGR" mode. This phenomenon occurs due to a limitation of the dot matrix in "HGR" mode as shown on page 19 ~ 20 of the APPLE reference manual. This optional function has been developed to solve this problem. If you connect a commercially available "ON-OFF" push-type switch to this terminal, (which is a three pin socket) via the attached 3P plug and set this switch accordingly, the color graphic and characters displayed on the screen change into a two-color display, thereby vividly displaying the characters. If you further rotate "ROTARY-SW" in this state, 8 color combinations for the screen and characters can be obtained, so that you can use the RGB vision as a monochrome monitor with colors you desire.

Note:

APPLE, APPLE-IIe, APPLE-II PLUS, are registered trademarks of APPLE COMPUTER INC.

KAGA ELECTRONICS CO.,LTD.

3-14-2, YUSHIMA, BUNKYO-KU, TOKYO 113, JAPAN

TEL : 03-836-5521

TSK ELECTRONICS CORP.

18005 CORTNEY COURT, CITY OF INDUSTRY,

CA. 91748 USA

TEL : 213-810-1291

Printed in Japan