



## Kit Information

3299-K071 CGMA Board

This manual provides the necessary information for the installation of this kit (3299-K071) to Personal Computers

**3279 = NCR PC810**

**3278 = NCR PC710 / NCR 3392 Workstation**

Hercules is a trademark of Hercules Technology Inc.

Copyright ©1987 by NCR Corporation  
Dayton, Ohio  
All rights reserved  
Printed in the Federal Republic of Germany

### **August, 1987**

It is the policy of NCR Corporation to improve products as new technology, components, software, and firmware become available. NCR Corporation, therefore, reserves the right to change specifications without prior notice.

All features, functions, and operations described herein may not be marketed in all parts of the world. In some instances, photographs are of equipment prototypes. Therefore, before using this document, consult your nearest dealer or NCR office for information that is applicable and current.

## FEDERAL COMMUNICATIONS COMMISSION (FCC) RADIO FREQUENCY INTERFERENCE STATEMENT

### WARNING

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

### Information to User

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

The NCR Corporation (NCR) is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

## CGMA Board

This board is designed to be installed as piggy-back board to a Personality Board, thus providing the possibility of connecting an standard color/graphics compatible monitor or a standard monochrome (Hercules) compatible monitor to the system.

This description is in two parts:

- Part 1, Board Preparation - This part describes the preparation of the CGMA Board and the function of the various straps on the board.
- Part 2, Installation Information - This provides the specific information needed to install this board into your PC.

First read carefully the information in "Board Preparation" so that you understand how to prepare your CGMA Board; then refer to the second part for the specific information for your PC.

---

## BOARD PREPARATION

This board could be damaged by electro-static discharge once it has been removed from its packing. To avoid such problems, follow the recognized procedures for electro static discharge, such as:

- Always work in a static free area
- Before handling the board, discharge yourself by touching something that has a good connection to ground.
- Do not touch the components on the board unless you are instructed to do so.
- Place the board on an anti-static, padded surface when preparing the board.

There are a number of jumpers and switches that have to be set depending on how the CGMA Board is used in your PC.

Before installing the board, the various jumpers and switches on the board must be set as described in the following tables.

Jumpers are electrical bridges encapsulated in plastic to be placed onto connecting pins. The locations of jumpers and switches are shown in Figure 1, the functions of the jumper and switch settings are described below.

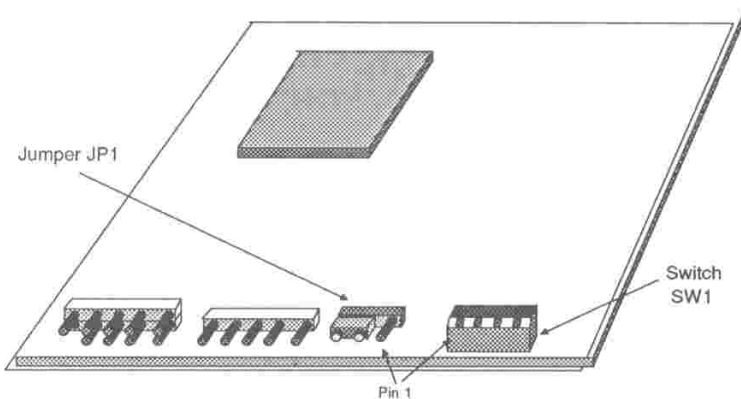


Figure 1

Switch SW1				
SW1-1	SW1-2	SW1-3	SW1-4	
Not used	Not used	Off	Off	14.318 MHz Standard Color Graphics (CGA)
Not used	Not used	Off	On	16.257 MHz Standard Mono (Hercules)
Open = Off    Closed = On				

Jumper JP1	
Compatible to standard CGA	- connect Pins 1 and 2
Non blink scrolling, Mono, (for 3278, 3279, 3285)	- connect Pins 2 and 3

Factory Setting: SW1-3 off, SW1-4 on; JP1 connects pins 2 and 3

---

## SYSTEM INFORMATION

This section contains the information necessary to install the adapter into the following PCs:

- **3279**

NOTE: Installation of the CGMA Board to a 3278 system requires the assistance of qualified service personal - the installation procedure is fully described in the 3278 Installation Guide.

## 3279 INSTALLATION

To install the CGMA Board onto a Personality Board that is already in the PC use the following procedure. If the Personality Board has not yet been installed into the PC you should start at Step 5 of this procedure.

1. Be sure that the power switch is off and remove the power cable from the PC. Make a note of their position and remove any peripheral cable from the PC.
2. Pull off the back cover, remove the five cabinet retaining screws as shown in Figure 1, slide the cabinet top forward slightly and lift it off.

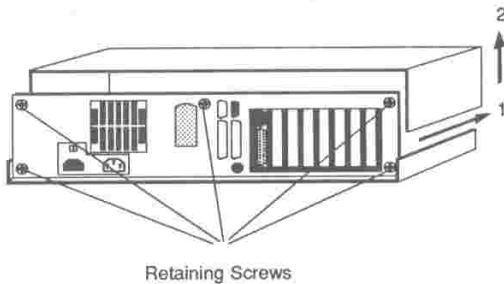


Figure 1

3. Locate the Personality Board (normally this is in slot 8, the slot nearest the power supply), make a note of their positions and disconnect all the cables from the Personality Board.

- 
4. Remove the retaining screw and carefully remove the Personality Board as shown in Figure 2.

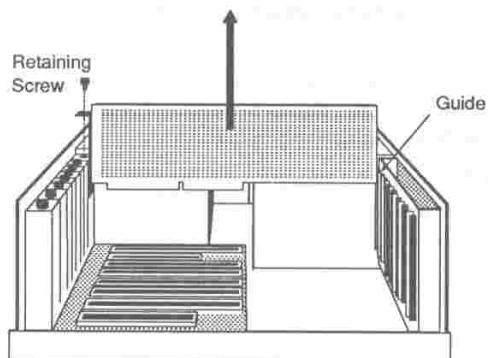


Figure 2

5. Install the ribbon cable to the retaining bracket of the Personality Board using the following procedure:

Take the 9-pin female connector at the end of the ribbon cable and locate the hole in the retaining bracket of the Personality Board.

Coming from the board side, insert the female 9-pin connector into the hole in the retaining bracket of the Personality Board.

Fasten the connector using the set of screws that comes with the kit - see Figure 3.

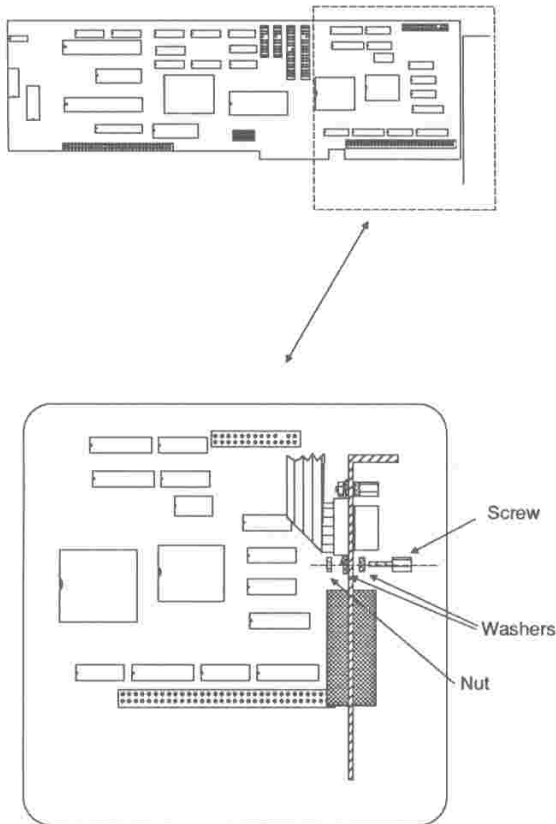


Figure 3

- 
6. Make sure that the jumper and switches on the CGMA Board are set correctly as described in "BOARD PREPARATION". Also check that the primary display switch on the main processor board is set correctly for your display adapter configuration. See your Owner's Manual for strapping information on the main processor board.
  7. Carefully install the CGMA Board onto the Personality Board as shown in Figure 4. Be sure that all the pins on connector J8 engage into the socket on the CGMA Board.

Snap the plastic stand-offs into the holes provided in the Personality Board.

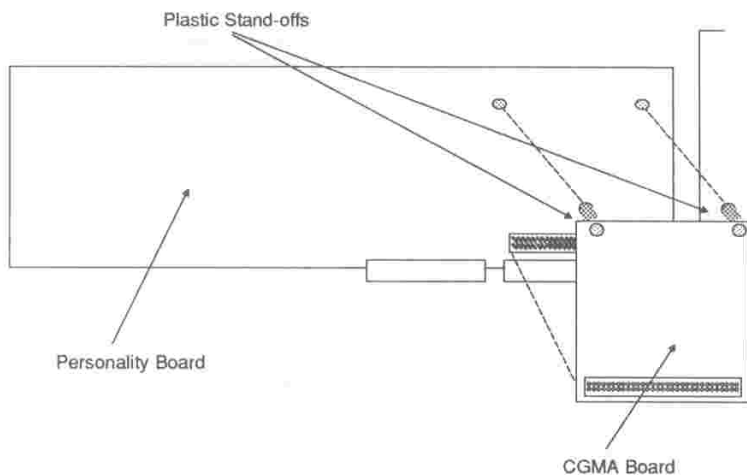


Figure 4

8. Connect the plug at the end of the ribbon cable to connector J3 on the CGMA Board - see Figure 5.

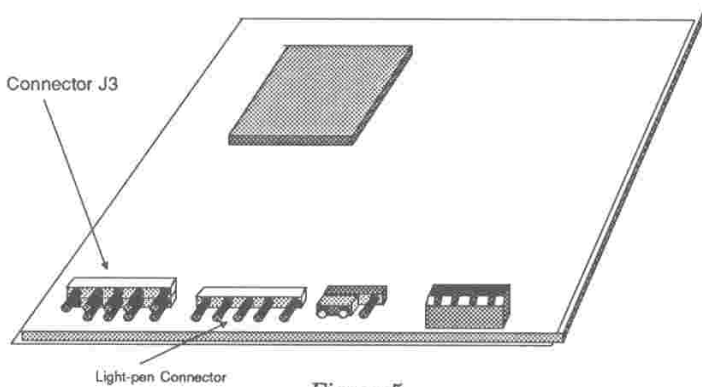


Figure 5

9. Slide the Personality Board back into the original position, making sure that the edge connector on the board fully engages into the connector in the base of the PC. Secure the bracket and board with the screw that was removed in Step 4. Re-connect all cables that were removed in Step 3.
10. Re-install the cabinet top, connect the display cable to your newly installed video connector. Reconnect the power cable and the previously removed peripheral cables.
11. Run **HARDWARE-SETUP** (described in your Owner's Manual) to declare the new adapter to the system. Your PC is now ready to use.