

3.6 FRONT PANEL KEYBOARD DATA TRANSFER OPERATIONS

The following procedures describe how to perform data transfer operations from the Series 22 front panel keyboard.

3.6.1 LOAD RAM WITH MASTER DEVICE DATA

Use the following procedure to load the Series 22 RAM with data from a master device using the programmer front panel:



to select the mode.

Series 22 Displays

COPY DATA FROM



to select the source of the data.

Series 22 Displays

DEV ^ ADDR / SIZE TO

The prompt (^) preceding "ADDR" in the display means that you can change the begin device address to any address within the range of device word limit by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "ADDR," it is from a previously entered begin address.

- If the hex value that appears in place of "ADDR" is correct, go to step 3.
- If it is incorrect, enter the correct hex value.
- If you do not wish to change the begin device address or block size (step 3), go to step 4.



Series 22 Displays

DEV ADDR ^ SIZE TO

The prompt (^) preceding "SIZE" means that you can change the block size by entering the hex value with the keyboard. If an entry is not made, the value defaults to the device size. If a hex value appears in place of "SIZE," it is from a previously entered block size.

NOTE

If a begin device address is specified, then the size must be specified also. The size must be equal to or less than the device size minus the begin device address.

- If the hex value that appears in place of "SIZE" is correct, go to step 4.
- If it is incorrect, enter the correct hex value, then go to step 4.



to select the destination for the data.

Series 22 Displays

CO DEV ^ RAM ^ ADDR

The prompt (^) preceding "ADDR" means that you can change the begin RAM address by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "ADDR," it is from a previously entered RAM begin address.

- If the hex value that appears in place of "ADDR" is correct, go to step 5.
- If it is incorrect, enter the correct hex value, then go to step 5.

(3.6.1 Continued)

5.



Series 22 Displays



Enter the four-digit hex family/pinout code combination for the device to be copied. The codes are listed in the device table in appendix A. If a code combination other than zeroes appears on the display, it is from a previously entered code combination.

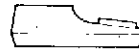
- a. If the hex value that appears in place of the family/pinout combination is correct, go to step 6.
- b. If it is incorrect, enter the correct family/pinout code hex value, then go to step 6.

NOTE

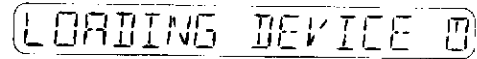
If the socket adapter installed has more than one socket, the LED next to the correct socket will illuminate.

6. Insert and lock the master device into the appropriate socket. (See subsection 3.4.3).

7.



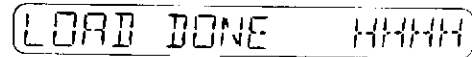
Series 22 Displays



NOTE

The amount of time the programmer will require to perform this operation will vary depending on the device size. The action symbol character rotates while the operation is taking place.

8. When the operation is complete, the following display signals the programmer's readiness. If an error code is displayed, see appendix A.



NOTE

HHHH is the hex sumcheck of all the device data. If block limits are set, the sumcheck (HHHH) will be calculated only for the block size.

9. Remove the master device from the socket (see subsection 3.4.4).
10. To repeat the load operation from another device with the same family and pinout codes, return to step 7.

3.6.2 LOAD RAM FROM SERIAL PORT

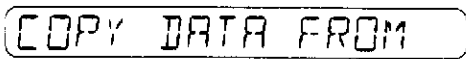
Use the following procedure to load the Series 22 RAM from the front panel keyboard with incoming serial port data:

1. Set up the serial port. Refer to section 2.
2. Select the appropriate data translation format from appendix B and execute the format select function B3 (see subsection 3.9).



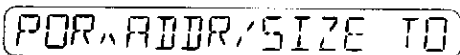
to select the mode.

Series 22 Displays



to select the source of the data.

Series 22 Displays

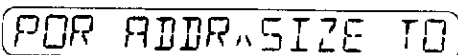


The prompt (^) preceding "ADDR" in the display means that you can change the begin address offset to any address within the range of the data format by entering the hex value with the front panel keyboard. If an entry is not made, the value defaults to the first incoming address. If a hex value appears in place of "ADDR," it is from a previously entered begin address. Enter FFFF (up to 8 characters) to reset the default.

- a. If the hex value that appears in place of "ADDR" is correct, go to step 5.
- b. If it is incorrect, enter the correct hex value.
- c. If you do not wish to change the begin device address or block size (step 5), go to step 6.



Series 22 Displays



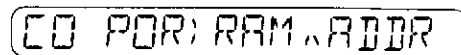
The prompt (^) preceding "SIZE" means that you can change the block size by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "SIZE," it is from a previously entered block size.

- a. If the hex value that appears in place of "SIZE" is correct, go to step 6.
- b. If it is incorrect, enter the correct hex value, then go to step 6.



to select the destination for the data.

Series 22 Displays

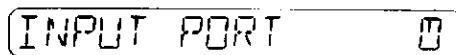


The prompt (^) preceding "ADDR" means that you can change the begin RAM address by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "ADDR," it is from a previously entered RAM begin address.


- a. If the hex value that appears in place of "ADDR" is correct, go to step 7.
- b. If it is incorrect, enter the correct hex value, then go to step 7.



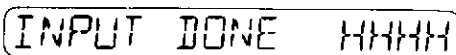
Series 22 Displays



NOTE

The amount of time the programmer will require to perform this operation will vary depending on the data format, block size, and baud rate. The action symbol  character rotates while the operation is taking place.

8. When the operation is complete, the following display signals the programmer's readiness. If an error code is displayed, see appendix A.



NOTE

HHHH is the hex sumcheck of all the received data.

9. To repeat the load operation, return to step 7.

3.6.3 PROGRAM DEVICE WITH RAM DATA

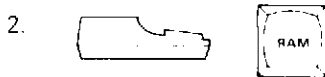
When programming a device, the system automatically performs illegal bit tests and blank checks at nominal V_{CC} to verify the ability of the PROM to accept programming before it begins the operation. Use the following procedure to program a blank device with data from RAM using the programmer front panel keyboard:



to select the mode.

Series 22 Displays

`COPY DATA FROM`



to select the source of the data.

Series 22 Displays

`RAM ADDR SIZE TO`

The prompt (^) preceding "ADDR" in the display means that you can change the begin RAM address to any address within the range of RAM word limit by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "ADDR," it is from a previously entered begin address.

- If the hex value that appears in place of "ADDR" is correct, go to step 3.
- If it is incorrect, enter the correct hex value.
- If you do not wish to change the begin device address or block size (step 3), go to step 4.



Series 22 Displays

`RAM ADDR SIZE TO`

The prompt (^) preceding "SIZE" means that you can change the block size by entering the hex value with the keyboard. If an entry is not made, the value defaults to the device size. If a hex value appears in place of "SIZE," it is from a previously entered block size.

- If the hex value that appears in place of "SIZE" is correct, go to step 4.
- If it is incorrect, enter the correct hex value, then go to step 4.



to select the destination for the data.

Series 22 Displays

`CO RAM DEV ADDR`

The prompt (^) preceding "ADDR" means that you can change the begin device address by entering the hex value with the keyboard. If an entry is not made, the value defaults to zero (0). If a hex value appears in place of "ADDR," it is from a previously entered device begin address.

- If the hex value that appears in place of "ADDR" is correct, go to step 5.
- If it is incorrect, enter the correct hex value, then go to step 5.

5.



Series 22 Displays

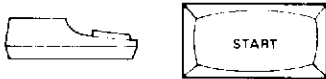


Enter the four-digit hex family/pinout code combination for the device to be programmed. The codes are listed in the device table in appendix A. If a code combination other than zeroes appears on the display, it is from a previously entered family and pinout code.

- a. If the hex value that appears in place of the family/pinout code combination is correct, go to step 6.
- b. If it is incorrect, enter the correct family/pinout code hex value, then go to step 6.

6. Insert and lock the blank device into the appropriate socket. (See subsection 3.4.3).

7.

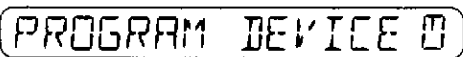


Series 22 Displays



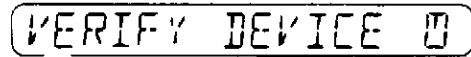
If the device passes the blank check and illegal bit test, the Series 22 automatically begins to program the device.

Series 22 Displays




When the device has been successfully programmed, the Series 22 automatically verifies the programmed device.

Series 22 Displays

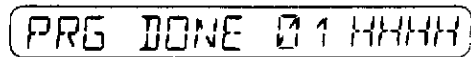


NOTE

The amount of time the programmer will require to perform these operations will vary depending on the device size, technology, and programming algorithm. The action symbol character  rotates while the operation is taking place.

8. When the operation is complete, the following display signals the programmer's readiness. If an error code is displayed, see appendix A.

Series 22 Displays



NOTE

The number (01) following PRG DONE (program done) is the sequence number. The sequence number increments by 1 for each device programmed. HHHH is the hex sumcheck of all the device data. If block is defined, the sumcheck (HHHH) will be calculated only for the block size.

9. Remove the device from the socket.
10. To program additional identical devices using the data stored in RAM, return to step 6.