NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN ON LABEL "ETC4", AND MARK ASY NO. 00-04-02-7018.
   AND LATEST ASY REVISION.

PIN NUMBERING AND ORIENTATION

COMPONENT SIDE
<table>
<thead>
<tr>
<th>Signal Name</th>
<th>Color Code</th>
<th>Device Signal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PLATE</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>RED</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>GREEN</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>WHITE</td>
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<tr>
<td>5</td>
<td>BROWN</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>BLUE</td>
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</tr>
<tr>
<td>7</td>
<td>ORANGE</td>
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</tr>
<tr>
<td>8</td>
<td>YELLOW</td>
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<td>25</td>
</tr>
</tbody>
</table>

**Diagram Description:**
- The diagram includes a schematic with labeled ports and connections.
- The legend on the right side of the diagram provides color codes and signal names for each port.

**Notes:**
- Synchronizer Controller 002
- Diagram includes a port labeled 'I/O DEVICE 20/20 DATA SET'.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROPRIATE AREA SHOWN REVISION LABEL, ITEM 53,
   AND MARK ASSEMBLY NO. 001-08-02-704D AND LATEST ASSM. REVISION.

COMPONENT SIDE
ASSEMBLE WITH ARTWORK 001-08-03-704 REV.

PIN NUMBERING AND
ORIENTATION

COMPONENT SIDE
SYNCHRONOUS CONTROLLER

F.C. BOARD ASSY
SYNCHRONOUS CONTROLLER

NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROPRIATE AREA SHOWN REVISION LABEL, ITEM 53,
   AND MARK ASSEMBLY NO. 001-08-02-704D AND LATEST ASSM. REVISION.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 15.
   AND MARK ASSY NO 001-18-02-701 AND LATEST ASSY REVISION.
<table>
<thead>
<tr>
<th>SIGNAL NAME</th>
<th>CODE</th>
<th>DEVICE SIGNAL</th>
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<tbody>
<tr>
<td>$I/O$</td>
<td>1</td>
<td>I/O CABLE COLOR</td>
</tr>
<tr>
<td>1</td>
<td>BLACK</td>
<td>PROTECTIVE GROUND</td>
</tr>
<tr>
<td>2</td>
<td>WHITE</td>
<td>TRANSMITTED DATA</td>
</tr>
<tr>
<td>3</td>
<td>RED</td>
<td>RECEIVED DATA</td>
</tr>
<tr>
<td>4</td>
<td>GREEN</td>
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<td>5</td>
<td>ORANGE</td>
<td>CLEAR TO SEND</td>
</tr>
<tr>
<td>6</td>
<td>BLUE</td>
<td>DATA SET READY</td>
</tr>
<tr>
<td>7</td>
<td>WHITE/BLACK</td>
<td>SIGNAL GROUND</td>
</tr>
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<td>8</td>
<td>RED/BLACK</td>
<td>RECEIVED LINE SIGNAL</td>
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<td>9</td>
<td>WHITE/BLACK</td>
<td>DETECTOR</td>
</tr>
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<td>10</td>
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<td>SENT</td>
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<td>11</td>
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<td>GREEN/BLACK</td>
<td>SPARE UNASSIGNED</td>
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<td>13</td>
<td>GREEN/BLACK</td>
<td>TRANSMITTER SIGNAL</td>
</tr>
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<tr>
<td>25</td>
<td>GREEN/BLACK</td>
<td>TRANSMITTER SIGNAL</td>
</tr>
</tbody>
</table>
NOTE:

1. HEIGHT LIMITATIONS,
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2 PATTERN MARKED X NOT USED
3. LOCATE IN APPROPRIATE AREA SHOWN REVISION LABEL ITEM 37,
   AND MARK ASSY. NO. 010-30-02-70A, AND LATEST ASSY. REVISION.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. X INDICATES NO COMPONENT MOUNTED AT
   THIS LOCATION.
3. LOCATE IN APPROPRIATE. AREA SHOWN DEVIATION 5000 LABEL.
   ITEM No. 39. AND MARK ASSY. NO. 001-09-02. AND LATEST ASSY.
   REVISION.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. X INDICATES NO COMPONENT MOUNTED AT
   THIS LOCATION.
NOTE:

THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED:

A. +5V - PINS 1 & 2
B. GND - PINS 85 & 86
C. +12V - PINS 75 & 76
D. -13V - PINS 81 & 82
E. I/O BUS - PINS 3 THRU 39.

*THIS LOGIC IS TO BE USED WITH BOARDS ASSEMBLED USING ARTWORK 90-03-702 REV A*
3. COMPONENT TERMINATING LEADS TO BE CLINCHED OR NON-CLINCHED PRIOR TO SOLDERING.

2. MAXIMUM HEIGHT OF LEAD PROTRUSIONS CLINCHED OR NON-CLINCHED TO BE .080 MAX.

1. COMPONENT HEIGHT TO BE .400 MAX. INCLUDING SHIELD COVERS, TEST SOCKETS WITH EXTERNAL PLUG, ETC.

NOTES:
4. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL ITEM 21, AND MARK ASSY NO. 001-15-02-701 AND LATEST ASSY REVISION.
NOTE:

1. HEIGHT LIMITATIONS.

COMPONENT SIDE OF BOARD .400 MAX.

ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN, REVISE LABEL, ITEM 3A,
AND MARK ASSY. NO. 001-22-02-702 AND LATEST ASSY. REVISION.
JUMPER OPTIONS

1 TO 8 FOR 15 CPS PRINTER MODEL #150
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. MARK BOARD 701 AND REVISION OF BOARD
   AS SHOWN.
**NOTE:**

1. **HEIGHT LIMITATIONS.**
   
   **COMPONENT SIDE OF BOARD .400 MAX.**
   
   **ETCH SIDE OF BOARD .080 MAX.**

2. LOCATE IN APPROXIMATE AREA SHOWN, REVISION LABEL, ITEM 3B, AND MARK ASSY NO. 010-33-02-70C AND LATEST ASSY REVISION.

---

**COMPONENT SIDE**

ASSEMBLE WITH ARTWORK 00-33-02-70C REV C

---

**PIN NUMBERING AND ORIENTATION**
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. PATTERN MARKED 'X' NOT USED.

3. LOCATE IN APPROPRIATE AREA SHOWN REVISION LABEL, ITEM 25,
   AND MARK ASSY. NO. 010-3402-08C AND LATEST ASSY. REVISION.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN, REVISION LABEL.
   ITEM 34, AND MARK ASSY. NO. 010-42-02-101 AND LATEST
   ASSY. REVISION.
NOTE:

1. HEIGHT LIMITATIONS.

   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA AS SHOWN.

   REV LABEL, ITEM 65, AND MARK ASSY NO. 045-44-02-701
   AND LATEST ASSY REV.

ASSEMBLE WITH ARTWORK 04-44-02-701B
NOTES:
1. UNLESS OTHERWISE SPECIFIED:
A. ALL RESISTORS ARE IN 0.1Ω, 1/4W, ±5%.
B. ALL CAPACITORS ARE IN MICROFARADS
C. "ALL DIODES ARE TYPE IN4148.
2. THE FOLLOWING I/O PINS ARE PREASSIGNED
   AND MUST BE USED FOR THE FUNCTIONS
   DESCRIBED ONLY:
A. +5V PINS 1&2
B. GND PINS 3&5
C. +12V PINS 75&76.
D. -13V PINS 81&82.

M1,M2,M49,M50,M51

---

A. ST USED ON
   ROM KEYBOARD CONTROLLER

---

HIGHEST REF DES USED

REF DES NOT USED
**NOTE:**

1. **HEIGHT LIMITATIONS.**
   - **COMPONENT SIDE OF BOARD: .700 MAX.**
   - **ETCH SIDE OF BOARD: .080 MAX.**

2. **LOCATION:**
   - In approximately the area shown.
   - **REV LABEL, ITEM 47, AND MARK 'ASS'Y NO. 010-45-02-701' AND LATEST ASS'Y REV.**

3. **ASSEMBLY:**
   - **COMPONENT SIDE**
   - **ORIENTATION**

---

**REVISION HISTORY**

[Revision Details]

---

**REFERENCE DESIGNATION**

[Reference Details]
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. LOCATE APPROXIMATE AREA SHOWN, REV STATUS LABEL.
   ITEM NO.90 AND MARK ASSY. NO. 010-47-02-701 AND LATEST
   ASSY. REV.

COMPONENT SIDE
OUT ETCH FROM
PIN 20 TO EYELET

ADD WIRE ITEM 411 FROM
PIN 24 TO EYELET
NOTES:

1. RIGHT SIDE UP

2. ALL JUMPER WIRE ARE TO BE FASTEN TO BOARD USING ITEM 4, 3 PLACES MARKED "O"

3. MARK AS SHOWN IN "A" HIGH VERTICAL GOTHIC CHARACTERS (BLACK), REV ASSY NO & REV

4. OF HOLE USING NO. 60 ROUND (0.25MM).
NOTE:

1. HEIGHT LIMITATIONS.

COMPONENT SIDE OF BOARD .400 MAX.

ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 14,

AND MARK ASSY. NO. 007-03-02-701E AND LATEST ASSY REVISION.
NOTES
1. LR = LINE RECEIVER SR75154.
2. LD = LINE DRIVER UA9616.
3. LR "DATA/NO DATA" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
4. LD "LAST TO SEND" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
5. LD "XMITTER SIG TIMING ELEMENT" USED ONLY FOR MASTER MULTIPLEXER (701 ASSY).
6. RESISTORS ARE 1/4W, 5K.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN.
   REVISED LABEL, ITEM 16, AND MARK ASSY. NO. 007-04-02704C AND
   LATEST ASSY. REVISION.

PIN NUMBERING AND ORIENTATION
NOTE:

1. HEIGHT LIMITATIONS:
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN REVISION LABEL, ITEM 14, AND MARK ASSY NO. 007-04-02-703C AND LATEST ASSY REVISION.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL RESISTOR VALUES ARE IN OHMS, ±5% AND ARE 1/4 WATT.
2. A & B ARE ETCH CUT OPTIONS.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

NOTE:
1. ALL JUMPER WIRES ARE TO BE FASTEN TO BOARD USING STORM S, Places Marked (O)
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD, .400 MAX.
   ETCH SIDE OF BOARD, .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN.
   REVISION LABEL ITEM 37 AND MARK
   ASSEMBLY NO. 007-06-03-701 AND LATEST
   ASSEMBLY REVISION.
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWNRevision Table Item 30.
   AND PACK ASSY.No.027-02-701C AND LATEST ASSY.REVISION.

3. THIS ASSEMBLY DRAWING REPLACES THE ASSEMBLY DRAWING USING REVISION B.
   ASSEMBLY (BOARD NEVER SHOWN AT ARTWORK REVISION B)
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .050 MAX.
2. MARK .12 HIGH VERTICAL USING CHARACTERS
   BLACK, USING ACRYLIC BASE INK.
NOTE:
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.
2. 'X' INDICATES NO COMPONENT
1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. "X" INDICATES NOT USED.

3. REMOVE STRIPPING FROM PINS-ITEM 19
   AFTER WAVE SOLDER.

4. DO NOT INSTALL PIN 26 (14 PLACES) MKD O.

NOTE:

PIN NUMBERING AND ORIENTATION

COMPONENT SIDE

ASSEMBLE WITH ARTWORK REV B
NOTE:

1. HEIGHT LIMITATIONS. COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN.

3. ATTACH JUMPER WIRES ITEM 43, USING GLUE ITEM 44, TO BOARD IN AREAS MARKED "X".

4. ATTACH CLEAR SLEEVE ITEM 46, OVER DIODE LEADS BEFORE ATTACHING DIODE TO BOARD.
NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTORS ARE IN OHMS, 1/4W, ± 5%. 
   B. ALL CAPACITORS ARE IN MICROFARADS.
   C. ALL DIODES ARE TYPE IN4148.

2. THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED ONLY:
   A. +5V PINS 12, 13, +12V PINS 75, 76
   B. GND PINS 85, 86
   D. -13V PINS 81, 86

HIGHEST REF DES USED
A. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTORS ARE IN OHMS, 1/4W, ± 5%.
   B. ALL CAPACITORS ARE IN MICROFARADS.
   C. ALL DIODES ARE TYPE IN4148.

2. THE FOLLOWING I/O PINS ARE PREASSIGNED AND MUST BE USED FOR THE FUNCTIONS DESCRIBED ONLY:
   A. +5V PINS 12, 13, +12V PINS 75, 76
   B. GND PINS 85, 86
   D. -13V PINS 81, 86

DOCUMENT NUMBER
REV.:

FLOPPY DISK CONTROLLER LOGIC DIAGRAMS
NOTE:

1. HEIGHT LIMITATIONS.

COMPONENT SIDE OF BOARD  .400 MAX.

ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA AS SHOWN.

REV LABEL, ITEM 56, AND MARK ASSY NO. 045-01-02-701 AND LATEST ASSY REV.

3. ATTACH JUMPER WIRE, ITEM 57, TO BOARD WITH GLUE, ITEM 43, IN PLACES MARKED (G).

ASSEMBLE WITH ARTWORK 045-01-03-701 REV B

PC BOARD ASSY FLOPPY DISC LOCAL LOGIC-701

REFERENCE DESIGNATION
NOTE:

1. HEIGHT LIMITATIONS.
   COMPONENT SIDE OF BOARD .400 MAX.
   ETCH SIDE OF BOARD .080 MAX.

2. LOCATE IN APPROXIMATE AREA SHOWN, REV LABEL ITEM 48
   AND MARK ASSY NO. 010-48-02-701 OR 702 & LATEST ASSY REV
   3. PATTERN MARKED X NOT USED (701 ONLY)