Schematic Package Supplement to

Operation, Maintenance and Service Manual

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**NOTE:** This staple temporarily holds the schematic package together. Please remove the staple before using the schematics.
Color Raster Power Supply Wiring Diagram
### MEMORY MAP

<table>
<thead>
<tr>
<th>HEXA-DECIMAL ADDRESS</th>
<th>R/W</th>
<th>DATA</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000-3FFF</td>
<td>R</td>
<td>D D D D D D D D</td>
<td>1st Priority Z80 CPU ROM (16K)</td>
</tr>
<tr>
<td>0000-1FFF</td>
<td>R</td>
<td>D D D D D D D D</td>
<td>2nd Priority Z80 CPU ROM (8K)</td>
</tr>
<tr>
<td>0000-0FFF</td>
<td>R</td>
<td>D D D D D D D D</td>
<td>3rd Priority Z80 CPU ROM (4K)</td>
</tr>
<tr>
<td>6800-680F</td>
<td>W</td>
<td>D D D D D D D D</td>
<td>Audio Control</td>
</tr>
<tr>
<td>6810-681F</td>
<td>W</td>
<td>D D D D D D D D</td>
<td>Audio Control</td>
</tr>
<tr>
<td>6820</td>
<td>W</td>
<td>D</td>
<td>0 = Reset IRQ1 (Latched)</td>
</tr>
<tr>
<td>6821</td>
<td>W</td>
<td>D</td>
<td>0 = Reset IRQ2 (Latched)</td>
</tr>
<tr>
<td>6822</td>
<td>W</td>
<td>D</td>
<td>0 = Enable NM13 (Latched)</td>
</tr>
<tr>
<td>6823</td>
<td>W</td>
<td>D</td>
<td>0 = Reset 2nd and 3rd Z80 CPUs (Latched)</td>
</tr>
<tr>
<td>6825</td>
<td>W</td>
<td>D</td>
<td>Custom Chip 53 Mode Control (Latched)</td>
</tr>
<tr>
<td>6826</td>
<td>W</td>
<td>D</td>
<td>Custom Chip 53 Mode Control (Latched)</td>
</tr>
<tr>
<td>6827</td>
<td>W</td>
<td>D</td>
<td>Custom Chip 53 Mode Control (Latched)</td>
</tr>
<tr>
<td>6830</td>
<td>W</td>
<td>D</td>
<td>Watchdog Reset</td>
</tr>
<tr>
<td>7000</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>Custom Chip 06—Data</td>
</tr>
<tr>
<td>7100</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>Custom Chip 06—Command</td>
</tr>
<tr>
<td>8000-87FF</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>2K Playfield RAM</td>
</tr>
<tr>
<td>8800-8BFF</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>1K Motion RAM (PIC)</td>
</tr>
<tr>
<td>9000-93FF</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>1K Motion RAM (HPOS, VPOS)</td>
</tr>
<tr>
<td>9800-9BFF</td>
<td>R/W</td>
<td>D D D D D D D D</td>
<td>1K Motion RAM (FLIP)</td>
</tr>
<tr>
<td>A000</td>
<td>W</td>
<td>D</td>
<td>Playfield Select (Latched)</td>
</tr>
<tr>
<td>A001</td>
<td>W</td>
<td>D</td>
<td>Playfield Select (Latched)</td>
</tr>
<tr>
<td>A002</td>
<td>W</td>
<td>D</td>
<td>Playfield Color Select (Latched)</td>
</tr>
<tr>
<td>A003</td>
<td>W</td>
<td>D</td>
<td>Alphanumeric Color Select (Latched)</td>
</tr>
<tr>
<td>A004</td>
<td>W</td>
<td>D</td>
<td>Playfield Color Select (Latched)</td>
</tr>
<tr>
<td>A005</td>
<td>W</td>
<td>D</td>
<td>Playfield Color Select (Latched)</td>
</tr>
<tr>
<td>A007</td>
<td>W</td>
<td>D</td>
<td>Flip Video</td>
</tr>
<tr>
<td>B800-B83F</td>
<td>W</td>
<td>D D D D D D D D</td>
<td>Write EARAM Address and Data</td>
</tr>
<tr>
<td>B800</td>
<td>R</td>
<td>D D D D D D D D</td>
<td>Read EARAM Data</td>
</tr>
<tr>
<td>B840</td>
<td>W</td>
<td>D D D D D D D D</td>
<td>Write EARAM Control</td>
</tr>
</tbody>
</table>

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**Dig Dug CPU PCB Schematic Diagram:**

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SP-203 Sheet 3A
1st printing 3L
CPU PCB Power Input, Clock, NMI, and Watchdog
1st Priority CPU
CPU PCB Address Decoder

Dig Dug CPU PCB Schematic Diagram

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SP-203 Sheet 4A
1st printing 3L

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Motion Object Address Generator, Decoder, and Match Line Flag
MOP0 through MOP7 – Motion Object
V and H Position Data.
MOBJA0 through MOBJA7 – Motion
Object Picture Address.
Components identified by shading have special characteristics important to safety and should be replaced only with identical types.

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Dig Dug Color Display Schematic Diagram

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SP-203 Sheet 8B
1st printing 3L
Schematic Notes
Unless otherwise specified

Resistance: (Ω) (K = kΩ, M = MΩ), 1/4 (W) carbon resistor
Capacitance: 1 or higher (pF), less than 1 (µF)
working voltage = 50 (V)
ceramic capacitor
Inductance: (H)
Electrolytic Cap: Capacitance Value (µF)/working voltage (V).
NP = non-polar (or bipolar) electrolytic cap.
Refer to the parts list for additional component information.

δ indicates test point connection
Ψ indicates chassis ground unless otherwise specified
Hz indicates cycles per second

For safety purposes (and continuing reliability)
replace all components marked with safety symbol with identical type.
NOTE: FR = fusible resistor

Parts identification on circuit boards:
e.g. SU1126A (R107 = R1107)
SU3030A (R113 = R3113)

Color Display Scheme

SU-1133A MAIN PCB ASSY

X901 POWER DRIVE 2SC2668
X902 ERROR AMP 2SC1890

X303 BEAM LIMITER 2SA673
X304 BLANKING 2SC454C or 2SC4585
X301, X302, X305, X306 SYNCH AMP 2SC454C or 2SC4585

SU1133A MAIN PCB ASSY

X701 X-RAY PROTECTOR 2SC454C or 2SC4585
X501 H.DRIVE 2SC1507 or 2SC237V
X502 H.OUT 2SC998 or 2SC998H
X01 H.OUT 2SC998 or 2SC998H

AC20V 60Hz/50Hz ±10%