

8-7-80  
ML-3

Mod//	ECO//	Date Issued	CHANGE	REASON
1	2	2-8-79	RN4 resistor pack from 1K to 4.7K on SCC board.	
2	57	11-16-79	Cut pin 26 of 26 pin CA connectors.	A polarizing key will be added to all cables attached to these connectors to guarantee correct mating of cable to connector.
3	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.

*Colour*

8-7-80

ML-2

Mod#	ECO#	Date Issued	CHANGE	REASON
1	227	5-2-80	Change IC32 from 74LS74 to 7474.	To provide increased drive capability to the $\emptyset$ signal into the Z80.
2	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at the locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at the locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	2	2-8-79	RN4 resistor pack from 1K to 4.7K on SCC board.	
2	57	11-16-79	Cut pin 26 of 26 pin CA connectors.	A polarizing key will be added to all cables attached to these connectors to guarantee correct mating of cable to connector.
3	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.
4	610	2-18-81	Remove IC18 pins 1,2,3,4 and IC24 pins 2,12 from socket. Jump IC18 chip pin 3→IC24-2 solder side (via feedthrough hole for faultfinder). Jump IC18 chip pin 1→IC24-12 solder side. Jump IC18 chip pin 4→IC24 chip pin 2. Jump IC18 chip pin 2→IC24 chip pin 12. Cut memory disable jumper. <i>* THIS ALSO</i>	This change puts the base address of the SCC ports to 50 Hex so that port 53 & 54 can be used to drive a Centronics printer.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	227	5-2-80	Change IC32 from 74LS74 to 7474.	To provide increased drive capability to the $\emptyset$ signal into the Z80.
2	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at the locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.
3	610	2-18-81	Remove IC18 pins 1,2,3,4 and IC24 pins 2,12 from socket. Jump IC18 chip pin 3→IC24-2 solder side (via feedthrough hole for faultfinder). Jump IC18 chip pin 1→IC24-12 solder side. Jump IC18 chip pin 4→IC24 chip pin 2. Jump IC18 chip pin 2→IC24 chip pin 12. Cut memory disable jumper. <i>* THIS ALSO</i>	This change puts the base address of the SCC ports to 5 $\emptyset$ Hex so that port 53 & 54 can be used to drive a Centronics printer.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	357	8-7-80	Replace metal screws & washers with nylon screws & washers, at the locations indicated: IC17-7905C	This regulator's heatsink is electrically hot. Nylon hardware will alert users to this effect.
2	610	2-18-81	Remove IC18 pins 1,2,3,4 and IC24 pins 2,12 from socket.  Jump IC18 chip pin 3 → IC24-2 solder side (via feedthrough hole for faultfinder). Jump IC18 chip pin 1 → IC24-12 solder side. Jump IC18 chip pin 4 → IC24 chip pin 2. Jump IC18 chip pin 2 → IC24 chip pin 12. Cut memory disable jumper. ← + THIS ALSO	This change puts the base address of the SCC ports to 50 Hex so that port 53 & 54 can be used to drive a Centronics printer.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	171	4-1-80	<ol style="list-style-type: none"> <li>1. Jump IC53-1 to IC18-9, pin side.</li> <li>2. Cut trace from base of Q3 to GND, component side.</li> <li>3. Cut trace at J2-20. } Jump J2-20 to J3-28. } pin side</li> <li>4. Change R27 to 220<math>\Omega</math> R61 to 470<math>\Omega</math> R74 to 13K R77 to 18K.</li> <li>Direction of diode D5 must be opposite to that indicated on legend.</li> <li>5. RN7 should be 83R33<math>\Omega</math>.</li> </ol>	Corrections to artwork.
2	226	4-29-80	<ol style="list-style-type: none"> <li>1. Change R1 from 560<math>\Omega</math> resistor to 2.2K resistor.</li> <li>2. Connect a 2.7K resistor between pin 6 &amp; pin 14 of IC31.</li> <li>3. Change R53 from 10K to 12K<math>\Omega</math>.</li> </ol>	Design change for Master/Slave operation was necessary due to IC current output limitations.
3	469	10-20-80	<ol style="list-style-type: none"> <li>1. On solder side, cut trace at IC17-5.</li> <li>2. Jump IC17-5 <math>\rightarrow</math> IC60-15.</li> </ol>	The clock inputs to IC's 13, 14 & 15 were being delayed by IC17, so that IC13 latched data from IC2 during an output transition. Thus, IC13 latched in image data as control data. This change compensates for this delay by 11 nsec.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	349	7-30-80	1. Add jumper wire from IC29-14 → IC28-14, on the solder side. 2. Cut trace on component side at R52 near R53 (this trace runs from R52 to R1, and runs under trim pots R17 & R18). Then jump R1 (near J4-26) → R53 (near R52).	Artwork Layout Errors. 1. Missing trace- won't supply power to IC29. 2. Trace misrouted- leads to -5V rather than PHASEIN.
2	435	9-30-80	Cut trace between C12 & C15. Cut trace between C15 & IC11-3. Jump C12 → IC11-3.	PCB layout correction. C15 is a .047μf capacitor which is incorrectly connected to the input of IC11 (TL810 op. amp). This change connects it as a filter cap to the op. amp +12V power supply as intended.
3	469	10-20-80	1. On solder side, cut trace at IC17-5. 2. Jump IC17-5 → IC60-15.  ↑ 2/13/81 correction pin <u>15</u> , not <u>5</u> .	The clock inputs to IC's 13, 14 & 15 were being delayed by IC17, so that IC13 latched data from IC2 during an output transition. Thus, IC13 latched in image data as control data. This change compensates for this delay by 11 nsec.



Mod#	ECO#	Date Issued	CHANGE	REASON
1	435	9-30-80	Cut trace between C12 & C15. Cut trace between C15 & IC11-3. Jump C12 → IC11-3.	PCB layout correction. C15 is a .047 $\mu$ f capacitor which is incorrectly connected to the input of IC11 (TL810 op. amp). This change connects it as a filter cap to the op. amp +12V power supply as intended.
2	466	10-17-80	1. C5 should be 18pf. 2. IC7 is a 340H-12, IC6 is a 320H-5. 3. C22, 23, 25 & 26 are .047 $\mu$ f axial caps. (.1 $\mu$ f is OK, but .047's should be used henceforth).	Legend corrections.
3	469	10-20-80	1. On solder side, cut trace at IC17-5. 2. Jump IC17-5 → IC60-15.	The clock inputs to IC's 13, 14 & 15 were being delayed by IC17, so that IC13 latched data from IC2 during an output transition. Thus, IC13 latched in image data as control data. This change compensates for this delay by 11 nsec.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	172	4-1-80	<ol style="list-style-type: none"> <li>1. Cut trace at IC29-6, and jump IC29-6 to J3-22, pin side.</li> <li>2. On pin side, scrape off the insulation coating of the feedthrough at IC38-16, then solder in that pin.</li> <li>3. On component side, cut trace from RN1-4 to J2-22, near RN1. On pin side, connect jumper between RN1-5 &amp; J2-22.</li> <li>4. On pin side, cut trace from J3-33 to feedthrough, near J3-33.</li> <li>5. On component side, cut trace from IC9-12 to feedthrough hole, near IC26-16. Then connect a jumper from that feedthrough to IC9-11, pin side.</li> </ol>	Corrections to artwork.
2	239	5-8-80	Change RN9 from 83R100 to 83R33.	Needed for increased cable drive for running two 48KTP boards with the SDJ.

Mod#	ECO#	Date Issued	CHANGE	REASON
1	348	7-30-80	<ol style="list-style-type: none"><li>1. Cut trace on component side between IC5-10 &amp; IC5-16. Jump IC5-10 → IC5-15.</li><li>2. Scrape off insulation of feedthrough hole near IC44 pins 9 &amp; 10, located between IC44 &amp; IC45, solder side. Jump feedthrough → IC44-15.</li></ol>	Artwork layout errors: <ol style="list-style-type: none"><li>1. Shorts +5V line to Ground.</li><li>2. Feedthrough hole should have been moved with the moving of the trace between IC44-15 and IC56-19.</li></ol>
2	483	10-31-80	<ol style="list-style-type: none"><li>1. Jump IC13-4 → IC13-14. (F/F Preset) Jumper on solder side.</li></ol>	<ol style="list-style-type: none"><li>1. IC13-4 should be connected to +5V; artwork error.</li></ol>

10-31-80

ML- 1

Mod#	ECO#	Date Issued	CHANGE	REASON
1	483	10-31-80	1. Jump IC13-4 → IC13-14. (F/F Preset) Jumper on solder side.	1. IC13-4 should be connected to +5V; artwork error.