



The Sol Systems Manual is organized in a modular fashion. Purchasers of different Sol models will receive the appropriate sections of the manual. This mailing is to purchasers of Sol-PC, Sol-10 and Sol-20 units and includes Sections I, III, IV, IX and X, as well as numerous appendices. Please see the Table of Contents on pages i and ii. Sol-10 and Sol-20 owners will also receive sections II and V through VIII.

We will soon be sending more sections to you as they are printed. At the same time we will ship the Sol System binder and Sol-BASIC5 cassette along with two computer games and further diagnostic software. Sol-PC purchasers will also receive section VIII and Appendix V.

ASSEMBLY PROCEDURE CHANGE NOTICE #2

The Sol-REG PC board shipped with your kit contains an error that existed in our original art and a silk screen (legend) error. These errors relate specifically to the SCRL installation portion of Step 10 and the Sol-20 DC cable installation instruction (Step 13) in Section II of the Sol Systems Manual.

Reference Section II, Step 10, SCRL Installation

With your kit, use the following procedure to install SCRL in place of the instructions provided on Page II-8 of the manual:

- () Position SCRL (IR106B2 or MCRL06-2) on heat sink with component nomenclature up and observe how the left and center leads must be bent to install SCRL as shown in Figure 1. Bend these two leads as required and install a $\frac{1}{2}$ " piece of spaghetti over the center lead. Place circular mica insulator between heat sink and SCRL, insert leads and fasten SCRL-insulator-sink to PC board with a 4-40 x 7/16 screw, lockwasher and nut. Insert screw from back (solder) side of board and drive nut finger tight.

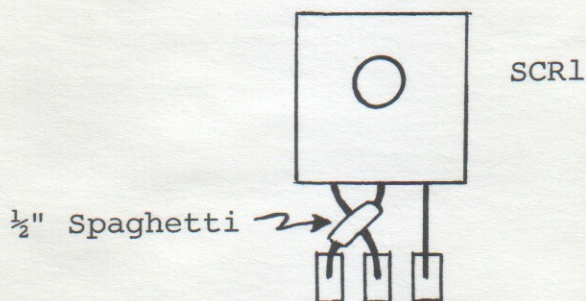


Figure 1. SCRL installation.

Reference Section II, Step 13.

On the Sol-REG PC board you received, two pads are labeled X5. One is located in the upper right-hand area of the board above C4 and to the right of pad T3; the other is located between C5 and FWB2 just above pad T4.

IGNORE THE X5 PAD LOCATED ABOVE C4.

Connect the red-white lead of the Sol-20 DC cable to the X5 located between C5 and FWB2.

CN #2

Sol POWER SUPPLY



ASSEMBLY PROCEDURE CHANGE NOTICE #4

Reference Section II, Page II-9

Add the following step to "Assembly-Test Procedure":

- () Step 13. Test Sol-REG for short circuits. Check for continuity between FWB1 (MDA970-1) mounting screw and the following points. The resistance should be greater than **20** ohms in all cases.

X2
T2
T1
Q1, Emitter
Q1, Base
Q1, Collector
D1, right-hand lead
R1, left hand lead
D3, top lead
D4, top lead
*D3, bottom lead
*D4, bottom lead

*Resistance will be initially low due to C4 and C5, but it should increase to greater than **20** ohms after a few seconds.

So1-BPB

REVISION LEVEL B BOARDS ONLY



ASSEMBLY PROCEDURE CHANGE NOTICE #5

Reference Section VI, Step 4, Page VI-8

On some Rev B boards, the blue and two white leads on the cable are too large for the mounting holes. To overcome this problem, prepare these three leads as follows:

1. Cut off end of white and blue wires, about 1/8" back into insulation.
2. Cut off as many strands of each wire as needs in order to insert through mounting hole.

CN#5A

ASSEMBLY PROCEDURE CHANGE NOTICE #6-2

A problem was detected in early Sol-Reg regulator boards in which the "crowbar" circuit would trigger without adequate reason and short-circuit the 5-volt output. A circuit change was made which will be reflected on revision level C and above.

Refer to the three Engineering Change Orders numbered ECO 10017, ECO 10018, and ECO 10019.

Reference Section 2.7.2, step 10;

Following visual inspection carry out the trace cuts shown on ECO 10017.

Reference Section 2.7.2, step 14;

Install the following components as shown in ECO 10019:

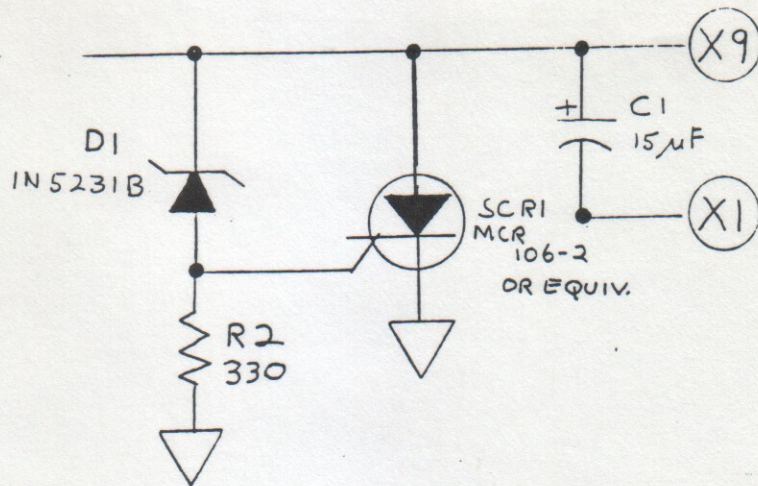
()	R13	330	orange-orange-brown
()	R14	100	brown-black-brown
()	C8	.047uf	disc ceramic capacitor

Reference Schematic, Regulator

Attach ECO 10018 to the schematic or insert the new components as indicated in this ECO.

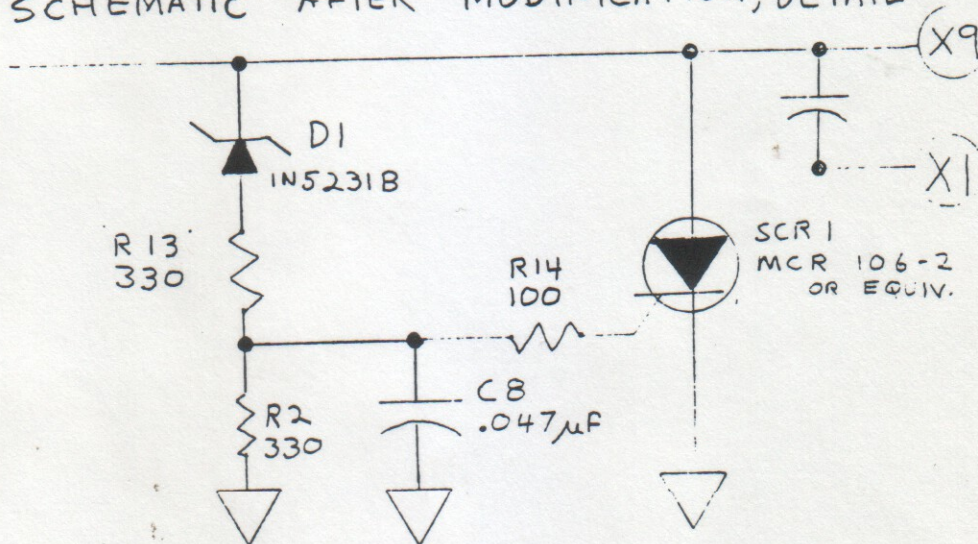
CN #6-2


ENGINEERING CHANGE ORDER



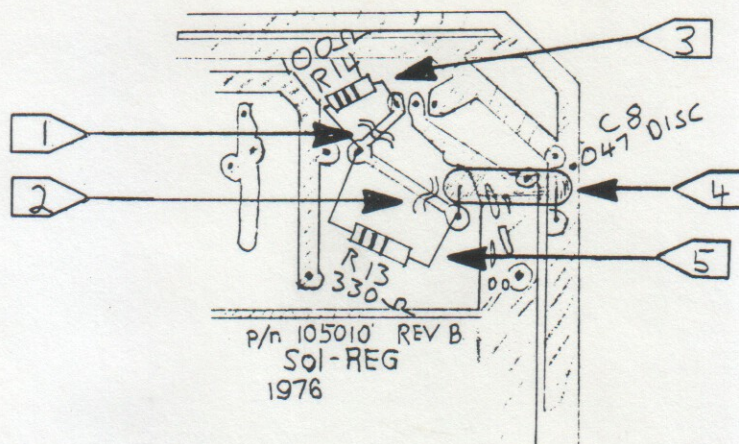
SCHEMATIC BEFORE MODIFICATION, DETAIL

SCHEMATIC AFTER MODIFICATION, DETAIL



REF. DES.	PART OR DWG. NO.	PART DESCRIPTION		
NEXT ASSY.	USED ON	 Processor Technology Corporation 6200 Hollis Street Emeryville, CA 94608	DRAWN: A. ATARIANI DATE: 2/8/77 CHECKED: K. Jorgensen DATE: 2/9/77	ENGR: P. Marsh DATE: 2-1-77 RELEASED: P. Marsh DATE: 2-9-77
ECO 10017	105010			
MODIFICATION Schematic Sol Reg Crowbar		REF. DRAWING NO. 105009		
REV. B	E.C.O. 10018	SCALE: —	SIZE	
	DRAWING NO.	SHEET 1	OF 1	

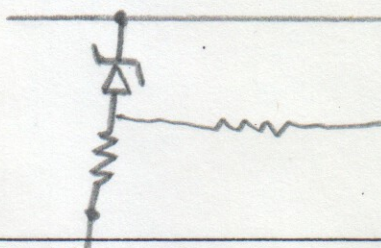
ENGINEERING CHANGE ORDER




BOTTOM VIEW (Solder Side)

NOTES. UNLESS OTHERWISE SPECIFIED:

- 1) CUT TRACE CONNECTING Anode of D1 with gate of SCR1.
- 2) CUT TRACE CONNECTING R2 with D1.
- 3) Solder R14 (new) TO pads of D1 ANODE + SCR1 GATE.
- 4) SOLDER C8 (new) TO pads of R2 (both ENDS).
- 5) Solder R13 (new) TO pads of D1 (ANODE) + R2.



R14	NEW	100-Ω 5% 1/4W	Film Resistor	1					
R13	NEW	330-Ω 5% 1/4W	Film Resistor	1					
C8	NEW	-0.047UF	DISC CAPACITOR	1					
REF. DES.	PART OR DWG. NO.	PART DESCRIPTION							

NEXT ASSY.	USED ON	 Processor Technology Corporation 6200 Hollis Street Emeryville, CA 94608	DRAWN: A. ATARIAN II	ENGR: R. Mann
ECO 10018	105009		DATE: 2/9/77	DATE: 2-10-77
			CHECKED: K. Jorgensen	RELEASED: R. Mann
			DATE: 2/9/77	DATE: 2-10-77

MODIFICATION, PC BOARD, Sol Reg, CROW BAR	
REF. DRAWING NO. 100510	
B REV.	E.C.O. 10017 DRAWING NO.
SCALE: —	SHEET 1 OF 1

The first few pages of this section of the Sol manual are revisions to other pages already in the manual. Please note the correct section and page that they refer to, and replace the appropriate page or pages as necessary. New pages are easily identified by the "Rev A" in the lower lefthand corner of the page.

ASSEMBLY PROCEDURE CHANGE NOTICE #5Reference Section VI, Step 4, Page 5

When attaching the cable to the Sol-BPB, insert wires from solder (back) side of board and solder on component (front) side.

NOTE

Pad orientations given in Step 4 are as viewed from component side of board.

The blue and two white leads on the cable are too large for the mounting holes. To overcome this problem, prepare these three leads as follows:

1. Cut off end of white and blue wires, about 1/8" back into insulation.
2. Cut off as many strands of each wire as needed in order to insert through mounting hole.

Sol MANUAL ERRATA SHEET #1

Reference Drawing No. 101007 in Section X (Page X-8)

The plastic tapped insert on the top edge of the left-hand masonite piece is incorrectly shown installed in the second hole from the back edge. This insert should be installed in the third hole from the back edge.

The second insert on the bottom edge is also shown incorrectly installed in the hole to the left of the center large hole. Install this insert in the hole to the immediate right of the large center hole.

ES #1

Applies to Revision Level A Boards
(Revision level not included on silk screen)

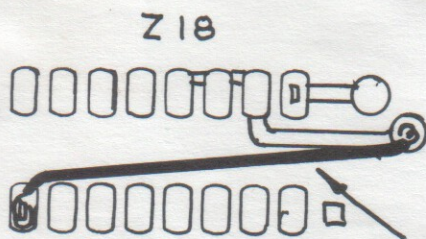
Three layout errors exist on the Sol-KBD PC board you received. These errors must be corrected before you check the circuit board and start assembly. How these errors are corrected are described below:

1. Key Pad #55



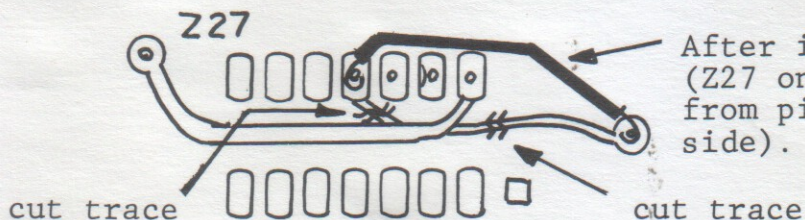
Using a sharp point, cut the bridge between the pad at 55 and the trace above (solder side).

2. U18, Pin 8



After installation of socket at U18 (Z18 on etch), install jumper wire from pin 8 to ground trace as shown. (Solder side.)

3. U27, Pin 11



After installation of socket at U27 (Z27 on etch) install jumper wire from pin 11 to pad as shown (solder side).