VECTOR
VECTOR GRAPHIC INC.

TECHNICAL ADVISORY

SUBJECT: IDENTIFICATION AND CONVERSION OF FLASHWRITER II BOARD UNITS AFFECTED: ALL SYSTEMS	MODEL: V3 DATE: 8 DEC. 1981	V3-0026 PAGE: 1 OF 1

CONDITION: Identification of the different versions of the Flashwriter II PCB.

CORRECTION: The list below contains a brief summary of identifying features and conversion procedures of the Flashwriter II Board.

FWII PCBA

#3514-0000 4Mhz VERSION

Identifying Features: Area "S" does not have a two pin molex connector. Does not have added resistor between pin 13 of IC U13 and ground. Memory chips at location U17, U18, U31, and U32 will be number #2114-3 or #2114-4.

#3514-0000 4/6Mhz VERSION

Identifying Features: The IC's at U17, U18, U31, and U32 must be #2114-2 and there will be a added 1K resistor(R-19) connecting pin 13 of U13 to pin 7 of U-14.
NOTE: Maybe used in either 4Mhz or 6Mhz, no modifications required.

#3514-0006 6Mhz VERSION FOR MULTI-USER SYSTEMS

Identifying Features: This version has a wire (part #3599-0000) terminated with a two pin female molex connector, from pad 2 of Area "S" (to right of C28) or a two pin male molex connector in Area "S". A wire connection has been made between pin 15 of U39 and pad 1 of area "S". Also the trace between pad 1 and pad 2 of area "S" has been cut. Jumper area "L" may be cut-software dependent.

To convert to 4/6Mhz for other than 5005 systems: Jumper the two pads 1 and 2 togeather in area "S" (C-28).

#3514-0008 4/6Mhz VERSION

Identifying Features: The IC's at U17, U18, U31, and U32, must be #2114-2 and the traces have been added to R19 which is now between U39 and U40. Does not have a wire soldered in Pad 2 of Area "S".
NOTE: Maybe used in 4Mhz or 6Mhz; no modification required.

VECTOR GRAPHIC INC.

TECHNICAL ADVISORY

SUBJECT: FWII REV.7	MODEL FWII	VTA# V3-014
	DATE 4/22/81	PAGE 1 of 5

UNITS EFFECTED: ALL SYSTEMS

Category: As required, Not Field Mandatory FLASHWRITER II, Rev 7

The addition of the 100 pf capacitor, C31 (U30-8 to U30-7), which created Rev 6 of the FW II PCB, did not sufficiently, compensate for the difference in various 2114 Ram manufacturer's specifications that impact timing and race conditions. Vector now recommends removing the 100 pf capacitor and implementing the following procedures:

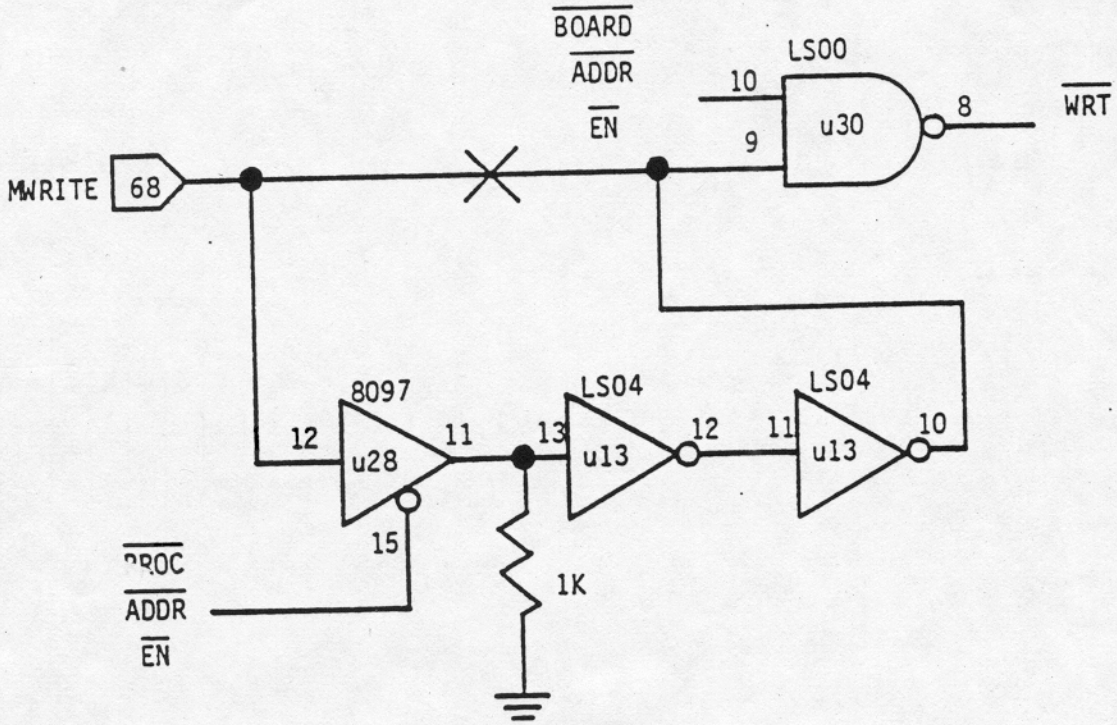
Component Side:

1. Cut the trace between U29 and U30, which passes between pins U30-6 & 7, and U 29-10 & 11.
2. Add a 1K resistor between U13-13 and U14-7. Solder the resistor directly to the I.C. pins. The top lead of the resistor should not touch the lower lead of C6.

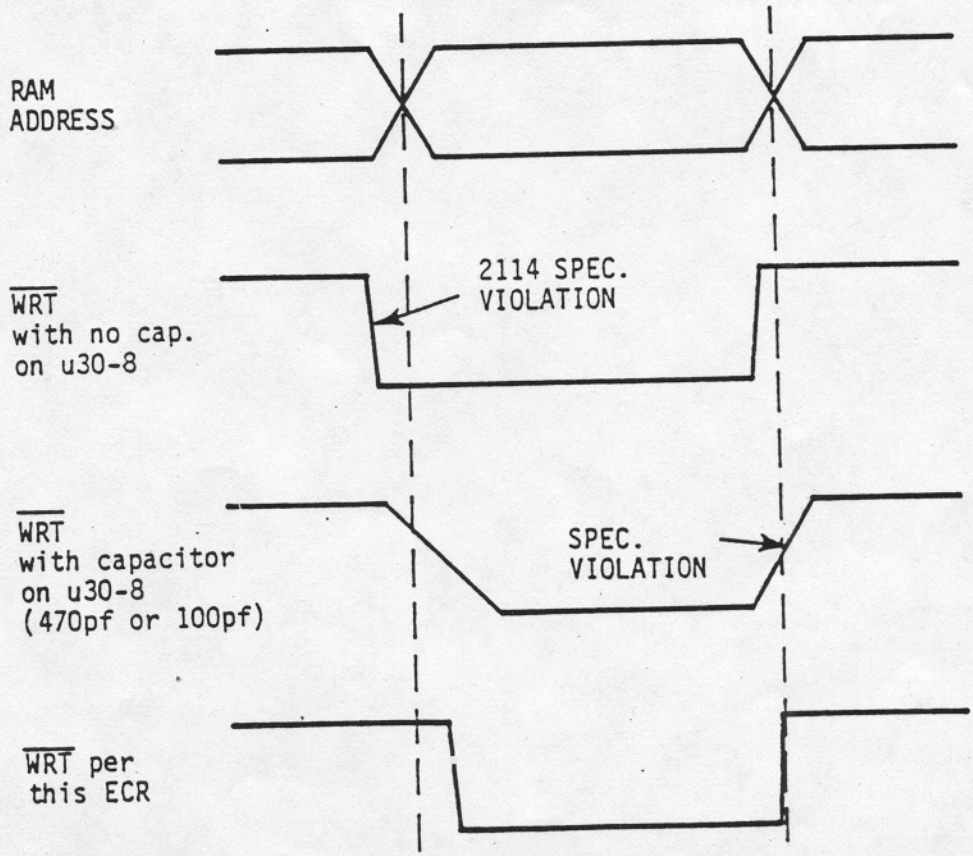
Circuit Side:

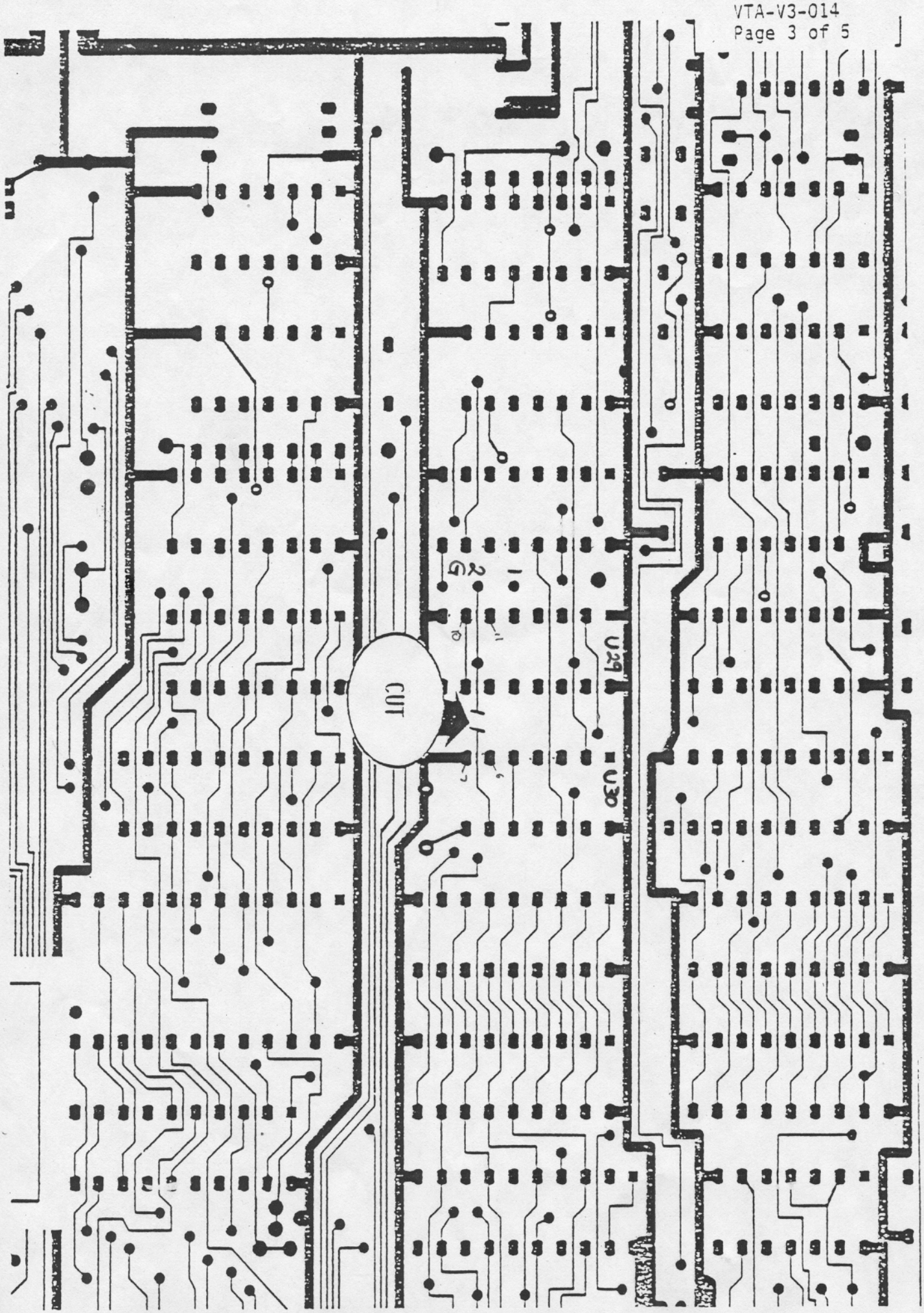
1. Install a jumper between U30-9 and U13-10.
2. Install a jumper between U13-11 and U13-12.
3. Install a jumper between U13-13 and U28-11.
4. Install a jumper between U28-12 and the feed-through hole just to the right of U29-10. (Under U29)

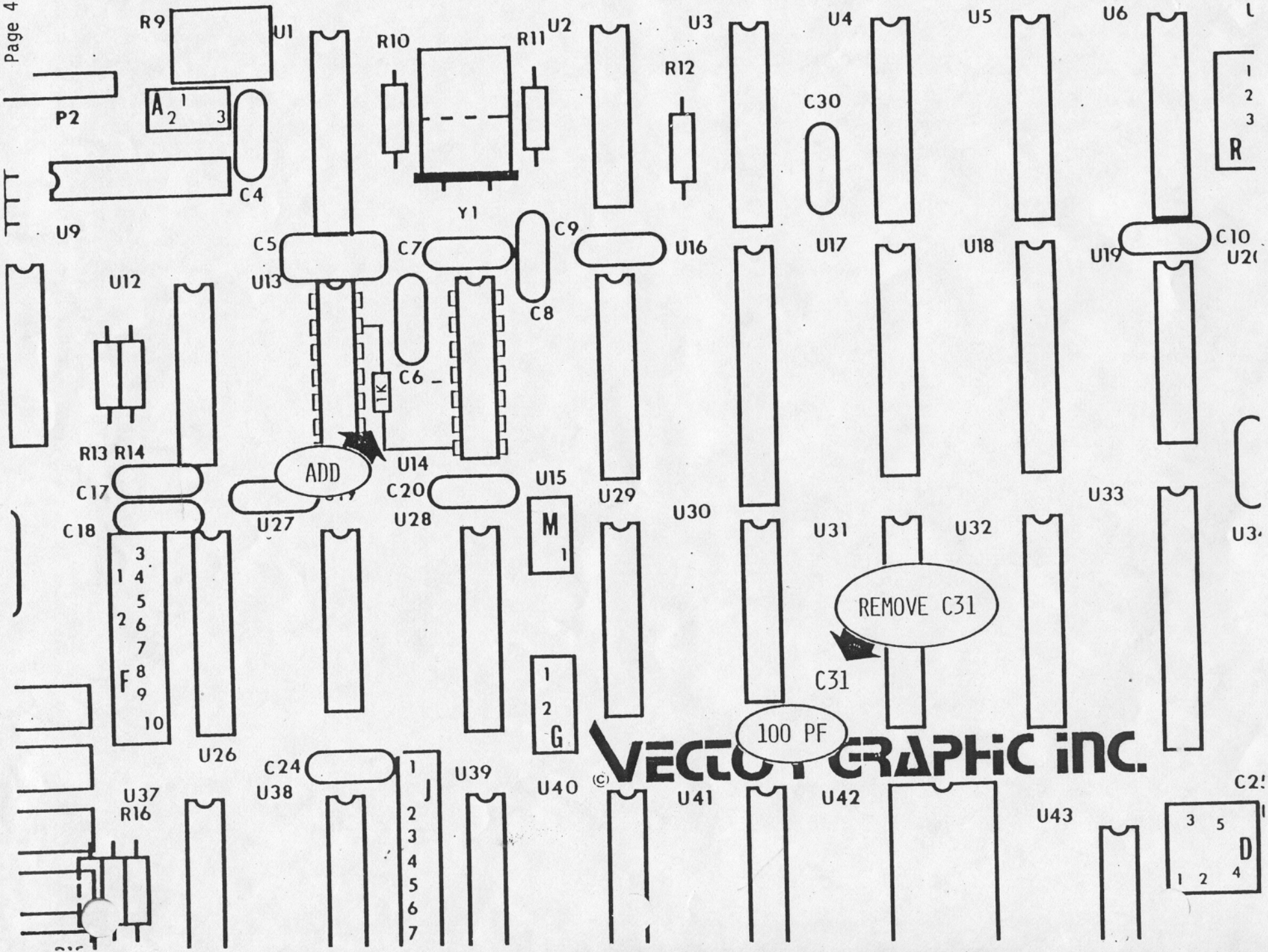
This will be revision 7 of the Flashwriter II PCBA.

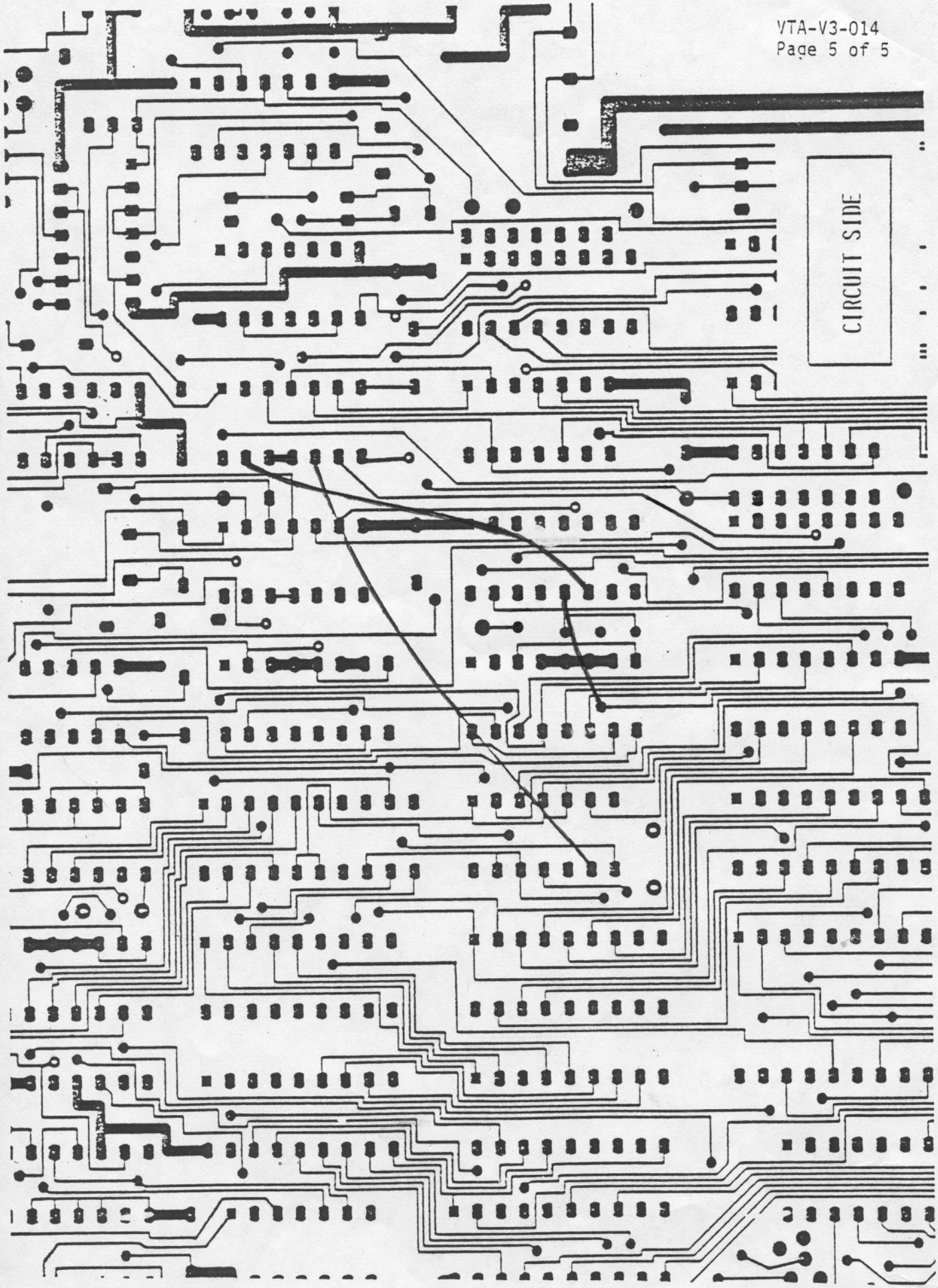


u28 IS USED TO EXPAND u30. (NO SPARE LS10 IS AVAILABLE ON THE BOARD.)




CUT
U29
U30




CIRCUIT SIDE

VECTOR GRAPHIC INC.

TECHNICAL ADVISORY

	FLASHWRITER II	VTA# V3-0028
CONVERSION OF FLASHWRITER II	FEB. 20 1980	PAGE 1 OF 2

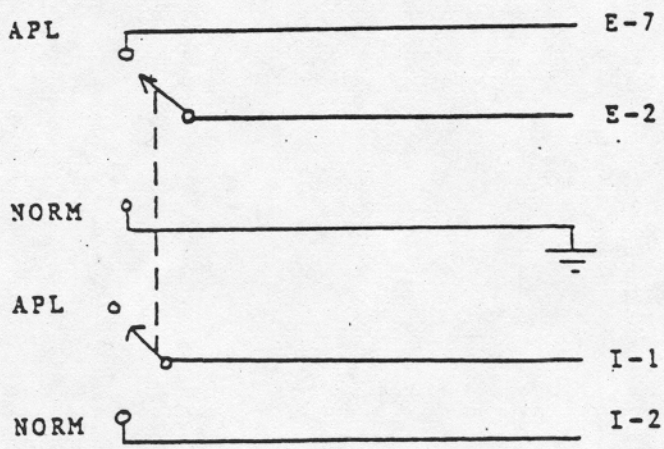
AFFECTED UNITS: FLASHWRITER II REV. 3.

The following will explain the cuts and jumpers necessary to incorporate the APL Character Generator PROMs on the Flashwriter II Rev. 3.

Previous instructions sent with each order of APL were for rev. 2 only.

I. For INTEL 2716 or TMS 2516 only -

A) Add switch as shown below



B) Cut etches

I1-I2
E1-E4
E2-E5

Jumper from

B1-B3
E1-E5

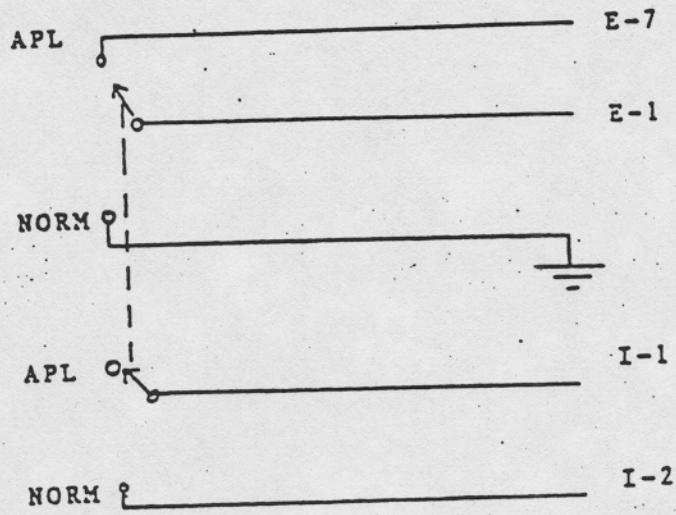
C) Insert APL PROMs at U22 and U23

Use APL TMS 2516 or INTEL 2716 at U22
Use APL 2708 at U23

FLASHWRITER II Rev.3 APL MODIFICATION

II. For TMS 2716 proms only -

A) Add switch as shown below



B) Cut Etches

I1 to I2
E1 to E4
E2 to E5
E3 to E9
trace from U22-18

Jumper from

B1 to B2
E1 to E3
E2 to E6
E5 to U22-18

C) Insert APL PROMs at U22 and U23

Use APL TMS 2716 at U22
Use APL 2708 at U23

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
FW II	4-21-80	0063

REASON:

Intermittent memory errors caused by marginal timing in retrace wait circuit.

DESCRIPTION OF CHANGE:

Add 470 pF (P/N 13-2479) between U30-8 and U30-7.

EFFECTIVITY:	PRIORITY
All new production	

ORIG.	R. Dieges	DATE	4-21-80
APPVD.	R. Harp R.H.	DATE	4-21-80

DISTRIBUTION:

- [x] PRODUCTION
- [x] TEST
- [x] QA
- [x] MATERIAL
- [x] PURCHASING
- [x] FIELD

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PRODUCT IMPROVEMENT BULLETIN

ART	DATE	NUMBER
FW II for Vector 3	4-24-80	0065

REASON:

Eliminate need for MTI bd. in Vector 3.

DESCRIPTION OF CHANGE:

1. Replace R4(100 ohm) with 330 ohm 1/4W 5%.
2. Replace R6(68 ohm) with jumper wire.
3. Replace C2(470 pF) with 150 pF capacitor.
4. Remove R5(150 ohm).
5. Cut leg 10 of U10 from board.
6. Place jumper from one hole on right side of optional R3 to second hole on right side of R3.(Jumper these optional holes together.)
7. Add 150 pF cap to contrast pot.

   Solder capacitor leads to potentiometer leads where blue wires are soldered.

EFFECTIVITY: Immediate	PRIORITY

ORIG. M. Musial	DATE 4/24/80
APPVD. R. Hall	DATE

DISTRIBUTION:

- ▷ PRODUCTION
- ▷ TEST
- ▷ QA
- ▷ MATERIAL
- ▷ PURCHASING
- ▷ FIELD

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PRODUCT IMPROVEMENT BULLETIN

ART	DATE	NUMBER
Flashwriter II	4/8/80	0061

REASON:

In order to test the optional monitor socket on FWII boards.

DESCRIPTION OF CHANGE:

Install 20 pin socket in U43 position on all production boards.

EFFECTIVITY: Immediate	PRIORITY

ORIG. Mark Musial	DATE 4/8/80
APPVD. R. Hap	DATE 4/17/80

DISTRIBUTION:

- ☒ PRODUCTION
- ☒ TEST
- ☐ QA
- ☒ MATERIAL
- ☒ PURCHASING
- ☐ FIELD

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
Flashwriter II	2-1-80	0055

REASON:

All Flashwriter II boards will have the jumper installed in area L for generating interrupts. All FW IIs will respond to keyboard input under WMS software.

DESCRIPTION OF CHANGE:

Jumper installed in area L by P.C.B. assemblers.

EFFECTIVITY:		PRIORITY
February 4, 1980	M. Musial	New Prod. only.

ORIG. M. Musial	DATE 2-1-80
APPVD. R. Harp R.H.	DATE 2-1-80

DISTRIBUTION:

- [X] PRODUCTION
- [X] TEST
- [X] QA
- [ ] MATERIAL
- [ ] PURCHASING
- [ ] FIELD

VECTOR GRAPHIC INC.

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
FLASHWRITER 2 VIDEO BOARD	1/29/80	0054

REASON:

1. TO ELIMINATE NEED FOR MTI BOARD IN VECTOR 3
2. TO ELIMINATE "SWIMMING VIDEO"

DESCRIPTION OF CHANGE:

1. CHANGE R4 FROM A 100 OHM 1/4 WATT RESISTOR TO A 330 OHM 1/4 WATT RESISTOR
2. DELETE R5, A 150 OHM, 1/4 WATT RESITOR
3. DELETE R6, A 68 OHM, 1/4 WATT RESISTOR AND PLACE A JUMPER WIRE IN ITS PLACE
4. CHANGE THE 14.31818MHz CRYSTAL TO A 14.3347MHz CRYSTAL

MAKE THE FOLLOWING CHANGES TO FLASHWRITER 2 PARTS LIST

ACTION	QTY	PART DESCRIPTION	PART NUMBER
DELETE	1	RESISTOR, 100 OHM, 1/4 WATT	14-1101
ADD	1	RESISTOR, 330 OHM, 1/4 WATT	14-1331
DELETE	1	RESISTOR, 150 OHM, 1/4 WATT	14-1151
DELETE	1	RESISTOR, 68 OHM, 1/4 WATT	14-1680
DELETE	1	CRYSTAL, 14.318MHz	19-1004
ADD	1	CRYSTAL, 14.3347MHz	19-1006

EFFECTIVITY:	PRIORITY
FLASHWRITER 2'S INSTALLED IN VECTOR 3 CHASSIS	

ORIG. C. SECBY	DATE 1/29
APPVD. R. Hap	DATE

DISTRIBUTION:

- [x] PRODUCTION
- [x] TEST
- [x] QA
- [x] MATERIAL
- [x] PURCHASING
- [ ] FIELD

VECTOR GRAPHIC INC.

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
flashwriter 2	9/7/79	0043

REASON: The 16 Ga. Wire now used is difficult to install and dress and puts stress on connector JZ.

DESCRIPTION OF CHANGE:

Use 18 or 20 Ga. wire for connector to J2 on flashwriter.

EFFECTIVITY:	PRIORITY
9/7/79	Normal

ORIG. B. Jones	DATE 9/7/79
APPVD. R. Harp	DATE 9/7/79

DISTRIBUTION:

- [x] PRODUCTION
- [x] TEST
- [x] QA
- [x] MATERIAL
- [x] PURCHASING
- [ ] FIELD

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PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
FW 11	8/9/79	0039

REASON:

To remove decoding glitch on output of U 2.

DESCRIPTION OF CHANGE:

Add 150 PF capacitor (PIN13-1159) between U2 pin and U2 pin 8.

EFFECTIVITY:	PRIORITY
All FW 11	

ORIG. R D[illegible]	DATE 8/14/79
APPVD. R. Hay	DATE 8/22/79

DISTRIBUTION:

- ☒ PRODUCTION
- ☒ TEST
- ☒ QA
- ☒ MATERIAL
- ☒ PURCHASING
- ☒ FIELD

VECTOR GRAPHIC INC.

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
FW II	8-7-79	0038

REASON:

FW II does not work at 2 MHz

DESCRIPTION OF CHANGE:

Change R13 and R14 to 560 r 1/4W 5%

EFFECTIVITY:	PRIORITY
All new Production	

ORIG. R. Dieges	DATE 8/7/79
APPVD R. Harp	DATE 8/7/79

DISTRIBUTION:

- [X] PRODUCTION
- [X] MATERIAL
- [X] TEST
- [X] PURCHASING
- [X] QA
- [X] FIELD

VECTOR GRAPHIC INC.

PRODUCT IMPROVEMENT BULLETIN

PART	DATE	NUMBER
FLASHWRITER II	1-18-79	0024

REASON:

TO REMOVE GLITCHES ON VIDEO OUTPUT SIGNAL

DESCRIPTION OF CHANGE:

ADD 100pf CAPACITOR BETWEEN U19-7 AND U19-8

EFFECTIVITY:	PRIORITY
ALL PRODUCTION	

ORIG.	DATE 1-18-79
APPVD.	DATE 1-19-79

DISTRIBUTION:

- PRODUCTION
- TEST
- QA
- MATERIAL
- PURCHASING
- FIELD

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