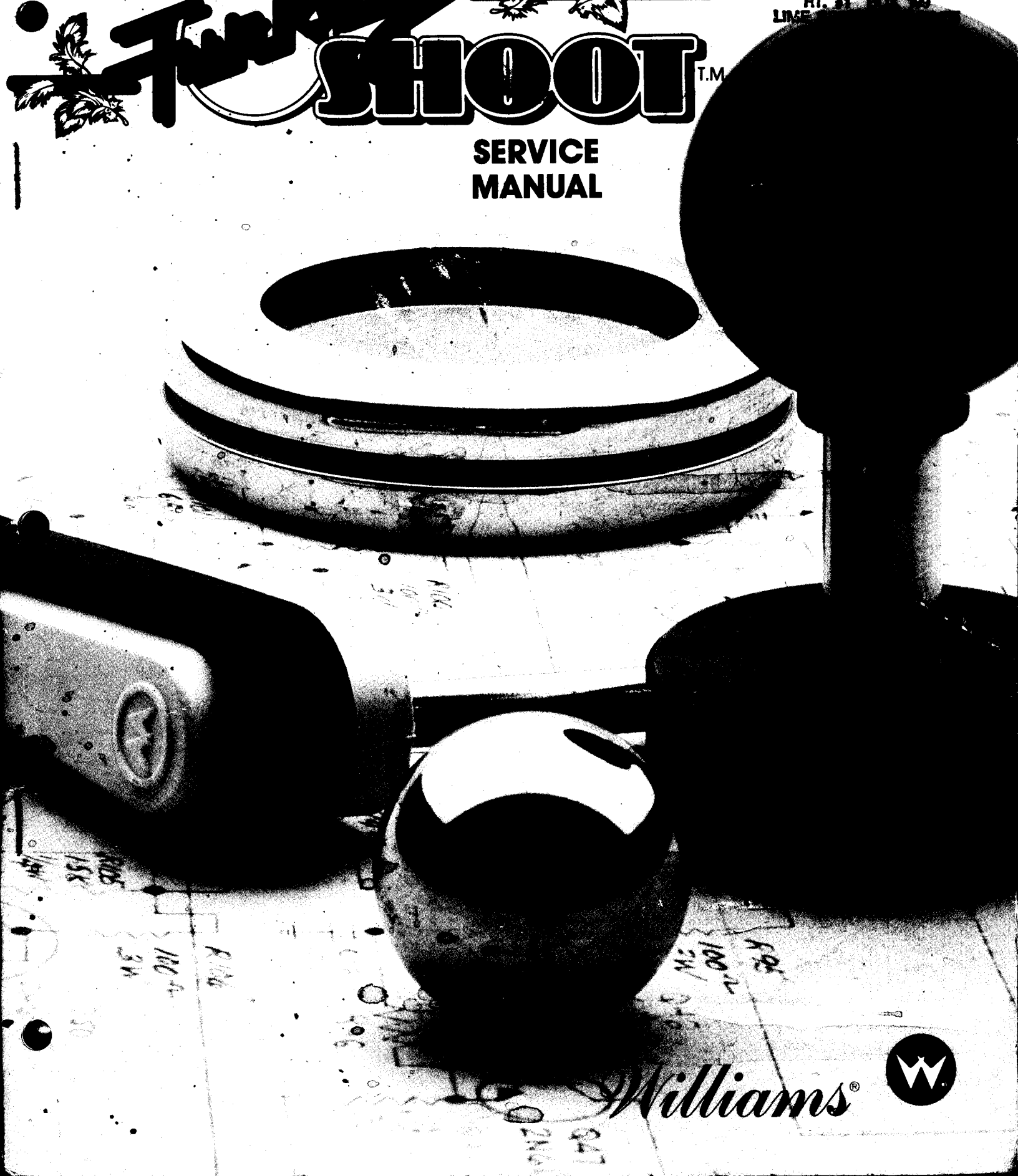
16-3025-101 Rev. A
June 1, 1984

Turkey Shoot™

SERVICE MANUAL



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ROM SUMMARY

ROM	PART NO.	DESCRIPTION	IC NO.	BOARD	ERROR CODE OR INDICATION
Sound ROM	A-5343-10706	2764 PROM, 8Kx8	IC8	CPU	no sound
TURKEY SHOOT 2	A-5343-10707	2732 PROM, 4Kx8	IC9	CPU	feathers
TURKEY SHOOT 3	A-5343-10708	2732 PROM, 4Kx8	IC10	CPU	spkr clicks
TURKEY SHOOT 4	A-5343-10709	2764 PROM, 8Kx8	IC11	CPU	213
TURKEY SHOOT 5	A-5343-10710	2764 PROM, 8Kx8	IC12	CPU	209
TURKEY SHOOT 6	A-5343-10711	2764 PROM, 8Kx8	IC13	CPU	205
TURKEY SHOOT 7	A-5343-10712	2764 PROM, 8Kx8	IC14	CPU	201
TURKEY SHOOT 8	A-5343-10713	2764 PROM, 8Kx8	IC15	CPU	214
TURKEY SHOOT 9	A-5343-10714	2764 PROM, 8Kx8	IC16	CPU	210
TURKEY SHOOT 10	A-5343-10715	2764 PROM, 8Kx8	IC17	CPU	206
TURKEY SHOOT 11	A-5343-10716	2764 PROM, 8Kx8	IC18	CPU	202
TURKEY SHOOT 12	A-5343-10717	2764 PROM, 8Kx8	IC19	CPU	215
TURKEY SHOOT 13	A-5343-10718	2764 PROM, 8Kx8	IC21	CPU	207
TURKEY SHOOT 14	A-5343-10719	2764 PROM, 8Kx8	IC23	CPU	216
TURKEY SHOOT 15	A-5343-10720	2764 PROM, 8Kx8	IC24	CPU	none
TURKEY SHOOT 16	A-5343-10721	2764 PROM, 8Kx8	IC25	CPU	208
TURKEY SHOOT 17	A-5343-10722	2764 PROM, 8Kx8	IC26	CPU	204
Special Chip 2	A-5410-10083	Special Chip	IC29	CPU	—
Special Chip 2	A-5410-10083	Special Chip	IC30	CPU	—
Clock-ROM 1	A-5282-10295	82S123 ROM, 32x8	IC14	VIDEO	no video
TURKEY SHOOT 21	A-5343-10726	2764 PROM, 8Kx8	IC41	VIDEO	vert lines
Horiz-sync ROM 1	A-5282-10294	82S129 ROM, 256x4	IC47	VIDEO	—
TURKEY SHOOT 18	A-5343-10723	2732 ROM, 4Kx8	IC55	VIDEO	gobbles
TURKEY SHOOT 19	A-5343-10724	2764 PROM, 8Kx8	IC57	VIDEO	vert lines
TURKEY SHOOT 20	A-5343-10725	2764 ROM, 8Kx8	IC58	VIDEO	vert lines
Decoder-ROM 5A (Horizontal)	A-5282-10292	6349 ROM, 512x8	IC60	VIDEO	—

CPU-BOARD JUMPERS: W1, W3, W6, W8, W10, W11, W14 and W16. Remove jumper W11 for cocktail games.

NOTICE

TO ORDER REPLACEMENT ROMS from your authorized ***WILLIAMS*** distributor, specify (1) part number shown above, (2) ROM-label color, (3) REV level (number) on the label, and (4) which game the ROM is used in.

SERVICE MANUAL

- schematic and logic diagrams
- operation
- bookkeeping
- adjustment
- diagnostics
- parts

Williams®

Contents

Warnings & Notices

WARNING

FOR SAFETY AND RELIABILITY, *WILLIAMS* does not recommend or authorize any substitute parts or modifications of ***WILLIAMS*** equipment.

USE OF NON-*WILLIAMS* PARTS and modifications of game circuitry may adversely affect game play, or may cause injuries.

SUBSTITUTE PARTS OR EQUIPMENT MODIFICATIONS may void FCC type-acceptance.

SINCE THIS GAME IS PROTECTED by Federal copyright, trademark and patent laws, unauthorized game-conversions may be illegal under Federal law.

THIS "CONVERSION" PRINCIPLE ALSO APPLIES to unauthorized facsimiles of ***WILLIAMS*** equipment, logos, designs, publications, assemblies and games (or game features not deemed to be in the public domain), whether manufactured with ***WILLIAMS*** components or not.

RF-INTERFERENCE NOTICE

CABLE PLACEMENT and ground-strap routing on this game have been designed to keep RF radiation and conduction within levels accepted by FCC regulations.

TO MAINTAIN THESE LEVELS, reposition harnesses and reconnect ground straps to their original placements if they should be disconnected during maintenance.

Examine Your Game

☐ **INSPECT THE OUTSIDE** of the carton or game cabinet for shipping damage.

☐ **UNLOCK AND OPEN** the bottom-rear door. Now check circuitry.

☐ **ARE CONNECTORS SECURELY ATTACHED?** Reconnect any found loose. DON'T FORCE CONNECTORS. They're keyed and only fit one way.

☐ **ARE PLUG-IN CHIPS FIRMLY SEATED** in their sockets?

☐ **UNWRAP THE POWER CORD** coiled inside the cabinet. DON'T PLUG IT IN YET!

☐ **SCRUTINIZE MAJOR SUBASSEMBLIES,** such as the monitor, control panel, transformer chassis and power supply. Make sure they're securely-mounted.

☐ **UNDO THE CONTROL-PANEL LATCHES.** You can reach these two from the coin door by extending your arm upward and to either side. Now check connectors and circuitry as above.

Control Locations

☐ **THE ON-OFF SWITCH** is below the back door.

☐ **THE POWER-INTERLOCK SWITCH** is behind the bottom-right corner of the back door. The interlock switch is a spring-loaded DPDT type that will turn off the game when you remove the panel. For servicing purposes, pull the switch out and the game will power up.

☐ **THE VOLUME-CONTROL** is inside the coin-door and to your right.

☐ **THREE DIAGNOSTIC SWITCHES** are mounted together on a bracket behind the coin door. *These switches are used to access the* **Diagnostic-Mode** *Tests, the BOOK-KEEPING TOTALS screen and the GAME ADJUSTMENTS screen.*

☐ **THE MEMORY-PROTECT INTERLOCK SWITCH** is behind the coin door. This switch must be open when you clear BOOKKEEPING TOTALS or make GAME ADJUSTMENTS. It automatically opens when the coin door is open.

☐ **THE CPU-BOARD RESET SWITCH** is on the CPU board near the batteries.

☐ **THE CASHBOX ADVANCE-SWITCH** found inside the cashbox door allows bookkeeping information to be audited without permitting it to be zeroed.

☐ **THE SOUND DIAGNOSTIC-SWITCH** is on the CPU board near the small heatsink. Refer to **Sound Self-Test** for information on its use.

Power Turn-On

WARNING

THREE-WIRE PLUG. This game must be plugged into a properly-grounded outlet to prevent shock hazard and to assure proper game operation. DO NOT use a "cheater" plug to defeat the ground pin on the power cord, and DO NOT cut off the ground pin.

WARNING

FCC STICKER. Check the back of your game to see that an FCC sticker was attached to your game at the factory. All games that leave ***WILLIAMS'*** plants have been tested and found to comply with FCC Rules. As the sticker is proof of this fact, *legal repercussions to the owner and distributor of the game* may result if the sticker is missing. If you receive any ***WILLIAMS*** game (manufactured after December 1982) that has no FCC sticker, call ***WILLIAMS*** for advice or write us a note on your game-registration card. *Be sure the card bears your game's serial number.*

WHEN THE GAME IS FIRST TURNED ON general illumination should light. A moment later the scanning "rug pattern" indicating RAM/ROM test should appear on the screen.

IN A CORRECTLY-RUNNING GAME tests will be followed by the message "INITIAL CHECKS INDICATE ALL SYSTEMS GO." If failure messages come up on the screen instead, refer to **Built-In Test Procedures.**

DEMAGNETIZE THE GAME with a television degaussing-coil. Besides the monitor, remember to degauss large steel parts (for example, the back-door hinge). Do this as a daily procedure. *Otherwise residual magnetism may cause color impurities that adversely affect your collections.*

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to correct the interference.

Game Operation

GAME START

INSERT COINS. The game allocates an adjustable number of credits per coin and displays this number on the CRT. Factory settings are one credit for two quarters. At factory settings, when two credits are displayed, pressing 2-PLAYER START initiates a two-player game.

PLAYER CONTROLS

☐ **SHOOT** mischievous turkeys with the laser gun.

☐ **PRESS GOBBLE!** Freeze the turkeys and pick them off with the gun!

☐ **PRESS GRENADE!** Eliminate several turkeys in one blast!

GAME PLAY

WITH A HAND ON HIS GUN, his GOBBLE and GRENADE buttons at the ready, the player defends his territory from marauding TURKEYS! He's given 100 missions to eliminate all the turkeys.

HE CAN TAKE AIM with his laser gun using the cursor on the screen to home in on his enemies. Or he can launch a GRENADE to blast all turkeys within range. Once each mission he can activate his GOBBLE button to momentarily freeze all the turkeys.

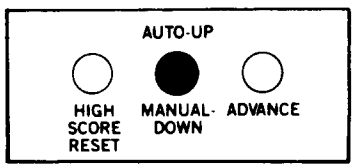
ASTUTE PLAYERS learn that most turkeys can be eliminated by a shot to the body. However the cyborg mechano-turkey persists until they hit him in the head. No turkey will succumb to a shot in the leg!

MISSIONS REQUIRE QUICK REACTIONS to clever ploys such as turkey air-raids, turkeys disguising themselves as businessmen and turkey helicopter-getaways. Every 8th wave earns a rapid-fire bonus where the player has 15 seconds to eliminate as many turkeys as possible. The player can score bonus points by shooting fire hydrants and trashcans as well as by freeing hostages.

THREE FOWLUPS are allowed. These occur whenever a turkey escapes or when an innocent bystander is injured.

Bookkeeping Totals

BOOKKEEPING TOTALS SHOW YOU AT A GLANCE if game settings are bringing you a satisfactory return on your investment! *Only games by* ***WILLIAMS ELECTRONICS*** *have this feature.* Think of it as a unique way to keep your ***TURKEY SHOOT*** game the *leader of the pack when it comes to earnings*...location after location, week in and week out!



Diagnostic Button-Switches

ENTERING BOOKKEEPING MODE. Inside the coin door is a bracket with three button-switches. Set the AUTO-UP/MANUAL-DOWN (center) switch to AUTO-UP. Press the ADVANCE switch to display BOOKKEEPING TOTALS on the screen. Now check those totals. Here's what to look for...

Bookkeeping screen

AVERAGE TIME PER CREDIT: TWO MINUTES. Your most important figure on the BOOKEEEPING TOTALS screen is AVERAGE TIME/GAME. You'll want to pay special attention to this figure every day for this reason: Thorough field and factory research has shown that *two-minute games both satisfy players and also keep the quarters flowing.*

If games aren't running about two minutes long, then collections probably aren't at their peak. You'll want to tailor your game to your game-playing public. It's easy. But *only* ***WILLIAMS*** *games let you do it!*

Exclusive Game Adjustments

1. Inside the coin door is a bracket with three button switches. Set the AUTO-UP/MANUAL-DOWN (center) switch to AUTO-UP.
2. Press the ADVANCE switch twice. The GAME ADJUSTMENTS screen will come up.
3. Use PLAYER 2 START to move down to the desired adjustment.
4. Use PLAYER 1 START to move up.
5. Use GOBBLE (*raise value or yes*) or GRENADE (*reduce value or no*) to alter the value of an adjustment.

Adjustments Screen Showing Factory Settings

Pricing Table

COIN-DOOR MECHANISM	GAMES/PRICE	PRICING SELECTION	LEFT SLOT UNITS	CENTER SLOT UNITS	RIGHT SLOT UNITS	UNITS REQ'D FOR CREDIT	UNITS REQ'D FOR BONUS CREDIT	MIN. UNITS FOR ANY CREDIT
Twin-Quarter	**•1/25¢, 4/$1**	**3**	**1**	**4**	**1**	**1**	**0**	**0**
or	1/25¢, 5/$1	0	1	4	1	1	4	0
Quarter,	2/50¢, 4/$1	0	1	4	1	1	0	2
Dollar,	2/50¢, 5/$1	0	1	4	1	1	4	2
Quarter	**•1/50¢, 2/$1**	**5**	**1**	**4**	**1**	**2**	**0**	**0**
	1/50¢, 3/$1, 4/$1.25	0	3	12	3	4	15	0
	1/$1	0	1	4	1	4	0	0
	1/50¢, 3/$1, 7/$2	0	12	48	12	14	96	24
1DM, 5DM	2/1DM, 12/5DM	0	12	0	2	2	0	0
	•1/1DM, 6/5DM	**2**	**6**	**0**	**1**	**1**	**0**	**0**
1Franc, 5 Franc	**•1/2F, 3/5F only**	**4**	**1**	**16**	**6**	**2**	**0**	**0**
25-Cent,	**•1/25¢, 4/1G**	**6**	**1**	**0**	**4**	**1**	**0**	**0**
1 Guilder,	1/25¢, 5/1G	0	1	0	4	1	4	0
5-Franc,	**•1/5F, 2/10F**	**7**	**1**	**0**	**2**	**1**	**0**	**0**
10 Franc	**•1/10F**	**8**	**1**	**0**	**2**	**2**	**0**	**0**
1 Franc, 2 Franc	**•2/1F, 5/2F**	**2**	**6**	**0**	**1**	**1**	**0**	**0**
100 Lire, 200 Lire	**•1/200 Lire**	**8**	**1**	**0**	**2**	**2**	**0**	**0**
Twin Coin	**•1/1 Coin**	**3**	**1**	**4**	**1**	**1**	**0**	**0**
	•1/2 Coins	**5**	**1**	**4**	**1**	**2**	**0**	**0**
	1/4 Coins	0	1	4	1	4	0	0
	1/2 Coins, 3/4 Coins	1	1	4	1	2	4	0
	1/3 Coins, 2/5 Coins	0	2	0	2	5	0	0
1-Unit,	**•1/2, 3/5**	**4**	**1**	**16**	**6**	**2**	**0**	**0**
5-Unit	1/1, 5/5	0	1	0	5	1	0	0
	1/3, 2/5	0	2	0	10	5	0	0
Any	Free Play	9	1	4	1	1	0	0

Now for the multiple-choice section! *Choose one or more:*

☐ **Use GOBBLE or GRENADE** to choose the appropriate difficulty level (0 = easiest or extra liberal, 5 = average, 9 = hardest or extra conservative).

☐ **SELECT GAME PRICING** with standard or custom settings. See the ***Pricing Table***.

Game Pricing

PRICING SELECTION allows a *shorthand* method of setting the pricing functions. If a number from one to nine is entered into the PRICING SELECTION function, a corresponding standard setting (shown in the pricing table above) will be entered into the game. *The rest of the pricing functions are automatically set for that standard.*

FOR CUSTOM SETTINGS first set PRICING SELECTION to zero. Then set the remaining values according to the ***Pricing Table.***

THE GAMES : PRICE RATIO is equivalent to the ratio *X : VC*, where:

X = SLOT UNITS
V = COIN VALUE
C = UNITS REQUIRED FOR CREDIT

For example at factory settings with quarter chutes the variables produce 1 : 25x2 or one game for two quarters.

Diagnostic-Mode Tests

SET THE AUTO-UP MANUAL-DOWN SWITCH to the MANUAL-DOWN position and press ADVANCE. The game is now in its **Diagnostic Mode** and a ROM test is performed. With ROM test results present on the CRT display, set the AUTO-UP/MANUAL-DOWN switch to the AUTO-UP position. Enter subsequent tests by pressing ADVANCE once more for each test. After the last test, **Game-Over Mode** commences.

AUTO-CYCLE MODE permits continuous ROM, RAM and CMOS RAM tests to detect failures that only appear after numerous checksum comparisons. If an error is detected **Auto-Cycle Mode** is aborted and a failure message is displayed on the CRT.

1. Open the coin door. It must remain open for AUTO CYCLE.
2. Display GAME ADJUSTMENTS.
3. Move down to AUTO CYCLE.
4. Display YES.
5. Press ADVANCE.
6. To enter **Game-Over Mode** turn the game off and on.

Built-In Test Procedures

POWER-UP TESTS

☐ **RAM TEST.** A *rug pattern* scans across the screen. Only screen RAMS (dynamic type) are tested. A bad RAM is indicated on the CPU-board LED-indicator by an error code between 100 and 199 (eg., 1-3-1; see the table of ***Screen-RAM Error Codes*** below).

If a RAM error is indicated, check all three DC power-voltages on the RAM indicated: -5/pin 1, +12/pin 8, +5/pin 9. None of these should have more than a few millivolts of AC on it. *Never replace a RAM chip until you prove that these voltages are normal!*

Screen-RAM Error Codes

CHIP	98	99	100	101	102	103	104	105
CODE	115	116	117	118	111	112	113	114
CHIP	106	107	108	109	110	111	112	113
CODE	125	126	127	128	121	122	123	124
CHIP	114	115	116	117	118	119	120	121
CODE	135	136	137	138	131	132	133	134

☐ **ROM TEST.** A bad ROM is indicated on the CPU-board LED-indicator by an error code between 200 and 299 (eg., 2-1-1; see the **ROM Summary** for codes). An error message may also appear on the CRT. Power down and replace bad chips.

☐ **CMOS-DATA TEST.** Checksums are compared. If the CMOS RAM fails the test, FACTORY SETTINGS RESTORED appears on the CRT.

DIAGNOSTIC-MODE TESTS

☐ **RAM AND ROM TESTS...** These tests are repeated, only the ROM test is performed first. Refer to **RAM Test** and **ROM Test** above.

☐ **CMOS-RAM TEST.** A chip error is displayed on the CRT and the LED readout on the CPU board. If the CMOS RAM is bad, the error code 3 will appear on the LED readout.

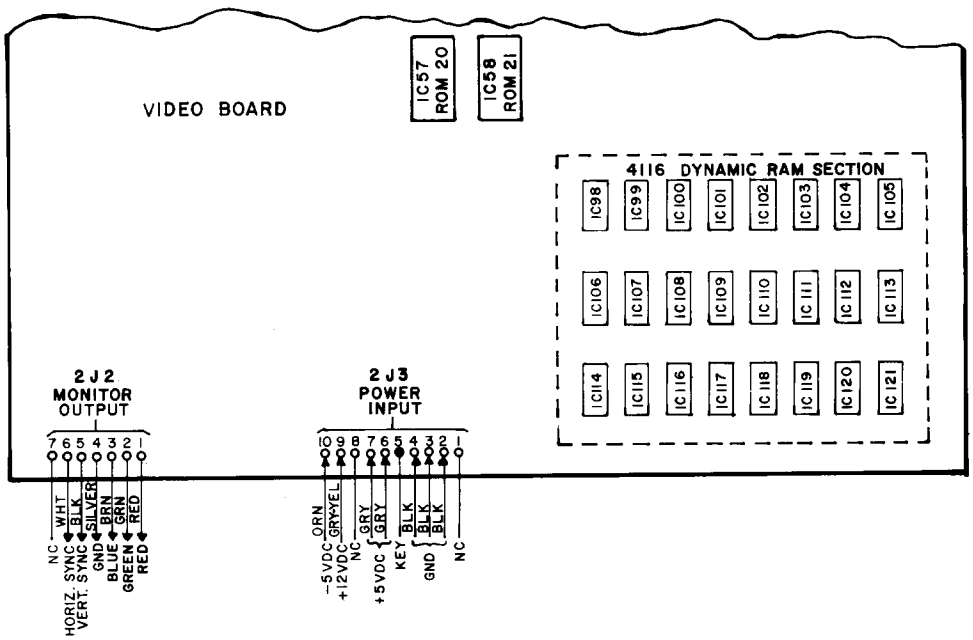
☐ **SOUND, COIL AND LAMP TEST.** Sound-lines 1 through 6 are tested. In addition, the grenade and gun lamps, feather and gun coils are checked.

One by one, sound lines, lamps or coils are pulsed. *When a sound line is pulsed,* its number is shown on the CRT. You should hear a separate sound for each sound line. If a sound is missing, its corresponding line is probably *stuck high* or *stuck low.* If two lines produce the same sound, they're shorted together.

Use AUTO-UP to cycle through all the sounds, coils and lamps. With MANUAL-DOWN, you'll continuously test one sound-line, lamp or coil.

☐ **SWITCH TEST.** The name of the switch is highlighted when that switch is closed. Opto switches (used to determine gun position) are tested in a special way: Watch the graph on the left side and bottom of the switch-test screen as you move the gun. The graph should change color ("move") smoothly.

If the graph appears to "jump," adjust the optos for smooth movement. *To exit the* **Switch Test** *you must hold ADVANCE down until the next screen appears.*



☐ **THE CROSSHATCH PATTERN** aids the technician in converging the monitor.

☐ **THE PURITY SCREENS** (solid red, green and blue screens) are intended for monitor adjustments and for checking the color RAMs *(ICs 75 through 78 on the video board).* If these screens show contaminated colors, degauss the monitor and adjust the purity magnets. If colors are missing, one of your color RAMs may be bad.

A purity screen with vertical lines through it also signals a color-RAM error. (*Please don't confuse the purity screens with the crosshatch pattern or color-bars pattern.* These last two patterns are *supposed* to have vertical lines!)

☐ **THE COLOR BARS** are intended for monitor adjustments and for checking the color RAMS. The bars serve as a color and brightness reference when you adjust the color drives and cutoffs, screen and black-level controls.

If colors are missing or the wrong colors are displayed, you may have a bad color RAM. From the left side of the CRT, here are the colors you should see: *red, green, blue, black, white, yellow, cyan and magenta.*

Sound Self-Test

1. **NO SOUND IN DIAGNOSTIC-MODE TEST:** Check the sound-select inputs (pins 2 through 9 of IC 4) on the CPU board for pulsing during the test. Also check for shorts between sound lines.

2. **STILL NO SOUND:** Turn the volume control all the way up. With the game turned on, momentarily place a powered-up AC soldering-pencil on the center tap of the volume control. DO NOT use a soldering iron of over 40 watts. Cordless models will NOT work here.

   A. ***If you hear a low hum,*** the power-amplifier chip (TDA2002A), volume control and speaker are okay.

   B. ***If you don't hear a hum,*** try the test again with the volume control turned halfway up.

3. **GARBLED SOUNDS:** One at a time, replace microprocessor IC 27 and sound ROM IC 8 on the CPU board.

4. **THE SOUND DIAGNOSTIC BUTTON** on the CPU board isn't used in this game. If you accidentally press this button, game sounds will be disabled until you turn the game off and on again.

A Word About Troubleshooting

***WILLIAMS* PROVIDES EXTENSIVE DIAGNOSTICS** in the games it manufactures. These can be a dramatic timesaver in your servicing work. Familiarity with the drawing set and instruction manual can also enhance troubleshooting. In the few instances when you can't find the problem using built-in diagnostics, these rules of thumb should help...

1. **GIVE YOUR GAME A VISUAL INSPECTION** in the suspected area. Bad connections are common in older games.

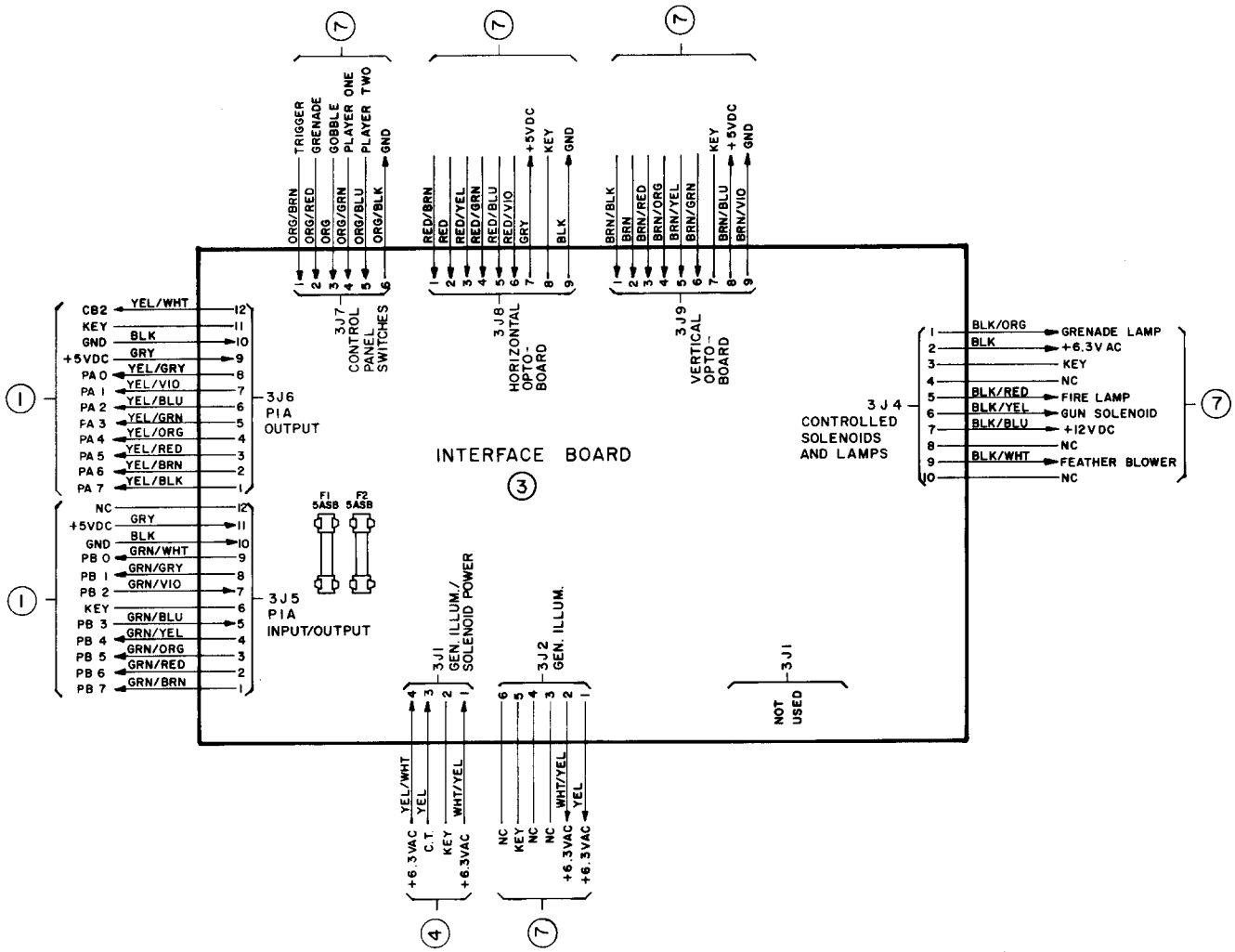
2. **THINK OVER THE SYMPTOMS** and then jot them down. Keeping notes pins down the details of your problem and prevents wasted time going over the same tests.

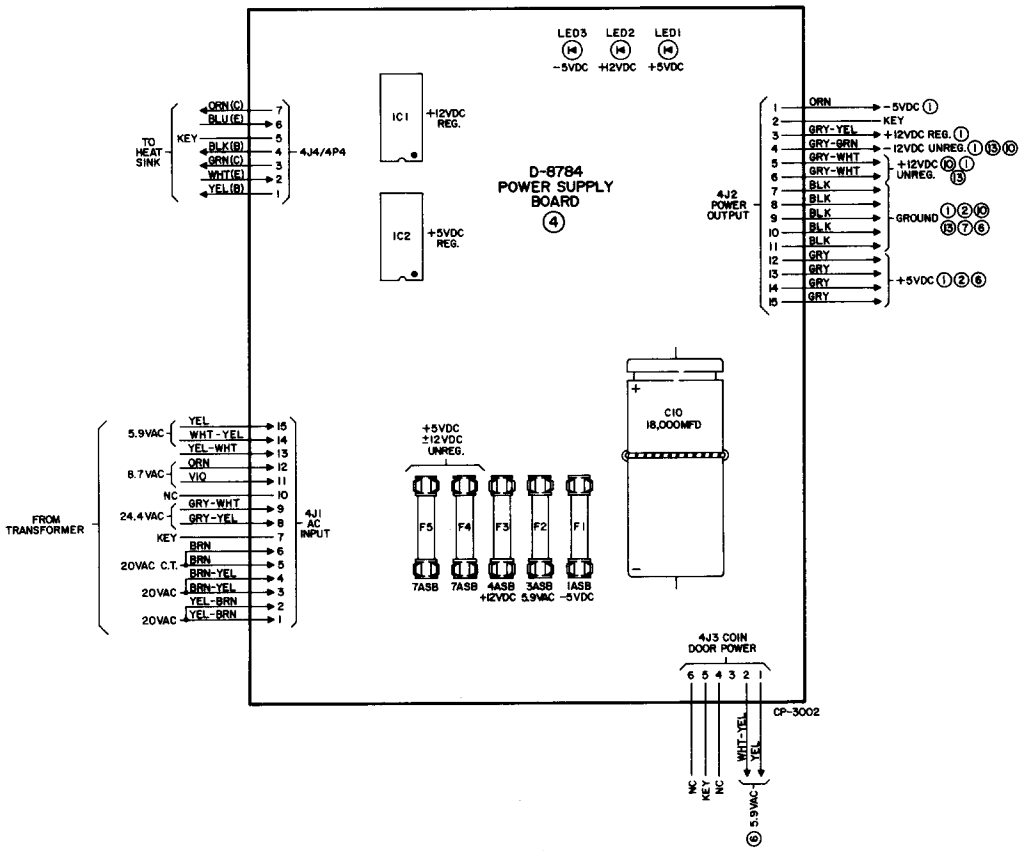
3. **YOUR ANALYSIS SHOULD REVEAL** which tools you need: Multimeter (analog or digital), logic probe, oscilloscope or other diagnostic equipment. Gather your tools.

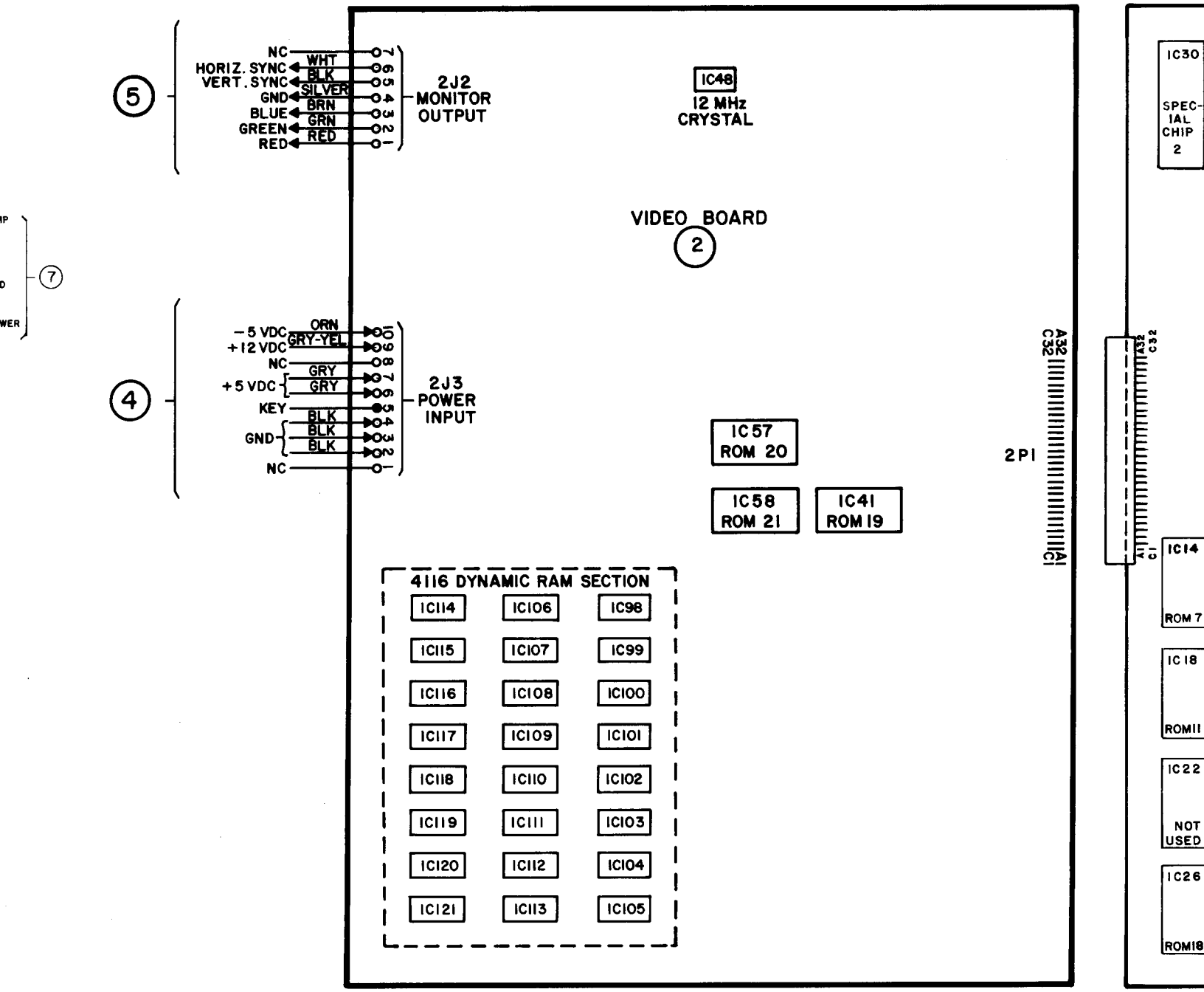
4. **CHECK YOUR VOLTAGES.** Check regulated and unregulated DC voltages first at the output of the power supply. If any DC voltage is missing check your AC voltage at the fuse (with reference to its return line to the transformer). Use your **Power-Wiring Diagram** and **Interboard-Wiring Diagram** to find the fuse's location.

5. **SWAP INTERCHANGEABLE BOARDS** and chips that relate to your problem.

6. **ONCE YOU'VE ISOLATED THE SUSPECTED CIRCUIT** use your logic probe or oscilloscope to test for normal operation.

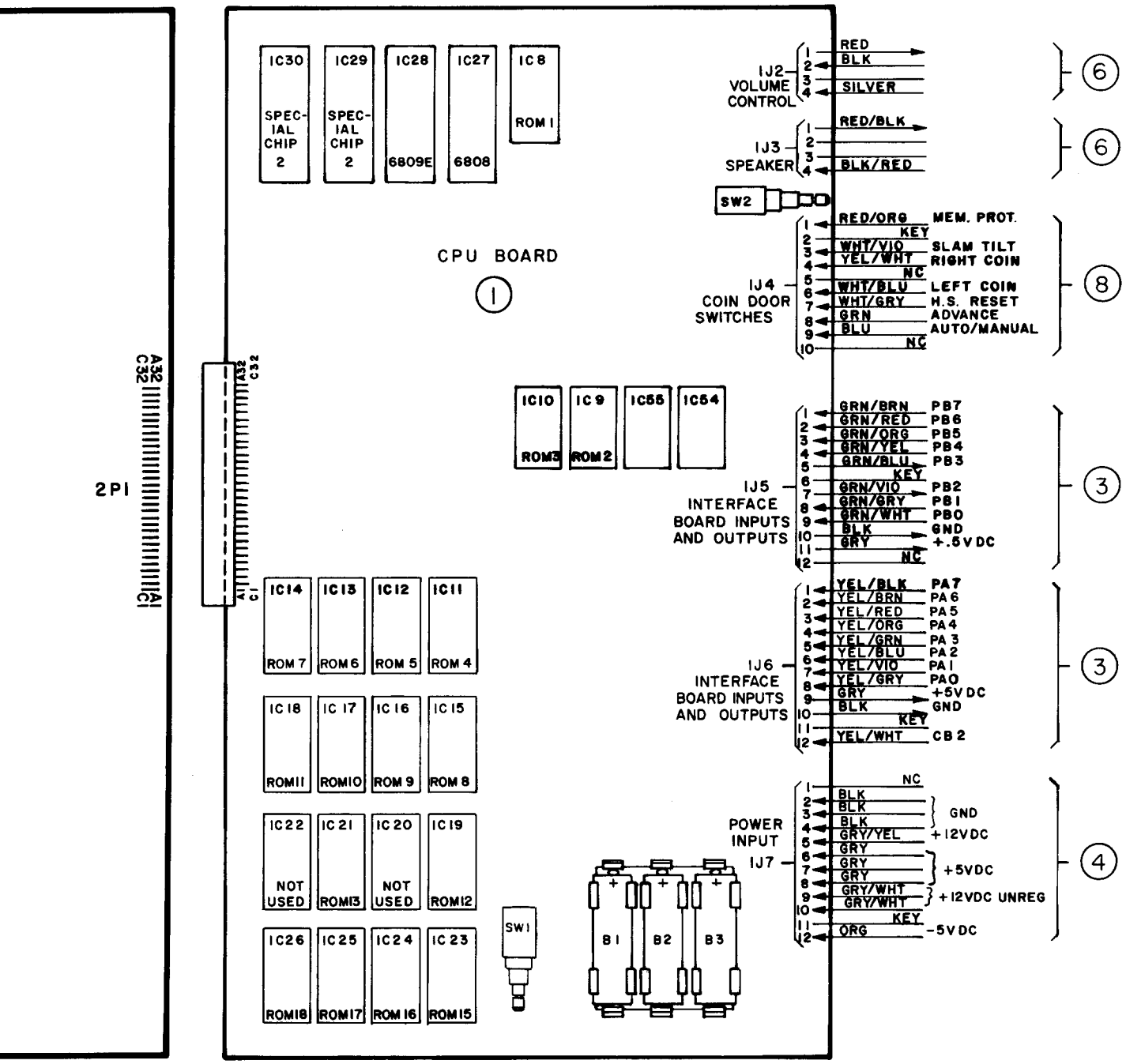

INTERFACE BOARD
3
3J6 PIA OUTPUT
3J5 PIA INPUT/OUTPUT
3J7 CONTROL PANEL SWITCHES
3J8 HORIZONTAL OPTO-BOARD
3J9 VERTICAL OPTO-BOARD
3J4 CONTROLLED SOLENOIDS AND LAMPS
3J1 GEN. ILLUM./ SOLENOID POWER
3J2 GEN. ILLUM.
3J1 NOT USED
F1 5ASB
F2 5ASB
TRIGGER
GRENADE
GOBBLE
PLAYER ONE
PLAYER TWO
GND
+5VDC
KEY
GRENADE LAMP
+6.3V AC
FIRE LAMP
GUN SOLENOID
+12VDC
FEATHER BLOWER
+6.3VAC
C.T.


D-8784 POWER SUPPLY BOARD
4
LED3 -5VDC
LED2 +12VDC
LED1 +5VDC
IC1 +12VDC REG.
IC2 +5VDC REG.
TO HEAT SINK
4J4/4P4
4J2 POWER OUTPUT
-5VDC
+12VDC REG.
-12VDC UNREG.
+12VDC UNREG.
GROUND
+5VDC
FROM TRANSFORMER
4J1 AC INPUT
+5VDC +12VDC UNREG.
C10 18,000MFD
F5 7ASB
F4 7ASB
F3 4ASB +12VDC
F2 3ASB 5.9VAC
F1 1ASB -5VDC
4J3 COIN DOOR POWER
CP-3002



CONNECTOR KEY

1	CPU BOARD	7	CONTROL PANEL
2	VIDEO BOARD	8	COIN DOOR
3	INTERFACE BOARD	9	CASH BOX
4	POWER SUPPLY	10	VERTICAL OPTO-BOARD
5	MONITOR	11	HORIZONTAL OPTO-BOARD
6	CABINET	12	GUN



Circuitboards & Gun Mechanism

PART NO.	DESCRIPTION
C-10544	opto PC-board subassembly
C-8809	heatsink assembly
D-9444 or D-8784	power-supply PC-board
D-9868	video PC-board
D-9886	power-transformer chassis
D-10395	CPU PC-board
D-10413	interface PC-board
D-10289	gun mechanism
SFL-24-750-DC	gun coil-assembly
SFL-25-750-DC	feather-dispenser coil

GAME NAME	TURKEY SHOOT
ASSEM. NO.	D-10395
IC8 (ROM1)	A-5343-10706
IC9 (ROM2)	A-5343-10707
IC10 (ROM3)	A-5343-10708
IC11 (ROM4)	A-5343-10709
IC12 (ROM5)	A-5343-10710
IC13 (ROM6)	A-5343-10711
IC14 (ROM7)	A-5343-10712
IC15 (ROM8)	A-5343-10713
IC16 (ROM9)	A-5343-10714
IC17 (ROM10)	A-5343-10715
IC18 (ROM11)	A-5343-10716
IC19 (ROM12)	A-5343-10717
IC20 ---	NOT USED
IC21 (ROM13)	A-5343-10718
IC22 ---	NOT USED
IC23 (ROM14)	A-5343-10719
IC24 (ROM15)	A-5343-10720
IC25 (ROM16)	A-5343-10721
IC26 (ROM17)	A-5343-10722
IC54 ---	NOT USED
IC55 (ROM18)	A-5342-10723
IC29, IC30	A-5410 10083

ITEM NO.	PART NO	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
73	5700-09004-00		24-PIN I.C. SOCKET	4
74	5705-09199-00		HEAT SINK THERMALLOY #6030	1
75	4006-01003-06		6-32 x 3/8" P-PH-S	1
76	4406-01117-00		6-32 HEX NUT	1
77	4703-00007-00		#6 EXT. LOCKWASHER	1
78	20-9229		THERMAL COMPOUND	.01
79	5700-08985-00		40 PIN I.C. SOCKET	4
(B) 80	5010-09539-00	W1, W3, W6, W7, W10, W11	RESISTOR, 0 OHM	6

(A)

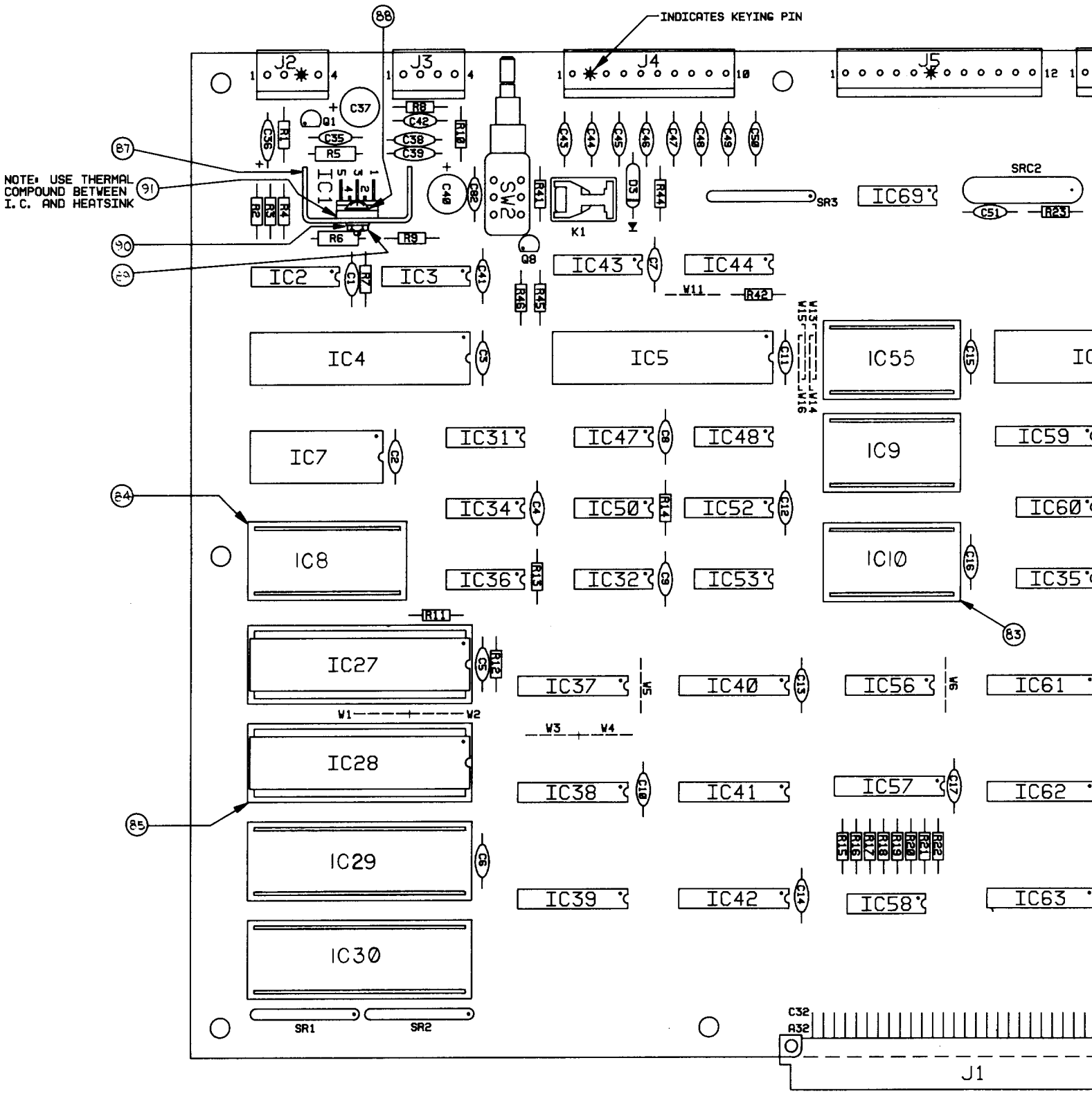
NOTES:

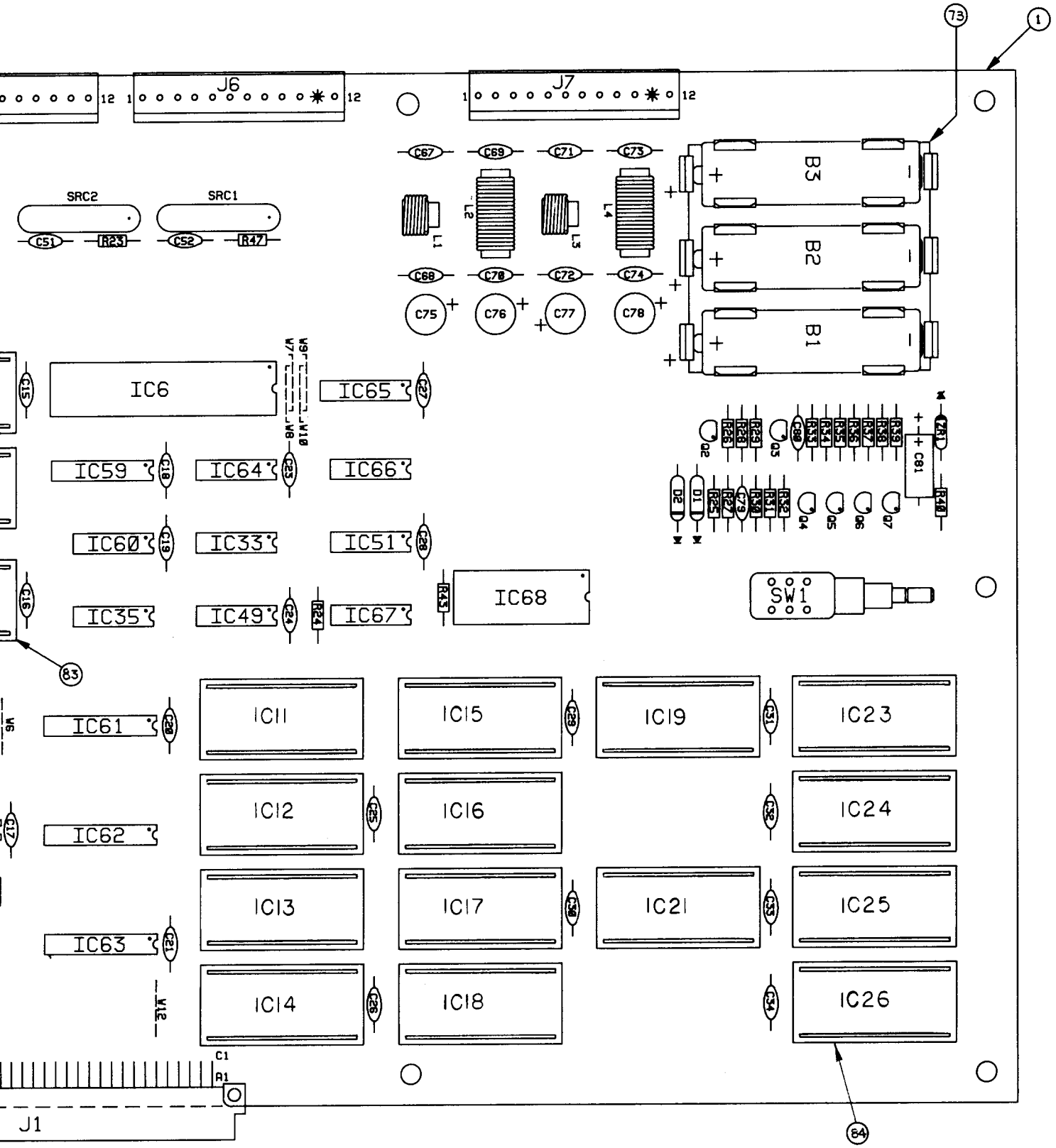
1. 1K Ω RESISTOR:
   R8, R10, R11, R12, R13, R14, R26, R30, R34, R38, R39, R41
2. 270 Ω RESISTOR:
   R15, R16, R17, R18, R19, R20, R21, R22.
3. .01 MFD. CAPACITOR:
   C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C79, C80, C82.
4. .001 MFD. CAPACITOR:
   C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74.

REQ'D. NO.	ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
4	37	5010-09224-00	SEE NOTE #2	RESISTOR, C.F., 270 OHM 5% 1/4 WATT	8
1	38	5010-08991-00	R23, R28, R42, R36	RESISTOR, C.F., 4.7 K OHM 5% 1/4 WATT	4
1	39	5010-09416-00	R24	RESISTOR, C.F., 470 OHM 5% 1/4 WATT	1
1	40	5010-09034-00	R25, R40	RESISTOR, C.F., 10 K OHM 5% 1/4 WATT	2
1	41	5010-10171-00	R27	RESISTOR, C.F., 56 OHM 5% 1/4 WATT	1
.01	42	5010-10170-00	R29	RESISTOR, C.F., 47 OHM 5% 1/4 WATT	1
4	43	5010-10003-00	R31, R32	RESISTOR, C.F., 390 OHM 5% 1/4 WATT	2
6	44	5010-09160-00	R33, R35	RESISTOR, C.F., 220 OHM 5% 1/4 WATT	2
	45	5010-09001-00	R43	RESISTOR, C.F., 330 OHM 5% 1/4 WATT	1
	46	5010-09039-00	R37	RESISTOR, C.F., 10 OHM 5% 1/4 WATT	1
	47	5043-08980-00	SEE NOTE #3	CAPACITOR, CERAMIC, .01 MFD. 50V. +80-20%	38
Ⓐ	48	5041-09243-00	C36	CAPACITOR, 10 MFD. 10V. ±10%	1
	49	5040-09776-00	C37	CAPACITOR, RADIAL, 470 MFD. 16 V. +50-10%	1
	50	5043-08996-00	C38, C39	CAPACITOR, CERAMIC, .1 MFD. 50 V. ±20%	2
	51	5040-09421-00	C40, C75, C76, C77, C78	CAPACITOR, ELECT., RAD. 100 MFD. 25V. +50-10%	5
	52	5043-09844-00	C41	CAPACITOR, AXIAL 47 PFD. 50 V. ±20%	1
	53	5043-09845-00	SEE NOTE #4	CAPACITOR, AXIAL .001 MFD. 50 V.	33
	54	5040-09545-00	C81	CAPACITOR, AXIAL 22 MFD. 10 V. ±20%	1
	55	5160-10269-00	Q1, Q2, Q4, Q5, Q6, Q7	TRANSISTOR, 2N3904 NPN TO-92	6
	56	5190-10270-00	Q3	TRANSISTOR, 2N3906 PNP TO-92	1
	57	5070-09266-00	D1	DIODE, SILICON IN5817	1
	58	5070-06258-00	D2	DIODE, SILICON IN4001	1
	59	5075-09018-00	ZR1	ZENER DIODE, 6.8V IN5996A	1
	60	5019-09362-00	SR1, SR2, SR3 SR4	RESISTOR, 4.7 K OHM 10 PIN SIP	4
	61	5019-09786-00	SR5	RESISTOR, 4.7 K OHM 6 PIN SIP	1
	62	~~			~~
	63	5551-09822-00	L2, L4	COIL, RADIAL 4.7 UH. 3A.	2
	64	5551-10161-00	L1, L3	COIL, RADIAL 2.0 UH. 3 A.	2
	65	5880-09022-00	B1, B2, B3	BATTERY, ALKALINE 1.5 V. (AA)	3
	66	5881-09021-00		BATTERY HOLDER #171	1
	67	5641-09311-00	SW1 SW2	PUSH BUTTON SW. SPST	0
		5641 09312-00		PUSH BUTTON SW. DPDT MOM.	2
	68	5791-10027-00	IJ1	64 PIN R.N. HEADER (MALE)	1
	69	5791-09028-00	IJ2, IJ3	4 PIN HEADER 09-65-1041	2
	70	5791-09444-00	IJ4, IJ5, IJ6	10 PIN HEADER 09-65-1101	3
	71	5791-09043-00	IJ7	12 PIN HEADER 09-65-1121	1
	72	5700-10176-00		28-PIN I.C. SOCKET	17

BILL OF MATERIAL

ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
1	5770-09959-00		BARE P.C. BOARD	1
2	5370-09156-00	IC1	I.C., TDA 2002 A AUDIO AMPLIFIER	1
3	5371-09152-00	IC2	I.C., 1408, D/A CONVERTER	1
4	5281-09745-00	IC3	I.C., 74LS138, 3 TO 8 LINE DECODERS/DEMULT.	1
5	5430-08972-00	IC4, IC5, IC6	I.C., 6821, P.I.A.	3
6	5340-09003-00	IC7	I.C., 6810 RAM	1
7	5400-09250-00	IC27	I.C., 6808 MPU	1
8	5400-09490-00	IC28	I.C., 6809E MICROPROCESSOR	1
9	5281-09499-00	IC31, IC32, IC33	I.C., 74LS00 QUAD 2-INPUT NAND	3
10	5281-09215-00	IC34, IC35	I.C., 74LS04 HEX. INVERTER	2
11	5281-09487-00	IC36	I.C., 74LS74 DUAL-D TYPE FLIP-FLOP	1
12	5281-09867-00	IC37, IC38, IC39 IC40, IC41, IC42	I.C., 74LS244, OCTAL BUFS/LINE DRS/LINE RECEIVERS	6
13	5310-08975-00	IC43, IC44 IC45, IC46	I.C., 4049, CMOS HEX. INVERTOR	4
14	5281-09500-00	IC47, IC48 IC49, IC69	I.C., 74LS32 QUAD 2-INPUT OR	4
15	5280-09551-00	IC50, IC51	I.C., 7425, DUAL 4-INPUT POSITION-NOR GATE WITH STROBE	2
16	5281-09246-00	IC52	I.C., 74LS139 DUAL 2 TO 4 LINE DECODER	1
17	5281-09247-00	IC53	I.C., 74LS02 QUAD 2-INPUT NOR	1
18	~~			~~
19	5281-10015-00	IC56	I.C., 74LS75 4-BIT BISTABLE LATCHES	1
20	5281-09486-00	IC57	I.C., 74LS374 OCTAL D-TYPE FLIP-FLOP	1
21	5671-09411-00	IC58	I.C., MAN 72A 7 SEG LED DISPLAY	1
22	5340-09689-00	IC59	I.C., 5114 1K X 4 CMOS SRAM 450NS	1
23	5281-09743-00	IC60	I.C., 74LS08 QUAD 2-INPUT AND	1
24	5281-09308-00	IC61, IC62, IC63	I.C., 74LS245 OCTAL BUS TRANSCEIVER	3
25	5281-09235-00	IC64	I.C., 74LS10 TRIPLE 3-INPUT NAND GATES	1
26	5281-09735-00	IC65	I.C., 74LS161 BINARY COUNTER	1
27	5281-10014-00	IC66	I.C., 74LS20 DUAL 4-INPUT NAND	1
28	5280-09309-00	IC67	I.C., 7407 HEX. BUF. OPEN-COLLECTOR	1
29	5280-09010-00	IC68	I.C., 74154 4 TO 16 LINE DEC./DEMULT.	1
30	5010-09363-00	R1	RESISTOR, C.F., 5.6 K OHM 5% 1/4 WATT	1
31	5010-08983-00	R2, R3, R7	RESISTOR, C.F., 3.3 K OHM 5% 1/4 WATT	3
32	5010-09179-00	R4	RESISTOR, C.F., 3.3 M OHM 5% 1/4 WATT	1
33	5010-09181-00	R5	RESISTOR, C.F., 1 OHM, 10% 1/2 WATT	1
34	5010 09361-00	R6	RESISTOR, C.F., 220 OHM 5% 1/2 WATT	1
35	5010-09358-00	SEE NOTE #1	RESISTOR, C.F., 1K OHM 5% 1/4 WATT	12
36	5010-09161-00	R9	RESISTOR, C.F., 2.2 OHM 5% 1/4 WATT	1


INDICATES KEYING PIN
NOTE: USE THERMAL COMPOUND BETWEEN I.C. AND HEATSINK
J1
J2
J3
J4
J5
SW2
K1
SR1
SR2
SR3
SRC2
IC1
IC2
IC3
IC4
IC5
IC7
IC8
IC9
IC10
IC27
IC28
IC29
IC30
IC31
IC34
IC36
IC37
IC38
IC39
IC40
IC41
IC42
IC43
IC44
IC47
IC48
IC50
IC52
IC53
IC55
IC56
IC57
IC58
IC59
IC60
IC61
IC62
IC63
IC69
C32
A32


J6
J7
SRC2
SRC1
B3
B2
B1
IC6
IC65
IC59
IC64
IC66
IC60
IC33
IC51
IC35
IC49
IC67
IC68
SW1
IC11
IC15
IC19
IC23
IC61
IC12
IC16
IC24
IC62
IC13
IC17
IC21
IC25
IC63
IC14
IC18
IC26
J1

REV	DESCRIPTION OF CHANGE	ECN NO DATE
-	NEW PART RELEASE	10859 6-7-83
A	REVERSED W1 & W2 JUMPERS (LOCATED AT COORD B1)	12446 3-22-84

IC CHIPS NO.	VCC	GND
IC1	5	3
IC2	13	2
IC3	16	5,4
IC4, IC5	20,24,22	1
IC6	20	1
IC7	20	1
IC9 THRU IC26	26,28	14
IC 27	6,35	1,21
IC 28	7	39,1
IC 29, IC30	29	10,16,24
IC 31 THRU 35; IC47, IC48, IC49 IC50, IC52, IC53, IC60, IC64, IC66, IC67, IC51, IC69	14	7
IC 36, IC37, IC38, IC43, IC44, IC45, IC46,	1	9,8
IC 39, IC40, IC61, IC62, IC63, IC41, IC 42 IC57,	20	10
IC54, IC55, IC68	24	12
IC58,	13	NONE
IC59	18	9

NOTES:
1) C2 – C34 ARE BYPASS CAPACITORS ON THE 5V LINE.

SPARE GATES		
IC'S	PIN NUMBERS	TYPES
IC 31	1, 2, 3	74LS00
IC 43	9. 10	4049
IC 60	11, 12, 13	74LS08
IC 67	1, 2 3,4 10,11 12,13	7407
IC 69	4,5,6 8,9,10. 11,12,13	74LS32

SWITCH 1 1J6
UP ORN-GRN
RIGHT ORN-GRN
DOWN ORN-RED
LEFT ORN
PLAYER 1 YEL-GRN
PLAYER 2 YEL-BLU
KEY
JUMP ORN-GRN
KEY GND

SWITCH 2 1J5
KEY GND

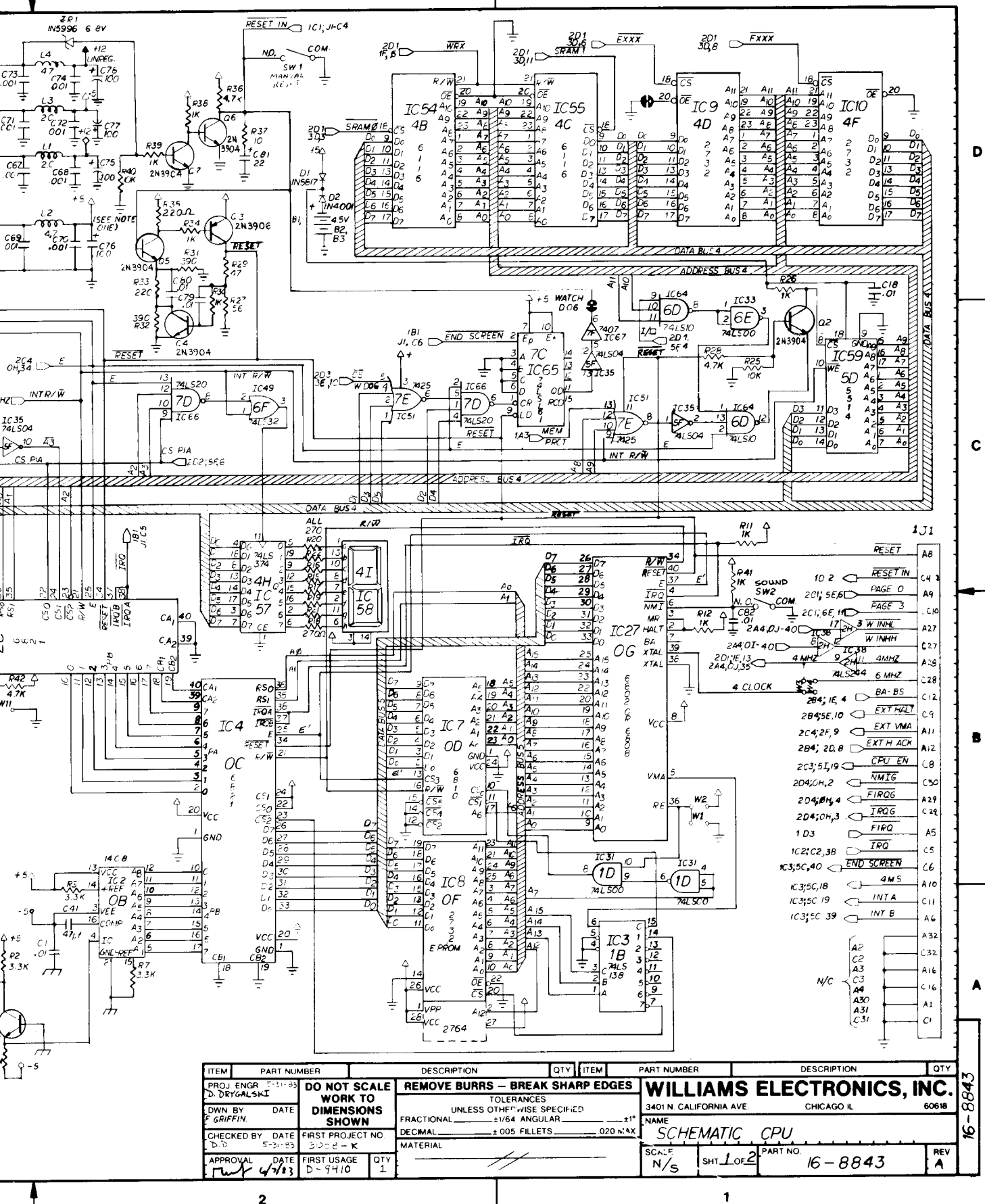
COIN BOX 1J4
AUTO/MANUAL
ADVANCE
H.S. RESET
LEFT COIN
CENTER COIN
RIGHT COIN
SLAM TILT
MEM PROT
KEY GND

POWER J7
ZP1 IN5996 6.8V
+12 UNREG.

IC 6 5C
IC 5 2C
IC35 74LS04
CS PIA
INTR/W
2B12MZ
END SCREEN

1J3 SPEAKER
1J2 VOLUME

N.C
C7 AND C22 FOR 2B & 6B (4049)



ITEM	PART NUMBER	DESCRIPTION	QTY	ITEM	PART NUMBER	DESCRIPTION	QTY

PROJ. ENGR. 5-31-83 D. DRYGALSKI
DWN. BY DATE F. GRIFFIN
CHECKED BY DATE D.D. 5-31-83
APPROVAL DATE 4/7/83

DO NOT SCALE WORK TO DIMENSIONS SHOWN

FIRST PROJECT NO. 3008-K
FIRST USAGE D-9410
QTY 1

REMOVE BURRS – BREAK SHARP EDGES

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ±1/64 ANGULAR ±1°
DECIMAL ± 005 FILLETS .020 MAX
MATERIAL

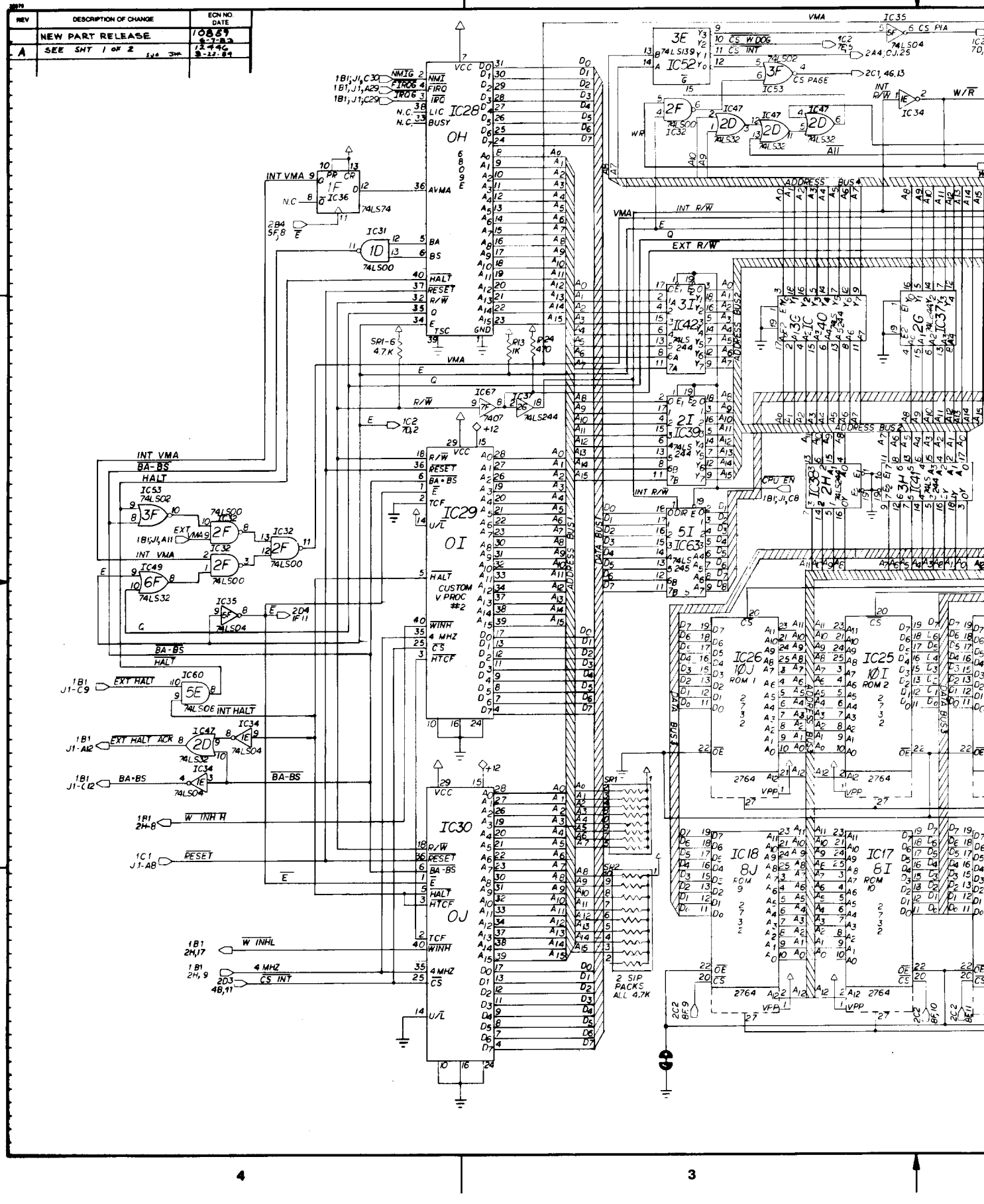
WILLIAMS ELECTRONICS, INC.
3401 N. CALIFORNIA AVE. CHICAGO IL. 60618

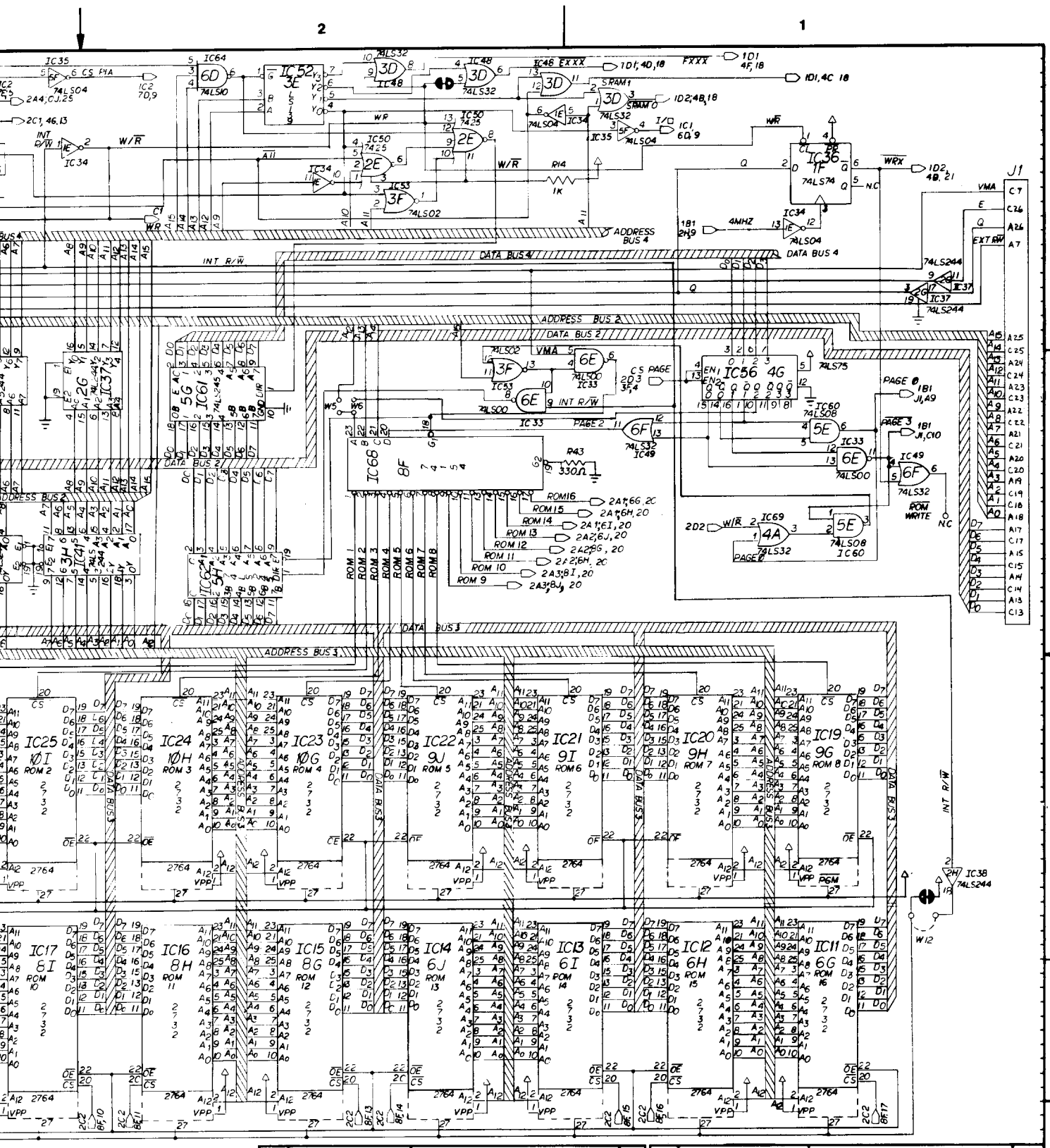
NAME SCHEMATIC CPU

SCALE N/S SHT 1 OF 2 PART NO. 16-8843 REV A

16-8843

14 CPU-Board Logic Diagram (Sheet 1 of 2)


REV
DESCRIPTION OF CHANGE
ECN NO. DATE
NEW PART RELEASE
10859 8-2-83
A
SEE SHT 1 OF 2
12,946 8-22-84
IC28 OH
IC29 OI
IC30 OJ
IC31 1D
IC32 2F
IC33 2H
IC34 1E
IC35 6F
IC36 1F
IC37 2G
IC38 3H
IC39 2I
IC40 3G
IC42 3I
IC47 2D
IC52 3E
IC53 3F
IC60 5E
IC63 5I
IC67 7F
IC18 8J
IC17 8I
IC26 10J
IC25 10I
VMA
INT R/W
EXT R/W
ADDRESS BUS
DATA BUS
CPU EN
INT VMA
BA-BS
HALT
EXT HALT
INT HALT
EXT HALT ACK
W INH H
W INH L
RESET
4 MHZ
CS INT
CS PIA
CS W DOG
CS PAGE
2764
2 SIP PACKS ALL 4.7K



ITEM	PART NUMBER	DESCRIPTION	QTY	ITEM	PART NUMBER	DESCRIPTION	QTY

PROJ. ENGR. 5-31-83 D. DRYGALSKI
DWN BY F. GRIFFIN DATE 8-12-82
CHECKED BY D D DATE 5-31-83
APPROVAL DATE 6/1/83
DO NOT SCALE WORK TO DIMENSIONS SHOWN
FIRST PROJECT NO. 3008-K
FIRST USAGE D-94 10 QTY 1
REMOVE BURRS – BREAK SHARP EDGES
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ±1/64 ANGULAR ±1°
DECIMAL ± 005 FILLETS .020 MAX
MATERIAL

WILLIAMS ELECTRONICS, INC.
3401 N. CALIFORNIA AVE. CHICAGO IL. 60618
NAME SCHEMATIC CPU
SCALE N/S SHT 2 OF 2 PART NO. 16-8843 REV A
16-8643

NOTES:

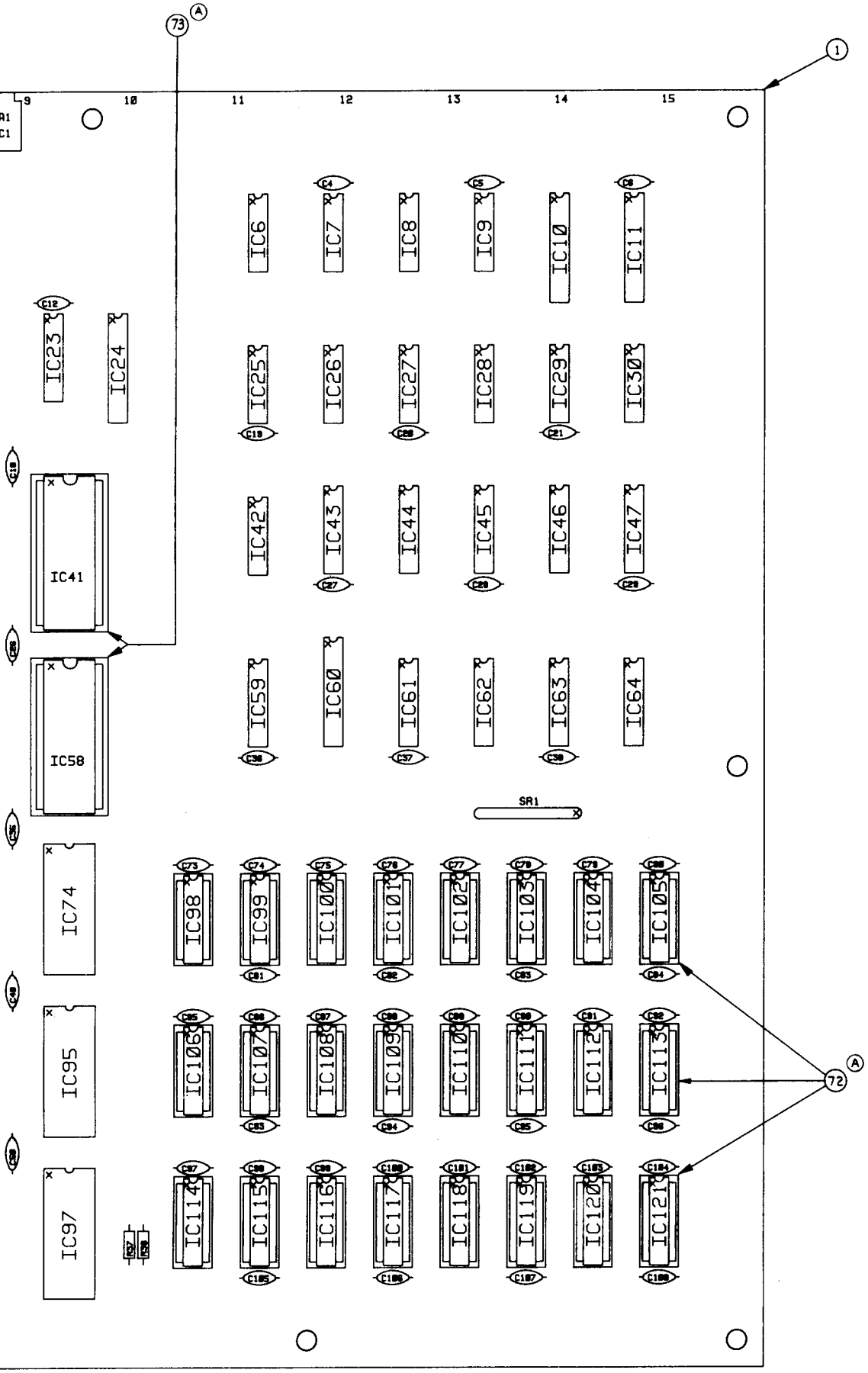
1. FOR SCHEMATIC, REFER TO DWG. #16-8844
2. I.C., 74LS86: IC3, IC26, IC27, IC28, IC29, IC33, IC84.
3. I.C., 74LS74: IC6, IC12, IC25, IC50, IC52, IC53.
4. I.C., 74LS374: IC11, IC15, IC38, IC39, IC55, IC56, IC70, IC86, IC88, IC89, IC90.
5. I.C., 74LS157: IC21, IC22, IC23, IC80, IC81, IC82.
6. I.C., 74LS161: IC31, IC43, IC44, IC45, IC46.
7. I.C., 74198: IC73, IC74, IC94, IC95, IC96, IC97.
8. I.C., 4116: IC98, IC99, IC100, IC101, IC102, IC103, IC104, IC105, IC106, IC107, IC108, IC109, IC110, IC111, IC112, IC113, IC114, IC115, IC116, IC117, IC118, IC119, IC120, IC121.
9. RESISTOR, 1K OHM: R1, R2, R3, R4, R5, R32, R33, R37, R38.
10. (B) RESISTOR, 2K OHM: R8, R12, R16, R20, R28, R29, R30, R40, R41, R42.
11. CAPACITOR, .01 MFD: C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C63, C67, C71, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108.
12. CAPACITOR, .001 MFD: C62, C64, C66, C68, C70, C72.
13. DIODE, 1N4148: D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19.

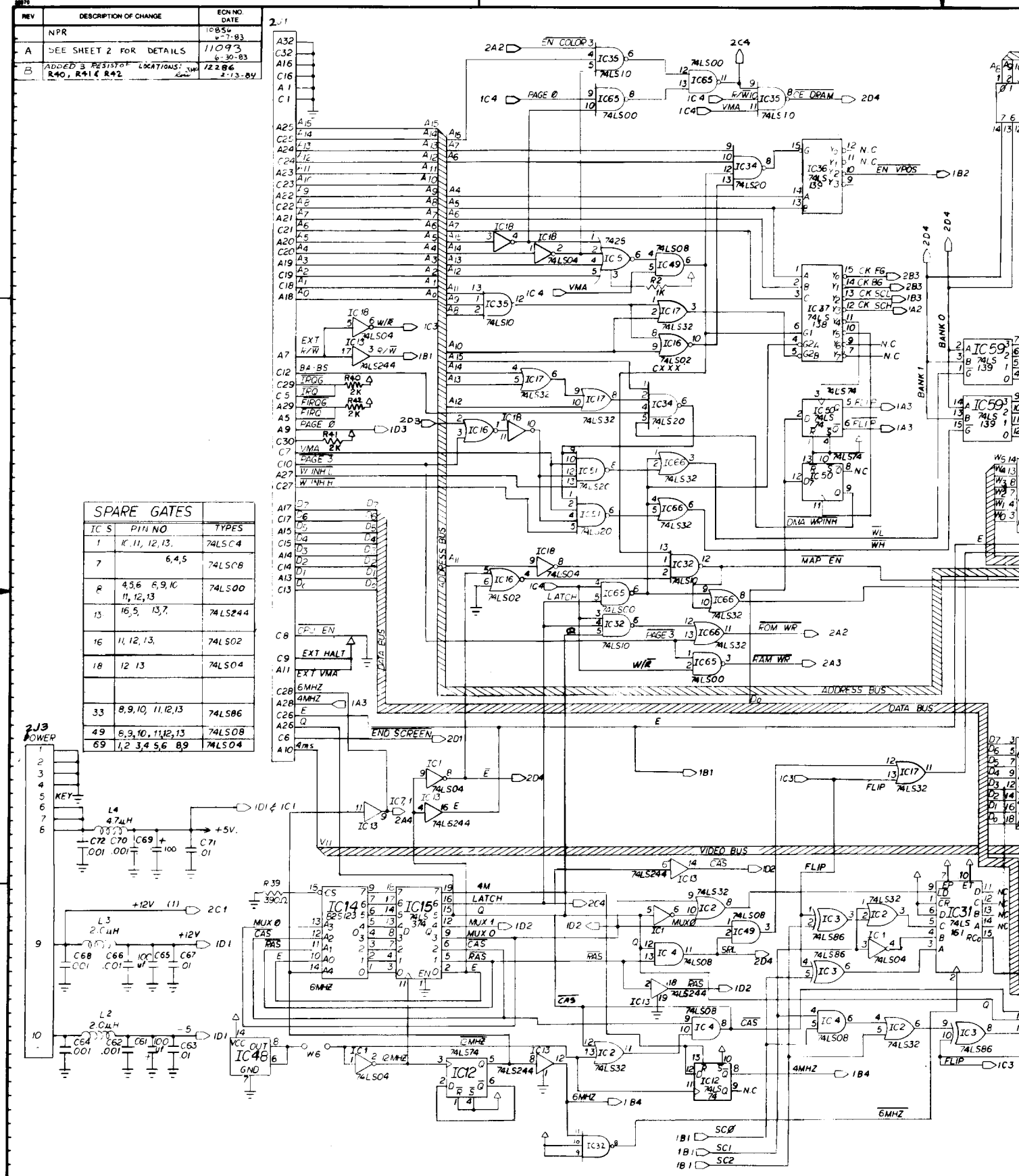
ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY
87				
86				
85				
84				
83				
82				
81				
80				
79				
78				
77	A 5343 10724	IC57	ROM 19	
76	A-5343-10725	IC58	ROM 20	
75	A-5343-10726	IC41	ROM 21	
74				
73	5700-10176-00		28 PIN I.C. SOCKET	3
72	5700-09006-00		16 PIN I.C. SOCKET	24
71				
70				
69	5791-09444-00	J3	10 PIN HEADER 09-65-1101	1
68	5791-09497-00	J2	7 PIN HEADER 09-65-1071	1
67	5792-10026-00	J1	64 PIN R.N. HEADER FEMALE	1
66				
65				
64	5551-09822-00	L4	COIL, RADIAL, 4.7 UH 3 A.	1
63	5551-10161-00	L2, L3	COIL, RADIAL, 2.0 UH 3 A.	2
62	5551-09825-00	L1	COIL, RADIAL, 4.7 UH 30 MA	1
61				
60				
59	5070-08919-00	SEE NOTE #13	DIODE, IN4148 150 MA	19
58				

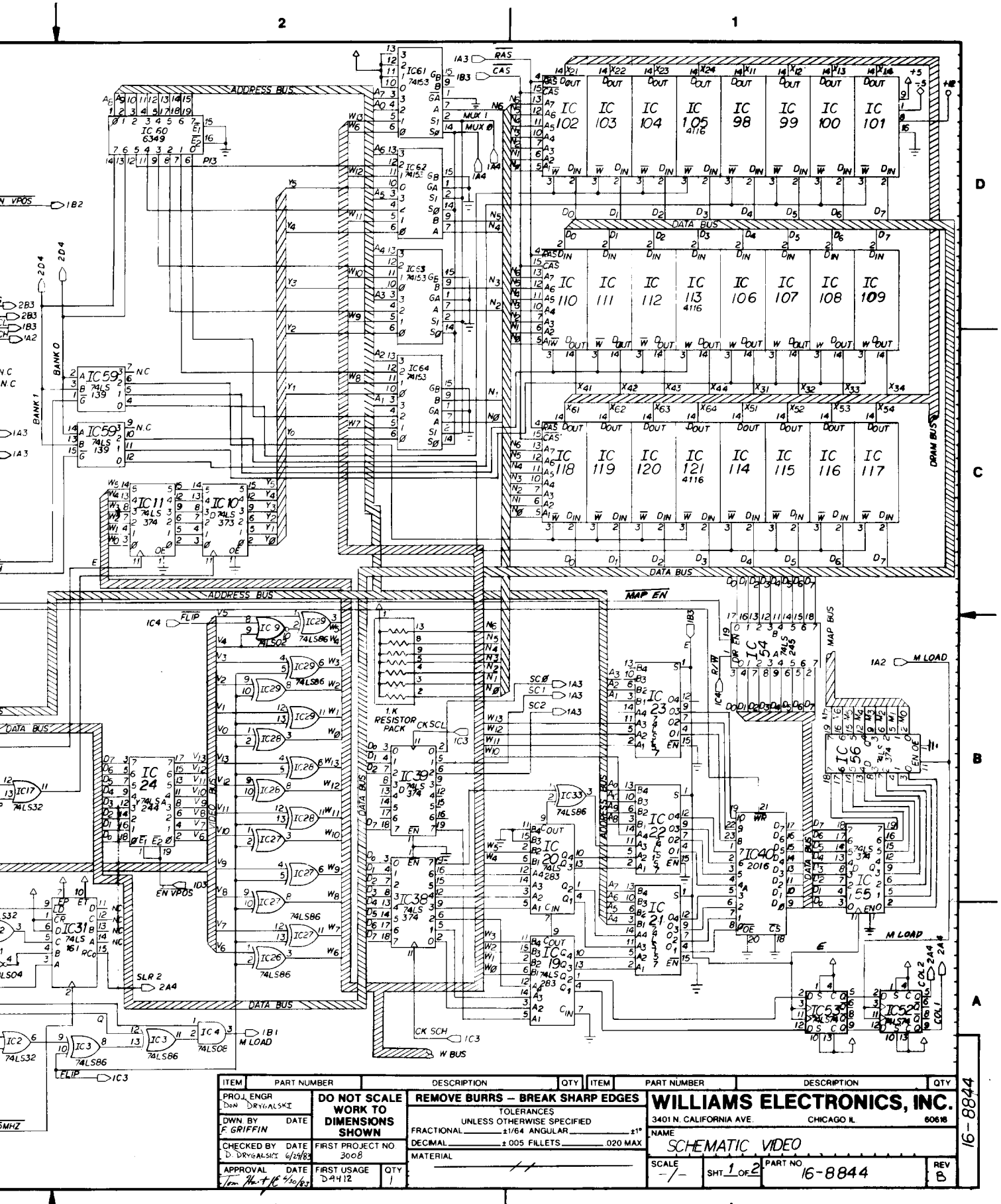
	ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY.
	57	5160-10269-00	Q1, Q2, Q3, Q4, Q5	TRANSISTOR, 2N3904 NPN TO-92	5
	56				
	55				
	54	5043-09845-00	C62, C64, C66, C68, C70, C72	CAPACITOR, AXIAL, .001 MFD. 50V +/-20%	6
	53	5040-09421-00	C61 C65, C69	CAPACITOR, RADIAL, 100 MFD. 25V +50-10%	3
	52	5043-08996-00	C60	CAPACITOR, CERAMIC, .1 MFD. 50V +/-20%	1
	51	5043-09844-00	C54, C55 C56, C57	CAPACITOR, CERAMIC, 47 PFD. 50V +/-20%	4
	50	5043-09065-00	C51, C52, C53	CAPACITOR, CERAMIC, 470 PFD. 50V +/-20%	3
	49	5043-08980-00	SEE NOTE #11	CAPACITOR, CERAMIC, .01 MFD. 50V +80-20%	89
	48				
	47	5019-09669-00	SR1	RESISTOR, C.F., 1K OHM 5% 10 PIN SIP	1
	46				
	45	5010-09534-00	W2, W4, W5, W6	RESISTOR, 0 OHM	4
	44	5010-09541-00	R36	RESISTOR, C.F., 2.7K OHM 2% 1/4 WATT	1
3	43	5010-10203-00	R35	RESISTOR, C.F., 2.2K OHM 2% 1/4 WATT	1
24	42	5010-10003-00	R34, R39	RESISTOR, C.F., 390 OHM 5% 1/4 WATT	2
	41	5010-10170-00	R23, R25, R29	RESISTOR, C.F., 47 OHM 5% 1/4 WATT	3
	40	5010-09508-00	R31	RESISTOR, C.F., 270 OHM 2% 1/4 WATT	1
1	39	5010-09416-00	R22, R24, R26	RESISTOR, C.F., 470 OHM 5% 1/4 WATT	3
1	38	5010-10204-00	R9, R13, R17, R21	RESISTOR, C.F., 1K OHM 2% 1/4 WATT	4
1	37 (6)	5010-10205-00	SEE NOTE #10	RESISTOR, C.F., 2K OHM 2% 1/4 WATT	10
	36	5010-10000-00	R7, R11, R15, R19	RESISTOR, C.F., 3.9K OHM 5% 1/4 WATT	4
	35	5010-09219-00	R6, R10, R14, R18	RESISTOR, C.F., 8.2K OHM 5% 1/4 WATT	4
1	34	5010-09358-00	SEE NOTE #9	RESISTOR, C.F., 1K OHM 5% 1/4 WATT	9
2	33				
1	32				
	31	5340-09488-00	SEE NOTE #8	I.C., 4116 RAM/D 16K X 1, 450 NS	24
	30	5281-09853-00	IC79	I.C., 74LS85 4 BIT COMPARITOR	1
19	29	5340-10019-00	IC75, IC76, IC77, IC78	I.C., 2149 RAM/S 1K X 4, 70 NS	0
		5340-10018-00		I.C., 2148 RAM/S 1K X 4, 70 NS	4
	28	5280-10017-00	SEE NOTE #7	I.C., 74198, 8 BIT SHIFT REGISTER	6
	27	5281-09739-00	IC71, IC72, IC83	I.C., 74LS158, QUAD 2 TO 1 MULTIPLEXER	3
	26	5280-09481-00	IC61, IC62, IC63, IC64	I.C., 74153, DUAL 4 TO 1 MULTIPLEXER	4
	25	A-5282-10293	IC60	I.C., HORZ. DECODE ROM 5B	0
		A-5282-10292		I.C., HORZ. DECODE ROM 5A	1
	24	5281-09308-00	IC54, IC85, IC87	I.C., 74LS245, OCTAL BUS TRANSCEIVER	3
	23	5521-10028-00	IC48	I.C., K1116, 12 MHZ OSC 1%	1
	22	A-5282-10294	IC47	I.C., HORZ. SYNC. ROM	1
	21	5340-10139-00	IC40	I.C., TC5516AP-2 CMOS S RAM 2K X 8 200 NS	0
		5340-09878-00		I.C., 2016 S RAM 2K X 8 200 NS	1
	20	5281-09745-00	IC37	I.C., 74LS138, 3 TO 8 DECODER	1
	19	5281-09246-00	IC36, IC59	I.C., 74LS139, DUAL 2 TO 4 DEC.	2
	18	5281-10014-00	IC34, IC51, IC68	I.C., 74LS20, DUAL 4-INPUT NAND	3
	17	5281-09735-00	SEE NOTE #6	I.C., 74LS161, BINARY COUNTER	5
	16	5281-09235-00	IC30, IC32, IC35	I.C., 74LS10, TRIPLE 3-INPUT NAND	3
	15	5281-09738-00	SEE NOTE #5	I.C., 74LS157, QUAD 2 TO 1 MULTIPLEXER	6
	14	5281-09734-00	IC19, IC20	I.C., 74LS283, 4 BIT ADDER	2
	13	A-5282-10295	IC14	I.C., CLOCK ROM	1
	12	5281-09867-00	IC13, IC24	I.C., 74LS244, OCTAL BUF	2
	11	5281-09486-00	SEE NOTE #4	I.C., 74LS374, OCTAL D F/F	11
	10	5281-09856-00	IC10, IC91, IC92, IC93	I.C., 74LS373, OCTAL D LATCH	4
	9	5281-09247-00	IC9, IC16	I.C., 74LS02, QUAD 2-INPUT NOR	2
	8	5281-09499-00	IC8, IC65	I.C., 74LS00, QUAD 2-INPUT NAND	2
	7	5281-09487-00	SEE NOTE #3	I.C., 74LS74, DUAL D F/F	6
	6	5280-09551-00	IC5	I.C., 7425, DUAL 4-INPUT W/STROBE NOR	1
	5	5281-09743-00	IC4, IC7, IC49	I.C., 74LS08, QUAD 2-INPUT AND	3
	4	5281-09737-00	SEE NOTE #2	I.C., 74LS86, QUAD 2-INPUT EXOR	7
	3	5281-09500-00	IC2, IC7, IC42, IC66, IC67	I.C., 74LS32, QUAD 2-INPUT OR	5
	2	5281-09215-00	IC1, IC18, IC69	I.C., 74LS04, HEX. INVERTER	3
	1	5777-09960-00		BARE P.C. BOARD (REV. - A)	1

BILL OF MATERIALS

2J1
A32
C32
A1
C1
2J2
2J3
INDICATES KEYING PIN


73
A
1
9
10
11
12
13
14
15
IC6
IC7
IC8
IC9
IC10
IC11
IC23
IC24
IC25
IC26
IC27
IC28
IC29
IC30
IC41
IC42
IC43
IC44
IC45
IC46
IC47
IC58
IC59
IC60
IC61
IC62
IC63
IC64
SR1
IC74
IC95
IC97
IC98
IC99
IC100
IC101
IC102
IC103
IC104
IC105
IC106
IC107
IC108
IC109
IC110
IC111
IC112
IC113
IC114
IC115
IC116
IC117
IC118
IC119
IC120
IC121
72
A


REV | DESCRIPTION OF CHANGE | ECN NO. DATE
NPR | 10856 6-7-83
A | SEE SHEET 2 FOR DETAILS | 11093 6-30-83
B | ADDED 3 RESISTOR LOCATIONS: R40, R41 & R42 | 12286 2-13-84
SPARE GATES
IC S | PIN NO | TYPES
1 | 11, 12, 13, | 74LSC4
7 | 6,4,5 | 74LSC8
8 | 4,5,6 6,9,10 11, 12, 13 | 74LS00
13 | 16,5, 13,7. | 74LS244
16 | 11, 12, 13, | 74LS02
18 | 12 13 | 74LS04
33 | 8,9,10, 11,12,13 | 74LS86
49 | 8,3,10, 11,12,13 | 74LSC8
69 | 1,2 3,4 5,6 8,9 | 74LS04
ADDRESS BUS
DATA BUS
VIDEO BUS
EN COLOR
PAGE Ø
R/W
VMA
EXT H/W
BA·BS
TPDQ
TPQ
FIRQG
FIRQ
PAGE 3
W INHL
W INHH
CPU EN
EXT HALT
EXT VMA
6MHZ
4MHZ
END SCREEN
4ms
KEY
+5V.
+12V
MUX Ø
MUX 1
LATCH
CAS
RAS
ROM WR
RAM WR
MAP EN
DMA W/INH
BANK 0
BANK 1
FLIP
SC Ø
SC1
SC2

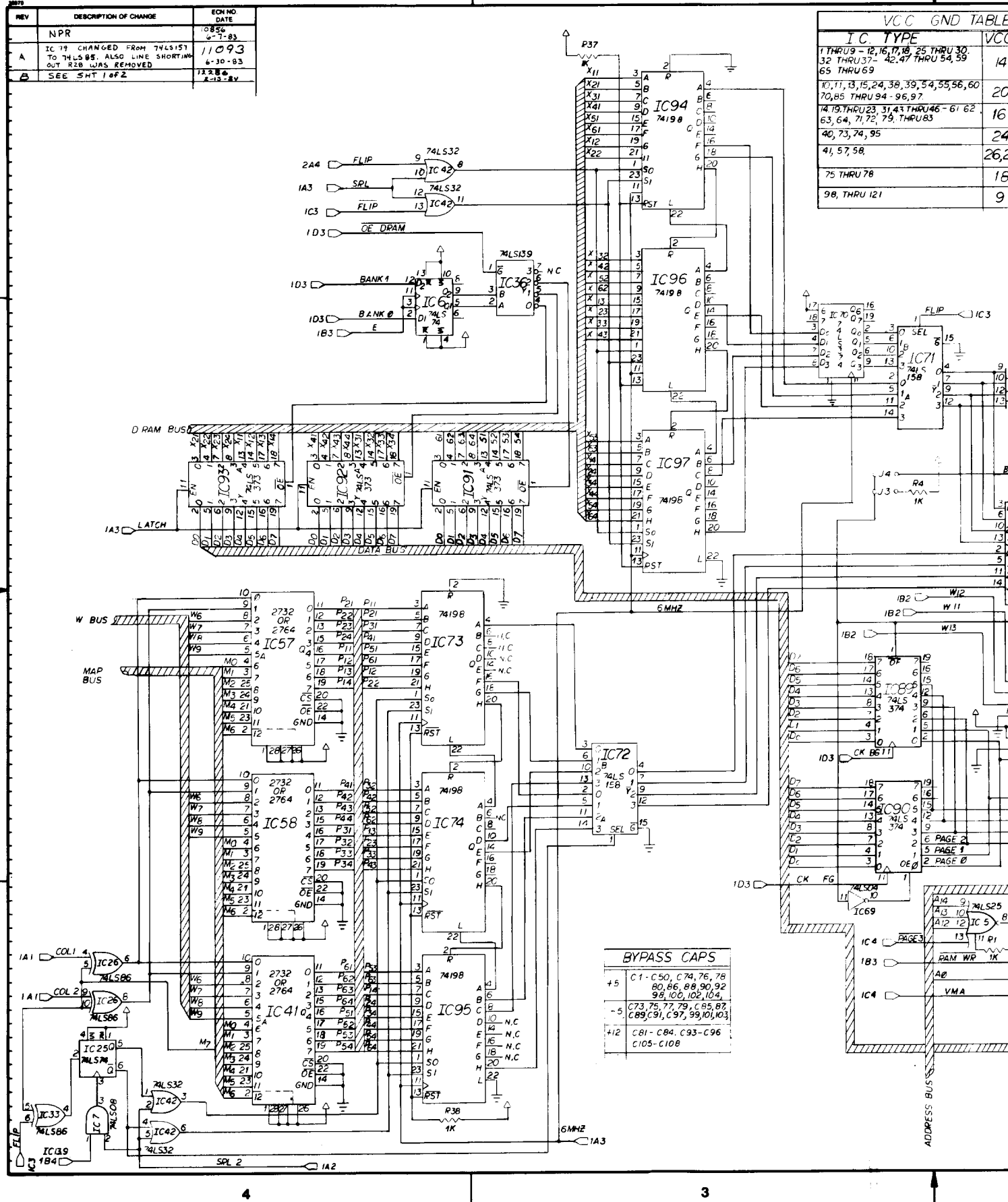


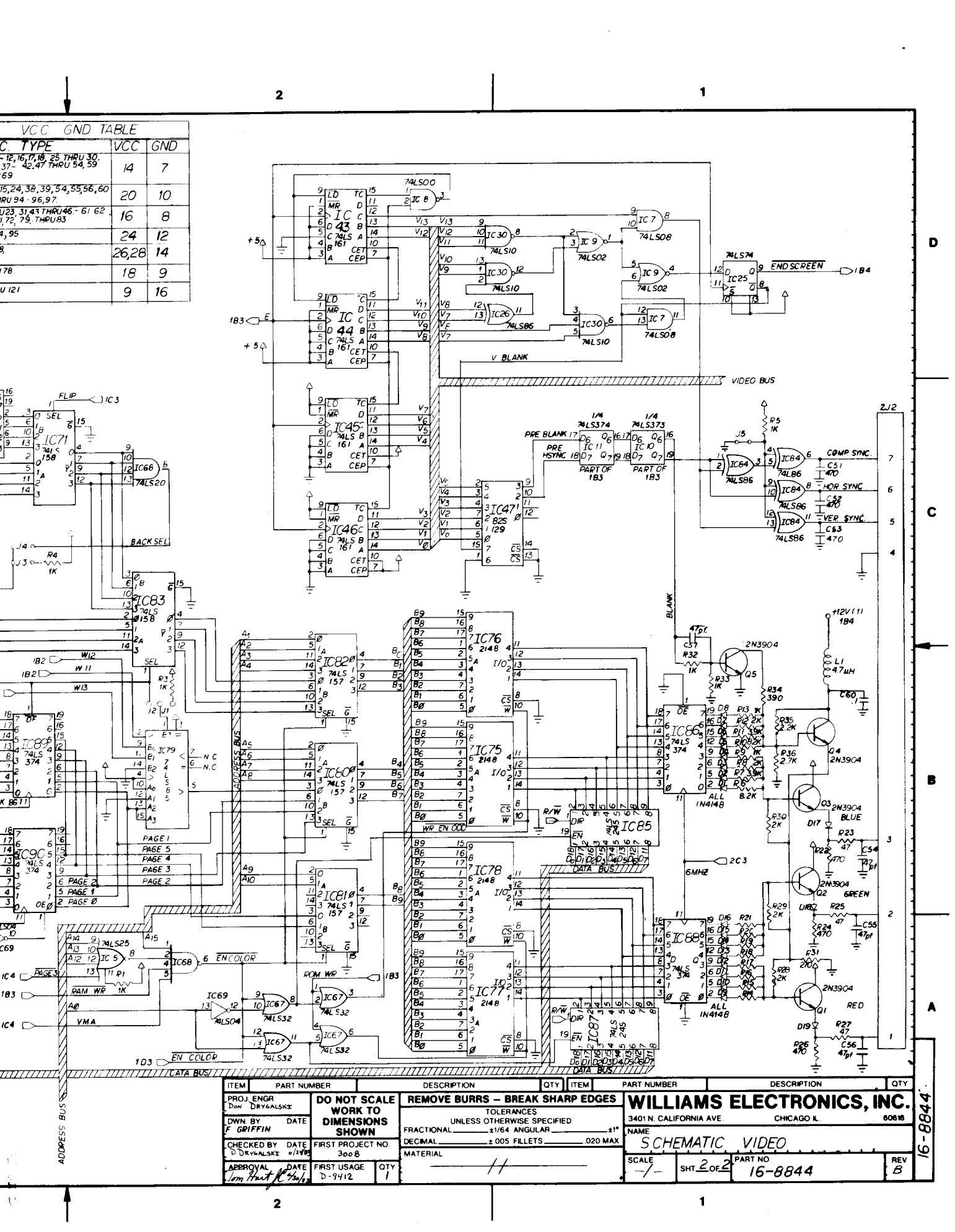
18 Video-Board Logic Diagram (Sheet 1 of 2)

REV	DESCRIPTION OF CHANGE	ECN NO DATE
-	NPR	10856 6-7-83
A	IC 79 CHANGED FROM 74LS157 TO 74LS85. ALSO LINE SHORTING OUT R28 WAS REMOVED	11093 6-30-83
B	SEE SHT 1 of 2	12286 X-13-84

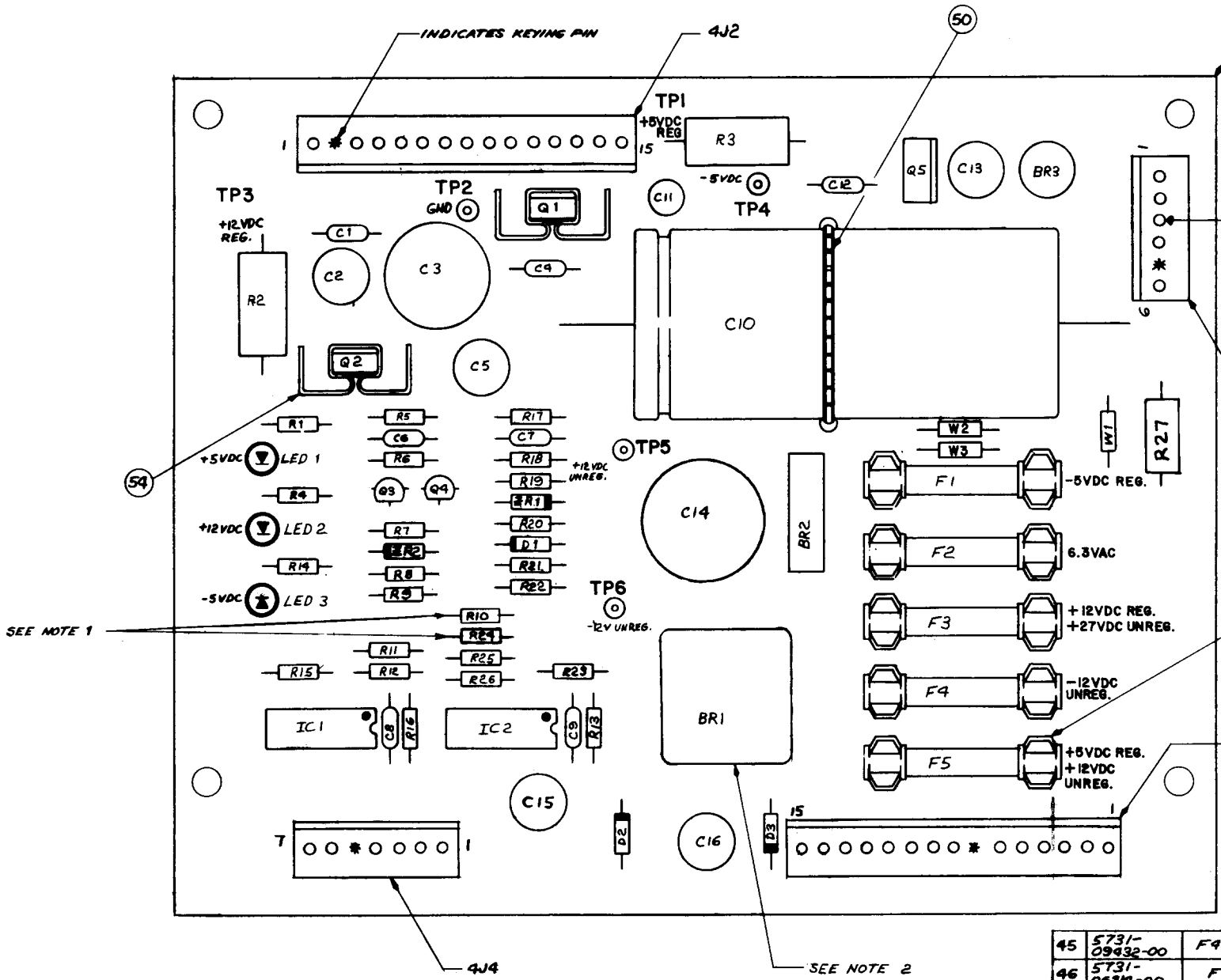
VCC GND TABLE	
I C. TYPE	VCC
1 THRU 9 - 12, 16, 17, 18, 25 THRU 30. 32 THRU 37 - 42, 47 THRU 54, 59 65 THRU 69	14
10, 11, 13, 15, 24, 38, 39, 54, 55, 56, 60 70, 85 THRU 94 - 96, 97	20
14, 19, THRU 23, 31, 43 THRU 46 - 61 62 63, 64, 71, 72, 79, THRU 83	16
40, 73, 74, 95	24
41, 57, 58,	26,2
75 THRU 78	18
98, THRU 121	9

BYPASS CAPS	
+5	C1 - C50, C74, 76, 78 80, 86, 88, 90, 92 98, 100, 102, 104,
-5	C73, 75, 77, 79, C85, 87, C89, C91, C97, 99, 101, 103
+12	C81 - C84. C93 - C96 C105 - C108





Video-Board Logic Diagram (Sheet 2 of 2)

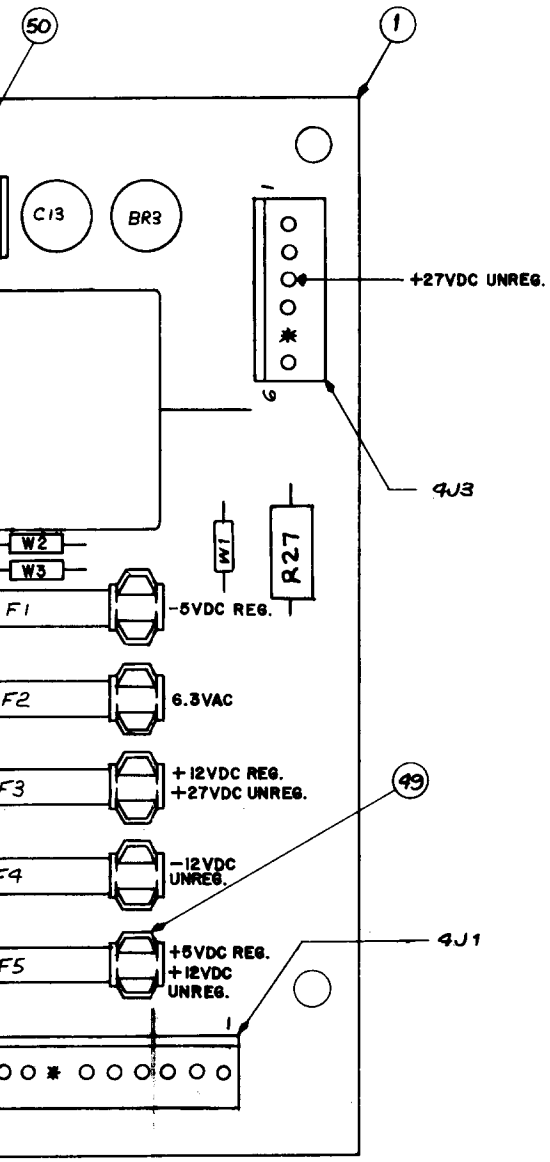


NOTES:

1. REMOVE R24 IF +5VDC IS GREATER THEM 5.25 VDC, REMOVE R10 IF +5VDC IS LESS THAN 4.75 VDC.
2. BR1 MUST BE MOUNTED 1/8" ABOVE SURFACE OF BOARD.
3. FOR SCHEMATIC REFER TO 16-8811.

ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO
55	5010-09682-00	R10	RESISTOR C.F. 51K ±5% 1/4 W	1
56	5010-09324-00	R24	RESISTOR C.F. 27K, ±5% 1/4 W	1

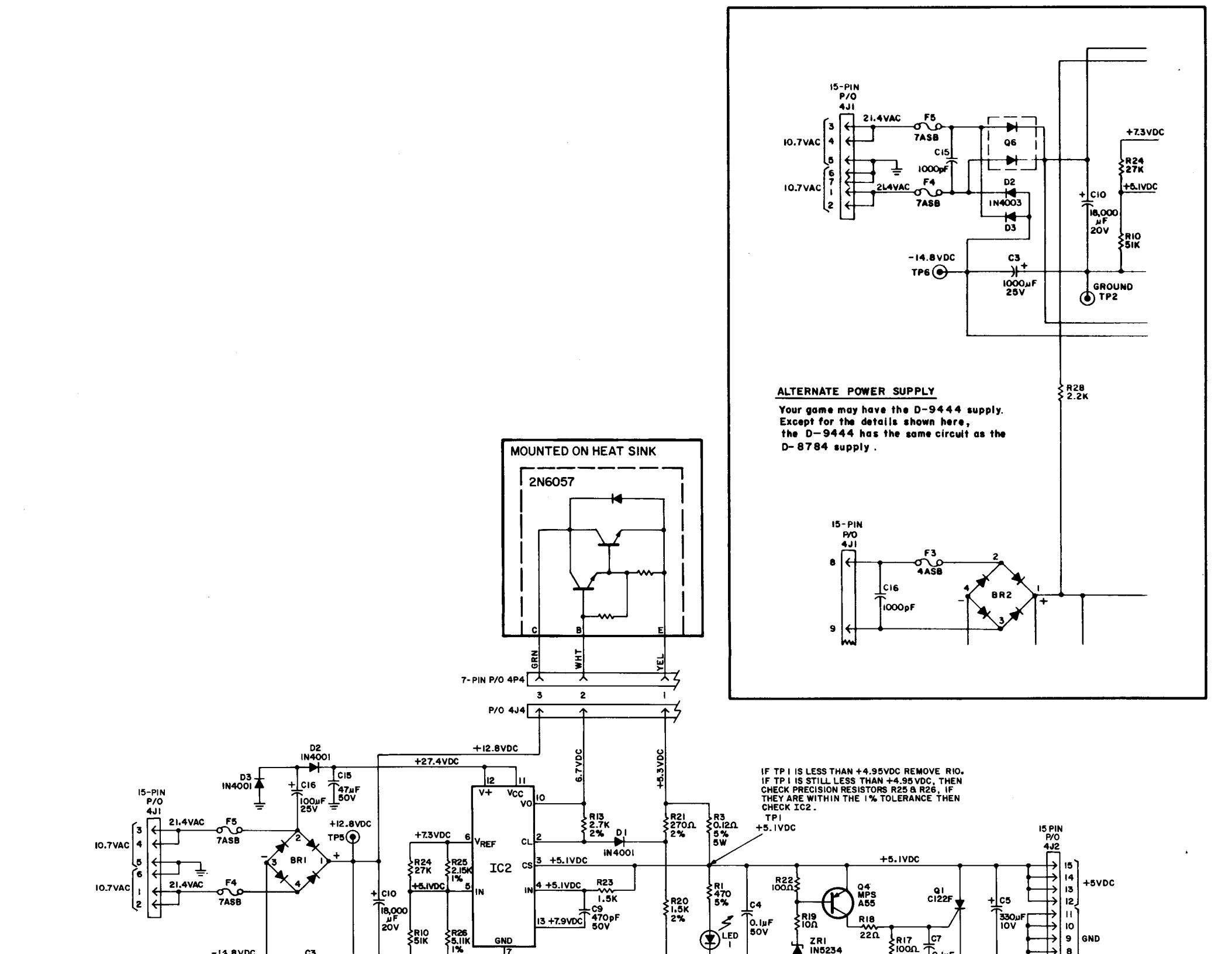
45	5731-09432-00	F4
46	5731-06314-00	F
47	5731-06569-00	F
48	5731-09651-00	F
49	5732-09178-00	
50	03-7620	
51	5791-09074-00	4J
52	5791-09098-00	4
53	5791-09497-00	4
54	5705-09663-00	
	5706-09698-00	

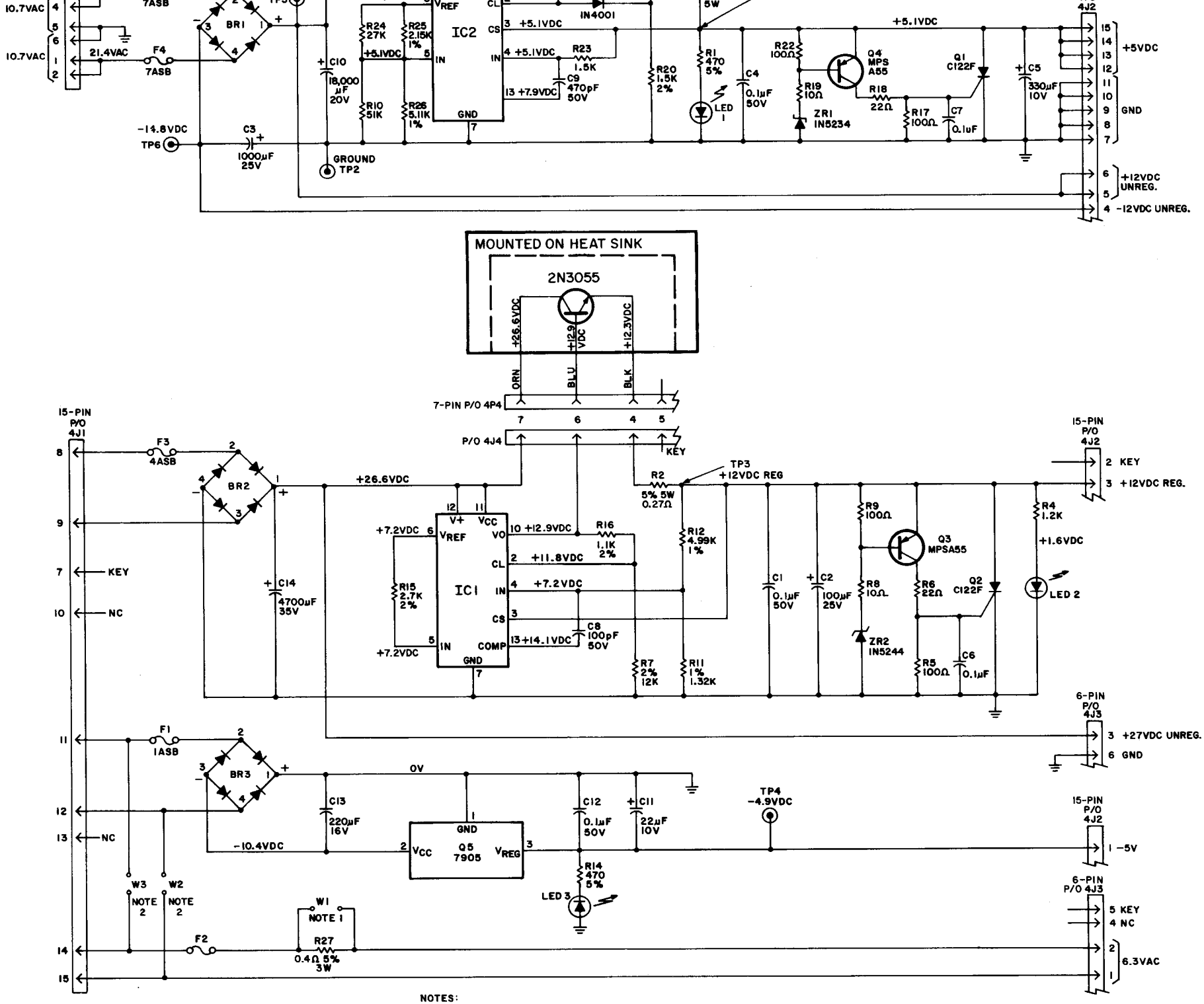


BILL OF MATERIAL

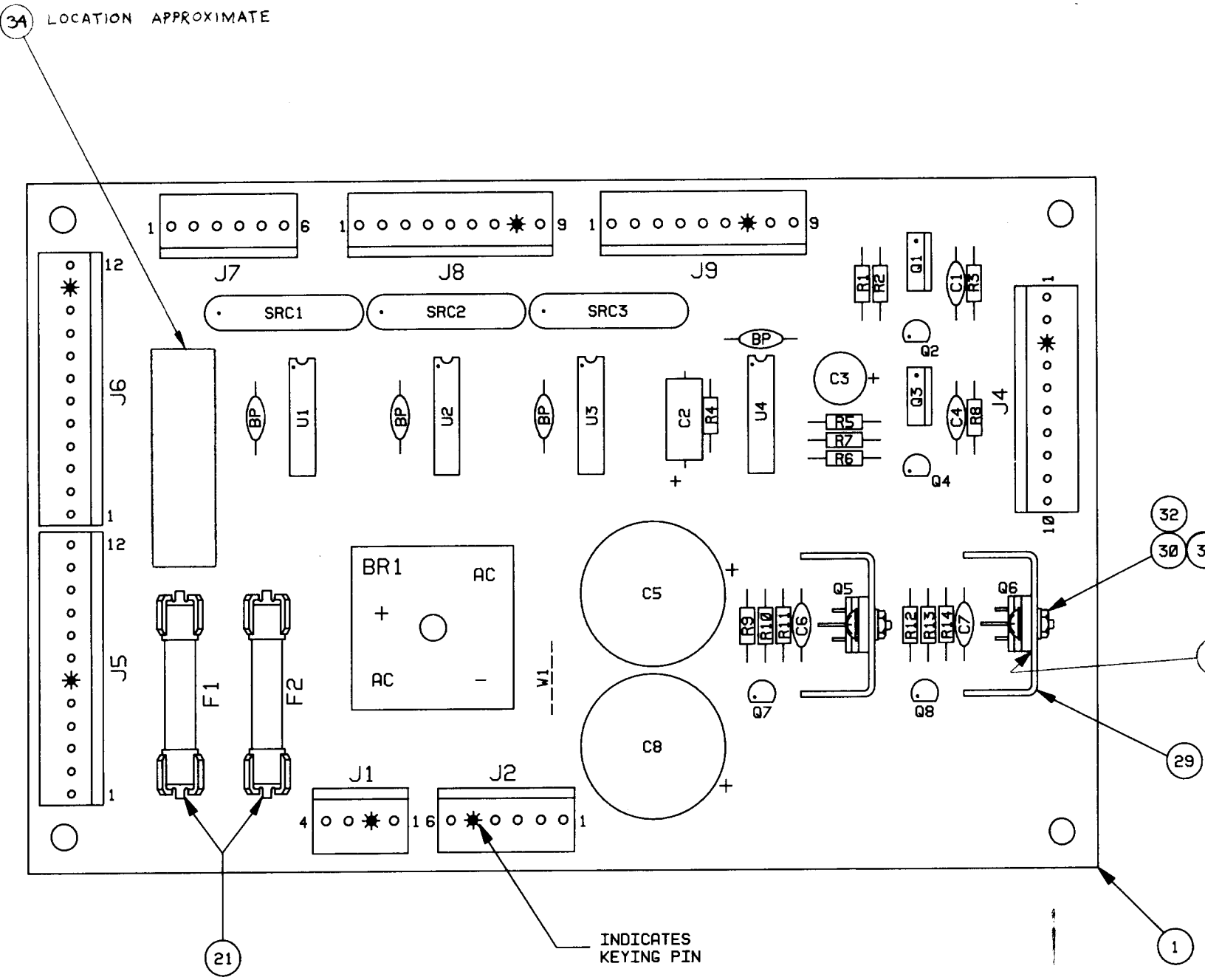
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO.
1	5773-09679-00		BARE P.C. BOARD	1
2	5010-09085-00	R23	RESISTOR, 1.5K 5%, 1/4W	1
3	5010-09541-00	R13, R15	RESISTOR, 2.7K 2%, 1/4W	2
4	5010-09508-00	R21	RESISTOR, 870Ω 2%, 1/4W	1
5	5010-09428-00	R20	RESISTOR, 1.5K 2%, 1/4W	1
6	5010-09509-00	R16	RESISTOR, 1.1K 2%, 1/4W	1
7	5010-09510-00	R7	RESISTOR, 12K 2%, 1/4W	1
8	5010-09314-00	R4	RESISTOR, 1.2K 5%, 1/4W	1
9	5010-09415-00	R1, R14	RESISTOR, 470Ω 5%, 1/4W	2
10	5013-09542-00	R11	RESISTOR, 7.32K 1%, 1/4W	1
11	5013-09427-00	R12	RESISTOR, 4.99K 1%, 1/4W	1
12	5013-09426-00	R25	RESISTOR, 2.15K 1%, 1/4W	1
13	5012-09429-00	R3	RESISTOR, .12Ω 5%, 5W	1
14	5012-09512-00	R2	RESISTOR, .27Ω 5%, 5W	1
15	5012-09057-00	R27	RESISTOR, 0.4Ω 5%, 3W	1
16	5013-09665-00	R26	RESISTOR, 5.11K 1%, 1/4W	1
17	5010-09434-00	R6, R18	RESISTOR, C.F. 22Ω ±5% 1/4W	2
18	5010-09036-00	R5, R9, R17 & R22	RESISTOR, C.F. 100Ω ±5% 1/4W	4
19	5010-09039-00	R8, R19	RESISTOR, C.F. 10Ω ±5%, 1/4W	2
20	5010 09534-00	W1	RESISTOR, 0Ω	1
21	5043-08996-00	C6, C7	CAPACITOR, 0.1μF CERAMIC +80% -20% 50V	2
22	5040-09421-00	C2, C16	CAPACITOR, 100MFD, 25V RADIAL +50% -10%	2
23	5040-09422-00	C15	CAPACITOR, 47 MFD, 50V RADIAL +50% -10%	1
24	5040-09420-00	C3	CAPACITOR, 1000 MFD. 25V RADIAL +75% -10%	1
25	5040-09419-00	C10	CAPACITOR, 18,000MFD 20V AXIAL +75% -10%	1
26	5040-09423-00	C5	CAPACITOR, 330 MFD 10V RADIAL +50% -10%	1
27	5040-09504-00	C14	CAPACITOR 4700MFD 35V RADIAL +50% -10%	1
28	5043-09446-00	C1, C4 & C12	CAPACITOR .1MFD 50V AXIAL Z5U -20 +80%	3
29	5043-08065-00	C9	CAPACITOR 470PFD 50V AXIAL XTR ± 10%	1
30	5043-09492-00	C8	CAPACITOR 100 PFD 50V AXIAL S2L ± 5%	1
31	5040-09506-00	C13	CAPACITOR 220MFD 16V RADIAL +50% -10%	1
32	5040-09493-00	C11	CAPACITOR 22MFD 10V RADIAL +50% -10%	1
33	5070-06258-00	D1, D2 & D3	DIODE, IN4001	3
34	5075-09406-00	ZR1	ZENER, IN5234 ± 5% (6.2V)	1
35	5075-09662-00	ZR2	ZENER IN5249 ± 5% (14V)	1
36	5190-09430-00	Q3, Q4	TRANSISTOR, MPS A55	2
37	5130-09661-00	Q1, Q2	SCR 8 AMP, 100V	2
38	5250-09515-00	Q5	VOLTAGE REGULATOR, T905	1
39	5460-09426-00	IC1, IC2	VOLTAGE REGULATOR, 723	2
40	5100-09690-00	BR1	BRIDGE RECTIFIER, 35 AMP, 200V	1
41	5100-09513-00	BR2	BRIDGE RECTIFIER, 4.0A, 50V	1
42	5100-09514-00	BR3	BRIDGE RECTIFIER, 1.0A, 50V	1
43	5671-09019-00	LED1, LED2, LED3	LED, RED	3
44	5829-09248-00	TP1 — TP6	TERMINAL #1502-1 (TEST POINT)	4
Ⓐ				

		45	5731-09432-00	F4 & F5	FUSE, 7A, S.B. 2
		46	5731-06314-00	F3	FUSE, 4A, S.B., 250V 1
		47	5731-06569-00	F1	FUSE, 1A, S.B. 250V 1
		48	5731-09651-00	F2	FUSE, 5A, S.B. 250V 1
		49	5732-09178-00		FUSEHOLDER, 10
		50	03-7520		TIE WRAP 1
		51	5791-09074-00	4J1 & 4J2	HEADER, 15 PIN 09-65-1151 2
		52	5791-09038-00	4J3	HEADER, 6 PIN 09-65-1061 1
	1	53	5791-09437-00	4J4	HEADER, 7 PIN 09-65-1071 1
	1	54	5705-09663-00		HEAT SINK 2
	REQ'D NO.		5705-09698-00		HEAT SINK 0


15-PIN P/O 4J1
21.4VAC
F5 7ASB
10.7VAC
21.4VAC
F4 7ASB
10.7VAC
C15 1000pF
Q6
D2 IN4003
D3
+7.3VDC
R24 27K
+5.1VDC
+C10 18,000 µF 20V
R10 51K
-14.8VDC
TP6
C3 1000µF 25V
GROUND TP2
R28 2.2K
ALTERNATE POWER SUPPLY
Your game may have the D-9444 supply. Except for the details shown here, the D-9444 has the same circuit as the D-8784 supply.
15-PIN P/O 4J1
F3 4ASB
C16 1000pF
BR2
MOUNTED ON HEAT SINK
2N6057
C B E
GRN WHT YEL
7-PIN P/O 4P4
P/O 4J4
+12.8VDC
+27.4VDC
6.7VDC
+5.3VDC
D2 IN4001
D3 IN4001
C16 100µF 25V
C15 47µF 50V
15-PIN P/O 4J1
21.4VAC
F5 7ASB
10.7VAC
21.4VAC
F4 7ASB
10.7VAC
BR1
+12.8VDC
TP5
+C10 18,000 µF 20V
-14.8VDC
C3 1000µF 25V
IC2
V+ VCC VREF VO CL CS IN GND
+7.3VDC
R24 27K
R25 2.15K 1%
R10 51K
R26 5.11K 1%
+5.1VDC
R13 2.7K 2%
D1 IN4001
R23 1.5K
C9 470pF 50V
+7.9VDC
R21 270Ω 2%
R20 1.5K 2%
R3 0.12Ω 5% 5W
R1 470 5%
LED 1
C4 0.1µF 50V
IF TP1 IS LESS THAN +4.95VDC REMOVE R10. IF TP1 IS STILL LESS THAN +4.95VDC, THEN CHECK PRECISION RESISTORS R25 & R26, IF THEY ARE WITHIN THE 1% TOLERANCE THEN CHECK IC2.
TP1 +5.1VDC
+5.1VDC
R22 100Ω
R19 10Ω
ZR1 IN5234
Q4 MPS A55
R18 22Ω
R17 100Ω
Q1 C122F
C7
+C5 330µF 10V
15 PIN P/O 4J2
+5VDC
GND

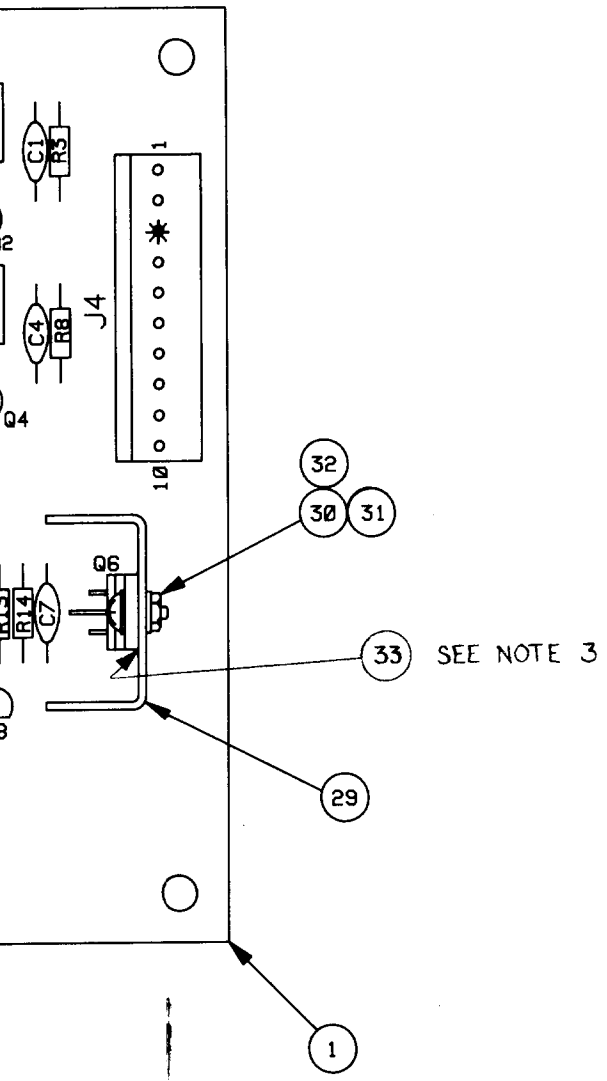


NOTES:
1. W1 IS NOT USED ON UPRIGHT GAMES.
2. W2 & W3 ARE NOT USED.
3. 1ASB 250V.



NOTES:

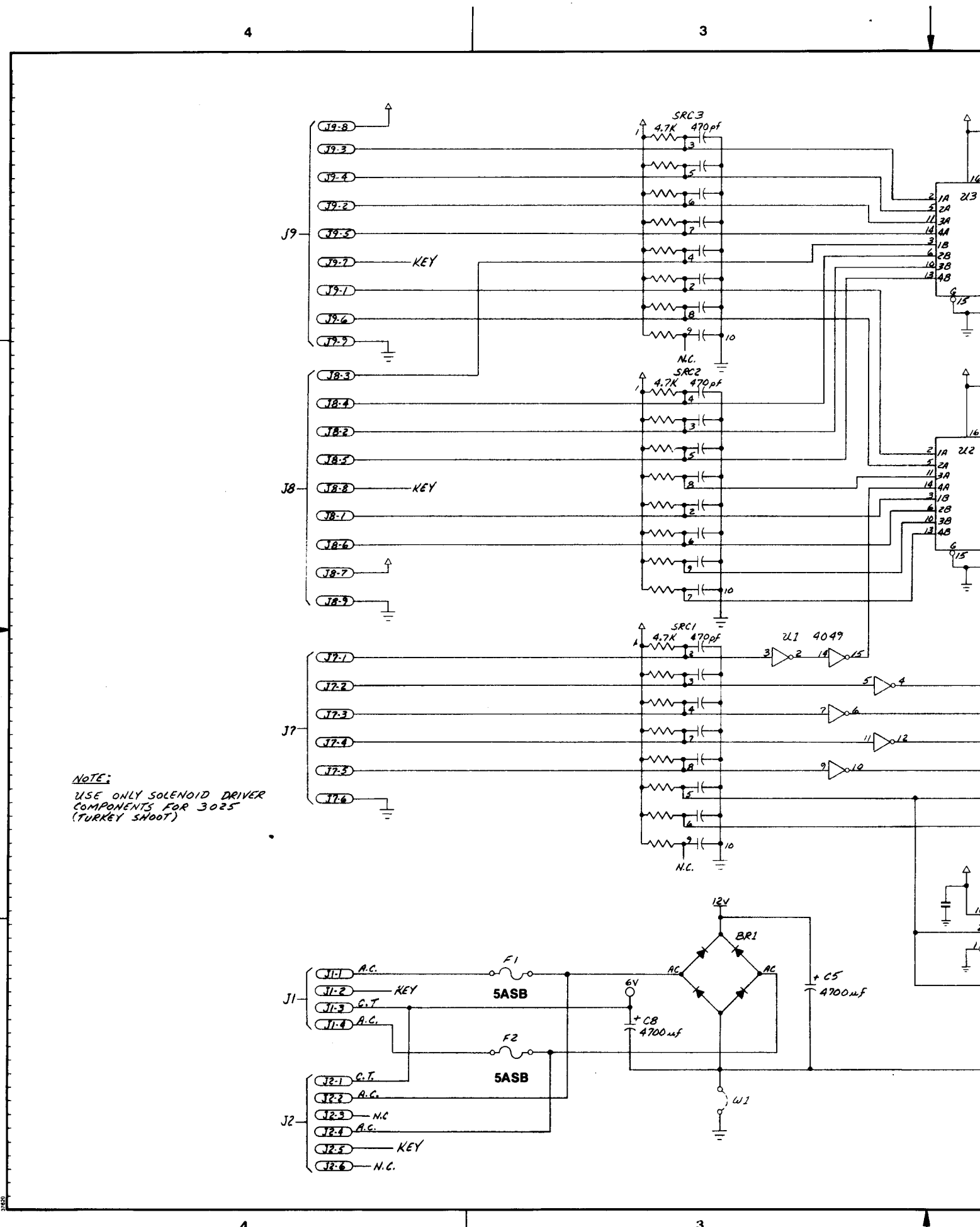
1. FOR SCHEMATIC, REFER TO DRA
2. RESISTOR, 4.7K: R1, R2, R6,
3. APPLY ITEM 33 BETWEEN ITE

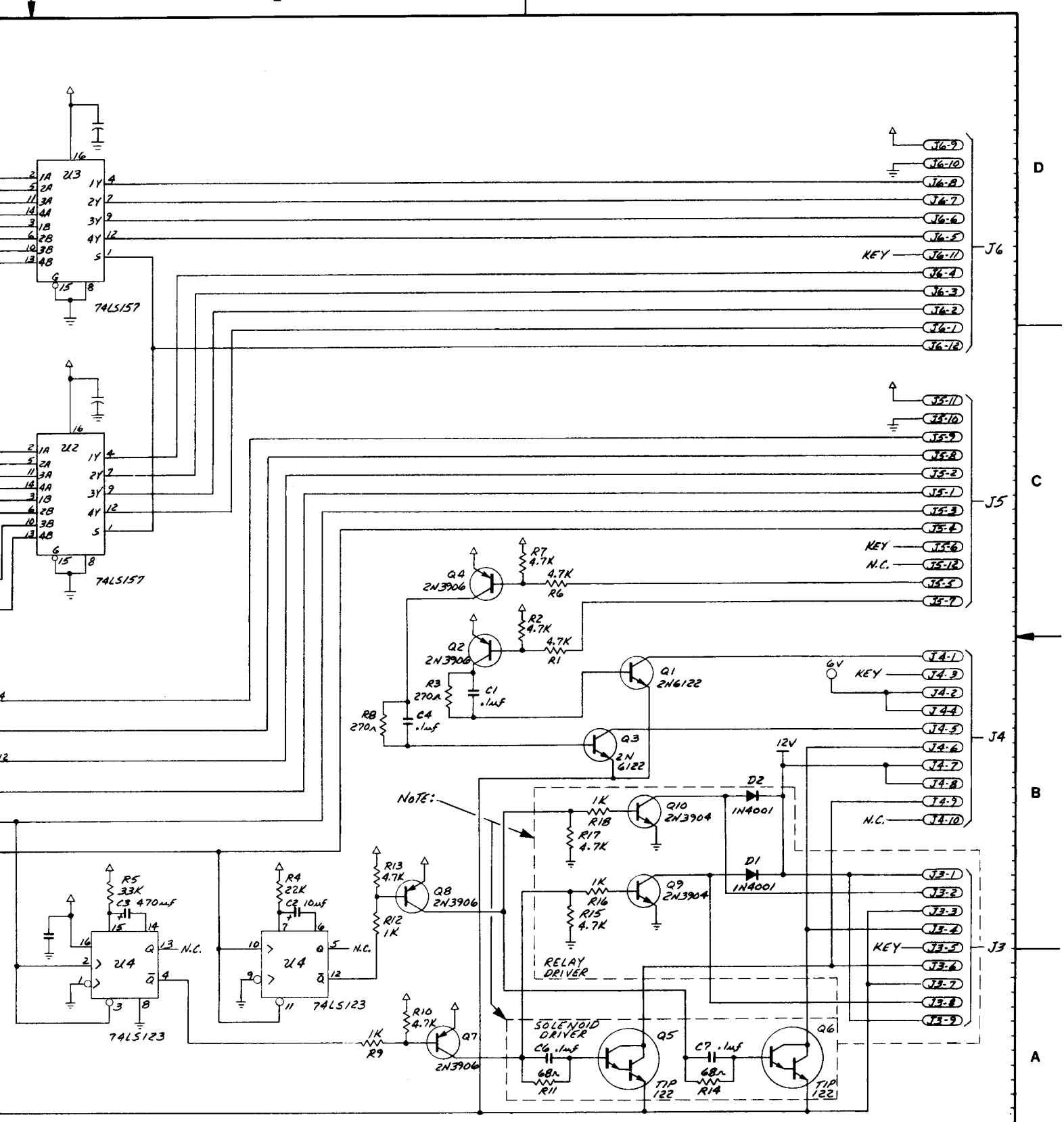


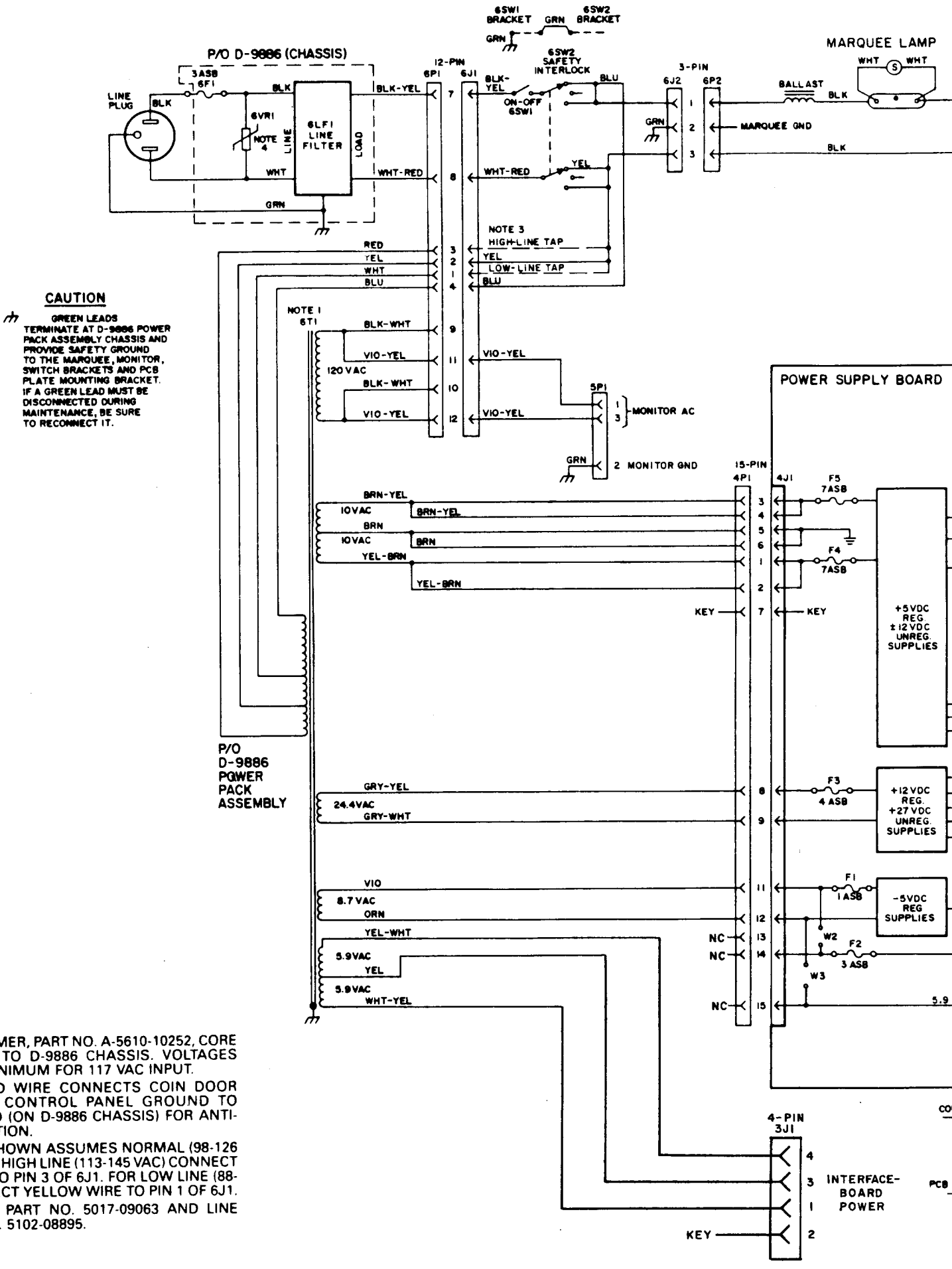
SCHEMATIC, REFER TO DRAWING NO. 16-8910.
ISTOR, 4.7K: R1, R2, R6, R7, R10, R13.
LY ITEM 33 BETWEEN ITEMS 7 & 29.

ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY.
34	16-8850-113		LABEL - PCB ASSY ID	1
33	20-9229		THERMAL COMPOUND	.010 oz.
32	4703-00007-00		#6 EXT. TOOTH LOCKWASHER	2
31	4406-01117-00		6-32 HEX NUT	2
30	4006-01003-06		6-32 x 3/8 P-H.S. SCREW	2
29	5705-09199-00		HEATSINK	2
28	5010-09548-00	R11, R14	RESISTOR, C.F., 68 OHM 2% 1/4 WATT	2
27	5791-09028-00	J1	4-PIN HEADER, 09-65-1041	1
26	5791-09038-00	J2, J7	6-PIN HEADER, 09-65-1061	2
25	5791-09027-00	J8, J9	9-PIN HEADER, 09-65-1091	2
24	5791-09444-00	J4	10-PIN HEADER, 09-65-1101	1
23	5791-09043-00	J5, J6	12-PIN HEADER, 09-65-1121	2
22	5731-09651-00	F1, F2	FUSE, S.B. 5 A. 250V	2
21	5732-09178-00		FUSEHOLDER	4
20	5043-08980-00	BP	CAPACITOR, AXL. .01 MFD. 50V +80-20%	4
19	5043-08996-00	C1, C4, C6, C7	CAPACITOR, AXL. .1 MFD. 50V +/-20%	4
18	5041-09243-00	C2	CAP., ELECT. AXL. 10 MFD. 10V +/-10%	1
17	5040-09776-00	C3	CAP., ELECT. RAD. 470 MFD. 16V +/-20%	1
16	5040-09504-00	C5, C8	CAP., ELECT. RAD. 4700 MFD. 35V +50-10%	2
15	5010-09534-00	W1	RESISTOR, C.F., 0 OHM	1
14	5010-09113-00	R5	RESISTOR, C.F., 33K OHM 5% 1/4 WATT	1
13	5010-08774-00	R4	RESISTOR, C.F., 22K OHM 5% 1/4 WATT	1
12	5010-09224-00	R3, R8	RESISTOR, C.F., 270 OHM 5% 1/4 WATT	2
11	5010-09358-00	R9, R12	RESISTOR, C.F., 1K OHM 5% 1/4 WATT	2
10	5010-08991-00	SEE NOTE #2	RESISTOR, C.F., 4.7K OHM 5% 1/4 WATT	6
9	5161-08979-00	Q1, Q3	TRANSISTOR, 2N6122 NPN	2
8	5190-10270-00	Q2, Q4, Q7, Q8	TRANSISTOR, 2N3906 PNP	4
7	5162-09410-00	Q5, Q6	TRANSISTOR, TIP122 NPN	2
6	5100-09690-00	BR1	BRIDGE RECTIFIER, 35 A. 200V	1
5	5060-10396-00	SRC1, SRC2, SRC3	SIP, 4.7K, 470 PFD., 8R, 8C	3
4	5310-08975-00	U1	I.C., 4049 CMOS HEX. INVERTER	1
3	5281-10007-00	U4	I.C., 74LS123 DUAL MLT/VIB	1
2	5281-09738-00	U2, U3	I.C., 74LS157 QUAD 2 TO 1 MLTPX	2
1	5772-10697-00		BARE P.C. BOARD	1

BILL OF MATERIALS


4
3
D
C
B
A
J9
J9-8
J9-3
J9-4
J9-2
J9-5
J9-7
KEY
J9-1
J9-6
J9-9
SRC3
4.7K 470pf
N.C.
J8
J8-3
J8-4
J8-2
J8-5
J8-8
KEY
J8-1
J8-6
J8-7
J8-9
SRC2
4.7K 470pf
J7
J7-1
J7-2
J7-3
J7-4
J7-5
J7-6
SRC1
4.7K 470pf
N.C.
U1 4049
U3
U2
NOTE:
USE ONLY SOLENOID DRIVER COMPONENTS FOR 3025 (TURKEY SHOOT)
J1
J1-1 A.C.
J1-2 KEY
J1-3 C.T.
J1-4 A.C.
F1
5ASB
F2
5ASB
J2
J2-1 C.T.
J2-2 A.C.
J2-3 N.C
J2-4 A.C.
J2-5 KEY
J2-6 N.C.
12V
BR1
AC
AC
6V
+ C8
4700 uf
+ C5
4700 uf
W1
37820


2
1
D
C
B
A
U3
74LS157
U2
74LS157
J6-9
J6-10
J6-8
J6-7
J6-6
J6-5
KEY
J6-11
J6-4
J6-3
J6-2
J6-1
J6-12
J6
J5-11
J5-10
J5-9
J5-8
J5-2
J5-1
J5-3
J5-4
KEY
J5-6
N.C.
J5-12
J5-5
J5-7
J5
R7 4.7K
4.7K R6
Q4 2N3906
R2 4.7K
4.7K R1
Q2 2N3906
R3 270Ω
C1 .1uf
R8 270Ω
C4 .1uf
Q1 2N6122
Q3 2N 6122
6V
KEY
J4-1
J4-3
J4-2
J4-4
J4-5
J4-6
J4-7
J4-8
J4-9
N.C.
J4-10
J4
12V
D2
1N4001
D1
1N4001
NOTE:
1K R18
R17 4.7K
Q10 2N3904
1K R16
R15 4.7K
Q9 2N3904
RELAY DRIVER
R5 33K
C3 470uf
R4 22K
C2 10uf
U4
74LS123
N.C.
N.C.
R13 4.7K
Q8 2N3906
R12 1K
R10 4.7K
Q7 2N3906
1K R9
SOLENOID DRIVER
C6 .1uf
68Ω R11
Q5 TIP 122
C7 .1uf
68Ω R14
Q6 TIP 122
J3-1
J3-2
J3-3
J3-4
KEY
J3-5
J3-6
J3-7
J3-8
J3-9
J3



CAUTION

GREEN LEADS TERMINATE AT D-9886 POWER PACK ASSEMBLY CHASSIS AND PROVIDE SAFETY GROUND TO THE MARQUEE, MONITOR, SWITCH BRACKETS AND PCB PLATE MOUNTING BRACKET. IF A GREEN LEAD MUST BE DISCONNECTED DURING MAINTENANCE, BE SURE TO RECONNECT IT.

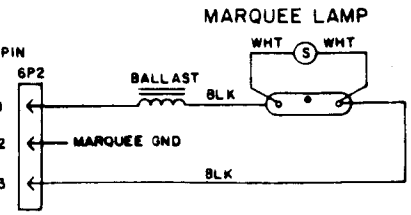
OTES:

6TI TRANSFORMER, PART NO. A-5610-10252, CORE IS GROUNDED TO D-9886 CHASSIS. VOLTAGES SHOWN ARE MINIMUM FOR 117 VAC INPUT.

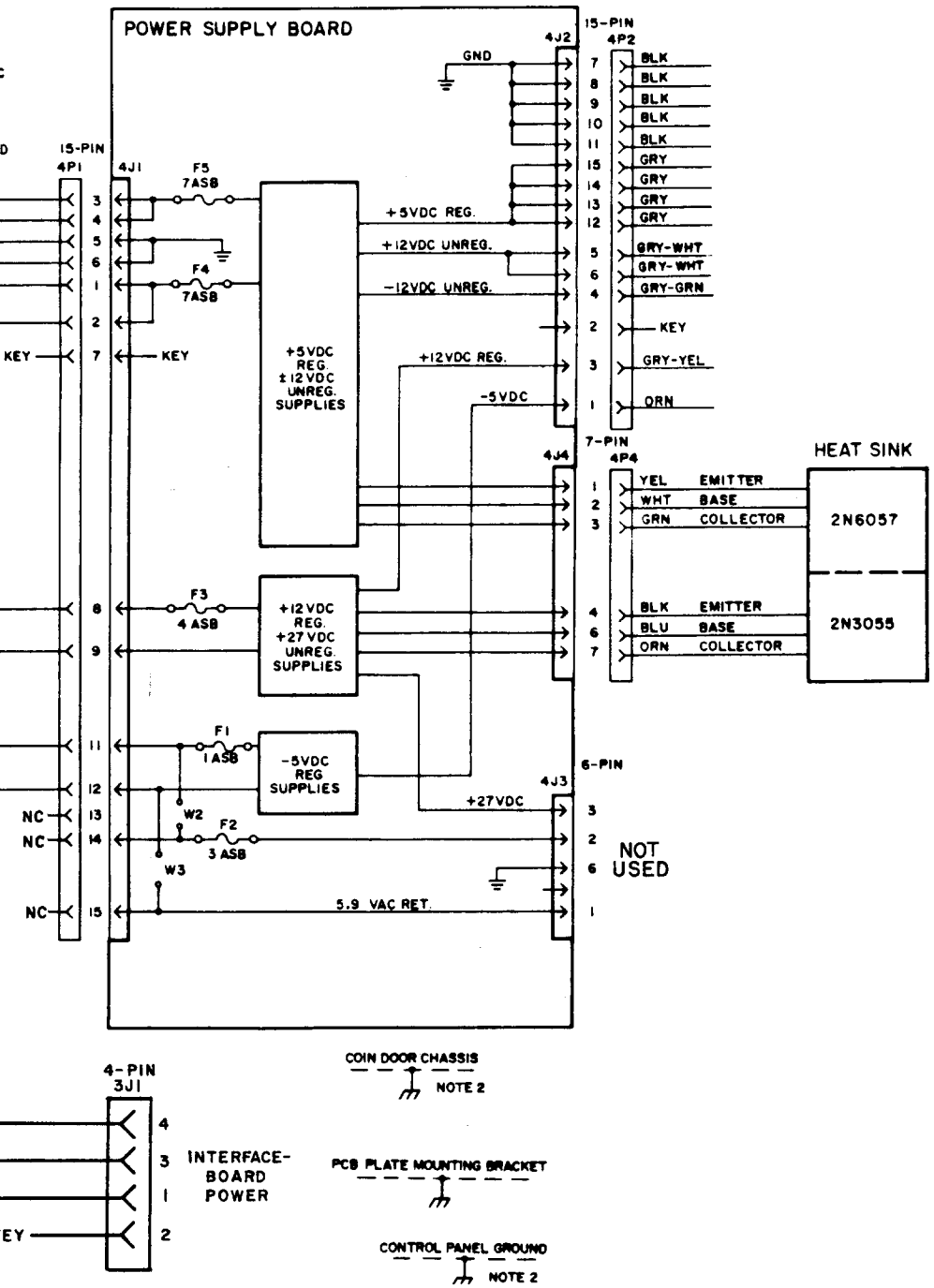
GROUND BRAID WIRE CONNECTS COIN DOOR GROUND AND CONTROL PANEL GROUND TO EARTH GROUND (ON D-9886 CHASSIS) FOR ANTI-STATIC PROTECTION.

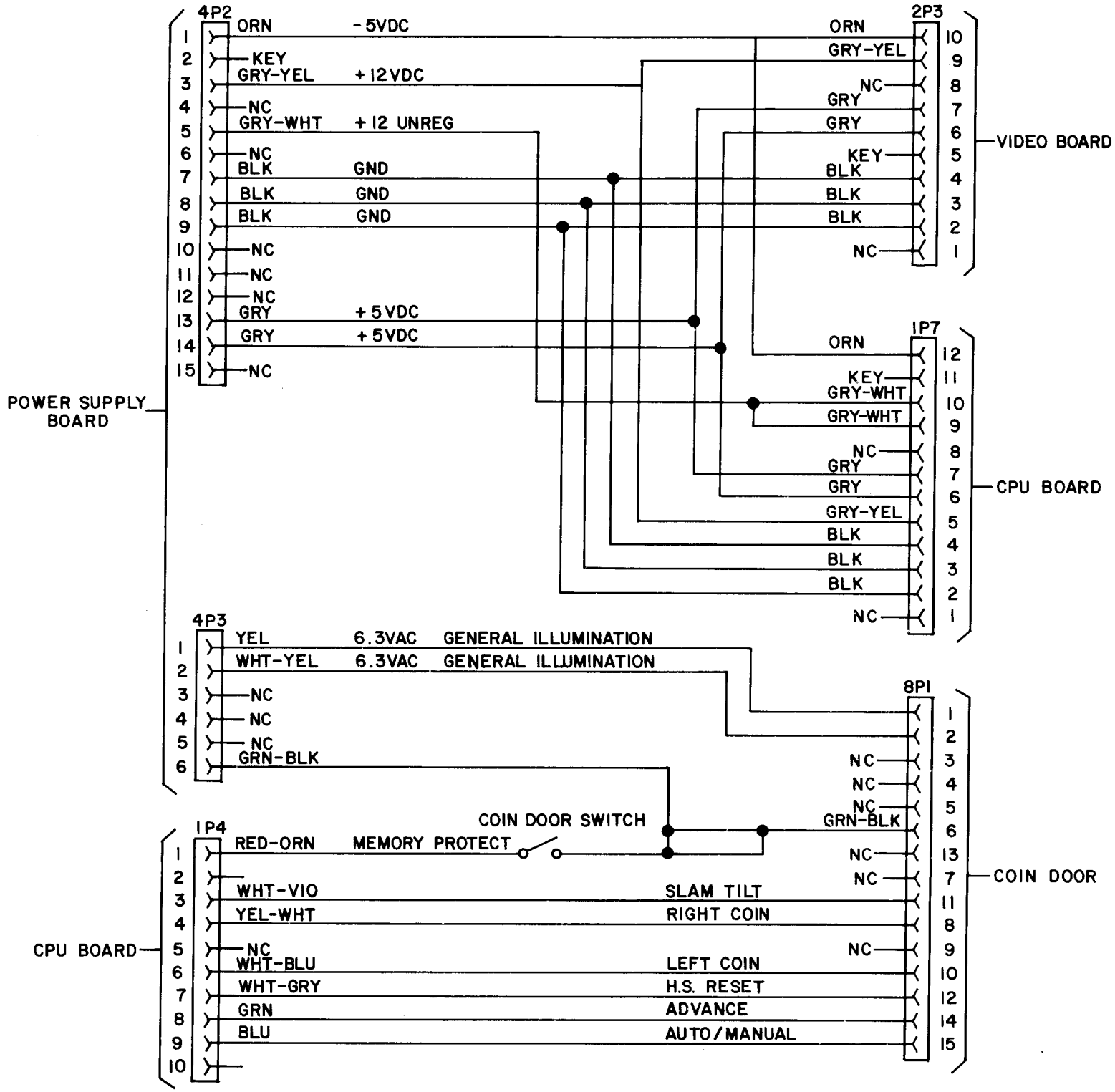
CONNECTION SHOWN ASSUMES NORMAL (98-126 VAC) INPUT. FOR HIGH LINE (113-145 VAC) CONNECT YELLOW WIRE TO PIN 3 OF 6J1. FOR LOW LINE (88-113 VAC) CONNECT YELLOW WIRE TO PIN 1 OF 6J1.

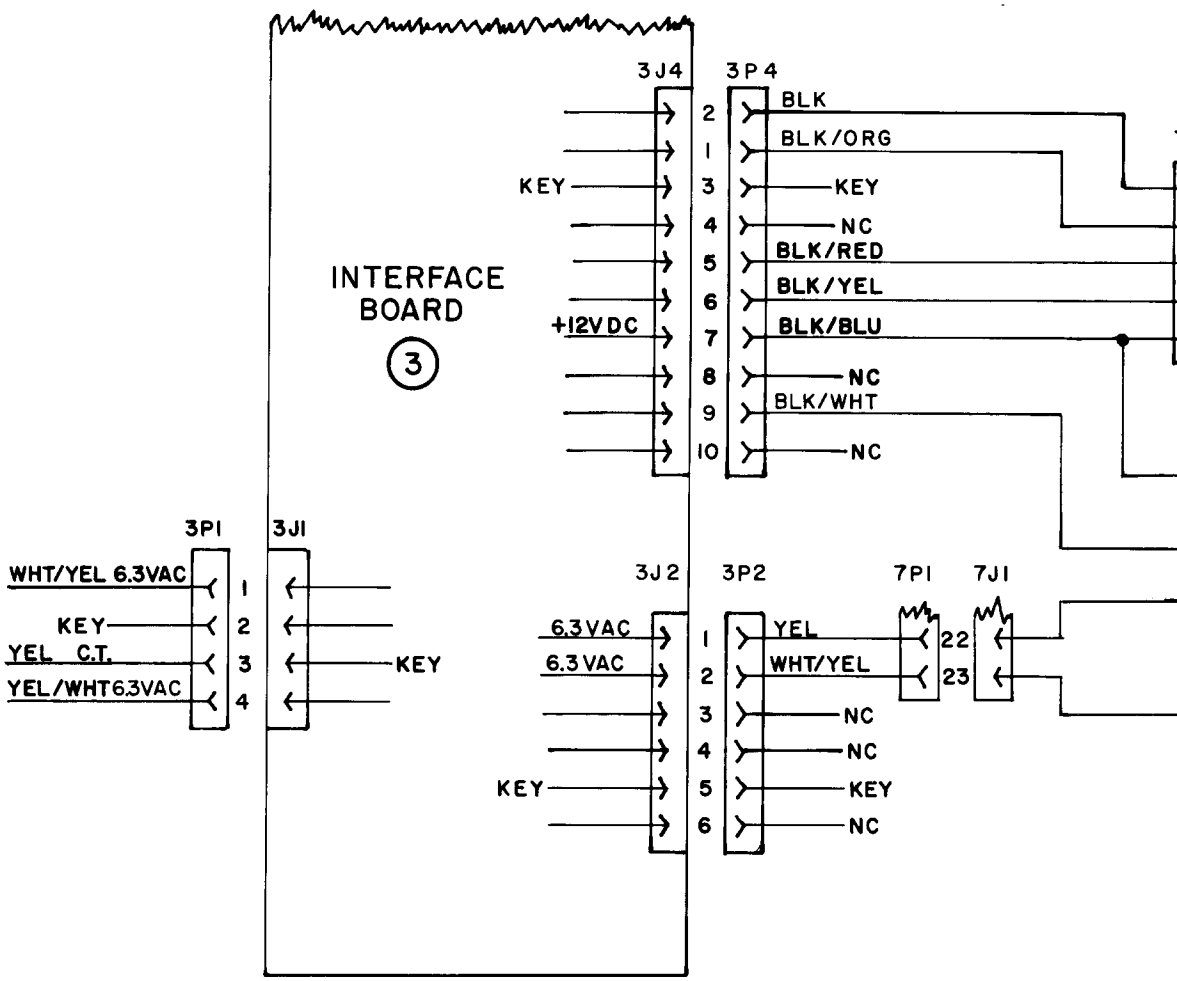
130V VARISTOR PART NO. 5017-09063 AND LINE FILTER PART NO. 5102-08895.

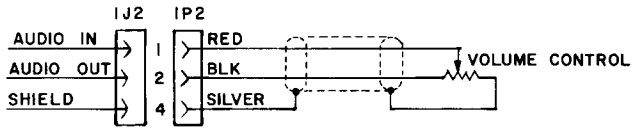


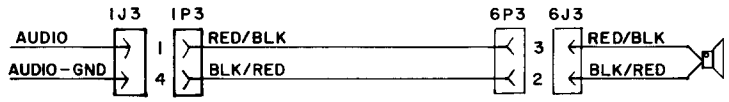
NOTE: Power-supply outputs are shown on the facing page.

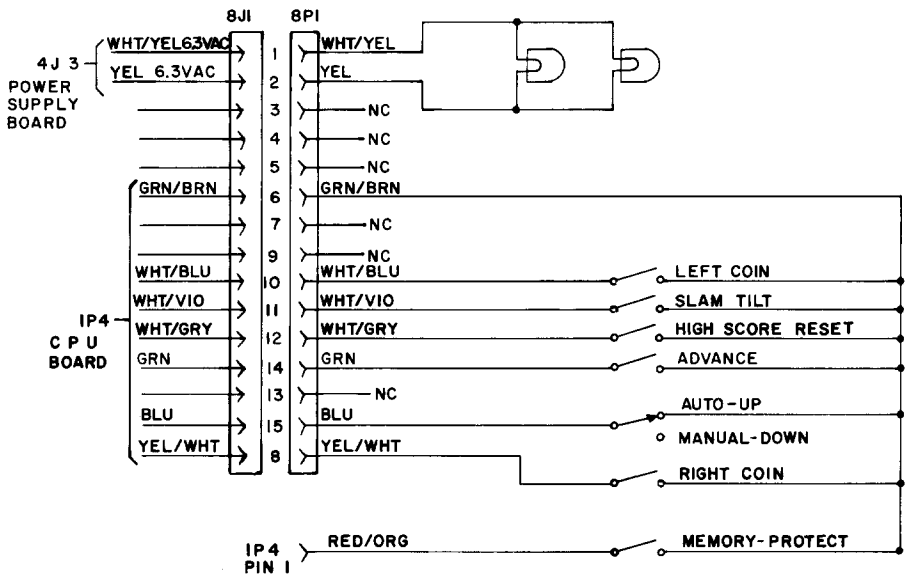


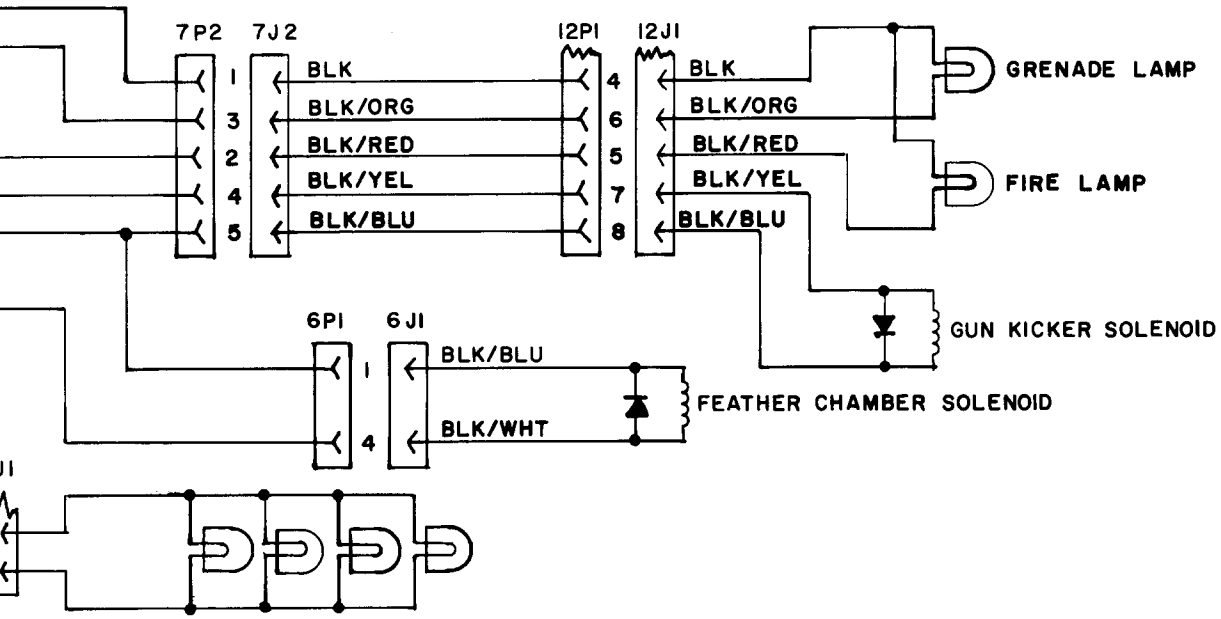

4P2
ORN
-5VDC
KEY
GRY-YEL
+12VDC
NC
GRY-WHT
+12 UNREG
NC
BLK
GND
BLK
GND
BLK
GND
NC
NC
NC
GRY
+5VDC
GRY
+5VDC
NC
POWER SUPPLY BOARD
2P3
ORN
GRY-YEL
NC
GRY
GRY
KEY
BLK
BLK
BLK
NC
VIDEO BOARD
1P7
ORN
KEY
GRY-WHT
GRY-WHT
NC
GRY
GRY
GRY-YEL
BLK
BLK
BLK
NC
CPU BOARD
4P3
YEL
6.3VAC
GENERAL ILLUMINATION
WHT-YEL
6.3VAC
GENERAL ILLUMINATION
NC
NC
NC
GRN-BLK
8P1
NC
NC
NC
GRN-BLK
NC
NC
NC
COIN DOOR
COIN DOOR SWITCH
1P4
RED-ORN
MEMORY PROTECT
WHT-VIO
SLAM TILT
YEL-WHT
RIGHT COIN
NC
WHT-BLU
LEFT COIN
WHT-GRY
H.S. RESET
GRN
ADVANCE
BLU
AUTO/MANUAL
CPU BOARD

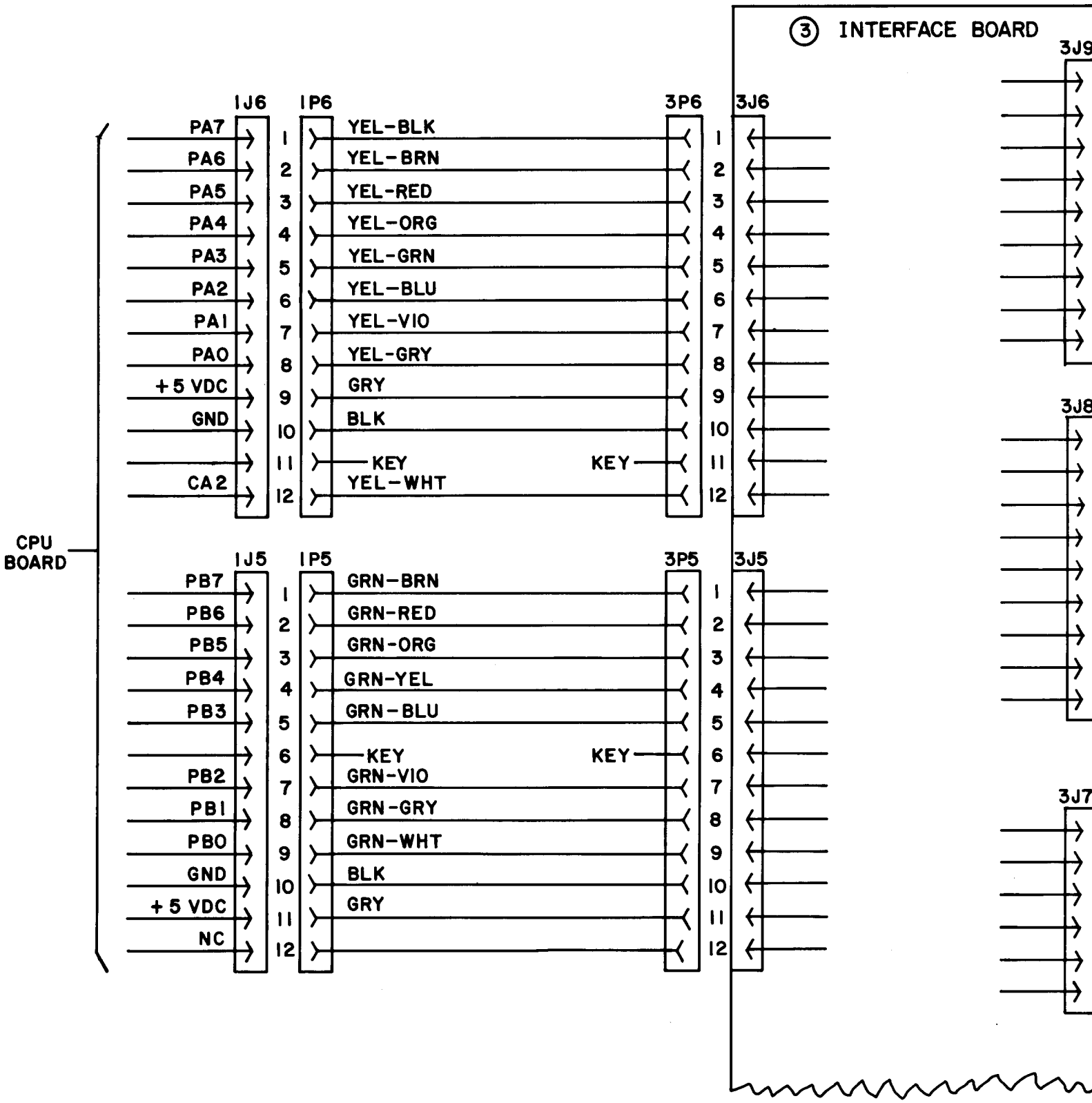

INTERFACE BOARD
3
3J4
3P4
KEY
+12VDC
BLK
BLK/ORG
KEY
NC
BLK/RED
BLK/YEL
BLK/BLU
NC
BLK/WHT
NC
3P1
3J1
WHT/YEL 6.3VAC
KEY
YEL C.T.
YEL/WHT6.3VAC
KEY
3J2
3P2
7P1
7J1
6.3VAC
6.3VAC
KEY
YEL
WHT/YEL
NC
NC
KEY
NC
22
23

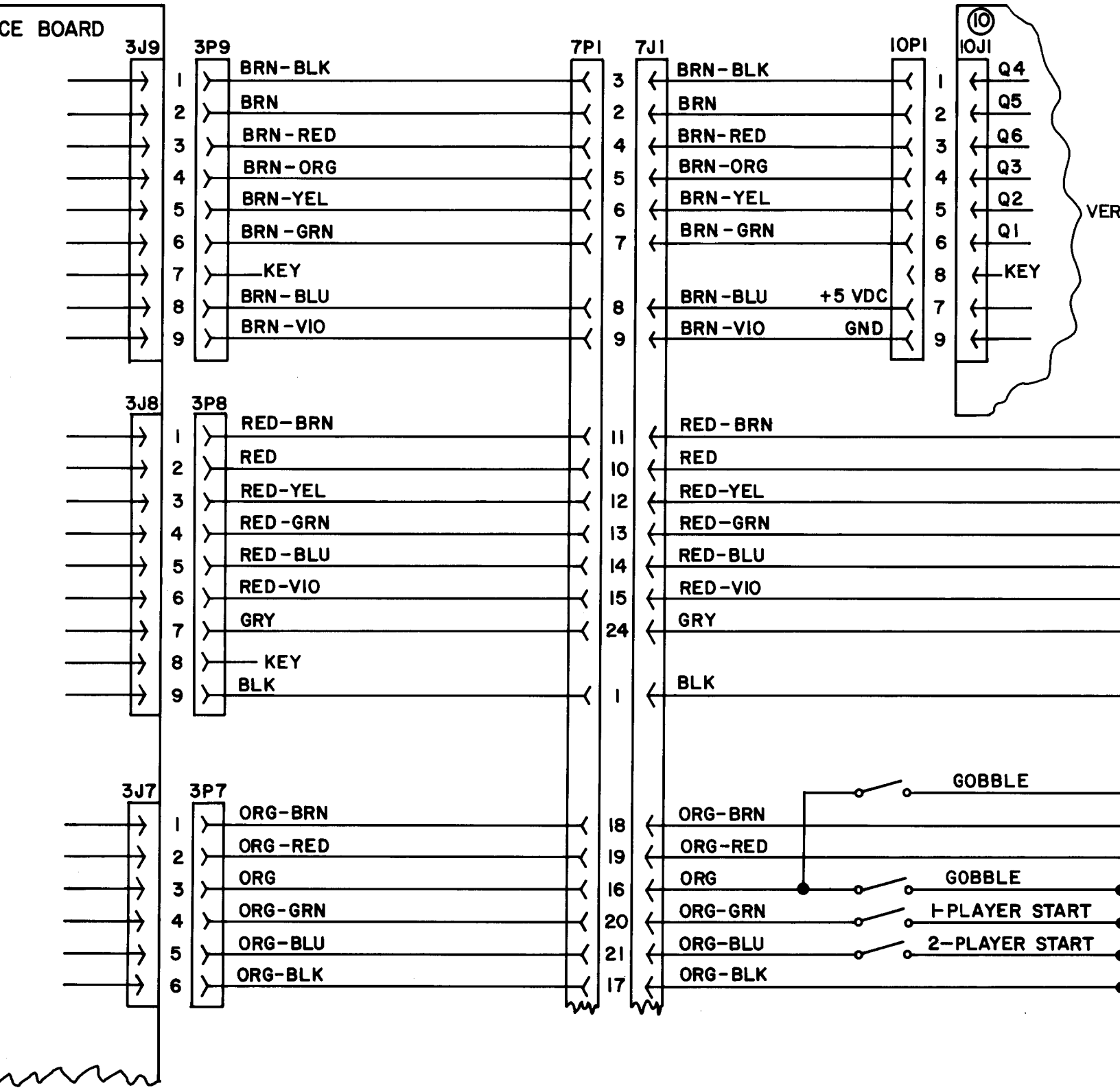

1J2
1P2
AUDIO IN
AUDIO OUT
SHIELD
RED
BLK
SILVER
VOLUME CONTROL

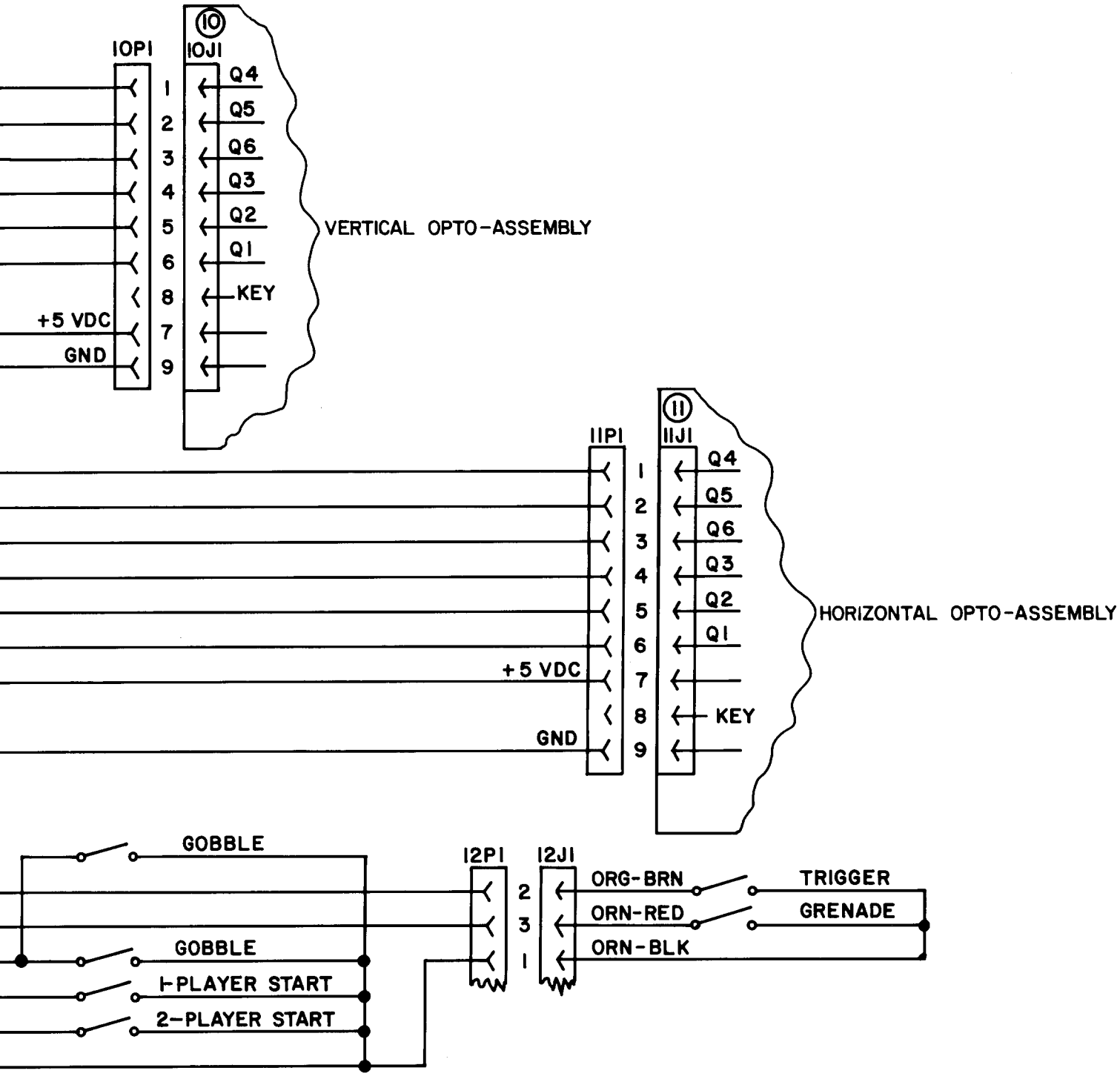

1J3
1P3
6P3
6J3
AUDIO
AUDIO-GND
RED/BLK
BLK/RED
RED/BLK
BLK/RED

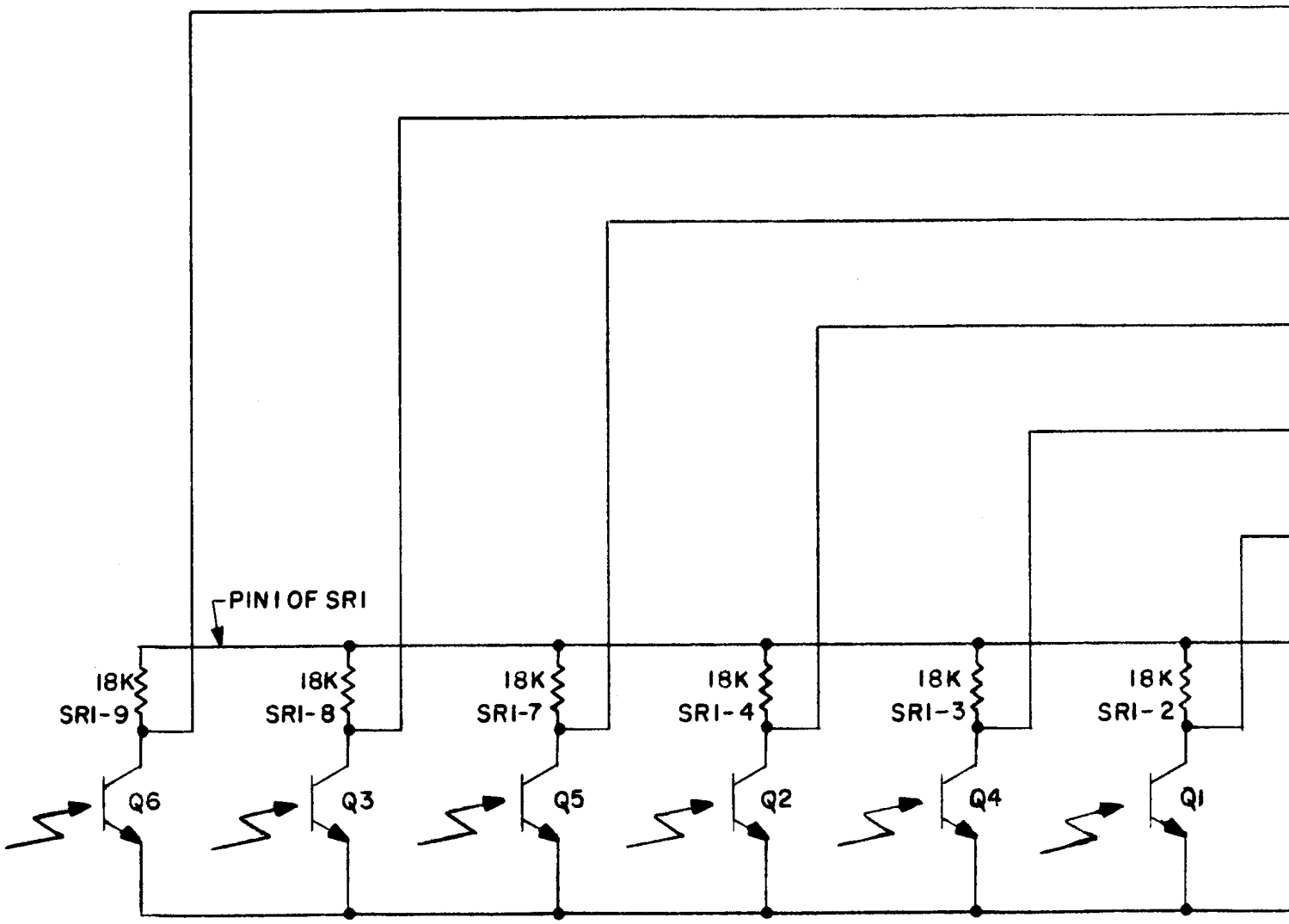

8J1
8P1
4J 3
POWER SUPPLY BOARD
WHT/YEL6.3VAC
YEL 6.3VAC
WHT/YEL
YEL
NC
NC
NC
GRN/BRN
GRN/BRN
NC
NC
WHT/BLU
WHT/VIO
WHT/GRY
GRN
NC
BLU
YEL/WHT
IP4
C P U BOARD
WHT/BLU
WHT/VIO
WHT/GRY
GRN
BLU
YEL/WHT
LEFT COIN
SLAM TILT
HIGH SCORE RESET
ADVANCE
AUTO-UP
MANUAL-DOWN
RIGHT COIN
IP4 PIN 1
RED/ORG
MEMORY-PROTECT


7P2
7J2
12P1
12J1
BLK
BLK/ORG
BLK/RED
BLK/YEL
BLK/BLU
GRENADE LAMP
FIRE LAMP
GUN KICKER SOLENOID
6P1
6J1
FEATHER CHAMBER SOLENOID
BLK/WHT


③ INTERFACE BOARD
CPU BOARD
1J6
1P6
3P6
3J6
PA7
PA6
PA5
PA4
PA3
PA2
PA1
PA0
+5 VDC
GND
CA2
1
2
3
4
5
6
7
8
9
10
11
12
YEL-BLK
YEL-BRN
YEL-RED
YEL-ORG
YEL-GRN
YEL-BLU
YEL-VIO
YEL-GRY
GRY
BLK
KEY
YEL-WHT
KEY
1J5
1P5
3P5
3J5
PB7
PB6
PB5
PB4
PB3
PB2
PB1
PB0
GND
+5 VDC
NC
GRN-BRN
GRN-RED
GRN-ORG
GRN-YEL
GRN-BLU
KEY
GRN-VIO
GRN-GRY
GRN-WHT
BLK
GRY
KEY
3J9
3J8
3J7

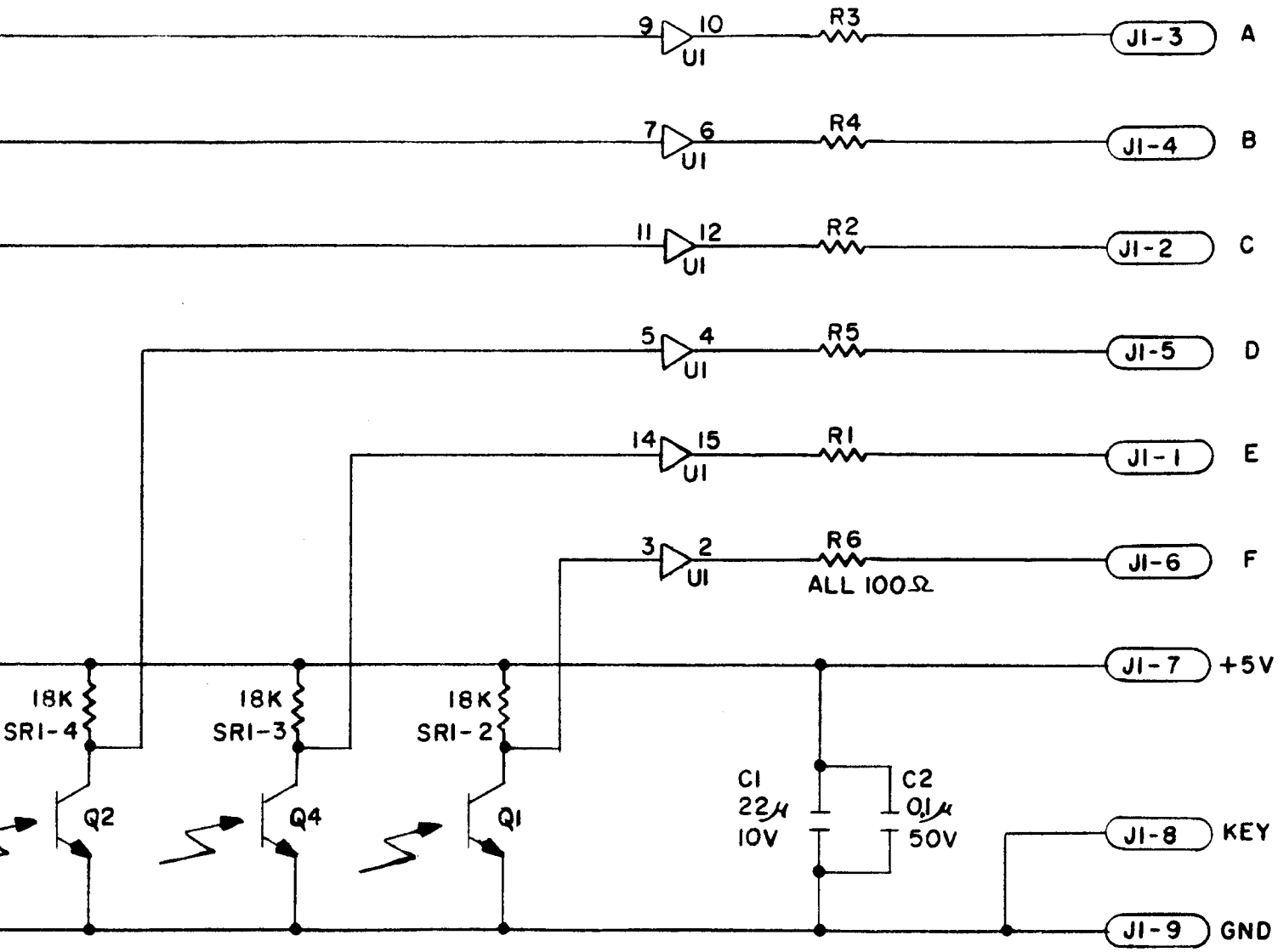

CE BOARD
3J9
3P9
7P1
7J1
10P1
10J1
10
VER
Q4
Q5
Q6
Q3
Q2
Q1
KEY
+5 VDC
GND
BRN-BLK
BRN
BRN-RED
BRN-ORG
BRN-YEL
BRN-GRN
BRN-BLU
BRN-VIO
3J8
3P8
RED-BRN
RED
RED-YEL
RED-GRN
RED-BLU
RED-VIO
GRY
BLK
3J7
3P7
ORG-BRN
ORG-RED
ORG
ORG-GRN
ORG-BLU
ORG-BLK
GOBBLE
GOBBLE
1-PLAYER START
2-PLAYER START


10
10P1
10J1
1
2
3
4
5
6
8
7
9
Q4
Q5
Q6
Q3
Q2
Q1
KEY
+5 VDC
GND
VERTICAL OPTO-ASSEMBLY
11
11P1
11J1
1
2
3
4
5
6
7
8
9
Q4
Q5
Q6
Q3
Q2
Q1
KEY
+5 VDC
GND
HORIZONTAL OPTO-ASSEMBLY
GOBBLE
GOBBLE
1-PLAYER START
2-PLAYER START
12P1
12J1
2
3
1
ORG-BRN
ORN-RED
ORN-BLK
TRIGGER
GRENADE

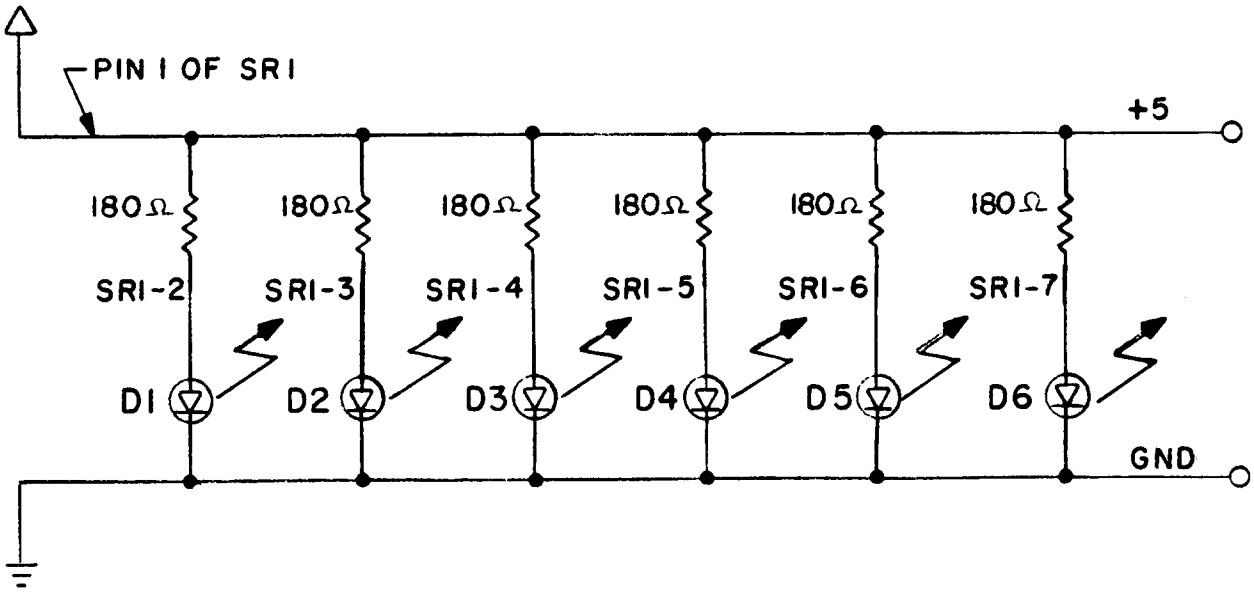


NOTE:

1. +5 Vcc = PIN 1 OF U1
   GND = PIN 8 OF U1


9
10
U1
R3
J1-3
A
7
6
U1
R4
J1-4
B
11
12
U1
R2
J1-2
C
5
4
U1
R5
J1-5
D
14
15
U1
R1
J1-1
E
3
2
U1
R6
ALL 100Ω
J1-6
F
J1-7
+5V
18K
SR1-4
18K
SR1-3
18K
SR1-2
Q2
Q4
Q1
C1
22μ
10V
C2
0.1μ
50V
J1-8
KEY
J1-9
GND

F U1



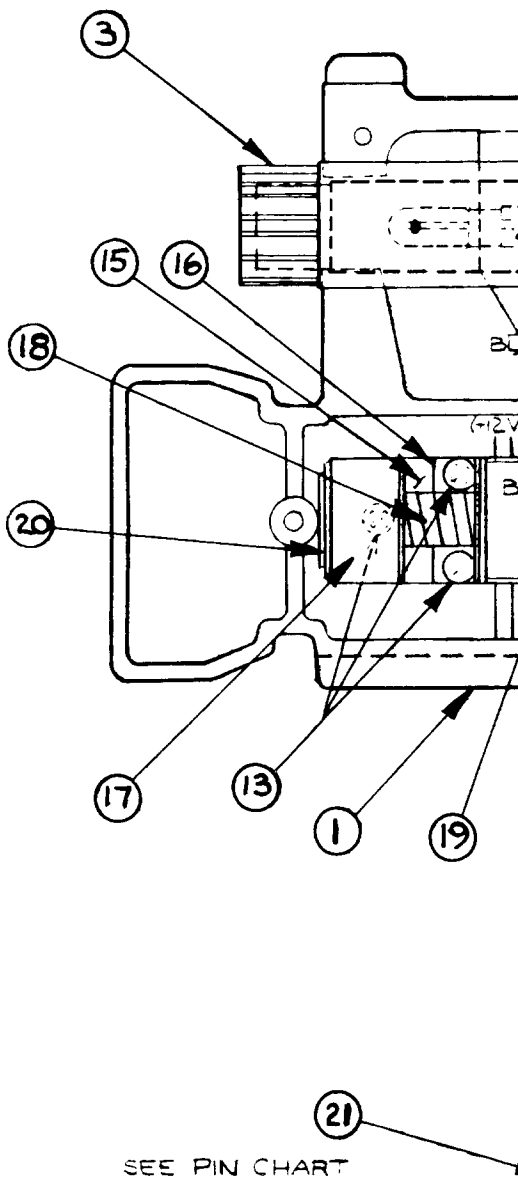
NOTE:

1. POWER AND GROUND SUPPLIED THRU CENTER MOUNTING HOLES FROM ASSEMBLY C-10545

ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY
11	5010-09036-00	R1, R2, R3, R4, R5, R6	RESISTOR, C.F., 100 OHMS 5% 1/4 WATT	6
10	5310-09153-00	U1	I.C., 4050 HEX. BUFFER	1
9	16-8850-114		LABEL, PCB IDENT.	1
8	5791-09027-00	J1	CONNECTOR, 9 PIN MALE 2391 09-65-1091	1
7	5043-08996-00	C2	CAPACITOR, AXIAL, 0.1 MFD. 50V. +/-20	1
6	5040-09545-00	C1	CAPACITOR, AXIAL, 22 MFD. 10V. +/-20	1
5	5019-10158-00	SR2	SIP, 180 OHMS 7R 8P 5%	1
4	5019-10387-00	SR1	SIP, 18K OHMS 9R 10P 5%	1
3	5163-10509-00	Q1, Q2, Q3, Q4, Q5, Q6	PHOTOTRANSISTOR, NPN 3.4 mA	6
2	5671-10508-00	D1, D2, D3, D4, D5, D6	I.R. LED 40 mA .1 W	6
1	5779-10727-00		BARE P.C. BOARD (REV. A)	1

TURKEY SHOOT GUN ASS'Y. (D-10302)

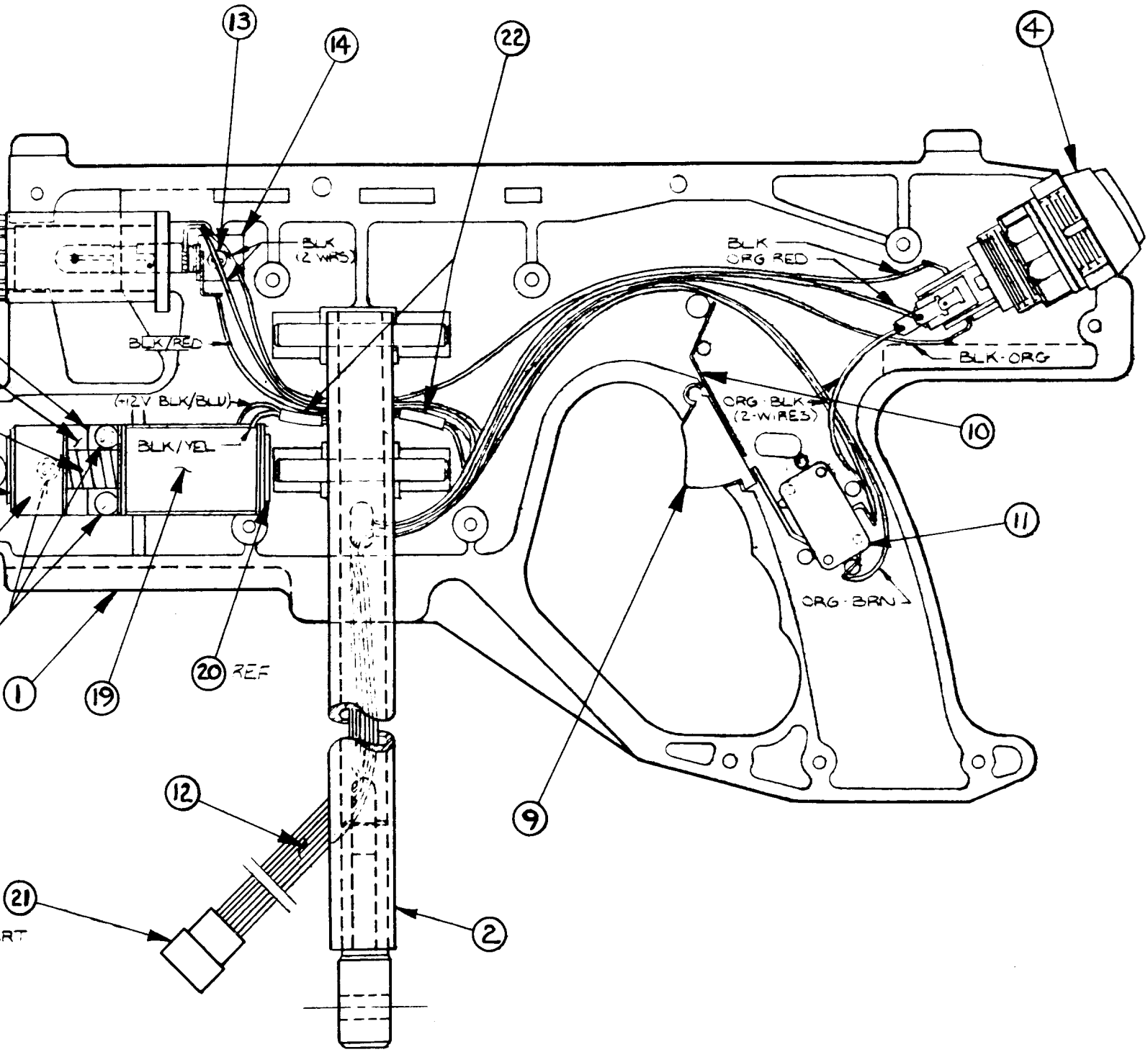
ITEM	PART NO.	DESCRIPTION	QTY.
1	03-7890	GUN, MOLDED	1
2	B-10293	GUN SHAFT ASS'Y	1
3	03-7891-24	GUN NOZZLE	1
4	C-10423-3025-1	3025 BTN ASSY GRND	1
5	4106-01099-16B	S.T.S. #6 TORX (T-15) TRX-PH	2
6	4106-01099-18B	S.T.S. #6 TORX (T-15) TRX-PH	5
7	4106-01099-06B	S.T.S. #6 TORX (T-15) TRX-PH	1
8	4106-01099-26B	S.T.S. #6 TORX (T-15) TRX-PH	2
9	03-7786	P/GRIP TRIGGER	1
10	01-7994	T/S TRIG. SPRING	1
11	5647-10163-00	TRIGGER SWITCH	1
12	H-10328	GUN CABLE	1
13	4106-01009-06	SMS #6 x 3/8 P.PH P	4
14	A-10512	SKT. & BULB #1866 ASSY.	1
15	A-10441	COIL BRKT SUB-ASSY	1
16	01-7991	T/S COIL RET BRKT	1
17	02-4211	T/S KICKER PLUNGER	1
18	10-257	SPRING-CREDIT BTN	1
19	SFL-24/750-DC	3025 GUN COIL ASSY	1
20	23-6557-9	NEOPRENE GASKET	2
21	5791-09138-00	9P1625 03-06-2092	1
22	RM-23-01	H.S. TUBING 1/8 POLY	1



9-PIN MALE CONNECTOR

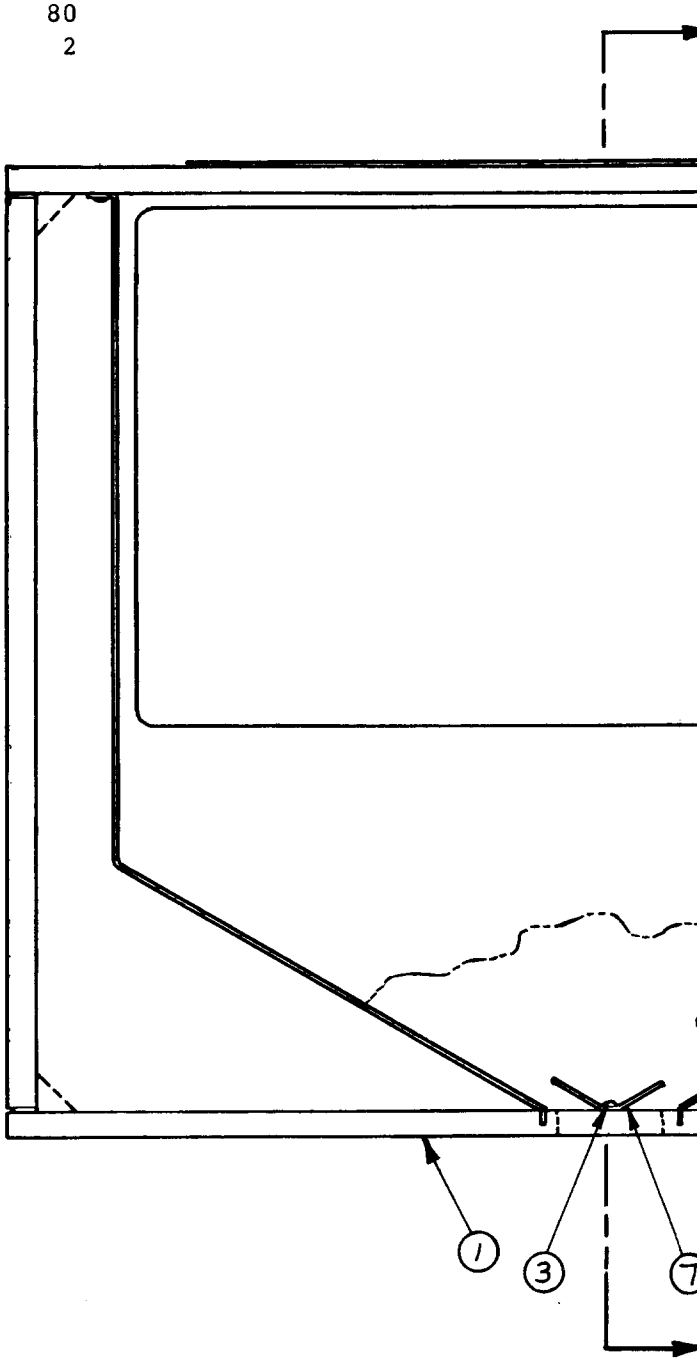
PIN	COLOR		FUNCTION
1	ORG-BLK	22	SW. GND
2	ORG-BRN	22	TRIGGER SW.
3	ORG-RED	22	GRENADE SW.
4	BLK-RED	22	LAMP COMMON 6V D.C.
5	BLK-RED	22	TRIGGER LAMP ON-OFF
6	BLK-ORG	22	GRENADE LAMP ON-OFF
7	BLK-YEL	18	TRIGGER SOLENOID ON-OFF
8	BLK-BLU	18	SOLENOID COMMON (+12V D.C.)
9	NOT USED		

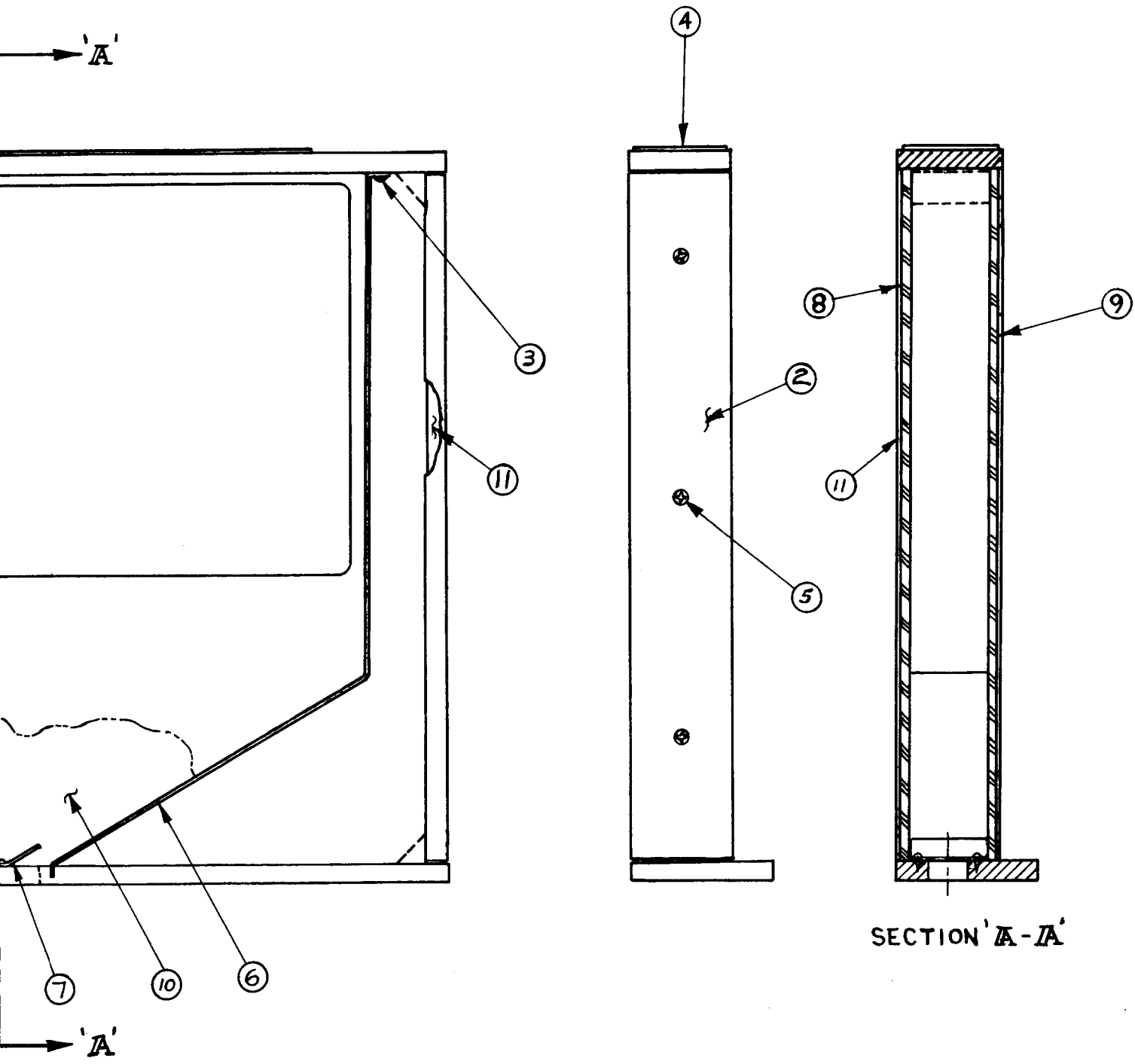
WHITE HOUSING 5791-09138-00 (REF.). Install item 21 after wires are installed in gun shaft.

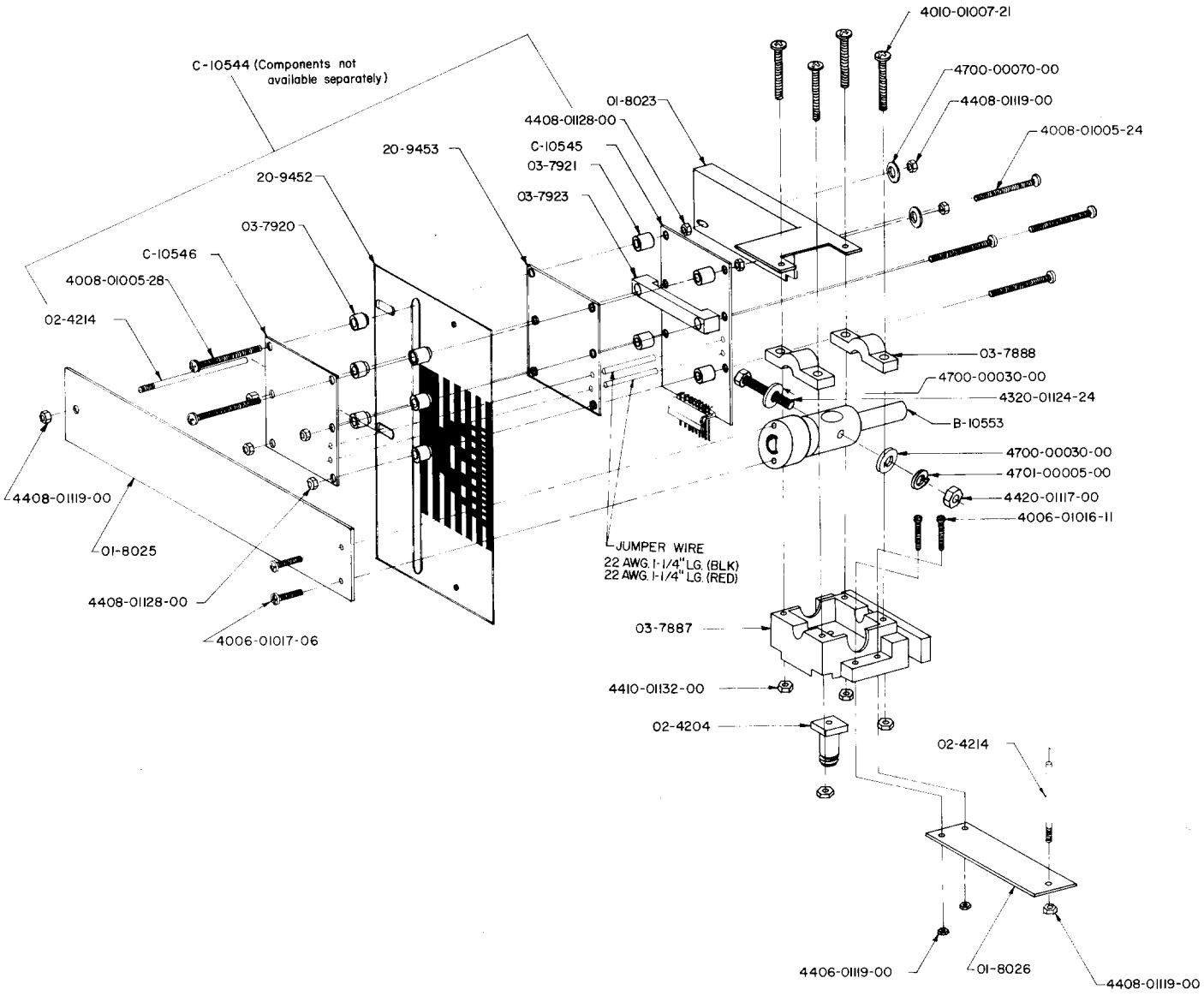

13
14
22
4
BLK
(2 WIRES)
BLK
ORG RED
BLK/RED
BLK-ORG
(+12V BLK/BLU)
BLK/YEL
ORG-BLK
(2-WIRES)
10
11
ORG-BRN
1
19
20 REF
12
9
21
2

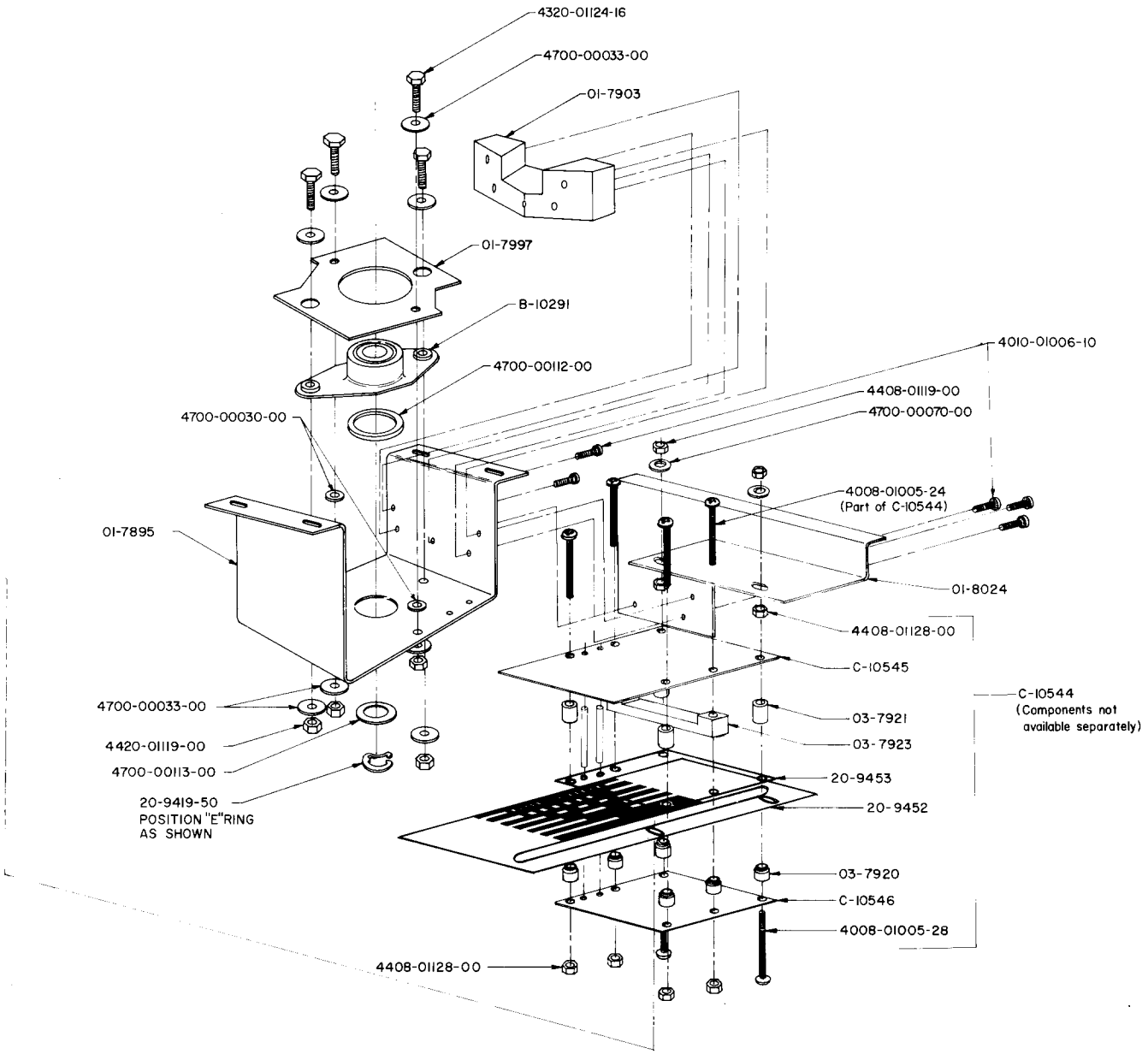
FEATHER CHAMBER ASSY. (D-10344)

ITEM	PART NO.	DESCRIPTION	QTY.
1	11-768	FTR DEVICE FRAME	1
2	01-7906	F/D GLASS CLAMP	2
3	4206-01016-08	WS #6 x 1/2 P-RH	4
4	03-7902	FTR DEVICE SCREEN	1
5	4208-01041-10	WS #8 x 1/2 P-FH	6
6	01-7927	FEATHER GUIDE	2
7	01-7979	F/D FLOW DIVIDER	1
8	31-1228-3025-U	3025 F/D COVER	1
9	08-7424	FTR DEVICE GLASS	1
10	20-9435	FEATHERS	80
11	23-6573-4	NEOPRN GSKT 17"	2




'A'
4
3
11
2
5
8
9
11
7
10
6
'A'
SECTION 'A-A'


C-10544 (Components not available separately)
4010-01007-21
4700-00070-00
4408-01119-00
4008-01005-24
01-8023
4408-01128-00
C-10545
03-7921
03-7923
20-9453
20-9452
03-7920
C-10546
4008-01005-28
02-4214
03-7888
4700-00030-00
4320-01124-24
B-10553
4700-00030-00
4701-00005-00
4420-01117-00
4006-01016-11
4408-01119-00
01-8025
4408-01128-00
4006-01017-06
JUMPER WIRE
22 AWG. 1-1/4" LG. (BLK)
22 AWG. 1-1/4" LG. (RED)
03-7887
4410-01132-00
02-4204
02-4214
4406-01119-00
01-8026
4408-01119-00


4320-01124-16
4700-00033-00
01-7903
01-7997
B-10291
4700-00112-00
4700-00030-00
4010-01006-10
4408-01119-00
4700-00070-00
4008-01005-24
(Part of C-10544)
01-7895
01-8024
4408-01128-00
C-10545
C-10544
(Components not
available separately)
4700-00033-00
03-7921
4420-01119-00
03-7923
4700-00113-00
20-9453
20-9419-50
POSITION "E" RING
AS SHOWN
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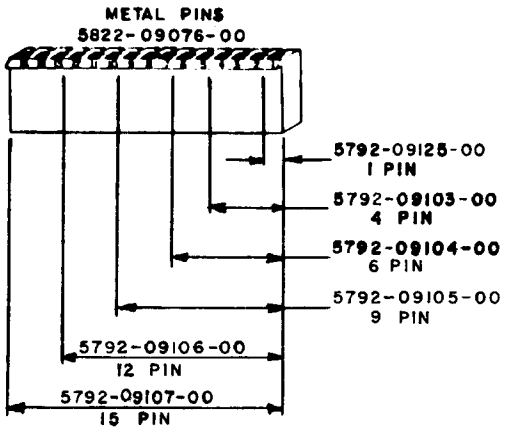
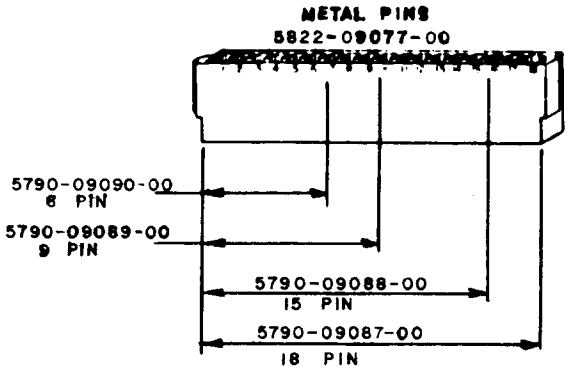
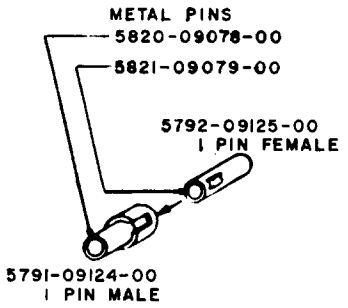
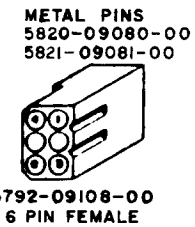
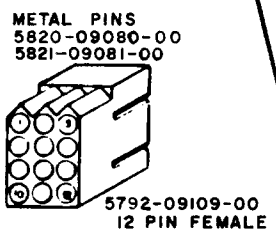
MALE CONNECTORS AND FEMALE RECEPTACLES

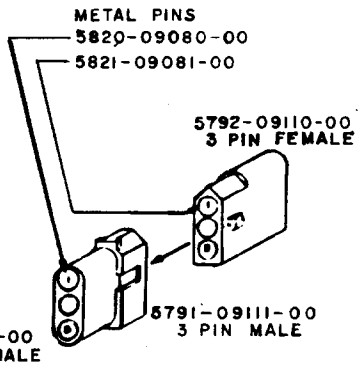


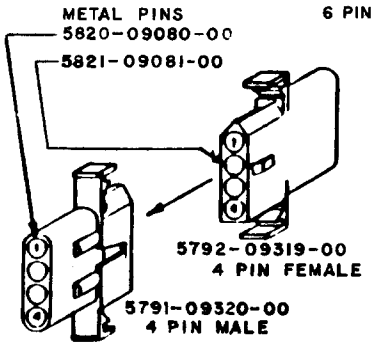


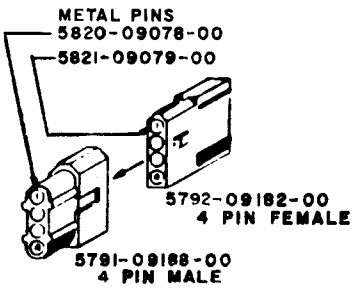


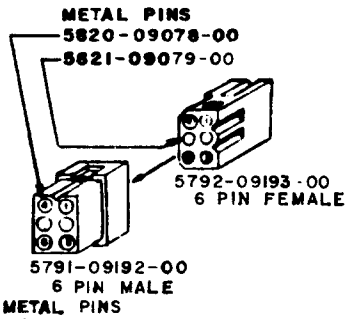


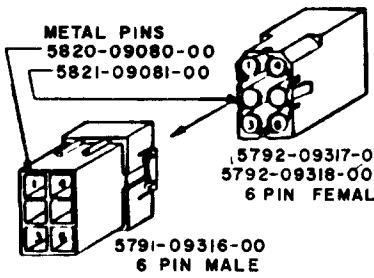


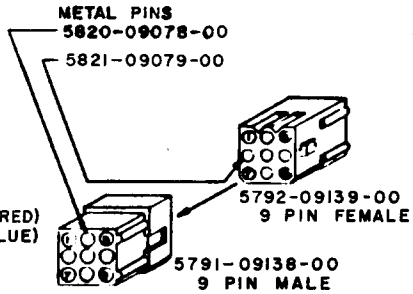


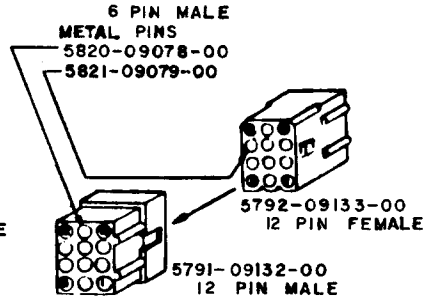


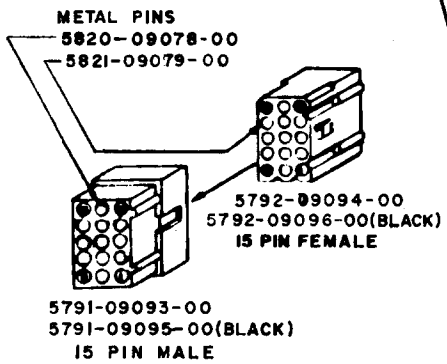


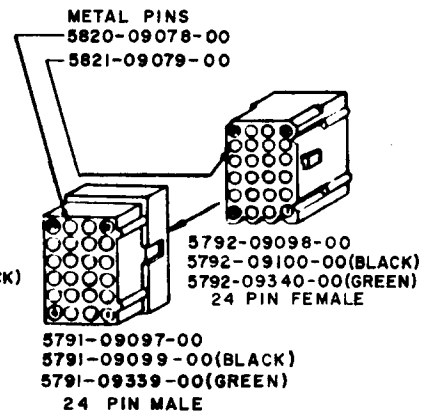


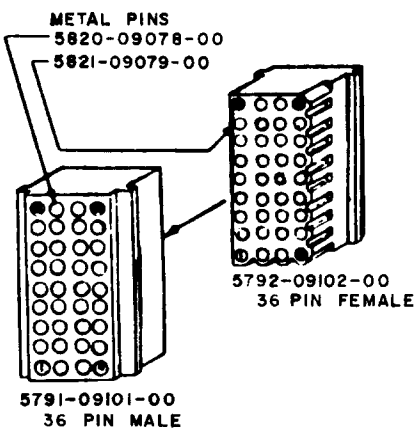


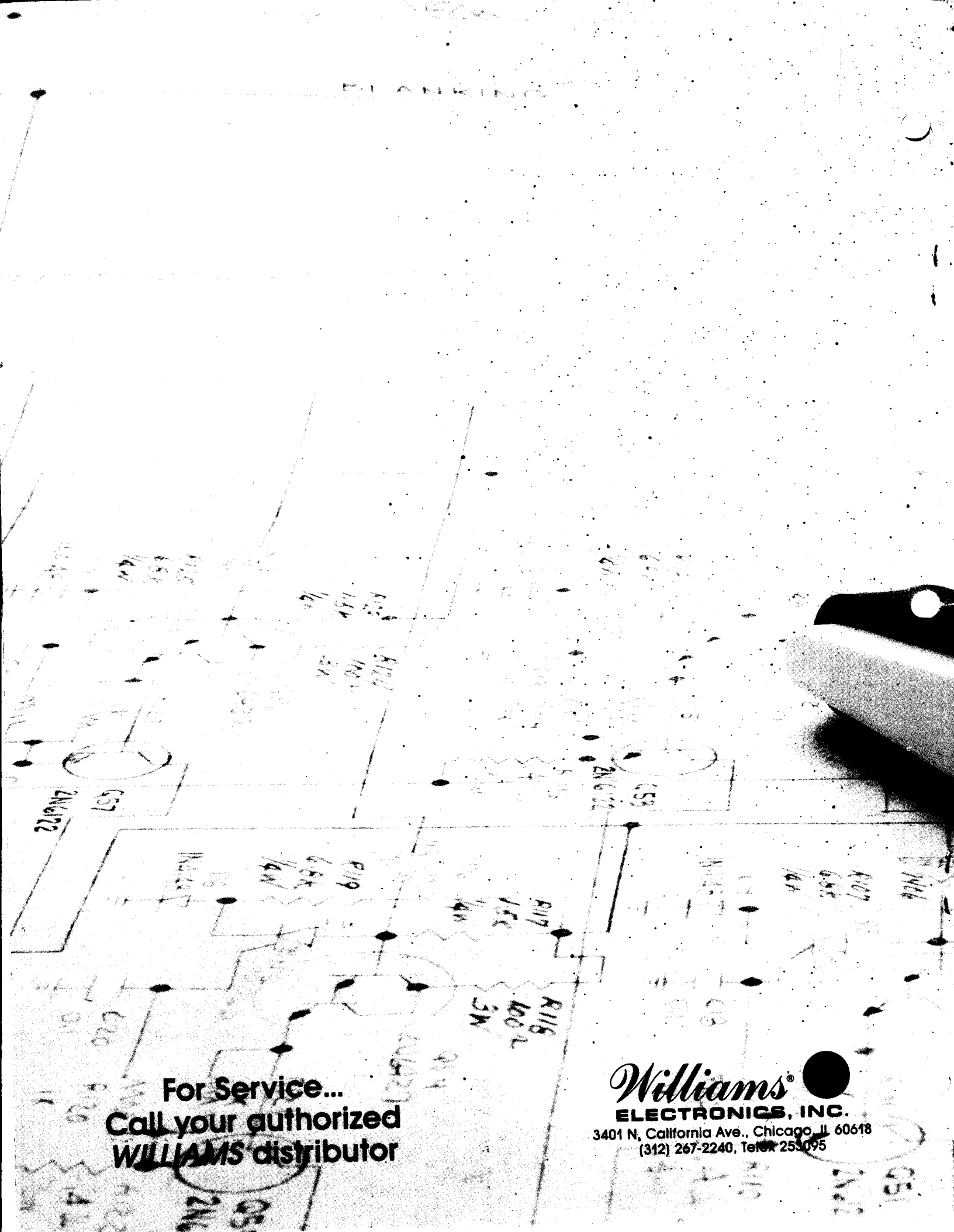












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