Turkey SHOOT ™.

SERVICE MANUAL

Williams®

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-I0723	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.

Turkey Shoot™

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 BOOKKEEPING 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.

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.*

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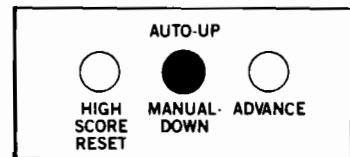
ASTUTE PLAYERS learn that most turkeys can be eliminated by a shot to the body. However the cyborg mechano-turkey persists until they hit him in the head. No turkey will succumb to a shot in the leg!

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 TOTALS

LEFT SLOT COINS	432
CENTER SLOT COINS	0
RIGHT SLOT COINS	398
PAID CREDITS	830
EXTRA MISSIONS EARNED	226
TOTAL PLAY TIME (HOUR: MIN)	34:28
TOTAL MEN PLAYED	689
TOTAL SINGLE PLAYER	548
TOTAL TWO PLAYER	141
TOTAL CREDITS PLAYED	830
AVERAGE TIME/GAME (MIN:SEC)	2:00

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.

GAME ADJUSTMENTS

EXTRA FOWL EVERY	50000	RECOMMENDED
MISSIONS FOR 1 CREDIT GAME	3	RECOMMENDED
ATTRACT MODE SOUNDS	YES	
PRICING SELECTION	5	1/FIFTY 2/DOLLAR
LEFT SLOT UNITS	1	
CENTER SLOT UNITS	4	
RIGHT SLOT UNITS	1	
UNITS REQUIRED FOR CREDIT	2	
UNITS REQUIRED FOR BONUS CREDIT	0	
MINIMUM UNITS FOR ANY CREDIT	0	
DIFFICULTY OF PLAY	5	RECOMMENDED
GUN RECOIL	YES	
RESTORE FACTORY SETTINGS	NO	
CLEAR BOOKKEEPING TOTALS	NO	
HIGH SCORE TABLE RESET	NO	
AUTO CYCLE	NO	

(PLAYER 1 START) TO MOVE UP - (PLAYER 2 START) TO MOVE DOWN
(GOBBLE) TO INCREASE VALUE - (GRENADE) TO DECREASE VALUE
PRESS ADVANCE TO EXIT

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 Guilder,	•1/25¢, 4/1G	6	1	0	4	1	0	0
	1/25¢, 5/1G	0	1	0	4	1	4	0
5-Franc, 10 Franc	•1/5F, 2/10F	7	1	0	2	1	0	0
	•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, 5-Unit	•1/2, 3/5	4	1	16	6	2	0	0
	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.
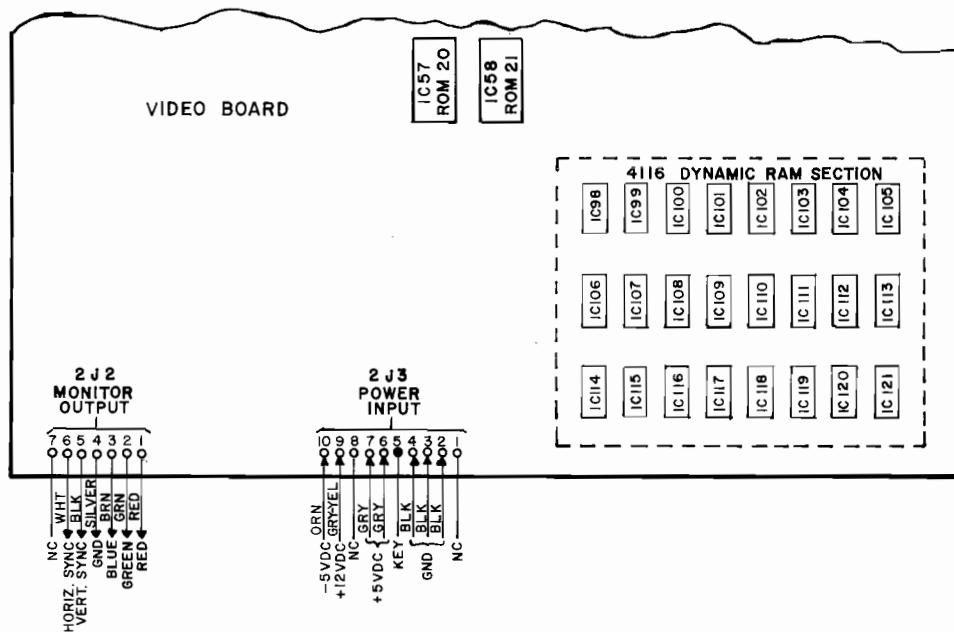
☐ **SOUND, COIL AND LAMP TEST.** Sound-lines 1 through 6 are tested. In addition, the grenade and gun lamps, feather and gun coils are checked.

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.*

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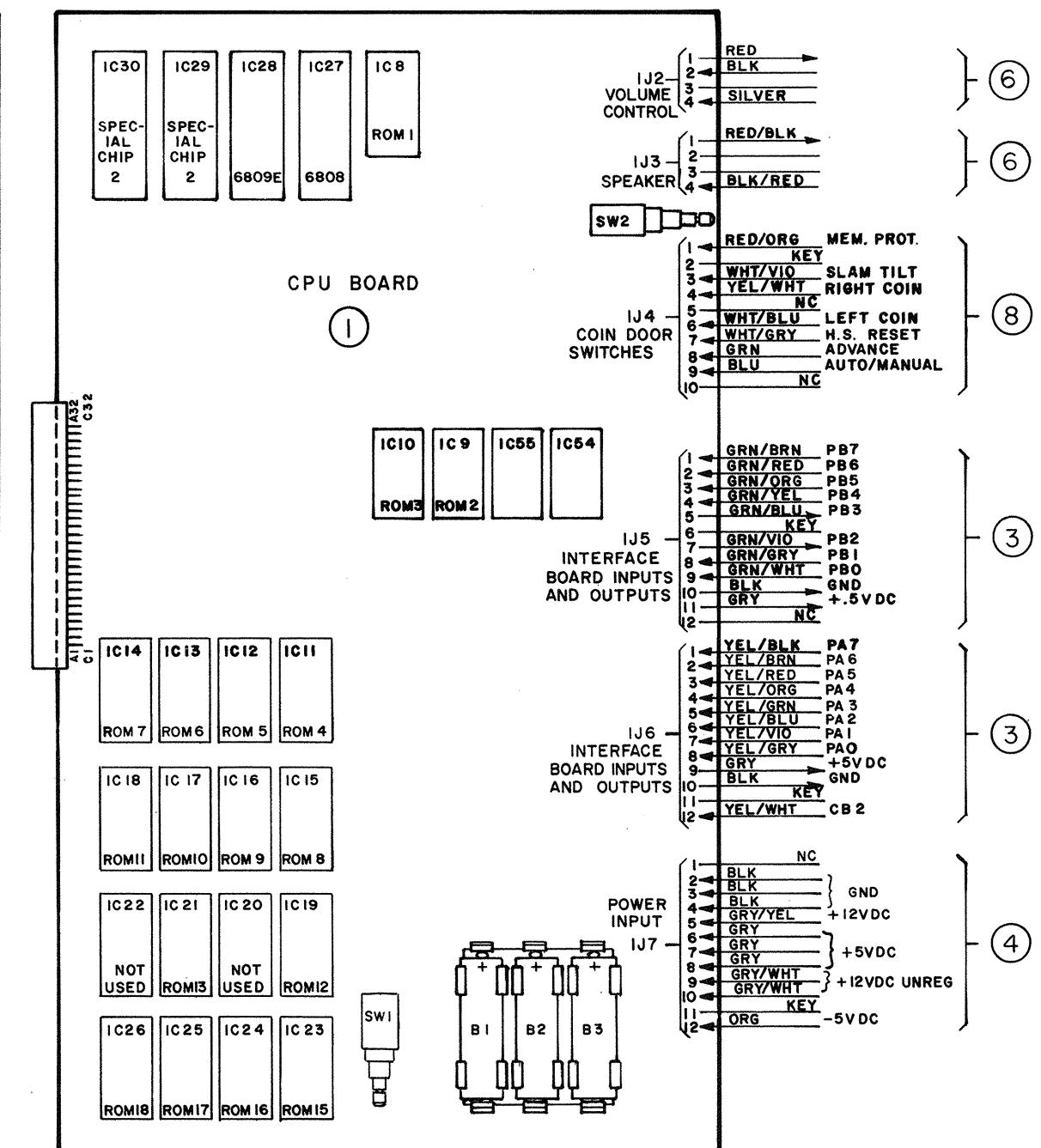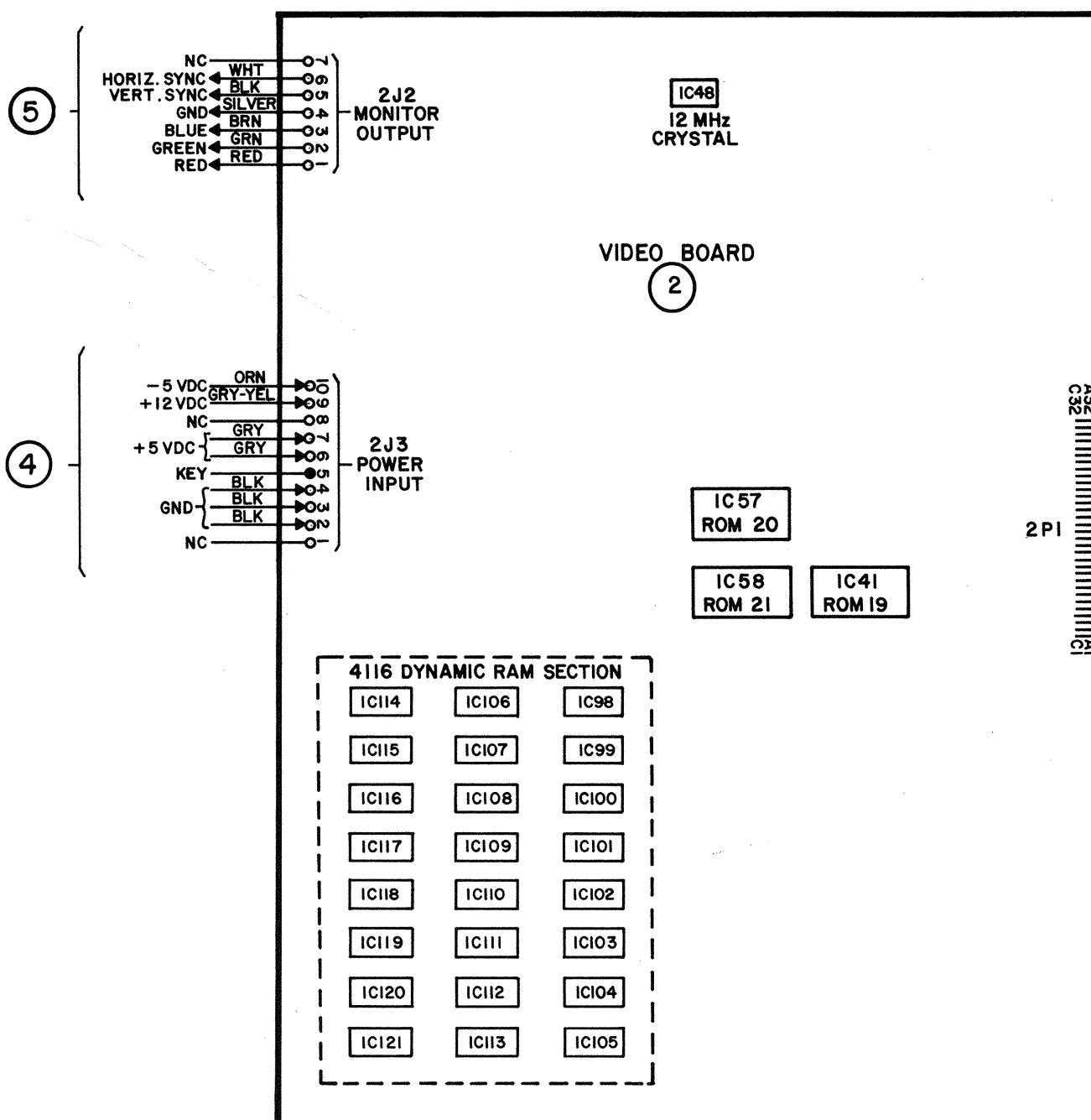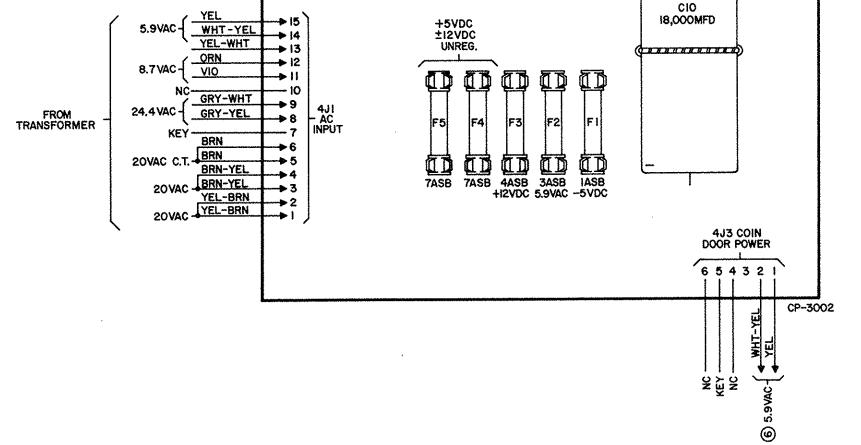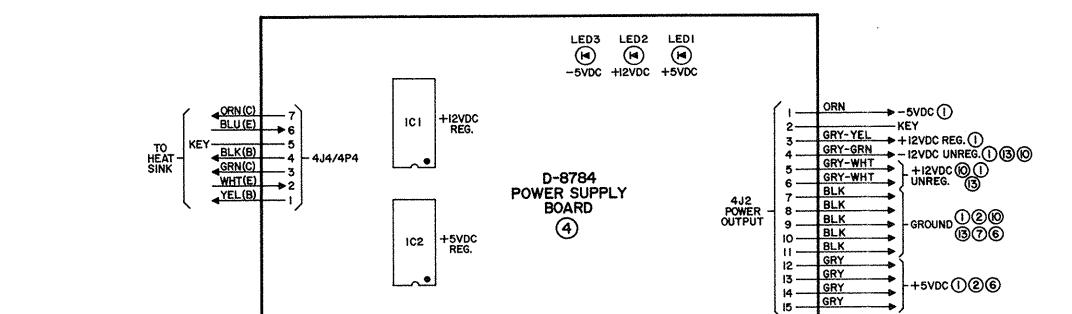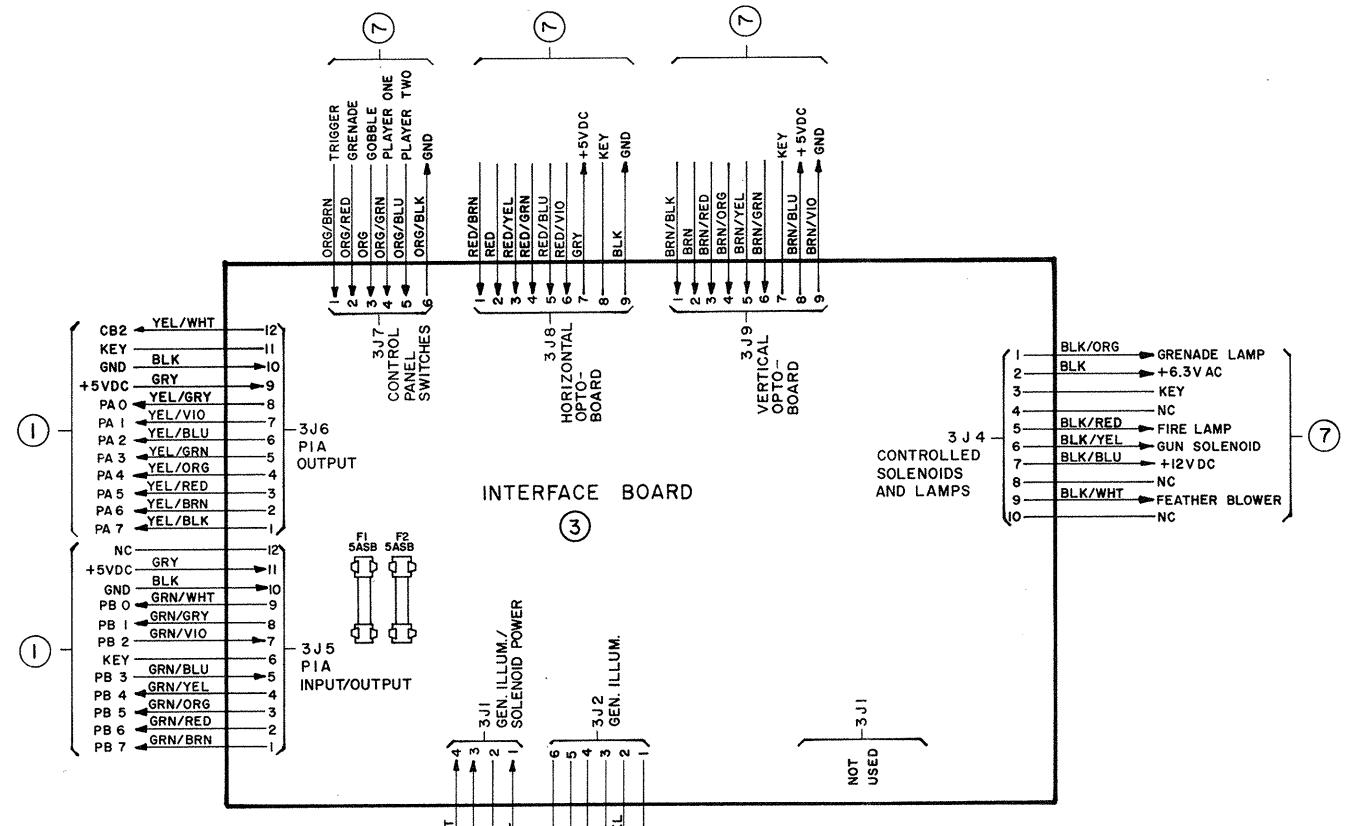
1. **NO SOUND IN DIAGNOSTIC-MODE TEST:** Check the sound-select inputs (pins 2 through 9 of IC 4) on the CPU board for pulsing during the test. Also check for shorts between sound lines.

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
- CB2 YEL/WHT 12
- KEY BLK 10
- GND 11
- +5VDC GRY 9
- PA0 YEL/GRY 8
- PA1 YEL/VIO 7
- PA2 YEL/BLU 6
- PA3 YEL/GRN 5
- PA4 YEL/ORG 4
- PA5 YEL/RED 3
- PA6 YEL/BRN 2
- PA7 YEL/BLK 1

3J5 PIA INPUT/OUTPUT
- NC GRY 12
- +5VDC GRY 11
- GND BLK 10
- PB0 GRN/WHT 9
- PB1 GRN/GRY
- PB2 GRN/VIO 8
- KEY 7
- PB3 GRN/BLU 5
- PB4 GRN/YEL
- PB5 GRN/ORG
- PB6 GRN/RED
- PB7 GRN/BRN

F1 5ASB F2 5ASB

3J7 CONTROL PANEL SWITCHES
- ORG/BRN TRIGGER
- ORG/RED GRENADE
- ORG GOBBLE
- ORG/GRN PLAYER ONE
- ORG/BLU PLAYER TWO
- ORG/BLK GND

3J8 HORIZONTAL OPTO-BOARD
- RED/BRN
- RED/YEL
- RED/GRN +5VDC
- RED/BLU KEY
- GRY GND
- BLK

3J9 VERTICAL OPTO-BOARD
- BRN/RED
- BRN/RED
- BRN/YEL KEY
- BRN/ORG +5VDC
- BRN/GRN GND
- BRN/BLU
- BRN/VIO

3J4 CONTROLLED SOLENOIDS AND LAMPS
1. BLK/ORG — GRENADE LAMP
2. BLK — +6.3V AC
3. KEY
4. NC
5. BLK/RED — FIRE LAMP
6. BLK/YEL — GUN SOLENOID
7. BLK/BLU — +12 VDC
8. GRN
9. BLK/WHT — NC
10. FEATHER BLOWER
NC

3J1 GEN. ILLUM./SOLENOID POWER
- YEL/WHT
- YEL
- WHT/YEL
- +6.3VAC
- C.T.
- +6.3VAC KEY

3J2 GEN. ILLUM.
- NC
- KEY
- NC
- NC
- WHT/YEL
- YEL
- +6.3VAC

NOT USED 3J1

POWER SUPPLY BOARD ④ D-8784

TO HEAT SINK
- ORN (C) 7
- BLU (E) 6
- KEY 5
- BLK (B) 4
- GRN (C) 3
- WHT (E) 2
- YEL (B) 1

4J4/4P4

LED3 LED2 LED1
-5VDC +12VDC +5VDC

IC1 +12VDC REG.
IC2 +5VDC REG.

4J2 POWER OUTPUT
1. ORN — -5VDC ①
2. GRY-YEL — +12VDC REG.
3. GRY-GRN — +12VDC REG.
4. GRY-WHT — +12VDC UNREG.
5. BLK
6. BLK — GROUND
7. BLK
8. BLK
9. BLK
10. BLK
11. GRY
12. GRY
13. GRY
14. GRY — +5VDC

4J1 AC INPUT
- 5.9VAC — YEL 15
- WHT-YEL 14
- YEL-WHT 13
- VIO 12
- 8.7VAC — ORN 11
- NC 10
- GRY-WHT 9
- 24.4VAC — GRY-YEL 8
- KEY 7
- BRN 6
- 20VAC C.T. — BRN 5
- BRN-YEL 4
- 20VAC — BRN-YEL 3
- BRN-BRN 2
- 20VAC — YEL-BRN 1

FROM TRANSFORMER

C10 18,000 MFD

F5 F4 F3 F2 F1
7ASB 7ASB 4ASB 3ASB 1ASB
+12VDC 5.9VAC -5VDC

4J3 COIN DOOR POWER
6 5 4 3 2 1
NC
KEY
NC
WHT-YEL
5.9VAC
CP-3002

VIDEO BOARD ②

⑤ 2J2 MONITOR OUTPUT
- NC WHT
- HORIZ. SYNC BLK
- VERT. SYNC SILVER
- GND BRN
- BLUE GRN
- GREEN RED
- RED

IC48 12 MHz CRYSTAL

④ 2J3 POWER INPUT
- -5 VDC ORN
- +12 VDC GRY-YEL
- NC
- +5 VDC GRY
- GRY
- KEY BLK
- GND BLK
- BLK
- NC

IC57 ROM 20
IC58 ROM 21   IC41 ROM 19

A32 C32
2P1
C1 A1

4116 DYNAMIC RAM SECTION
IC114 IC106 IC98
IC115 IC107 IC99
IC116 IC108 IC100
IC117 IC109 IC101
IC118 IC110 IC102
IC119 IC111 IC103
IC120 IC112 IC104
IC121 IC113 IC105

CPU BOARD ①

IC30 SPECIAL CHIP 2
IC29 SPECIAL CHIP 2
IC28 6809E
IC27 6808
IC8 ROM1

IJ2 VOLUME CONTROL
- RED
- BLK
- SILVER ⑥

IJ3 SPEAKER
- RED/BLK
- BLK/RED ⑥

SW2

IJ4 COIN DOOR SWITCHES
- RED/ORG — MEM. PROT.
- WHT/VIO — SLAM TILT
- YEL/WHT — RIGHT COIN
- NC
- WHT/BLU — LEFT COIN
- WHT/GRY — H.S. RESET
- GRN — ADVANCE
- BLK
- BLU — AUTO/MANUAL
- NC ⑧

IC10 IC9 IC55 IC54
ROM3 ROM2

IJ5 INTERFACE BOARD INPUTS AND OUTPUTS
- GRN/BRN — PB7
- GRN/RED — PB6
- GRN/ORG — PB5
- GRN/YEL — PB4
- GRN/GRN — PB3
- KEY
- GRN/VIO — PB2
- GRN/GRY — PB1
- GRN/WHT — PB0
- BLK — GND
- GRY — +5 VDC ③

IC14 IC13 IC12 IC11
ROM7 ROM6 ROM5 ROM4

IJ6 INTERFACE BOARD INPUTS AND OUTPUTS
- YEL/BLK — PA7
- YEL/BRN — PA6
- YEL/RED — PA5
- YEL/ORG — PA4
- YEL/GRN — PA3
- YEL/BLU — PA2
- YEL/VIO — PA1
- YEL/GRY — PA0
- GRY — +5 VDC
- BLK — GND
- KEY
- YEL/WHT — CB2 ③

IC18 IC17 IC16 IC15
ROM11 ROM10 ROM9 ROM8

IC22 IC21 IC20 IC19
NOT USED ROM13 NOT USED ROM12

IJ7 POWER INPUT
1. BLK — NC
2. BLK — GND
3. BLK
4. GRY/YEL — +12VDC
5. GRY
6. GRY — +5VDC
7. GRY
8. GRY/WHT — +12VDC UNREG
9. GRY/WHT
10. KEY
11. ORG — -5VDC ④

SW1
B1 B2 B3

IC26 IC25 IC24 IC23
ROM18 ROM17 ROM16 ROM15

CONNECTOR KEY

1 CPU BOARD
2 VIDEO BOARD
3 INTERFACE BOARD
4 POWER SUPPLY
5 MONITOR
6 CABINET
7 CONTROL PANEL
8 COIN DOOR
9 CASH BOX
10 VERTICAL OPTO-BOARD
11 HORIZONTAL OPTO-BOARD
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
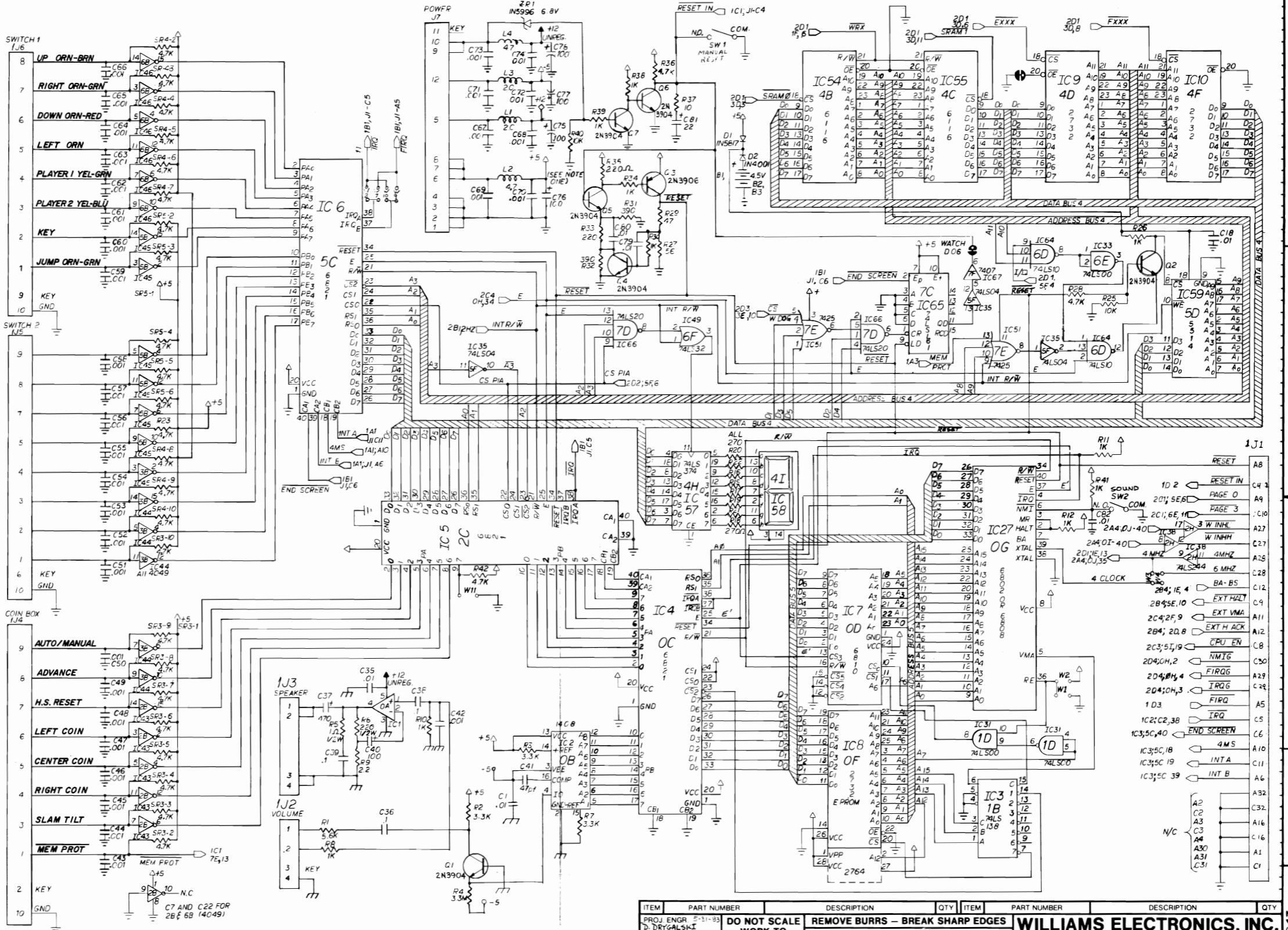
GAME NAME	TURKEY SHOOT
ASSEM. NO.	D-10395
IC8 (ROM1)	A-5343-10706
IC9 (ROM2)	A-5343-10707
IC10 (ROM3)	A-5343-10708
IC11 (ROM4)	A-5343-10709
IC12 (ROM5)	A-5343-10710
IC13 (ROM6)	A-5343-10711
IC14 (ROM7)	A-5343-10712
IC15 (ROM8)	A-5343-10713
IC16 (ROM9)	A-5343-10714
IC17 (ROM10)	A-5343-10715
IC18 (ROM11)	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
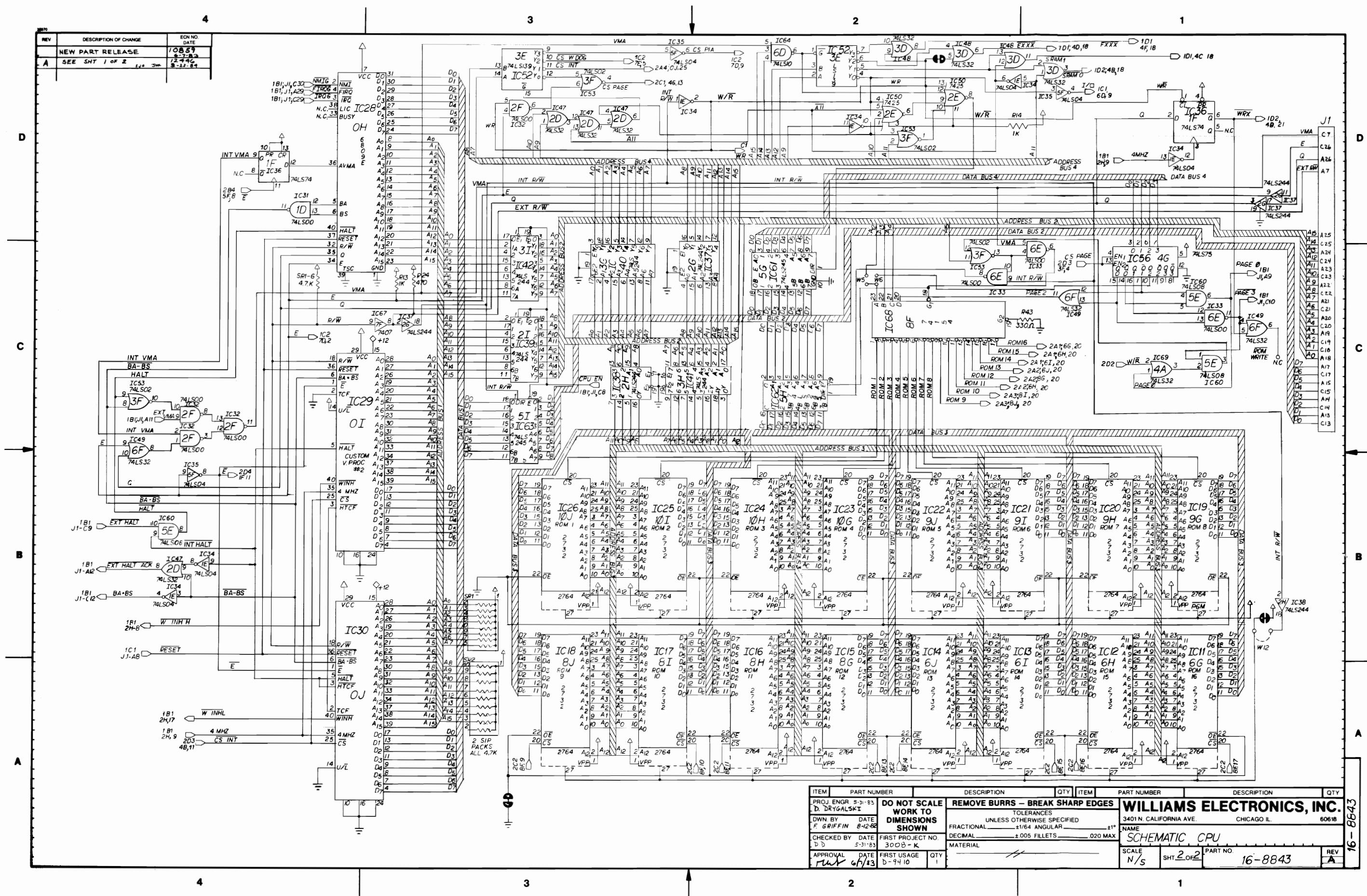
ITEM NO.	PART NO	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
73	5700-09004-00		24-PIN I.C. SOCKET	4
74	5705-09199-00		HEAT SINK THERMALLOY #6030	1
75	4006-01003-06		6-32 x 3/8" P-PH-S	1
76	4406-01117-00		6-32 HEX NUT	1
77	4703-00007-00		#6 EXT. LOCKWASHER	1
78	20-9229		THERMAL COMPOUND	.01
79	5700-08985-00		40 PIN I.C. SOCKET	4
Ⓑ 80	5010-09534-00	W1,W3,W6,W7,W10,W11	RESISTOR, 0 OHM	6

ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
37	5010-09224-00	SEE NOTE #2	RESISTOR, C.F., 270 OHM 5% 1/4 WATT	8
38	5010-08991-00	R23, R28, R42, R36	RESISTOR, C.F., 4.7K OHM 5% 1/4 WATT	4
39	5010-09416-00	R24	RESISTOR, C.F., 470 OHM 5% 1/4 WATT	1
40	5010-09034-00	R25, R40	RESISTOR, C.F., 10K OHM 5% 1/4 WATT	2
41	5010-10171-00	R27	RESISTOR, C.F., 56 OHM 5% 1/4 WATT	1
42	5010-10170-00	R29	RESISTOR, C.F., 47 OHM 5% 1/4 WATT	1
43	5010-10003-00	R31, R32	RESISTOR, C.F., 390 OHM 5% 1/4 WATT	2
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. 16V. +50-10%	1
50	5043-08996-00	C38, C39	CAPACITOR, CERAMIC, .1 MFD. 50V. ±20%	2
51	5040-09421-00	C40, C75, C74, C77, C78	CAPACITOR, ELECT., RAD. 100 MFD. 25V. +50-10%	5
52	5043-09844-00	C41	CAPACITOR, AXIAL 47 PFD. 50V. ±20%	1
53	5043-09845-00	SEE NOTE #4	CAPACITOR, AXIAL .001 MFD. 50V.	33
54	5040-09545-00	C81	CAPACITOR, AXIAL 22 MFD. 10V. ±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	5010-09266-00	D1	DIODE, SILICON 1N5817	1
58	5010-06258-00	D2	DIODE, SILICON 1N4001	1
59	5075-09018-00	ZR1	ZENER DIODE, 6.8V 1N996A	1
60	5019-09362-00	SR1, SR2, SR3, SR4	RESISTOR, 4.7K OHM 10 PIN SIP	4
61	5019-09786-00	SR5	RESISTOR, 4.7K 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. 3A.	2
65	5880-09022-00	B1, B2, B3	BATTERY, ALKALINE 1.5V. (AA)	3
66	5881-09021-00		BATTERY HOLDER #171	1
67	5641-09371-00	SW1	PUSH BUTTON SW. SPST	0
	5641-09312-00	SW2	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	5710-09959-00		BARE P.C. BOARD	1
2	5370-09156-00	IC1	I.C., TDA 2002A 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	5281-09285-00	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., 74LS. 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., 5.6K OHM 5% 1/4 WATT	1
31	5010-08983-00	R2, R3, R7	RESISTOR, C.F., 3.3K OHM 5% 1/4 WATT	3
32	5010-09119-00	R4	RESISTOR, C.F., 3.3M 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

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.

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.

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
IC27	8,35	1,21
IC28	7	39,1
IC29, IC30	29	10,15,24
IC31 THRU 35, IC47, IC48, IC49, IC50, IC52, IC53, IC60, IC64, IC66, IC67, IC51, IC69	14	7
IC36, IC37, IC38, IC43, IC44, IC45, IC46,	1	9,8
IC39, IC40, IC61, IC62, IC63, IC41, IC42, 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 labels: UP ORN-BRN, RIGHT ORN-GRN, DOWN ORN-RED, LEFT ORN, PLAYER 1 YEL-GRN, PLAYER 2 YEL-BLU, KEY, JUMP ORN-GRN, KEY GND

SWITCH 1 1J6, SWITCH 2 1J5, COIN BOX 1J4

AUTO/MANUAL, ADVANCE, H.S. RESET, LEFT COIN, CENTER COIN, RIGHT COIN, SLAM TILT, MEM PROT

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

DO NOT SCALE WORK TO DIMENSIONS SHOWN	REMOVE BURRS — BREAK SHARP EDGES

PROJ. ENGR. D. DRYGALSKI
DWN. BY F. GRIFFIN
CHECKED BY D.D.
FIRST PROJECT NO. 3008-K
FIRST USAGE D-9410

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

16-8843

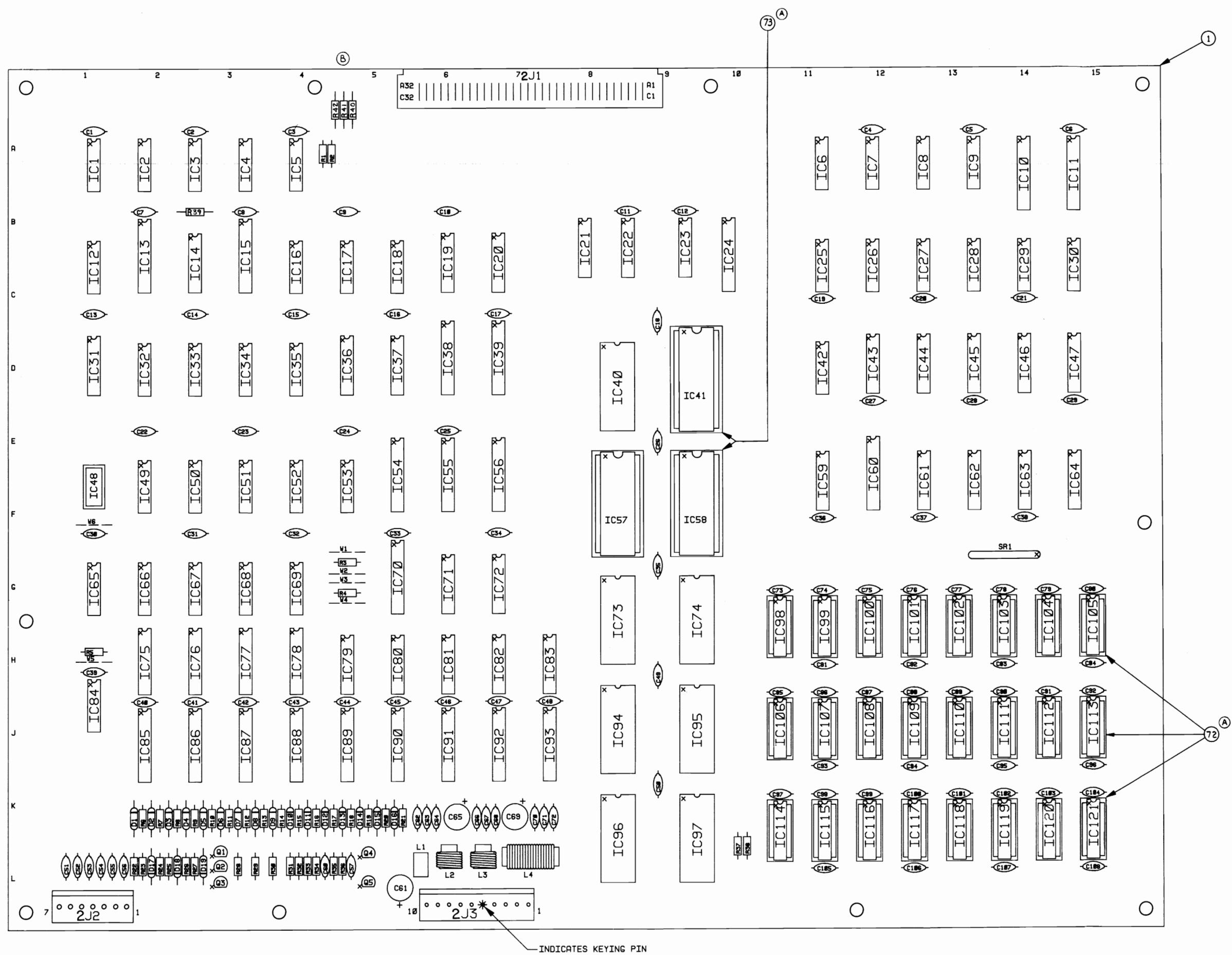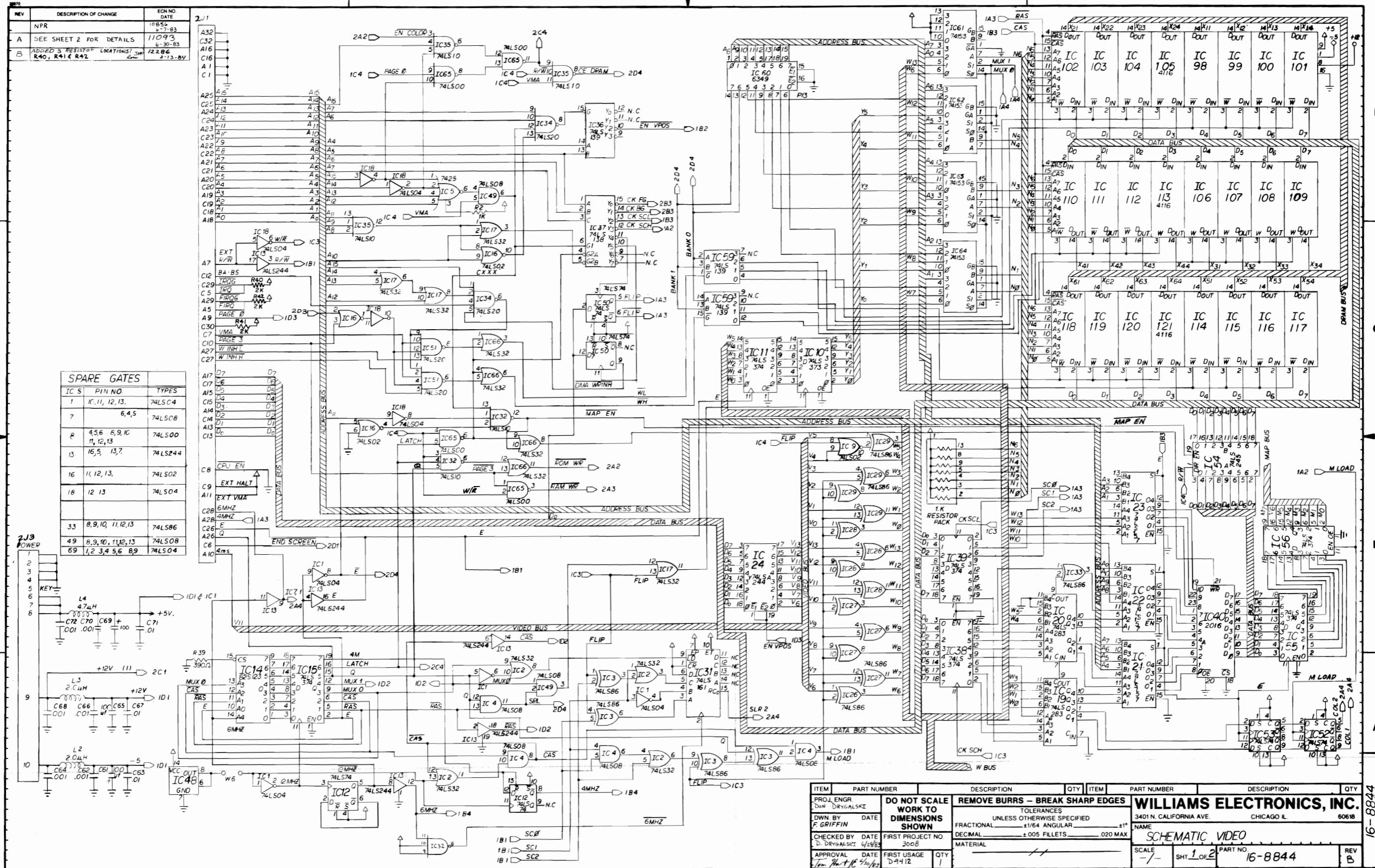14   CPU-Board Logic Diagram (Sheet 1 of 2)

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. 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.
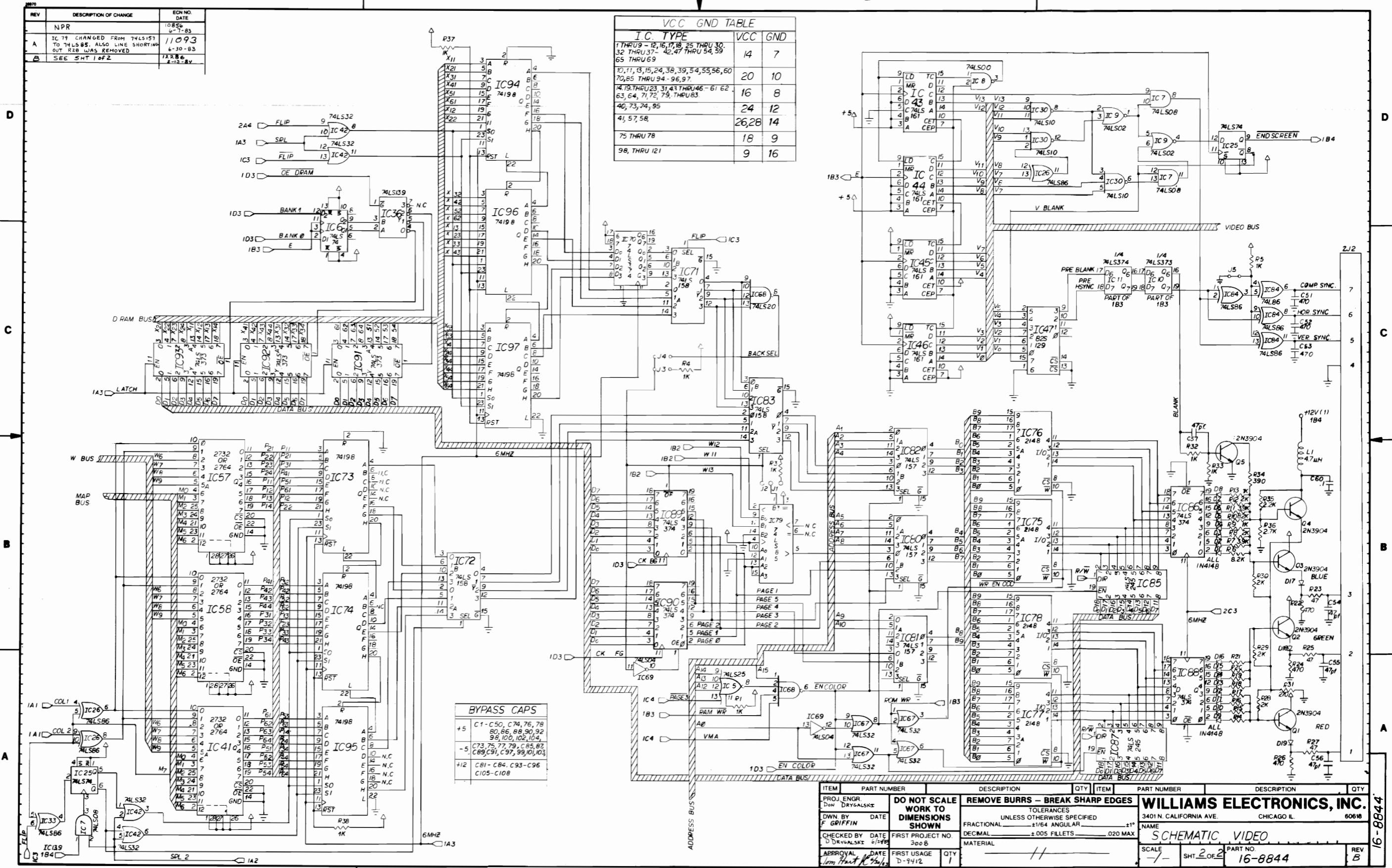
BILL OF MATERIALS

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, 1N4148 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
43	5010-10203-00	R35	RESISTOR, C.F., 2.2K OHM 2% 1/4 WATT	1
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
39	5010-09416-00	R22, R24, R26	RESISTOR, C.F., 470 OHM 5% 1/4 WATT	3
38	5010-10204-00	R9, R13, R17, R21	RESISTOR, C.F., 1K OHM 2% 1/4 WATT	4
37 Ⓑ	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
34	5010-09358-00	SEE NOTE #9	RESISTOR, C.F., 1K OHM 5% 1/4 WATT	9
33				
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
29	5340-10019-00	IC75, IC76, IC77, IC78	I.C., 2149 RAM/S 1K X 4, 70 NS	0
29	5340-10018-00		I.C., 2148 RAM/S 1K X 4, 70 NS	4

ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY
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
25	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
21	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
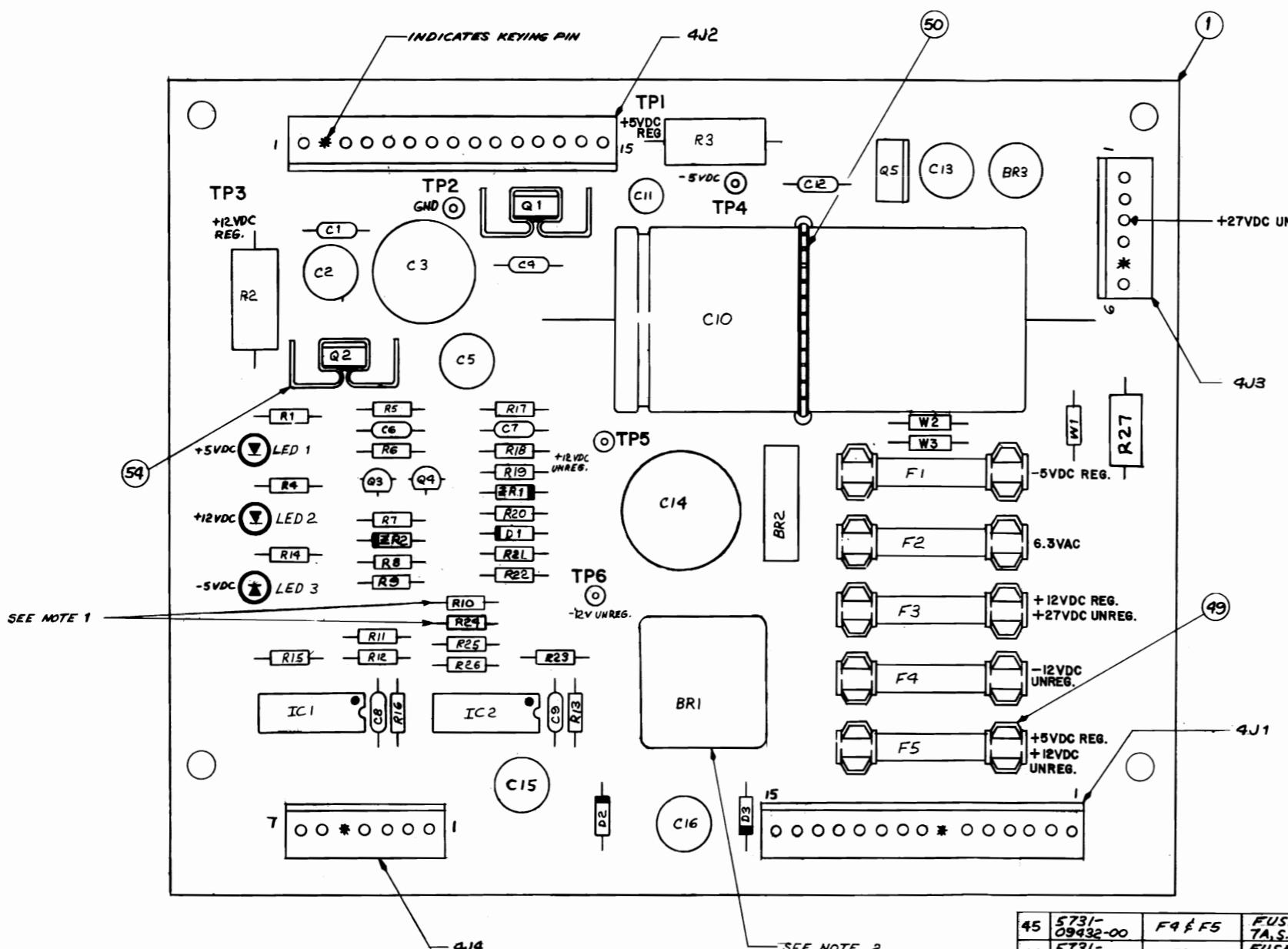
INDICATES KEYING PIN
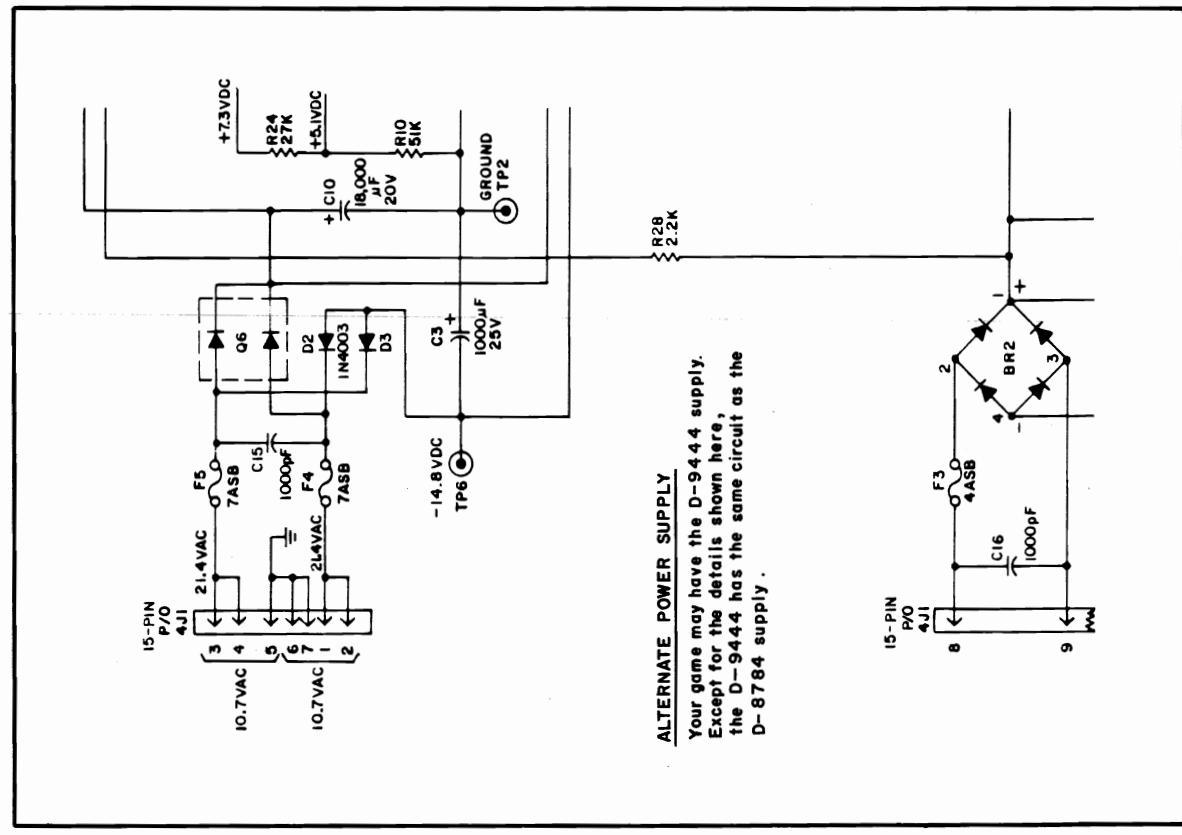
Video-Board Logic Diagram (Sheet 1 of 2)

Video-Board Logic Diagram (Sheet 2 of 2)   19

BILL OF MATERIAL
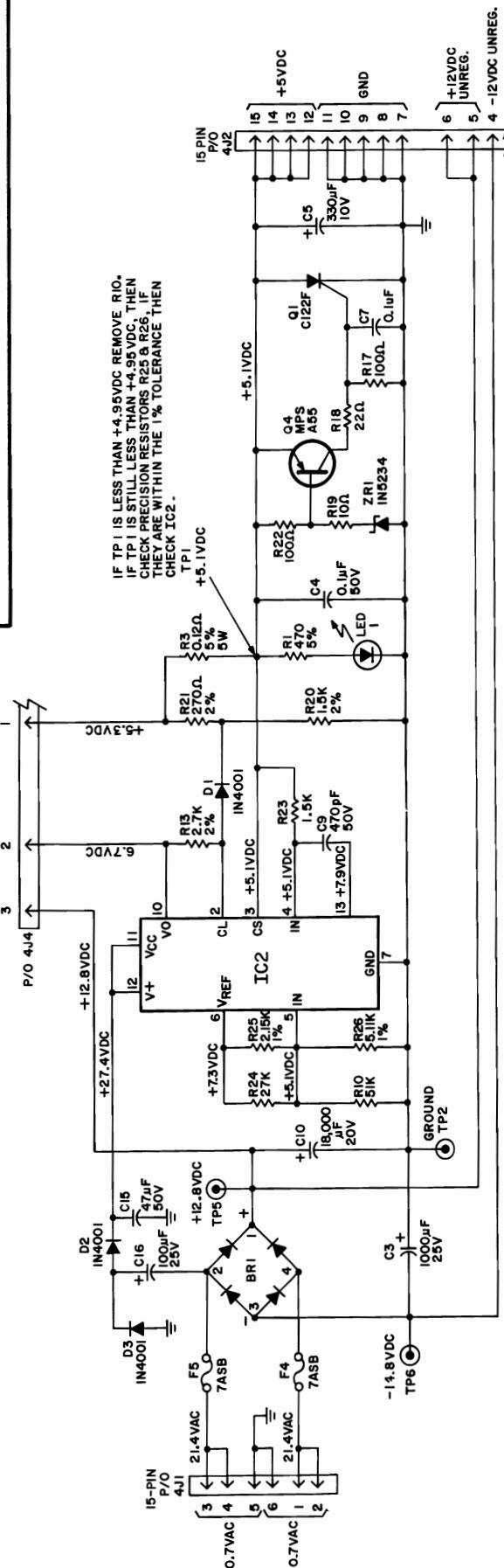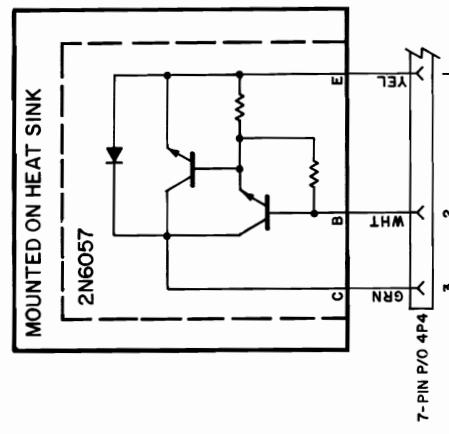
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO.
1	5773-09679-00		BARE P.C. BOARD	1
2	5010-09085-00	R23	RESISTOR, 1.5K 5%, 1/4W	1
3	5010-09541-00	R13, R15	RESISTOR, 2.7K 2%, 1/4W	2
4	5010-09508-00	R21	RESISTOR, 270Ω 2%, 1/4W	1
5	5010-09428-00	R20	RESISTOR, 1.5K 2%, 1/4W	1
6	5010-09509-00	R16	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	5010-09416-00	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, 9.99K 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	5012-09037-00	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, 0.Ω	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, 1000MFD, 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 25V -20 +80%	3
29	5043-08065-00	C9	CAPACITOR, 470PFD 50V AXIAL X7R ±10%	1
30	5043-09492-00	C8	CAPACITOR, 100 PFD 50V AXIAL 5% ±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, 1N4001	3
34	5075-09406-00	ZR1	ZENER 1N5234 ±5% (6.2V)	1
35	5075-09662-00	ZR2	ZENER 1N5244 ±5% (14V)	1
36	5190-09430-00	Q3, Q4	TRANSISTOR, MPS A55 100V	2
37	5130-09661-00	Q1, Q2	SCR 8 AMP, 100V	2
38	5250-09515-00	Q5	VOLTAGE REGULATOR, 7905	1
39	5460-09428-00	IC1, IC2	VOLTAGE REGULATOR, 723	2
40	5100-09890-00	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	5671-09018-00	LED1, LED2, LED3	L.E.D., RED	3
44	5844-09298-00	TP1 — TP6	TERMINAL #1502-1 (TEST POINT)	4

45	5731-09432-00	F4 & F5	FUSE, 7A, S.B.	2
46	5731-063M-00	F3	FUSE, 9A, 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	5791-03038-00	4J3	HEADER, 6 PIN 09-65-1061	1
53	5791-08497-00	4J4	HEADER, 7 PIN 09-65-1071	1
54	5705-09663-00		HEAT SINK	2
	5706-09688-00		HEAT SINK	0
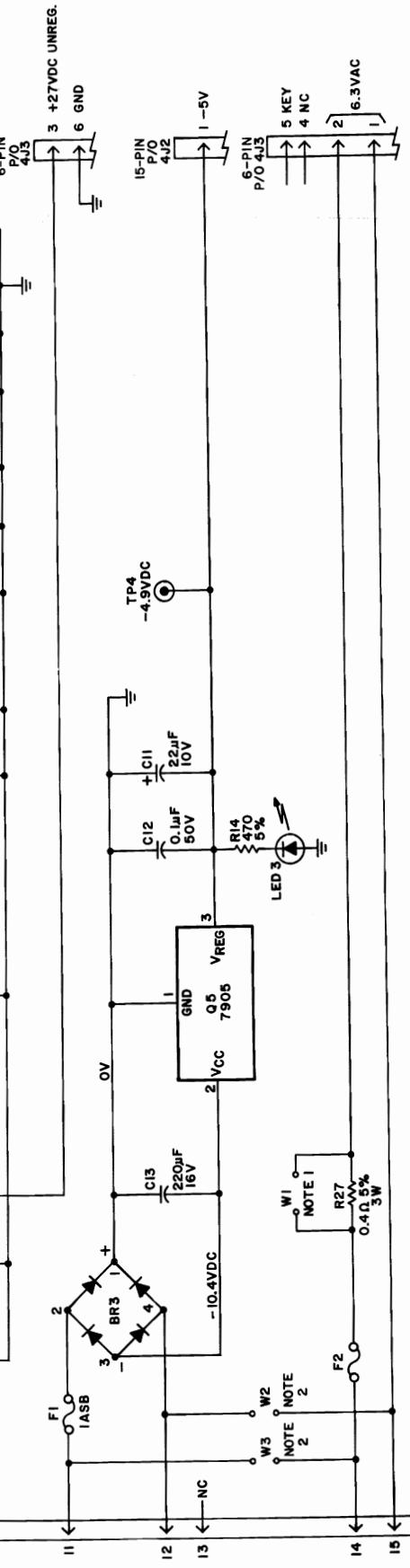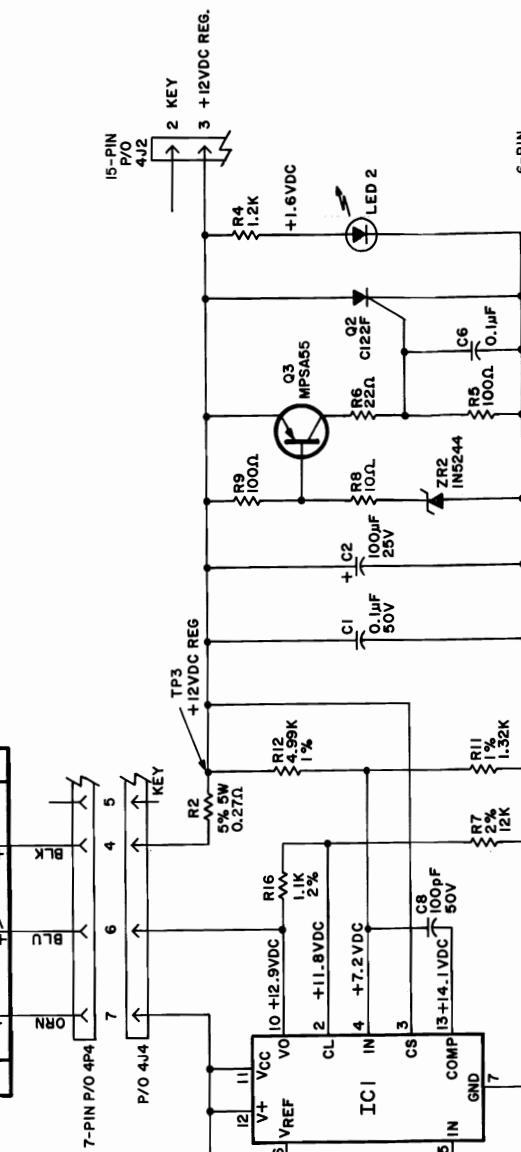
55	5010-09682-00	R10	RESISTOR C.F. 51K ±5% 1/4W	1
56	5010-09324-00	R24	RESISTOR, C.F. 27K ±5% 1/4W	1
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO.

NOTES:
1. REMOVE R24 IF +5VDC IS GREATER THEN 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.

D-8784 Power-Supply Schematic Diagram
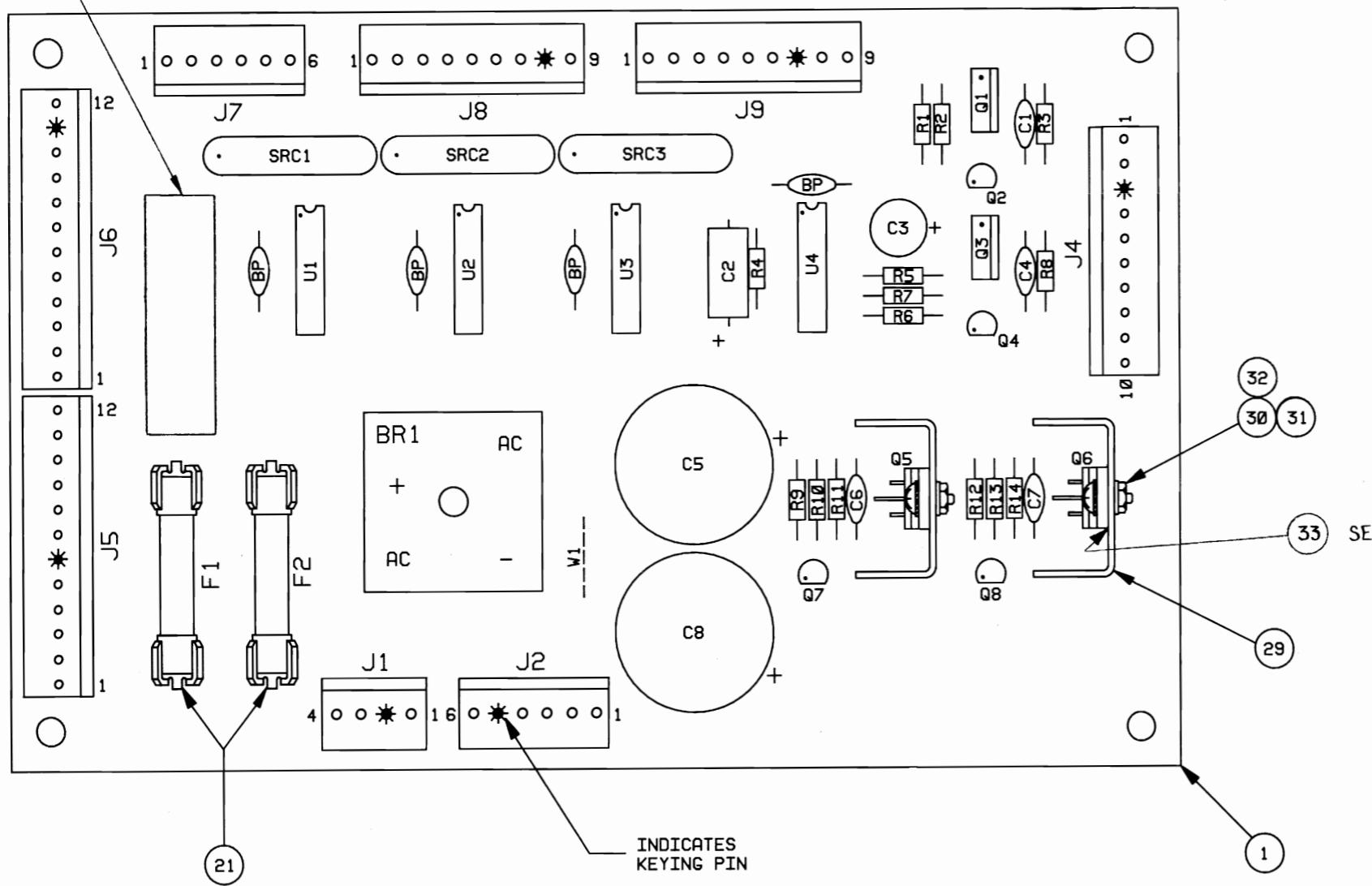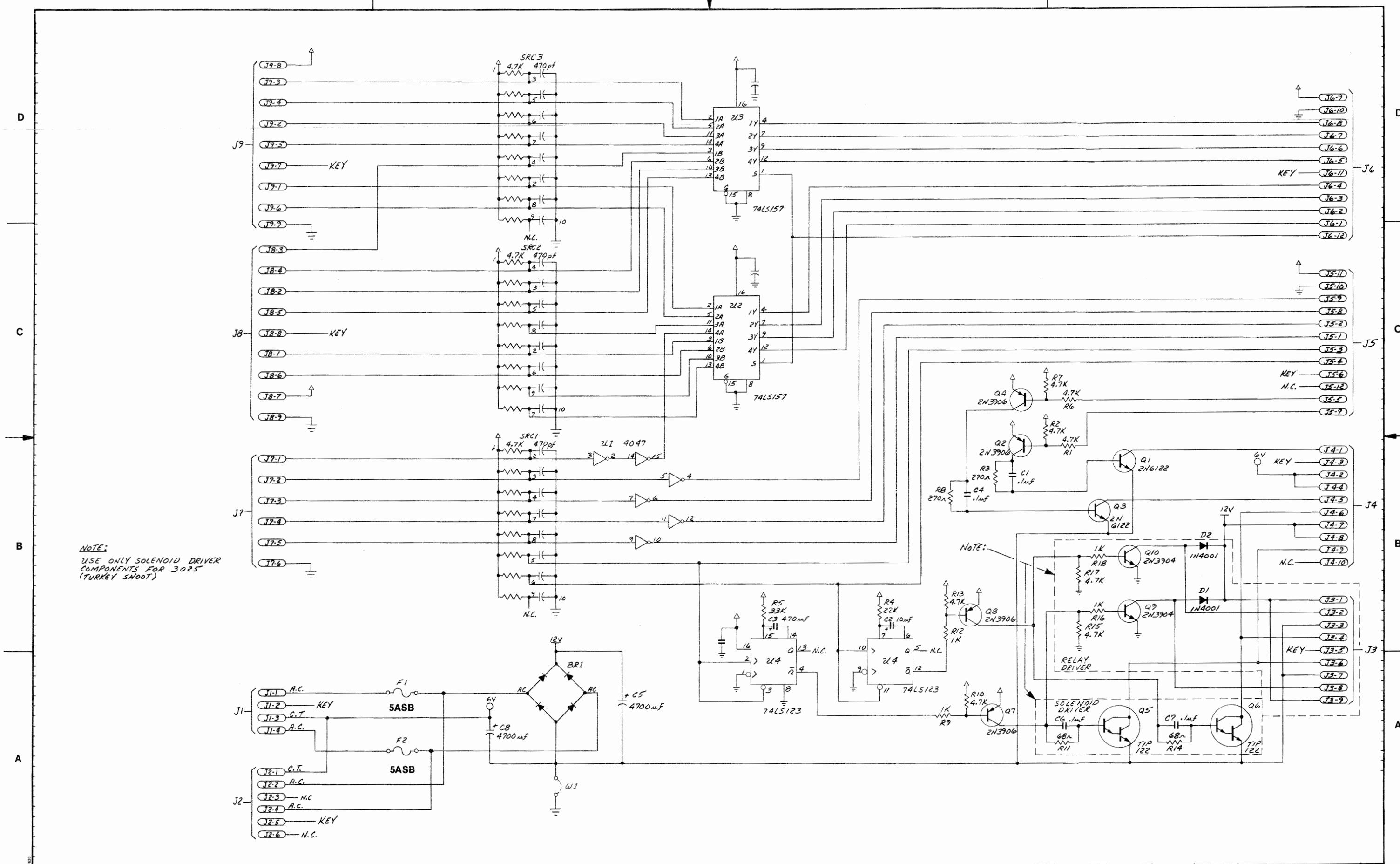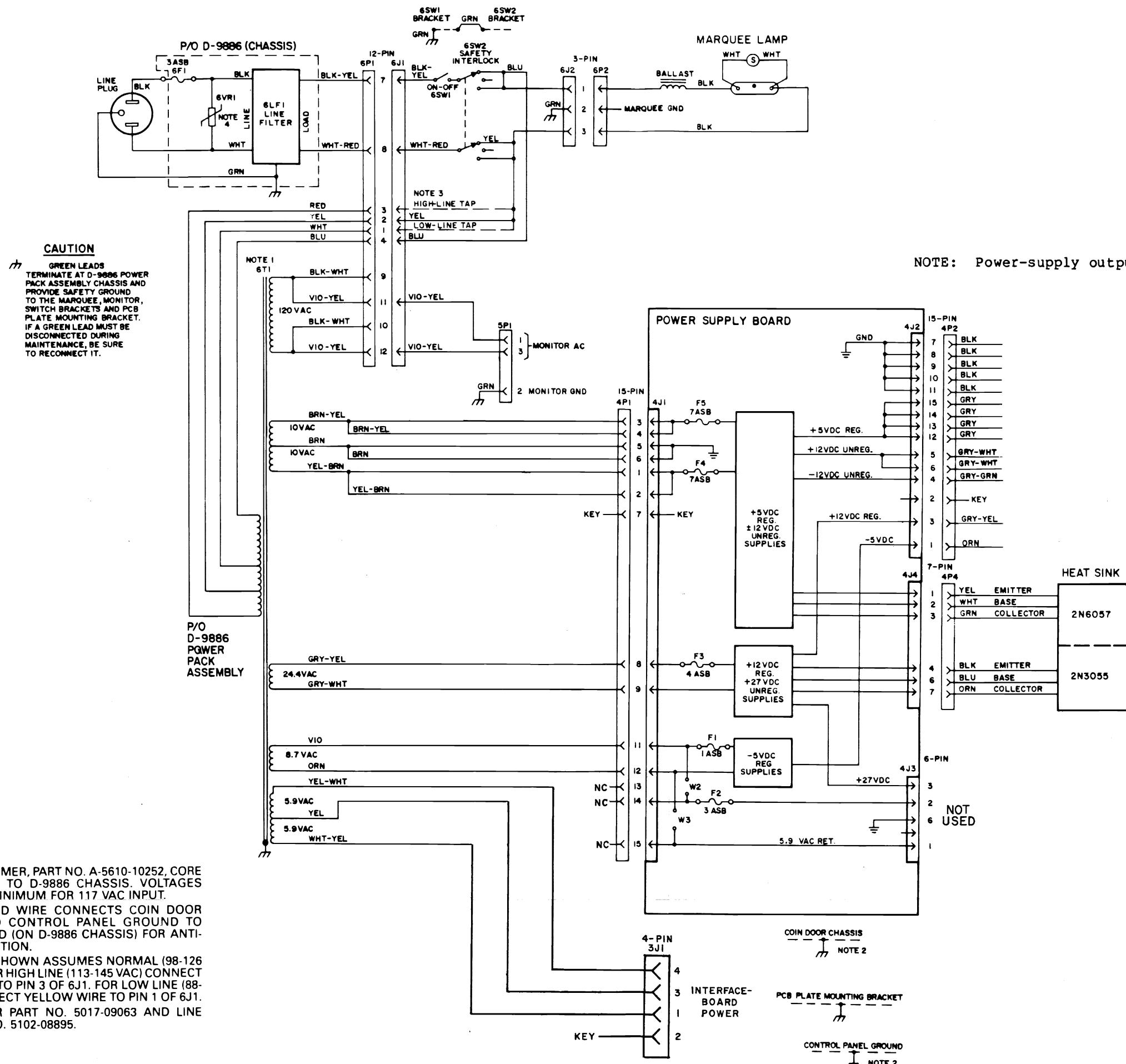
NOTES:
1. FOR SCHEMATIC, REFER TO DRAWING NO. 16-8910.
2. RESISTOR, 4.7K: R1, R2, R6, R7, R10, R13.
3. APPLY ITEM 33 BETWEEN ITEMS 7 & 29.
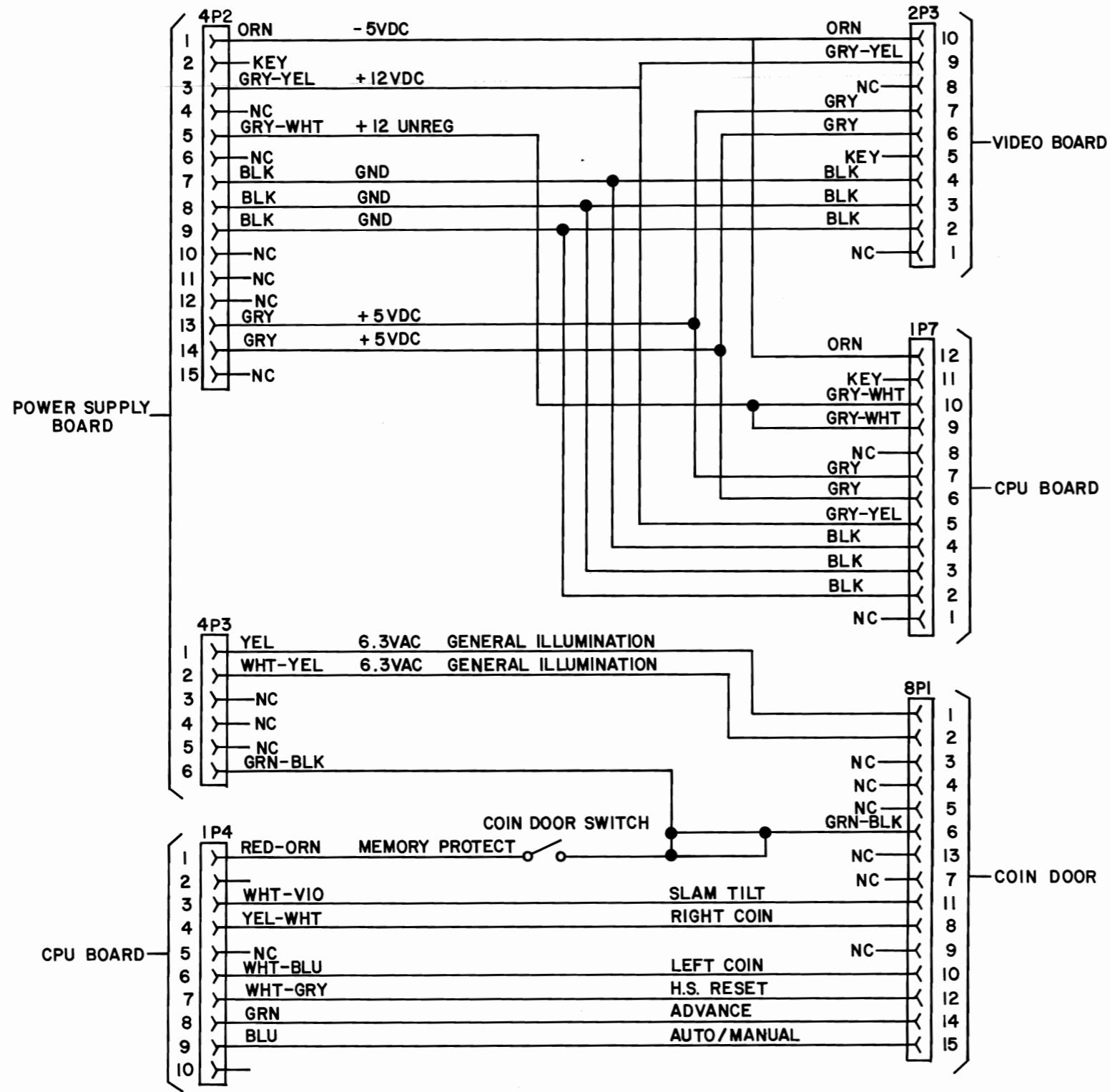
ITEM	PART NO.	PART DESIGNATION	DESCRIPTION	QTY.
34	16-8850-113		LABEL - PCB ASSY ID	1
33	20-9229		THERMAL COMPOUND	.010 oz.
32	4703-00007-00		#6 EXT. TOOTH LOCKWASHER	2
31	4406-01117-00		6 - 32 HEX NUT	2
30	4006-01003-06		6-32 X 3/8 P-H.S. SCREW	2
29	5705-09199-00		HEATSINK	2
28	5010-09548-00	R11, R14	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

Interface-Board Schematic Diagram   23

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

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.

NOTES:

1. 6TI TRANSFORMER, PART NO. A-5610-10252, CORE
   IS GROUNDED TO D-9886 CHASSIS. VOLTAGES
   SHOWN ARE MINIMUM FOR 117 VAC INPUT.
2. GROUND BRAID WIRE CONNECTS COIN DOOR
   GROUND AND CONTROL PANEL GROUND TO
   EARTH GROUND (ON D-9886 CHASSIS) FOR ANTI-
   STATIC PROTECTION.
3. 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.
4. 130V VARISTOR PART NO. 5017-09063 AND LINE
   FILTER PART NO. 5102-08895.

4P2

				2P3	
1	ORN	−5VDC	ORN	10	
2	KEY		GRY−YEL	9	
3	GRY−YEL	+12VDC	NC	8	
4	NC		GRY	7	
5	GRY−WHT	+12 UNREG	GRY	6	VIDEO BOARD
6	NC		KEY	5	
7	BLK	GND	BLK	4	
8	BLK	GND	BLK	3	
9	BLK	GND	BLK	2	
10	NC		NC	1	
11	NC				
12	NC				
13	GRY	+5VDC			
14	GRY	+5VDC		1P7	
15	NC		ORN	12	

POWER SUPPLY BOARD

KEY	11		
GRY−WHT	10		
GRY−WHT	9		
NC	8		
GRY	7		
GRY	6	CPU BOARD
GRY−YEL	5	
BLK	4	
BLK	3	
BLK	2	
NC	1	

4P3

1	YEL	6.3VAC	GENERAL ILLUMINATION
2	WHT−YEL	6.3VAC	GENERAL ILLUMINATION
3	NC		
4	NC		
5	NC		
6	GRN−BLK		

8P1

1	
2	
NC 3	
NC 4	
NC 5	
GRN−BLK 6	

CPU BOARD

1P4

COIN DOOR SWITCH

1	RED−ORN	MEMORY PROTECT	NC	13	
2	WHT−VIO		NC	7	COIN DOOR
3	YEL−WHT	SLAM TILT		11	
4		RIGHT COIN		8	
5	NC		NC	9	
6	WHT−BLU	LEFT COIN		10	
7	WHT−GRY	H.S. RESET		12	
8	GRN	ADVANCE		14	
9	BLU	AUTO/MANUAL		15	
10					

CPU BOARD

INTERFACE BOARD ③

3J4 3P4
2 BLK
1 BLK/ORG
KEY 3 KEY
4 NC
5 BLK/RED
6 BLK/YEL
+12VDC 7 BLK/BLU
8 NC
9 BLK/WHT
10 NC

7P2 7J2
1 BLK
3 BLK/ORG
2 BLK/RED
4 BLK/YEL
5 BLK/BLU

12PI 12JI
4 BLK
6 BLK/ORG
5 BLK/RED
7 BLK/YEL
8 BLK/BLU

GRENADE LAMP
FIRE LAMP
GUN KICKER SOLENOID

6PI 6JI
1 BLK/BLU
4 BLK/WHT
FEATHER CHAMBER SOLENOID

3PI 3JI
WHT/YEL 6.3VAC 1
KEY 2
YEL C.T. 3 KEY
YEL/WHT 6.3VAC 4

3J2 3P2
6.3VAC 1 YEL
6.3VAC 2 WHT/YEL
3 NC
4 NC
KEY 5 KEY
6 NC

7PI 7JI
22
23

IJ2 IP2
AUDIO IN 1 RED
AUDIO OUT 2 BLK
SHIELD 4 SILVER
VOLUME CONTROL

IJ3 IP3
AUDIO 1 RED/BLK
AUDIO-GND 4 BLK/RED

6P3 6J3
3 RED/BLK
2 BLK/RED

8JI 8PI
4J3 WHT/YEL6.3VAC 1 WHT/YEL
POWER YEL 6.3VAC 2 YEL
SUPPLY 3 NC
BOARD 4 NC
5 NC
GRN/BRN 6 GRN/BRN
7 NC
9 NC
WHT/BLU 10 WHT/BLU LEFT COIN
WHT/VIO 11 WHT/VIO SLAM TILT
IP4 WHT/GRY 12 WHT/GRY HIGH SCORE RESET
CPU GRN 14 GRN ADVANCE
BOARD 13 NC
BLU 15 BLU AUTO-UP
MANUAL-DOWN
YEL/WHT 8 YEL/WHT RIGHT COIN

IP4 RED/ORG MEMORY-PROTECT
PIN I

26 Cabinet and Control-Panel Wiring Diagram

③ INTERFACE BOARD

CPU BOARD

1J6 / 1P6
PA7	1	YEL-BLK
PA6	2	YEL-BRN
PA5	3	YEL-RED
PA4	4	YEL-ORG
PA3	5	YEL-GRN
PA2	6	YEL-BLU
PA1	7	YEL-VIO
PA0	8	YEL-GRY
+5 VDC	9	GRY
GND	10	BLK
	11	KEY
CA2	12	YEL-WHT

3P6 / 3J6 (KEY at 11)

1J5 / 1P5
PB7	1	GRN-BRN
PB6	2	GRN-RED
PB5	3	GRN-ORG
PB4	4	GRN-YEL
PB3	5	GRN-BLU
	6	KEY
PB2	7	GRN-VIO
PB1	8	GRN-GRY
PB0	9	GRN-WHT
GND	10	BLK
+5 VDC	11	GRY
NC	12	

3P5 / 3J5 (KEY at 6)

3J9 / 3P9 — 7P1 / 7J1 — 10P1 / 10J1
1	BRN-BLK	3	BRN-BLK	1	Q4
2	BRN	4	BRN	2	Q5
3	BRN-RED	4	BRN-RED	3	Q6
4	BRN-ORG	5	BRN-ORG	4	Q3
5	BRN-YEL	6	BRN-YEL	5	Q2
6	BRN-GRN	7	BRN-GRN	6	Q1
7	KEY			8	KEY
8	BRN-BLU	8	BRN-BLU +5 VDC	7	
9	BRN-VIO	9	BRN-VIO GND	9	

⑩ VERTICAL OPTO-ASSEMBLY

3J8 / 3P8 — 7P1 / 7J1 — 11P1 / 11J1
1	RED-BRN	11	RED-BRN	1	Q4
2	RED	10	RED	2	Q5
3	RED-YEL	12	RED-YEL	3	Q6
4	RED-GRN	13	RED-GRN	4	Q3
5	RED-BLU	14	RED-BLU	5	Q2
6	RED-VIO	15	RED-VIO	6	Q1
7	GRY	24	GRY +5 VDC	7	
8	KEY			8	KEY
9	BLK	1	BLK GND	9	

⑪ HORIZONTAL OPTO-ASSEMBLY

3J7 / 3P7 — 7P1 / 7J1 — 12P1 / 12J1
1	ORG-BRN	18	ORG-BRN	GOBBLE
2	ORG-RED	19	ORG-RED	
3	ORG	16	ORG	GOBBLE
4	ORG-GRN	20	ORG-GRN	1-PLAYER START
5	ORG-BLU	21	ORG-BLU	2-PLAYER START
6	ORG-BLK	17	ORG-BLK	

12P1 / 12J1
2	ORG-BRN	TRIGGER
3	ORN-RED	GRENADE
1	ORN-BLK	

NOTE:
1. +5 Vcc = PIN 1 OF U1
   GND = PIN 8 OF 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
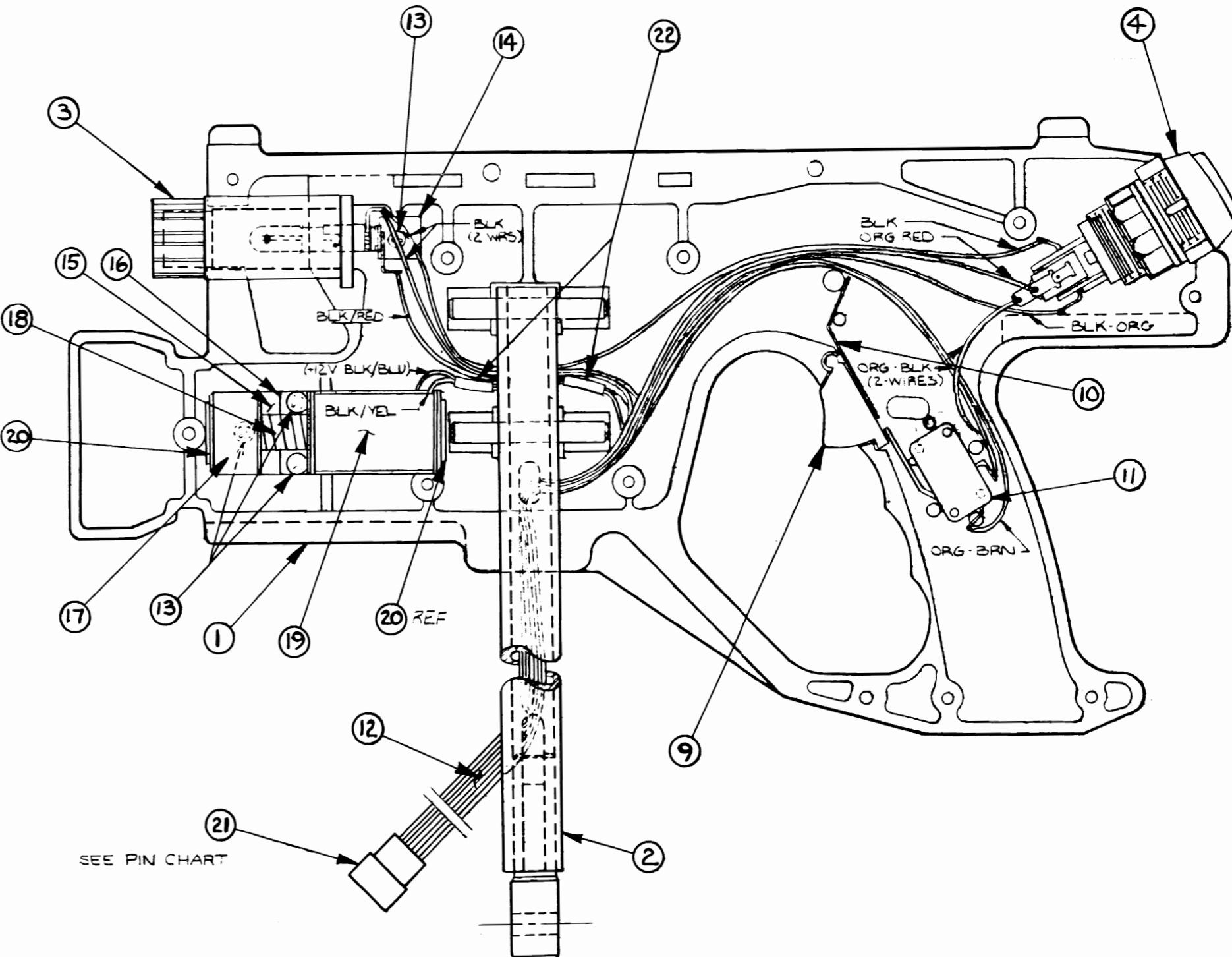
TURKEY SHOOT GUN ASS'Y. (D-10302)

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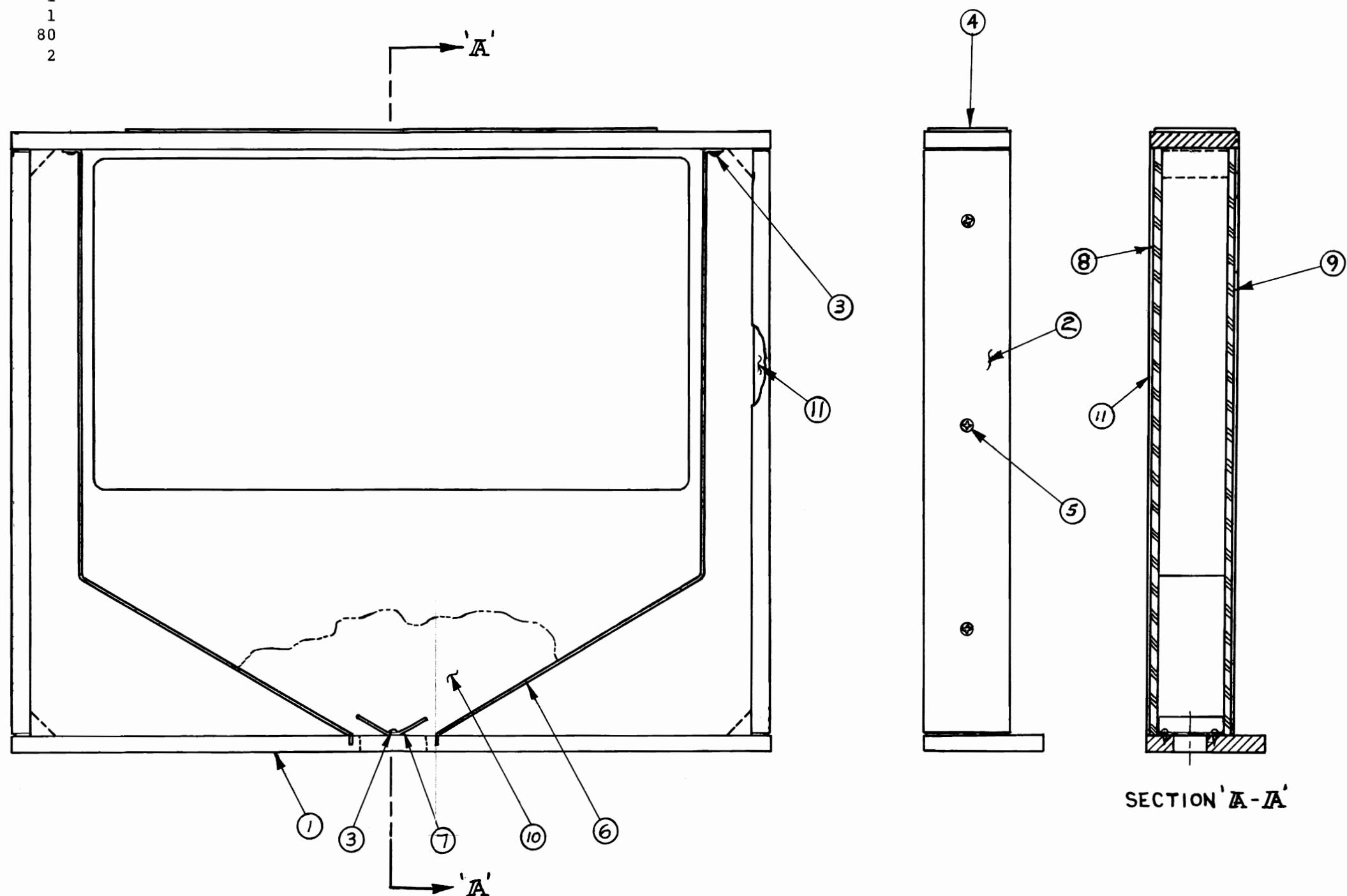
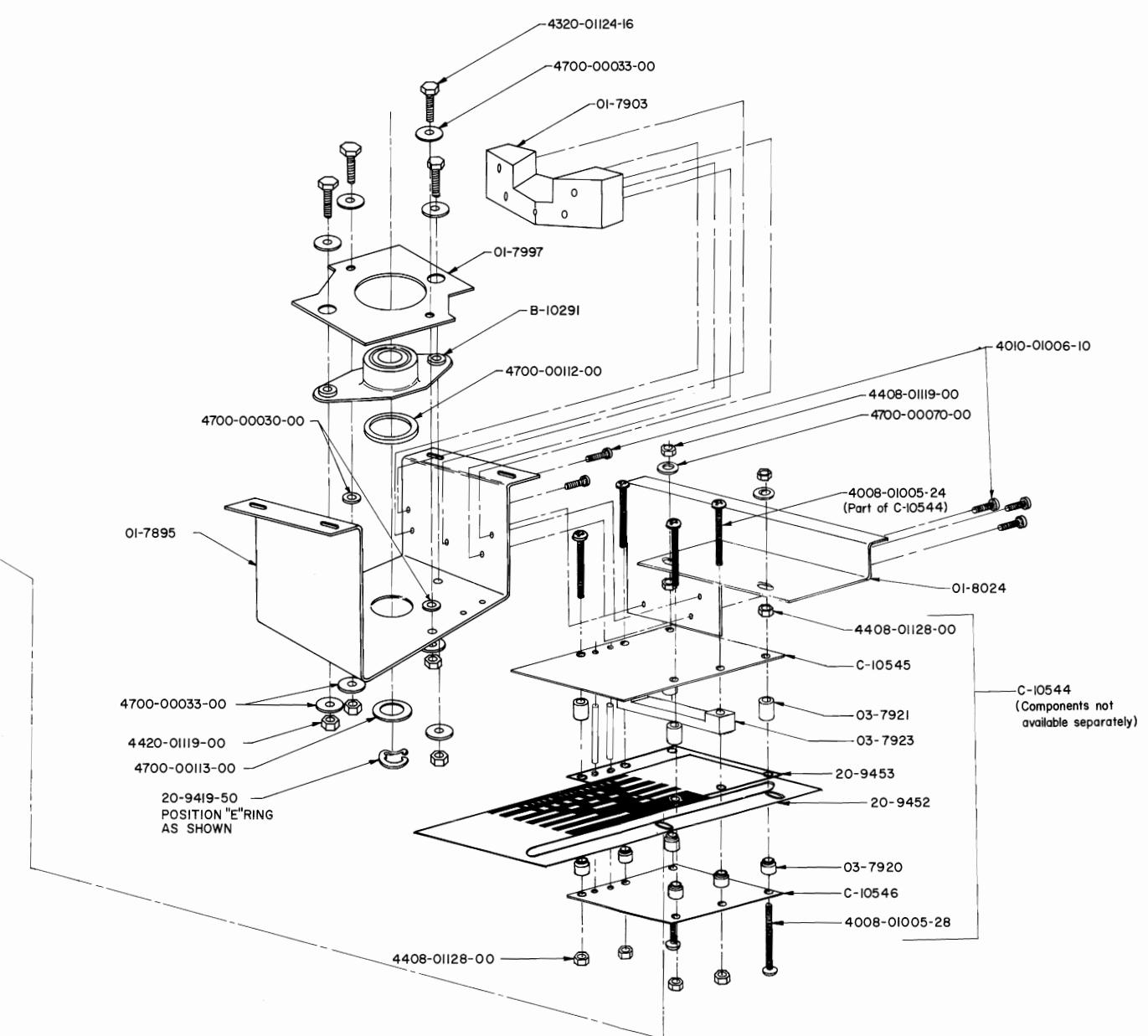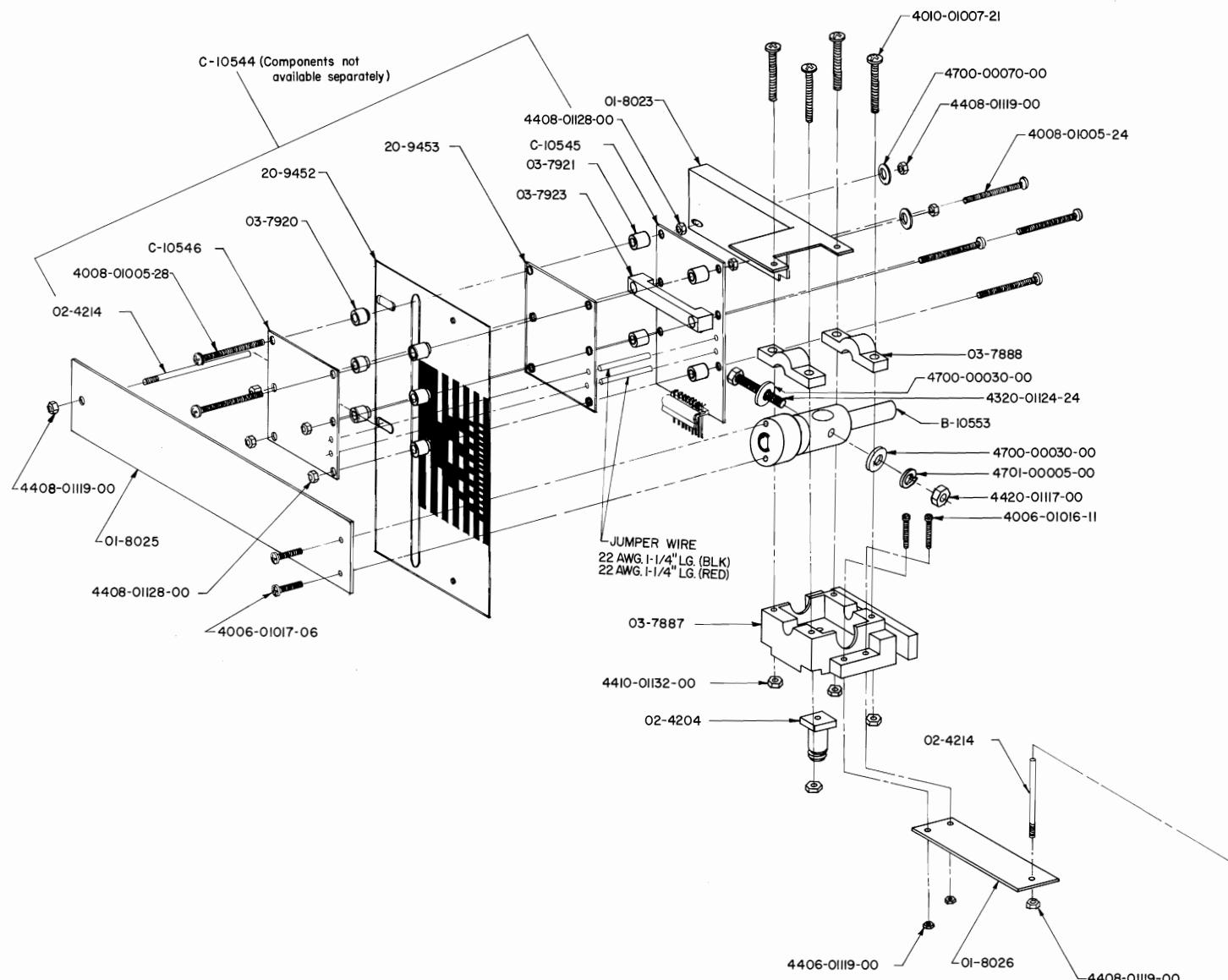| PIN	COLOR		FUNCTION
1	ORG-BLK	22	SW. GND
2	ORG-BRN	22	TRIGGER SW.
3	ORG-RED	22	GRENADE SW.
4	BLK-RED	22	LAMP COMMON 6V D.C.
5	BLK-RED	22	TRIGGER LAMP ON-OFF
6	BLK-ORG	22	GRENADE LAMP ON-OFF
7	BLK-YEL	18	TRIGGER SOLENOID ON-OFF
8	BLK-BLU	18	SOLENOID COMMON (+12V D.C.)
9	NOT USED		

WHITE HOUSING 5791-09138-00 (REF.). Install item 21 after
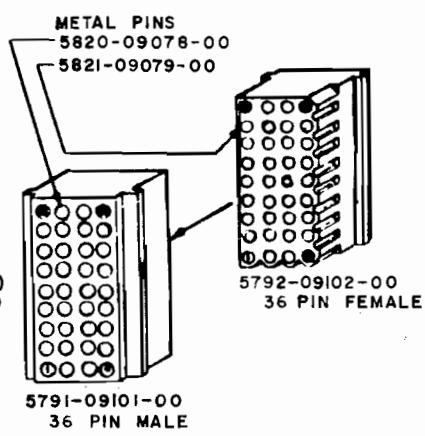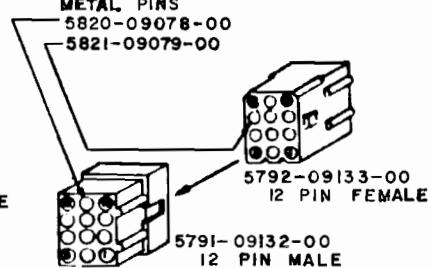wires are installed in gun shaft.
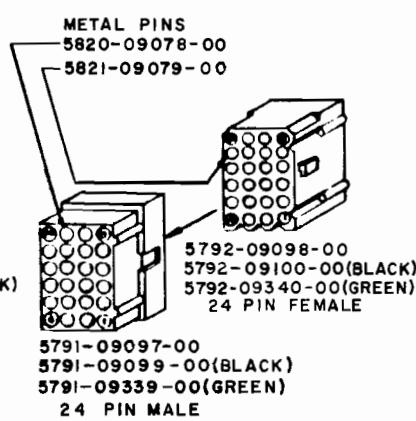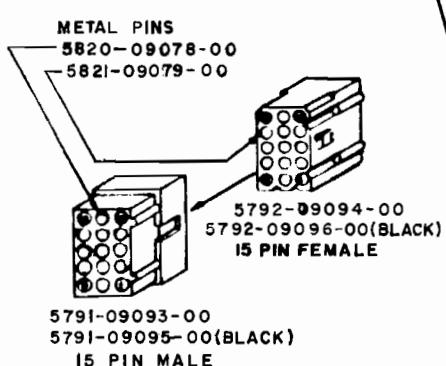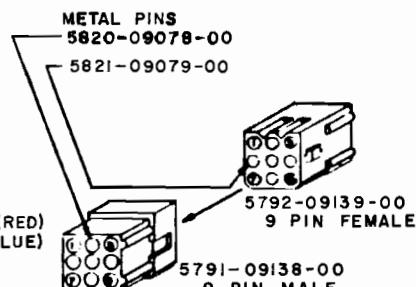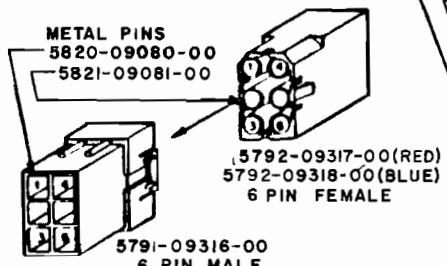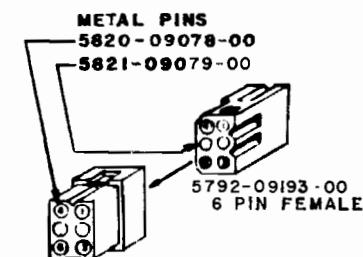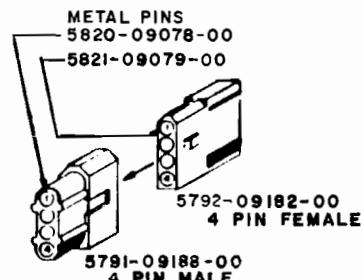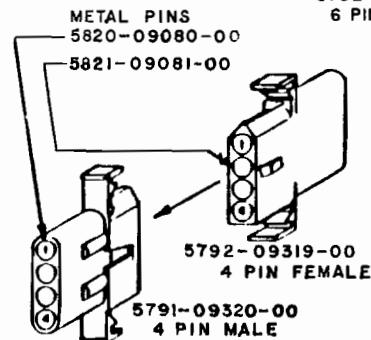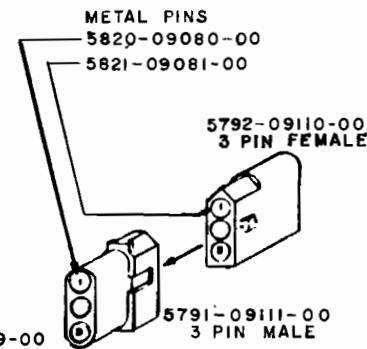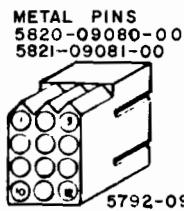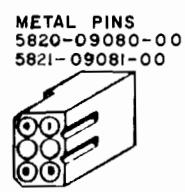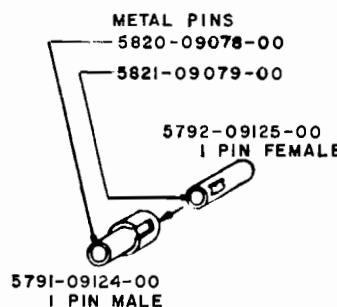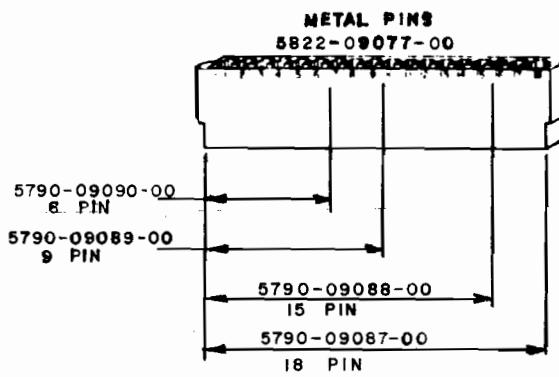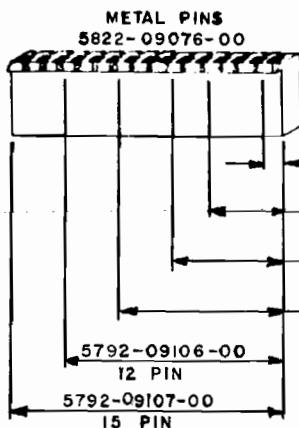
FEATHER CHAMBER ASSY. (D-10344)

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

SECTION 'A-A'

C-10544 (Components not available separately)

20-9452
20-9453
03-7920
C-10546
4008-01005-28
02-4214

4408-01128-00
C-10545
03-7921
03-7923

01-8023

4010-01007-21

4700-00070-00
4408-01119-00

4008-01005-24

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

01-7895

4700-00033-00
4420-01119-00
4700-00113-00
20-9419-50
POSITION "E" RING AS SHOWN

4010-01006-10
4408-01119-00
4700-00070-00
4008-01005-24 (Part of C-10544)
01-8024
4408-01128-00
C-10545
C-10544 (Components not available separately)
03-7921
03-7923
20-9453
20-9452
03-7920
C-10546
4008-01005-28
4408-01128-00

MALE CONNECTORS AND FEMALE RECEPTACLES

METAL PINS
5822-09076-00

5792-09125-00
I PIN

5792-09103-00
4 PIN

5792-09104-00
6 PIN

5792-09105-00
9 PIN

5792-09106-00
12 PIN

5792-09107-00
15 PIN

METAL PINS
5822-09077-00

5790-09090-00
6 PIN

5790-09089-00
9 PIN

5790-09088-00
15 PIN

5790-09087-00
18 PIN

METAL PINS
5820-09078-00
5821-09079-00

5792-09125-00
I PIN FEMALE

5791-09124-00
I PIN MALE

METAL PINS
5820-09080-00
5821-09081-00

5792-09108-00
6 PIN FEMALE

METAL PINS
5820-09080-00
5821-09081-00

5792-09109-00
12 PIN FEMALE

METAL PINS
5820-09080-00
5821-09081-00

5792-09110-00
3 PIN FEMALE

5791-09111-00
3 PIN MALE

METAL PINS
5820-09080-00
5821-09081-00

5792-09319-00
4 PIN FEMALE

5791-09320-00
4 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09182-00
4 PIN FEMALE

5791-09188-00
4 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09193-00
6 PIN FEMALE

5791-09192-00
6 PIN MALE

METAL PINS
5820-09080-00
5821-09081-00

5792-09317-00(RED)
5792-09318-00(BLUE)
6 PIN FEMALE

5791-09316-00
6 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09139-00
9 PIN FEMALE

5791-09138-00
9 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09133-00
12 PIN FEMALE

5791-09132-00
12 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09094-00
5792-09096-00(BLACK)
15 PIN FEMALE

5791-09093-00
5791-09095-00(BLACK)
15 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09098-00
5792-09100-00(BLACK)
5792-09340-00(GREEN)
24 PIN FEMALE

5791-09097-00
5791-09099-00(BLACK)
5791-09339-00(GREEN)
24 PIN MALE

METAL PINS
5820-09078-00
5821-09079-00

5792-09102-00
36 PIN FEMALE

5791-09101-00
36 PIN MALE

33

BLANKING