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Operator's and Service MANUAL

First Edition

FOREWORD

PART ONE:
Contains Preliminary Procedures, describing game inspection, installation, and checkout.

PART TWO:
Adjustment procedures are given for Power Supply, Audio Volume, Selectable Options, Gun Sight Alignment and Optical Sensitivity Adjustment.

PART THREE:
Modes of Operation, describes the four **CHEYENNE™** modes: Automatic Self-Diagnostic Test Mode, Manual Diagnostic Mode, Attract Mode.

PART FOUR:
Contains the Electrical Schematics.

PART FIVE:
Contains the Mechanical and the Electronic Part Breakdown.

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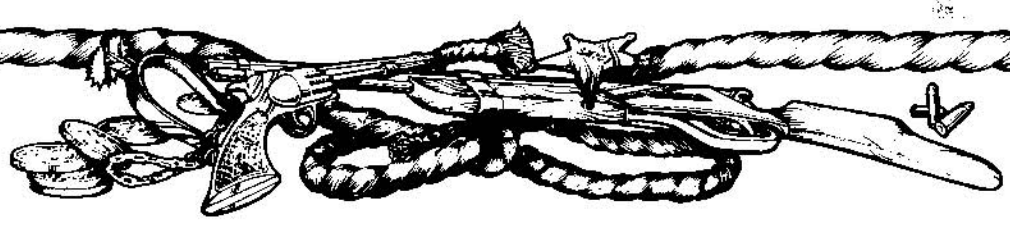

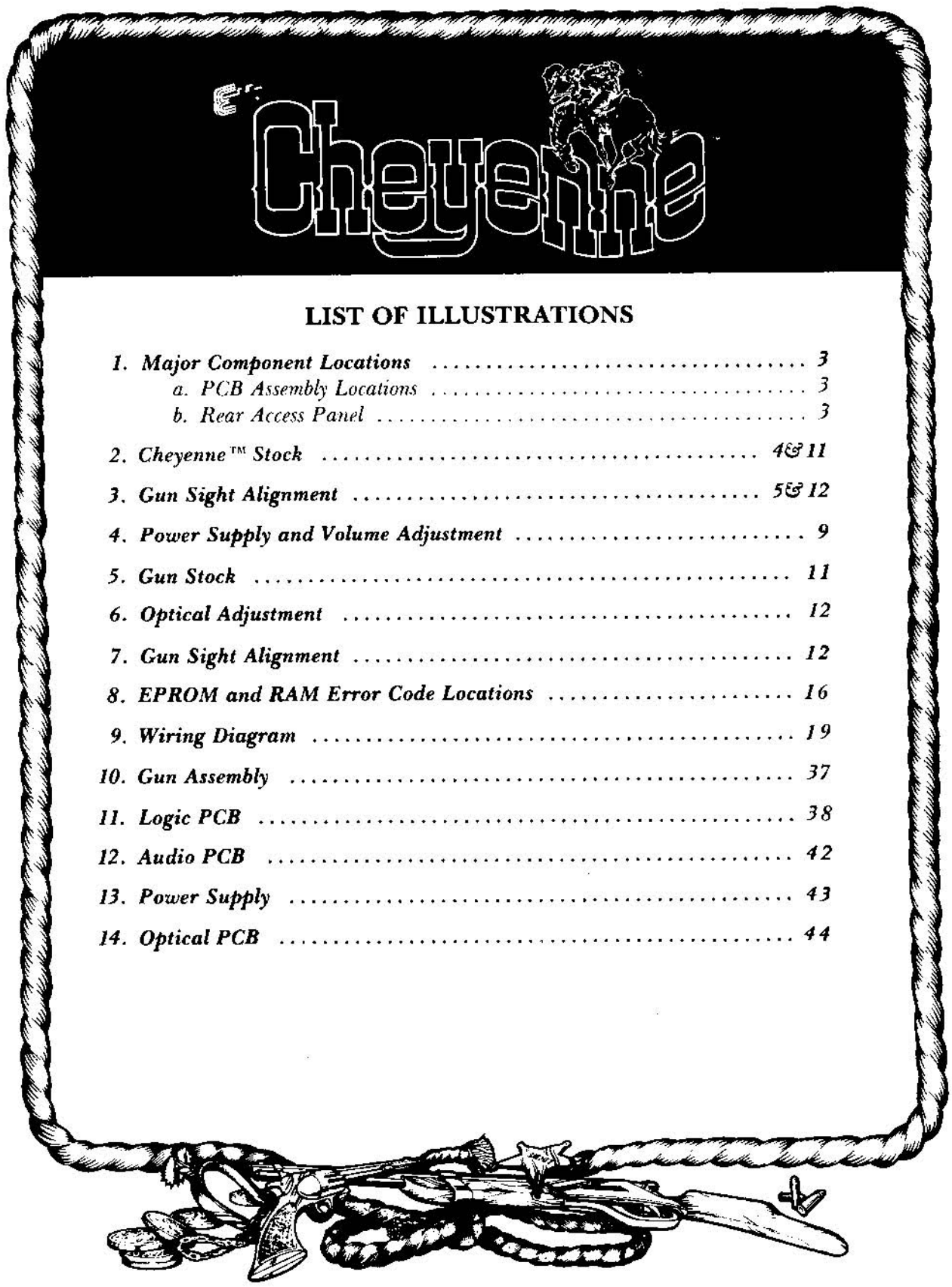

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Preliminary Procedure 1

PRELIMINARY PROCEDURE

GAME INSPECTION

All **Exidy** equipment is carefully packaged in well-padded cardboard containers to prevent damage during shipment. Before signing the delivery receipt, you should follow this procedure:

1. Check for obvious damage and make certain that the physical piece count of the shipment matches the piece count on the bill of lading. These two procedures should always be done before signing the delivery receipt.
2. Shortages and/or obvious damage to the packaging on any given shipment should be noted in writing on the delivery receipt before signing for the delivery.
3. If concealed damage is suspected on any shipment, those packages believed to contain the damaged goods should be opened in the presence of the delivery driver. If the goods have sustained concealed damage, a description of said damage should be noted in writing on the delivery receipt before signing for the delivery.
4. Never apply power to any game with noticeable damage.

VISUAL INSPECTION

1. Remove the rear and front access doors with the appropriate packaged key.
2. Examine each major and electrical component thoroughly for scrapes, dents, broken or missing parts and loosening screws.
3. Check for loose cable connectors.
4. Visually verify that all the integrated circuit devices (IC's) plugged into sockets are properly seated and that no IC pins are bent or misaligned.

If you find any damage during this inspection, file a claim with the carrier. Send a complete report of the damage to **Exidy Inc.**

FILING A CLAIM

TO FILE A CLAIM, FOLLOW THIS PROCEDURE:

1. Any and all damaged freight, including packaging, should be retained by the consignee until a physical inspection of said freight can be made by a representative of the carrier involved.
2. The Claims Manager for the carrier involved should be notified as soon as possible after the damaged goods are received. Preferably, the carrier's Claims Manager should be notified within forty-eight (48) hours of receipt of the goods by the consignee.

If warranted, a written claim must be filed with the carrier(s) involved. A detailed description of the damage(s) must be provided including copies of delivery receipt and/or bill of lading, inspection report and invoice.

The carrier(s) to which a claim has been filed against is required by law to respond to within thirty (30) days after receiving your claim and must reach a final disposition in the matter within one hundred twenty (120) days.

QUESTIONS

Exidy encourages technicians to use the toll-free customer service hotline for any questions they may have regarding ***CHEYENNE™****. That number is* ***(800) 538-8402****.*

INSTALLATION

Planning the location of the game should involve both physical and electrical considerations. Such physical considerations concern the placement of the equipment with respect to these clearances:

- HEIGHT: 80.00 inches, 203.2 cm.
- WEIGHT: 25.25 inches, 65.1 cm.
- DEPTH: 35.00 inches, 88.9 cm.

An indoor, relatively dust-free environment is necessary, with proper conditions required of any electrical component. Electrical considerations include availability of an AC outlet with the correct voltage and frequency. You should consider the working space required for technicians and operators including access to the rear of the game.

NOTE:

The cabinet must be within five feet of an AC outlet. Be certain that a ground jack or terminal is available at the outlet.

CAUTION:

DO NOT remove the AC ground prong from the plug. Doing so ***VOIDS YOUR WARRANTY!***

MAJOR COMPONENTS

The **Cheyenne™** game is a colorfully illustrated upright video game with high resolution graphics.

The major components of your **Cheyenne** game are illustrated in (See Fig. 1). These major components are the following:

- **Cheyenne™** Gun
- Coin Mechanism
- Monitor Chassis
- Power Supply Chassis
- Control Panel
- All PCB Assemblies
- Speakers

The PCB assemblies are listed as follows:

- Game Logic PCB
- Power Supply PCB
- Audio PCB
- Photo Optic PCB

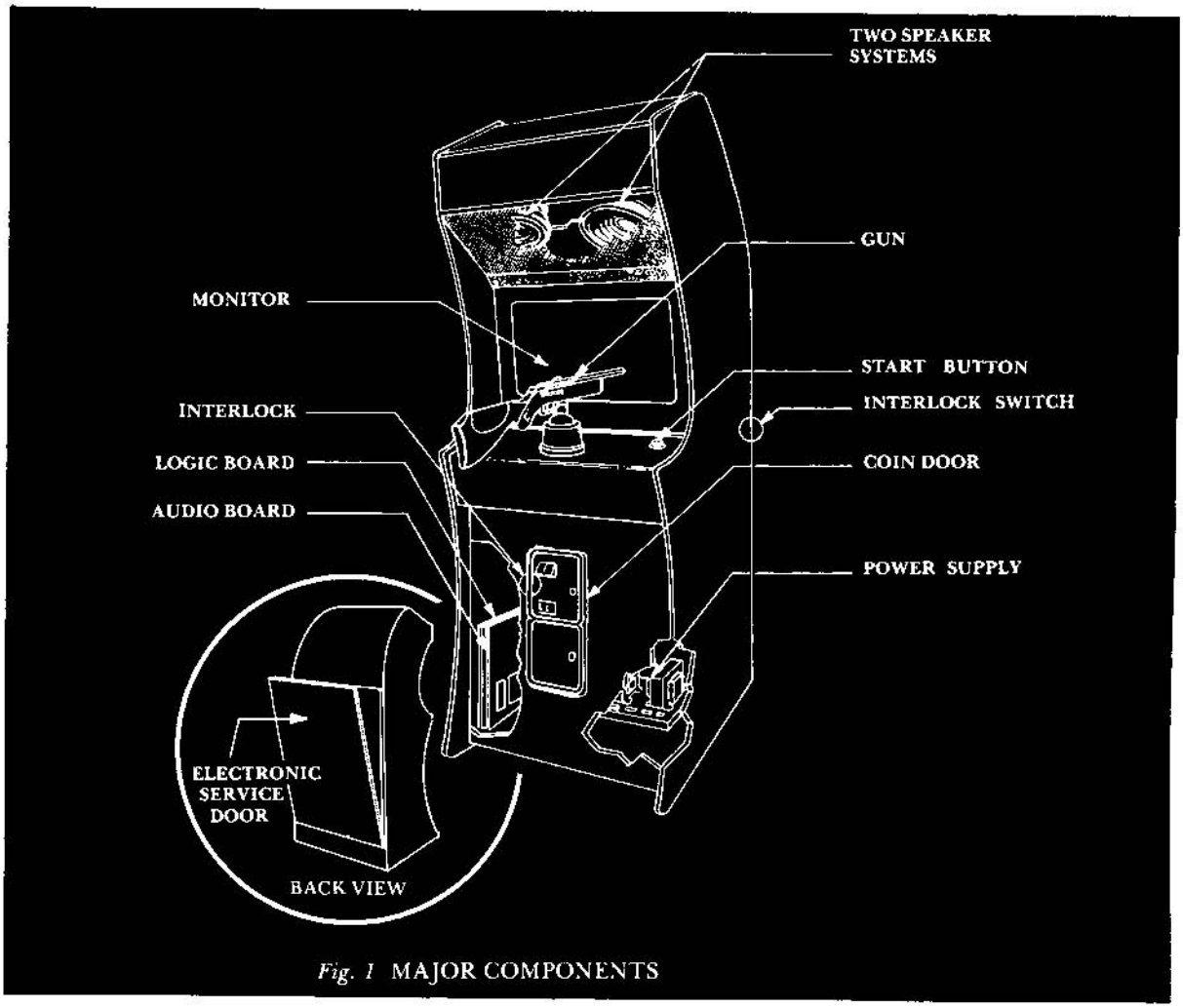


Fig. 1 MAJOR COMPONENTS

GUN STOCK INSTALLATION

MECHANICAL

Gun Stock is detached from the forestock for shipping. To install **Cheyenne™** gun stock, proceed as follows:

1. Locate the 3 mounting screws, packed inside shipping carton with Cheyenne Gun.
2. Loosen the 8/32 set screw in the FORESTOCK that secures down the OPTICAL TUBE ASSEMBLY.
3. Check that the gun optic PCB connector is in place.
4. Gently place gun stock onto forestock mount with the (2) 10-24×1 button head screws, and (1) 1/4-20×2 3/8 cap screws and secure gun stock to forestock (See Fig. 2).

NOTE:

Be sure to tighten down the set screw in FORESTOCK that secures the OPTICAL TUBE ASSEMBLY.

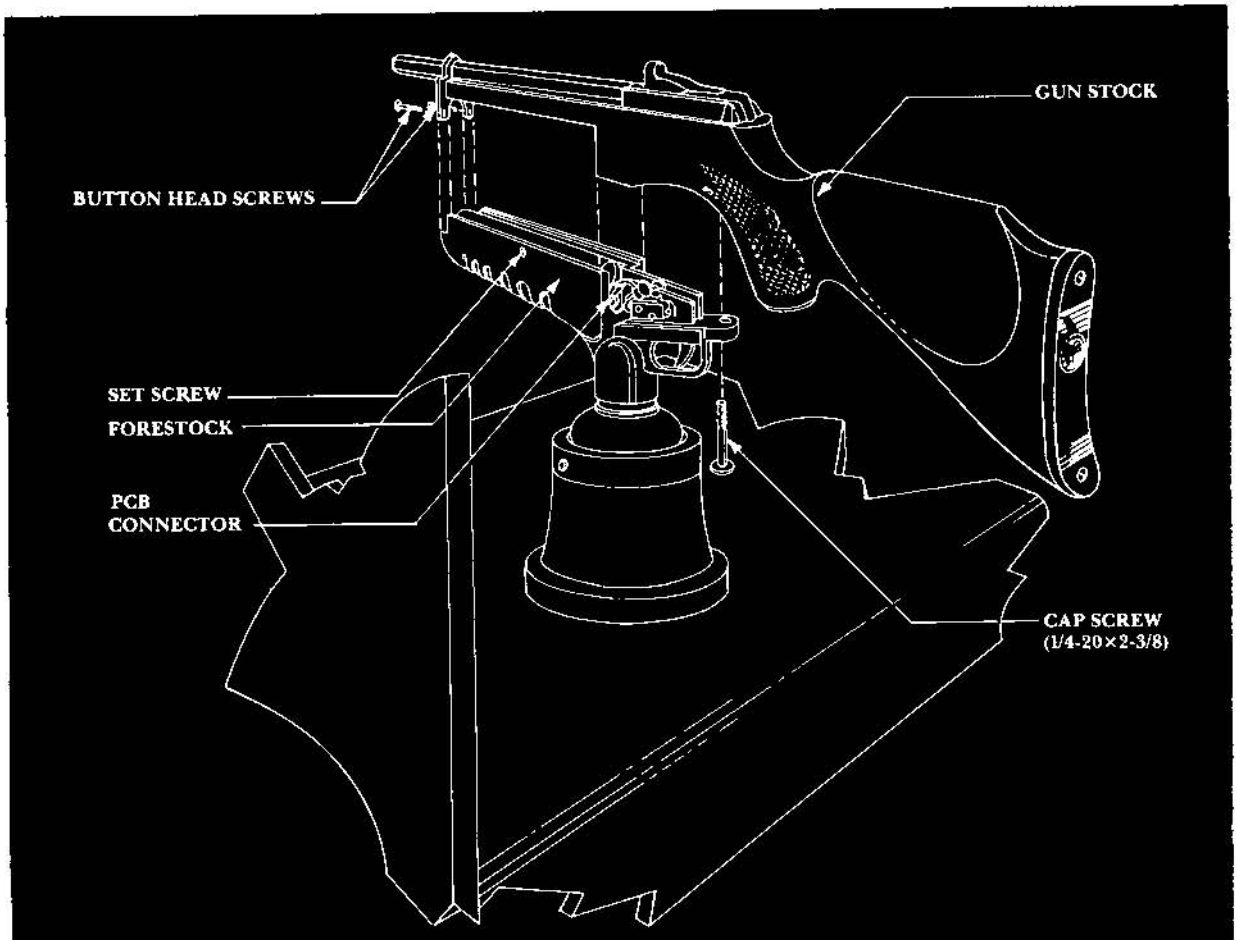


Fig. 2 GUN STOCK

PRELIMINARY CHECK PROCEDURE

AFTER PROPERLY INSTALLING THE STOCK PROCEED AS FOLLOWS:

1. Connect the power plug into 110 VAC 60 Hz outlet.

2. Three seconds after power-up there should be a burst of sound followed by the AUTO SELF DIAGNOSTIC TEST.

3. Following the AUTO SELF DIAGNOSTIC TEST the game will enter the ATTRACT MODE.

4. When AUTO SELF TESTS are completed and the gun stock is properly installed proceed with the GUN SIGHT ALIGNMENT.

GUN SIGHT ALIGNMENT

1. Open the Coin Door to access the AC interlock switch, game will power down.

2. While holding down the START BUTTON pull out the interlock switch to restore power. After a burst of sound the screen should display the MANUAL DIAGNOSTIC MENU MODE.

3. Be sure the index is pointing to GUN SIGHT ALIGNMENT, use the Start Button to index if not.

4. Pull gun trigger and a crosshair (+) will be displayed, release gun trigger.

5. Aim the gun sight to center of crosshair, pull gun trigger once and gun sight will be aligned to the last burst.

6. Press down the START BUTTON and return to the MANUAL DIAGNOSTIC MENU. With the START BUTTON move the index to EXIT MODE, press the GUN TRIGGER and return to the ATTRACT MODE.

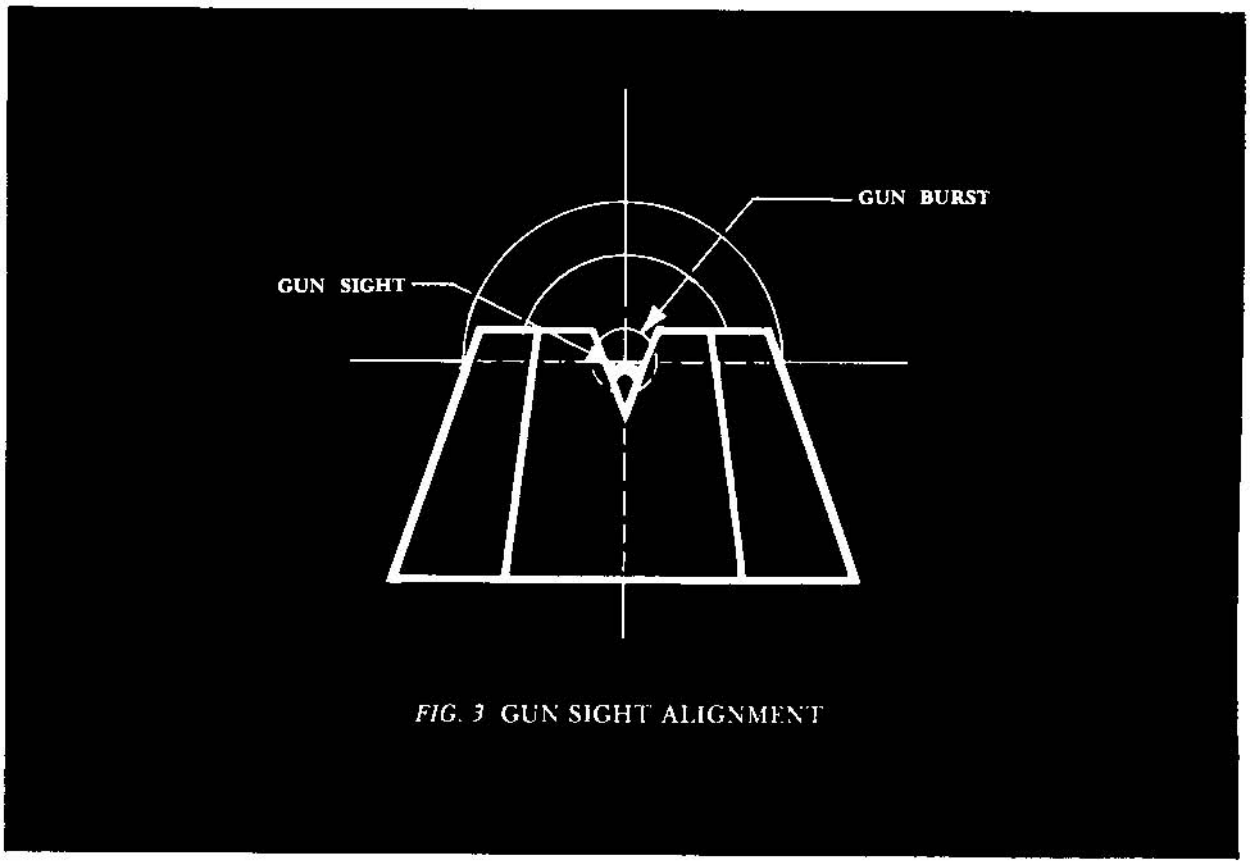
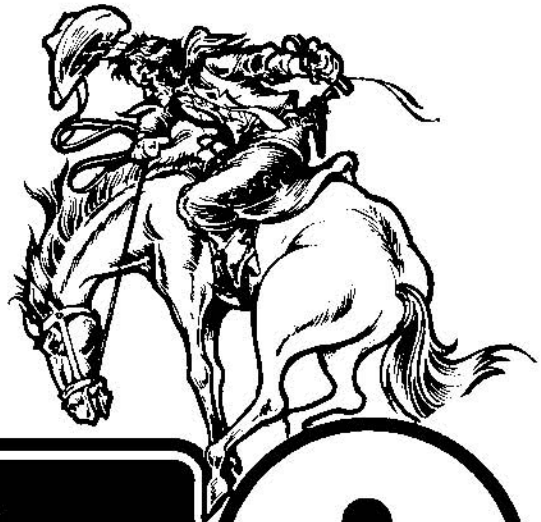


FIG. 3 GUN SIGHT ALIGNMENT



Adjustments

2

ADJUSTMENTS

I. POWER SUPPLY INFORMATION AND ADJUSTMENTS

ALL DC Power required to operate **Cheyenne™** is supplied by the Exidy Power Supply Module. These supply outputs are as follows:

- +5V .....@ 9 AMPS
- +18V .....@ 3 AMPS
- −18V .....@ 3 AMPS

CAUTION: Only certified technicians should make adjustments on all components of ***Cheyenne™****. Only the +5v DC is adjustable. This must be adjusted to: +5.00 VDC as measured on the PCB near the microprocessor (location J2) (See Fig. 4).*

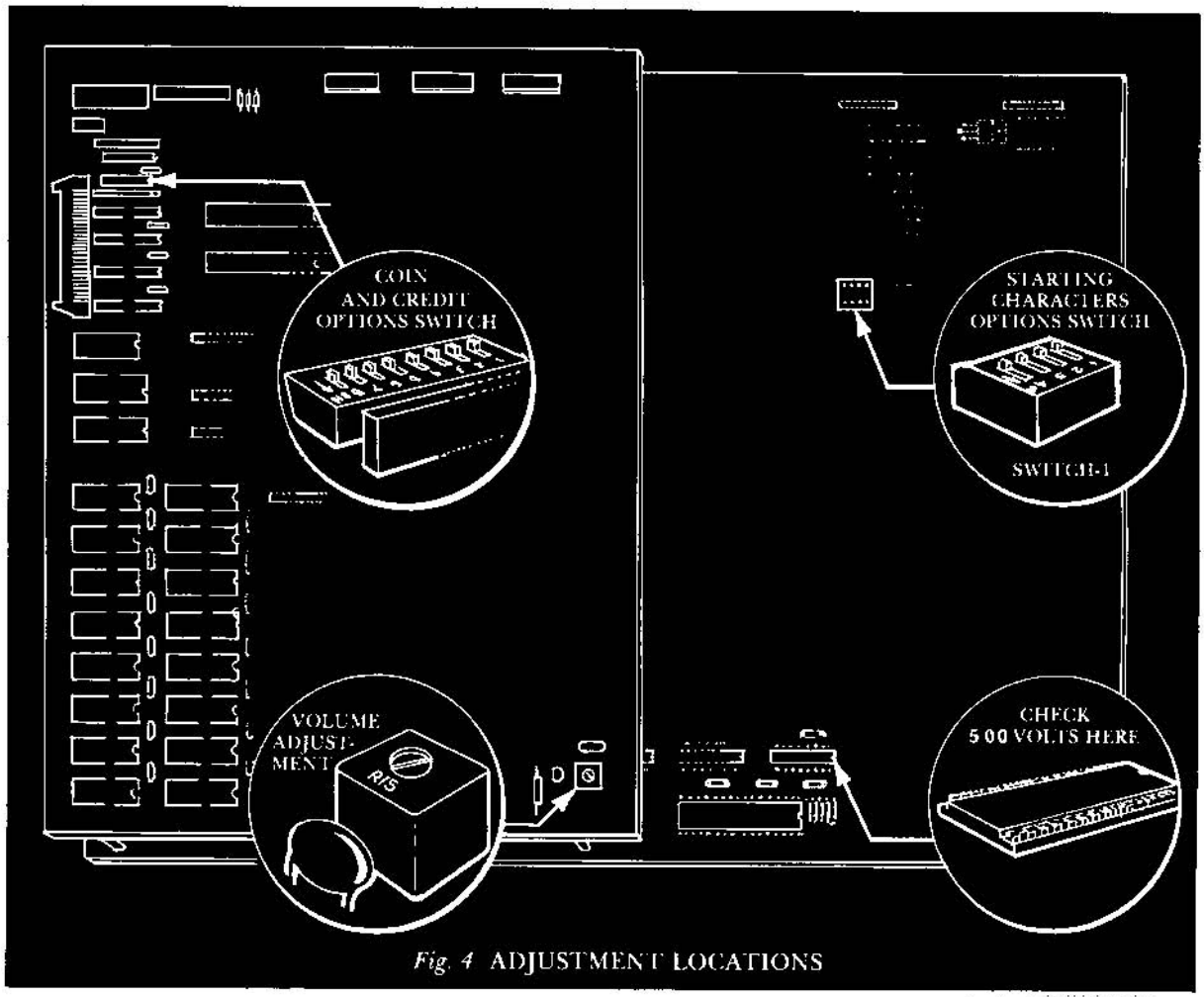


Fig. 4 ADJUSTMENT LOCATIONS

II. AUDIO BOARD ADJUSTMENTS

Adjust R15 master audio volume control located at position T2 on the Audio Logic Board (See Fig. 4) and adjust audio level while game is in progress. This audio board rides piggyback on the logic board, mounted inside of the cabinet on the side wall (See Fig. 1).

III. OPERATOR SELECTABLE OPTIONS

Cheyenne™ has several selectable switch options controlled by an 8 position DIP SWITCH located at B1 of the AUDIO BOARD and a 4 position DIP SWITCH located at J19 of the LOGIC BOARD. Both switches are accessible through the rear door of the game.

SWITCH OPTION SETTINGS
8 POSITION SWITCH LOCATION B1

@ = FACTORY SETTINGS

COINAGE	SWITCH 1	SWITCH 5	SWITCH 6	SWITCH 7	SWITCH 8
FREE PLAY –	ON	OFF	OFF	OFF	OFF
1 COIN — 1 CREDIT	OFF	OFF	OFF	OFF	OFF
@ 2 COINS — 1 CREDIT	OFF	OFF	ON	OFF	OFF
3 COINS — 1 CREDIT	OFF	ON	OFF	OFF	OFF
4 COINS — 1 CREDIT	OFF	ON	ON	OFF	OFF
1 COIN — 2 CREDITS	OFF	OFF	OFF	OFF	ON
2 COINS — 2 CREDITS	OFF	OFF	ON	OFF	ON
3 COINS — 2 CREDITS	OFF	ON	OFF	OFF	ON
4 COINS — 2 CREDITS	OFF	ON	ON	OFF	ON
1 COIN — 3 CREDITS	OFF	OFF	OFF	ON	OFF
2 COINS — 3 CREDITS	OFF	OFF	ON	ON	OFF
3 COINS — 3 CREDITS	OFF	ON	OFF	ON	OFF
4 COINS — 3 CREDITS	OFF	ON	ON	ON	OFF
1 COIN — 4 CREDITS	OFF	OFF	OFF	ON	ON
2 COINS — 4 CREDITS	OFF	OFF	ON	ON	ON
3 COINS — 4 CREDITS	OFF	ON	OFF	ON	ON
4 COINS — 4 CREDITS	OFF	ON	ON	ON	ON

SWITCH OPTION SETTINGS
4 POSITION SWITCH LOCATION J19

GAME PLAY DIFFICULTY	SWITCH 1	SWITCH 2	SWITCH 3	SWITCH 4	
1 EASY	ON	ON			
@ 2 NORMAL	OFF	OFF			
3 HARD	OFF	ON			
5 MOST DIFFICULT	ON	OFF			
STARTING CHARACTERS					
2 CHARACTERS			OFF	ON	
@ 3 CHARACTERS			OFF	OFF	
4 CHARACTERS			ON	OFF	
5 CHARACTERS			ON	ON	

IV. OPTICAL SENSITIVITY ADJUSTMENT

The Cheyenne uses an Optical Sensor PCB mounted in the forestock to monitor the scanning electron beam of the CRT. Gun positioning information from this Optical Sensor PCB is monitored by the Logic PCB. The Optic PCB sensitivity adjustment allows for monitor intensity, distance between gun and monitor and the electronic circuitry tolerance.

During game play each time the trigger is pulled there will be a white flash and a small dot is displayed wherever the gun is aimed. If for any reason the optic circuitry is not sensing the screen when the trigger is pulled the dot will not be displayed, and an audio warning sound will be heard. When this occurs, the optical sensor sensitivity should be readjusted.

1. To access the optical electronics, remove the (2) button head screws and the (1) cap screw and gently lift the Gun Stock from the Forestock (See Fig. 5).
2. Select the MANUAL DIAGNOSTIC MODE. To enter this mode, hold down the Start Button while applying power.
3. Index the pointer to the CHECK INTERRUPTS test, pull gun trigger and execute. When test is complete it will return to the MANUAL DIAGNOSTIC MENU MODE.
4. Index the pointer to the OPTICAL ADJUSTMENT and pull Gun Trigger, a white screen should appear.
5. If the screen should come up with wavering lines, repower the game and return to MANUAL DIAGNOSTIC MENU. Perform the CHECK INTERRUPTS, then index to the OPTICAL ADJUSTMENT.

(continued)

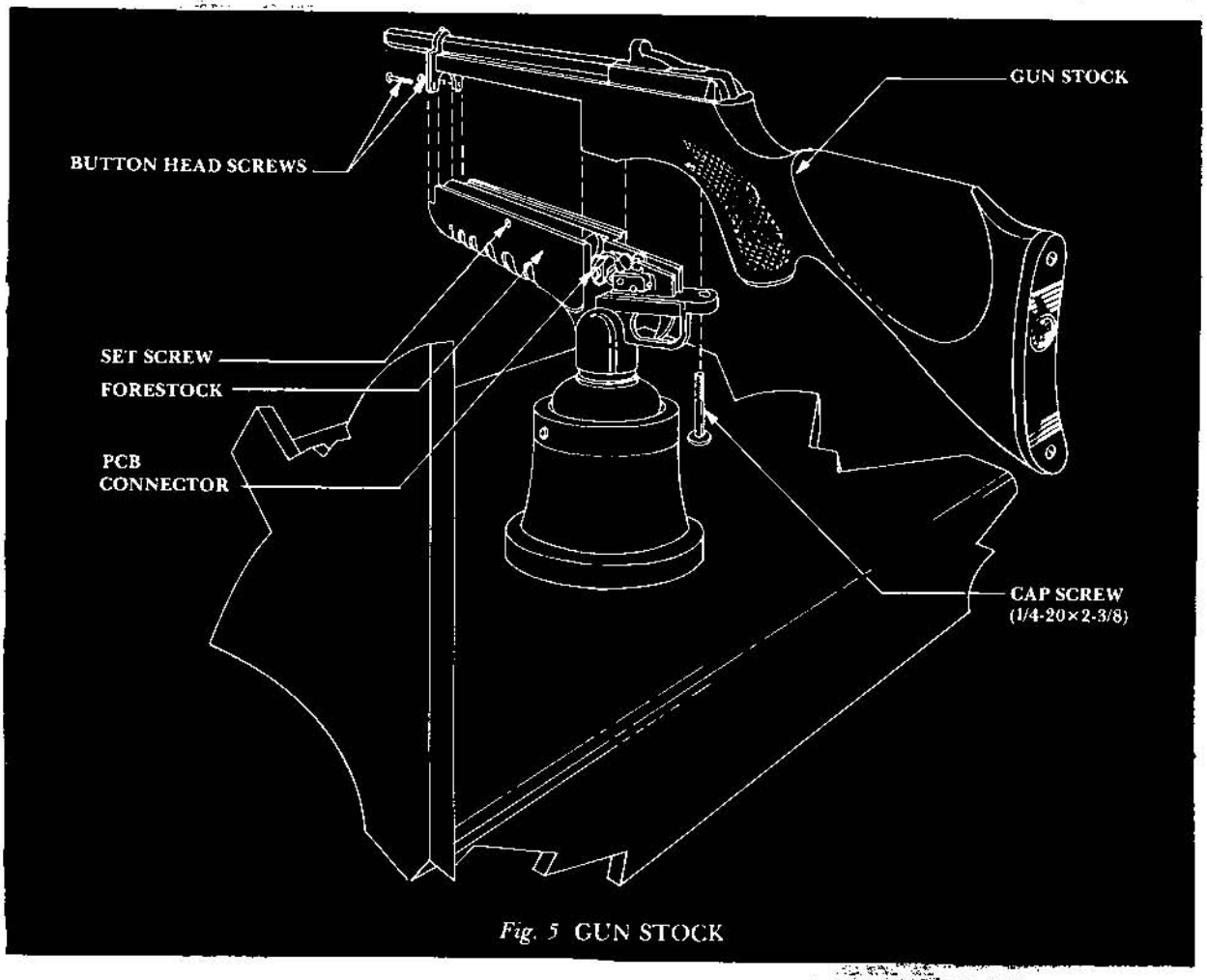


Fig. 5 GUN STOCK

6. Aim the Gun to the enter of the screen, an orange rectangular pattern with a brown leading edge should be displayed (See Fig. 6-C).
7. Turn sensitivity control CCW until oscillation and an orange rectangular pattern are displayed (See Fig. 6-A). Now turn sensitivity control CW until oscillation diminishes just beyond this oscillation point (See Fig. 6-B), from this point turn sensitivity control CW approx. ¼ turn more. This should be the optimum setting.
8. The rectangular pattern should appear on the screen wherever you aim the Forestock (Optic), with the exception of approx. 2" to the extreme left of screen.
9. Reinstall the Gun Stock Assembly. Refer to **Cheyenne™** Stock Installation procedure (Page 4 Steps 2 & 3). This completes the optical check.

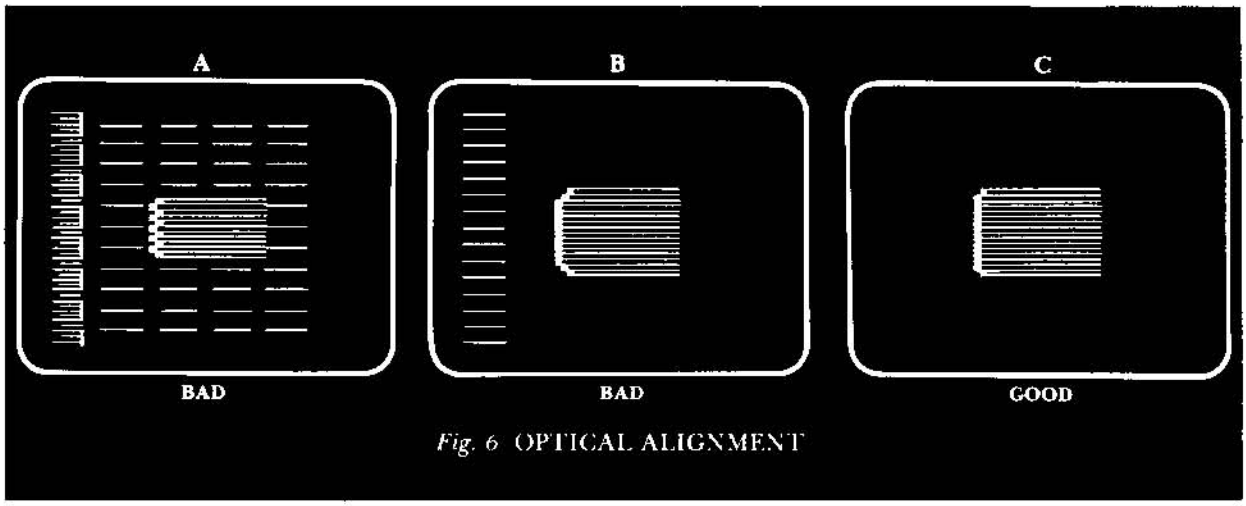


Fig. 6 OPTICAL ALIGNMENT

V. GUN SIGHT ALIGNMENT

1. Open the Coin Door to access the AC interlock switch, game will power down (See Fig. 1).
2. While holding down the START BUTTON pull out the interlock switch to restore power. After a burst of sound the screen should display the MANUAL DIAGNOSTIC MENU MODE.
3. Be sure the index is pointing to GUN SIGHT ALIGNMENT, use the Start Button to index if not.
4. Pull Gun Trigger and a crosshair (+) will be displayed, release gun trigger.
5. Aim the Gun Sight to center of crosshair, pull Gun Trigger once and Gun Sight will be aligned to the last burst (See Fig. 7).

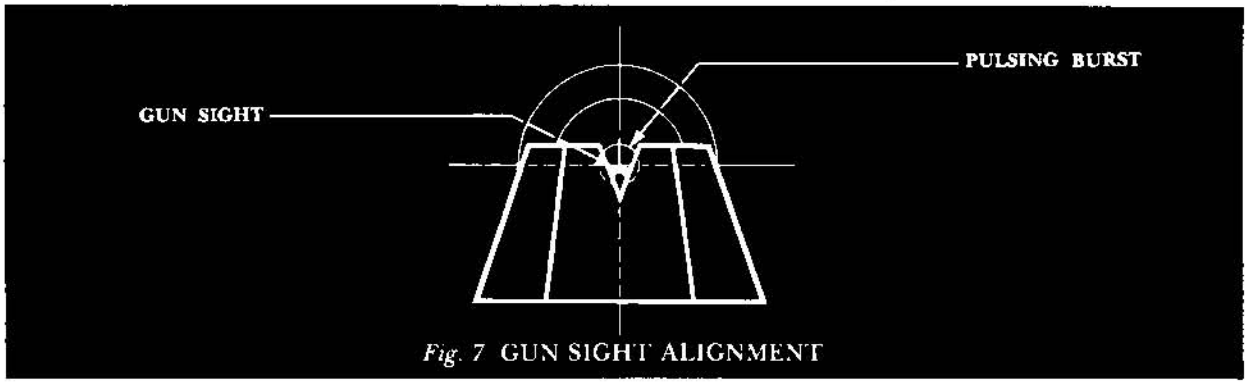


Fig. 7 GUN SIGHT ALIGNMENT

Modes Of Operation

3

MODES OF OPERATION

CHEYENNE™ HAS FOUR MODES OF OPERATION:

A. AUTO SELF DIAGNOSTIC TEST MODE
B. MANUAL DIAGNOSTIC MODE
C. ATTRACT MODE
D. PLAY MODE

To bypass all diagnostics, press rifle trigger during the power-up sequence.

AUTO SELF DIAGNOSTIC TEST MODE

RAM TEST
SCREEN RAM TEST
CRC OF PROGRAM ROMS
CHECKSUM OF DATA BANK ROMS
AUDIO TEST
E^2 PROM

MANUAL DIAGNOSTIC MENU MODE

To access the manual diagnostic mode, hold down the START BUTTON on power-up. Once this mode is accessed, any of the listed selections may be indexed by the player start button and executed by the GUN TRIGGER.

GUN ALIGNMENT

Displays a crosshair (+) for gun sight alignment. Aim the GUN SIGHT at center of crosshair and fire gun once. the GUN SIGHT will be aligned to the last burst.

Press START BUTTON and return to the MANUAL DIAGNOSTIC MENU.

RAM TEST

Tests RAMS on logic board at locations A8 and A9.**

SCREEN RAM TEST

Tests RAMS on logic board at locations:**

B14-B21
C14-C21
D14-D21
E14-E21

CRC CHECK OF PROGRAM ROMS

Tests ROMS on logic board at locations A1, A3, A4, and A6.**

CHECKSUM OF DATA BANK ROMS

Tests ROMS on logic board at locations:*

B1, B3, B4, B6, B7, B8, B10
C8, C10, C11
D1, D3, D4, D6, D7, D8, D10,
E1, E3, E4, E6, E7, E8, E10, E11

AUDIO TEST

Tests the communication between logic and audio board.

NOTES: * *See Diagnostic Error Code FIG. 8 for suspected location of RAM or ROM.*
** *The Processor may not run dependent on the extent of chip failure of these locations.*

CHECK INTERRUPTS

Tests for horizontal and vertical frame interrupts.

GRAY SCALE

Displays a graduated gray scale for monitor check or adjustments.

CROSSHATCH

Displays horizontal and vertical lines for monitor linearity and convergence checks or adjustments.

COLOR BARS AND BLOCKS

Displays a color visual test pattern utilizing the backround and moving object circuitry. The bars are produced by the backround circuitry and the blocks are produced by the moving object circuitry.

OPTICAL ADJUSTMENTS

Displays a rectangular pattern for adjusting the sensitivity of the Optical Sensing Circuitry.

RESET TO FACTORY SETTINGS

Sets the high score and also checks the E^2 ROM*** located at B11 of the logic board. The E^2 PROM contains the high score table and gun alignment information. Running this diagnostic will reset the high score table. It will also require that the accuracy of the gun alignment be rechecked.

RESET HIGH SCORE TABLE TO ZERO

Resets all high scores on the high score table to zero. (Same as reset to factory set) except to zero.

EXIT

Returns game to the ATTRACT MODE.

FREE PLAY

For those wishing to demonstrate Cheyenne, a freeplay mode may be achieved by turning on switch #1 on audio board at location B1.

ATTRACT MODE

The attract mode appears after power-up auto self diagnostic and after every game. This mode will continue to display the attract mode repeatedly until a coin, and the start button is pressed.

HIGH SCORE TABLE

GAME SCENE

COIN AND CREDIT INSTRUCTIONS

GAME PLAY INSTRUCTIONS

NOTE:

*** E^2 PROM = *Electrically Erasable Programable READ ONLY MEMORY.*

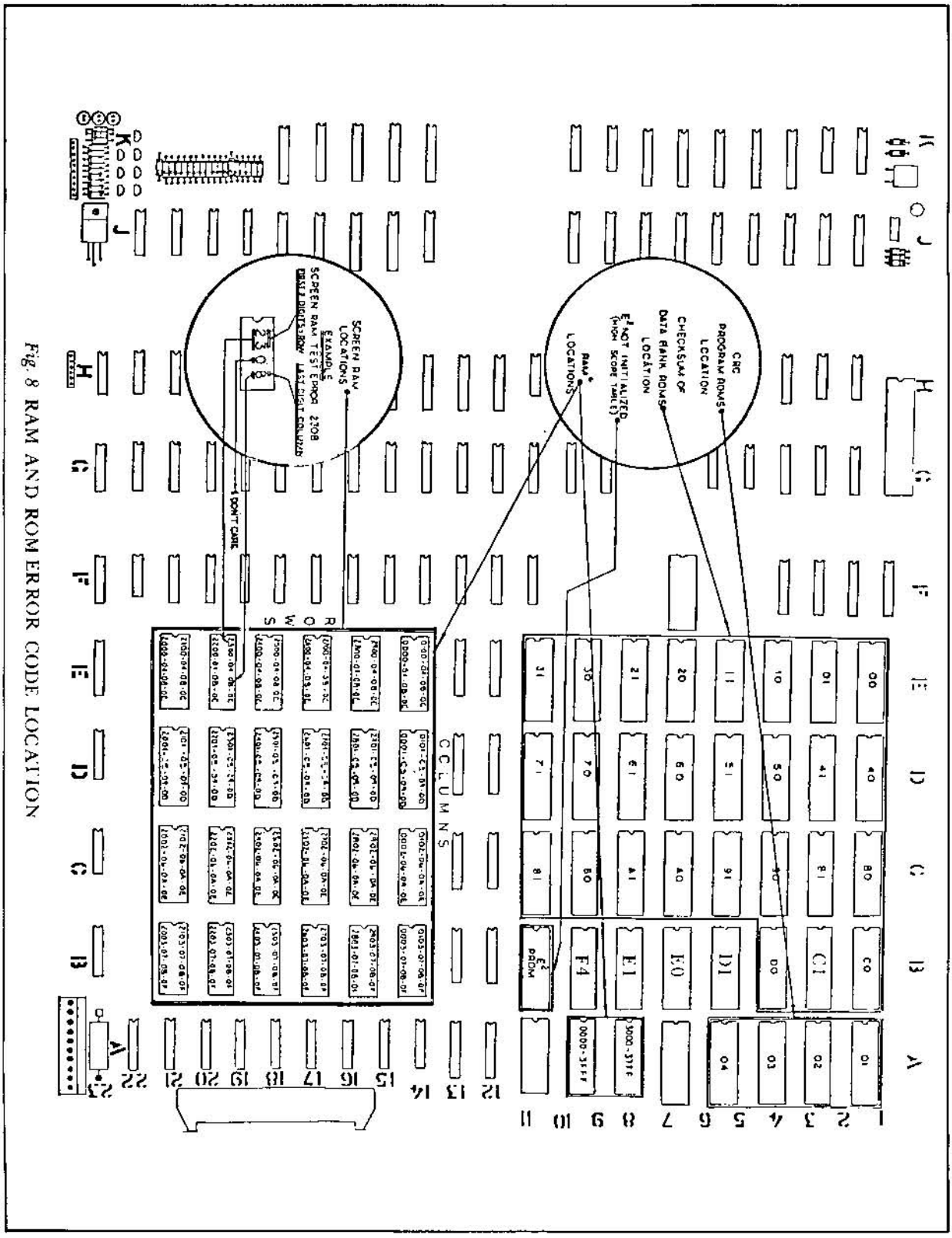
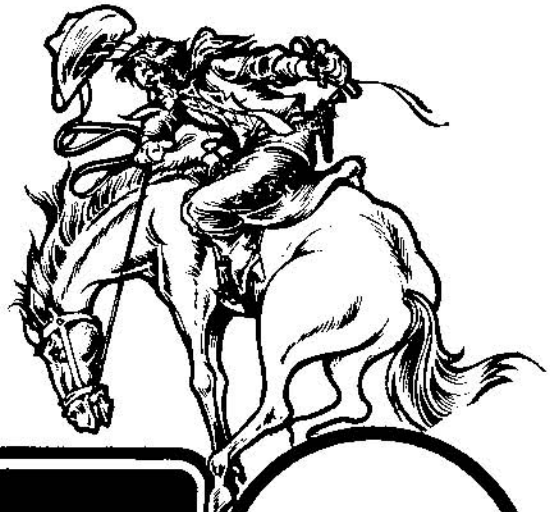


Fig. 8 RAM AND ROM ERROR CODE LOCATION



Schematics

4

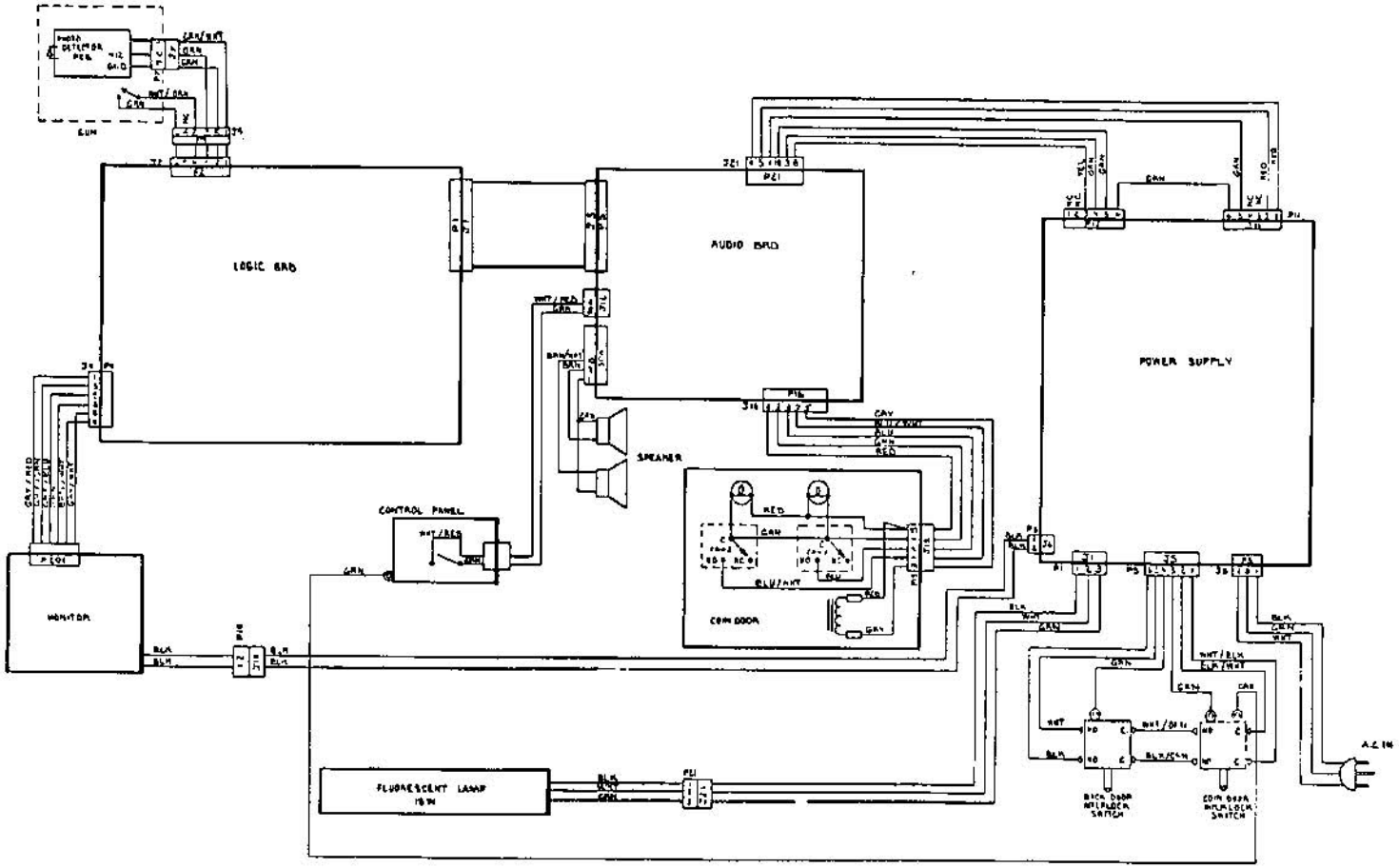


Fig. 10 WIRING DIAGRAM

HARNESS

PART NUMBER	DESCRIPTION
49-0067-05	ASSEMBLY, GUN
49-0066-05	ASSEMBLY, FLUORESCENT LAMP
49-0065-05	ASSEMBLY, 50 PIN RIBBON CABLE
49-0064-05	ASSEMBLY, COIN DOOR
49-0063-05	ASSEMBLY, CONTROL & COIN INTERFACE
49-0062-05	ASSEMBLY SPEAKER
49-0061-05	ASSEMBLY, INTERLOCK DIST.
49-0060-05	ASSEMBLY, LAMP & MONITOR
49-0059-05	ASSEMBLY, VIDEO
49-0058-05	ASSEMBLY, D.C. SUPPLY

GUN ASSEMBLY

PART NUMBER	DESCRIPTION
90-0091-00	ASSEMBLY, GUN MOUNT
75-0011-00	KNUCKLE MOUNT
75-0012-00	RING MOUNT
70-0048-00	PIVOT PIN
50-1103-27	SCREW, 6/32 × 3/8
90-0092-00	ASSEMBLY, FORE STOCK
95-0033-00	ROLL PINS 3/16 × 1-1/4
95-0034-00	SPRING, TRIGGER
75-0013-00	FORESTOCK, CASTING
70-0047-00	BUSHING, TRIGGER
70-0049-00	TUBE MOUNT
65-0125-00	TRIGGER PLATE
55-0004-00	NYLON SPACER 1/2 × 8 CLEARANCE
50-9905-00	SCREW, 256 × 5/8 P.H.X
50-2103-27	SCREW, 8/32 × 3/8
50-2104-00	SCREW, 8/32 × 1/2
50-2106-00	SCREW, 8/32 × 3/4
48-3005-00	SWITCH, MICRO #483005-001
37-0018-00	CLAMP, NYLON RICHO N-2
90-0093-00	ASSEMBLY, OPTIC TUBE
77-0020-05	ASSEMBLY PHOTO DETECTOR PCB
80-0076-00	PHOTO SENSOR HOLDER
80-0069-00	PLANO-CONVEX LENS 25MM × 100MM F.L.
90-0113-00	ASSEMBLY, GUN STOCK
75-0015-00	CASTING, GUN BARREL
75-0016-00	CASTING, GUN STOCK
50-3105-26	ALLEN SCREW, 10-32 × .625
50-5418-15	ALLEN BOLT, 1/4-20 × 2 1/4

GUN ASSEMBLY

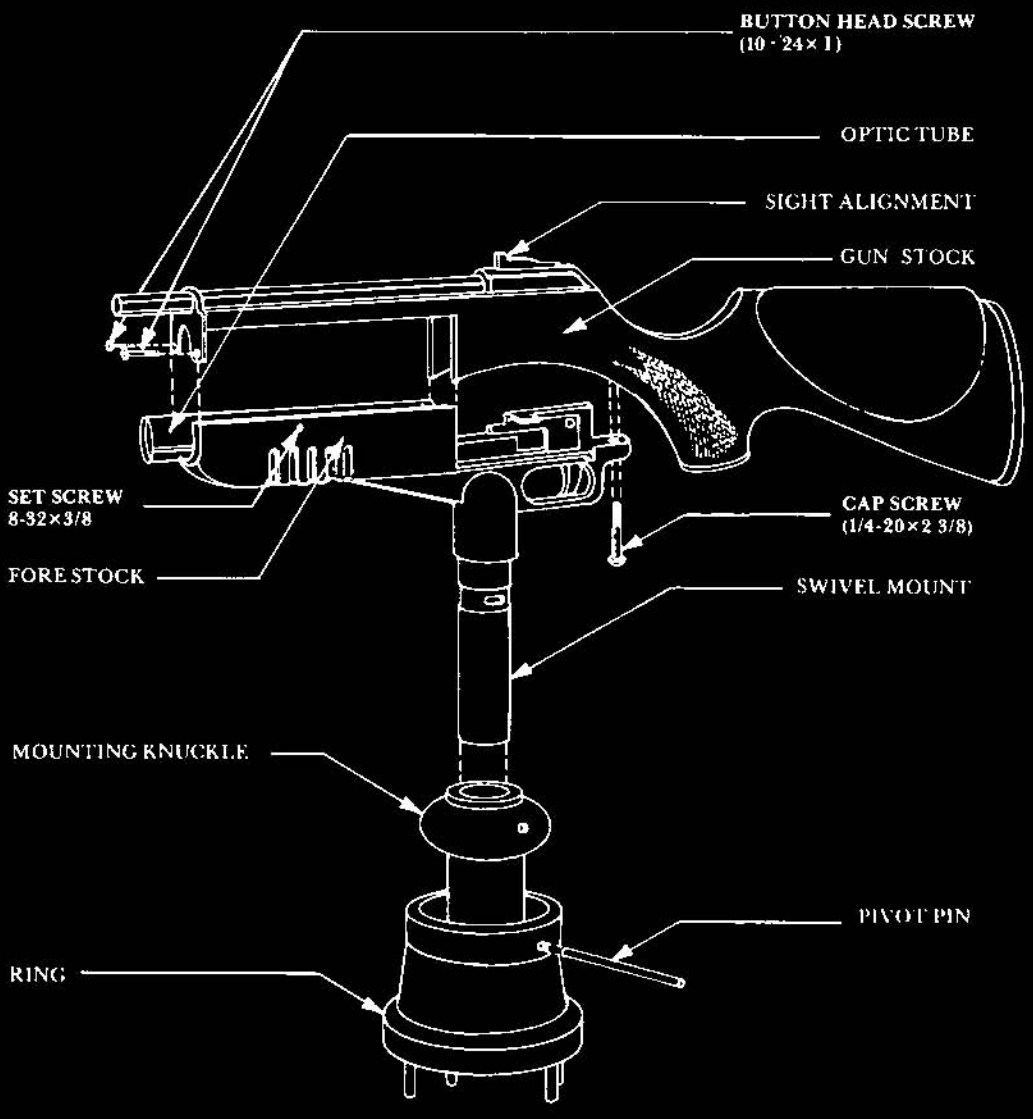


Fig. 11 GUN ASSEMBLY

99-9001-00

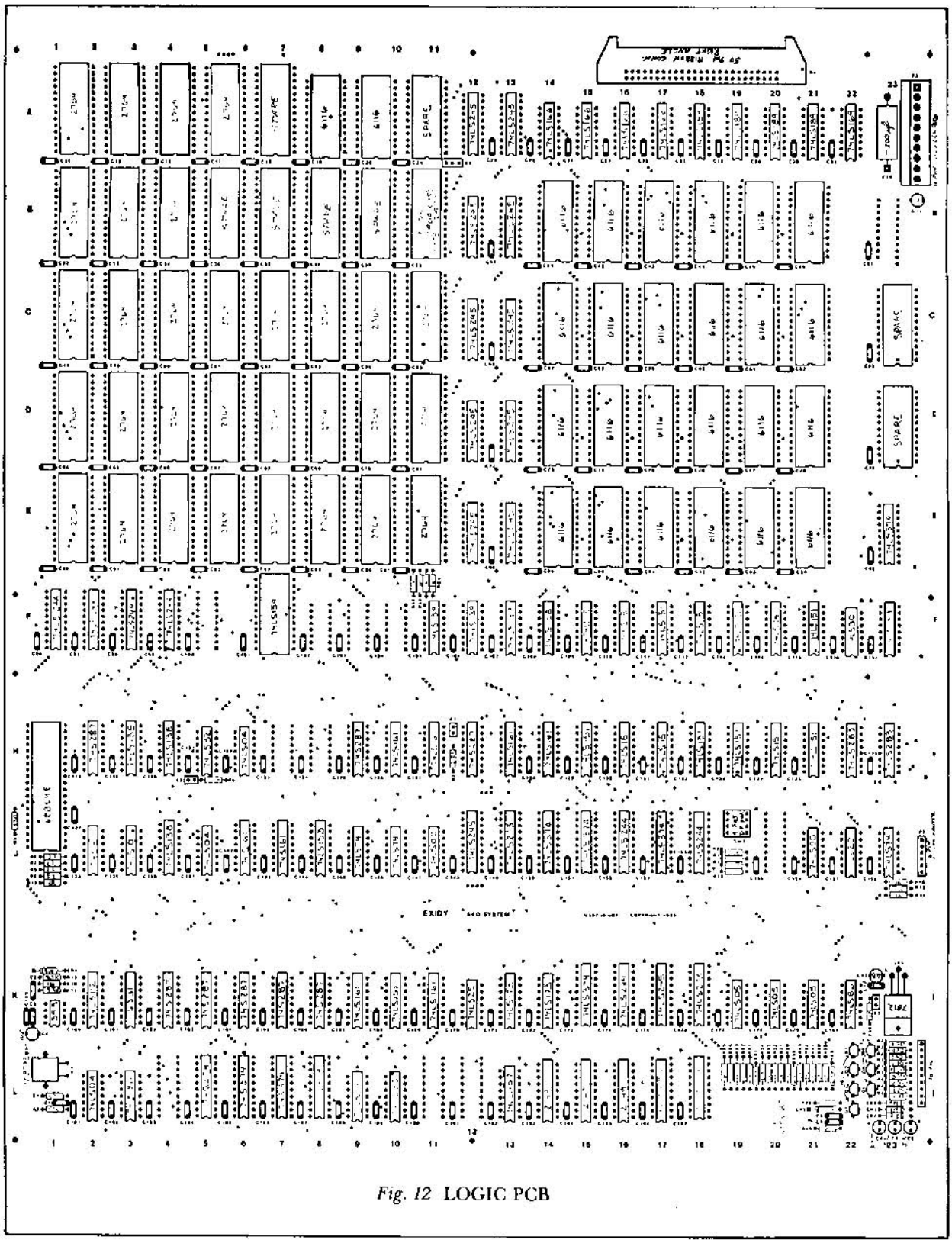


Fig. 12 LOGIC PCB

LOGIC PCB

PART NUMBER	DESCRIPTION
77-0019-04	LOGIC PCB BLANK
77-0019-05	LOGIC PCB
74-8547-00	SPACER, SNAP-IN
49-0065-05	CABLE, RIBBON 50 CONDUCTOR
48-5016-00	SWITCH, 4 POSITION DIP
44-1601-00	SOCKET, 16 PIN
44-2401-00	SOCKET, 24 PIN
44-2801-00	SOCKET, 28 PIN
44-4001-00	SOCKET, 40 PIN
41-0009-00	CONNECTOR, 50 PIN RIBBON
40-0021-06	CONNECTOR, 6 POSITION INLINE
40-0021-10	CONNECTOR, 10 POSITION INLINE
40-0061-00	CONNECTOR, 10 POSITION MALE
29-0005-00	CRYSTAL, 12.979 MHZ
28-0005-00	I.C., 2804 RAM (300NS)
28-0006-00	I.C., 2149 RAM (35NS)
27-0003-00	I.C., NE555
25-0007-00	I.C., 68B09E CPU 2MHZ
23-0045-00	I.C., 6116
22-0001-02	I.C., 74LS00
22-0002-02	I.C., 74LS02
22-0003-02	I.C., 74LS04
22-0005-02	I.C., 74LS08
22-0007-02	I.C., 74LS20
22-0010-02	I.C., 74LS32
22-0011-02	I.C., 74LS74
22-0012-02	I.C., 74LS112
22-0013-02	I.C., 74LS138
22-0014-02	I.C., 74LS139
22-0015-02	I.C., 74LS157
22-0016-01	I.C., 74S161
22-0016-02	I.C., 74LS161
22-0017-02	I.C., 74LS166
22-0020-02	I.C., 74LS245
22-0021-01	I.C., 74S374
22-0021-02	I.C., 74LS374
22-0022-02	I.C., 74LS154
22-0027-01	I.C., 74S86
22-0027-02	I.C., 74LS86
22-0030-02	I.C., 74LS151
22-0041-02	I.C., 74LS10
22-0043-02	I.C., 74LS169
22-0044-02	I.C., 74LS283
22-0061-02	I.C., 74LS244
22-0062-02	I.C., 74LS05
22-0063-02	I.C., 74LS30

(continued)

LOGIC PCB

PART NUMBER	DESCRIPTION
22-0064-02	I.C., 74LS25
22-0065-02	I.C., 74LS153
22-0066-02	I.C., 74LS173
22-0067-02	I.C., 74LS189
22-0068-02	I.C., 74LS273
21-0006-00	REGULATOR, 7812
21-0007-00	TRANSISTOR, 2N3904
21-0008-00	TRANSISTOR, 2N3906
20-0008-00	DIODE, 1N914
13-1062-00	CAPACITOR, 10UF
13-1075-00	CAPACITOR, 100UF
13-6844-00	CAPACITOR, 6.8μF DIP-TANT
11-3305-02	CAPACITOR, 3.3μF
10-1034-1	CAPACITOR, .01μF
10-1044-1	CAPACITOR, .1μF
02-1012-00	RESISTOR, 100 OHM
02-1021-00	RESISTOR, 1K 1%
02-1022-00	RESISTOR, 1K
02-1032-00	RESISTOR, 10K
02-1052-00	RESISTOR, 1MEG
02-1631-00	RESISTOR, 16K
02-2021-00	RESISTOR, 2K 1%
02-2222-00	RESISTOR, 2.2K
02-2712-00	RESISTOR, 270 OHM
02-3312-00	RESISTOR, 330 OHM
02-3322-00	RESISTOR, 3.3K
02-4021-00	RESISTOR, 4K 1%
02-4712-00	RESISTOR, 470 OHM
02-4722-00	RESISTOR, 4.7K
02-8021-00	RESISTOR, 8K 1%

AUDIO PCB

PART NUMBER	DESCRIPTION
77-0022-04	AUDIO PCB BLANK
77-0022-05	AUDIO PCB
49-5002-00	SWITCH, 8 POSITION DIP
44-1601-00	SOCKET, 16 PIN
44-2401-00	SOCKET, 24 PIN
44-2801-00	SOCKET, 28 PIN
44-4001-00	SOCKET, 40 PIN
41-0003-00	CONNECTOR, 10 PIN FEMALE
40-0005-10	CONNECTOR, 10 PIN MOLEX
40-0021-08	CONNECTOR, 8 POS. INLINE
40-0021-10	CONNECTOR, 10 POS. INLINE
40-0021-12	CONNECTOR, 12 POS. INLINE
27-0004-00	I.C., MC3417L
27-0006-00	I.C., AD558
27-0007-00	I.C., MC3418
26-0005-00	I.C., 6844
25-0008-00	I.C., 6809 CPU
23-0045-00	I.C., 6116
22-0001-02	IC., 74LS00
22-0003-02	IC., 74LS04
22-0004-00	IC., 7407
22-0005-02	IC., 74LS08
22-0010-02	IC., 74LS32
22-0011-02	IC., 74LS74
22-0014-02	IC., 74LS139
22-0015-02	IC., 74LS157
22-0016-02	IC., 74LS161
22-0017-02	IC., 74LS166
22-0020-02	IC., 74LS245
22-0021-02	IC., 74LS374
22-0026-00	IC., LM324
22-0027-02	IC., 74LS86
22-0028-00	IC., 4051
22-0036-00	IC., LM741
22-0038-02	IC., 74LS367
22-0039-02	IC., 74LS42
22-0061-02	IC., 74LS244
22-0067-02	IC., 74LS189A
22-0071-00	IC., 7406
22-0077-00	IC., CA3080
21-0001-00	TRANSISTOR, TIP 120
21-0002-00	TRANSISTOR, TIP 125
21-0005-00	REGULATOR, 7912
21-0006-00	REGULATOR, 7812
21-0007-00	TRANSISTOR, 2N3904
21-0008-00	TRANSISTOR, 2N3906
21-0010-00	TRANSISTOR, 2N2222
20-0001-00	DIODE, 1N4002

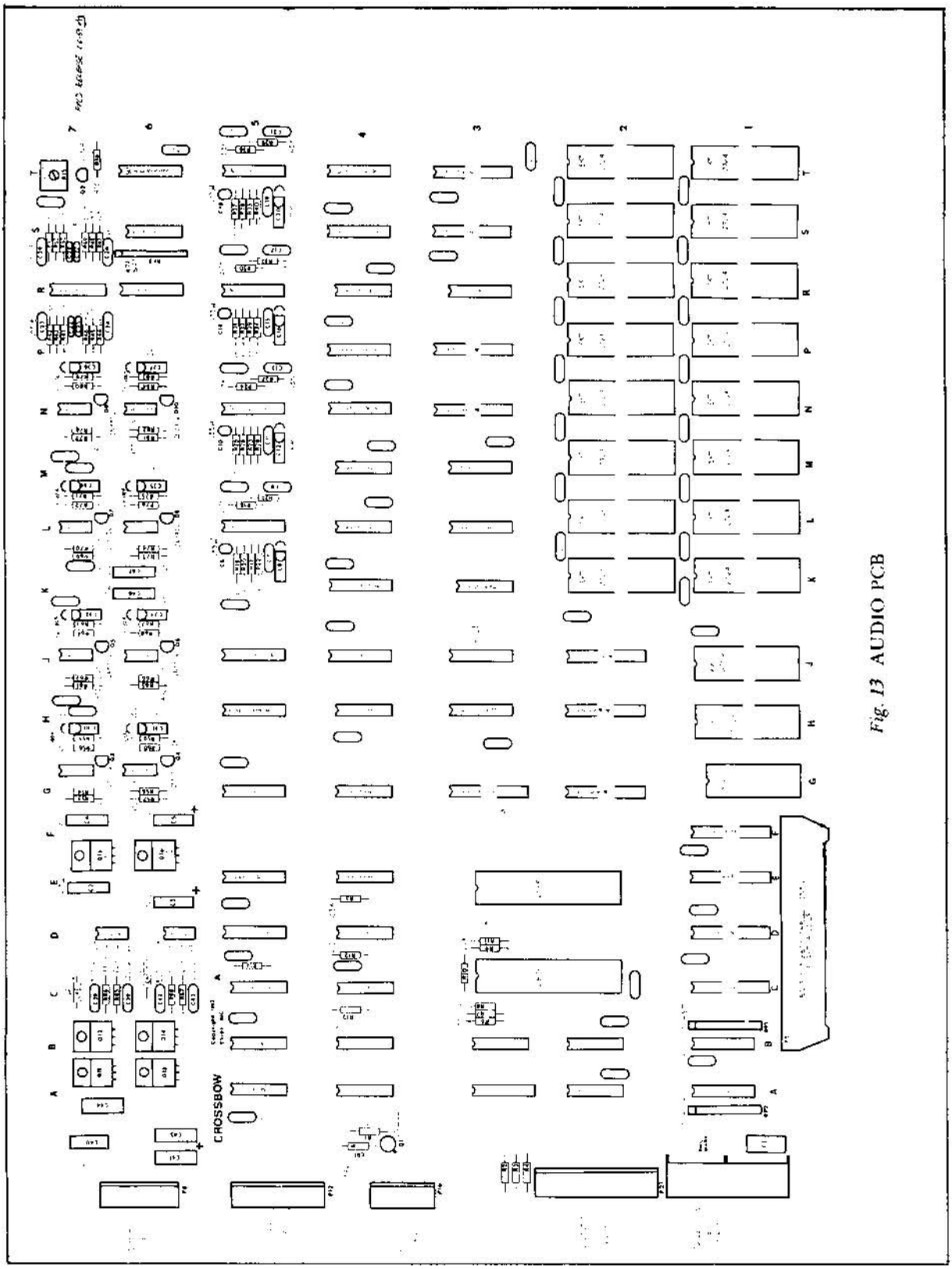


Fig. 13 AUDIO PCB

POWER SUPPLY

PART NUMBER	DESCRIPTION
90-0094-00	ASSEMBLY, POWER SUPPLY
32-0002-00	PLUS 5 VOLT REGULATED POWER SUPPLY
130-0003-00	ASSEMBLY, TRANSFORMER
90-0017-00	GROMMET
77-0003-04	PRE-REGULATOR, PCB BLANK
77-0003-04	PRE-REGULATOR, PCB
65-0133-00	CHASSIS, POWER SUPPLY
65-0134-00	PROTECTIVE COVER, +5 VOLT POWER SUPPLY
58-0062-00	STANDOFF, PCB
45-0012-00	TERMINAL, TAB
40-0005-06	CONNECTOR, 6 PIN
34-0002-00	FUSE HOLDER
31-0001-00	FILTER, AC LINE
20-0007-00	RECTIFIER, BRIDGE

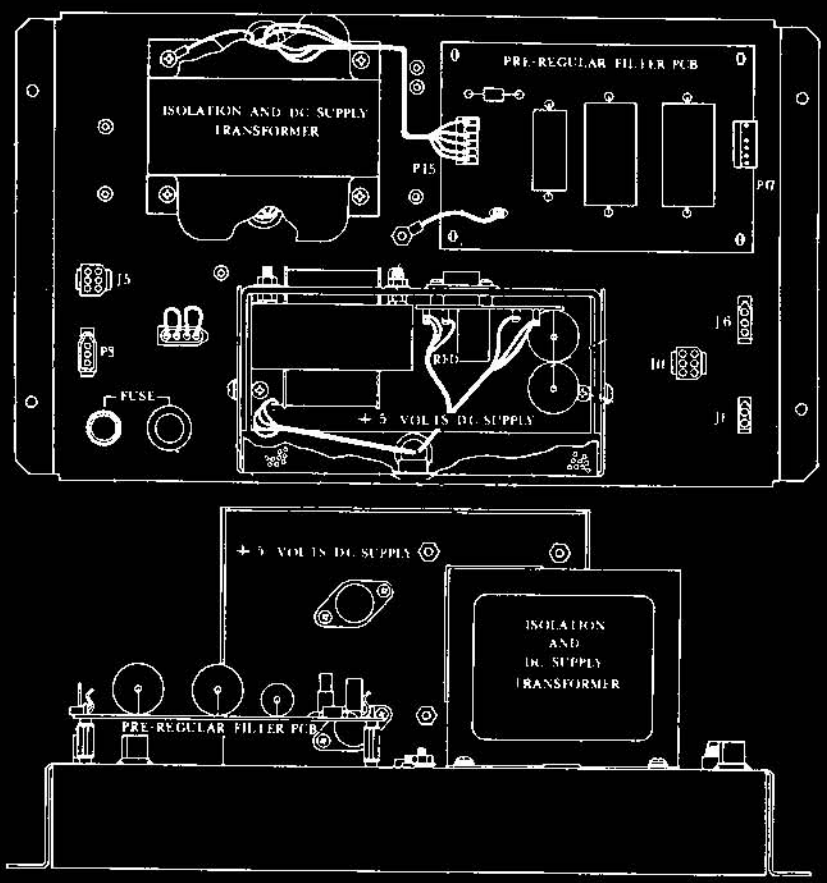


Fig. 14 POWER SUPPLY

OPTICAL SENSOR PCB

PART NUMBER	DESCRIPTION
77-0020-04	PHOTO DETECTOR PCB BLANK
77-0020-05	PHOTO DETECTOR PCB
22-0070-00	I.C., LM311
21-0007-00	TRANSISTOR, 2N3904
20-0012-00	DIODE, PHOTO (TELEFUNKEN 153P)
13-1062-00	CAPACITOR, 10μF
10-1044-1	CAPACITOR, .1μF
10-1201-02	CAPACITOR, 120PF CERAMIC DISC.
10-6800-02	CAPACITOR, 68PF CERAMIC DISC.
07-0004-00	CAPACITOR, VARIABLE 10K TEN TURN TRIMPOT
02-1032-00	RESISTOR, 10K
02-1532-00	RESISTOR, 15K
02-2222-00	RESISTOR, 2.2K
02-5022-00	RESISTOR, 5K
02-8242-00	RESISTOR, 820K

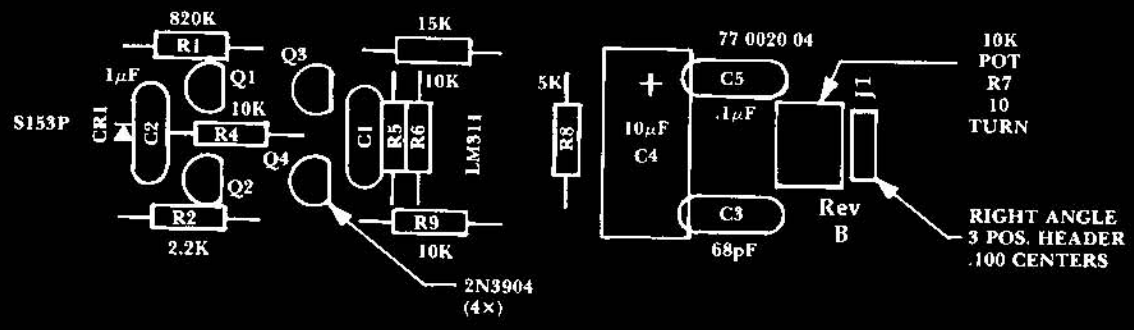


Fig. 15 OPTICAL PCB

MISCELLANEOUS

PART NUMBER	DESCRIPTION
00-0007-00	CHEYENNE™ MANUAL
49-0069-05	AC POWER CORD
35-0001-00	AC LINE FUSE 5 AMP
135-0024-00	110 AC PROGRAM PLUG
137-0025-00	220 AC PROGRAM PLUG