Cisco Heat

ALL AMERICAN POLICE CAR RACE

© 1990

SERVICE MANUAL AND PARTS LIST

™
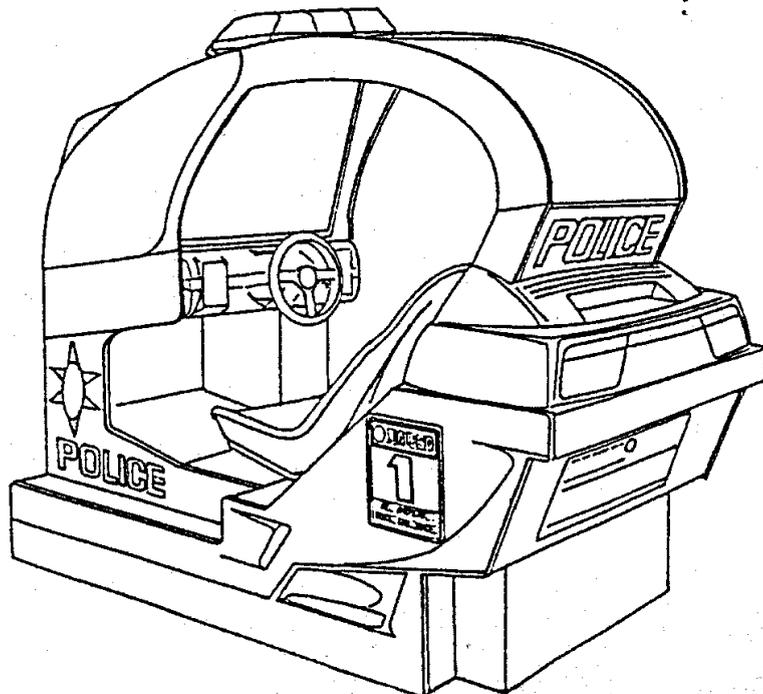
CISCO HEAT
TECHNICAL DATA

Power Requirements:	100v AC	Japanese Specification
	110v AC	USA Specification
	220/240v AC	European Specification

| Weight: | 320 kg | Approximate |
| | 704 lbs | Approximate |

Dimensions:	1,760 mm	Height
	69.25 inches	Height (Approx.)
	1,950 mm	Depth
	76.75 inches	Depth (Approx.)
	920 mm	Width
	36.2 inches	Width (Approx.)

WARNING

SERVICE PERSONNEL

Danger, be sure to remove power supply to the machine before commencing servicing. This machine is fitted with high-power motors and moving parts. Take extreme care when servicing and testing.

CABINET DESIGN, SPECIFICATIONS AND GAME PROGRAM ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTIFICATION

TM

INDEX

SPECIFICATION

1	Power Usage	AC 100/110V 5A 50/60 Hz
		AC 220/240V 10A 50/60 Hz
2	Power Consumption	During Game Play 400w
		During Attract Mode 200w
3	Monitor	26" Colour
4	Dimensions	Width 920 mm
		Depth 1,960 mm
		Height 1,880 mm

1,880 mm — 1,960 mm — 920 mm
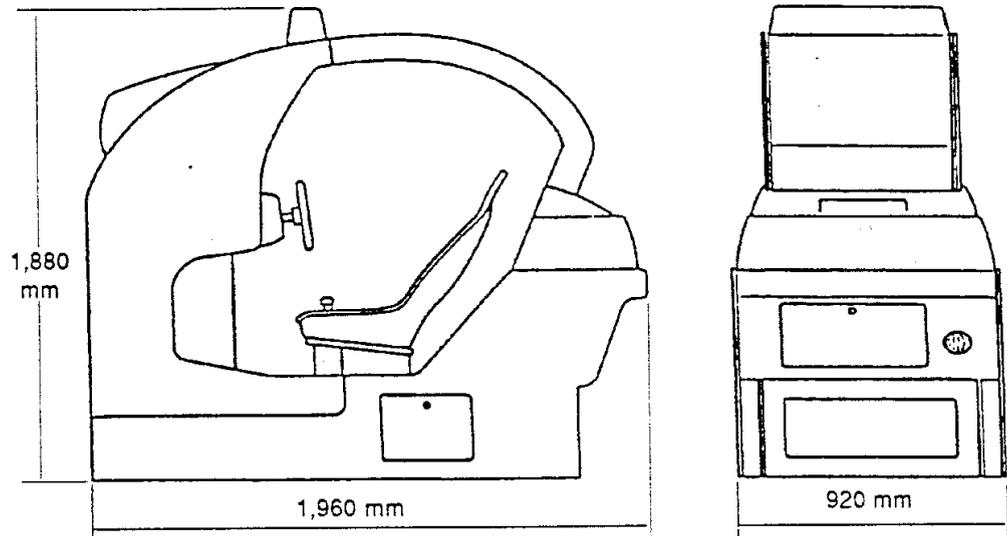
5	Machine Weight	320 kg
6	Coin Box Capacity	2,500 (¥100 coin size)
7	Maximum Capacity	One person
8	Maximum Weight	150 kg
9	Game time	100 Seconds
10	PCB Power Usage	5v 13amp
11	Accessories:	

Cash Box Key	x	1
Key to all other doors	x	1
Manual	x	1
Potentiometer (VR 5k ohm)	x	1
Rubber Roller (MB9001-30226)	x	1
Brushes (DC motor 200w)	x	1
Lamp (Flashing Patrol Light G30)	x	1
Lamp (12v start, race button)	x	1
Hexagon wrench 5 mm	x	1
Hexagon wrench 4 mm	x	1
Hexagon wrench 2.5 mm	x	1

Attention specifications are subject to change without prior notification. If this machine is rebuilt or altered in any way without prior written consent from the manufacturer, then Jaleco Ltd. holds no responsibility for whatever loss or damages might be incurred including injury or the loss of life.

> To avoid danger at such times as when an authorised serviceman needs to inspect or examine the machine, without fail cut the power beforehand by turning the power switch to the off position.

IMPORTANT ITEMS

2-1   Care in installation: This machine is for use indoors. The following locations are not suitable.

1. Outdoors

2. In places where there is exposure to rain, leaks, or direct sunlight. In addition damp or humid places, dusty places or near a heat source. Places of high temperature or places where the formation of dew is possible.

3. To ensure safety, before operation this machine must be placed in a location with an emergency exit, and a fire extinguisher must be nearby.

4. This machine must not be placed on an unstable surface or one which is prone to shaking. In addition, an incline or any other surface which is not flat can not be used.

5. This machine must not be placed near dangerous, inflammable materials or volatile chemicals.

2-2   Care during transport:

1. Please take care during transport so that no excessive shocks are incurred by the machine.

2-3   Care in operation:

1. To ensure that this machine functions properly it must be connected directly to a wall or power outlet, and not to an extension outlet with other machines running off it. This machine can only be used with either {220-240 v (or above) 5A} or {100-110 v (or above) l0A} currents.

If there is not a sufficient supply of electricity, then the machine's performance will not be stable which could lead to problems.

ATTENTION

2. Please make sure that the machine's power cord is attached firmly to the wall outlet or extension cord, of the proper gauge, and grounded.

3. Before disconnecting the power cord you must first turn off the power switch.

4. It is dangerous to pull the power cord out even for a second while the machine is on.

5. Pease make sure that the power cord is placed in a secure manner so as to avoid being tripped over or being exposed to dangerous elements such as rain or water.

6. Please only use those fuses which meet the current electrical standards for this machine.

7. When disconnecting the power cord please be sure to pull the plug and not the power cord.

Patrol Light Unit

Roof Cabinet

Coin Box Door
Test Switch
Inside

26" Monitor

CRT Cover

Shift Unit

Rear Cover

Steering Unit

Stop Screw for
Wood Door E

Door C

Front
Cabinet

Accelerator &
Brake Unit

Door A

Door B

Drive Unit

Base
Cabinet

Seat Mechanism
(Gear Unit, Gum
Unit, etc.

Door D
(Stop screw for wood)
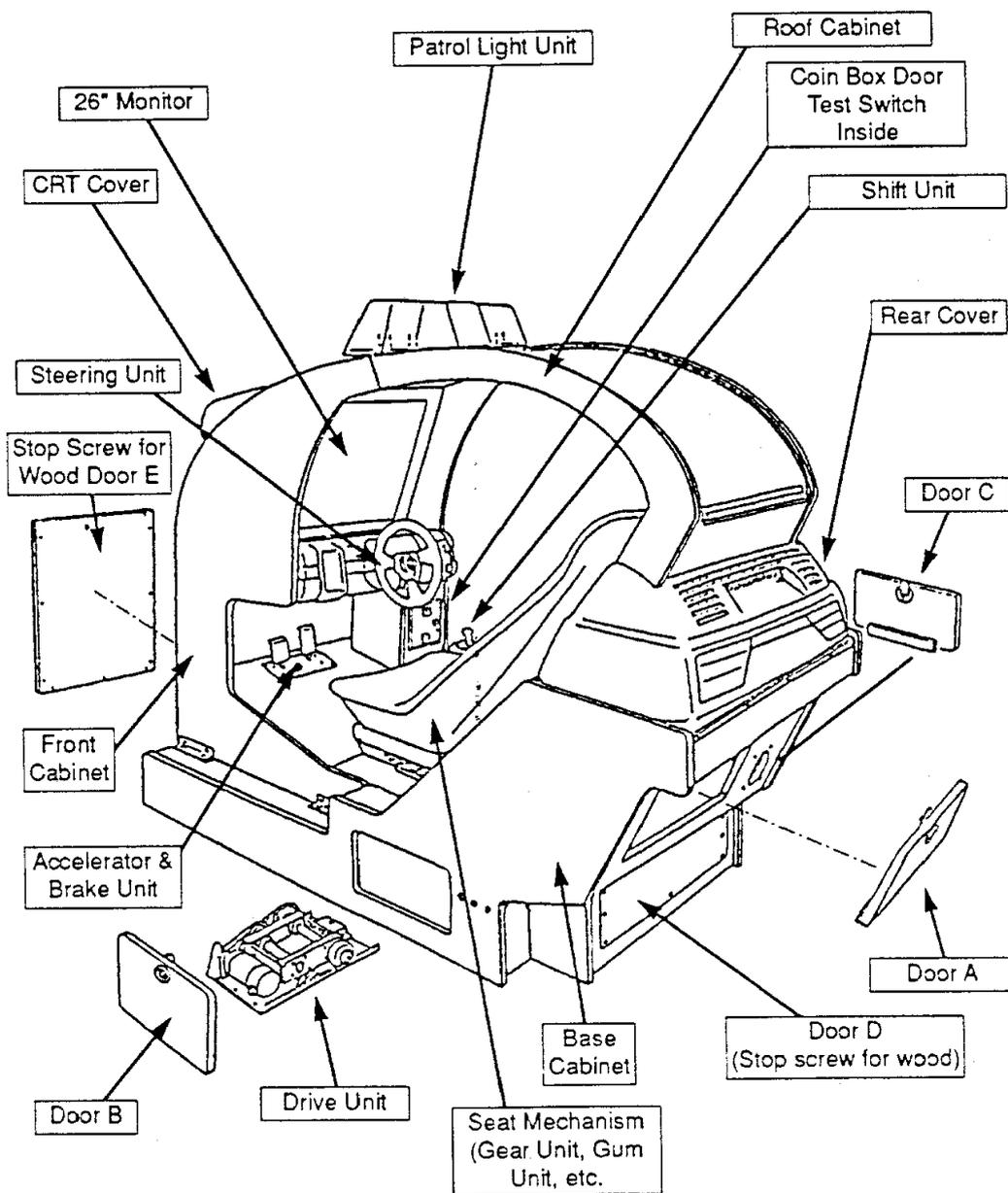
(1) Place the front cabinet assembly over the base cabinet assembly. Now (as shown in the diagram) align and slide the two together so that the holes for the angle joints are aligned. At this time you may open door E and begin connecting the wiring from the base cabinet to the front cabinet.

(2) Now firmly join the front and base cabinet assemblies together by means of the metal angle frames A and B (there are two for each side) once these are in place insert all 22 (machine screw, button head, hexagon socket m8x20) into the angle frames and tighten.

(3) Place the roof cabinet assembly over the base cabinet assembly and join it with both the front cabinet and the base cabinet. Now secure the cabinets together by attaching the 6 wing bolts (m8x35), along with the spring and flat washers. Once this is done, door A may be opened and the PCB unit can be installed.

(4) Now the base cover (rubber skirt attached) may be fitted into place and secured by using the 9 shoulder bolts.

SUMMARY OF ASSEMBLY

- Front Cabinet Assy.
- Metal Joint Angle Frame B
- Flat Washer (M8)
- Spring Washer (M8)
- Wing Bolt M8 x 35 (3 Pieces)
- Door E
- Roof Cabinet Assy.
- Metal Joint Angle Frame B
- Metal Joint Angle Frame A (R)
- Machine Screw, Button Head, Hex Socket M8 x 20 (22 Pieces)
- Metal Joint Angle Frame A (L)
- Shoulder Bolt (9 Pieces)
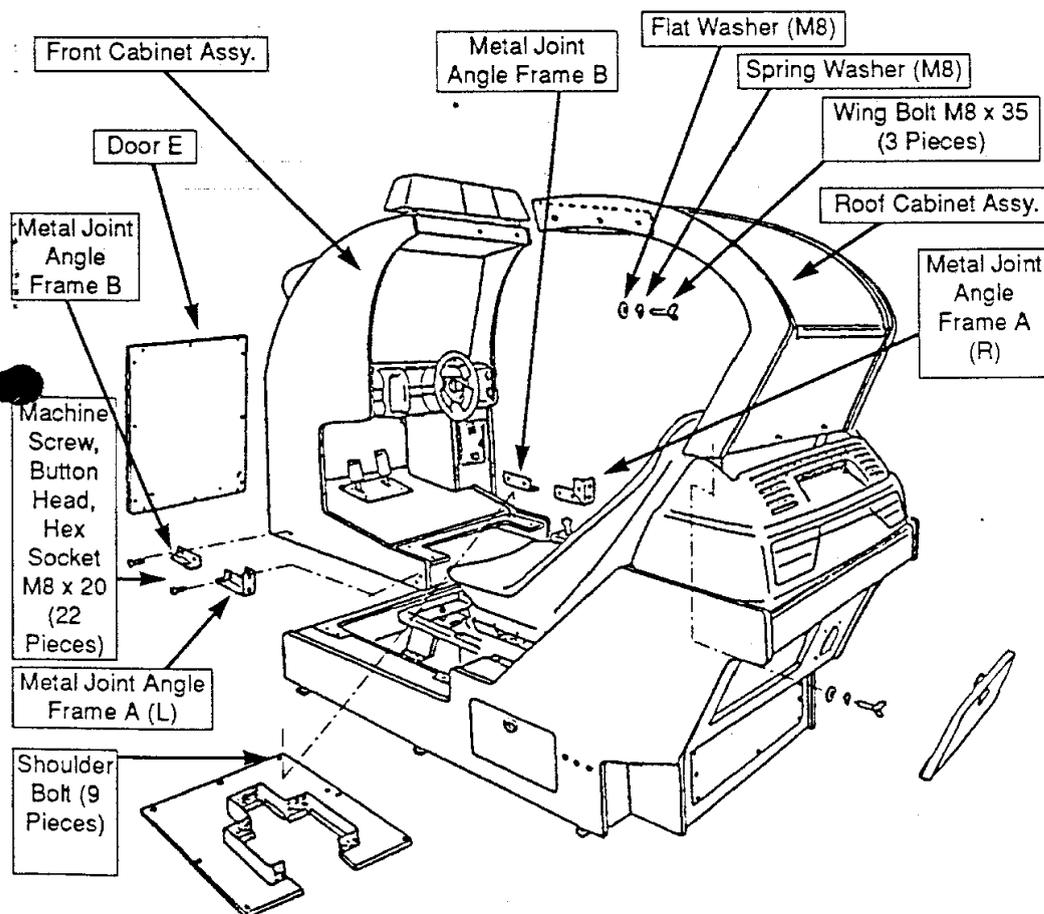
**WIRING
DIAGRAM**

NUMBER	CONNECTING COMPONENT	CONNECTER TYPE
J1	TV Monitor-AC 100V	Amp Mate-N-Lok 2p
J2	TV Monitor-power Signal	Amp Power 6p
J10	Steering And Shock Motor-power	Amp Power 2p
J13	Steering Assembly	Amp Power 12p
J14	Accel/brake Assembly	Amp Power 4p
J15	Coin Selector	Amp Power 6p
J16	Service Switch	Amp Power 9p
J17	Coin Counter	Amp Power 3p
J27	Patrol Light-signal	Amp Power 3p
J28	Patrol Light-AC 100V	Amp Mate-N-Lok 2p

NOTES

(1)   Please wire the machine based on the above diagram.

(2)   This machine has been fitted with 6 adjusters. After placing the machine in the desired location, please reposition the height of the adjusters so that the casters will be 5mm above the ground. This will help keep the machine level. (If the space between the floor and the caster is too small, then the machine might move during its operation which could be dangerous.)

(3)   Please make sure that the front cabinet and the roof cabinet can not slip or move once fitted in position.
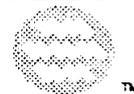
The player's car, located screen centre, races in a dead heat through the streets of San Francisco. A thrilling, against-the-clock American police race awaits all those who dare to take the challenge. This race will come alive through realistic handling, drift, and intense shock absorber rebounds. More than ever before the quickly paced speed and solid body feel of Cisco Heat will bestow a true-to-life feel on its riders. This is all made possible by the 3d-like graphics which realistically display sudden right angle curves and drift. All this and more can be found in this exciting new racing machine.

HOW TO PLAY

CONTROLLING INSTRUMENTS

Accelerator : Step on this pedal to increase the speed of the player's car.

Brake : Step on this pedal to reduce the speed of the player's car.

Steering wheel : If you turn the wheel right or left, you can change the cars direction.

Shift : A choice between high and low gear.

Horn : The computer's cars will give way (yield) when pressed.

When you insert a coin in the coin slot the start button will flash. If you want the game to start immediately then push the start button; otherwise the game will start automatically after the opening ceremony.

The player can select between a powerful, large American car with quick acceleration or a small European sports type. At the beginning of the game the player can make his selection by turning the steering wheel and pressing the accelerator. Also during the "time up" the player gets a chance to select a car.

Stage 1	Golden Gate Bridge	To	Fisherman's Wharf
Stage 2	Fisherman's Wharf	To	Union Square
Stage 3	Union Square	To	Moscone Centre
Stage 4	Moscone Centre	To	Twin Peaks
Stage 5	Twin peaks	To	Treasure Island

CISCO HEAT'S FIVE STAGES

If the player has not passed a stage's goal or check point before the timer turns to zero, the game will end.

BASIC MAINTENANCE

REMOVING OR ADJUSTING THE DRIVE UNIT
### (LEFT AND RIGHT MOTION)

A) REMOVAL:

Open base cabinet door B, observe the drive unit (see diagram). Remove the 3 hexagon bolts (m8x25). Loosen wing bolt (m6x30) which stops the lever from moving. As shown below, the lever will fall forward once it is loosened.
Finally, separate the rubber roller from the roller guide, and the drive unit can be removed from the base cabinet.
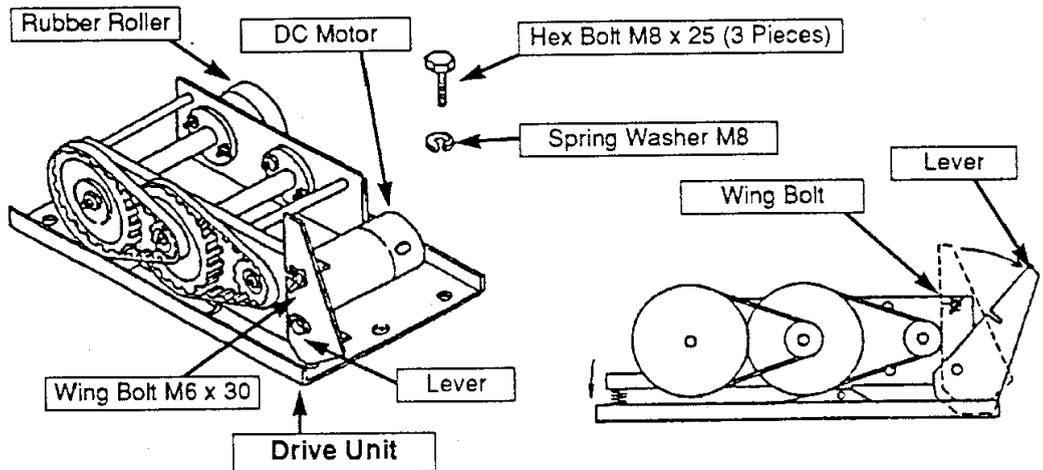

B) HOW TO CHANGE THE RUBBER ROLLER:

First remove stop screws m5 x 15 (3 pieces) from the middle of the roller stopper and then tighten bolt m8 x 25 which is fixed to the drive shaft. As you tighten the bolt, the rubber roller will gradually slip off the drive shaft.
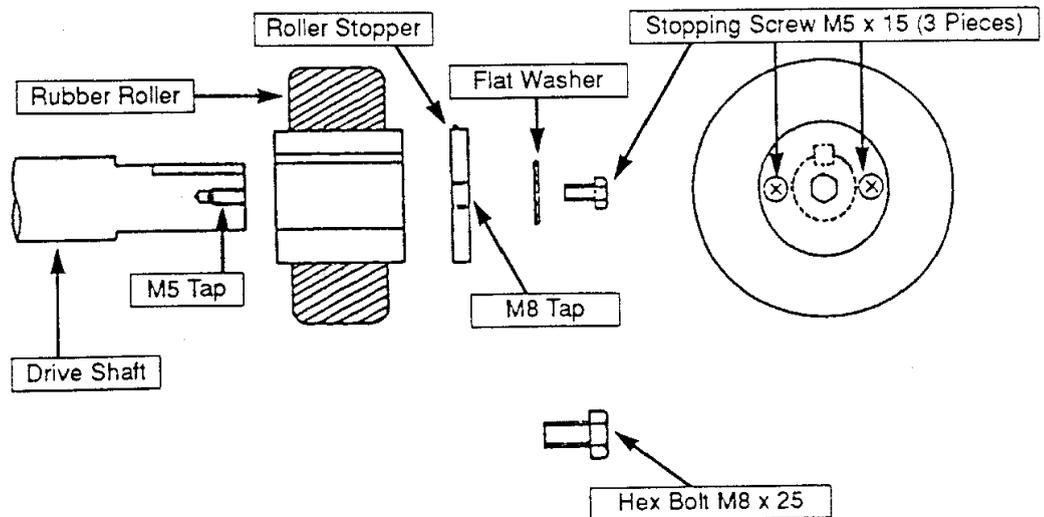
MAINTENANCE AND ADJUSTMENT OF THE GEAR UNIT
(BACK AND FORTH MOTION)

**BASIC
MAINTENANCE**

1. Remove the base cover (rubber skirt attached) and then remove the bolts which hold the front cabinet in position. Slide the front cabinet forward. This will provide free access to the gear unit assembly.

2. The V belt and the motor brushes can now be changed easily.

Front Cabinet
Drivers Seat
Cam Unit
Base Cabinet
Gear Unit
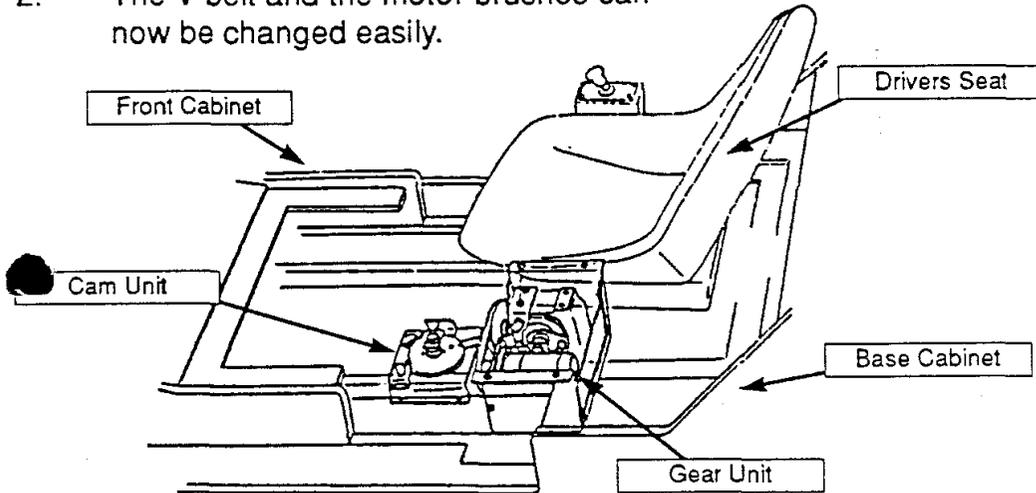
3. In order to change the V-belt first loosen the hexagon bolts m8 x 30 (4 pieces) located on the side of the gear unit. Next loosen the tension adjustment bolt m6 x 20. Now the V-belt can be removed. After replacing the V-belt be sure to tighten the bolts in the reverse order - first the tension adjustment bolt m6 x 20 and then the hexagon bolts m8 x 30 (4 pieces). Now as shown below please test and adjust the tension of the V-belt. Using the tension adjustment bolt, tighten or loosen the belt so that it can only be pressed down 1-1.5 cm with your finger.

Worm Gear
Wire Guide Panel
Hex Bolt M8 x 30 (4 Pieces)
Hex Bolt M6 x 20
V-belt
Stopping Screw M4 x 10 (2 Pieces)
1 ~ 1.5 cm

™
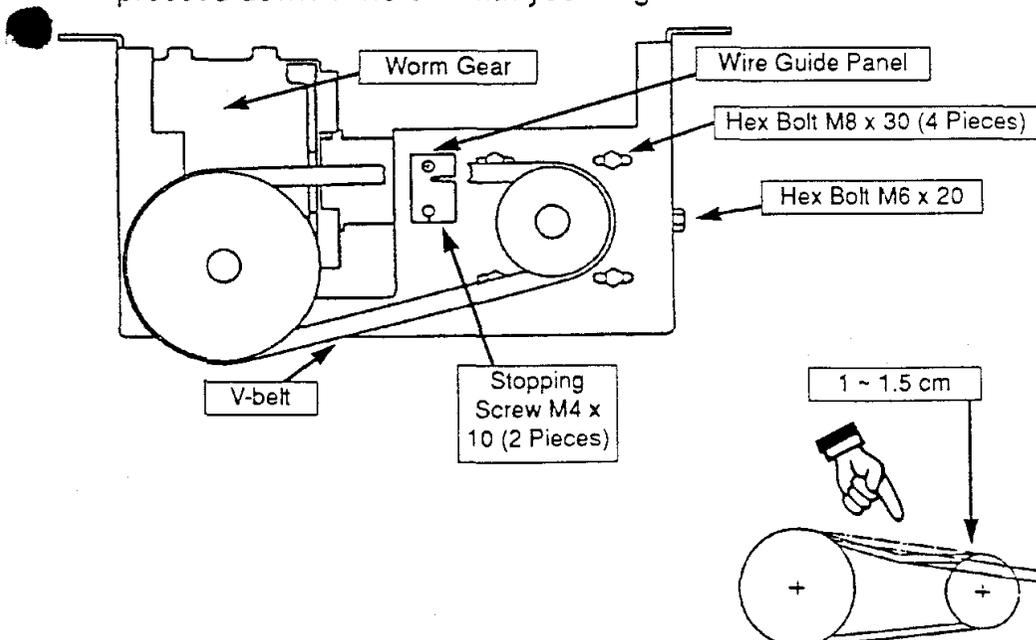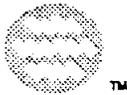
HOW TO CHANGE THE POTENTIOMETER

4. First remove both phillips hexagon head bolts m4x20 (2 pieces) which are attached to the potentiometer bracket. Next dislodge the potentiometer while the wires are still connected. Now if the set screw, hexagon socket cup point m4x6 (1 piece) is taken out the potentiometer can be completely removed. When installing the new potentiometer, after the wiring is completed but before the potentiometer is actually inserted, please run a check with the "test mode i/o switch." Rotate the shaft and if a high pitched tone is heard then set the potentiometer's value to (80h). Now insert the potentiometer into the potentiometer bracket and secure it with the set screw, hexagon socket cup point m4x6 (I piece). Once again run a check with the "test mode i/o switch" to re-confirm the potentiometer's value. If there is a little slippage please make the necessary fine adjustments on the wiring guide panel to normalise the potentiometer's value.

ATTENTION

●

If the worm gear becomes damaged or if the cam board begins to slip etc., Please contact an authorised serviceman to initiate adjustment, repair, or replacement, and do not attempt to correct the problem yourself because a high level of technical skill is needed.

●

Phillips Hex Head Bolts M4 x 20 (2 Pieces)

Set Screw, Hex Socket Socket Cup Point M4 x 6 (1Piece)

VR (5k ohm)

Arm

The arm should be in a level position when you are setting the potentiometer's value to 80H

Potentiometer Bracket

MONITOR SCREEN READINGS FOR VR (5k Ohm) SETTING
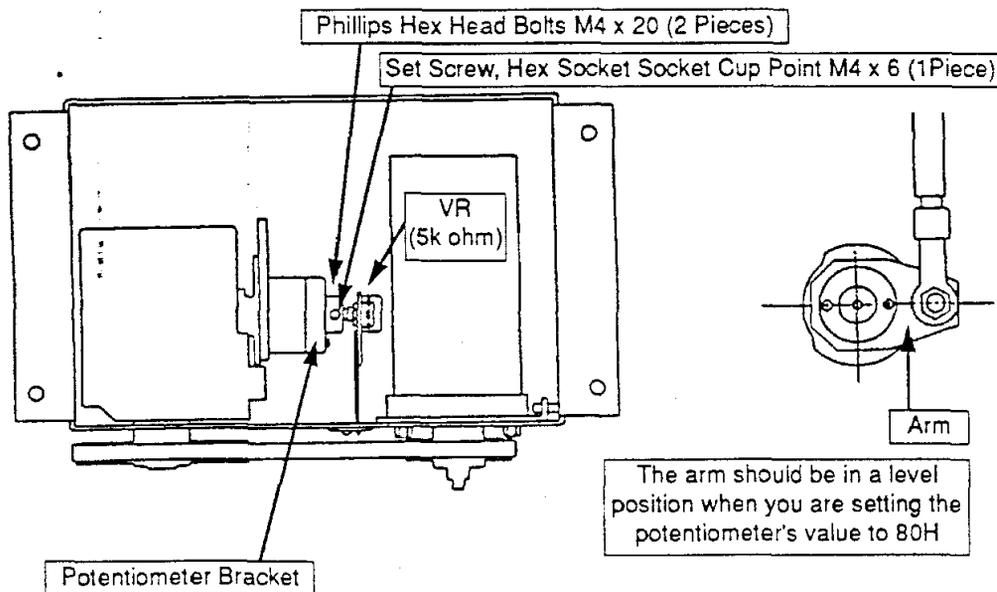
7BH 7CH 7DH 7EH 7FH 80H 81H 82H 83H 84H 85H

STANDARD VALUE

◀─────────── Normal Range ───────────▶

CAM UNIT MAINTENANCE AND SERVICE

1. First remove the base cover (gum skirt attached). Next remove the screws which secure the front cabinet assembly. Now slide the front cabinet assembly forward, there should be plenty of room to work.

2. In this state work can also be done on the potentiometer. (Please refer back to the gear unit diagram)

3. When detaching the potentiometer please remove the set screw, hexagon socket cup point m4x6 (1 piece) from cam stand B. When installing the new potentiometer, after the wiring is completed but before the potentiometer is actually inserted, please run a check with the "test mode i/o switch." Rotate the shaft and if a high pitched tone is heard then set the potentiometer's value to (80h). Now insert the potentiometer into cam stand B and secure it with the set screw, hexagon socket cup point m4x6 (1 piece). Once again run a check with the "test mode i/o switch" to re-confirm the potentiometer's value. If there is a little slippage please make the necessary fine adjustments on the wiring guide panel to normalise the potentiometer's value. This can be done by adjusting the position of the potentiometer with a 2mm hex wrench. Once again check the potentiometer value and make the necessary adjustment.

ATTENTION

If the cam board begins to slip etc..., Please contact an authorised serviceman to initiate adjustment, repair, or replacement, and do not attempt to correct the problem yourself because a high level of technical skill is needed.

Cam Disk   Micro Switch   VR (5k Ohm)   Cam Stand B

Stopping Screw, M4 x 10 (2 Pieces)

Wire Guide Panel

Set Screw, Hex Socket Cup Point M4 x 6 (1 Piece)

MONITOR SCREEN READINGS FOR VR (5k Ohm) SETTING

7BH 7CH 7DH 7EH 7FH 80H 81H 82H 83H 84H 85H

STANDARD VALUE

⟵——————— Normal Range ———————⟶

HOW TO REMOVE THE PC GAME BOARD

1) First open door A at the cabinet's rear. Then remove all 5 stopping screws (m4x10) from the PCB game cover.

2) Make the following disconnections before removing the PCB.

NUMBER	BOARD NUMBER	NOTES
CN303 (4P)	CH9073 (TOP)	POWER SOURCE
CN305 (56P)	CH9073 (TOP)	SIGNAL
CN306 (44P)	CH9073 (TOP)	SIGNAL
CN103 (6P)	CH9071 (MIDDLE)	POWER SOURCE
CN105 (5P)	CH9071 (MIDDLE)	MONITOR OUTPUT
6 CN1 (9P)	CH9074 (COMMUNICATION BOARD)	COMMUNICATION
CN203 (4P)	CH9072 (BOTTOM)	POWER SOURCE

(1) 1 and 2 are interchangeable.

(2) Except for numbers 1 through 7 please do not remove the connecters.

(3) If you remove wing bolt (m5x20) from the PCB board, the PCB can be
• disconnected from the case.

Wing Bolt M5 x 20 (1 Piece)

PCB Case

Stopping Screw M4 x 10 (5 Pieces)

Board No: CH9073

Board No: CH9071

Board No: CH9072

PCB Mounting Board

Board No: CH9074 (Communications Board)

PCB Case Cover
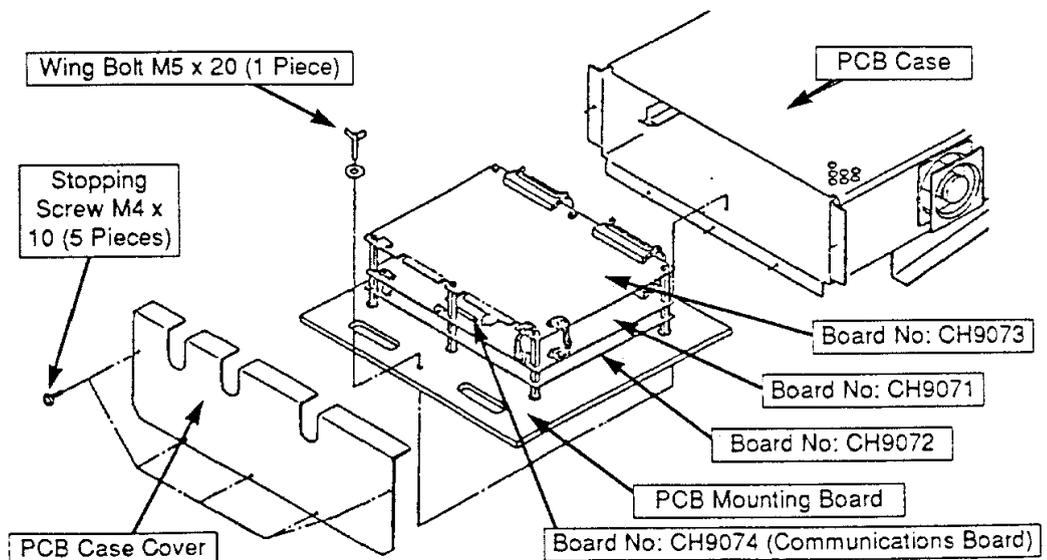
First open door E which is located to the rear of the front cabinet assembly (wood stop screws). Next remove all the hexagon nuts m8 (4 pieces) which are holding the steering unit in place. During removal be careful not to sever the wiring which is connected to the start sw, race sw lamp and sw unit etc.
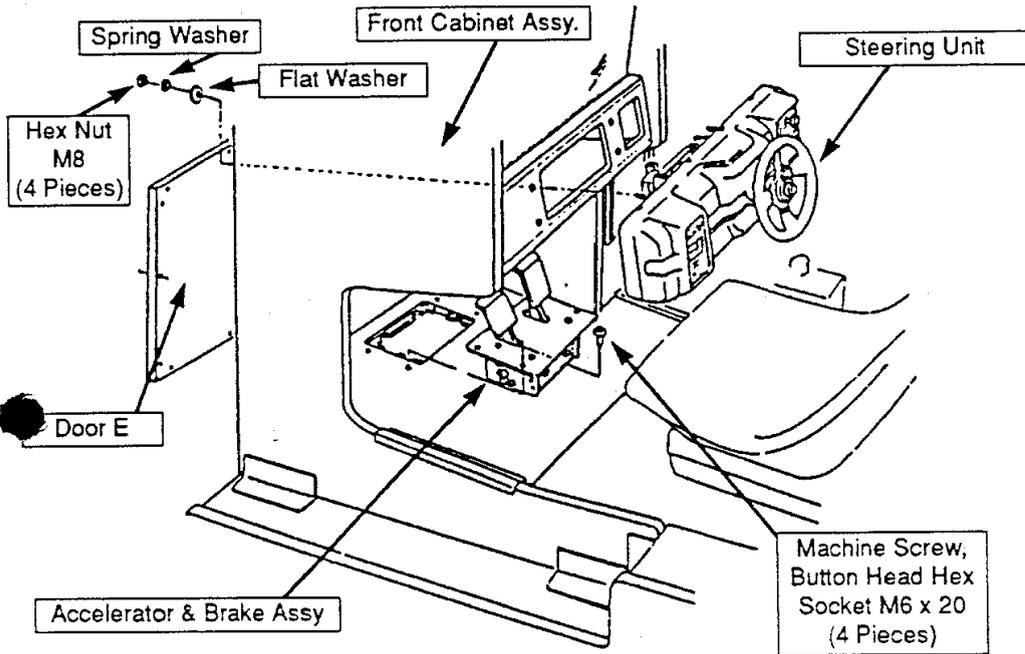
STEERING UNIT REMOVAL AND ADJUSTMENT

Spring Washer

Front Cabinet Assy.

Flat Washer

Steering Unit

Hex Nut M8 (4 Pieces)

Door E

Accelerator & Brake Assy

Machine Screw, Button Head Hex Socket M6 x 20 (4 Pieces)

STEERING POTENTIOMETER ADJUSTMENT

Adjust the steering potentiometer to the proper value using the i/o test monitor.

1. First loosen screw A and adjust the meshing of the gear teeth.

2. Adjust the gears so that there is a 0.1mm to 0.3mm space between them.

3. Now run the i/o mode test on the monitor.

4. Next loosen screw B and when you hear a high pitched tone by turning the steering wheel, set the potentiometer to a value of (VR 80H).

A

Steering VR

Horn Shaft

B

Horn Switch

A

HORN SWITCH ADJUSTMENT

0.3 to 0.5mm

Horn Shaft
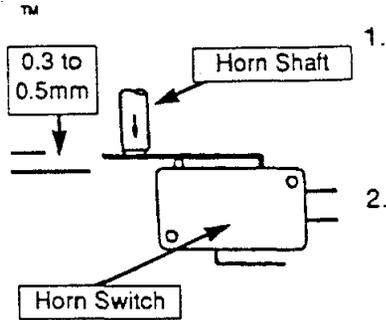
Horn Switch

1. First loosen screw C and move the horn switch up and down and to the left and right so that the switch lever will be positioned in the centre of the horn shaft.

2. When pushing the horn button, adjust the spacing between the micro switch and the lever as shown in the diagram.

MONITOR SCREEN READINGS FOR HANDLE SETTING

7BH 7CH 7DH 7EH 7FH 80H 81H 82H 83H 84H 85H

STANDARD VALUE

◀——————— Normal Range ———————▶

ACCELERATOR AND BRAKE REMOVAL AND ADJUSTMENT

Remove all 4 machine screws, button head hex socket M6 x 20 from the floor of the front cabinet. (Please refer back to the steering unit diagram for further information)

If the accelerator/brake unit is detached from the floor of the front cabinet assembly, then the position of the micro switch, located on the side bracket, can be adjusted by first loosening the "micro sw position adjustment screws" m3x16 (2 pieces).

Accelerator   Is on when the accelerator lever is touching the very front of the rubber stopper.

Brake   After the brake lever touches the rubber stopper and in addition suppresses the rubber stopper, braking should commence. Please adjust the position of the micro switch so that braking will start only when the rubber stopper is suppressed by the brake lever. (If the player's foot is only resting on the brake pedal, then the brake will not be on.)

Accelerator Pedal

Brake Pedal

Accelerator & Brake Unit

Rubber Stopper

Micro Switch

Circuit Breakers **Mains Switch**

Ground Terminal
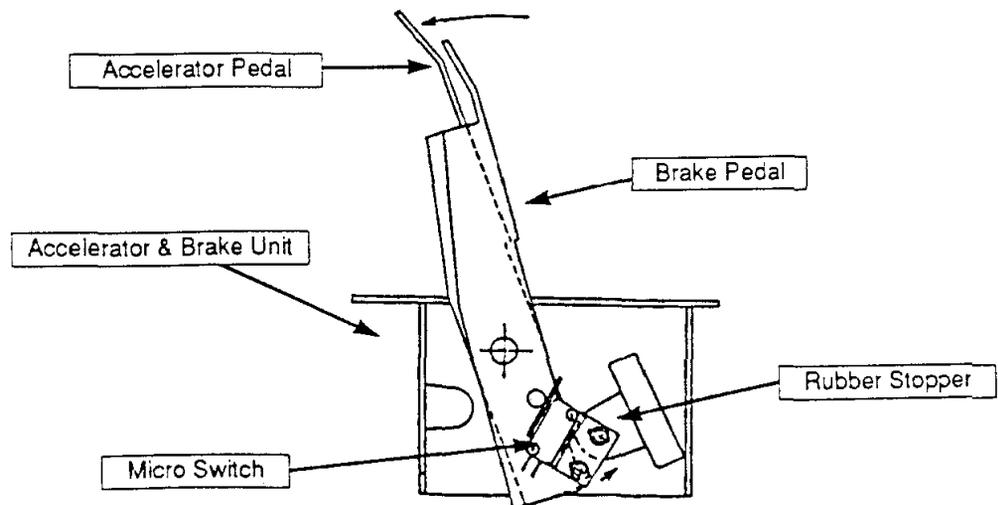
Power Source

If for whatever reason this machine has suffered a power surge which has switched off the breakers, then most likely all power to the machine will be cut. When this happens please check the breaker switches as shown below. The electric current can be reinstated by simply pushing back in the "pop-out" type breaker buttons.

Only reinstate the breakers after the cause of the power surge has been eliminated.

POWER SOURCE UNIT

ATTENTION

st remove the top cover from the upper part of the front cabinet assembly.

Next loosen the wood screws 4x10 (3 pieces) from the stopper panel and lift up the stopper panel so that the monitor screen filter can be slid out.

Now by holding the bracket panel, located at the bottom, gently slide the monitor screen filter up a little ways and then pull it in the direction of the driver's seat. In this, way the whole filter screen and bracket panel should be easily dislodged.

Before replacing the monitor screen filter in the same manner that it was removed, please be sure that the bracket panel is attached.

HOW TO REMOVE THE MONITOR SCREEN FILTER

Stopper Panel

4 x 10 Wood Screws (3 Pieces)

Bracket Panel

Monitor Screen Filter

Top Cover

FRONT CABINET (TOP VIEW)
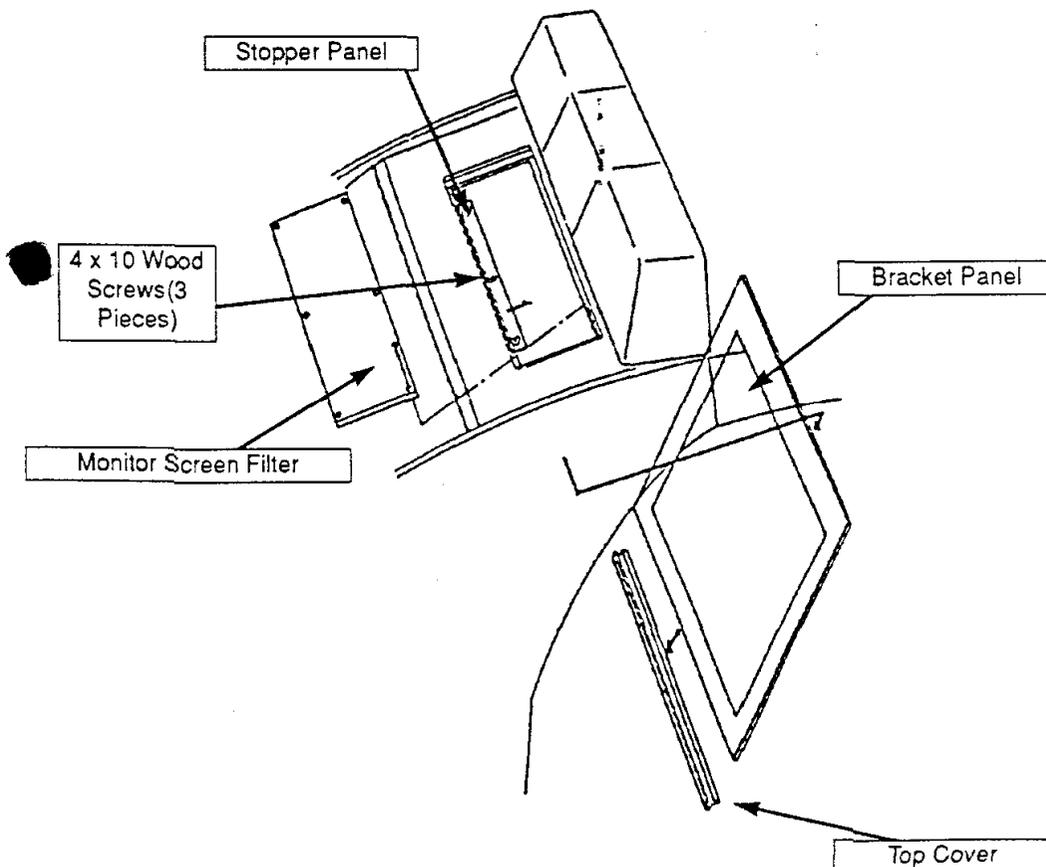
TEST, VOLUME, SERVICE SWITCHES

These controls are located inside the coin entry door. (see diagram)
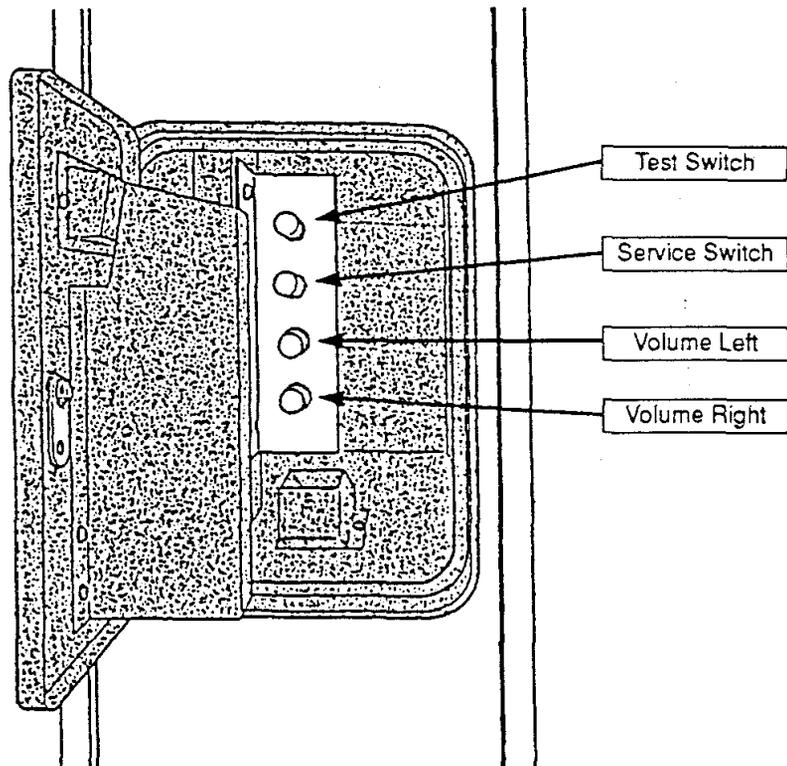
SERVICE SW

Service switch: for use in servicing the coin counter, and to enable the operator to increase the number of credits without affecting the coin counting mechanism

TEST SW

Test switch: this switch is to be used when the operator wants to run a check on the game's systems. A more detailed explanation can be found in the "test mode" section of this manual.

VOLUME

Volume adjustment: these two switches will regulate the volume of the right and left speakers.

MONITOR ADJUSTMENTS
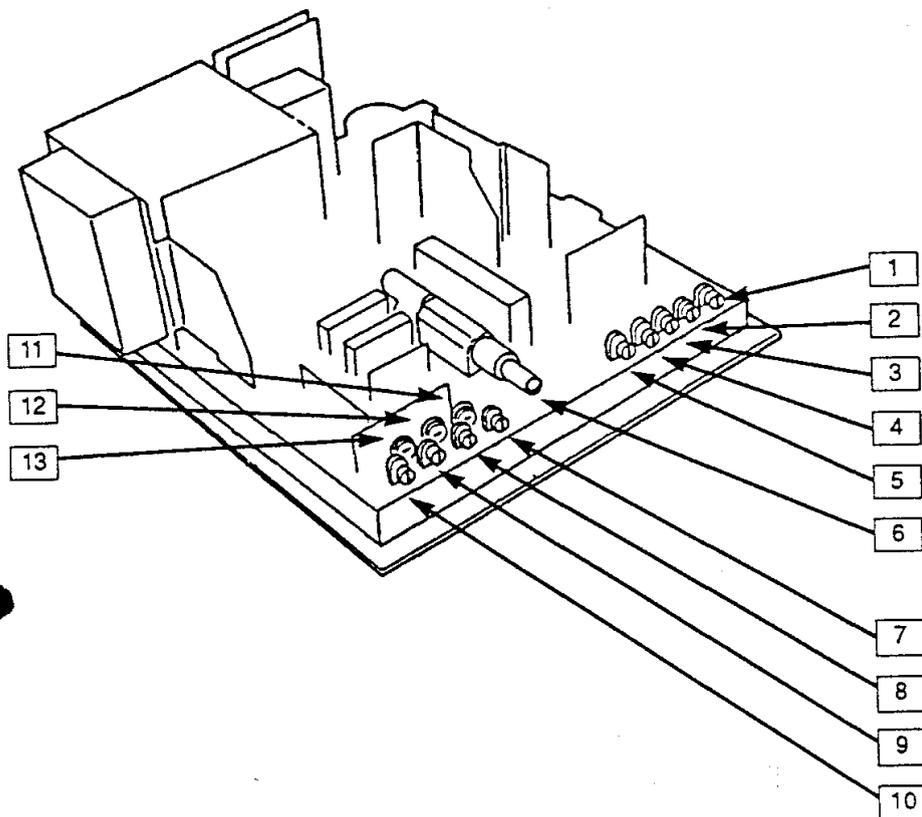
1. VERTICAL POSITIONING   ADJUSTS THE VERTICAL POSITIONING OF THE MONITOR'S IMAGE

2. VERTICAL HOLD   ADJUSTS THE VERTICAL TRACKING

3. VERTICAL SIZE   ADJUSTS THE VERTICAL SIZE OF THE IMAGE

4. HORIZONTAL PHASE   ADJUSTS THE HORIZONTAL POSITIONING OF THE MONITOR'S IMAGE

5. HORIZONTAL HOLD   ADJUSTS THE HORIZONTAL TRACKING

6. HORIZONTAL SIZE   ADJUSTS THE HORIZONTAL SIZE OF THE IMAGE (USE A HEXAGON SCREW DRIVER TO MAKE ADJUSTMENTS)

7. BRIGHT   ADJUSTS THE BRIGHTNESS OF THE IMAGE

8. B. GAIN

9. G. GAIN

10. R. GAIN

11. B. BIAS

12. G. BIAS

13. R. BIAS

**PCB
CONNECTOR
INFORMATION**

CH9073

```
      ┌─ 50P ─┐        ┌─ 50P ─┐
      │ CN302 │        │ CN301 │



         DIP Switches


      SW302  SW301      SW303    CN307
                                        6P
      CN303                    CN304
           CN305    CN306
       4P   56P      44P       5P
```

CH9071

```
      ┌─ 50P ─┐        ┌─ 50P ─┐
      │ CN102 │        │ CN101 │

                     50P
               ┌──── CN107 ────┐
               │               │
               │               │
               │   CN108       CN106
               │   [    ]        6P
               │     34P
      CN103   CN105           CN104
       6P      5P              5P
```

CH9072

```
      ┌─ 50P ─┐        ┌─ 50P ─┐
      │ CN202 │        │ CN201 │







      CN203
       4P
```

CH9074

```
          50P
      ┌──────────────┐
      │ ┌─ CN2 ─┐    │ D
      │ └───────┘    │ I
      │        SW1   │ P
      │              │ S
      │ COMMUNICATIONS│ w
      │     PCB      │ i
      │              │ t
      │     54P      │ c
      │  ┌─ CN3 ─┐   │ h
      │  └───────┘ ┌──┐
      └───────────│CN1│
                  └──┘
                   9P
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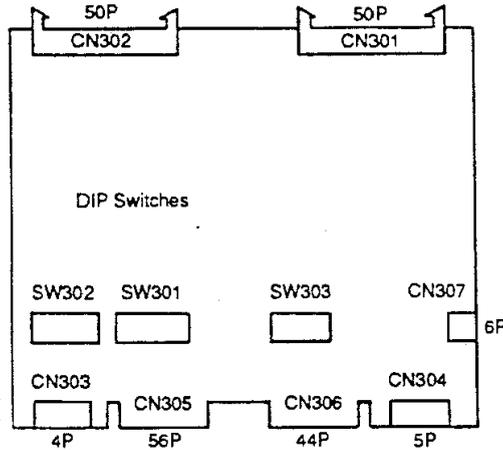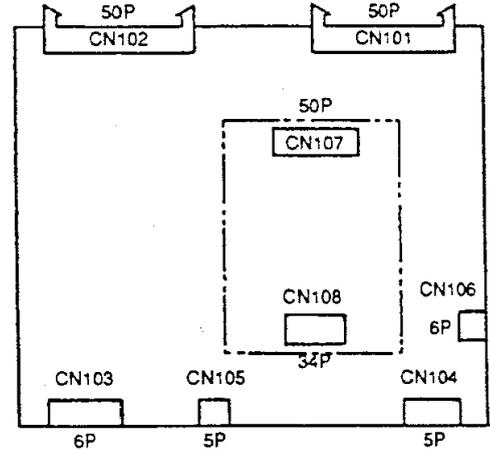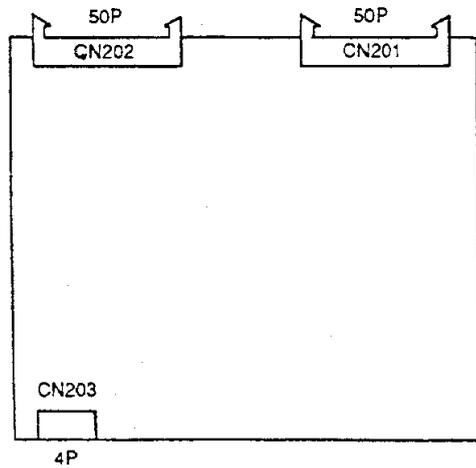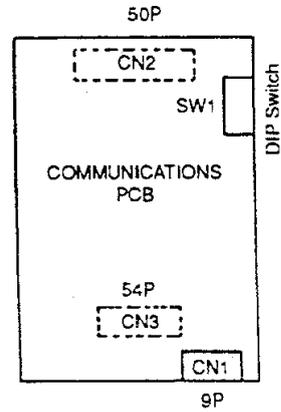
CREDIT SWITCH SETTINGS FOR USA

CREDIT SWITCH
SETTINGS

DIP Switch #SW301　　Board No: CH-9073
(ROM CH 9071-1　Checksum E60F)

COIN SHUTE 1	CREDIT	1	2	3	4	5	6	7	8
1	1	OFF	OFF	OFF					
1	2	ON	OFF	OFF					
1	3	OFF	ON	OFF					
1	4	ON	ON	OFF					
2	1	OFF	OFF	ON					
3	1	ON	OFF	ON					
4	1	OFF	ON	ON					
FREE PLAY		ON	ON	ON					

COIN SHUTE 2	CREDIT	1	2	3	4	5	6	7	8
1	1				OFF	OFF	OFF		
1	2				ON	OFF	OFF		
1	3				OFF	ON	OFF		
1	4				ON	ON	OFF		
2	1				OFF	OFF	ON		
3	1				ON	OFF	ON		
4	1				OFF	ON	ON		
FREE PLAY					ON	ON	ON		
THESE SWITCHES MUST ALWAYS BE OFF								OFF	OFF

CREDIT SWITCH SETTINGS FOR EUROPE

DIP Switch #SW301　　Board No: CH-9073
(ROM CH 9071-3　Checksum C8DC)

COIN SHUTE 1	CREDIT	1	2	3	4	5	6	7	8
1	1	OFF	OFF	OFF					
1	2	ON	OFF	OFF					
1	3	OFF	ON	OFF					
1	4	ON	ON	OFF					
1	5	OFF	OFF	ON					
1	6	ON	OFF	ON					
1	7	OFF	ON	ON					
2	3	ON	ON	ON					

COIN SHUTE 2	CREDIT	1	2	3	4	5	6	7	8
1	1				OFF	OFF	OFF		
1	2				ON	OFF	OFF		
1	3				OFF	ON	OFF		
1	4				ON	ON	OFF		
2	1				OFF	OFF	ON		
3	1				ON	OFF	ON		
4	1				OFF	ON	ON		
5	1				ON	ON	ON		
FREE PLAY (Otherwise set both switches OFF)								ON	ON

PLAY CONTROL SWITCH SETTINGS

1. To control the colour of the players car, the degree of difficulty and other functions connected with the game, set the switches as detailed in the chart below to your personal

	CREDIT	1	2	3	4	5	6	7	8
Players Car Colour Control	1 Red	ON	ON						
	2 Blue	OFF	ON						
	3 Yellow	ON	OFF						
	4 Green	OFF	OFF						
Degree of Difficulty	Normal			OFF	OFF				
	Demanding			ON	OFF				
	Expert			ON	OFF				
	Novice			ON	ON				
		1	2	3	4	5	6	7	8
Player	Dies					OFF			
	Lives					ON			
Sound During Demo	On						OFF		
	Off						ON		
Screen Language	Japanese							OFF	
	European							ON	
									OFF

ATTENTION

2. Switch No:8 must be set to the OFF position otherwise the game will not function correctly.

SETTING COM-LINK SWITCHES

3. When connecting one or more machines together ensure that all machines are fitted with the optional Com-Link PCB CH9074.

   Set the DIP SW1switch settings on the Com-Link PCB CH9074 as follows to ensure perfect operation of linked machines.

	1	2	3	4
Master Machine	ON			ON
All Other Machines	OFF			ON
Machine 1		ON	ON	ON
Machine 2		OFF	ON	ON
Machine 3		ON	OFF	ON
Machine 4		OFF	OFF	ON
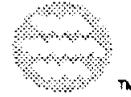
Please run the following tests to confirm that your machine is working correctly. These tests will assure you that the wiring, and switches are correctly adjusted. In addition, the monitor's screen colour and the sound adjustment can be checked.

If the coin chute door is opened and the 'Test Switch' is pressed, the following screen will be displayed which lists each type of test that can be carried out.
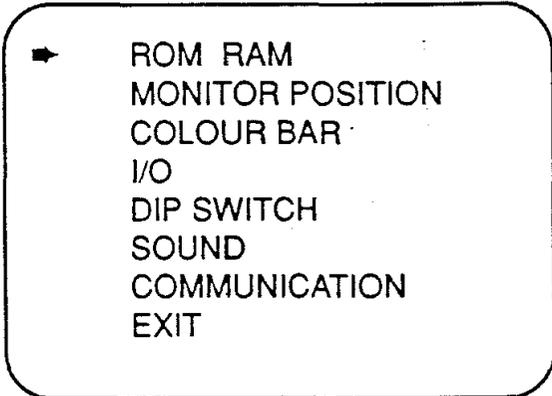
TEST MODE

TEST FUNCTIONS

```
➡   ROM  RAM
    MONITOR POSITION
    COLOUR BAR
    I/O
    DIP SWITCH
    SOUND
    COMMUNICATION
    EXIT
```

ROM RAM	Checks the ROMs and RAMs on the board
MONITOR POSITION	A cross-hatch display for monitor adjustment
COLOUR BAR	A colour bar display for colour adjustment
I/O	Test mode for switches, lamps, volume, motors etc.
DIP SWITCH	Shows the current DIP switch settings
SOUND	Checks the sound features and the amplifier
COMMUNICATION	(if connected) Checks the Com-Link system

The different test headings may be selected by moving the arrow up and down with the "Start" or "Race" buttons. With the arrow aligned with the test required press the "Test Switch" again.

To exit from the test mode simply align the arrow with the "Exit" heading and press the "Test Switch" at which time the game will revert to the normal attract mode.

**TEST MODE
SCREEN
HEADINGS**

**ROM RAM
CHECK**

The following screen will be displayed when the ROM RAM check is selected. If the ROM and RAM are functioning correctly "OK" will be displayed. In the unlikely event of a fault on the ROM or RAM test then "NG" will be displayed.

```
                    ROM RAM CHECK

     MAIN
             VRAM                      OK
             SCRATCH RAM               OK
             COLOR RAM                 OK
             ROAD COM. RAM             OK
             CAR COM. RAM              OK
             OBJECT RAM                OK
             PROGRAM ROM               OK

     ROAD
             SCRATCH RAM               OK
             ATTRIBUTE RAM             OK
             ROAD COM. RAM             OK
             PROGRAM ROM               OK


                              EXIT ➡ TEST SW
```

**MONITOR
POSITION
CHECK**

```
          MONITOR POSITION CHECK




                              EXIT ➡ TEST SW
```

This pattern will appear to aid with monitor alignment
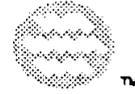
This screen will be displayed for the colour bar check

COLOR BAR CHECK

DARK   BRIGHT

| RED |
| GREEN |
| BLUE |
| WHITE |

EXIT ➡ TEST SW

I/O CHECK

I/O CHECK

START	SW	ON	SERVICE	SW
RACE	SW		COIN 1	SW
SHIFT	SW		COIN 2	SW
BRAKE	SW		ACCELE	SW
HORN	SW		HANDLE	VR
SAFETY	SW			

EXIT ➡ TEST SW

1. Check the switches, lamps, volume and motor
2. Press each switch or button in turn and check for the "ON" display beside each function.
3. Move "Shift" to high for display to change to "ON"
4. The steering wheel should revert back to a position of 80H ±2 when released. (If the steering wheel reading is 80H±1 then a high pitched tone will be heard.)
5. Press the "Test Switch" again to move to the next I/O (Motors) check.

**I/O CHECK
LIMIT SW & VR**

```
                    I/O CHECK

    UP/DOWN VR.
    UP LIMIT SW.
    DOWN LIMIT SW
    LEFT/RIGHT VR.
    LEFT LIMIT SW.
    RIGHT LIMIT SW



                              EXIT ➨ TEST SW
```

**TEST
PROCEDURE**

1. UP/DOWN VR — Is normal if the reading is 80H ±2 in the stationary state.

2. UP LIMIT SW — Is normal when "ON" appears next to this display. To test this switch move the drivers seat upward by pressing the "RACE" switch until the UP LIMIT switch is activated.

3. DOWN LIMIT SW — Is normal when "ON" appears next to this display. To test this switch move the drivers seat down by pressing the "START" switch until the DOWN LIMIT switch is activated.

4. LEFT/RIGHT VR — Is normal if the reading is 80H±2 in the stationary state.

5. LEFT LIMIT SW — Is normal when "ON" appears next to this display. To test this switch turn the steering wheel left until the LEFT LIMIT switch is activated.

6. RIGHT LIMIT SW — Is normal when "ON" appears next to this display. To test this switch turn the steering wheel right until the RIGHT LIMIT switch is activated.
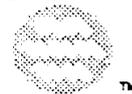
1. This screen will be displayed for the DIP switch check.

ATTENTION: Only "ON" will be displayed. If the switch is off then no indication is given.

DIP SWITCH CHECK

```
┌─────────────────────────────────────────────┐
│                 I/O CHECK                     │
│  DIP SW301                                    │
│      1    2    3    4    5    6    7    8      │
│                                               │
│  DIP SW302                                    │
│      1    2    3    4    5    6    7    8      │
│     ON   ON                                   │
│                                               │
│  DIP SW1                                      │
│      1    2    3    4                          │
│     ON   ON   ON   ON                          │
│        :                                       │
│                              EXIT ➡ TEST SW   │
└─────────────────────────────────────────────┘
```

ATTENTION: DIP switch 1 will only be displayed if the Com-Link PCB is fitted.

SOUND CHECK

```
┌─────────────────────────────────────────────┐
│                SOUND CHECK                    │
│                                               │
│        SOUND ROM  1     OK                    │
│                                               │
│        SOUND ROM  2     OK                    │
│                                               │
│        SOUND RAM  1     OK                    │
│                                               │
│        SOUND RAM  2     OK                    │
│                                               │
│                              EXIT ➡ TEST SW   │
└─────────────────────────────────────────────┘
```

The sound ROMs, RAMs and power amplifier is checked with this test.

If a ROM or RAM is normal then "OK" will be displayed. In the unlikely event of a failure with the ROM or RAM "NG" will be displayed.

In this test the following sequence occurs: Trolley Car Bell sound, Police Car horn sound. These sounds will play from left to right on the stereo speaker system. This is followed by a musical scale from left, right and finaly the center.

INSTALLING THE COM-LINK BOARD

If you have purchased the optional "Com-Link" PCB, then please follow the installation instructions detailed below.

PARTS AND TOOLS REQUIRED TO INSTALL COM-LINK PCB

	NAME	SPECIFICATION	NOTES	Qty
1	"COM-LINK" Board	No. CH9074	For attachment to one machine	1
2	"COM-LINK" Cable	5 Pin Din Cord		1
3	Phillips Screwdriver			
4	M4 Nut Spanner			

COM-LINK INSTALLATION INSTRUCTIONS

1. Open door A located at the base cabinet's rear and remove all 5 screws (M4x10) to detatch the PCB case fron cover.
2. Remove wing bolt M5x20 from the PCB base-board. Disconnect all plugs to the PCB set (be sure to pull the plug NOT the cable).
3. To dismantle the PCB set remove the 6 hex nuts M4 from the top PCB and lift off top PCB gently.
4. Attatch the Com-Link PCB CH9074 to the middle of the PCB CH9071 connecting the 34pin and 50p plugs to the PCB CH9071. Connect the 9 pin Com-Link connector to CN1.

PCB CASE ASSEMBLY
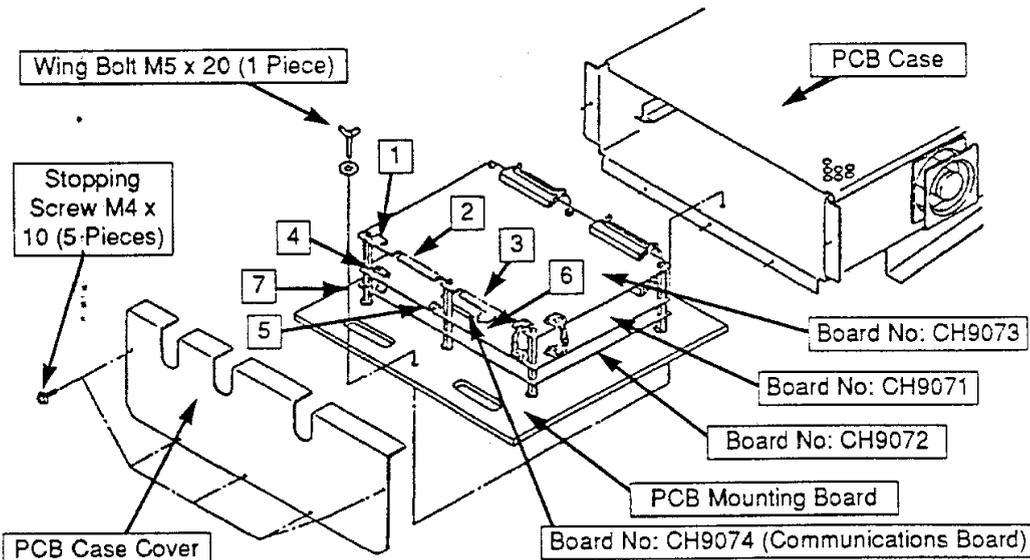
CONNECTOR NUMBERS

NUMBER		BOARD NUMBER	NOTES
CN303 (4P)	1	CH9073 (TOP)	POWER SOURCE
CN305 (56P)	2	CH9073 (TOP)	SIGNAL
CN306 (44P)	3	CH9073 (TOP)	SIGNAL
CN103 (6P)	4	CH9071 (MIDDLE)	POWER SOURCE
CN105 (5P)	5	CH9071 (MIDDLE)	MONITOR OUTPUT
6 CN1 (9P)	6	CH9074 (COMMUNICATION BOARD)	COMMUNICATION
CN203 (4P)	7	CH9072 (BOTTOM)	POWER SOURCE

Only connectors 1 and 7 are interchangeable. Do not remove any other inter-PCB connectors.

The PCB boards are laid out as shown below. DO NOT disconnect the connectors which link the PCBs. (Refer to section Removal of PCBs)

PCB LAYOUT AND ARRANGEMENT

Board CH9073 TOP

Board CH9071 MIDDLE
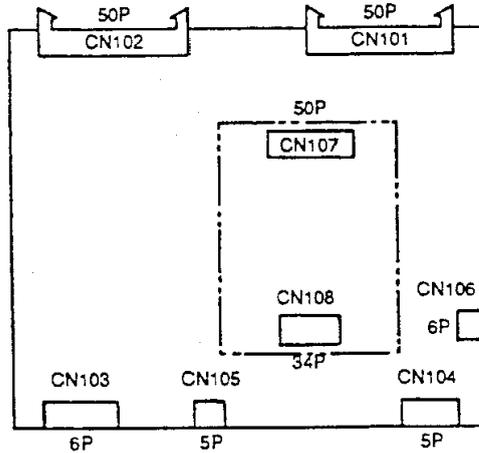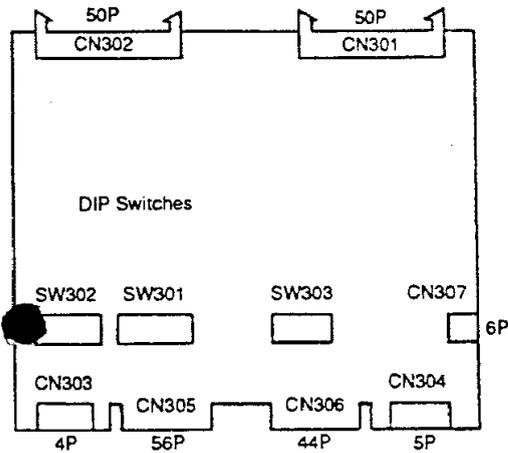
Board CH9072 BOTTOM

Board CH9074 COM-LINK
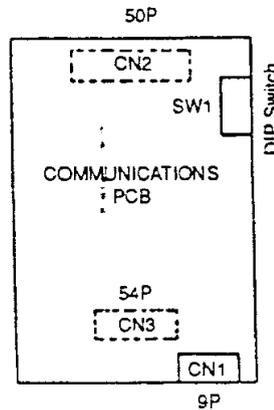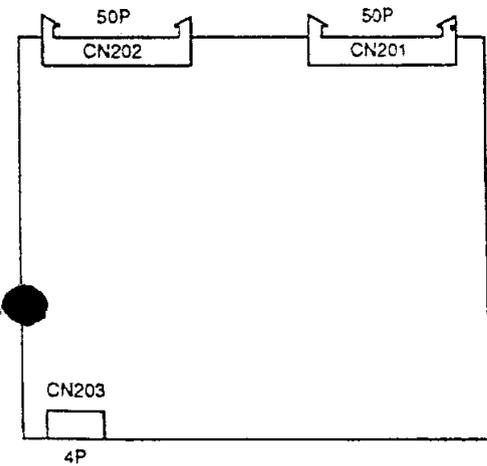
PCB CH9074 (Com-Link) is fastened to PCB CH9071 and linked by connectors CN2 (Com-Link) to CN107 and CN3 (Com-Link) to CN108.

TESTING THE COM-LINK COMMUNICATIONS

Once the communications PCB has been installed and the inter-machine cables connected, it is possible to test the com-link system via the self-test program installed in the Cisco Heat.

```
            COMMUNICATIONS CHECK


                 CAR No 1

      CAR No 2          OK

      CAR No 3          NOT CONNECTED

      CAR No 4          WAITING
```

CAM UNIT ASSEMBLY

CAM UNIT PARTS LIST
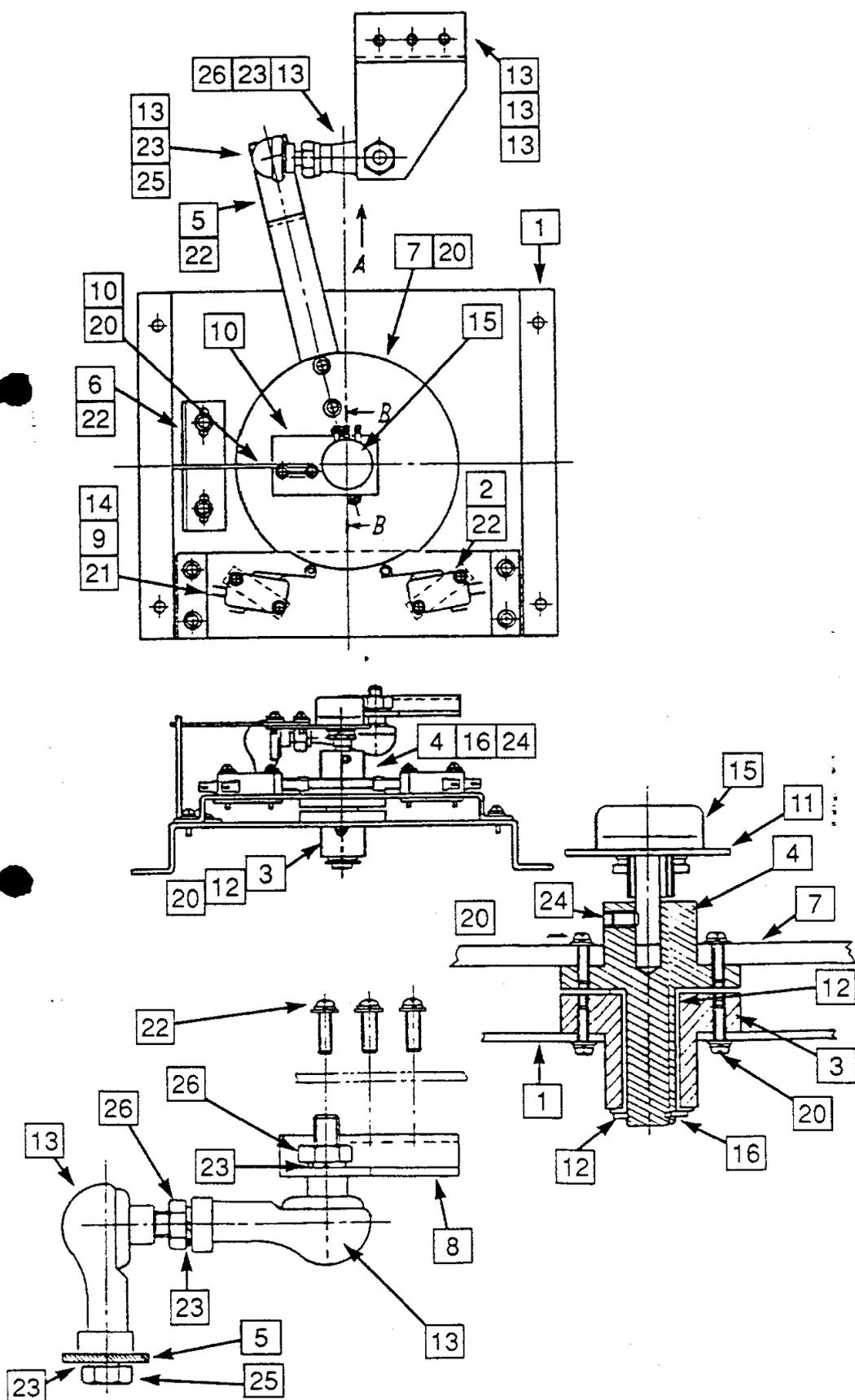
1	MB9001-20119	CAM BRACKET
2	MB9001-30266	SWITCH BRKT
3	MB9001-40319	CAM STAND A
4	MB9001-40320	CAM STAND B
5	MB9001-40321	CAM ARM
6	MB9001-40322	WIRE GUIDE LR
7	MB9001-40323	CAM
8	MB9001-40324	ARM BRACKET
9	MB88004-40083	SW PLATE A
10	MB9001-40284-1	WIRE
11	MB9001-40283-1	VR PLATE
12	80F-1008	BEARING
13	RBL6D	ROD END
14	VX-016-1A3	MICRO SWITCH
15	EWS-UOAS25E53	VR 5KOHM B
16	ETW-9	E-WASHER
20	3P 3 X 10	
21	3P 3 X 15	
22	3P 4 X 10	
23	SW6	WASHER
24	M4 X 6	GRUB SCREW
25	M6 X 15	
26	M6	

DRIVE UNIT ASSEMBLY

DRIVE UNIT ASSY PARTS LIST

1	MB9001-10055-1 DRIVE BRKT	11	MB9001-40275 PULLEY 12T	21	MB9001-40329 ROD
2	MB9001-30227-1 DRIVE BASE	12	MB9001-30226 RUBBER ROLLER	22	MB9001-40331 SPRING D
3	MB9001-30228-1 DRIVE SHAFT A	13	MB9001-40273 ROLLER STOPPER	23	MB9001-40326 SPRING GUIDE
4	MB9001-30229-1 DRIVE SHAFT B	14	MB9001-40330 COLLAR	24	DMW-180T DC MOTOR
5	MB9001-40272 BEARING BRKT A	15	MB9001-40276 UP BRACKET	25	30F-1415 BEARING
6	MB9001-40271 BEARING BRKT B	16	MB9001-40277 LOW BRACKET L	26	6005 ZZ BEARING
7	MB9001-30267 BEARING GUIDE	17	MB9001-40327 LOW BRACKET R	27	6204 ZZ BEARING
8	MB9001-30286 LEVER	18	MB9001-40325 ROD BASE	28	225L TIMING BELT
9	MB9001-40347 LEVER COLLAR	19	MB9001-40280 MOTOR NUT	29	KEY 6 X 6 X 25 KEY
10	MB9001-30230-1 PULLEY 48T	20	MB9001-40328 SPRING BRACKET	30	KEY 4 X 4 X 20 KEY
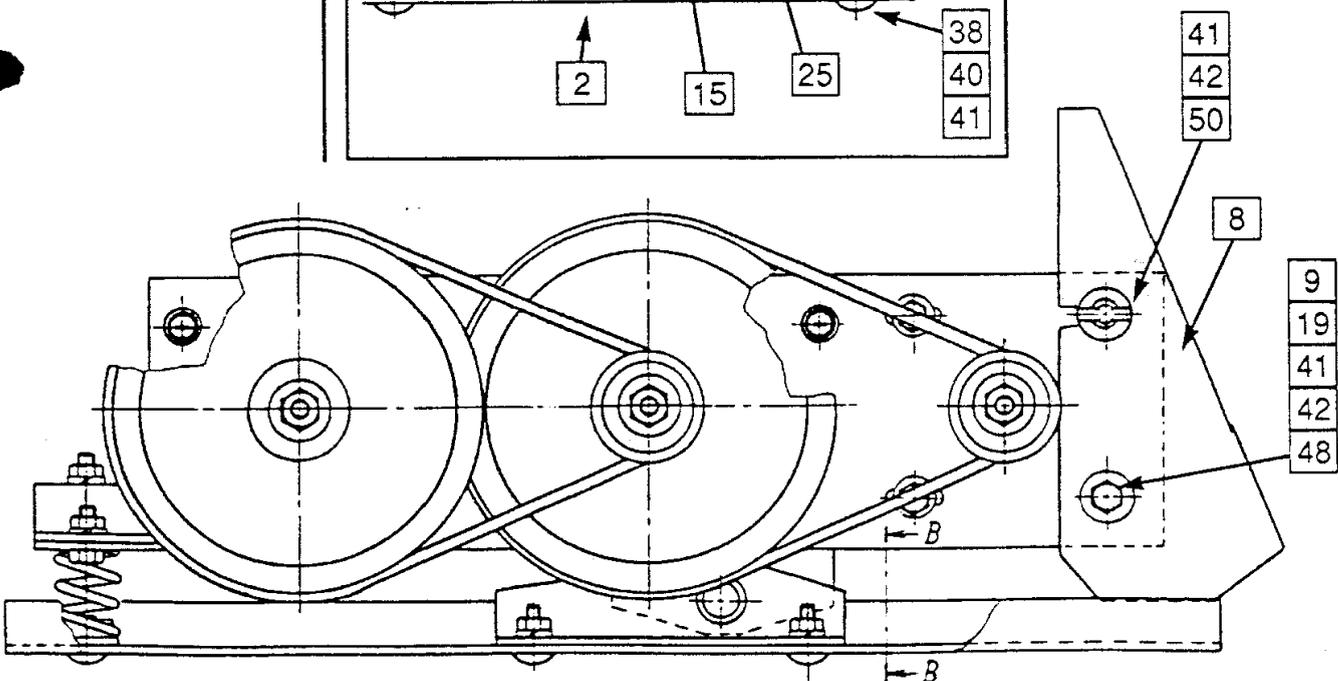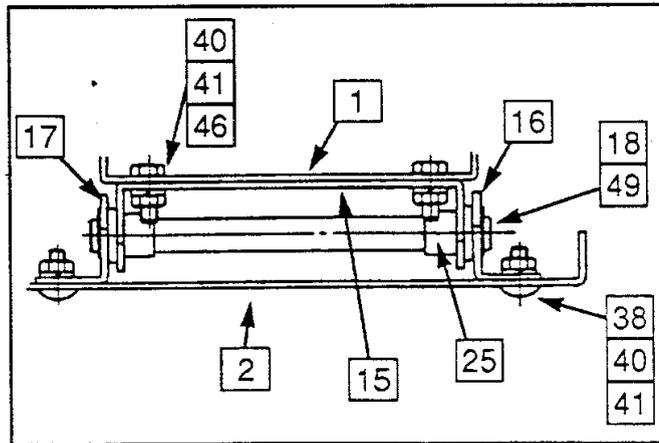
DRIVE UNIT ASSEMBLY

DRIVE UNIT ASSY PARTS LIST

35	M4 X 6
36	M5 X 8
37	3P 5 X 15
38	M6 X 18
39	M6 X 15
40	N6
41	SW6
42	PW6
43	N8
44	SW8
45	PW8
46	M6 X 20
47	M6 X 30
48	M6 X 35
49	STW - 14
50	M6 X 30
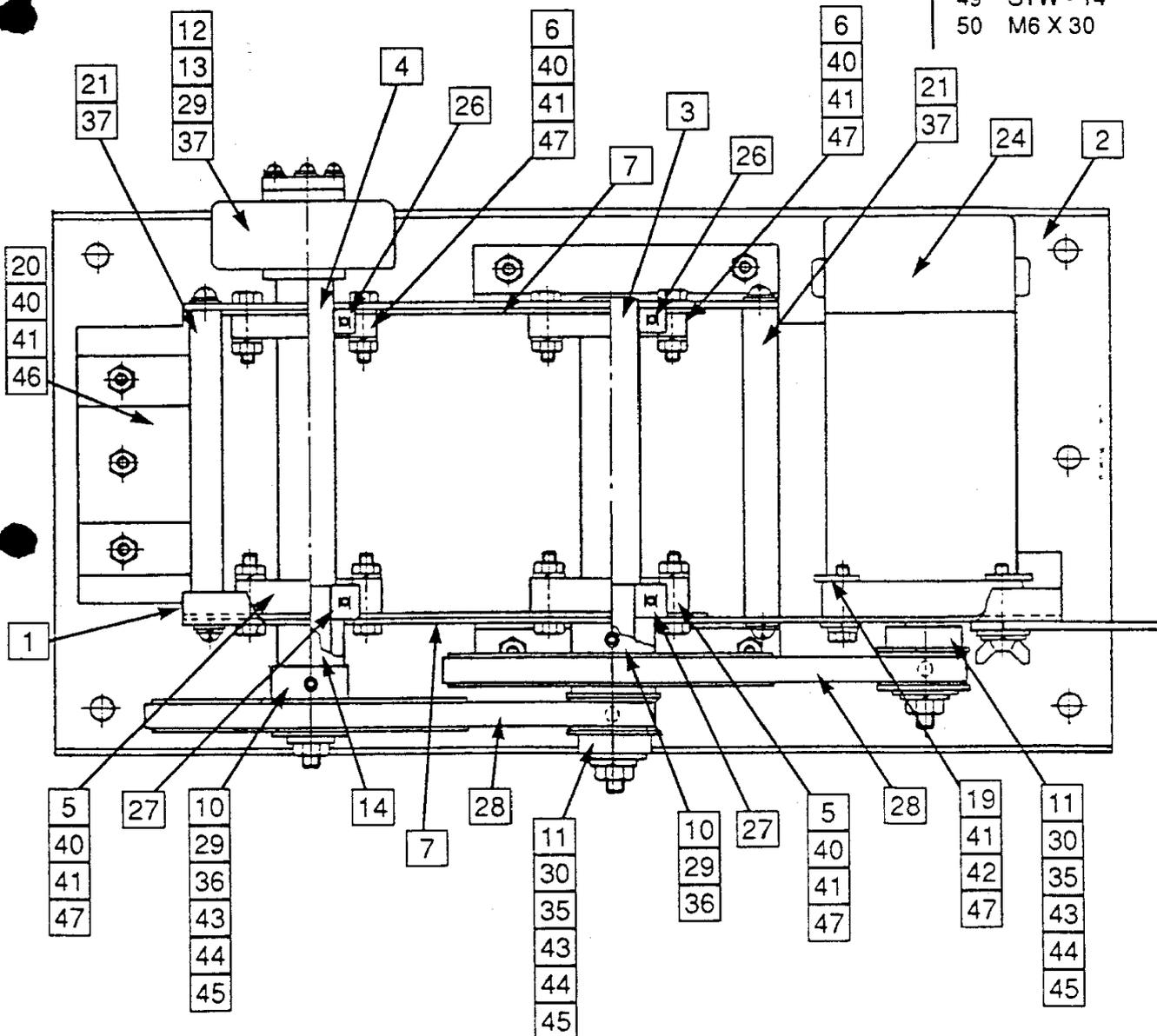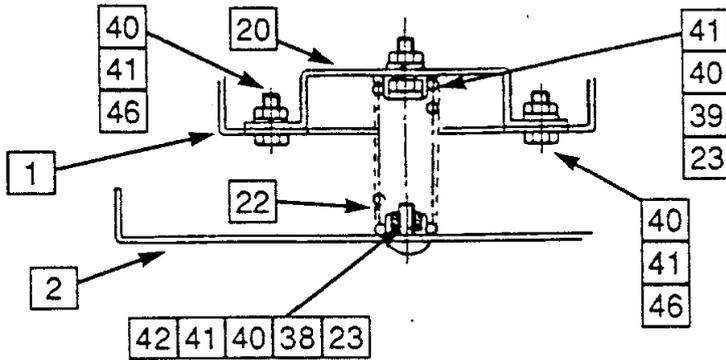
TOP LIGHT ASSEMBLY

TOP LIGHT ASSY PARTS LIST

1. MB9001-20128
   TOP LIGHT BASE
2. MB9001-20129
   TOP LIGHT COVER
3. MB9001-20130
   T/L BASE BRKT
4. MB9001-30288
   TOP LIGHT PANEL
5. MB9001-30289
   TOP LIGHT BRKT
6. G30E17C 110V 20W
   LAMPS
7. F-T01
   LAMP HOLDER
8. TP3 X 12
   SCREW
9. TP3 X 6
   SCREW
10. TP3 X 20
    SCREW
11. TP4 X 15
    SCREW
12. M6 X 25
    SCREW
13. PW6
    WASHER
14. FN6
    NUT
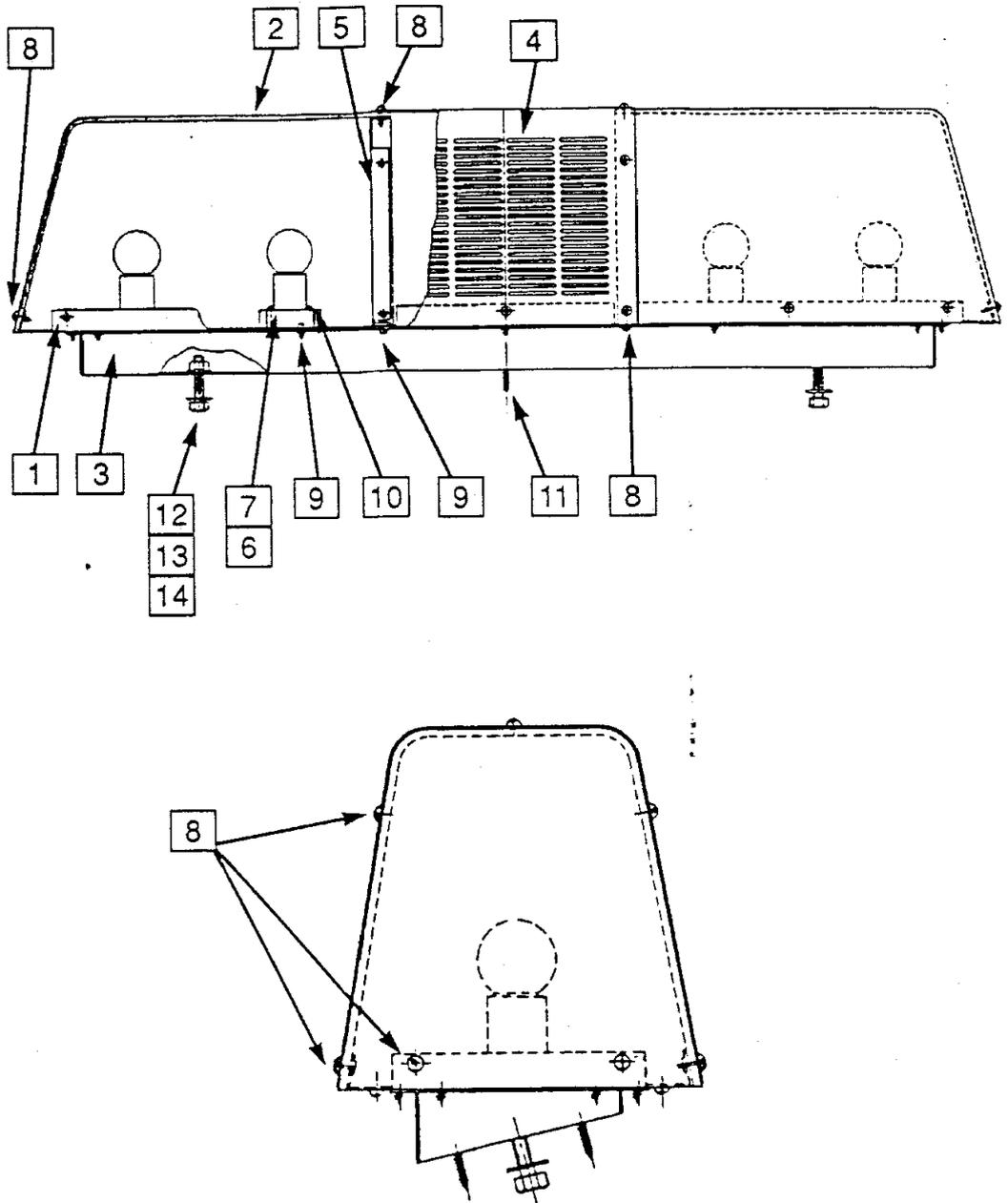
SHIFT ASSEMBLY
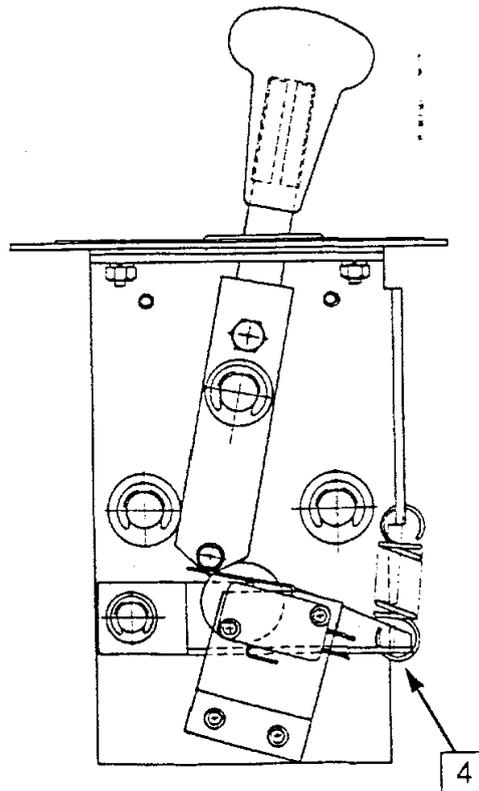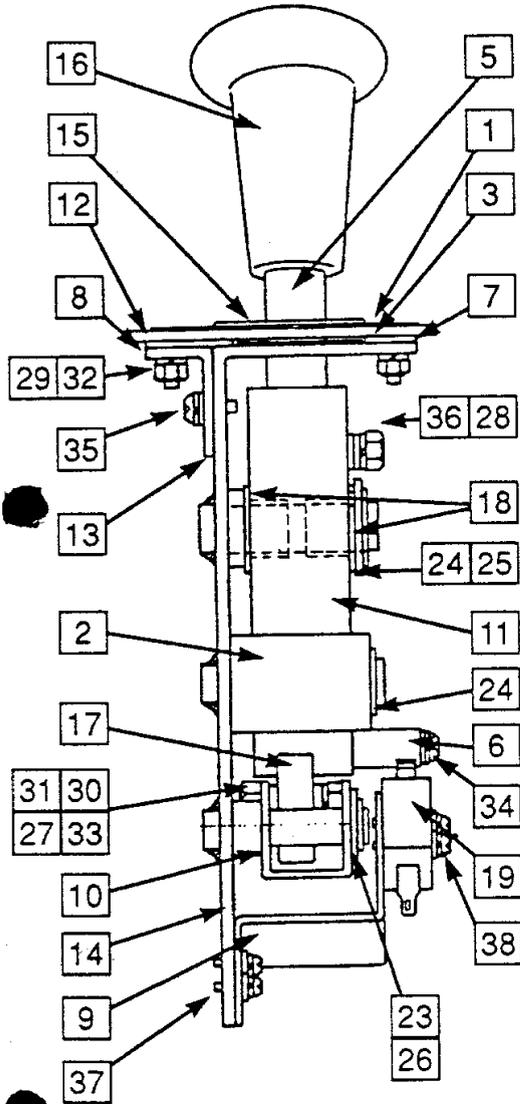
**SHIFT ASSY
PARTS LIST**

1	MB88004-30065
	SHIFT SEL. STICKER
2	MB88004-40055
	SHIFT RUBBER
3	MB88004-40056
	SHIFT COVER
4	MB88004-40057
	SHIFT SPRING
5	MB88004-40058
	SHIFT SHAFT
6	MB88004-40059
	SW POST SH
7	MB88004-40060
	COVER GUIDE A
8	MB88004-40061
	COVER GUIDE B
9	MB88004-40062
	SW BRACKET
10	MB88004-40063
	SHIFT ARM
11	MB88004-40064
	SHIFT LEVER
12	MB88004-30066
	SHIFT PANEL
13	MB88004-40065
	SHIFT BRKT A
14	MB88004-40029
	SHIFT BRKT B
15	MB88004-40066
	SHAFT COVER
16	SHIFT KNOB No4
17	MR636ZZ
	BEARING
18	80F-1008
	BEARING
19	AH7158261
	MICRO SWITCH
23	07
24	09
25	PW10
26	PW8
27	PW6
28	PW5
29	SW4
30	SW6
31	FN6
32	M4
33	M6 X 20
34	3P4 X 25
35	3P4 X 10
36	3P5 X 10
37	3P3 X 8
38	3P3 X 15

ACCELERATOR ASSEMBLY

ACCELERATOR ASSY PARTS LIST

#	Part No.	Name
1	MB9001-10059	MAIN BRACKET
2	MB9001-20111-1	PEDAL ARM
3	MB9001-30237-1	BRAKE PEDAL
4	MB9001-30238-1	ACCEL. PEDAL
5	MB9001-20118	FRONT PLATE
6	MB9001-40287	BRACKET
7	MB9001-40290	SWITCH BRKT
8	MB9001-40289-1	SPRING
9	MB88004-30084	STOPPER BRKT
10	MB88004-40124	BS BRACKET
11	MB88004-40126	ACCEL. SHAFT
12	MB88004-40125	SHAFT PIPE A
13	MB88004-40129	SHAFT PIPE B
14	MB88004-40128	SW. PIPE
15	D2MV-01L-1C3	MICRO SWITCH
16	EH 1001	RUBBER STOP
17	EH 1002	RUBBER STOP
18	80F-1410	BEARING
19	AH7158261	MICRO SWITCH
20	3P 3 X 15	
21	3P 4 X 10	
22	M 5 X 45	
23	SW5	
24	2P 6 X 15	
25	FN6	
26	M 5 X 15	
27	FN5	
28	M6 X 15	
29	SW6	
30	N6	
31	Ø 12	
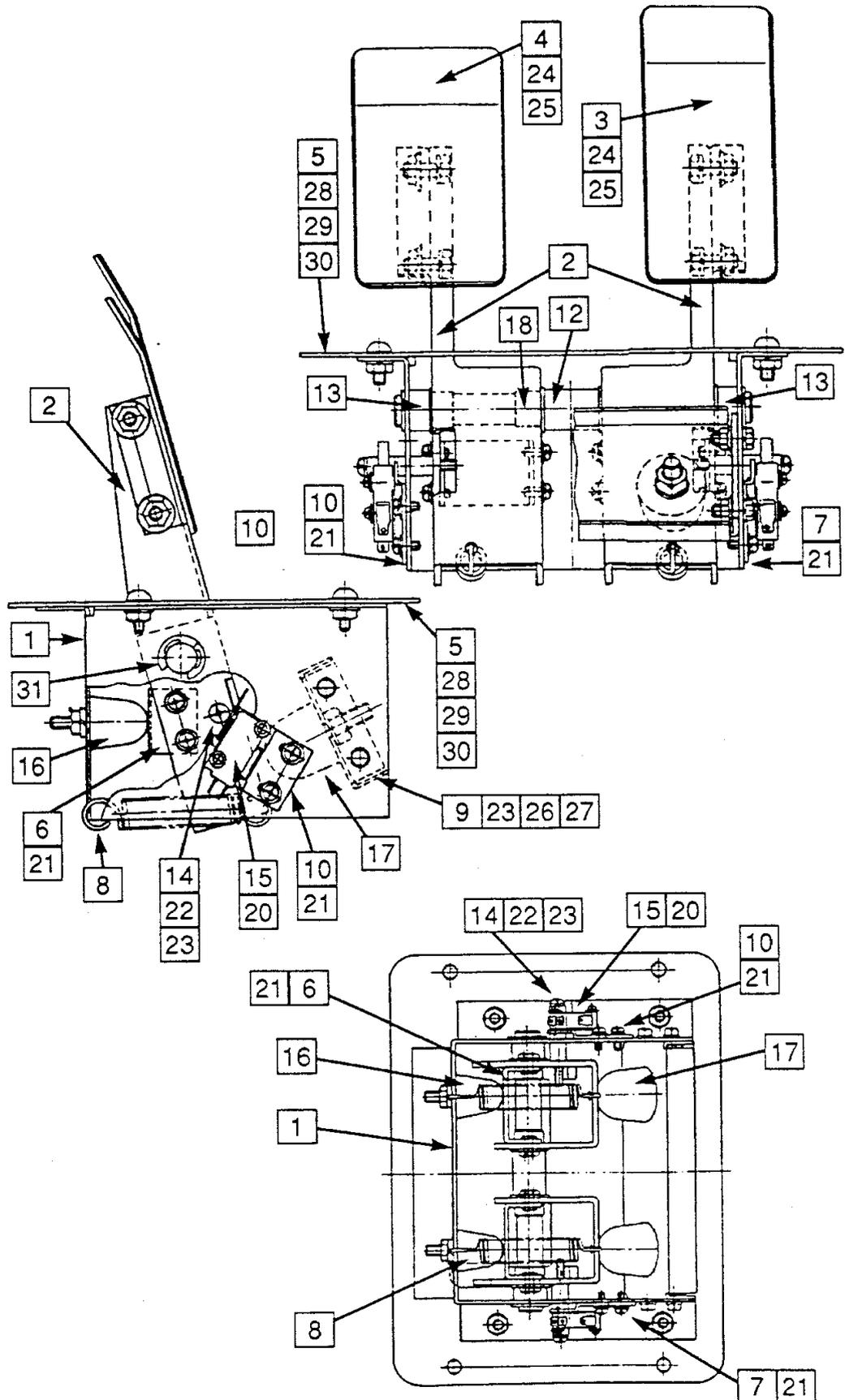
MOVING BASE ASSEMBLY
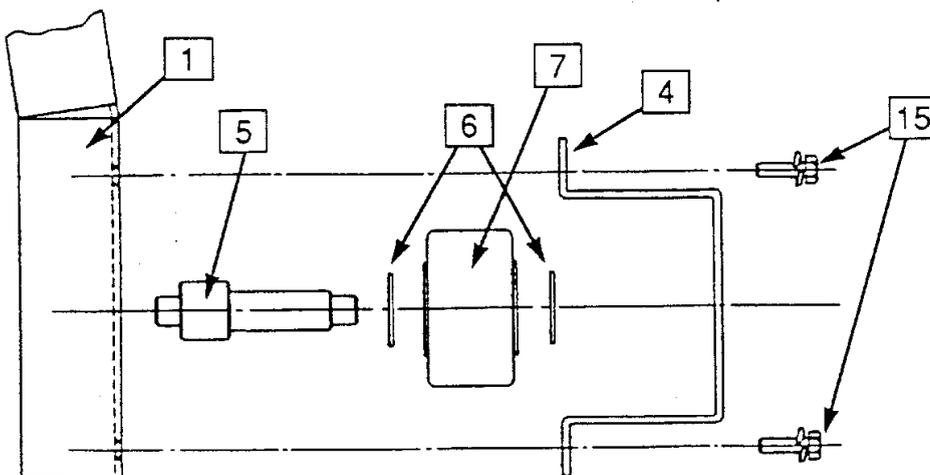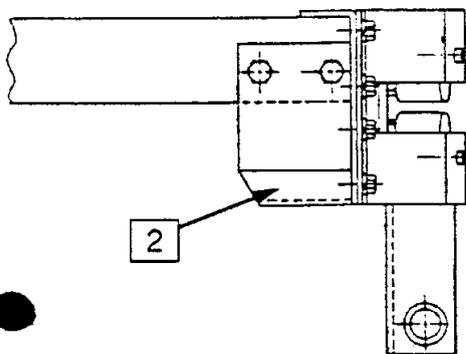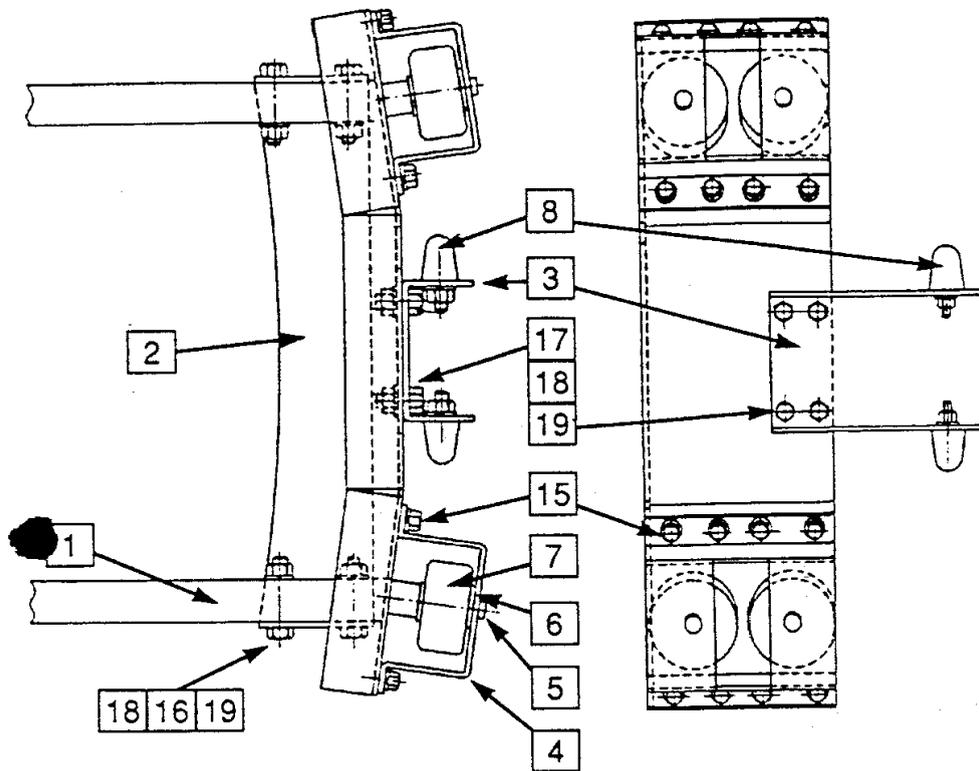
MOVING BASE ASSY PARTS LIST

1	MB9001-10057-1 MOVING BASE
2	MB9001-20110 MOVING GUIDE
3	MB9001-30233 STOPPER BRKT
4	MB9001-20108 ROLLER BRKT
5	MB9001-40233 ROLLER SHAFT
6	70W-1615
7	MGH-65 ROLLER
8	EH-1002 RUBBER STOP
9	M8
15	2P 6 X 15
16	M8 X 50
17	M8 X 20
18	SW8
19	M8

GEAR UNIT ASSEMBLY

GEAR UNIT ASSY PARTS LIST

1	MB9001-10056-1	GEAR BASE
2	MB88004-30235-1	PULLEY FR
3	MB88004-30235-1	LIMIT PLATE FR
4	MB88004-30236-1	FR ARM
5	MB88004-40279-1	MOTOR GUIDE
6	MB880041-40281	MOTOR PULLEY
7	MB88004-40282-1	FR CAM
8	MB88004-40283-1	VR PLATE
9	MB88004-40284-1	WIRE
10	MB88004-40285	WIRE GUIDE
11	MB88004-40286-1	VR BRKT
12	MB88004-40318	WASHER M
13	MB88004-40280	MOTOR NUT
14	MB88004-40083	SWITCH PLATE A
15	DMW-180J	DC MOTOR
16	ZA50-1/60	
17	VX-016-1A3	MICRO SW
18	EWS-UOAS25E53	VR 5KOHM
19	3V-265	
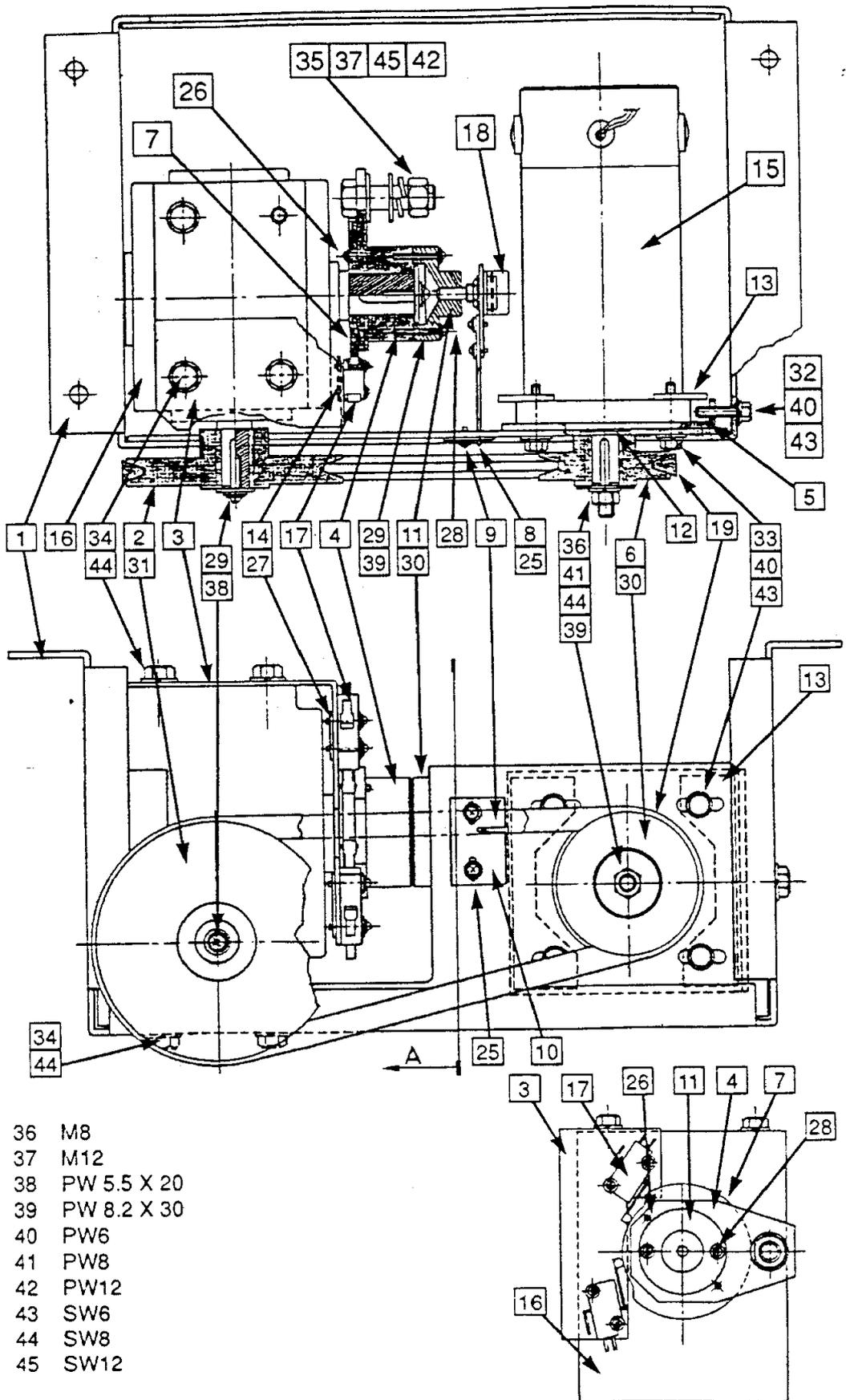
25	3P 3 X 10		36	M8
26	2P 3 X 15		37	M12
27	2P 3 X 15		38	PW 5.5 X 20
28	3P 4 X 20		39	PW 8.2 X 30
29	M4 5 X 15		40	PW6
30	M4 X 6		41	PW8
31	M5 X 8		42	PW12
32	M6 X 20		43	SW6
33	M8 X 30		44	SW8
34	M8 X 15		45	SW12
35	M12 X 40			
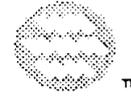
CHAIR UNIT ASSEMBLY
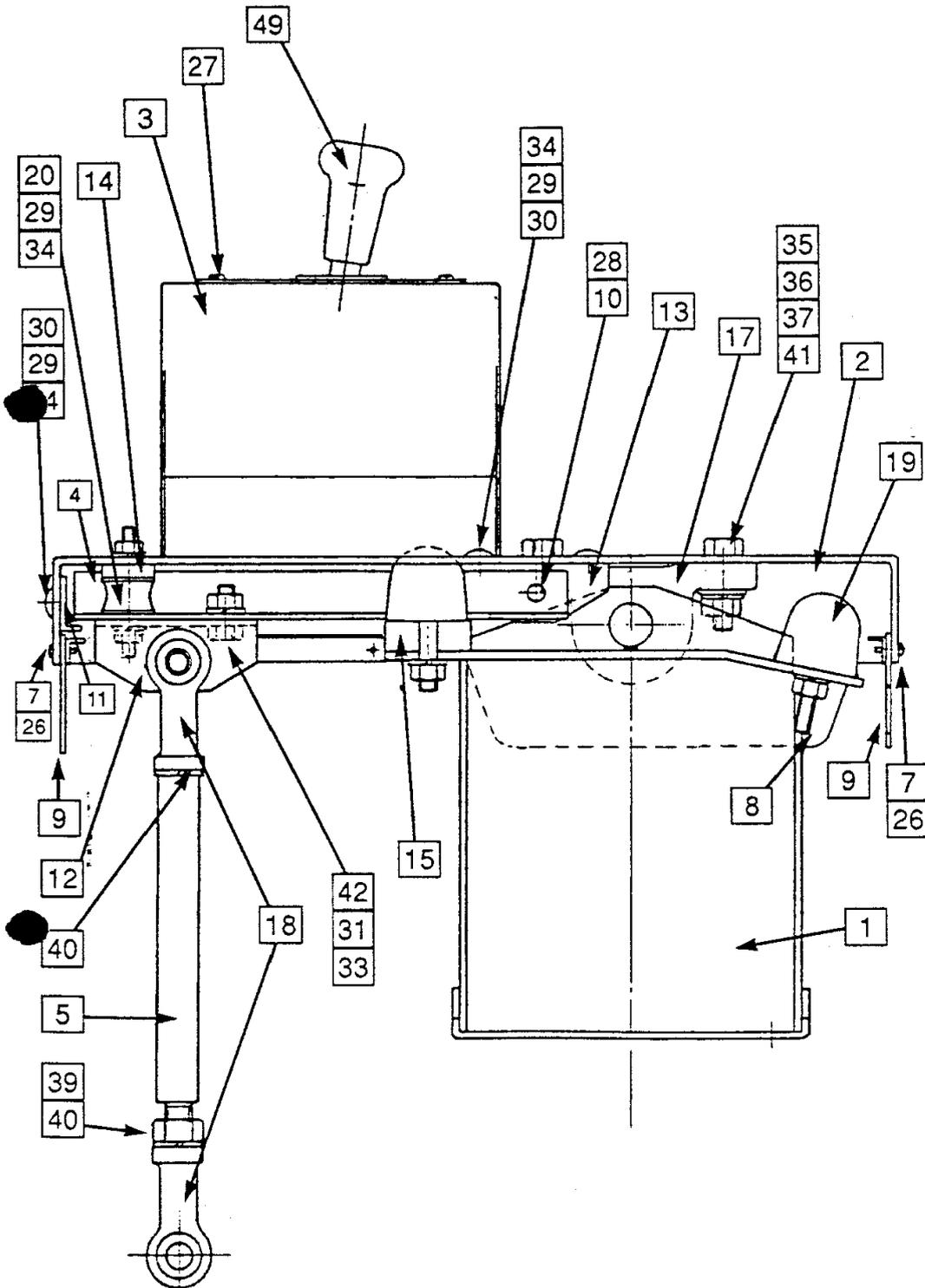
CHAIR UNIT ASSY
PARTS LIST

1	MB9001-10058-1 CHAIR BASE
2	MB9001-10060-2 CHAIR BRKT
3	MB9001-10061-1 SHIFT BOX
4	MB9001-30243-1 ROD BRKT A
5	MB9001-30273 CHAIR ROD
6	MB9001-30274 COVER NUT S
7	MB9001-30275 COVER NUT
8	MB9001-30276 COVER S
9	MB9001-30277 COVER L
10	MB9001-40298 ROD A
11	MB9001-40299-1 ROD STOPPER
12	MB9001-40300 ROD BRKT B
13	MB9001-40301 ROD BRKT C
14	MB9001-40337 COLLAR B
15	MB9001-40338 COLLAR C
16	
17	BLLP 3J BEARING
18	NHS 12T ROD END
19	EH 10003 STOPPER
20	KA-25
21	MB9001-30290 COVER BRKT S
22	MB9001-40350 WOOD S
26	M3 X 12
27	M4 X 10
28	STW-8
29	SW6
30	M6 X 18
31	SW8
32	PW8

CHAIR UNIT ASSY
PARTS LIST

CHAIR UNIT ASSEMBLY

33 M8
34 M6
35 M10
36 SW10
37 PW10
38 M12 X 40
39 M12
40 SW12
41 M10 X 35
42 M8 X 15
43 M3 X 30
44 M5
45 SW5
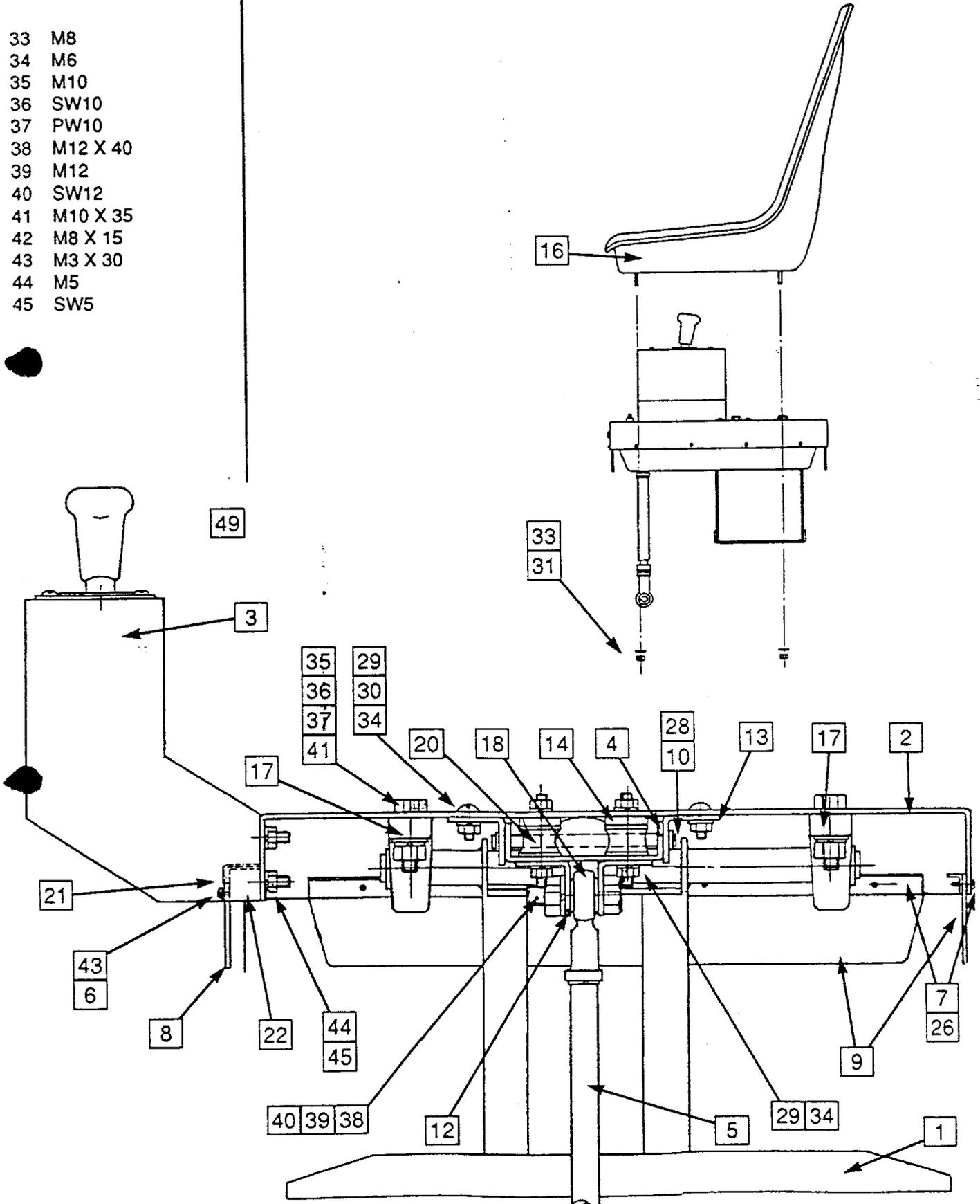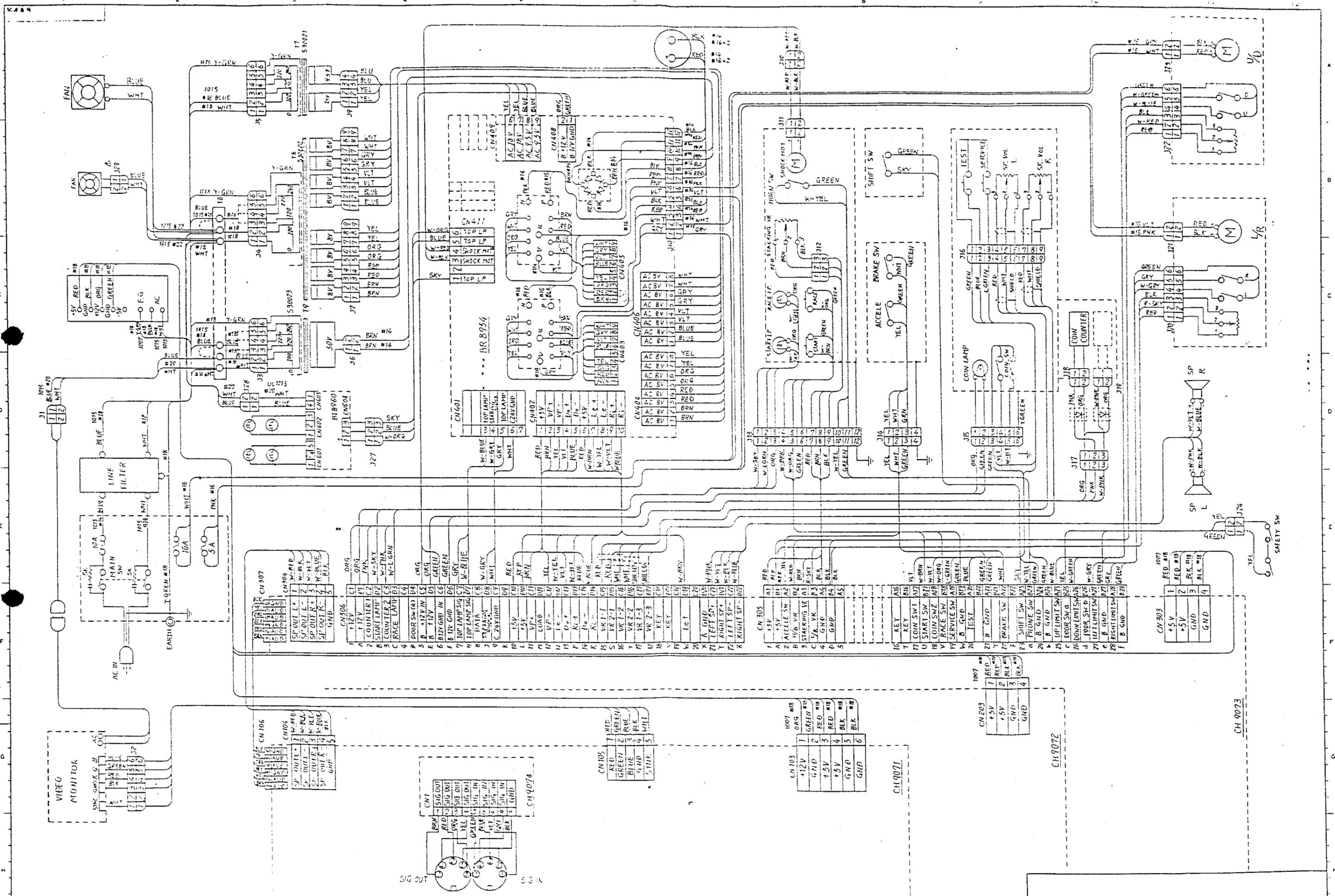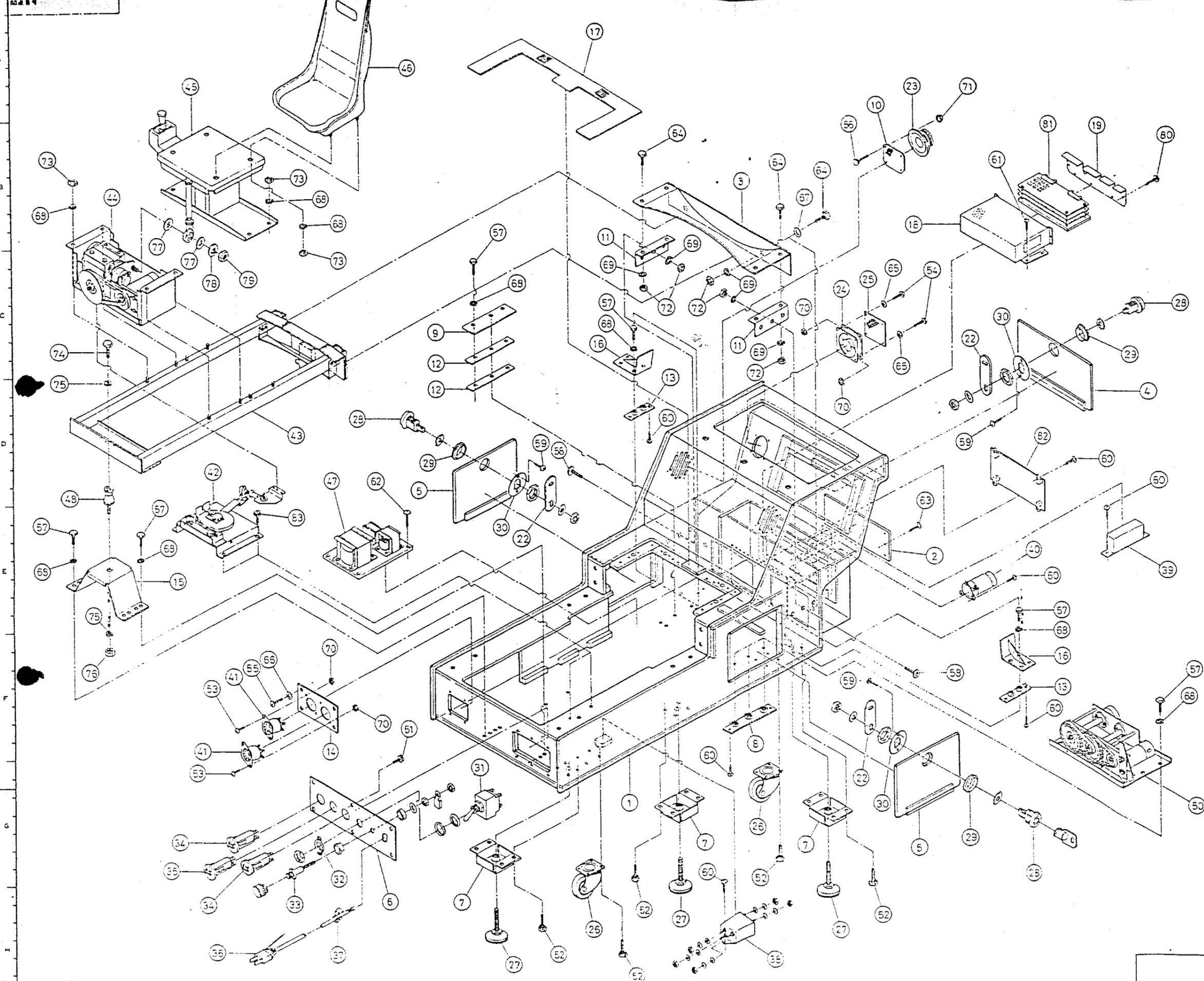
ITEM	DESCRIPTION	PARTS NO.	Q'U
1	BASE CABINET	MP90001-10047	1
2	BASE REAR HOOD (B)	〃 -30103	1
3	ROLLER GUIDE	〃 -30100	1
4	BASE REAR DOOR (A)	〃 -30203	1
5	SIDE DOOR	〃 -30203-1	2
6	POWER SW BKL	〃 -30191	1
7	ADJUSTER BKL	〃 -30265	5
8	BASE NET	〃 -30268	1
9	MOVE PLATE (A)	〃 -30269	1
10	SPEAKER PANEL	〃 -30270	2
11	GUIDE BKL	〃 -4027R-1	2
12	MOVE PLATE (B)	〃 -60332	2
13	POWER NUT	〃 -60336	2
14	SW BKL	〃 -60336-1	1
15	CENTER BASE	〃 -30221	1
16	STOPPER	〃 -30232	2
17	RUBBER MAT (B)	〃 -30237	1
18	PCB CASE	〃 -30262	1
19	PCB CASE COVER	〃 -30270R	1
22		ST-5061-C	2
23	SPEAKER	F160C55-1	2
24	AC FAN	109CR5	1
25	FAN PANEL	MP93001-60263	1
26	CASTER	K-100K89-50	4
27	ADJUSTER	C-280-3	5
28	KEY LOCK	NO.9003	3
29	KEY NUT	AP-122	3
30	KEY B	BL-1	3
31	POWER SWITCH	A-421	1
32	ON/OFF PLATE	(A-421 用)	1
33	EARTH TERMINAL	T-6500	1
34	10A	A05110	2
35	5A	A05110	1
36	AC CORD	1-A35-130	1
37	AC CORD		1
38	NOISE FILTER	ZAC-2215-04	1
39			1
40		160LSPG700	1
41	PIN SOCKET	TCS1250-01-6201	2
42	CVM UNIT ASSY	MP90001-1000.9	1
43	GEAR UNIT ASSY	〃 -10005	1
44	MOVE BASE ASSY	〃 -10007	1
45	CHAIR UNIT ASSY	〃 -10003	1
46			1
47	POWER SUPPLY ASSY		1
48		PRT1250	1
50	DRIVE UNIT ASSY	〃 -1000P	1
52		2.6×25	40
53		M3×P	4
54		M3×25	2
55		M4×20	2
56		M6×30	4
57		M6×25	20
58		M10×25	6
59		T-P3×10	6
60		T-P4×12	16
61		T-P6×14	3
62		T-P4×30	2
63		T-P4×30	6
64		M10×30	4
65		PW-3	4
66		PW-6	2
67		PW-10	3
68		CW-8	2
69		NW-10	12
70		EA-3	6
72		N-10	12
73		N-8	8
74		M12×30	2
75		PW-12	2
76		N-12	2
77		PW-12	2
78		RW-12	2
79		N-12	1
80		3.6×10	1
81	PCB ASSY		1
82	POWER PCB	RR-P95GA	1
83		3.6×20	2

STEERING UNIT Assy MF90001-10011-2 1/2

STEERING UNIT Assy MF90001-10011-2 2/2

番号	品 名	図面番号	材質	処理	個数	備 考
29						
28						
27						
26						
25						
24						
23						
22						
21						
20						
19	フランジ付六角ナット	FN4		MF三ルエ-C	8	
18	皿穴付丸サラタッピングネジ	TP 4×20		Ni or Cr	5	
17	皿穴付トラスタッピングネジ	TP 4×12		黒クロナート	4	
16	皿穴埋込十字穴付ネジ	3P 4×15		MF三ルエ-C	12	
15						
14						
13						
12						
11						
10	LIMIT SWITCH Ass'y	MF90001 - 10001-1			2	
9						
8	圧縮コイルバネ	No. 1150			4	ケ-エス産業
7	SPring Bks	MB90001- 40340	SECC 1.2	脱脂	4	
6	Shoulder Bolts	: -40339 - 1	S2o~4oC	黒クロナート	6	
5	ROOF BKs (B)	: -30198-1	SECC 1.2	黒塗装	1	
4	ROOF BKs (A)	: -30197-1	SUS 304 1.0		1	
3	ROOF DOOR	: -20126	見ボリ合板		1	
2	ROOF PANEL	: -20120-1	スモ-ク板1.0 印刷		1	
1	ROOF CABINET	MF90001-10098-1			1	

ROOF CABINET Assy MF90001-10012-1

FRONT CABINET Assy MF90001-10013-1

ITEM	DESCRIPTION	PARTS NO.	Q'TY
1	FRONT CABINET	MF9001-10013-1	1
2	CUT COVER	" -10050-1	1
3	CASH BOX COVER	" -10052	1
4	COIN CHECKER ASSY	" -10121	1
5	CHASSIS MAT (下)	" -30199-1	1
6	BACKING BKS	" -30200	1
7	CASH BOX	" -30202	1
8	COIN CHUTE	" -30201-1	2
9	LOCK BKS	" -30226	1
10	BACKING STOPPER (上)	" -30205	1
11	BACKING PANEL	" -30226-1	1
12	TOP COVER WOOD	" -30248	1
13	REAR DOOR	" -30253	1
14	TOP COVER BKS (右)	" -30199-1	2
15	" (左)	" -40231-1	2
16	HITCH BKS	" -40335	1
17	FOOT PLATE (下)	" -30235	1
20	ACCEL. UNIT	" -10005	1
21	STEERING UNIT	" -10011	1
22	COIN SELECTOR (Yen)	400-52	1
23	COIN DOOR (右)	400	1
24	丁ネジ	ST-5001-0	2
25	COIN LOCK (用)	9502	1
26	ミ LOCK		1
27			12
28	電源 トランス (12V)	GX-060	1
29	MONITOR ASSY	MF9001-10015	1
30	MONITOR P.C.B		1
31		PL-1-15P	1
32	1ST IF BKS		1
33	キャップ (黒)		1
34	" (赤)		1
35	VR ツマミ		2
36	TEST スイッチシール		1
37	SERVICE "		1
38	SPEAKER VR #		1
39	ヒゲ	M3x8-3x3	1
40	"	" -40164	1
41	DIPLIGHT BASE BKS	MF9001-20100	1
42	" BKS	" -20122	1
43	" BKS	" -30299	1
44	SOCKET	E-791	2
45	白熱球 Lamp 110V 22W	P30E11C	2
46	DIPLIGHT COVER	MF9001-20129	2
47	" PANEL	" -30299	1
48		30368	4
49		3P4x10	15
51	六角穴付キャップボルト	M4x10	10
52	" (")	M6x20	2
53	六角ナット	M4x15	3
54		3P6x20	2
55		TP4x12	5
56		TP4x20	2
58	ワッシャー	PW8	6
59	スプリングワッシャー	SW8	4
60	六角ナット	N8	1
61	スプリングワッシャー	PW6	3
62	ワッシャー	M4x25	2
63	六角ボルト	TP3x6	2
64		TP3x12	24
65		TP3x20	8
66			2
67	ワッシャー	PW6	2
68		FW6	1
69		TP4x20	3
70		M5x12	12
72		TP4x12	6

No.	品名	記号	K番号	材質・寸法・形状 他	員数	備考
1	SIDE CABINE Assy					
2	FRONT CABINE Assy					
3	ROOF CABINE Assy					
4	REAR COVER	MF90001	10064-1		1	
5	REAR COVER Bkt	〃	30510-1		1	
6	TAILLAMP STICKER	〃	30012		1	
7	Joint Bkt (B)	〃	30509-1		2	
8	Joint Bkt (A)	〃	30508-1		2	
9						
10	FOOT GUARD (B)	〃	30095		1	
11	FOOT GUARD (A)	〃	30094		1	
12	Rubber Mat (D)	〃	30293		1	
13	Rubber Mat (C)	〃	30292		1	
14	BASE COVER	〃	10064-1		1	
15	Rubber Mat (B)	〃	30125-1		1	
16	Skirt	〃	30120		1	
17	当て木 ⑧	〃	30047		2	
18	⑤	〃	〃		3	
19	⑥	〃	〃		4	
20	皿ビス		M3 × 35		6	
21	スプリングワッシャー		SW 3		6	
22	平ワッシャー		Dφ φ3.Bφ-t2.0		6	
23	木用ビス ROUND+		M3 × 20		22	
24	Shoulder Bolt	MF90001	30330-1		9	
25	トラスタッピンビス		TP 4 × 20 (黒)		2	
26	トラスタッピンビス		TP 4 × 20 (黒)		13	
27	埋木くぎ		N25		25	
28	PLATE Assy				1	

9001総組立図　　MF90001-10014

PCB Set for Cisco Heat

The 4-piece PCB Set (basic PCB set) is composed of:

CH-9071
CH-9072
CH-9073
BR-8957 (not shown)

plus such Flat Cables, Wiring Harnesses, and Studs that are needed only to put together the first 3 pieces as illustrated below:

PCB Stud A (6 pcs.) ——————————————————— Flat Cable

PCB Stud A (6 pcs.) ——————————————————— CH-9073

PCB Stud B (6 pcs.) ——————————————————— CH-9071

PCB Stud A (6 pcs.) ——————————————————— CH-9072

Wiring Harness
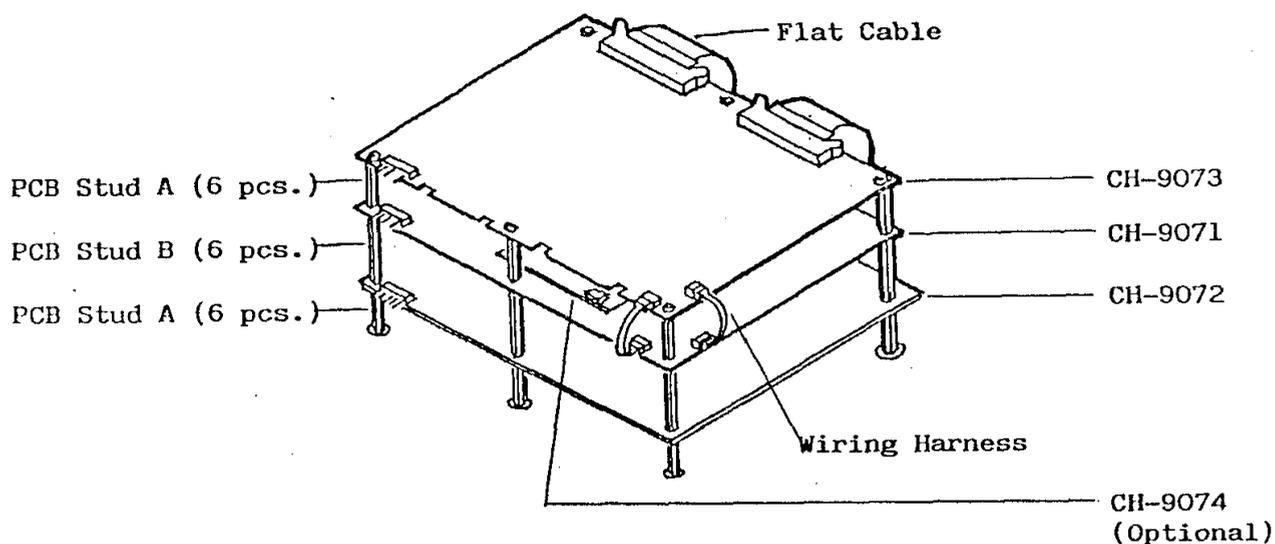
CH-9074
(Optional)

COM-LINK PCB CH-9074 is an optional accessory, and it must be ordered in addition to the basic PCB set when Cisco Heat machines are to be com-linked to one another for simultaneous racing.

Power Transformer

The secondary side (output) is AC 18V 2A, 9.5V 3A.

Switching Regulator

The secondary side (output) is max. 100W, DC 5V 13A, 12V 2A.

SETTING THE DIP SWITCHES   FOR EUROPE

PRICE SETTING:

DIP SWITCH   #SW301   (BOARD NO. CH-9073)

	COIN	CREDIT	1	2	3	4	5	6	7	8
COIN SLOT #1 (RIGHT HAND SIDE)	1	1	OFF	OFF	OFF					
	1	2	ON	OFF	OFF					
	1	3	OFF	ON	OFF					
	1	4	ON	ON	OFF					
	1	5	OFF	OFF	ON					
	1	6	ON	OFF	ON					
	1	7	OFF	ON	ON					
	2	3	ON	ON	ON					
COIN SLOT #2 (LEFT HAND SIDE)	1	1				OFF	OFF	OFF		
	1	2				ON	OFF	OFF		
	1	3				OFF	ON	OFF		
	1	4				ON	ON	OFF		
	2	1				OFF	OFF	ON		
	3	1				ON	OFF	ON		
	4	1				OFF	ON	ON		
	5	1				ON	ON	ON		
FREE PLAY									ON	ON

SETTING THE OTHER DIP SWITCHES:

DIP SWITCH #SW302 (BOARD NO. CH-9073)

		1	2	3	4	5	6	7	8
PLAYER'S CAR	NO.1 RED	ON	ON						
	NO.2 BLUE	OFF	ON						
	NO.3 YELLOW	ON	OFF						
	NO.4 GREEN	OFF	OFF						
DIFFICULTY LEVEL	EASY			ON	ON				
	NORMAL			OFF	OFF				
	HARD			ON	OFF				
	HARDER			OFF	ON				
PLAY TIME	NORMAL					OFF			
	UNLIMITED					ON			
SOUND IN 'ATTRACT' MODE	YES						OFF		
	NO						ON		
SCREEN DISPLAY	JAPANESE							OFF	
	ENGLISH							ON	
CONTINUE	YES								ON
	NO								OFF

ATTENTION:

1) SET SWITCH NO. 8 TO "OFF" DURING COM-LINK FOR "SIMULTANEOUS RACING."

2) SET SWITCH NO. 8 TO "ON" WHEN OPERATING THE MACHINE(S) INDEPENDENTLY AND WHEN "CONTINUE PLAY" IS REQUIRED

3) "COM-LINK" AND "CONTINUE" ARE DESIGNED NOT TO WORK SIMULTANEOUSLY. FAILURE TO SET SWITCH NO. 8 PROPERLY, AS STATED ABOVE, WOULD RESULT IN A PROGRAM MALFUNCTION.

DIP SWITCH #SW303 (BOARD CH-9073)

1	2	3	4
OFF	OFF	OFF	OFF

ATTENTION:

1) SWITCH #SW 303 IS FOR PRODUCTION USE ONLY.

2) DURING OPERATION, ALL FOUR SWITCHES SHOULD BE KEPT IN THE "OFF" POSITION.

SETTING THE COM-LINK:

DIP SWITCH #SW1 (BOARD NO. CH-9074)

		1	2	3	4
PLAYER'S CAR	NO.1 RED		ON	ON	ON
	NO.2 BLUE		OFF	ON	ON
	NO.3 YELLOW		ON	OFF	ON
	NO.4 GREEN		OFF	OFF	ON
MASTER MACHINE		ON			ON
ALL OTHER MACHINE(S)		OFF			ON

● **ATTENTION:** IF THE MACHINES ARE FITTED WITH THE OPTIONAL COM-LINK PCB (CH-9074) AND IF THEY ARE COM-LINKED TO ONE ANOTHER FOR SIMULTANEOUS RACING, THEN DIP SWITCH #SW1 SHOULD BE SET AS SHOWN ABOVE.

(1) AS FOR THE "PLAYER'S CAR," #SW1'S SETTINGS SUPERSEDES #SW302 (CH-9073)

(2) ONE MACHINE MUST BE SELECTED AS THE MASTER MACHINE, AND ANY COLOR CAR CAN BE SELECTED AS THE MASTER MACHINE'S CAR.

(3) SWITCH NO. 8 (#SW302) SHOULD BE SET TO "OFF."

(4) ALL MACHINES SHOULD BE SET TO THE SAME DIFFICULTY LEVEL ON #SW302.

HOW TO PLAY

THE PLAYER'S CAR, LOCATED SCREEN CENTER, RACES IN A DEAD HEAT THROUGH THE STREETS OF SAN FRANCISCO. A THRILLING, AGAINST-THE-CLOCK AMERICAN POLICE RACE AWAITS ALL THOSE WHO DARE TO TAKE THE CHALLENGE. THIS RACE WILL COME ALIVE THROUGH REALISTIC HANDLING, DRIFT, AND INTENSE SHOCK ABSORBER REBOUNDS. MORE THAN EVER BEFORE THE QUICKLY PACED SPEED AND SOLID BODY FEEL OF CISCO HEAT WILL BESTOW A TRUE-TO-LIFE FEEL ON ITS RIDERS. THIS IS ALL MADE POSSIBLE BY THE 3D-LIKE GRAPHICS WHICH REALISTICALLY DISPLAY SUDDEN RIGHT ANGLE CURVES AND DRIFT. ALL THIS AND MORE CAN BE FOUND IN THIS EXCITING NEW RACING MACHINE.

CONTROLLING INSTRUMENTS:

ACCEL   : STEP ON THIS PEDAL TO INCREASE THE SPEED OF
                  THE PLAYER'S CAR.

BRAKE   : STEP ON THIS PEDAL TO REDUCE THE SPEED OF THE
                  PLAYER'S CAR.

STEERING WHEEL : IF YOU TURN THE WHEEL RIGHT OR LEFT, YOU CAN
                  CHANGE THE CARS DIRECTION.

SHIFT   : A CHOICE BETWEEN HIGH AND LOW GEAR.

HORN   : IF PUSHED BRIEFLY, THE MUSICAL HORN IS
                  ACTIVATED; HOWEVER, IF PRESSED FOR A LONGER
                  TIME, THE SIREN SYSTEM IS ACTIVATED AND THE
                  COMPUTER'S CARS WILL GIVE WAY (YIELD).

WHEN YOU PUT A COIN IN THE COIN SLOT, THE START BUTTON WILL FLASH. TO START THE GAME IMMEDIATELY, PUSH THE "START BUTTON;" OTHERWISE, THE GAME WILL START AUTOMATICALLY AFTER A FEW SECONDS.

THE PLAYER CAN SELECT BETWEEN A POWERFUL, LARGE AMERICAN CAR WITH QUICK ACCELERATION OR A SMALL EUROPEAN SPORTS TYPE. AT THE BEGINNING OF THE GAME THE PLAYER CAN MAKE HIS SELECTION BY TURNING THE STEERING WHEEL AND PRESSING THE ACCELERATOR. ALSO DURING THE "TIME UP" THE PLAYER GETS A CHANCE TO SELECT A CAR.

"CISCO HEAT'S" FIVE STAGES:

STAGE 1	GOLDEN GATE BRIDGE	TO	FISHERMAN'S WHARF
STAGE 2	FISHERMAN'S WHARF	TO	UNION SQUARE
STAGE 3	UNION SQUARE	TO	MOSCONE CENTER
STAGE 4	MOSCONE CENTER	TO	TWIN PEAKS
STAGE 5	TWIN PEAKS	TO	TREASURE ISLAND

IF THE PLAYER HAS NOT PASSED A STAGE'S GOAL OR CHECK POINT BEFORE THE TIMER TURNS TO ZERO, THE GAME WILL END.