MIDWAYS

Parts and Operating Manual



NO. 929 UPRIGHT



NO. 894 SITDOWN



NO. 930 COCKTAIL



NO. 931 MINI



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I. INTRODUCTION

OMEGA RACE

IMPORTANT NOTE

DO NOT plug in your new game yet. Before you do anything to your game, we recommend that you read sections I. and II. of this manual completely. It will not take more than a few minutes and it may be very helpful.

I. INTRODUCTION

OMEGA RACE is a one or a two player game with one exception; the "SIT DOWN" model. This model is for one player at a time ONLY. The other models are the "UPRIGHT", "MINI", and "COCKTAIL TABLE". When the two player mode is selected on one of these, the players take turns at the controls to fly their space ship(s) through the game course. If you have purchased the cocktail table model of this game, the rules of play are the same. The only **difference** is that in the two player mode of the cocktail table game, the picture flips to face you when it is your turn.

When playing this game, you are the pilot of an **Omegan Space Fighter** in training to defend **Omega's Star Colonies.** You are stationed in space to destroy as many waves of attacking enemy droid ships as possible.

You begin your training with a small number of droid ships in the first wave of attackers and gradually build your skill until there is a maximum number of 12 attacking droid ships per wave. These attaching ships not only move independently and fire at you, they also drop two different kinds of space mines to block your path and your shots at them.

As your skill level increases, the speed with which the droid ships attack is gradually increased and their shots at you become more accurate.

Bonus ships are awarded to you periodically throughout the game as you reach or pass certain preselected point values. Each enemy ship and mine has a point value as listed in Figure 1.

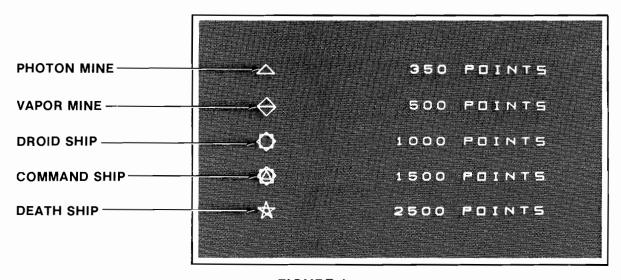


FIGURE 1

The object of the game is to survive as long as possible while destroying as many attacking droid ships and space mines as you can. As you do this, each following wave of attackers will be harder to destroy.

II. LOCATION AND SETUP

II. LOCATION AND SETUP

A. MAJOR DIFFERENCES:

A major new feature of your OMEGA RACE game is the addition of an accounting mode. This mode provides the owner/operator with coin and credit information, numbers of one and two player games played, free ships given, average score per game, highest score, average seconds per game, maximum seconds per game, and current credits on the game.

Your OMEGA RACE game will remember this information even if the power to it is turned off for a period of time.

B. INSPECTION

- 1. Remove the game from its shipping crate.
- 2. Inspect the entire outside of it for any signs of damage.
 - a. Any scratches?, dents?, cracks?
 - b. Any broken controls?
 - c. Any broken glass or plastic?
 - d. Just look it over closely and make a note of any signs of damage.
- 3. Remove the shipping cleats from the bottom of the cabinet. See Figure 2.
- 4. Install the four levelers, one at each corner of the cabinet. See Figure 2.
 - a. Level the cabinet.
- 5. Open the cabinet and inspect the inside of the game for any signs of damage. See Figure 3.
 - a. Also check to make sure all plug-in connectors on the wire harness are firmly seated.
 - **NOTE:** All connectors or plugs are keyed so they will only go together when all pins are properly lined up.
 - b. Replug any connectors found unplugged. DO NOT FORCE PLUGS ONTO CONNECTORS. DO NOT FORCE PLUGS TOGETHER. If it won't go on easily, assuming the keys are lined up, it either does not belong there or is damaged.
 - c. Make sure all printed circuit boards (P.C.B.'s) are firmly seated in their connectors. See Figure 3. These connectors are also keyed. The P.C.B.'s will only go into them one way without being damaged.
 - d. Note the location of the game's serial number. See Figure 3.
 - e. Check all major sub assemblies to be sure they are mounted securely. These are called out in Figure 4.
 - i. Power supply.
 - ii. Control panel(s).
 - iii. T.V. monitor.
 - iv. Other P.C.B.'s and/or P.C.B. rack, etc.
 - v. Power supply filter assembly.
 - vi. Transformer board assembly.

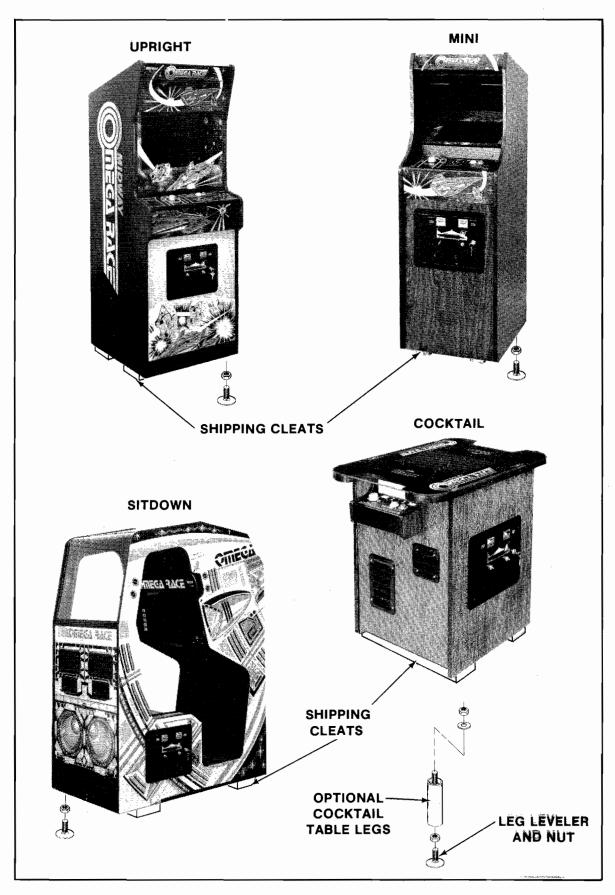


FIGURE 2

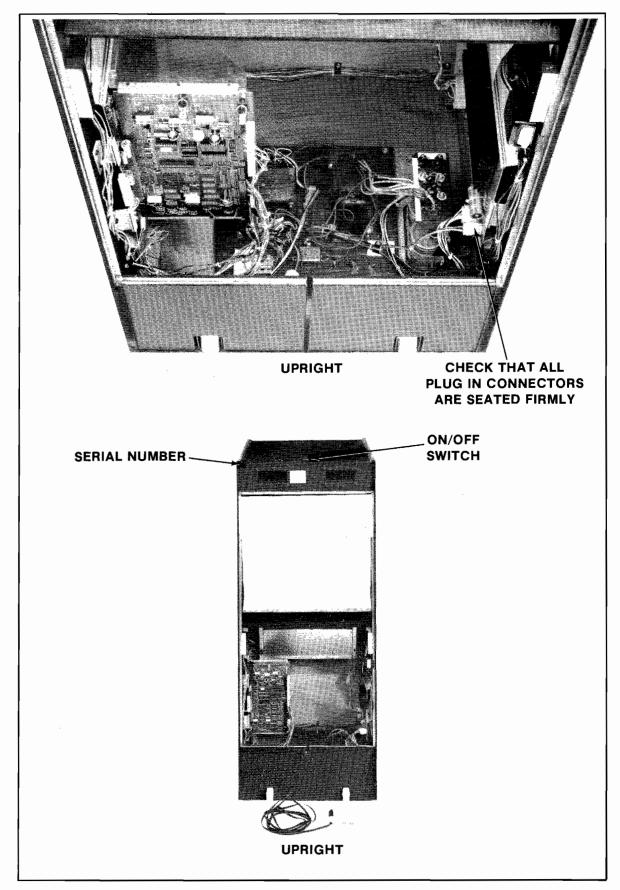


FIGURE 3

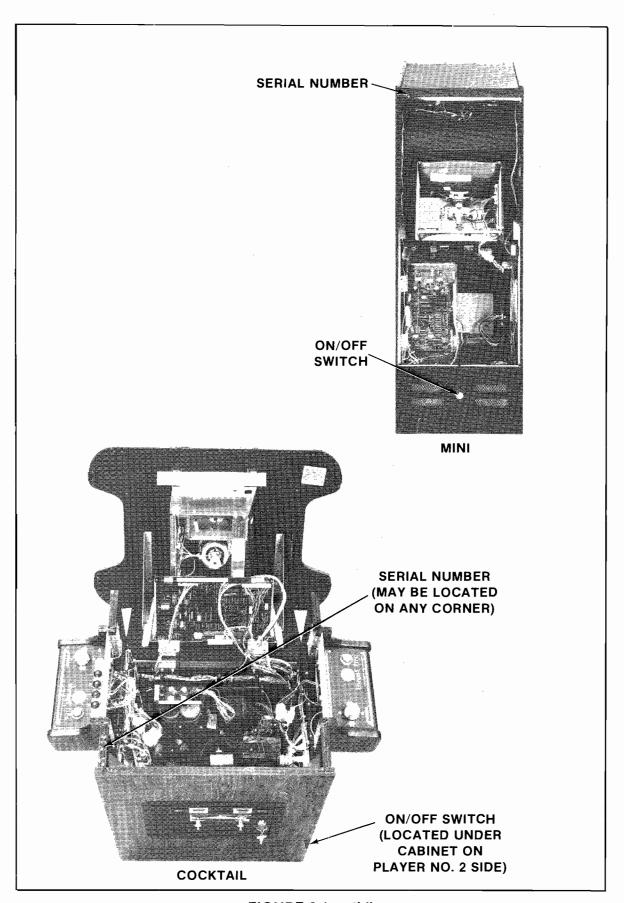


FIGURE 3 (cont'd)

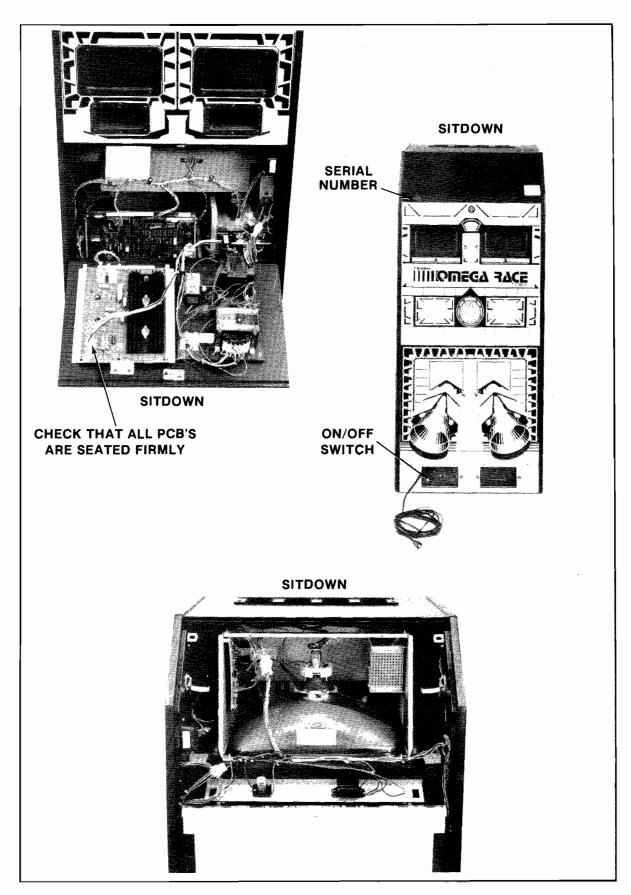


FIGURE 3 (cont'd)

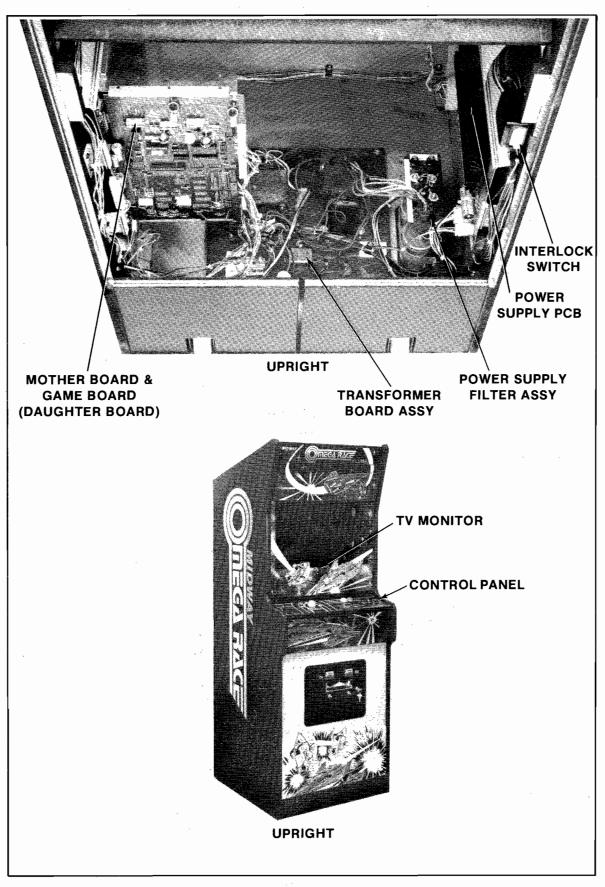


FIGURE 4

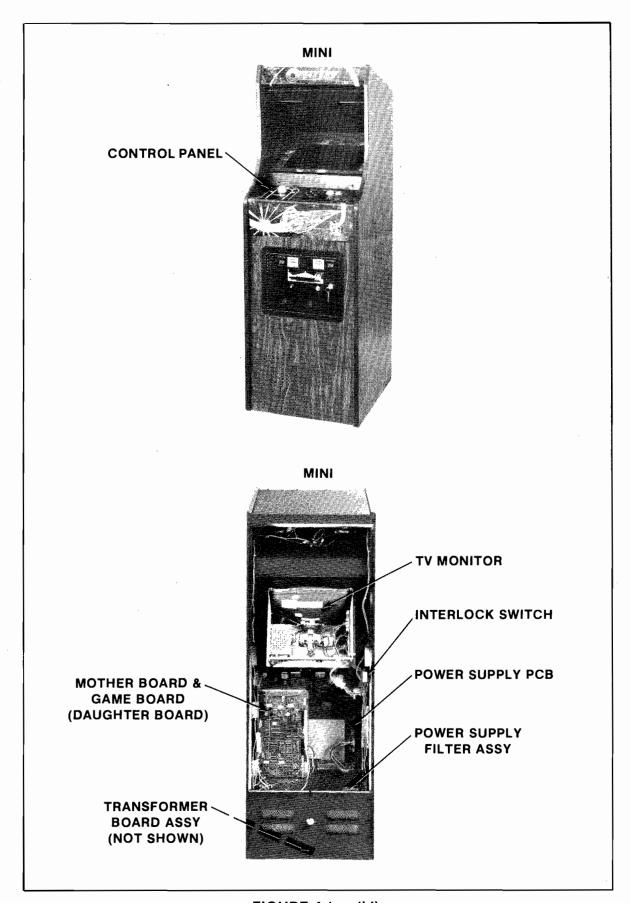


FIGURE 4 (cont'd)

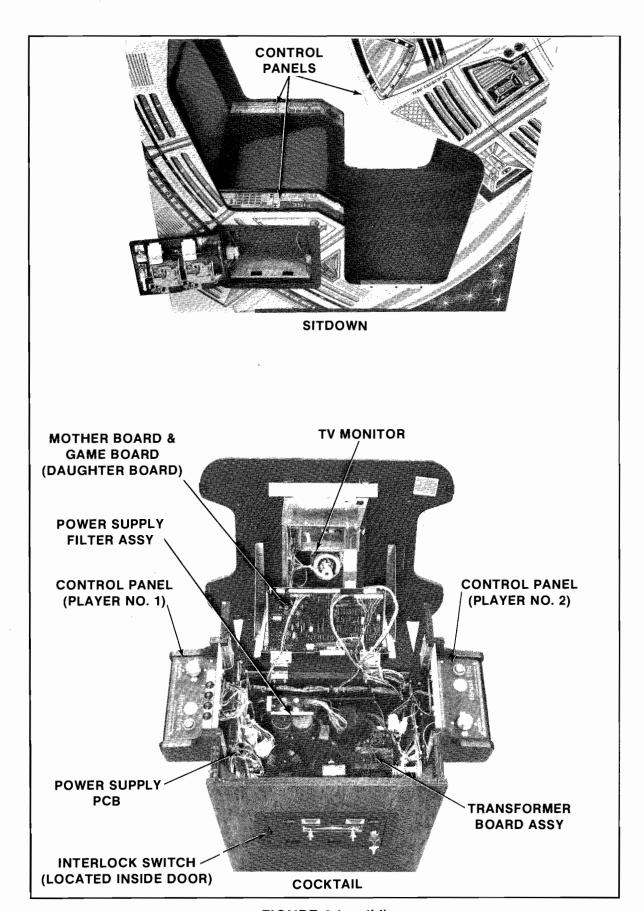


FIGURE 4 (cont'd)

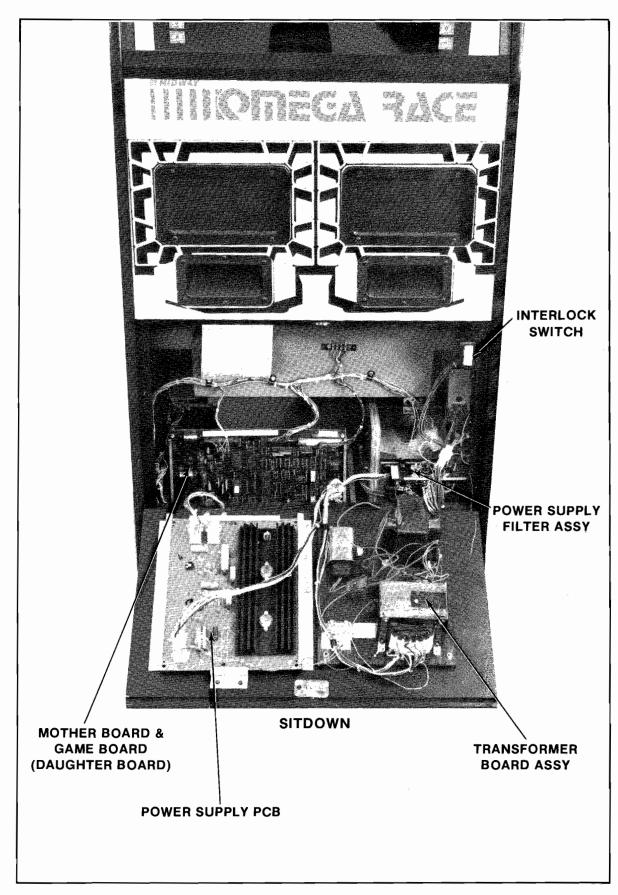


FIGURE 4 (cont'd)

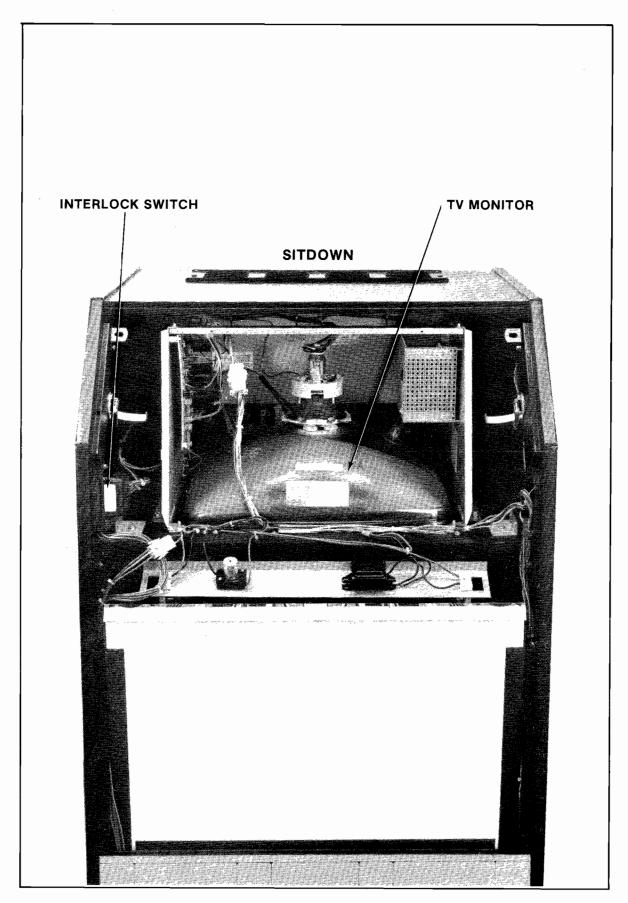


FIGURE 4 (cont'd)

- 6. Make a note of any problems that can't be easily corrected.
- 7. Call your distributor and/or service man about your problem list.

C. INSTALLATION

- Location requirements
 - a. Power
 - i. Domestic 110V @ 60 Hz
 - ii. Foreign 200 to 240V @ 50 Hz
 - b. Temperature 32° to 100°F (0° to 38°C)
 - c. Humidity Not over 95% relative
 - d. Space required:
 - i. Upright 25-1/2"W x 30"D (64 x 75 cm)
 - ii. Mini 20"W x 24"D (50 x 60 cm)
 - iii. Cocktail 32"W x 22"D (80 x 55 cm)
 - iv. Sit down 26-1/2"W x 48"D (67 x 120cm)
 - e. Game height:
 - i. Upright 70" (175 cm)
 - ii. Mini 59" (148 cm)
 - iii. Cocktail 29" (73 cm)
 - iv. Sit down 64-1/2" (164 cm)

2. Voltage Selection

Your game is designed to work properly on the line voltage where you are located. Check your line voltage with a meter to determine what its value is. Then check the power input wires to the main power supply transformer on your game to be sure they are connected to taps which correspond to your line voltage value.

If the power input wires to the main power supply transformer are not connected to taps which correspond to your local line voltage, move them to the proper taps.

If the line voltage in your area falls outside the upper or lower limits of the range of inputs covered by the main power supply transformer, **DO NOT PLUG YOUR GAME IN** until you have talked with your distributor and/or service man and obtained a solution to this problem. Otherwise you could damage your game.

- 3. Interlock and power On/Off switches See Figure 4.
 - a. To help prevent the possibility of getting an electric shock while working inside the game cabinet, interlock switches have been installed at each cabinet access door (this **DOES NOT** include the coin door in the Upright, Mini, and Sit Down models).
 - b. When any access door is opened, the interlock switch installed there turns off all power to the game.
 - c. Check each interlock switch for proper operation.
 - i. After checking the line voltage in your area and determining that the input wires to the main power supply transformer of your game are connected

properly — or — after obtaining a solution to your over or under voltage problem from your distributor and/or your service man, plug the game into your A.C. wall outlet.

- ii. The game On/Off switches for all four models are located as shown in Figure 3. Turn the game on and allow it to warm up for a few minutes.
- iii. Slowly open each access door to the game (this does not include the coin door on the Upright, Mini, and Sit Down models).
 - As the door is opened approximately 1" (2.54 cm) the power to the game should go off (the T.V. monitor, all the lights, and all sounds will stop).
 - If this does not happen, check the interlock switch by this door to see if it has broken loose from its mounting or if it is stuck in the "ON" position.
 - If the switch is found to be bad, turn the game off, unplug it, and replace the interlock switch.
 - Plug the game back into the wall outlet, close the access door, and turn it on.
 - After the game has warmed up, repeat the above interlock switch test.
- iv. When the interlock switch is working properly and turns the power to the game off, power may be restored to the game with the access door(s) open. Take hold of the interlock switch plunger and **gently** pull it out. THIS IS TO BE USED **ONLY** FOR SERVICING THE GAME.

D. SELF-TEST

Your new game will Self-Test itself to see if it has any bad parts. The information it receives while testing itself will be shown on the T.V. monitor. Some information can also be heard through the game's speaker system. See Step H. GAME OPERATION for a more detailed discription of this function.

When there is a bad result according to the Self-Test, call your distributor and/or service man to have the trouble fixed unless it is something you can do yourself (such as replace a bad RAM or ROM chip).

E. GAME ADJUSTMENT CONTROLS: See Figure 5.

The game volume control pots are located on the left hand side of the daughter board as you face it. There are only two pots, one above the other. For adjustment, they may be reached through the rear access door on the Upright and Mini models, and through the front access door on the Sit Down models. On the Cocktail Table model, you will need to open the table top to reach them.

As you face them, the right pot controls the right speaker sounds and the left pot controls the left speaker sounds.

To make the sounds louder, turn the wheels on the pots in this direction \rightarrow as you face them.

To make the sounds **less** loud, turn the wheels on the pots in this direction ← as you face them.

F. OPTION SWITCH SETTINGS

To change the option switch settings, you DO NOT have to take the daughter board out of the game. They can be easily reached through the rear access door on the Upright and Mini models, and through the front access door on the Sit Down models. On the Cocktail Table model, you have to open the table top to reach them.

When changing any options, ALWAYS perform the Self-Test to be sure the display on the T.V. monitor indicates your new selections. (It is a good idea to actually change the option switches while the game is in the Self-Test mode so you can see the result of the change right then on the screen.) This assures you the switches have worked properly and that no switches were accidentally moved that were not meant to be. (These switches are small and this can happen.)

The option switch settings and what they will make the game do are shown in Figure 6. See Figure 5 for option switch locations.

G. PICTURE SIZE — HORIZONTAL AND VERTICAL

The picture on the monitor may be expanded or contracted in either the horizontal or vertical direction. This function is controlled by two pots on the mother board located directly behind the daughter board. They are marked "H" for horizontal and "V" for vertical. You will have to reach around behind the daughter board to make this adjustment.

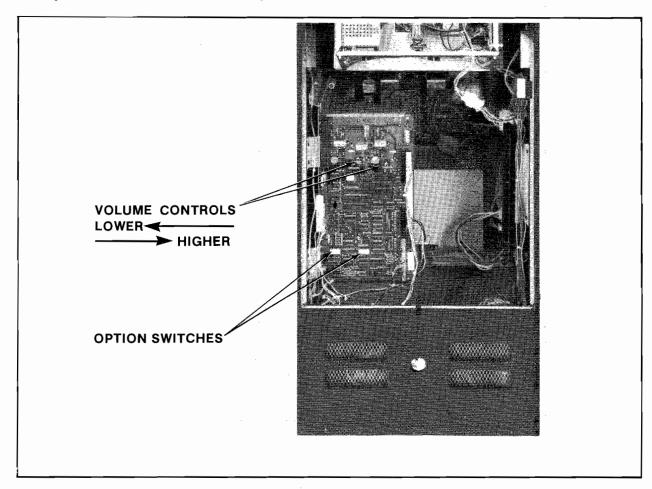


FIGURE 5

```
DIP
                     1st BONUS SHIP AWARDED AT:
    SW#1
              SW#2
              0 N
                         40,000
                                   POINTS
    0 N
    OFF
              0 N
                         50,000
                                   POINTS
    0 N
              0 F F
                         70,000
                                   POINTS
                        100,000
    0 F F
              0 F F
                                   POINTS
                 2nd AND 3rd BONUS SHIPS AWARDED AT:
                        2nd
                                                 3rd
                        BONUS
                                                 BONUS
    SW#3
              SW#4
                        SHIP
                                                 SHIP
              0 N
                        150,000
                                   POINTS
                                                   250,000
                                                            POINTS
    0 N
                        250,000
    0 F F
              0 N
                                   POINTS
                                                   500,000
                                                            POINTS
    0 N
              OFF
                        500,000
                                   POINTS
                                                   750,000
                                                            POINTS
    0 F F
              0 F F
                        750,000
                                   POINTS
                                                 1,500,000
                                                            POINTS
                          SHIPS PER CREDIT
    SW#5
              SW#6
              0 N
                        1 CREDIT = 2 SHIPS / 2 CREDITS = 4 SHIPS
    0 N
    0 F F
              0 N
                        1 CREDIT = 2 SHIPS / 2 CREDITS = 5 SHIPS
                        1 CREDIT = 3 SHIPS / 2 CREDITS = 6 SHIPS
              0 F F
    ON
                        1 CREDIT = 3 SHIPS / 2 CREDITS = 7 SHIPS
    0 F F
              0FF
                              NOT USED
                             SW#7 / SW#8
                          COINS PER CREDIT
    COIN SWITCH #1 IS CONTROLED BY SW#1,2,83
    SW#1
              SW#2
                        SW#3
    0 F F
              0 F F
                        OFF
                                   1 COIN
                                                 1 CREDIT
                        0 F F
                                                 1 CREDIT
    0 N
              0 F F
                                   2 COINS
                        OFF
    OFF
              0 N
                                   2 COINS
                                                 3 CREDITS
              0 N
                        OFF
                                   3 COINS
                                                4 CREDITS
    0 N
    0 F F
              0 F F
                        0 N
                                    COINS
                                                5 CREDITS
                                   1 COIN
    ON
              0 F F
                        0 N
                                                5 CREDITS
    0 F F
              0 N
                        0 N
                                   1 COIN
                                                 3 CREDITS
              0 N
                        0 N
                                   1 COIN
                                                 2 CREDITS
    COIN SWITCH #2 IS CONTROLED BY SW#4,5,86
    SW#4
              SW#5
                        SW#6
              0 F F
                                                 1 CREDIT
                                   1 CO!N
    0 F F
                        0 F F
    0 N
              0 F F
                        0 F F
                                    COINS
                                                 1 CREDIT
                                    COINS
                                                  CREDITS
    0 F F
              0 N
                        OFF
                        0 F F
                                                 4 CREDITS
                                   3 COINS
    0 N
              0 N
                                                5 CREDITS
    0 F F
              0 F F
                        ΩN
                                   4 COINS
    0 N
              0 F F
                        0 N
                                   1 COIN
                                                 5 CREDITS
                                   1 COIN
                                                 3 CREDITS
    0 F F
              0 N
                        0 N
                                   1 COIN
                                                 2 CREDITS
    0 N
              0 N
                        0 N
                              PLAY MODE
    SW#7
    0 F F
              FREE PLAY (CREDIT REMAINS AT 4)
    0 N
                        COCKTAIL TABLE MODELS
    SW#8
    ON
              THIS IS THE NORMAL POSITION FOR THIS SWITCH IN THE
              UPRIGHT, MINI, AND SIT DOWN MODELS.
              THIS IS THE NORMAL POSITION FOR THIS SWITCH IN THE
    0FF
              COCKTAIL TABLE MODELS. (IT ENABLES THE GAME TO FLIP
              THE PICTURE WHEN IT IS THE OTHER PLAYERS TURN AND TO
              RECEIVE INSTRUCTIONS FROM THE SECOND SET OF CONTROLS
```

FIGURE 6

H. GAME OPERATION

OMEGA RACE, with the exception of the Sit Down model, is a one or a two player game with a black and white T.V. monitor. The game gives a display which has all the parts shown in Figure 7.

The game has six possible modes of operation: ATTRACT, READY-TO-PLAY, PLAY, HIGH SCORE INITIAL, SELF-TEST, and RECORD KEEPING.

1. Record Keeping Mode:

The Record Keeping mode is a unique mode to give the owner/operator research information about game play activity.

You may enter the Record Keeping mode at any time after the game has been turned on by sliding the Self-Test switch to the "ON" position. See Figure 8. When this is done, the game will react as follows:

- a. If the game is in the Attract mode or the Ready-To-Play mode when the Self-Test switch is moved to the "ON" position, several seconds (5 to 10) will go by and then it will display the Record Keeping ledger.
- b. If the game is in the Play mode when the Self-Test switch is moved to the "ON" position, it will **NOT** go into the Record Keeping mode until **AFTER** the last omegan defender has been destroyed (the game must be over). At this point, several seconds (5 to 10) will go by and then it will display the Record Keeping ledger.

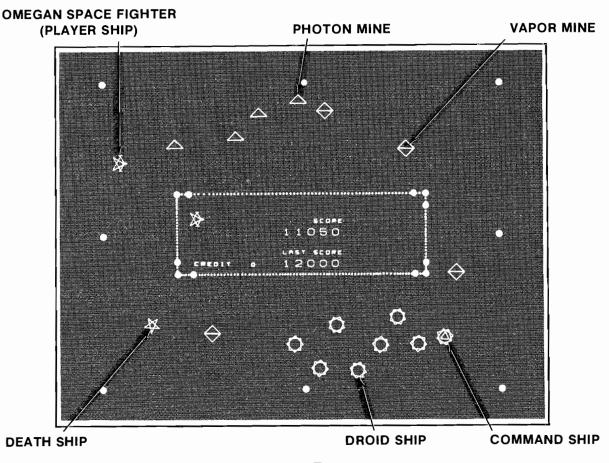


FIGURE 7

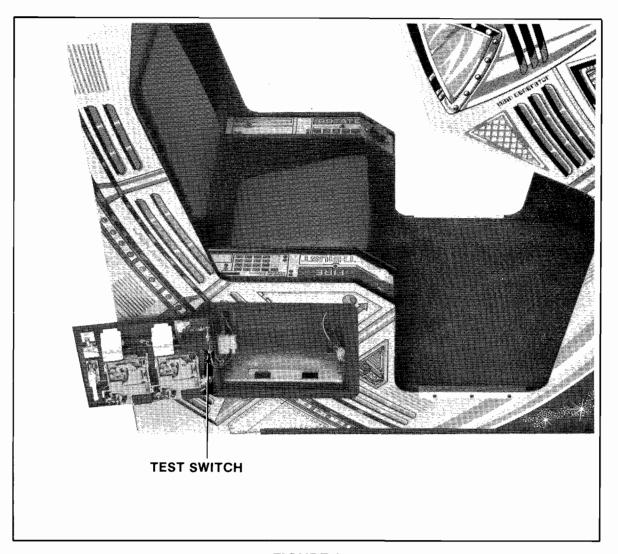


FIGURE 8

- c. When in the Record Keeping mode:
 - i. The T.V. monitor will give the following display: See Figure 9.
 - ii. Anytime a coin acceptor switch is tripped, the game will register a "TEST CREDIT" in the Record Keeping ledger but will not advance the coin counting meter on the coin door.
 - iii. Pushing the "THRUST" button will set the "CURRENT CREDIT" count to zero "0". (This is the last line on the ledger display.)
 - iv. Pushing the "FIRE" button will set the 1 and 2 player high score values to 38,250 points at the same time.
 - v. Holding in the "1 PLAYER 1 CREDIT" button while at the same time pressing the "1 PLAYER 2 CREDIT" button will set **all information** in the Record Keeping ledger to zero "0".
- d. To go from the Record Keeping mode back to the game's other modes (ATTRACT, READY-TO-PLAY, etc.) simply slide the Self-Test switch back to the "OFF" position.

FIGURE 9 RECORD KEEPING DISPLAY

COIN CHUTE 1 COIN CHUTE 2 TOTAL CREDITS					
TEST CREDITS	1 CREDIT	2 CREDIT			
1 PLAYER GAMES *2 PLAYER GAMES					
FIRST FREE SHIP SECOND FREE SHIP THIRD FREE SHIP					
AVERAGE SCORE HIGHEST SCORE					
AVERAGE SEC. PER GAME MAXIMUM SEC. PER GAME					
CURRENT CREDIT					
*THIS WILL ALWAYS READ ZER	*THIS WILL ALWAYS READ ZERO "0" ON THE SIT DOWN MODEL				

2. Self-Test Mode:

The Self-Test mode is a special mode made up of 4 test displays for checking game switches and computer functions. It is the easiest and best way to check for proper operation of the entire game.

You may begin a Self-Test at any time by turning the power to the game off. See Figure 3 for the location of the game ON/OFF switches on all four models. Slide the Self-Test switch to the "ON" position as shown in Figure 8, and turn the power to the game back on. When this is done, the game will react as follows:

The game displays a ROM/RAM check list as shown in Figure 10.

The entire ROM/RAMcheck list shown in Figure 10 flashes off and on at regular intervals every few seconds.

If a bad ROM or RAM chip is found by the game's internal check system: it is indicated visually by the letters "NG" on the display in place of the letters "OK", and phonically by "BEEPING" at you from the moment you turn it on.

For instance: if the 7th chip down from the top is found to be bad, "NG" will appear in front of this chip (P RAM 3 NG) and the game will "BEEP" at you 7 times from the moment you turn it on. It will wait a few seconds (10 to 15) after the 7th "BEEP" and repeat the 7 "BEEPS" again.

If you have two chips that were found to be bad by the game's internal check system, they would both be shown on the display with the letters "NG" in front of them and the game would "BEEP" at you in a slightly different manner.

FIGURE 10 — ROM/RAM CHECK LIST AND MOTHER BOARD LOCATION COORDINATES

V ROM 1 OK — — — — — — — — — — — — — — — — — — —				
P ROM 3 OK — — — — — — — — — — — — — — — — — — —	*	Р	ROM 1	
P ROM 4 OK — — — — — — — — — — — — — — — — — — —	i	Р	ROM 2	OKL-7
P RAM 1 OK — — — — — — — — — — — — — — — — — —	1	Р	ROM 3	OK K-7
P RAM 2 OK — — — — — — — — — — — — — — — — — — —		Р	ROM 4	OK — — — — — — — — J-7
P RAM 2 OK — — — — — — — — — — — — — — — — — — —		Р	RAM 1	OK — — — — — — — — — — S-3 and/or S-2
P RAM 3 OK — — — — — — — — — — — — — — — — — — —				
BBU RAM OK — — — — — — — — — — — — — — — — — — —				
** V RAM 1 OK — — — — — — — — — — — — — — — — — —		'	HAIVIO	
V RAM 2 OK — — — — — — — — — — — — — — — — — — —		BBU	RAM	OK S-4
V RAM 3 OK — — — — — — — — — — — — L-1 and/or (K/L)-1 V RAM 4 OK — — — — — — — — — — — — — (J/K)-1 and/or (N/P)-1 V ROM 1 OK — — — — — — — — — — — E-1 V ROM 2 OK — — — — — — — — — — — F-1 * If completely bad, no picture and no "BEEP" sound.	**	V	RAM 1	OK — — — — — — — — — — H-1 and/or (M/N)-1
V RAM 4 OK — — — — — — — — — — — — — — — — — — —		V	RAM 2	OK — — — — — — — — — J-1 and/or (L/M)-1
V ROM 1 OK — — — — — — — — — — — — — — — — — — —		V	RAM 3	OK — — — — — — — — — L-1 and/or (K/L)-1
V ROM 2 OK — — — — — — — — — F-1 * If completely bad, no picture and no "BEEP" sound.		V	RAM 4	OK — — — — — — — — — (J/K)-1 and/or (N/P)-1
V ROM 2 OK — — — — — — — — — F-1 * If completely bad, no picture and no "BEEP" sound.		V	ROM 1	OK — — — — — — — — — F-1
* If completely bad, no picture and no "BEEP" sound.		•		
		•		
	*	If com	pletely bad,	no picture and no "BEEP" sound.
** If completely bad, no picture.	* *	If com	pletely bad,	no picture.

For instance: if the 7th and the 12th chips down from the top are found to be bad, they would look like this (P RAM 3 NG) and (V RAM 4 NG). In the above case, the "BEEPING" sequence would be as follows:

7 "BEEPS",
PAUSE (2 to 5 seconds),
THEN 12 MORE "BEEPS",
LONGER PAUSE (10 to 15 seconds),
THEN REPEATS ABOVE SEQUENCE.

NOTE: In addition to the "BEEPING", the game will also flash its 1 and 2 credit LED lit push buttons at you in sequence with the "BEEPS" - 7 "BEEPS", 7 "flashes" - 12 more "BEEPS", 12 more "flashes" - and so on.

These "BEEPING" and "FLASHING" sequences are repeated until the game is turned off and the bad chip(s) are replaced or until the Self-Test switch is turned off.

When there is a bad chip, the game **will not** advance to the next Self-Test display by pressing the "FIRE" button. All bad chips must be replaced **BEFORE** the game will advance to the next Self-Test display.

The meaning of each part of this test display is explained in Figure 11.

b. When in the Self-Test mode, you advance to the next display by pressing the "FIRE" button one time. Do so now. Figure 12 shows you what the next display in the Self-Test series (SWITCH OPERATION TEST) looks like.

As you move each of the switches indicated above you will observe that the indications change from "HI" to "LOW" or from "LOW" to "HI". If you move a switch and its indication on the monitor fails to change, the switch is either not working, miswired, or disconnected. Check it out thoroughly.

The meaning of each part of this test display is explained in Figure 13.

FIGURE 11 DISPLAY EXPLANATION

Р	ROM 1	ОК	The "P" stands for PROGRAMMABLE.
P	ROM 2	OK	
P	ROM 3	OK	The "ROM" stands for READ ONLY MEMORY.
P	ROM 4	OK	
1			The "1, 2" etc. is the number of that particular
P	RAM 1	OK	chip.
P	RAM 2	OK	
P	RAM 3	NG	The "OK" means this particular chip is good.
BBU	RAM	OK	"BBU" stands for BATTERY BACK UP.
V	RAM 1	OK	The "RAM" stands for RANDOM ACCESS
V	RAM 2	OK	MEMORY.
V	RAM 3	OĶ	
V .	RAM 4	NG	The "V" stands for VECTOR.
V	ROM 1	OK	The "NG" stands for NO GOOD.
V	ROM 2	OK	

NOTE: An indication of "HI" means that that particular switch is in the "OFF" condition or is a "normally open" switch. An indication of "LOW" means that that particular switch is in the "ON" condition or is a "normally closed" switch.

After having tested all the switches in your game, you are ready to advance to the third display of the series.

c. Press the "FIRE" button one time. Figure 14 shows you what the next display should look like.

NOTE: This pattern and the one that will follow are for use in adjusting or checking the monitor's brightness and linearity.

- d. Press the "FIRE" button one time. Figure 15 shows you what the next and last display should look like.
- e. Pressing the "FIRE" button one more time will cause the monitor screen to go blank and a tone to begin coming from first one of the game's speakers and then the other.

The tone is high in pitch to begin with and goes lower over a 2 to 3 second period. When the tone stops at the end of the 2 to 3 second period, the game switches speakers and repeats the tone through this speaker.

The game will continue alternating back and forth between speakers to aid you in adjusting the volume level heard through each.

- f. To get out of the Volume Adjustment mode and advance to the beginning of the Self-Test mode, proceed in either one of the two following ways:
 - i. At least four beeps of tone must be heard to come from the game's speakers before you do anything. At any time after those first four beeps of tone are heard, depress and hold down the "FIRE" button. You will hear another two

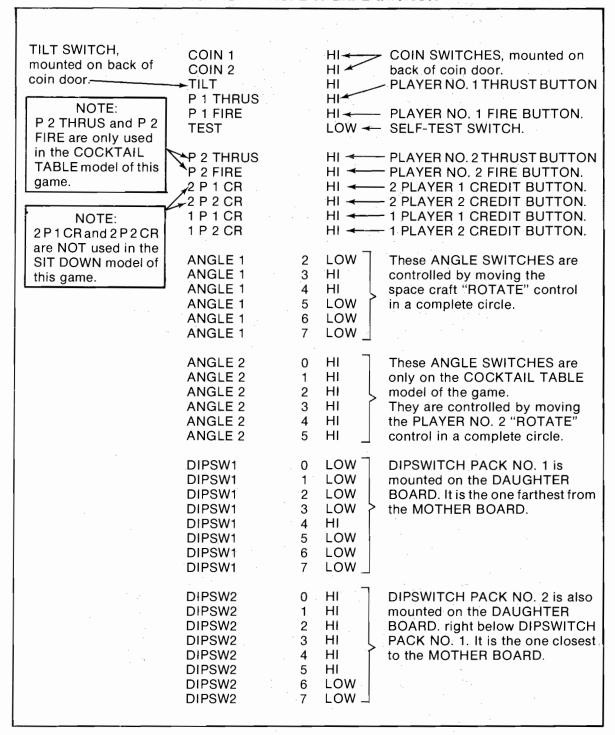
FIGURE 12 SWITCH OPERATION TEST

COIN 1 COIN 2 TILT P 1 THRUS P 1 FIRE TEST P 2 THRUS P 2 FIRE 2 P 1 CR 2 P 2 CR 1 P 1 CR 1 P 2 CR ANGLE 1 ANGLE 2 ANGLE 2 ANGLE 2	2 3 4 5 6 7 0 1 2 3	HI HI HI HI HI LOW LOW HI HI HI HI	
ANGLE 2 ANGLE 2 DIPSW1 DIPSW1 DIPSW1 DIPSW1 DIPSW1 DIPSW1 DIPSW1 DIPSW1 DIPSW2 DIPSW2 DIPSW2 DIPSW2 DIPSW2	4 5 0 1 2 3 4 5 6 7 0 1 2 3	HI LOW LOW LOW LOW LOW LOW HI LOW LOW HI HI HI	
DIPSW2 DIPSW2 DIPSW2 DIPSW2	4 5 6 7	HI LOW LOW	

to three beeps of tone while you're **holding down** the "FIRE" button and then the game will return to the beginning of the Self-Test mode (the ROM/RAM check list).

- ii. The second way to get out of the Volume Adjustment mode and return to the beginning of the Self-Test mode is to quickly turn the game "OFF" and back "ON" again.
- g. Slide the Self-Test switch to the "OFF" position. The game functions and display will now return to the T.V. monitor.

FIGURE 13 DISPLAY EXPLANATION



reappear (come back) by just sliding the Self-Test switch to the "OFF" position. You **MUST** be in the ROM/RAM portion of the displays **BEFORE** you can get out of Self-Test and back into game play. Just push the "FIRE" button to cycle through any remaining displays. When you reach the ROM/RAM display portion of the Self-Test mode, (assuming the Self-Test switch is already in the "OFF" position), the game will pop out of Self-Test and into normal game functions.

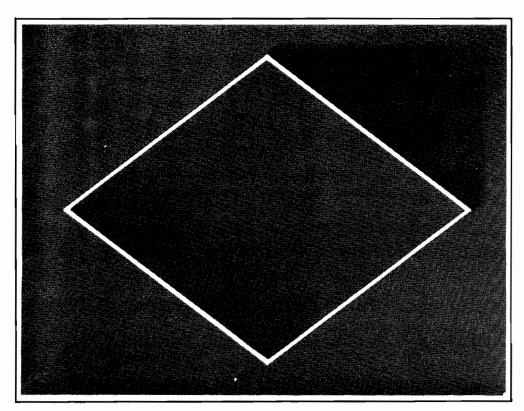
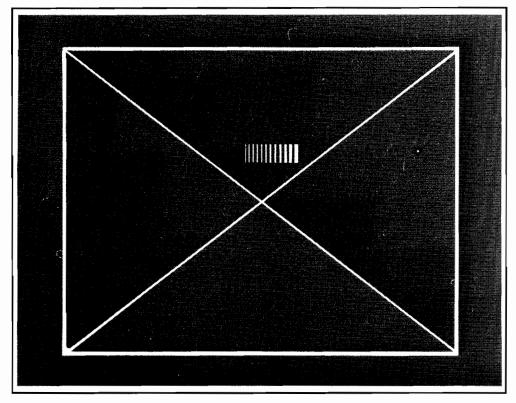


FIGURE 14 SINGLE DIAMOND PATTERN WHICH FILLS THE MONITOR SCREEN





ABOVE DISPLAY FILLS THE MONITOR SCREEN

3. Attract Mode:

The Attract mode starts:

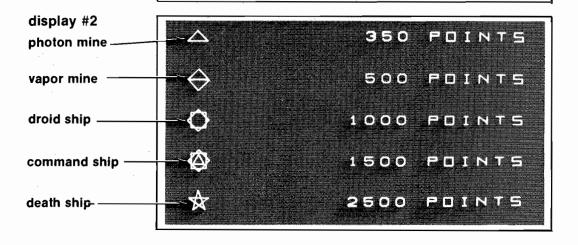
- a. As soon as power has been turned on to the game. (Self-Test switch is in the "OFF" position.)
- b. After play has been finished, the score was not high enough to put the game into the High Score/Initial mode, there are still credits left in the game memory but no one pushes one of the flashing "1 PLAYER 1 CREDIT", "1 PLAYER 2 CREDIT", etc. push buttons. (It will take one minute and then the Attract mode will begin.)
- c. After a play has been finished, the score was not high enough to put the game into the High Score/Initial mode, and there are no more credits left in its memory.
- d. After the High Score/Initial mode when there are no more credits left in its memory.
- e. The Attract mode is on all the time and is only stopped when a game has been paid for and the Record Keeping or Self-Test modes have not been started.
- f. In the Attract mode, the game will give the following displays **centered** on the monitor screen:

NOTE: With regard to the lettering shown in each "display": When the lettering is **ALL CAPITALS**, it is the lettering actually shown on the T.V. monitor screen. When the lettering is **all lower case**, it does not actually appear on the T.V. monitor screen.

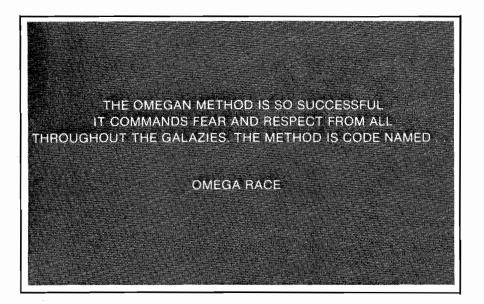


IN THE YEAR 2003, THE OMEGAN SYSTEM DEVELOPED A METHOD OF TRAINING ITS WARRIORS TO PROTECT THEIR STAR COLONIES. OVER THE CITY OF KOMAR, ANDROID CONTROLLED FIGHTERS RACED TO ENGAGE AND DESTROY THESE OMEGAN WARRIORS.

POINTS WERE AWARDED FOR THE ABILITY TO NEUTRALIZE THIS DROID FORCE AS FOLLOWS.



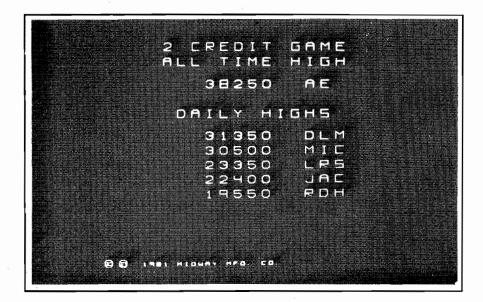
display #3

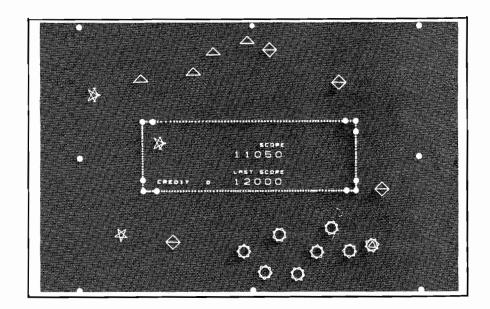


display #4



display #5





display #6

1 CREDIT GAME
ALL TIME HIGH
106550 MFG

DAILY HIGHS
70650 DDK
31350 DLM
30950 HHS
30950 MIC
23350 LRS

display #7

2 CREDIT GAME
ALL TIME HIGH

38250 AE

DAILY HIGHS

31350 DLM

30500 MIC

23350 LRS

22400 JAC

19550 RDH

display #8



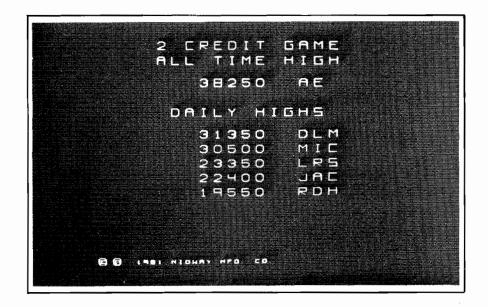
switch selectable



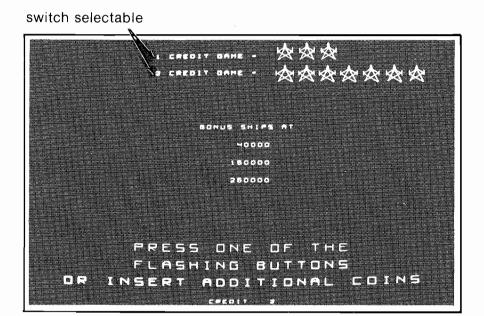
display #10

1 CREDIT GAME ALL TIME HIGH 106550 MFG DAILY HIGHS 70650 DDK 31350 DLM 30950 HHS 30500 MIE 23350 LRS G B 1481 HIGHEY HFG. CO.

display #11



g. No matter where the game is in the 11 display Attract mode sequence, it will immediately go to display #12 as soon as a game has been paid for. It will hold this display on the monitor screen for a minute. If, at the end of that minute, the player has not pushed one of the flashing "1 PLAYER 1 CREDIT", "1 PLAYER 2 CREDIT", etc. start buttons, the game will go back to the beginning of the Attract mode sequence.



display #12

4. Ready-To-Play Mode:

- a. The Ready-To-Play mode starts when enough coins have been accepted for a 1 or a 2 player game.
- b. The Ready-To-Play mode ends when one of the flashing "1 PLAYER 1 CREDIT", "1 PLAYER 2 CREDIT", etc. pushbuttons is pressed.
- c. In the Ready-to-Play mode, the game will give the above "display #12" **centered** on the monitor screen.
- d. If no START button is pressed, the game will hold the above display on the screen for one minute before going back to the beginning of the Attract mode sequence.

5. Play Mode:

- a. The Play mode begins when one of the flashing "1 PLAYER 1 CREDIT", "1 PLAYER 2 CREDIT", etc. start buttons is pressed.
- b. The Play mode ends when all of your Omegan fighters have been destroyed. When this happens, all the enemy driods and mines disappear and "GAME OVER" is written across the top center of the screen.
- c. The game is made up of an energy field through which the Omegan 'pilot' flys his space fighter to attack and destroy the invading enemy droid forces. (See Figure 7 for a sample display and an explanation of all its components.)

i. There are four initial waves of enemy droids in the first droid force. These waves are made up of:

1st WAVE = 6 ENEMY DROID SHIPS 2nd WAVE = 8 ENEMY DROID SHIPS 3rd WAVE = 10 ENEMY DROID SHIPS 4th WAVE = 12 ENEMY DROID SHIPS

- ii. If one of your Omegan space fighters is hit by the enemy or runs into an enemy mine **BEFORE** the last enemy ship of that wave is destroyed; when play begins again, you will have to re-destroy **ALL** of that **SAME** wave of enemy droids all over again **BEFORE** you can advance to the next wave.
 - If, however, one of your omegan space fighters is hit by a stray enemy ray or runs into an enemy mine **AFTER** the last enemy ship of that wave has been destroyed, you are advanced to the next wave of enemy droids even though you lost a ship.
- iii. When you destroy the last enemy ship of the fourth wave of attackers, the T.V. monitor will give the following display **centered** on the screen:

FIRST DROID FORCE ELIMINATED 5000 BONUS POINTS

- iv. Each wave of enemy droids after the fourth wave is made up of 12 ships.
- v. Each droid force after the 1st is made up of 4 waves of enemy ships.
- vi. You are awarded an additional 5000 BONUS POINTS for each and every droid force you eliminate.
- vii. As you destroy ever larger numbers of enemy droids, they move faster and their aim gets even better.

d. Two Player Operation

- i. The Upright, Mini, and Cocktail Table models are the **ONLY** ones that have two player operation.
- ii. In the two player mode, the rules of play are the same as in the single player mode. There are some additional rules, however.
 - In the Upright and Mini models, the players must take turns at the controls.
 - In the Cocktail Table model, each player has his own set of individual controls. The picture will flip to face you when it is your turn. (When it is not your turn, your set of controls will have no effect on the game.)
 - When a bonus ship is awarded to a player in a two player game, it is played immediately following the destruction of the ship he is currently piloting. (This enables the game to END at the SAME TIME for BOTH players. One player does not have to stand around after all his ships have been destroyed and watch the other one play.)

III. MAINTENANCE AND REPAIR

Your OMEGA RACE game needs certain types of maintenance to keep it in good working order. Clean, well maintained games attract players and earn more profits.

The most important thing for you to remember is to run the Self-Test EVERY TIME you collect money from the coin box. **JUST LOOKING** at your game **WILL NOT** tell you if all its controls and inside parts are working correctly. The Self-Test will inform you whether or not your game is working the way it should.

The second most important thing you should remember is to clean the outside of the game and coin acceptor mechanisms on a regular basis.

A. CLEANING

The outside of the game cabinet plus the metal can be cleaned with any non-abrasive household cleaner. However, the front of the T.V. monitor tube and **both sides** of all other glass and plastic on or in the game **MUST** be cleaned with anti-static cleaner **ONLY.** For cleaning the coin acceptors, hot soapy water may be used on the plastic ones and any household cleaner may be used on the metal ones. If you wish, special coin machine cleaners that leave no residue may be purchased from your distributor.

DO NOT dry-wipe any of the plastic panels. This is because any dust that was on them can scratch their surfaces. If this has happened, anyone looking through this type of damaged plastic would feel he was looking at the game through a fog. This fogging damage CAN NOT be repaired or reversed. The ONLY solution is to **replace** the damaged piece of plastic.

B. FUSE REPLACEMENT

This game contains several fuses located as shown in Figure 16.

1. Upright model:

As viewed from the back, facing the cabinet, with the rear access door removed, the fuses are located on the Mech. Panel, the Linear Power Supply Board, and on the Power Supply Filter Assembly.

2. Mini model:

As viewed from the back, facing the cabinet, with the rear access door removed; the fuses are located on the Mech. Panel, the Linear Power Supply Board, and the Power Supply Filter Assembly.

3. Cocktail Table model:

As viewed from the coin door side of the cabinet, with the monitor tilted open to one side; the fuses are located on the Mech. Panel, the Linear Power Supply Board, and the Power Supply Filter Assembly.

4. Sit Down model:

As viewed from the front, facing the cabinet, with the front access door open; the fuses are located on the Mech. Panel, the Linear Power Supply Board, and on the Power Supply Filter Assembly.

As viewed from the rear, facing the cabinet, there is one fuse by the ON/OFF switch.

Replace fuses ONLY with the type and size listed in the Illustrated Parts Breakdown Section of this manual.

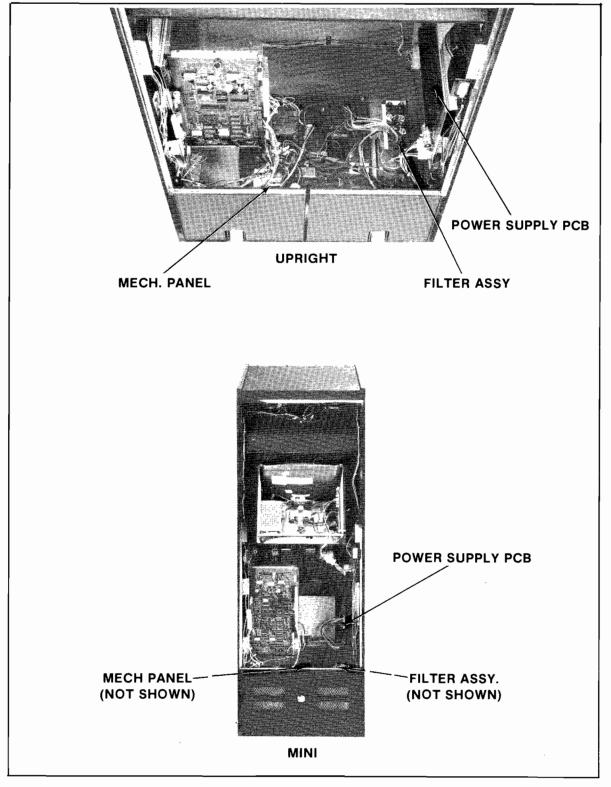


FIGURE 16

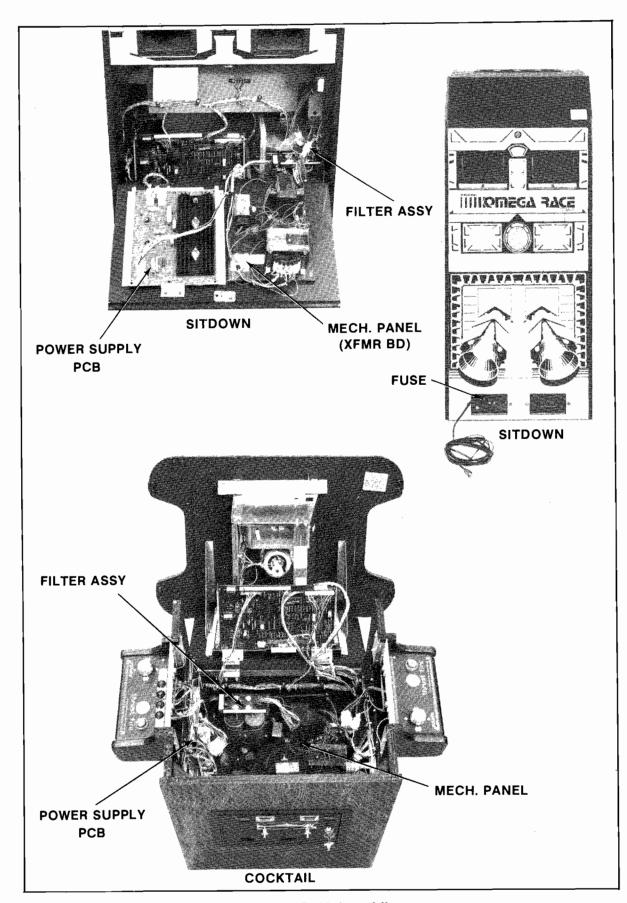


FIGURE 16 (cont'd)

C. OPENING THE CONTROL PANEL — See Figure 17.

1. Upright model:

- a. The control panel is held in place by two latches, one on the left side and one on the right side of the cabinet.
 - i. They are spring loaded to provide constant positive pressure on their latch plates.
 - ii. They can be reached through the coin door **AFTER** turning power to the game off.
 - iii. To release the latches, lift up and toward the center of the control panel.
 - Once they are released, unhook them from their latch plates.

b. To remove the control panel:

- i. Raise it up and tilt it toward you until you can see the cable behind it.
- ii. Cradling the control panel between yourself and the cabinet, disconnect it from its cabling.
- iii. The control panel is now free and can be removed.
- c. To reinstall the control panel, reverse this procedure.

2. Mini model:

- a. The control panel is held in place by two latches, one on the right side and one on the left side of the cabinet.
 - i. They are spring loaded to provide constant positive pressure on their latch plates.
 - They can be reached through the coin door AFTER turning power to the game off.
 - iii. To release the latches, lift up and toward the center of the control panel.
 - Once they are released, unhook them from their latch plates.

b. To remove the control panel:

- i. Raise it up and tilt it toward you until you can see the cable behind it.
- ii. Cradling the control panel between yourself and the cabinet, disconnect it from its cabling.
- iii. The control panel is now free and can be removed.
- c. To reinstall the control panel, reverse this procedure.

3. Cocktail Table model:

- a. Each control panel is held in place by several screws, two on the inside of the cabinet and three along the bottom edge of the control panel.
 - i. Turn power to the game off.
 - ii. Open the coin box door and release the two latches indicated in Figure 18.

CAUTION: The left hand latch is very close to the sharp metal edge on the monitor chassis. Be careful not to cut yourself when working the latch.

- Once they're released, unhook them from their latch plates.
- iii. Grasp the table top at "A" and open it as indicated in Figure 18.

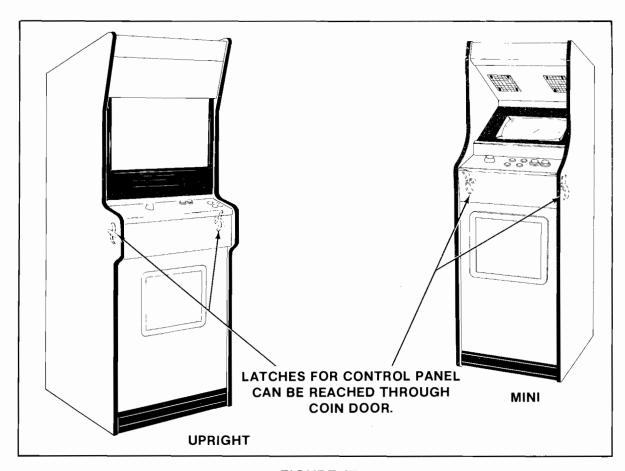


FIGURE 17

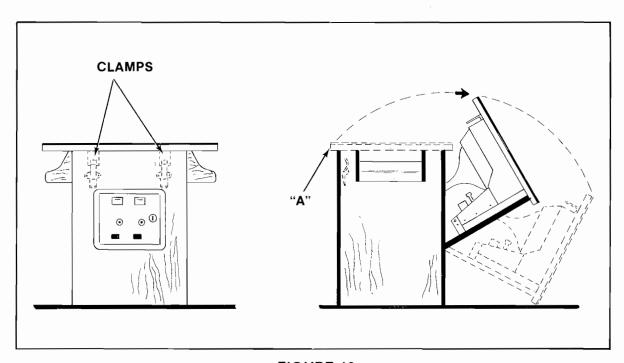


FIGURE 18

CAUTION: Due to the weight of the monitor, EXTREME CASE MUST be taken when opening the cabinet.

iv. Remove the screws which secure the control panel in place. See Figure 19.

b. To remove the control panel(s):

- i. Disconnect it from its cabling.
- ii. The control panel is now free and can be removed.

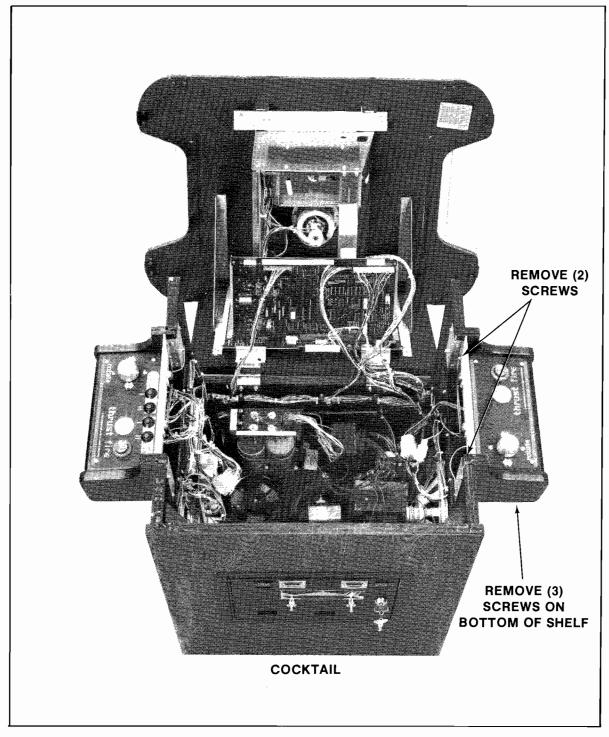


FIGURE 19

4. Sit Down model:

There are three control panels on a Sit Down model, one at the bottom of the screen which contains the "START GAME" "1 CREDIT" and "2 CREDIT" buttons, one in the right hand arm rest which contains the "THRUST" and "FIRE" buttons, and one in the left hand arm rest which contains the "ROTATE" control.

- a. These control panels are held in place by semi-tamper-proof screws.
- b. Turn the power off to the game.
- c. To remove either arm rest control panel: (See Figure 20.)
 - i. Remove the three screws which secure it.
 - ii. Grasping it at its bottom front edge, lift it up and tilt it to the side until you can see its cable plug.
 - iii. Unplug it from its cable.
 - iv. The armrest control panel is now free and can be removed.
 - v. To reinstall these control panels, reverse this procedure.

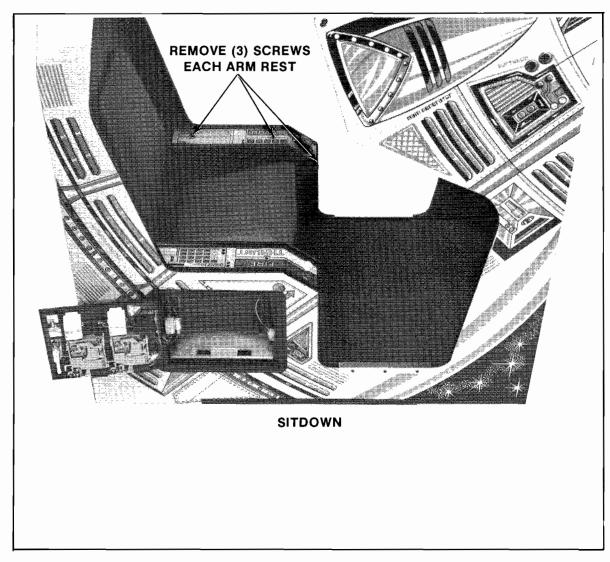


FIGURE 20

d. To remove the control panel at the bottom of the screen: (See Figure 21.)

NOTE: This control panel **CAN NOT** be disconnected from its wire harness except by unsoldering the wire harness from the switches.

For trouble-shooting purposes, however, the control panel can be lowered slightly so that the pins on the back side of the switches can be reached. To do this, proceed as follows:

- i. Remove the three screws which secure it. (**Make sure** you support it as you remove the last of the three screws.)
- ii. Lower the left hand end of this control panel and support it on your knees while tilting it toward you to expose the pins at the back of the two switches for trouble-shooting or replacement purposes.

CAUTION: DO NOT pull on the panel to better expose the pins at the backs of the switches. THERE IS NO SLACK IN THIS CABLE!!

iii. To reinstall this control panel, reverse this procedure.

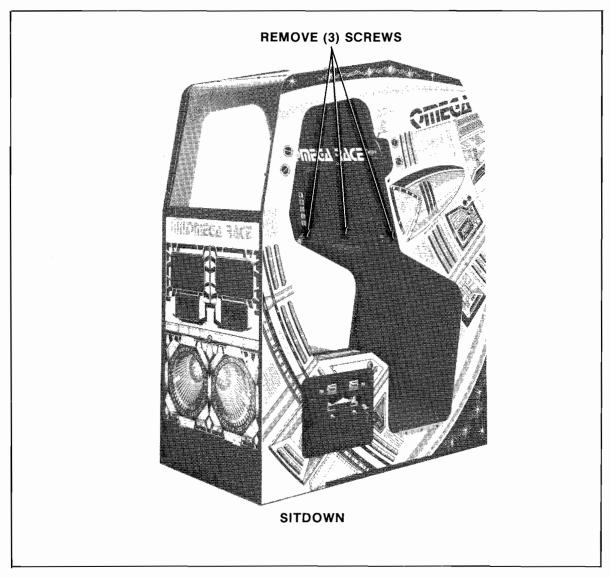


FIGURE 21

D. REMOVAL OF THE MAIN-DISPLAY-GLASS AND/OR THE T.V. BEZEL ASSEMBLY:

1. Upright model:

NOTE: In order to do this, the control panel **MUST** be removed first. See the "Upright model" procedure.

- a. Turn the power to the game off and remove the control panel. This frees the main-display-glass so it can be lifted up.
- b. Grasp the main-display-glass in the bottom center, lift up slightly and pull it toward you about an inch, let it down just far enough so you can get hold of its top edge with your other hand and lift it out of the game. See Figure 22.
- c. Remove the triangular shaped pieces of scenery from the left and right hand sides of the cabinet. See Figure 23.
- d. Remove the screws which secure the T.V. bezel assembly in place.
- e. The T.V. bezel assembly is now free and can be slid out of the cabinet. See Figure 23.
- f. To reinstall the T.V. bezel assembly and the main-display-glass, reverse this procedure.

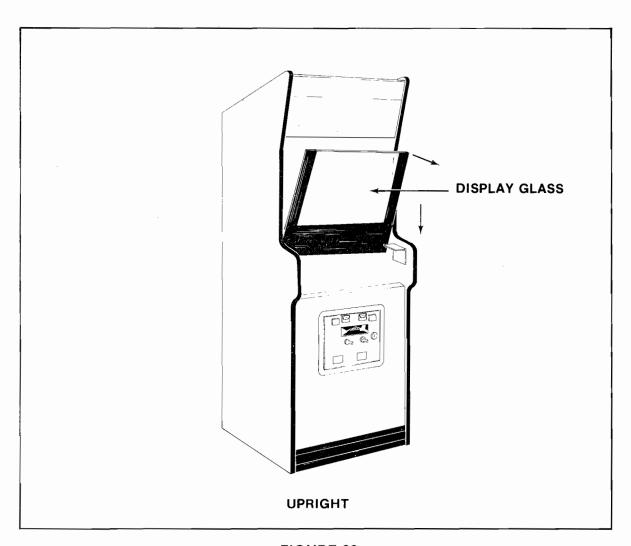


FIGURE 22

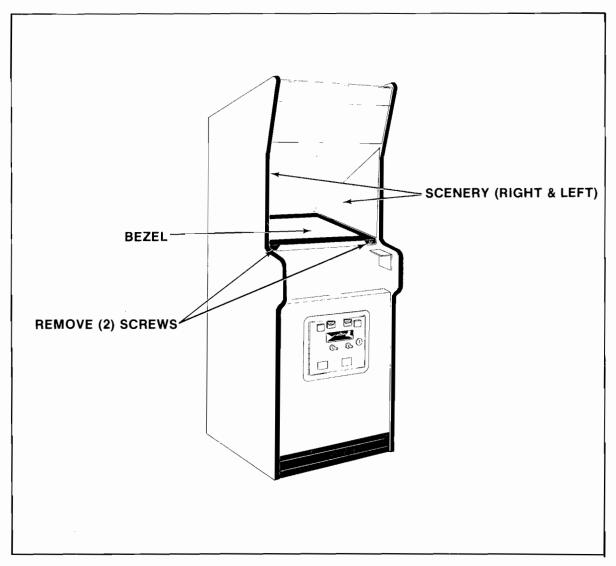


FIGURE 23

2. Mini model:

NOTE: In order to do this, the control panel **MUST** be removed first. See above "Mini model" procedure.

- a. Turn the power off to the game and remove the control panel.
- b. Remove the screws which secure the glass clamping plate. See Figure 24.
- c. Lift out the glass clamping plate. This frees the main-display-glass so it can be lifted up.
- d. By putting your finger in the hole in the middle of the main-display-glass support, you can lift it up and out. See Figure 24.
- e. Remove the screws which secure the T.V. bezel assembly, see Figure 25, and lift it out.

NOTE: Use the hole in the center of the main-display-glass support to grasp it.

f. Reverse this procedure to reinstall the T.V. bezel assembly and the main-display-glass.

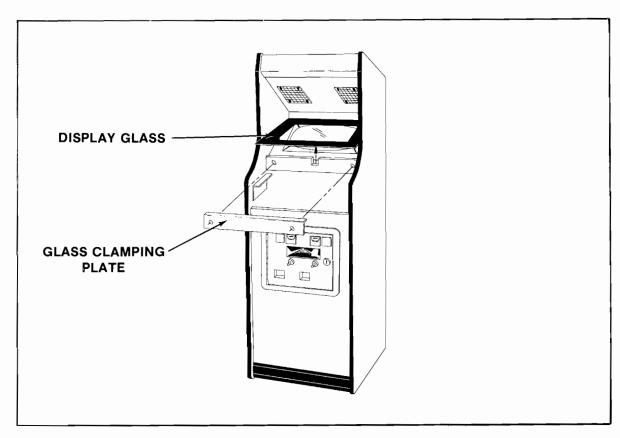


FIGURE 24

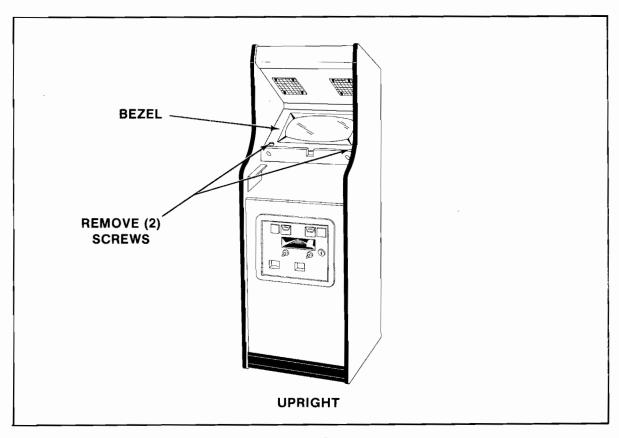


FIGURE 25

3. Cocktail Table model:

NOTE: This may be done with the table top in the closed or the open position. If you decide to open the table top, TURN THE POWER TO THE GAME **OFF FIRST.**

- a. Remove the screws which secure the table top glass clamps in place.
- b. Remove the table top glass.
- c. Lift out the T.V. bezel assembly.
- d. To reinstall the T.V. bezel assembly, simply reverse this procedure.

4. Sit Down model:

- a. Turn the power off to the game.
- b. Loosen the three screws in the control panel at the bottom of the main-displayglass. See Figure 26.
- c. Loosen **and remove** the three screws at the top of the main-display-glass. See Figure 26.

CAUTION: DO NOT let the main-display-glass fall forward. Hold it in place with one hand.

- d. Grasp the top edge of the main-display-glass with both hands and lift up until its bottom edge is free of the control panel at its bottom.
- e. Now slide the glass straight down and onto your lap.
- f. Reverse this procedure to reinstall the main-display-glass.

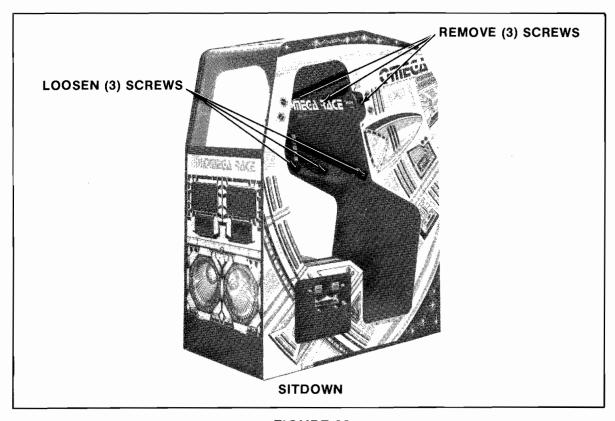


FIGURE 26

E. T.V. MONITOR REPLACEMENT

CAUTION: High voltages may exist in any television unit, even with power disconnected. Use EXTREME CAUTION and do not touch electrical parts or the T.V. yoke area with your hands or with metal objects in your hands!

In addition, BE SURE TO USE HEAVY GLOVES when handling the monitor. You could cut your hands on the metal T.V. chassis without such protection.

DANGER: The T.V. monitor DOES NOT contain an isolation transformer on its chassis (it is mounted instead on the floor of the cabinet). When servicing the monitor on a test bench, YOU MUST ISOLATE THE MONITOR FROM AC VOLTAGE WITH AN ISOLATION TRANSFORMER.

1. Upright model — See Figure 27.

- a. Turn power off to the game.
- b. Open the rear access door.
- c. Completely disconnect the T.V. monitor from all its cabling. DON'T FORGET THE CHASSIS GROUND WIRE.
- d. Unplug the mother board and daughter board from all their cabling. Remove the short P.C.B. supports indicated in Figure 27 and slide the mother and daughter board assembly out the back of the cabinet. Set them aside. (Otherwise the T.V. monitor chassis would hit the daughter board as it was being slid out the back of the cabinet.)
- e. Before removing the T.V. monitor, the main-display-glass and bezel must be removed. See above "Upright model" procedure.
- f. With the removal of only four bolts, the T.V. monitor and its mounting board will be loose.
- g. The monitor mounting board slides on top of and against two wooden guides mounted to the cabinet's right and left sides. The monitor is removed by sliding it out the back of the cabinet. See Figure 27.
- h. To reinstall the T.V. monitor, reverse this procedure.
- i. After replacing the T.V. monitor, be sure to run the game Self-Test.

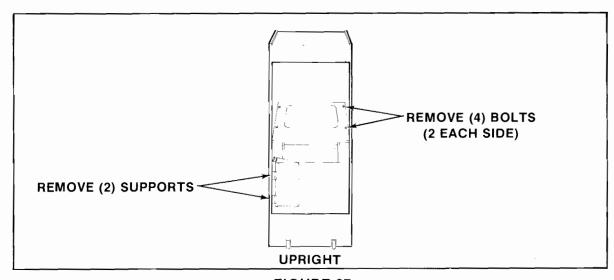


FIGURE 27

2. Mini model — See Figure 28.

- a. Turn the power to the game off.
- b. Open the rear access door.
- c. Completely disconnect the T.V. monitor from all its cabling. DON'T FORGET THE CHASSIS GROUND WIRE.
- d. Before removing the T.V. monitor, the main-display-glass and bezel must be removed. See above "Mini model" procedure.
- e. With the removal of only four nuts, the T.V. monitor will be loose.

CAUTION: BE SURE to support the T.V. monitor from the rear while removing the four bolts so it will not fall out of the cabinet.

- f. The monitor is removed by supporting it and pulling straight back.
- g. To reinstall the T.V. monitor, reverse this procedure.
- h. After replacing the T.V. monitor, be sure to run the game Self-Test.

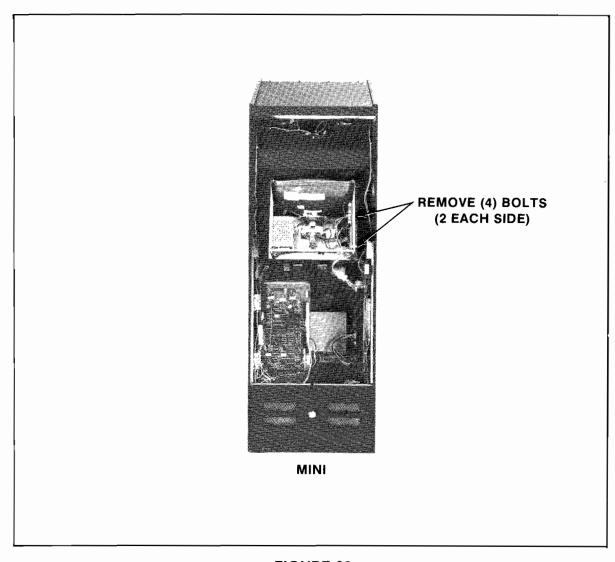


FIGURE 28

3. Cocktail Table model — See Figure 29.

- a. Turn the power off to the game.
- b. Open the coin box door and release the two latches indicated in Figure 18.

CAUTION: The left hand latch is very close to the sharp metal edge on the monitor chassis. Be careful not to cut yourself when working the latch.

- i. Once the latches are released, unhook them from their latch paltes.
- c. Grasp the table top at "A" and open it as indicated in Figure 18.

CAUTION: Due to the weight of the monitor, EXTREME CARE MUST be taken when opening the cabinet.

- d. Remove the screws which hold the table top glass clamps in place.
- e. Remove the table top glass.
- f. Lift out the T.V. bezel assembly.
- g. Completely disconnect the T.V. monitor from all its cabling. DON'T FORGET THE CHASSIS GROUND WIRE.
- h. Completely disconnect the mother and daughter boards from all their cabling and slide them out of their supports.
- i. Remove the screws holding the T.V. monitor chassis to its mounting brackets while at the same time supporting it so it can't move.
- j. After the last screw is removed, the T.V. monitor may be lifted straight away from the table top's back side.
- k. To reinstall the T.V. monitor, reverse this procedure.
- I. After replacing the T.V. monitor, be sure to run the game Self-Test.

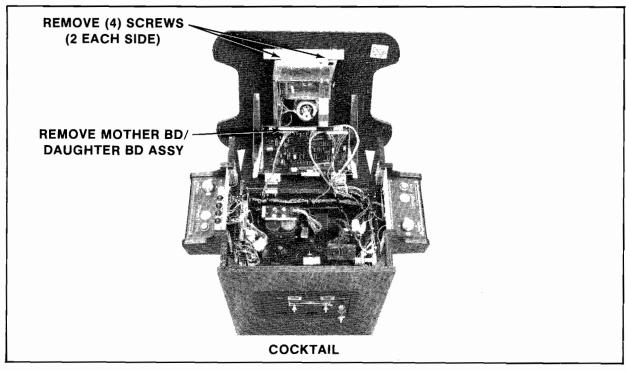


FIGURE 29

4. Sit Down model — See Figure 30.

- a. Turn the power off to the game.
- b. Remove the upper and lower rear access doors:
 - i. Unlock and open the lower rear access door.
 - ii. Release the latches which secure the upper rear access door and unhook them from their latch plates.
 - iii. The upper rear access door is now free and can be removed.
- c. Lift out the scenery.
- d. Disconnect the power cable from the lighting tube fixture.
- e. Remove the screws which secure the lighting fixture and its mounting bracket in place.
 - i. Remove the lighting fixture and mounting bracket assembly and set it aside.
- f. Completely disconnect the T.V. monitor from all its cabling. DON'T FORGET THE CHASSIS GROUND WIRE.
- g. Remove the cable clamps at the front edge of the monitor mounting board. See Figure 30.
- h. With the removal of the two securing screws, the T.V. monitor and its mounting board will be loose.
- The monitor mounting board slides on top of and against two wooden guides mounted to the cabinet's right and left sides. The monitor is removed by sliding it out the back of the cabinet.
- j. To reinstall the T.V. monitor, reverse this procedure.
- k. After replacing the T.V. monitor, be sure to run the game Self-Test.

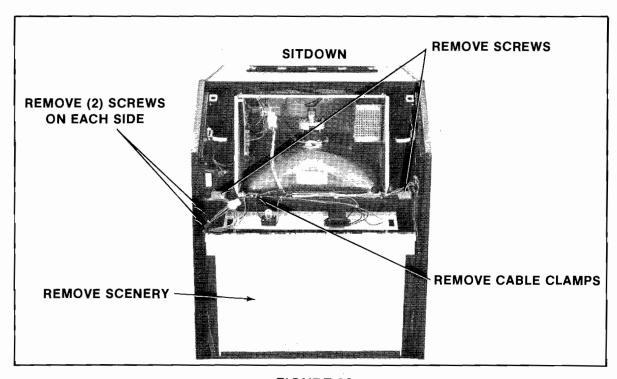


FIGURE 30

F. PRINTED CIRCUIT BOARD (P.C.B.) REPLACEMENT:

- 1. Upright model See Figure 31.
 - a. Turn the power to the game off.
 - b. Unlock and open the rear access door.
 - c. Disconnect the daughter board from all its cabling and unplug it from the mother board.
 - d. Disconnect the mother board from all its cabling, remove the P.C.B. supports indicated in Figure 31, and slide the mother board out the back of the cabinet.
 - e. Disconnect the linear power supply board from all its cabling, remove the P.C.B. supports indicated in Figure 31, and slide the lienar power supply board out the back of the cabinet.
 - f. To reinstall the above P.C.B.'s, reverse this procedure.

NOTE: P.C.B.'s are all keyed and will **ONLY** fit into their connectors one way without forcing them. The plugs on the cable harness which connect it to the P.C.B.'s are also keyed and will **ONLY** go onto their connectors one way without forcing them.

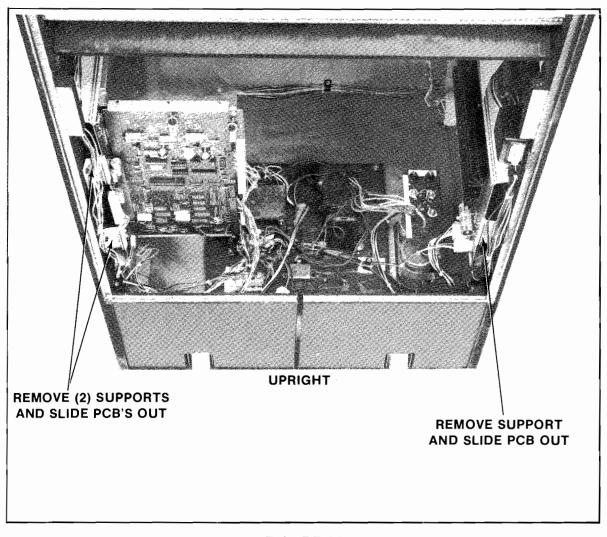


FIGURE 31

2. Mini model — See Figure 32.

- a. Turn the power off to the game.
- b. Unlock and open the rear access door.
- c. Disconnect the daughter board from all its cabling and unplug it from the mother board.
- d. Disconnect the mother board from all its cabling, remove the P.C.B. supports indicated in Figure 32, and slide the mother board out the back of the cabinet.
- e. Disconnect the linear power supply board from all its cabling, remove the P.C.B. supports indicated in Figure 32, and slide the linear power supply board out the back of the cabinet.
- f. To reinstall the above P.C.B.'s, reverse this procedure.

NOTE: P.C.B.'s are all keyed and will **ONLY** fit into their connectors one way without forcing them. The plugs on the cable harness which connect it to the P.C.B.'s are also keyed and will **ONLY** go onto their connectors one way without forcing them.

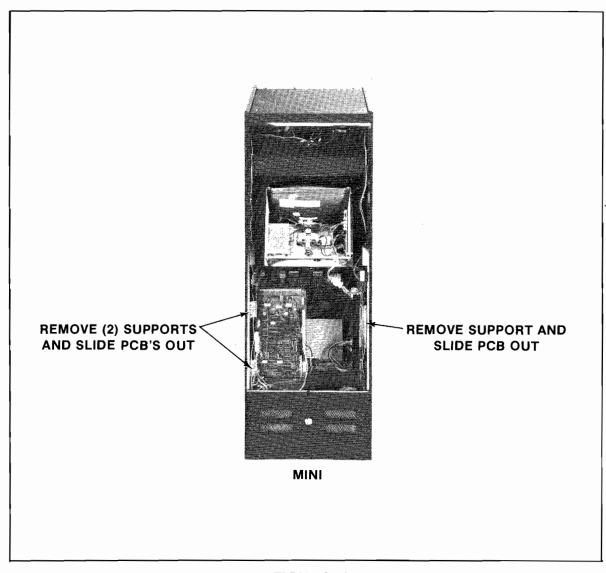


FIGURE 32

3. Cocktail Table model -

- a. Turn the power off to the game.
- b. Open the cabinet:
 - i. Open the coin box door and release the two latches indicated in Figure 18.

CAUTION: The left hand latch is very close to the sharp metal edge on the monitor chassis. Be careful not to cut yourself when working the latch.

- Once they're released, unhook them from their latch plates.
- c. Grasp the table top at "A" and open it as indicated in Figure 18.

CAUTION: Due to the weight of the monitor, EXTREME CARE MUST be taken when opening the cabinet.

- d. To remove the linear power supply board See Figure 33.
 - i. Disconnect it from all its cabling.
 - ii. Remove the two smallest P.C.B. supports.
 - iii. Once these are removed, the linear power supply can be lifted out of the cabinet.
 - iv. To reinstall the linear power supply board, reverse this procedure.

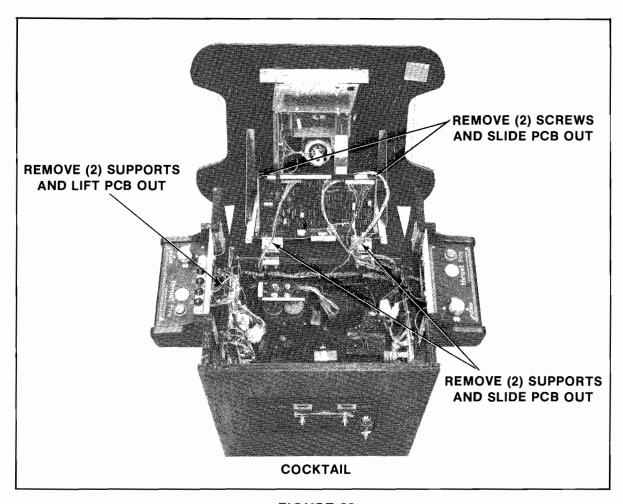


FIGURE 33

- e. To remove the mother and daughter boards See Figure 33.
 - Disconnect the daughter board from all its cabling.
 - ii. Remove the nylon retainer screws at its upper right and left hand corners.
 - iii. The daughter board is now free and can be slid from its bracket.
 - iv. Disconnect the mother board from all its cabling.
 - v. Remove the screws from the P.C.B. supports indicated in Figure 33 and then remove the supports.
 - vi. The mother board is now free and can be slid from its P.C.B. supports.
 - vii. To reinstall the mother and daughter boards, reverse this procedure.

4. Sit Down model — See Figure 34.

- a. Turn the power off to the game.
- b. Unlock and open the front access door.
- c. Disconnect the daughter board from all its cabling and unplug it from the mother board.
- d. Disconnect the mother board from all its cabling.
- e. Remove the screws indicated in Figure 34 and the mother board plus its mounting assembly are now free to be slid out of the cabinet.
- f. Disconnect the linear power supply from all its cabling.
- g. Remove the screws from the P.C.B. supports indicated in Figure 34 and then remove the supports.
- h. The linear power supply is now free and can be slid from its P.C.B. supports.
- i. To reinstall the above mother, daughter, and linear power supply boards, reverse this procedure.

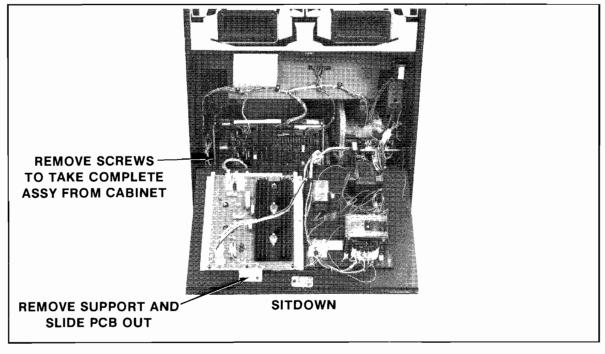


FIGURE 34

G. OPENING THE ATTRACTION PANEL(s):

1. Upright model:

The upright model has two attraction panels, one at the very top of the cabinet and one in the middle just below the control panel.

- a. Turn the power off to the game.
- b. Opening the attraction panel at the top of the cabinet See Figure 35:
 - i. Remove the screws which secure the top bracket in place. (They are on its top side.)
 - ii. Remove the top bracket and slide up the attraction panel. This exposes the attraction panel light bulbs and their mounting board.

• To service the light bulbs and their mounting board:

- •• Turn the power to the game back on so you can see which bulbs are burnt out.
- Mark the burnt out bulbs and turn the power to the game back off again.
- •• To replace the burnt out bulbs, grasp them gently and pull straight out.

 The new bulbs are gently pushed into the empty sockets.

• To completely remove the light bulb mounting board:

- •• Remove the control panel and main-display-glass as described previously and unplug the mounting board from its power cable.
- •• Remove the screws that hold the mounting board to the cabinet.
- Gently slide the mounting board out the front of the cabinet being careful not to catch its cable on anything.

c. Replacing the Speakers — See Figure 35:

- i. Be sure the power is off to the game.
- ii. Remove the control panel and main-display-glass and disconnect the speakers from their cabling.
- iii. Remove the screws which secure the speaker grill in place and set the speaker grill aside.
- iv. The bolts which secure the speakers in place are now accessible.
- v. Once the bolts which secure the speakers in place are removed, the speakers may be removed through opening where the main-display-glass was.
- d. Servicing the light behind the attraction panel in the center of the cabinet below the control panel.
 - i. Remove the control panel as described previously. This exposes the attraction panel fluorescent light tube and its mounting bracket assembly.
 - ii. The fluorescent light tube may be replaced at this time by reaching through the space where the control panel was before you removed it and around the light tubes mounting bracket assembly.

WARNING: If you drop a fluorescent tube and it breaks, IT WILL IMPLODE! Shattered glass can fly six (6) feet or more from the implosion. Use care when replacing any fluorescent tube.

- iii. Replacing the fluorescent tube starter -
 - Grasp the starter (it is on the back of the mounting bracket), give it a quarter turn, and remove it from its socket.
- iv. Replacement of the fluorescent tube mounting bracket assembly -
 - Be sure the power is off to the game.
 - Disconnect it from its power cable.
 - Remove the screws along its base which secure it to the cabinet and remove it.
- e. To reinstall any of the items removed above, reverse this procedure.

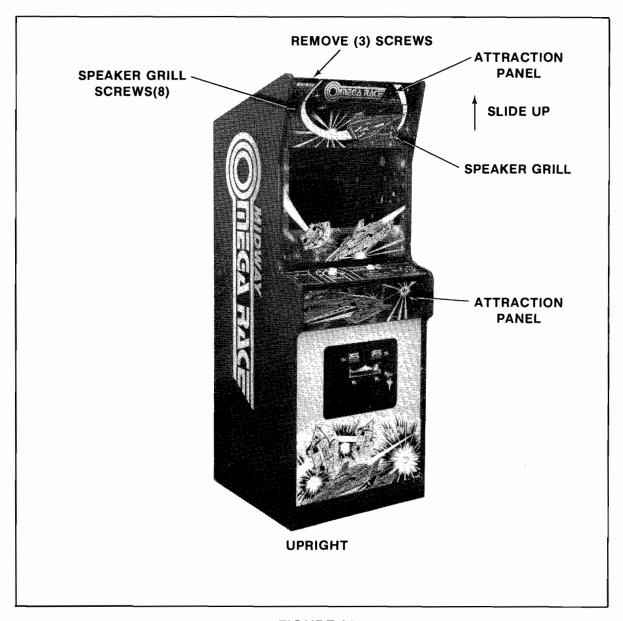


FIGURE 35

2. Mini model — See Figure 36:

- a. Turn the power off to the game.
- b. Remove the screws from the top of the top bracket.
- c. Remove the top bracket and slide up the attraction panel. This exposes the attraction panel light bulbs and their mounting board.
- d. To service the light bulbs and their mounting board:
 - i. Turn the power to the game back on so you can see which bulbs are burnt out.
 - ii. Mark the burnt out bulbs and turn the power to the game off again.
 - iii. To replace the burnt out bulbs, grasp them gently and pull straight out.
 - The new bulbs are gently pushed into the empty sockets.

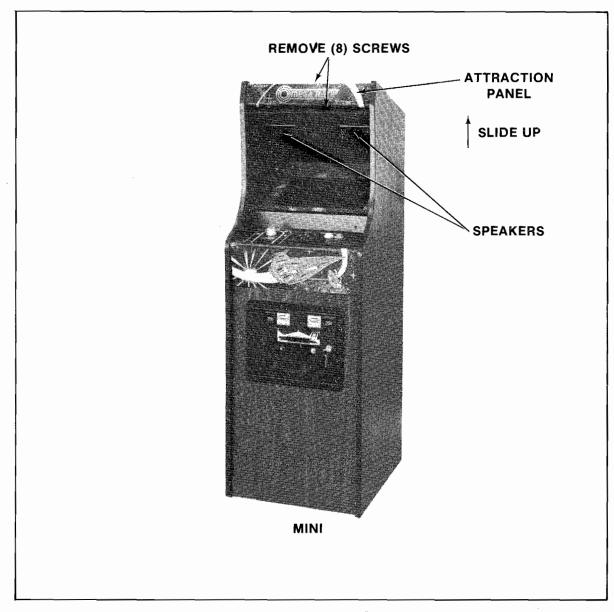


FIGURE 36

- iv. To completely replace the light bulb mounting board:
 - Open the cabinet rear access door and unplug the mounting board from its power cable.
 - Remove the screws that hold the mounting board to the cabinet.
 - Gently slide the mounting board out the front of the cabinet being careful not to catch its cable on anything.
- e. To replace the speaker(s)
 - i. Be sure the power is off to the game.
 - ii. Disconnect the speaker(s) from its cabling.
 - iii. Remove the nuts and bolts securing the speaker(s) to be replaced.
 - iv. Slide the speaker(s) out through the rear access door.
- f. To reinstall any of the items removed above, reverse this procedure.
- 3. The Cocktail Table model and the Sit Down model have no back lit attraction panels.

H. COIN DOOR MAINTENANCE

- 1. Periodically, the metal coin acceptor mechanism(s) must be removed from the coin door and cleaned.
 - a. Make sure the power to the game is off.
 - b. Unlock and open the coin door.
 - d. Remove the coin acceptor mechanism(s) as shown in Figure 37.
 - i. Push down on the two spring loaded latches.
 - ii. While holding the latches down, pull the top of the coin acceptor mechanism toward you.
 - iii. Release the latches and lift out the coin acceptor mechanism.
 - d. Clean the magnet of all foreign particles. See Figure 38.
 - i. This may be accomplished by swinging the gate open as shown in the above figure.
 - e. Remove the cradles and undersize levers and clean the bushings. (A pipe cleaner makes a good bushing cleaner.)
 - i. Also clean the pivot pin.
 - f. Whenever needed, the coin acceptor should be cleaned with hot water and cleanser in the following manner.
 - i. Place the coin acceptor in boiling water for about ten minutes.

CAUTION: BE CAREFUL NOT TO BURN YOURSELF.

- ii. Next, use a brush and kitchen cleaner to remove all remaining foreign matter from the unit.
- iii. Rinse the coin acceptor in clean boiling water.
- iv. Dry the coin acceptor thoroughly by using filtered compressed air to blow it dry.

NOTE: The reason we recommend using boiling water is that it evaporates faster than cold water and speeds drying time.

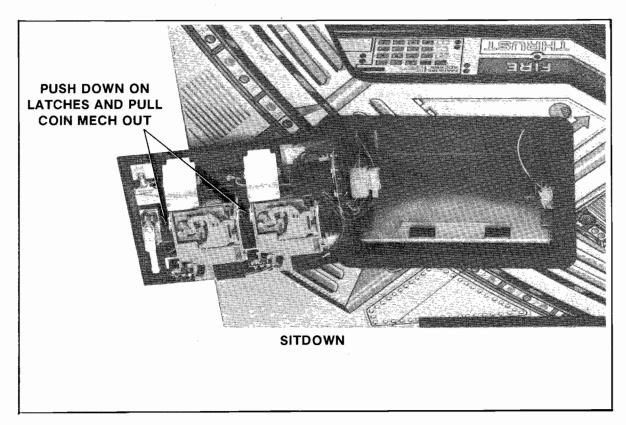


FIGURE 37

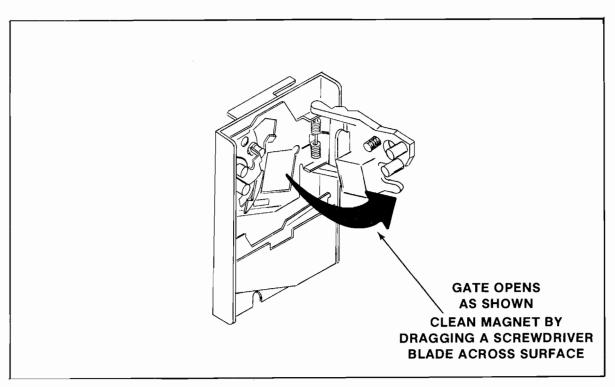


FIGURE 38

- g. To lubricate the coin acceptor:
 - Use ONLY powdered graphite and put it ONLY on the moving parts of the coin Acceptor. These parts are called out in Figure 39.
 - ii. Be extremely careful to keep the powdered graphite away from paths that are traveled by the coins.

WARNING DO NOT USE OIL TO LUBRICATE THE COIN ACCEPTOR.

- h. Check the coin chute for obstructions such as: paper, gum, etc.
- i. Reinstall the coin acceptor to the coin door.
 - i. Place the two pegs at the coin acceptor's base into their retaining slots.
 - ii. Now push the top of the coin acceptor toward the coin door until it snaps in place and is held there by the two spring loaded latches.
- j. Close and lock the coin door.
- 2. The plastic coin acceptor mechanisms must be removed periodically from the coin door and cleaned.
 - a. Make sure the power to the game is off.
 - b. Unlock and open the coin door.
 - c. Remove the coin acceptor mechanism(s) as shown in Figure 37.
 - i. Push down on the two spring loaded latches.
 - ii. While holding the latches down, pull the top of the acceptor mechanism toward you.
 - iii. Release the latches and lift out the mechanism.

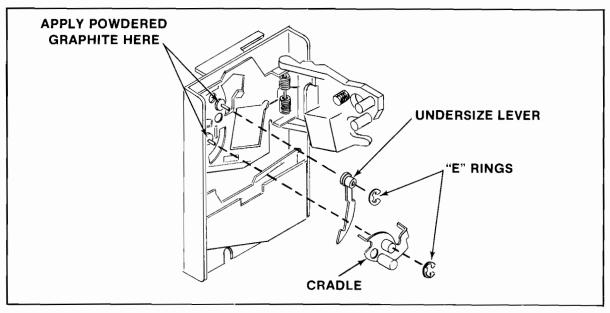


FIGURE 39

- d. Squeeze the two pins indicated in Figure 40 together to open the mechanism and break it down into its three basic parts.
 - i. Clean the mechanism in hot soapy water. It never rusts.
 - ii. Rinse the mechanism in clean hot water and allow it to dry.
 - iii. Reassemble the mechanism (it never needs lubrication).
- e. Check the coin chute for obstructions such as: paper, gum. etc.

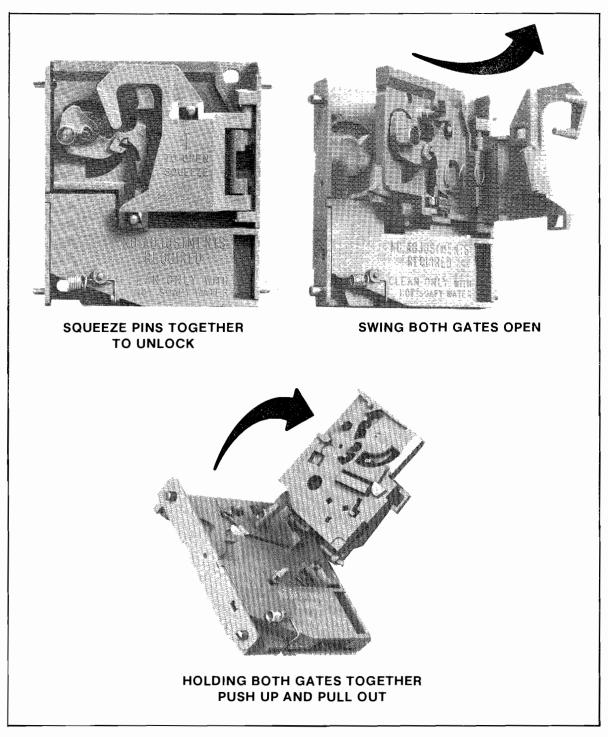
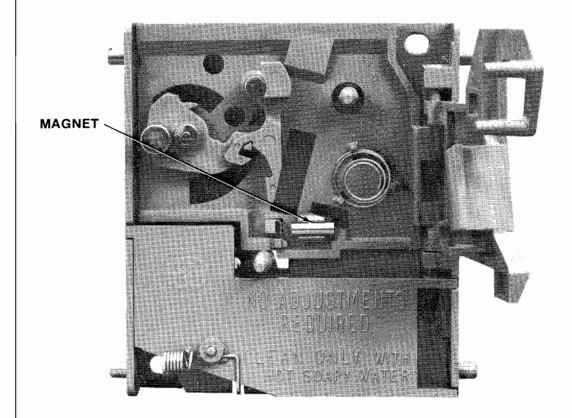


FIGURE 40

- f. Reinstall the coin acceptor to the coin door.
 - i. Place the two pegs at the coin acceptor's base into their retaining slots.
 - ii. Now push the top of the coin acceptor toward the coin door until it snaps in place and is held by the two spring loaded latches.
- g. Close and lock the coin door.

NOTE: See Figure 41 for instructions on how to set the plastic coin acceptor mechanisms to either accept or reject Canadian quarters.

ACCEPTOR CAN BE SET TO ACCEPT U.S. QUARTERS ONLY OR BOTH U.S. AND CANADIAN QUARTERS.



SLIDE MAGNET TO EXTREME RIGHT (AS SHOWN) TO ACCEPT BOTH U.S. AND CANADIAN QUARTERS.

TO ACCEPT U.S. QUARTERS ONLY, SLIDE MAGNET TO EXTREME LEFT.

FIGURE 41

I. REPLACING THE ULTRAVIOLET LIGHT TUBE; STARTER; AND THE MOUNTING BRACKET ASSEMBLY.

1. Upright model

- a. Turn the power to the game off.
- b. Remove the rear access door.
- c. Remove the scenery.
- d. The ultraviolet light tube may now be removed and replaced in the same manner you would any ordinary fluorescent tube.

WARNING: If you drop an ultraviolet light tube and it breaks, IT WILL IMPLODE! Shattered glass from the implosion can fly six (6) feet or more. Use care when replacing any ultraviolet light tube.

- e. Replacing the ultraviolet light tube starter
 - i. Be sure the power is off to the game.
 - ii. Grasp the starter (it is on the back side of the mounting bracket), give it a quarter turn, and remove it from its socket.
 - iii. To reinstall the starter, reverse this procedure.
- f. Replacement of the ultraviolet light tube mounting bracket assembly
 - i. Be sure the power to the game is off.
 - ii. Disconnect the power cable leading to the mounting bracket assembly.
 - iii. Remove the screws which hold the mounting bracket assembly to the right and left hand sides of the cabinet. BE SURE to support it as you remove the last two screws so it does not fall.
 - iv. The ultraviolet light tube mounting bracket assembly is now free and can be removed.
 - v. To reinstall the above assembly, reverse this procedure.

2. Sit Down model

- a. Turn the power off to the game.
- b. Remove the lower rear access door.
- c. Remove the scenery.
- d. The ultraviolet light tube may now be removed and replaced in the same manner you would any ordinary fluorescent tube.

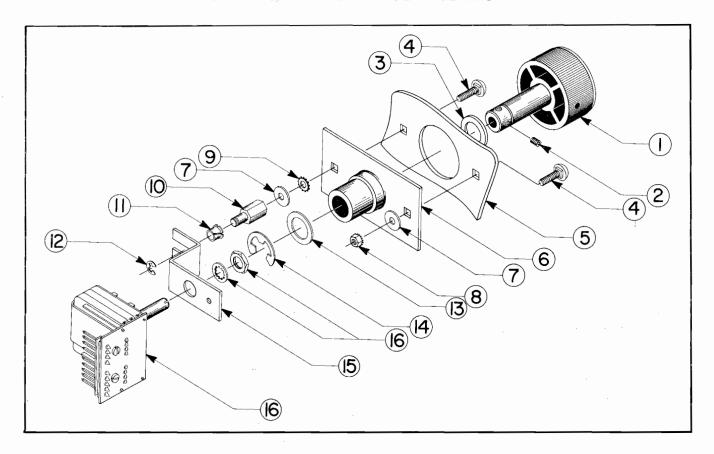
WARNING: If you drop an ultraviolet light tube and it breaks, IT WILL IMPLODE! Shattered glass from the implosion can fly six (6) feet or more. Use care when replacing any ultraviolet light tube.

- e. Replacing the ultraviolet light tube starter
 - i. Be sure the power to the game is off.
 - ii. Grasp the starter, give it a quarter turn, and remove it from its socket.
 - iii. To reinstall the starter, reverse this procedure.

- f. Replacement of the ultraviolet light tube mounting bracket assembly
 - i. Be sure the power to the game is off.
 - ii. Disconnect the power cable leading to the mounting bracket assembly.
 - iii. Remove the screws which hold the mounting bracket assembly to the right and left hand sides of the cabinet. BE SURE to support it as you remove the last two screws so it does not fall.
 - iv. The ultraviolet light tube mounting bracket assembly is now free and can be removed.
 - v. To reinstall the above assembly, reverse this procedure.
- 3. The Mini and Cocktail Table models have no ultraviolet lighting.

IV. ILLUSTRATED PARTS BREAKDOWN

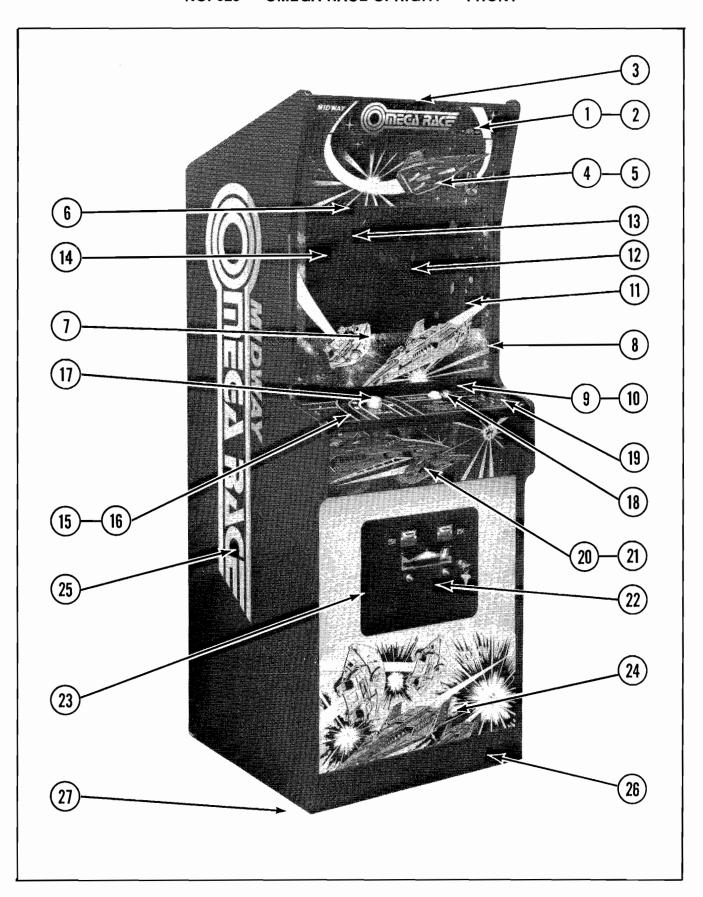
OMEGA RACE — CONTROL KNOB ASSY.



OMEGA RACE — CONTROL KNOB ASSY. — PARTS LIST

ORDER BY PART NUMBER ONLY

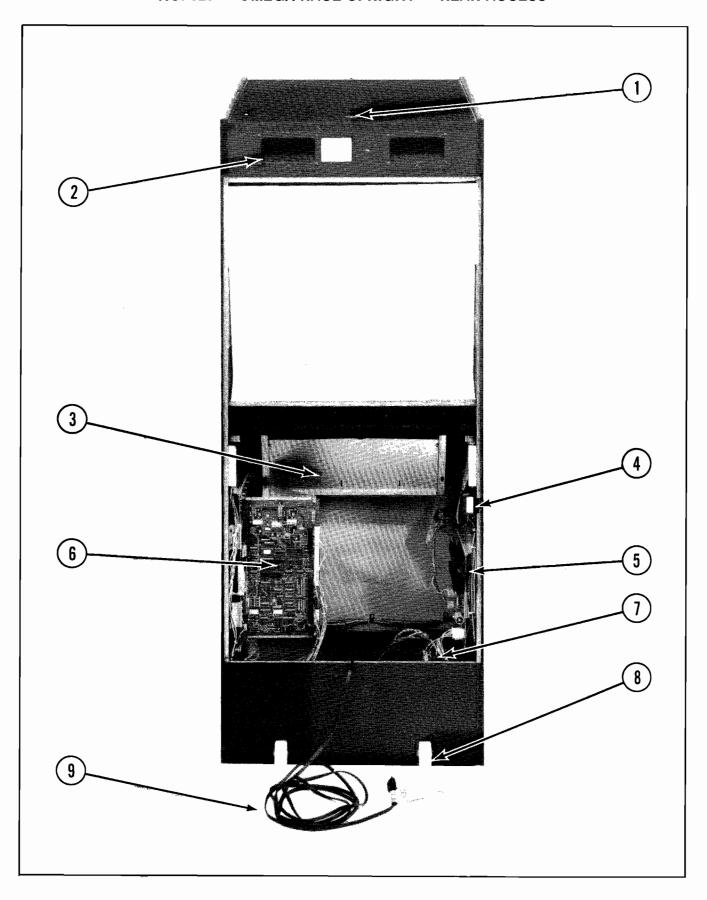
ITEM	PART NO.	DESCRIPTION
1	A894-00008-0000	KNOB & SHAFT ASSY. — S.D. ONLY
1	A929-00021-0000	KNOB & SHAFT ASSY. — U.R., C.T., MINI ONLY
2	0017-00101-0308	#8-32 x 3/16 SET SCREW
3	0017-00104-0109	NYLON WASHER
4	0017-00101-0620	#8-32 x 1/2 CARRIAGE BOLT (2 REQ'D.)
5	A894-00022-0000	LEFT CONSOLE/OVERLAY ASSY. — S.D.
5	0929-00102-00XF	CONTROL PANEL — U.R.
5	0930-00100-00XF	CONTROL PANEL — PLYR. #1 — C.T.
5	0930-00100-01XF	CONTROL PANEL — PLYR. #2 — C.T.
5	0931-00102-0000	CONTROL PANEL — MINI
6	A894-00010-0000	BEARING & PLATE ASSY.
7	0017-00104-0062	#8 FLAT WASHER (2 REQ'D.)
8	0017-00103-0061	#8-32 HEX NUT W/SEMS
9	0017-00104-0010	#8 EXT. LOCKWASHER
10	0894-00701-00XF	STABILIZER POST NUT
11	0017-00042-0173	3/16 NYLINER
12	0017-00100-0018	3/16 E-RING
13	0017-00104-0045	1/2 I.D. FLAT WASHER
14	0017-00100-0050	1/2 E-RING
15	0894-00112-00XF	ENCODER STABILIZER
16	A082-91110-A000	P.C. ENCODER ASSY. W/HARDWARE CONSISTING 3/8 INT. LOCK-
		WASHER & 3/8-32 NUT.



NO. 929 — OMEGA RACE UPRIGHT — PARTS LIST

ORDER BY PART NUMBER ONLY

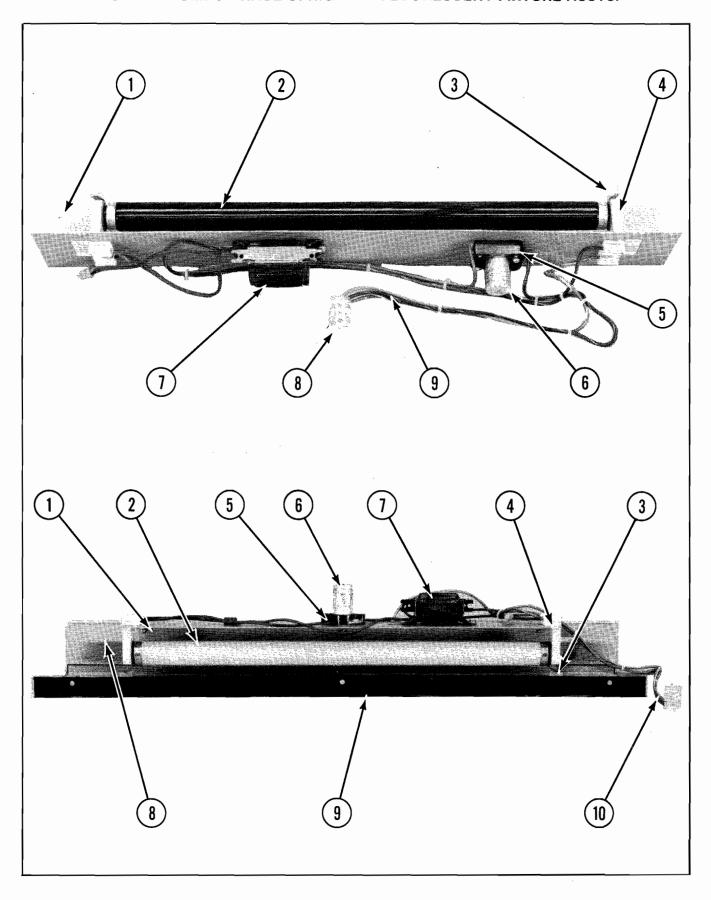
1 0929-00904-00XF 2 A929-00013-0000 0929-00909-0000 0017-00003-0219 0017-00031-0002 3 0929-00100-00XF 0017-00101-00117 4 0929-00105-00XF 0017-00101-00117 5 0017-00003-0187 0017-00101-0118 0017-00101-0118 0017-00103-0061 DECORATIVE LEXAN PANEL — 23-7/8" x 4-3/32 LIGHT TRAY BEZEL #194 WEDGE LAMP 14V., .27A. (7 REQ'D.) S11 LAMP HOLDER ASSY. (7 REQ'D.) INSERT BRKT. #8 x 5/8 PHIL TRS. HD. SCR. (3 REQ'D.) SPEAKER PANEL GRILL #8 x 5/8 PHIL TRS. HD. SCR. (8 REQ'D.) 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 0017-00103-0061 #8-32 X 1-1/8 CARRIAGE BOLT (8 REQ'D.)	" x 3/16"
0929-00909-0000	
0017-00003-0219 0017-00031-0002 3 0929-00100-00XF 0017-00101-00117 4 0929-00105-00XF 0017-00101-00117 5 0017-00003-0187 0017-00101-0118 #8 x 5/8 PHIL TRS. HD. SCR. (3 REQ'D.) SPEAKER PANEL GRILL #8 x 5/8 PHIL. TRS. HD. SCR. (8 REQ'D.) 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 0017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	
3 0017-00031-0002 S11 LAMP HOLDER ASSY. (7 REQ'D.) 10929-00100-00XF O17-00101-00117 #8 x 5/8 PHIL TRS. HD. SCR. (3 REQ'D.) 4 0929-00105-00XF SPEAKER PANEL GRILL 0017-00101-00117 #8 x 5/8 PHIL. TRS. HD. SCR. (8 REQ'D.) 5 0017-00003-0187 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 0017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	Į.
3	
4 0017-00101-00117 #8 x 5/8 PHIL TRS. HD. SCR. (3 REQ'D.) 5 0017-00101-00117 #8 x 5/8 PHIL TRS. HD. SCR. (3 REQ'D.) 6" x 9" SPEAKER PANEL GRILL 70017-00003-0187 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 70017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	
4 0929-00105-00XF SPEAKER PANEL GRILL 0017-00101-00117 #8 x 5/8 PHIL. TRS. HD. SCR. (8 REQ'D.) 5 0017-00003-0187 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 0017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	
5 0017-00101-00117 #8 x 5/8 PHIL. TRS. HD. SCR. (8 REQ'D.) 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.) 0017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	
5 0017-00003-0187 6" x 9" SPEAKER 8 OHM, 9W (2 REQ'D.)	
0017-00101-0118 #8-32 x 1-1/8 CARRIAGE BOLT (8 REQ'D.)	
1 1 1	
0017-00103-0061	
6 A929-00011-0000 FLUORESCENT BRKT. ASSY — NOT SEEN 7 0929-00901-00XF MAIN VIEWING GLASS — 23-13/16" x 20-5/8" x 3	0/46"
	3/ 10
8 0537-00903-0049 GLASS CHANNEL — 17-3/4" LG. (2 REQ'D.) 9 0537-00903-0034 GLASS CHANNEL — 23" LG. (2 REQ'D.)	
10 0629-00902-0800 GLASS LIFT CHANNEL — 20" LG.	
11 0929-00916-0100 RIGHT FRONT SIDE SCENERY	
12 0929-00912-0100 RIGHT SIDE SCENERY	
13 0929-00907-00XF BACK SCENERY CARD	
0929-00912-0200 LEFT SIDE SCENERY — (NOT SEEN)	
0929-00916-0200	
14 0929-00902-0000 MIRROR — 23-27/32" x 19-3/4" x 1/4"	
15 0929-00102-00XF CONTROL PANEL	,
16 0929-00908-0000 CONTROL OVERLAY — DECORATIVE	
0017-00101-0341 #6 x 1/4 PHIL. TRS. HD. SCR. (4 REQ'D.)	
0961-00115-00XF STRIKE (2 REQ'D.)	
0017-00101-0607 #8-32 x 3/8 HEX HD. BUTTON SCR. (4 REQ'D.)	
0017-00103-0041 #8-32 LOCK NUT (4 REQ'D.)	
17 A929-00021-0000 KNOB & SHAFT ASSY.	
18 0017-00042-0256 PUSH BUTTON ASSY. — RED	
0017-00042-0257 PUSH BUTTON ASSY. — YELLOW	
0017-00032-0093 P.B. SWITCH W/HOLDER (2 REQ'D.)	
19 0017-00032-0092 LIGHTED RED P.B. SWITCH (4 REQ'D.)	
0929-00905-00XF	
20 0929-00903-00XF LOWER HEADER — DECORATIVE	
21 A929-00022-0000 LOWER FLUOR. BRKT. ASSY. — NOT SEEN	
22 A090-00300-06BK DOUBLE ENTRY COIN DOOR ASSY. 23 0090-00002-02BK LARGE COIN DOOR FRAME	
0017-00101-0121 #6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)	
(MOUNTS COIN DOOR TO FRAME)	
24 0929-00915-0000 DECAL — FRONT	
25 0929-00913-0000 DECAL — CABINET SIDES (2 REQ'D.)	
26 0935-00906-0300 KICK PLATE 23-7/8" LG.	
27 0017-00102-0048 3/8-16 x 2" LEG LEVELERS (4 REQ'D.)	
0017-00103-0026 3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)	
NOT CHOWN LIST	
NOT SHOWN LIST	
A929-00031-0000 T.V. BEZEL ASSY.	
0929-00906-0000 BEZEL	11
0929-00106-01XF CONTROL SHELF BRKT. SUPPORT — RIGHT	
0929-00106-02XF CONTROL SHELF BRKT. SUPPORT — LEFT	
0017-00009-0033 BASSICK CLAMP (2 REQ'D.)	



NO. 929 — OMEGA RACE UPRIGHT — REAR ACCESS PARTS LIST ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	A627-00066-0000	ON/OFF SWITCH ASSY.
2	0894-00913-0000	RECESSED HAND LIFT (2 REQ'D.)
	0017-00101-0117	#8 x 5/8 PHIL. TRS. HD. SCR. (12 REQ'D.)
3	0017-00003-0324	ELECTROHOME — 19" B&W MONITOR & CHASSIS
		(OR)
3	0017-00003-0325	WELLS-GARDNER — 19" B&W MONITOR & CHASSIS
	0017-00102-0012	1/4-20 x 1-1/4 UNSLT. HEX BOLT. (4 REQ'D.)
	0017-00104-0046 0017-00104-0014	FLAT WASHER (4 REQ'D.)
	0017-00104-0014	DISH WASHER (4 REQ'D.) 1/4-20 HEX NUT (4 REQ'D.)
	0929-00910-0000	FORMED MONITOR FISHPAPED SHIELD
4	A151-00027-0000	INTERLOCK SWITCH ASSY.
5	A082-90413-D000	LINEAR POWER SUPPLY ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. — 12" LG. (3 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. — 2-1/2" LG. (3 REQ'D.)
	0624-00902-0500	P.C. SUPPORT BRKT. — 6" LG. (4 REQ'D.)
	0017-00101-0025	#8 x 1/2 SLT. HEX HD. SCR. (20 REQ'D.)
	0017-00104-0037	#8 FLAT WASHER (20 REQ'D.)
6	A084-91372-G929 A084-90007-H929	GAME LOGIC BRD. ASSY. (DAUGHTER BRD.) MOTHER BRD. ASSY.
	A597-00012-0100	P.C. SUPPORT BRKT. ASSY.
	A597-00012-0100	P.C. SUPPORT BRKT. ASSY.
	0017-00101-0096	#6 x 3/8 SLT. HEX HD. SCR. (6 REQ'D.)
7	A945-00002-0000	125V — FILTER ASSY.
	A929-00006-0000	TRANSFORMER BRD. ASSY — LOCATED NEXT TO FILTER ASSY.
8	A961-00007-0000	CASTER ASSY. (2 REQ'D.)
	0961-00109-0000	WHEEL BRKT. (2 REQ'D.)
	0017-00042-0255	PLASTIC WHEEL (2 REQ'D.)
	0894-00702-00XF	SHAFT (2 REQ'D.)
9	0017-00100-0037 0017-00003-0064	3/8" E-RING (2 REQ'D.) 16 FT. LINE CORD
9	0017-00003-0004	10 FT. LINE CORD
		ADDITIONAL PARTS LIST
	A031-00004-0000	TERMINAL STRIP ASSY.
	0017-00009-0477	CASH BOX — MOLDED
	A961-00008-0000	CASH BOX COVER ASSY.
	A894-00024-0000 0894-00121-0000	CASH BOX SIDE CHANNEL ASSY. CASH BOX SIDE CHANNEL — LONG
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00101-0020	#8 FLAT WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
	A151-00029-0000	BACK DOOR LOCK ASSY.
	0017-00009-0490	5-5/8" SQ. VENT GRILL (4 REQ'D.)
	A929-00028-0000	HIGH VOLTAGE CABLE ASSY.
	A929-00027-0000	LOW VOLTAGE SIGNAL CABLE ASSY.
	A929-00026-0000	MASTER CABLE ASSY.
	A894-00035-0000	COIN DOOR CABLE ASSY.
	A929-00023-0000 A894-00031-0000	CONTROL SHELF CABLE ASSY. MOTHER & DAUGHTER BRDS. BRKT. ASSY.
	7.004 00001-0000	MOTITER & DAUGHTER DRUG, DRKT, MOST.

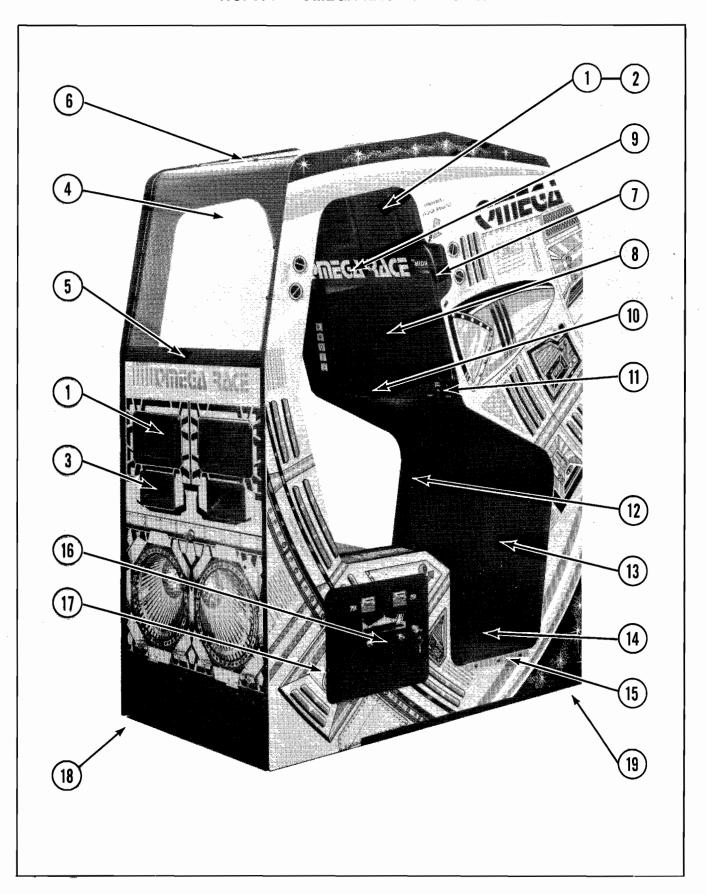
NO. 929 — OMEGA RACE UPRIGHT — FLUORESCENT FIXTURE ASSYS.



NO. 929 — OMEGA RACE UPRIGHT — FLUORESCENT FIXTURE ASSYS. — PARTS LIST

ITEM	PART NO.	DESCRIPTION
		UPPER FLUORESCENT BRKT. ASSEMBLY
1	0929-00101-0000	FLUORESCENT BRKT. — UPPER
2	0017-00003-0095	18" BLACK LIGHT LAMP — F15T8
3	0017-00021-0005	FLUORESCENT LOCKS (2 REQ'D.)
4	0017-00031-0036	FLUORESCENT SOCKET (2 REQ'D.)
5	0017-00021-0079	FLUOR. STARTER HOLDER
	0017-00101-0573	#6-32 x 1/2 PHIL. R.H.M.S. (4 REQ'D.)
6	0017-00003-0019	STARTER
7	0017-00003-0026	BALLAST
1	0017-00101-0593	#8-32 x 1/4 SLT. PAN HD. M.S. (2 REQ'D.)
8	0017-00021-0096	2 PIN SOCKET CONNECTOR
9	A929-00030-0000	FLUOR. CABLE ASSY.
		LOWER FLUORESCENT BRKT. ASSEMBLY
1	0929-00107-0000	FLUORESCENT BRKT. — LOWER
2	0017-00003-0043	18" COOL WHITE LAMP
3	0017-00021-0005	FLUORESCENT LOCKS (2 REQ'D.)
4	0017-00031-0036	FLUORESCENT SOCKET (2 REQ'D.)
5	0017-00003-0412	FLUOR. STARTER HOLDER W/LEADS
	0017-00101-0573	#6-32 x 1/2 PHIL R.H.M.S. (4 REQ'D.)
	0017-00104-0009	#6 EXT. WASHER (4 REQ'D.)
6	0017-00003-0019	STARTER
7	0017-00003-0026	BALLAST
	0017-00101-0598	#8-32 x 5/16 SLT. HEX. HD. SCR. (2 REQ'D.)
8	0929-00104-0000	RETAINER BRKT.
	0017-00101-0025	#8 x 1/2 SLT. HEX HD. SCR. (3 REQ'D.)
9	0929-00903-00XF	LOWER HEADER — DECORATIVE
10	A929-00032-0000	CABLE ASSY.

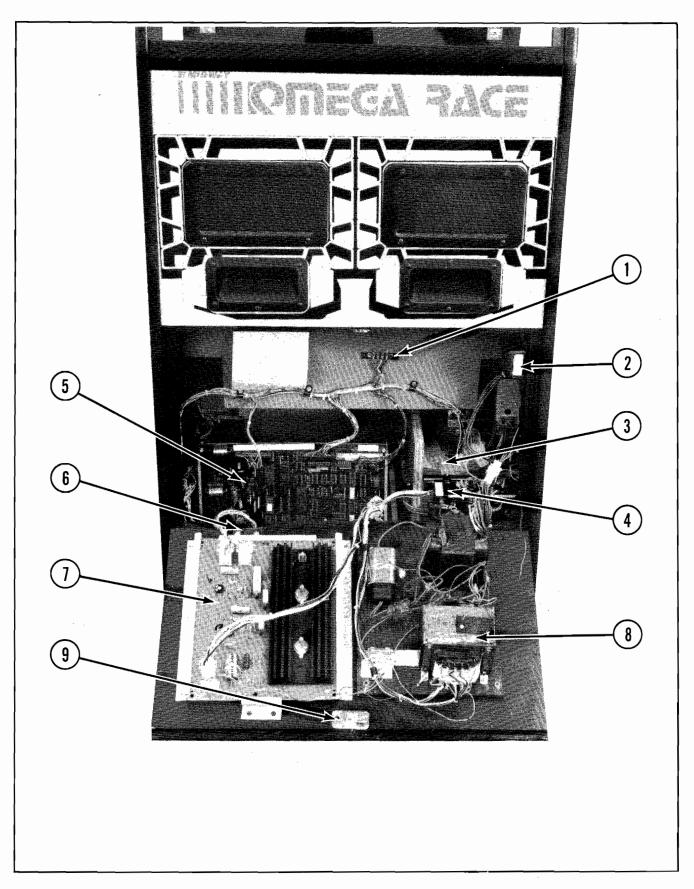
NO. 894 — OMEGA RACE SIT DOWN



NO. 894 — OMEGA RACE SIT DOWN — PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	0017-00009-0393	BLACK SPEAKER GRILL W/SLOTS (6 REQ'D.)
2	0017-00003-0187	6" x 9" SPEAKERS 8 OHM, 9W (2 REQ'D.)
	0017-00101-0127	#8-32 x 1-1/2 CARRIAGE BOLT (80 REQ'D.)
1	0017-00101-0126	#10-32 x 3/4 HEX HD. BUTTON SCR. (4 REQ'D.)
! I	0017-00104-0062	#8 FLAT WASHER (20 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (20 REQ'D.)
3	0894-00913-00XF	RECESSED HAND LIFT (2 REQ'D.)
1	0017-00101-0117	#8 x 5/8 PHIL. TRS. HD. SCR. (12 REQ'D.)
4	0894-00900-0000	CANOPY — ACRYLIC
5	0894-00103-00XF	PLEXI RETAINING STRAP — LOWER
6	0894-00104-00XF	PLEXI RETAINING STRAP — UPPER
	0017-00100-0114	BLACK NYLON FINISHING WASHER (9 REQ'D.)
1 1	0017-00101-0029	#8 x 1" PHL. OVAL HD. SCR. — BLK. (6 REQ'D.)
	0017-00101-0126	#10-32 x 3/4 HEX HD. BUTTON SCR. (6 REQ'D.)
7	0894-00113-00XF	HANDLE — EXIT/ENTRY ASSIST (2 REQ'D.)
	0017-00101-0126	#10-32 x 3/4 HEX HD. BUTTON SCR. (4 REQ'D.)
8	0894-00909-00XF	MAIN VIEWING GLASS — 24-13/16" x 12" x 3/16"
	0537-00903-0051	GLASS EDGE CHANNEL — 10-3/8 LG. (2 REQ'D.)
	0894-00904-0000	ONE WAY MIRROR
9	0894-00106-00XF	GLASS RETAINER — UPPER
10	0894-00105-00XF	GLASS RETAINER — LOWER
	0017-00101-0126	#10-32 x 3/4 HEX HD. BUTTON SCR. (6 REQ'D.)
11	0017-00032-0092	SMALL RED LIGHTED P.B. SWITCH (2 REQ'D.)
	0929-00905-00XF	SWITCH BEZEL (2 REQ'D.)
12	0894-00910-0100	CORNER CONDUIT — LEFT
13	0894-00914-0000	SCUFF PROTECTOR
	0894-00910-0200	CORNER CONDUIT — RIGHT — NOT SEEN
] ,, [0017-00101-0117	#8 x 5/8 PHIL. TRS. HD. SCR. (12 REQ'D.)
14 15	0894-00911-0000	FLOOR MAT THRESHOLD GUARD (2 REQ'D.)
15	0894-00109-0000 0017-00101-0742	#8 x 1/2 PHIL. TRS. HD. SCR. (6 REQ'D.)
16	A090-00300-06BK	DOUBLE ENTRY COIN DOOR ASSY.
17	0090-00002-02BK	LARGE DOOR FRAME
l '' l	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. M.S. (3 REQ'D.) (MOUNTS COIN DOOR
1 1	0017-00101-0121	TO FRAME)
18	0017-00102-0048	3/8-16 x 2" LEG LEVELERS (4 REQ'D.)
'	0017-00103-0026	3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)
19	A894-00014-0000	CASTER ASSY. (2 REQ'D.)
		NOT SHOWN LIST
	0894-00903-0000	SEAT & BACK CUSHIONS (2 REQ'D.)
]]	0017-00102-0052	1/4-20 x 1" UNSLOT. HEX BOLT (6 REQ'D.)
	0017-00104-0014	PERIPHERY WASHER (6 REQ'D.)
	0894-00912-0000	MONITOR MASK
	0017-00009-0484	1/8" TAMPER PROOF ALLEN KEY
	0017-00032-0083	ON/OFF SWITCH W/NUT

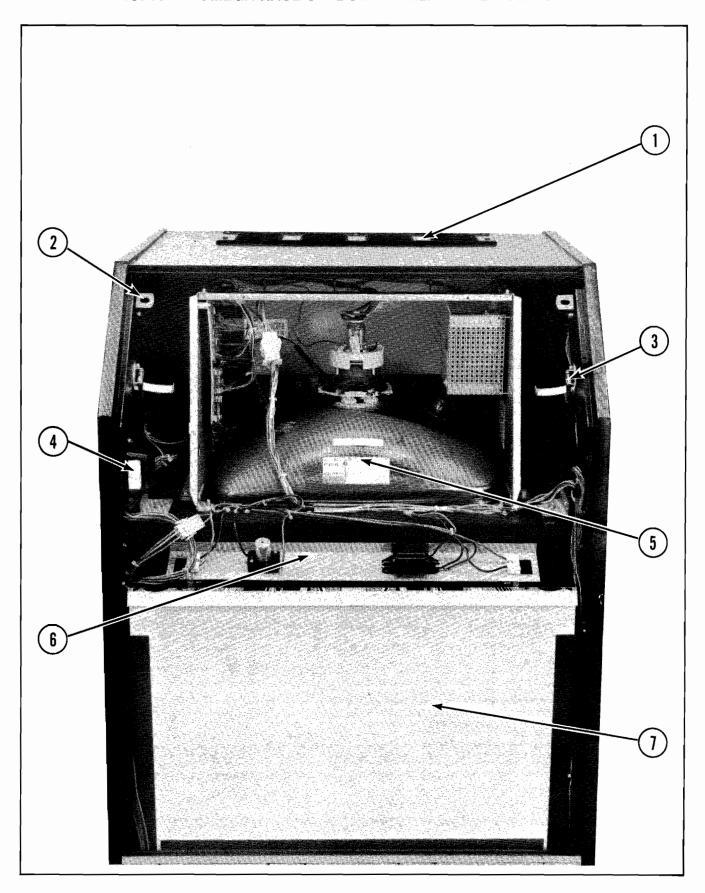
NO. 894 — OMEGA RACE SIT DOWN — FRONT INTERIOR ACCESS



NO. 894 — OMEGA RACE SIT DOWN — FRONT INTERIOR ACCESS PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	A031-00004-0000	TERMINAL STRIP ASSY.
	0017-00101-0015	#6 x 1/2 SLT. HEX HD. SCR. (2 REQ'D.)
- 2	A151-00027-0000	INTERLOCK SWITCH ASSY.
3	A894-00025-0000	CASH BOX COVER ASSY
	0017-00009-0477	MOLDED CASH BOX
	A894-00024-0000	CASH BOX SIDE CHANNEL ASSY.
	0894-00121-0000	CASH BOX SIDE CHANNEL — LONG
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 FLAT WASHER (4 REQ'D.)
i i	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
4	A945-00002-0000	FILTER ASSY. — 125VA
5	A084-91372-G929	GAME LOGIC BOARD ASSY. (DAUGHTER BRD.)
1	A084-90007-H929	MOTHER BOARD ASSY.
	A894-00032-0000	MOTHER & GAME BOARDS MTG. ASSY.
	A597-00012-0100	P.C. SUPPORT MTG. BRKT. ASSY.
1	A597-00012-0200	P.C. SUPPORT MTG. BRKT. ASSY.
	0017-00101-0096	#6 x 3/8 SLT. HEX HD. SCR. (6 REQ'D.)
6	0017-00009-0514	2-1/2" HINGE (2 REQ'D.)
	0017-00101-0127	#8-32 x 1/2 CARRIAGE BOLT (4 REQ'D.)
	0017-00101-0713	#8-32 x 1" SLT. FLT. HD. M.S. (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (8 REQ'D.)
7	A082-90413-D000	LINEAR POWER SUPPLY ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. — 12" LG. (2 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. — 6-1/2" LG.
	0624-00902-0500	P.C. SUPPORT BRKT. — 2-1/2" LG.
	0017-00101-0028	#8 x 3/4 SLT. HEX HD. SCR. (11 REQ'D.)
1	0017-00104-0062	#8 FLAT WASHER (11 REQ'D.)
8	A894-00030-0000	TRANSFORMER BOARD ASSY.
9	A097-00001-0000	FRONT DOOR LOCK ASSY.
1		ADDITIONAL PARTS LIST
	A894-00037-0000	MASTER CABLE ASSY.
	A894-00043-0000	LOW VOLTAGE TRANSFORMER CABLE ASSY.
	A894-00042-0000	LOW VOLTAGE CABLE ASSY.
	A894-00040-0000	A.C. VOLTAGE ASSY.
	A894-00035-0000	COIN DOOR CABLE ASSY.
	A894-00041-0000	THRUST-FIRE CABLE ASSY.
	A894-00033-0000	SWITCH CABLE ASSY.
	0894-00915-0000	GAME BOARD SHIELD

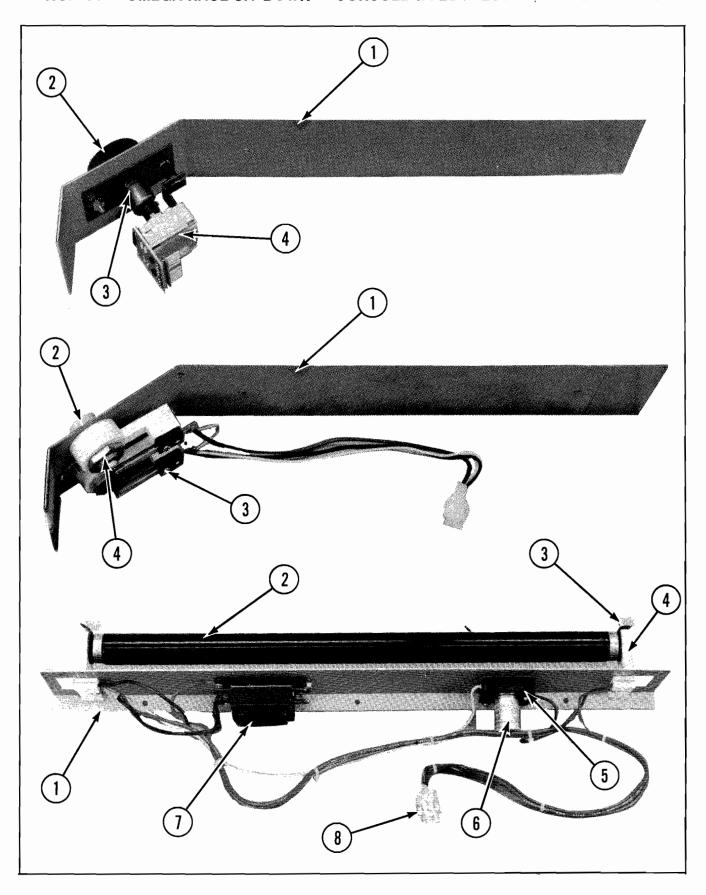
NO. 894 — OMEGA RACE SIT DOWN — REAR INTERIOR ACCESS



NO. 894 — OMEGA RACE SIT DOWN — REAR INTERIOR ACCESS — PARTS LIST

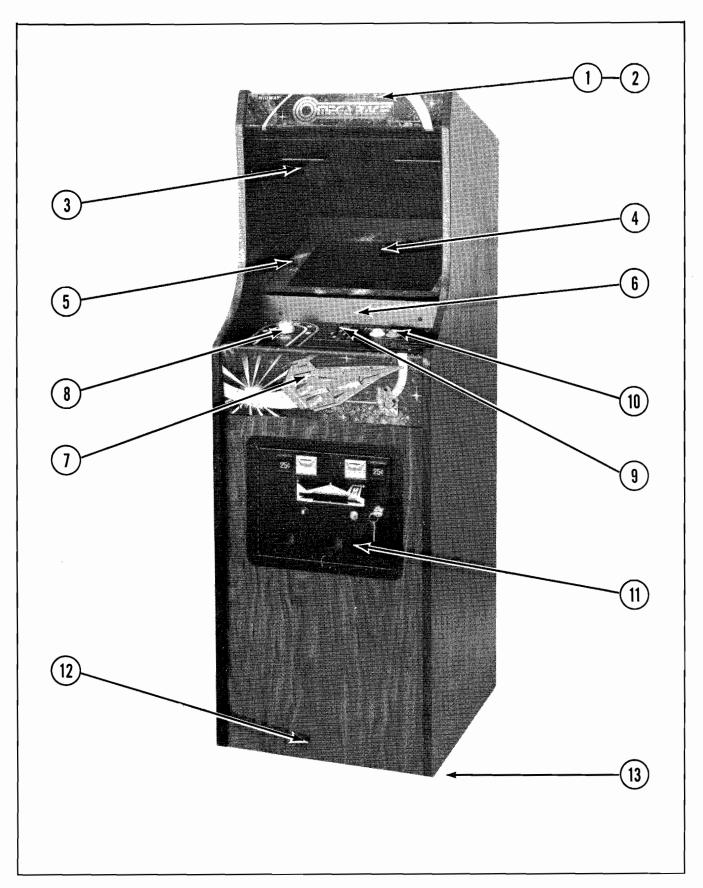
ITEM	PART NO.	DESCRIPTION
1	0894-00119-00XF	VENT — ANTI SPILL
	0017-00101-0742	#8 x 1/2 PHIL. TRS. HD. SCR. (8 REQ'D.)
2	A866-00026-0000	LOCATING PIN & PLATE ASSY. (2 REQ'D.)
3	0603-00131-0000	STRIKE (2 REQ'D.)
	0017-00009-0033	BASSICK CLAMP (2 REQ'D.)
	0017-00101-0027	#8 x 3/4 SLT. HEX HD. SCR. (TOTAL REQ'D. 16)
4 5	A151-00027-0000	INTERLOCK SWITCH ASSY.
5	0017-00003-0324	ELECTROHOME — 19" B&W, X-Y MONITOR & CHASSIS (OR)
5	0017-00003-0325	WELLS-GARDNER — 19" B&W, X-Y MONITOR & CHASSIS
	0894-00108-0000	MONITOR HOLD DOWN BRKT. (2 REQ'D.)
	0017-00102-0008	1/4-20 x 7/8 SLT. HEX HD. BOLT (4 REQ'D.)
	0017-00104-0005	SPLIT LOCK WASHER (4 REQ'D.)
6	A894-00004-0000	FLUORESCENT LIGHT FIXTURE ASSY.
_	0894-00100-00XF	FLUOR. REFLECTOR
7	A894-00045-0000	BACKGROUND SCENERY ASSY.
		REAR SIDE OF CABINET — NOT SHOWN
	0017-00009-0393	BLACK SPEAKER GRILL W/SLOTS (2 REQ'D.)
1	0017-00101-0137	#8-32 x 1" CARRIAGE BOLT (8 REQ'D.)
	0017-00104-0062 0017-00103-0061	#8 FLAT WASHER (8 REQ'D.) #8-32 HEX NUT W/SEMS (8 REQ'D.)
	A097-00001-0000	BACK DOOR LOCK ASSY.
	0894-00118-0000	VENT/ACCESS PLATE
	0017-00101-0135	#8-32 x 3/4 WELD SCREW (2 REQ'D.)
	0894-00114-0000	LINE CORD/ACCESSORY PLATE
	0017-00101-0135	#8-32 x 3/4 WELD SCREW (2 REQ'D.)
	0017-00003-0178	FUSE 3A., 125V. SLO-BLO
	0017-00003-0155	FUSE HOLDER

NO. 894 — OMEGA RACE SIT DOWN — CONSOLE & FLUORESCENT FIXTURE ASSYS.



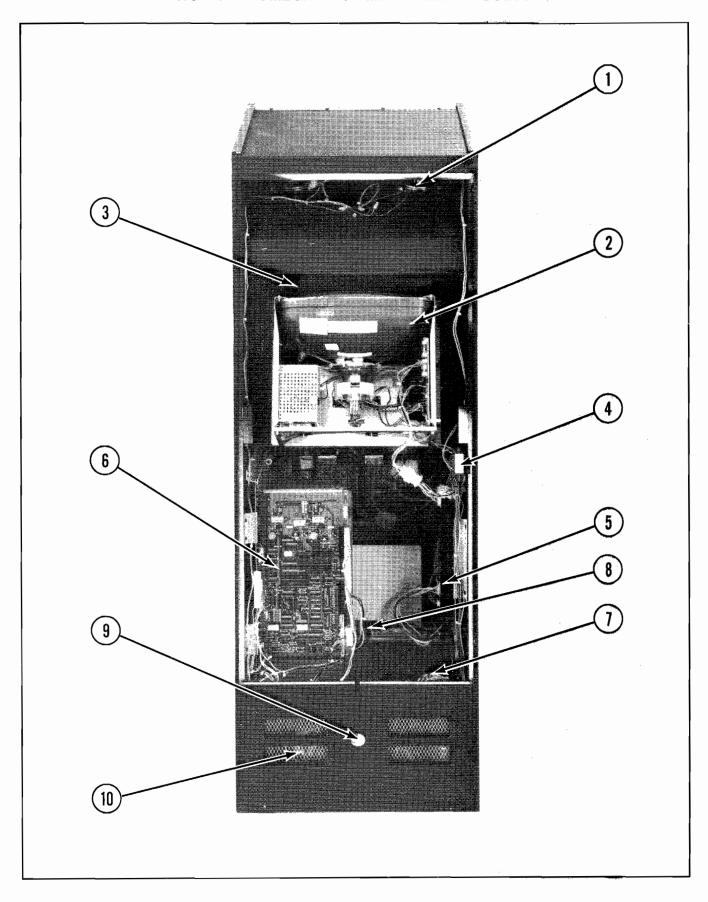
NO. 894 — OMEGA RACE SIT DOWN — CONSOLE & FLUORESCENT ASSYS. — PARTS LIST

1 1	A894-00011-0000 A894-00022-0000	LEFT ARM CONSOLE ASSY.
2 3	0894-00110-0000 0894-00907-0200 0017-00101-0126 A894-00008-0000 A894-00010-0000 A084-91110-A000	LEFT CONSOLE/OVERLAY ASSY. LEFT CONSOLE PLATE DECORATIVE OVERLAY — LEFT #10-32 x 3/4 BLACK HEX HD. BUTTON SCR. (3 REQ'D.) KNOB & SHAFT ASSY. BEARING & PLATE ASSY. ANGLE ENCODER P.C. BRD. ASSY.
2 3	A894-00013-0000 A894-00023-0000 0894-00107-0000 0894-00907-0100 0017-00101-0126 0017-00042-0256 0017-00042-0257 0017-00032-0093 0017-00103-0054	RIGHT ARM CONSOLE ASSY. RIGHT ARM/OVERLAY ASSY. RIGHT CONSOLE PLATE DECORATIVE OVERLAY — RIGHT #10-32 x 3/4 BLACK HEX HD. BUTTON SCR. (3 REQ'D.) RED PUSH BUTTON ASSY. YELLOW PUSH BUTTON ASSY. PUSH BUTTON SWITCH W/HOLDER (2 REQ'D.) 5/8 PAL NUT (2 REQ'D.)
1 2 3 4 5 6 7	A894-0004-0000 0894-00101-0000 0017-00003-0095 0017-00021-0005 0017-00021-0079 0017-00101-0573 0017-00003-0019 0017-00003-0026 0017-00101-0593 A894-00034-0000	FLUORESCENT LIGHT FIXTURE ASSY. FLUORESCENT BRKT. 18" BLACK LIGHT LAMP — F15T8 FLUORESCENT LOCKS (2 REQ'D.) FLUORESCENT SOCKETS (2 REQ'D.) FLUOR. STARTER HOLDER #6-32 x 1/2 PHIL. R.H.M.S. (2 REQ'D.) STARTER BALLAST #8-32 x 5/16 SLT. HEX HD. M.S. (2 REQ'D.) FLUORESCENT CABLE ASSY.



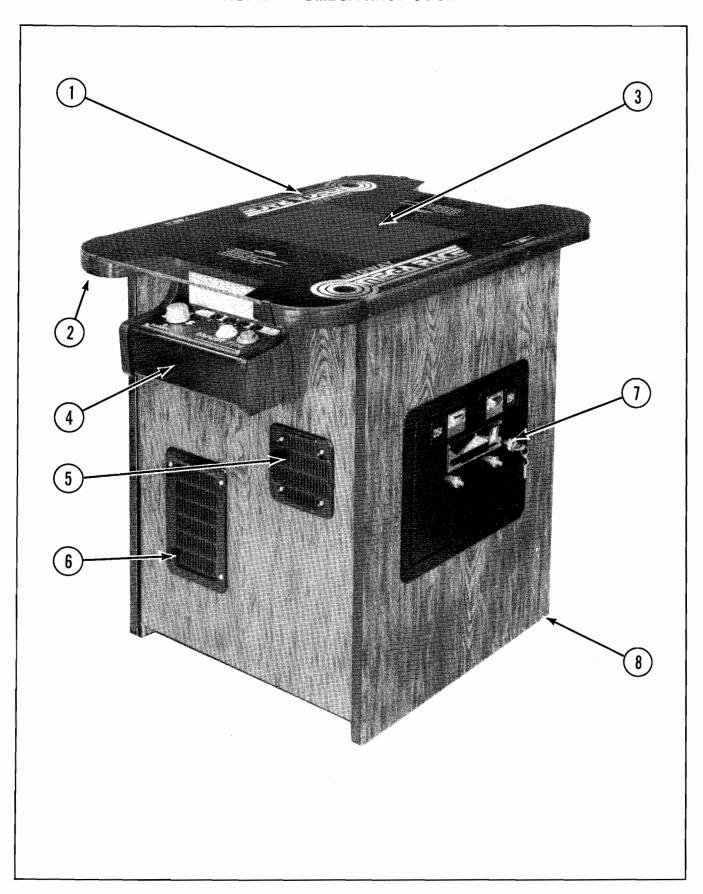
NO. 931 — OMEGA RACE MINI — PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	0931-00901-0000	DISPLAY PANEL
'	0017-00101-0117	#8 x 5/8 PHIL. TRS. HD. SCREW (8 REQ'D.)
2	A931-00017-0000	INSERT DISPLAY ASSY.
	0017-00031-0030	WEDGE BASE LIGHT SOCKET (5 REQ'D.)
	0017-00031-0030	#194 LAMP 14V, 27A. (5 REQ'D.)
3	0017-00003-0219	4" SQR. SPEAKER 8 OHM, 3W. (2 REQ'D.)
0 .	0017-00003-0101	SPEAKER GRILL (2 REQ'D.)
	0017-00009-0482	#8-32 x 1/4 CARRIAGE BOLT (8 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (8 REQ'D.)
. 4	0931-00902-00XF	MAIN DISPLAY GLASS — 17-13/16" x 14-13/16" x 1/8"
5	0905-00903-0100	GLASS EDGE CHANNEL — 14-1/2" LG. (2 REQ'D.)
6	0963-00101-00XF	GLASS CLAMPING PLATE
Ŭ	0017-00101-0789	#10-32 x 3/4 HEX BUTTON HD. SCR. (2 REQ'D.)
7	A931-00014-0000	CONTROL PANEL & OVERLAY ASSY.
	0931-00102-0000	CONTROL PANEL
	0931-00905-0000	DECORATIVE OVERLAY
	0017-00101-0118	#8-32 x 1-1/8 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 FLAT WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
	0017-00101-0065	#6 x 1/2 PHIL. TRS. HD. SCR. (2 REQ'D.)
8	A929-00021-0000	KNOB & SHAFT ASSY.
9	0017-00032-0092	LIGHTED RED P.B. SWITCH (4 REQ'D.)
	0929-00905-00XF	SWITCH BEZEL (4 REQ'D.)
10	0017-00042-0256	RED — PUSH BUTTON ASSY.
	0017-00042-0257	YELLOW — PUSH BUTTON ASSY.
	0017-00032-0093	P.B. SWITCH W/HOLDER (2 REQ'D.)
11	A090-00300-06BK	DOUBLE ENTRY COIN DOOR ASSY.
	0090-00002-02BK	LARGE DOOR FRAME
	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
	74.	(MOUNTS COIN DOOR TO FRAME)
12	0935=00906-0400	KICK PLATE — 17-15/16" LG. — NOT SHOWN
13	0017-00102-0048	3/8-16 x 2" LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)
	1	
	and the second of the second o	NOT SHOWN LIST
	0017-00009-0033	BASSICK CLAMP (2 REQ'D.)
	0961-00115-00XF	STRIKE (2 REQ'D.)
	0017-00101-0027	#8 x 3/4 SLT. HEX HD. SCR. (8 REQ'D.)
	0961-00113-0000	SHELF SUPPORT — LEFT
	0961-00114-0000	SHELF SUPPORT — RIGHT
	0017-00101-0028	#8 x 3/4 BLACK SLT. HEX HD. SCR. (16 REQ'D.)



NO. 931 — OMEGA RACE MINI — REAR ACCESS — PARTS LIST

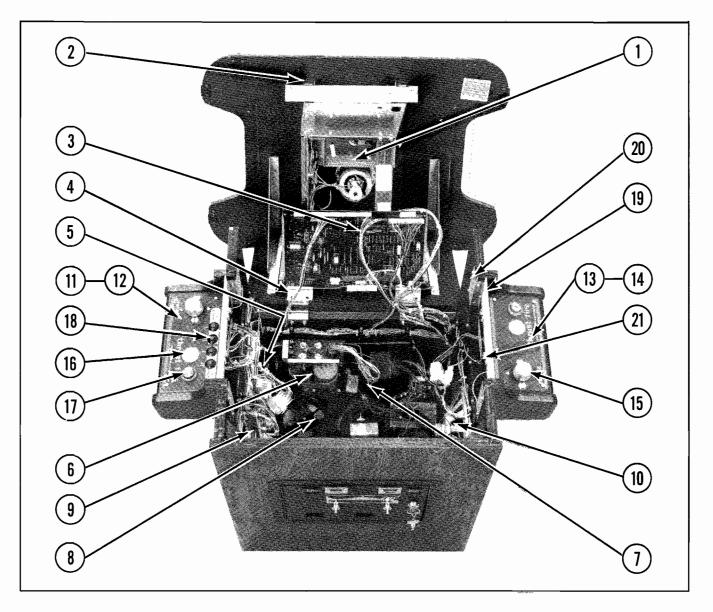
ITEM	PART NO.	DESCRIPTION
1	0017-00003-0161	4" SQR. SPEAKER 8 OHM, 3W. (2 REQ'D.)
2	0017-00003-0358	ELECTROHOME — 15" B&W, X-Y HORIZ. MTG. MONITOR
		(OR)
2	0017-00003-0384	WELLS-GARDNER — 15" B&W, X-Y HORIZ. MTG. MONITOR
	0592-00104-0100	CHASSIS MTG. BRKT. — R.H.
	0017-00101-0628 0017-00104-0014	#8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.) DISH WASHER — .870 DIA. (4 REQ'D.)
	0017-00104-0014	#8-32 HEX NUT W/SEMS (4 REQ'D.)
3	A931-00011-0000	T.V. BEZEL ASSY.
	0931-00903-0000	T.V. BEZEL
	0931-00904-0000	BLUE ACETATE OVERLAY — 14" x 11-3/4"
	0934-00905-0000	PLEXI-GLASS
4	A151-00027-0000	INTERLOCK SWITCH ASSY.
5	A082-90413-D000	LINEAR POWER SUPPLY
	0624-00902-0100	P.C. SUPPORT BRKT. — 12" LG. (5 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. — 2-1/2" LG. (4 REQ'D.)
	0017-00101-0025	#8 x 1/2 SLT. HEX HD. SCR. (23 REQ'D.)
6	0017-00104-0037 A084-91372-G929	#8 FLAT WASHER (23 REQ'D.) GAME LOGIC BRD. ASSY. (DAUGHTER BRD.)
"	A084-91007-H929	MOTHER BRD. ASSY.
	A597-00012-0100	P.C. SUPPORT BRKT. ASSY.
	A597-00012-0200	P.C. SUPPORT BRKT. ASSY.
	0017-00101-0096	#6 x 3/8 SLT. HEX HD. SCR. (6 REQ'D.)
7	A945-00002-0000	125 VA — FILTER ASSY.
	A931-00015-0000	TRANSFORMER BRD. ASSY. — LOCATED NEXT TO FILTER ASSY.
8	A031-00004-0000	TERMINAL STRIP ASSY
	0017-00101-0014	#6 x 1/2 SLT. HEX HD. SCR. (2 REQ'D.)
9	0017-00032-0083	ON/OFF SWITCH 120V, 6A.
10	0567-00106-0100 0017-00009-0490	ON/OFF SW. PLATE 5-5/8" SQR. VENT GRILL (2 REQ'D.)
	0017-00009-0490	3-5/6 SQR. VENT GRILL (2 REQ D.)
		ADDITIONAL PARTS LIST
	A905-00028-0000	CASH BOX ASSY. W/HANDLE
	A961-00008-0000	CASH BOX COVER ASSY.
	A894-00024-0000	CASH BOX SIDE CHANNEL ASSY.
	0894-00121-0000 0017-00101-0628	CASH BOX SIDE CHANNEL — LONG #8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00101-0028	#8 FLAT WASHER (4 REQ'D.)
	0017-00104-0022	#8-32 HEX NUT W/SEMS (4 REQ'D.)
	A931-00013-0000	MASTER CABLE ASSY.
	A931-00007-0000	HIGH VOLTAGE CABLE ASSY.
	A931-00008-0000	LOW VOLTAGE CABLE ASSY.
	A931-00009-0000	CONTROL SHELF CABLE ASSY.
	A931-00016-0000	INSERT LIGHT CABLE ASSY.
	A894-00035-0000	COIN DOOR CABLE ASSY.
	A866-00049-0000	LINE CORD ASSY.
	A151-00029-0000 0017-00009-0490	BACK DOOR LOCK ASSY. 5-5/8" SQR. VENT GRILL — BACK DOOR
	A904-00031-0000	MOTHER & DAUGHTER BRDS. BRKT. ASSY.
	7,00-1-0000	MOTHER & DAOGHTER BROOK BRIKT, AGOT.



NO. 930 — OMEGA RACE COCKTAIL — PARTS LIST

1 0930-0		DESCRIPTION
		ER GLASS — 32" x 22" x 1/4"
l I	•	SS CLIPS (8 REQ'D.)
		5/8 PHIL, TRS. HD. SCR. (16 REQ'D.)
1 1 1 1 1 1		BEZEL ASSY.
		BEZEL
1	•	E ACETATE OVERLAY — 14" x 11-3/4"
		(I-GLASS
		TROL SHELF ASSY. — PLAYER #1
	•	TROL SHELF ASSY. — PLAYER #2 — NOT SEEN
1 1		LL SPEAKER GRILL
	•	OR. SPEAKER 8 OHM, 7W.
		2 x 1-1/8 CARRIAGE BOLT (4 REQ'D.)
		PHEX NUT W/SEMS (4 REQ'D.)
		AKER GRILL (3 REQ'D.)
		9" SPEAKER 8 OHM, 9W.
		2 x 1-1/4 CARRIAGE BOLT (12 REQ'D.)
I		PHEX NUT W/SEMS (12 REQ'D.)
1 1		BLE ENTRY COIN DOOR ASSY.
		GE COIN DOOR FRAME
0017-0		2 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
	, ·	JNTS COIN DOOR TO FRAME)
	•	6 x 2" LEG LEVELERS (4 REQ'D.)
0017-0	0103-0026 3/8-1	6 LEG LEVELER NUTS (4 REQ'D.)
	NOT	SHOWN LIST
0017-0	0032-0083 ON/C	DFF SWITCH 120V., 6A.
0567-0	0106-0100 ON/C	OFF SWITCH MTG. PLATE
A151-0	0078-0000 INTE	RLOCK SWITCH ASSY.
A930-0	0007-0000 CASI	H BOX ASSY.
A930-0	0010-0000 CASI	H BOX COVER ASSY.
A962-0	0005-0000 CASI	H BOX SIDE CHANNEL ASSY. — SHORT
0962-0		H BOX SIDE CHANNEL — SHORT
0017-0	0101-0628 #8-32	2 x 3/4 CARRIAGE BOLT (4 REQ'D.)
0017-0	0104-0022 #8 FL	AT WASHER (4 REQ'D.)
0017-0	0103-0061 #8-32	HEX NUT W/SEMS (4 REQ'D.)

NO. 930 — OMEGA RACE COCKTAIL — INTERIOR ACCESS



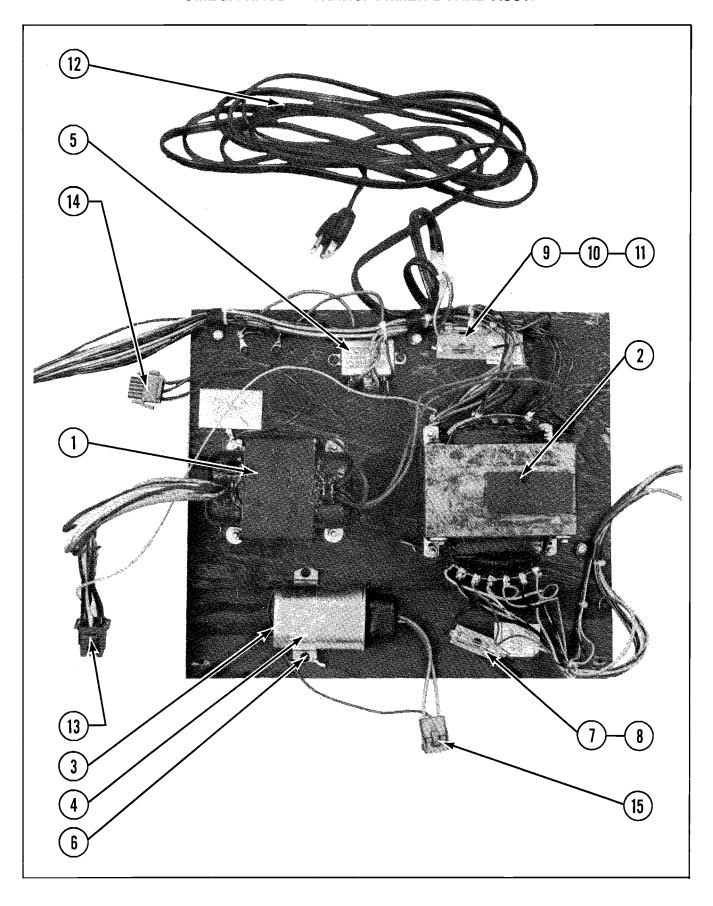
NO. 930 — OMEGA RACE COCKTAIL — INTERIOR ACCESS — PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	0017-00003-0358	ELECTROHOME 15" B&W, X-Y HORIZ. MTG. MONITOR & CHASSIS (OR)
1	0017-00003-0384 0930-00101-0000 0017-00101-0082	WELLS-GARDNER 15" B&W, X-Y HORIZ. MTG. MONITOR & CHASSIS C.R.T. MTG. BRKT. (2 REQ'D.) #10 x 3/4 HEX HD. SCR. (UNSLOTTED) (8 REQ'D.)
2	0017-00101-0799 0017-00103-0081 0610-00132-0000 0017-00009-0033 0017-00101-0027	#10-32 x 3/8 SLT. HEX HD. SCR. (4 REQ'D.) #10-32 HEX NUT W/SEMS (4 REQ'D.) STRIKE (2 REQ'D.) BASSICK CLAMP (2 REQ'D.) — NOT SEEN #8 x 3/4 SLT. HEX HD. SCR. (8 REQ'D.)

NO. 930 — OMEGA RACE COCKTAIL — INTERIOR ACCESS — PARTS LIST (cont'd)

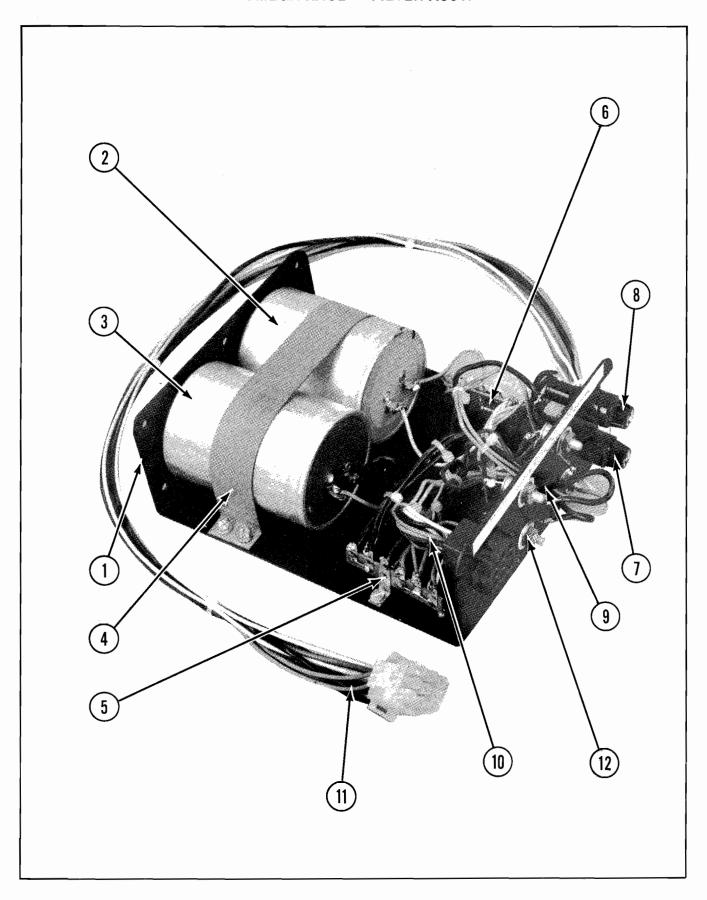
ITEM	PART NO.	DESCRIPTION
3	A084-91372-G929	GAME LOGIC BRD. ASSY. (DAUGHTER BRD.)
	A084-90007-H929	MOTHER BOARD ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. — 12" (2 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. — 2-1/2" (2 REQ'D.)
	0017-00101-0027	#8 x 3/4 SLT. HEX HD. SCR. (10 REQ'D.)
.	0017-00104-0037	#8 WASHER (6 REQ'D.)
4	0017-00009-0514	2-1/2" HINGE (2 REQ'D.)
	0017-00101-0639	#8-32 x 1-1/4 CARRIAGE BOLT (8 REQ'D.)
5	0017-00103-0061	#8-32 HEX NUT W/SEMS (8 REQ'D.)
5	A082-90413-D000 0624-00902-0100	LINEAR POWER SUPPLY ASSY. P.C. SUPPORT BRKT. — 12" (2 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. — 12 (2 REQ D.) P.C. SUPPORT BRKT. — 2-1/2"
	0624-00902-0500	P.C. SUPPORT BRKT. — 6-1/2"
	0017-00101-0027	#8 x 3/4 SLT. HEX HD. SCR. (10 REQ'D.)
	0017-00104-0037	#8 WASHER (10 REQ'D.)
6	A945-00002-0000	125VA FILTER ASSY.
7	A730-00011-0000	TRANSFORMER BRD. ASSY.
8	0017-00003-0310	EXHAUST FAN 115V., 60HZ
	0017-00009-0485	FAN FINGER GUARD
	0869-00909-0000	FAN SHROUD
i i	0870-00700-00XF	FAN SPACER (4 REQ'D.)
	0017-00101-0583	#6-32 x 1-1/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00103-0052	#6-32 LOCKNUT (4 REQ'D.)
	0017-00104-0019	#6 FLAT WASHER (4 REQ'D.)
9	0017-00003-0161	4" SQR. SPEAKER 8 OHM, 7W.
10	0017-00003-0187	6" x 9" SPEAKER 8 OHM, 9W.
11	0930-00100-01XF	CONTROL PANEL — PLAYER #1
12	0980-00903-0100	DECORATIVE OVERLAY — PLAYER #1
13	0930-00100-00XF	CONTROL PANEL — PLAYER #2
14	0930-00903-0200	DECORATIVE OVERLAY — PLAYER #2
	0017-00101-0341	#6 x 1/4 PHIL. TRS. HD. SCR. (TOTAL REQ'D. 14)
15	0930-00103-00XF A929-00021-0000	BOTTOM SHELF PANEL (2 REQ'D.) KNOB & SHAFT ASSY. (2 REQ'D.)
16	0017-00042-0257	YELLOW — PUSH BUTTON (2 REQ'D.)
17	0017-00042-0257	RED — PUSH BUTTON (2 REQ'D.)
' '	0017-00042-0230	P.B. SWITCH W/HOLDER (4 REQ'D.)
18	0017-00032-0092	LIGHTED RED PUSH BUTTON SWITCH (4 REQ'D.)
	0929-00905-00XF	SWITCH BEZEL (4 REQ'D.)
19	0930-00904-0000	LIGHT SHIELD (2 REQ'D.)
20	0921-00105-00XF	PANEL SUPPORT BRKT. (4 REQ'D.)
	0017-00101-0025	#8 x 1/2 SLT. HEX HD. SCR. (20 REQ'D.)
21	0017-00003-0219	#194 WEDGE LAMP 14V., .27A. (4 REQ'D.)
	0017-00031-0044	WEDGE BASE LAMP SOCKET (4 REQ'D.)
	0017-00101-0555	#6-32 x 5/16 SLT. HEX HD. SCR. (4 REQ'D.)
		455550000
	A021 00004 0000	ADDITIONAL PARTS LIST
	A031-00004-0000 A930-00012-0000	TERMINAL STRIP ASSY. MASTER CABLE ASSY.
	A930-00012-0000 A930-00013-0000	HIGH VOLTAGE CABLE ASSY. — A.C.
	A930-00013-0000 A930-00014-0000	LOW VOLTAGE CABLE ASSY. — A.C. LOW VOLTAGE CABLE ASSY. — MONITOR
	A894-00035-0000	COIN DOOR CABLE ASSY. — MONITOR
	A930-00008-0100	CONTROL SHELF CABLE ASSY. — PLAYER #1
	A930-00008-0200	CONTROL SHELF CABLE ASSY. — PLAYER #2

OMEGA RACE — TRANSFORMER BOARD ASSY.



OMEGA RACE — TRANSFORMER BOARD ASSY. — PARTS LIST

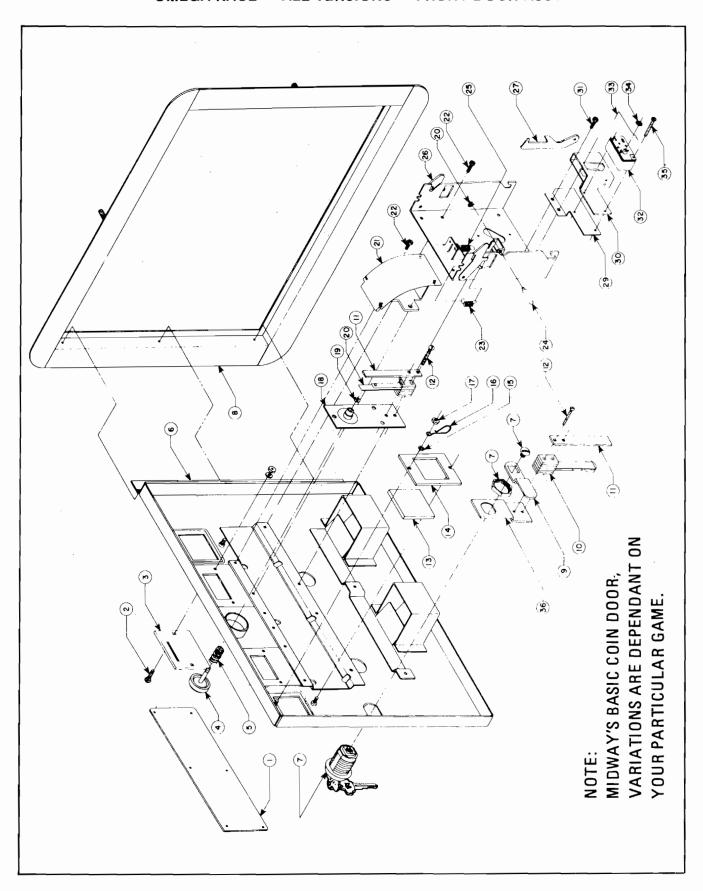
ITEM	PART NO.	DESCRIPTION
1	A945-00013-0000	TRANSFORMER ASSY. W/PINS — MT89-A000
2	MT00-00088-A000	TRANSFORMER W/SHIELD
1	0017-00101-0639	#8-32 x 1-1/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
	0017-00104-0026	1/2" #8 FLAT WASHER (8 REQ'D.)
	0017-00101-0052	#6 x 1-1/4 SLT. HEX HD. SCR. (4 REQ'D.)
3	A945-00005-0000	60 HZ CAPACITOR ASSY.
4	0017-00003-0379	CAPACITOR CLAMP
5	0017-00003-0064	NOISE FILTER
6	0017-00101-0014	#6 x 1/2 SLT. HEX HD. SCR. (17 REQ'D.)
7	0720-00001-0100	1 POSITION FUSE CLIP ASSY. (U.R., C.T., & MINI MODELS)
8	0017-00003-0004	FUSE — 2A, 250V, SLO-BLO
9	0720-00001-0200	2 POSITION FUSE CLIP ASSY. (U.R., C.T., & S.D. MODELS)
10	0017-00008-0260	FUSE — 1/2A, 250V, SLO-BLO (C.T. & U.R. MODELS)
11	0017-00003-0262	FUSE — 3A, 250V, SLO-BLO (U.R., C.T., & MINI MODELS)
	0017-00003-0103	FUSE — 1A, 250V, SLO-BLO (S.D. MODEL ONLY)
12	A866-00049-0000	LINE CORD ASSY.
13	0017-00021-0478	9 PIN CONNECTOR PLUG
14	0017-00021-0479	3 PIN CONNECTOR PLUG
15	0017-00021-0480	3 PIN CONNECTOR CAP



OMEGA RACE — FILTER ASSY. — PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	0945-00101-00XF	CHASSIS
2	0945-00803-0100	CAPACITOR — 55000MF — 25V.
3	0945-00803-0200	CAPACITOR — 100000MF — 15V.
4	0945-00100-0000	CAPACITOR STRAP
	0017-00101-0555	#6-32 x 5/16 SLT. HEX HD. SCR. (4 REQ'D.)
5	0017-00021-0525	5 POSITION TERMINAL STRIP (2 REQ'D)
	0017-00101-0510	#4-40 x 1/2 SLT. PAN HD. SCR. (4 REQ'D.)
	0017-00104-0087	#4 FLAT WASHER (4 REQ'D.)
	0017-00104-0071	#4 EXT. TOOTH WASHER (4 REQ'D.)
	0017-00103-0002	#4-40 HEX NUT (4 REQ'D.)
6	0062-122H7-1XXX	RESISTOR — 150 OHM, 2W.
	0062-086H7-1XXX	RESISTOR — 47 OHM, 2W. — LOCATED ON OPPOSITE TERMINAL
		STRIP
7	0017-00003-0008	FUSE — 6AMP — 120V.
8	0017-00003-0174	FUSE — 10 AMP — 32V.
	0945-00805-0000	FUSE HOLDER (2 REQ'D.)
9	0017-00041-0008	RUBBER GROMMET
10	A089-00007-0000	FILTER CABLE ASSY. #2
11	A089-00006-0000	FILTER CABLE ASSY. #1
12	0945-00804-0100	DIODE — 12A. — 50V. (4-REQ'D.)
	0017-00103-0086	#10-32 HEX NUT (4 REQ'D.)
ł	0017-00021-0484	SOLDER LUG (4 REQ'D.)
	0017-00104-0107	#10 FLAT WASHER (4 REQ'D.)
	0017-00009-0510	INSULATOR (8 REQ'D.)
	0017-00042-0254	BUSHING (4 REQ'D.)
	0945-00900-0000	DIODE FORMED FISHPAPER COVER — NOT SHOWN

OMEGA RACE — ALL VERSIONS — FRONT DOOR ASSY.



OMEGA RACE — ALL VERSIONS — FRONT DOOR ASSY. — PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	0090-00902-0000	DRESS PLATE
	0090-00902-0100	DRESS PLATE W/O BUTTON TO START GAME
2	0017-00101-0552	#6-32 x 1/4 CARRIAGE BOLT (2 REQ'D.)
3	0090-00117-03XF	COIN ENTRY PLATE (25¢)
4	0090-00906-0000	PLASTIC START BUTTON
5	0010-00007-0000	COMPRESSION SPRING
6	A090-00020-2003	DOOR ASSY. DOUBLE ENTRY
7	0017-00005-0050	DOOR LOCK & KEY WITH SCREW & NUT
8	0090-00002-02BK	DOUBLE DOOR FRAME
9	0017-00005-0041	421 N.S. CAM
10	0090-00901-0000	DOOR SWITCH
	0090-00126-01XF	SWITCH BACKUP PLATE
12	0017-00101-0528	#5-40 x 3/4 LNG. M.S.
13	0090-00903-9500	25¢ WINDOW
14	0090-00143-00XF	COIN PLEX RETAINER
15	0017-00104-0002	SPLIT LOCK WASHER
16	0017-00007-0019	KEY HOOK
17	0017-00103-0087	#6-32 HEX NUT
18	0090-00010-0000	SW. PLATE & OILLITE ASSY.
19	0017-00100-0018	"E" RING
20	0090-00131-0000	SWITCH
21.	A090-00087-0100	TOP & BTM. COIN CHUTE W/BRKT. ASSY.
22	0017-00101-0123	#8 x 1/4 SCREW
23	0010-00181-0100	SPRING
24	0090-00129-00XF	PIVOT POST
25	0010-00134-0000	SPRING
26	A090-00085-0000	ACCEPTOR FRAME ASSY.
27	0093-00155-00XF	REJECTOR LEVER
28	0017-00100-0012	"E" RING
29	0090-00162-00XF	COIN SWITCH MTG. BRKT. — SMALL
29	0090-00163-00XF	COIN SWITCH MTG. BRKT. — LARGE
30	0017-00005-0203	COIN SWITCH CHUTE — SMALL
30	0017-00005-0204	COIN SWITCH CHUTE — LARGE
31	0017-00101-0124	#6 x 1/4 SCREW
32	0017-00005-0195	COIN SWITCH
33	0010-00599-0000	COIN SWITCH WIRE
34	0017-00007-0132	PUSH-ON RING (BLK.)
35	0017-00101-0698	#4-40 x 3/4 SCREW (. REQ'D.)
36	0090-00128-00XF	SWITCH BRKT. — DOOR TILT
	A090-00061-0000	ANTI-STRING DEVICE ASSY.
	A090-00064-0000	ANTI-PENNY DEVICE ASSY.

OMEGA RACE

Vector Mother Board #A084-90007-E929

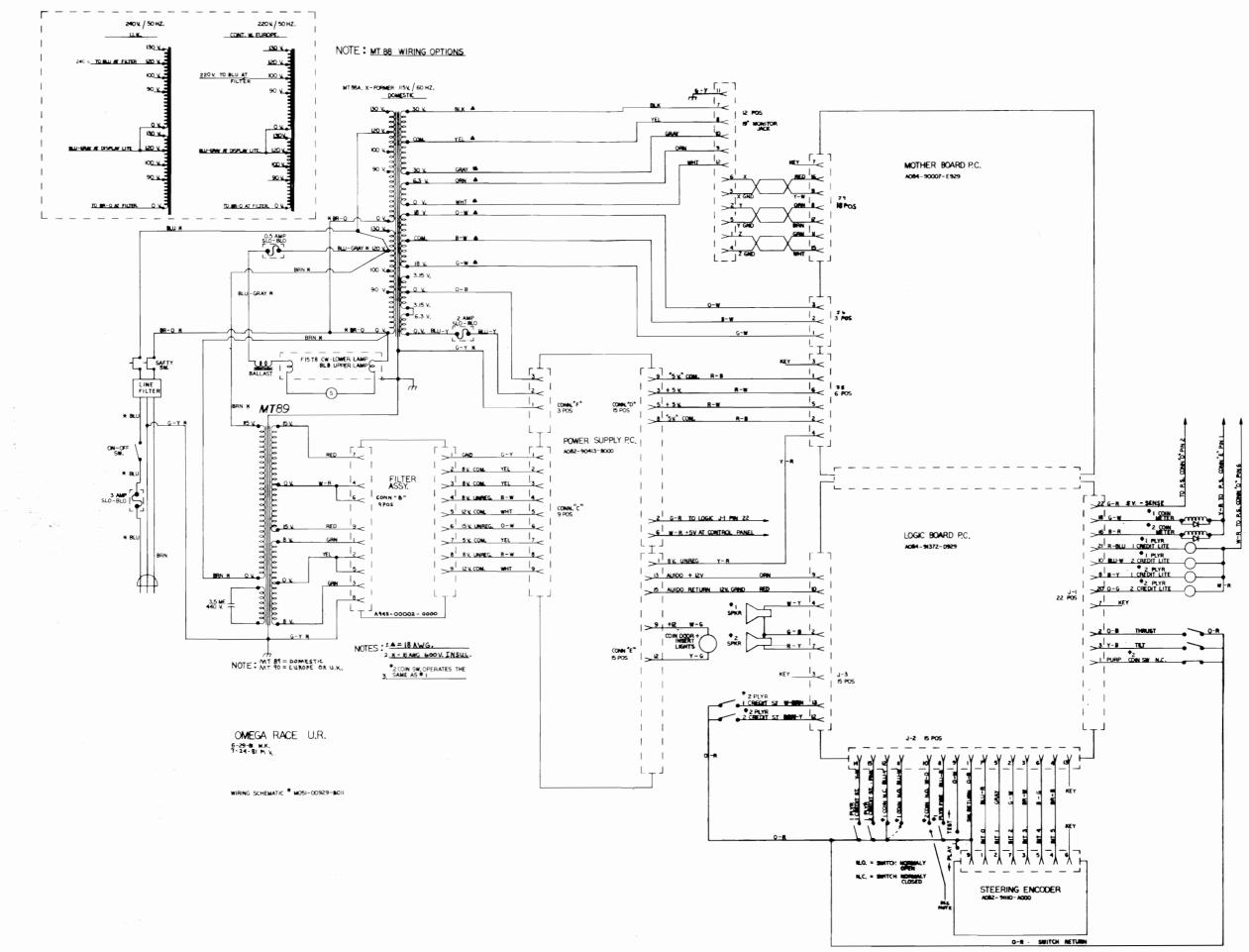
CHIP NUMBER	FUNCTION
74LS00 74LS02 74LS04 or 74S04 74LS08 74LS10 74LS14 74LS20 74LS32 74LS42 74LS74 74LS109 74LS138 74LS139 74LS157 74LS161 74LS175 74LS191 74LS193 74LS244 74LS245 74LS273 74LS273 74LS367 74LS393 74LS367 74LS393 74LS670 Z80 2114 2716 2532 9316 9332 MI-7611-5 5101 UPD8216 AD561 TL081	Quad 2 input Nor Hex inverter Quad 2 input And Triple 3 input Nand Hex Schmitt-Trigger Dual 4 input Nand Quad 2 input Or BCD to decimal decoder Dual "D" Flip-Flop 4 bit binary adder 6 bit rate multipliers Dual "JK" Flip-Flop 3 to 8 line decoder Quad 2 to 1 line multiplexer 4 bit binary counter Hex "D" Flip-Flop Quad "D" Flip-Flop Quad "D" Flip-Flop Synchronous up-down counters Up-down counter with dual clock Octal buffer Octal bus tranceiver Octal "D" Flip-Flop Hex bus driver Octal "D" Flip-Flop Dual 4 bit binary counter 4 by 4 register files CPU 1K x 4 Ram 2K x 8 Prom 4K x 8 Rom Prom 256 x 4 Ram 4 bit bus tranceiver Operational amplifier
AD561	Digital to analog converter
TL081 TL082	Operational amplifier Operational amplifier
4016 7805	Quad electronic switch
7805 78M12	Positive 5 volt regulator Positive 12 volt regulator
7815	Positive 15 volt regulator
7915	Negative 15 volt regulator
12.0000	Crystal 12 megahertz

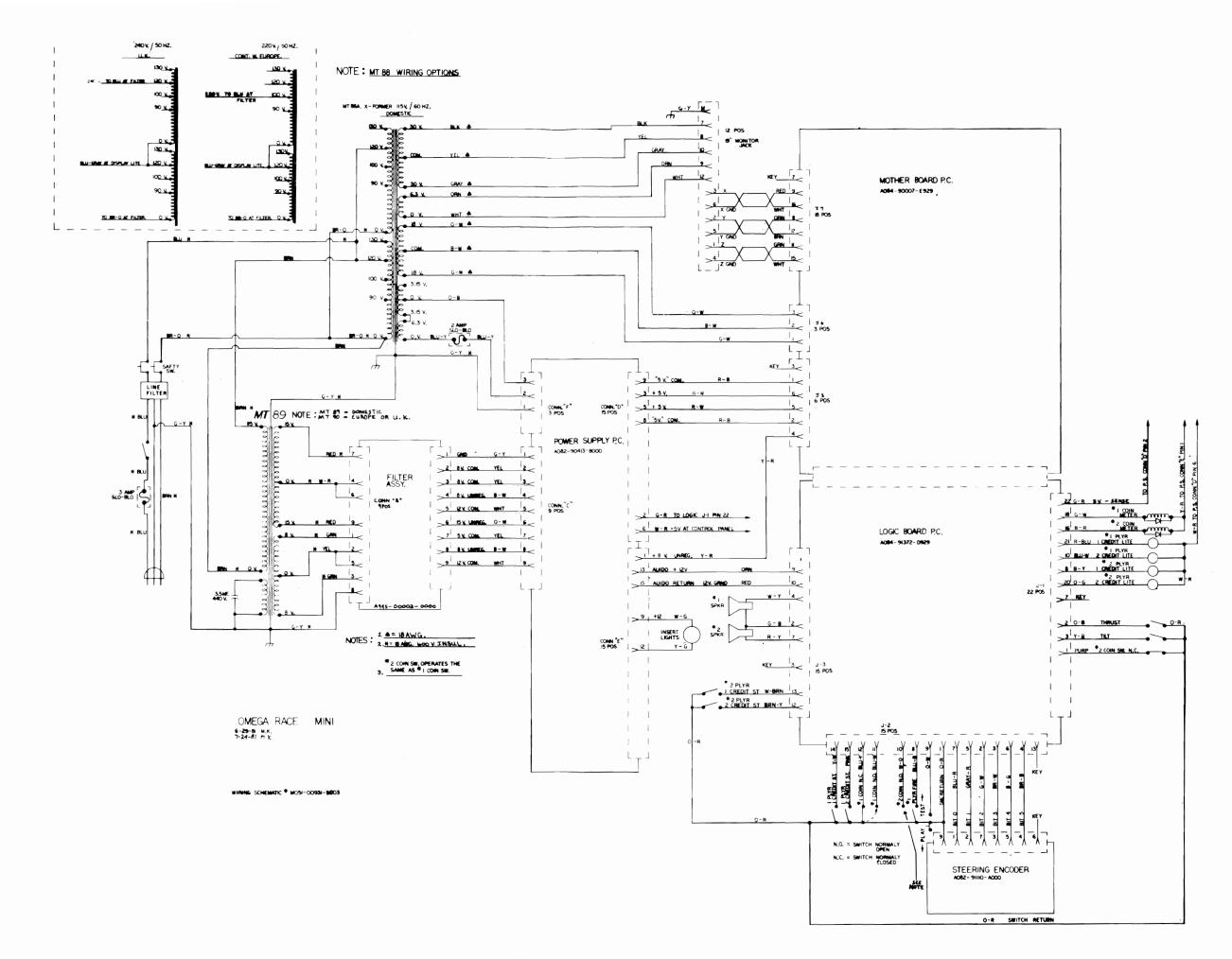
OMEGA RACE

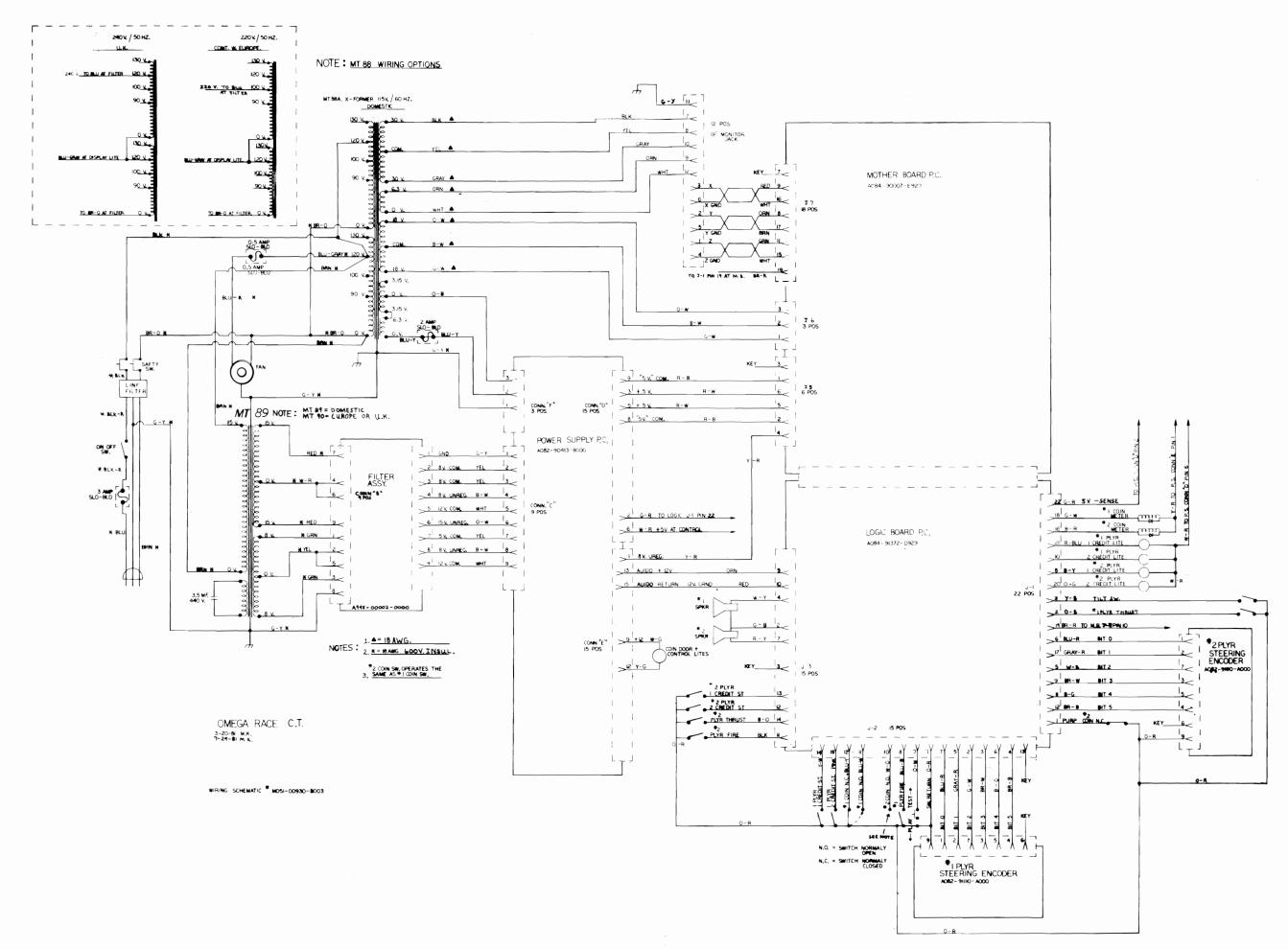
Game Board #A084-91372-D929

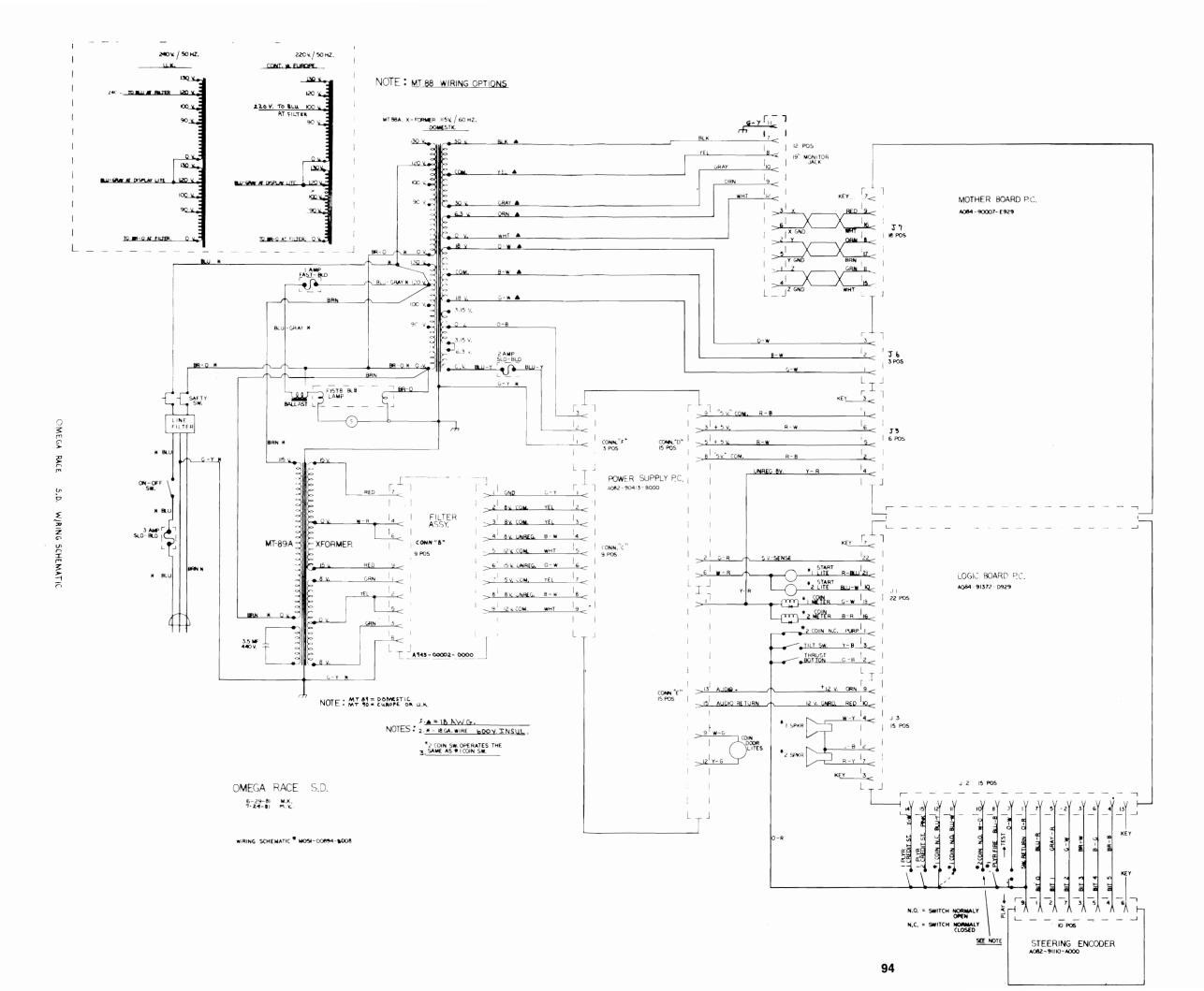
CHIP NUMBER	FUNCTION
7400	Quad 2 input Nand
7402	Quad 2 input Nor
7404	Hex inverter
7407	Hex buffer
7408	Quad 2 input And
7432	Quad 2 input Or
7492	Divide by 12 counter
74138	3 to 8 line decoder
74367	Hex bus driver
74LS373	Octal "D" latch
74LS374	Octal "D" Flip-Flop
Z80	CPU
2716	2K x 8 Prom
2114	1K x 4 Ram
LM383	8 watt audio amplifier
AY-3-8912	Sound chip

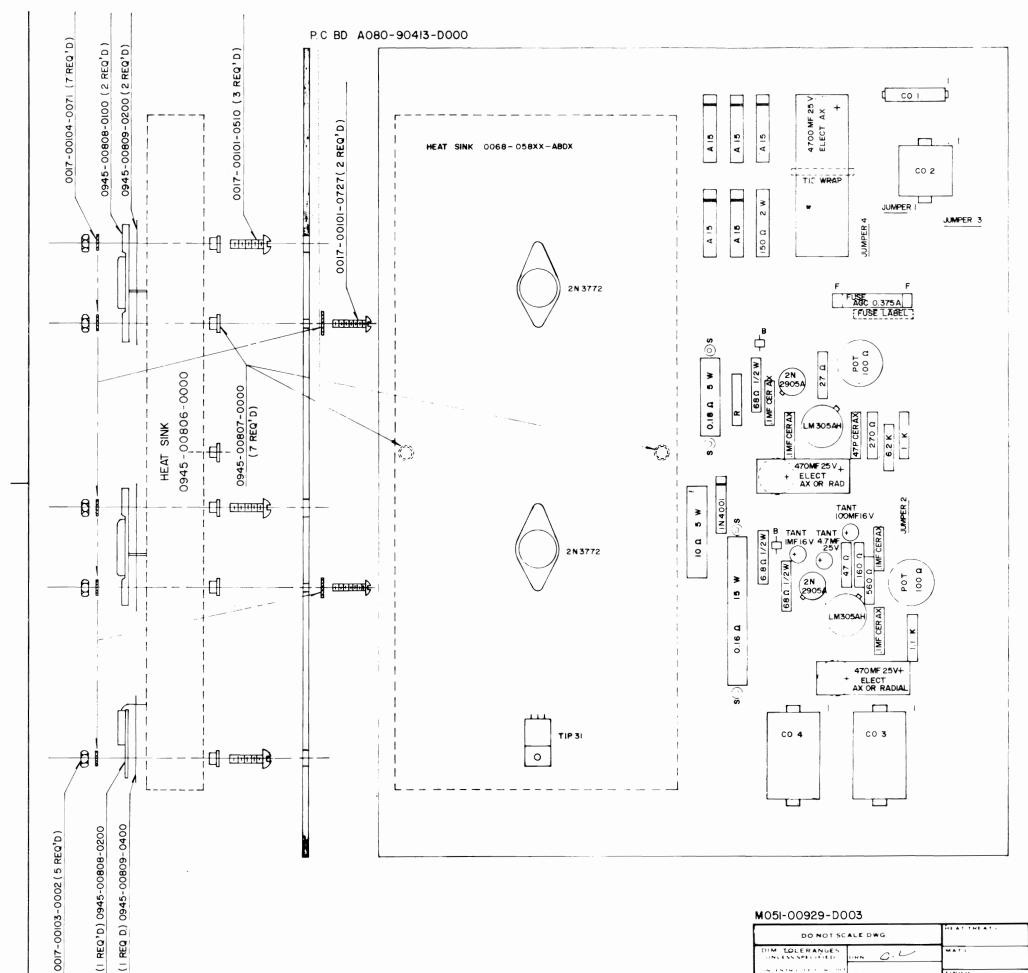
V. SCHEMATICS











NOTE

CO I - P C MOUNT CONN. (MALE) - 0017 - 00021 - 0443 (3 PIN)

CO 2 - " " " (FEMALE) " 0442 (9 PIN)

CO 3 - " " (MALE) " 0440 (15 PIN)

CO 4 - " " (MALE) " 0440 (15 PIN)

R - JUMPER

F - FUSE CLIP

S - SPACER 3/8 INCH

JUMPERS ARE 22 GAGE WIRE.

OMEGA RACE - OMIT JUMPER I AND 3

B - FERRITE BEAD WITH 20 GAGE WIRE

MOSI-00929-D003

DO NOT SCALE DWG

DIM TOLERANGES

OMATT

ASS'Y DRAWING

LINEAR PWR SUPPLY, 125 VA
WITHOUT SUPPORT CIRCUIT

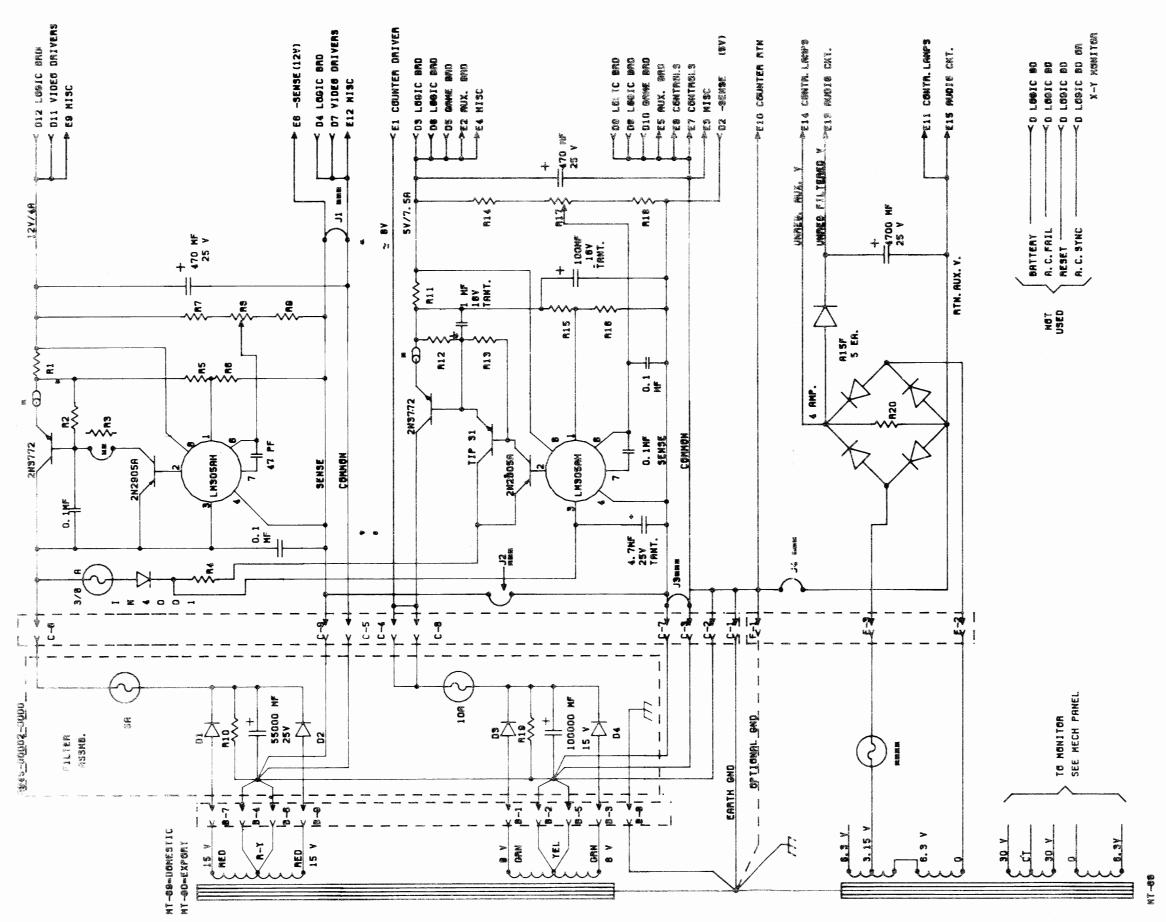
REVISIONS

MIDWAY MFG. CO.

FRANKLIN PK ILL

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HE JUMPER OR RESISTOR man JUMPER BFIIGHS NOTES FERRITE BERD DIGGE KEY D1 -54 -HR1128 RESISTON KEY R1-0.18 0NH, SM R2-68 0NH1/2M R3-R4-10 0NM, SM R5-27 0HM R6-270 0NM R7-6.2K 0NM R8-R17-100 0NM F6T. R8-1K 0NM

MARINE VALUE VARIES MITH APPLICATION

	#051	MOS1 -00845 -9003			Processor and the later.	
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SELS.	Ť	18/8/8	9. F. O. C.	-		Frankel 188 Persel 11.
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) Craumbro	dak e	2/27/81	LINGER POWER SUFFLY FOST 125VS MITHOUT CIRCUIT SUFFOST	ER SUPPLY		P/N H082-80419-0000

IN4148
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IN418157
74LS157
74LS17
74LS 22 "
16 "
22 WH CHOKE
BATTERY
LED 12 HIZ CRYSTAL
CONN. EDGE DL F36S
SF GIW
2 FOS KK-156 RA
3 FOS "
" " " "

	CHUQUENE	PERENCE LIST	
DESCRIPTION	QUAN.	DESIGNATION	PHANTON: #
10 pf 50v 5½ CR 33 pf 50v 5½ " 47 pf 50v 102 " 68 pf 100v 202 " 91 200 pf 50v 5½ " 91 30v 5½ " 91 30v 202 " 91 100 pf 50v 202 " 91 100 pf 50v 202 " 91 100 pf 50v 102 "	2 1 1 2 5 1 1 1 69 1 4 1	C201,C204 C102 C203 C211,C212 C205-C209 C202 C104 C210 C210 C210 C210 C210-C7301-C7369 C118 C107,C108,C109,C112 C116 C116 C116 C116 C116 C116 C116	6929-00818-0200 929-00808-0100 929-00808-0200 9171-039K5-Ax8x 929-00808-0300 929-00808-0300 929-00808-0500 929-00808-0500 9329-00818-0500 9329-00818-0500 9329-00818-0500 9329-00818-0500 9329-00808-0700 9329-00808-0700 9329-00808-0900 9329-00808-1000 9329-00808-1000
22 ± M 5% CARBON 68 " " " " " " " " " " " " " " " " " " "	1 1 1 1 1 2 2 2 3 3 16 2 4 1 1 1 1 1 1 2 2 2 4 1 1 1 1 1 1 1 1	R103 R262 R261 R146 R107, R104 R142, R153 R151, R152 R101, R102, R237 R101, R102, R237 R101, R202, R234 R254, R244-R255 R254 R136-R141 R259 R134-R37, R158-R160, R235, R242, R245, R252 R134, R149, R259 R134-R37, R158-R160, R235, R242, R245, R252 R134, R149, R259 R134-R37, R158-R160, R218-R229, R233, R254, R241, R243, R244, R258	0062-06383-1XXX 0062-06883-1XXX 0062-09883-1XXX 0062-10455-1XXX 0062-13833-1XXX 0062-13833-1XXX 0062-13833-1XXX 0062-13833-1XXX 0062-13833-1XXX 0062-13833-1XXX 0062-1383-1XXX 0062-10583-1XXX 0062-10583-1XXX 0062-20583-1XXX 0062-22383-1XXX 0062-22383-1XXX 0062-22383-1XXX
18K "	1 1 10 1 1 1 1 1 1 1 1 3	R256 R145 R206-R213,R236,R248 R144 R251 R253 R147 RM1-RM3	0062-23983-1XXX 0062-24183-1XXX 0062-24383-1XXX 0062-24583-1XXX 0062-25983-1XXX 0062-25983-1XXX 0062-27583-1XXX 0062-27583-1XXX 0062-27983-1XXX
10K POT CBN UP ±W 1N4148 DIODE 1N4736 ZENER DIODE 1N4004 DIODE 1N999B ZENER DIODE 2N3904 NPN TRANS.	2 8 1 4 2	Q102	0063-265AX-1EEX 0929-00809-0200 0929-00819-0100 0929-00809-0100 0929-00813-0000 0929-00809-0300 0929-00809-0400
EN 3906 PNP TRANS. XSTAL 12MHZ INDUCTOR .22MH LED RED WY5055: BATTERY 3.6v N1 CAD CONN EORE D 1.736S SP G1 W CONN FIND. HDR. ASSY45-2A	1 1 1 1 1 1	Q101,Q102-Q104 XTAL 101 L101 LED 1 BATT 101 J4 J5 J5	0065-187XX-XX6X 0069-173XX-XAJX 0067-008XX-XXXB 0069-097XX-XA1X 0017-00003-0172 0017-00021-0374 3000-16387-0300 3000-16387-0300
74LS00 74LS00 74LS04 74LS04 74LS08 74LS10 74LS10 74LS14 74LS20 74LS24 74LS24 74LS24 74LS27 74LS15 74LS15 74LS15 74LS15 74LS15 74LS15 74LS15 74LS15 74LS17	1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D1 (P-R)1 O5, J5, (H-G)6, (R-P)4 E6 (M-N)6 (L-M)6 H5, R1, (J-H)9, K2, E(7-8), H9, P5 E5, (H-J)6, (L-K)6, (P-N)2 F5, LH-J)6, (L-K)6, (P-N)2 F4, LH-J)6, (L-K)6, (P-N)2 A1, B4, C4, D4, E4, F4 H2, J3, K3, L3, M3 L2, H2, N2, N8, R6 D6, F6 C1 B3, C3, D3, E3, F3, J4, A3 K5, L5, H5 F5, (P-N)6 A5, D5 B2, D2, E2, C2 G4, H4, (K-J)9 A1, A2, G3, H3	923-06810-1000 923-0810-1000 923-0810-1000 923-0810-10400 923-0810-10400 923-0810-10400 923-0810-10500
4016 6216 6216 6216 6216 6216 6216 6216 6	14 2 2 1	' H1, J1, (K-J)1, (K-L)1, L1, (R-L)1, L1, (R-P)2, P3, (R-S)2, R3, S2, S3, A6, B6, B6, B7, T7, T7, T7, T7, T7, T7, T7, T7, T7, T	0929-00810-2800 0929-00810-2900 0929-00810-3000 0929-00810-3000 0929-00810-3100 0929-00810-4000 0929-00810-4000 0929-00815-0100 0929-00815-0100 0929-00815-0400 0066-729AX-XXCX 0066-729AX-XXCX 0929-00815-0400 0066-772AV-XXCX 9290-014XA-EXFD 9290-014XA-EXFD 9290-018XA-EXFD
7815 " +15v 16 PIN DIP SOCKET 18 " " " 24 " " 22 PIN SOCKET 40 PIN DIP SÖCKET	1 5 10 14 11 16 11 6 11 1 11	U104 S7,77,(6-F)6 H1,J1,(K-J)1,(K-L)1,L1, (M-L)1,(K-N)1,(M-P)1, (R-P)2,F,(R-S)2,FS,52,S3 E1,F1,J8,K8,L8,H8 N9	0926-00815-0600 0069-116XX-XXWX 0069-117XX-XXWX 0929-00817-0100 0066-069XX-XXWX 0929-00817-0200

