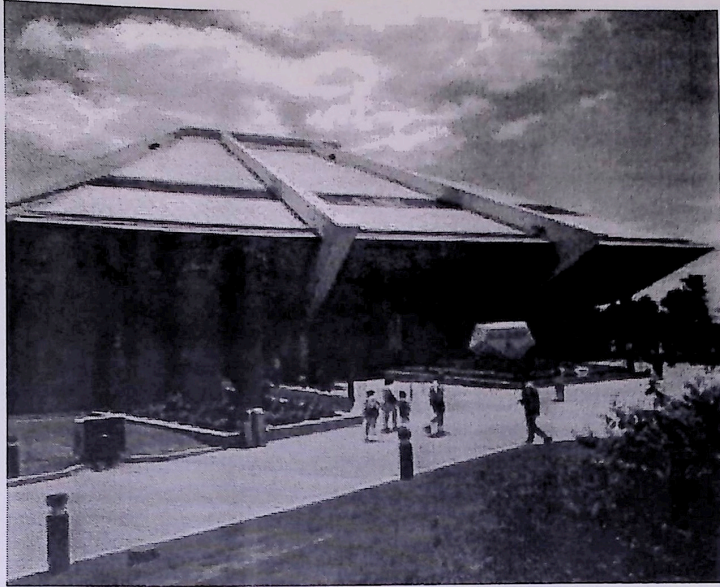


HORIZONS INVENTORY SUMMARY



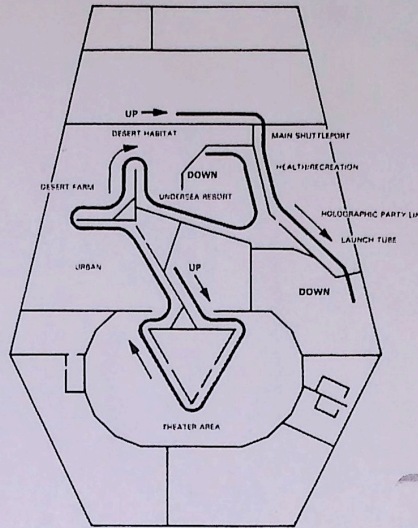
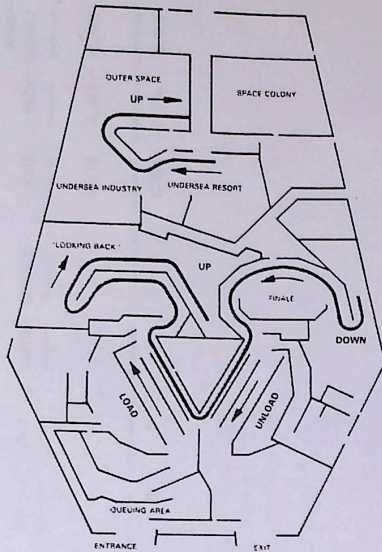


HORIZONS

INVENTORY SUMMARY

PUBLISHED BY

WALT DISNEY WORLD
Ride & Show Engineering
Standards & Publications Department



The Horizons Attraction contains a suspended ride system that transports guests through 35 show scenes. The attraction contains the following equipment as well as other misc. minor inventory.

| SHOW ELEMENTS | | RIDE ELEMENTS | |
|--------------------------|-----|---|------|
| Show Sets | 17 | Conveyor Belts (Load/Unload) | 2 |
| Murals | 7 | Steel track structure (ft) | 1350 |
| Animated Figures | 51 | Track Switches (automated) | 3 |
| Animated Props | 35 | Vehicles (4 passenger suspended with drive motor) | 175 |
| Lighting Effects | 110 | Ride Control Consoles | 2 |
| Static Props | 583 | Ride Control Computer System | 1 |
| Foilage Plants | 456 | Maintenance Lift | 2 |
| Films (70 mm) | 14 | Cable Spool | 1 |
| Film Projectors | 14 | Hoists | 3 |
| Video Projectors | 13 | Lathe | 1 |
| Screens | 36 | Hydraulic Press | 1 |
| Film Loop Cabinets | 5 | Drive Units (spares) | 2 |
| Show Control Units | 10 | | |
| Show Power Units | 3 | | |
| Show Power Cooling Units | 3 | | |
| Hydraulic Power Units | 2 | | |

EPCOT CENTER SQUARE FOOTAGE ANALYSIS

FUTURE WORLD

| HORIZONS | OVERALL BUILDING | ATTRACTION | | MERCHANDISE | | FOODS | | SUPPORT | | | | |
|--------------|------------------|---------------|---------------------|-------------|----------|----------|----------|--------------|--------------|--------------|------------|--------------|
| | | SHOW/ RIDE | PARTICIPANT DISPLAY | SALES | STOCK | DINING | KITCHEN | ELEC | MECH | MAIN-TENANCE | REST ROOMS | VIP AREA |
| Pavilion | 99,732 | 48,115 | | | | | | 6,129 | 7,395 | 2,415 | 475 | |
| GE VIP Area | 6,060 | | | | | | | | | | | 6,060 |
| TOTAL | 105,792 | 48,115 | 0 | 0 | 0 | 0 | 0 | 6,129 | 7,395 | 2,415 | 475 | 6,060 |



Chapter 1 DESCRIPTION, THEORY OF OPERATION AND FACT SHEET

Horizons Supplemental Manual, WDW Document C3PD-11, Revision C - 19 February, 1997



FACT SHEET

GENERAL FACTS

Number of Vehicles:

Normal: 174
Spares: 10

Operating Hours:

Approximately 4,980 hours annually

Guest Capacity:

Guests per vehicle: 4 Adults

Top Assembly Drawing:

C3PG-A100 (Mechanical Ride)

VEHICLE SPECIFICATIONS

Vehicle Type:

Gondola suspended from overhead trolley

Normal Operating Speed:

1.53 feet per second

Vehicle Weight:

Without Guests = 1,700 lbs

Top Assembly Drawing:

C3PV-A100
(Vehicle Assembly)

Vehicle Height:

7 feet

Vehicle Depth:

4 feet

Vehicle Length:

6 feet

TRACK SPECIFICATIONS

Construction:

Track is constructed of tubular steel.

Two types of track:

Both types configured so rails are pressurized.

1. Load rail - 6 inch diameter
2. Reaction rail - 3 inch diameter

Track Length:

Show track = 1,350 feet
Maintenance track = 210 feet

Top Assembly Drawing:

C3PT-A1 (Track Assembly)

Vertical Rise of Track:

37 feet 7 inches

DRIVE SYSTEM SPECIFICATIONS

Type:

Motor-driven bogies

Bus Bar:

Four (4) conductors of the bus bar pickup system, and self contained pickup box provide power for drive motors.

Propulsion:

Two bogies per trolley; one motor per bogie.

Brakes:

Disc brakes mounted on motor

Motor:

High-slip unit, 1 hp, 240 VAC, 3-phase, 1650 rpm, NEMA D motor

Top Assembly Drawing:

207994 (Track Assembly)

Gearbox:

25:1 ratio, standard double reduction type with helical gears and a hollow output shaft



HORIZONS INVENTORY SUMMARY

INVENTORY

WALT DISNEY WORLD
HORIZONS RIDE AND SHOW ASSETS

| <u>Horizons Show Assets:</u> | <u>Cost</u> | <u>NBV 09/30/96</u> | <u>NBV 09/30/97</u> |
|--|-------------|-------------------------|-------------------------|
| 1 animated figure (person on bike). | | | |
| 4 animated figures (1 man, 2 ladies, 1 girl). lady in tub, man w/ hair cut, cooking robot). | | | |
| 5 non-animated figures (sweeping robot, man of the house, | | | |
| 2 animated figures (astronauts). | | | |
| 2 animated figures (boy, girl). | | | |
| 5 animated figures (3 children, 1 lady, 1 seal). | | | |
| 3 non-animated figures (dog, chicken, man). | | | |
| 2 animated figures (bird, mom) | | | |
| 2 animated figures (dad, son, cat, fish) | | | |
| 3 animated figures (husband, wife, dog). | | | |
| 4 animated figures above guests (part of "ghost" effect). | | | |
| 5 animated figures in front of guests. | | | |
| 1 animated figure (researcher). | | | |
| 4 animated figures (mom, dad, son, dog). | | | |
| <u>Animated/Non Animated Figures</u> | 5,104,213 | 2,097,617 | 1,916,139 |
| 1 Imax spare projector (leased) | | | |
| 2 Imax projectors (leased) | | | |
| <u>Imax Projector Capital Lease</u> | 1,510,433 | 620,724 | 567,022 |
| 10 animated props to include mother, father, daughter, astronaut, 3 spaceships, alien, and two signs all moving | | | |
| 2 animated props (robots picking oranges). | | | |
| Several animated props like the cardboard plane. | | | |
| 7 animated props to include seaweed, a fish, a turtle, a seal, an octopus, and two robots picking rocks. | | | |
| 3 animated props (2 spaceships and 1 arm). | | | |
| <u>Animated Props</u> | 2,316,543 | 952,001 | 869,638 |
| Several static props to make kitchen area. | | | |
| Several static props to make work space. | | | |
| Several static props to make office and sea classroom. | | | |
| Several static props to make living room and kitchen. | | | |
| Several props to make classroom. | | | |
| 1 static prop (rocket). | | | |
| Several static props (luggage, home) | | | |
| Several neon tubes and static props. | | | |
| 3 static "tv" props w/ several neon tubes. | | | |
| Many static props make living room, kitchen, and bath. | | | |
| Several static props (crystals). | | | |
| <u>Show and Figure Props</u> | 1,789,816 | 735,539 | 671,903 |
| 1 film. | | | |
| 2 films. | | | |
| 1 film. | | | |
| 2 films. | | | |
| 1 film | | | |
| 3 films. | | | |
| 1 "moon" film. | | | |
| 1 - 70 MM film. | | | |
| 3 short films. | | | |
| <u>Films, Slides, Video Production</u> | 9,858,433 | 4,051,401 | 3,700,889 |
| Set to include walls of classroom. | | | |
| Set to include walls of living room. | | | |
| Set to include walls of kitchen. | | | |
| Set to include rockwork. | | | |
| Set to include walls of office and classroom. | | | |
| The set might be the cloud type surroundings. | | | |
| <u>Show Sets and Displays</u> | 6,603,384 | 2,713,714 | 2,478,934 |

WALT DISNEY WORLD
HORIZONS RIDE AND SHOW ASSETS

| | Cost | NBV 09/30/96 | NBV 09/30/97 |
|--|-------------------|-------------------|-------------------|
| There was a painting of planes and France in back. Murals to include octopus, and two robots rock picking. Murals to include painting of sky background. Murals to include painting of sky background. | | | |
| Scenic Paintings and Murals | 1,106,816 | 454,855 | 415,502 |
| 1 projector and 1 screen. 3 mirrors. 3 "rear" projectors. 7 video projectors. 1 "rolling" projector / screen. Several "splitting" units (around 20). 1 projector and 1 screen 6 projectors. 2 video projector and two screens. 2 film loop cabinets. 1 film loop cabinet. 1 video projector. 1 projection screen. 2 video projectors and 2 screens. 2 film cabinets 1 projector and 3 screens. 2 screens (diamond pieces put together). 3 screens. 1 video projector and 1 screen. 1 projector (purple and pink lights down the walls). 19 screens with 38 panels. | | | |
| Projections, Video, and Cameras | 4,518,217 | 1,889,854 | 1,726,351 |
| 3 control units. 3 controller units. 1 controller of "fiber optics". 1 controller unit. 2 power units 1 spare power unit 2 controller units. 2 cooling units 1 spare cooling unit Hydraulic System - to include 2 pumps for running animatronics. | | | |
| Show Control Eqpt and Cables | 3,483,626 | 1,431,623 | 1,307,765 |
| Hydraulic System - to include 2 pumps for running animatronics. | | | |
| Show Action Equipment | 1,909,686 | 784,801 | 716,903 |
| Rainbow lights with 1 controller unit. Several mirrors. 1 scent cannon in wall. Fiber Optic Lights 4 special effects projectors (ocean). Special effects lens. | | | |
| Special Effects | 5,456,190 | 2,242,265 | 2,048,272 |
| Sound Equipment | 1,716,785 | 705,527 | 644,487 |
| Audio Production | 1,150,229 | 472,696 | 431,800 |
| Misc Furniture | 255,048 | 104,814 | 95,746 |
| Maintenance Manuals | 223,806 | 91,975 | 84,017 |
| Show Lighting | 900,984 | 370,266 | 338,232 |
| Wardrobe | 581,143 | 238,825 | 218,163 |
| Total Show Components | 48,485,352 | 19,958,497 | 18,231,763 |

WALT DISNEY WORLD
HORIZONS RIDE AND SHOW ASSETS

| <u>Horizons Ride Assets</u> | <u>Cost</u> | <u>NBV 09/30/96</u> | <u>NBV 09/30/97</u> |
|--|-------------------|-------------------------|-------------------------|
| 2 conveyor belts = 1 at load area, and 1 at unload area. 1 conveyor moving neon future cars as on highway. | | | |
| <u>Moving Stairs and Conveyors</u> | 322,910 | 134,748 | 123,380 |
| 1 switch "ceiling" track to take vehicles off main. 1 switch "ceiling" track to do below maintenance. 1 track Tracks / guide rails = 1 main "ceiling" track 1 switch "ceiling" track to do above maintenance. | | | |
| <u>Track and Guide Rails</u> | 5,558,208 | 2,319,403 | 2,123,729 |
| 175 - 4 seat guest vehicles = 174 for guests, and 1 for maintenance. | | | |
| <u>Vehicles</u> | 13,117,806 | 5,473,974 | 5,012,167 |
| 2 Lifts 1 Cable Spool 3 or 4 "Dimmer" cabinets 2 Motors 3 Hoists 1 Welding Unit 1 Lathe 1 Hydraulic Press 2 driver units = 1 at load area, and 1 at unload area. Computer hook ups in cars for "future choice area". Several "receivers" on floor at "future choice area". 2 ride control stations = 1 at load area, and 1 in maintenance. 1 motor | | | |
| <u>Ride Control System</u> | 3,607,547 | 1,505,406 | 1,378,404 |
| "SK" Cabinets - 14 Total: | | | |
| <u>Audio Eqpt Vehicle and Track</u> | 2,057,309 | 872,720 | 799,094 |
| Propulsion/Drive System | 497,311 | 207,525 | 190,017 |
| Maintenance Manuals | 202,857 | 84,651 | 77,509 |
| <u>Total Ride Components</u> | <u>25,363,948</u> | <u>10,598,427</u> | <u>9,704,301</u> |



HORIZONS INVENTORY SUMMARY

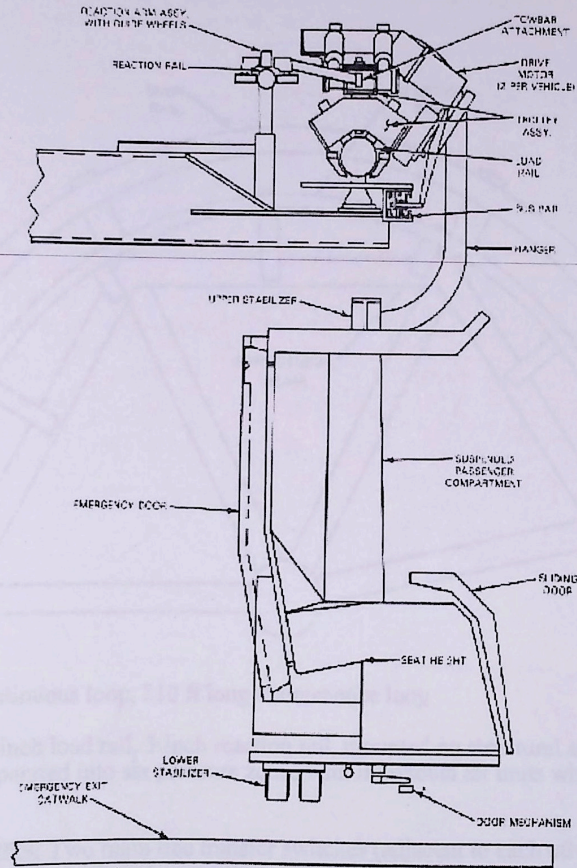
RIDE MECHANICAL SYSTEM

- Vehicle
- Track

 **WALT DISNEY** World Co.
HORIZONS ATTRACTION

RIDE SYSTEM INVENTORY

Ride Vehicles



NUMBER OF VEHICLES: 175

CAPACITY: Four adults

CONSTRUCTION: Steel tubular frame suspended from overhead track

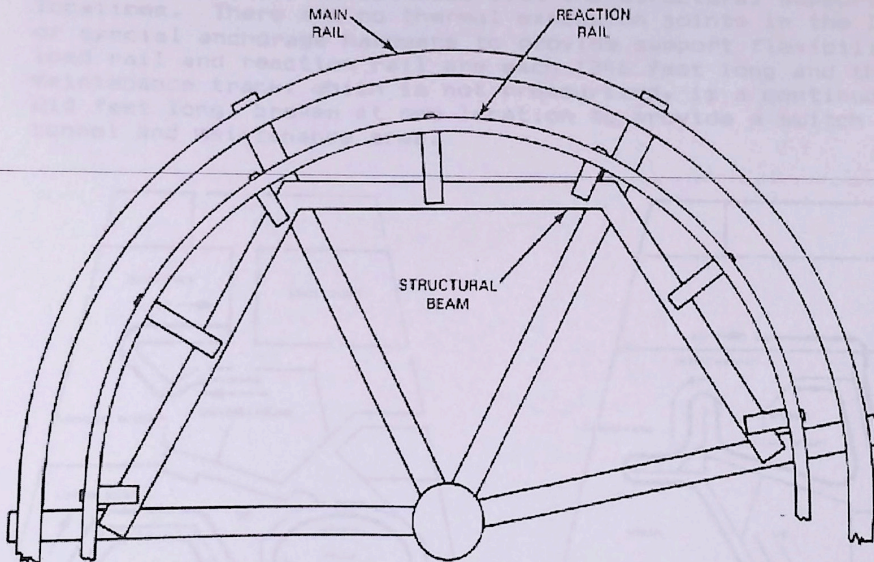
WEIGHT: 1700 lbs.

DRIVE SYSTEM: Motor driven bogies (two bogies per trolley, one motor per bogie), GE High Slip 1 hp 240V 3 phase, 1650 rpm NEMA D, Gearbox is 25:1 ratio standard double reduction type with helical gears and hollow output shaft.

POWER: Bus Bar on overhead track. 4 conductors, self contained pickup box on vehicle trolley

BRAKES: Disc brakes with manual release (static braking only)

Track System



LENGTH: 1346 ft. continuous loop, 210 ft long maintenance loop

CONSTRUCTION: 6-inch load rail, 3-inch reaction rail, mounted on structural steel supports, Load and reaction rails are separated into six pressure zones with individual air units which monitors internal pressure.

TRANSFER SWITCHES: Two main line transfer switches (adjacent to each other) and one maintenance area transfer switch. Switches are steel roundtables on castors, powered by

2.5 TRACK SYSTEM

2.5.1 TRACK DESCRIPTION. The Horizons track system is laid out as shown in Figures 2-16. The track system consists of a 6-inch diameter main line load rail (Figure 2-17), a 3-inch diameter reaction rail and a maintenance track. The load rail is a single pipe section with leak type welds at the joints. The rail is separated into six pressurized zones which are monitored by crack detection sensors (Figure 2-18) so that if a pressure decay exists, there will be an indication that a crack is present within a defined zone. The rail is made up of straight pipe sections, flat horizontal curves, vertical curves, helical curves and a maintenance track as shown in Figure 2-19. Curve numbers on the main line track are identified by a "C" to indicate a curve, followed by a sequence number. Maintenance track curves are identified by "SC" followed by sequence numbers. The load rail has a maximum change in elevation of 37 feet, 7 inches and is mounted on structural steel supports with spans between supports at intervals of less than 12 feet each. The rail is supplied with anchor pads welded in position along the rail (Figure 2-20) to coincide with the structural support locations. There are no thermal expansion joints in the load rail or special anchorage hardware to provide support flexibility. The load rail and reaction rail are each 1346 feet long and the maintenance track, which is not pressurized, is a continuous pipe 210 feet long, broken at one location to provide a switch to the tunnel and maintenance area.

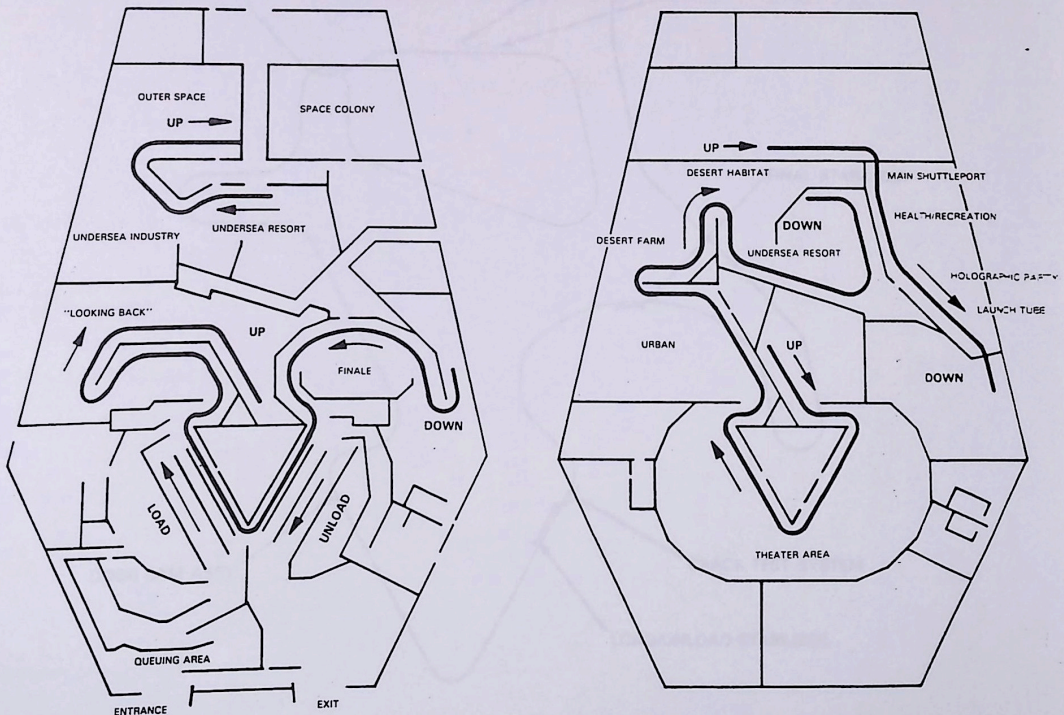


Figure 2-16 Track Layout

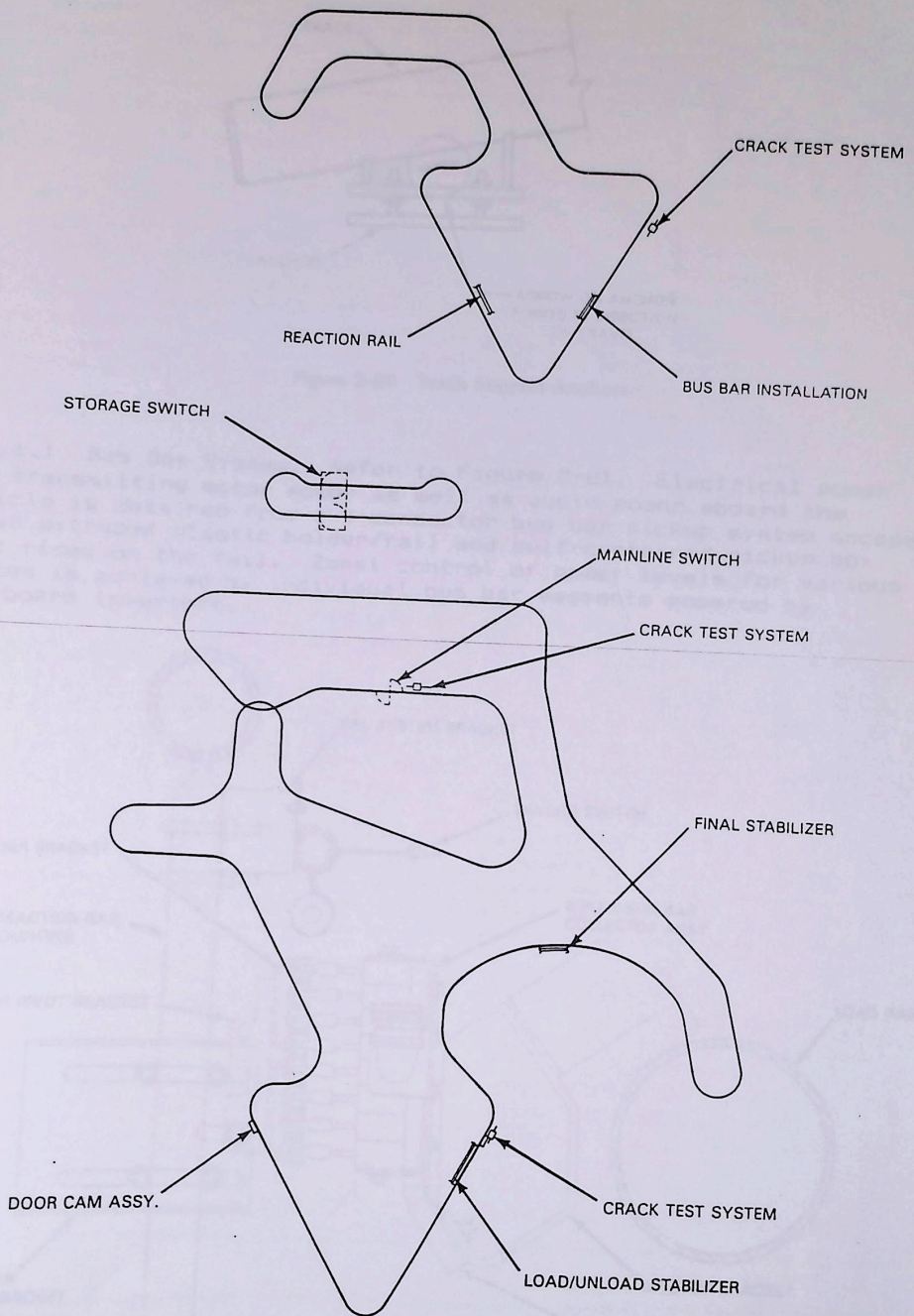


Figure 2-19 Track Curves & Trackside Equip.

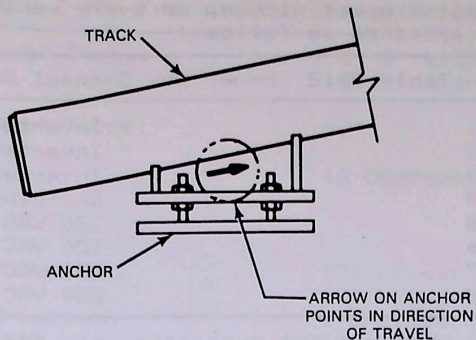


Figure 2-20 Track Support Anchors

2.5.1.1 Bus Bar System. Refer to Figure 2-21. Electrical power for transmitting motor power as well as audio power aboard the vehicle is obtained from a 4-conductor bus bar pickup system encased in an extruded plastic holder/rail and self-contained pickup box that rides on the rail. Zonal control of power levels for various grades is achieved by individual bus bar segments powered by off-board inverters.

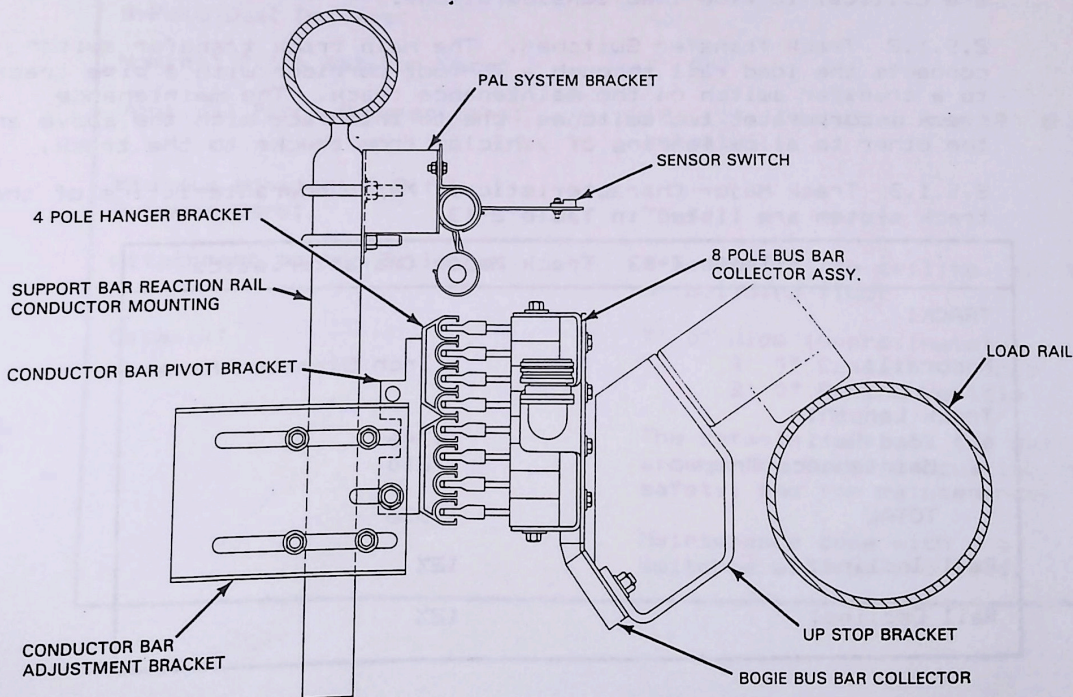


Figure 2-21 Bus Bar System

All vehicle voltage is fed from the eight channel bus bar through a vehicle collector power pick-up on every vehicle. Power bus channels are assigned as follows:

| | |
|-----------|----------------------|
| Channel 1 | Inverter L1 |
| Channel 2 | Inverter L2 |
| Channel 3 | Inverter L3 |
| Channel 4 | Building Ground |
| Channel 5 | 120 VAC L1 |
| Channel 6 | 120 VAC L2 (Neutral) |
| Channel 7 | 230 VAC L2 (Neutral) |
| Channel 8 | 230 VAC L1 |

Power bus bar channels are separated into forty isolated sections which are fed from eleven circuit breakers. The eleven 230 VAC circuit breakers are in the Facilities Electrical Cabinet in the ride equipment room. The circuit breakers for the three inverter channels are located in the Load Control Switch cabinet in the ride equipment room. Individual bus bar channels are rated at 100 Amps continuous service. Therefore, the Load Switch Control cabinet provides load distribution and protection as well as standby inverter switching capability. The 120 VAC bus bar feed is controlled from each of four maintenance stations by Electrical Facilities Engineering. Inverter isolation points are eight inches long to allow motor stator fields and currents to reduce to a negligible level at normal ride speed. The isolation point locations are critical to ride load considerations.

2.5.1.2 Track Transfer Switches. The main track transfer switch connects the load rail through a 75-foot corridor with a pipe track to a transfer switch on the maintenance track. The maintenance track incorporates two switches, one to interface with the above and the other to allow loading of vehicles from trucks to the track.

2.5.1.3 Track Major Characteristics. Major characteristics of the track system are listed in Table 2-13.

| | |
|-------------------|----------------------|
| TRACK: | |
| Monorail: | 6 Inch Diameter Pipe |
| Track Length: | |
| Load Rail | 1,346 |
| Maintenance Track | 210 |
| TOTAL | 1,556 |
| Rail Incline: | 12% |
| Rail Decline: | 12% |

Table 2-13 Track Major Characteristics (cont.)

| | |
|---|---|
| Minimum Radius of Turns: | 6' 0" with Guest facing out; 10' 0" with Guest facing in |
| Maximum Radius of Turns: | 40' |
| Maximum Slope: | 12 Degrees (Approximately) |
| Cam Rails: | |
| Upper Load Section | 170 Linear Feet |
| Door Open | 170 Linear Feet |
| Lower Load Section | 170 Linear Feet |
| Show Section | 100 Linear Feet |
| Switch Track: | 3 |
| Track Anchor Assembly: | 250 |
| Bus Bar Hangers: | 625 |
| Chill Rings: | 195 |
| Crack Test Plug: | 7 |
| Trackside Radiators: | 550 |
| B-Fold Dual Drivers: | 60 |
| Nominal Pitch Between Cars: | 7' 9" |
| Vertical Pitch Between Cars: | 12' 11" (Including one 18" thick catwalk) |
| Minimum Horizontal Pitch Between Cars: | 7' 4" |
| Attachment to the Building: | Brackets to the ceiling, walls, or building floor |
| Catwalk: | 7' 0" Wide (Approximately) 4' 0" Beneath Vehicle 3' 0" Behind Vehicle |
| | The catwalk runs all the way around for Guest evacuation and safety, and for maintenance. |
| | Maintenance zone with the switches will be provided. |

0 degree B grades:

| Beam Numbers | Feet |
|--------------|-----------|
| 88 - 111 | 138 |
| 119 - 121 | 25 |
| 123 - 126 | 16 |
| 133 - 135 | 21 |
| 143 - 148 | 30 |
| 163 - 172 | 59 |
| 176 - 180 | 21 |
| 185 - 188 | 9 |
| 190 - 195 | 41 |
| 209 - 2 | <u>37</u> |
| Total | 397 |

$$F = \frac{128 \text{ lbs}}{\text{car}} \times \frac{\text{car}}{7.75 \text{ feet}} \times \frac{397 \text{ feet}}{\text{track}} = 6,557 \text{ lbs}$$

$$\text{HP} = \frac{6,557}{0.90} \times \frac{1.65}{550} = 22 \text{ HP (maximum)}$$

0 degree C grades:

| Beam Numbers | Feet |
|--------------|-----------|
| 2 - 23 | 136 |
| 29 - 50 | 114 |
| 55 - 58 | 14 |
| 63 - 65 | 14 |
| 68 - 70 | 16 |
| 74 - 84 | <u>76</u> |
| Total | 370 |

$$F = \frac{128 \text{ lbs}}{\text{car}} \times \frac{\text{car}}{7.75 \text{ feet}} \times \frac{370 \text{ feet}}{\text{track}} = 6,111 \text{ lbs}$$

$$\text{HP} = \frac{6,111}{0.90} \times \frac{1.65}{550} = 20 \text{ HP (maximum)}$$

SHOW

-12 degree grades:

| Beam Numbers | Feet |
|--------------|------|
| 111 - 113 | 14 |
| 117 - 119 | 11 |
| 121 - 123 | 10 |
| 126 - 133 | 51 |
| 135 - 139 | 28 |
| 141 - 143 | 11 |
| 173 - 174 | 30 |
| 180 - 185 | 42 |
| 195 - 201 | 43 |
| Total | 240 |

$$F = \frac{-540 \text{ lbs}}{\text{car}} \times \frac{\text{car}}{7.75 \text{ feet}} \times \frac{240 \text{ feet}}{\text{track}} = -16,722 \text{ lbs}$$

$$HP = \frac{-16,722}{0.90} \times \frac{1.65}{550} = -56 \text{ HP (maximum)}$$

- 6 degree grades (unpowered zones):

| Beam Numbers | Feet |
|--------------|------|
| 113 - 117 | 19 |
| 139 - 141 | 13 |
| 172 - 173 | 6 |
| 188 - 190 | 9 |
| Total | 47 |

5.2.1 TRACK PROFILE CALCULATIONS.

Refer to drawing CONT-157861, which provides curve and elevation data from the circled reference points and beam numbers on the drawing.

| | | | |
|---------------------|-------|---------|-----------|
| Total Grade Length: | +12 | Grades: | 176 feet |
| | +6 | Grades: | 116 feet |
| | Level | Grades: | 767 feet |
| | -6 | Grades: | 47 feet |
| | -12 | Grades: | 240 feet |
| Total Track Length: | | | 1346 feet |

+12 degree grades:

| Beam Numbers | Feet |
|--------------|------|
| 50 - 55 | 26 |
| 58 - 63 | 37 |
| 65 - 68 | 15 |
| 70 - 74 | 20 |
| 84 - 88 | 20 |
| 150 - 153 | 18 |
| 157 - 163 | 40 |
| Total | 176 |

$$F = \frac{790 \text{ lbs}}{\text{car}} \times \frac{\text{car}}{7.75 \text{ feet}} \times \frac{176 \text{ feet}}{\text{track}} = 17,941 \text{ lbs}$$

$$\text{HP} = F \text{ (lbs)} \times \frac{V \text{ (ft)}}{\text{(sec)}} \times \frac{\text{sec}}{e \text{ (\%)} 550 \text{ ft-lbs}}$$

$$\text{HP} = \frac{17,941}{0.90} \times \frac{1.65}{550} = 60 \text{ HP (maximum)}$$

+ 6 degree grades:

| Beam Numbers | Feet |
|--------------|------|
| 23 - 29 | 35 |
| 148 - 150 | 14 |
| 153 - 157 | 24 |
| 201 - 209 | 43 |
| Total | 116 |

$$F = \frac{462 \text{ lbs}}{\text{car}} \times \frac{\text{car}}{7.75 \text{ feet}} \times \frac{116 \text{ feet}}{\text{track}} = 6,915 \text{ lbs}$$

$$\text{HP} = \frac{6,915}{0.90} \times \frac{1.65}{550} = 23 \text{ HP (maximum)}$$



HORIZONS INVENTORY SUMMARY

RIDE CONTROL SYSTEM

SHOW

OVERVIEW

The Display Control Module (DCM) is the principal ride control system for Horizons, acting as an interface between the ride operator and the GE Motor Control system.

Ride commands are entered by the operator via the DCM touch screen and executed through parallel output signals to the GE Motor Control system. Parallel input points from the motor drives are monitored and the DCM screen display updated to reflect current ride status. Operators may also use the touch screen to access diagnostic screens which display maintenance information in real-time. The real-time data for these screens is supplied by the RCC over the serial link.

The DCM displays two types of system error messages. The two types are ride errors which are determined by the RCC and errors which are determined by the DCM application software.

The complete DCM software system is installed in two independent units, one of which is located at the Load Console and the other at the Equipment Room Console. At any given time, a parallel input point determines which of these consoles is selected for control. The software will operate in one of two mutually exclusive modes, depending upon the current status of the console. In the control mode, the DCM checks all inputs, displays current system status and executes all operator ride requests. In the monitor mode, inputs are checked and status displayed, but no ride functions are executed.

The Horizons DCM software represents the application section of the DCM software system. The rest of the system is comprised of the System Library (v1.2), which consists of graphics subroutines and interrupt handlers. The entire DCM software system is written in 8080 assembly language.

5.7 OPERATOR CONSOLES

5.7.1 DCM CONSOLES.

ROC 01 is in the ride passenger loading area adjacent to the load belt walkway. ROC 02 is in the ride equipment room. The two consoles have identical DCM control and monitor functions.

5.7.1.1 DCM Touchscreen Control Functions:

START: Initiates ride START
STOP: Initiates ride STOP
LO SPEED: Initiates LO SPEED
HI SPEED: Initiates HI SPEED
ENTER: Required to enter all commands
Load Belt START: Starts load belt walkway and handrail drives
Load Belt STOP: Stops load belt walkway and handrail drives
CANCEL: Cancels last command
ERROR CLEAR: Erases messages on screen

5.7.1.2 DCM Touchscreen Monitor Functions:

Ride START: Acknowledge ride START
Ride SPEED: Acknowledge LO or HI SPEED
Load Belt START: Acknowledge load belt START
Unload Belt RUN: Monitor unload belt status

A portion of the DCM touchscreen CRT is used to display messages for operations and maintenance personnel. Some of this data is sent from the RCC 01 Monitor Computer via a serial link.

5.7.1.3 ROC 01 Hardware Control Functions:

E-Stop: Maintained push/pull switch for emergency stop of all ride equipment
Station Control: Key lock switch to select which of six ride control locations is active

Off (None Selected)
Load Console ROC 01
Eqpt Console ROC 02
Maintenance Station Selector

Maintenance Station Select:

Maintenance Station 1
Maintenance Station 2
Maintenance Station 3
Maintenance Station 4

5.7.1.4 ROC 02 Hardware Control Functions:

E-Stop: Maintained push/pull switch for emergency stop of all ride equipment

Off/On: Keylock Off/On switch to allow the console to provide control functions to the ride control equipment

5.7.2 ROC 03. The functions of the ROC 03 console are as follows:

E-Stop: Maintained push/pull switch for emergency stop of all ride equipment

Belt Start/Stop: Maintained push/pull switch to start or stop the unload belt walkway

5.7.3 DCM I/O TABLES.

The console DCM touchscreens interface to parallel I/O signals from the ride control system. Tables 5-8 through 5-10 list the input and output functions accommodated by the DCM's.

| PORT | FUNCTION |
|-------|--------------------------------------|
| J1-A0 | RIDE RESET |
| J1-A1 | HI SPEED |
| J1-A2 | LO SPEED |
| J1-A3 | BELT PACK LOW SPEED |
| J1-A4 | FRAMES RUN |
| J1-A5 | LOAD BELT RUN |
| J1-A6 | UNLOAD BELT RUN |
| J1-A7 | EMERGENCY STOP RESET |
| J1-B0 | PERMISSIVE RUN #1 |
| J1-B1 | PERMISSIVE RUN #2 |
| J1-B2 | RDC TRAVELING FRAMES RUN |
| J1-B3 | RDC TRAVELING FRAMES SYNC |
| J1-B4 | RDC VEHICLES MOVING |
| J1-B5 | KEY LOCK SWITCH: LOAD CONSOLE |
| J1-B6 | KEY LOCK SWITCH: EQPT CONSOLE |
| J1-B7 | KEY LOCK SWITCH: MAINTENANCE AREA #1 |
| J2-A0 | KEY LOCK SWITCH: MAINTENANCE AREA #2 |
| J2-A1 | KEY LOCK SWITCH: MAINTENANCE AREA #3 |
| J2-A2 | KEY LOCK SWITCH: MAINTENANCE AREA #4 |
| J2-A3 | DCM ID: LOAD CONSOLE |
| J2-A4 | DCM ID: EQPT CONSOLE |

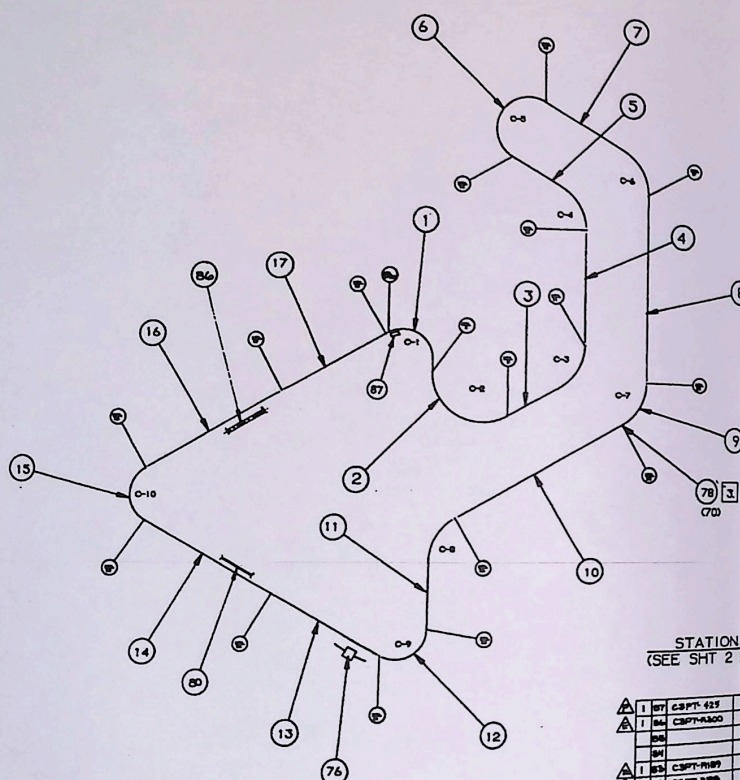
Table 5-9. DCM Output Points

| PORT | FUNCTION |
|-------|-----------------|
| J1-C0 | RIDE RESET |
| J1-C1 | HI SPEED |
| J1-C2 | LO SPEED |
| J1-C3 | STOP |
| J1-C4 | FRAMES START |
| J1-C5 | LOAD BELT START |
| J1-C6 | FRAMES STOP |
| J1-C7 | LOAD BELT STOP |

Table 5-10. DCM Status and Error Codes to RCC

| CODE | FUNCTION |
|------|--------------------------------|
| 00 | DCM NULL MESSAGE |
| 01 | RIDE STOP FROM EXTERNAL SOURCE |
| 02 | RIDE START |
| 03 | RIDE STOP |
| 04 | HALF SPEED |
| 05 | FULL SPEED |
| 06 | LOAD BELT START |
| 07 | LOAD BELT STOP |
| 08 | RIDE "101" |
| 09 | RIDE "102" |
| FE | RIDE MAP REQUEST |

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STATION 1/124 THRU 40
 (SEE SHIT 2 FOR STA 40 THRU 124/1)

| | | | | |
|---|----|----------|-------------|--|
| 1 | 87 | CPT-629 | 79-55-14478 | OPEN DOOR DETECTION SYSTEM, TRACK |
| 1 | 84 | CPT-6300 | 7085-58671 | REFLECTION RAIL, INSTALLATION |
| 1 | 83 | CPT-6189 | 7085-537779 | INSTALLATION, STABILIZERS, L/UNLOAD ARM |
| 1 | 82 | CPT-6188 | 7085-537693 | INSTALLATION, STABILIZER, 10' ROLL, PHURLE |
| 1 | 81 | CPT-6187 | 7085-537680 | DOOR CHA PINK'S INSTALLATION |
| 1 | 80 | CPT-6186 | 7085-537667 | RUN RAIL INSTALLATION |
| 1 | 79 | CPT-6185 | 7085-537654 | SWITCH STORAGE |
| 1 | 78 | CPT-6184 | 7085-537641 | CALL RAIL |
| 1 | 77 | CPT-6183 | 7085-537628 | SWITCH MANDREL |
| 1 | 76 | CPT-6182 | 7085-537615 | CRACK TEST SYSTEM ASSEMBLY & INSTALLATION |
| 1 | 75 | CPT-6181 | 7085-537602 | |
| 1 | 74 | CPT-6180 | 7085-534444 | TRACK WELDMENT STATION 814 TO STATION 818 |
| 1 | 73 | | | |
| 1 | 72 | | | |
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| 1 | 70 | | | |
| 1 | 69 | | | |
| 1 | 68 | | | |

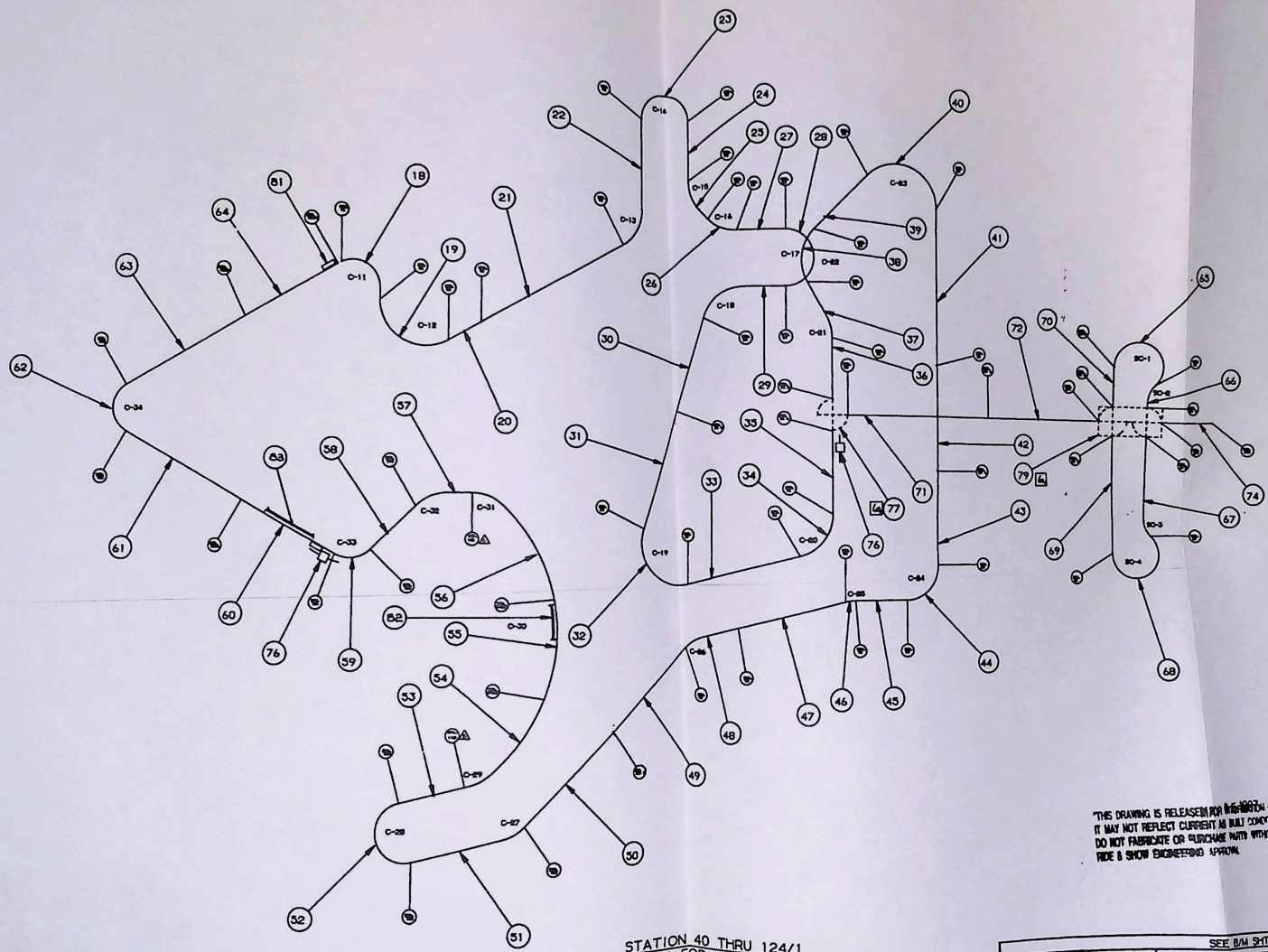
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- REFER TO CPT-60 FOR INSTALLATION DETAILS OF TRACK SWITCHES (ITEMS 776/7).
- REFER TO CPT-1100 FOR TRACK WELD SCHEDULE.
 - REFER TO CPT-11 FOR WELD DETAILS OF TRACK ANCHORS TO STRUCTURAL STEEL.
 - REFER TO CPT-7 FOR TYPICAL TRACK BRIDGE.
 - REFER TO CPT-8 FOR TRACK IDENTIFICATION.
- REF DOCUMENTS:
- CSP-01 COURSE PLAN
 - CSP-02 COURSE PROFILE
 - CSP-03 ANCHOR LOCATION PLAN
 - CSP-04 TRACK INSTALLATION COORDINATES
 - CSP-05 TRACKSIZ AIR STUBOUT LOCATIONS
 - CSP-06 ANCHOR CALCULATIONS
 - CSP-07 ANCHOR LOCATION PROFILE
 - CSP-08 COURSE COORDINATES, CURVES, BRIDGE
 - CSP-09 ANCHOR LOCATIONS PLAN
 - CSP-10 T13, DIMENSIONS AND DOOR CHA PLAN
- NOTE: WELD SCHEDULE REFERRED TO NOT SCALE 1/8"

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| 52 | 10/15/88 | J. J. ... | | ISSUED FOR PERMITS |

CSP-1-A1
 7025-518051
 1 of 2

| NO. | DESCRIPTION | BY | DATE |
|-----|-------------|------|----------|
| 1 | DESIGN | W.P. | 10-24-67 |
| 2 | CHECK | W.P. | 10-24-67 |

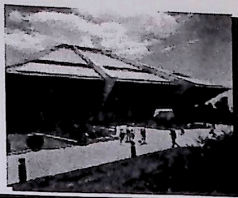


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STATION 40 THRU 124/1
 (SEE SHT 1 FOR STA 1/124 THRU 40)

| SEE DIM SHT. 1 | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------------|----------|------|---|--------|------|----------|---|-------|------|----------|--|------------------|---------|----------------|-------------|------|--------|
| <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>DESIGN</td> <td>W.P.</td> <td>10-24-67</td> </tr> <tr> <td>2</td> <td>CHECK</td> <td>W.P.</td> <td>10-24-67</td> </tr> </table> | NO. | DESCRIPTION | BY | DATE | 1 | DESIGN | W.P. | 10-24-67 | 2 | CHECK | W.P. | 10-24-67 | <table border="1"> <tr> <td>FUTUREPROBE EPCO</td> <td>C3PT-A1</td> </tr> <tr> <td>TRACK ASSEMBLY</td> <td>7025-345067</td> </tr> <tr> <td>W.P.</td> <td>2 of 2</td> </tr> </table> | FUTUREPROBE EPCO | C3PT-A1 | TRACK ASSEMBLY | 7025-345067 | W.P. | 2 of 2 |
| NO. | DESCRIPTION | BY | DATE | | | | | | | | | | | | | | | | |
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| TRACK ASSEMBLY | 7025-345067 | | | | | | | | | | | | | | | | | | |
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SEE SHT. 1
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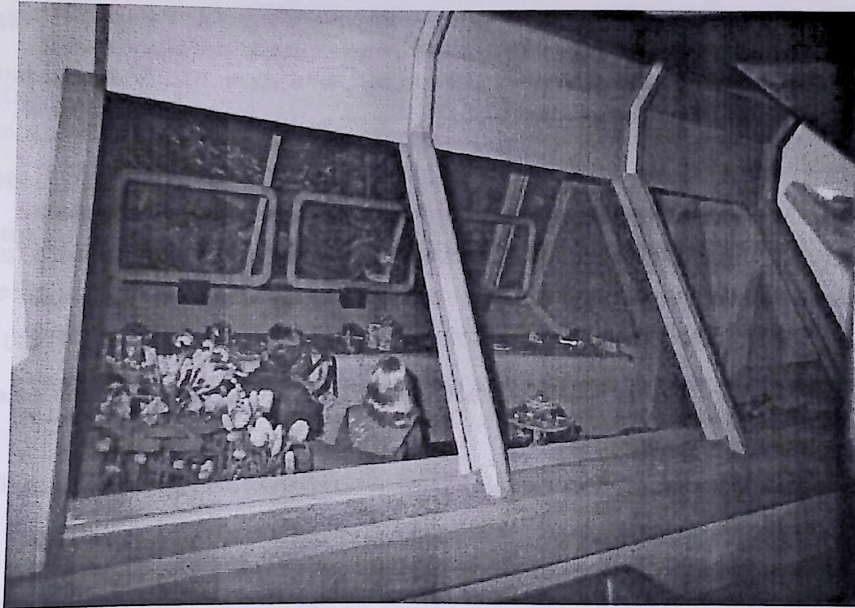
HORIZONS INVENTORY SUMMARY

SHOW ELEMENTS

- Scene-by-Scene Inventories
- Special Effects

HORIZONS ATTRACTION INVENTORY

Scene : 31 (Holographic Party)



SHOW SETS : 1 SET ,

SHOW PROPS : CAKE & PLATE (1) , PRESENTS (8) , LIGHTED FRAMES (3) , TABLE (1) , SOFA (1 INCOMPLETE) , BEAR (1) , PARTY FAVORS (?)

SPECIAL LIGHTING F/X : HOLOGRAM FLICKER (3) HOLOGRAPHIC PARTY (1)

SCENIC PAINT : SPACE COLONY MURAL

ARTIFICIAL FOLIAGE : EGG PLANTS (2) . BUSH (1) .

ANIMATION

Animated Figure F-38 FATHER (HOLDING BABY)

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , TILT , L & R EYE BLINK --- (TORSO) TWIST --- (RIGHT ARM) FORWARD .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-39 BABY

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , (LEFT & RIGHT LEGS) FORWARD.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-40 MOTHER

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , TILT , L & R EYE BLINK --- (TORSO) TWIST --- (RIGHT ARM) SWING --- (RIGHT WRIST) FORWARD & BACK , TWIST .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-41 GRANDFATHER

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , TILT , L & R EYE BLINK --- (TORSO) TWIST --- (RIGHT ARM) FORWARD , ELBOW , (RIGHT WRIST) FORWARD & BACK .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 42 GRANDMOTHER

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , TILT , L & R EYE BLINK --- (TORSO) TWIST --- (RIGHT ARM) FORWARD , ELBOW , (RIGHT WRIST) FORWARD & BACK .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 43 DAUGHTER

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , TILT , L & R EYE BLINK --- (TORSO) SIDE SWAY .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

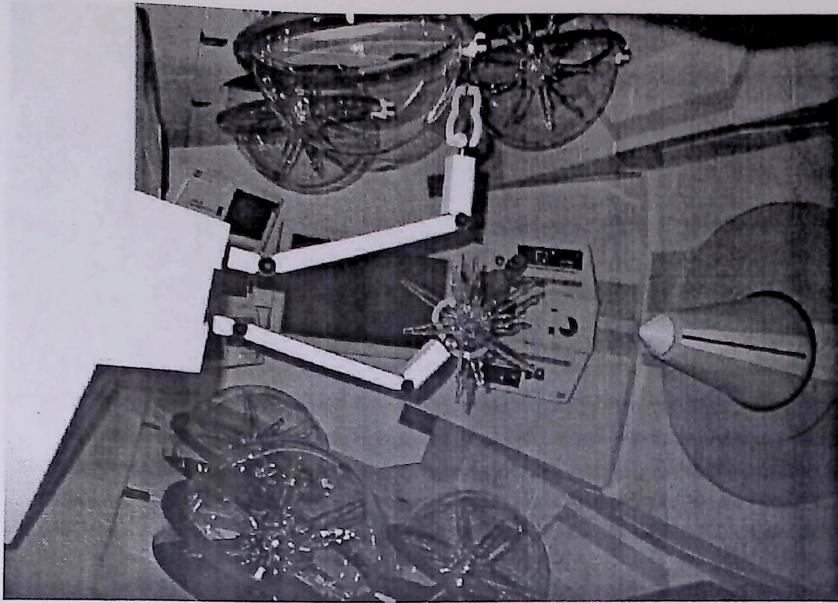
Animated Figure F- 45 TEENAGE BOY

FUNCTIONS: (HEAD) MOUTH , NOD , TURN , L & R EYE BLINK (TORSO) FORE BEND , TWIST (RIGHT ARM) FORWARD , SWING , ELBOW .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

END SCENE 31

Scene : 29 (Crystal Manufacturing)



SHOW SETS : 1 SET ,

SHOW PROPS : CRYSTAL HOLDERS (6) , CRYSTALS (6)

SPECIAL LIGHTING FX : CRYSTAL SCAN (1)

ANIMATION

Animated Figure F-37 WOMAN TECHNICIAN

FUNCTIONS: (HEAD) NOD , TURN , TILT , L & R EYE BLINK — (TORSO) SIDE BEND --- (LEFT ARM) ELBOW.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

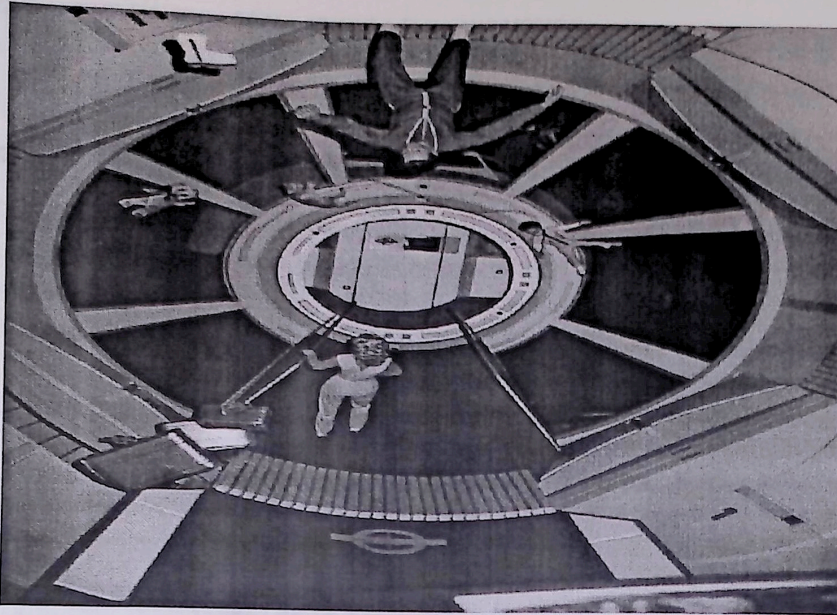
ANIMATED PROPS

AP - 49: LEFT ROBOT ARM

AP - 50 : RIGHT ROBOT ARM

END SCENE 30

Scene : 28 (Shuttle Port)



SHOW SETS : 1 SET ,

SHOW PROPS : BOOT (1) , BEAR (1) .

SPECIAL LIGHTING FIX : STARFIELD (3) .

ANIMATION

Animated Figure F- 34 MOTHER AT DOCKING ELAVATOR

FUNCTIONS:(HEAD) MOUTH , TURN , (RIGHT ARM) FORWARD , (RIGHT WRIST) FORWARD & BACK,(BODY) SIDESWAY & FORESWAY.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 35 FATHER AT DOCKING ELEVATOR

FUNCTIONS:(HEAD) NOD , TURN , L & R EYE BLINK , (LEFT ARM) FORWARD , ELBOW , (RIGHT ARM) FORWARD , (BODY) PELVIS , SIDESWAY , TWIST , (LEFT HAND) FORE,MIDDLE,RING & LITTLE FINGERS.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 36 BOY ON DOCKING RAMP

FUNCTIONS:(HEAD) MOUTH , L & R EYE BLINK , TURN (LEFT ARM) OUT , (RIGHT ARM) OUT , (LEFT LEG) IN / OUT , (RIGHT LEG) IN / OUT , FLOATING MOTION.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA - 39 PUPPY AT DOCKING PORT

FUNCTIONS:(HEAD) MOUTH , LEG MOVEMENT & FLOATING MOTION.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

Animated Figure AP-46 MOVING LUGGAGE

FUNCTIONS: ROTATE BACK & FORTH , UP & DOWN.

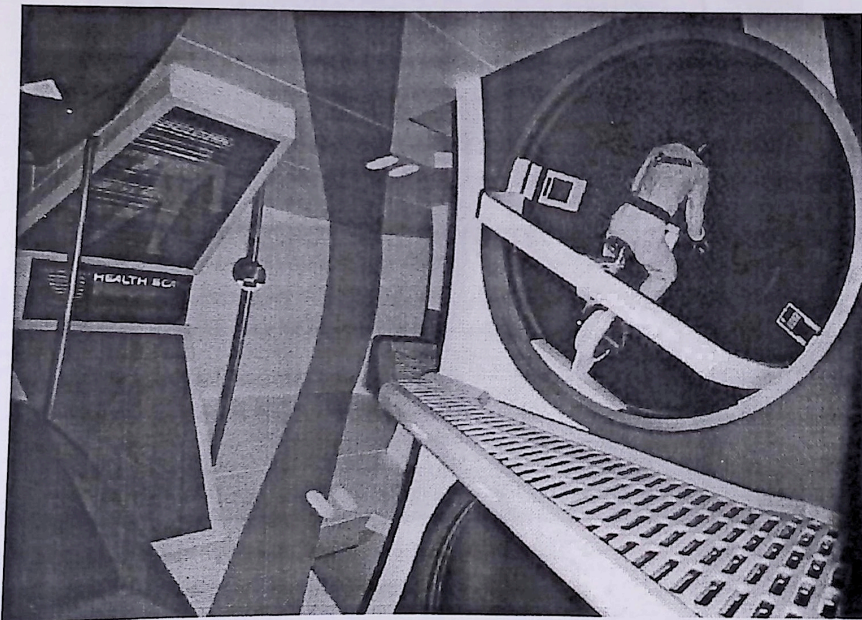
POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

AP - 47 : FLOATING SHOE (1)

AP -48 : FLOATING BEAR (1)

END SCENE 29

Scene : 27 (Health & Recreation)



SHOW SETS : 1 SET ,

SPECIAL LIGHTING FIX : BODY SCAN (1) , OCILLOSCOPE (1) .

SHOW PROPS : BICYCLE (1) , BOAT (1) , BODY SCAN (1) .

ANIMATION

Animated Figure F- 32 GIRL ON CYCLE

FUNCTIONS: PEDALING

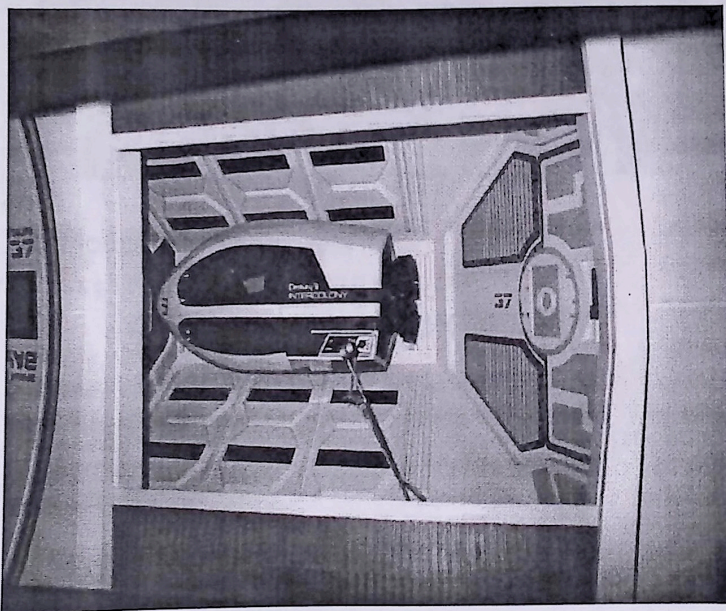
POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

NONE

END SCENE 27

Scene : 26 (Air Lock)

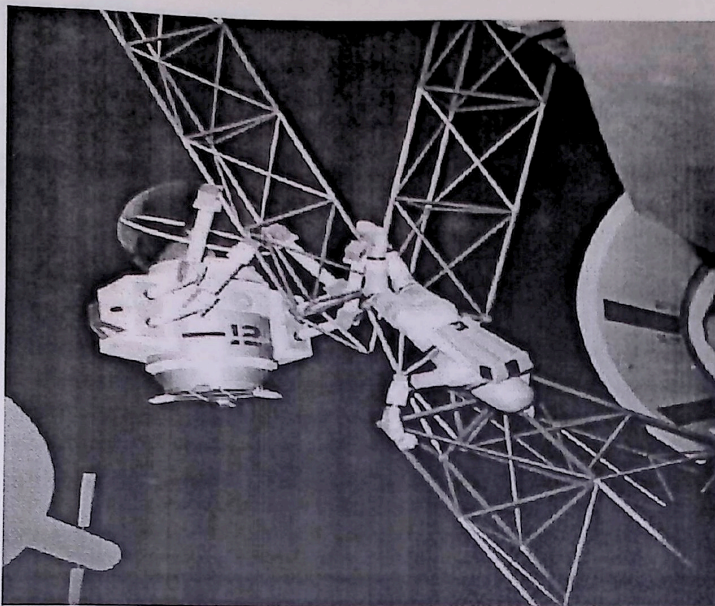


SHOW SETS : 1 SET ,

SHOW PROPS : SHUTTLE PROBE (1) , RECHARGER ARM (1) .

END SCENE 26

Scene : 25 (Outerspace)



SHOW SETS : 1 SET ,

SHOW PROPS : SCAFFOLDING (2) , PROBE ARM (1) .

SPECIAL LIGHTING F/X : BEAM BUILDER (1) , STAR FIELD (7) .

ANIMATION

Animated Figure F- 30 ASTRONAUT

FUNCTIONS: (RIGHT ARM) FORWARD, OUT , SWING , ELBOW , (RIGHT LEG) FORWARD & BACK.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

Animated Figure AP- 44 SPACE MANIPULATOR

FUNCTIONS:(HEAD) MOUTH , L & R EYE BLINK , (TORSO) FOREBEND , TWIST .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

END SCENE 25

Scene : 24 (Transition Area)

SPECIAL LIGHTING F/X : WATER RIPPLE (1)

END SCENE 24

Scene : 23 (Undersea Industry)



SHOW SETS : 1 SET ,

SHOW PROPS : ROCK PICKER (1)

SPECIAL LIGHTING F/X : DISTANT SUBS (2) , UNDERWATER LIGHTS (2) .

SCENIC PAINT : OCEAN MURAL (1)

ARTIFICIAL FOLIAGE : SEA PLANTS (7) .

ANIMATED PROPS

Animated Figure AP- 42 MANIPULATOR SUB

FUNCTIONS: (LEFT ARM) UP & DOWN , (RIGHT ARM) UP & DOWN .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS .

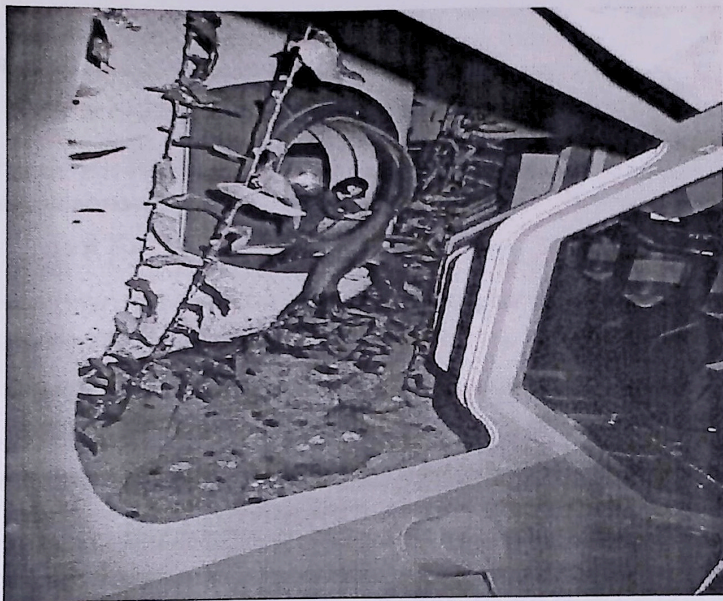
Animated Figure AP- 43 VACUUM MINER

FUNCTIONS: EFFECT DELETED EQUIPMENT STILL IN PLACE

POWER: ELEC. CONTROLS.

END SCENE 23

Scene : 22 (Undersea Resort)



SHOW SETS : 1 SET , 2 SECTIONS

SHOW PROPS : PLATES (9) , CUPS & SAUCERS (3) , GLASSES W/ WATER (3) , GLASSES JUICE (2) , SHRIMP COCKTAILS (2) , TABLE LAMPS (2) , SUGAR & CREAMERS (2 SETS) , SPOONS (6) , FORKS (6) , KNIVES (3) , PLACE MATS (3) , TABLES (2) , BENCH SEATS (4) , CORAL (11) , SEA URCHINS (20)

SPECIAL LIGHTING F/X : WATER RIPPLES (3) .

ARTIFICIAL FOLIAGE : KELP (150) , SEA PLANTS (10) .

ANIMATION

Animated Figure F-21 MAN, 1ST WINDOW

FUNCTIONS: (HEAD) TURN , MOUTH , L & R EYE BLINK ,
POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-22 WOMAN , 1ST WINDOW

FUNCTIONS:(HEAD) TURN , MOUTH , L & R EYE BLINK .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-23 MOTHER , 2ND WINDOW

FUNCTIONS:(HEAD) MOUTH , L & R EYE BLINK , (TORSO) FOREBEND , TWIST .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-24 LITTLE GIRL,2ND WINDOW

FUNCTIONS:(HEAD) NOD , L & R EYE BLINK .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-25 MAN, 3RD WINDOW

FUNCTIONS:(HEAD) NOD , TURN.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-11 SEAL AT WINDOW

FUNCTIONS:(HEAD) NOD , RIGHT FRONT FLIPPER , (TAIL) UP & DOWN.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-12 GIANT SEA BASS

FUNCTIONS:(HEAD) MOUTH , (TAIL) MOVES SIDWAYS

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-13 OCTOPUS

FUNCTIONS:(HEAD) L & R EYE BLINK , (BODY) RAISE & TWIST (TENTACLE) CURL.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-16 SEA TURTLE

FUNCTIONS:BODY MOVEMENT

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

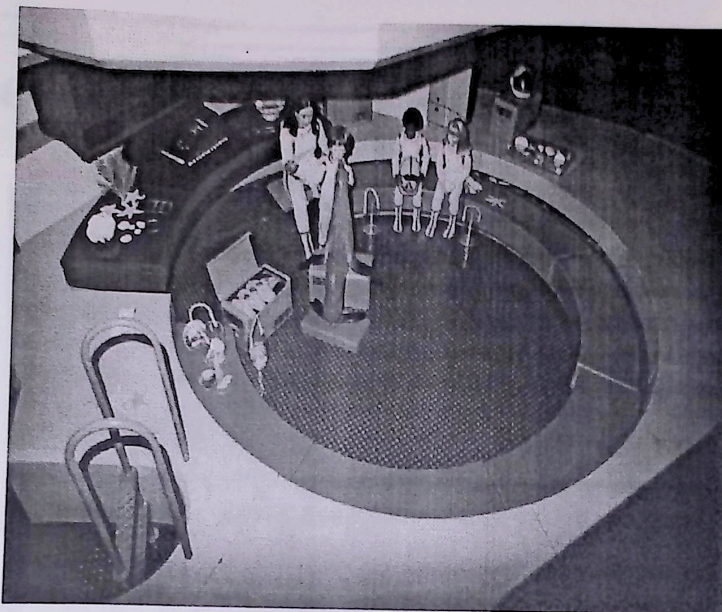
ANIMATED PROPS**Animated Prop AP-37THRU AP- 41 SWAYING KELP GRID**

FUNCTIONS: SWAY

POWER: ELEC. MOTOR

END SCENE 22

Scene : 21 (Undersea Classroom)



SHOW SETS : 1 SET

SHOW PROPS : BOX W/ SCUBA GEAR , HELMET (2) , SHELLS (46) , CORAL (2) , STARFISH (8) , SAND DOLLARS (5) , BOWL (1) , SHELL COLLECTORS (4) , SHELL HOLDER (1) .

ANIMATION

Animated Figure F-17 SCHOOL INSTRUCTOR (CLASSROOM)

FUNCTIONS:(HEAD) NOD , TURN , TILT , MOUTH , L & R EYE BLINK , (TORSO) TWIST , PELVIS , (R. ARM) ELBOW , SWING , (LEFT ARM) FORWARD , OUT , SWING.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-18 BOY STANDING WITH INSTRUCTOR

FUNCTIONS:(HEAD) NOD , TURN , MOUTH , L & R EYE BLINK , (TORSO) TWIST , PELVIS .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-19 BLONDE GIRL SEATED

FUNCTIONS:(HEAD) TURN , MOUTH , L & R EYE BLINK , (RIGHT FOOT) TAP.

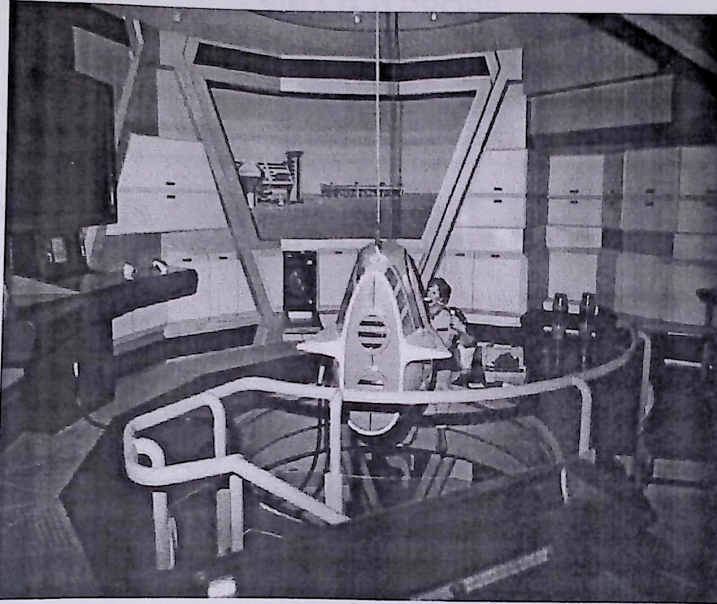
POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATION

NO ANIMATED FIGURES , NO ANIMATED PROPS

END SCENE 20

Scene : 19 (Sub Repair Room)



SHOW SET : 1 SET

SHOW PROPS : SHUTTLE SUB (1) , TOOL BOX W/ TOOLS (1) , GOGGLES (1) , BOX W/ SCUBA GEAR (1) , LASER WELDER (1) , BUCKET W/ RAGS (1) , ELECTRICAL CORDS (2) , CANISTERS (2) , COMPUTER WANDS (2) .

SPECIAL LIGHTING F/X : LASER WELDING (1) , WATER RIPPLES (2) .

ANIMATION**Animated Figure F-16 BOY, SUB ROOM**

FUNCTIONS:(HEAD) NOD , TURN , MOUTH , L & R EYE BLINK , (TORSO) FOREBEND , TWIST , (LEFT ARM) FORWARD , SWING , ELBOW , (RIGHT ARM) FREE ANIMATION , (LEG) SWING .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

Animated Figure F-20 BLACK GIRL SEATED

FUNCTIONS:(HEAD) NOD , TURN , MOUTH , L & R EYE BLINK , (TORSO) PELVIS , (RIGHT FOOT) FORWARD & BACK.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-10 SEAL (KISSING F-18)

FUNCTIONS:(HEAD) NOD , TURN , MOUTH , (NECK) FORWARD , (BODY) SWAY.

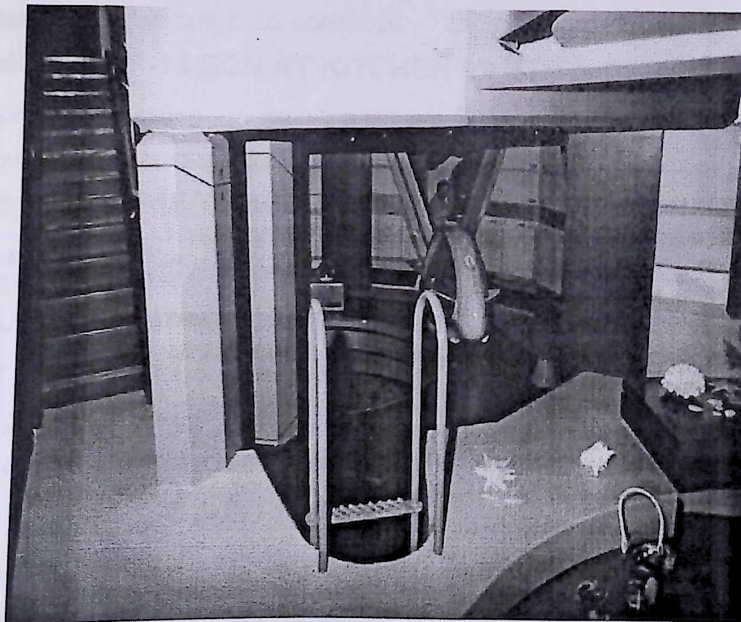
POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

NONE

END SCENE 21

Scene : 20 (Dive Chamber)



SHOW SETS : 1 SET

SHOW PROPS : SHUTTLE SUBS (2) , BOX W/ SCUBA GEAR (2) , HELMETS (1) , CANISTER (1).

SPECIAL LIGHTING F/X : WATER REFLECTIONS (1).

AP - 36 : DIVING PLANE ON SUB

END SCENE 19

Scene : 17 (Desert Habitat)

SHOW SETS : 1 SET , 2 SECTIONS**SHOW PROPS :** VASES (7) , CANISTERS (3) , PLATES (35) , COPS (11) , VITALIZER (1) , CANDY BOWL (1) , FLOWERS & VASE (1) , PAN & LID (1) , ROASTER & CHICKEN (1) , GLASS W/ MILK (1) , CAKE & PLATE (1) , VIDEOPHONE (1) , PRESENTS (4) , TUPPERWARE (19) , WALL HANGING (1) , BOOTS (2) , CHAIRS (3) , WALL DESK (1) , STATUES (5) , FLOOR LAMP (1) , BOOKS & GAMES (20) .**SCENIC PAINT :** DESERT FARM MURAL

ANIMATION

Animated Figure F-13 FATHER IN KITCHEN

FUNCTIONS:(HEAD) NOD , TURN , TILT , MOUTH , L & R EYE BLINK , (R. ARM) ELBOW , CAKE TURN (AP-27).**POWER:** PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-14 SON AT KITCHEN PANTRY

FUNCTIONS:(HEAD) NOD , TURN , MOUTH , L & R EYE BLINK .**POWER:** PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F-15 TEENAGE GIRL COMMUNICATION ROOM

FUNCTIONS:(HEAD) NOD , TURN , TILT , MOUTH , L & R EYE BLINK , (RIGHT ARM) SWING , ELBOW , (RIGHT FOOT) FORWARD & BACK .**POWER:** PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-7 CAT BY WATERFALL

FUNCTIONS:(HEAD) TURN , (TAIL) .**POWER:** PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-8 JUMPING FISH

FUNCTIONS: FISH JUMPS**POWER:** PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

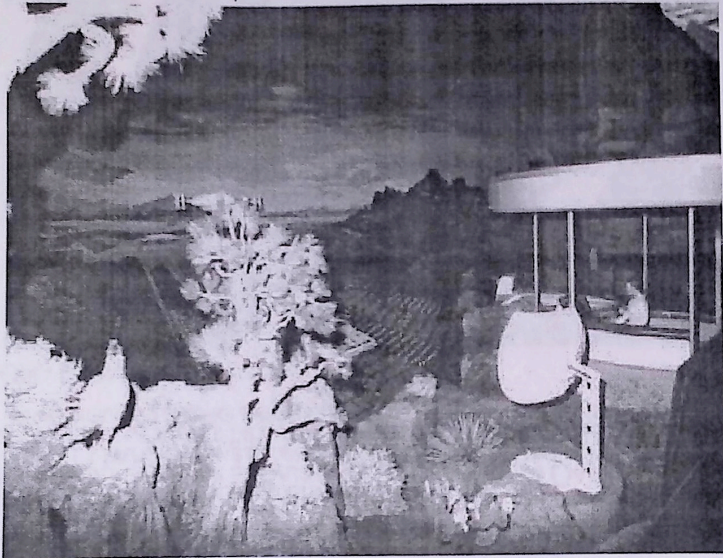
Animated Figure AP-33 HOVERCRAFT

FUNCTIONS:

POWER: ELEC. CONTROLS.

END SCENE 17

Scene : 16 (DESERT HABITAT)



SHOW SETS : 1SET 2 SECTIONS

SPECIAL LIGHTING FIX : MOVING CLOUDS (2), LIGHTNING (1), VIDEO MONITOR (2), FLYING CRAFT (2), LIGHTS ON HARVESTER (1)

SCENIC PAINT : DESERT MURAL (1)

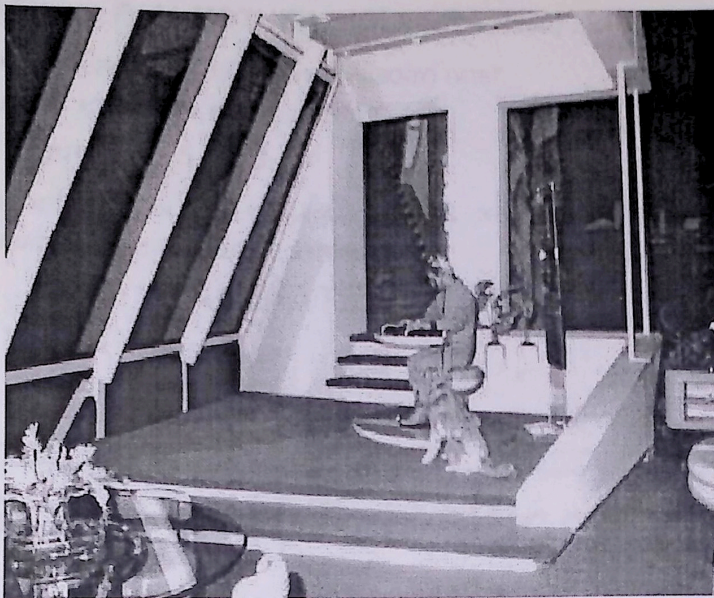
ARTIFICIAL FOLIAGE : TREES (3), YUCCA PLANTS (3), CACTUS (6), SAGE (17), FRUIT BANANA/PINEAPPLE

ANIMATION

NO ANIMATION , NO PROPS

END SCENE 11

Scene : 14 (URBAN HABITAT)



SHOW SETS : 1 SET 2 SECTIONS.

PROPS : WALL HANGINGS (6), DINING TABLE (1), SOFA (1), PILLOWS (21), BOOKSHELF (1), CANDLE HOLDER (1), DECORATIVE PIECES (5), STEREO (1), HOLOGRAPHIC TELEPHONE (1), WALL TABLE (1), STEREO SPEAKERS (2), MUSICAL INSTRUMENT (1), STOOL (1), GAME (1), PICTURE FRAME (4), FLOWER ARRANGEMENT (4), ROCK PILLARS (6), STEPPING STONES (10), GARDEN TABLES (2), AEROPONIC PLANTERS (2), HYDROPONIC PLANTERS (2).

SPECIAL LIGHTING FIX : DISTANT CITY LIGHTS (5), ELEVATORS (3), MAG LEV TRAINS (2), HOLOGRAPH FLICKER (1), STATION HIGHLIGHTS (2)

SCENIC PAINT : FUTURISTIC CITY MURAL

ARTIFICIAL FOLIAGE : FUTURISTIC PLANT (1), VINE ON WALL (1), BUSHES (8), GRASS (1 SECTION), EGGPLANTS (2), TREES (5), CABBAGE (13), LETTUCE (11), CARROTS (10), TURNIPS (9), ORANGE HYBRID (11), RUTABAGA (10), STRAWBERRIES (40), SQUASH (7), HYBRID BEAN VINES (2), HYBRID CUCUMBER/PEPPER (14).

ANIMATION

Animated Figure F- 9 GRANDFATHER

FUNCTIONS: (HEAD) NOD, TURN & TILT, L&R EYE BLINK, MOUTH --- (RIGHT ARM) FORWARD, OUT, SWING, ELBOW, --- (LEFT ARM) FORWARD, OUT, SWING, ELBOW.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 10 GRANDMOTHER

FUNCTIONS:(HEAD) NOD,TURN , L&R EYE BLINK , MOUTH ---(LEFT WRIST) IN & OUT.

POWER: PNEUMATIC ACTUATORS , ELEC. CONTROLS.

Animated Figure F- 11 MOTHER (HOLOGRAPHIC)

FUNCTIONS:(HEAD) TURN ,(LEFT ARM) FORWARD , (BODY) TWIST.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA - 5 DOG

FUNCTIONS:(HEAD) NOD,TURN , L&R EYE BLINK , L & R EARS , (NECK) RAISE , (TAIL) WAG .

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

ANIMATED PROPS

NONE

END SCENE 14

Scene : 13(Transitions #3)

SPECIAL LIGHTING F/X : MINI MOLE LUMIA (13)

ANIMATION

NO ANIMATION , NO PROPS

END SCENE 13

Scene : 11(Transitions #2)

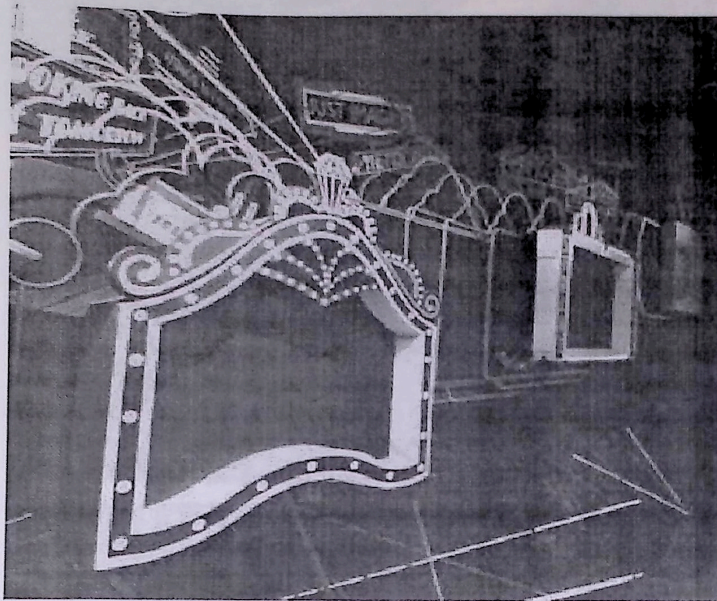
SPECIAL LIGHTING F/X : MINI MOLE LUMIA (13)

ANIMATION

NO ANIMATION , NO PROPS

END SCENE 11

Scene : 08 (Neon City)



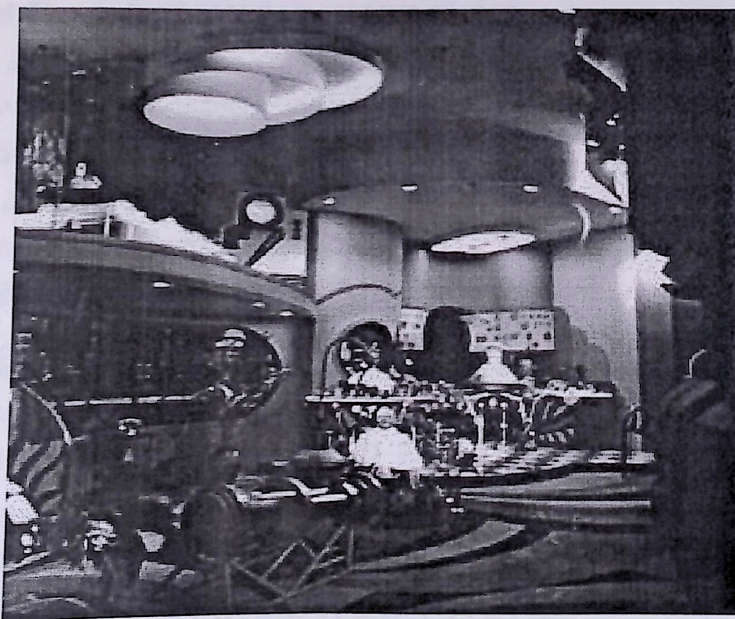
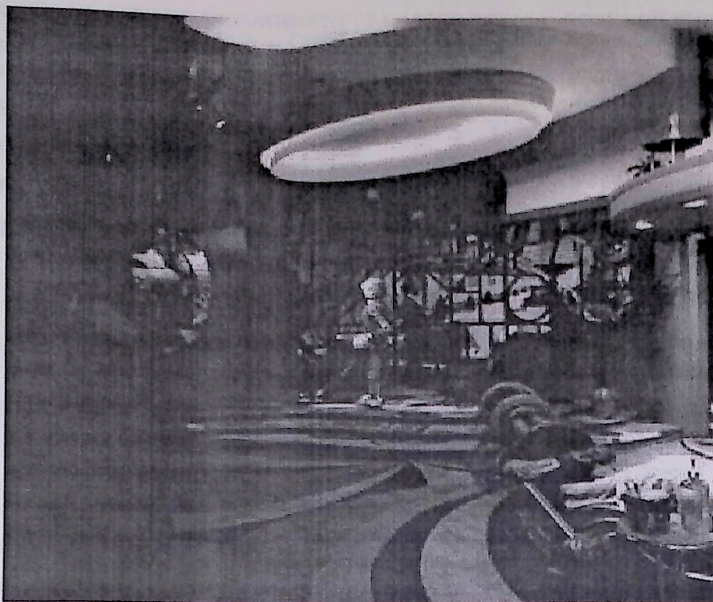
SHOW SETS : SIGNS & PIPE USEING BLACKLIGHT (1 SET)

ANIMATION

MINIMAL PROP ANIMATION USEING ELECTRIC MOTORS, NO FIGURE ANIMATION.

END SCENE 08

Scene : 07 (Art Deco)



SHOW SETS: ART DECO (3 SECTIONS).

PROPS: CHAIRS (2), VACUUM (1), ASH TRAY (1), GOLF BALL LIGHTER (1), SELTZER BOTTLES (4), SIDE TABLE (3), FEATHER DUSTER (1), FLOOR LAMP (1), ATMOSPHERIC MACHINE (1), WALL TABLE (1), TELEPHONE (1), TANNING MACHINE (1), ICE BUCKET (2), GLASSES (15), SHOWER FIXTURE (1), SOAP DISH (2), FAUCETS (2), BACK BRUSH (1), SLIPPERS (1 PAIR), PLASTIC BELL (

1), HAND MIRROR (1), FLOWER ARRANGEMENT (2), VIDEO SET (1), ROBE (1), SHOWER CURTAIN (1), STOOLS (2), SILVER SET (13 PCS.), CUPS & SAUCERS (6 EA.), FRUIT BOWL (1), PLATES (14), MIXER (1), POTS & PANS (6), SKILLETS (5), ROASTER (1), TOASTER (1), PITCHERS (3), BRUSHES (3), SALT & PEPPER SHAKERS (2 PR.), FRUIT JUICERS (2), WAFFLE IRON (1), COFFEE GRINDER (1), COOK BOOK (1), HOT PAD (2), DISH CLOTH (1), UTENSILS (19), BUTTER DISHES (2), FOOD PIECES (30).

SPECIAL LIGHTING F/X: AP - 31 (ROBOT) FLASHES.

SCENIC PAINT: FUTURE CITY MURAL (1).

ARTIFICIAL FOLIAGE: FERN & POTS (3).

ANIMATION

Animated Figure F-2 MAN STANDING AT WINDOW

FUNCTIONS: STATIC

POWER: N/A

Animated Figure F-3 SWEEPING ROBOT

FUNCTIONS: Head Turn, Forward and Backward

POWER: Pneumatic actuators, elec. controls

Animated Figure F-4 MAN IN BARBER CHAIR

FUNCTIONS: RIGHT WRIST TWIST, BARBER SHEARS, COMB, BRUSHES.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 5 GIRL IN BATH TUB

FUNCTIONS: HEAD TILT, EYE BLINK, RIGHT HAND/WRIST.

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure F- 6 KITCHEN ROBOT

FUNCTIONS: CLOCK HANDS, HEAD TURNS, ARM 1 - UP/DOWN, ARM 2 - SWEEPING, ARM 4 - DISH CLOTH ROTATING, ARM 6 - TEETERING STACK OF DISHES, ARM 7 - IN/OUT

POWER: PNEUMATIC ACTUATORS, ELEC. CONTROLS.

Animated Figure FA-3 CAT IN KITCHEN

FUNCTIONS: TAIL WAG, TONGUE.

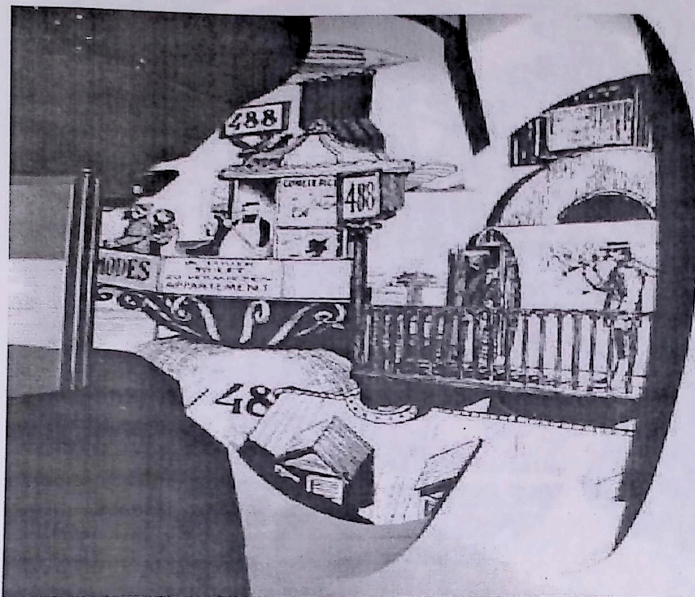
POWER: PNEUMATIC ACTUATORS

ANIMATED PROPS

BARBER SHEARS

COMB

Scene : 06 (Robida)



SHOW SETS : ROBIDA (1)

SHOW PROPS : PAINTED FLATS (?)

SPECIAL LIGHTING F/X : N/A

ARTIFICIAL FOLIAGE : N/A

ANIMATION

NO ANIMATED FIGURES

ANIMATED PROPS

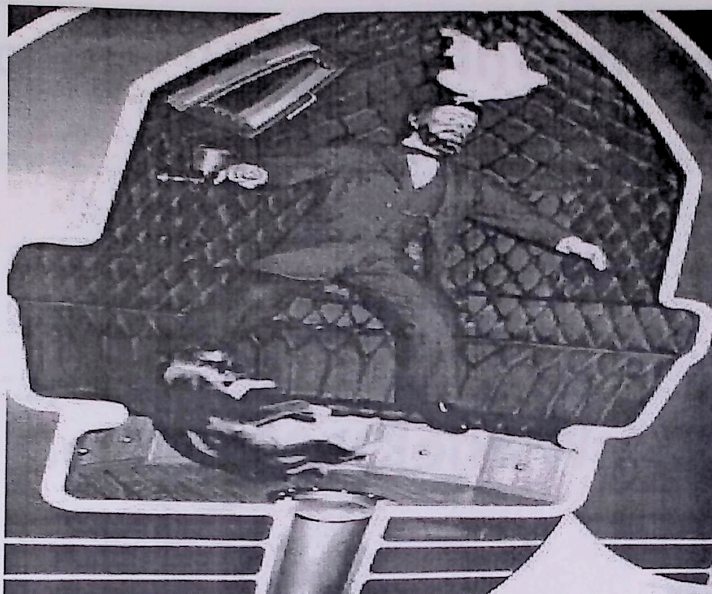
AP-1 : TURNTABLE (1)

AP-2 : AIRSHIP # 1 (1)

AP-3 : AIRSHIP # 3 (1)

END SCENE 06

Scene : 05 (Jules Vern)



SHOW SETS: JULES VERN (1)

SHOW PROPS: ROCKETS (2) , MOON (1) .

SPECIAL LIGHTING FIX: CLOUD 24" D CLOUD DRUM (2) .

ANIMATION

Animated Figure F-1 JULES VERN

FUNCTIONS: HEAD NOD, HEAD TURN, LEFT ARM OUT, RIGHT WRIST IN & OUT, TORSO SIDE BEND, LEFT KNEE BEND, EYE BLINK, BODY UP & DOWN, BODY SIDE SWAY, RIGHT LEG OUT.

POWER: PNEUMATIC ACTUATORS , ELEC. CONTROLS

Animated Figure FA-1 CHICKEN IN ROCKET

FUNCTIONS: BEAK, RIGHT WING OUT, LEFT WING OUT, RIGHT LEG FORWARD & BACK, LEFT LEG FORWARD & BACK.

POWER: PNEUMATIC ACTUATORS , ELEC. CONTROLS

Animated Figure FA-2 DOG IN ROCKET

FUNCTIONS: MOUTH, HEAD NOD & TURN, RIGHT EAR, BODY UP, DOWN & SIDeways, FRONT & BACK LEGS.

POWER: PNEUMATIC ACTUATORS , ELEC. CONTROLS

END SCENE 05

Scene : 04 (Early Inventors)

SPECIAL LIGHTING F/X : 10 X 10 D DISC 38" STD (4) , 5 X 5 D DISC 38" STD (2) , 5 X 5 R DISC 19" STD (1).

ANIMATION

NO ANIMATION , NO PROPS

END SCENE 04

Scene : 03 (Cloud Wall)

SPECIAL LIGHTING F/X : FIBER OPTICS (4)

ANIMATION

NO ANIMATION , NO PROPS

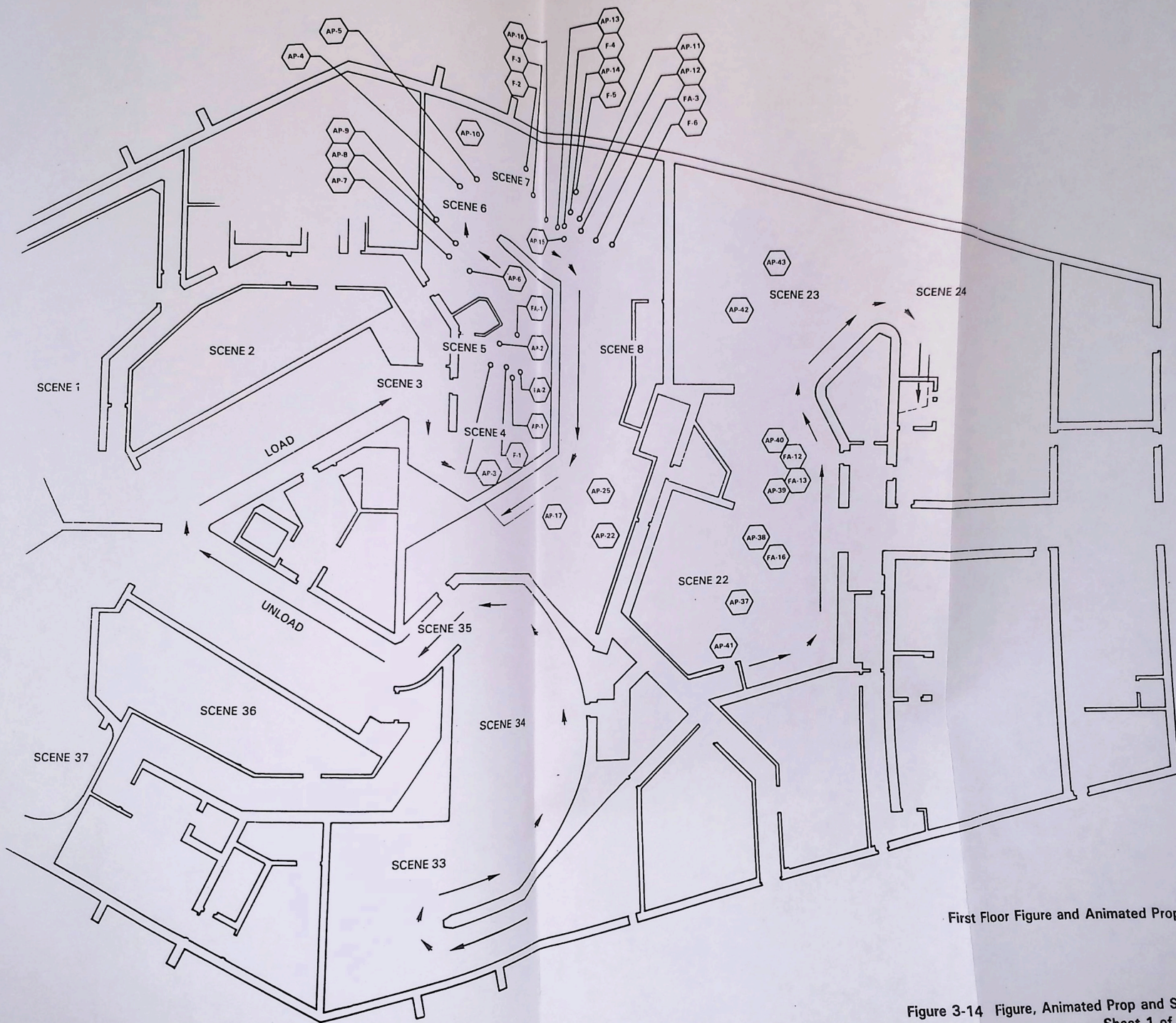
END SCENE 03

Scene : 01 (Futureport)

SPECIAL LIGHTING F/X : 5 X 5 TRAVEL POSTER

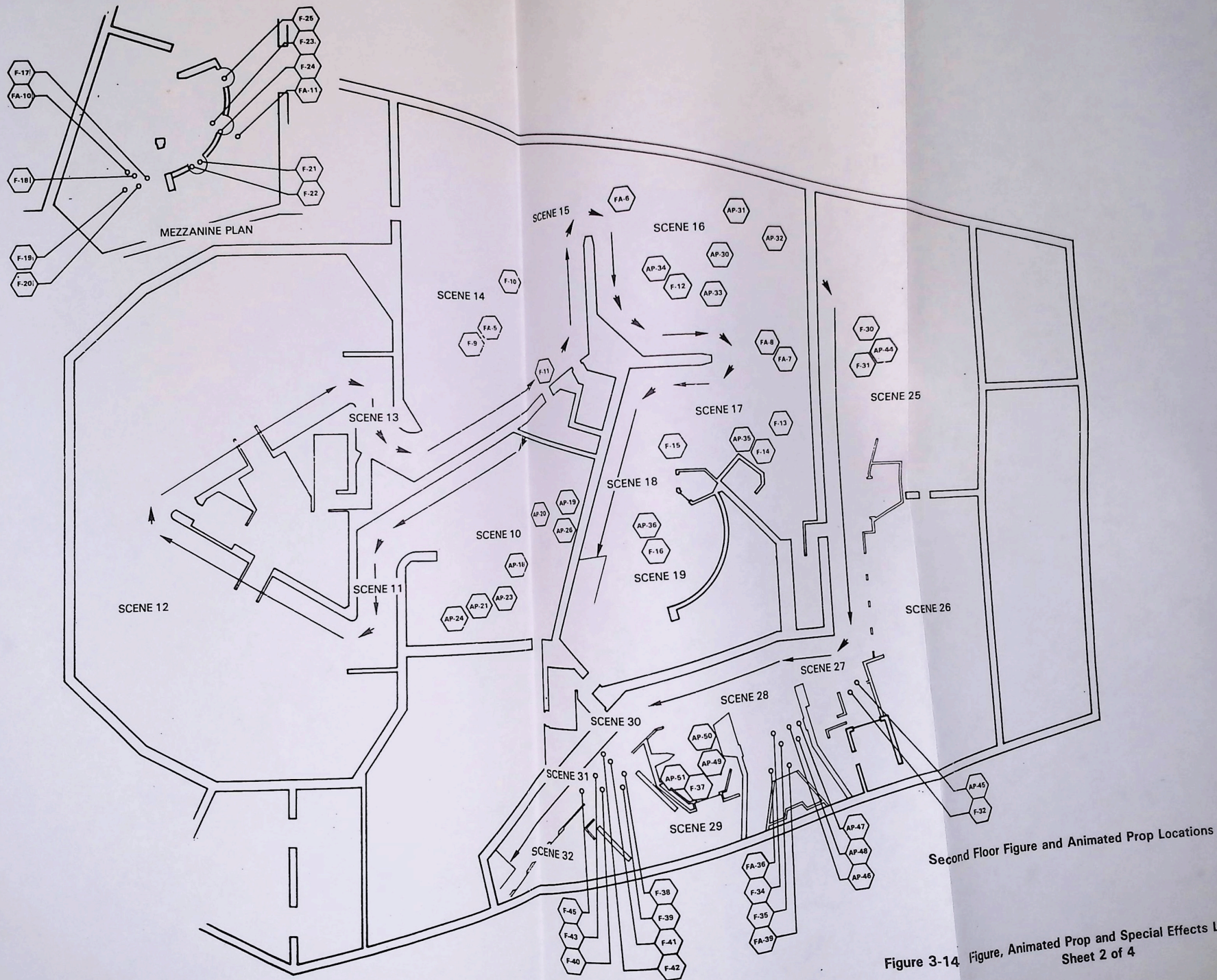
NO ANIMATION , NO PROPS

END SCENE 01



First Floor Figure and Animated Prop Locations

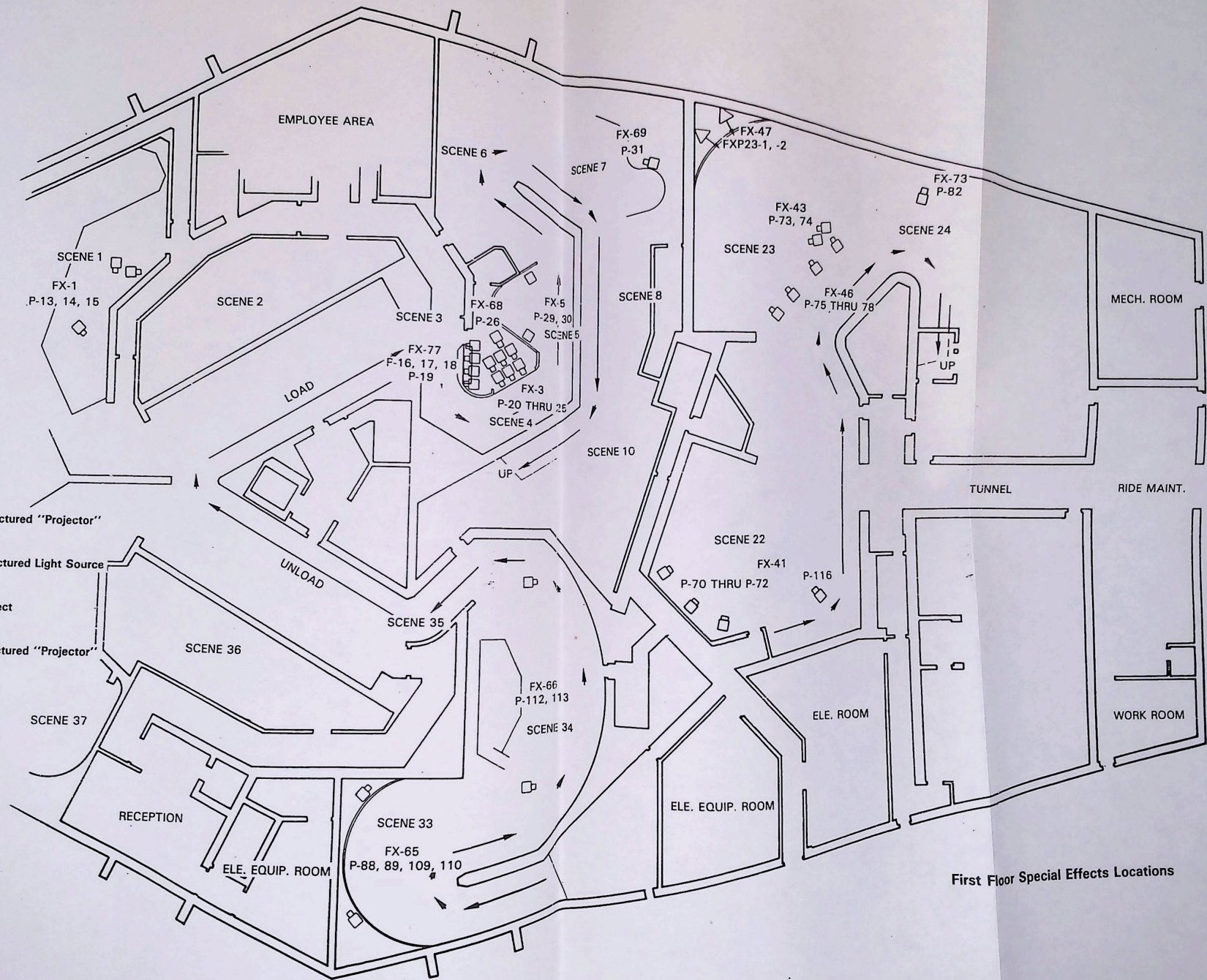
Figure 3-14 Figure, Animated Prop and Special Effects Location Diagram
Sheet 1 of 4







Second Floor Figure and Animated Prop Locations

Figure 3-14 Figure, Animated Prop and Special Effects Location Diagram
Sheet 2 of 4

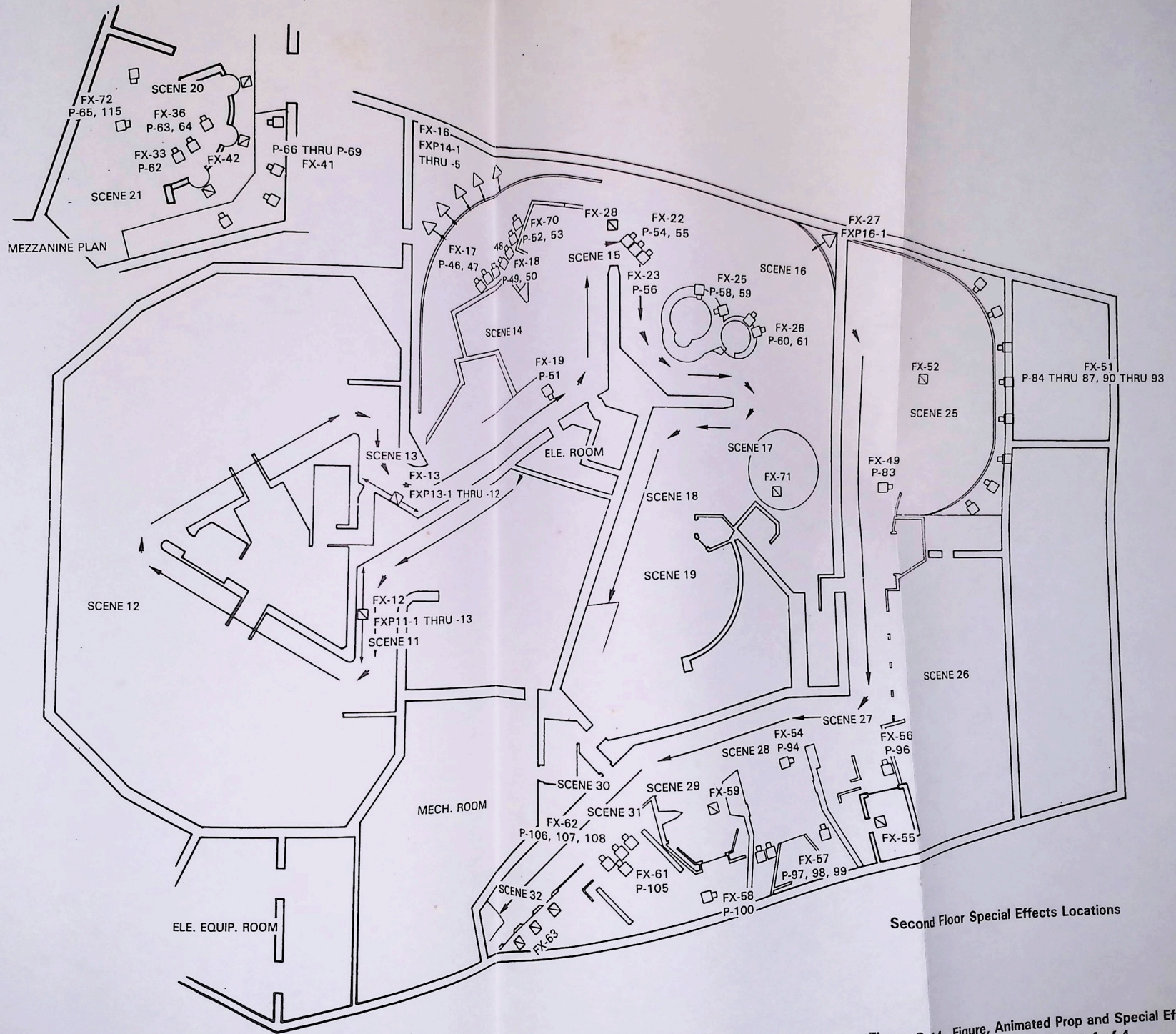
3-5E



-  Studio Manufactured "Projector"
-  Studio Manufactured Light Source
-  Non Studio Effect
-  MAPO Manufactured "Projector"

First Floor Special Effects Locations

Figure 3-14 Figure, Animated Prop and Special Effects Location Diagram
Sheet 3 of 4



Second Floor Special Effects Locations

Figure 3-14 Figure, Animated Prop and Special Effects Location Diagram
 Sheet 4 of 4

SECTION 4 SPECIAL EFFECTS

This section contains useful information about the special effects in the Horizons Pavilion. Because the special effects add a sense of "reality/believability" to each scene and, therefore, heighten the experience of the guests, it is important that all special effects equipment, both optical and mechanical, work at all times.

All projected special effects are unacceptable if:

1. Color is faded from the gel or color transparency
2. Artwork is dirty or damaged
3. Distortion or diffusion missing
4. Focus incorrect
5. Brightness incorrect from set level
6. Aiming incorrect
7. Lamp burned out
8. Flash rate set wrong
9. Accessory motors inoperative or wrong speed

Each effect is assigned an "FX- " number for identification purposes. The special effects are discussed in show-scene order.

The projector set-up for a specific effect is provided in this Section. For detailed information about a specific projector (for example: a 5x5, or a 10x10) and its accessories, refer to the projector manual distributed by the WDP Studio Machine Shop. The Mini Fiber Optic Illuminators are made by MAPO and are covered in this Section.

See Figure 3-14 in Section 3 for an equipment location plan to help you find the projectors, fog box, and other special effects equipment.

For fast reference see the back of this section:

| | |
|-----------|--------------------------------------|
| Table 4-1 | Artwork Replacement |
| Table 4-2 | Lamp Replacement |
| Table 4-3 | Sources for Uncommon Parts |
| Table 4-4 | List of WED Special Effects Drawings |

4.1 FX-1: TRAVEL POSTERS; SCENE 1.

4.1.1 DESCRIPTION. Creating travel posters that look like giant geodesic, kaleidoscopic spheres, images of futuristic living spaces are projected by HMI 5x5 (P-13, P-14, P-15) with accessories. Each "poster's" image is projected by a single projector and multiplied by mirrors: P-13 for the underwater poster, P-14 for the desert city poster, and P-15 for the outer space poster. All three projectors are located by the entrance/que area. The projectors are in show sync.

P-13 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 4.5" Buhl
Lens Sleeve
Condenser B (6"x12" F.L.)
P.S. (Ballast) HMI (Modified)

RP Screen: Size=7'5"w x 6'0"h; Throw=11'0"

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling) 2 reqd
(X-Y) Stage Assy (Program)
(X-Y) Stage - Elect Control Cab (4A)
Mode - (X-Y) Travel = 12"
" Oper - (Rate) Horz=1.5"/sec (Const)
" " (Rate) Vert=0-3"/sec (Var)
" Cable Assy (Controls to Proj) x 11"
Mirror (RP) Assy (4'6"w x 4'6"h)
Electrical 'J' Box (Hubbell #7594)

ARTWORK/MASK/GEL: see Table 4-1

6730-910661-1
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#271-020
6730-909784
6730-907675-2
6730-920839
Xetron#B1-1200/C
Refer to Table
4-3.

6730-910708-4
6730-920797-2
6730-908932-2
6730-910664
6730-921428

Ref.
Ref.
6730-921584
6730-910583
6730-909526-1

P-14 consists of:

MAIN ASSEMBLY

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 4.5" Buhl
Lens Sleeve
Condenser B (6"x12" F.L.)
P.S. (Ballast) HMI (Modified)

RP Screen: Size=7'5"w x 6'0"h; Throw=11'7"

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling) 2 reqd
(X-Y) Stage Assy (Program)
(X-Y) Stage - Elect Control Cab (4A)
Mode - (X-Y) Travel = 12"
" Oper - (Rate) Horz=1.5"/sec (Const)
" " (Rate) Vert=0-3"/sec (Var)
" Cable Assy (Controls to Proj) x 11"
Mirror (RP) Assy (7'6"w x 6'6"h)
Electrical 'J' Box (Hubbell #7594)

ARTWORK/MASK/GEL: see Table 4-1

6730-910661-2
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#271-020
6730-909784
6730-907675-2
6730-920839
Xetron#B1-1200/C
Refer to Table
4-3.

6730-910708-2
6730-920797-2
6730-908932-2
6730-910664
6730-921428

Ref.
Ref.
6730-921584
6730-910584-1
6730-909526-1

P-15 consists of:

MAIN ASSEMBLY

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 4.5" Buhl
Lens Sleeve
Condenser B (6"x12" F.L.)
P.S. (Ballast) HMI (Modified)

RP Screen: Size=7'5"w x 6'0"h; Throw=12'0"

6730-910661-3
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#271-020
6730-909784
6730-907675-2
6730-920839
Xetron#B1-1200/C
Refer to Table
4-3.

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling) 2 reqd
(X-Y) Stage Assy (Program)
(X-Y) Stage - Elect Control Cab (4A)
Mode - (X-Y) Travel = 12"
" Oper - (Rate) Horz=1.5"/sec (Const)
" " (Rate) Vert=0-3"/sec (Var)
" Cable Assy (Controls to Proj)
Mirror (RP) Assy (7'6"w x 6'6"h)
Electrical 'J' Box (Hubbell #7594)

6730-910708-5
6730-920797-2
6730-908932-2
6730-910664.
6730-921428
Ref.
Ref.
6730-921460
6730-910584-2
6730-909526-1

ARTWORK/MASK/GEL: see Table 4-1

4.1.2 THEORY OF OPERATION. Refer to the projector manual.

4.1.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.1.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.2 FX-77: FIBER OPTIC WALL; SCENE 3.

4.2.1 DESCRIPTION. The fiber optic wall creates a visual interpretation of time travel. It is created by three Large Disc Fiber Optic Illuminators (P-16, P-17, P-18) with indexing disc, one Xenon Fiber Optic Illuminator (P-19), and fiber optic displays. P-16, P-17, and P-18 form the changing color/clouds and P-19 provides the lightning. All four illuminators are located by the load area. The large disc fiber optic illuminators' indexing is in show sync to maintain the color change coordination.

P-16, P-17, and P-18 consist of:

| | |
|---|----------------|
| ASSEMBLY: Fiberoptics Illum Unit (Large Disc) | 6730-908940-39 |
| LAMP: 75 Watts TYPE: EYC (12 lamps) | |
| Electrical Panel | 6730-920911-33 |
| Spl Plug/Filter Panel | 6730-920913-3 |
| ACCESSORIES: | |
| 20" Disc Drive Unit - Indexing (3D) | Ref. |
| 20" Disc Drive Speed (0.25 RPM) | |
| 20" Disc Mtr Speed (RPM) | Ref. |
| Floor Stand (Part of Unit) | |
| Backplate Fiber I/F | Ref. |
| Bushing (Fiber) - 6 reqd | Ref. |
| Lamp Control - 6 SSR (6D): see below | Ref. |
| Power I/F Panel Distribution | 6730-921400 |
| Power Cable: | |
| P-16: (12c-#16) x 20' | 6730-921582 |
| P-17 and P-18: (12c-#16) x 6' | 6730-921401 |

This unit interfaces with multiple fiber bundles
ARTWORK/MASK/GEL: see Table 4-1

Dimmer Circuit Number:

P-16

SSR#1 = DS1, 2 (LD01-301-1)
SSR#2 = DS3, 4 (LD01-302-2)
SSR#3 = DS5, 6 (LD01-401-3)
SSR#4 = DS7, 8 (LD01-402-4)
SSR#5 = DS9, 10 (LD01-501-5)
SSR#6 = DS11, 12 (LD01-502-6)

P-17

SSR#1 = DS1, 2 (LD01-303-1)
SSR#2 = DS3, 4 (LD01-304-2)
SSR#3 = DS5, 6 (LD01-403-3)
SSR#4 = DS7, 8 (LD01-404-4)
SSR#5 = DS9, 10 (LD01-503-5)
SSR#6 = DS11, 12 (LD01-504-6)

P-18

SSR#1 = DS1, 2 (LD01-305-1)
SSR#2 = DS3, 4 (LD01-306-2)
SSR#3 = DS5, 6 (LD01-405-3)
SSR#4 = DS7, 8 (LD01-406-4)
SSR#5 = DS9, 10 (LD01-505-5)
SSR#6 = DS11, 12 (LD01-506-6)

P-19 consists of:

| | |
|---|-----------------|
| ASSEMBLY: Fiberoptics Unit (Xenon) | 6730-908131-13 |
| LAMP: 300 Watts TYPE: Xenon Lamp | ILC#LX300F |
| Lamp Holder | 6730-905082 |
| P.S. Unit (Xenon) | 6730-906960 |
| ACCESSORIES: | |
| Motor Drive Unit - Indexing (150 RPM) | 6730-902867-149 |
| Dual Optical Assy - (10.0 RPM) | 6730-909773 |
| " " Mirror Assy | Ref. |
| 2 Fiber Mounting Rings: 6.0" D | 6730-908168-3 |
| " " 8.0" D | 6730-908168-4 |
| Plate, Floor Mounting (Xen. Fib. Opt.) | 6730-908501 |
| Douser Assy. (Show Controls) - (1D) | Ref. |
| This Unit interfaces with Fiber Bundles | |
| ARTWORK/MASK/GEL: none | |

4.2.2 THEORY OF OPERATION. Refer to the projector manual.

4.2.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.2.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.3 FX-3: PARADE OF INVENTIONS; SCENE 4.

4.3.1 DESCRIPTION. The parade of inventions are three zones projected on an RP screen which is behind the cloud-shaped cut-out. Each zone has images of inventions drawn to look like wood block prints. In each of the three zones there is always an image cross-fading with another. A couple of images are always on the screen at any one time.

On and around the invention images, there is projected "rippling" or clouds (see FX-68, paragraph 4.4).

The images of inventions are created with four Incandescent 10 x 10 Projectors (P-20, P-21, P-22, P-23) and two Incandescent 5 x 5 Projectors (P-24, P-25). All of the projectors run continuously during the show day.

P-20 is the bottom unit for the left screen, the large flying craft. P-21 is the top unit for the left screen, the man in the feather flying machine. P-22 is the bottom unit for the center screen, the cannon. P-23 is the top unit for the center screen, the Verne bullets. P-24 is the bottom unit for the right screen, the man with the balloon/parachute. P-25 is the top unit for the right screen, the man with the birds.

P-20, P-21, P-22, and P-23 consist of:

MAIN ASSEMBLY:

P-20 and P-21
P-22 and P-23
ASSEMBLY: 10 x 10 Unit (Front Throw) - MIII
LAMP: 2000 Watts TYPE: Tungsten Halogen
LENS:
P-20 and P-21: 14" TYPE: Buhl
P-22 and P-23: 12.5" TYPE: Buhl
10 x 10 Lamp/ Blower Module - MIII

6730-910904
6730-910905
6730-910906
6730-904676
6240-594504

#834-140
#834-125
6730-904689

ACCESSORIES:

Stand (Projector):
P-20 and P-21 - Main Frame
P-22 and P-23 - Main Frame
*38"D Disc Assy - Constant w/ Ripple
" " - Speed (6.0 RPM) CW (@ Rear)
" " - Drive (Coupled w/ Shaft)

6730-910905
6730-910906
6730-910927
Ref.
Ref.

Mirror Assy.:

P-20 and P-21 (10" w x 10" h) @45 degree
P-22 and P-23 - not required

6730-907776

Man. Dimmer - MIII

6730-904670

Gel Holder

*Disc Unit Loc. (8" - 10" Front of Proj (Used w/ P-20 and P-21)
ARTWORK/MASK/GEL: see Table 4-1

Ref.

P-24 and P-25 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 5 x 5 Unit (Front Throw) - MIII

LAMP: 2000 Watts TYPE: Tungsten Halogen

LENS: 6.5" TYPE: Beseler

Condenser A(6" x 9" F.L.

10 x 10 Lamp/ Blower Module - MIII

ACCESSORIES:

Stand (Projector):

*38"D Disc Assy - Constant w/ Ripple

" " - Speed (6.0 RPM) CW (@ Rear)

" " - Drive (Coupled w/ Shaft)

" " - Drive Mtr.(1/12 HP-9.4 RPM)

" " - Drive Mtr.(Elect. Term. Box)

" " - w/Hubbell #7596 I/F

Fan Unit (Artwork Cooling)

Electrical 'J' Box (Hubbell #7596)

Slide Holder (Dual)

Man. Dimmer - MIII

Gel Holder

*Disc Unit Loc. (8" - 10" Front of Proj (Used w/ P-24 and P-25)

ARTWORK/MASK/GEL: see Table 4-1

6730-910904

6730-910907

6730-907671

6730-910109

6730-594504

#BS1.1-34 (SK)

6730-907675-1

6730-904689

6730-910907

6730-910927

Ref.

Ref.

Ref.

Bodine (Ref.)

Ref.

6730-908932-1

6730-909526-1

6730-908618

6730-904670

6730-907889-1

4.3.2 THEORY OF OPERATION. The projectors for each zone are paired. Each pair has a rotating disc in front of it which either blocks, distorts, or passes one of the projector's image so that one image fades in as the other fades out. All pairs are mechanically synced so that there will always be a couple of images visible at any one time.

For information about the projectors and their accessories, refer to the projector manual.

4.3.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.3.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.4 FX-68: MOVING CLOUDS; SCENE 4.

4.4.1 DESCRIPTION. Also part of the parade of inventions (see FX-3), this effect provides the "clouds" or "ripples" that add to the visual interpretation of looking back in time. They are created with one Incandescent 5 x 5 Projector (P-26) and accessories. P-26 is the top unit for the center screen. It runs continuously during the show day.

P-26 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 5 x 5 Unit Front Throw

LAMP: 2000 Watts TYPE: Tungsten Halogen
LENS: 8.5" TYPE: Buhl
Condenser B(6"x9/12" F.L.)
10 x 10 Lamp/Blower Module-MIII

ACCESSORIES:

Stand (Projector) - Main Frame
19" Rim Disc (Single)-Constant
" " " - Speed (.75 RPM) CW (Rear)
Man. Dimmer Unit - MIII
Fan Unit (Artwork Cooling)
Electrical 'J' Box (Hubbell #7594)
Beam Diverting Mirror-Adj. for 45 degree
Mirror (9'6"w x 10'0"h)
Gel Holder

ARTWORK/MASK/GEL: see Table 4-1

6730-910904
6730-910906
6730-907671
6730-900110
6240-594504
#834-85
6730-907675-2
6730-904689

6730-910906
6730-907840-18
Ref.
6730-904670
6730-908932-1
6730-909526-1
6730-909848-3
by WED
Ref.

4.4.2 THEORY OF OPERATION. Refer to the projector manual.

4.4.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.4.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.5 FX-5: MOVING CLOUDS; SCENE 5.

4.5.1 DESCRIPTION. This effect simulates movement of the space craft by projecting clouds rolling down the "wall." They are created with two 24" Cloud Drums (P-29, P-30). P-29 is located on the left side and P-30 is located on the right side. The cloud drums run continuously during the show day.

P-29 and P-30 consist of:

| | |
|--|---------------|
| ASSEMBLY: Cloud Drum-24" D. (Sp1) | 6730-910751 |
| Lamp Assembly | 6730-910675 |
| LAMP: 75 Watts TYPE: Quartz (28v) | G.E. #1982 |
| ACCESSORIES: | |
| 24" D. Drum-(Constant)w/Blower | Ref. |
| " " -Drum Speed (6.7 RPM)CCW | Ref. |
| " " -Mtr.(7.0 RPM)CCW | Ref. |
| " " -Elect. Control Box | 6730-921499 |
| " " -Cable Assy.-(1)Reqd(Lamp) | 6730-921500-1 |
| " " -Cable Assy.-(2)Reqd(Mtr/Fan) | 6730-921500-2 |
| Stand (Projector) - (Part of Assembly) | 6730-910744 |

ARTWORK/MASK/GEL: see Table 4-1

4.5.2 THEORY OF OPERATION. Refer to the projector manual.

4.5.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.5.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.6 FX-69: ROBOT FLASHES; SCENE 7.

4.6.1 DESCRIPTION. The flashes simulate electrical sparks around the head and eyes of the robot as if it had overloaded and short-circuited. They are created with one Xenon Fiber Optic Illuminator (P-31) and fiber optic displays. The illuminator is located beneath the set. It runs continuously during the show day.

P-31 consists of:

| | |
|--|-----------------|
| ASSEMBLY: Fiberoptics Unit (Xenon) | 6730-908131-12 |
| Lamp Holder | 6730-905082 |
| LAMP: 300 Watts TYPE: Xenon | ILC#LX300F |
| ACCESSORIES: | |
| (1) Motor Drive Unit - Constant (52 RPM) | 6730-902867-112 |
| Dual Optical Assy. - (4.0 RPM) | 6730-909773 |
| " " Mirror Assy. | Ref. |
| (2) Fiber Mounting Rings (4.0" D) | 6730-908168-1 |
| (5.0" D) | 6730-908168-2 |
| Plate, Floor Mounting (Xen. Fib. Opt.) | 6730-908501 |

Note: This unit interfaces with fiber bundles
ARTWORK/MASK/GEL: none

4.6.2 THEORY OF OPERATION. Refer to the projector manual.

4.6.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.6.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.7 FX-12: LUMIA; SCENE 11.

4.7.1 DESCRIPTION. The lumia provides a transition area from one time period to another. It uses Mini-Moles with a motor, shaft, and two wheels on the shaft - one with radial stripes and one with colors (FXP11-1 thru FXP11-13).

Each unit also has a motor/lamp monitor that assumes if light is pulsating at a regular rate, the lamp is on and the motor is turning the wheels.

For more information, refer to Figure 4-1.

ARTWORK: see Table 4-1

4.8 FX-13: LUMIA; SCENE 13.

For information about FXP13-1 thru FXP13-14, see FX-12, paragraph 4.7.

4.9 FX-16: CITY LIGHTS IN THE DISTANCE; SCENE 14.

4.9.1 DESCRIPTION. This effect provides twinkling lights in the distant city to give the scenic wall animation. They are created with five Mini Fiber Optic Illuminators (FXP14-1, FXP14-2, FXP14-3, FXP14-4, FXP14-5) with constant run disc drives and fiber optic displays. The illuminators run continuously during the show day.

FXP14-1, FXP14-2, FXP14-3, FXP14-4, and FXP14-5 consist of:

ASSEMBLY: Mini Fiber Optic Illuminator, Type 1 MAPO A7-90-A598-2
 LAMP: G.E. 2604-X
 ACCESSORIES:
 Rotating Disc
 ARTWORK: see Table 4-1

4.9.2 PREVENTIVE MAINTENANCE. Preventive maintenance procedures are listed as follows.

PREVENTIVE MAINTENANCE SERVICE SCHEDULE

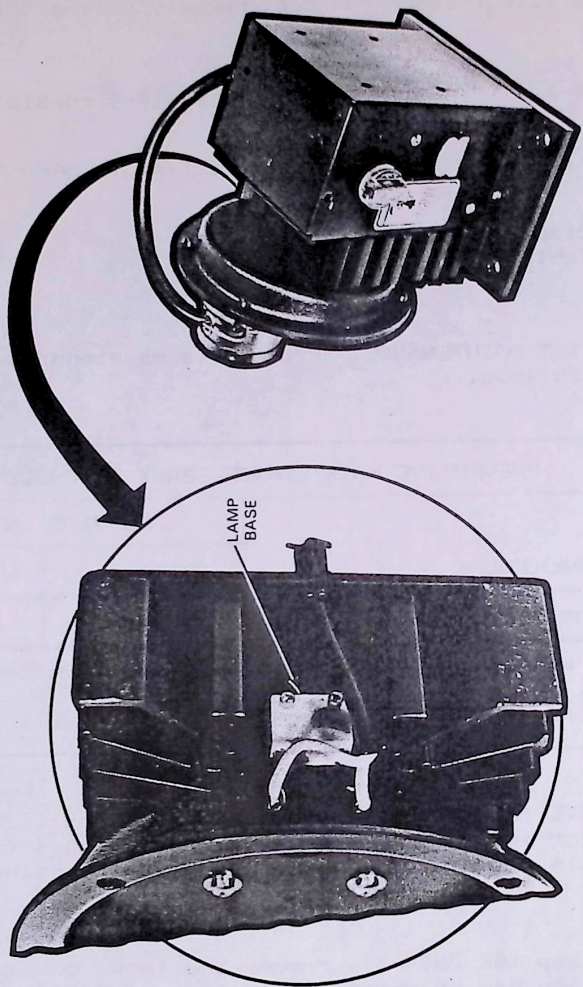
| PROCEDURE | SERVICE INTERVAL* | | | | | | |
|----------------------|-------------------|---|---|---|---|----|---|
| | REF** | D | W | M | Q | SA | A |
| 1. Replace the lamp. | Fig 4-2 | | | | | | X |

*D=Daily, W=Weekly, M=Monthly, Q=Quarterly, SA=Semi-annually, A=Annually
 **See referenced paragraph or figure for details

4.9.3 CORRECTIVE MAINTENANCE (Refer to Figure 4-2). The Mini Fiber Optic Illuminator is a small light source unit for a fiber optic display. In this application it has a constant running twinkle disc.

To change the lamp (GE 2604-X), remove the lamp socket from the outside. The lamp has an expected lifetime of 8000 hours.

FACILITY



R543-008

Figure 4-2 Mini Fiber Optic Illuminator
Sheet 1 of 8
4-14

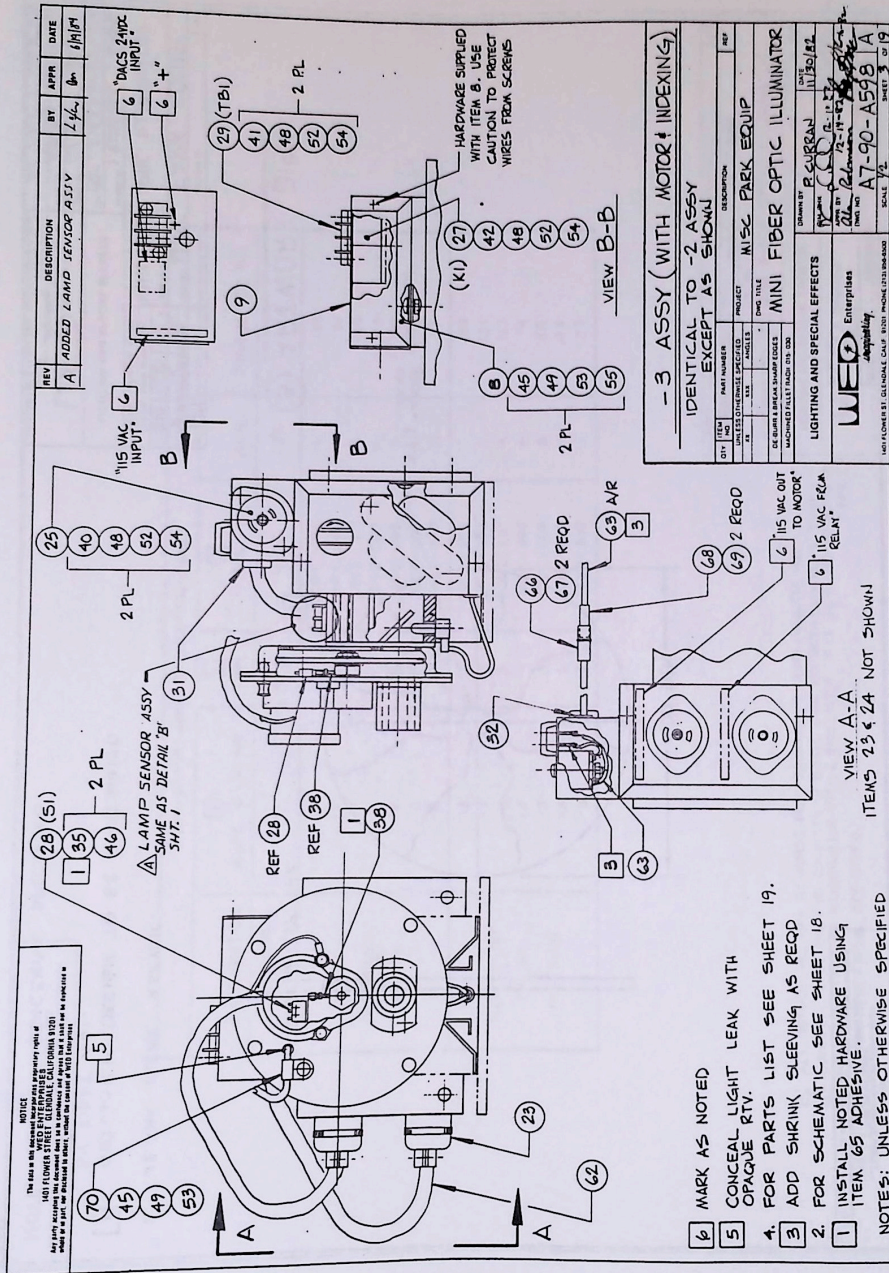
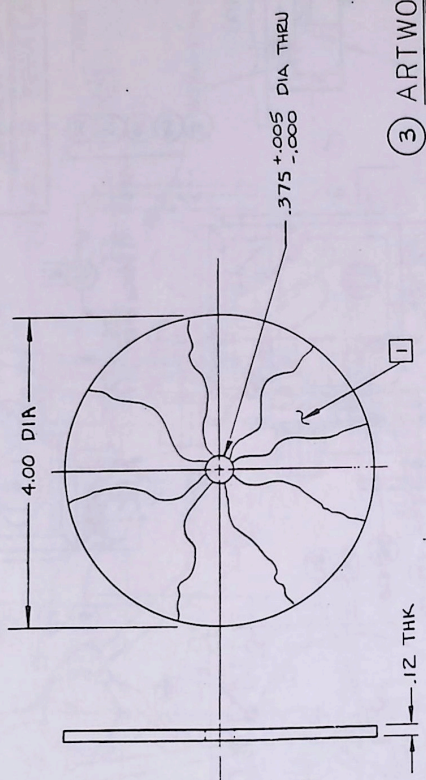


Figure 4-2 Mini Fiber Optic Illuminator
Sheet 4 of 8

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| | | | | |
|-----|-------------|----|------|------|
| REV | DESCRIPTION | BY | APPR | DATE |
|-----|-------------|----|------|------|



③ ARTWORK DISK

2. .12 THK CLEAR ACRYLIC.

① ARTWORK DESIGN TO BE DETERMINED BY DEPT 4-31.

NOTES: UNLESS OTHERWISE SPECIFIED

| | | | | | | | |
|------------------------------|--|---|--|------------------------------|--|---------------|--|
| CITY | | STATE | | COUNTRY | | REV | |
| .030 | | .010 | | .7 | | .1 | |
| MATERIAL | | PROJECT | | DESCRIPTION | | DATE | |
| DE BUREAU LERAGE SHARP DICES | | MISC. PARK EQUIP. | | MINI FIBER OPTIC ILLUMINATOR | | 8-10-82 | |
| MATERIAL SPEC. (SEE 211-20) | | DWG. TITLE | | DRAWN BY | | DATE | |
| | | MINI FIBER OPTIC ILLUMINATOR | | J. RUSSELL | | 8-10-82 | |
| | | LIGHTING AND SPECIAL EFFECTS | | CHECKED BY | | DATE | |
| | | WED Enterprises | | BY | | DATE | |
| | | Applying, | | A7-90-AS9B | | A | |
| | | 100 FLOWER ST. GLENDALE CALIF. 91201 (213) 846-0000 | | SCALE | | SHEET 9 OF 19 | |

Figure 4-2 Mini Fiber Optic Illuminator
 Sheet 5 of 8
 4-18

REVISIONS
 The user is to be responsible for the accuracy of the information contained in this drawing. It is the responsibility of the user to ensure that the information is current and accurate. The user is to be responsible for the accuracy of the information contained in this drawing. It is the responsibility of the user to ensure that the information is current and accurate.

| REV | DESCRIPTION | BY | APPR | DATE |
|-----|-------------|----|------|------|
|-----|-------------|----|------|------|

ILLUMINATOR ASSY TABULATION CHART

| CONFIGURATION | [1] ASSY. DASH NO. | [1] TYPE | [2] MOTOR P/U | RPM | TORQUE (OZ IN.) |
|-----------------------------------|--------------------|----------|---------------|-----|-----------------|
| ILLUMINATOR ONLY | -1 | N/A | N/A | N/A | N/A |
| ILLUMINATOR WITH MOTOR | -2 | 1 | 3002-001 | 1 | 150 |
| | -2 | 2 | 3002-003 | 2 | 131 |
| | -2 | 3 | 3002-005 | 4 | 110 |
| | -2 | 4 | 3002-007 | 6 | 74 |
| | -2 | 5 | 3002-008 | 8 | 55 |
| | -2 | 6 | 3002-009 | 10 | 44 |
| | -2 | 7 | 3002-010 | 12 | 37 |
| ILLUMINATOR WITH MOTOR & INDEXING | -3 | 1 | 3002-001 | 1 | 150 |
| | -3 | 2 | 3002-003 | 2 | 131 |
| | -3 | 3 | 3002-005 | 4 | 110 |
| | -3 | 4 | 3002-007 | 6 | 74 |
| | -3 | 5 | 3002-008 | 8 | 55 |
| | -3 | 6 | 3002-009 | 10 | 44 |
| | -3 | 7 | 3002-010 | 12 | 37 |

[2] ALL MOTORS ARE MFG BY HURST AND PROCURABLE FROM MINARIK INC.
 [1] COMPLETE ASSY PART NO. CONSISTS OF BASIC DNG. NO. WITH DASH NO. TYPE :
 e.g. TO SPECIFY AN ILLUMINATOR WITH 2 RPM MOTOR, PART NO. IS AT-90-A598-2,
 TYPE 2.

NOTES : UNLESS OTHERWISE SPECIFIED:

| | | | |
|------|-------|----------------------------|-------------------|
| CITY | STATE | PART NUMBER | DESCRIPTION |
| | | UNLESS OTHERWISE SPECIFIED | MISC. PARK EQUIP. |
| 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | 32 |
| 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 |
| 45 | 46 | 47 | 48 |
| 49 | 50 | 51 | 52 |
| 53 | 54 | 55 | 56 |
| 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 |
| 65 | 66 | 67 | 68 |
| 69 | 70 | 71 | 72 |
| 73 | 74 | 75 | 76 |
| 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 |
| 85 | 86 | 87 | 88 |
| 89 | 90 | 91 | 92 |
| 93 | 94 | 95 | 96 |
| 97 | 98 | 99 | 100 |
| 101 | 102 | 103 | 104 |
| 105 | 106 | 107 | 108 |
| 109 | 110 | 111 | 112 |
| 113 | 114 | 115 | 116 |
| 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 |
| 125 | 126 | 127 | 128 |
| 129 | 130 | 131 | 132 |
| 133 | 134 | 135 | 136 |
| 137 | 138 | 139 | 140 |
| 141 | 142 | 143 | 144 |
| 145 | 146 | 147 | 148 |
| 149 | 150 | 151 | 152 |
| 153 | 154 | 155 | 156 |
| 157 | 158 | 159 | 160 |
| 161 | 162 | 163 | 164 |
| 165 | 166 | 167 | 168 |
| 169 | 170 | 171 | 172 |
| 173 | 174 | 175 | 176 |
| 177 | 178 | 179 | 180 |
| 181 | 182 | 183 | 184 |
| 185 | 186 | 187 | 188 |
| 189 | 190 | 191 | 192 |
| 193 | 194 | 195 | 196 |
| 197 | 198 | 199 | 200 |
| 201 | 202 | 203 | 204 |
| 205 | 206 | 207 | 208 |
| 209 | 210 | 211 | 212 |
| 213 | 214 | 215 | 216 |
| 217 | 218 | 219 | 220 |
| 221 | 222 | 223 | 224 |
| 225 | 226 | 227 | 228 |
| 229 | 230 | 231 | 232 |
| 233 | 234 | 235 | 236 |
| 237 | 238 | 239 | 240 |
| 241 | 242 | 243 | 244 |
| 245 | 246 | 247 | 248 |
| 249 | 250 | 251 | 252 |
| 253 | 254 | 255 | 256 |
| 257 | 258 | 259 | 260 |
| 261 | 262 | 263 | 264 |
| 265 | 266 | 267 | 268 |
| 269 | 270 | 271 | 272 |
| 273 | 274 | 275 | 276 |
| 277 | 278 | 279 | 280 |
| 281 | 282 | 283 | 284 |
| 285 | 286 | 287 | 288 |
| 289 | 290 | 291 | 292 |
| 293 | 294 | 295 | 296 |
| 297 | 298 | 299 | 300 |
| 301 | 302 | 303 | 304 |
| 305 | 306 | 307 | 308 |
| 309 | 310 | 311 | 312 |
| 313 | 314 | 315 | 316 |
| 317 | 318 | 319 | 320 |
| 321 | 322 | 323 | 324 |
| 325 | 326 | 327 | 328 |
| 329 | 330 | 331 | 332 |
| 333 | 334 | 335 | 336 |
| 337 | 338 | 339 | 340 |
| 341 | 342 | 343 | 344 |
| 345 | 346 | 347 | 348 |
| 349 | 350 | 351 | 352 |
| 353 | 354 | 355 | 356 |
| 357 | 358 | 359 | 360 |
| 361 | 362 | 363 | 364 |
| 365 | 366 | 367 | 368 |
| 369 | 370 | 371 | 372 |
| 373 | 374 | 375 | 376 |
| 377 | 378 | 379 | 380 |
| 381 | 382 | 383 | 384 |
| 385 | 386 | 387 | 388 |
| 389 | 390 | 391 | 392 |
| 393 | 394 | 395 | 396 |
| 397 | 398 | 399 | 400 |
| 401 | 402 | 403 | 404 |
| 405 | 406 | 407 | 408 |
| 409 | 410 | 411 | 412 |
| 413 | 414 | 415 | 416 |
| 417 | 418 | 419 | 420 |
| 421 | 422 | 423 | 424 |
| 425 | 426 | 427 | 428 |
| 429 | 430 | 431 | 432 |
| 433 | 434 | 435 | 436 |
| 437 | 438 | 439 | 440 |
| 441 | 442 | 443 | 444 |
| 445 | 446 | 447 | 448 |
| 449 | 450 | 451 | 452 |
| 453 | 454 | 455 | 456 |
| 457 | 458 | 459 | 460 |
| 461 | 462 | 463 | 464 |
| 465 | 466 | 467 | 468 |
| 469 | 470 | 471 | 472 |
| 473 | 474 | 475 | 476 |
| 477 | 478 | 479 | 480 |
| 481 | 482 | 483 | 484 |
| 485 | 486 | 487 | 488 |
| 489 | 490 | 491 | 492 |
| 493 | 494 | 495 | 496 |
| 497 | 498 | 499 | 500 |
| 501 | 502 | 503 | 504 |
| 505 | 506 | 507 | 508 |
| 509 | 510 | 511 | 512 |
| 513 | 514 | 515 | 516 |
| 517 | 518 | 519 | 520 |
| 521 | 522 | 523 | 524 |
| 525 | 526 | 527 | 528 |
| 529 | 530 | 531 | 532 |
| 533 | 534 | 535 | 536 |
| 537 | 538 | 539 | 540 |
| 541 | 542 | 543 | 544 |
| 545 | 546 | 547 | 548 |
| 549 | 550 | 551 | 552 |
| 553 | 554 | 555 | 556 |
| 557 | 558 | 559 | 560 |
| 561 | 562 | 563 | 564 |
| 565 | 566 | 567 | 568 |
| 569 | 570 | 571 | 572 |
| 573 | 574 | 575 | 576 |
| 577 | 578 | 579 | 580 |
| 581 | 582 | 583 | 584 |
| 585 | 586 | 587 | 588 |
| 589 | 590 | 591 | 592 |
| 593 | 594 | 595 | 596 |
| 597 | 598 | 599 | 600 |
| 601 | 602 | 603 | 604 |
| 605 | 606 | 607 | 608 |
| 609 | 610 | 611 | 612 |
| 613 | 614 | 615 | 616 |
| 617 | 618 | 619 | 620 |
| 621 | 622 | 623 | 624 |
| 625 | 626 | 627 | 628 |
| 629 | 630 | 631 | 632 |
| 633 | 634 | 635 | 636 |
| 637 | 638 | 639 | 640 |
| 641 | 642 | 643 | 644 |
| 645 | 646 | 647 | 648 |
| 649 | 650 | 651 | 652 |
| 653 | 654 | 655 | 656 |
| 657 | 658 | 659 | 660 |
| 661 | 662 | 663 | 664 |
| 665 | 666 | 667 | 668 |
| 669 | 670 | 671 | 672 |
| 673 | 674 | 675 | 676 |
| 677 | 678 | 679 | 680 |
| 681 | 682 | 683 | 684 |
| 685 | 686 | 687 | 688 |
| 689 | 690 | 691 | 692 |
| 693 | 694 | 695 | 696 |
| 697 | 698 | 699 | 700 |
| 701 | 702 | 703 | 704 |
| 705 | 706 | 707 | 708 |
| 709 | 710 | 711 | 712 |
| 713 | 714 | 715 | 716 |
| 717 | 718 | 719 | 720 |
| 721 | 722 | 723 | 724 |
| 725 | 726 | 727 | 728 |
| 729 | 730 | 731 | 732 |
| 733 | 734 | 735 | 736 |
| 737 | 738 | 739 | 740 |
| 741 | 742 | 743 | 744 |
| 745 | 746 | 747 | 748 |
| 749 | 750 | 751 | 752 |
| 753 | 754 | 755 | 756 |
| 757 | 758 | 759 | 760 |
| 761 | 762 | 763 | 764 |
| 765 | 766 | 767 | 768 |
| 769 | 770 | 771 | 772 |
| 773 | 774 | 775 | 776 |
| 777 | 778 | 779 | 780 |
| 781 | 782 | 783 | 784 |
| 785 | 786 | 787 | 788 |
| 789 | 790 | 791 | 792 |
| 793 | 794 | 795 | 796 |
| 797 | 798 | 799 | 800 |
| 801 | 802 | 803 | 804 |
| 805 | 806 | 807 | 808 |
| 809 | 810 | 811 | 812 |
| 813 | 814 | 815 | 816 |
| 817 | 818 | 819 | 820 |
| 821 | 822 | 823 | 824 |
| 825 | 826 | 827 | 828 |
| 829 | 830 | 831 | 832 |
| 833 | 834 | 835 | 836 |
| 837 | 838 | 839 | 840 |
| 841 | 842 | 843 | 844 |
| 845 | 846 | 847 | 848 |
| 849 | 850 | 851 | 852 |
| 853 | 854 | 855 | 856 |
| 857 | 858 | 859 | 860 |
| 861 | 862 | 863 | 864 |
| 865 | 866 | 867 | 868 |
| 869 | 870 | 871 | 872 |
| 873 | 874 | 875 | 876 |
| 877 | 878 | 879 | 880 |
| 881 | 882 | 883 | 884 |
| 885 | 886 | 887 | 888 |
| 889 | 890 | 891 | 892 |
| 893 | 894 | 895 | 896 |
| 897 | 898 | 899 | 900 |
| 901 | 902 | 903 | 904 |
| 905 | 906 | 907 | 908 |
| 909 | 910 | 911 | 912 |
| 913 | 914 | 915 | 916 |
| 917 | 918 | 919 | 920 |
| 921 | 922 | 923 | 924 |
| 925 | 926 | 927 | 928 |
| 929 | 930 | 931 | 932 |
| 933 | 934 | 935 | 936 |
| 937 | 938 | 939 | 940 |
| 941 | 942 | 943 | 944 |
| 945 | 946 | 947 | 948 |
| 949 | 950 | 951 | 952 |
| 953 | 954 | 955 | 956 |
| 957 | 958 | 959 | 960 |
| 961 | 962 | 963 | 964 |
| 965 | 966 | 967 | 968 |
| 969 | 970 | 971 | 972 |
| 973 | 974 | 975 | 976 |
| 977 | 978 | 979 | 980 |
| 981 | 982 | 983 | 984 |
| 985 | 986 | 987 | 988 |
| 989 | 990 | 991 | 992 |
| 993 | 994 | 995 | 996 |
| 997 | 998 | 999 | 1000 |

UNLESS OTHERWISE SPECIFIED
 MISC. PARK EQUIP.
 MINI FIBER OPTIC ILLUMINATOR
 LIGHTING AND SPECIAL EFFECTS
 WLED Enterprises
 151 FLOWER ST. GLENDALE CALIF. 91201 PHONE (626) 282-8800
 SCALE: NONE
 SHEET 17 OF 19

Figure 4-2 Mini Fiber Optic Illuminator Sheet 6 of 8

NOTICE
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 1001 FLORENCE STREET, BURLINGAME, CALIFORNIA
 94010
 ANY REPRODUCTION OF THIS DRAWING WITHOUT THE WRITTEN
 PERMISSION OF WED ENTERPRISES, INC. IS STRICTLY PROHIBITED.

| QTY | REV | DESCRIPTION | DATE |
|-----|-----|---------------------------------------|------|
| 1 | 1 | GLUE, SUPER | |
| 1 | 1 | TERMINAL BOARD (KULKA) | |
| 1 | 1 | PHOTO - DARLINGTON (G-E) | |
| 1 | 1 | LOCK WASHER, INT TOOTH, 3/8 DIA | |
| 1 | 1 | CABLE CLAMP (H.H. SMITH) | |
| 1 | 1 | CONTACT, PIN (AMP) | |
| 1 | 1 | CONNECTOR, PLUG (AMP) | |
| 1 | 1 | CONTACT, SOCKET (AMP) | |
| 1 | 1 | CONNECTOR, RECPT (AMP) | |
| 1 | 1 | *LOCTITE® COMPOUND (LOCTITE) | |
| 1 | 1 | HEAT SINK COMPOUND (GC CO.) | |
| 1 | 1 | WIRE ELECT. 18 GAGE | |
| 1 | 1 | LINE CORD, SJO-5 COND, 18 GA (BELDEN) | |
| 1 | 1 | TERM #8 RING, 18 AWG | |
| 1 | 1 | TERM #6 RING, INSUL, 18 AWG | |
| 1 | 1 | TERM #4 RING, INSUL, 18 AWG | |
| 1 | 1 | TERM #4 FORK, INSUL, 18 AWG | |
| 1 | 1 | WASHER, FLAT THIN, 3/8" | |
| 1 | 1 | NUT, HEX, 8-32 | |
| 1 | 1 | NUT, HEX, 6-32 | |
| 1 | 1 | WASHER, LOCK, #8 | |
| 1 | 1 | WASHER, LOCK, #6 | |
| 1 | 1 | WASHER, LOCK, #4 | |
| 1 | 1 | WASHER, LOCK, #2 | |
| 1 | 1 | WASHER, FLAT, #8 | |
| 1 | 1 | WASHER, FLAT, #6 | |
| 1 | 1 | WASHER, FLAT, #4 | |
| 1 | 1 | WASHER, FLAT, #2 | |
| 1 | 1 | SCREW, BHSCS, 8-32 x .38 LG | |
| 1 | 1 | SCREW, BHSCS, 8-32 x .25 LG, | |
| 1 | 1 | SET SCREW, SOC. HD, 6-32 x .190 LG, | |
| 1 | 1 | SCREW, PAN HD, 6-32 x .50 LG, | |
| 1 | 1 | SCREW, BHSCS, 6-32 x .50 LG, | |
| 1 | 1 | SCREW, BHSCS, 6-32 x .38 LG | |
| 1 | 1 | SET SCREW, SOC. HD, 4-40 x .25 LG, | |
| 1 | 1 | SCREW, FIL HD, 4-40 x .38 LG, | |
| 1 | 1 | SCREW, BHSCS, 4-40 x .38 LG, | |
| 1 | 1 | SCREW, BHSCS, 2-56 x .62 LG, | |
| 1 | 1 | SCREW, PAN HD, 2-56 x .31 LG, | |
| 1 | 1 | GR0MMET 'NYLATCH' (HARTWELL) | |

| REV | DESCRIPTION | DATE |
|-----|--|------|
| 1 | ADDED ITEM 72 73 74 | |
| 1 | 33 HN4P-4-4-1-1 PLUNGER 'NYLATCH' | |
| 1 | 32 20-47 SNUB BUSHING (HARTWELL) | |
| 1 | 21 1200 STRAIN RELIEF BUSHING (HEYCO) | |
| 1 | 30 B-312-250 SNAP BUSHING (HEYCO) | |
| 1 | 29 2-164-Y TERMINAL BLOCK, 2 TERM (TR) | |
| 1 | 28 MMW SWITCH, MIN. (S) W/INTERLOCK (M) | |
| 1 | 27 601-1901 RELAY, SOLID STATE, 5 AMP (LEEDOM) | |
| 1 | 26 7595 RECEPTACLE, FEMALE (HUBBELL) | |
| 1 | 25 7095 RECEPTACLE, MALE RECESSED (HUBBELL) | |
| 1 | 24 7594 PLUG, MALE (HUBBELL) | |
| 1 | 23 7593 FUSE, FEMALE (HUBBELL) | |
| 1 | 22 344125 FUSE HOLDER (LITTLE FUSE) | |
| 1 | 21 313005 FUSE, 3AMP (3A6) (F1) (LITTLE FUSE) | |
| 1 | 20 P-6467 TRANSFORMER, 5V, 3AMP (T) (STANCOR) | |
| 1 | 19 5-1189 TERM, 189 FEM (90° FLAG), 18-14 (M) (MIL-D-14) | |
| 1 | 18 28-207 SOCKET (G4) | |
| 1 | 17 26C-4-X LAMP, 5V, 10W (LI) | |
| 1 | 16 5005-5005-2 MIRROR, 45° COLD/PYREX 100 (G4) | |
| 1 | 15 PLATE, MOUNTING | |
| 1 | 14 BUSHING, FIBER OPTIC | |
| 1 | 13 PLATE, BUSHING MOUNT | |
| 1 | 12 BUSHING, MTG (FIBER OPTIC) | |
| 1 | 11 HOUSING, DISC | |
| 1 | 10 COVER, TOP | |
| 1 | 9 COVER, RELAY HOUSING | |
| 1 | 8 BASE, RELAY HOUSING | |
| 1 | 7 BASE, XFMR HOUSING | |
| 1 | 6 COVER, XFMR HOUSING | |
| 1 | 5 HEAT SINK | |
| 1 | 4 BUSHING, DISC MTG | |
| 1 | 3 DISC, ARTWORK | |
| 1 | 2 PLATE, MOTOR MTG | |
| 1 | 1 MOTOR 3W, 115VAC 60HZ (M) (HURST) | |
| 1 | MISC. PARK EQUIP. | |

2 SEE TAB CHART, SHT 17, TO SELECT APPROPRIATE MOTOR SPEED.

1 SEE TAB BLOCK, SHT 15, TO SELECT PROPER BUSHING SIZE.

NOTES: UNLESS OTHERWISE SPECIFIED

MINI FIBER OPTIC ILLUMINATOR

DESIGNED BY: SAMMY K. 11-22-82

DRAWN BY: [Signature] 11-22-82

DATE: AT-90-A598 A

SCALE: SHEET 13 OF 10

WED Enterprises

1001 FLORENCE STREET, BURLINGAME, CALIF. 94010

Figure 4-2 Mini Fiber Optic Illuminator Sheet 8 of 8

4.10 FX-17: ELEVATOR; SCENE 17.

4.10.1 DESCRIPTION. The purpose of this effect is to provide additional animation to scenic wall; for this effect, "elevators" move up and down the outside of buildings. Each elevator is created with a 10 x 10 Projectors (P-46, P-47, P-48). Each projector's light source is a 10 watt bulb mounted on a stage assembly. It is the light source moved by the stage assembly and projected by the objective lens that moves the "elevator." P-46 is located on the left side of the setpiece. P-47 is located in the center area in front of the setpiece. P-48 is located in the center area. The projectors are in show sync.

P-46, P-47, and P-48 consist of:

| | |
|---|---------------|
| MAIN ASSEMBLY: | 6730-910510 |
| ASSEMBLY: 10 x 10 Unit (Front Throw) Spl | 6730-904676 |
| LAMP: 10 Watts TYPE: Quartz (5v) | #2604X |
| LENS: 14" TYPE: Buhl | #834-140 |
| ACCESSORIES: | |
| Stand (Projector) Lens Hgt=38"; Tilting=8"h | 6730-903424-7 |
| (Y) Stage Assy. (Program) | 6730-910511 |
| " " -Elect. Control Box (1A) | 6730-921464 |
| " Mode - (Y) Travel=8" | Ref. |
| " Oper. - (Rate) Travel=0.5"/sec | Ref. |
| Cable Assy.(Control Box to Projector) x 30" | 6730-921478 |
| ARTWORK/MASK/GEL: none | |

4.10.2 THEORY OF OPERATION. Refer to the projector manual.

4.10.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.10.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.11 FX-18: MAG LEV TRAINS; SCENE 14.

4.11.1 DESCRIPTION. This effect simulates magnetic levitation trains moving through tunnels behind the buildings in the "foreground" of the scene. They are created with two HMI 10 x 10 Projectors (P-49, P-50). P-49 is located on the left side by the setpiece. P-50 is located on the left side in front of the setpiece. The projectors run continuously during the show day.

P-49 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 10 x 10 Unit (HMI-1200) - Vert.

LAMP: 1200 Watts TYPE: HMI Quartz (5600 K)

LENS: 10" TYPE: Buhl

P.S. (Ballast) HMI

6730-911008
6730-909205-2
DAYMAX#DMI 1200
OSRAM#HMI1200W
#834-100
6730-920839
Xetron#B1-1200/c

ACCESSORIES:

Stand (Projector) Lens Hgt=34";Tilting=8"h

Power Cord x 50' (P.S. to 10x10)

9-1/2" Film Loop Unit (Long) perfed

" " Artwork Speed (73"/min) (L to R)

" " Motor Speed (25 RPM)

Mirror Assy. (10"w x 10"h) @45 degrees

ARTWORK/MASK/GEL: see Table 4-1

6730-903424-7
6730-920797-7
6730-905100-4
Ref.
Ref.
6730-907776

P-50 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 10 x 10 Unit (HMI-1200) - Front

LAMP: 1200 Watts TYPE: HMI Quartz (5600 K)

LENS: 12-1/2" TYPE: Buhl

P.S. (Ballast) HMI

6730-911008
6730-909201-4
DAYMAX#DMI 1200
OSRAM#HMI1200W
#834-125
6730-929839
Xetron#B1-1200/c

ACCESSORIES:

Stand (Projector) Lens Hgt=39-1/2";Tilting=8"h

Power Cord x 30' (P.S. to 10x10)

9-1/2" Film Loop Unit (Long) perfed

" " Artwork Speed (?"/min) (L to R)

" " Motor Speed (13 RPM)

Mirror Assy. (10"w x 10"h) @45 degrees

ARTWORK/MASK/GEL: see Table 4-1

6730-903424-7
6730-920797-3
6730-905100-5
Ref.
Ref.
6730-907776

4.11.2 THEORY OF OPERATION. Refer to the projector manual.

4.11.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.11.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.12 FX-70: STATION HIGHLIGHTS: SCENE 14.

4.12.1 DESCRIPTION. To further increase the depth and therefore, the realism of the scene, the station's lights are more intense than those painted on the wall. They seem to shine brightly from within. They are created with two aimed HMI 10 x 10 Projectors (P-52, P-53). Both projectors are located on the right side of the setpiece. They run continuously during the show day.

P-52 and P-53 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 10 x 10 Unit (HMI-575) - Front
LAMP: 575 Watts TYPE: HMI Quartz (5600 K)

LENS: 14" TYPE: Buhl
P.S. (Ballast) HMI

6730-911005
6730-909201-2
DAYMAX#DMI 575
OSRAM#HMI575W
#834-140
6730-920838
Xetron#B1-575/c

ACCESSORIES:

Stand (Projector) Lens Hgt=34";Tilting=8"h
Power Cord x 50' (P.S. to 10x10)

6730-903424-7
6730-920797-2

ARTWORK/MASK/GEL: see Table 4-1

4.12.2 THEORY OF OPERATION. Refer to the projector manual.

4.12.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.12.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.13 FX-19: HOLOGRAM FLICKER; SCENE 14.

4.13.1 DESCRIPTION. To enhance the interpretation of a transmitting hologram (rather than just a poorly lit figure), the image is made to flicker. The flicker is created with a show controlled 2 x 2 Strobe (P-51). It is located in area #209.

P-51 consists of:

| | |
|--|----------------|
| ASSEMBLY: 2 x 2 Strobe Unit (Constant) w/fan | 6730-910686-1 |
| LAMP: 300 Watts TYPE: Flashtube | Kemlite#S958-9 |
| Lamp Module | Strobex#274 |
| LENS: 7.87" TYPE: Buhl | #206-060 |
| Strobe P.S. Unit | Strobex#236-D |
| Modified (w/PCB) | #VC99-3482 |
| ACCESSORIES: | |
| Floor Mounting (Projector) | 6730-908500 |
| Mirror Assy. (10"w x 8"h) | Ref. |
| ARTWORK/MASK/GEL: none | |

4.13.2 THEORY OF OPERATION. Refer to the projector manual.

4.13.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.13.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.14 FX-2B: CITRUS BLOSSOM SCENT; SCENE 16.

4.14.1 DESCRIPTION. This effect increases the guests' perception of the orchard at the desert farm. It is created with citrus blossom scent (R-2534) "fired" from a scent cannon.

4.14.2 THEORY OF OPERATION. When signaled by show control, the scent cannon "shoots" a puff of scent to the middle of the tracks.

It shoots each time the "open" cylinder control valve receive the 24 vdc dispense scent command and filtered animation air extends the actuator cylinder which opens the tank cover. When the "close" cylinder control valve receives the 24 vdc signal, the actuator cylinder retracts which closes the tank cover.

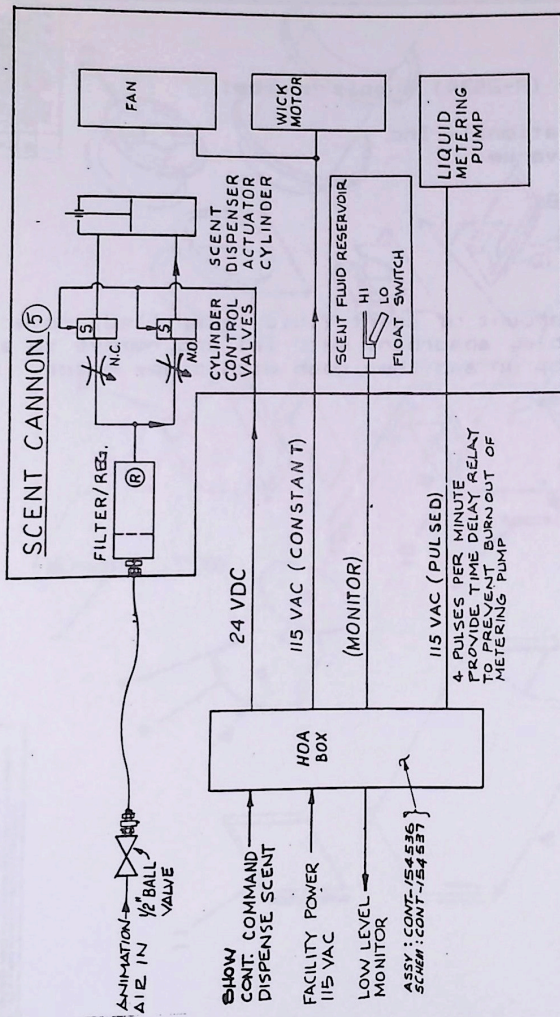
The wick motor and the fan are on continuously during the show day.

Periodically, the metering pump is signaled to spray fresh scent on the wick. There is a time delayed relay to protect the liquid metering pump, see Figure 4-3.

4.14.3 PREVENTIVE MAINTENANCE. Preventive maintenance procedures are listed as follows.

| PREVENTIVE MAINTENANCE SERVICE SCHEDULE | | | | | | | |
|---|-------------------|---|---|---|---|----|---|
| PROCEDURE | SERVICE INTERVAL* | | | | | | |
| | REF** | D | W | M | Q | SA | A |
| 1. Check scent fluid level. Refill as needed. | 4.14.4 | | X | | | | |
| 2. Clean or replace foam filter. | Fig 4-4 | | | X | | | |
| 3. Clean or replace animation air filter. | Fig 4-4 | | | | X | | |
| 4. Clean or replace cannon air filter. | Fig 4-4 | | | | X | | |

*D=Daily, W=Weekly, M=Monthly, Q=Quarterly, SA=Semi-annually, A=Annually
 **See referenced paragraph or figure for details



SYSTEM DIAGRAM

Figure 4-3 Scent System Diagram

4.14.4 SCENTS. Each scent refill canister should be color-coded to the correct scent cannon.

WARNING

If scent is swallowed, do not induce vomiting. Call a physician. In case of fire, use a chemical foam type fire extinguisher.

Orange fragrance scent (R-2534) supply source:

Felton International, Inc
2242 Purdue Avenue
LA, Calif.
(213) 272-3482.

Cleaning. If a large amount of scent fluid is spilled, cover with an inert, non-combustible, absorbant material and remove to a disposal container. Mop up and then wash with soapy water.

**Figure 4-
SCENT CANNON
PARTS LIST**

DWG NO. A7-90-A337

WDP NO. 6005-259705

| ITEM | DWG/MFR PART NO. | WDP NO. | DESCRIPTION | QTY |
|------|-----------------------------|-------------|---|------------------------------|
| 1 | 04DXDDE | | Cylinder, Double Acting, 3/8" Bore x 3" Stroke | <i>BIMBA</i> 1 |
| 2 | 04E-0-5-B-13-F | | Filter Regulator | <i>PARKER</i> 1 |
| 3 | 1128N21 | 6680-584883 | Sight Glass | <i>McMASTER-CARR</i> 1 |
| 4 | 40 P.P.I. | 9390-584821 | Foam, Industrial, 3/8" Thk x 8" Dia | <i>WILSHIRE FOAM PROD.</i> 1 |
| 5 | 6910-050 | | Switch, Liquid Level (Not Shown) | <i>RYAN-HERCO</i> 1 |
| 6 | 7214-2 1/2-1/8-CM, O-100 | | Gauge | <i>GEN.INST.</i> 1 |
| 7 | 742 | 6105-584925 | Motor, Geared, 7.9 RPM | <i>BODINE</i> 1 |
| 8 | 9002-01 | 6005-646044 | Valve, Miniature Type EVO-3 with Muffler Element | <i>CLIPPARD</i> 2 |
| 9 | 9238W12 | | Cloth, Wire, 6" x 6" x .028, 60% Open, SSt | <i>McMASTER-CARR</i> 2 |
| 10 | SV500-2 | 4810-645244 | Pump, Miniature Metering | <i>VALCOR</i> 1 |
| 11 | A7-90-A337B | 6005-259707 | Air Filter — Same material as wick retainer | 1 |
| 12 | | | Barrel | 1 |
| 13 | | | Fan, Rotron "Karavel" | <i>WEATHERFORD</i> 1 |
| 14 | | | Fillport | |
| 15 | | | Insert, Phenolic, 4" Thk x 9" O.D. 3/8" Cell Type Hrp | <i>HEXCELL</i> 1 |
| 16 | | | Liquid Storage Tank | 1 |
| 17 | | | Tank Cover | 1 |

4.15 FX-22: MOVING CLOUDS; SCENE 16.

4.15.1 DESCRIPTION. To give an otherwise static scenic wall animation, the effect provides a stormy sky with moving clouds. They are created with two HMI 10 x 10 Projectors (P-54, P-55). Both projectors are located on the left side of the rear catwalk. They run continuously during the show day.

P-54 and P-55 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 10 x 10 Unit (HMI-1200) - Front
LAMP: 1200 Watts TYPE: HMI Quartz (5600 K)

LENS: 14" TYPE: Buhl
P.S. (Ballast) HMI

ACCESSORIES:

Stand (Projector) Lens Hgt=33-1/2";Tilting=8"h
Power Cord x 15' (P.S. to 10x10)
9-1/2" Film Loop Unit (Long) perfed
" " Artwork Speed (7.9"/min) (L to R)
" " Motor Speed (35 RPM)
Gel Holder (Lens Mtd)

ARTWORK/MASK/GEL: see Table 4-1

6730-911006
6730-909201-5
DAYMAX#DMI 1200
OSRAM#HMI1200W
#B34-140
6730-920839
Xetron#B1-1200/C

6730-903424-7
6730-920797-2
6730-905100-
Ref.
Ref.
Ref.

4.15.2 THEORY OF OPERATION. Refer to the projector manual.

4.15.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.15.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.16 FX-23: LIGHTNING; SCENE 16.

4.16.1 DESCRIPTION. The lightning appears to flash from the stormy clouds (FX-22). It is created with a 2 x 2 Strobe (P-56). P-56 is located on the shelf of the rear catwalk. The strobe is in show sync.

P-56 consists of:

| | |
|---|----------------|
| MAIN ASSEMBLY: | 6730-910687 |
| ASSEMBLY: 2 x 2 Strobe Unit (Spl. 10-200 FPS) | Chadwick#236D |
| LAMP: 300 Watts TYPE: Flashtube | Kemlite#8958-9 |
| Lamp Module | Strobex#274 |
| LENS: 18" TYPE: Buhl | #834-180 |
| Strobe P.S. Unit | Strobex#236-D |
| Modified (w/PCB) | #VC99-3482 |
| ACCESSORIES: | |
| Floor Mounting (Projector) | 6730-908500 |
| Mirror Assy. (10"w x 8"h) | Ref. |
| ARTWORK/MASK/GEL: see Table 4-1 | |

4.16.2 THEORY OF OPERATION. Refer to the projector manual.

4.16.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.16.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.17 FX-25: SIMULATED MONITORS; SCENE 16.

4.17.1 DESCRIPTION. In addition to the real video monitor, three monitors are simulated: a farm aerial grid, a harvester, and a weather map. Their images move slowly as if a camera was panning. The video is simulated by three Incandescent 2 x 2 Projectors (P-57, P-58, P-59). They are located underneath the setpiece. The Video Monitor Screens are 18" wide x 14" high; with 60 degree mirror 8-1/2" x 8-1/2" which are also part of the prop. The projectors run continuously during the show day.

P-57, P-58, and P-59 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 2 x 2 Unit - MIII

LAMP: 500 Watts TYPE: Quartz (BCK)

LENS: 3" TYPE: Buhl

Lamp/Blower Module - MIII

ACCESSORIES:

Stand (Projector) - Std Yoke

Plate, Floor Mounting (2x2)

(X-Y) Slide Assy. - Constant (Osc.)

X " Mtr. Speed (0.9 RPM) CW

Y " Mtr. Speed (1.3 RPM) CW

" I/F (Hubbell 7594) - (2) Plcs.

Man. Dimmer Unit - MIII

ARTWORK/MASK/GEL: see Table 4-1

6730-910503

6730-905190-B

#813-060

6730-905152

Ref.

6730-908500

6730-910489

Ref.

Ref.

Ref.

6730-904670

4.17.2 THEORY OF OPERATION. Refer to the projector manual.

4.17.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.17.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.18 FX-26: FLYING CRAFT; SCENE 16.

4.18.1 DESCRIPTION. To add animation to the scenic wall, flying craft move across it. They are created with two HMI 2 x 2 Projectors (P-60, P-61). P-60 and P-61 are located in front of the setpiece. The projectors run continuously during the show day.

P-60 and P-61 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 2 x 2 Unit (HMI-575) - Front
LAMP: 575 Watts TYPE: HMI Quartz (5600 K)

LENS: 36" F.L. TYPE: Objective lens=14", Buhl

Neg Lens= -50mm Assy

P.S. (Ballast) HMI (Modified)

6730-910903
6730-909115
DAYMAX#DMI575
OSRAM#HMI 575W
#830-140
6730-908683-3
6730-910902
6730-920838
Xetron#B1-575/C

ACCESSORIES:

Stand (Projector) - Std Yoke/Base
Plate, Floor Mounting (2x2)
Power Cord x 6' (P.S. to 2x2)
Osc. Mirror Unit (10"w x 6"h) - Constant
" " " Speed (1.0 RPM) CW
" " " 'J' Box (Hubbell #7974)

6730-901884
6730-908500
6730-920797-1
6730-909999-3
Ref.
6730-906983-2

ARTWORK/MASK/GEL: see Table 4-1

4.18.2 THEORY OF OPERATION. Refer to the projector manual.

4.18.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.18.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.19 FX-27: LIGHTS ON HELIUM CLOUD COVERS; SCENE 16.

4.19.1 DESCRIPTION. This effect provides the blinking warning lights on the helium cloud covers. They are created with a Mini Fiber Optic Illuminator (FXP16-1) with constant run disc drives (made by MAPO) and fiber optic display. The illuminator runs continuously during the show day. It is located behind the painted scenic wall.

FXP16-1 consists of:

ASSEMBLY: Mini Fiber Optic Illuminator, Type 1 MAPO A7-90-A598-2
LAMP: 10 watt G.E. 2604-X
ACCESSORIES:
Rotating Disc
ARTWORK: see Table 4-1

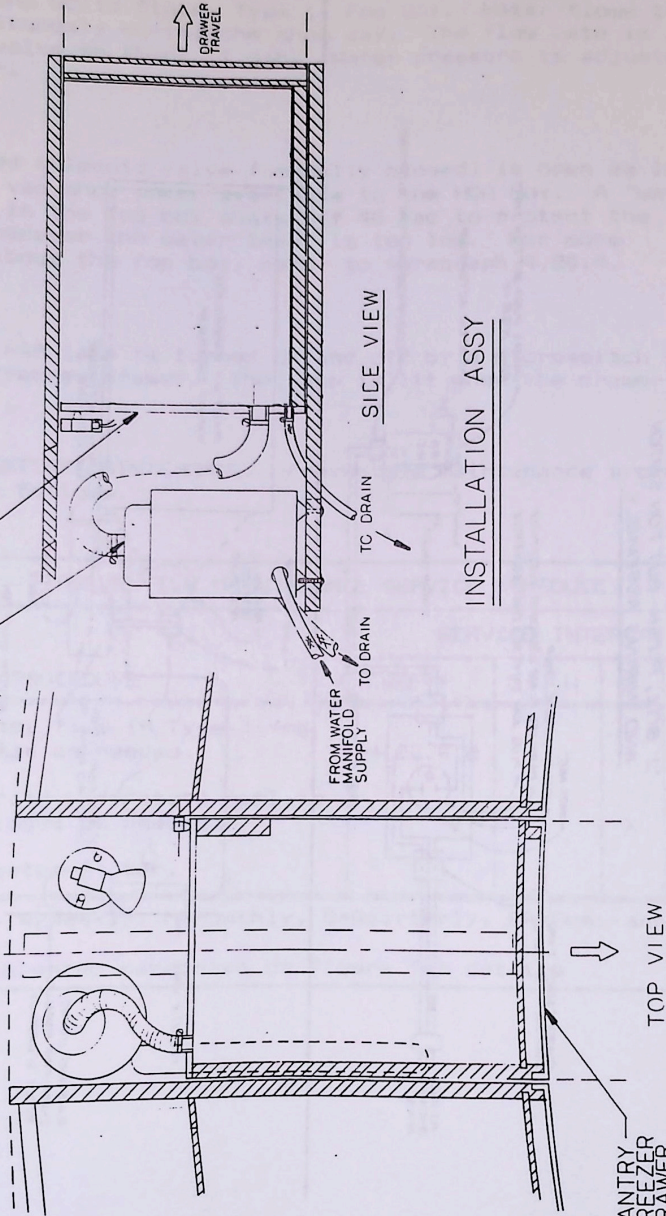
For more information, refer to paragraph 4.9, FX-16.

4.20 FX-71: PANTRY FREEZER; SCENE 17.

4.20.1 DESCRIPTION (refer to Figure 4-5). The illusion of the pantry freezer's coldness is enhanced by escaping "frosty air" from the drawer while opened. It is generated by a Type 1 Solid State Fog Box. The fog is produced continuously during the show day. Mineral-free water is supplied by the DI water cartridges. A PAR lamp behind the freezer drawer highlights the fog. The lamp is lit only when the drawer is open. The drawer's opening and closing are show controlled.

LIGHT BLUE ACRYLIC
BACK REQUIRED ON
DRAWER TO SERVE AS
LIGHT FILTER MEDIUM
PLEXIGLAS BLUE # 2069

TAP 1 1/2"
FPT



INSTALLATION ASSY

PANTRY
FREEZER
DRAWER
(SHOWN IN
FULLY CLOSED
POSITION)

Figure 4-5 Pantry Freezer
Sheet 1 of 2

J' BOX, PUSH-BUTTON SWITCH AND WIRING ASSEMBLY

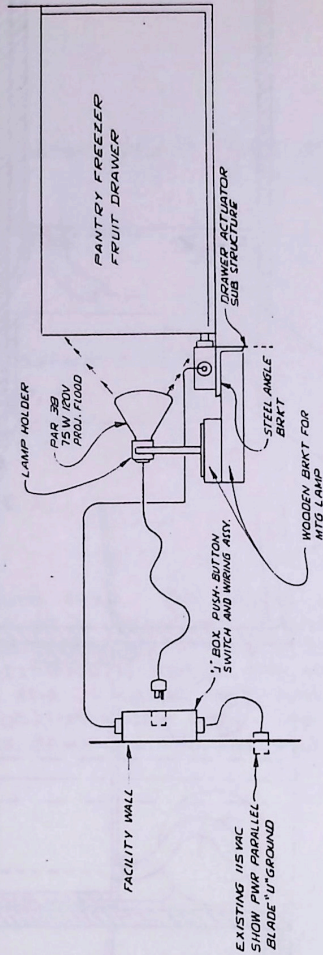
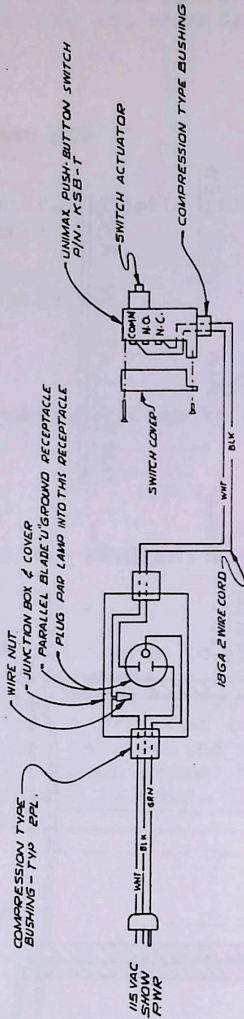


Figure 4-5 Pantry Freezer
Sheet 2 of 2

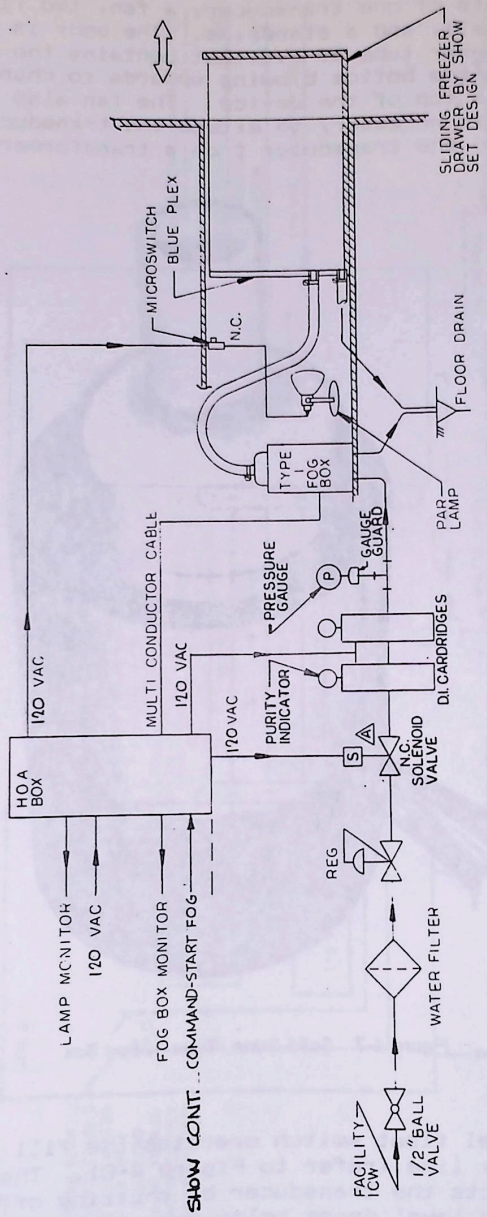
4.20.2 THEORY OF OPERATION (refer to Figure 4-6). "Frosty air" is produced by one Solid State, Type 1, Fog Box. Water flows to the fog box continuously during the show day. The flow rate is adjusted by the ball valve to about .1 gph. Water pressure is adjusted at the regulator.

The water feed solenoid valve (normally closed) is open as long as there is 115 vac show power available to the HOA box. A "water low" float switch in the fog box shuts off 48 vac to protect the transducer whenever the water level is too low. For more information about the fog box, refer to paragraph 4.20.4.

Power to the PAR lamp is turned on and off by a microswitch behind the sliding freezer drawer. The lamp is lit when the drawer is open.

4.20.3 PREVENTIVE MAINTENANCE. Preventive maintenance procedures are listed as follows.

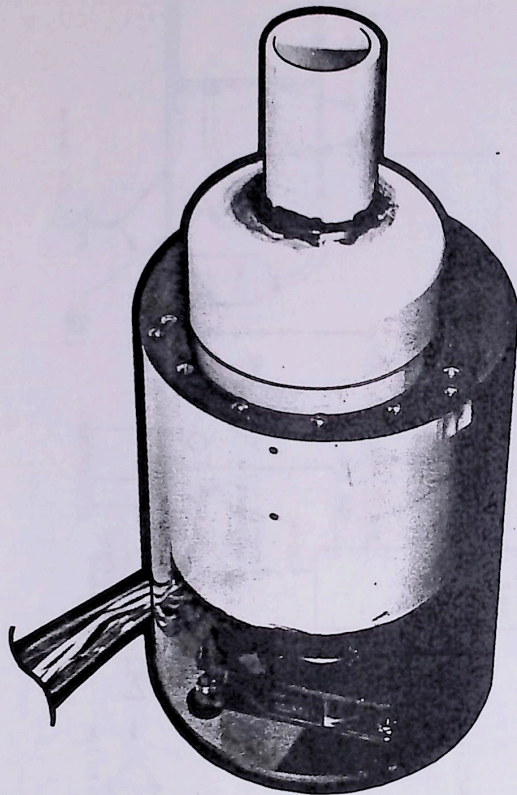
| PREVENTIVE MAINTENANCE SERVICE SCHEDULE | | | | | | | |
|--|----------|-------------------|---|---|---|----|---|
| PROCEDURE | REF** | SERVICE INTERVAL* | | | | | |
| | | D | W | M | Q | SA | A |
| 1. Check water flow in Type 1 fog box. Clean as needed. | 4.20.4.2 | | | X | | | |
| 2. Check purity indicator; replace DI cartridges as needed. | | | | X | | | |
| 3. Replace water filter. | | | | | X | | |
| *D=Daily, W=Weekly, M=Monthly, Q=Quarterly, SA=Semi-annually, A=Annually **See referenced paragraph or figure for details | | | | | | | |



SYSTEM DIAGRAM

Figure 4-6 System Diagram

4.20.4 SOLID STATE TYPE 1 FOG BOX MAINTENANCE (refer to Figure 4-7). The Type 1 fog box is the smallest of the solid-state fog boxes. It consists of one transducer, a fan, two float switches (high and low level), and a standpipe. The body is made of clear acrylic with an inner tube of PVC that contains the transducer. The fan is mounted on the bottom blowing upwards to channel the fog out the opening at the top of the device. The fan also cools the transducer which is necessary to extend the transducer's life. 48 vac is supplied to the transducer from a transformer at the HOA box.

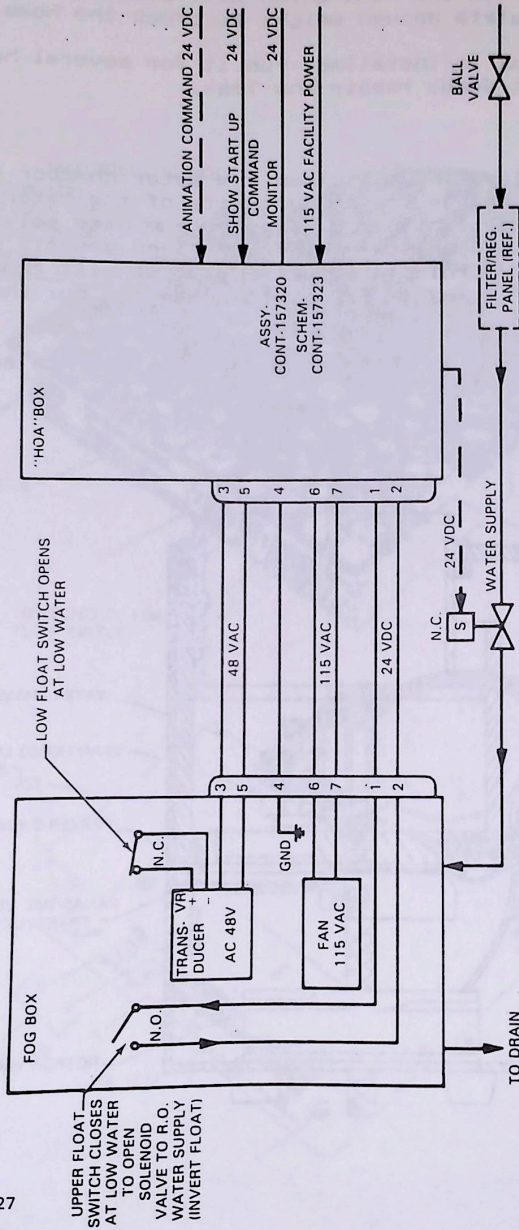


R543-026

Figure 4-7 Solid State, Type 1, Fog Box

The high water level float switch operates the fill solenoid valve in the water supply line (refer to Figure 4-8). The low water level float switch protects the transducer by shutting off the transistor (TR) when the water level drops below the minimum depth in the fog box's water chamber.

R543-027



NOTE: FOR CABLE HARNESS, SEE DEPT 510 DRWG
CONT-157335 TAB

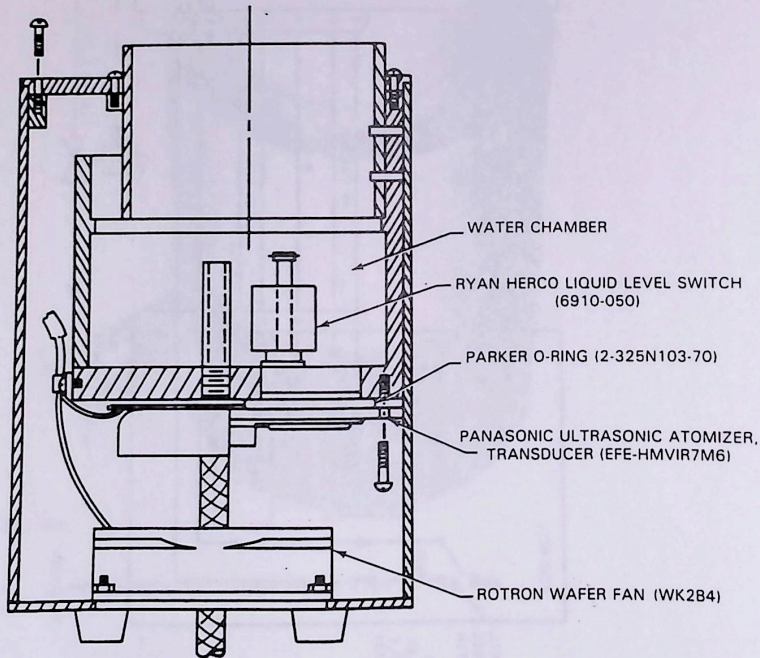
Figure 4-8 Type 1 System Diagram

4.20.4.1 Installation. The flexadux hose used to supply fog to the show area must not sag. If any sags or low spots are present, a puddle will form in the hose which will block the outlet of fog. It may also accumulate enough weight to break the hose.

After the fog box is installed, run it for several hours. It should not leak. If it does, repair the leak.

4.20.4.2 Cleaning. DO NOT clean the water chamber with salt or acid; they will change the conductivity of the water. DO NOT clean the water chamber with soap or a petroleum base solvent; they will change the surface tension of the water and greatly cut down the fog output. A mild hydrochloric acid solution will remove hard water stains, but it is very important to rinse the box thoroughly with fresh water.

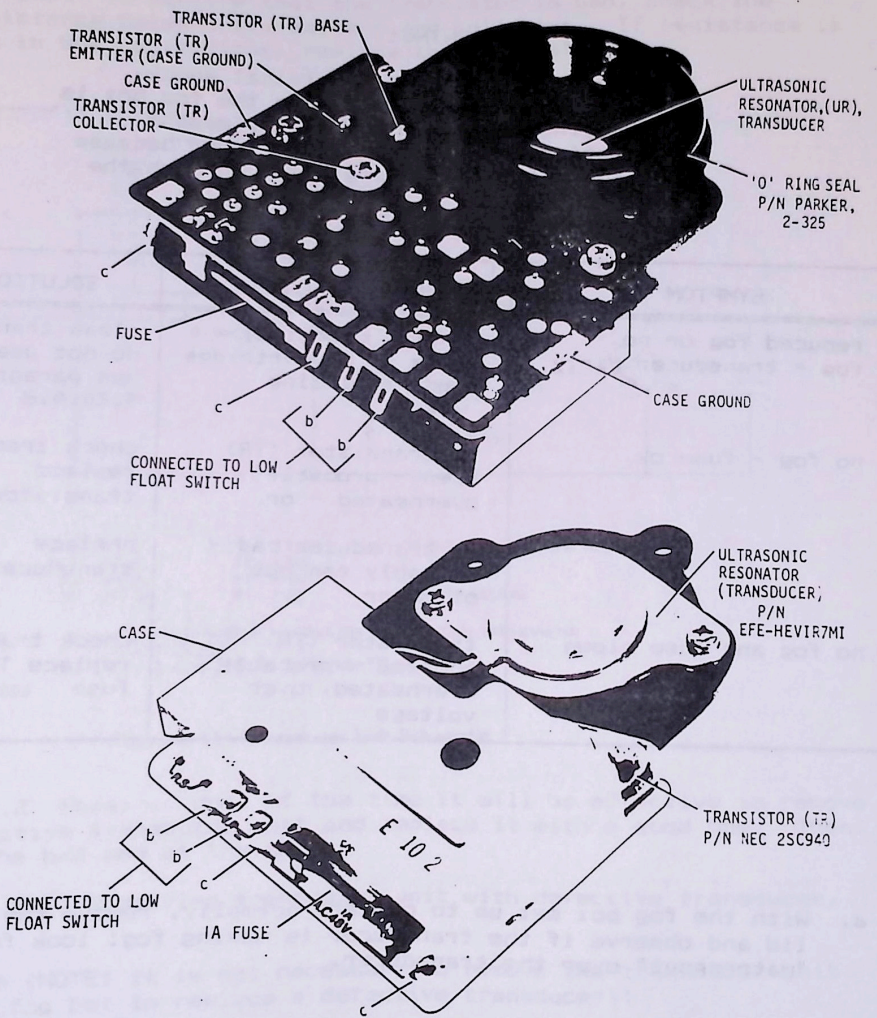
Generally, rinsing the water chamber with water is sufficient.



R543-028

Figure 4-9 Type 1 Cut-a-way

4.20.4.3 Transducer Unit (PART NO. EFE-HMVIR7M6E). Refer to Figure 4-10.



R543-036

Figure 4-10 Transducer Unit

4.20.4.3.1 Troubleshooting Procedure. Refer to the troubleshooting chart, the steps that follow it, and Figure 4-11.

Troubleshooting Chart

WARNING:

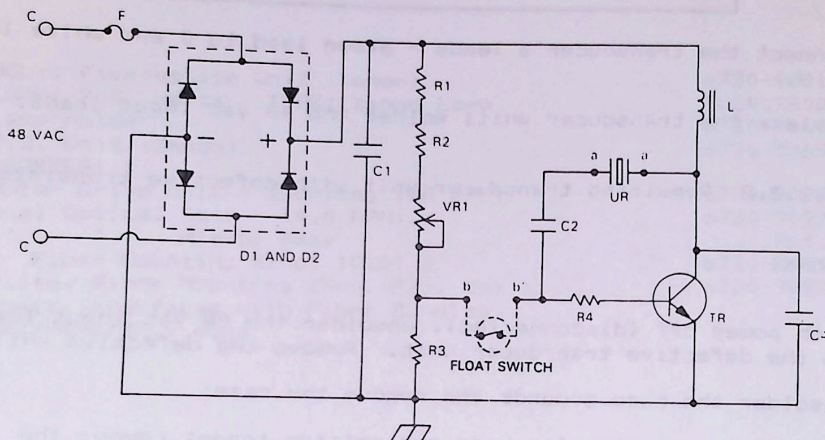
Although it isn't an electrical shock, touching the tank water when the fog box is operating will give you an unpleasant sensation and may burn your finger because of the ultrasonic energy flux through the water.

| SYMPTOM | POSSIBLE CAUSE | SOLUTION |
|--|---|---|
| reduced fog or no fog - transducer dirty | mineral deposits; check if DI cartridge needs replacing | clean transducer: do not use soap - see paragraph 4.20.4.2 |
| no fog - fuse ok | 1. transistor (TR) open - probably overheated - or 2. transducer bad - probably ran out of water | check transistor replace transistor if bad replace transducer |
| no fog and fuse blown | transistor (TR) shorted - probably overheated, over voltage | check transistor replace TR and fuse |

- a. With the fog box set up to operate normally, remove the fog box lid and observe if the transducer is making fog: look for a "waterspout" over the transducer.
- b. First, try cleaning the transducer. Remove power from the box. Then wipe the transducer with tissue in a circular fashion. Reapply power to the box and again note if the transducer is still not making fog.

- c. Again, remove power from the box. Drain the water from the box. Check the transducer's fuse. If the fuse is ok, check for an open transistor. This will happen if overheated. To check for an open transistor, check the emitter, base, and collector resistance. This procedure can be done with the transistor in the circuit.

However, if the fuse is blown, the transistor will usually be shorted. To confirm that the transistor is bad, check the resistance between its emitter and collector. If resistance is low in both directions, replace the transistor.



| | | |
|------------------|-------------------|------------------------------------|
| C1: .22 μ F | R1: 1.5k Ω | D1 AND D2: FULL WAVE RECTIFIER, 2A |
| C2: 22 μ F | R2: 1.5k Ω | F: 1A |
| C3: .03 μ F | R3: 470 Ω | L: 64 μ H |
| C4: .001 μ F | R4: 3.9 Ω | TR: NEC 2SC940 |

UR: ULTRASONIC RESONATOR (TRANSDUCER), EFE-HEVIR7MI
 VR1: 500 Ω
 VR2: CONNECTED TO LOW FLOAT SWITCH

R543-038

Figure 4-11 Transducer Unit Schematic

4.20.4.3.2 Repair. Most of the time it will be effective to remove the defective transducer unit and replace it with a good one. Then repair the bad one at the shop.

4.20.4.3.2.1 Repairing transducer unit with defective transducer.

To Remove (NOTE: it is not necessary to remove the transducer unit from the fog box to replace a defective transducer):

- With power off (disconnected), unsolder the 48 vac input leads to the defective transducer unit. Remove the defective unit.
- Disconnect the transducer leads; remove the defective transducer.

To Replace:

- a. Replace transducer.

WARNING:

ELECTRICAL SHOCK HAZARD. Failure to reconnect the transducer (UR) leads correctly as marked will place 150 volts peak-to-peak at the tank water.

- b. Connect the transducer's leads - green lead to G and white lead to W.
 - c. Replace the transducer unit; solder the 48 vac input leads.
- 4.20.4.3.2.2 Repairing transducer unit with defective transistor.

To Remove:

- a. With power off (disconnected), unsolder the 48 vac input leads to the defective transducer unit. Remove the defective unit.
- b. Unsolder the case grounds and remove the case.
- c. Unsolder the transistor base and emitter leads; remove the defective transistor.

To Replace:

- a. Sparingly coat the bottom of a good transistor with heat sink compound. With the transistor's insulator in place, seat the transistor on the circuit board.
- b. Solder the transistor's leads and clip.
- c. Replace the transducer unit's case and solder it in place.
- d. Replace the transducer unit; solder the 48 vac input leads.

4.21 FX-33: WELDING; SCENE 19.

4.21.1 DESCRIPTION. Welding sparks fly off the "laser welding" torch held by the boy repairing the submarine. It is created with a Xenon Fiber Optic Illuminator (P-62) and fiber optic displays. P-62 is located at the rear of the setpiece. The illuminator is in show sync.

P-62 consists of:

| | |
|--|-----------------|
| ASSEMBLY: Fiberoptics Unit (Xenon) | 6730-908131-11 |
| LAMP: 300 Watts TYPE: Xenon Lamp | ILC#LX300F |
| Lamp Holder | 6730-905082 |
| P.S. Unit (Xenon) | 6730-906960 |
| ACCESSORIES: | |
| Motor Drive Unit - Indexing (52 RPM) | 6730-902867-112 |
| Dual Optical Assy - (4.0 RPM) | 6730-909773 |
| " " Mirror Assy | Ref. |
| 2 Fiber Mounting Ring: 10.0" D | 6730-908168-5 |
| Plate, Floor Mounting (Xen. Fib. Opt.) | 6730-908501 |

This Unit interfaces with Fiber Bundles
ARTWORK/MASK/GEL: none

4.21.2 THEORY OF OPERATION. Refer to the projector manual.

4.21.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.21.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.22 FX-36: WATER RIPPLES; SCENE 19.

4.22.1 DESCRIPTION. The painted scenic is animated with the projected water ripples. They are created with two Incandescent 5 x 5 Projectors (P-63, P-64). Both are located by the setpiece: P-63 on the right side and P-64 on the left side. The projectors run continuously during the show day.

P-63 and P-64 consist of:

| | |
|---|---------------|
| MAIN ASSEMBLY: | 6730-911000 |
| ASSEMBLY: 5 x 5 Unit - Front Throw | 6730-907671 |
| LAMP: 2000 Watts TYPE: Tungsten Halogen | 6240-594504 |
| LENS: 8.5" TYPE: Buhl | #834-85 |
| Condenser B(6" x 12" F.L.) | 6730-907675-2 |
| (10x10) Lamp/Blower Module - MIII | 6730-904689 |
| ACCESSORIES: | |
| Stand (Projector) - Tilting 3" h | 6730-909320 |
| Triple Plate Osc. Unit - Constant | 6730-908601-1 |
| " " " - Mtr Spd (3.0 RPM) CW | Ref. |
| Fan Unit (Artwork Cooling) | 6730-908932-1 |
| ARTWORK/MASK/GEL: see Table 4-1 | |

4.22.2 THEORY OF OPERATION. Refer to the projector manual.

4.22.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.22.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.23 FX-72: MYLAR WATER RIPPLE/REFLECTIONS; SCENE 20.

4.23.1 DESCRIPTION. It runs continuously during the show day.

P-65 and P-115 consist of:

| | | |
|-------------------|-------------------------------------|-----------------|
| ASSEMBLY: | Water Ripple Unit (w/Mon.) | 6730-910703-2 |
| LAMP: | 150 Watts TYPE: PAR (Blue Dichroic) | GE #150PAR/FL/B |
| ACCESSORIES: | | |
| | Baseplate (Part of Unit) | Ref. |
| | Mon. Box Unit (5W) | 6730-921312 |
| | " " Cable Assy. (5W) x 6' | 6730-920995 |
| | Mylar w/Frame (by MAPO) 22"w x 20"h | Ref. |
| | Fan Unit (by MAPO) -3W U Gnd. | Ref. |
| ARTWORK/MASK/GEL: | none | |

4.23.2 THEORY OF OPERATION. Refer to the projector manual.

4.23.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.23.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.24 FX-41: WATER RIPPLE; SCENE 22.

4.24.1 DESCRIPTION. To give an underwater look, water ripples are projected onto the sets and floor. They are created with eight HMI 5 x 5 Projectors (P-66, P-67, P-68, P-69, P-70, P-71, P-72, P-116). P-66, P-67, P-68, P-69, and P-116 are located in area #128. P-70, P-71, and P-72 are suspended in the under sea area. All of the projectors run continuously during the show day.

P-66, P-67, P-68, P-69, P-70, P-71, and P-72 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

6730-911001
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W

LENS:

P-66 - P-69: 8.5" Buhl
P-70 - P-72: 4.5" Buhl
Lens Sleeve
P-116: 14" Buhl
Condenser B (6" x 9"/12" F.L.)
P.S. (Ballast) HMI (Modified)

#834-85
#271-020
6730-909784
#834-140
6730-907675-2
6730-920839
Xetron#B1-1200/C

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling)
19" Rim Disc (Dual) - Constant
" " " A (F)-(0.5 RPM) CW (Mtr.=2.8 RPM)
" " " B (R)-(1.5 RPM) CCW (Mtr.=9.0 RPM)
" " " I/F - (Hubbell 7974) - 2 Placs.
Electrical 'J' Box (Hubbell #7594) - 1 Reqd.
10"x10" @ 45 degree Beam Diverter Mirror
w/ Gimble Adj.
Gel Holder (Lens Mtd.)

6730-910708-3
6730-920797-2
6730-908932-1
6730-908777-6
Ref.
Ref.
Ref.
6730-909526-1
6730-909848-1
Ref.

ARTWORK/MASK/GEL: see Table 4-1

4.24.2 THEORY OF OPERATION. Refer to the projector manual.

4.24.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.24.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.25 FX-42: RESTAURANT DOME WINDOWS; SCENE 22.

4.25.1 DESCRIPTION. Each window has two concave acrylic domes with resin sandwiched between them for a little bit of lensing action as if you're looking through water at the people in the restaurant.

4.25.2 CLEANING INSTRUCTIONS. Clean with Type A-57 Plexiglass Cleaner (or equivalent) available from Orco Plastics. Follow instructions on the label.

Many transparent or mirrored surfaces use Plexiglass brand acrylic or Lexan brand polycarbonate sheeting. These surfaces should NOT be treated as glass; cleaning these surfaces too frequently or with the wrong solvent will leave the material scratched or cloudy.

To clean the acrylic or polycarbonate material, the surface should first be dusted very lightly (NOT WIPED) with a soft, clean cloth. Then the surface can be rinsed with water or a solution of mild non-abrasive detergent and water. A soft, grit-free cloth, sponge, or chamois may be used, but only as a means of carrying water to the plastic -- do NOT rub or "squeegee" the surface.

Grease, oil, food, and chewing gum may be removed with kerosene, VMP grade naphtha, or isopropyl alcohol. To remove paint splatters from acrylic, use a 50/50 mixture of VMP grade naphtha and Lacryl 205-T or solvent 100, or use a 10 - 20% solution of caustic soda or trisodium phosphate. To remove paint or caked-on substances on polycarbonate sheeting, use butyl cellosolde. The household cleaner "Formula 409" contains a small amount of butyl cellosolde and works well to clean Lexan. Rinse any solutions off with water to prevent film deposits on the surface.

Do NOT use solvents such as acetone, benzene, carbon tetrachloride, fire extinguisher fluid, dry cleaning fluid, hexane, gasoline, lacquer thinner, window sprays, or scouring compounds.

Clean the acrylic/polycarbonate surfaces only "on an as needed" basis - when dust or stains appear. Cleaning too frequently will result in a cloudy surface.

4.26 FX-43: DISTANT SUBS; SCENE 23.

4.26.1 DESCRIPTION. This effect enhances the scene by adding the animation of the moving submarines to the painted scenic wall. They are created with two HMI 2 x 2 Projectors (P-73, P-74). The projectors are in show sync.

P-73 and P-74 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 2 x 2 Unit (HMI-575) - Front
LAMP: 575 Watts TYPE: HMI Quartz (5600 K)
LENS: 14" TYPE: Buhl
P.S. (Ballast) HMI (Modified)

6730-9109501
6730-909115
DAYMAX#DMI575
OSRAM#HMI 575W
#834-140
6730-920838
Xetron#B1-575/C

ACCESSORIES:

Stand (Projector) - Std Yoke/Base 6730-905157-5
Plate, Floor Mounting (2x2) 6730-901884
Power Cord x 6' (P.S. to 2x2) 6730-908500
'Cam Driven' Mirror Assy (12"w x 6"h) 6730-920797-1
Cam Dr. Mir./Douser 6730-910951-1
" " Elect. Control Assy. (10) 6730-921481
" " Mode Oper.:
P-73: 90 degree sweep in 52.5 Sec. Ref.
P-74: 90 degree sweep in 63 Sec. Ref.
" " Cable I/F (Pwr) 6730-906980
" " Cable I/F (Douser) 6730-921492
Douser Assy. 6730-910983-2
ARTWORK/MASK/GEL: see Table 4-1

4.26.2 THEORY OF OPERATION. Refer to the projector manual.

4.26.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.26.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.27 FX-46: RIPPLES ON ROCKWORK; SCENE 23.

4.27.1 DESCRIPTION. To give an underwater look, water ripples are projected onto the sets and floor. They are created with four HMI 5 x 5 Projectors (P-75, P-76, P-77, P-78). The projectors run continuously during the show day.

P-75, P-76, P-77, and P-78 consist of:

MAIN ASSEMBLY:

ASSEMBLY: 5x5 Unit (HMI 1200) Front

LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 8.5" Buhl

Condenser B (6" x 9"/12" F.L.)

P.S. (Ballast) HMI (Modified)

6730-911003-1
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#834-85
6730-907675-2
6730-920839
Xetron#B1-1200/C

ACCESSORIES:

Stand (Projector)

Power Cord x 15' (PS to 5x5)

Fan Unit (Artwork Cooling)

19" Rim Disc (Dual) - Constant

" " " A (F)-(0.5 RPM) CW (Mtr.=2.8 RPM)

" " " B (R)-(1.5 RPM) CCW (Mtr.=9.0 RPM)

" " " I/F - (Hubbell 7974) - 2 Placs.

Electrical 'J' Box (Hubbell #7594) - 1 Reqd.

10"x10" @ 45 degree Beam Diverter Mirror

w/ Gimble Adj.

Gel Holder (Lens Mtd.)

ARTWORK/MASK/GEL: see Table 4-1

6730-910708-1
6730-920797-2
6730-908932-1
6730-908777-6
Ref.
Ref.
Ref.
6730-909526-1
6730-909848-1
Ref.

4.27.2 THEORY OF OPERATION. Refer to the projector manual.

4.27.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.27.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.28 FX-47: RED WARNING LIGHTS IN KELP; SCENE 23.

4.28.1 DESCRIPTION. The scene is animated by the blinking red warning lights in the kelp. They are created with two Mini Fiber Optic Illuminators (FXP23-1, FXP23-2) with constant run disc drives (made by MAPO) and fiber optic displays. They are located behind the scenic wall. The illuminators run continuously during the show day.

FXP23-1 and FXP23-2 consist of:

ASSEMBLY: Mini Fiber Optic Illuminator, Type 1 MAPO A7-90-A598-2
LAMP: 10 watt G.E. 2604-X
ACCESSORIES:
Rotating Disc
ARTWORK: see Table 4-1

For more information, refer to paragraph 4.9, FX-16.

4.29 FX-73: WATER RIPPLES; SCENE 24.

4.29.1 DESCRIPTION. To give an underwater look, water ripples are projected onto the sets and floor. They are created by an HMI 5 x 5 (P-82). P-82 runs continuously during the show day.

P-82 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 8.5" Buhl
Condenser B (6" x 9"/12" F.L.)
P.S. (Ballast) HMI (Modified)

6730-911003-2
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#834-85
6730-907675-2
6730-920839
Xetron#B1-1200/C

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling)
19" Rim Disc (Dual) - Constant
" " " A (F)-(0.5 RPM) CW (Mtr.=2.8 RPM)
" " " B (R)-(1.5 RPM) CCW (Mtr.=9.0 RPM)
" " " I/F - (Hubbell 7974) - 2 Placs.
Electrical 'J' Box (Hubbell #7594) - 1 Req'd.
Slide Holder (6")

6730-910708-3
6730-920797-2
6730-908932-1
6730-908777-6
Ref.
Ref.
Ref.
6730-909526-1
Ref.

ARTWORK/MASK/GEL: see Table 4-1

4.29.2 THEORY OF OPERATION. Refer to the projector manual.

4.29.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.29.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.30 FX-49: BEAM BUILDER; SCENE 25.

4.30.1 DESCRIPTION. At the partially built space station, prefabbed "panels" are being generated and continuously move from the space ship to the station for assembly. They are created by an HMI 10 x 10 Projector (P-83) which is located at the top of the catwalk. P-83 runs continuously during the show day.

P-83 consists of:

| | |
|--|------------------|
| MAIN ASSEMBLY: | 6730-911007 |
| ASSEMBLY: 10 x 10 Unit (HMI-1200) - Front | 6730-909201-5 |
| LAMP: 1200 Watts TYPE: HMI Quartz (5600 K) | DAYMAX#DMI 1200 |
| | OSRAM#HMI1200W |
| LENS: 14" TYPE: Buhl | #834-140 |
| P.S. (Ballast) HMI | 6730-920839 |
| | Xetron#B1-1200/C |
| ACCESSORIES: | |
| Stand (Projector) | 6730-903424-8 |
| Power Cord x 15' (P.S. to 10x10) | 6730-920797-2 |
| 9-1/2" Film Loop Unit (Long) perfed | 6730-905100- |
| " " Artwork Speed (13"/min) | Ref. |
| " " Motor Speed (3 RPM) | Ref. |
| Gel Holder (Lens Mtd) | Ref. |
| ARTWORK/MASK/GEL: see Table 4-1 | |

4.30.2 THEORY OF OPERATION. Refer to the projector manual.

4.30.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.30.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.31 FX-51: STARFIELD; SCENE 25.

4.31.1 DESCRIPTION. Because the view is from space, the starfields do not blink or twinkle. They are created by eight Standard Fiber Optic Illuminators without disc motors (P-84, P-85, P-86, P-87, P-90, P-91, P-92, P-93) and fiber optic displays. P-84, P-85, P-86, and P-87 are located on the left side behind the scrim. P-90, P-91, P-92, and P-93 are located on the right side behind the scrim. The illuminators run continuously during the show day.

P-84, P-85, P-86, P-87, P-90, P-91, P-92, and P-93 consist of:

| | |
|-----------------------------------|---------------|
| ASSEMBLY: Fiberoptics Illum. Unit | 6730-905905-8 |
| LAMP: 42 Watts TYPE: ENL | |
| Illum Unit | 6730-905889 |
| ACCESSORIES: | |
| No Motor Unit | 6730-905994-1 |
| Floor Mounting Assy. (Full Base) | 6730-907661 |
| Fiber Housing (1.0" D.) Bushing | 6730-905910-1 |
| GEL: see Table 4-1 | |

4.31.2 THEORY OF OPERATION. Refer to the projector manual.

4.31.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.31.4 CORRECTIVE MAINTENANCE. To service, loosen four allen head screws, lift the projector from the fiber optic plate. It is not necessary to disturb the fiber optic bushing. The fiber bundles are fragile, and, if damaged, are difficult to replace.

If further maintenance information is required, refer to the appropriate section of the projector manual.

4.32 FX-52: FLIGHT THRUSTERS, SCENE 25.

4.32.1 DESCRIPTION. At the incomplete space station, a construction worker moves a girder into position by using the propulsion from the thrusters of the "jet pack." The propulsion is visually enhanced by fog nozzle assemblies each with a lamp assembly. The thrusters are show controlled and in sync with the show action of the girder.

4.32.2 THEORY OF OPERATION. Fog is produced by the nozzle assemblies. Each thruster has one assembly. The nozzle requires air at about 80 psi and water at about 50 psi. Both the air and water lines to the "up" or "down" thrusters have show controlled solenoid valves. The production of fog begins once both the air and water solenoids are energized and air and water are present at the nozzles.

The up sequence is programmed as follows:

To start:

activate air to the lower nozzles
short delay
activate water to the lower nozzles
short delay
activate the lower ring lights
short delay
activate girder movement (up)

To stop:

deactivate lights
short delay
deactivate water to the lower nozzles
short delay
deactivate air to the lower nozzles
short delay
deactivate girder movement

The down movement is the same, except that the upper nozzles and associated lamps are activated and deactivated.

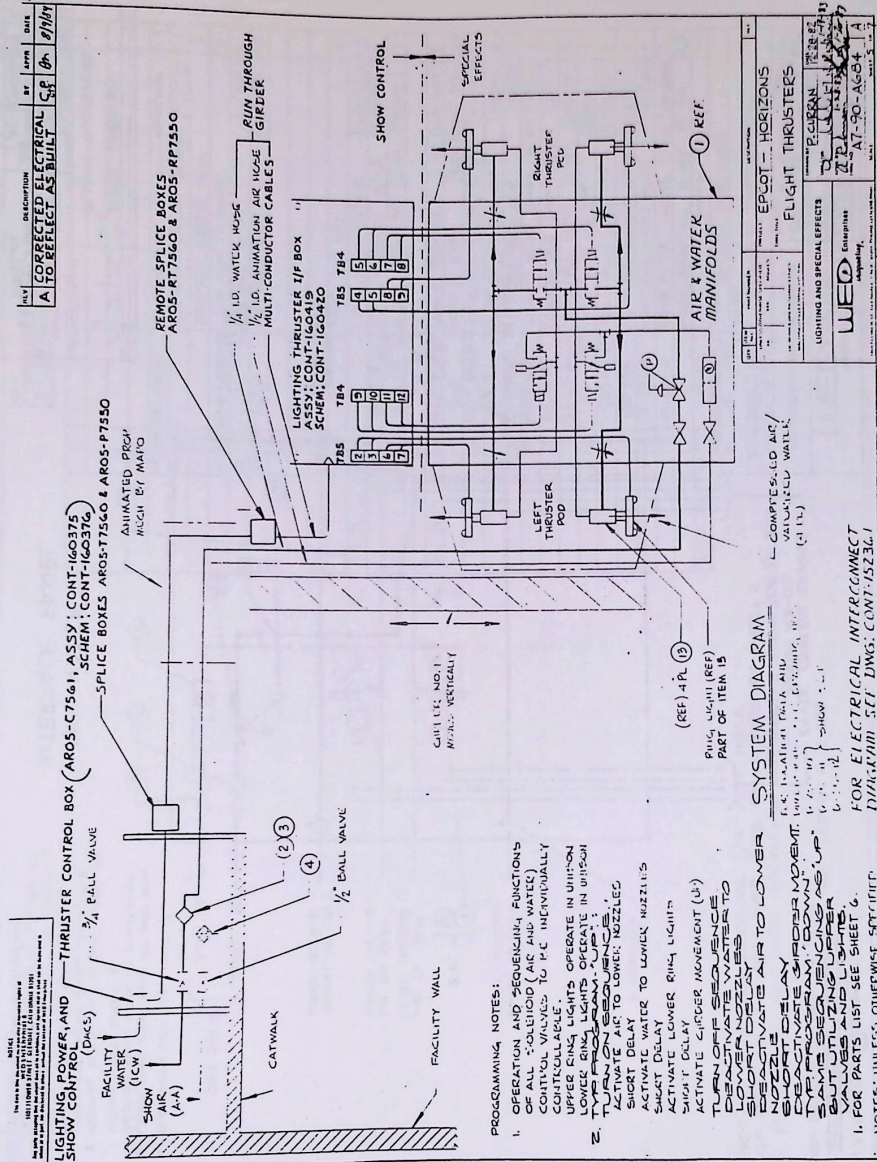
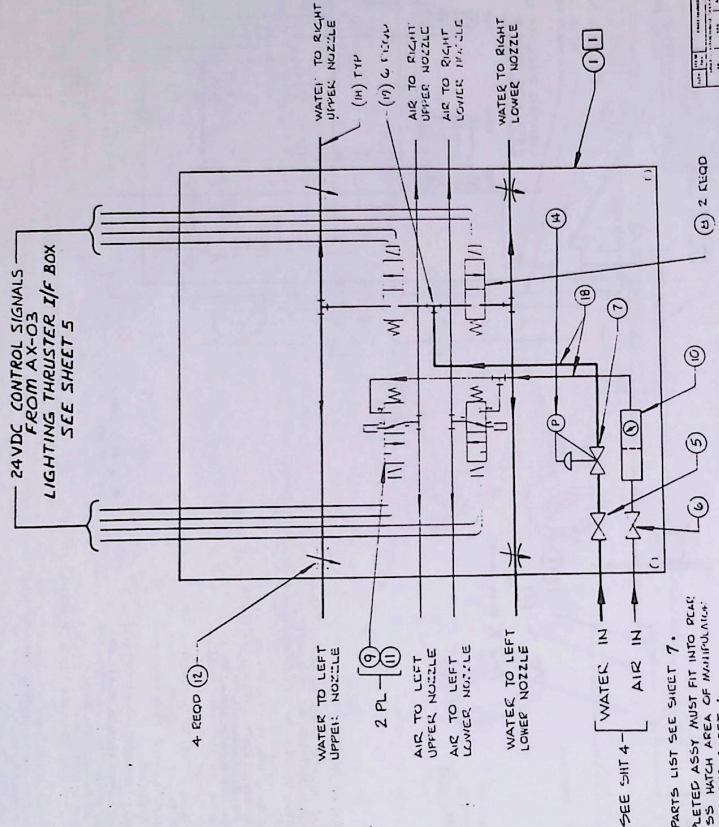


Figure 4-12 Flight Thrusters
 Sheet 4 of 6
 4-63

| | | | |
|-----|----------------------|----|---------|
| REV | DESCRIPTION | BY | DATE |
| A | DELETED ELEC. SCHEM. | CS | 18/1/64 |

NOTE:
 1. THIS IS THE ORIGINAL DRAWING FOR THE AIRCRAFT.
 2. THIS DRAWING IS THE ORIGINAL DRAWING FOR THE AIRCRAFT.
 3. THIS DRAWING IS THE ORIGINAL DRAWING FOR THE AIRCRAFT.



AIR, WATER INTERFACE PANEL

- 4. FOR PARTS LIST SEE SHEET 7.
- 5. COMPLETED ASSY MUST FIT INTO DEAG ACCESS HATCH AREA OF MANIPULATOR VEHICLE PER SHEET 1.
- 2. PARTIAL PIPING INFO SHOWN. MAPO TO COMPLETE ASSY USING APPLICABLE PIPING FITTINGS AS REQUIRED.
- 1. COMPONENT PLACEMENT AND MOUNTING ON ITEM 1 PANEL TO BE DETERMINED BY MAPO PER FLOW INFO SHOWN.

NOTES: UNLESS OTHERWISE SPECIFIED

| | | | |
|-----|------------------------------|----|------|
| REV | DESCRIPTION | BY | DATE |
| 1 | EPICOT - HORIZONS | | |
| 2 | FLIGHT THRUSTERS | | |
| 3 | LIGHTING AND SPECIAL EFFECTS | | |
| 4 | WED | | |
| 5 | ENTRUSTING | | |
| 6 | ADAPTING | | |
| 7 | MAPO | | |
| 8 | MAPO | | |
| 9 | MAPO | | |
| 10 | MAPO | | |
| 11 | MAPO | | |
| 12 | MAPO | | |

Figure 4-12 Flight Thrusters
 Sheet 5 of 6
 4-64

4.32.3 PREVENTIVE MAINTENANCE. Preventive maintenance procedures are listed as follows.

| PREVENTIVE MAINTENANCE SERVICE SCHEDULE | | | | | | | |
|--|-------------------|---|---|---|---|----|---|
| PROCEDURE | SERVICE INTERVAL* | | | | | | |
| | REF** | D | W | M | Q | SA | A |
| 1. Replace filter cartridges | | | | X | | | |
| 2. Clean or replace air manifold filter | | | | | X | | |
| 3. Clean nozzles | | | | | | | X |
| a. Disassemble nozzles | | | | | | | |
| b. Clean in ultrasonic cleaning unit with a 6:1 solution of water and metal etching | | | | | | | |
| *D=Daily, W=Weekly, M=Monthly, Q=Quarterly, SA=Semi-annually, A=Annually **See referenced paragraph or figure for details | | | | | | | |

4.32.4 CORRECTIVE MAINTENANCE. The fog nozzle is an efficient atomizer that uses soundwaves to explode liquids into a fine mist. It uses a resonator cup supported by wire legs to reflect the air stream shockwave exiting from the main body of the nozzle.

If the resonator cup is bent out of alignment or broken off, the nozzle should be replaced. In an emergency, the cup can be re-aligned by passing the nearest sized drill bit through the nozzle and lining up the cup with the drill.

Troubleshooting the nozzle:

If the nozzle pulses at low flow rates, there could be a loose fitting between the nozzle and the adapter or a leak in the water line or connection before it enters the nozzle.

If the nozzle dribbles or fails to atomize the water completely, it is either not getting enough air or the water is being delivered to it at too great of a rate. Check for restrictions in the air line and increase the air and/or valve down the liquid.

If the nozzle creates too much fog, it is either receiving too much air or being delivered too little water.

4.33 FX-54: BODY SCAN; SCENE 27.

4.33.1 DESCRIPTION. This effect simulates a patient's digitized body scan. The figure wipes on and off the screen. It is created with an HMI 5 x 5 Projector (P-94) with a static digital screen. P-94 runs continuously during the show day.

P-94 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 5x5 Unit (HMI 1200) Front
LAMP: 1200 watts TYPE: HMI Quartz (5600)

LENS: 8.5" Buhl
Condenser B (6" x 9"/12" F.L.)
P.S. (Ballast) HMI (Modified)

6730-910546
6730-909208-2
DAYMAX#DMI 1200
OSRAM#HMI 1200W
#834-85
6730-907675-2
6730-920839
Xetron#B1-1200/C

ACCESSORIES:

Stand (Projector)
Power Cord x 15' (PS to 5x5)
Fan Unit (Artwork Cooling)
6" Film Loop Unit (Short)
" " " - Speed (20.0"/Min.)
" " Mtr. - Speed (60.0 RPM)

6730-909320
6730-920797-2
6730-908932-1
6730-910260-1
Ref.

ARTWORK/MASK/GEL: see Table 4-1

4.33.2 THEORY OF OPERATION. Refer to the projector manual.

4.33.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

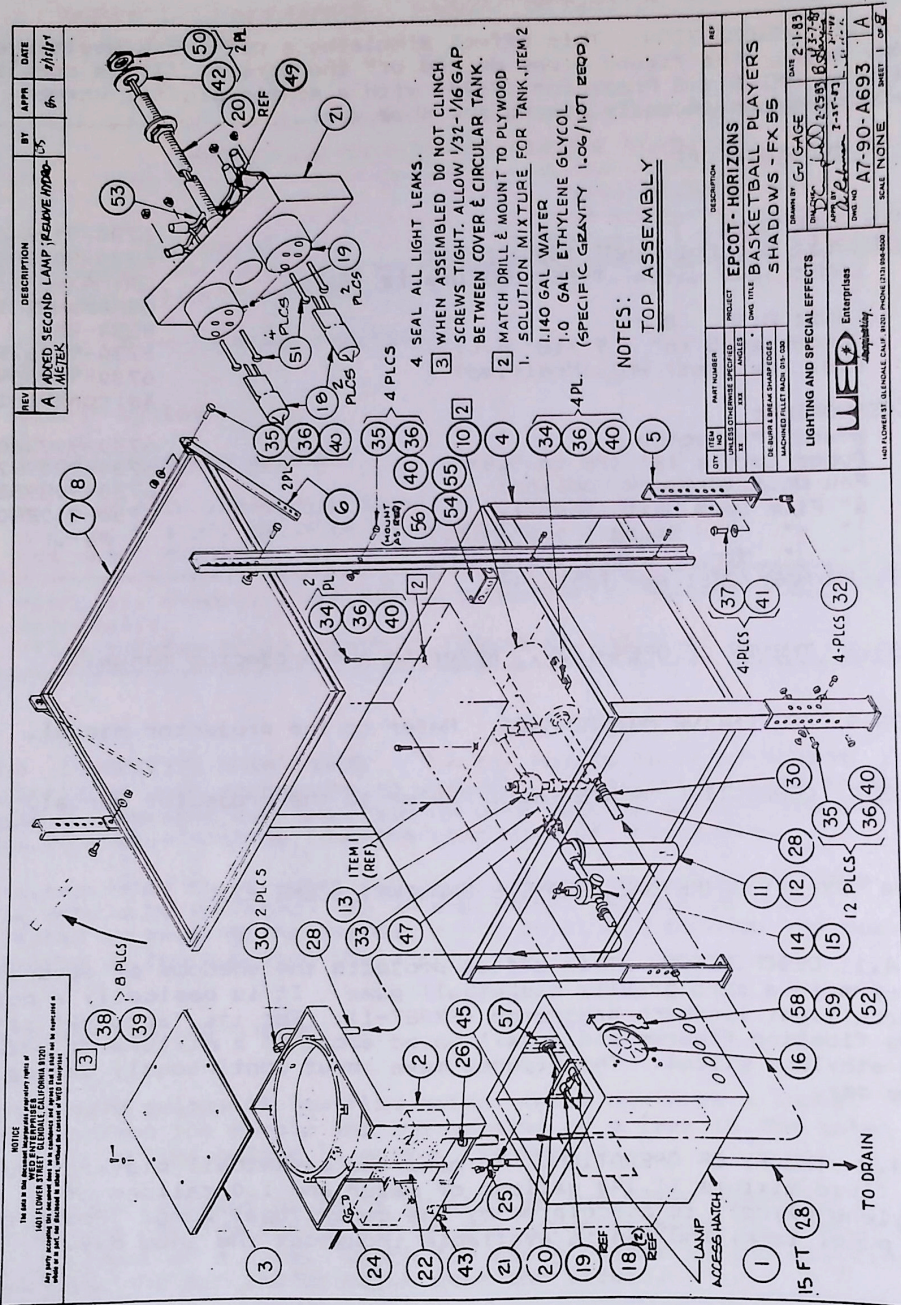
4.33.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.34 FX-55: BASKETBALL PLAYERS SHADOWS; SCENE 27.

4.34.1 DESCRIPTION. This effect projects the shadows of several players in a zero gravity basketball game. It is basically a point source light lineback projector (FXP27-1). For its "artwork" it uses floating figures and a ball moved about in a mixture of water and ethylene glycol. The figures move about continuously during the show day.

4.34.2 THEORY OF OPERATION. To move the basketball player figures, the fluid mixture (1.140 gallons of water and 1.0 gallons of ethylene glycol) is circulated by the centrifugal pump. Power to the pump, lamp, and fan is available throughout the show day.

A float switch in the tank provides a low fluid level monitor. The lamp also has a monitor.



NOTICE
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| REV | DESCRIPTION | BY | APPV | DATE |
|-----|---------------------------------------|----|------|---------|
| A | ADDED SECOND LAMP, REBARE HYDRO-METEK | CS | 6h | 2/11/71 |

- 4 SEAL ALL LIGHT LEAKS.
 3 WHEN ASSEMBLED DO NOT CLINCH SCREWS TIGHT. ALLOW 1/32-1/16 GAP. BETWEEN COVER & CIRCULAR TANK.
 2 MATCH DRILL & MOUNT TO PLYWOOD
1. SOLUTION MIXTURE FOR TANK, ITEM 2
 1.140 GAL WATER
 1.0 GAL ETHYLENE GLYCOL
 (SPECIFIC GRAVITY 1.06/1107 260D)

NOTES:
TOP ASSEMBLY

| | | | |
|----------|-----|---------|------------------------------|
| ITEM NO. | QTY | ITEM | DESCRIPTION |
| 1 | 1 | WED-101 | EPCOT - HORIZONS |
| 2 | 1 | WED-101 | BASKETBALL PLAYERS |
| 3 | 1 | WED-101 | SHADOWS - FX 55 |
| 4 | 1 | WED-101 | LIGHTING AND SPECIAL EFFECTS |
| 5 | 1 | WED-101 | DRY ICE |
| 6 | 1 | WED-101 | DRY ICE |
| 7 | 1 | WED-101 | DRY ICE |
| 8 | 1 | WED-101 | DRY ICE |
| 9 | 1 | WED-101 | DRY ICE |
| 10 | 1 | WED-101 | DRY ICE |
| 11 | 1 | WED-101 | DRY ICE |
| 12 | 1 | WED-101 | DRY ICE |
| 13 | 1 | WED-101 | DRY ICE |
| 14 | 1 | WED-101 | DRY ICE |
| 15 | 1 | WED-101 | DRY ICE |
| 16 | 1 | WED-101 | DRY ICE |
| 17 | 1 | WED-101 | DRY ICE |
| 18 | 1 | WED-101 | DRY ICE |
| 19 | 1 | WED-101 | DRY ICE |
| 20 | 1 | WED-101 | DRY ICE |
| 21 | 1 | WED-101 | DRY ICE |
| 22 | 1 | WED-101 | DRY ICE |
| 23 | 1 | WED-101 | DRY ICE |
| 24 | 1 | WED-101 | DRY ICE |
| 25 | 1 | WED-101 | DRY ICE |
| 26 | 1 | WED-101 | DRY ICE |
| 27 | 1 | WED-101 | DRY ICE |
| 28 | 1 | WED-101 | DRY ICE |
| 29 | 1 | WED-101 | DRY ICE |
| 30 | 1 | WED-101 | DRY ICE |
| 31 | 1 | WED-101 | DRY ICE |
| 32 | 1 | WED-101 | DRY ICE |
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| 45 | 1 | WED-101 | DRY ICE |
| 46 | 1 | WED-101 | DRY ICE |
| 47 | 1 | WED-101 | DRY ICE |
| 48 | 1 | WED-101 | DRY ICE |
| 49 | 1 | WED-101 | DRY ICE |
| 50 | 1 | WED-101 | DRY ICE |
| 51 | 1 | WED-101 | DRY ICE |
| 52 | 1 | WED-101 | DRY ICE |
| 53 | 1 | WED-101 | DRY ICE |
| 54 | 1 | WED-101 | DRY ICE |
| 55 | 1 | WED-101 | DRY ICE |
| 56 | 1 | WED-101 | DRY ICE |
| 57 | 1 | WED-101 | DRY ICE |
| 58 | 1 | WED-101 | DRY ICE |
| 59 | 1 | WED-101 | DRY ICE |
| 60 | 1 | WED-101 | DRY ICE |

2-3442 R.1

Figure 4-13 Basketball Players
 Sheet 1 of 3
 4-68

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2, 3

| QTY | REV | PART NUMBER | DESCRIPTION |
|-----|-----|-------------------|--|
| 1 | 62 | BASKETBALL | SCULPTED |
| 4 | 61 | BASKETBALL PLAYER | FIGURE SCULPTED |
| 4 | 60 | LOCKWASHER | #10 SST |
| 1 | 58 | SPACER | 5/16 OD X 1/2 ID X 1/4 LG, ALUM. |
| 1 | 57 | LIGHT SHIELD | PL, FAN, 6" SQ. |
| 1 | 56 | LIGHT SHIELD | PLATE |
| 1 | 55 | TERM. STRIP | BUCHANAN RE. BASE (REQ. 1/16) |
| 1 | 55 | COVER | "J" BOX, 1" GALV. |
| 1 | 54 | "J" BOX | W/ HO'S, 4" 50X1 1/2 DP. GALV. |
| 1 | 53 | WIRE | 14-GA. |
| 4 | 52 | SCREW | RD. HD # 8-32 X 1/4 LG. W/ NUT |
| 4 | 51 | SCREW | RD. HD # 5-40 X 1/6 LG. W/ NUT |
| 2 | 50 | LOCKNUT | BRASS, 1/8 IPS. CRYSTAL LAMP |
| 1 | 49 | NO. K0148 | FLANGE, BRASS, 1/8 F, CRYSTAL LAMP |
| 2 | 48 | 3720-101-20 | TRAY FASTENER SOUTHCORP INC. |
| 4 | 47 | 385B-005 | UNION, 1/2" PVC RYAN-HERCO |
| 1 | 46 | FITTING | BRASS, 1/2 MPT X 1/2 HOSE DADO |
| 1 | 45 | TEE | BARBED 1/2 X 1/2 X 1/2 RYAN-HERCO |
| 1 | 44 | HEXNUT | #10-32 SST |
| 1 | 43 | LAB COCK VALVE | 1/4" THD X HOSE, RYAN-HERCO |
| 2 | 42 | 91090A115 | WASHER, FENDER, 3/8 X 1/2 OD, ZINC PL. |
| 4 | 41 | WASHER | FLAT, 1/2", GALV. |
| 24 | 39 | WASHER | FLAT, 1/4", GALV. |
| 6 | 38 | SCREW | MACHINE, RD. HD, #10-24 SST |
| 4 | 37 | BOLT | HEX HD, 28-24 X 1/4 LG. SST |
| 2 | 36 | LOCKNUT | 1/4-20 |
| 22 | 35 | SCREW | MACHINE, HEX. HD, 1/4-20 X 1" LG |
| 6 | 34 | SCREW | HEX. HD, 1/4-20 X 1 1/4 LG |
| 1 | 33 | PIPE | PVC, SCHED. 40, 1/2" |

5 SUNRAY LIGHTING INC.
 3120 CROPPY WAY
 SANTA ANA, CA 92704
 PH. (714) 870-8628
 (714) 556-3650

4 M C MASTER CARR

3 SCULPTING MATERIAL:
 BORDEN LIQUID RUBBER,
 CASCOREZ CV-833 WITH
 GE. SILICONE RUBBER
 CURING AGENT BETA 4.
 CARVE FIGURES FROM
 CURED RUBBER, FIGURES
 TO BE NEUTRALLY BUOYANT
 IN SOLUTION SPECIFIED IN
 NOTE 1 OF SHEET 1.

2 FIGURES TO BE SCULPTED
 BY SHOW PRODUCTION DEPT 443.
 SEE ECF

1 SUGGESTED SOURCE:
 KEIM PRECISION MIRRORS CORP
 2117 EMPIRE AV, BURBANK, CA.
 PHONE (714) 842-4543

NOTES: UNLESS OTHERWISE SPECIFIED

| REV | DESCRIPTION | BY | DATE |
|-----|--|----|------|
| A | REWORK ITEM 72, APP NOTES 1, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000 | | |

PROJECT: EPCOT - HORIZONS
 DWG TITLE: BASKETBALL PLAYERS
 DRAWN BY: GJ GAGE
 DATE: 2-1-83
 CHECKED BY: J. C. GAGE
 DATE: 2-1-83
 DWG NO: A7-90-A693
 SCALE: 1" = 1'-0"

WED Enterprises
 Lighting
 1811 LOWER ST. DENISE, CA 95019 PHONE (415) 890-0000
 SHEET 3 OF 3

Figure 4-13 Basketball Players
 Sheet 3 of 3
 4-70

4.35 FX-56: SIMULATED OSCILLOSCOPE; SCENE 27.

4.35.1 DESCRIPTION. The sweep of the oscilloscope is created with a Large Disc Fiber Optic Illuminator (P-96) and fiber optic displays. Fluorescent tubes with associated circuitry side lights the plex to create the screen's graticule. The illuminator runs continuously during the show day.

P-96 consists of:

| | |
|---|----------------|
| ASSEMBLY: Fiberoptics Illum Unit (Large Disc) | 6730-908940-40 |
| LAMP: 75 Watts TYPE: EYC (3 lamps) | |
| Electrical Panel | 6730- |

ACCESSORIES:

| | |
|---------------------------------|------|
| 20" Disc Drive Unit - Constant | Ref. |
| 20" Disc Drive Speed (2.25 RPM) | |
| 20" Disc Mtr Speed (RPM) | Ref. |
| Floor Stand (Part of Unit) | |
| Backplate Fiber I/F | Ref. |
| Bushing (Fiber) - 2 reqd | Ref. |

This unit interfaces with multiple fiber bundles
ARTWORK/MASK/GEL: see Table 4-1

4.35.2 THEORY OF OPERATION. Refer to the projector manual.

4.35.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.35.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.36 FX-57: STARFIELD; SCENE 28.

4.36.1 DESCRIPTION. Because the view is from space, the starfields do not blink or twinkle. They are created with three Standard Fiber Optic Illuminators without disc motors (P-97, P-98, P-99) and fiber optic displays. The illuminators run continuously during the show day.

P-97, P-98, and P-99 consist of:

| | |
|--|---------------|
| ASSEMBLY: Fiberoptics Illum. Unit | 6730-905905-8 |
| LAMP: 42 Watts TYPE: ENL Illum Unit | 6730-905889 |
| ACCESSORIES: | |
| No Motor Unit | 6730-905994-1 |
| Floor Mounting Assy. (Full Base) | 6730-907661 |
| Fiber Housing (1.0" D.) Bushing | 6730-905910-1 |
| GEL: see Table 4-1 | |

4.36.2 THEORY OF OPERATION. Refer to the projector manual.

4.36.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.36.4 CORRECTIVE MAINTENANCE. To service, loosen four allen head screws, lift the projector from the fiber optic plate. It is not necessary to disturb the fiber optic bushing. The fiber bundles are fragile, and, if damaged, are difficult to replace.

If further maintenance information is required, refer to the appropriate section of the projector manual.

4.37 FX-58: CRYSTAL SCAN; SCENE 28.

4.37.1 DESCRIPTION. The rotating color ring of a crystal micrograph is rear projected on a screen. It is created with an HMI 5 x 5 Projector (P-100). P-100 runs continuously during the show day.

P-100 consists of:

MAIN ASSEMBLY:

| | |
|--|------------------|
| ASSEMBLY: 5x5 Unit (HMI 1200) Front | 6730-909208-2 |
| LAMP: 1200 watts TYPE: HMI Quartz (5600) | 6730-909208-2 |
| | DAYMAX#DMI 1200 |
| | OSRAM#HMI 1200W |
| LENS: 6.5" TYPE: Beseler | #BS1-1-34 |
| Condenser B (6"x9" F.L.) | 6730-907675-1 |
| P.S. (Ballast) HMI | 6730-920839 |
| | Xetron#B1-1200/C |

PS/Ballast modified

RP Screen: Size=7'5"w x 6'0"h; Throw=11'0"

ACCESSORIES:

| | |
|--|----------------|
| Stand (Projector) | 6730-910708-4 |
| Power Cord x 15' (PS to 5x5) | 6730-920797-2 |
| Fan Unit (Artwork Cooling) 2 reqd | 6730-908932-2 |
| 8"D. Disc - Constant | 6730-907840-19 |
| " " Speed (1.25 RPM) CW | Ref. |
| " " Motor (3.0 RPM) CW | Ref. |
| " " I/F - (Hubbell 7574) | Ref. |
| Beam Diverter Mirror Assy (10"x10") @ 45 degrees | 6730-909848-1 |
| Mirror Assy. (6'w x 4'h) @ 45 degrees | 6730-911040 |

ARTWORK/MASK/GEL: see Table 4-1

4.37.2 THEORY OF OPERATION. Refer to the projector manual.

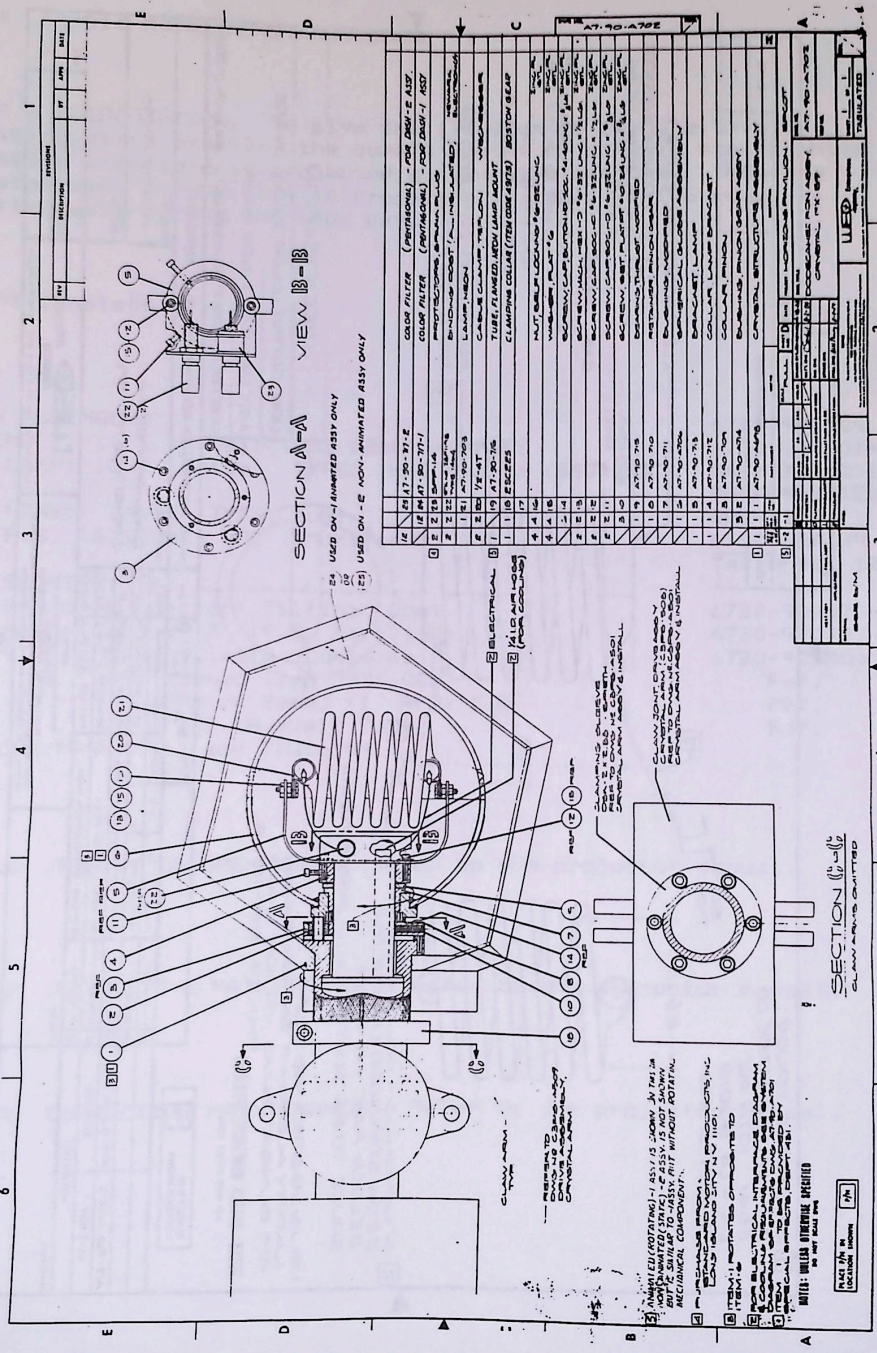
4.37.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.37.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.38 FX-59: CRYSTAL LIGHTING: SCENE 28.

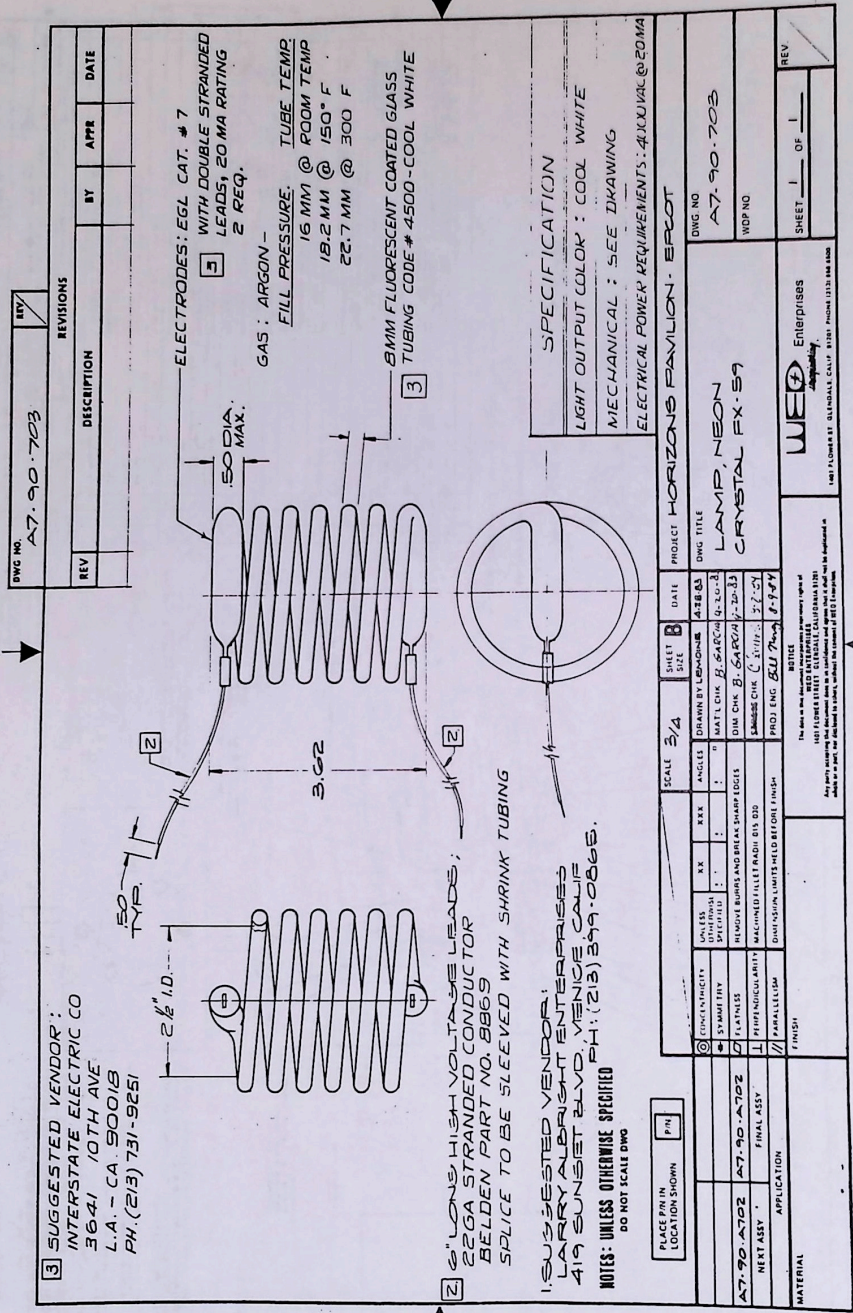
Colors slowly shift through the internally illuminated crystal. The neon lamp is on continuously during the show day.

For more information, refer to Figure 4-14.



| QTY | DESCRIPTION | REF | UNIT |
|-----|----------------------------------|-----|------|
| 1 | NEON CRYSTAL LAMP | 1 | EA |
| 1 | CLAMPING COLLAR (ITEM CODE 3973) | 2 | EA |
| 1 | TUBE FLANGED, NEON LAMP MOUNT | 3 | EA |
| 1 | CABLE CLAMP, VERLON | 4 | EA |
| 1 | LAMP, NEON | 5 | EA |
| 1 | BRACKET, NEON LAMP | 6 | EA |
| 1 | COLLAR, BRONZ | 7 | EA |
| 1 | BRACKET, BRONZ | 8 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 9 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 10 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 11 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 12 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 13 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 14 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 15 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 16 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 17 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 18 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 19 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 20 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 21 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 22 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 23 | EA |
| 1 | SCREW, SELF-PLUNGING, BRONZ | 24 | EA |

Figure 4-14 Neon Crystal Lamp
Sheet 2 of 3
4-75



3 SUGGESTED VENDOR:
 INTERSTATE ELECTRIC CO
 3641 10TH AVE
 L.A. - CA, 90013
 PH. (213) 731-9251

2 30" LONG HIGH VOLTAGE LEADS;
 22 GA STRANDED CONDUCTOR
 BELDEN PART NO. 8869
 SPLICE TO BE SLEEVED WITH SHRINK TUBING

1 SUGGESTED VENDOR:
 LARRY ALDRIGHT ENTERPRISES
 419 SUNSET BLVD, VENTURE CALIF
 NOTES: UNLESS OTHERWISE SPECIFIED
 DO NOT SCALE DRAW

ELECTRODES: EGL CAT. # 7
 WITH DOUBLE STRANDED
 LEADS, 20 MA RATING
 2 REQ.

GAS: ARGON -
 FILL PRESSURE: TUBE TEMP
 16 MM @ ROOM TEMP
 19.2 MM @ 150° F
 22.7 MM @ 300 F

3 8MM FLUORESCENT COATED GLASS
 TUBING CODE # 4500-COOL WHITE

SPECIFICATION
 LIGHT OUTPUT COLOR: COOL WHITE
 MECHANICAL: SEE DRAWING
 ELECTRICAL POWER REQUIREMENTS: 4.000VA @ 20MA

| | |
|--------|-------------|
| REV. / | |
| REV | DESCRIPTION |
| BY | APPR |
| DATE | |

DWG NO. A7.90.703

| | |
|----------------|----|
| LOCATION SHOWN | PH |
|----------------|----|

| | | | | | | | | |
|------------------|----|-----|--------|-----|-------|---|------|-------|
| CONCENTRICITY | XX | XXX | ANGLES | 3/4 | SHEET | B | DATE | A7E83 |
| STRAIGHT EN | | | | | | | | |
| PLATINUM | | | | | | | | |
| PERPENDICULARITY | | | | | | | | |
| PARALLELISM | | | | | | | | |
| FINISH | | | | | | | | |

SCALE 3/4

DRAWN BY LENDONH
 MATL CHK B. SABCOR 02-10-83

DIM CHK B. SABCOR 02-20-83

ISSUED CHK C. SABCOR 02-27-83

PROJ. ENG. BELT 02/27/83

| | |
|---------------|-----------------------------|
| PROJECT | HORIZONS FAMILION - ERLOT |
| DWG NO | A7.90.703 |
| WOP NO | |
| PROJECT TITLE | LAMP, NEON CRYSTAL PX-59 |

| | | | |
|-------|---|----|---|
| SHEET | 1 | OF | 1 |
| REV | | | |

WED Enterprises
 1401 FLORENCE ST. GLENDALE, CALIF. 91201 PHONE 312-214-1400

THIS IS THE ORIGINAL DRAWING OF THE
 PROJECT. ANY CHANGES MUST BE APPROVED BY
 THE PROJECT ENGINEER. ANY CHANGES MUST BE
 APPROVED BY THE PROJECT ENGINEER.
 ANY PARTS ORDERING THE DRAWING MUST BE IDENTIFIED AND APPROVED BY A SIGNATURE AND
 DATE TO BE VALID FOR THE PROJECT. ANY CHANGES MUST BE APPROVED BY THE PROJECT ENGINEER.

Figure 4-14 Neon Crystal Lamp
 Sheet 3 of 3
 4-76

4.39 FX-61: ROTATING STARS; SCENE 31.

4.39.1 DESCRIPTION. To give the illusion of being within a rotating space station, the guests' point of view is static while a rotating starfield is projected outside the windows. They are created with an HMI 10 x 10 Projector (P-105). P-105 runs continuously during the show day.

P-105 consists of:

MAIN ASSEMBLY:

ASSEMBLY: 10 x 10 Unit (HMI-1200) - Front

LAMP: 1200 Watts TYPE: HMI Quartz (5600 K)

LENS: 12.5" TYPE: Buhl

P.S. (Ballast) HMI (Modified)

6730-911004

6730-909201-4

DAYMAX#DMI 1200

OSRAM#HMI1200W

#834-125

6730-920839

Xetron#B1-1200/C

ACCESSORIES:

Stand (Projector) Tilting (Low)

Power Cord x 15' (P.S. to 10x10)

9" Rim Disc (Single) Constant

" " Speed (1.5 RPM) CCW

" " Motor Speed (19 RPM) CCW

" " I/F (Hubbell 7574)

6730-904070-7

6730-920797-2

6730-903884

Ref.

Ref.

Ref.

ARTWORK/MASK/GEL: see Table 4-1

4.39.2 THEORY OF OPERATION. Refer to the projector manual.

4.39.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.39.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.40 FX-62: HOLOGRAM FLICKER; SCENE 31.

4.40.1 DESCRIPTION. To enhance the interpretation of a transmitting holographic party line (rather than just poorly lit figures), the images appear to flicker. The flicker is created with three show controlled 2 x 2 Strobes (P-106, P-107, P-108).

P-106, 107, and P-108 consist of:

ASSEMBLY: 2 x 2 Strobe Unit (Constant) w/fan
LAMP: 300 Watts TYPE: Flashtube
Lamp Module

LENS: 7.87" TYPE: Buhl
Strobe P.S. Unit
Modified (w/PCB)

ACCESSORIES:
Floor Mounting (Projector)
ARTWORK/MASK/GEL: none

6730-910686-1
Kemlite#S95B-9
Strobex#274
#206-060
Strobex#236-D
#VC99-3482

6730-908500

4.40.2 THEORY OF OPERATION. Refer to the projector manual.

4.40.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.40.4 CORRECTIVE MAINTENANCE. Refer to the projector manual.

4.41 FX-63: AERIAL IMAGES; SCENE 33.

As the guests are instructed in the "choose your tomorrow" voting scenes of the of the three transport vehicles float by as if from three dimensional travel posters. The effect is created with three static spherical mirrors.

4.42 FX-65: STARFIELD; SCENE 33.

4.42.1 DESCRIPTION. Because the view is from space, the starfields do not blink or twinkle. They are created with four Standard Fiber Optic Illuminators without disc motors (P-88, P-89, P-109, P-110) and fiber optic displays. The illuminators run continuously during the show day.

P-88, P-89, P-109, and P-110 consist of:

| | |
|--|---------------|
| ASSEMBLY: Fiberoptics Illum. Unit | 6730-905905-8 |
| LAMP: 42 Watts TYPE: ENL Illum Unit | 6730-905889 |
| ACCESSORIES: | |
| No Motor Unit | 6730-905994-1 |
| Floor Mounting Assy. (Full Base) | 6730-907661 |
| Fiber Housing (1.0" D.) Bushing | 6730-905910-1 |
| GEL: see Table 4-1 | |

4.42.2 THEORY OF OPERATION. Refer to the projector manual.

4.42.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.42.4 CORRECTIVE MAINTENANCE. To service, loosen four allen head screws, lift the projector from the fiber optic plate. It is not necessary to disturb the fiber optic bushing. The fiber bundles are fragile, and, if damaged, are difficult to replace.

If further maintenance information is required, refer to the appropriate section of the projector manual.

4.43 FX-66: STARFIELD; SCENE 34.

4.43.1 DESCRIPTION. Because the view is from space, the starfields do not blink or twinkle. They are created with two Standard Fiber Optic Illuminators without disc motors (P-112, P-113) and fiber optic displays. The illuminators run continuously during the show day.

P-112 and P-113 consist of:

| | |
|--|---------------|
| ASSEMBLY: Fiberoptics Illum. Unit | 6730-905905-8 |
| LAMP: 42 Watts TYPE: ENL Illum Unit | 6730-905889 |
| ACCESSORIES: | |
| No Motor Unit | 6730-905994-1 |
| Floor Mounting Assy. (Full Base) | 6730-907661 |
| Fiber Housing (1.0" D.) Bushing | 6730-905910-1 |
| GEL: see Table 4-1 | |

4.43.2 THEORY OF OPERATION. Refer to the projector manual.

4.43.3 PREVENTIVE MAINTENANCE. Refer to the projector manual.

4.43.4 CORRECTIVE MAINTENANCE. To service, loosen four allen head screws, lift the projector from the fiber optic plate. It is not necessary to disturb the fiber optic bushing. The fiber bundles are fragile, and, if damaged, are difficult to replace.

If further maintenance information is required, refer to the appropriate section of the projector manual.

PROJECTED SPECIAL EFFECTS STILL FILM LOG
 WED/SPECIAL EFFECTS/DEPARTMENT 431

The purpose of this log is to provide tracking information and facilitate the retrieval of both the original artwork at the studio and related WED-maintained transparencies. This log also establishes production requirements for each Special Effects projector's still film usage.

LEGEND: WDP: WALT DISNEY PRODUCTIONS
 CIBA: CIBACHROME
 SILK: SILKSCREENED
 KODA: KODALITH

PAGE 1 OF 10

NO. OF FILM PROJECTORS 12

DOCUMENT ID# 0085F

REVISION NO: 3

LOCATION: FUTURE WORLD - EPCOT

NO. OF EFFECT PROJECTORS 114

MOST RECENT UPDATE: 07-25-84

PROJECT: HORIZONS

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|-----------------------|---------------------|------------------|--|------------------------------|--------------|----------------|---------------|--------------------------------------|------------------------------------|
| #1 FUTURE PORT | P13 | 1 | 1200W. HMI 5 X 5 COLOR STILL | WDP | CIBA | | | ARTWORK REF. #: 16770-919452 | 5 X 7 COLOR STILL TRAVEL POSTER |
| | | | "TRAVEL POSTER" (UNDERWATER) MCCALL PAINTINGS FX-1 | | | | | ROSCO GEL #66 (1) LAYER COOL BLUE | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P14 | 1 | 1200W. HMI 5 X 5 COLOR STILL | WDP | CIBA | | | ARTWORK REF. #: 16770-919453 | 5 X 7 COLOR STILL TRAVEL POSTER |
| | | | "TRAVEL POSTER" (DESERT CITY) MCCALL PAINTINGS FX-1 | | | | | | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P15 | 1 | 1200W. HMI 5 X 5 COLOR STILL | WDP | CIBA | | | ARTWORK REF. #: 16770-919454 | 5 X 7 COLOR STILL TRAVEL POSTER |
| | | | "TRAVEL POSTER" (OUTER SPACE) MCCALL PAINTINGS FX-1 | | | | | | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P16 | 1 | LARGE DISC F.O.I. 20" DIA. ICOLOR STILL WITH LAMINATION | WDP | SILK | | | ARTWORK REF. #: 16770-919455 | 20" DIA. SILK SCREEN, LAMINATED |
| | | | "FIBER OPTIC WALL" FX-77 | | | | | | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P17 | 1 | LARGE DISC F.O.I. 20" DIA. ICOLOR STILL WITH LAMINATION | WDP | SILK | | | ARTWORK REF. #: 16770-919456 | 20" DIA. SILK SCREEN, LAMINATED |
| | | | "FIBER OPTIC WALL" FX-77 | | | | | | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P18 | 1 | LARGE DISC F.O.I. 20" DIA. ICOLOR STILL WITH LAMINATION | WDP | SILK | | | ARTWORK REF. #: 16770-919457 | 20" DIA. SILK SCREEN, LAMINATED |
| | | | "FIBER OPTIC WALL" FX-77 | | | | | | |
| | | | | | | | | | |
| #3 TRANS TUNNEL #1 | P19 | 0 | XENON FIBER OPTIC ILLUMINATOR "LIGHTNING FOR F.O. WALL" FX-77 | NO ARTWORK | | | | | |
| | | | | | | | | | |

Table 4-1 Artwork Replacement

MOST RECENT UPDATE: 07-25-84
 PROJECT: HORIZONS

REVISION NO: 3
 LOCATION: FUTURE WORLD - EPCOT

DOCUMENT ID# 008BF
 NO. OF EFFECT PROJECTORS 114

PAGE 2 OF 10
 NO. OF FILM PROJECTORS 12

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS | | | | | | | |
|----------------------------------|-------------------------|----------------------------------|---|------------------------------|--------------|----------------|-----------------|------------------------------------|------------------|----------------------------------|-----|------|--|--|-----------------------------------|--|
| #4 EARLY INVENTIONS | P20 | 1 | INCANDESCENT 10 X 10 FX-3 | WDP | KODA | | | ARTWORK REF. #: | | | | | | | | |
| | | | "PARADE OF INVENTIONS" B&W STILL | | | | | 16770-919458 | | | | | | | | |
| | | | (LARGE FLYING CRAFT) | | | | | ROSCO GEL #10 (1) LAYER MED YELLOW | | | | | | | | |
| | | | P21 | | | | | 1 | | INCANDESCENT 10 X 10 FX-3 | WDP | KODA | | | ARTWORK REF. #: | |
| | | | | | | | | | | "PARADE OF INVENTIONS" B&W STILL | | | | | 16770-919459 | |
| | | | | | | | | | | (MAN IN FEATHER FLYING MACHINE) | | | | | ROSCO GEL #30 (1) LT. SALMON PINK | |
| | | | | | | | | | | P22 | | | | | 1 | |
| | | | "PARADE OF INVENTIONS" B&W STILL | | | | | 16770-919460 | | | | | | | | |
| | | | (CANNON) | | | | | ROSCO GEL #70 (1) MILE BLUE | | | | | | | | |
| | | | P23 | | | | | 1 | | INCANDESCENT 10 X 10 FX-3 | WDP | KODA | | | ARTWORK REF. #: | |
| "PARADE OF INVENTIONS" B&W STILL | 16770-919461 | | | | | | | | | | | | | | | |
| (VERNE BULLETS) | ROSCO GEL #12 (1) STRAW | | | | | | | | | | | | | | | |
| P24 | 1 | INCANDESCENT 5 X 5 FX-3 | | WDP | KODA | | | | ARTWORK REF. #: | | | | | | | |
| | | "PARADE OF INVENTIONS" B&W STILL | 16770-919462 | | | | | | | | | | | | | |
| P25 | 1 | INCANDESCENT 5 X 5 FX-3 | WDP | KODA | | | ARTWORK REF. #: | | | | | | | | | |
| | | "PARADE OF INVENTIONS" B&W STILL | | | | | 16770-919463 | | | | | | | | | |
| P26 | 1 | INCANDESCENT 5 X 5 FX-68 | WDP | KODA | | | ARTWORK REF. #: | | | | | | | | | |
| | | "PARADE OF INVENTIONS" B&W STILL | | | | | 16770-919464 | | | | | | | | | |
| #5 JULES VERNE SPACESHIP | P29, 30 | 1 ea | (MOVING CLOUDS) B&W 19" DISC | WDP | KODA | | | ARTWORK REF. #: | | | | | | | | |
| | | | (CLOUD DRUM - "MOVING CLOUDS" B&W 12" DIA. DRUM/76" LOOP FX-5 | | | | | 16730-911043 | | | | | | | | |
| | | | | | | | | ARTWORK REF. #: | | | | | | | | |
| | | | | | | | | 16770-919465 | (1) LT. SKY BLUE | | | | | | | |

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|--------------------------------|-------------------------------|------------------|---|------------------------------|--------------|----------------|---------------|---|----------|
| #5 JULES VERNE | P1 | 1 | 135mm 1-MIN. BLK & WHT FILM LOOP | HDP | | | | | |
| SPACESHIP, (CON'T.) | | | "MAN IN MOON" | | ESTAR | | | ARTWORK REF. #: 16770-919441 | |
| #7 ART DECO | P31 | 1 | IF.O. XENON ILLUMINATOR "ROBOT FLASHES" FX-69 | NO ARTWORK | | | | | |
| #8 NEON CITY | P2 | 1 | 135mm 1-MIN BLK&WHT FILM LOOP "MOVIE MARQUEE" (CLIPS OF OLD TV) | HDP | ESTAR | | | ARTWORK REF. #: 16770-919442 | |
| | P3 | 1 | 135mm 1-MIN BLK&WHT FILM LOOP "MOVIE MARQUEE" (CLIPS OF OLD TV) | HDP | ESTAR | | | ARTWORK REF. #: 16770-919443 | |
| #11 TRANSITION TUNNEL #2 | FXP-11-1 THRU FXP-11-13 | 2 ea | MINI-MOLE MODIFIED FX-12 "LUMIA" 12" DIA. COLOR DISK 12" DIA. B & W KODA | HDP HDP | SILK KODA | | | ARTWORK REF. #: 16770-919509 COLOR SILKSCREEN 12" DIA 16770-919510 BLK&WHT KODALITH 12" DIA | |
| #12 OMNIMAX | P4,5 | 1 ea | 170mm OMNIMAX 12 MIN. COLOR FILM LOOP "MICRO/MACRO WORLDS" | HDP | ESTAR | | | ARTWORK REF. #: 16770-919444 | |
| #13 TRANSITION TUNNEL #3 | FXP-13-1 THRU FXP-13-14 | 2 ea | MINI-MOLE, MODIFIED FX-13 "LUMIA" 12" DIA. COLOR DISK 12" DIA. B & W DISK | HDP HDP | SILK KODA | | | ARTWORK REF. #: 16770-919511 COLOR SILKSCREEN 12" DIA 16770-919510 BLK&WHT KODALITH 12" DIA | |

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|----------------------|-------------------------|------------------|---|------------------------------|--------------|----------------|---------------|--|----------|
| #14 URBAN HABITAT | P46 | 2 | 10 X 10 SPECIAL MOVING LAMP "ELEVATOR" FX-17 | NO ARTWORK | | | | LAMP ONLY GE 2604X | |
| | P47 | 2 | 10 X 10 SPECIAL MOVING LAMP "ELEVATOR" FX-17 | NO ARTWORK | | | | LAMP ONLY GE 2604X | |
| | P48 | 2 | 10 X 10 SPECIAL MOVING LAMP "ELEVATOR" FX-17 | NO ARTWORK | | | | LAMP ONLY GE 2604X | |
| | P49 | 2 | 1200W. HMI 10 X 10 FX-18 "MAG-LEV TRAINS" B&W LONG LOOP B&W MASK | WDP | KODA | | | ARTWORK REF. #: 16770-919472 B&W LONG LOOP 16770-919473 B&W MASK | |
| | P50 | 2 | 1200W. HMI 10 X 10 FX-18 "MAG LEV TRAINS" B&W LONG LOOP B&W MASK | WDP | KODA | | | ARTWORK REF. #: 16770-919472 B&W LONG LOOP 16770-919475 B&W MASK [LEE FILTER #209 (LT.NEUTRAL DENSITY)] | |
| | FXP14-1 THRU FXP14-5 | 1 | F.O. MINI-ILLUMINATOR (4" DISC) "BLINKING LIGHTS" FX-16 | WDP | KODA | | | ARTWORK REF. #: 16770-919471 B & W LAMINATED | |
| | P51 | 0 | 12 X 2 STROBE "HOLOGRAM FLICKER" | NO ARTWORK | | | | | |
| | P52 | 1 | 1575W. HMI 10 X 10 FX-70 "STATION HIGHLIGHTS" BLK&WHT | WDP | KODA | | | ARTWORK REF. #: 16770-919476 10 X 10 KODALITH [LEE FILTER #211 (DK.NEUTRAL DENSITY)] | |
| | P53 | 1 | 1575W. HMI 10 X 10 FX-70 "STATION HIGHLIGHTS" BLK&WHT | WDP | KODA | | | ARTWORK REF. #: 16770-919477 10 X 10 KODALITH [LEE FILTER #211 (DK.NEUTRAL DENSITY)] | |

MOST RECENT UPDATE: 07-25-84

PROJECT: HORIZONS

REVISION NO: 3

DOCUMENT ID# 0085F

PAGE 5 OF 10

LOCATION: FUTURE WORLD - EPCOT NO. OF EFFECT PROJECTORS 114

NO. OF FILM PROJECTORS 12

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM | PROCESS | LAB | DATE | COMPL | STUDIO | REFERENCE NUMBER | COMMENTS | |
|--------------------|---------------------|------------------|--|------------------------------|------|---------|-----|------|-------|--------|---|--|----------------------------------|
| #16 DESERT FARM | P54 | 2 | 1200M. HMI 10 X 10 FX-22 "MOVING CLOUDS" B&W LONG LOOP B&W MASK | WDP | KODA | | | | | | ARTWORK REF. #: 16770-919478 B&W LONG LOOP CONT. TONE 16770-919479 B&W MASK | | |
| | P55 | 2 | 1200M. HMI 10 X 10 FX-22 "MOVING CLOUDS" B&W LONG LOOP B&W MASK | WDP | KODA | | | | | | ARTWORK REF. #: 16770-919478 B&W LONG LOOP CONT. TONE 16770-919479 B&W MASK | | |
| | P56 | 1 | 12 X 2 STROBE "LIGHTNING" 9" DIA. B&W DISC | WDP | KODA | | | | | | ARTWORK REF. #: 16770-919480 | 9" KODALITH DISC | |
| | P57 | 1 | INCANDESCENT 2 X 2 "FARM AERIAL GRID" 4" X 4" COLOR (SIMULATED MONITORS) FX-25 | WDP | CIBA | | | | | | ARTWORK REF. #: 16770-919481 | COLOR TRANSP. | |
| | P58 | 1 | INCANDESCENT 2 X 2 "HARVESTER" (SIMULATED MONITORS) FX-25 | WDP | CIBA | | | | | | ARTWORK REF. #: 16770-919482 | COLOR TRANSP. | |
| | P59 | 1 | INCANDESCENT 2 X 2 "WEATHER MAP" (SIMULATED MONITORS) FX-25 | WDP | CIBA | | | | | | ARTWORK REF. #: 16770-919483 | COLOR TRANSP. | |
| | P60, 61 | 2 ea | HMI 2 X 2 "FLYING CRAFT" COLOR 2 X 2 SLIDE B & W 2 X 2 MASK | WDP | KODA | | | | | | | ARTWORK REF. #: 16770-919484 16770-919485 ROSCO GEL #18 - FLAME | 35mm COLOR TRANSP & KODA MASK |
| | FXP16-1 | 0 | F.O. MINI-ILLUMINATOR (4" DISC) "BLIMP LIGHTS" | NO ARTWORK | GEL | | | | | | | ROSCO GEL #26 - LT. RED | |

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | RESPONSIBILITY | PRODUCTION | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS | |
|-------------------------------|---------------------|--|---|----------------|--------------|--------------|----------------|---------------|----------------------------|---|--|
| #17 DESERT HABITAT | P114 | 0 | MYLAR WATER RIPPLE FX-72 | NO ARTWORK | | | | | | BLUE PAR LAMP MOVED TO SC. 20, RENUMBERED P115 | |
| | | | | | | | | | | | |
| | P6 | 1 | 135mm 1-MIN. COLOR FILM LOOP "COMMO. ROOM" (BOY WITH GIRL) | WDP | | ESTAR | | | | ARTWORK REF. #: 16770-919445 | |
| | | | | | | | | | | | |
| #19 SUB REPAIR ROOM | P62 | 0 | IXENON FIBER OPTIC ILLUMINATOR "LASER MELDING" FX-33 | NO ARTWORK | | | | | | | |
| | | | | | | | | | | | |
| | P63 | 4 | INCANDESCENT 5 X 5 FX-36 "WATER RIPPLE" BLK & WHT | WDP | | KODA KODA | | | | ARTWORK REF. #: 16770-919487 16770-919488 | KODA MASK (TRIPLE PLATE OSCILLATOR) (3) |
| | | | | | | | | | | | |
| P64 | 4 | INCANDESCENT 5 X 5 FX-36 "WATER RIPPLE" BLK & WHT | WDP | | KODA KODA | | | | | ARTWORK REF. #: 16770-919489 16770-919488 | KODA MASK (TRIPLE PLATE OSCILLATOR) (3) |
| | | | | | | | | | | | |
| #20 DIVE CHAMBER P65, P115 | P7 | 1 | 135mm 1-MIN. COLOR FILM LOOP "VIDEO SCREEN" (SIMULATED) | WDP | | ESTAR | | | | ARTWORK REF. #: 16770-919446 | |
| | | | | | | | | | | | |
| #22 UNDERSEA RESORT | P66-69 | 1 | 1200M. HMI 5 X 5 FX-41 "RIPPLE REFLECTIONS" B & W | WDP | | KODA | | | | ARTWORK REF. #: 16770-919491 16730-911289 | 19" KODA DISC, TEXTURED DISC |
| | | | | | | | | | | | |
| | | | | | | | | | | | ILEE FILTER #209 (1) LAYER LIGHT N.D. ILEE FILTER #211 (2/3) LAYER DARK NO IROSICO GEL #70 (1) MILE BLUE #71 (1) SEA BLUE WITH 1-1/4" HOLE IN CENTER |
| | | | | | | | | | | | |

MOST RECENT UPDATE: 07-25-84

PROJECT: HORIZONS

REVISION NO: 3

DOCUMENT ID# 0085F

PAGE 7 OF 10

LOCATION: FUTURE WORLD - EPCOT

NO. OF EFFECT PROJECTORS 114

NO. OF FILM PROJECTORS 12

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|-----------------------------------|---------------------|------------------|--|------------------------------|--------------|----------------|---------------|--|--|
| #22 UNDERSEA RESORT (CONT.) | P70-72, 116 | 1 | 1200M. HMI 5 X 5 FX-41 "RIPPLE REFLECTIONS" | HDP | KODA | | | ARTWORK REF. #: 16770-919491 16730-911289 ILEE FILTER #211 (1) LAYER DARK N.D. ROSCO GEL #70 (1) LAYER MILE BLUE #71 (1) SEA BLUE WITH 1-1/4" HOLE IN CENTER | 19" KODA DISC, TEXTURED DISC |
| | P8 | 1 | 135mm, 50 SEC. COLOR FILM LOOP "FLOATING CITY" (WITH SUB AND DIVERS) | HDP | ESTAR | | | ARTWORK REF. #: 16770-919447 | |
| #23 UNDERSEA INDUSTRY | P73 | 2 | 1575W. HMI 2 X 2 FX-43 "DISTANT SUBS" COLOR 2 X 2 B & W 2 X 2 | HDP | CIBA KODA | | | ARTWORK REF. #: 16770-919492 16770-919493 | 35mm COLOR TRANSP KODA MASK |
| | P74 | 2 | 1575W. HMI 2 X 2 FX-43 "DISTANT SUBS" COLOR 2 X 2 B & W 2 X 2 | HDP | CIBA KODA | | | ARTWORK REF. #: 16770-919494 16770-919495 | 35mm COLOR TRANSP KODA MASK |
| | P75-78 | 1 | 1200M. HMI 5 X 5 FX-46 "RIPPLES ON ROCKWORK" B & W | HDP | KODA | | | ARTWORK REF. #: 16770-919491 16730-911289 | 19" KODA DISC TEXTURED DISC |
| | | | | | | | | | ILEE FILTER #211 (2) LAYERS DARK N.D. ROSCO GEL #70 (1) LAYER MILE BLUE #71 (1) SEA BLUE WITH 1-1/4" HOLE IN CENTER |
| | FAP23-1,2 | 0 | F.O. MINI-ILLUMINATOR (4" DISC) "HELP WARNING LIGHTS" FX-47 | NO ARTWORK | GEL | | | ROSCO GEL #26 (1) LT. RED ILEE FILTER #211 (1) DARK NEUTRAL DENSITY | |

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|------------------------|------------------------------|---|---|---|--------------|----------------|---------------------------------|---------------------------------|------------------------------------|
| #24 TRANSITION AREA | P79 | 2 | 1575M. HMI 2 X 2 ¹ "SUBMARINE" | FX-48 WDP | CIBA | | | ARTWORK REF. #: 16770-919496 | 35mm COLOR TRANSP KODA MASK |
| | | | | B & W 2 X 2 WDP | KODA | | | 16770-919497 | |
| | P80 | 2 | 1575M. HMI 2 X 2 "SPACECRAFT" | FX-48 WDP | CIBA | | | ARTWORK REF. #: 16770-919498 | 35mm COLOR TRANSP KODA MASK |
| | | | | B & W 2 X 2 WDP | KODA | | | 16770-919499 | |
| P81 NOT INSTALLED | | 2 | 1575M. HMI 2 X 2 "BUBBLES FOR SUB" | FX-74 WDP | KODA | | | ARTWORK REF. #: 16770-919500 | 4 X 5 KODALITH (SOFT EDGE MASK) |
| | | | | WDP | KODA | | | 16770-919501 | |
| | P82 | 2 | 1200M. HMI 5 X 5 "WATER RIPPLES" | FX-73 WDP | KODA | | | ARTWORK REF. #: 16770-919491 | 19" KODA DISC MASK |
| | | | | B & W 19" DISC B & W 5X5 MASK WDP | KODA | | | 16770-919486 | TEXTURED DISC |
| #25 OUTERSPACE | P83 | 2 | 1200M. HMI 10 X 10 "BEAM BUILDER" | FX-49 WDP | KODA | | | ARTWORK REF. #: 16770-919502 | 10 X 10 KODA |
| | | | | B&W LONG LOOP WDP | KODA | | | 16770-919503 | LONG LOOP (KODA) |
| | | | | | | | | ROSCO GEL #66 (1) | COOL BLUE |
| | | | | | | | | 16730- | P-5 PLEX 2" X 2" |
| | P84,85,86,87, 90,91,92,93 | | 142 WATT FIBER OPTIC ILLUMINATOR "STARFIELD" | NO ARTWORK FX-51 | GEL | | | ROSCO GEL #60 (1) | NO COLOR BLUE |
| P9 | 1 | 170mm, 1-MIN. COLOR FILM LOOP "SPACE COLONY" (OUTSIDE) | WDP | ESTAR | | | ARTWORK REF. #: 16770-919448 | | |

Table 4-1 Artwork Replacement

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|------------------------------|---------------------|------------------|---|------------------------------|--------------|----------------|---------------|---|----------|
| #26 SPACE COLONY | P10 | 1 | 170mm, 1-MIN. COLOR FILM LOOP "ROTATING COLONY" (SPACE COLONY INSIDE) | WDP | ESTAR | | | ARTWORK REF. #: 16770-919449 | |
| #27 HEALTH AND RECREATION | P11 | 1 | 35mm, 1-MIN. COLOR FILM LOOP "SPORT SIMULATOR" (ROWING, TOP BUBBLE) | WDP | ESTAR | | | ARTWORK REF. #: 16770-919450 | |
| | P12 | 1 | 35mm, 1-MIN. COLOR FILM LOOP "SPORT SIMULATOR" (BICYCLE MACHINE, BOTTOM BUBBLE) | WDP | ESTAR | | | ARTWORK REF. #: 16770-919451 | |
| | P94 | 2 | 1200H. HMT 5 X 5 FX-54 "BODY SCAN" COLOR 5 X 5 STILL 5 X 5 SHORT LOOP | WDP | SILK KODA | | | ARTWORK REF. #: 16770-919504 5 X 5 SILKSCREEN STILL 16770-919505 5 X 5 SHORT LOOP (KODA) (B&W LOOP WITH ROSCOGYE) RED HANDPAINTED ON IT.) | |
| | FXP27-1 | 0 | (MAPO) LINEBACH PROJECTOR "BASKETBALL PLAYERS" FX-55 | NO ARTWORK | GEL | | | ROSCO GEL #71 (1) SEA BLUE ISEE SPECIAL EFFECTS DWG A7-90-A693 | |
| #28 MAIN SHUTTLE PORT | P96 | 1 | ILARGE DISC FIBER OPTIC ILLUM. "SIMULATED OSCILLOSCOPE" FX-56 | WDP | SILK | | | ARTWORK REF. #: 16770-919506 20" SILK. DISC | |
| | P97, 98 | 0 | 42 WATT FIBER OPTIC ILLUMINATOR "STARFIELD" FX-57 | NO ARTWORK | GEL | | | MECHANICAL REF. #: 16730-911290 (1) P-5 PLEX 2" X 2" ROSCO GEL #60 (1) NO COLOR BLUE | |
| | P99 | 0 | 42 WATT FIBER OPTIC ILLUMINATOR "STARFIELD" FX-57 | NO ARTWORK | GEL | | | ROSCO GEL #60 (1) NO COLOR BLUE | |

Table 4-1 Artwork Replacement

MOST RECENT UPDATE: -07-25-84
PROJECT: HORIZONS

REVISION NO: 3 DOCUMENT ID# 0085F
LOCATION: FUTURE WORLD - EPCOT NO. OF EFFECT PROJECTORS 114

PAGE 10 OF 10
NO. OF FILM PROJECTORS 12

| AREA/ SCENE | PROJECTOR NUMBER | SLIDES (QTY.) | SUBJECT/DESCRIPTION AND PROJECTOR TYPE | PRODUCTION RESPONSIBILITY | FILM BASE | PROCESS LAB | COMPL DATE | STUDIO REFERENCE NUMBER | COMMENTS |
|--|----------------------|------------------|--|------------------------------|--------------|----------------|---------------|--|--------------------------------|
| #29 CRYSTAL MANUFACTURING | P100 | 1 | 1200W. HMI 5 X 5 FX-58 "CRYSTAL SCAN" 6" DIA. COLOR DISC | MDP | CIBA | | | ARTWORK REF. #: 16770-919507 ROSCO GEL #65 (1) DK. STRAW ROSCO GEL #37 (3) PALE ROSE PINK (1) ACETATE DIFFUSER | |
| #31 HOLOGRAPHIC PARTY LINE | P105 | 2 | 1200W. HMI 10 X 10 FX-61 "ROTATING STARS" 10" DIA B&W DISC | MDP | KODA | | | ARTWORK REF. #: 16770-919508 16770-919512 | 10" KODA. DISC 10 X 10 MASK |
| | P106, 107, 108 | 0 | 2 X 2 STROBE FX-62 "HOLOGRAM FLICKER" | NO ARTWORK | | | | | |
| #33 CHOOSE YOUR TOMORROW SELECTIONS | P88, 89, 109, 110 | 0 | 142 WATT FIBER OPTIC ILLUMINATOR FX-65 "STARFIELD" | NO ARTWORK | GEL | | | 16730-911290 (1) P-5 PLEX 2" X 2" ROSCO GEL #60 (2) LAYERS NO COLOR BLUE | |
| #34 CHOOSE YOUR TOMORROW SIMULATIONS | P112, 113 | 0 | 142 WATT FIBER OPTIC ILLUMINATOR FX-66 "STARFIELD" | NO ARTWORK | GEL | | | 16730-911290 (1) P-5 PLEX 2" X 2" ROSCO GEL #60 (1) LAYER NO COLOR BLUE | |

ADDITIONAL INFO.:

HORIZON 10-DIGIT NUMBERS: 6770-919452 THRU' 6770-919551
UNUSED WATER RIPPLE NUMBERS: 6770-919490 (LGE. SPOTS)
6770-919469 (SML. SPOTS)
USABLE NUMBERS AVAILABLE: 6770-919466 THRU' 6770-919468 ,6770-919474
6770-919513 THRU' 6770-919551

Table 4-2 Lamp Replacement

| FX NO | DEVICE NUMBER | EQUIPMENT | LAMP TYPE | PART NUMBER |
|-------|---------------|---------------------|-----------------------------|-----------------|
| FX-1 | P-13 | HMI 5x5 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | P-14 | " | Quartz 5600 K | OSRAM#HMI1200W |
| | P-15 | " | " | " |
| FX-77 | P-16 | Lg Disc FOI | (12) 75 watt EYC | |
| | P-17 | " | " | --- |
| | P-18 | " | " | --- |
| | P-19 | Xenon FOI | 300 watt Xenon | ILC#LX300F |
| FX-3 | P-20 | 10x10 Projector | 2000 watt tungsten halogen | 6240-594504 |
| | P-21 | " | " | " |
| | P-22 | " | " | " |
| | P-23 | " | " | " |
| | P-24 | 5x5 Projector | 2000 watt tungsten halogen | 6240-594504 |
| | P-25 | " | " | " |
| FX-68 | P-26 | 5x5 Projector | " | " |
| FX-5 | P-29 | 24" Cloud Drum | 75 watt Quartz (28v) | GE #1982 |
| | P-30 | " | " | " |
| FX-69 | P-31 | Xenon FOI | 300 watt Xenon | ILC#LX300F |
| FX-12 | | Lumia | Mini Mole Lamp Quartzline | GE Q150CL/DC/2V |
| FX-13 | | Lumia | " | " |
| FX-16 | FXP14-1 | Mini FOI | Mini Lamp | GE 2504x |
| | FXP14-2 | " | " | " |
| | FXP14-3 | " | " | " |
| | FXP14-4 | " | " | " |
| | FXP14-5 | " | " | " |
| FX-17 | P-46 | 10x10 Projector | 10 watt Quartz (5v) | GE 2604X |
| | P-47 | " | " | " |
| | P-48 | " | " | " |
| FX-18 | P-49 | HMI 10x10 Projector | 1200 watt HMI Quartz 5600 K | DAYMAX#DMI1200 |
| | P-50 | " | " | OSRAM#HMI1200W |

Table 4-2 Lamp Replacement (Continued)

| DEVICE FX NO NUMBER | EQUIPMENT | LAMP TYPE | PART NUMBER |
|------------------------|---------------------|--------------------------------|----------------------------------|
| FX-19 P-51 | 2x2 Strobe | 300 watt flashtube | Kemlite #S59B-9 |
| FX-70 P-52 | HMI 5x5 Projector | 575 watt HMI Quartz 5600 K | DAYMAX#DMI575 OSRAM#HMI575W |
| P-53 | " | " | " |
| FX-22 P-54 | HMI 10x10 Projector | 1200 watt HMI Quartz 5600 K | DAYMAX#DMI1200 OSRAM#HMI1200W |
| P-55 | " | " | " |
| FX-23 P-56 | 2x2 Strobe | 300 watt flashtube | Kemlite #S59B-9 |
| FX-25 P-57 | 2x2 Projector | 500 watt Quartz (BCK) | --- |
| P-58 | " | " | --- |
| P-59 | " | " | --- |
| FX-26 P-60 | HMI 2x2 Projector | 575 watt HMI Quartz 5600 K | DAYMAX#DMI575 OSRAM#HMI575W |
| P-61 | " | " | " |
| FX-27 FXP16-1 | Mini FOI | Mini Lamp | GE 2504x |
| FX-71 | Pantry Freezer | 75 watt PAR flood lamp | --- |
| FX-33 P-62 | Xenon FOI | 300 watt Xenon | ILC#LX300F |
| FX-36 P-63 | 5x5 Projector | 2000 watt tungsten halogen | 6240-594504 |
| P-64 | " | " | " |
| FX-72 P-65 | Water Ripple Unit | 150 watt PAR flood | GE #150PAR/FL/B |
| P-115 | " | " | " |
| FX-41 P-66 | HMI 5x5 Projector | 1200 watt HMI Quartz 5600 K | DAYMAX#DMI1200 OSRAM#HMI1200W |
| P-67 | " | " | " |
| P-68 | " | " | " |
| P-69 | " | " | " |
| P-70 | " | " | " |
| P-71 | " | " | " |
| P-72 | " | " | " |

Table 4-2 Lamp Replacement (Continued)

| FX NO | DEVICE NUMBER | EQUIPMENT | LAMP TYPE | PART NUMBER |
|-------|---------------|---------------------|----------------------------|----------------|
| FX-43 | P-73 | HMI 2x2 Projector | 575 watt HMI | DAYMAX#DMI575 |
| | P-74 | " | Quartz 5600 K | OSRAM#HMI575W |
| | | | " | " |
| FX-46 | P-75 | HMI 5x5 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | P-76 | " | Quartz 5600 K | OSRAM#HMI1200W |
| | P-77 | " | " | " |
| | P-78 | " | " | " |
| FX-47 | FXP23-1 | Mini FOI | Mini lamp | ? |
| | FXP23-2 | | | |
| FX-73 | P-82 | HMI 5x5 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | | | Quartz 5600 K | OSRAM#HMI1200W |
| FX-49 | P-83 | 10x10 Projector | 2000 watt tungsten halogen | 6240-594504 |
| FX-51 | P-84 | Std FOI | 42 watt ENL | --- |
| | P-85 | " | " | --- |
| | P-86 | " | " | --- |
| | P-87 | " | " | --- |
| | P-90 | " | " | --- |
| | P-91 | " | " | --- |
| | P-92 | " | " | --- |
| | P-93 | " | " | --- |
| FX-54 | P-94 | HMI 5x5 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | | | Quartz 5600 K | OSRAM#HMI1200W |
| FX-56 | P-96 | Lg Disc FOI | (3) 75 watt EYC | --- |
| | | Fluorescent Fixture | (4) 4 watt tubes | GE F4TS |
| FX-57 | P-97 | Std FOI | 42 watt ENL | --- |
| | P-98 | " | " | --- |
| | P-99 | " | " | --- |
| FX-58 | P-100 | HMI 5x5 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | | | Quartz 5600 K | OSRAM#HMI1200W |
| FX-59 | | " | " | " |
| FX-61 | P-105 | HMI 10x10 Projector | 1200 watt HMI | DAYMAX#DMI1200 |
| | | | Quartz 5600 K | OSRAM#HMI1200W |

Table 4-2 Lamp Replacement (Continued)

| DEVICE FX NO NUMBER | EQUIPMENT | LAMP TYPE | PART NUMBER |
|------------------------|------------|--------------------|--------------------|
| FX-62 P-106 | 2x2 Strobe | 300 watt flashtube | Kemlite #859B-9 |
| P-107 | " | " | " |
| P-108 | " | " | " |
| FX-65 P-88 | Std FOI | 42 watt ENL | --- |
| P-89 | " | " | --- |
| P-109 | " | " | --- |
| P-110 | " | " | --- |
| FX-66 P-112 | Std FOI | 42 watt ENL | --- |
| P-113 | " | " | --- |

Table 4-3 Sources for Uncommon Parts

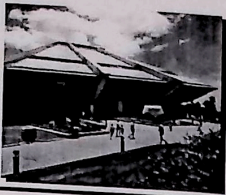
| SCENE/FX # | DESCRIPTION | SOURCE |
|------------|--|--|
| 1/FX-1 | Lumiflex 130 Rear Projection Screen; 99-1/2" x 80"; material only (no grommets, etc) | Stewart Film Screen Corp 1161 W. Sepulveda Blvd Torrance, CA 90592 (213) 326-1422 |
| 11/FX-12 | Hurst Gearmotor (6 RPM) Reversible 3002-007 (Model A) Light Detector, General Electric L14F1 Transistor Socket, Augat Incorp 8060-1G5 | Distributor: Minarik Electric Co LA, CA (213) 624-3161 Distributor: Hamilton Electric Sales Culver City, CA (213) 558-2121 Distributor: ERIK-A Electronics 2640 S. Myrtle #1 Monrovia, CA 91016 (213) 574-1020 |
| 13/FX-13 | see 11/FX-12 | |
| 16/FX-28 | Orange fragrance scent (R-2534) | Felton International, Inc 2242 Purdue Ave. LA, CA (213) 272-3482. |
| 17/FX-71 | Transducer unit for fog box - complete PC board Panasonic Ultrasonic Humidifier (EFE-HMVIR7M6E) Ultrasonic resonator for transducer unit - Ceramic Transducer (EFE-HEVIR7MI) Transistor for transducer unit (NEC 2SC940) DI Cartridge D0803 Puralite-Water Purity Indicator light E3450 Microswitch 20 Amp, KSB-T | Matsushita Electric Components Co, Ltd. " Mfg: Syborn/Barnstead " Mfg: Unimax |

Table 4-3 Sources for Uncommon Parts (Continued)

| SCENE/FX # | DESCRIPTION | SOURCE |
|------------|--|--|
| 25/FX-52 | Fog nozzle assemblies (S-11) | Environmental Control Systems, Inc. PO BOX 5 Glendora, CA 91740 (818) 963-8712 |
| 27/FX-55 | Mirror, 36"x36"x1/4" 1st surface | Keim Precision Mirror Corp 2117 Empire Ave. Burbank, CA (818) 842-4543 |
| 28/FX-59 | All plastic components for crystals | Reynolds and Taylor, Inc 2109 S. Wright St. Santa Ana, CA 92705 (714) 540-4850 |
| | Neon lamp | Larry Albright Enterprises 419 Sunset Blvd. Venice, CA (213) 399-0865 |
| | High Voltage Neon Transformer 721-171-100 | Mfr: Jefferson Electric Dist: Interstate Electric |
| 33/FX-63 | Spherical mirrors | Reynolds and Taylor, Inc 2109 S. Wright St. Santa Ana, CA 92705 (714) 540-4850 |

Table 4-4 List of WED Special Effects Drawings

| SCENE/FX # | DWG NO. | TITLE |
|------------|--|--|
| 11/FX-12 | A7-90-A770 | Lumia Effect Assy and Installation |
| 13/FX-13 | A7-90-A770 | " |
| 14/FX-16 | A7-90-A598 | Mini Fiber Optic Illuminator |
| 16/FX-27 | A7-90-A598 | " |
| 16/FX-28 | A7-90-A337 A7-90-A659 | Scent Cannon Citrus Scent Installation |
| 17/FX-30 | A7-90-A679 A7-90-A229 | Mylar Water Ripple/Reflections Small Blower |
| 17/FX-71 | A7-90-A663 A7-90-A146 | Pantry Freezer Fog Box, Ultrasonic, Type 1 |
| 20/FX-72 | A7-90-A679 A7-90-A229 | Mylar Water Ripple/Reflections Small Blower |
| 23/FX-47 | A7-90-A598 | Mini Fiber Optic Illuminator |
| 25/FX-52 | A7-90-A684 | Flight Thrusters |
| 27/FX-55 | A7-90-A693 | Basketball Players Shadows |
| 28/FX-59 | A7-90-A698 A7-90-A701 A7-90-A702 A7-90- 703 A7-90-A704 A7-90- 705 A7-90-A706 A7-90-A707 A7-90- 708 A7-90- 709 A7-90- 710 A7-90- 711 A7-90- 712 A7-90- 713 A7-90-A714 A7-90- 715 A7-90- 716 A7-90- 717 | Crystal Structure Assy, Crystal FX-59 Systems Diagram, Crystal FX-59 Dodecahedron Assy, Crystal FX-59 Lamp, Neon, Crystal FX-59 Hub, Dodecahdn Assy, Crystal FX-59 Internal Gear, Modified, Crystal FX-59 Globe, Spherical Assy, Crystal FX-59 Collar, Spherical Globe Assy Crystal FX-59 Spur Gear, Modified, Crystal FX-59 Collar, Pinion, Crystal FX-59 Retainer, Pinion Gear, Crystal FX-59 Bushing, Modified, Crystal FX-59 Collar, Lamp Bracket, Crystal FX-59 Bracket, Lamp, Crystal FX-59 Bushing, Pinion Gear Assy, Crystal FX-59 Bearing, Thrust Mod, Crystal FX-59 Tube, Flanged, Crystal FX-59 Color Filter - Pentagonal, Crystal FX-59 |
| 33/FX-63 | A7-90-A681 | Aerial Images |



HORIZONS INVENTORY SUMMARY

FACILITY

MOST RECENT UPDATE: 09-28-83

REVISION NO.: 1

PROJECT: HORIZONS

LOCATION: ART DECO

SCENE: SC. 7

| FIXT. | | LAMP | | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | |
|-------|------|------|-------|------------|------|--------|------|-----|--------------|-----------|----|-------|-------|-----|------|----|----------|---------------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | | DOWN |
| 200 | | | | | | | | | | | | | | | | | | NOT USED |
| 201 | | | | | | | | | | | | | | | | | | NOT USED |
| 202 | | | | | | | | | | | | | | | | | | NOT USED |
| 203 | | | | | | | | | | | | | | | | | | NEON |
| 204 | CC1 | 11 | | NEON | 120 | | | | SLE-19 | | | | | | | | | STAIR |
| 205 | D60 | 11 | 75 | 75PAR38/FL | 120 | | | | SLE-9 17A-2 | 1m | | | | | | | | UNDER BALCONY |
| 206 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-10 17A-3 | 1m | | | | | | | | UNDER BALCONY |
| 207 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-10 17A-3 | 1m | | | | | | | | UNDER BALCONY |
| 208 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-10 17A-4 | 1m | | | | | | | | UNDER BALCONY |
| 209 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-10 17A-4 | 1m | | | | | | | | NEON |
| 210 | CC | 13 | | NEON | 120 | | | | SLE-21 | 1m | | | | | | | | MAIN FLOOR |
| 211 | D33a | 11 | 150 | R40/FL | 120 | | | | SLE-11 17A-6 | 1m | | | | | | | | MAIN FLOOR |
| 212 | D33a | 11 | 150 | R40/FL | 120 | | | | SLE-11 17A-6 | 1m | | | | | | | | NOT USED |
| 213 | | | | | | | | | | | | | | | | | | NOT USED |
| 214 | | | | | | | | | | | | | | | | | | KITCHEN |
| 215 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-12 17A-7 | 1m | | | | | | | | KITCHEN |
| 216 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-12 17A-7 | 1m | | | | | | | | KITCHEN |
| 217 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-12 17A-8 | 1m | | | | | | | | KITCHEN |
| 218 | D49a | 11 | 150 | R40/FL | 120 | | | | SLE-12 17A-8 | 1m | | | | | | | | NOT USED |
| 219 | | | | | | | | | | | | | | | | | | KITCHEN SKYLIGHT |
| 220 | F20b | 14 | 30 | T12WW | 120 | 168 | | IR | SLE-17 | | | | | | | | | NOT USED |
| 221 | | | | | | | | | | | | | | | | | | KITCHEN SKYLIGHT |
| 222 | F20b | 14 | 30 | T12WW | 120 | 168 | | IR | SLE-17 | | | | | | | | | SCENIC |
| 223 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-18 | | | | | | | | | SCENIC |
| 224 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-18 | | | | | | | | | SCENIC |
| 225 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-18 | | | | | | | | | SCENIC |
| 226 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-18 | | | | | | | | | SCENIC |
| 227 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-20 | | | | | | | | | SCENIC |
| 228 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-20 | | | | | | | | | SCENIC |
| 229 | F20a | 14 | 40 | T12BLB | 120 | | | | SLE-20 | | | | | | | | | INDICATOR |
| 230 | CPR | 14 | 25 | NL67WL/RED | 120 | | | | SLR-7 | | | | | | | | | RED NEON (TO CONTROL BOX) |
| 231 | CPR | 11 | 25 | NEON | 120 | | | | | 17C-1,2,3 | 1m | | | | | | | |

MOST RECENT UPDATE: 09-28-83

REVISION NO.: 1

PROJECT: HORIZONS

LOCATION: NEON CITY

SCENE: SC. 8

| FIXT. NO. | FIXT. TYPE | LAMP | | | FILTER | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | |
|-----------|------------|------|-------|--------|--------|-------|----------|-----|--------|--------|-------|----|------|-----|----------|-------------------------------|
| | | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | FLCKR | MU | MAX | MIN | | UP |
| 11150 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-39 | | | | | | | BLACKLIGHT |
| 11151 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-39 | | | | | | | BLACKLIGHT |
| 11152 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-39 | | | | | | | BLACKLIGHT |
| 11153 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-39 | | | | | | | BLACKLIGHT |
| 11154 | | | | | | | | | | | | | | | | NOT USED |
| 11155 | | | | | | | | | | | | | | | | NOT USED |
| 11156 | F11a | 12 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | SCENIC |
| 11157 | F11a | 12 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | SCENIC |
| 11158 | F11a | 12 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | SCENIC |
| 11159 | F11a | 12 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | SCENIC |
| 11160 | F11a | 12 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | SCENIC |
| 11161 | F11 | 11 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | NOT USED |
| 11162 | | | | | | | | | | | | | | | | NOT USED |
| 11163 | F-11 | 11 | 40 | T12BLB | 120 | | | | SLJ-41 | | | | | | | NOT USED SCENIC |
| 11164 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-37 | | | | | | | SCENIC |
| 11165 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-37 | | | | | | | SCENIC |
| 11166 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-37 | | | | | | | SCENIC |
| 11167 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLJ-37 | | | | | | | SCENIC |
| 11168 | CEL | 11 | 10 | EL | 120 | | | | ARO1 | BA-3 | 1m | | | | | "TRIP TO MOON" FLASHING SIGN |
| 11169 | CEL | 11 | 10 | EL | 120 | | | | ARO1 | BA-2 | 1m | | | | | "THINGS TO COME FLASHING SIGN |
| 11170 | CEL | 11 | 10 | EL | 120 | | | | ARO1 | BA-1 | 1m | | | | | "JUST IMAGINE" FLASHING SIGN |
| 11171 | CEL | 11 | 10 | EL | 120 | | | | ARO1 | BA-4 | 1m | | | | | "METROPOLIS" FLASHING SIGN |
| 11172 | CEL | 11 | 10 | EL | 120 | | | | ARO1 | BA-5 | 1m | | | | | "TIME MACHINE" FLASHING SIGN |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: FUTURE CITY

SCENE: SC. 10

REVISION NO.: 1

| FIXT. | | LAMP | | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | |
|-------|-------|------|-------|------------|------|--------|------|-----|----------|--------|---|-------|-------|-----|------|----|----------|---------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | | DOWN |
| 1225 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | MAN WALKING DOG |
| 1226 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | GIRL WITH HULA HOOP |
| 1227 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | MAN ON PLATFORM |
| 1228 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | WOMAN ON PLATFORM |
| 1229 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | MAN WALKING DOG |
| 1230 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | "FLY IN" SIGN |
| 1231 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-15 | | | | | | | | | ASTROBURGER |
| 1232 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-13 | | | | | | | | | ASTROBURGER |
| 1233 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-13 | | | | | | | | | "UFO WELCOME" |
| 1234 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SLA-13 | | | | | | | | | HELICOPTER |
| 1235 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-13 | | | | | | | | | FILL |
| 1236 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-13 | | | | | | | | | FILL |
| 1237 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-13 | | | | | | | | | FILL |
| 1238 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-13 | | | | | | | | | FILL |
| 1239 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-17 | | | | | | | | | FILL |
| 1240 | F20 | 12 | 40 | T12BLB | 120 | | | 10S | SLA-17 | | | | | | | | | HOUSE FILL |
| 1241 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-16 | | | | | | | | | NOT USED |
| 1242 | | | | | | | | | | | | | | | | | | FILL |
| 1243 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-18 | | | | | | | | | FILL |
| 1244 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-18 | | | | | | | | | FREEWAY |
| 1245 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-17 | | | | | | | | | NOT USED |
| 1246 | | | | | | | | | | | | | | | | | | -- |
| 1247 | SPARE | | -- | -- | -- | | | | | | | | | | | | | -- |
| 1248 | SPARE | | -- | -- | -- | | | | | | | | | | | | | -- |
| 1249 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-14 | | | | | | | | | SCENIC |
| 1250 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-14 | | | | | | | | | SCENIC |
| 1251 | F20 | 12 | 40 | T12BLB | 120 | | | 10S | SLA-14 | | | | | | | | | SCENIC |
| 1252 | F20 | 14 | 40 | T12BLB | 120 | | | 10S | SLA-14 | | | | | | | | | SCENIC |
| 1253 | F20a | 14 | 40 | T12BLB | 120 | | | 10S | SLA-14 | | | | | | | | | SCENIC |
| 1254 | F20a | 14 | 40 | T12BLB | 120 | | | 20S | SLA-14 | | | | | | | | | SCENIC |
| 1255 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLA-16 | | | | | | | | | "SPEED LIMIT" SIGN |
| 1256 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLA-18 | | | | | | | | | HELICOPTER AT PAD |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: URBAN APARTMENT

SCENE: SC. 14

REVISION NO.: 1

| FIXT. | FIXT. | LAMP | | | FILTER | | | | CONTROLS | | | VOLTS | | RAMP | | COMMENTS | |
|-------|-------|------|------|------------|--------|------------------|------|-----|----------|--------|----|-------|----|------|-----|----------|-----------------|
| | | NO. | TYPE | WATTS | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | | UP |
| 282 | | | | | | | | | | | | | | | | | NOT USED |
| 283 | T59 | 11 | 1500 | FDB | 120 | 181 | R | | SLF-15 | 14B-2 | 1m | | | | | | SCENIC |
| 284 | T59 | 11 | 1500 | FDB | 120 | 181 | R | | SLF-17 | 14B-3 | 1m | | | | | | SCENIC |
| 285 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-12 | 14B-4 | 1m | | | | | | SCENIC |
| 286 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-10 | 14B-8 | 1m | | | | | | SCENIC |
| 287 | T4 | 11 | 500 | EVR | 120 | 222 | R | LBU | SLF-14 | 14B-5 | 1m | | | | | | CLOUDS |
| 288 | T4 | 11 | 500 | EVR | 120 | 222 | R | LBU | SLF-16 | 14B-6 | 1m | | | | | | CLOUDS |
| 289 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-18 | 14B-7 | 1m | | | | | | SCENIC |
| 290 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-11 | 14C-1 | 1m | | | | | | SCENIC |
| 291 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-19 | 14C-2 | 1m | | | | | | SCENIC |
| 292 | T59 | 11 | 1500 | FDB | 120 | 222 | R | | SLF-21 | 14C-3 | 1m | | | | | | PLANTER CEILING |
| 293 | T4 | 11 | 500 | EVR | 120 | 22 21 | R | LBU | SLF-14 | 14B-5 | 1m | | | | | | CLOUDS |
| 294 | T4 | 11 | 500 | EVR | 120 | 22 21 | R | LBU | SLF-16 | 14C-6 | 1m | | | | | | CLOUDS |
| 295 | T4 | 11 | 500 | EVR | 120 | 222 | R | SBU | SLF-29 | 14D-3 | 1m | | | | | | SUNSET |
| 296 | T59 | 11 | 1500 | FDB | 120 | 222 | R | | SLF-22 | 14C-6 | 1m | | | | | | PLANTER CEILING |
| 297 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-9 | 14C-8 | 1m | | | | | | SCENIC |
| 298 | T4 | 11 | 500 | EVR | 120 | 226 | R | LBU | SLF-29 | 14D-3 | 1m | | | | | | CLOUDS |
| 299 | T4 | 11 | 500 | EVR | 120 | 22 21 | R | SBU | SLF-13 | 14B-1 | 1m | | | | | | CLOUDS |
| 300 | T4 | 11 | 500 | EVR | 120 | 22 21 | R | SBU | SLF-13 | 14B-1 | 1m | | | | | | BUILDING |
| 301 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-24 | 14C-7 | 1m | | | | | | SCENIC |
| 302 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-25 | 14D-1 | 1m | | | | | | SCENIC |
| 303 | T59 | 11 | 1500 | FDB | 120 | 161 | R | | SLF-27 | 14D-2 | 1m | | | | | | SCENIC |
| 304 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SL1-5 | | | | | | | | PLANTERS |
| 305 | T13 | 11 | 1000 | FEL | 120 | 101 | R | | SLF-31 | 14D-7 | 1m | | | | | | HOLOGRAM |
| 306 | T13 | 11 | 1000 | FEL | 120 | 160 | R | | SLF-33 | 14D-8 | 1m | | | | | | HOLOGRAM |
| 307 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLF-5 | | 1m | | | | | | PLANTERS |
| 308 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLF-5 | | 1m | | | | | | PLANTERS |
| 309 | S27a | 11 | 100 | HR100PSP44 | 120 | | | | SL1-5 | | | | | | | | PLANTERS |
| 310 | K | 11 | 100 | 100PAR/B | 120 | | | | SLF-34 | 14E-2 | 1m | | | | | | TREE ACCENT |
| 311 | K | 11 | 100 | 100PAR/B | 120 | | | | SLF-36 | 14E-3 | 1m | | | | | | TREE ACCENT |
| 312 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-35 | 14E-4 | 1m | | | | | | ARBOR UPLIGHT |
| 313 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-35 | 14E-4 | 1m | | | | | | ARBOR UPLIGHT |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: URBAN APARTMENT

SCENE: SC. 14

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REVISION NO.: 1

| FIXT. NO. | FIXT. TYPE | LAMP INO. | LAMP WATTS | LAMP TYPE | VOLT | FILTER | | ACC | CIRC. | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS |
|-----------|------------|-----------|------------|-----------|------|--------|------|-----|--------|----------|----|-------|----|-------|-----|------|------|------------------------------|
| | | | | | | COLOR | TYPE | | | DIMMER | C | FLCKR | MU | MAX | MIN | UP | DOWN | |
| 314 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-35 | 14E-4 | 1m | | | | | | | ARBOR UPLIGHT |
| 315 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-35 | 14E-4 | 1m | | | | | | | ARBOR UPLIGHT |
| 316 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-37 | 14E-5 | 1m | | | | | | | PLANTERS. |
| 317 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-37 | 14E-5 | 1m | | | | | | | PLANTERS |
| 318 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-37 | 14E-5 | 1m | | | | | | | PLANTERS |
| 319 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-B | 14A-7 | 1m | | | | | | | PLANTERS |
| 320 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-B | 14A-7 | 1m | | | | | | | PLANTERS |
| 321 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-B | 14A-8 | 1m | | | | | | | PLANTERS |
| 322 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-B | 14A-8 | 1m | | | | | | | PLANTERS |
| 323 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-B | 14A-8 | 1m | | | | | | | PLANTERS |
| 324 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-B | 14A-8 | 1m | | | | | | | PLANTERS |
| 325 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-B | 14A-7 | 1m | | | | | | | PLANTERS |
| 326 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-30 | 14D-6 | 1m | | | | | | | PLANTERS |
| 327 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-30 | 14D-6 | 1m | | | | | | | PLANTERS |
| 328 | XS981 | 11 | 100 | 100PAR/B | 120 | | | | SLF-30 | 14D-6 | 1m | | | | | | | PLANTERS |
| 329 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | SLF-30 | 14D-6 | 1m | | | | | | | PLANTERS |
| 330 | CPR | 14 | 15 | T8CW | 120 | 68 | | IR | SLF-5 | | | | | | | | | HYDROPONICS |
| 331 | CPR | 14 | 15 | T8CW | 120 | 68 | | IR | SLF-5 | | | | | | | | | HYDROPONICS |
| 332 | CPR | 14 | 20 | T12CW | 120 | 83 | | IR | SLF-5 | | | | | | | | | MR. MISTER |
| 333 | CPR | 14 | 20 | T12CW | 120 | 83 | | IR | SLF-5 | | | | | | | | | MR. MISTER |
| 334 | CPR | 11 | 32 | FC12T9/CW | 120 | | | | SLF-5 | | | | | | | | | TREE ACCENT |
| 335 | XS981 | 11 | 100 | 100PAR/B* | 120 | | | | SLF-39 | 14E-6 | 1m | | | | | | | TREE ACCENT |
| 336 | XS981 | 11 | 100 | 100PAR/BW | 120 | | | | | 14E-6 | 1m | | | | | | | IVY UPLIGHT |
| 337 | F10 | 11 | 40 | T12BLB | 120 | | | | SLF-3 | | | | | | | | | IVY UPLIGHT |
| 338 | F10 | 11 | 40 | T12BLB | 120 | | | | SLF-3 | | | | | | | | | MR. MISTER |
| 339 | CPR | 11 | 32 | FC12T9/CW | 120 | | | | SLF-5 | | | | | | | | | CEILING TRACKS - T14B DOG |
| 340 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | SLF-38 | 14E-7 | 1m | | | | | | | CEILING TRACKS-T14B GRANDMA |
| 341 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | SLF-38 | 14E-7 | 1m | | | | | | | CEILING TRACKS - T14B DL |
| 342 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | SLF-40 | 14E-8 | 1m | | | | | | | CEILING TRACKS - T14C DL |
| 343 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | SLF-40 | 14E-8 | 1m | | | | | | | CEILING TRACKS - T14C DL |
| 344 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | SLF-40 | 14E-8 | 1m | | | | | | | CEILING TRACKS - T14C PLANTS |
| 345 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | SLF-40 | 14E-8 | 1m | | | | | | | CEILING TRACKS - T14C PLANTS |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: URBAN APARTMENT

SCENE: SC. 14

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REVISION NO.: 1

| FIXT. NO. | FIXT. TYPE | NO. | WATTS | LAMP | | | FILTER | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS |
|-----------|------------|-----|-------|-----------|------|-------|--------|-----|----------|--------|-------|-------|-------|-----|------|----|--|
| | | | | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | |
| 346 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLF-40 | 14E-8 | Im | | | | | CEILING TRACKS - T14C DOG |
| 347 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLF-40 | 14E-8 | Im | | | | | CEILING TRACKS-T14C GRANDPA |
| 348 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-2 | 14F-4 | Im | | | | | CEILING TRACKS - T14F DL |
| 349 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-2 | 14F-4 | Im | | | | | CEILING TRACKS - T14F DL |
| 350 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-3 | 14F-2 | Im | | | | | CEILING TRACKS - T14D DL |
| 351 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLC-3 | 14F-2 | Im | | | | | CEILING TRACKS - T14D WALL |
| 352 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLC-3 | 14F-2 | Im | | | | | CEILING TRACKS-T14D GRANDMA |
| 353 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLC-5 | 14F-3 | Im | | | | | CEILING TRACKS - T14E WALL |
| 354 | S-55 | 11 | 50 | PAR36NSP | 12 | | | | | SLC-5 | 14F-3 | Im | | | | | CEILING TRACKS - T14E WALL |
| 355 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-5 | 14F-3 | Im | | | | | CEILING TRACKS - T14E DL |
| 356 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-5 | 14F-3 | Im | | | | | CEILING TRACKS - T14E TABLE |
| 357 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-2 | 14F-4 | Im | | | | | CEILING TRACKS - T14F DL |
| 358 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-2 | 14F-4 | Im | | | | | CEILING TRACKS - T14F DL |
| 359 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-2 | 14F-4 | Im | | | | | CEILING TRACKS - T14F DL |
| 360 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-4 | 14F-5 | Im | | | | | CEILING TRACKS-T14F GRANDMA |
| 361 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-4 | 14F-5 | Im | | | | | CEILING TRACKS - T14G TABLE |
| 362 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-4 | 14F-5 | Im | | | | | CEILING TRACKS - T14G TABLE |
| 363 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-3B | 14F-7 | Im | | | | | CEILING TRACKS - T14B DL |
| 364 | S-55 | 11 | 50 | PAR36W/FL | 12 | | | | | SLC-4 | 14F-5 | Im | | | | | CEILING TRACKS - T14G TABLE |
| 365 | | | | | | | | | | | | | | | | | NOT USED |
| 366 | T4 | 11 | 1500 | EV R | 120 | 22 | IR | | | SLF-28 | 14D-5 | Im | | | | | SUNSET - STRIP 14E-4 |
| 367 | T4 | 11 | 1500 | EV R | 120 | X-48 | IR | | | SLF-28 | 14D-5 | Im | | | | | SUNSET - STRIP 14E-3 ^{BUILDING} |
| 368 | T4 | 11 | 1500 | EV R | 120 | 26 | IR | | | SLF-26 | 14D-4 | Im | | | | | SUNSET - STRIP 14E-2 SET |
| 369 | T4 | 11 | 1500 | EV R | 120 | X-26 | IR | | | SLF-26 | 14D-4 | Im | | | | | SUNSET - STRIP 14E-1 SET |
| 370 | F10 | 11 | 40 | T12CW | 120 | | | | | SLI-5 | | | | | | | HOLOGRAM L.B. |
| 371 | F10 | 11 | 40 | T12CW | 120 | | | | | SLI-5 | | | | | | | HOLOGRAM L.B. |
| 372 | | | | | | | | | | | | | | | | | NOT USED |
| 373 | CP R | 11 | 22 | FCA/WW | 120 | | | | | SLF-3 | | | | | | | HOLOGRAM TABLE/CIRCLINE FLUR |
| 374 | T31 | 11 | 1250 | QCL/DC | 120 | INC | | | | SLF-20 | 14C-5 | | | | | | PLANTER |
| 375 | T31 | 11 | 1250 | QCL/DC | 120 | INC | | | | SLF-20 | 14C-5 | | | | | | PLANTER |
| 376 | T31 | 11 | 1250 | QCL/DC | 120 | 178 | IR | | | SLF-20 | 14C-5 | | | | | | PATIO WALL |

MOST RECENT UPDATE: 09-28-83

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PROJECT: HORIZONS

LOCATION: DESERT FARM

SCENE: SC. 16

REVISION NO.: 1

| FIXT. NO. | FIXT. TYPE | NO. | LAMP | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS |
|-----------|------------|-----|-------|-----------|------|--------|------|-----|----------|--------|-------|-------|-------|-----|------|----|----------------|
| | | | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | |
| 11007 | T103 | 11 | 1000 | PAR64/WFL | 120 | 08 | IR | | D4 | SLD-24 | 16C-8 | 1m | | | | | ROCKWORK |
| 11008 | T103 | 11 | 1000 | PAR64/WFL | 120 | 162 | IR | | D4 | SLD-22 | 16C-7 | 1m | | | | | HOVERCRAFT |
| 11009 | | | | | | | | | | | | | | | | | NOT USED. |
| 11010 | T103 | 11 | 1000 | PAR64/WFL | 120 | 117 | IR | | D4 | SLD-23 | 16C-5 | 1m | | | | | CROP ROWS |
| 11011 | T4 | 11 | 500 | EVR | 120 | 08 | IR | | | SLD-19 | 16C-3 | 1m | | | | | ROAD RUNNER |
| 11012 | T103 | 11 | 1000 | PAR64/WFL | 120 | 08 | IR | | | SLD-18 | 16C-2 | 1m | | | | | HOVERCRAFT |
| 11013 | | | | | | | | | | | | | | | | | NOT USED |
| 11014 | T103 | 11 | 1000 | PAR64/WFL | 120 | 08 | IR | | D4 | SLD-14 | 16B-8 | 1m | | | | | HOVERCRAFT |
| 11015 | | | | | | | | | | | | | | | | | NOT USED |
| 11016 | T103 | 11 | 1000 | PAR64/WFL | 120 | 08 | IR | | D4 | SLD-15 | 16B-6 | 1m | | | | | CROP ROWS |
| 11017 | T103 | 11 | 1000 | PAR64/WFL | 120 | 160 | IR | | D4 | SLD-13 | 16B-5 | 1m | | | | | SCENIC |
| 11018 | T4 | 11 | 500 | EVR | 120 | 162 | IR | | SL | SLD-10 | 16B-3 | 1m | | | | | CROP ROWS |
| 11019 | T19a | 11 | 1000 | FEL | 120 | 08 | IR | | | SLD-8 | 16B-2 | 1m | | | | | HARVESTER #1 |
| 11020 | | | | | | | | | | | | | | | | | NOT USED |
| 11021 | T103 | 11 | 1000 | PAR64/WFL | 120 | 117 | IR | | D4 | SLD-9 | 16A-8 | 1m | | | | | ROCKWORK |
| 11022 | | | | | | | | | | | | | | | | | NOT USED |
| 11023 | | | | | | | | | | | | | | | | | NOT USED |
| 11024 | | | | | | | | | | | | | | | | | NOT USED |
| 11025 | | | | | | | | | | | | | | | | | NOT USED |
| 11026 | T4 | 11 | 500 | EVR | 120 | 1NC | IR | | SL | SLD-3 | 16A-2 | 1m | | | | | CROP ROWS |
| 11027 | T19a | 11 | 1000 | FEL | 120 | 08 | IR | | | SLD-1 | 16A-1 | 1m | | | | | HARVESTER #3 |
| 11028 | F10d | 11 | 30 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | ENTRY LOCK |
| 11029 | F10d | 11 | 30 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | ENTRY LOCK |
| 11030 | F10d | 11 | 30 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | ENTRY LOCK |
| 11031 | F115b | 12 | 35 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | CONTROL ROOM |
| 11032 | F115b | 12 | 35 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | CONTROL ROOM |
| 11033 | F115b | 12 | 35 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | CONTROL ROOM |
| 11034 | F115b | 12 | 35 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | CONTROL ROOM |
| 11035 | F115b | 12 | 35 | T12/WW | 120 | 168 | IR | | | SLH-24 | | | | | | | CONTROL ROOM |
| 11036 | CPR | 11 | 6 | T5/CW | 120 | | | | | SLH-22 | | | | | | | CONSOLE |
| 11037 | CPR | 11 | 6 | T5/CW | 120 | | | | | SLH-22 | | | | | | | CONSOLE |
| 11038 | T31 | 11 | 250 | QCL/DC | 120 | 08 | IR | | LS | SLH-23 | 16H-5 | 1m | | | | | F 12 - UPLIGHT |

MOST RECENT UPDATE: 09-28-83

SCENE: SC. 17

REVISION NO.: 1

PROJECT: HORIZONS

LOCATION: DESERT HABITAT

| FIXT. NO. | FIXT. TYPE | LAMP | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | |
|-----------|------------|------|-------|----------------|--------|-------|------|----------|-------|------------|-------|-------|----|------|-----|----------|---------------------|
| | | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | | UP |
| 957 | | | | | | | | | | | | | | | | | NOT USED |
| 958 | | | | | | | | | | | | | | | | | NOT USED |
| 959 | | | | | | | | | | | | | | | | | NOT USED |
| 960 | F97A | 12 | 15 | T8/CW | 120 | | | | | SLB-35 | | | | | | | DISH WASHER |
| 961 | F97A | 12 | 15 | T8/CW | 120 | | | | | SLB-35 | | | | | | | OVEN |
| 962 | F129 | 12 | 6 | T5/CW | 120 | | | | | SLB-35 | | | | | | | PANTRY/REFRIGERATOR |
| 963 | T12 | 11 | 250 | QCL/DC | 120 | 168 | | | | SLD-11 | 6B-1 | | | | | | ROCK BUTTE - TOP |
| 964 | T12 | 11 | 250 | QCL/DC | 120 | 168 | | | | SLD-11 | 6B-1 | | | | | | ROCK BUTTE - BOTTOM |
| 965 | F129 | 12 | 6 | T5/CW | 120 | | | | | SLB-35 | | | | | | | STORAGE |
| 966 | F129 | 11 | 6 | T5/CW | 120 | | | | | SLB-35 | | | | | | | RECIPE LIGHT |
| 967 | L6 | 13 | 1100 | 100PAR38/FL/BW | 120 | | | | | SLJ-35 | | | | | | | PLANTER |
| 968 | T31 | 11 | 250 | QCL/DC | 120 | | | | | SLD-6 | 6A-6 | 1m | | | | | CAT/FISH |
| 969 | 2F129 | 12 | 6 | T5/CW | 120 | | | | | SLJ-35 | | | | | | | SPEAKER |
| 970 | F10d | 11 | 30 | T12/WW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 971 | F10d | 11 | 30 | T12/WW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 972 | F10d | 11 | 30 | T12/WW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 973 | F10d | 11 | 30 | T12/WW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 974 | F10d | 11 | 30 | T12/WW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 1050 | T12 | 11 | 750 | EHG | 120 | 109 | | | | SLI-19 | 20A-5 | 1m | | | | | ROCKWORK |
| 1051 | T12 | 11 | 750 | EHG | 120 | 109 | | | | SLI-19 | 20A-5 | 1m | | | | | ROCKWORK/WATERFALL |
| 1052 | T12 | 11 | 750 | EHG | 120 | 109 | | | | SLI-21 | 20A-6 | 1m | | | | | KITCHEN |
| 1053 | T12 | 11 | 750 | EHG | 120 | 109 | | | | SLI-21 | 20A-6 | 1m | | | | | KITCHEN |
| 1054 | T103 | 11 | 1000 | PAR64/WFL | 120 | 109 | | | | SLI-23 | 20A-7 | 1m | | | | | TREE/SCENIC |
| 1055 | | | | | | | | | | | | | | | | | NOT USED |
| 1056 | T4 | 11 | 500 | EVR | 120 | INC | | | | SBU SLI-24 | 20A-8 | 1m | | | | | SCENIC/CLOUDS |
| 1057 | T4 | 11 | 500 | EVR | 120 | INC | | | | SBU SLI-24 | 20A-8 | 1m | | | | | SCENIC/CLOUDS |
| 1058 | F97a | 12 | 15 | T8/CW | 120 | | | | | SLJ-35 | | | | | | | LIGHT BOX |
| 1059 | T31 | 11 | 250 | QCL/DC | 120 | 154 | | | | SLB-29 | 17C-1 | | | | | | STAIRWAY/RUG |
| 1060 | F10d | 11 | 30 | T12CW | 120 | 209 | | | | SLJ-35 | | | | | | | LIGHT BAND |
| 1061 | D112b | 11 | 25 | R14/FL | 12 | | | | | SLB-42 | 17C-8 | 1m | | | | | DOWNLIGHT - T17B |
| 1062 | D112b | 11 | 25 | R14/FL | 12 | | | | | SLB-42 | 17C-8 | 1m | | | | | DOWNLIGHT - T17B |
| 1063 | D112b | 11 | 25 | R14/FL | 12 | | | | | SLB-42 | 17C-8 | 1m | | | | | DOWNLIGHT - T17B |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: SUB REPAIR

SCENE: SC. 19

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REVISION NO.: 1

| FIXT. NO. | FIXT. TYPE | NO. | WATTS | LAMP | | | FILTER | | | ACC | CIRC. | CONTROLS | | | VOLTS | | RAMP | | COMMENTS |
|-----------|------------|-----|-------|-------|------|-------|--------|-----|--------|-----|--------|----------|----|-----|-------|----|------|--|-------------------------------|
| | | | | TYPE | VOLT | COLOR | TYPE | ACC | DIMMER | | | FLCKR | MU | MAX | MIN | UP | DOWN | | |
| 694 | F10a | 2 | 40 | T12CW | 120 | 68 | IR | | | | SLB-36 | | | | | | | | CEILING LIGHT BOX NOT USED |
| 695 | | | | | | | IR | | | | SLB-36 | | | | | | | | CEILING LIGHT BOX SUB BOY |
| 696 | F10a | 2 | 40 | T12CW | 120 | 68 | IR | | | | SLB-38 | 19B-3 | Im | | | | | | SET WASH |
| 697 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-41 | 19B-5 | Im | | | | | | SET WASH |
| 698 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-41 | 19B-5 | Im | | | | | | SET WASH |
| 699 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-38 | 19B-3 | Im | | | | | | SUB BOY |
| 700 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-38 | 19B-3 | Im | | | | | | SKYLIGHT |
| 701 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-39 | 19B-4 | Im | | | | | | SKYLIGHT |
| 702 | T4 | 1 | 1500 | EVR | 120 | 16 | IR | | | | SLB-39 | 19B-4 | Im | | | | | | SUB RING - T19A1 |
| 703 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-38 | 19B-1 | Im | | | | | | SUB RING - T19A1 |
| 704 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-38 | 19B-1 | Im | | | | | | SUB RING - T19A1 |
| 705 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-38 | 19B-1 | Im | | | | | | SUB RING - T19A1 |
| 706 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-38 | 19B-1 | Im | | | | | | SUB RING - T19A1 |
| 707 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-38 | 19B-1 | Im | | | | | | SUB RING - T19A |
| 708 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 709 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 710 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 711 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 712 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 713 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 714 | D112 | 1 | 25 | R14 | 12 | | | | | | SLB-39 | 19B-2 | Im | | | | | | SUB RING - T19A |
| 715 | T59 | 1 | 1000 | FFFT | 120 | 68 | IR | | | | SLI-7 | 19A-3 | Im | | | | | | SCENIC |
| 716 | T59 | 1 | 1000 | FFFT | 120 | 68 | IR | | | | SLI-9 | 19A-4 | Im | | | | | | SCENIC |
| 717 | T59 | 1 | 1000 | FFFT | 120 | 68 | IR | | | | SLI-25 | 19A-8 | Im | | | | | | SCENIC |
| 718 | T4 | 1 | 500 | EVR | 120 | 16 | IR | | SBU | | SLI-26 | 20A-4 | Im | | | | | | BUILDINGS |
| 719 | T4 | 1 | 500 | EVR | 120 | 16 | IR | | SBU | | SLI-26 | 20A-4 | Im | | | | | | BUILDINGS |
| 720 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-11 | 19A-5 | Im | | | | | | CATWALK D/L - T19B |
| 721 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-11 | 19A-5 | Im | | | | | | CATWALK D/L - T19B |
| 722 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-10 | 19A-6 | Im | | | | | | CATWALK D/L - T19C |
| 723 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-10 | 19A-6 | Im | | | | | | CATWALK D/L - T19C |
| 724 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-10 | 19A-6 | Im | | | | | | CATWALK D/L - T19C |
| 725 | D95 | 1 | 25 | R14 | 12 | | | | | | SLI-10 | 19A-6 | Im | | | | | | CATWALK D/L - T19C |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: SUB REPAIR

SCENE: SC. 19

REVISION NO.: 1

| FIXT. | | LAMP | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | | |
|-------|------|------|-------|------|--------|-------|------|----------|-------|--------|-------|-------|----|------|-----|----------|----|---------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | | UP | DOWN |
| 726 | D95 | 11 | 25 | R14 | 12 | | | | | SLI-10 | 19A-6 | m | | | | | | CATWALK D/L - T19C |
| 727 | D95 | 11 | 25 | R14 | 12 | | | | | SLI-10 | 19A-6 | m | | | | | | CATWALK D/L - T19C |
| 728 | D95 | 11 | 25 | R14 | 12 | | | | | SLI-8 | 19A-7 | m | | | | | | CATWALK D/L - T19D |
| 729 | D95 | 11 | 25 | R14 | 12 | | | | | SLI-8 | 19A-7 | m | | | | | | CATWALK D/L - T19D |
| 730 | D95 | 11 | 25 | R14 | 12 | | | | | SLI-8 | 19A-7 | m | | | | | | CATWALK D/L - T19-D |
| 731 | D112 | 11 | 25 | R14 | 12 | 81 | | R | | SLI-2 | 20A-1 | m | | | | | | MEZZANINE - T20A |
| 732 | D112 | 11 | 25 | R14 | 12 | 81 | | R | | SLI-2 | 20A-1 | m | | | | | | MEZZANINE - T20A |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: UNDERSEA

SCENES: SC. 20 & 22

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REVISION NO.: 1

| FIXT. | | LAMP | | | FILTER | | | CONTROLS | | | | | VOLTS | | RAMP | | COMMENTS | |
|-------|-------|------|-------|---------|--------|--------|------|----------|--------|--------|----|-------|-------|-----|------|----|----------|-----------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | | DOWN |
| 733 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 734 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 735 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 736 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 737 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 738 | D112 | 11 | 25 | R14 | 12 | 81 | R | | SLI-2 | 20A-1 | 1m | | | | | | | MEZZANINE - T20A |
| 739 | D112 | 11 | 25 | R14 | 12 | | | | SLI-2 | 20A-2 | 1m | | | | | | | CLASSROOM - T20B |
| 740 | D112 | 11 | 25 | R14 | 12 | | | | SLI-2 | 20A-2 | 1m | | | | | | | CLASSROOM - T20B |
| 741 | D112 | 11 | 25 | R14 | 12 | | | | SLI-2 | 20A-2 | 1m | | | | | | | CLASSROOM - T20B |
| 742 | D112 | 11 | 25 | R14 | 12 | | | | SLI-2 | 20A-2 | 1m | | | | | | | CLASSROOM - T20B |
| 743 | D112 | 11 | 25 | R14 | 12 | | | | SLI-2 | 20A-2 | 1m | | | | | | | CLASSROOM - T20B |
| 744 | CPR | 11 | 15 | 15T7C | | | | | SLI-1 | | | | | | | | | TABLE LAMP |
| 745 | CP | 14 | 15 | T8/CW | 120 | 57a | R | | SLI-1 | | | | | | | | | INDIRECT REST. |
| 746 | CP | 14 | 15 | T8/CW | 120 | 57a | R | | SLI-1 | | | | | | | | | INDIRECT REST. |
| 747 | CP | 14 | 15 | T8/CW | 120 | 57a | R | | SLI-1 | | | | | | | | | INDIRECT REST. |
| 748 | CPR | 11 | 15 | 15T7C | | | | | SLI-1 | | | | | | | | | TABLE LAMP |
| 749 | D112a | 11 | 25 | R12 | 12 | 81 | R | | SLI-2 | 20A-3 | 1m | | | | | | | HALL WALL WASH - T20C |
| 750 | D112a | 11 | 25 | R12 | 12 | 81 | R | | SLI-2 | 20A-3 | 1m | | | | | | | HALL WALL WASH - T20C |
| 751 | D112a | 11 | 25 | R12 | 12 | 81 | R | | SLI-2 | 20A-3 | 1m | | | | | | | HALL WALL WASH - T20C |
| 752 | L | 11 | 300 | NEON | 120 | | | | SLJ-32 | | | | | | | | | SUB SCREENS (NEON) |
| 753 | F97a | 12 | 15 | T8/CW | 120 | | | | SLJ-34 | | | | | | | | | CLASS SCREENS (NEON) |
| 754 | CPR | 14 | 8 | F8T5/CW | 120 | | | | SLJ-32 | | | | | | | | | REPAIR SCREENS (NEON) |
| 755 | D105 | 11 | 25 | R14 | 12 | | | | SLI-3 | | | | | | | | | BENCH ACCENT - T19E |
| 756 | D105 | 11 | 25 | R14 | 12 | | | | SLI-3 | | | | | | | | | BENCH ACCENT - T19E |
| 757 | D105 | 11 | 25 | R14 | 12 | | | | SLI-3 | | | | | | | | | BENCH ACCENT - T19E |
| 758 | | | | | | | | | | | | | | | | | | NOT USED |
| 759 | | | | | | | | | | | | | | | | | | NOT USED |
| 760 | | | | | | | | | | | | | | | | | | NOT USED |
| 761 | | | | | | | | | | | | | | | | | | NOT USED |
| 762 | T31 | 11 | 250 | QCL/DC | 120 | 57 | R | MS | SLI-32 | 23F-6 | 1m | | | | | | | F21 & F22 |
| 763 | T31 | 11 | 250 | QCL/DC | 120 | 57/109 | R/L | MS | SLI-32 | 23F-6 | 1m | | | | | | | F21 & F22 |
| 764 | T31 | 11 | 250 | QCL/DC | 120 | 57 | R | U4 | SLI-36 | 23F-7 | 1m | | | | | | | F23 |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: UNDERSEA INDUSTRY

SCENE: SC. 23

REVISION NO.: 1

| FIXT. | FIXT. | LAMP | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | | | | |
|-------|-------|------|------|-----------|--------|-------|-------|----------|-----|--------|--------|-------|-------|------|-----|----------|-----|----|---------------------------|----------|
| | | NO. | TYPE | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | | MIN | UP | DOWN | |
| 775 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 776 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 777 | T104 | 1 | 200 | PAR46NSP | 120 | 60/73 | R | | | SLJ-20 | | m | 2-1 | | | | | | SEA BED | |
| 778 | T33 | 1 | 1000 | BVT | 120 | 85 | R | | | SLP-37 | 23E-3 | m | | | | | | | SEA BED | |
| 779 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 780 | T104 | 1 | 200 | PAR46NSP | 120 | 60/73 | R | | | SLJ-22 | | m | 2-4 | | | | | | SEA BED | |
| 781 | T33 | 1 | 1000 | BVT | 120 | 85 | R | | | SLP-36 | 23E-5 | m | | | | | | | SEA BED | |
| 782 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 783 | T104 | 1 | 200 | PAR46NSP | 120 | 60/73 | R | | | SLJ-24 | | m | 2-7 | | | | | | SEA BED | |
| 784 | T33 | 1 | 1000 | BVT | 120 | 85 | R | | | SLP-39 | 23E-7 | m | | | | | | | SEA BED | |
| 785 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 786 | T104 | 1 | 200 | PAR46NSP | 120 | 79 | R | | | SLJ-20 | | m | 2-2 | | | | | | SEA BED | |
| 787 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 788 | T33 | 1 | 1000 | BVT | 120 | 85 | R | | | SLI-29 | 23F-2 | m | | | | | | | SEA BED | |
| 789 | T104 | 1 | 200 | PAR46NSP | 120 | 79 | R | | | SLJ-22 | | m | 2-5 | | | | | | SEA BED | |
| 790 | T103 | 1 | 1000 | PAR64MFL | 120 | 85 | R | | | SLP-30 | 23D-7 | m | | | | | | | SCENIC - STRIP 23E-1 | |
| 791 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 792 | T103 | 1 | 1000 | PAR64MFL | 120 | 85 | R | | | SLP-27 | 23D-4 | m | | | | | | | SCENIC - STRIP 23E-9 | |
| 793 | T103 | 1 | 1000 | PAR64MFL | 120 | 85 | R | | | SLP-29 | 23D-5 | m | | | | | | | SEA BED - STRIP 23E-2 | |
| 794 | T103 | 1 | 1000 | PAR64MFL | 120 | 95/81 | R | | | SLP-31 | 23D-6 | m | | | | | | | SEA BED - STRIP 23E-3 | |
| 795 | T59 | 1 | 1500 | FDB | 120 | 95/83 | R | | | SLI-28 | 23F-3 | m | | | | | | | SCENIC - STRIP 23D-1 | |
| 796 | T59 | 1 | 1500 | FDB | 120 | 95/83 | R | | | SLP-23 | 23C-7 | m | | | | | | | SEA BED - STRIP 23E-7 | |
| 796 | T103 | 1 | 1000 | PAR64MFL* | 120 | 95/81 | R | | | SLP-25 | 23C-8 | m | | | | | | | SEA BED - STRIP 23D-3 | |
| 797 | T103 | 1 | 1000 | PAR64MFL | 120 | 85 | R | | | SLP-25 | 23C-8 | m | | | | | | | SEA BED - STRIP 23D-3 | |
| 798 | T103 | 1 | 1000 | PAR64MFL | 120 | 83 | R | | | SLP-24 | 23D-1 | m | | | | | | | SEA BED - STRIP 23D-6 | |
| 799 | T103 | 1 | 1000 | PAR64MFL | 120 | 95/81 | R | | | SLP-26 | 23D-2 | m | | | | | | | SEA BED - STRIP 23D-9 | |
| 800 | T59 | 1 | 1500 | FDB | 120 | 95/83 | R | | | SLP-28 | 23D-3 | m | | | | | | | SCENIC - STRIP 23D-8 | |
| 801 | | | | | | | | | | | | | | | | | | | NOT USED | |
| 802 | T59 | 1 | 1500 | FDB | 120 | 77 | R | | | SLP-14 | 23B-8 | m | | | | | | | SCENIC - STRIP 23D-12 | |
| 803 | T4 | 1 | 500 | EVR | 120 | 81 | R | | | VB | SLP-17 | 23C-1 | m | | | | | | SUN PATTERN - STRIP 23C-1 | |
| 804 | T103 | 1 | 1000 | PAR64MFL | 120 | 95/81 | R | | | SLP-19 | 23C-2 | m | | | | | | | WATER - STRIP 23D-10 | |
| 805 | | | | | | | | | | | | | | | | | | | | NOT USED |
| 806 | T103 | 1 | 1000 | PAR64MFL | 120 | 83 | R | | | SLP-18 | 23C-4 | m | | | | | | | WATER - STRIP 23D-4 | |

MOST RECENT UPDATE: 09-28-83

REVISION NO.: 1

PROJECT: HORIZONS

LOCATION: UNDERSEA INDUSTRY

SCENE: SC. 23

| FIXT. NO. | FIXT. TYPE | NO. | LAMP | | VOLT | FILTER | | | ACC | CIRC. | CONTROLS | | | VOLTS | | RAMP | | COMMENTS |
|-----------|------------|-----|-------|------------|------|--------|------|--------|-----|--------|----------|----|-----|-------|----|------|--|---------------------------|
| | | | WATTS | TYPE | | COLOR | TYPE | DIMMER | | | FLCKR | MU | MAX | MIN | UP | DOWN | | |
| 807 | T103 | 1 | 1000 | PAR64MFL | 120 | 81 | | R | | SLP-20 | 23C-5 | 1m | | | | | | WATER - STRIP 23E-8 |
| 808 | T59 | 1 | 1500 | FDB | 120 | 177 | | R | | SLP-22 | 23C-6 | 1m | | | | | | SCENIC - STRIP 23C-2 |
| 809 | T59 | 1 | 1500 | FDB | 120 | 95/83 | | R | | SLP-11 | 23B-3 | 1m | | | | | | SCENIC - STRIP 23C-7 |
| 810 | T104 | 1 | 200 | PAR46NSP | 120 | 179 | | R | | SLJ-20 | | 1m | 2-3 | | | | | SEA BED - STRIP 23C-5 |
| 811 | T59 | 1 | 1500 | FDB | 120 | 95/83 | | R | | SLP-13 | 23B-4 | 1m | | | | | | SCENIC - STRIP 23B-1 |
| 812 | T104 | 1 | 200 | PAR46NSP | 120 | 195 | | R | | SLJ-22 | | 1m | 2-6 | | | | | SEA BED - STRIP 23C-10 |
| 813 | T103 | 1 | 1000 | PAR64MFL | 120 | 81 | | R | | SLP-15 | 23B-5 | 1m | | | | | | SEA BED - STRIP 23C-3 |
| 814 | T4 | 1 | 500 | EVBR | 120 | 81 | | R | WBU | SLP-12 | 23B-6 | 1m | | | | | | SUN PATTERN - STRIP 23C-6 |
| 815 | T103 | 1 | 1000 | PAR64MFL | 120 | 83 | | R | | SLP-10 | 23B-2 | 1m | | | | | | SEA BED - STRIP 23C-8 |
| 816 | T104 | 1 | 200 | PAR46NSP | 120 | 179 | | R | | SLJ-19 | | 1m | 1-1 | | | | | SEA BED - STRIP 23B-3 |
| 817 | T104 | 1 | 200 | PAR46NSP | 120 | 81 | | R | | SLJ-21 | | 1m | 1-4 | | | | | SEA BED - STRIP 23B-2 |
| 818 | T59 | 1 | 1500 | FDB | 120 | 95/83 | | R | | SLP-7 | 23A-7 | 1m | | | | | | SCENIC - STRIP 23B-7 |
| 819 | T103 | 1 | 1000 | PAR64MFL | 120 | 83 | | R | | SLP-9 | 23A-8 | 1m | | | | | | SEA BED - STRIP 23C-11 |
| 820 | T104 | 1 | 200 | PAR46NSP | 120 | 179 | | R | | SLJ-23 | | 1m | 1-7 | | | | | SEA BED - STRIP 23B-5 |
| 821 | T104 | 1 | 200 | PAR46NSP | 120 | 179 | | R | | SLJ-19 | | 1m | 1-2 | | | | | SEA BED - STRIP 23B-4 |
| 822 | T104 | 1 | 200 | PAR46NSP | 120 | 195 | | R | | SLJ-19 | | 1m | 1-3 | | | | | SEA BED - STRIP 23B-9 |
| 823 | T103 | 1 | 1000 | PAR64MFL | 120 | 95/81 | | R | | SLP-8 | 23B-1 | 1m | | | | | | SEA BED - STRIP 23B-6 |
| 824 | T104 | 1 | 200 | PAR46NSP | 120 | 160/73 | | R | | SLJ-23 | | 1m | 1-8 | | | | | SEA BED - STRIP 23A-1 |
| 825 | T103 | 1 | 1000 | PAR64MFL | 120 | 179 | | R | | SLP-6 | 23A-6 | 1m | | | | | | SEA BED - STRIP 23B-8 |
| 826 | T59 | 1 | 1500 | FDB | 120 | 95/83 | | R | | SLP-1 | 23A-1 | 1m | | | | | | SCENIC - STRIP 23A-3 |
| 827 | T104 | 1 | 200 | PAR46NSP | 120 | 195 | | R | | SLP-19 | | 1m | 1-3 | | | | | SEA BED - STRIP 23A-5 |
| 828 | T104 | 1 | 200 | PAR46NSP | 120 | 195 | | R | | SLP-21 | | 1m | 1-6 | | | | | SEA BED - STRIP 23A-2 |
| 829 | T104 | 1 | 200 | PAR46NSP | 120 | 160/73 | | R | | SLP-23 | | 1m | 1-9 | | | | | SEA BED - STRIP 23A-7 |
| 830 | T103 | 1 | 1000 | PAR64MFL | 120 | 81 | | R | | SLP-3 | 23A-2 | 1m | | | | | | SEA BED - STRIP 23A-4 |
| 831 | T103 | 1 | 1000 | PAR64MFL | 120 | 160/73 | | R | | SLP-5 | 23A-3 | 1m | | | | | | SEA BED - STRIP 23A-6 |
| 832 | T103 | 1 | 1000 | PAR64MFL | 120 | 160/73 | | R | | SLP-2 | 23A-4 | 1m | | | | | | SEA BED - STRIP 23A-8 |
| 833 | | | | | | | | | | | | | | | | | | NOT USED |
| 834 | CPR | 1 | 10 | 58 GE 1073 | 12 | 160/62 | | R | | SLN-18 | 32A-1 | 1m | | | | | | LEE 11-225 (VACUUM SWEEP) |
| 835 | S55 | 1 | 50 | PAR36/WFL | 12 | 81 | | R | | SLN-21 | 32A-6 | 1m | | | | | | SUB |
| 836 | S55 | 1 | 50 | PAR36/WFL | 12 | 81 | | R | | SLN-21 | 32A-6 | 1m | | | | | | SUB |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: SPACE COLONY

SCENES: SC. 27-29

REVISION NO.: 1

| FIXT. | | LAMP | | FILTER | | CONTROLS | | | VOLTS | | RAMP | | COMMENTS | | | | | |
|-------|------|------|-------|----------|------|----------|------|-----|--------|--------|------|-------|----------|----|-----|-----|----|----------------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | | MU | MAX | MIN | UP | DOWN |
| 500 | T4 | 11 | 500 | EVBR | 120 | 78 | IR | | SLL-20 | 288-4 | 1m | | | | | | | PLATFORM GRATING |
| 501 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 502 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 503 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 504 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 505 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 506 | F97 | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-12 | | | | | | | | | CATWALK PORT |
| 507 | T59 | 11 | 1000 | FFFT | 120 | 158 | IR | | SLL-21 | 288-5 | 1m | | | | | | | PASSAGEWAY |
| 508 | T59 | 11 | 1000 | FFFT | 120 | 158 | IR | | SLL-22 | 288-6 | 1m | | | | | | | PASSAGEWAY |
| 509 | F97c | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-11 | | | | | | | | | LIGHT PORTS |
| 510 | F97c | 11 | 15 | T8/CW | 120 | 121 | IR | | SLL-11 | | | | | | | | | LIGHT PORTS |
| 511 | | | | | | | | | | | | | | | | | | NOT USED |
| 512 | | | | | | | | | | | | | | | | | | NOT USED |
| 513 | | | | | | | | | | | | | | | | | | NOT USED |
| 514 | | | | | | | | | | | | | | | | | | NOT USED |
| 515 | | | | | | | | | | | | | | | | | | NOT USED |
| 516 | | | | | | | | | | | | | | | | | | NOT USED |
| 517 | F20 | 12 | 35 | T12CW | 120 | | | | SLL-11 | | | | | | | | | LIGHT BOX |
| 518 | F10d | 12 | 30 | T12CW | 120 | | | | SLL-11 | | | | | | | | | BODY SCAN |
| 519 | F10d | 12 | 30 | T12CW | 120 | | | | SLL-11 | | | | | | | | | BODY SCAN |
| 520 | F10d | 12 | 30 | T12CW | 120 | | | | SLL-11 | | | | | | | | | BODY SCAN |
| 521 | F10d | 12 | 30 | T12CW | 120 | | | | SLL-11 | | | | | | | | | BODY SCAN |
| 522 | | | | | | | | | | | | | | | | | | NOT USED |
| 523 | T31 | 11 | 250 | QCL/DC | 120 | 160/62 | IR | D4 | S11-29 | 32C-6 | 1m | | | | | | | BOTTOM FILL |
| 524 | T31 | 11 | 250 | QCL/DC | 120 | 160/62 | IR | D4 | SLL-29 | 32C-6 | 1m | | | | | | | MOTHER'S BACK |
| 525 | T31 | 11 | 250 | QCL/DC | 120 | 160/62 | IR | D4 | SLL-29 | 32C-6 | 1m | | | | | | | BOTTOM FILL |
| 526 | | | | | | | | | | | | | | | | | | NOT USED |
| 527 | | | | | | | | | | | | | | | | | | NOT USED |
| 528 | T4 | 11 | 500 | EVBR | 120 | 78 | IR | | SLL-13 | 28A-2 | 1m | | | | | | | SHOE |
| 529 | | | | | | | | | | | | | | | | | | NOT USED |
| 530 | T4 | 11 | 500 | EVBR | 120 | 78 | IR | | SLL-15 | 28A-4 | 1m | | | | | | | DOG |
| 531 | CWM | 14 | 15 | T5 (904) | 12 | | | | SLL-5 | | | | | | | | | SHUTTLE PORT/LEERAFT 24-25 |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: SPACE COLONY

SCENES: SC. 27-29

REVISION NO.: 1

| FIXT. | | LAMP | | | FILTER | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | | | |
|-------|-------|------|-------|------------|--------|---------|----------|-----|--------|--------|-------|-------|------|-----|----------|-----|----|--------------------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | IC | FLCKR | MU | MAX | | MIN | UP | DOWN |
| 532 | CWM | 14 | 15 | T5 (904) | 12 | | | | SLL-5 | | | | | | | | | SHUTTLE PORT/LEE 24-25/T28-4 |
| 533 | T4 | 11 | 1500 | EVRR | 120 | 178 | R | | SLL-17 | 28A-6 | Im | | | | | | | MAN |
| 534 | T31 | 11 | 250 | IQCL/DC | 120 | | | FSW | SLL-25 | 32C-3 | | | | | | | | GRANDMA |
| 535 | T4 | 11 | 1500 | EVRR | 120 | 178 | R | | S11-15 | 28A-3 | Im | | | | | | | BOY |
| 536 | T59 | 11 | 1000 | FFFT | 120 | 158 | R | | S11-17 | 28A-5 | Im | | | | | | | PORTAL |
| 537 | T59 | 11 | 1000 | FFFT | 120 | 158 | R | | SLL-14 | 28A-7 | Im | | | | | | | PORTAL |
| 538 | T4 | 11 | 1500 | EVRR | 120 | 160/62 | R | | SLL-16 | 28A-8 | Im | | | | | | | LUGGAGE |
| 539 | T4 | 11 | 1500 | EVRR | 120 | 160/62 | R | | SLL-18 | 28B-1 | Im | | | | | | | FATHER |
| 540 | T4 | 11 | 1500 | EVRR | 120 | 160/62 | R | | SLL-19 | 28B-2 | Im | | | | | | | MOTHER |
| 541 | F20a | 14 | 40 | T12BLB | 120 | | | | SLL-4 | | | | | | | | | SHUTTLE B.L. |
| 542 | F20a | 14 | 40 | T12BLB | 120 | | | | SLL-4 | | | | | | | | | SHUTTLE B.L. |
| 543 | CWM | 13 | 15 | T5 (904) | 12 | | | | SLL-5 | | | | | | | | | SHUTTLE RING/LEECRAFT 24-25 |
| 544 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLL-4 | | | | | | | | | ASTEROID |
| 545 | S27d | 11 | 100 | HR100PSP44 | 120 | | | | SLL-4 | | | | | | | | | ASTEROID |
| 546 | F97c | 12 | 15 | T8CW | 120 | | | | SLL-6 | | | | | | | | | SHUTTLE PANELS |
| 547 | F97c | 12 | 15 | T8CW | 120 | | | | SLL-6 | | | | | | | | | SHUTTLE PANELS |
| 548 | F97c | 12 | 15 | T8CW | 120 | | | | SLL-6 | | | | | | | | | SHUTTLE PANELS |
| 549 | F97c | 11 | 15 | T8BLB | 120 | | | | SLL-6 | | | | | | | | | COCKPIT |
| 550 | F97c | 11 | 15 | T8BLB | 120 | | | | SLL-6 | | | | | | | | | COCKPIT |
| 551 | CWM | 18 | 15 | T8/CW | 120 | 210/210 | L | | SLL-9 | | | | | | | | | CRYSTAL PANELS (4) F10b, F108a |
| 552 | CWM | 16 | 15 | T8/CW | 120 | 210/210 | L | | SLL-9 | | | | | | | | | CRYSTAL PANELS (6) F108a |
| 553 | | | | | | | | | | | | | | | | | | NOT USED |
| 554 | | | | | | | | | | | | | | | | | | NOT USED |
| 555 | F115b | 12 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 556 | F115b | 12 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 557 | F115b | 12 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 558 | F115b | 12 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 559 | T4 | 11 | 1500 | EVRR | 120 | 160/62 | R | | SLL-25 | 32C-3 | Im | | | | | | | COMPUTER PANEL |
| 560 | CWM | 12 | 15 | S8 GE1073 | 12 | | | | SLL-19 | 28B-3 | Im | | | | | | | B. SCAN IN/LEE. 11-225/T28-B |
| 561 | F115a | 11 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 562 | F115a | 11 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |
| 563 | F115b | 12 | 40 | T12WW | 120 | 179 | R | | SLL-8 | | | | | | | | | CRYSTAL "DEXION" |

MOST RECENT UPDATE: 09-28-83

PROJECT: HORIZONS

LOCATION: LAUNCH TUBE

SCENE: SC. 32

REVISION NO.: 1

| FIXT. | FIXT. | LAMP | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | | |
|-------|-------|------|------|--------|--------|------|-------|----------|-------|-------|--------|-------|-------|------|-----|----------|-----|------------------------------|
| | | NO. | TYPE | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | | MIN | UP |
| 1421 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 1'-6") |
| 1422 | CEL | 1 | 2.5 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1(3-1/2" X 2'-11") |
| 1423 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 2'-2") |
| 1424 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 1'-6") |
| 1425 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 1'-6") |
| 1426 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1 (3-1/2" X 2'-2") |
| 1427 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 1'-6") |
| 1428 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 1'-6") |
| 1429 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 2'-2") |
| 1430 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1 (3-1/2" X 1'-6") |
| 1431 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 1'-6") |
| 1432 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 2'-2") |
| 1433 | CEL | 1 | 2.5 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2(3-1/2" X 2'-11") |
| 1434 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1 (3-1/2" X 1'-6") |
| 1435 | F10a | 2 | 40 | T12BLB | 120 | | | | SLA-1 | | | | | | | | | U.V. FRONT |
| 1436 | F10a | 2 | 40 | T12BLB | 120 | | | | SLA-1 | | | | | | | | | U.V. FRONT |
| 1437 | F10a | 2 | 40 | T12BLB | 120 | | | | SLA-1 | | | | | | | | | U.V. FRONT |
| 1438 | | | | | | | | | | | | | | | | | | NOT USED |
| 1439 | | | | | | | | | | | | | | | | | | NOT USED |
| 1440 | | | | | | | | | | | | | | | | | | NOT USED |
| 1441 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 1'-6") |
| 1442 | CEL | 1 | 2.5 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1(3-1/2" X 2'-11") |
| 1443 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 2'-2") |
| 1444 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 1'-6") |
| 1445 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 1'-6") |
| 1446 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1 (3-1/2" X 2'-2") |
| 1447 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 1'-6") |
| 1448 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 1'-6") |
| 1449 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 2 (3-1/2" X 2'-2") |
| 1450 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 1 (3-1/2" X 1'-6") |
| 1451 | CEL | 1 | 1.3 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 4 (3-1/2" X 1'-6") |
| 1452 | CEL | 1 | 1.89 | EL | 120 | G | | | SLA-4 | 320-1 | 1m | | | | | | | CHASE CIR 3 (3-1/2" X 2'-2") |

PROJECT: HORIZONS

LOCATION: LAUNCH TUBE

SCENE: SC. 32

REVISION NO.: 1

| FIXT. | | LAMP | | | | FILTER | | | CONTROLS | | | | VOLTS | | RAMP | | COMMENTS | |
|-------|------|------|-------|-------|------|--------|------|-----|----------|--------|-------|-------|-------|-----|------|----|----------|------------------------------|
| NO. | TYPE | NO. | WATTS | TYPE | VOLT | COLOR | TYPE | ACC | CIRC. | DIMMER | C | FLCKR | MU | MAX | MIN | UP | | DOWN |
| 1453 | CEL | 11 | 12.5 | EL | 120 | G | | | | SLA-4 | 320-1 | m | | | | | | CHASE CIR 2(3-1/2" X 2'-11") |
| 1454 | CEL | 11 | 11.3 | EL | 120 | G | | | | SLA-4 | 320-1 | m | | | | | | CHASE CIR 1 (3-1/2" X 1'-6") |
| 1455 | QWM | 12 | 130 | L30/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 7 |
| 1456 | QWM | 12 | 130 | L30/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 5 |
| 1457 | QWM | 12 | 160 | L60/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 7 |
| 1458 | QWM | 12 | 160 | L60/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 5 |
| 1459 | QWM | 12 | 160 | L60/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 7 |
| 1460 | QWM | 12 | 160 | L60/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 5 |
| 1461 | QWM | 12 | 120 | L30/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 7 |
| 1462 | QWM | 12 | 120 | L30/W | 120 | | | | | SLA-2 | 320-2 | m | | | | | | (SENT. 2L18P) LITE BOX/CIR 5 |