$20.00

International Game Technology

IGT MECHANICAL SLOT SERVICE & PARTS MANUAL

IGT MECHANICAL SLOT

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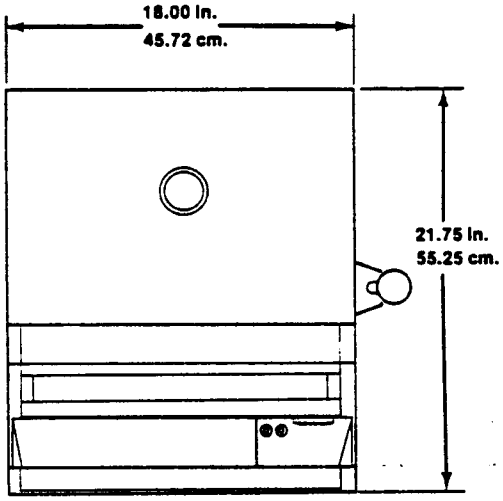
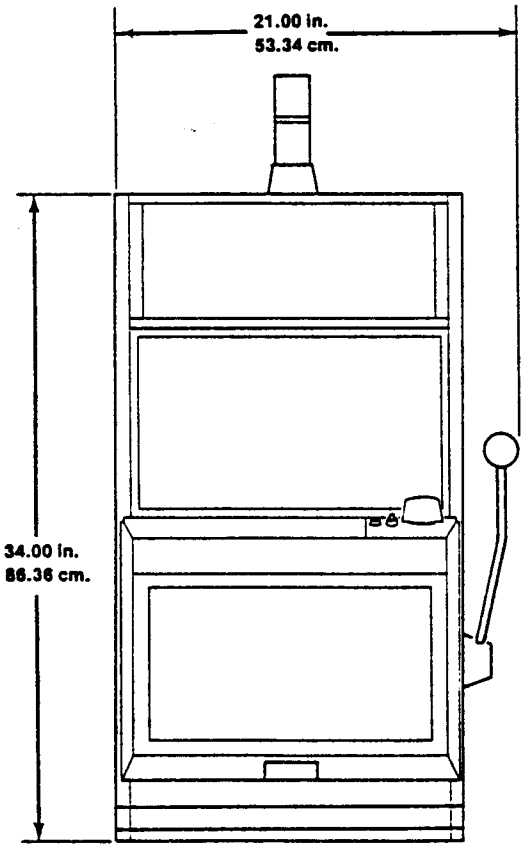
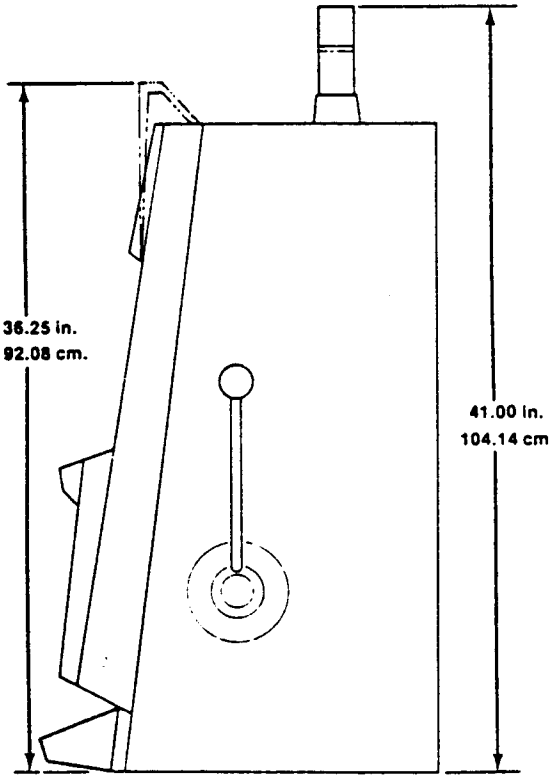
Mechanical Slot
BASIC DIMENSIONS







Section I

Section I
General Information

Introduction

The IGT Mechanical Slot machine has been professionally engineered to provide a new level of machine flexibility, economical installation and simplified maintenance.

Special Features

The Mechanical Slot machine uses the IGT circuit board system. This system provides the following unique features:

- Microprocessor control of the game.
- Modular component design.
- Numerous advanced security features.
- Back up battery for memory circuit.
- Low voltage sensing circuit.
- Error detection circuitry.
- Sound generation.
- Self Test and Statistical Display modes.

Options

The following options are available for the Mechanical Slot:

- A large selection of program percentages are available, as well as credit play features and progressive features.
- Denomination can be quickly changed to any U.S. coin or gaming token.
- Side panels on cabinet are available in several standard colors.
- Machines are available with handle and/or "PUSH TO PLAY" button.
- Speed of play choices.
- Maximum hopper pay levels.
- Coins are dropped into either a tray or a loud bowl stand.
- A variety of sound choices are available, ranging from a standard slot bell to various electronic tones, music or custom sounds.
- Upper glass lighting is available in standard back lighting or in two, three, four, five and six coin stepper boxes, in either standard or expanded top.
- A large selection of candle colors are available.
- Power supplies and line cords are available for both U.S. and foreign configurations.
- A variety of top box assemblies are available.

Specifications

Table 1-1 lists the electrical, physical and environmental specifications for the Mechanical Slot.

Power Requirements

The Mechanical Slot machine operates from 99-128VAC at 50/60 Hz and at 198-244VAC at 50/60 Hz for foreign games. A transformer is used to provide power to all components requiring isolated voltages.

Table 1-2 lists the transformer output AC voltages and the transformer tap selections. A schematic diagram for the transformer is provided in Section VII-Appendix.

FCC Data

This equipment generates and uses radio frequencies in the radio band width. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Part 15 of FCC rules, which are designed to provide reasonable protection against radio and television

TRANSFORMER OUTPUT VOLTAGE	TRANSFORMER TAP
110-120VAC COM	1
110VAC HOT	2
220VAC HOT	3
24VAC	4
24VAC RETURN	5
110VAC ISO.	6
110VAC ISO. RETURN	7
10VAC	8
10VAC RETURN	9
7VAC	10
7VAC RETURN	11
8VAC	12
8VAC RETURN	13

Table 2-2
Transformer Tap Selection

interference in an industrial installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, the user is encouraged to try to correct the interference.

Section II

Section II

Section II
Inspection & Installation

Inspection

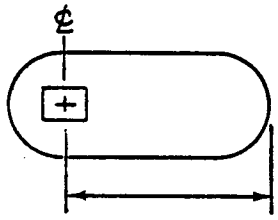
Check the exterior of the machine to verify that the machine is free from scratches, chips, blemishes and any mechanical damage.

Check the interior of the machine, making sure none of the components are disconnected or loose.

The main cabinet door and security door for the printed circuit boards are not provided with locks. Install separate secure locks into the doors to maintain proper security control. See Table 2-1 for each door lock requirements.

MAIN DOOR LOCK

- 3/4" DIA. "DOUBLE-D" MOUNTING HOLE
- BARREL LENGTH - 1/2" to 3/4"
- 90° LEFT HAND
- STRAIGHT CAM
- ℄ OF LOCK TO END OF CAM - 1"



SECURITY DOOR LOCK

- 3/4" DIA. "DOUBLE-D" MOUNTING HOLE
- BARREL LENGTH - 21/32"
- 90° RIGHT HAND
- STRAIGHT CAM
- ℄ OF LOCK TO END OF CAM - 1 1/8"

Table 2-1
Security Locks

Open the card cage and make sure that the circuit boards are securely connected to the Mother Board. The lower tray holds the Master Board and the upper tray holds the Tone Generator Module or Vocal Effects Module.

Check that the wire harnesses are properly routed and secured away from all moving parts or removable assemblies.

Make sure that all electrical connections are tight and that proper antichafe protection has been used.

Installation

To mount the machine on the stand proceed as follows:(See Figure 2-1)

1) Set the machine on the center of the stand and align the mounting holes on the bottom of the cabinet with those on the top of the stand.

   If there are no holes in the stand, use IGT hole drill template #781 026 00 and align on the stand. Drill the mounting holes using a 3/8" drill.

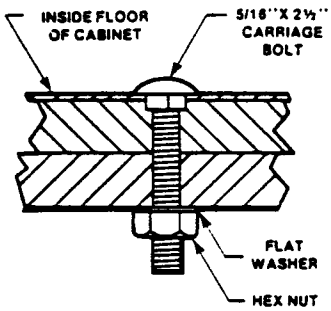


Figure 2-1
Stand Mounting

2) Insert a 5/16" X 2-1/2" carriage bolt in each hole from the inside of the machine, down into the stand. Secure the bolts with flat washers and hex nuts.

Adjustments

See Section IV, Modular Components, for complete instructions on all adjustments concerning the Mechanical Slot. A wiring diagram is also provided in Section VII, Appendix.

Returning for Damage Adjustment

As per the "General Terms and Conditions of Sales", no merchandise may be returned for adjustment without prior written approval of IGT. No credit or replacement will be effected until alleged defects are

established to IGT's satisfaction by tests and inspections to be performed by IGT at any reasonable time and place it designates.

Progressive Jackpot Installation

If the machine is to be connected to a progressive jackpot series, refer to the IGT Progressive System Manual.

Electrical Connection

Refer to Section I, General Information, for electrical requirements.

Top Box Installation (Optional)

For installation instructions for an optional Top Box refer to Section IV.

Section III

Section III
Game Instructions

Introduction

This section provides the game instructions for the Mechanical Slot machine.

Game Instructions—Regular Slot

One to six coins can be played to start the game. After the first coin is accepted, the **COIN ACCEPTED** light will turn on. The LED matrix display shows the number of coins accepted and increments as successive coins are accepted. The number of coins played will remain displayed until the next game.

After the first coin is accepted, the handle can be pulled to start the game. The **INSERT COIN** light will go out when the maximum number of coins have been played, or when the handle is pulled.

When the desired number of coins have been accepted and the handle has been pulled, the reels will start to spin. The reels then stop one at a time from left to right.

Win Condition—Hopper Pay

A win condition is any one of the winning combination of symbols shown on the paytable. When a win occurs, the **WINNER PAID** light will come on above the LED Matrix Display and the amount paid out will increment on the LED display as the hopper pays out each coin. The number of coins paid-out will remain displayed until the next game.

Win Condition—Hand Pay

A hand pay condition occurs when the amount won is in excess of the maximum hopper pay out. When a large jackpot is hit, the jackpot light will light up and the bell will ring. The machine will lockout until the jackpot is paid and the game is reset by authorized personnel.

The game is reset by turning the Jackpot Reset key switch clockwise. Refer to Section IV, for switch information. When the machine has been reset, the bell and jackpot light will turn off and the game will return to the Idle mode.

Lose Condition

If no win occurs, the **INSERT COIN** light will come on and the game will return to the Idle mode.

Game Instructions—Play Credit Slot

Same as Regular Slot, with the following exceptions:

PLAYER SWITCHES: PUSH TO BET 1 CREDIT,PUSH TO PLAY (X) CREDITS, COLLECT WINNINGS, PUSH TO PLAY. Each switch will illuminate whenever that function can be used.

PUSH TO BET 1 CREDIT: Push to bet one credit; hold down to increment credits one at a time.

PUSH TO PLAY (X) CREDITS: Push to automatically bet the maximum coins allowed per game, and automatically initiate the game without pulling handle.

PUSH TO PLAY: Push to spin reels instead of pulling handle.

COLLECT WINNINGS: Push to cash out accumulated credits in coins.

Credits Display

As credits accumulate, the LED matrix display continually shows the number of credits and the credit light above the display stays on. Credits will not accumulate over the set maximum hopper pay. Example: If the hopper maximum pay is 400 coins and a player has accumulated 375 credits, a win of 50 coins means the machine will pay all 50 coins and the 375 credits will be maintained.

Win Condition

Amount won will appear as credits. COLLECT WINNINGS switch must be pushed to collect winnings.

Section IV

Section IV
Modular Components

Introduction

The following text provides basic descriptions, functions, removal and installation instructions, adjustments and functional checkout information for the major components of the Mechanical Slot.

For more detailed information on the circuit boards and electronics, refer to the IGT Mechanical Slot Machine Tester Manual, or contact IGT Customer Service.

Reel Mechanism

REEL MECHANISM DESCRIPTION AND FUNCTION

The reel mechanism provides the reel spin for the Mechanical Slot and is a self-contained, modular electromechanical assembly, controlled by the Master Board.

The reel spin cycle begins when the electrically activated start solenoid actuates the start latch and spins the reel. Approximately half way through the stroke, the pawl arm disengages from the sprocket and resets the stop latch. A motorized camshaft then resets the start latch.

An optic sensor continually monitors the reel position and speed, and provides input to the Master Board. This input activates the stop solenoid, which drives the stop latch, stopping the reel and completing the reel spin cycle.

REEL MECHANISM REMOVAL AND INSTALLATION

To remove the reel mechanism from the cabinet, proceed as follows:

1) Open the door and turn the main power switch to the machine OFF.

2) Depress the latch button on the right hand side of the latch panel while pulling on the panel to disengage the side latches. Press downward on the panel to release the reel mechanism from the shelves.

3) Pull the reel mechanism clear of the shelf and return the latch panel to the upright position.

4) Use the hand holds provided on the reel mechanism to slide the assembly out from the cabinet.

To install the reel mechanism into the machine, proceed as follows:

1) Align the reel mechanism into the guides on the shelf and slide the assembly halfway into the cabinet. Lower the panel and finish inserting the mechanism into the cabinet. Close the panel up to lock the mechanism in place.

2) Insure that the sockets on the back of the reel mechanism properly engage with the guide pins on the back wall of the cabinet.

REEL MECHANISM MAINTENANCE

This section describes the overall maintenance for the reel mechanism and for the individual components of the reel mechanism assembly.

Every six months or one million cycles the entire reel mechanism should be removed from the machine and thoroughly inspected and cleaned. This includes the reel bearings, solenoids and all moving parts. The actuator arm assembly should be closely inspected for excessive wear, i.e. out of round holes, worn pins, frozen parts, broken springs, mushroomed latches, etc.

Inspect and clean all electrical contacts. Repair or replace excessively worn parts and carefully lubricate as prescribed for each component, with a high film strength spray lubricant and/or extreme pressure grease (EP grease).

REEL MECHANISM DISASSEMBLY AND ASSEMBLY

To disassemble the reel mechanism down to its major components, see Figure 4-1 and proceed as follows:

1) Hold the reel shaft latches up with your thumbs and simultaneously lift the reel shaft out from the chassis.

2) Pull the actuator assembly latch out and lift the assembly from the reel mechanism chassis. Repeat this procedure for each actuator assembly.

NOTE

Be careful not to damage the optical sensor on each actuator assembly during this process.

3) Remove the left side panel of the chassis assembly by loosening the five screws. Slide the drive belt off the camshaft toward the end of the shaft and slide the camshaft away from the motor.

4) Unplug the leads to the motor, and then unscrew the four screws holding the motor to the chassis and remove the motor.

5) Unplug the leads to the solid state relay (SSR) and unscrew the two screws to remove the SSR.

6) Remove the wire harness by cutting all of the ty-raps holding the harness to the chassis. Unscrew the plugs from the chassis and then remove the harness.

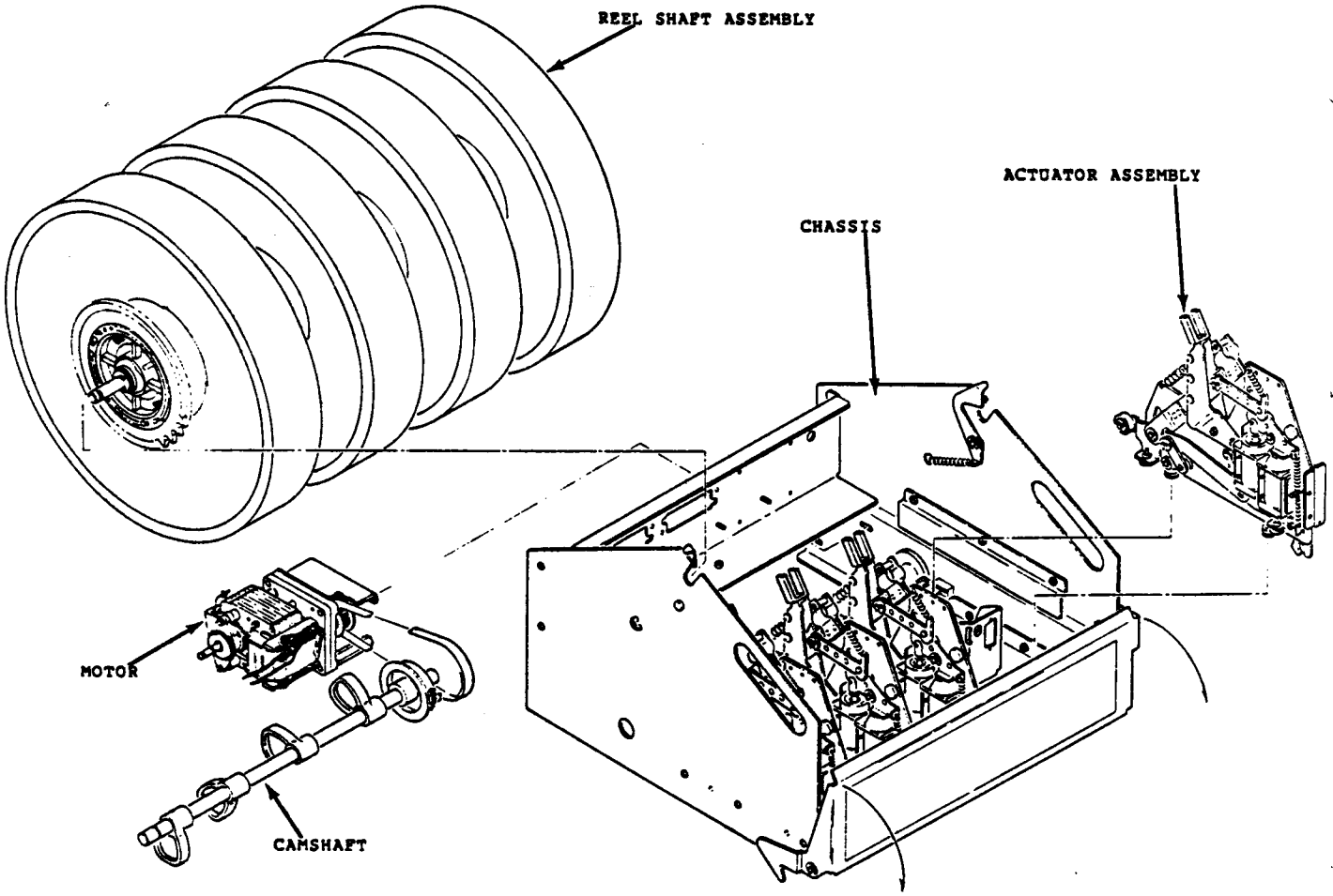


Figure 4-1
Reel Mechanism

7) Unplug the motor optics from the harness and unscrew the motor optics from the chassis.

To assemble the reel mechanism, proceed as follows:

1) Slip the belt over the camshaft before insertion into the right hand bearing. Insert the sprocket end of the camshaft into the right hand bearing. Hold the cam in place and replace the left chassis panel.

2) Attach the motor optic sensor to the chassis with the fork end toward the back of the chassis. Leave the screw semi-tight to allow for adjustment after the camshaft is installed.

3) Install the harness by attaching the plugs to the actuator assembly plug brackets and the back wall of the chassis. Attach ty-raps to the harness and to the adhesive ty-rap mounts on the chassis, pulling the harness snug to the chassis.

4) Mount the SSR to the bottom of the chassis with two screws and attach the harness to the SSR.

5) Fit the drive belt onto the motor sprocket, and then align the motor onto the chassis and attach with four screws. Secure the screws with removable thread locking adhesive.

6) Carefully hand turn the camshaft until the optic sensor interrupter on the camshaft sprocket is lined up with the optic sensor mounted on the chassis.

NOTE

The motor brake must be disengaged to turn the motor while the camshaft is being turned.

Align the optic sensor so that the interrupter is centered between the fork prongs. Tighten the optic sensor mounting screw and plug the sensor into the harness.

NOTE

Do not apply thread locking adhesive to any fasteners that attach plastic parts. The adhesive will damage the plastic parts.

7) Gently pull the camshaft drive motor away from the camshaft to take up the slack in the drive belt. Allow 1/16" to 1/8" vertical movement in the belt at the center between the two sprockets, and then tighten the four motor mount screws. Secure the screws with removable thread locking adhesive.

8) Hold the shaft latches open and guide the reel shaft with the reels into the two grooves on the chassis. Align the slots in the reel shaft with the slots in the chassis. Make sure the latches close fully to secure the reel shaft in place.

9) Gently align each actuator assembly onto the chassis base, assuring that the electrical connector plugs into the receptacle. Lock the actuator assembly latch in place.

NOTE

Be careful not to damage the optical sensor on each actuator assembly during this process.

CAMSHAFT AND MOTORDRIVE ASSEMBLY

CAMSHAFT AND MOTORDRIVE ASSEMBLY DESCRIPTION AND FUNCTION

The camshaft and motordrive assembly is an electro-mechanical assembly on the reel mechanism which cocks the reel STOP latch. Mounted on the steel camshaft are three, four or five lobes, and a 32 tooth belt drive sprocket with an interrupter blade.

The motor used with this assembly is a 120VAC, 50/60Hz Tap, 4.5 watt electric motor with gear box, brake and 16 tooth belt drive sprocket.

The motor is controlled by the Master Board through the solid state relay (SSR). See Figure 4-2.

When the motor is activated, the camshaft rotates one revolution in each reel spin/stop cycle and the lobes activate the START latch on the actuator arm assembly to reset the cam follower lever. The 32 tooth sprocket on the camshaft is provided with an interrupter blade that indicates one revolution through the optic sensor mounted on the reel mechanism chassis. After one complete revolution of the camshaft, the motor stops.

CAMSHAFT AND MOTORDRIVE ASSEMBLY MAINTENANCE

This section describes specific maintenance for the camshaft and motordrive assembly. For instructions to remove and install the camshaft and motordrive assembly from the reel mechanism, refer to Section IV - Reel Mechanism Disassembly and Assembly.

1) Lubricate the camshaft bearings every six months or one million cycles with a thin coat of EP grease. Refer to Section V- Statistical Display Mode.

2) Inspect the motor brake for excessive wear every three months. Replace the motor brake if worn or faulty.

3) Clean the optic sensor fork every three months with a cotton swab soaked in isopropyl alcohol. Wipe the inside of the fork clean of dirt, grease and other foreign material.

4) Check for clearance of all of the cam followers with the camshaft lobes, when the camshaft is in the stop position.

CAMSHAFT AND MOTORDRIVE DISASSEMBLY AND ASSEMBLY

Refer to IGT Reel Mechanism Overhaul Manual.

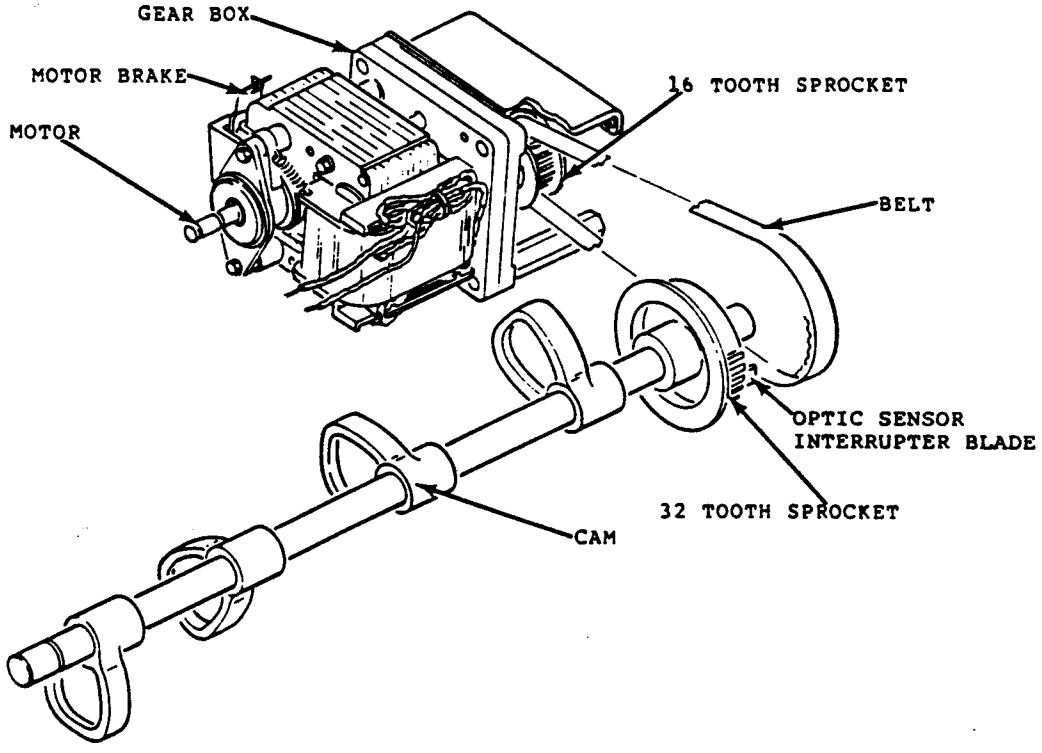


Figure 4-2
Camshaft and Motor

ACTUATOR ARM ASSEMBLY

ACTUATOR ARM ASSEMBLY DESCRIPTION AND FUNCTION

The actuator arm assembly is an electro-mechanical modular component of the reel mechanism which starts and stops the reel spin. Each actuator arm assembly is interchangeable with any other actuator arm assembly.

There are two solenoids on each actuator arm assembly which are controlled by the Master Board. Mechanically, the solenoids are reset by the STOP linkage on the assembly. The START latch and the STOP latch and both springs are reset by the camshaft, which enables the actuator arm assembly to complete the full reel spin and reel stop cycle. See Figure 4-3.

ACTUATOR ARM ASSEMBLY MAINTENANCE

This section describes the specific maintenance for the actuator arm assembly. For removal and installation of the actuator arm assembly from the reel mechanism refer to Section IV - Reel Mechanism Disassembly and Assembly instructions. See Figure 4-3.

1) All pivot points on the actuator arm assembly should be lubricated every three months with a thin coat of high film strength spray lubricant.

2) Every three months the three slots on the actuator arm assembly should be greased with a light coat of extreme pressure grease.

3) The optic sensor should be cleaned every three months with a cotton swab soaked in isopropyl (rubbing) alcohol. Wipe the inside of the fork clean of any dirt, grease or other foreign material.

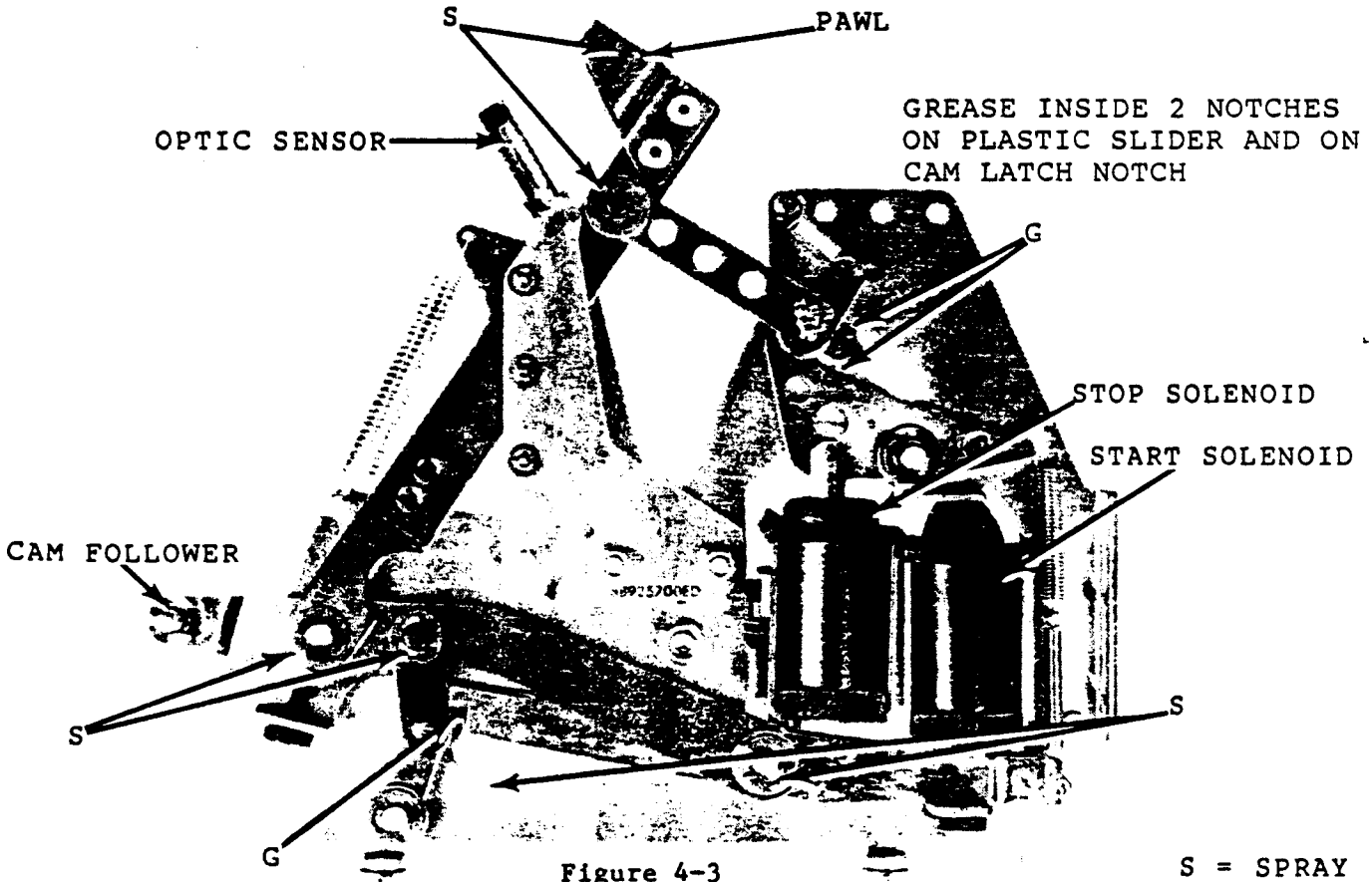


Figure 4-3
Actuator Assembly
Lubrication Points

S = SPRAY
G = GREASE

ACTUATOR ARM DISASSEMBLY AND ASSEMBLY

If an actuator arm assembly fails, remove and replace it with another assembly or refer to IGT Reel Mechanism Overhaul Manual.

REEL SHAFT ASSEMBLY

REEL SHAFT ASSEMBLY DESCRIPTION AND FUNCTION

The reel shaft assembly is a mechanical component of the reel mechanism which holds the reel subassemblies. The reel shaft is made of steel and holds three, four or five reel subassemblies, depending on the program of the machine.

Each reel subassembly consists of a molded reel,an internally self-lubricated roller bearing, and a 32 tooth (stop) sprocket with clutch plate and springs for energy absorbtion. The reels are secured to the shaft with brass bushings and "E clips.

NOTE

Do not lubricate reel bearings or subassemblies.

REEL SHAFT ASSEMBLY MAINTENANCE

This section describes specific maintenance for the reel shaft assembly. Refer to Section IV -Reel Mechanism Disassembly and Assembly for removal and installation instructions for the reel shaft assembly. See Figure 4-4.

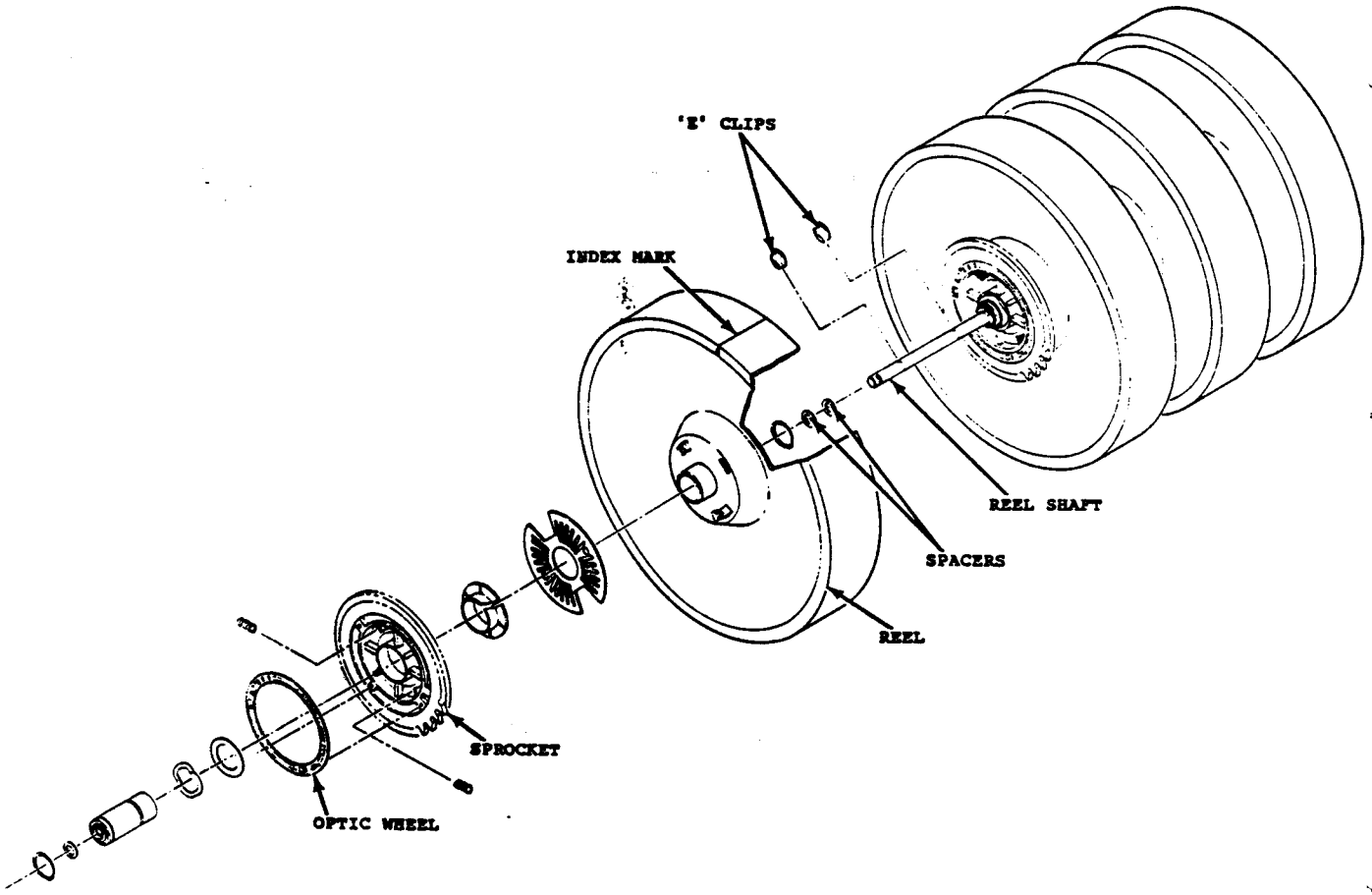


Figure 4-4
Reel Shaft Assembly

1) Each reel bearing should be cleaned every six months to remove dirt and built up lubricant.

EEL STRIP REMOVAL AND INSTALLATION

To remove a reel strip from a reel, proceed as follows:

1) Remove the reel mechanism from the machine. Find the end of the reel strip and gently peel the strip away from the reel.

2) Remove all of the adhesive from the reel with isopropyl (rubbing) alcohol.

NOTE
Use of any other solvent will result in damage to the equipment.

To install a reel strip on a reel, proceed as follows:

NOTE
The reel shaft should be installed in the chassis when changing a reel strip.

1) Align the reel index mark to a position near 12 o'clock. See Figures 4-5 & 4-6.

2) Remove the backing from the new reel strip and align the dashed line on the end of the reel strip with the index mark on the side and across the reel. Drape the strip down the back side of the reel mechanism. Apply pressure to bond the reel strip onto the reel and guide the strip along the outer edges of the reel while rotating the reel around to the end of the reel strip.

3) Repeat this procedure for each reel.

4) Verify each reel strip installation and indexing with Test Four in the Self Test Mode. Refer to Section V - Self Test & Statistical Display Mode for instructions.

Figure 4-5
Reel Strip Installation

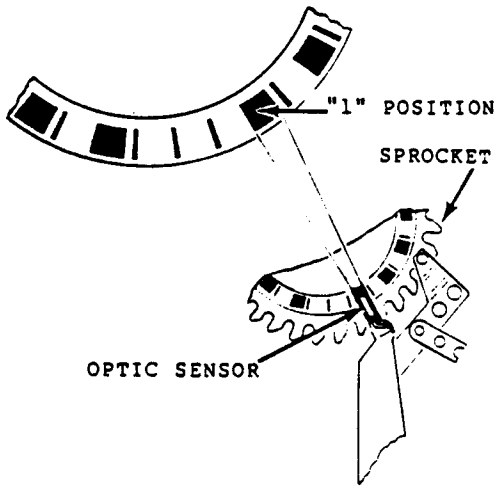


Figure 4-6
Reel Strip Installation

Hopper

The hopper is an electro-mechanical assembly which holds and counts the coins paid out by the machine. The hopper weight switch activates the coin diverter mechanism, while the mechanical operation of the hopper is controlled by the Master Board.

HOPPER REMOVAL AND INSTALLATION

To remove the hopper, see Figure 4-7 and proceed as follows:

1) Open door and turn the machine OFF.

2) Grasp the hopper handle and pull the hopper straight out.

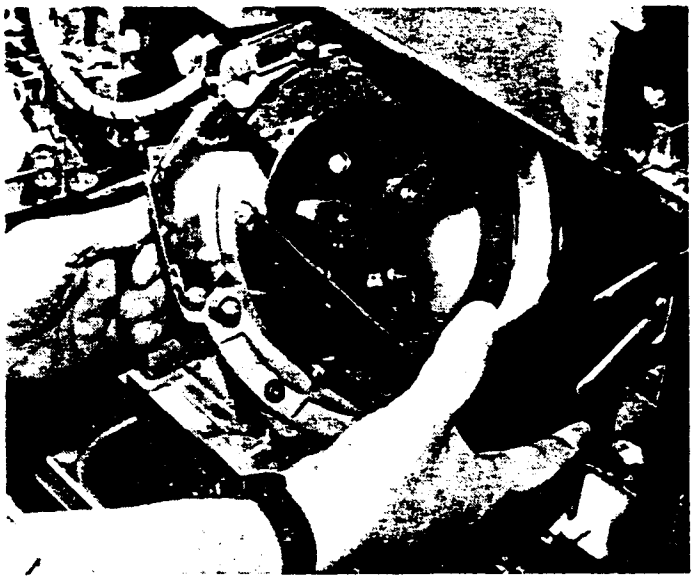


Figure 4-7
Hopper Removal

To install the hopper, proceed as follows:

1) Align the hopper base with the metal guides and slide the hopper back into the cabinet.

NOTE

Make sure that the hopper is firmly plugged into the receptacle.

2) Turn the main power ON, and close and lock the door.

HOPPER DISASSEMBLY AND ASSEMBLY INSTRUCTIONS

This section describes the procedure for disassembly and assembly of the hopper for motor replacement.

To disassemble the hopper, proceed as follows:

1) Remove the four Phillips head screws that secure the hopper bowl in place and remove the bowl.

2) Loosen the two screws holding the coin cover and knife.

3) Loosen set screw on top of hopper.

4) Back off brake screw approximately one-half inch.

5) Remove pinwheel assembly.

6) Desolder the AC leads on the motor.

7) Remove the four flat head screws holding the motor in place and remove motor. Refer to Section VI.

To assemble the hopper with a new motor, proceed as follows:

1) Insert the four flat head screws that hold the motor in place.

2) Solder the AC leads on the terminals of the motor.

NOTE

Be sure that the new motor has the drive-pin in the shaft and that the pin does not scrape the housing as it turns.

3) Replace the pinwheel.

4) Replace bowl.

5) Adjust the hopper.

HOPPER PLUG

If it becomes necessary to replace the hopper plug, make sure that it is correctly oriented to align with the receptacle in the cabinet.

HOPPER ADJUSTMENTS

The following adjustment procedure provide instructions to make all necessary adjustments to the hopper.

TOP PINWHEEL BEARING (ECCENTRIC TYPE)

1) Be sure that the vee edge on the pinwheel is in the groove of the bottom two pinwheel bearings.

2) Snug the top bearing set screw with a 3/32" allen wrench so that the eccentric can be turned with a flat bladed screwdriver.

3) Turn the eccentric counterclockwise, making sure that the pinwheel vee edge fits into the bearing groove.

4) While holding the bearing snugly against the pinwheel with a flat bladed screwdriver, tighten the set screw with a 3/32" allen wrench. Depress the motor brake and rotate the pinwheel to check for smooth operation. An overtight pinwheel bearing will cause excessive wear on the pinwheel bearing surface.

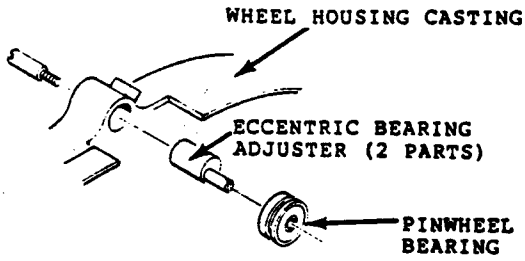


Figure 4-8
Top Pinwheel Bearing

5) If it is necessary to bring the pinwheel surface out to be flush with the wheel housing casting surface, push the eccentric outward. Tighten in the desired position. See Figure 4-8.

BOWL ECCENTRIC

1) Loosen the screw holding the bowl eccentric located on the right side of the hopper bowl flange with a Phillips screwdriver.

2) Rotate the eccentric with a 7/16" open end wrench until there is an even, minimum clearance between the hopper bowl and the edge of the pinwheel. In most cases this is achieved when the bowl clearance hole is centered on the head of the lower right pinwheel bearing retaining screw. See Figure 4-9 & 4-10.

3) Holding the eccentric in place with the wrench, tighten the retaining screw.

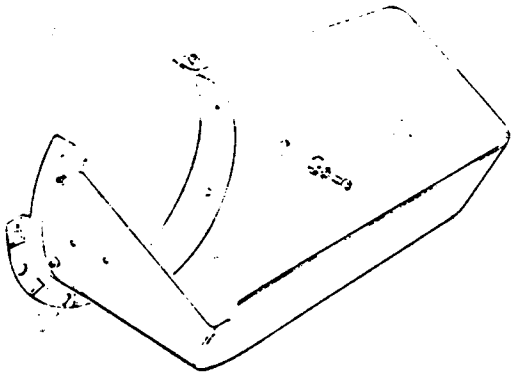


Figure 4-9
Bowl Eccentric

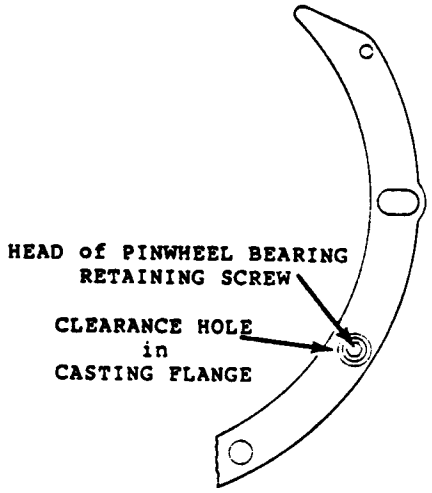


Figure 4-10
Bowl Eccentric Adjustment

KNIFE ADJUSTMENT

1) Loosen knife retaining screws with a Phillips screwdriver.

2) Depress the motor brake and rotate the pinwheel to find the high point on the shelf wheel, if any. Adjust to this point.

3) Hold knife blade assembly to the top of the shelf wheel. See Figure 4-11.

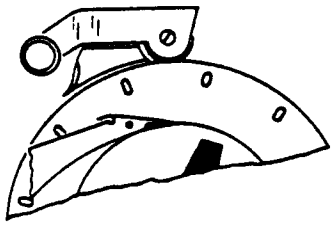


Figure 4-11
Hopper Knife Adjustment

4) Tighten knife retaining screws. Depress motor brake and rotate the pinwheel to check for smooth operation.

COIN WIPER

1) Loosen the coin wiper retaining screws with a Phillips screwdriver. See Figure 4-12.

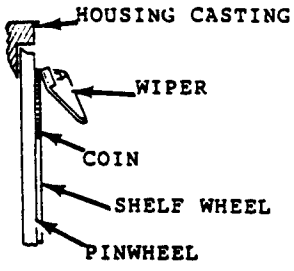


Figure 4-12
Hopper Wiper Adjustment

2) Place a coin on the shelf wheel under the tip of the coin wiper.

3) Position the tip of the coin wiper to just touch the edge of the coin.

4) Tighten retaining screws, using care not to change the position of the coin wiper.

BOWL WEIGHT SWITCH

1) Fill hopper bowl with the appropriate number of coins, which varies with denomination.

2) Push down on the end of the hopper bowl so that the bowl bottoms out in its travel. See Figure 4-13.

3) Adjust the switch activating screw so that the hex head clears the microswitch by 1/32" when the bowl is depressed. Secure the screw with the jam nut.

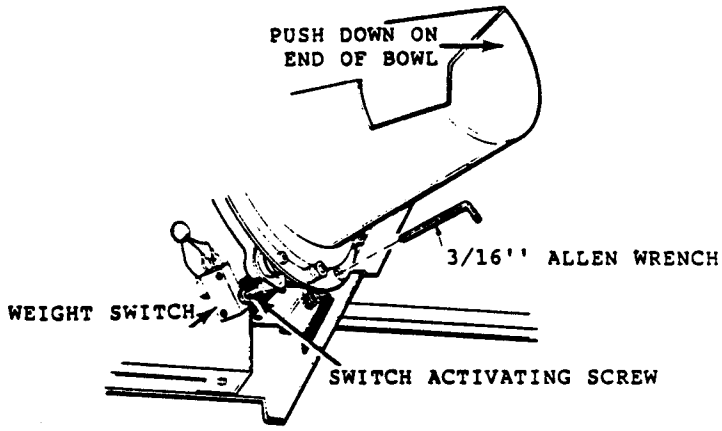


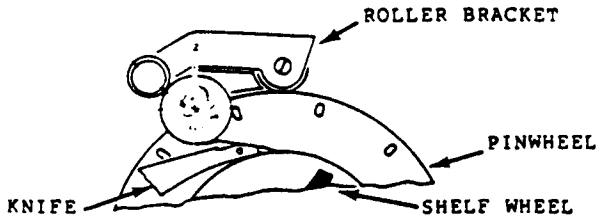
Figure 4-13
Weight Switch Adjustment

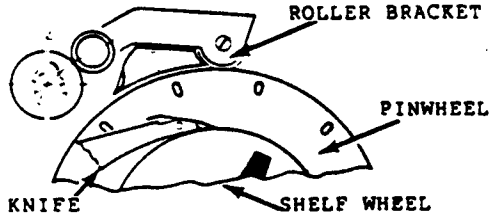
4) Turn the set screw, centered under the hopper bowl, with a 3/16" allen wrench until the microswitch clicks when light pressure is applied to the filled hopper bowl. The hopper is now set at the appropriate capacity and weight.

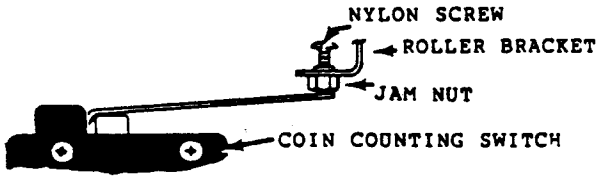
COIN COUNTING SWITCH

1) As the coin passes under the coin counting roller on 50¢ and dollar hoppers, the switch should click on when the coin is contacted by the roller in the 11:00 position and click off when the roller is in the 1:00 position on the coin. See Figures 4-14, 4-15, 4-16.

2) Hold the nylon screw, which activates the coin counting switch, with a screwdriver and loosen the jam nut with a 5/16" open end wrench.







Figures 4-14, 4-15, 4-16
Coin Out Adjustments

3) Turning the nylon screw clockwise will activate the switch sooner and deactivate it later, providing a longer sweep over the coin. Turning the screw counterclockwise will activate the switch later and deactivate it sooner, providing a shorter sweep over the coin.

4) Hold the screw in place with a screwdriver and tighten the jam nut with a wrench.

Slot Handle Mechanism

SLOT HANDLE MECHANISM DESCRIPTION AND FUNCTION

The slot handle mechanism is located on the right hand wall of the cabinet and is a mechanical ratchet assembly that simulates the mechanical reel spin.

The handle mechanism has one electrical switch which indicates that the handle has been fully extended, which then activates the reel spin.

The lockout solenoid on the handle mechanism energizes when coins are accepted, allowing the handle to be pulled. The handle mechanism has two dash pots to absorb the shock of hard handle pulls or returns.

SLOT HANDLE MECHANISM REMOVAL AND INSTALLATION

To remove the slot handle mechanism, see Figure 4-17 and proceed as follows:

1) Turn the main power to the machine OFF.

2) Place a shop rag into the coin overflow bin to prevent parts from falling into the slot stand.

3) Unplug the wire harness from the switch mounted on the base plate.

4) Remove the spring from the hammer post and the base plate post.

5) Remove the spring with shrink tube from the action plate post and base post.

6) Remove the two 1/4-20 socket head screws which hold the slot handle brace to the base plate posts.

7) Remove the 3/8-16 button head socket cap screw, ground connector and helical washer from the handle shaft.

8) Remove the two dashpots from the base plate and the hammer and action plates.

9) Remove the lockout subassembly from the base plate by removing the two screws on the solenoid mounting bracket and by removing the "E" clip from the base plate post.

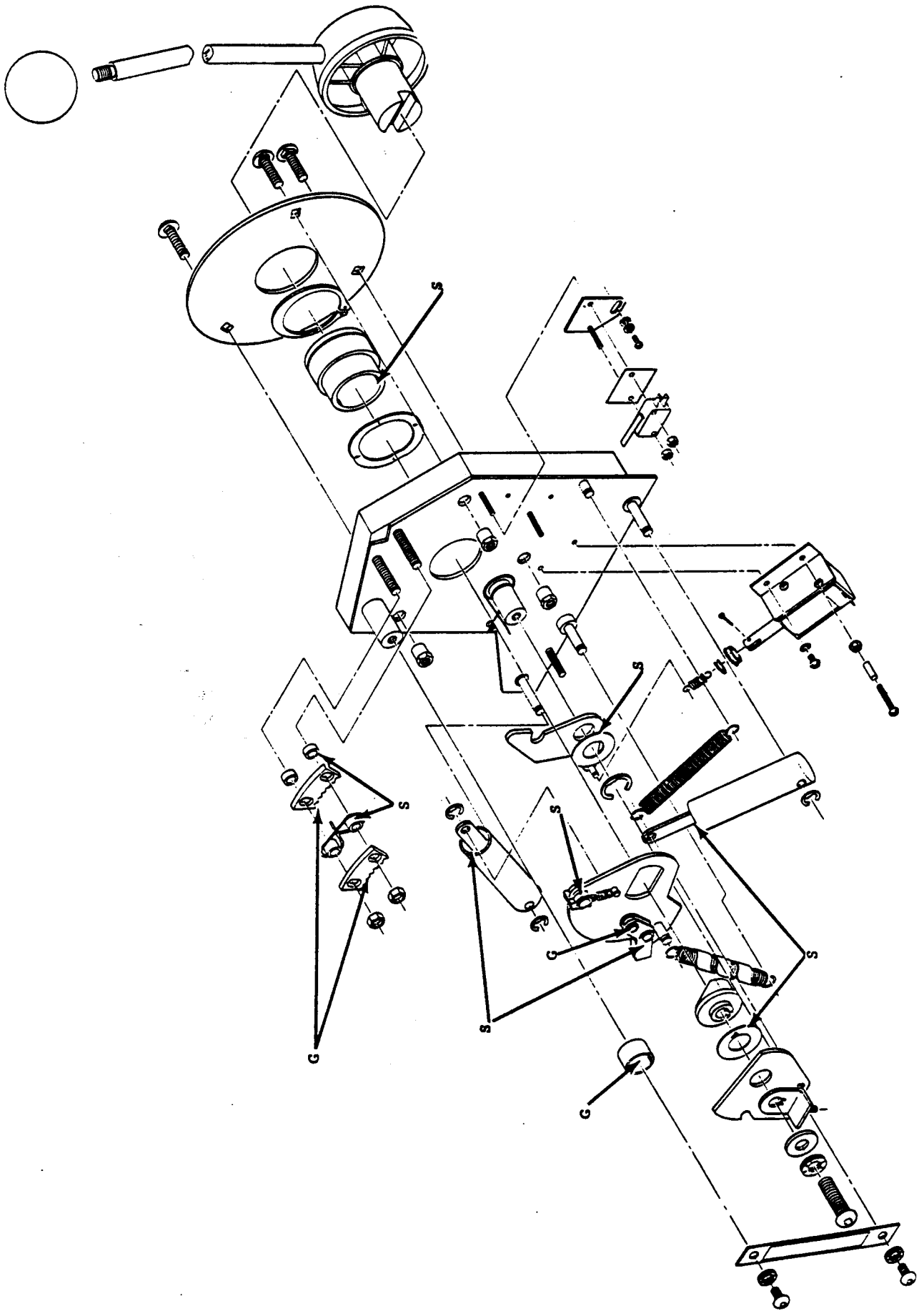


Figure 4-17
Slot Handle Mechanism
S=Spray
G=Grease

10) Remove the hammer, spacer and the action plate from the handle shaft.

11) Remove the handle arm assembly by sliding it out through the bearing.

12) Remove the base plate from the inside of the cabinet. The base plate is attached with three nuts to the carriage bolts which hold the outside ring.

To install the slot handle mechanism, proceed as follows:

1) Turn the main power to the machine OFF.

2) Place a shop rag into the coin overflow bin to prevent parts from entering the slot stand.

3) Fit the base plate assembly inside the machine and line up the mounting holes. Make sure there are no obstructions preventing a flush mount.

4) Insert the bearing and the ring into the hole in the cabinet.

5) Insert the three carriage bolts through the ring and the cabinet hole spacers.

6) Install the spring washer over the bearing exposed to the inside of the cabinet.

7) Preassemble the lockout latch, tension spring, solenoid, torsion spring and o-ring. Then slide the lockout latch onto the base plate post and attach the solenoid to the base plate with two #6 screws. Secure the screws with removable thread locking adhesive. Replace the "E" clip which holds the lockout latch to the base plate post.

8) Take the base plate assembly and insert it over the bearing exposed to the cabinet interior. Orient the mounting holes in the base plate to the carriage bolts and secure using the three special nuts and removable thread locking adhesive.

9) Preassemble the screw, ground connector and helical washer and set aside.

10) Preassemble the action plate assembly, bushing spacer and hammer, and set aside.

11) Lubricate the inside of the bearing with EP grease.

12) Insert the handle arm assembly through the bearing.

13) Install the dashpot assembly and retainer onto the hammer post.

14) Install the other dashpot assembly and retainer onto the action plate assembly post.

15) Orient the preassembled action plate assembly to the handle arm assembly and the base plate ratchet pawls. Place the spacer and hammer assembly on the shaft and connect the dashpots to the base plate.

16) Using the screw and washer preassembled in step nine, place a small amount of removable thread locking adhesive on the screw and secure the action plate assembly and the hammer assembly to the handle assembly.

17) Install the brace to the base plate assembly with two screws and a small amount of removable thread locking adhesive. Check the dashpot assemblies by hand, making sure they do not bind anywhere through complete travel.

18) Install the spring to the hammer and the base plate post.

19) Install the spring with shrink tube to the action plate post and to the base plate post.

20) Plug the two leads from the wire harness into the switch on the base plate.

21) Lubricate all pivot points including the contact area between the spacer with a heavy coat of

high film strength spray lubricant. Lube all ratchets and pawls with EP grease.

22) Pull the handle through several complete cycles to insure that no binding exists.

23) Remove rag from the coin overflow bin. Turn the machine power ON and test for proper operation.

SLOT HANDLE MECHANISM ADJUSTMENTS

This section provides information for proper adjustments and basic operation checks for the slot handle mechanism.

1) To adjust the upper microswitch, pull the handle to the "bottom out" position and hold. Rotate the microswitch plate until the switch contacts "click". Lock the adjustment in place with the switch adjustment screw and release the handle.

2) Check the switch wiring with the machine wiring diagram. Refer to Section VII - Appendix for wiring diagram.

A) Check for binding in the damper and lubricate with a high film strength spray lubricant.

B) Clogged orifice in the damper. Clean orifice with a .023 diameter #74 twist drill.

C) Check for binding in main bearing pin and lubricate with a high film strength spray lubricant.

5) If the handle is returning properly, but the reels are still not spinning correctly, check switch adjustments, steps one and two.

6) If the cam is not engaging properly into the hammer, proceed as follows:

A) Lubricate all moving parts with a high film strength spray lubricant.

B) Check for binding of roller pin against action plate.

C) Check for burrs on end of roller pin.

D) Check for proper orientation of torsion spring and lockout solenoid.

E) Check for wear on roller. If any wear is visible, replace part.

F) Check for binding of ground connector washer against hammer.

G) Check damper for binding or clogged orifice.

H) Check wear caused by hammer on stop pin of base plate. If excessive wear is causing the hammer not to engage with the cam roller, replace entire handle assembly.

Coin Handling Assembly

COIN HANDLING ASSEMBLY DESCRIPTION AND FUNCTION

The coin handling mechanism, with the exception of the drop chute for the cash box, is fully contained in the door of the Mechanical Slot machine. It is designed to electronically and/or mechanically accept coins of the proper denomination and return undesired or invalid coins.

Another feature of the coin handling is the ability to change denomination with minimal effort. The coin handling has been designed to provide for various coin acceptors. Contact IGT Casino Service for denomination changes. Refer to Section VII-Appendix for coin acceptor adjustments.

COIN HANDLING ASSEMBLY REMOVAL AND INSTALLATION

This section describes removal and installation of major components of the coin handling mechanism. Refer to Section VI-Parts List.

COIN ACCEPTOR

To remove the coin acceptor, grasp the sides of the acceptor and pull away from the chassis until the clips release. If the acceptor is electronic, unplug the harness from the acceptor. See Figure 4-18.

CHASSIS ASSEMBLY

To remove the chassis assembly, remove the coin acceptor, then remove the three 6-32 screws from the back of the chassis. Disconnect the harness for the encoder, diverter solenoid and lockout solenoid if applicable.

MOUNTING PLATE

To remove the mounting plate, remove the coin acceptor and the chassis assembly, then remove the three 6-32 screws attaching the mounting plate to the entry assembly and door casting.

COIN ENTRY ASSEMBLY

To remove the coin entry assembly, remove the coin acceptor, the chassis assembly, and the mounting plate. Next, remove the two 10-32 screws attaching the entry assembly to the door casting.

COIN HEAD

To remove the coin head, remove the entry assembly then remove the two 4-40 flathead screws. This provides access to the reflector, diffuser and the coin head lamp.

To install the coin assembly components, follow the above steps in reverse order.

CHASSIS ASSEMBLY COMPONENT DISASSEMBLY AND ASSEMBLY

This section provides instructions for the removal of the major components of the chassis assembly.

LOCKOUT SOLENOID

Machines equipped with a mechanical coin acceptor require a lockout solenoid which is located on the acceptor chassis behind the coin acceptor. To remove the lockout solenoid, remove the acceptor then remove the two 4-40 screws attaching the solenoid to the chassis. A spacer is placed under the solenoid for small denomination coin acceptors. See Figure 4-19 for positioning of the lockout solenoid for the different denominations.

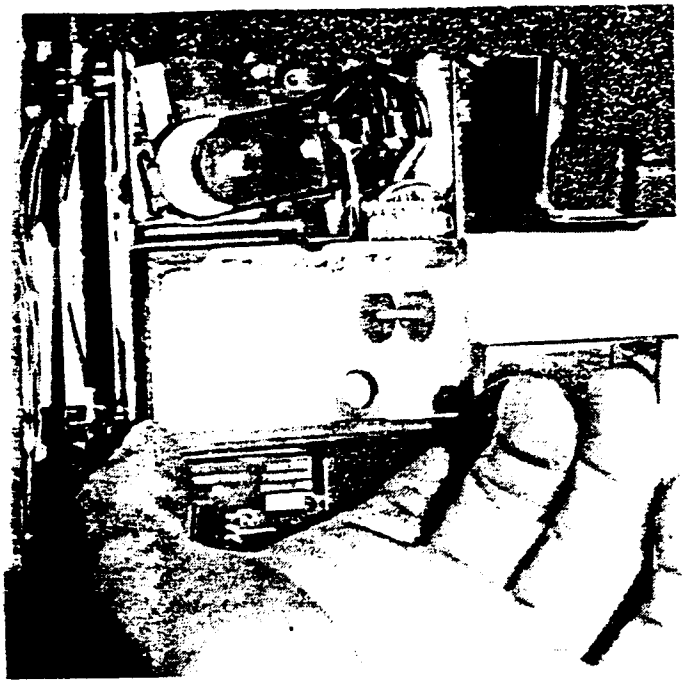


Figure 4-18
Coin Acceptor

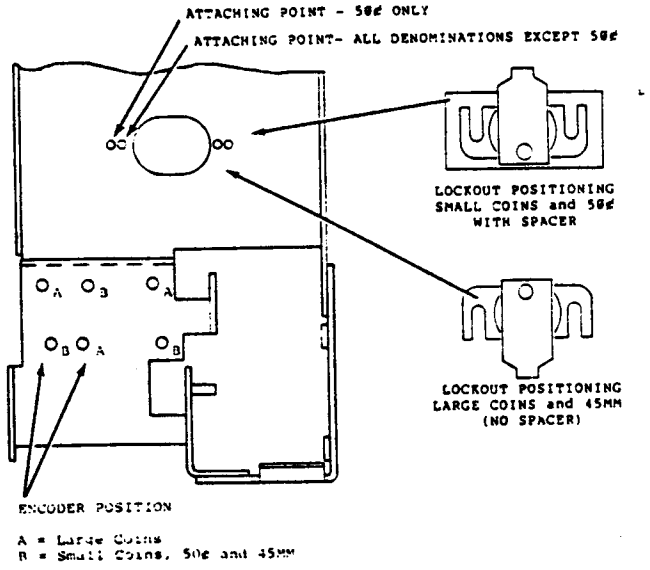


Figure 4-19
Encoder & Lockout Position

ENCODER INSERT

To remove the encoder insert, remove the two 4-40 screws holding the top encoder board to the encoder assembly and move the board to access the insert. A unique insert is used for each denomination of coin. Each encoder insert is identified with the correct denomination or coin size.

ACCEPTOR CLIPS

To remove the coin acceptor clips, remove the coin acceptor then remove the clips by turning them 1/4 turn. See Figure 4-20 for positioning of the clips for various denominations.

NOTE

Only three clips are used for the $5 token coin acceptor. Use of the fourth clip prevents coin reject.

REJECT CHUTE

To remove the reject chute, remove the two 6-32 screws attaching the chute to the chassis assembly.

DIVERTER SPRING

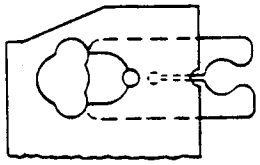
To remove the diverter spring, remove the 4-40 screw attaching the spring to the cam pivot and release the spring from the cam.

DIVERTER

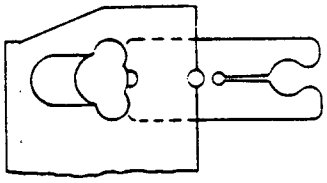
To remove the diverter, position the cam half way through its travel and place a small screwdriver between the diverter and chassis on the side opposite the cam. Twist the screwdriver until the pivot clears the hole.

NOTE

The following two components require removal of the chassis assembly from the door. Refer above to Chassis Assembly Removal.



LARGE COIN POSITION
(INCLUDING $5 TOKEN)



SMALL COIN POSITION
(INCLUDING 50¢)

Figure 4-20
Acceptor Clip Position

ENCODER ASSEMBLY

To remove the encoder assembly remove the chassis assembly from the door and remove the three 4-40 cap screws from the back side of the chassis assembly attaching the encoder assembly to the chassis. See Figure 4-19 for the correct position and hole pattern for different denominations.

DIVERTER SOLENOID

To remove the diverter solenoid, remove the chassis assembly, encoder assembly, and the diverter spring. Remove the three 6-32 cap screws attaching the solenoid to the chassis and slide the solenoid off the drive pin. This removal provides access to the diverter cam and the shim.

To install the components of the chassis assembly, follow the removal instructions in reverse order. Make sure the spring is not pinched between the solenoid and the mounting bracket. Check the cam movement to make sure it does not rub the harness or the coin reject chute.

COIN HANDLING ASSEMBLY ADJUSTMENTS, LUBRICATION AND MAINTENANCE

The coin handling kit in the IGT Mechanical Slot is designed so that no adjustment or lubrication is required.

To assure proper continuous operation, visually inspect all coin handling components for loose or broken parts and excess wear every three months. Inspect, clean off excessive coin deposits and check for proper diverter operation every three months. Refer to Section V Self Test to check diverter operation. Inspect and clean encoder optics every three months.

NOTE

If the diverter solenoid is very audible with the door closed, the adjustment screw on top of the solenoid may be turned 1/16 turn at a time until the buzz is minimized.

DENOMINATION CHANGE

To make a denomination change, see Table 4-1 for a definition of components and alignments affected. Refer to Coin Handling Assembly Removal and Installation for procedures to change the affected components.

For instructions on how to change denomination on the LED display, refer to Section V - Self Test Mode.

Switches

This section lists all possible switches, both standard and optional, and provides a description of the function of each switch.

JACKPOT RESET, CURSOR ADVANCE AND STATISTICAL DISPLAY SWITCH (STANDARD)

This key switch, located on the upper right hand side of the machine, is a multi-functional switch used for the following functions:

FROM / TO	100 SERIES COIN MECH (MECHANICAL)														COIN COMPARATOR				3RD WAVE			
	$5			LG. COIN				SM. COIN				50¢			LG. COIN		SM. COIN		LG.COIN		SM. COIN	
COMPONENT	LG. COIN	SM. COIN	50¢	$5	LG. COIN	SM. COIN	50¢	$5	LG. COIN	SM. COIN	50¢	$5	LG. COIN	SM. COIN	LG. COIN	SM. COIN	LG. COIN	SM. COIN	LG. COIN	SM. COIN	LG. COIN	SM. COIN
LOCKOUT SOLENOID	-	M	M	-	-	M	M	M	M	-	M	M	M	M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LOCKOUT SPACER	N/A	A	A	N/A	N/A	A	A	R	R	-	-	R	R	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ENCODER INSERT	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
ENCODER HOUSING	M	-	-	M	-	M	M	-	M	-	-	-	M	-	-	M	M	-	-	M	M	-
ACCEPTOR CLIPS	-	M	M	-	-	M	M	M	M	-	-	M	M	-	-	M	M	-	-	M	M	-
COIN HEAD	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
COIN BASE	-	C	C	-	-	C	C	C	C	-	-	C	C	-	-	C	C	-	-	C	C	-
ACCEPTOR HARNESS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C	C	-
ACCEPTOR	C	C	C	C	C	C	C	C	C	C	C	C	C	C	-	C	C	-	C	C	C	C

R—REPLACE M—MOVE C—CHANGE A—ADD N/A—NOT APPLICABLE DASH(-)—NO CHANGE

Table 4-1
Denomination Change

1) To reset the machine when a hand pay jackpot has occurred. Refer to Section III - Game Instructions.

2) To enter the Statistical Display mode. Refer to Section V - Self Test and Statistical Display Mode.

3) To advance the cursor (select steps within a category) when the machine is in the Self Test Mode or the Statistical Display Mode.

HANDLE SPIN SWITCH (STANDARD)

This microswitch is mounted on the handle mechanism and provides input to the CPU for reel spin actuation. Refer to Section IV - Handle Mechanism.

COIN-OUT SWITCH (STANDARD)

This microswitch is mounted on the hopper and counts the coins as they are paid out upon a win condition. Refer to Section IV - Hopper.

HOPPER FULL SWITCH (STANDARD)

This microswitch is mounted on the hopper and provides input to the CPU for diverter actuation. Refer to Section IV - Hopper , and Section V- Option Setting.

POWER ON SWITCH (STANDARD)

This toggle switch is mounted inside the cabinet and turns the main power to the machine on or off.

CHANGE AND SERVICE LIGHT SWITCH (STANDARD)

This pushbutton switch is mounted on the door and turns on the candle light on top of the machine. It is also used to review the attract mode message on the LED matrix display. Refer to Section V - Self Test and Statistical Display Mode.

SELF TEST SWITCH (STANDARD)

This pushbutton switch is located inside the cabinet on the test switch panel. It is used to enter and exit the Self Test Mode as well as to advance the groups within the Self Test Mode.

CURSOR ADVANCE SWITCH (STANDARD)

This pushbutton switch is located inside the cabinet on the test switch panel and is used to advance through the steps in each group of the Statistical Display and the Self Test Modes. This switch is wired in parallel with the Jackpot/Reset switch. Refer to Section V - Self Test and Statistical Display Mode.

SERVICE LIGHT SWITCH (STANDARD)

This pushbutton switch is located inside the cabinet and turns on the service light when the door is opened.

PUSH TO BET 1 CREDIT (OPTIONAL)

This player actuated pushbutton switch is located on the front of the door when the machine is equipped with credit play feature and serves the same purpose as a single coin being played.

PUSH TO PLAY [X] CREDITS (OPTIONAL)

This player actuated pushbutton switch is located on the front of the door when the machine is equipped with the credit play feature. It allows players to wager the maximum number of coins per game and automatically starts the game once the wager is recorded.

COLLECT WINNINGS (OPTIONAL)

This player actuated pushbutton switch is located on the front of the door when the machine is equipped with the credit play feature and allows the player to collect accumulated credits.

PUSH TO PLAY SWITCH (OPTIONAL)

This player actuated pushbutton switch is located on the front door when the machine is equipped with the spin feature and allows the player to spin the reels with the switch rather than the handle.

HOLD 1, 2, 3, 4, 5 OR 6 SWITCHES (OPTIONAL)

These player actuated pushbutton switches are located on the front of the door when the machine is equipped with the Hold Reel feature. The number of hold buttons corresponds to the number of reels on the machine. The player can select a reel to be held in position for the next handle pull.

Lighting

This section describes both the standard and optional lighting assemblies for the Mechanical Slot machine and lamp replacement. See Figure 4-21.

UPPER LIGHTING ASSEMBLY (STANDARD)

The upper lighting assembly is located inside the upper portion of the door. Depending on the type of machine, the light assembly is either fluorescent or a combination of fluorescent and incandescent lights. Refer to Reel Light Assemblies for bulb replacement instructions.

REEL LIGHT ASSEMBLIES (STANDARD)

The reel light assemblies are located inside the center portion of the door. The light assemblies are fluorescent and incandescent lights.

To replace reel lighting bulbs, proceed as follows:

Upper Fluorescent

1) Open the door and turn the power OFF.

2) Untwist the fluorescent bulb from the sockets.

To install replacement bulb follow the above steps in reverse order.

Line light incandescents

1) Open the door and turn the power OFF.

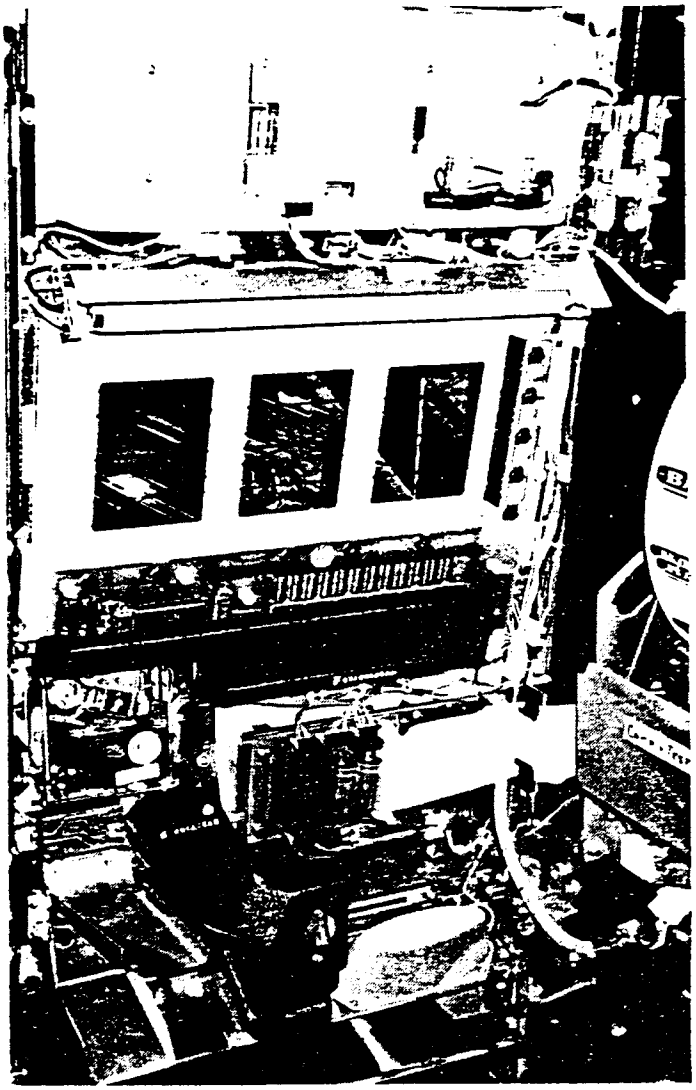


Figure 4-21
Lighting Assemblies

2) Untwist the wedge light socket from the circuit board by turning 1/8 turn counterclockwise.

3) Gently pull the bulb straight out from the socket.

To install the replacement bulb proceed as follows:

1) Insert the wedge lamp straight into the socket.

2) Insert the socket into the circuit board and twist 1/8 turn to lock the socket in place.

3) Turn the power ON, close and lock the door.

Figure 4-22
Door Panel Plungers

BELLY LIGHT ASSEMBLY (STANDARD)

The belly light is a fluorescent light assembly located inside the lower portion of the door, beside the coin mechanism.

To replace the bulbs in the lower light panel, proceed as follows:

1) Open the door and turn the power OFF.

2) Pull out the lower spring plunger then pull out the upper plunger and swing the lower door panel out.

3) Gently twist the fluorescent bulb from the sockets.

To install the bulbs and replace the lower panel proceed as follows:

1) Gently twist the replacement bulb into its sockets.

2) Swing the lower door panel back into place.

3) Pull the two spring plungers out and release them when the door panel is fully returned.

TOP BOX LIGHT ASSEMBLY (OPTIONAL)

This section describes the installation and removal of the optional 8 inch or 13 inch top light box. The top box can house one of three different configurations.

1) Single or Double Progressive Display.

2) Stepper lighting.

3) Fluorescent lighting.

To install the top box proceed as follows:

1) Open the door and turn the main power switch OFF.

2) Remove the reel mechanism.

3) Remove the card cage.

4) Disconnect the candle harness.

5) Remove the candle and candle plate assembly from the top of the machine (twelve nuts).

6) Place the top box assembly on top of the machine and align the twelve studs with the holes.

7) Install the 12 flat washers and 12 nuts to secure the top box.

8) Connect the harness and power cord. Refer to Section VII-Appendix for the wiring diagrams.

9) Install candle and candle plate onto the top box.

10) Connect the candle harness.

11) Install the card cage.

12) Install the reel mechanism.

13) Turn the machine ON and close the door.

To remove the top box assembly, proceed as follows:

1) Open the door and turn the main power OFF.

2) Disconnect the candle harness.

3) Remove the reel mechanism.

4) Remove the card cage.

5) Remove the top box assembly and candle plate (12 nuts and 12 flat washers).

6) Disconnect the candle harness.

7) Remove the candle plate assembly from the top box.

8) Install the candle plate onto the machine (12 nuts and 12 flat washers).

9) Connect the candle harness.

10) Install the card cage.

11) Install the reel mechanism.

12) Turn the machine ON and close the door.

To replace the lamps in the Top Box proceed as follows:

1) Open the machine door and turn the power OFF.

2) Turn the two Dzus fasteners on the bottom of the top box door 1/4 turn counterclockwise and lift the door up.

3) Twist the wedge lamp socket 1/8 turn counterclockwise to remove it from the circuit board. Refer to Reel Light Assemblies for the bulb replacement in the wedge lamp socket. Turn the fluorescent bulb 1/4 turn to remove it from its sockets.

To reassemble the top box lighting, follow the above steps in reverse order.

BALLAST ASSEMBLY

The ballast assembly is located inside the cabinet on the left, back corner.

NOTE

Turn the main power to the machine OFF before servicing the ballast assembly.

INDIVIDUAL BALLAST INFORMATION

The following information describes the function for each of the five ballasts on the assembly and the optional transformer. Figure 4-23 provides the corresponding number location for each description.

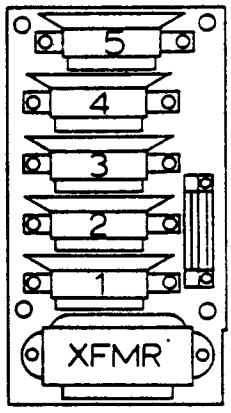


Figure 4-23
Ballast Assembly

The optional transformer is used only when stepper box lighting or back lit video plex switches are used (all credit play).

1 is used for REEL ILLUMINATION (14 - 22 Watt).

2 is used for upper bulb of belly glass light box.

3 is used for upper glass light box when stepper box upper lighting is not used, and upper bulb when stepper box lighting is used.

4 is used for belly glass lower bulb.

5 is used for lower bulb of stepper box. Used only when stepper box is used, but is still included on assembly.

LIGHT EMITTING DIODE (LED) MATRIX DISPLAY ASSEMBLY (STANDARD)

Refer to Section IV - Printed Circuit Boards.

PLAYER ACTUATED PUSHBUTTON LIGHTS

The player actuated pushbuttons are equipped with incandescent lights that turn on when appropriate. Refer to the above information for each individual switch.

PUSHBUTTON SWITCH LIGHTS

The player pushbutton switches are lighted when that function can be used.

To replace the bulb proceed as follows:

1) Open the door.

2) Turn the machine power OFF.

3) Use a 1/16" diameter rigid wire and insert it through the hole on the bottom of the switch to release the cap on top of the switch.

4) Push and turn the bayonet type bulb to remove.

To install the replacement bulb proceed as follows:

1) Insert the bulb into the socket and turn to engage the bayonets.

2) Replace the switch cap, legend right reading, and gently push down until it snaps in place.

3) Turn the machine ON.

4) Close and lock the door.

FUSES

The two fuses in the IGT Mechanical Slot are located on the switch panel below the left reel mechanism shelf. To inspect and/or replace either fuse turn the cap 1/4 turn, in the direction of the arrow, and pull the fuse out. If the fuse is blown, pull the fuse out of the cap and replace it with one with the same amperage rating. Insert the fuse into the socket and turn the cap 1/4 turn clockwise.

Printed Circuit Boards

This section describes the major circuit boards in the Mechanical Slot machine. This section also describes basic removal and installation procedures for the circuit boards and the card cage.

MASTER BOARD

The Master Board is located in the upper portion of the machine cabinet, inside of the card cage. This board contains the game processor chip which is the central element in the system. All inputs and outputs for the game operation are controlled by the Central Processing Unit (CPU) and the program memory. See Figure 4-24.

Data and certain types of programs are stored in Random Access Memory (RAM) while the game programs are stored in Read Only Memory (ROM) circuitry. The microprocessor performs all the system functions by retrieving the instructions in the memory, processing them and communicating the results via the system input and output ports and the LED display. See Figure 4-24.

CMOS / E^2 MODULE

This board piggybacks on the Master Board but is attached to the chassis of the machine by a cord and should remain with the slot machine as it contains an accounting history of its particular game. The battery backed CMOS RAM chip is also on this board. Its primary purpose is to hold all pertinent parameters associated with the current state and continues with what it was doing before power failed. In case of error messages "CMOS RAM", "EEROM", or "BATTERY," this module is likely to be at fault.

BREAKOUT BOARD

The Breakout Board provides the interface circuitry to connect the door functions to the Mother Board. The output ports permit the CPU to communicate the results of its processing to the external devices. The input ports enable the CPU to receive information from external sources.

LED DISPLAY BOARD

The LED Matrix Display Board is located on the door so that the lights and LEDs can be read from the

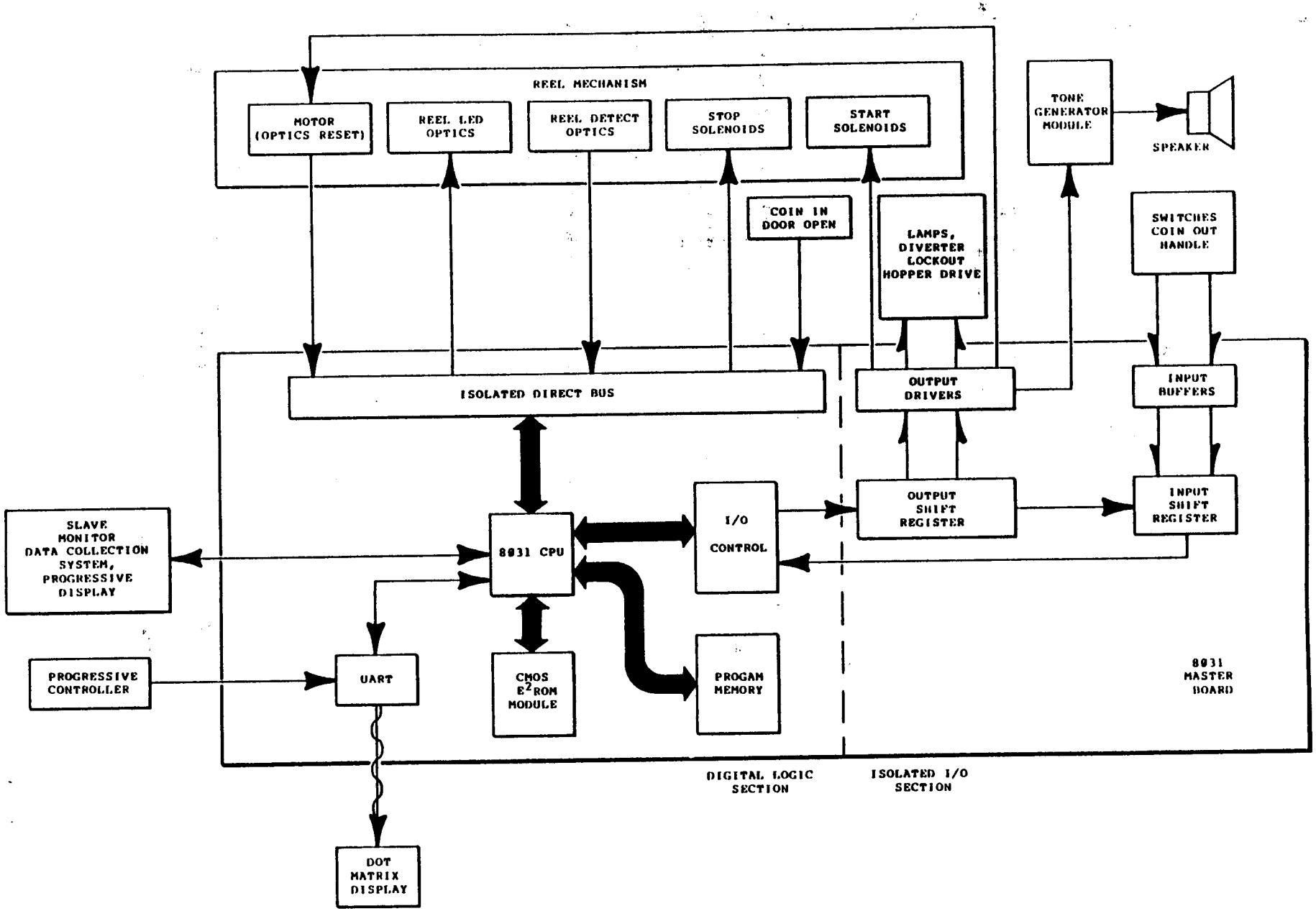


Figure 4-24
IGT "M" Slot Block Diagram

outside of the machine. The LED matrix display is used to show **WINNER PAID, CREDITS** (optional) and **COINS IN**, as well as attract mode messages and tilt condition readouts. The LED matrix display is also used in the Statistical Display Mode and the Self Test Mode. Refer to Section V - Self Test and Statistical Display Mode.

MOTHER BOARD

The Mother Board is mounted on the back wall of the card cage in the cabinet and is the distribution center of the machine for inputs and outputs to and from the Master Board. The Mother Board also distributes the various regulated power requirements to the other boards.

The Mother Board gathers inputs from the various sources and physically directs them to the Master Board. It also takes outputs from the Master Board and breaks them out to the proper connectors with the other boards.

TONE GENERATOR MODULE

The Tone Generator Module (TGM) is located in the upper portion of the card cage and provides a wide range of music and sound effects for the system. The sound generators are all under software control. The memory contains the instructions for the CPU for each application's sound or music requirements. See Figure 4-24.

To program optional sounds refer to Table 4-2 and arrange the numbered switches on the DIP switch, on the TGM accordingly.

VOCAL EFFECTS MODULE (OPTIONAL)

The Vocal Effects Module (VEM) can be custom ordered to provide any voice simulation in place of the TGM.

PRINTED CIRCUIT BOARDS REMOVAL AND INSTALLATION

There are two circuit boards located inside the card cage. The lower tray holds the Master Board and the upper tray holds the Tone Generator Module. See Figure 4-25.

CAUTION

Handle all circuit boards with care to avoid possible damage to the components, the boards and the edge connectors.

Figure 4-25
Circuit Boards

To remove a circuit board from the card cage, proceed as follows:

1) Turn the main power to the machine OFF and then unlock and open the card cage.

2) Firmly grasp the middle of the metal tray and pull the assembly straight out.

To install a circuit board assembly, proceed as follows:

1) Determine the location of the circuit board and align the tray with the guides on both sides of the card cage.

2) Push the circuit board back into the card cage until it is fully connected to the Mother Board.

3) Close and lock the card cage.

SOUND	OPTION	SWITCH							
		1	2	3	4	5	6	7	8
COIN-IN SOUND	NONE	OFF	OFF						
	NO. 1	ON	OFF						
	NO. 2	OFF	ON						
	NO. 3	ON	ON						
REEL SPIN SOUND	NONE			OFF	OFF				
	NO. 1			ON	OFF				
	NO. 2			OFF	ON				
	NO. 3			ON	ON				
COIN-OUT SOUND	NONE					OFF	OFF		
	NO. 1					ON	OFF		
	NO. 2					OFF	ON		
	NO. 3					ON	ON		
ATTRACTION	NONE								OFF
MUSIC	SONG								ON

Table 4-2
Sound Options

STANDARD TOP LIGHTING / NON-PROGRESSIVE

GAME	SOCKET J1 HEADER #	SOCKET J2 HEADER#
2 Coin Multiplier	909 058 90	909 060 90
3 Coin Multiplier	909 058 90	909 060 90
5 Coin Multiplier	909 058 90	909 057 90
6 Coin Multiplier	909 058 90	909 057 90
3 Line Standard	909 059 90	909 060 90
3 Line Horizontal	909 059 90	909 057 90
5 Line Criss Cross	909 059 90	909 057 90
4 Coin Buy-A-Pay	909 059 90	909 061 90

EXPANDED TOP LIGHTING / NON-PROGRESSIVE

GAME	SOCKET J1 HEADER #	SOCKET J2 HEADER#
2 Coin Multiplier	909 058 90	909 057 90
3 Coin Multiplier	909 058 90	909 060 90
5 Coin Multiplier	909 058 90	909 057 90
6 Coin Multiplier	909 058 90	909 057 90
3 Line Horizontal	909 059 90	909 057 90
5 Line Criss Cross	909 059 90	909 057 90
4 Coin Buy-A-Pay	909 059 90	909 057 90

TOP BOX LIGHTING

GAME & TOP BOX SIZE	SOCKET J1 HEADER#	SOCKET J4 HEADER#
6 Coin Multiplier 13" Top Box	909 058 00	909 057 90

Table 4-3
Stepper Board Lighting
Headers (Non-Progressive)

CARD CAGE ASSEMBLY REMOVAL AND INSTALLATION

To remove the card cage assembly, proceed as follows:

1) Open the card cage and remove the circuit boards.

2) Remove the reel mechanism assembly.

3) Unplug the harnesses on the Mother Board and remove the two #6 Phillips screws on the front of the card cage and remove the door chain nut.

4) Carefully pull out the card cage assembly at the top and lift it out of the flange on the back of the cabinet.

NOTE

Do not allow the fan to hit and damage the Jackpot Reset Switch mounted in the cabinet during removal or installation of the card cage.

Follow the reverse procedure to install the card cage assembly.

MOTHER BOARD ASSEMBLY REMOVAL AND INSTALLATION

To remove the Mother Board assembly, proceed as follows:

1) Disconnect all of the harnesses from the Mother Board. The number of harnesses will vary with the number of options used.

2) Remove the card cage assembly.

3) Disassemble the card cage by removing the (12) twelve, #6 Phillips screws.

4) Remove the (13) thirteen, #6 Phillips screws on the Mother Board.

5) Remove the Mother Board.

Follow the reverse procedure to install the Mother Board.

LED MATRIX DISPLAY BOARD ASSEMBLY REMOVAL AND INSTALLATION

To remove the LED Matrix Display Board, proceed as follows:

1) Unplug the wire harness from the board.

2) Pull out the four ny-latch fasteners and remove the board from the door.

Follow the reverse procedure to install the LED Matrix Display Board.

BREAKOUT BOARD REMOVAL AND INSTALLATION

To remove the Breakout Board from the door, proceed as follows:

1) Unplug the wire harness and ribbon cable from the board.

2) Remove the four, #6 screws and remove the board.

Follow the reverse procedure to install the Breakout Board.

STEPPER BOARD

The Stepper Board is located on the back of the light box for coin multiplier and coin stepper lighting control. The flash frequency for the lights is continuous or adjustable to 1, 2, or 4 flashes per second. The headers on sockets J1 and J2 on the board and the flash rate circuit can be changed to the desired lighting. See Table 4-3 for the various socket combinations.

To make the changes, turn the main power off and remove the four screws that attach the cover to the board. Connect the jumper across E1 for 4 flashes per second, E2 for 2 flashes per second, and E3 for 1 flash per second. Connect the jumper to E4 for no flash. Replace the appropriate header plugs into sockets J1 and J2 on the board. Replace the cover and turn the main power on. Refer to Section VII - Appendix for schematic.

LED PROGRESSIVE DRIVER/STEPPER BOARD (OPTIONAL)

The progressive driver/stepper board is located on the back of the light box for coin multiplier, coin stepper and progressive LED lighting control. Unlike the standard stepper board, the flash rate is controlled by the program on this board. Contact IGT regarding the various flash rates available. The socket J4, controls the lighting for the particular game configuration. See Table 4-4 for the appropriate header for socket J4 on the board.

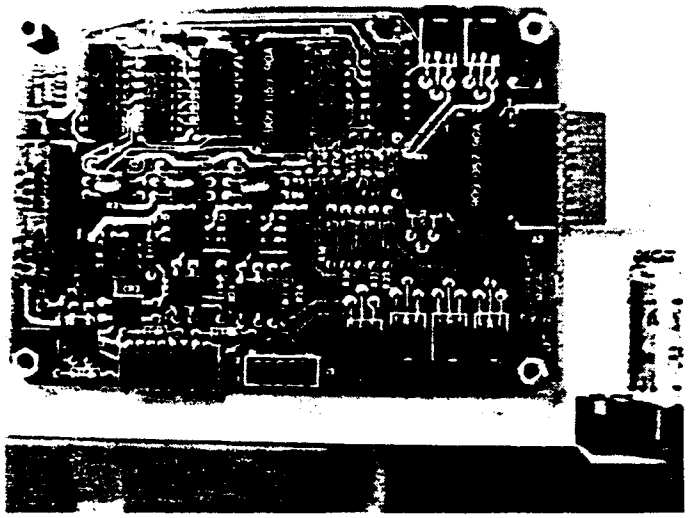


Figure 4-26
Stepper Board

EXPANDED TOP LIGHTING PROGRESSIVE

GAME TITLE	SOCKET J4 IGT #
2 Coin Multiplier	909 057 90
3 Coin Multiplier	909 057 90
5 Coin Multiplier	909 057 90
6 Coin Multiplier	909 057 90
3 Line Horizontal	909 057 90
5 Line Criss Cross	909 057 90
4 Coin Buy-A-Pay	909 057 90

STANDARD TOP LIGHTING PROGRESSIVE

GAME TITLE	SOCKET J4 IGT #
2 Coin Multiplier	909 060 90
3 Coin Multiplier	909 060 90
5 Coin Multiplier	909 057 90
6 Coin Multiplier	909 057 90
3 Line Horizontal	909 057 90
5 Line Criss Cross	909 057 90
4 Coin Buy-A-Pay	909 061 90

Table 4-4
Stepper Board Lighting
Headers (Progressive)

Section V

Section V
Self Test
Statistical Display
Troubleshooting
Field Service

Introduction

The following procedures and test modes are designed to aid in the functional inspection of the IGT Mechanical Slot machine. Using these tests, virtually any mechanical or electronic problem can be isolated.

Basic Troubleshooting Information

The following procedures are used to isolate a faulty circuit board from other devices in the machine:

1) Check the condition of all harnessing and securing of all wires, as well as the individual contacts of the mating connector to the circuit board;

2) Substitute a like unit known to be in good working order.

3) Check all switches for proper operation with the Self Test Mode.

4) Check the supply voltage to make sure it is within specified limits.

If a circuit board proves to be inoperative, replace it and return the faulty board to IGT Customer Service.

Recommended Test Equipment

It is recommended that the IGT Mechanical Slot Tester be used to troubleshoot the circuit boards and the electronic system of the Mechanical Slot machine.

Self Test Mode

The Self Test Mode is entered by opening the door and pressing the Self Test Switch, located on the switch panel. The Self Test Mode can only be entered when the machine is in the Idle Mode or in a tilt condition.

There are seven test groups in the Self Test Mode. Each group and each test within a group will be displayed on the LED Matrix Display on the front door.

To advance to the selected group, continue pressing the the Self Test Switch until the desired test group is found. To advance within each test group, press the Cursor Advance Switch on the service panel or turn the Jackpot Reset Switch counterclockwise. See Figure 5-1.

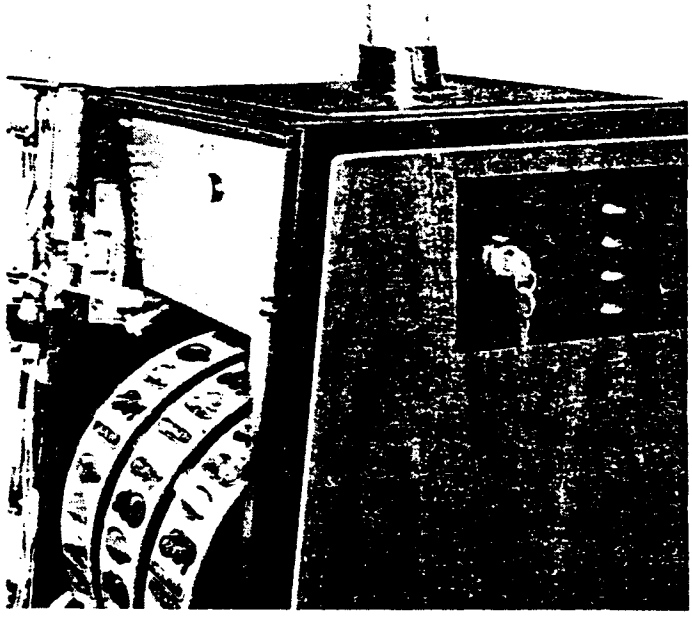


Figure 5-1
Jackpot Reset Switch

NOTE

The Cursor advance and the Jackpot Reset switches are wired in parallel. Either turn the Jackpot Reset counterclockwise or push the Cursor Advance switch. It is recommended to use the Jackpot Reset switch to be able to perform the functions while the door is closed to view the LED display.

To exit the Self Test Mode, advance one step past Self Test Group 7 and wait. After a short delay, the display will return to the game status. To proceed back to Self Test Group 1, continue pressing the Self Test Switch.

The following information and figures provide a complete breakdown for all of the possible tests and displays within each of the seven Self Test groups.

GROUP 1 - SELF TEST INPUTS (SCROLLING)

Press the Cursor Advance Switch to advance through the inputs. By pressing an input switch or by activating the input optics, the logic level, as indicated on the display, will change. See Table 5-1.

GROUP 2 - SELF TEST OUTPUTS (SCROLLING)

Advance through the outputs by pressing the Cursor Advance Switch. Turning the Jackpot Reset Switch clockwise will activate the output. See Table 5-2.

GROUP 3 - SOUND TEST (SCROLLING)

This test will select and play the desired sounds programmed in the TGM or VEM. To select the sound, press the Cursor Advance Switch. The display will show the type of sound that can be played, **ALL SOUND, COIN IN, COIN OUT, REEL SPIN.**

To activate the sound, turn the Jackpot Reset Switch clockwise. The sound may be repeated by turning this switch as many times as desired. Select the **ALL SOUND** test to sequentially display and play all available sound types.

GROUP 4 - SELF TEST REEL STRIP (SCROLLING)

Displays reel strips that are programmed in EPROM. Each time the Cursor Advance Switch is pressed, one line of the reel strip moves down into the display. This can be repeated through all 32 stops. The

GROUP 1 SELF TEST INPUTS (SCROLLING)

DISPLAY		DESCRIPTION
SELF TEST INPUTS (SCROLLING)		
REEL1	0/1	REEL 1 OPTICAL DECODER
REEL2	*	REEL 2 OPTICAL DECODER
REEL3	*	REEL 3 OPTICAL DECODER
REEL4	* *	REEL 4 OPTICAL DECODER
REEL5	* *	REEL 5 OPTICAL DECODER
REEL6	* *	REEL 6 OPTICAL DECODER
MOTOR	*	MOTOR ROTATION OPTIC
COIN A	*	COIN-IN A DECODER
COIN B	*	COIN-IN B DECODER
COIN C	*	COIN-IN C DECODER
DOOR	*	DOOR OPEN DECODER
CHANGE	*	CHANGE SWITCH
COCK	*	HANDLE COCK SWITCH
SPIN	*	HANDLE SPIN SWITCH
ADVANCE	*	CURSOR ADVANCE SWITCH
PLAY CR	* **	PLAY CREDIT (BET 1) SWITCH
PLAY MAX	* **	PLAY MAX BET SWITCH
CASHOUT	* **	CASHOUT SWITCH
JP RESET	*	JACKPOT RESET/DISPLAY SWITCH
HOLD 1	* ***	HOLD 1 FRONT PANEL SWITCH
HOLD 2	* ***	HOLD 2 FRONT PANEL SWITCH
HOLD 3	* ***	HOLD 3 FRONT PANEL SWITCH
HOLD 4	* *** / *	HOLD 4 FRONT PANEL SWITCH
HOLD 5	* *** / *	HOLD 5 FRONT PANEL SWITCH
HOLD 6	* *** / *	HOLD 6 FRONT PANEL SWITCH
SELF TST	*	SELF TEST SWITCH
HPR FULL	*	HOPPER FULL SWITCH
COIN OUT	*	COIN OUT SWITCH
XPORTER	*	TRANSPORTER MOVE SWITCH
OPTION	*	OPTION SET SWITCH
REEL MEC	*	REEL MECHANISM INTERLOCK

* Displayed only if the corresponding number of reels have been programmed.
** Displayed only if the Credit Option is ON.
*** Displayed only if the Hold Option is ON.

Table 5-1
Group 1 Self Test Inputs (Scrolling)

GROUP 2 SELF TEST OUTPUTS (Scrolling)

DISPLAY		DESCRIPTION
CASH OUT	**	CASHOUT LIGHT (SWITCH)
PLAY MAX	**	PLAY MAX BET LIGHT (SWITCH)
GAMES METER		NO. OF GAMES METER
JPX10 MTR		JACKPOT X 10 METER
CIN MTR		COINS-IN TOTAL METER
DROP MTR		COINS DROP TOTAL METER
COUT		COINS-OUT TOTAL METER
CREDIT MTR	**	CREDITS TOTAL METER
HOLD 1	***	HOLD 1 LIGHT (SWITCH)
HOLD 2	***	HOLD 2 * *
HOLD 3	***	HOLD 3 * *
HOLD 4	***/*	HOLD 4 * *
HOLD 5	***/*	HOLD 5 * *
HOLD 6	***/*	HOLD 6 * *
SPIN LIGHT		HANDLE SPIN
PLAY CREDIT	**	PLAY CREDIT (BET 1) LIGHT (SW)
CHANGE LIT		CHANGE LIGHT CANDLE
DOOR LITE		DOOR OPEN LIGHT (CANDLE)
JP LITE		JACKPOT LIGHT
STEPPER 1		STEPPER 1
STEPPER 2		STEPPER 2
STEPPER 3		STEPPER 3
HANDLE		HANDLE RELEASE SOLENOID
DIVERTER		DIVERTER SOLENOID
PROG OUT		PROGRESSIVE OUTPUT
HOPPER 1		HOPPER 1 OUTPUT
HOPPER 2		HOPPER 2 OUTPUT
HOPPER ON		HOPPER ON (BOTH 1 & 2)
LOCKOUT		LOCKOUT SOLENOID
BELL		BELL
JP OUTPUT		JACKPOT OUTPUT
DOOR LED		DOOR OPEN ENCODER
*		COINS IN INDICATOR
**	**	CREDITS INDICATOR
*		COINS OUT INDICATOR
COIN ACCPT		COIN ACCEPTED LIGHT
INSERT COI		INSERT COIN LIGHT
START 1		START REEL 1 SOLENOID
START 2		START REEL 2 SOLENOID
START 3		START REEL 3 SOLENOID
START 4		START REEL 4 SOLENOID
START 5		START REEL 5 SOLENOID
START 6		START REEL 6 SOLENOID
MOTOR ON		MOTOR
STOP 1		STOP REEL 1 SOLENOID
STOP 2		STOP REEL 2 SOLENOID
STOP 3		STOP REEL 3 SOLENOID
STOP 4	*	STOP REEL 4 SOLENOID
STOP 5	*	STOP REEL 5 SOLENOID
STOP 6	*	STOP REEL 6 SOLENOID

* Displayed only if the corresponding number of reels have been programmed.
** Displayed only if the Credit Option is ON.
*** Displayed only if the Hold Option is ON.

Table 5-2
Group 2 Self Test Inputs (Scrolling)

reel strip display can be three to six symbols wide, depending on the program. See Figure 5-2 and 5-3 for example of the LED matrix display.

GROUP 5 - SELF TEST PAYTABLE (SCROLLING)

Displays paytable lines that are stored in EPROM. A paytable line is a pay combination and its corresponding pay value. Each time the Cursor Advance is pressed, one paytable line is shown.

There are two formats for the display depending on the number of digits of the pay value. These are as follows:

If the number of digits is four or less (= or <9999) the display will show **RRRR DDDD.**

If the number of digits is five or more (= or >10000) the display will show **RRRRRTHHHH.**

R = Symbol

D = Digit

T = Indicator of five or greater digits

H = Multiple of 10,000's (Example: T0004 = 40,000)

GROUP 6 - REEL DIAGNOSTIC TEST (SCROLLING)

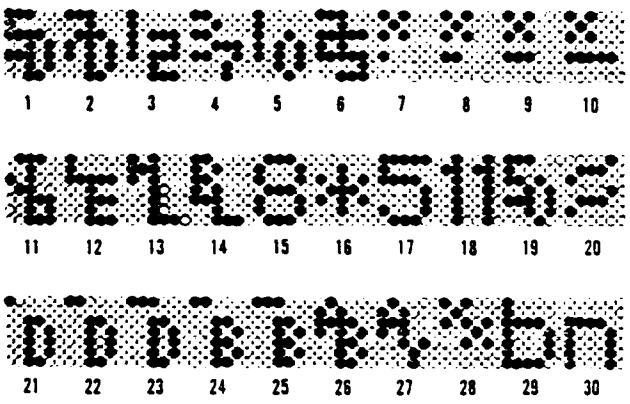
This test for the reel mechanism consists of three game cycles. These three reel spins help identify marginal condition problems. To initiate the test, push the Cursor Advance Switch. If a malfunction exists and is detected during any of the three spins, the test will stop and the display will show one of the following messages.

1) **TOO SLOW X** - Speed of reel X is too slow.

2) **DECEL X** - Deceleration of reel X during spin.

3) **NO SPIN X** - Start solenoid or Actuator assembly problem of reel X.

Figure 5-2
LED Display

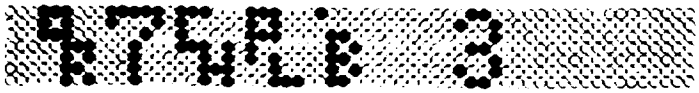


1. $5.00	16. Star
2. $7.50	17. 5 or 5/Bar
3. $12.50	18. 11
4. $37.50	19. $50.00
5. $10.00	20. Ghost (Blank)
6. $25.00	21. 1 Spot die
7. X 1	22. 2 Spot die
8. X 2	23. 3 Spot die
9. X 3	24. Double Bar
10. X 5	25. Triple Bar
11. Joker	26. Any Bar *
12. Lemon	27. Any *
13. Melon	28. Any but *
14. Bell	29. Blank *
15. 8-Ball	30. Either/or *

* Symbols unique to Paytable Verification Self Test Group 5

Figure 5-3
Standard LED Displays

Self Test "Reel Strip" LED Display below displays Orange, 7 or 7/Bar, Cherry, Plum, and Single Bar on Stop #3 for a 5-Reel Machine.



4) **MOVED X** - Reel X did not stop correctly. Stop solenoid or Actuator assembly problem.

Exit the Self Test Mode then refer to Tilt Processing for handling of the error message. If no problem was indicated, the program will jump to Self Test Group 7 after the third reel spin.

GROUP 7 - OPTION SELECTION (SCROLLING)

To program an option;

1) Press the Cursor Advance Switch to step through the option selections.

2) Turn the Jackpot Reset Switch clockwise to select the option within an option category.

3) Depress the Option Program Switch on the Master Board to program the selected option. Hold the switch down until the display blinks on and off (approximately 1 second).

4) Check the options by stepping through option selections once again.

Use the cursor advance switch to scroll through and select the following options:

VOICE..... Select ON, OFF (only if machine is equipped with VEM).

PROGRESSIVE... Select NONE, STANDARD, RAPID BONUS PROGESSIVE.

CREDIT PLAY... Select ON or OFF. Display only selection is automatic when switch panel is installed and used to verify program.

HOLD..... Select ON, OFF (used for models with appropriate switch panel which can hold or stop an individual reel).

DENOMINATION.. Select $1, 50¢, 25¢, 10¢, 5¢, (used to select standard hopper capacity).

HOPPER FILL... Select STANDARD, AUDIT.

STANDARD FUNCTION -Uses the hopper weight switch initial set value. Each time this switch is activated by the level of coins in the hopper, the program sets this initial value into a ram meter and increments or decrements this meter depending on the number of coins passing through the hopper. Metered value is an approximation only and is displayed in the Statistical Display Mode.
Standard Hopper Capacity:

$1	500
50¢	800
25¢	1,700
10¢	1,700
5¢	1,700

AUDIT FUNCTION - An amount is programmed into the E^2ROM (using the option programming switch) which is then used as the hopper fill amount. When a hopper fill is made the attendant depresses the Cursor Advance Switch.
A hopper fill is recorded by depressing the Cursor Advance Switch for three seconds. When recorded in memory the display will read FILL. This loads the programmed value into a ram meter and the game program increments or decrements this meter depending on the number of coins passing through the meter. This meter indicates a more accurate count but still requires confirmation by attendants or servicemen. This hopper fill value is also added to the total fill meter in CMOS.

ATTRACT MODE... Select ON, OFF.
The machine can be programmed for a set message to be displayed every minute in the Idle Mode. This message can be programmed into CMOS.

HOPPER MAX PAY..... Select STANDARD, SET amount.
STANDARD - using standard IGT hopper bowls:

$1	400
50¢	400
25¢	1,000
10¢	1,000
5¢	1,000

SET - using non-standard hoppers which can set various amounts, set amount can be programmed into E^2ROM but must also be indicated on glass, game program and pay table.

PARTIAL PAY... Select NONE, SET amount.
SET - A partial pay can be programmed into E^2ROM, also indicated on the glass, game program and pay table.

SPIN CYCLE..... Select SLOW, MEDIUM, FAST spin duration.

The options selected are stored in E^2ROM when the option program switch is activated for one second. If the exit from self test is performed without activating the option switch, the options will not change.

PROGRAMMING THE OPTION AMOUNTS

When the set or audit options have been selected and after pressing the Cursor Advance switch, the number **XXXX** is displayed with the left digit flashing. By turning the Jackpot Reset switch clockwise, the flashing digit will increment from zero through nine.

To advance to the next digit, turn the Jackpot Reset switch counterclockwise. Repeat this procedure until all four digits are selected.

To program the four digit number into E^2ROM, press the Option Program Switch on the Master Board for approximately one second until the display flashes. Advancing past the last digit will automatically move the display to the next option field.

PROGRAMMING THE ATTRACT MODE

When the Attract Mode is selected (ON), press the Cursor Advance switch, and an alpha-numeric character will appear in the rightmost position of the display. The following steps are used to program a new message:

1) Press the Option Program Switch on the Master Board until the display blinks to erase the old message (approx. 1 second).

2) Turn the Jackpot Reset Switch clockwise to change the rightmost character. If the switch is held down, the display will automatically increment through the alpha-numeric character set.

3) Turn the Jackpot Reset switch counterclockwise to step to the next character in the display.

4) The maximum message length is 80 characters. The display will show **XX** when this maximum is reached.

5) To review the message at any time, press the Change Light switch. To return to the program mode, press the Change Light switch once again.

6) To program the attract message into E^2ROM press the Option Program Switch on the Master Board for approximately 1 second until the display flashes. See Figure 5-4.

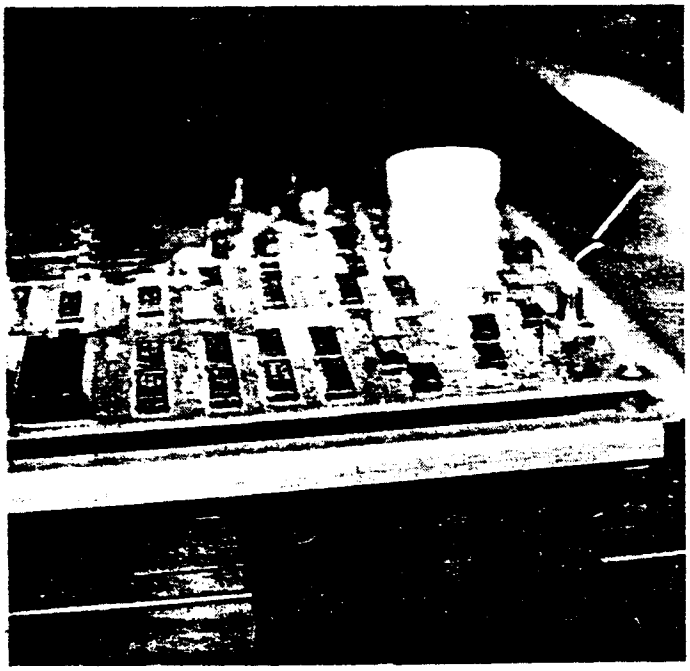


Figure 5-4
Option Program Switch

To exit the Self Test Mode, press the Self Test Switch one more time in Group 7 and the machine will return to normal game play.

Statistical Display Mode

STATISTICAL DISPLAY MODE DESCRIPTION

The Statistical Display Mode allows for the examination of the status of RAM and tilt conditions. Information appears on the LED matrix display on the front of the door. This mode also allows for examination of the current game and previous game played.

There are six groups in the Statistical Display Mode:

1) Tilt Messages (only if a tilt condition exists)

2) Hopper Fill Data

3) Statistical Group A

4) Statistical Group B

5) Game Data

6) Out of Order

NOTE

The Statistical Display Mode can only be entered when the machine is in the Idle Mode or when a tilt condition exists.

To enter the Statistical Display Mode, turn the Jackpot Reset switch clockwise once and release. This updates the E^2ROM and enters the first group. If no tilt condition exists then the first group will be "Hopper Fill Data". To advance through the displays in each group, turn the Jackpot Reset switch counterclockwise. To advance to subsequent groups, turn the Jackpot Reset switch clockwise.

To exit the Statistical Display Mode, turn the Jackpot Reset Switch clockwise to the last group. Then turn the reset switch once and the machine will return to normal game play.

HOPPER FILL DATA

This display, in the form of a bar graph, indicates the approximat level of coins in the hopper.

The hopper weight switch and the option selection for the hopper capacity both provide coin information for the hopper fill indicator. As long as the hopper full input is true, the bar display will indicate full. The microprocessor keeps track of the number of coins in and out of the hopper. This value and the max hopper capacity will determine the bar graph. Refer to Section V - Self Test, for instructions on how to set up the hopper fill data option. See Table 5-3.

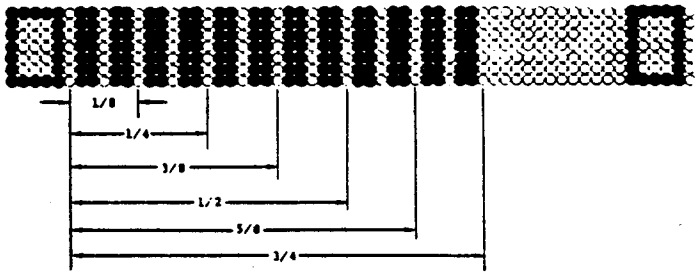


Table 5-3
Hopper Fill Data

STATISTICAL DISPLAY GROUP A

See Table 5-4 for Statistical Display Group A. See Figure 5-5.

DISPLAY		DESCRIPTION
CI	XXXXXXXX	COIN-IN CUMULATIVE TOTAL
CO	XXXXXXXX	COIN-OUT CUMULATIVE TOTAL
DR	XXXXXXXX	COIN DROP CUMULATIVE TOTAL
CC	XXXXXXXX	COLLECT CREDIT CUMULATIVE TOTAL
GP	XXXXXXXX	GAMES CUMULATIVE TOTAL
JP	XXXXXXXX	JACKPOT PAY CUMULATIVE TOTAL
DO	XXXXXXXX	DOOR OPEN CUMULATIVE TOTAL
WN	XXXXXXXX	WINS CUMULATIVE TOTAL
LS	XXXXXXXX	LOSSES CUMULATIVE TOTAL
CIT	XXXXXXXX	COIN-IN TILTS CUMULATIVE TOTAL
COT	XXXXXXXX	COIN-OUT TILTS CUMULATIVE TOTAL
RST	XXXXXXXX	RESETS CUMULATIVE TOTAL
HE	XXXXXXXX	HOPPER EMPTY CUMULATIVE TOTAL
HF	XXXXXXXX	HOPPER FILL AMOUNT CUMULATIVE TOTAL (valid only in Audit Mode)
YE*	XXXXXXXX	MACHINE YIELD CUMULATIVE TOTAL

YE = Coins-in - (Coins-out + Jackpots)

Table 5-4
Group A Statistical Display

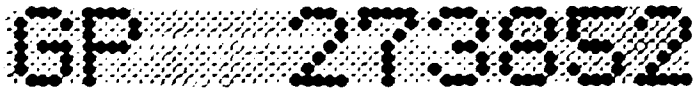


Figure 5-5
LED Statistical Display
# of Games Played

STATISTICAL DISPLAY GROUP B

See Table 5-5 for Statistical Display Group B. The game sequence audit trails are the last 16 software states that the game executed. Audit trail A contains the least recent six states (12 numbers), audit trail B shows the next six and the last four, most recent states are in audit trail C.

DISPLAY		DESCRIPTION
1CG	XXXXXXXX	*1 COIN GAME CUMULATIVE TOTAL
2CG	XXXXXXXX	*2 COIN GAME CUMULATIVE TOTAL
3CG	XXXXXXXX	*3 COIN GAME CUMULATIVE TOTAL
4CG	XXXXXXXX	*4 COIN GAME CUMULATIVE TOTAL
5CG	XXXXXXXX	*5 COIN GAME CUMULATIVE TOTAL
6CG	XXXXXXXX	*6 COIN GAME CUMULATIVE TOTAL
7CG	XXXXXXXX	*7 COIN GAME CUMULATIVE TOTAL
8CG	XXXXXXXX	*8 COIN GAME CUMULATIVE TOTAL
9CG	XXXXXXXX	*9 COIN GAME CUMULATIVE TOTAL
TCG	XXXXXXXX	*10 COIN GAME CUMULATIVE TOTAL
GPD	XXXXXXXX	GAMES PLAYED SINCE LAST POWER UP
GPP	XXXXXXXX	GAMES PLAYED SINCE LAST DOOR CLOSED
GV	XXXXXXXX	GAME VERSION EPROM NUMBER
XXXXXXXXXXXX		STATE GENERATOR AUDIT TRAIL A
XXXXXXXXXXXX		STATE GENERATOR AUDIT TRAIL B
XXXXXXXX		STATE GENERATOR AUDIT TRAIL C

* Displayed only up to maximum coins

Table 5-5
Statistical Display Group B

GAME DATA

Turn the Jackpot Reset switch again after the game sequence audit trail C to display the results of the game data. See Table 5-6 for Game Data information.

DISPLAY			DESCRIPTION
Last Game			Last Game Data
CO	CRED	CI	
XXXX	XXXX	XX	LAST GAME COIN READINGS
TOP			*POSITION OF REELS - TOP LINE
MID			*POSITION OF REELS - MIDDLE LINE
BOT			*POSITION OF REELS - BOTTOM LINE
This Game			Current Game Data
TOP			*POSITION OF REELS - TOP LINE
MID			*POSITION OF REELS - MIDDLE LINE
BOT			*POSITION OF REELS - BOTTOM LINE

* ASTERISK DENOTES ACTUAL REEL SYMBOLS ARE DISPLAYED

Table 5-6
Game Data Information

OUT OF ORDER?

The last group in Statistical Display allows for the machine to be put in an out of order status. This will shut down the machine except for the lights and the LED display which scrolls "Out of Order" To remove the out of order status, turn the reset switch counterclockwise once.

Tilt Messages and Processing

When a tilt condition exists, "TILT CALL ATTENDANT" will scroll across the display. Turn the Reset Key Switch clockwise and one of the tilt messages will appear on the LED Matrix Display, and the following occurs:

a. The dot matrix display shows a message indicating the type of tilt or requests attendant assistance.
b. The change lamp (candle) will flash 4 times every second.
c. All game play will stop until the tilt is reset by attendant.
d. Hopper is stopped and coin acceptor lockout is activated.
e. Reel tilts will halt game without finishing spin.

The following describes each of the sixteen tilt conditions:

1) **CI TILT** Coin-in jam caused by stringer, coin-in jam or some problem with the detectors (LED's), see #5 below.

2) **CO TILT** Coin-out jam caused by coin under the roller too long. This display will show the number of coins paid out before the tilt occurred.

3) **EMPTY** Indicates hopper empty or jammed and the number of coins already paid-out.

4) **EXTRA** Indicates extra coins paid to player caused by possible bad motor brake or hopper. Number of extra coins paid is also displayed.

5) **CI TILT** May also indicate a valid coin-in sequence continued with the door open.

NOTE

The following tilt conditions use the same LED display and require attendants to activate the Jackpot Reset Switch to locate the tilt cause. See Figure 5-6.

6) TILT CALL ATTENDANT(scrolling) CMOS RAM...means that the game CMOS RAM chip or related circuitry is faulty.

7) TILT CALL ATTENDANT(scrolling) EPROM...means that the checksum of the EPROM is non-zero and that the EPROM is probably bad.

8) TILT CALL ATTENDANT(scrolling) EEROM...indicates a bad E^2ROM or the E^2ROM has been programmed to the maximum capacity (10,000 writes X 16).

9) TILT CALL ATTENDANT(scrolling) BATTERY...voltage of the battery that backs up the game CMOS RAM is below 2.9VDC.

10) TILT CALL ATTENDANT(scrolling) NO SPIN...means reel X did not spin, defective reel number X is also displayed.

11) TILT CALL ATTENDANT(scrolling) TOO SLOW...Indicates reel X rotating too slow and the number of the reel.

12) TILT CALL ATTENDANT(scrolling) BACKWARD...indicates reel X rotating in the wrong direction.

13) TILT CALL ATTENDANT(scrolling) DECEL...indicates reel X decelerating too fast during spin and number of the defective reel.

14) TILT CALL ATTENDANT(scrolling) ACCEL...indicates reel(s) accelerating too fast during spin and number(s) of the defective reel(s).

15) TILT CALL ATTENDANT(scrolling) MOTOR...means that the cam shaft (motor) did not complete the rotation, stop in the correct position, or that the motor optics are defective.

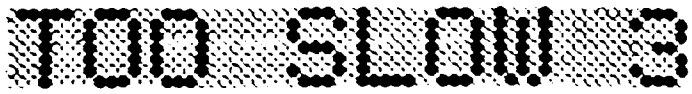


Figure 5-6
Tilt Condition #3 Reel TOO SLOW

16) TILT CALL ATTENDANT(scrolling) MOVED...indicates that movement was detected after stop command was given.

Self Tests and Statistical Display Modes can be entered during tilts. Statistical Display Mode is used to display the tilt conditions only for TILT CALL ATTENDANT conditions and the game statistics. The Self Test Mode can be used to test the components associated with the tilt.

To reset tilts, the following procedures are used:

COIN IN AND COIN OUT TILTS (1-5)

a) Open door - coins in are displayed until door is opened.

b) Close door - display wil return to game data. I problem still exists, proceed with the following steps:

If the display indicates CI TILT

a) Check for and clear jammed coins in the coin handling in the door.

b) Make sure the LED's in the optic encoder are not obstructed.

c) Check wire harness connections on the encoder and breakout board.

If the display reads CO TILT, EMPTY, or EXTRA:

a) Check for and clear jammed coins in the hopper.

b) Check for empty hopper an refill.

c) Check for proper operation of the hopper brake.

If the tilt condition still exists, enter the Self Test Mode and test the suspect component inputs and outputs. If the condition still cannot be identified, the Master Board must be repaired.

MEMORY TILTS (6-9)

a) Rotate key switch clockwise - the type of memory tilt will be displayed.

b) If statistical display is incremented - return to the tilt display (TILT CALL ATTENDANT) before continuing.

c) Open door.

d) Close door.

NOTE

If the tilt condition still exists proceed with the following steps.

If the display indicates **CMOS:**

a) Turn machine OFF.

b) Clear CMOS RAM by depressing the switch on the CMOS Board (check casino and state security procedures).

c) Turn machine ON. Display will read **TILT CALL ATTENDANT.**

d) Depress option selection switch on the Master Board until reels start spinning.

e) Close door.

If display reads **EEROM:**

a) Replace E^2ROM memory (check casino and state security procedures).

b) Go through **CMOS** tilt reset procedure above.

REEL TILTS (10-16)

NOTE

Loose optics or intermittent optic signal can cause any of the reel tilts.

a) Rotate key switch clockwise - type of tilt will be displayed.

b) If statistical display is entered, return to tilt display (TILT CALL ATTENDANT) before continuing.

c) Open door.

d) Close door.

e) Reels will re-spin to the last valid position stored in CMOS.

If the tilt still exists then proceed with the following steps.

If the display indicates:

NO SPIN, check the actuator assembly of the indicated reel for binding in any of the linkage.

TOO SLOW, check for drag on the indicated reel on the shaft assembly and make sure the clutch plate is clean.

BACKWARD, check for possible tampering.

DECEL, check for severe friction or binding on the indicated reel.

ACCEL, check for possible tampering.

MOTOR, check for bad or dirty optics, check the motor brake and the drive belt.

MOVED, check for bad or dirty optics and check sprocket of reel indicated, check for cause of improper stopping, and check for tampering.

After rectifying the problem, enter the Self Test Reel Diagnostic Mode to verify correct operation. If the problem still cannot be identified the Master Board must be repaired.

Security Displays

There are two other displays that can occur. These two displays enhance security procedures as follows:

CLOSURE This message indicates that the door has been opened and closed since the last game played. The display will continue to show **CLOSURE** alternating with the normal idle condition display until a game is played.

RESTART This message indicates that power was lost since the last game played. The display will continue to show **RESTART** alternating with the normal idle condition display until a game is played.

Field Services

The following table defines regular preventive maintenance and cleaning schedules. These are recommended to help assure longevity and identify potential failures, See Table 5-7. If the IGT Mechanical Slot is installed near the outer limits of the environmental specifications more frequent intervals may be required. Refer to Section I, Environmental Specifications, Table 1-1.

PERIODIC MAINTENANCE CHART

IGT International Game Technology

The following chart contains suggested periodic maintenance instructions for the IGT Mechanical Slot Machine. Refer to specific sections in the IGT M-Slot Manual for information on how to complete these services

	SERVICE*	EVERY MONTH	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
REEL MECHANISM					
ACTUATOR SOLENOIDS	C		X		
	L				
	A				
ACTUATOR LATCHES	C		X		
	L		X		
	A				
ACTUATOR REEL STOP PAWL	C			X	
	L				
	A				
ACTUATOR ELECTRICAL CONNECTORS	C			X	
	L				
	A				
ACTUATOR REEL OPTICS	C		X		
	L				
	A				
ACTUATOR LUBE POINTS	C				
	L		X		
	A				
REEL SHAFT BEARINGS	C			X	
	L				
	A				
REEL SHAFT CLUTCHES	C			X	
	L				
	A				
MOTOR BRAKE	C			X	
	L				
	A				
MOTOR BELT	C				
	L				
	A			X	
MOTOR OPTICS	C		X		
	L				
	A			X	
CAMSHAFT BEARINGS	C			X	
	L			X	
	A				
HANDLE MECHANISM					
DASHPOT ORIFICES	C			X	
	L				
	A				
DASHPOT SEALS	C			X	
	L			X	
	A				
LOCKOUT SOLENOID	C			X	
	L				
	A			X	
LOCKOUT LATCH	C			X	
	L			X	
	A				

IGT International Game Technology

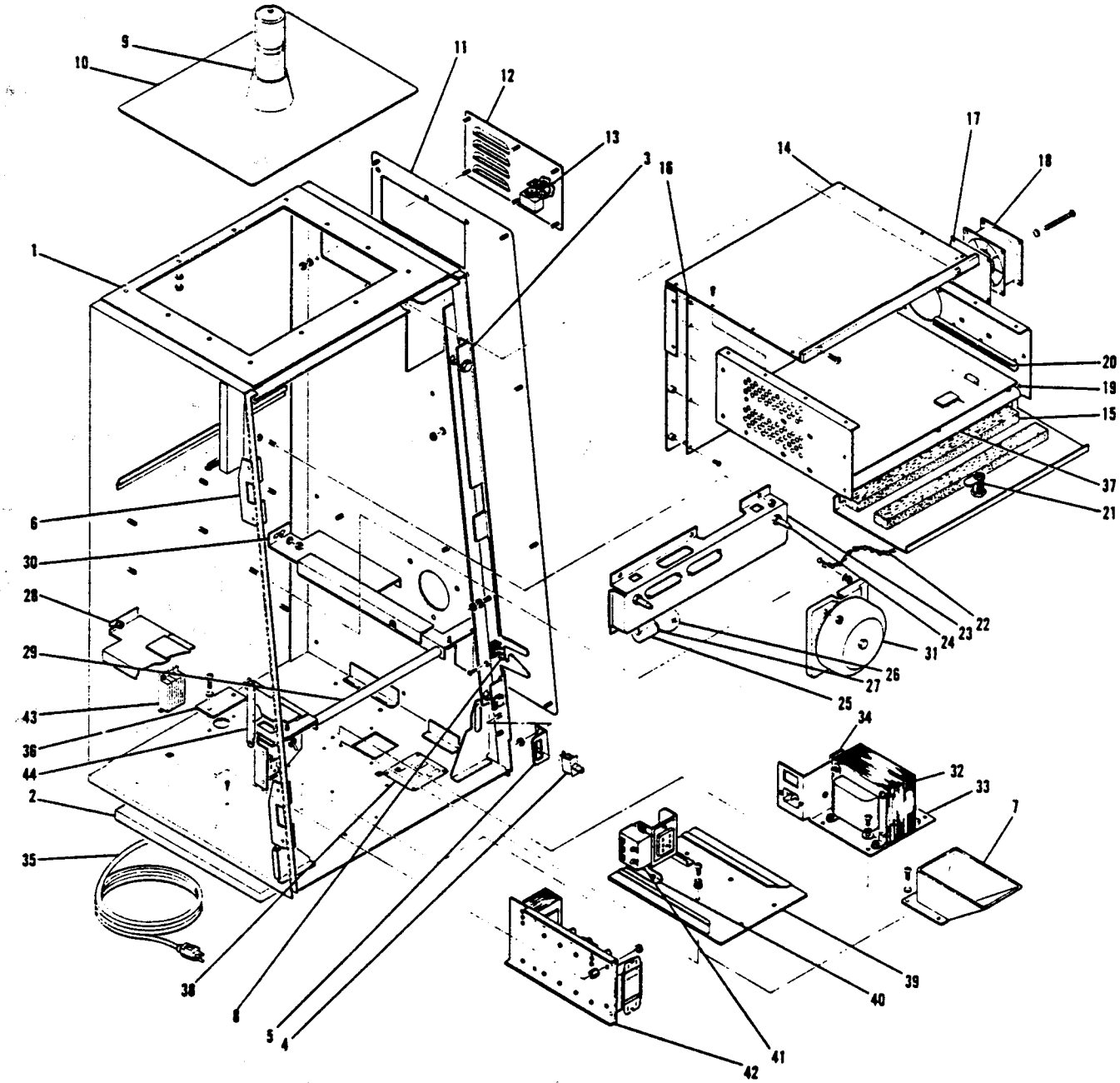
The following chart contains suggested periodic maintenance instructions for the IGT Mechanical Slot Machine. Refer to specific sections in the IGT M-Slot Manual for information on how to complete these services

	SERVICE*	EVERY MONTH	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
HANDLE MECHANISM (cont'd)					
SWITCHES	C				
	L				
	A				X
MOUNTING HARDWARE	C			X	
	L				
	A			X	
BEARING & LUBE POINTS	C		X		
	L		X		
	A				
HOPPER					
MOTOR BEARINGS	C			X	
	L			X	
	A				
MOTOR ARMATURE AND BRAKE	C		X		
	L				
	A				
PINWHEEL BEARINGS	C	X			
	L				
	A	X			
PINWHEEL HEIGHT	C	X			
	L				
	A	X			
HOPPER PLUG & RECEPTACLE	C			X	
	L				
	A			X	
SWITCHES (WEIGHT & COIN OUT)	C				
	L				
	A		X		
COIN WIPER	C		X		
	L				
	A		X		
KNIFE	C		X		
	L				
	A		X		
HARNESS CONNECTIONS	C			X	
	L				
	A				
COIN HANDLING					
ENCODER OPTICS	C		X		
	L				
	A				
DIVERTER OPERATION	C		X		
	L				
	A				
COMPONENTS	C		X		
	L				
	A				

* C-CLEAN & INSPECT L-LUBRICATE A-ADJUST

Table 5-7
Periodic Maintenance Chart

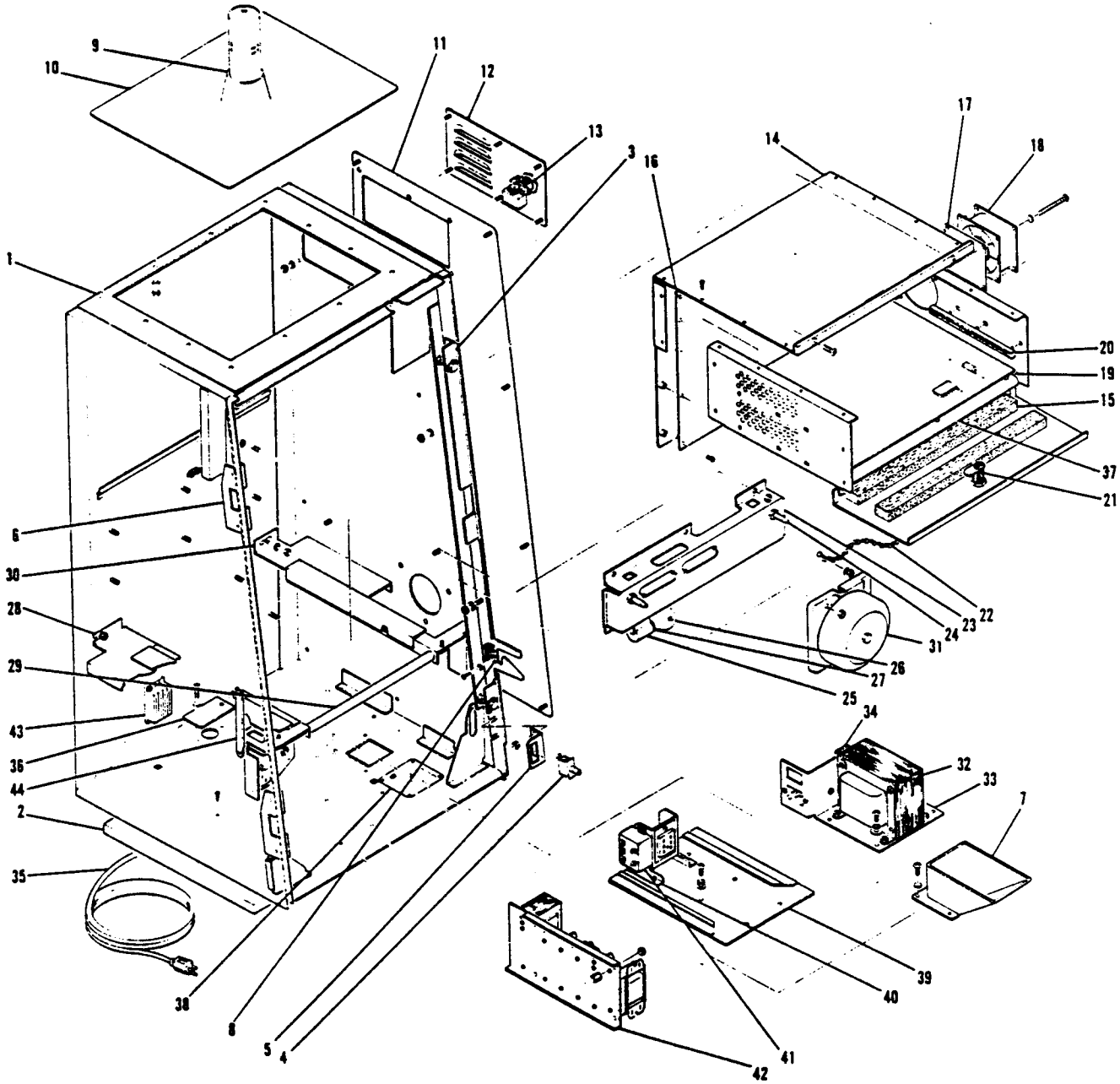
Section VI Parts Lists



Cabinet Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	141 027 00	CABINET, FORTUNE 2B	1.000	EA
2	633 031 00	BASE, WOOD, FORT. 2 CABINET	1.000	EA
-	601 047 00	HARN, MAIN M-SLOT	1.000	EA
3	589 274 00	PLATE, LATCH, F-2B	1.000	EA
4	516 033 90	SWITCH, P/B, STD INTERLOCK	1.000	EA
5	636 531 00	BRACKET, INTERLOCK SWITCH	1.000	EA
6	636 545 00	BRACKET, HINGE, F-2B	2.000	EA
7	573 183 00	CHUTE, OVERFLOW, PLASTIC	1.000	EA
8	653 099 00	MOUNT, DOOR OPEN OPTICS	1.000	EA
-	575 029 00	ENCODER, DOOR OPEN RECEIVER	1.000	EA
-	850 026 00	LABEL, PROGRAM	1.000	EA
9	191 015 00	CANDLE KIT, RED/YEL CNDL(NV)	1.000	EA
-	191 014 00	CANDLE KIT, YELLOW CNDL(NV)	1.000	EA
-	191 016 00	CANDLE KIT, RED/WHT CNDL(NJ 5C)	1.000	EA
-	191 018 00	CANDLE KIT, YEL/WHT CNDL(NJ25C)	1.000	EA
-	191 019 00	CANDLE KIT, ORN/WHT CNDL(NJ50C)	1.000	EA
-	191 020 00	CANDLE KIT, BLU/WHT CNDL(NJ 1$)	1.000	EA
-	191 017 00	CANDLE KIT, GRN/WHT CNDL(NJ10C)	1.000	EA
10	589 175 00	PLATE, TOP-K-CASE	1.000	EA
-	609 253 00	HARN, CANDLE INTERCON K CASE	1.000	EA
11	655 492 00	PANEL KIT, WLN/NO HNDL. F-2B	1.000	EA
-	655 484 00	PANEL KIT, RED/CRM. HNDL, F-2B	1.000	EA
-	655 485 00	PANEL KIT, WLN/CRM. HNDL. F-2B	1.000	EA
-	655 486 00	PANEL KIT BLK/CRM. HNDL F-2B	1.000	EA
-	655 487 00	PANEL KIT, BRN/CRM. HNDL F-2B	1.000	EA
-	655 488 00	PANEL KIT, BRS/CRM. HNDL. F-2B	1.000	EA
-	655 489 00	PANEL KIT, SIL/CRM. HNDL. F-2B	1.000	EA
-	655 490 00	PANEL KIT, BRS. HNDL. F-2B	1.000	EA
-	655 491 00	PANEL KIT, RED/NO HNDL. F-2B	1.000	EA
-	655 493 00	PANEL KIT, BLK/NO HNDL. F-2B	1.000	EA
-	655 494 00	PANEL KIT, BRN/NO HNDL. F-2B	1.000	EA
-	655 495 00	PANEL KIT, BRS/NO HNDL. F-2B	1.000	EA
-	655 496 00	PANEL KIT, SIL/NO HNDL. F-2B	1.000	EA
12	589 177 00	PLATE, LVRD. ONE SWITCH MTG.	1.000	EA
13	519 024 90	SWITCH, KEY OP. DPDT, MOM TO CNT	1.000	EA
-	640 026 00	CAGE ASSY, CARD X-SLOT	1.000	EA
-	640 027 00	CAGE, CARD, UNIV F2&M-SLOT	1.000	EA
14	688 160 00	COVER, CARD CAGE, UNIV. F2&M-SLOT	1.000	EA
15	661 070 00	RETAINER, MASTER PCB	2.000	EA
16	759 028 00	BOARD PC, M-SLOT MOTHER ASSY	1.000	EA
17	679 024 00	GUARD, FAN 3.12 SQ. SCREEN	1.000	EA
18	260 003 90	FAN, 32CFM 3.15 X 3.15	1.000	EA
19	581 019 90	GUIDE, CARD, 9.62IN UNIV. NY.	3.000	EA
20	581 062 00	GUIDE, MODIFIED CARD	1.000	EA
21	800 024 90	LOCK, SHIPPING L/H 180 DEG.	1.000	EA
-	609 260 00	HARN, JUMPER, NON PROG K-CASE	1.000	EA
22	289 016 90	CHAIN, SINGLE JACK #16	.800	FT
-	603 055 00	HARN, RBN. .1X.1 50P FL DBL MSL	1.000	EA
23	143 032 00	CHASSIS, GUIDE PIN, CONNECTOR	1.000	EA
-	609 340 00	HARN, CONN PANEL TO MOTHER BD.	1.000	EA
24	449 056 00	PIN, GUIDE .343 DIA	2.000	EA
25	120 022 90	SOCKET, INTMD. BASE-LAMP	1.000	EA
26	190 029 90	LAMP, SCREW CLEAR 130V 10W	1.000	EA
27	663 013 90	RING, O .549IDX.103 CROSS SECT	1.000	EA
28	670 050 01	SHELF ASSY LEFT	1.000	EA
-	670 055 00	SHELF, LEFT, M-SLOT	1.000	EA
-	609 343 00	HARN, POWER PANEL, MECH. SLOT	1.000	EA
-	524 009 90	FUSE, F.B., 3 AMP	1.000	EA
-	524 011 90	FUSE, F.B., 5 AMP	1.000	EA
29	676 202 00	SUPPORT, SHELF	1.000	EA
30	670 054 00	SHELF, RIGHT, M-SLOT	1.000	EA
31	228 004 00	BELL ASSY, 10V 4IN. UNIV.	1.000	EA
-	761 007 00	BOARD PC TONE GEN MODULE 2ASS	1.000	EA
32	408 035 00	POWER SUPPLY KIT, USA 115V60C	1.000	EA
-	408 036 00	POWER SUPPLY KIT, GERM. 230V50C	1.000	EA
33	636 453 00	BRACKET, TRANSFORMER	1.000	EA
34	272 001 90	FILTER, ELECTRICAL LINE 6 AMP	1.000	EA
-	602 044 00	HARN, AC POWER SUPPLY-K CASE	1.000	EA
-	602 045 00	HARN, POWER SUPPLY COIL LEADS	1.000	EA
-	218 022 90	TERMINAL BLOCK, 5POS COMMONIN	1.000	EA
35	618 004 90	CORD, POWER, STD. 7.5FT	1.000	EA
36	671 018 00	SHIELD, RFI, POWER CORD	1.000	EA
37	597 063 00	TRAY ASSY, MASTER PCB M-SLOT	1.000	EA

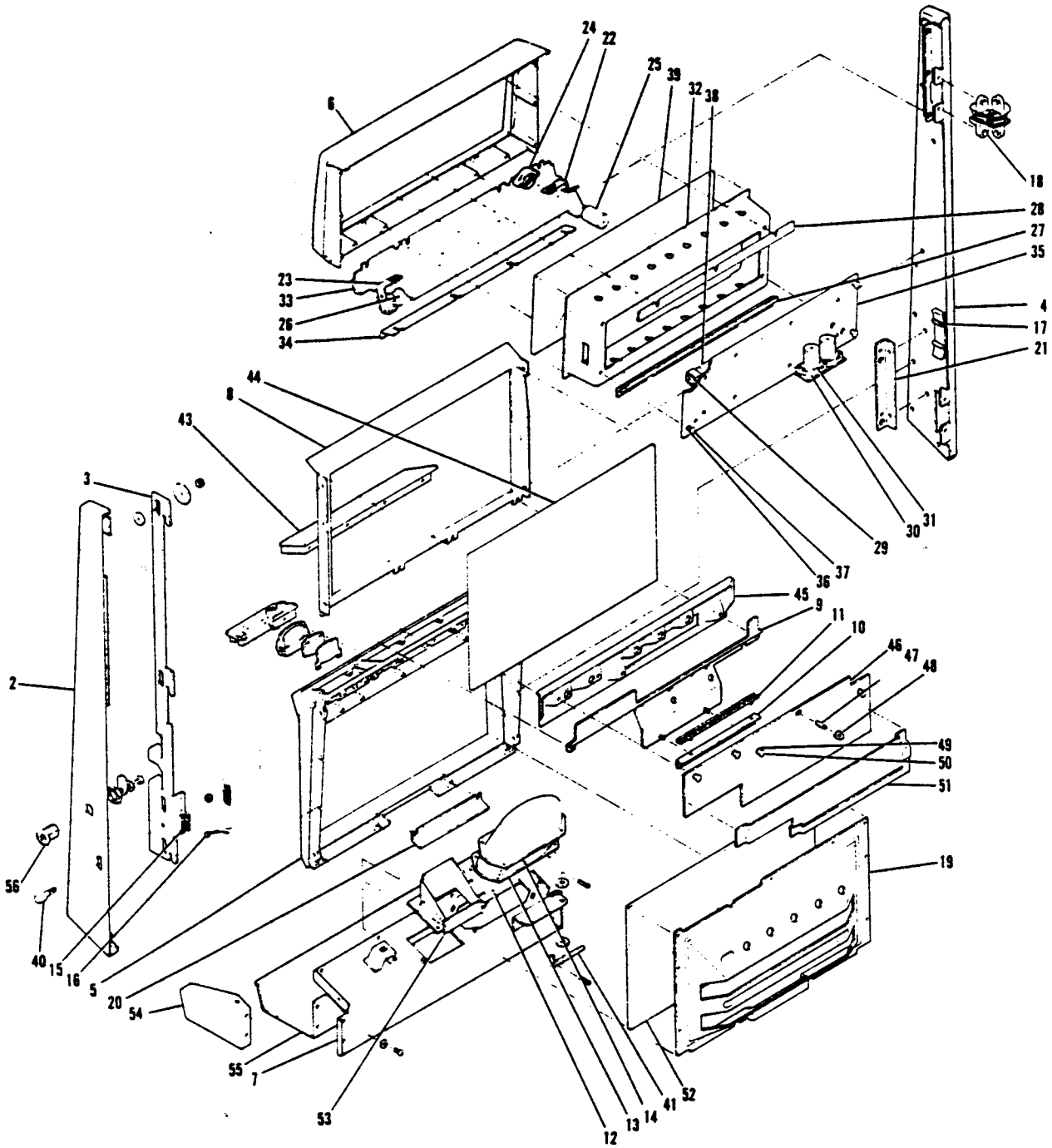


Cabinet Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

38	850 039 00	LABEL, SERIAL NO. PLAQUE	2.000 EA
39	672 030 00	SLIDE ASSY, HOPPER, FORT 2B	1.000 EA
40	636 560 00	BRACKET, HOPPER, LG PLUG	1.000 EA
-	605 045 00	HARN, HOPPER BKT 7PIN BEAU	1.000 EA
41	454 030 90	RELAY, OPTO, ASSY	1.000 EA
-	589 275 01	PLATE ASSY BALLAST F-2B	1.000 EA
42	589 276 00	PLATE, BALLAST MTG. F-2B	1.000 EA
-	195 003 90	BALLAST, 8W 118V	4.000 EA
-	195 001 90	BALLAST, 118V .35A 14-22W #200H	1.000 EA
43	218 021 90	TERMINAL BLOCK, 10POS DBL CRP	6.000 EA
-	609 361 00	HARN, TFMR, MODULE FORT. 2 NEW	1.000 EA
-	609 362 00	HARN, BLST TO DR FORT. 2 NEW	1.000 EA
44	653 084 90	MOUNT, TY-RAP BASE .375 X 4.32LG	2.000 EA
45	653 085 90	MOUNT, TY-RAP PLATE .375 X 3.32LG	2.000 EA

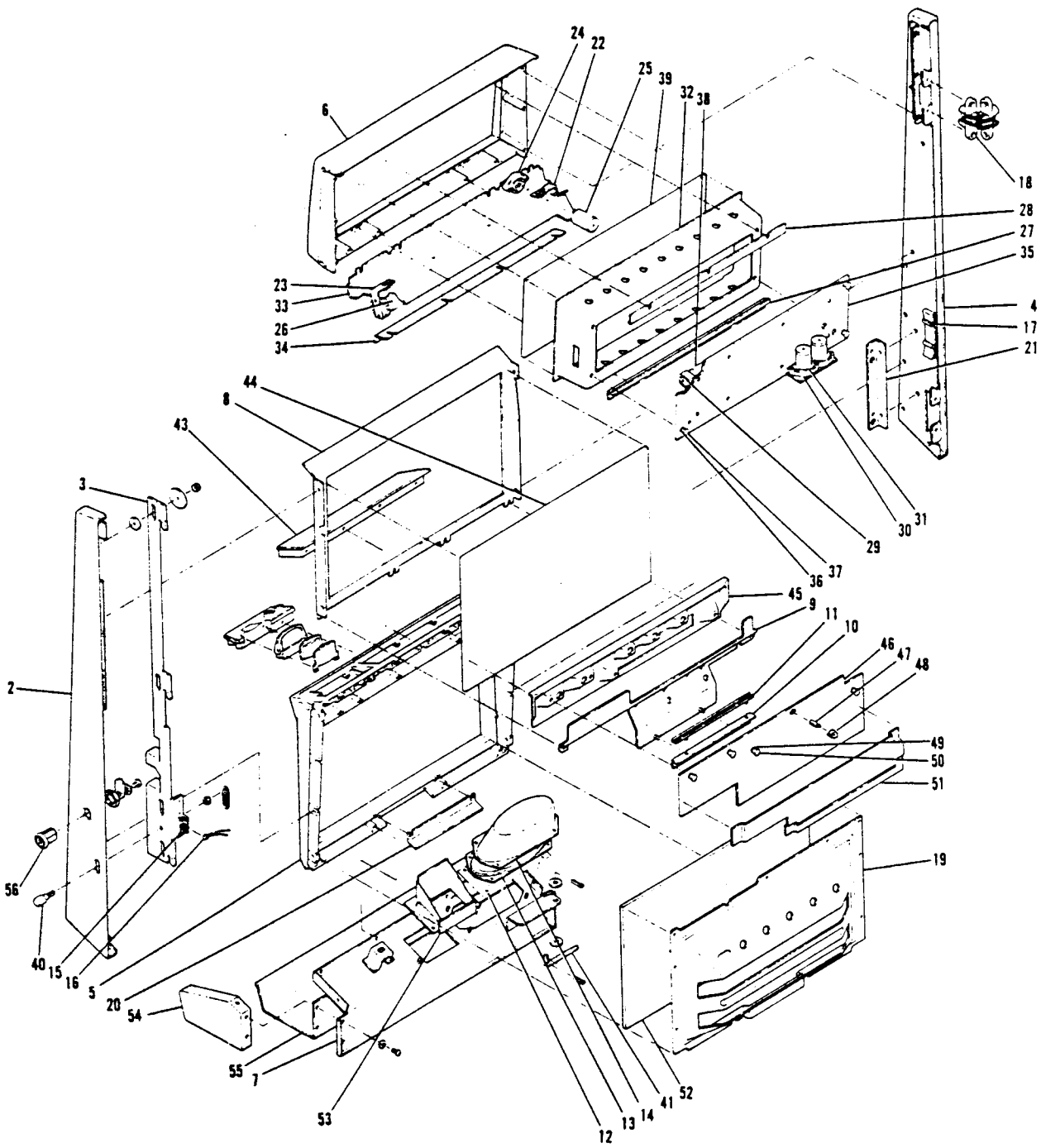
All parts and part numbers are subject to change. Contact **IGT Customer Service** for updated information when ordering.



Door Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	718 112 00	DOOR ASSY M-SLOT F2-B CRM	1.000	EA
-	718 112 01	DOOR ASSY M-SLOT F2-B BRS	1.000	EA
-	718 113 00	DOOR ASSY M-SLOT DBL LK CRM	1.000	EA
-	718 113 01	DOOR ASSY M-SLOT DBL LK BRS	1.000	EA
2	591 018 00	RAIL, RIGHT, CHROME, 1LOCK, F-2B	1.000	EA
3	639 025 00	BAR, LOCKING, F-2B	1.000	EA
4	591 017 00	RAIL, LEFT, CHROME, F-2B	1.000	EA
5	689 004 00	CASTING, DR. LOWER FRAME, K-C CR	1.000	EA
6	689 005 00	CASTING, DR. UPPER FRAME, K-C CR	1.000	EA
7	676 074 00	SUPPORT, TRAY, CHROME, F-2B	1.000	EA
8	647 037 00	FRAME, VIDEO GLASS, F2 CRM.	1.000	EA
9	661 073 00	RETAINER, LWR REEL GLS-DISP BD	1.000	EA
10	630 035 00	ANGLE, DISPLAY BD HOLDER	1.000	EA
11	581 145 90	GUIDE, CARD 6.50L X .075 DP	1.000	EA
12	688 109 00	COVER, 2X6 SPEAKER	1.000	EA
13	130 004 90	SPEAKER, 3-40HMS, 2W, 2X6 OVAL	1.000	EA
14	688 130 00	COVER, 6 IN SPEAKER, REAR	1.000	EA
15	653 099 00	MOUNT, DOOR OPEN OPTICS	1.000	EA
16	575 030 00	ENCODER, DOOR OPEN EMITTER	1.000	EA
-	609 295 00	HARN, DOOR OPTICS FORT. 2	1.000	EA
-	609 293 00	HARN, SPEAKER FORT. 2	1.000	EA
-	600 066 00	HARN, AC, DOOR, FORT. 2 NEW	1.000	EA
17	653 102 90	MOUNT, 50 COND. RIBBON, ADHESIV	1.000	EA
-	856 002 00	NAMEPLATE, IGT, WITH ADHESIVE	1.000	EA
18	280 031 90	HINGE, SLIDER LINKAGE	2.000	EA
19	500 048 00	BOX, LIGHT, LOWER DOOR, FORT. 2	1.000	EA
20	584 037 00	INSERT, LGT DIFFUSER-COIN TRAY	1.000	EA
21	636 512 00	BRACKET, 6 IN. HINGE MTG. FORT.	1.000	EA
22	120 016 90	SOCKET, LAMP L/HAND BRACKET	1.000	EA
23	120 017 90	SOCKET, LAMP R/HAND BRACKET	1.000	EA
24	124 002 90	SOCKET, STARTER	1.000	EA
25	197 001 90	STARTER, FS-2 14, 15, 20W	1.000	EA
26	194 013 90	LAMP, 15 IN. FLO 14W, F14T8/CW	1.000	EA
27	661 051 00	RETAINER, BOTTOM, UPR. DISP. GLAS	1.000	EA
28	661 072 00	RETAINER, UPPER TOP GLASS	1.000	EA
-	199 051 00	LIGHT KIT, SOLID FLUORESCENT	1.000	EA
29	120 002 90	SOCKET, FLUOR TUBE	4.000	EA
30	124 002 90	SOCKET, STARTER	2.000	EA
31	197 004 90	STARTER, FS-3 4, 6, 8W	2.000	EA
32	196 075 00	BOX, LIGHT, TOP GLASS	1.000	EA
33	636 579 00	BRACKET, BALLAST MOUNTING	1.000	EA
34	661 069 00	RETAINER, UPPER REEL GLASS	1.000	EA
-	688 172 00	COVER ASSY, LIGHT BOX	1.000	EA
35	688 162 00	COVER, LIGHT BOX	1.000	EA
36	449 027 90	FASTENER, PLUNGER	1.000	EA
37	449 026 90	FASTENER, GROMMET	1.000	EA
38	194 007 90	LAMP, 12 IN FLO, 8W	2.000	EA
39	860 000 00	GLASS, T AS SPECIFIED	1.000	EA
-	860 000 01	GLASS, T INSERT IF SPECIFIED	1.000	EA
-	199 062 08	LIGHTING, STEPPER	1.000	EA
40	383 007 00	KNOB, RELEASE, LOCK BAR CRM K-C	1.000	EA
41	669 026 00	STOP, DOOR, F-2B	1.000	EA
-	609 282 01	HARN, GROUNDING, 16GA. X6.50 IN.	1.000	EA
42	518 074 00	SWITCH KIT, N/CREDIT CHM 1LINE	1.000	EA
-	518 074 02	SWITCH KIT, N/CREDIT CHM 3 LINE	1.000	EA
-	518 074 04	SWITCH KIT, N/CREDIT CHM 5 LINE	1.000	EA
-	518 075 00	SWITCH KIT, CDT PLAY 1 LINE CHM	1.000	EA
-	518 075 02	SWITCH KIT, CDT PLAY 3 LINE CHM	1.000	EA
-	518 075 04	SWITCH KIT, CDT PLAY 5 LINE CHM	1.000	EA
-	518 076 00	SWITCH KIT, REEL SPIN CHM 1LINE	1.000	EA
-	518 076 00	SWITCH KIT, REEL SPIN CHM 3LINE	1.000	EA
-	518 076 00	SWITCH KIT, REEL SPIN CHM 5LINE	1.000	EA
-	518 074 01	SWITCH KIT, N/CREDIT BRS 1LINE	1.000	EA
-	518 074 03	SWITCH KIT, N/CREDIT BRS 3 LINE	1.000	EA
-	518 074 05	SWITCH KIT, N/CREDIT BRS 5 LINE	1.000	EA
-	518 075 01	SWITCH KIT, CDT PLAY 1 LINE BRS	1.000	EA
-	518 075 03	SWITCH KIT, CDT PLAY 3 LINE BRS	1.000	EA
-	518 075 05	SWITCH KIT, CDT PLAY 5 LINE BRS	1.000	EA
-	518 076 01	SWITCH KIT, REEL SPIN BRS 1LINE	1.000	EA
-	518 076 03	SWITCH KIT, REEL SPIN BRS 3LINE	1.000	EA
-	518 076 05	SWITCH KIT, REEL SPIN BRS 5LINE	1.000	EA
43	655 364 00	PANEL, CONTROL, BLANK-MOD	1.000	EA
44	870 000 05	GLASS R AS SPECIFIED	1.000	EA



Door Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

-	870 000 04	GLASS R INSERT IF SPECIFIED	1.000 EA
-	652 077 00	MASK, REEL 1 LINE	1.000 EA
-	652 070 00	MASK, REEL/LINE INDICATORS, X-S	1.000 EA
-	652 076 00	MASK, REEL 3-5 LINE 32 STOP	1.000 EA
46	751 034 00	BOARD PC, M-SLOT DISPLAY ASSY	1.000 EA
47	193 016 90	LAMP, MINI WEDGE 6.3 V #86	5.000 EA
48	120 032 90	SOCKET, LAMP, TI, 3/4 PCMT W/B	5.000 EA
49	449 026 90	FASTENER, GROMMET	4.000 EA
50	449 027 90	FASTENER, PLUNGER	4.000 EA
51	671 025 00	SHIELD, DISPLAY BD.	1.000 EA
-	609 381 00	HARN, MATRIX DISPLAY M-SLOT	1.000 EA
52	880 000 00	GLASS, B AS SPECIFIED	.000 EA
-	880 000 01	GLASS, B INSERT IF SPECIFIED	.000 EA
-	597 069 00	TRAY KIT, COIN, CHROME, F-2B	1.000 EA
-	597 069 01	TRAY KIT, COIN, BRASS, F-2B	1.000 EA
-	655 497 00	PANEL KIT, LOUD BOWL, CRM. F-2B	1.000 EA
-	655 497 01	PANEL KIT, LOUD BOWL, BRS. F_2B	1.000 EA
53	581 134 00	GUIDE, COIN-OUT, SHORT, F-2B	1.000 EA
54	599 096 00	CAP, COIN TRAY, R/SIDE, CRM. F-2B	1.000 EA
-	599 096 01	CAP, COIN TRAY, L/SIDE, CRM. F-2B	1.000 EA
55	597 068 00	TRAY, COIN, F-2B	1.000 EA
56	800 024 90	LOCK, SHIPPING L/H 180 DEG.	1.000 EA
-	600 048 00	HARN, AC DOOR, K-CASE	1.000 EA
-	609 258 00	HARN, DOOR OPTICS FORT. 2	1.000 EA
-	609 296 00	HARN, COUNTER INTERCON FORT. 2	1.000 EA
-	289 010 90	WRAPPING, HARN 3/8 OD POLY	1.000 EA

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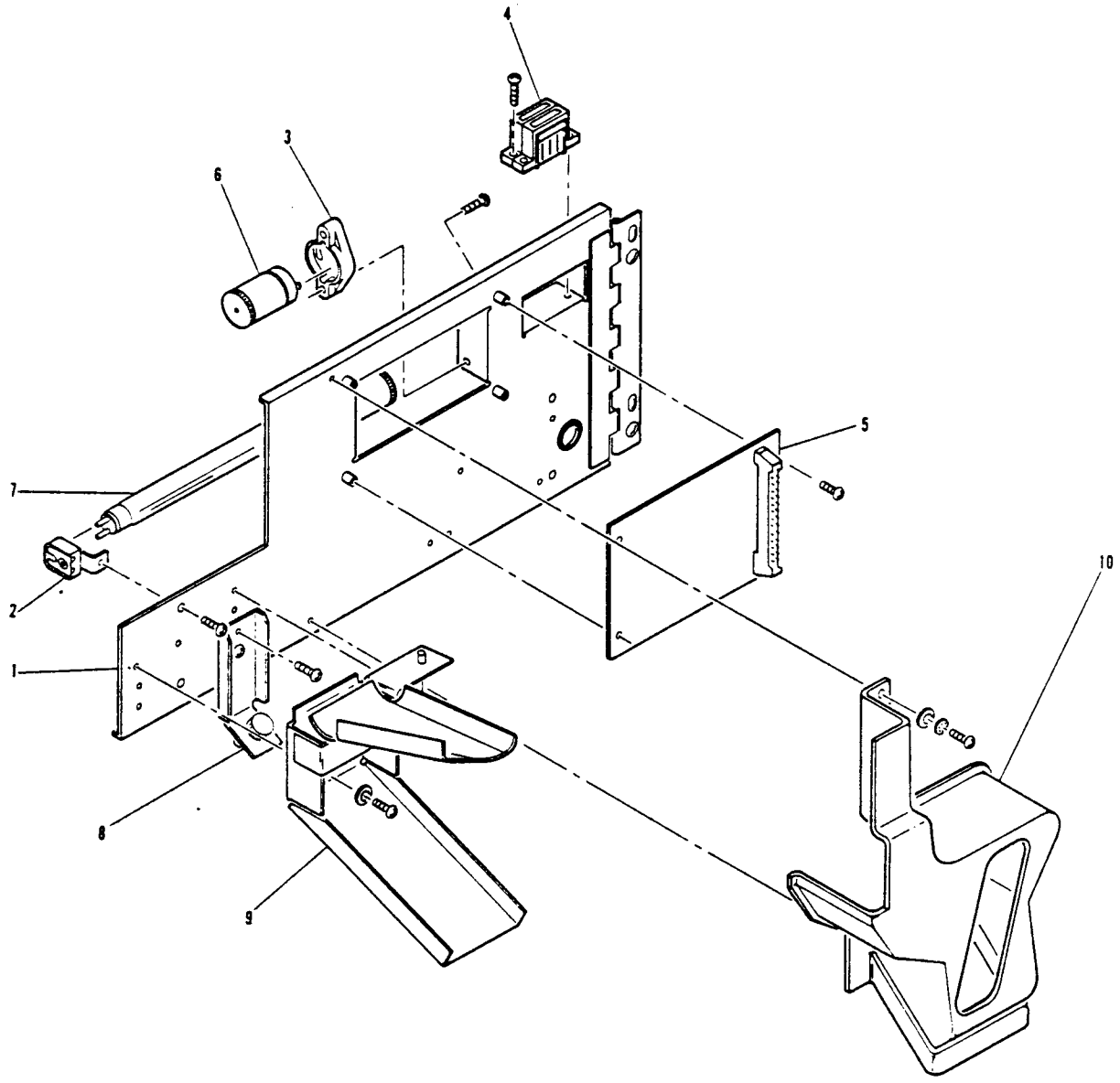

Lower Door Panel

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	655 542 00	PANEL,FLUOR,F-2,UNIV COIN SYS	1.000	EA
2	120 002 90	SOCKET,FLUOR TUBE	4.000	EA
3	124 002 90	SOCKET,STARTER	2.000	EA
4	218 022 90	TERMINAL BLOCK, 5POS COMMONIN	2.000	EA
5	766 006 00	BOARD,PC,FORTUNE 2,BRK-OUTASS	1.000	EA
6	197 004 90	STARTER,FS-5 4,6,8W	2.000	EA
7	194 007 90	LAMP, 12 IN FLO, 8W, #F8T5/C	2.000	EA
8	653 114 00	MOUNT,PLUNGER ASSY,LWR.PNL.	1.000	EA
9	573 192 00	CHUTE,COIN-IN,LG,UNIV SYS. F-2	1.000	EA
10	573 186 00	CHUTE,OUT,F-2B,UNIV.COIN SYS.	1.000	EA

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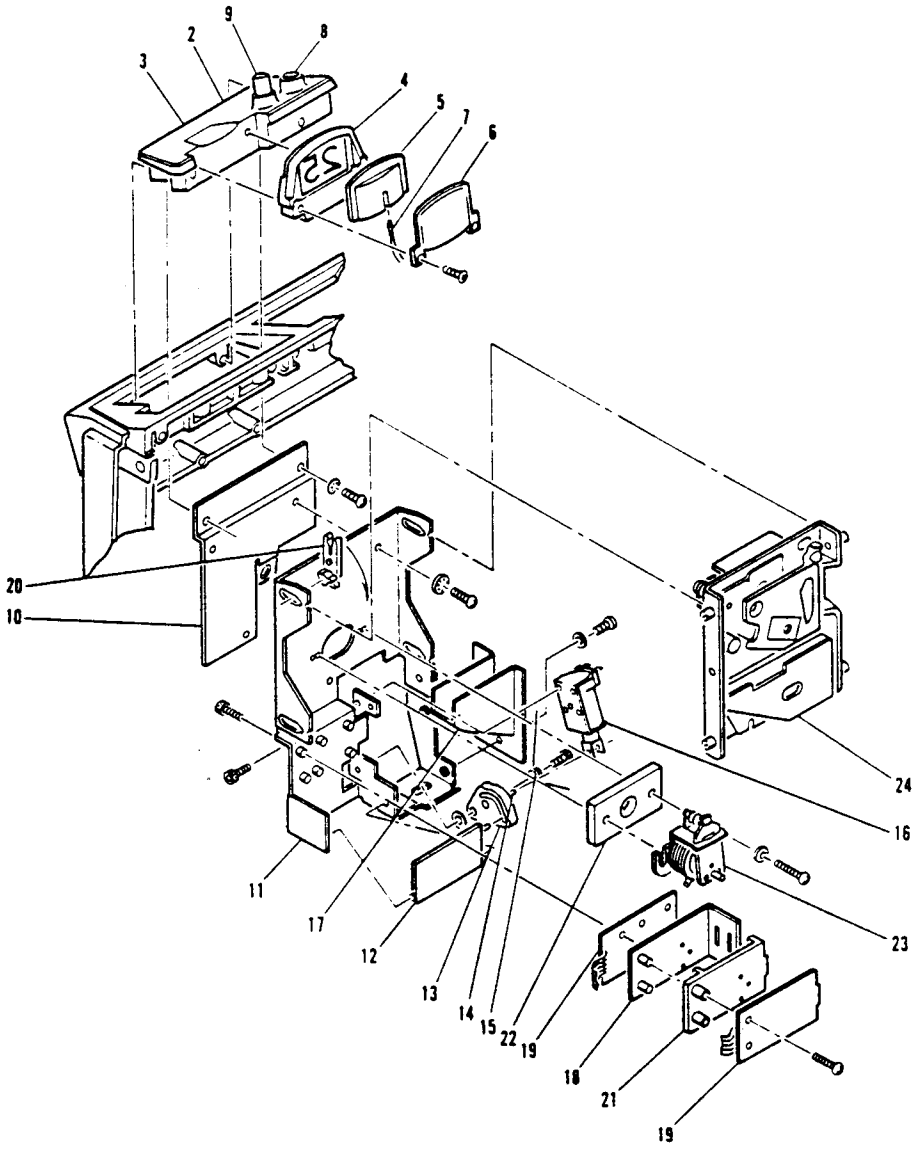
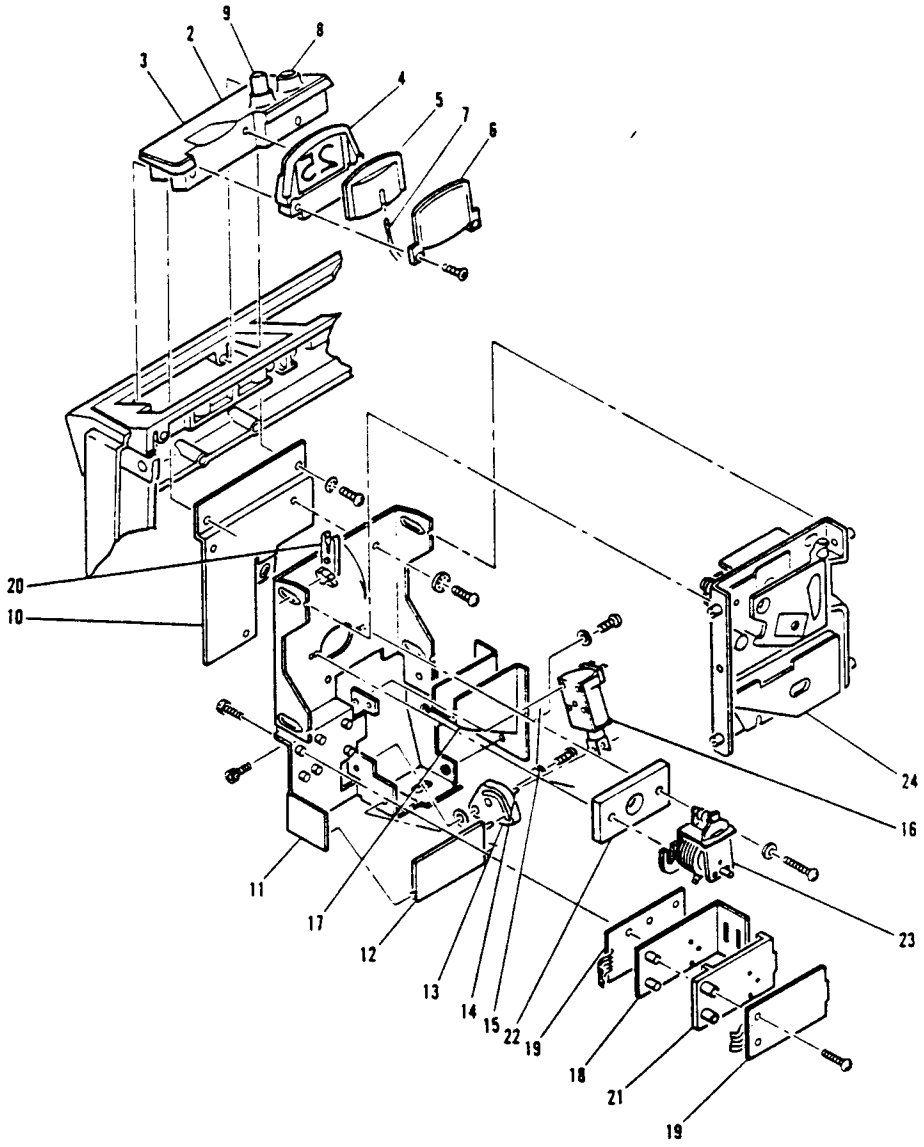


Coin-In Kit

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	599 138 00	COIN-IN KIT, MECH, CRM, 25CT	1.000	EA
-	599 136 00	COIN-IN KIT, MECH, CRM, 5CT	1.000	EA
-	599 137 00	COIN-IN KIT, MECH, CRM, 10CT	1.000	EA
-	599 139 00	COIN-IN KIT, MECH, CRM, 50CT	1.000	EA
-	599 140 00	COIN-IN KIT, MECH, CRM, SBA	1.000	EA
-	599 141 00	COIN-IN KIT, MECH, CRM, IKE	1.000	EA
-	599 142 00	COIN-IN KIT, MECH, CRM, 40MM	1.000	EA
-	599 136 01	COIN-IN KIT, MECH, BRS, 5CT	1.000	EA
-	599 137 01	COIN-IN KIT, MECH, BRS, 10CT	1.000	EA
-	599 138 01	COIN-IN KIT, MECH, BRS, 25CT	1.000	EA
-	599 139 01	COIN-IN KIT, MECH, BRS, 50CT	1.000	EA
-	599 140 01	COIN-IN KIT, MECH, BRS, SBA	1.000	EA
-	599 141 01	COIN-IN KIT, MECH, BRS, IKE	1.000	EA
-	599 142 01	COIN-IN KIT, MECH, BRS, 40MM	1.000	EA
-	599 144 00	COIN-IN KIT, E/CM, CRM, 5CT	1.000	EA
-	599 145 00	COIN-IN KIT, E/CM, CRM, 10CT	1.000	EA
-	599 146 00	COIN-IN KIT, E/CM, CRM, 25CT	1.000	EA
-	599 147 00	COIN-IN KIT, E/CM, CRM, 50CT	1.000	EA
-	599 148 00	COIN-IN KIT, E/CM, CRM, SBA	1.000	EA
-	599 149 00	COIN-IN KIT, E/CM, CRM, IKE	1.000	EA
-	599 144 01	COIN-IN KIT, E/CM, BRS, 5CT	1.000	EA
-	599 145 01	COIN-IN KIT, E/CM, BRS, 10CT	1.000	EA
-	599 146 01	COIN-IN KIT, E/CM, BRS, 25CT	1.000	EA
-	599 147 01	COIN-IN KIT, E/CM, BRS, 50CT	1.000	EA
-	599 148 01	COIN-IN KIT, E/CM, BRS, SBA	1.000	EA
-	599 149 01	COIN-IN KIT, E/CM, BRS, IKE	1.000	EA
2	578 059 00	ENTRY ASSY, COIN, FORT-2 25CT	1.000	EA
-	578 059 01	ENTRY ASSY, COIN, F2, 25CT. BRASS	1.000	EA
-	578 067 00	ENTRY ASSY, COIN, FORT-2 5CT	1.000	EA
-	578 067 01	ENTRY ASSY, COIN, F2, 5CT BRASS	1.000	EA
-	578 070 00	ENTRY ASSY, COIN, FORT-2 10CT	1.000	EA
-	578 070 01	ENTRY ASSY, COIN, F2, 10CT BRASS	1.000	EA
-	578 068 00	ENTRY ASSY, COIN, FORT-2 50CT	1.000	EA
-	578 068 01	ENTRY ASSY, COIN, F2, 50CT. BRASS	1.000	EA
-	578 071 00	ENTRY ASSY, COIN, FORT-2 SBA	1.000	EA
-	578 071 01	ENTRY ASSY, COIN, F2, SBA BRASS	1.000	EA
-	578 066 00	ENTRY ASSY, COIN, FORT-2 IKE	1.000	EA
-	578 066 01	ENTRY ASSY, COIN, F2, IKE BRASS	1.000	EA
-	578 072 00	ENTRY ASSY, COIN, FORT-2 40MM	1.000	EA
-	578 072 01	ENTRY ASSY, COIN, F2, 40MM BRASS	1.000	EA
-	578 069 00	ENTRY ASSY, COIN, FORT-2 45MM	1.000	EA
-	578 069 01	ENTRY ASSY, COIN, F2, 45MM BRASS	1.000	EA
3	633 029 00	BASE, COIN ENTRY, SMALL COIN-MO	1.000	EA
-	633 029 01	BASE, COIN ENTRY, SM. COIN MOD. BR	1.000	EA
-	633 028 00	BASE, COIN ENTRY, LARGE COIN MOD	1.000	EA
-	633 028 01	BASE, COIN ENTRY, LG. COIN MOD. BR.	1.000	EA
4	599 059 02	COIN HEAD, 25 CENT	1.000	EA
5	271 011 00	FILTER, RED, NON DOLLAR COIN HD	1.000	EA
6	584 027 00	INSERT, LIGHT REFLECTOR, SM. COI	1.000	EA
-	584 027 01	INSERT, LIGHT REFLECTOR, BRASS	1.000	EA
-	584 028 00	INSERT, LIGHT REFLECTOR, LG. COIN	1.000	EA
-	584 028 01	INSERT, LIGHT REFLECTOR, BRASS	1.000	EA
7	193 019 90	LAMP, MINI, 5V .060 AMP CUSTOM	1.000	EA
-	516 047 90	SWITCH, P/B, SUBM SPST MOM .060	1.000	EA
8	517 147 90	CAP, SWITCH .250DIA NYLON BLAC	1.000	EA
-	164 001 90	ADHESIVE, LOCTITE #242	.002	OZ
-	331 028 90	SPRING, COMP, .30 ODX. 44LX. 022W	1.000	EA
9	658 028 00	PLUNGER, COIN REJECT	1.000	EA
-	571 013 00	ACTUATOR, REJECT, NON-$ ACCEPT	1.000	EA
-	609 294 00	HARN, COIN HEAD FORT. 2	1.000	EA
-	164 010 90	ADHESIVE, LOCTITE 414/SICOMET5	.002	OZ
10	653 136 00	MOUNT, ACCEPTOR CHASSIS F-2	1.000	EA
-	143 040 00	CHASSI ASSY, UNIV COIN HNDLG	1.000	EA
11	143 039 00	CHASSIS, UNIV COIN SYSTEM	1.000	EA
12	576 034 00	DIVERTER, UNIV COIN SYSTEM	1.000	EA
13	659 088 00	CAM, DIVERTER, UNIV COIN SYSTEM	1.000	EA
14	444 001 90	PIN, DOWEL .094DIA X .50LB	1.000	EA
15	339 035 00	SPRING, DIVERTER, UNIV COIN SYS	1.000	EA
16	450 025 90	SOLENOID, 24VAC CONT. C-6 FRAM	1.000	EA
-	609 414 00	HARN, SOLENOID, UNIV. COIN SYSTE	1.000	EA
17	573 185 00	CHUTE, REJECT, UNIV COIN SYSTEM	1.000	EA
18	649 042 00	HOUSING, ENCODER, UNIV COIN SYS	1.000	EA



Coin-In Kit

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

19	753 040 00	BOARD ASSY, 3 OPTIC ENCR/DECR	1.000 EA
20	446 031 00	CLIP, ACCEPTOR, UNIV COIN SYSTE	4.000 EA
-	600 078 00	HARN, UNIV. MECH COIN HAND PORT	1.000 EA
21	584 043 03	INSERT, 25CT, UNIV COIN SYSTEM	1.000 EA
-	584 043 00	INSERT, 1CT, UNIV COIN SYSTEM	1.000 EA
-	584 043 01	INSERT, 5CT, UNIV COIN SYSTEM	1.000 EA
-	584 043 02	INSERT, 10CT, UNIV COIN SYSTEM	1.000 EA
-	584 043 04	INSERT, 50CT, UNIV COIN SYSTEM	1.000 EA
-	584 043 05	INSERT, SBA, UNIV COIN SYSTEM	1.000 EA
-	584 043 06	INSERT, IKE, UNIV COIN SYSTEM	1.000 EA
-	584 043 07	INSERT, 40MM, UNIV COIN SYSTEM	1.000 EA
-	584 043 08	INSERT, 45MM, UNIV COIN SYSTEM	1.000 EA
22	674 156 00	SPACER, LOCKOUT, UNIV COIN SYS.	1.000 EA
23	459 014 90	SOLENOID, CREM, 24VAC W/. 281 PI	1.000 EA
24	570 013 90	ACCEPTOR MECHANISM, COIN, 25CT	1.000 EA
-	570 009 90	ACCEPTOR MECHANISM, COIN, 1CT	1.000 EA
-	570 010 90	ACCEPTOR MECHANISM, COIN, 5CT	1.000 EA
-	570 011 90	ACCEPTOR MECHANISM, COIN, 10CT	1.000 EA
-	570 012 90	ACCEPTOR MECHANISM, COIN, 50CT	1.000 EA
-	570 013 90	ACCEPTOR MECHANISM, COIN, SBA	1.000 EA
-	570 080 90	ACCEPTOR MECHANISM, COIN, DOLLAR	1.000 EA
-	570 042 90	ACCEPTOR MECHANISM, COIN 40MM	1.000 EA
-	570 067 00	ACCEPTOR MECHANISM ASSY-5$ TOK	1.000 EA
-	570 085 90	ACCEPTOR, 3RD WAVE, 5CT	1.000 EA
-	570 086 90	ACCEPTOR, 3RD WAVE, 10CT	1.000 EA
-	570 087 90	ACCEPTOR, 3RD WAVE, 25CT	1.000 EA
-	570 088 90	ACCEPTOR, 3RD WAVE, 50CT	1.000 EA
-	570 089 90	ACCEPTOR, 3RD WAVE, $	1.000 EA
-	570 074 90	ACCEPTOR, EL/CM UP TO 50¢	1.000 EA
-	570 101 90	ACCEPTOR, EL/CM $	1.000 EA

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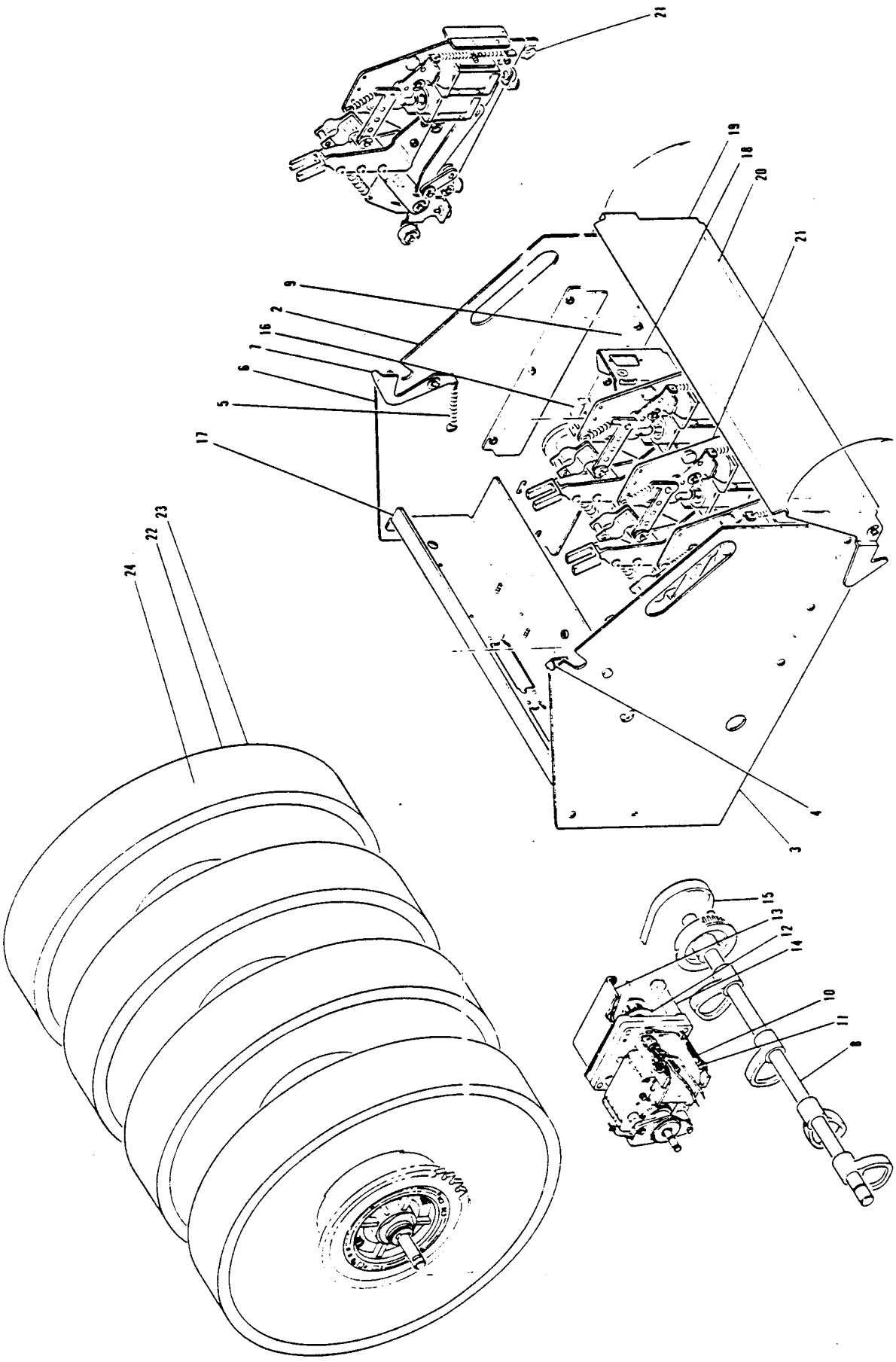

Reel Mechanism

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	660 010 01	REEL MECH ASSY, 4 REEL	1.000	EA
-	660 010 00	REEL MECH ASSY, 3 REEL	1.000	EA
-	660 010 02	REEL MECH ASSY, 5 REEL	1.000	EA
2	143 038 01	CHASSIS, ASSY, 4 REEL	1.000	EA
-	143 038 00	CHASSIS, ASSY, 3 REEL	1.000	EA
-	143 038 02	CHASSIS, ASSY, 5 REEL	1.000	EA
3	655 528 00	PANEL, CHASSIS, REEL MECH. LT	1.000	EA
4	650 020 01	LATCH, REEL SHAFT LOCKING LT.	1.000	EA
-	449 046 00	PIN, PIVOT, REEL SHAFT LATCH	2.000	EA
-	447 040 90	RING, E, 133-.250 SHAFT	2.000	EA
5	330 078 90	SPRING, EXT .25 ODX1.25L X.022	2.000	EA
6	655 527 00	PANEL, CHASSIS, REEL MECH. RT	1.000	EA
7	650 020 00	LATCH, REEL SHAFT LOCKING RT.	1.000	EA
-	449 046 00	PIN, PIVOT, REEL SHAFT LATCH	1.000	EA
-	392 005 00	BEARING, NY, .501DX.7450DX	2.000	EA
8	659 085 01	CAM SHAFT ASSY, 4 REEL	1.000	EA
-	659 085 00	CAM SHAFT ASSY, 3 REEL	1.000	EA
-	659 085 02	CAM SHAFT ASSY, 5 REEL	1.000	EA
9	589 281 01	PLATE, BASE 4-REEL	1.000	EA
-	589 281 00	PLATE, BASE 3-REEL	1.000	EA
-	589 281 02	PLATE, BASE 5-REEL	1.000	EA
10	358 015 00	MOTOR ASSY. REEL MECH	1.000	EA
11	350 014 90	MOTOR, 180RPM SHADED POLE	1.000	EA
12	355 008 90	PULLEY, 16 TOOTH, TIMING BELT	1.000	EA
13	653 134 00	MOUNT, MOTOR, REEL MECH.	1.000	EA
14	312 028 90	STANDOFF, 10-32HX M/F 1.75LG S	2.000	EA
15	352 005 90	BELT, TIMING .38WIDEX 50 TEETH	1.000	EA
16	653 124 00	MOUNT, OPTIC SENSOR	1.000	EA
-	609 386 00	HARN, MOTOR OPTICS	1.000	EA
17	676 071 00	SUPPORT, CONNECTOR MTG, REELMEC	1.000	EA
-	454 036 90	RELAY SOLID STATE 240V @ 10AM	1.000	EA
-	609 383 00	HARN, REEL MECH, 4 REEL M-SLOT	1.000	EA
-	609 382 00	HARN, REEL MECH, 3 REEL M-SLOT	1.000	EA
-	609 384 00	HARN, REEL MECH, 5 REEL M-SLOT	1.000	EA
18	636 548 00	BRACKET, MECH. CONNECT	4.000	EA
-	442 056 00	CLAMP, HARNESS, M-SLOT	1.000	EA
19	655 533 00	PANEL, LATCHING, REEL MECH	1.000	EA
20	850 097 00	LABEL, LATCHING DOOR	1.000	EA
21	571 022 00	ACTUATOR ASSY, REEL MECH.	4.000	EA
22	660 012 01	REEL SHAFT ASSY, 4 REEL	1.000	EA
-	660 012 00	REEL SHAFT ASSY, 3 REEL	1.000	EA
-	660 012 02	REEL SHAFT ASSY, 5 REEL	1.000	EA
23	660 007 01	REEL ASSY, 2.375 W	4.000	EA
-	660 007 00	REEL ASSY, 3.25 W	3.000	EA
-	660 007 02	REEL ASSY, 1.875 W	5.000	EA
-	660 005 01	REEL, 12.7210D X 2.500W, IGT	4.000	EA
-	582 017 00	HUB ASSY, REEL MECH	4.000	EA
-	447 064 90	RING, BASIC 100-1.00SHAFT	8.000	EA
-	436 004 90	WASHER, ST 1.016IDX1.4370DX.15	4.000	EA
-	439 034 90	WASHER, SHIM, 1.010IDX.016 THK	4.000	EA
-	353 016 00	SPROCKET ASSY, REEL MECH. 32 S	4.000	EA
24	857 000 00	REEL STRIP, AS SPECIFIED	0.000	EA

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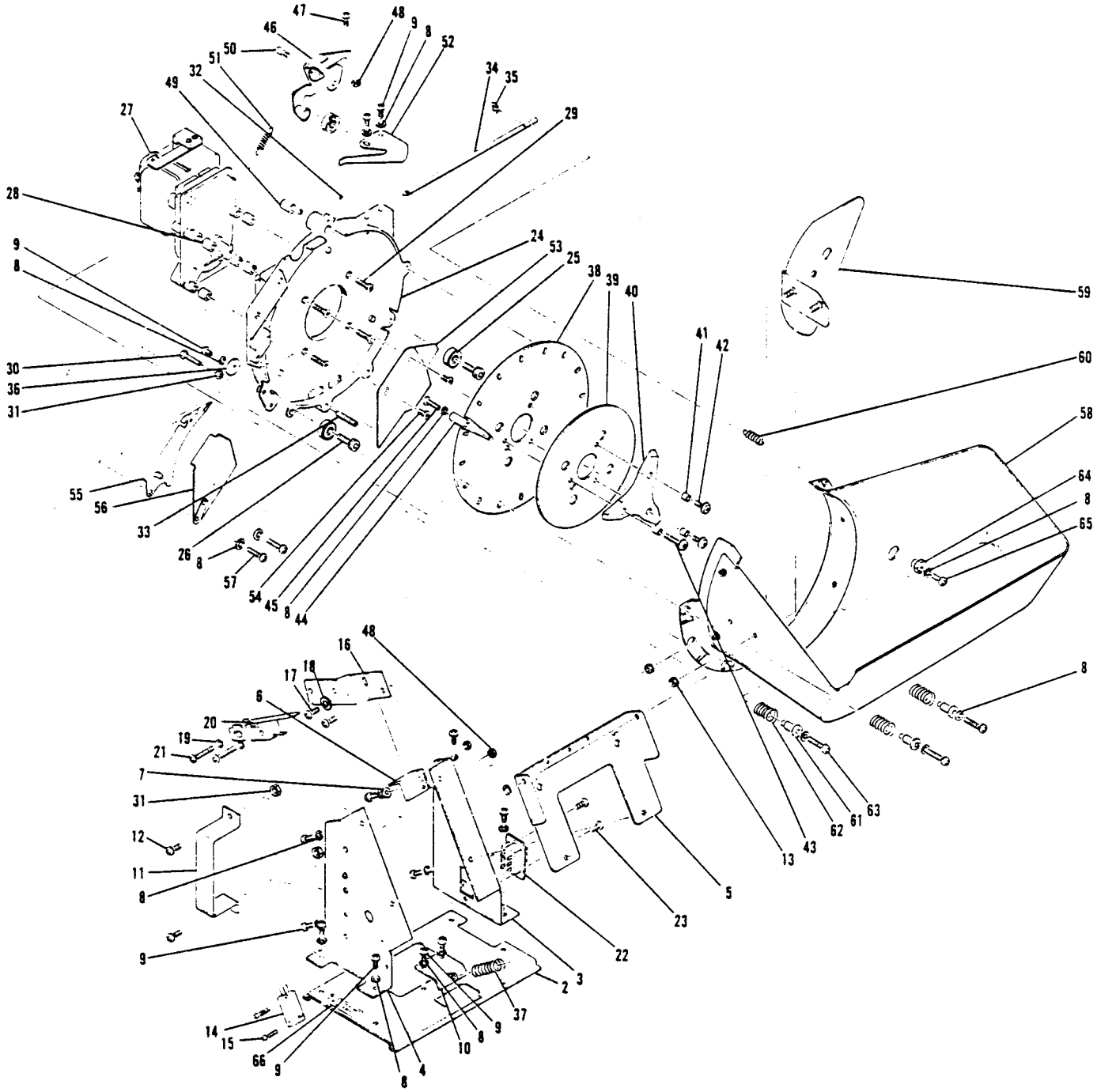
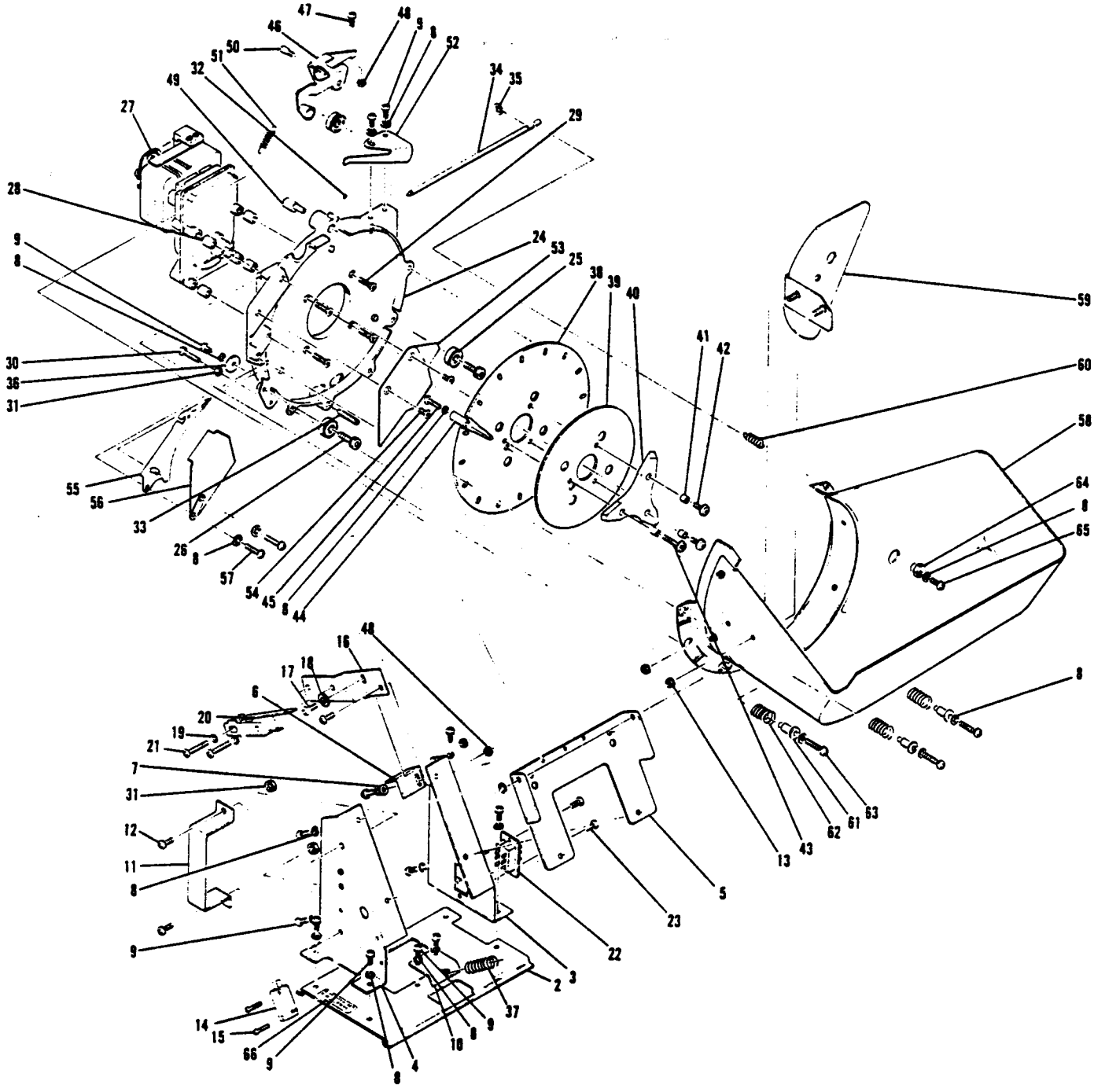


Hopper Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
1	795 043 00	HOPPER, FORT IIB, IKE	1.000	EA
-	795 036 00	HOPPER, FORT IIB, 1	1.000	EA
-	795 037 00	HOPPER, FORT IIB, 5	1.000	EA
-	795 047 00	HOPPER, FORT IIB, 5 PLSTC. BOWL	1.000	EA
-	795 038 00	HOPPER, FORT IIB, 10	1.000	EA
-	795 058 00	HOPPER, FORT IIB, 10 PLSTC. BOWL	1.000	EA
-	795 039 00	HOPPER, FORT IIB, 25	1.000	EA
-	795 040 00	HOPPER, FORT IIB, 25 PLSTC. BOWL	1.000	EA
-	795 042 00	HOPPER, FORT IIB, SBA	1.000	EA
-	795 049 00	HOPPER, FORT IIB, SBA PLSTC. BOWL	1.000	EA
-	795 041 00	HOPPER, FORT IIB, 50	1.000	EA
-	795 044 00	HOPPER, FORT IIB, 40MM	1.000	EA
-	795 045 00	HOPPER, FORT IIB, $5	1.000	EA
-	795 046 00	HOPPER, FORT IIB, $100	1.000	EA
2	633 013 00	BASE, NARROW, HOPPER	1.000	EA
3	636 562 00	BRACKET, HOPPER, RH, LG PLUG	1.000	EA
4	636 403 00	BRACKET, HOPPER MTG, LH	1.000	EA
5	636 028 00	BRACKET, PIVOT, HOPPER	1.000	EA
6	636 254 00	BRKT, STOP, C/SWITCH, HOPPER	1.000	EA
7	430 008 99	WASHER, FLAT STEEL #10	1.000	EA
8	431 008 99	WASHER, LOCK INT STEEL #10	21.000	EA
9	411 009 91	SCREW, MACH. P. PAN 10-32X3/8	15.000	EA
10	636 405 00	BRACKET, SPRING RETAINER, HOPPE	1.000	EA
11	380 007 00	HANDLE, HOPPER, IGT	1.000	EA
12	411 009 95	SCREW, MACH. PH PAN 10-32X1/2	2.000	EA
13	421 009 91	NUT, LOCK ESNA THIN 10-32	2.000	EA
14	510 031 90	SWITCH, SNAP-MINI PIN PLUNGER	1.000	EA
15	411 002 91	SCREW, MACH. PH PAN 4-40X5/8	2.000	EA
16	636 119 00	BRKT, HOPPER SWITCH	1.000	EA
17	411 003 99	SCREW, MACH, PH PAN 6-32 X 3/8	2.000	EA
18	430 003 95	WASHER, FLAT, STEEL #6	1.000	EA
19	431 006 98	WASHER, LOCK INT SEEL #6	2.000	EA
20	510 019 90	SWITCH, SNAP-STD LEVER	1.000	EA
21	411 004 94	SCREW, MACH PH PAN 6-32X7/8	2.000	EA
22	605 044 00	HARN, HOPPER 7PIN BEAU	1.000	EA
23	413 809 94	SCREW, MACH. SOC. BUT 10-32X1/4	2.000	EA
24	649 003 00	HOUSING, WHEEL, HOPPER, 1CT-$	1.000	EA
25	399 003 90	BEARING, PINWHEEL, HOPPER	3.000	EA
26	414 611 93	SCREW, CAP, HEX SOC. 1/4-28X5/8	2.000	EA
27	358 009 90	MOTOR, HOPPER, 35 RPM, HD	1.000	EA
	358 010 90	MOTOR, HOPPER, 25 RPM, LD	1.000	EA
-	311 018 90	SLEEVE, SHRINK 3/16 BLK	.062	FT
28	638 036 00	BUSHING, .38 OD X .20 ID X .37	4.000	EA
29	411 109 98	SCREW, MACH PH F 10-32X3/4	4.000	EA
30	411 510 90	SCREW, MACH. HEX HD. 10-32X1	1.000	EA
31	424 008 99	NUT, KEP STEEL 10-32	3.000	EA
32	416 609 92	SCREW, SET, HEX/SOC 10-32X1/4 K	1.000	EA
33	416 615 91	SCREW, SET, HEX, HALF DOGPT. 3/8X-16x1	1.000	EA
34	664 001 00	ROD, PIVOT, HOPPER	1.000	EA
35	447 002 90	RING, E, 133-.18 SHAFT	2.000	EA
36	439 011 90	WASHER, FENDER #10	2.000	EA
37	331 009 00	SPRING, COMP, .41 ODX1.07LX.065W	1.000	EA
-	331 015 00	SPRING, COMP, .36 ODX1.38LX.042W	1.000	EA
38	588 027 00	PINWHEEL, HOPPER, 11 PIN OVAL	1.000	EA
-	588 030 00	PINWHEEL, HOPPER, 16 PIN ROUND	1.000	EA
39	680 013 00	WHEEL, SHELF, HOPPER, IKE	1.000	EA
-	680 009 00	WHEEL, SHELF, HOPPER, 40MM	1.000	EA
-	680 012 00	WHEEL, SHELF, HOPPER, SBA	1.000	EA
-	680 014 00	WHEEL, SHELF, HOPPER, 50CT	1.000	EA
-	680 015 00	WHEEL, SHELF, HOPPER, 25CT	1.000	EA
-	680 016 00	WHEEL, SHELF, HOPPER, 5CT	1.000	EA
-	680 017 00	WHEEL, SHELF, HOPPER, 10CT	1.000	EA
-	680 019 00	WHEEL, SHELF, HOPPER, 1CT	1.000	EA
-	680 020 00	WHEEL, SHELF, HOPPER, $5 TOKEN	1.000	EA
40	572 002 00	AGITATOR, COIN HOPPER, 3 STAR	1.000	EA
41	674 099 90	SPACER, STL .203IDX.266 ODX.25	3.000	EA
42	419 909 96	SCREW, PH T HD 10-32X1/2	2.000	EA
43	413 822 90	SCREW, MACH SOC BUT, 10-32 X11/	1.000	EA
44	638 025 00	BUSHING, .38 OD X .20 ID X .75	1.000	EA
45	411 010 90	SCREW, MACH. PH PAN 10-32 X 1	1.000	EA
46	631 014 00	ARM, ROCKER	1.000	EA

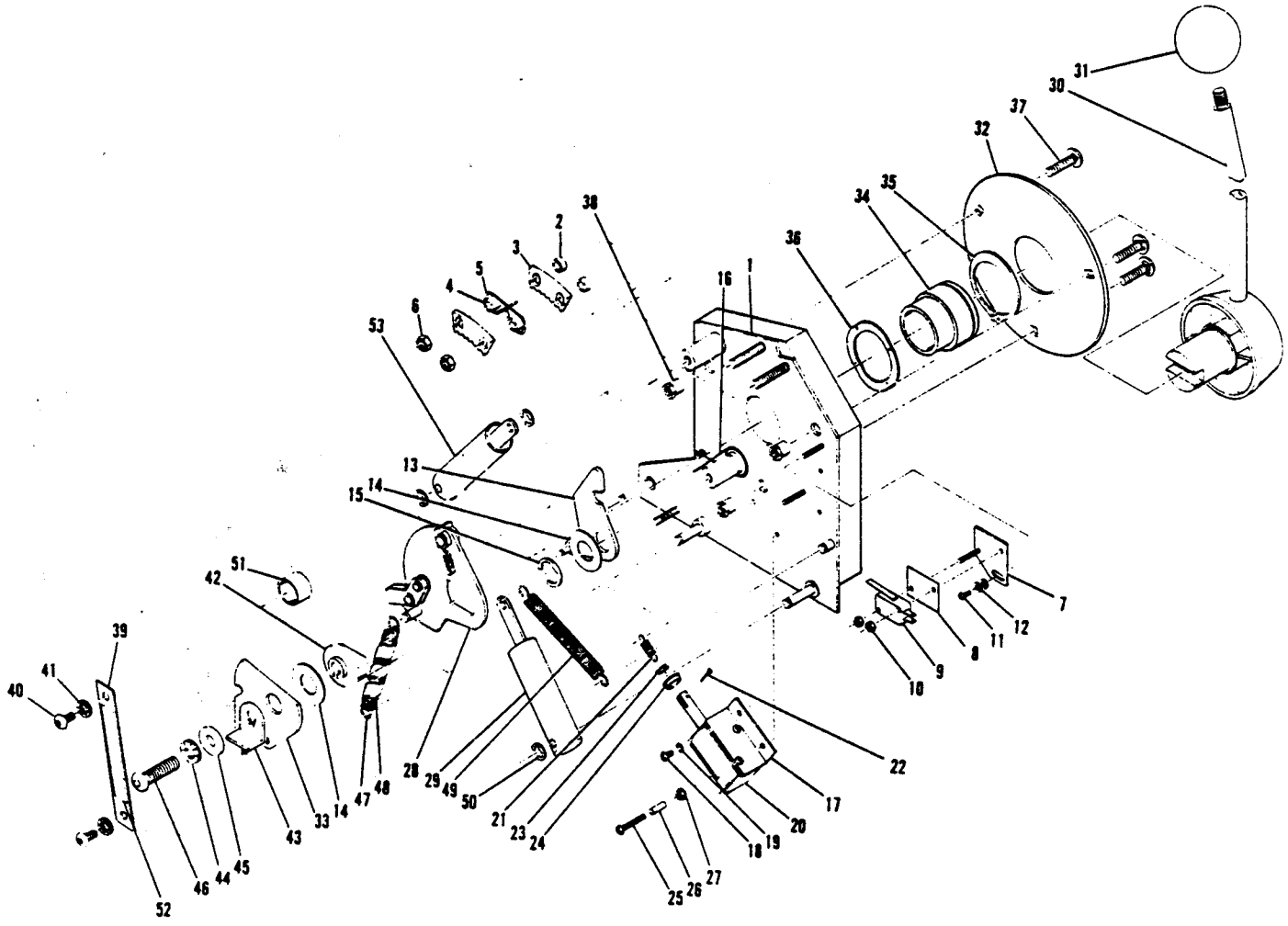


Hopper Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

47	413 004 91	SCREW, NYLON, SL. PAN 6-32X1/2	1.000 EA
48	424 003 95	NUT, KEP STEEL 6-32	3.000 EA
49	659 044 00	CAM, ADJUSTMENT-HOPPER	1.000 EA
50	419 010 00	SCREW, SPECIAL-CAM	1.000 EA
51	330 019 00	SPRING, EXT, .31 ODX 1.38LX.030	1.000 EA
-	330 016 00	SPRING, EXT, .25 ODX 1.50LX.018	1.000 EA
52	681 005 00	WIPER, COIN, HOPPER	1.000 EA
53	574 003 00	DEFLECTOR, COIN, HOPPER	1.000 EA
54	411 107 91	SCREW, MACH. PH. F. 8-32X3/8	2.000 EA
55	585 001 00	KNIFE, HOPPER, 1CT-$ BALLY	1.000 EA
56	688 077 00	COVER, COIN OUTLET, 50CT-40MM	1.000 EA
-	688 010 00	COVER, COIN OUTLET, 1CT-SBA	1.000 EA
57	419 909 96	SCREW, PH T HD 10-32X1/2	2.000 EA
58	620 028 00	BOWL, HOPPER, EXTENDED SIDE	1.000 EA
-	620 001 00	BOWL, HOPPER, DIV, 1CT-$	1.000 EA
59	632 007 00	BAFFEL, HOPPER, W/BEND	1.000 EA
60	330 010 00	SPRING, EXT, .31 ODX 1.0 LX.037	1.000 EA
61	653 006 01	MOUNT, BOWL SPRING, 50CT, $ BLK.	1.000 EA
-	653 006 02	MOUNT, BOWL SPRING, 1CT-SBA, CAD.	1.000 EA
62	331 008 00	SPRING, COMP, .48 ODX. 75LX .045	2.000 EA
-	331 010 00	SPRING, COMP, .48 ODX. 75LX .055	2.000 EA
63	411 010 90	SCREW, MACH. PH PAN 10-32 X 1	3.000 EA
64	653 004 00	MOUNT, ECCENT, 50CT, $, 40MM BLK.	1.000 EA
-	653 004 01	MOUNT, ECCENTRIC, 1CT-SBA CAD.	1.000 EA
65	411 009 96	SCREW, MACH. PH PAN 10-32X5/8	1.000 EA
66	850 080 00	LABEL, HOPPER WEIGHT SWITCH	1.000 EA

All parts and part numbers are subject to change. Contact **IGT Customer Service** for updated information when ordering.



Handle Assembly

IGT MECHANICAL SLOT MACHINE REPLACEABLE PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	QTY	UM
-	589 212 00	PLATE ASSY, BASE SLOT HNDL, 2 S	1.000	EA
1	589 110 00	PLATE, COVER ASSY	1.000	EA
2	674 084 01	SPACER, HNDL, . 257IDX. 370DX. 145	2.000	EA
3	590 002 00	RACK, HANDLE STOP	2.000	EA
4	674 084 02	SPACER, ST RD. 257IDX. 3750DX. 315	2.000	EA
5	339 023 00	SPRING, RACK	1.000	EA
6	421 011 90	NUT, LOCK ESNA 1/4-20	2.000	EA
7	589 100 00	PLATE, SWITCH	1.000	EA
8	310 015 01	INSULATOR, SWITCH, UPPER	1.000	EA
9	510 030 90	SWITCH, SNAP-MINI LEVER	1.000	EA
10	421 001 95	NUT, LOCK ESNA 4-40	2.000	EA
11	411 003 96	SCREW, MACH, PH PAN 6-32X3/16	1.000	EA
12	431 019 95	WASHER, LOCK, EXT. #6	2.000	EA
13	650 002 00	LATCH, WELDMENT ASSY	1.000	EA
14	439 039 90	WASHER, BRZ, . 628IDX1. 25 ODX. 06T	2.000	EA
15	447 037 90	RING, E, 133-. 62 SHAFT	1.000	EA
16	332 024 00	SPRING, TORSION 1. 06 ID.	1.000	EA
17	653 070 00	MOUNT, SOLENOID	1.000	EA
18	411 003 96	SCREW, MACH, PH PAN 6-32X3/16	3.000	EA
19	431 019 95	WASHER, LOCK, EXT. #6	4.000	EA
20	450 014 90	SOLENOID, 24V AC	1.000	EA
21	330 083 00	SPRING, EXT. 300 ODX. 636LX. 022W	1.000	EA
22	443 006 90	PIN, COTTER . 062DIA X . 50LG	1.000	EA
23	447 062 90	RING, GRIP, 555-. 310 SHAFT	1.000	EA
24	637 016 00	BUMPER, SOLENOID . 316 I. D.	1.000	EA
25	411 005 96	SCREW, MACH PH PAN 6-32X1	1.000	EA
26	311 005 90	SLEEVE, SHRINK 1/8IN BLACK	. 058	FT
27	424 003 95	NUT, KEP STEEL 6-32	1.000	EA
28	589 112 00	PLATE ACTION ASSY SLOT HLD IG	1.000	EA
29	599 133 00	DASH POT ASSY, SLOT HANDLE SST	1.000	EA
30	388 008 00	HANDLE ARM ASSY, IGT CHROME	1.000	EA
-	388 008 01	HANDLE ARM ASSY, IGT BRASS	1.000	EA
31	383 005 90	KNOB, SLOT HANDLE, 1 7/8IN DIA	1.000	EA
32	663 012 00	RING, SLOT HANDLE	1.000	EA
-	663 012 01	RING, SLOT HANDLE BRASS	1.000	EA
33	599 041 00	HAMMER SUB ASSY, SLOT HANDLE	1.000	EA
34	399 013 00	BEARING, OILITE 1. 25 ID	1.000	EA
35	447 039 90	RING, BSC, 100-1. 75 SHAFT	1.000	EA
36	434 004 90	WASHER, SPRING, 5806-165-2	1.000	EA
37	412 113 95	BOLT, CARR. RDHD1/4-20X1 NI/PT	3.000	EA
38	429 019 00	NUT, SPECIAL 1/4-20X1/4SLOT/H	3.000	EA
39	635 010 00	BRACE, SLOT HANDLE	1.000	EA
40	413 820 91	SCREW, MACH, S/B, 1/4-20X1/2 NYL.	2.000	EA
41	439 042 90	WASHER, STL , LK. 26IDX. 495ODX. 06T	4.000	EA
42	674 157 00	SPACER, HANDLE INTERLOCK	1.000	EA
43	439 036 00	WASHER, GND CONNECTION 3/8 I. D	1.000	EA
44	439 041 90	WASHER, STL, LK. 38IDX. 650DX. 060T	2.000	EA
45	430 009 94	WASHER, FLAT, STEEL 5/16	1.000	EA
46	413 810 98	SCREW, MACH SOC BUT3/8-16X1 1/	1.000	EA
47	330 077 00	SPRING. EXT. 38IDX3. 70LX. 063W	1.000	EA
48	289 010 90	WRAPPING, HARN 3/8 OD POLY	. 188	FT
49	330 076 00	SPRING, EXT. . 26IDX3. 45LX. 071W	1.000	EA
50	447 040 90	RING, E, 133-. 250 SHAFT	4.000	EA
51	665 016 00	ROLLER, CAM ARM, HANDLE	1.000	EA
52	850 087 00	LABEL BRACE, SLOT HANDLE	1.000	EA
53	599 133 01	DASHPOT ASSY, SLOT HANDLE OPT SST	1.000	EA

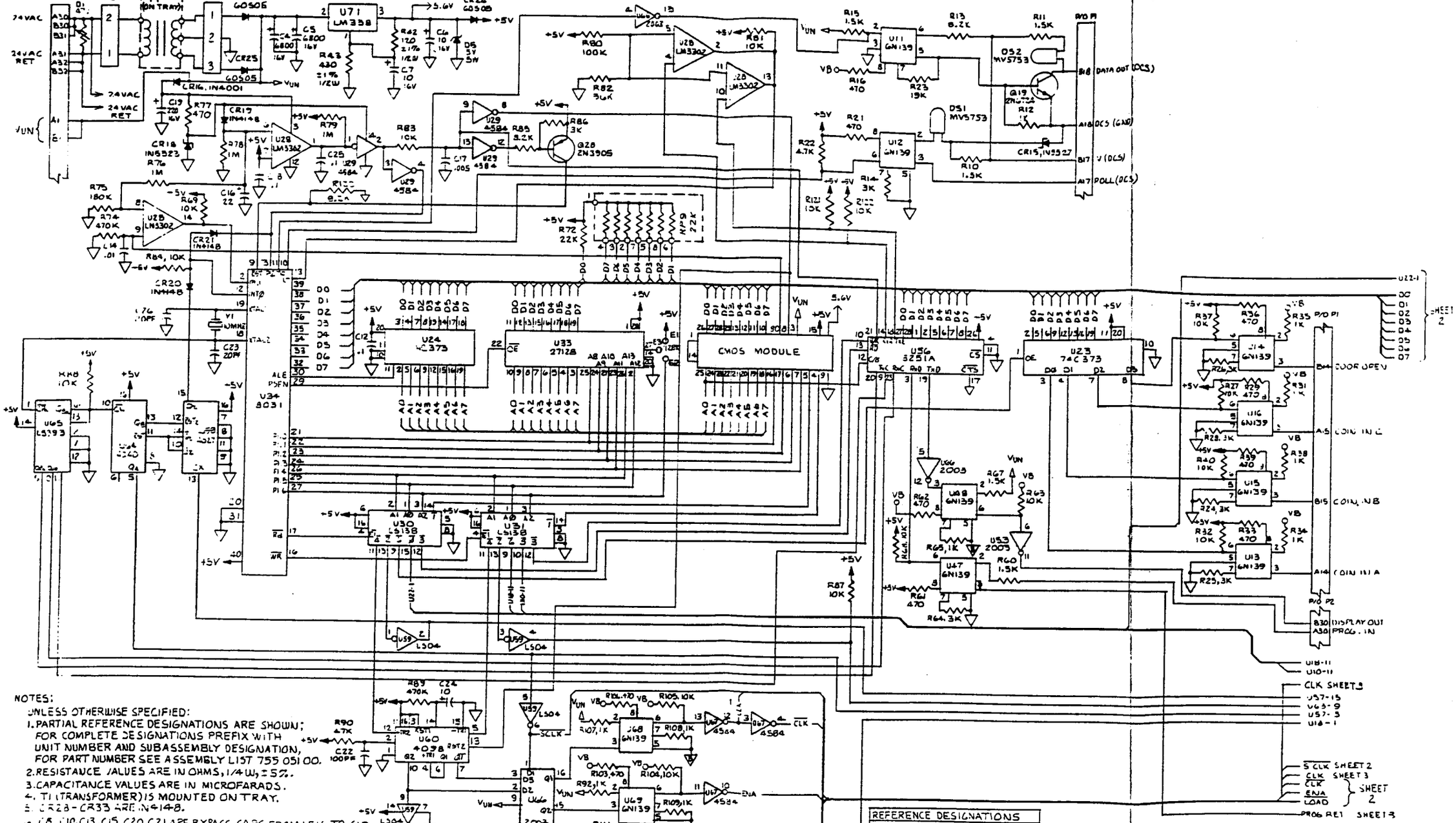
All parts and part numbers are subject to change. Contact **IGT Customer Service** for updated information when ordering.

Section VII Appendix

$20.00

International Game Technology

IGT MECHANICAL SLOT SERVICE & PARTS MANUAL



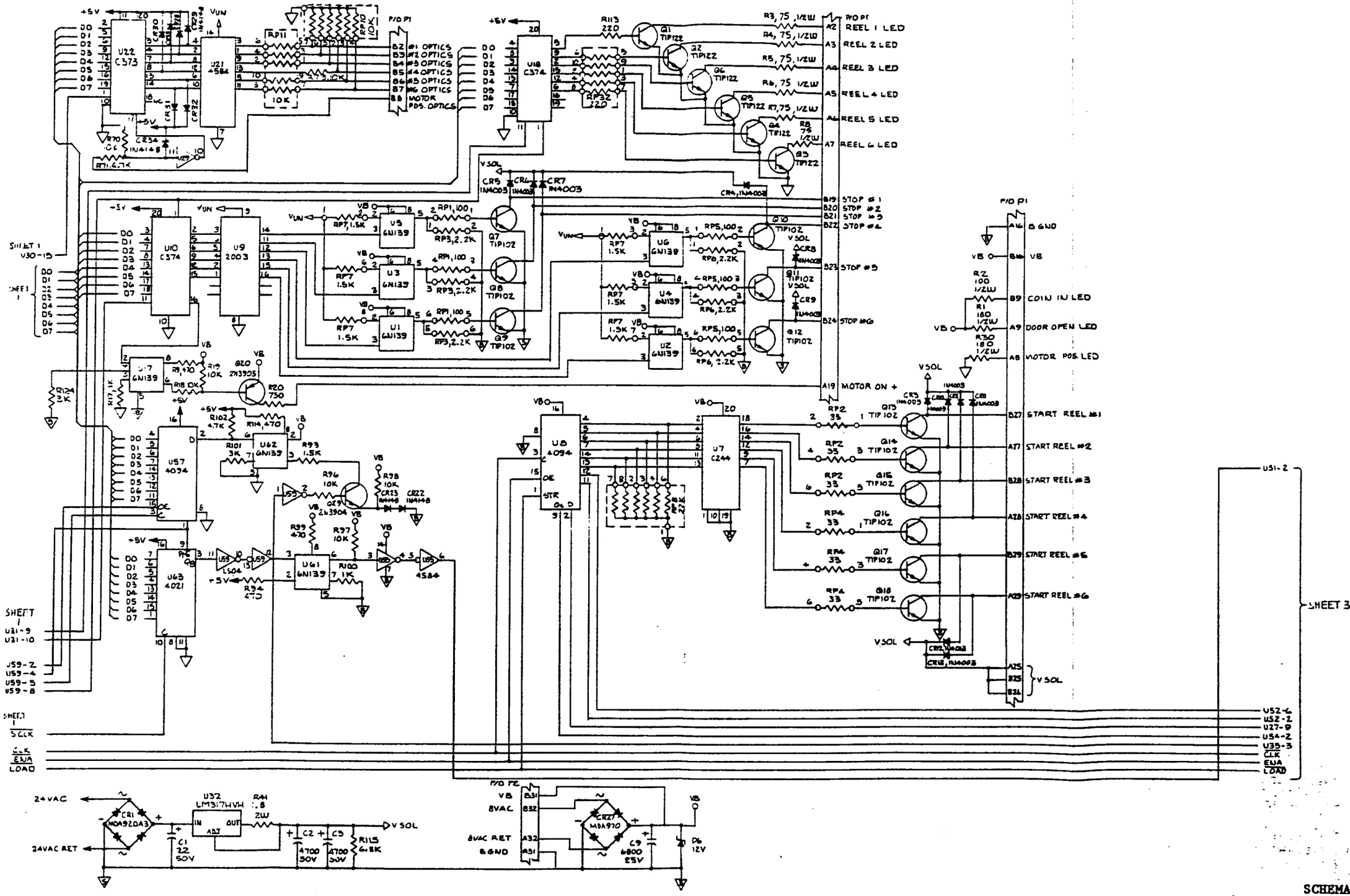
NOTES:

UNLESS OTHERWISE SPECIFIED:

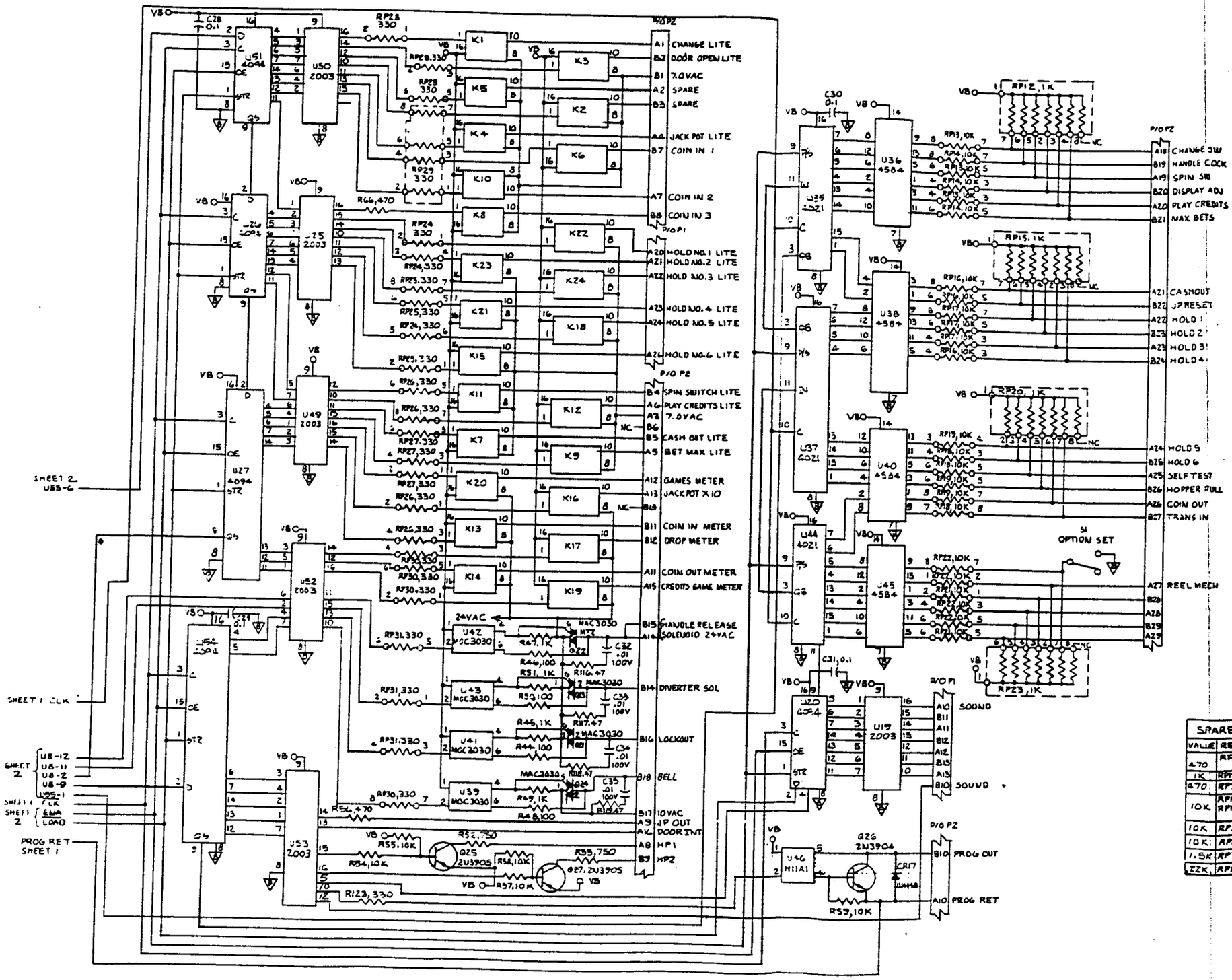
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATIONS PREFIX WITH UNIT NUMBER AND SUBASSEMBLY DESIGNATION, FOR PART NUMBER SEE ASSEMBLY LIST 755 051 00.
2. RESISTANCE VALUES ARE IN OHMS, 1/4 W, ±5%.
3. CAPACITANCE VALUES ARE IN MICROFARADS.
4. T1 (TRANSFORMER) IS MOUNTED ON TRAY.
5. CR28 - CR33 ARE 1N4148.
6. C8, C10, C13, C15, C20, C21 ARE BYPASS CAPS FROM +5V TO GND FILTER CAPS
7. SEE CHART FOR SPARE RESISTORS IN RESISTOR SIPS, SHEET 3
8. C11 IS A .100,000 PF, 50V, BYPASS CAPACITOR FROM VB TO GND.

REFERENCE DESIGNATIONS
LAST USED
R124, U71, CR33, S1, P4, C35 G29, D6, RP32.
NOT USED
R95 SPARE LOCATION CR14, D2-D4

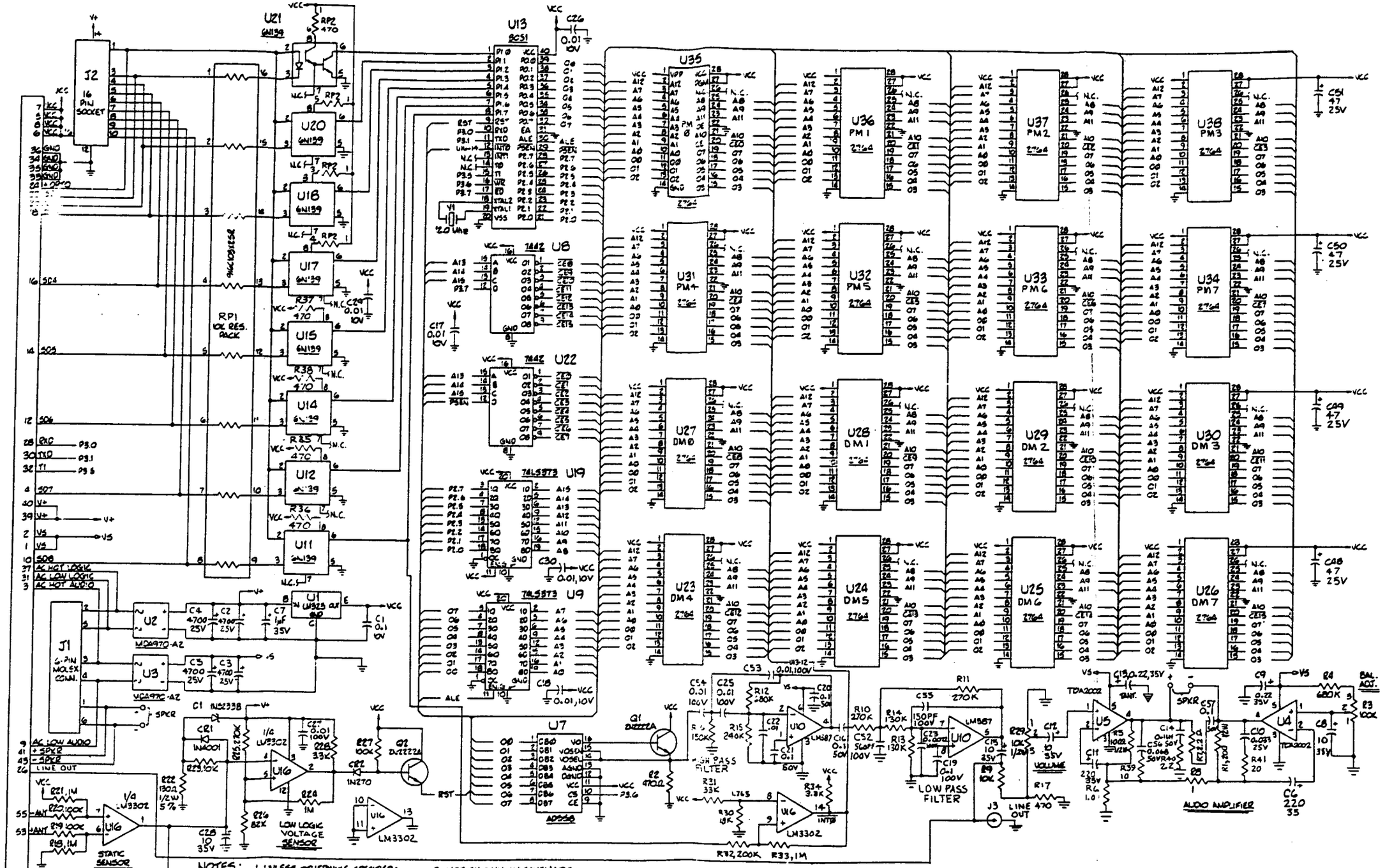
SCHEMATIC DIAGRAM
Master Board
Sheet 1 of 3



SCHEMATIC DIAGRA



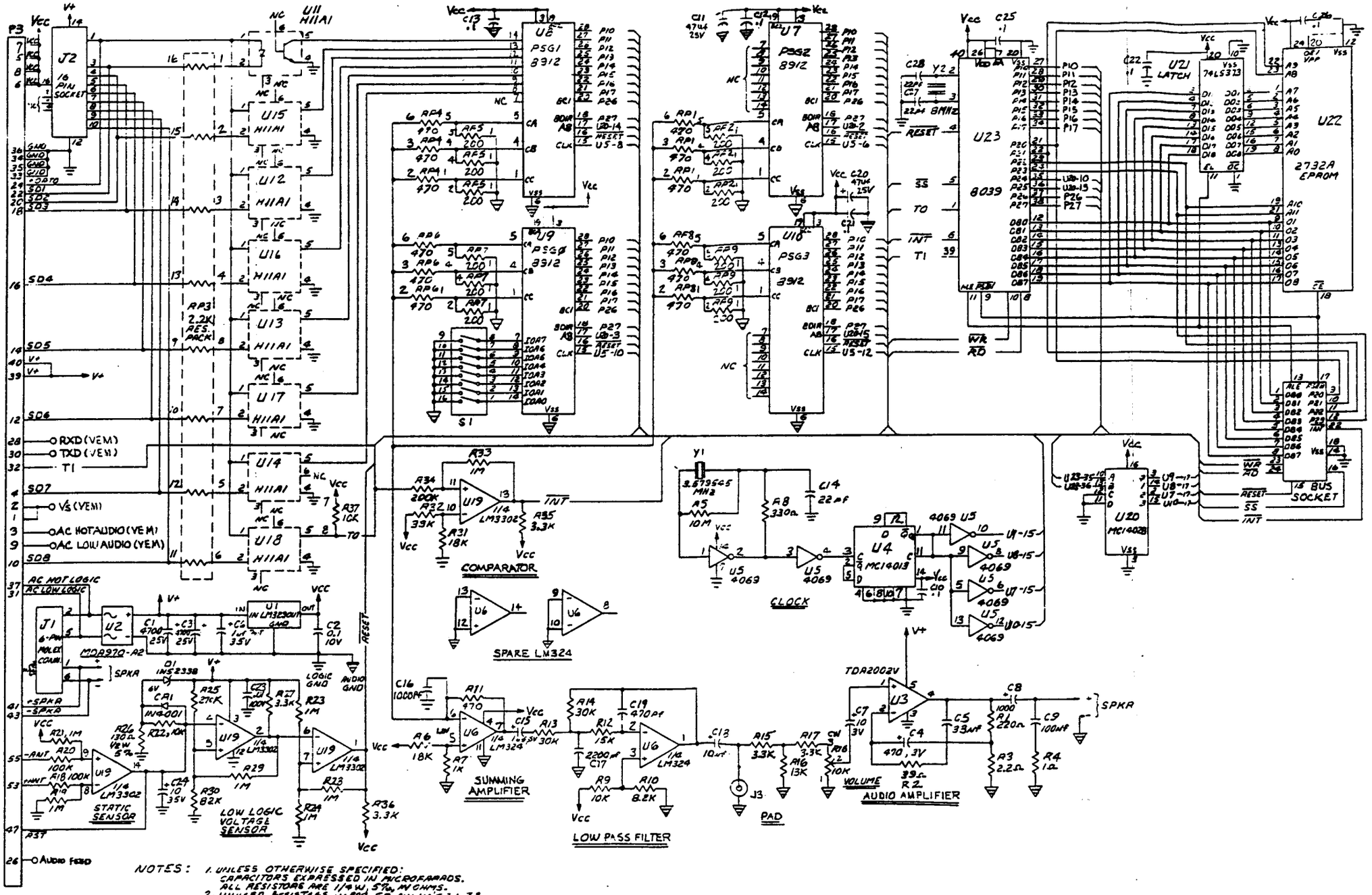
SPARE RESISTORS IN RESISTOR SIPS			
VALUE	REFERENCE DESIGNATIONS	PIN NO.	QTY PER SIP
470	RP24, RP27, RP28, RP31	7 & 8	1
1K	RP12, RP15, RP20, RP23	8	1
470	RP25	1 & 2	1
10K	RP13, RP14, RP16, RP17, RP18, RP19	1 & 2	1
10K	RP21	3 & 4, 7 & 8	2
10K	RP10	8	1
1.5K	RP7	4	1
22K	RP8	8	1



NOTES: 1. UNLESS OTHERWISE SPECIFIED:
CAPACITORS EXPRESSED IN MICROFARADS
ALL RESISTORS ARE 1/4W, 5%, IN OHMS.

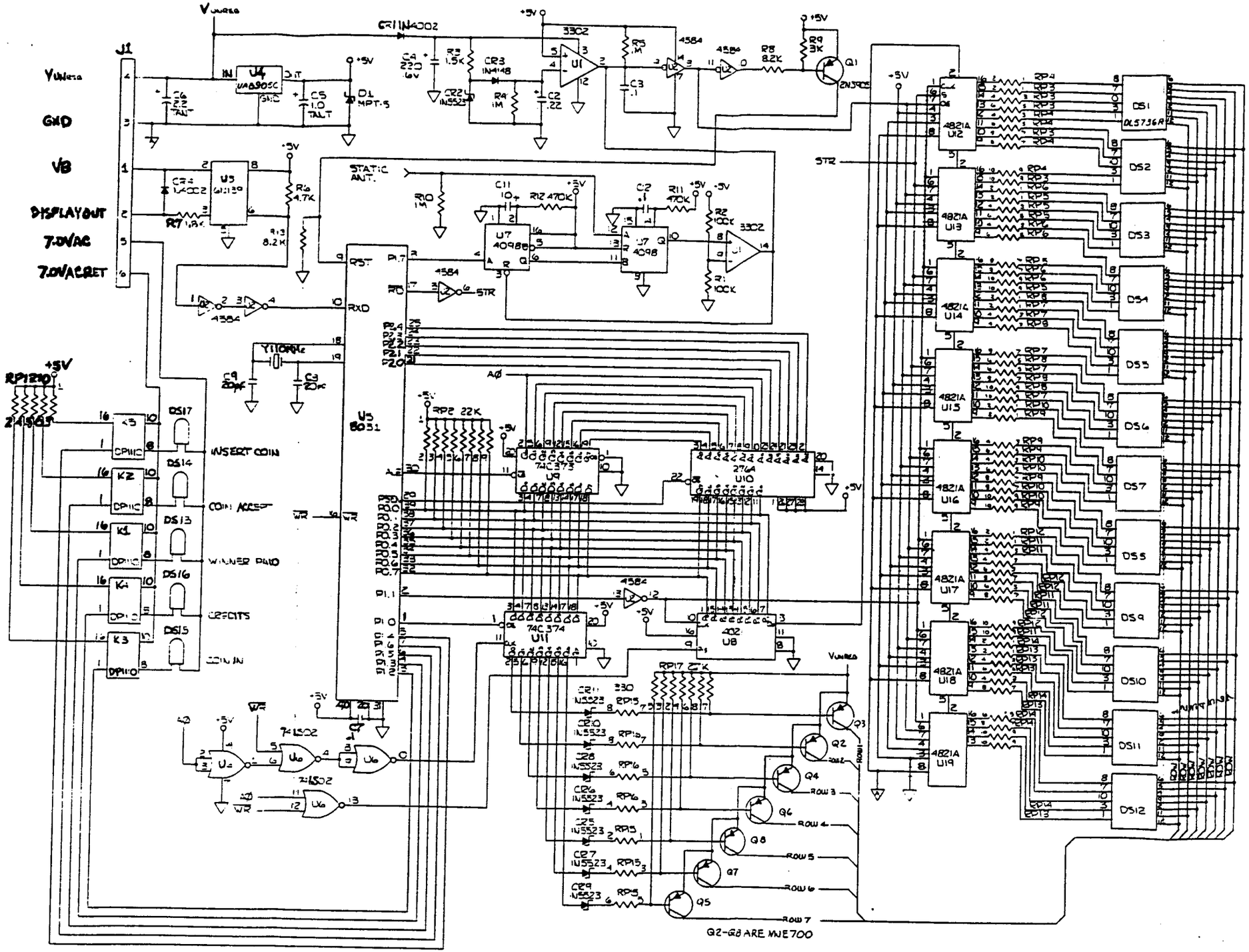
2. NOT SHOWN ON SCHEMATIC:
16 - .01μF, 10V BYPASS CAPS, DESIGNATED C52 THRU C67 AT IC'S U25 THRU U38, RESPECTIVELY

HIGHEST REFERENCE DESIGNATION USED								
C57	CR2	D1	J3	Q2	R43	U38	Y1	RP2
REF DES NOT USED		U6, C29, C31						



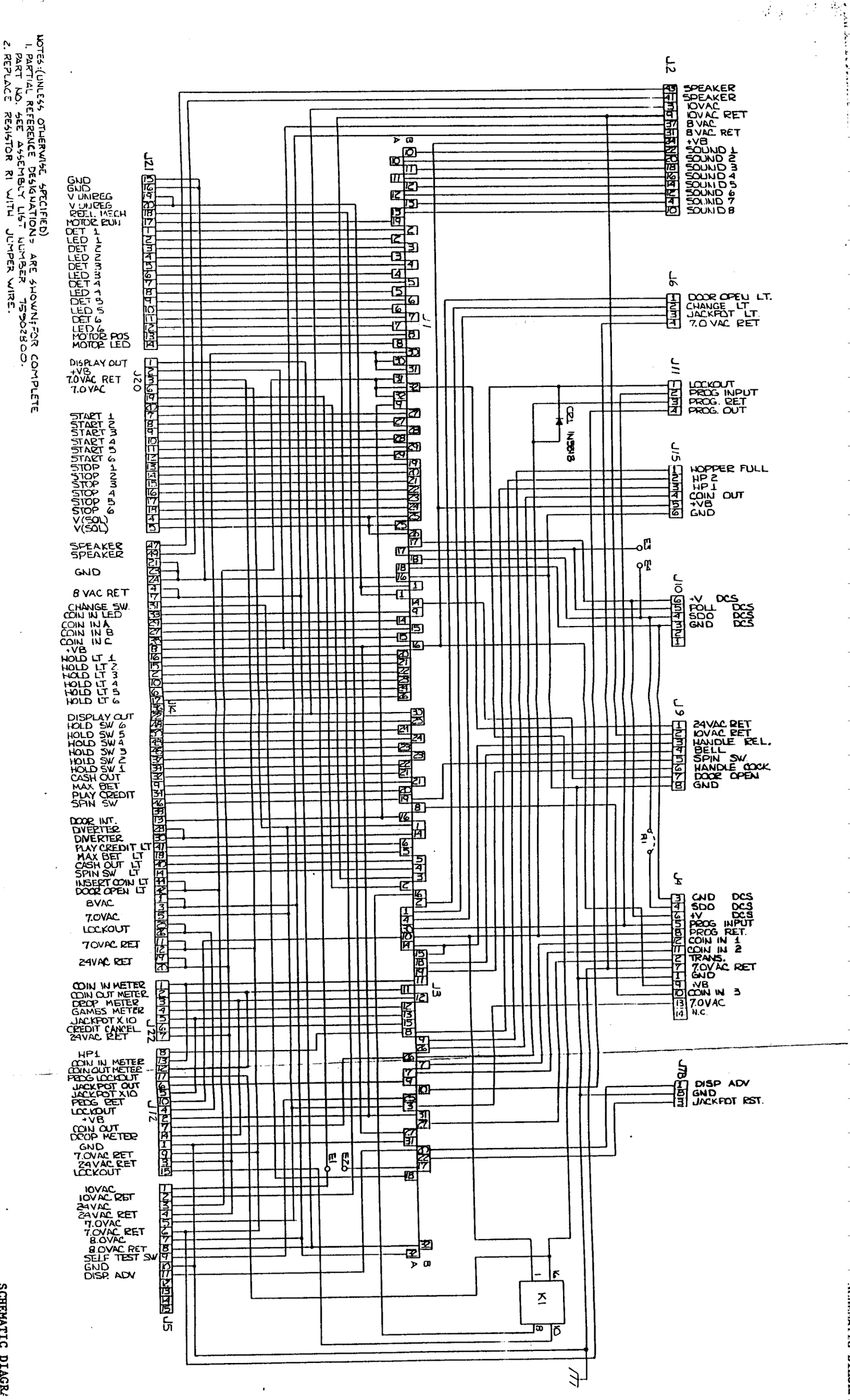
NOTES: 1. UNLESS OTHERWISE SPECIFIED: CAPACITORS EXPRESSED IN MICROFARADS. ALL RESISTORS ARE 1/8 W, 5% OHMS.
2. UNUSED RESISTORS IN RP2, 5, 7, PIN NOS. 3, 6, 7, 8, RP1, 4, 8 PINS 7&8.

SCHEMATIC DIAGRAM
TGM (Tone Generator Module)

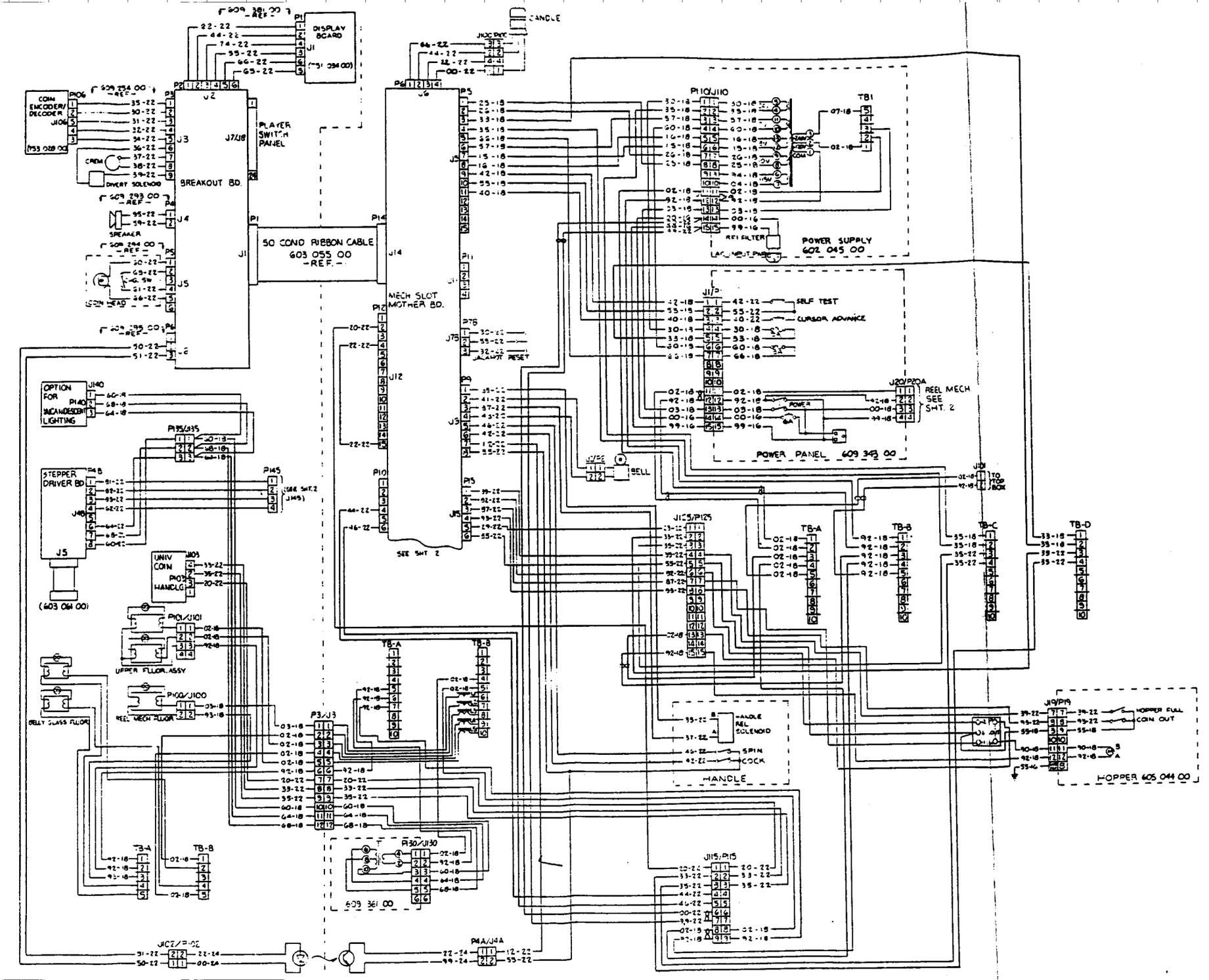


NOTES:
UNLESS OTHERWISE SPECIFIED
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE PART NO. SEE ASSEMBLY LIST 75103-90
2. RESISTANCE VALUES ARE IN OHMS 1/4w 5%
3. CAPACITANCE VALUES ARE IN MICROFARADS
4. C1, C7, C10, C13, C14, C15, BYPASS CAPS .1uF @ 50V

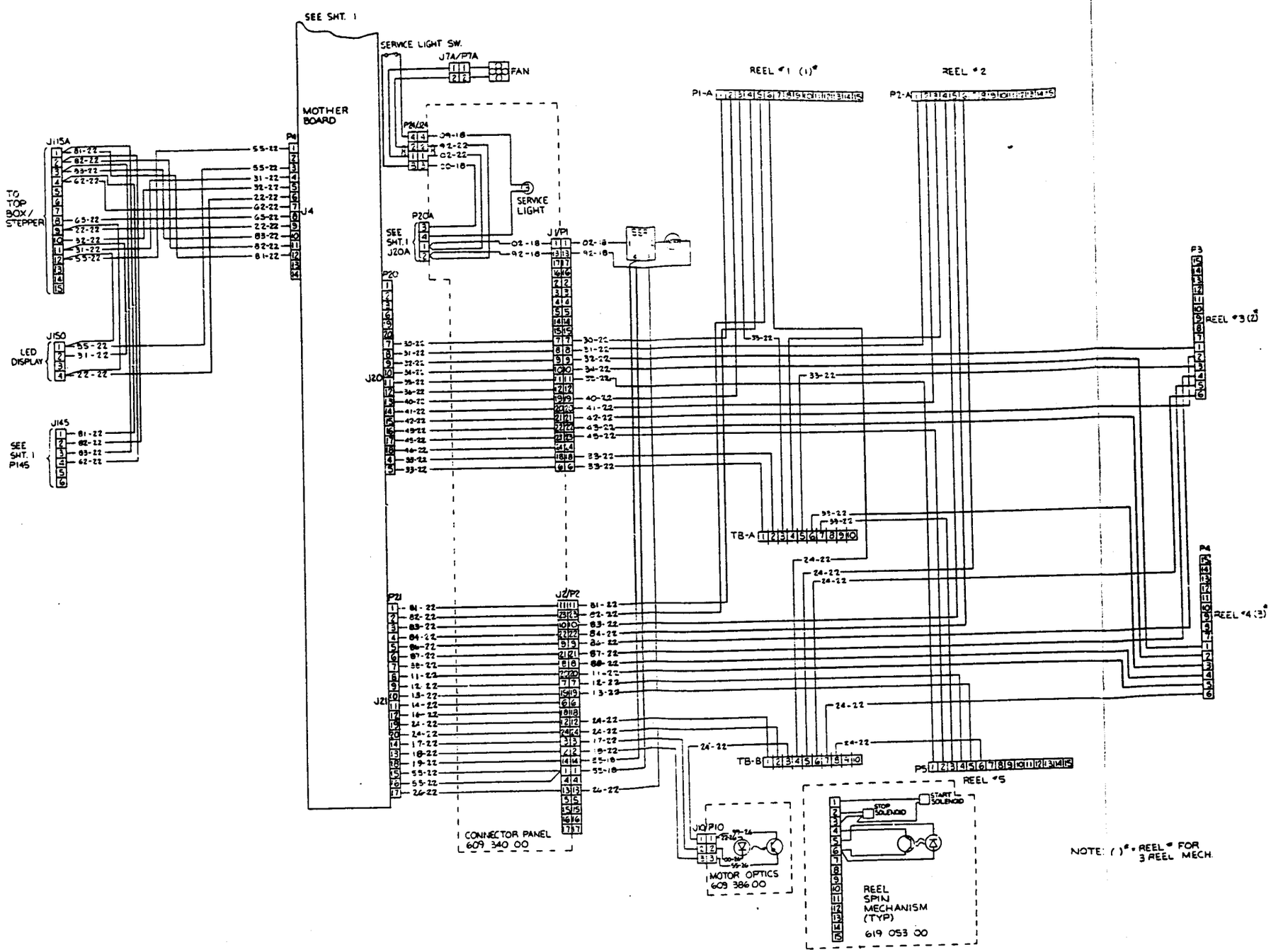
REFERENCE DESIGNATIONS USED
U1-U19, CR1-CR11, D1, RP1-RP17, DS1-DS17, R1-R13, C1-C15, Y1, Q1-Q8, J1, K1-K5



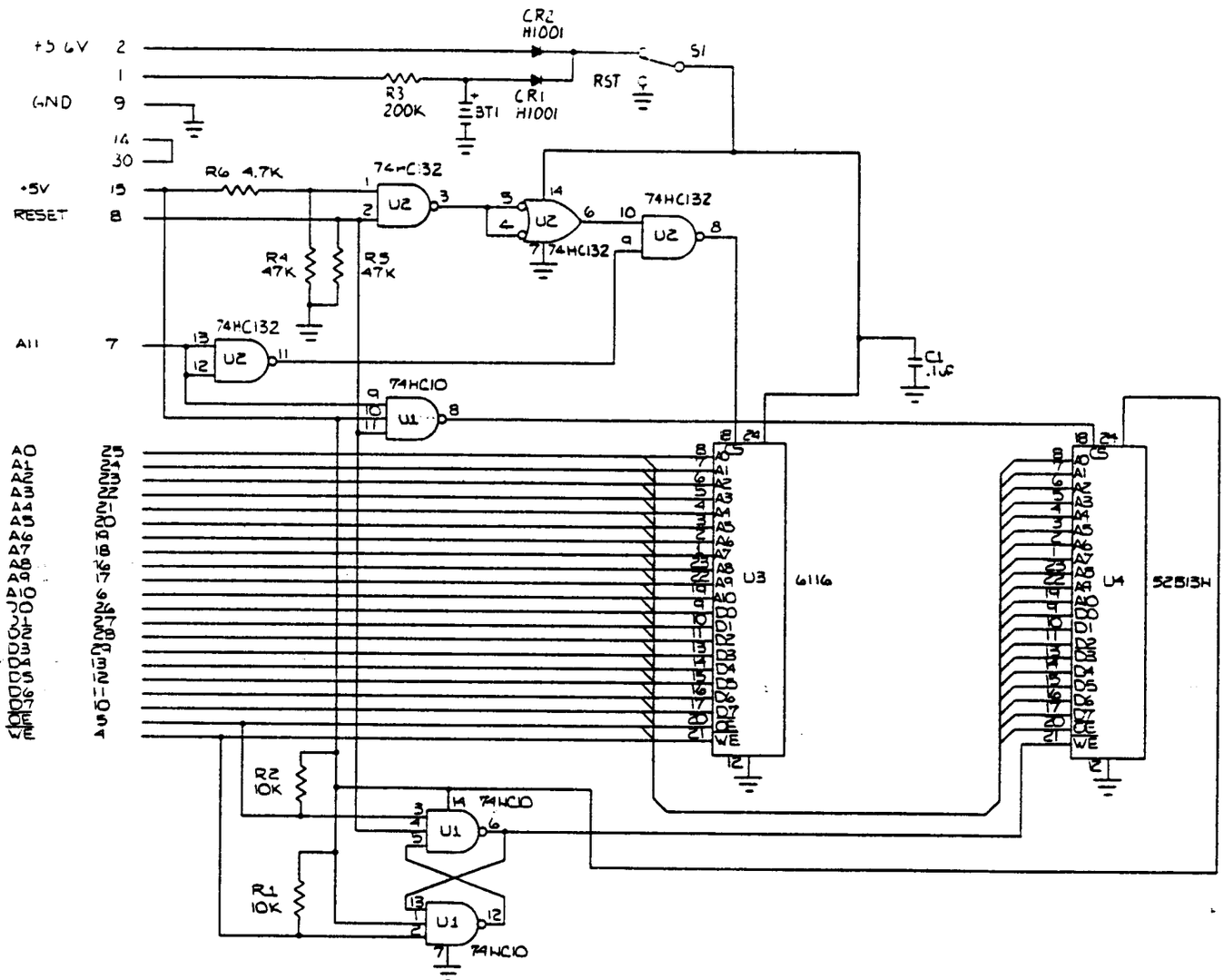
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM
Wiring Diagram

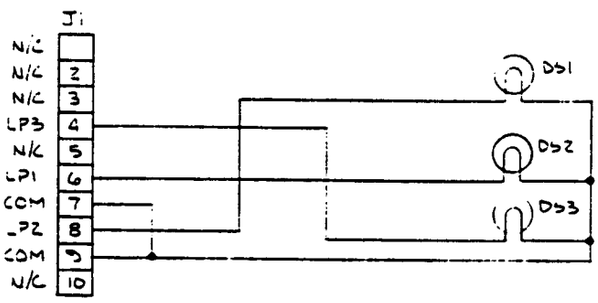


SCHEMATIC DIAG

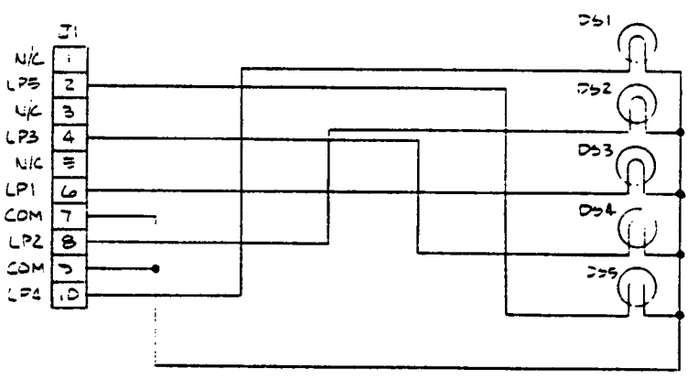


NOTES
UNLESS OTHERWISE SPECIFIED
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN;
   FOR COMPLETE PART NO. SEE ASSEMBLY LIST 76803800.
2. RESISTANCE VALUES ARE IN OHMS 1/4W ±5%.
3. CAPACITANCE VALUES ARE IN MICROFARADS.

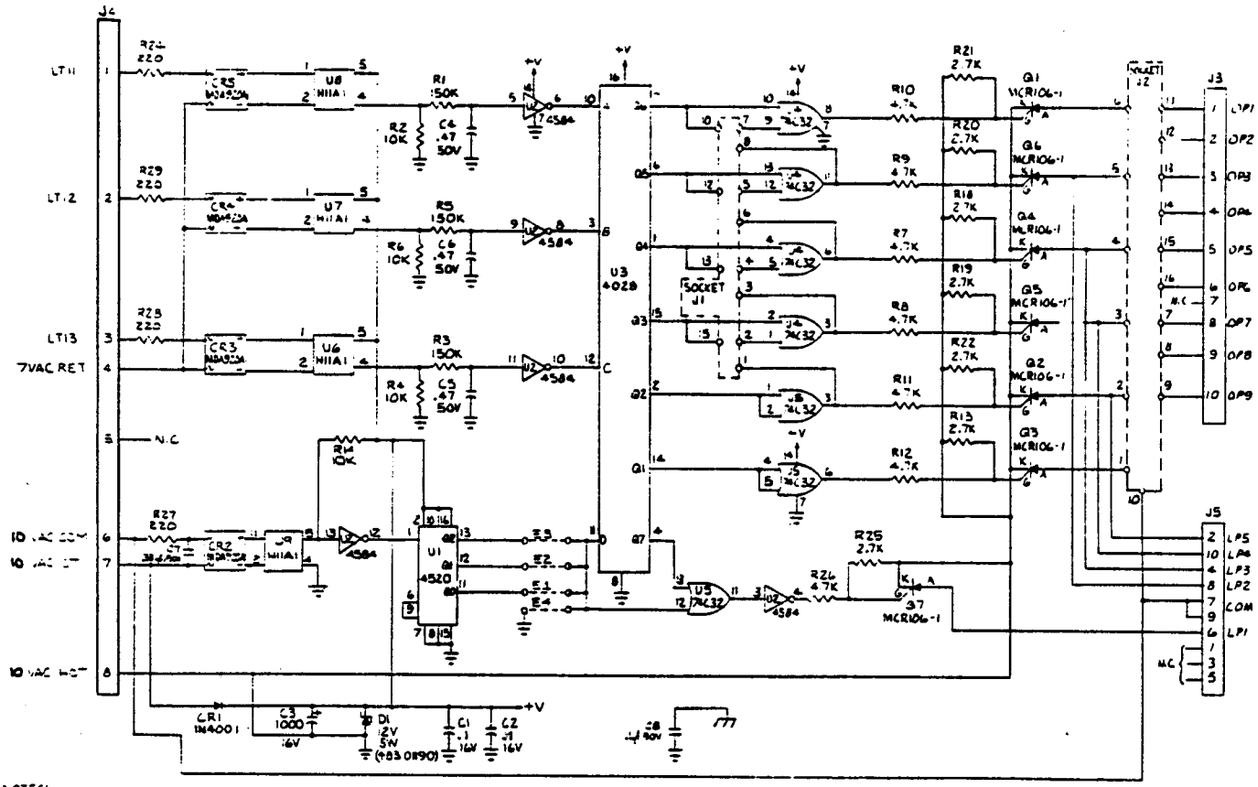
SCHEMATIC DIAGRAM
CMOS E^2 Board



SCHEMATIC DIAGRAM
3-Line Display



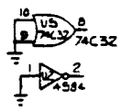
SCHEMATIC DIAGRAM
5-Line Display



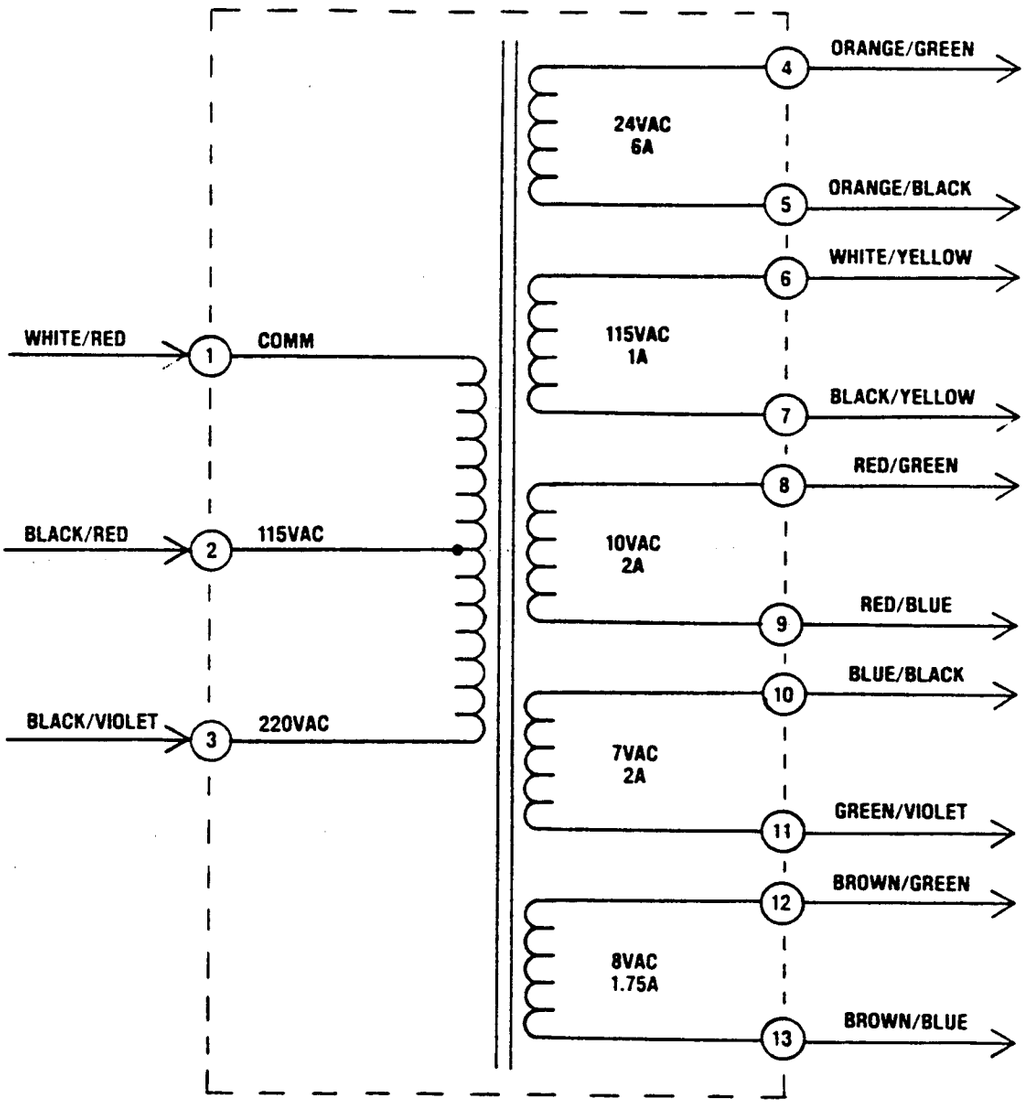
NOTES:
UNLESS OTHERWISE SPECIFIED
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN;
   FOR COMPLETE PART NO. SEE ASSEMBLY LIST NO 75103800.
2. RESISTANCE VALUES ARE IN OHMS, 1/4 W, ±5%.
3. CAPACITANCE VALUES ARE IN MICROFARADS.

REFERENCE DESIGNATION NOT USED	LAST REFERENCE DESIGNATION USED
R15, R16, R17, R23	J5.U9.CR5.C8.Q7 R29 E5

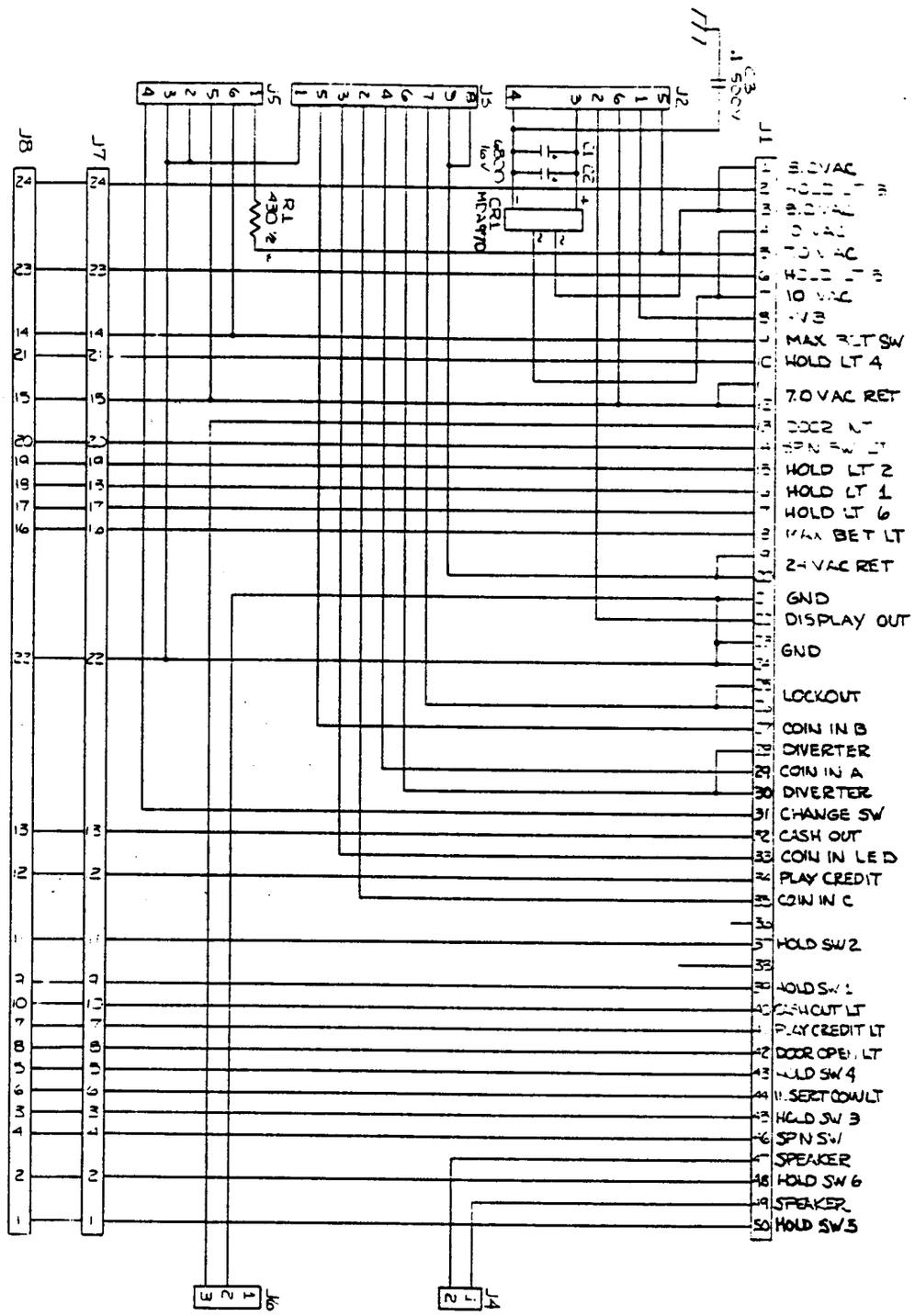
SPARES



SCHEMATIC DIAGRAM
Stepper Board



SCHEMATIC DIAGRAM
Transformer



NOTES
UNLESS OTHERWISE SPECIFIED
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE PART NO. SEE ASSEMBLY LIST 7660100D
2. RESISTANCE VALUES ARE IN OHMS
3. CAPACITANCE VALUES ARE IN MICROFARADS

SCHEMATIC DIAGRAM
Breakout Board