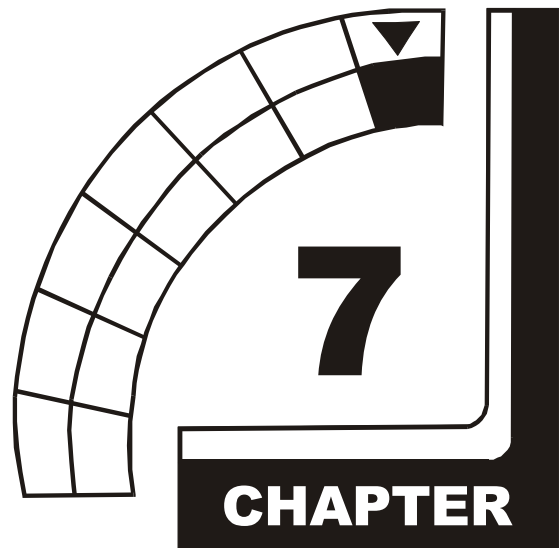




# OFFROAD

# THE THUNDER™



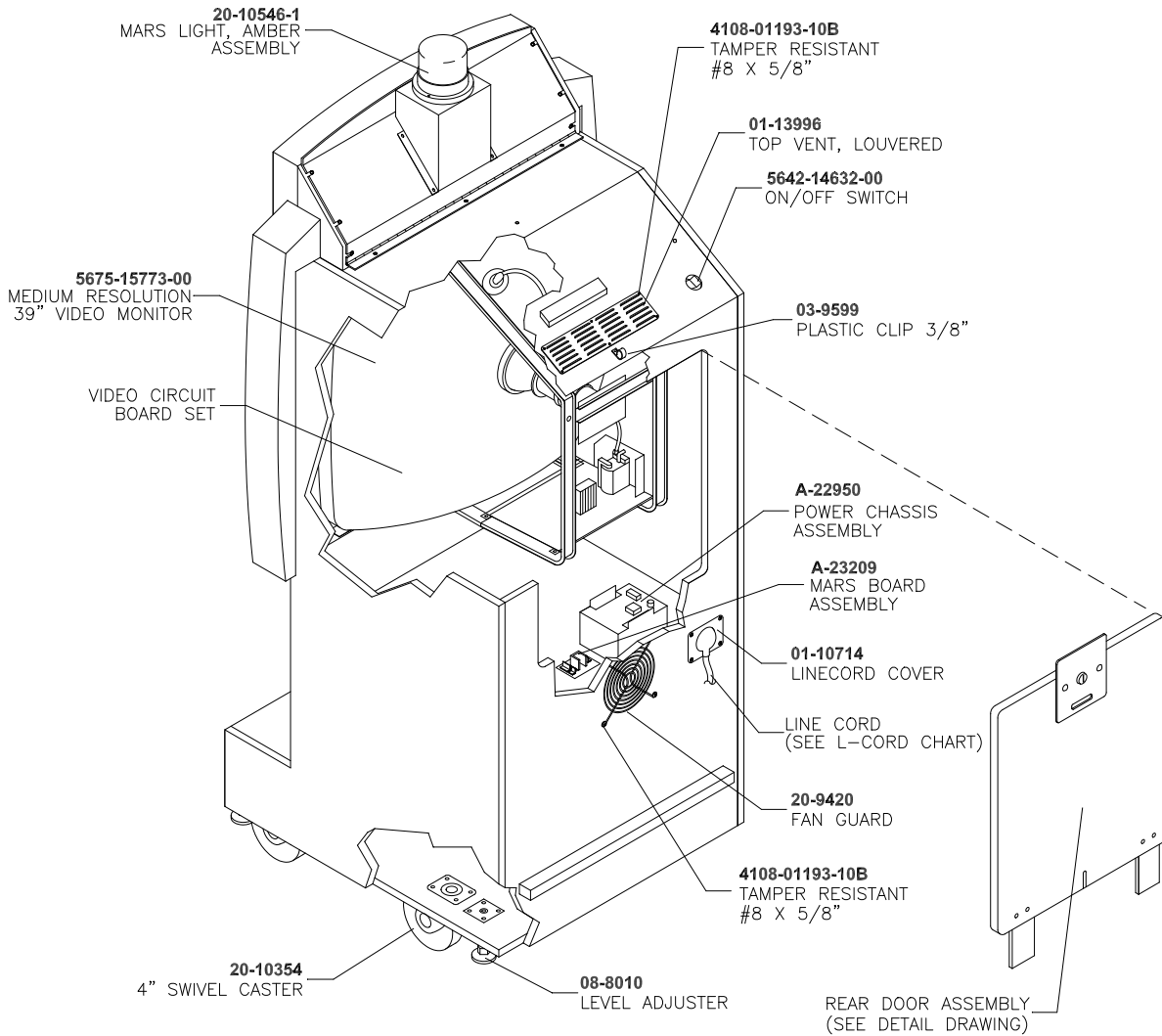
---

## PARTS

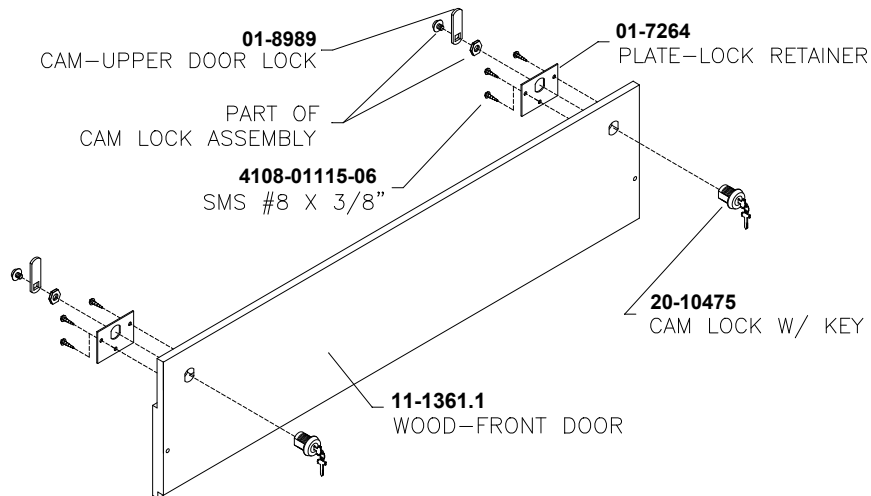
	<p><b>WARNING:</b> Use of non-Midway parts or circuit modifications may cause serious injury or equipment damage! Use only Midway authorized parts.</p> <p>For safety and reliability, don't substitute parts or modify Midway products. Substitute parts or modifications may void the game's EMC directive or FCC type acceptance.</p>
	<p><b>NOTICE:</b> The term VGM refers to the video game machine.</p>

# Cabinet Front View

# Cabinet Rear View



# Front Access Door Assembly A-23055

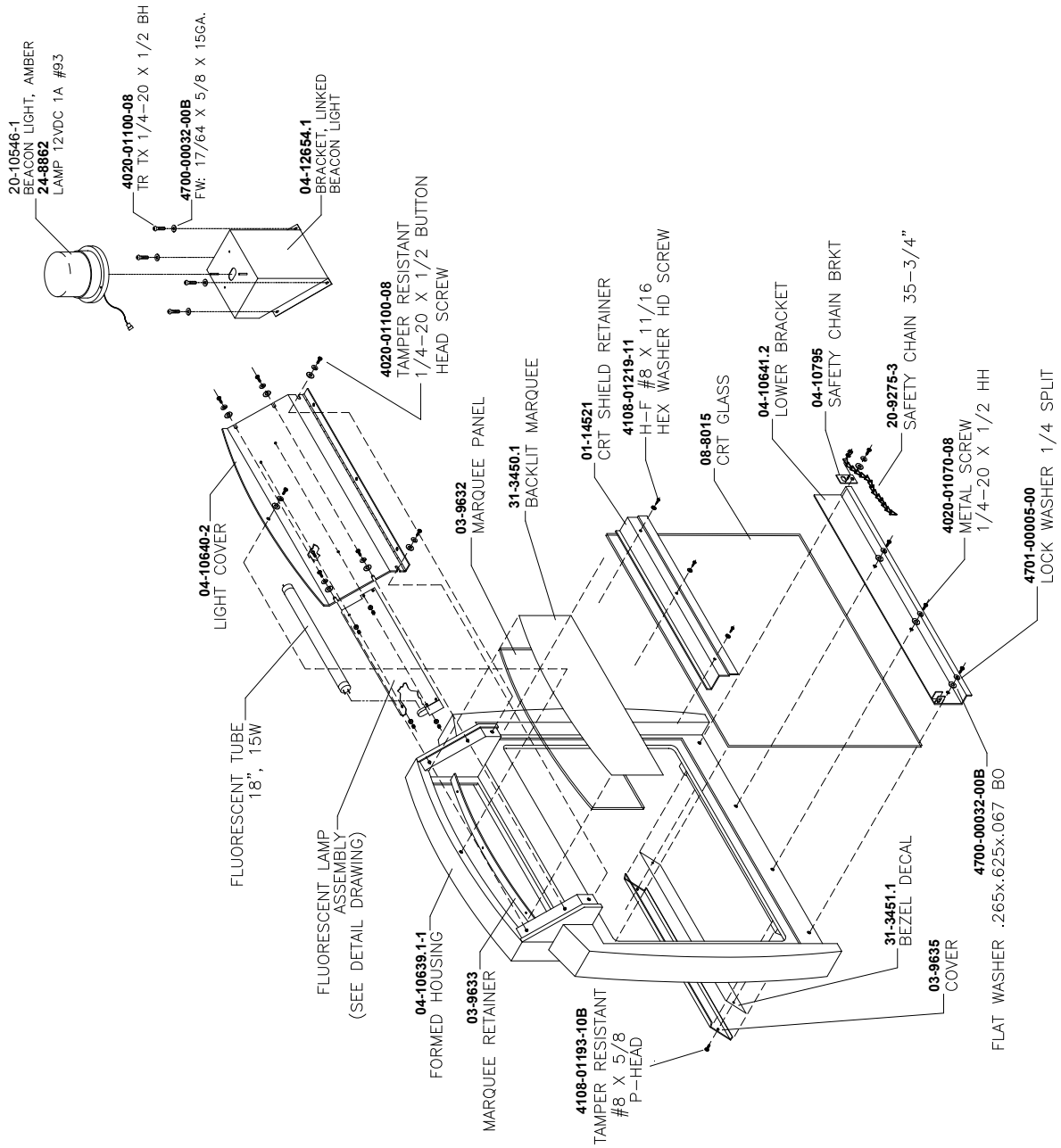


# Cabinet Joining Details

# Casters and Levelers

# Rear Door Assembly A-23058

# Monitor Bezel Assembly A-23361



# Padlock



# Coin Door Assembly

(See Coin Door Application Table *for Assembly Number*)

# Pushbutton Assembly

**20-9663-XX**

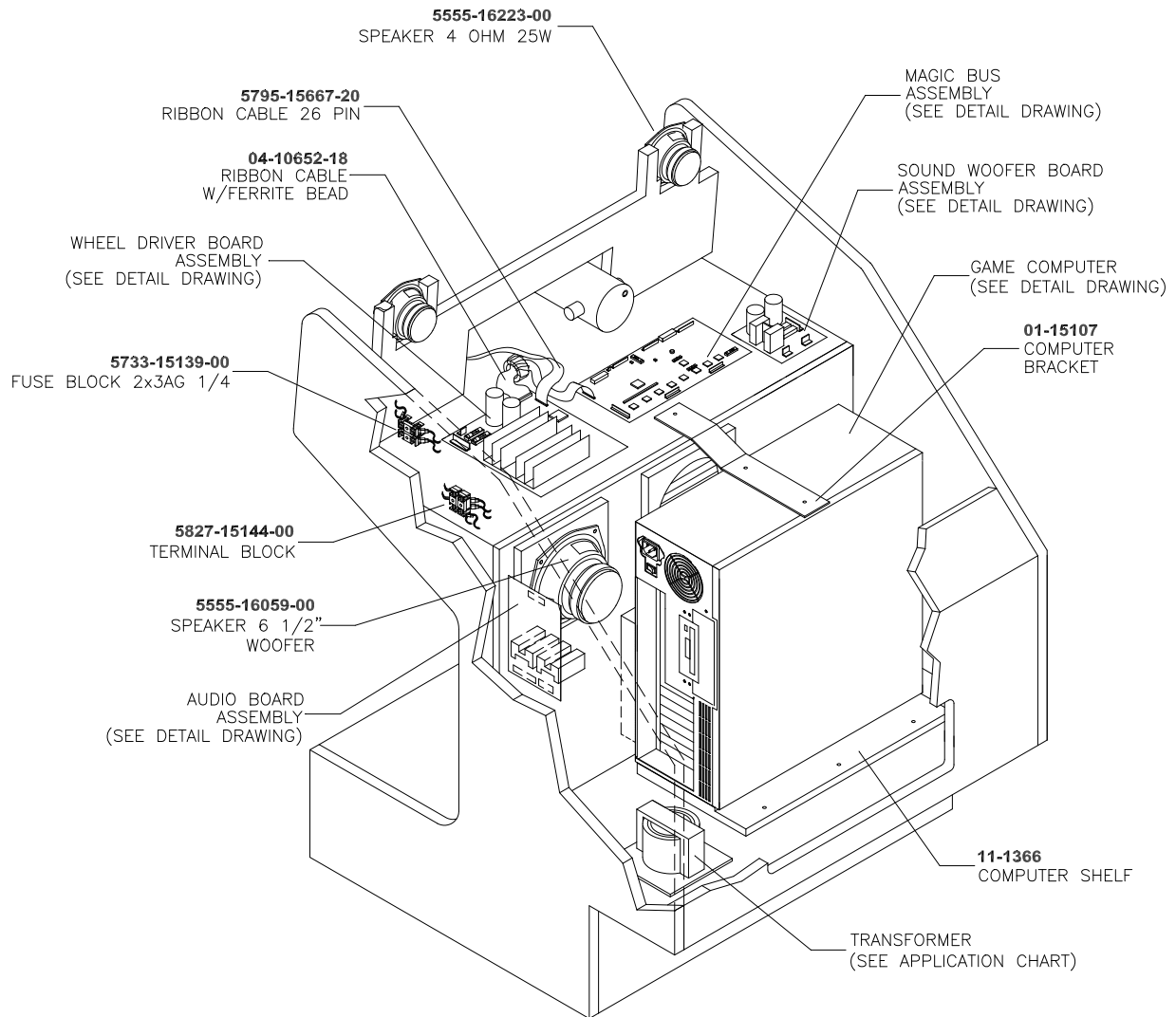
**20-10129-5**

# **Dash Assembly A-23365 (*Assembled*)**

# Dash Assembly A-23365 (*Exploded*)

**Optional Bill Validator**  
**(MARS AE 2451-U3E)**

# Dash Cabinet Assembly A-23357



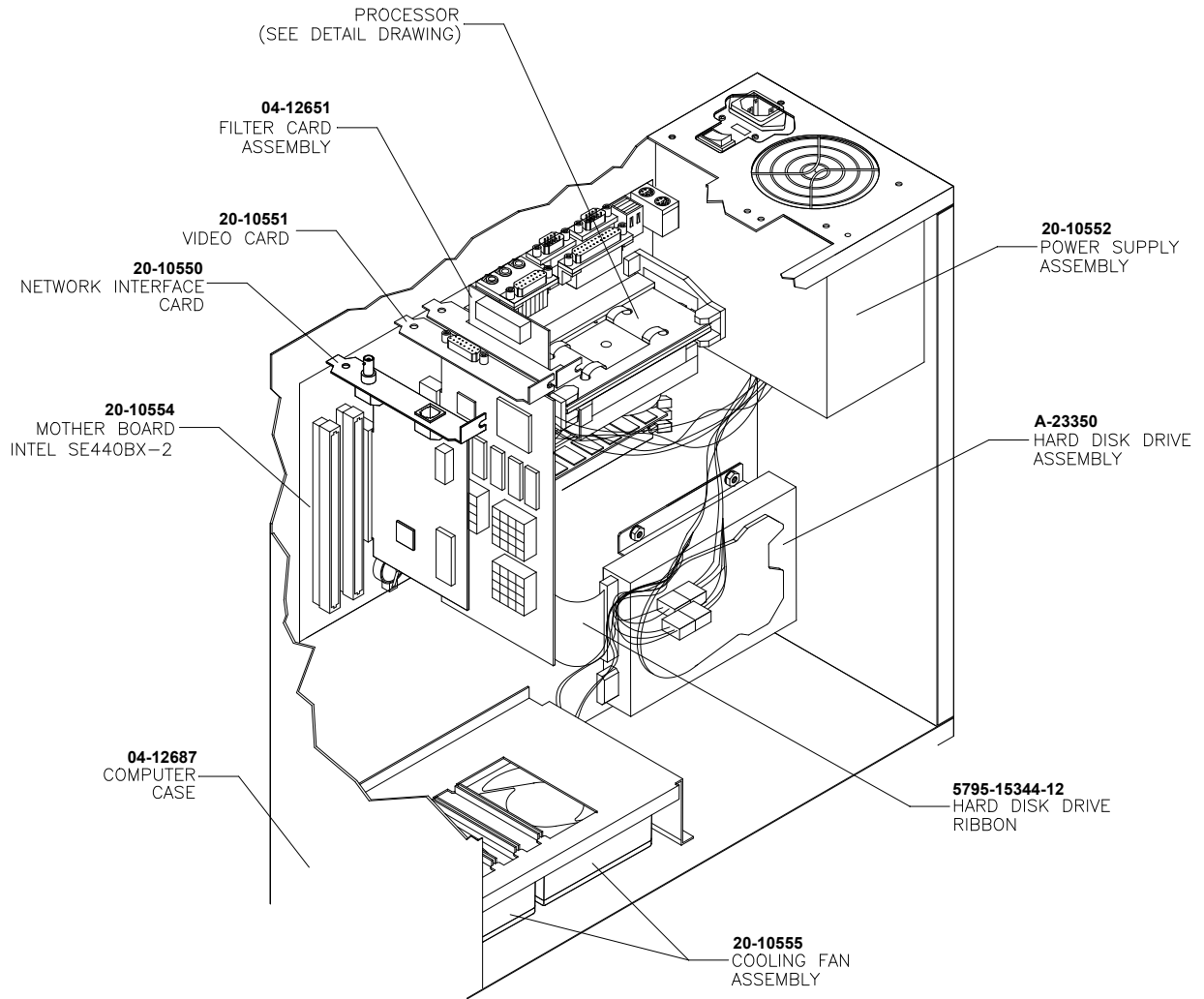
# Seat and Pedestal Assembly A-23231

# Throttle Assembly 20-10135

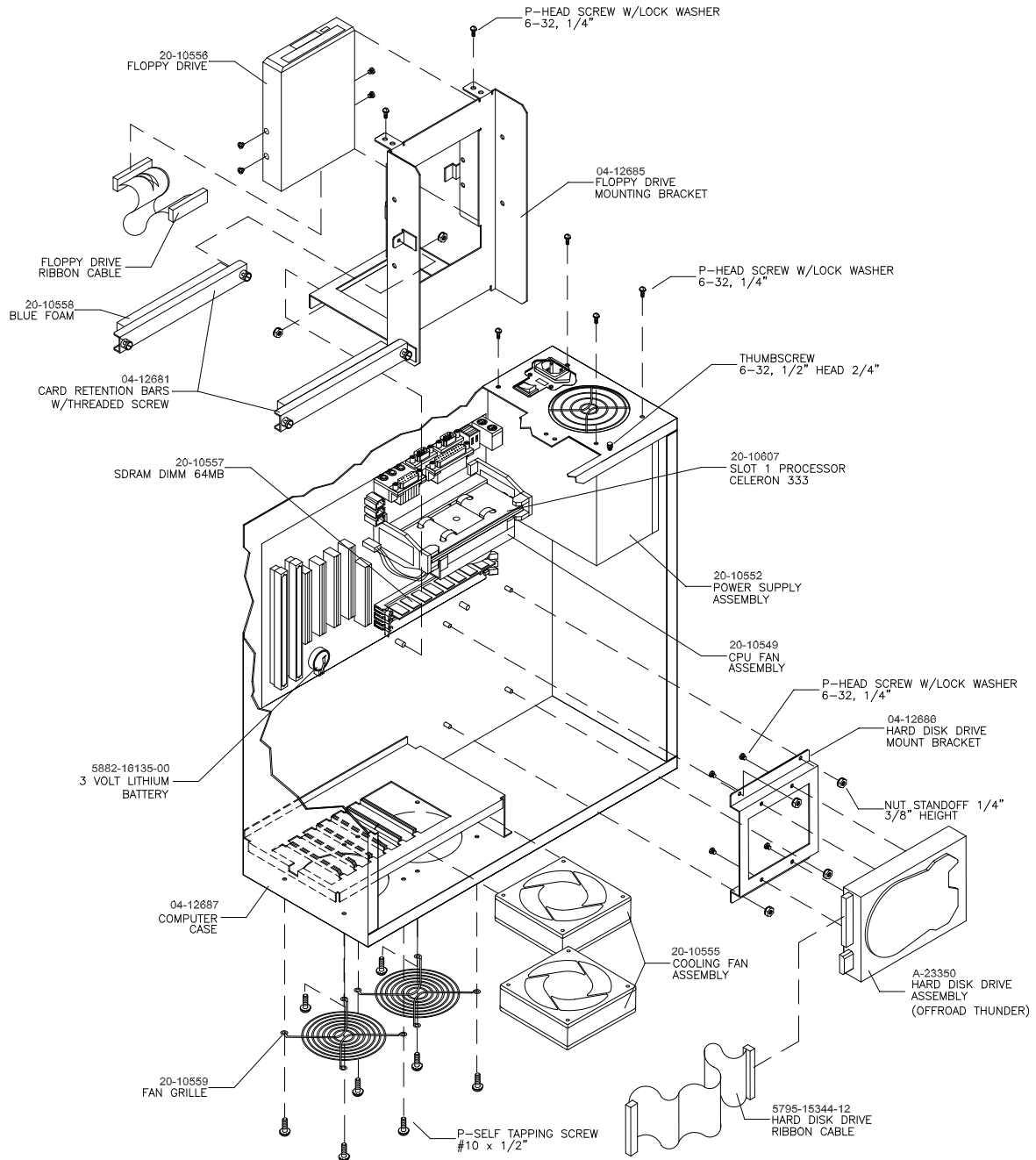


# Fluorescent Lamp Assembly A-22506

# Arcade Computer Assembly 04-12758.3



# Arcade Computer Mechanical Components






# Arcade Computer Cables

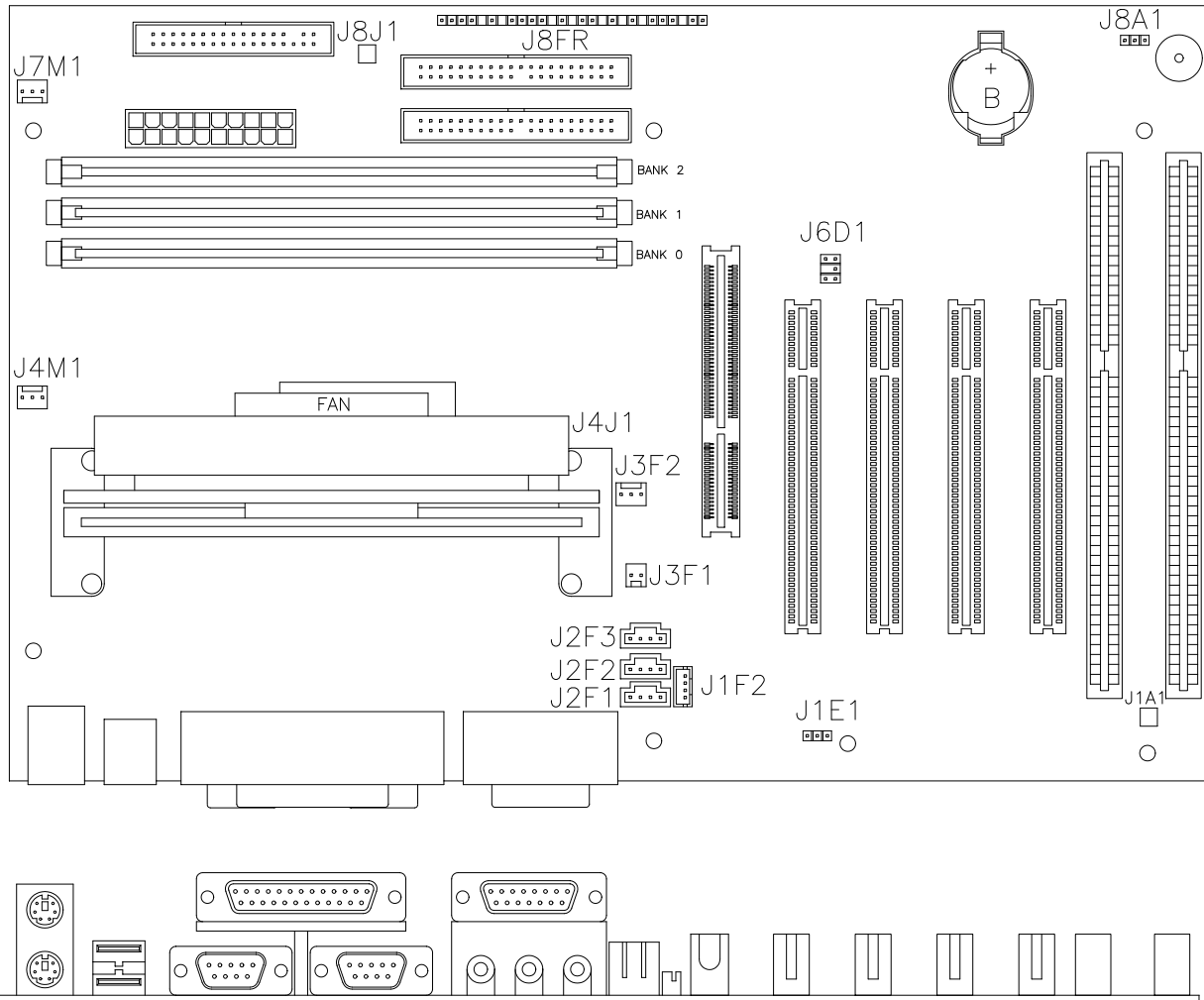


**NOTICE:** DC power cables are part of the power supply. You can't replace these cables individually.

# Arcade Computer Electronic Components

	<p><b>NOTICE:</b> Many stock computers use a motherboard that resembles this one. Still, a standard motherboard won't function correctly in this video game machine. Operation in this VGM also requires a custom operating system.</p>
	<p><b>NOTICE:</b> Before attempting to use other than factory authorized parts, ask your distributor for information. Other DIMM and processor modules may be equivalent or superior to those illustrated here. Yet Midway hasn't verified performance with alternate components.</p>
	<p><b>NOTICE:</b> Celeron and Slot 1 are registered trademarks of Intel.</p>

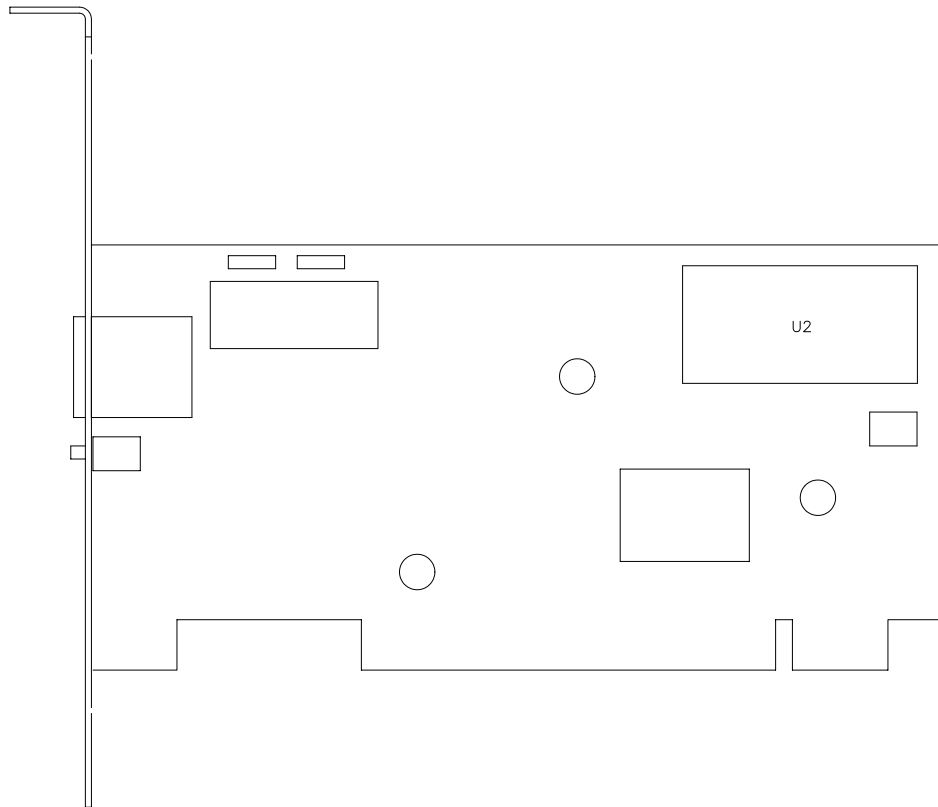
# Computer Motherboard Assembly 20-10554



## Field Replaceable Parts

Component	Description	Board Location	Part Number
Dual Inline Memory Module	64MB SDRAM DIMM	BANK 0-1-2	<b>20-10557</b>
Memory Backup	3-Volt Lithium Battery	B	<b>5882-16135-00</b>
Processor Assembly	Celeron Processor	J4J1	<b>20-10607</b>
Processor Cooling	Fan with Bracket	FAN	<b>20-10549</b>
Shunt Jumper	BIOS Startup Configuration	J8A1	<b>5882-13046-00</b>

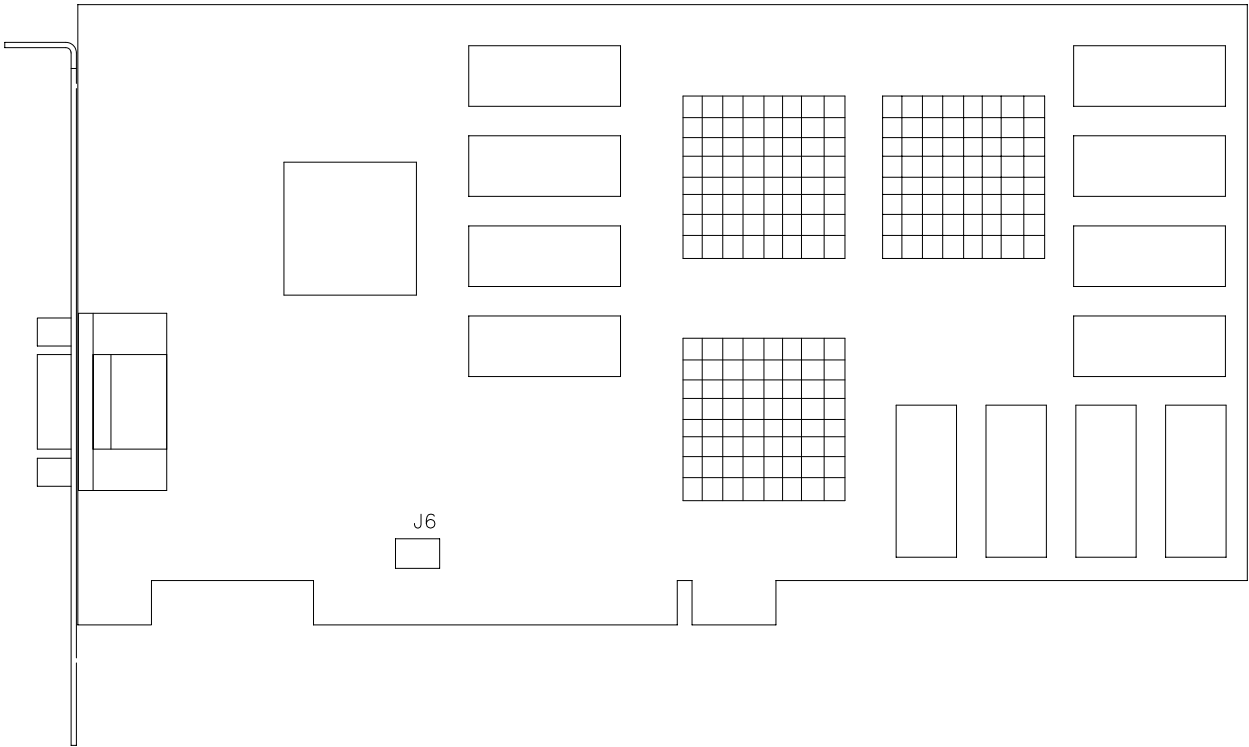
# Network Interface Card Assembly 20-10550



## Field Replaceable Parts

Component	Description	Board Location	Part Number
Instruction ROM	Not required in this game	U2	--

# Video Graphics Card Assembly 20-10551



## Field Replaceable Parts

Component	Description	Board Location	Part Number
Graphics Mode Select	Not required in this game	J6	--



# Filter Card Assembly 04-12651

## Field Replaceable Parts

<b>Component</b>	<b>Description</b>	<b>Board Location</b>	<b>Part Number</b>
EMI Filter	2200 pF Dual Capacitor	F1-F5	<b>5060-15633-00</b>
EMI Filter	Ferrite Bead Inductor	L1-L5	<b>5556-14181-00</b>

# BB12 Audio Amp Board Assembly 04-12529.1

## Field Replaceable Parts

<b>Component</b>	<b>Description</b>	<b>Board Location</b>	<b>Part Number</b>
Audio Amplifier	LM3403 Quad Amplifier	U1-U2	<b>5370-15163-00</b>
Audio Output	TDA1560Q Power Amplifier	U3	<b>5370-15984-00</b>
Audio Output	TDA7375 Power Amplifier	U4	<b>5370-15833-00</b>
Voltage Regulator	+5VDC, 5% Fixed Regulator	U5	<b>5250-13302-00</b>
None	Not required in this game	U6	--

# Sub-Woofer Driver Board Assembly 04-11128-1

## Field Replaceable Parts

Component	Description	Board Location	Part Number
Amplifier , Power	IC, TDA 2030AV, 18W	U1	5370-13419-00
Fuse	5 x 20mm, T2,.5A/250V	F1, F2	5731-14532-00
Preamplifier	TL084 Op Amp	U2	5370-12730-00
Regulator, Voltage	78L05, 5VDC	Q1	5250-13302-00
Regulator, Voltage	79L05, -5VDC	Q2	5250-13303-00

# MagicBus™ Interface Board Assembly 04-12697.3

## Field Replaceable Parts

Component	Description	Board Location	Part Number
Crystal	6 MHz	Y2	5520-16004-00
Diode	1N270	D11-15, D17-25, D28	5070-16229-00
Diode	1N5817, 1A	D2	5070-09266-00
Fuse	5 x 20mm, 2ASB	F1	5735-13853-00
Jumper	2-Pin	JP1, JP2, JP3, JP4	5791-13045-00
Transistor	2N2369 NPN	Q1	5190-15997-00
Transistor	2N3904 NPN	Q5-Q6	5160-14035-00
Transistor	ULN2064 NPN	Q3-Q4	5160-14035-00

# Wheel Driver Board Assembly 04-12770.1

## Field Replaceable Parts

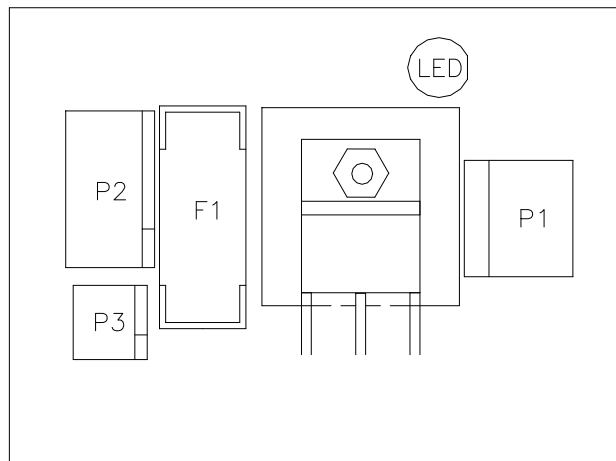
Component	Description	Board Location	Part Number
--	TO-92 Device	Q4	Not Used
Darlington	2N6427 NPN	Q1	<b>5162-08976-00</b>
Diode	Fast FE6B-35nS	D2, D3	<b>5070-16272-00</b>
Driver, Power	LM12 Op Amplifier	U5	<b>5370-14069-00</b>
Fuse	0.63AFB, 250V, 5x20mm	F3	<b>5731-15627-00</b>
Fuse	4ASB, 125V, 5x20mm	F1, F2	<b>5731-14094-00</b>
Pre-Driver	ULN2064B IC	U1, U2	<b>5370-12602-00</b>
Rectifier, Bridge	100V, 6A, SIP	BR1	<b>5100-13945-01</b>
Regulator, Voltage	78L15, 15VDC, TO-92	Q2	<b>5250-15624-00</b>
Regulator, Voltage	79L15, -15VDC, TO-92	Q3	<b>5250-15625-00</b>

# Speedometer Board Assembly 04-12759.1

## Field Replaceable Parts

Component	Description	Board Location	Part Number
LED	Green, Bright	LED1 - 6	5671-16256-00
LED	Orange, Bright	LED7 - 10	5671-15953-00
LED	Red, Bright	LED11 - 13	5671-15954-00

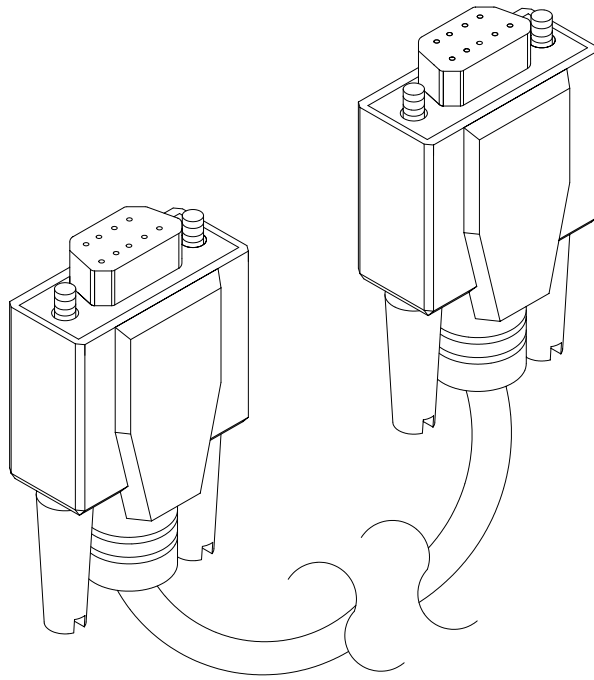
# Mars Light Board Assembly A-23209



## Field Replaceable Parts

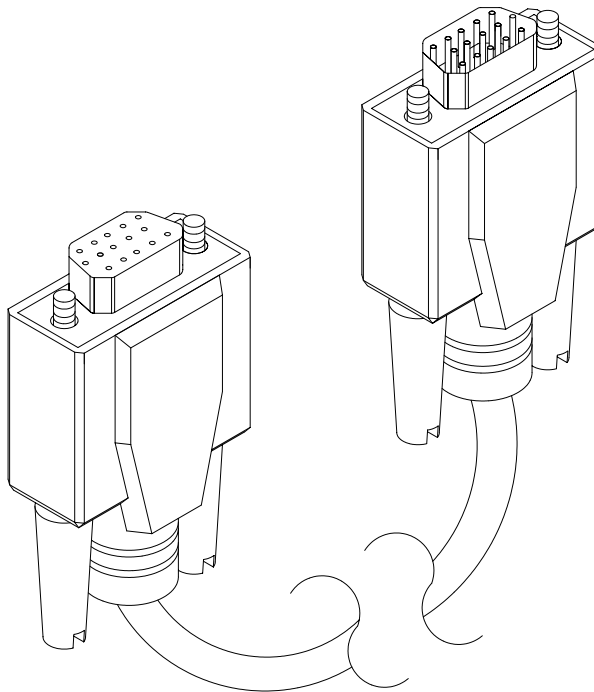
Component	Description	Board Location	Part Number
Fuse	5 x 20mm T2.5A/250V	F1	5731-14532-00
Transistor	TIP36C, PNP	Q1	5191-12179-00

# Electronic Cable Assemblies



**SERIAL COMMUNICATIONS CABLE (NULL MODEM DB-9F TO DB-9F)**

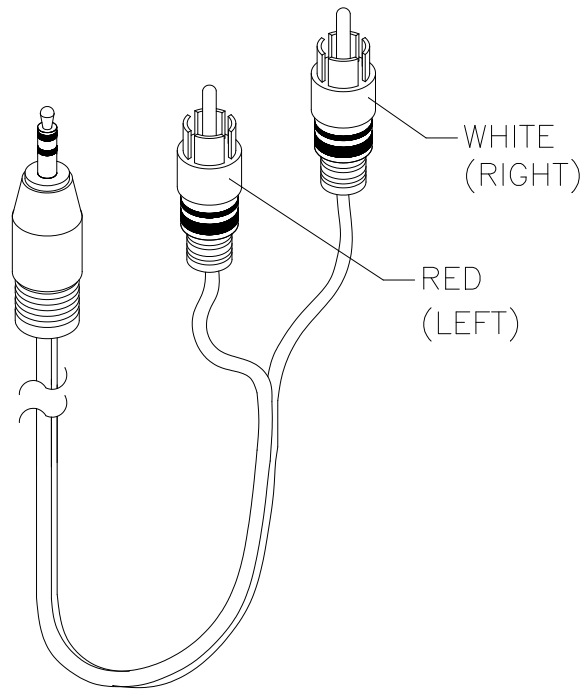
**20-10532**



**VIDEO COMMUNICATIONS CABLE (SHIELDED DB-15F TO DB-15M)**

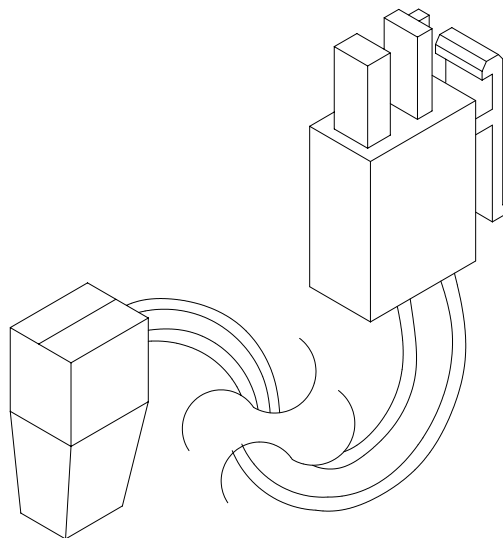
**5797-13171-00**

## Electronic Cable Assemblies



**AUDIO AMPLIFIER CABLE (SHIELDED, MINIATURE STEREO PHONE PLUG TO PHONO PLUGS)**

**04-12578-2**



**COMPUTER RESET CABLE (2-PIN PLUG TO LOCKING, 2-PIN PLUG)**

**04-12657**



# Line Cord Application Table

Part Number	5850-13271-00	5850-15521-00	5850-15521-02	5850-15521-03	5850-15521-06
<b>Country</b>					
France			■		
Germany			■		
Italy		■			
Japan					■
Spain			■		
UK				■	
USA	■				



**TYPICAL LINE CORD**

# Coin Door Application Table

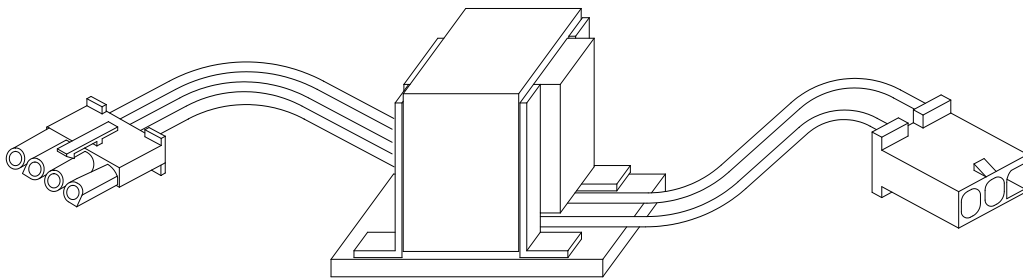
## ELECTROMECHANICAL COIN DOOR ASSEMBLIES

Part Number Country	09-72000-14	09-72000-15	09-72000-20	09-96011.1	09-96023-33
France				■	
Germany				■	
Italy	■				
Japan		■			
Spain			■		
UK				■	
USA, DBV Ready					■

# Transformer Application Table

## POWER TRANSFORMER ASSEMBLIES

Part Number Line Power	5610-14927-00	5610-14926-01	5610-15275-00
120 VAC 60 HZ	■		
230 VAC 50HZ		■	
100 VAC 50HZ			■



TYPICAL POWER TRANSFORMER ASSEMBLY