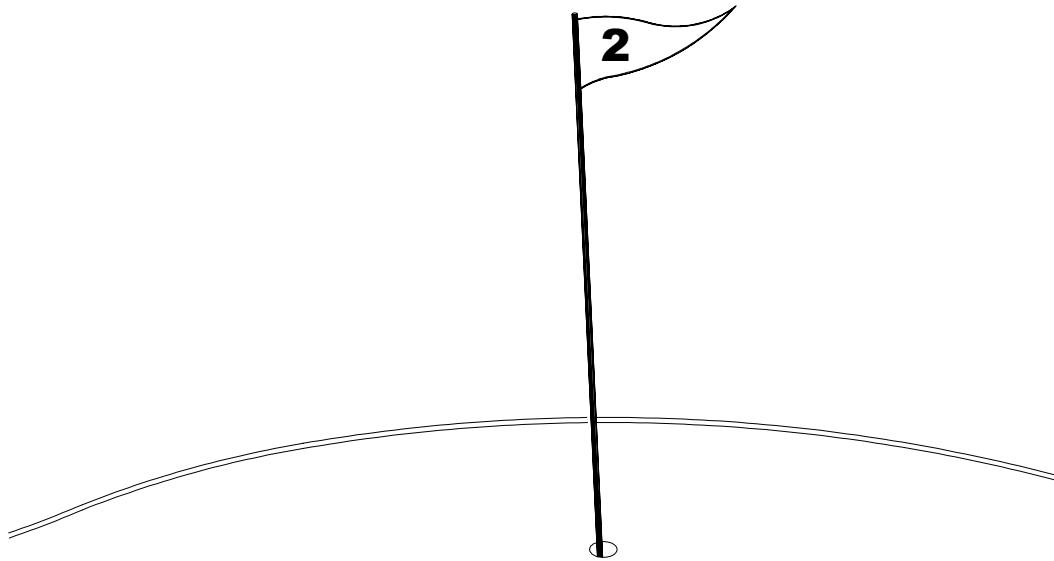


# SKINS GAME

## CHAPTER



## SERVICE



**NOTICE:** This manual is subject to change without notice. Midway Games West Inc. reserves the right to make improvements in equipment function, design, or components as progress in engineering or manufacturing methods may warrant.

## SERVICE



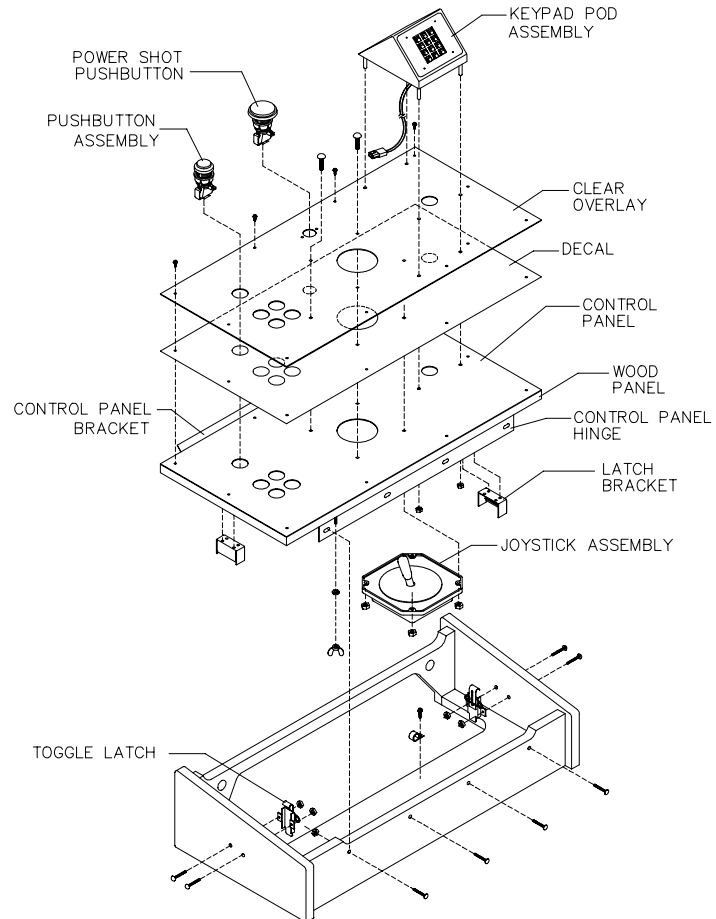
**CAUTION:** Before attempting any of the following procedures on your Skins Game Video Game Machine, turn AC Power off. Failure to do so can cause personal injury, may damage the components, and may void your warranty.

### Control Panel

To open control panel, open coin door and reach upward, feeling for left and right latches (see illustration). Latches hold control panel top to control panel box. Unlock latches and swivel top of hinged control panel toward you by pulling upward gently on keypad pod assembly.

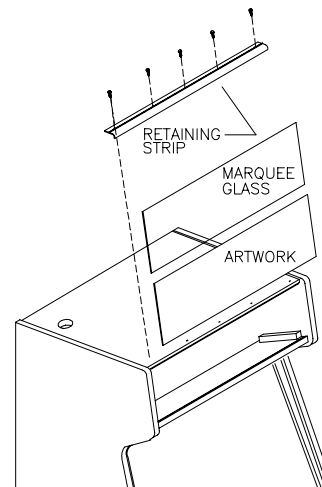
To remove control panel assembly, open control panel. Mark, and disconnect wiring harnesses from player controls. Use a wrench to remove four 1/4-20 hex-head bolts, flat washers, and lock washers that secure control panel to cabinet. Close control panel cover. Slide control panel housing away from cabinet.

To reinstall, align gasketed control panel bracket with bottom of viewing glass. Tighten mounting bolts firmly, but do not overtighten.



### Marquee

Remove five hex-head wood screws that hold marquee-retaining strip to cabinet top. Hold glass in place to avoid breakage. Remove retaining strip and set aside. Lift marquee glass out of top grooves and set in safe place. Do not overtighten screws during reinstallation.



**WARNING:** Marquee glass can fall from cabinet and break when retaining strip is removed. Hold glass in place until you can safely remove it.



**WARNING:** A dropped fluorescent tube is likely to break, implode, and shatter glass eight feet or more from the point of destruction. Use extreme care when handling.

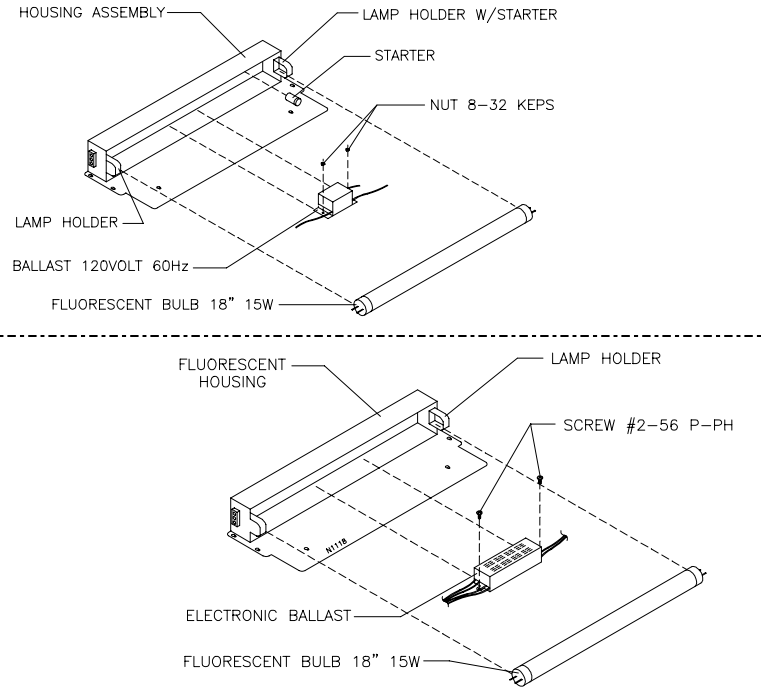
### Fluorescent Lamp

Remove marquee housing, retaining strip, glass, and artwork. Grasp bulb, and rotate a quarter turn. Pull tube from sockets.

To replace, carefully fit new bulb into socket and rotate a quarter turn. Clean bulb to remove fingerprints and dust.

### Fluorescent Light Assembly

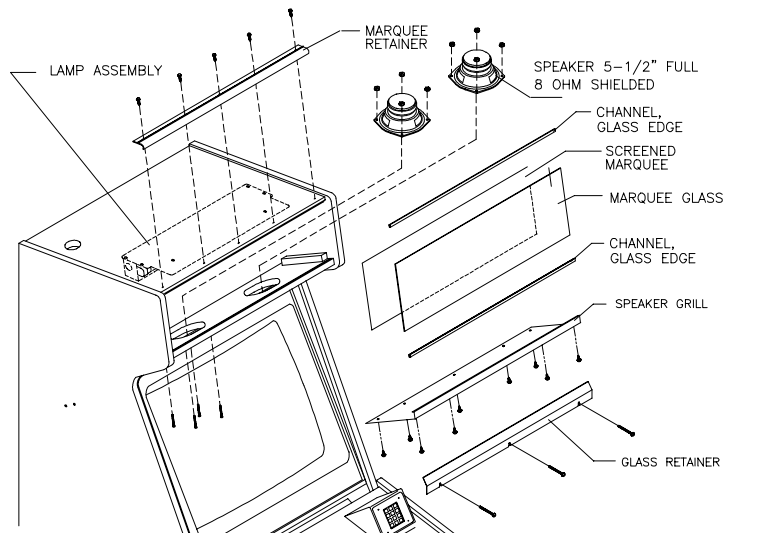
Remove marquee housing, retaining strip, glass, and artwork. Disconnect power cable from fluorescent light assembly. Loosen screws fastening assembly to cabinet, but do not remove them. Slide assembly slightly forward to disengage keyhole slots. Lift assembly out of cabinet.



**NOTE:** Fluorescent light assemblies with electronic ballasts have no starter.

### Speakers

Remove marquee, glass, and artwork. Label and disconnect wires. Remove nuts on screws. Lift speakers up above speaker grill and out of marquee. Carefully reseal seals upon completing any task in speaker enclosure. Refer to Cabinet Wiring Diagram for correct speaker polarity.



**NOTE:** Ensure replacement speakers are magnetically shielded. This prevents video monitor color impurity.



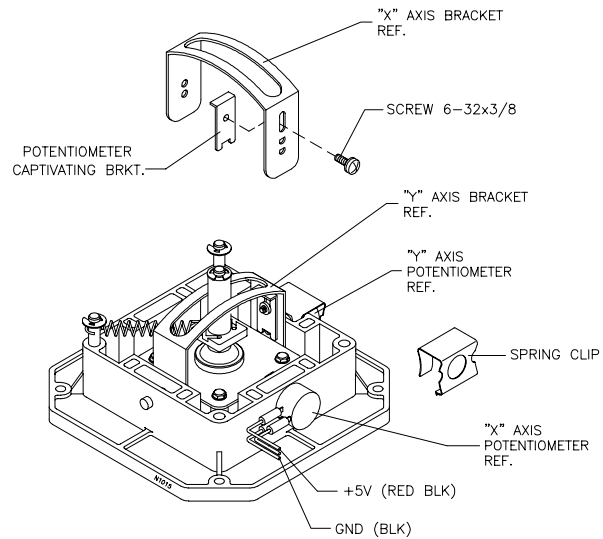
**CAUTION: USE PROPER FUSE.** Avoid electrical shock! Replacement fuses must be of the same type as those they replace. Fuse voltage and current ratings must match ratings on the original fuse.

### Joystick Assembly

Open control panel. Label and disconnect joystick wiring harness. Loosen and remove four nuts holding joystick to control panel. Lift joystick assembly out of control panel.

To remove potentiometer, pull bottom of spring clip out to unlatch and pull clip up to remove. Pull potentiometer away from assembly gently to release.

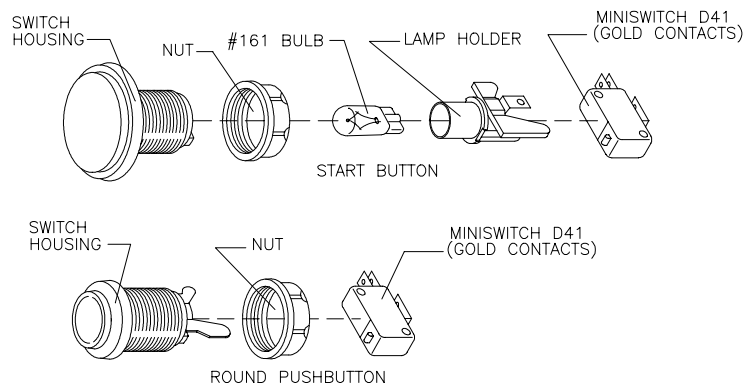
When replacing potentiometer, seat it snugly in its housing, flush against plastic base. If you have seated it properly, you should be unable to rotate the potentiometer more than a degree or two by hand.



### Push Buttons

Open control panel. Label and disconnect wires. Separate switch from its pushbutton. Bend large prong away from switch just enough to slide switch off housing.

To remove light inside START button, pull light bulb up and out of socket.

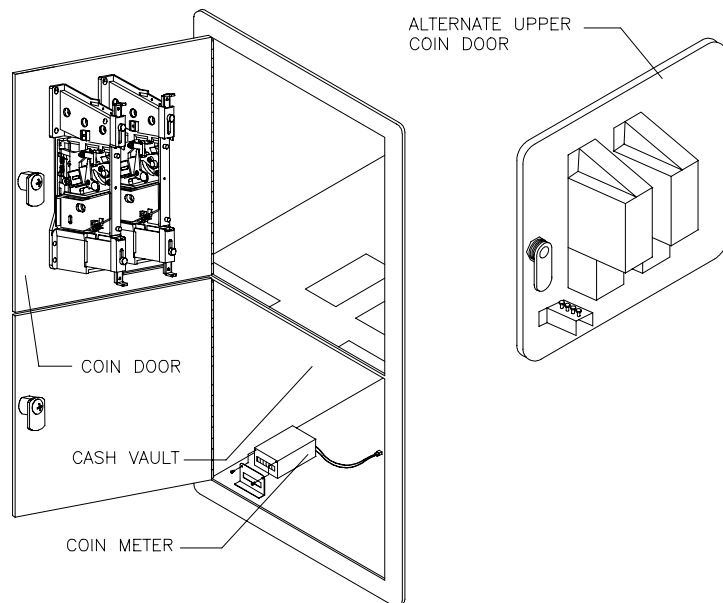


### Coin Meter

Open cash vault door. Label and disconnect meter wiring. Unscrew two front mounting screws. Record meter count before testing or replacing.

### Coin Mechanism

Unlock coin door and swing open. Unlatch and remove each coin mechanism separately to clean or replace with different type. Ensure mechanism seats fully in holder upon reinstallation. Close and lock release latch, then close door. Turn AC power ON and change mechanism setup. Then test known good and bad coins to verify operation.

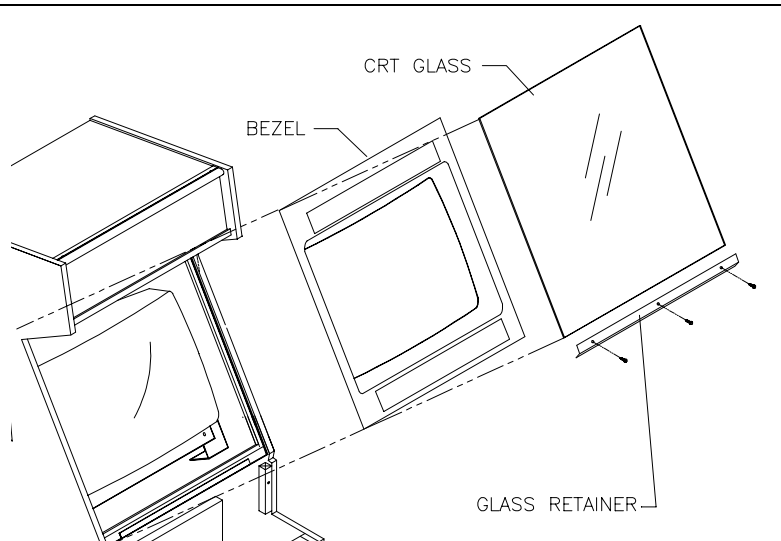


### Viewing Glass

Pull control panel upward to expose glass retainer strip. Hold viewing glass in place and remove retainer screws. Slide glass upward a bit and swing bottom outward until free from cabinet. Slowly slide glass down until free from cabinet. Set in safe place.

### Monitor Bezel

Remove viewing glass. Grasp monitor bezel at bottom and lift down out of groove. Remove bezel from cabinet. To replace, slide top of bezel into cabinet groove first. Swing bottom into position.



**CAUTION:** CRTs and their power supplies can retain energy long after power is off—especially when a defective circuit prevents a normal discharge. Connect well-insulated ground strap to metal chassis. Slide free end of strap under CRT anode cap until you make contact. Wait two minutes for charge recovery, then discharge anode again.



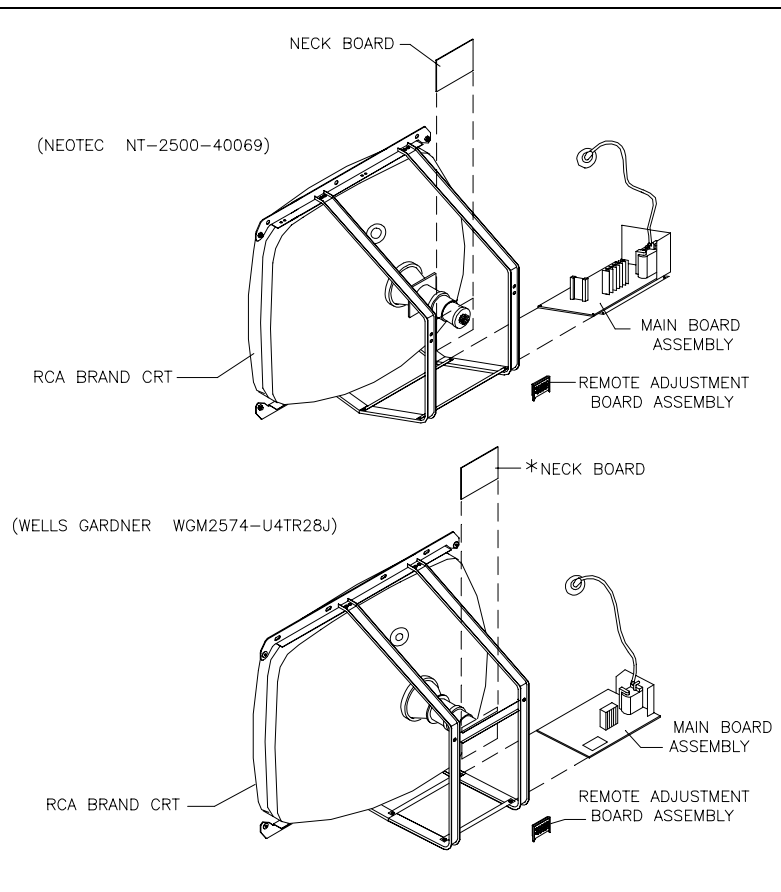
**CAUTION:** Monitor does not require isolation from AC line voltage during normal operation. However, when operating outside cabinet or servicing monitor on a test bench, isolate monitor from line voltage with isolation transformer.

### Monitor

Remove viewing glass and monitor bezel. Disconnect monitor from wiring harness and ground wires. Remove four ¼-20 flange nuts securing monitor mounting flanges to mounting panel. Pull monitor carefully from cabinet and set aside.



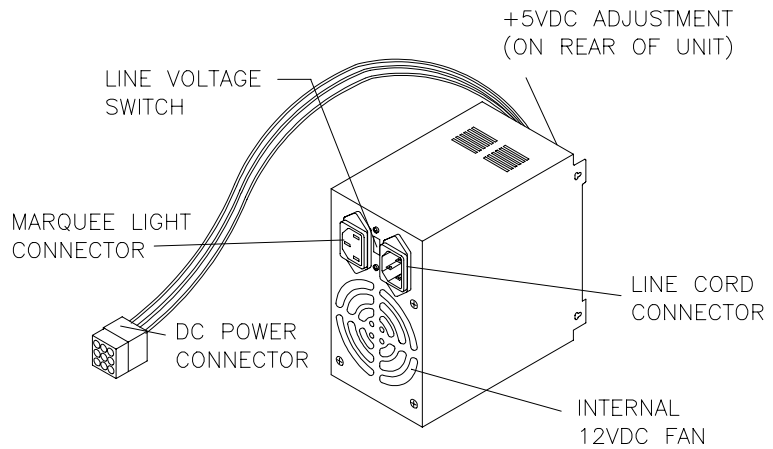
**WARNING:** Video monitor is heavy, with most weight toward front of assembly. Be sure to firmly support monitor as you remove it from cabinet.



### Power Supply

Remove rear door. Unplug IEC AC connector from rear of power supply. Unplug DC connector from front of power supply. Remove two front and two rear screws from power supply. Lift power supply off power chassis. Note AC input voltage setting.

To reinstall power supply, set AC voltage switch to correct value. Set supply on power chassis and align mounting holes. Install four screws and two power connectors.



### Fan Assembly

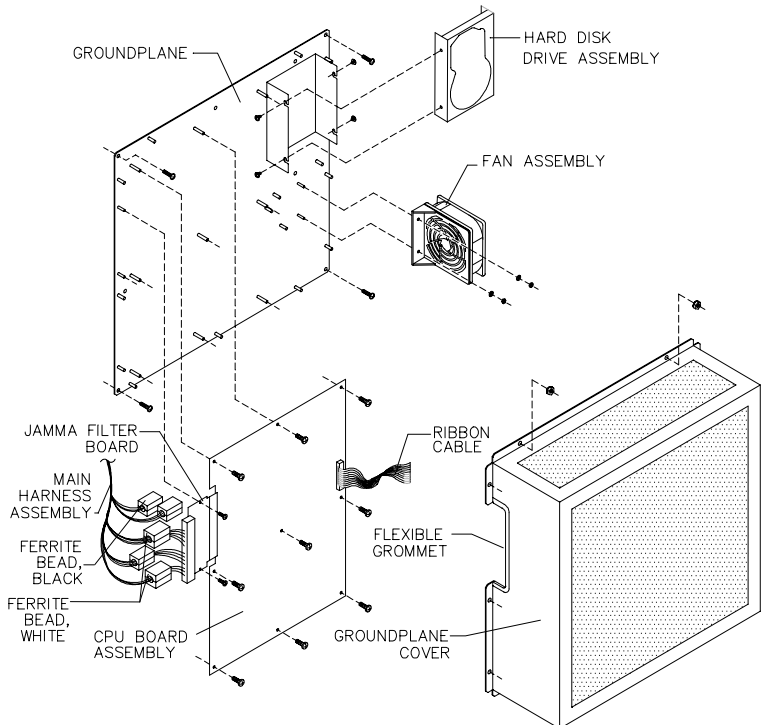
Remove rear door. Remove hex nuts on groundplane cover. Remove cover and set in safe place. Disconnect wiring harness and remove mounting hex nuts and washers. Remove fan from cabinet.

### Hard Disk Drive

Remove groundplane cover and set in safe place. Disconnect wires from hard drive and remove bracket mounting screws. Gently remove hard drive from bracket. Store and transport hard drive in anti-static bag.

### CPU Board Assembly

Remove groundplane cover and set in safe place. Disconnect wires from harness. Remove mounting screws.



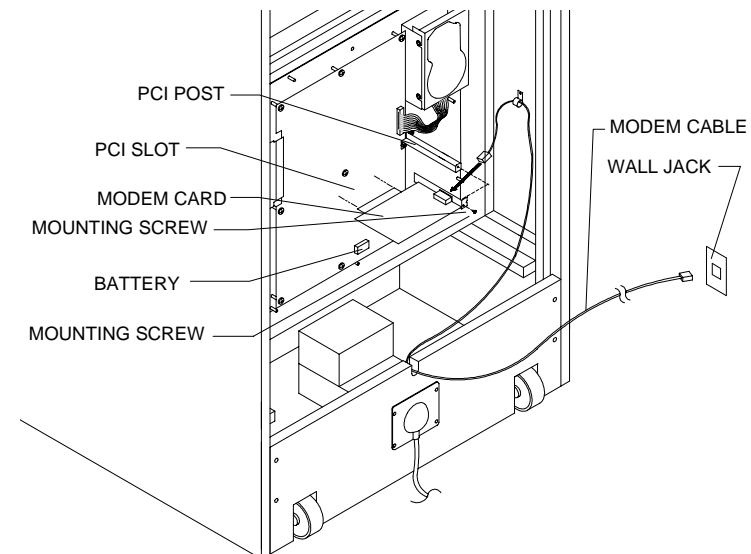
### Battery

Lithium battery sits on top of timekeeper IC. Carefully pry off battery and replace with identical type.

### Modem Card

Remove groundplane cover. Remove modem cable from modem card. Remove modem mounting screw. Carefully remove modem card from PCI slot without excessive rocking motion.

Ensure tight connection when replacing modem cable into modem card.



## ALTERNATE CASH MECHANISM INSTALLATIONS

The Mars 2451 Bill Validator is factory installed, but you can replace it with any of the following options.

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### Mars VFM2-L2 Bill Validator

1. Before installing MARS dollar bill validator, take off cover by removing two screws holding it.
2. Set DIP switches as follows:

Switch #1	On	(Accepts \$1.00)
Switch #2	On	(Pulse pattern 50 ms On/300 ms Off)
Switch #3	Off	(Rejects \$5.00)
Switch #4	On	(Not Used)
Switch #5	Off	(Number of pulses/dollar-1)
Switch #6	Off	(Number of pulses/dollar-1)
Switch #7	Off	(Number of pulses/dollar-1)
Switch #8	Off	(Bill orientation-accepts in both directions)
3. Replace cover and secure into place with screws.
4. Locate 18-pin connector/jumper (part no. 5797-13606-00), supplied in cashbox. Plug connector into bottom of dollar bill validator through opening in cover.
5. Turn AC power OFF and open coin door.
6. **09-96026-33 Coin Door**  
Remove four (4) nuts holding top plate to coin door. Save nuts.  
Remove top plate  
Place finished dollar bill validator face down on coin door on four (4) pem studs.  
Place cable clamp on lower pem stud. Orient cable clamp "down."  
Replace and tighten four (4) nuts previously removed.
7. Plug male 9-pin connector from dollar bill acceptor into female 9-pin connector in VGM (located next to coin door).
1. Set DIP Switches 1 and 6 to ON.
9. Close coin door. Turn AC power ON. Insert several dollar bills to confirm they are accepted and proper credits given.
10. Open coin door and ensure validator aligns with bill chute and bills do not remain in validator.

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### Tekbilt NV110-GA1 Bill Validator

1. Before installing TEKBILT dollar bill validator, set DIP switches (located on top of validator) as follows:

MODE	DIP SWITCH NUMBERS			
	1	2	3	4
1 credit per acceptance	Off	Off	Off	----
Slow pulse 50msL/300msH	----	----	----	On

2. TEKBILT requires separate adapter plate (adapter supplied with VGM). Mount adapter plate of dollar bill validator using four 6-32 nuts.
3. Turn AC power OFF to VGM and open coin door.
4. **09-96026-33 Coin Door**
  - A. Remove four (4) nuts holding top plate to coin door. Save nuts.
  - B. Remove top plate.
  - C. Place finished dollar bill validator face down on coin door on four pem studs.
  - D. Place cable clamp on lower pem stud. Orient cable clamp "down."
  - E. Replace and tighten four (4) nuts previously removed.

*continued*

5. Plug male 9-pin connector from dollar bill acceptor into female 9-pin connector in VGM (located next to coin door).
6. Set DIP Switches 1 and 6 to ON.
7. Close coin door. Turn AC power ON. Insert several dollar bills to confirm they are accepted and give proper credits. There should be one pulse per dollar on center coin chute.  
Note: If credits do not correctly register, swap red and white wires on validator side.
8. Open coin door and ensure that validator aligns with bill chute and bills do not remain in validator.

## Dixie-Narco Up-Stacker

You can install a DBV with a vertical dollar bill stacker into your VGM. The following information instructs you as to which stacker you can use and how to install it.

You must perform installation with AC power OFF and power switch in OFF position.

1. Install only the following vendor and model numbers:

- A. Dixie-Narco USA-15 (12-pin connector)  
Model: 88X5003  
Software: 57X300-20
- B. Williams Part Number 09-47000  
Dixie-Narco (9-pin connector)  
Model: 88X5014 (DBA1US)  
Software: 57X300-20

2. DIP Switch Settings

Williams 09-47000	Dixie-Narco USA-15
Switch #1: Open	Switch #1: Open
Switch #2: Closed	Switch #2: Open
Switch #3: Open	Switch #3: Open
Switch #4: Open	Switch #4: Open

3. Installation (to coin door):

- A. Remove four (4) nuts holding bottom plate to coin door. Save nuts.
- B. Remove bottom plate.
- C. Remove (2) nuts holding upper plate on. Save nuts.
- D. Remove one spacer, each from the two top pem studs.
- E. Attach these spacers to the bottom pem studs.
- F. Place item 3 face down on coin door on the four (4) pem studs.
- G. Place ground (green) wire, coming from the upstacker, on pem stud.
- H. Secure item 3 with the four (4) nuts (removed previously in step A) on pem studs.

4. Cable Connection:

- A. Dixie-Narco Stacker w/9-pin Connector (Williams P/M 09-47000)

Plug 9-pin connector from stacker into 9-pin female connector inside cabinet.

- B. Dixie-Narco Stacker w/12-pin Connector

1. Take jumper cable H-17019 (9-pin to 12-pin) supplied with VGM and mate 9-pin connector with 9-pin plug in cabinet, located by coin door opening.
2. Take 12-pin from jumper cable and mate with 12-pin connector on stacker cable.
3. Dress cable from stacker away from cash box area.