

**Bulletin No. GPB3T05B**

**Installation of Protocol Adapter Assembly for Aurora Gaming**

**Purpose**

This bulletin contains instructions to prepare and install a Protocol Adapter Assembly (PAA), for use with the Aurora Currency Validator, into a Host gaming machine. The PAA allows Aurora to communicate with the Host controller, and it provides the cables that connect Aurora to the Host gaming machine.

**Scope**

This bulletin applies to customers who replace their GI or GII Currency Validator with an Aurora Currency Validator and require a PAA. To determine the appropriate PAA and Currency Validator protocol requirements, refer to **Table 1**.



**Note:** If the Host controller uses V1 RS-232 or V2.2 RS-232 protocols, the Protocol Adapter Assembly is not required. For these protocols, the cable from the Host controller can be connected to the Currency Validator's RS-232 connector. For RS-232 connector pin-signal assignments, refer to **Figure 8**.

**Table 1. Aurora Protocol Summary Chart**

Protocol of Host Machine	Protocol Adapter Assembly – Part Number Required	Currency Validator – Protocol Required
VFM	GPT PN 350P0002-1	V2.2 RS-232
IGT®	GPT PN 350P0002-2	V2.2 RS-232
Bally® VFM	GPT PN 350P0002-3	V2.2 RS-232
V1 RS-232	PAA is not required.	V1 RS-232
V2.2 RS-232	PAA is not required.	V2.2 RS-232

**Required Items**

The items required for this procedure include:

1. Program Specification Sheet for your Currency Validator.
2. Protocol Adapter Assembly:



**Note:** Only one of the following items is required. To determine the proper Protocol Adapter Assembly for your unit, refer to Program Specification Sheet.

- VFM Protocol Adapter Assembly (GPT PN **350P0002-1**),
  - IGT® Protocol Adapter (GPT PN **350P0002-2**), or
  - Bally® VFM Protocol Adapter Assembly (GPT PN **350P0002-3**).
3. Lockit Strain Relief (GPT PN **300EI127**) (tie-wrapped to cable)
  4. **Installation Guide for Aurora Currency Validators**, publication number G3M2087 (GPT PN **899A0013**).
  5. Extension Cable for new installations only (not supplied – contact GPT Sales Department for the appropriate cable for your installation).



**Notes:**

1. Verify that Part Number/Protocol ID label on cover of Protocol Adapter Assembly identifies the appropriate protocol (i.e., VFM, IGT or Bally VFM) of your Host machine (Figure 1).
2. The Currency Denominations label, which specifies DIP-Switch settings of currency denominations for Aurora Currency Validator, may appear on cover. The setting on label must be used instead of values in Program Specification Sheet. This label appears for certain programs ending with **-1** (e.g., 350PD013-1) for the last digit on Microprocessor Label (Figure 5).



**Figure 1. Protocol Adapter Assembly – Label Identification**

## Protocol Adaptor Assembly Procedure

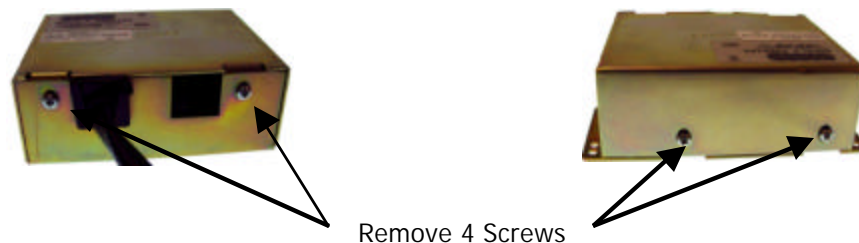
To prepare and install a Protocol Adapter Assembly into a Host machine, follow these steps:



### WARNINGS:

1. PERSONAL INJURY AND/OR DAMAGE TO EQUIPMENT MAY RESULT BY APPLYING INCORRECT VOLTAGE TO THE CURRENCY VALIDATOR. ONLY APPLY VOLTAGE AS SPECIFIED ON THE **CE/WARNING** LABEL FOUND ON THE BOTTOM ON THE CURRENCY VALIDATOR.
2. REDUCE AND/OR PREVENT RISK OF ELECTRIC SHOCK. DO NOT CONNECT POWER TO THE CURRENCY VALIDATOR IN DAMP OR WET ENVIRONMENT.
3. AVOID DANGEROUS SITUATIONS. DO NOT INTRODUCE FLAMMABLE LIQUIDS OR GASES TO MAINTENANCE WORK AREA WHEN CONNECTING OR DISCONNECTING POWER TO CURRENCY VALIDATOR.

1. Disconnect power to Host machine.
2. Disconnect all cables from GI or GII Currency Validator.
3. Remove Currency Validator from Host machine.
4. Remove and retain four screws that secure cover to Protocol Adapter Assembly, and remove cover by lifting it (**Figure 2**).

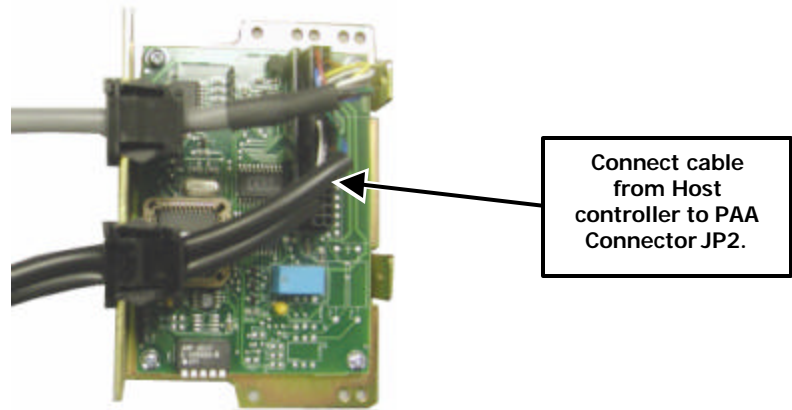


**Figure 2. Protocol Adapter Assembly – Removal of Cover**



**CAUTION:** DO NOT hot plug 24-pin connector from Host controller to 24-pin connector in Protocol Adapter Assembly. Ensure power to Host machine is OFF.

5. Connect 24-pin interface cable (removed in **Step 2**) from Host controller to 24-pin Connector JP2 in PAA (**Figure 3**). For PAA Connector JP2 pin-signal assignments, refer to **Table 1**.



**Figure 3. Protocol Adapter Assembly – Installation of 24-Pin Interface Cable**

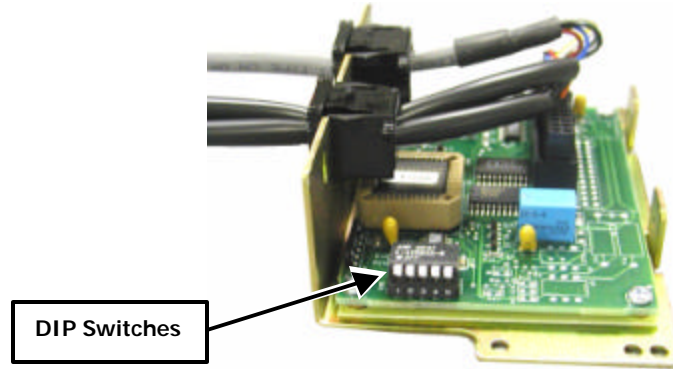
**Table 1. Pin Assignments for PAA 350P0002-1 through 350P0002-3**

Connector JP2 – Pin No.	Signal Name	Connector JP2 – Pin No.	Signal Name
1	Enable COM	13	RS-232 GND
2	Enable IN	14	Account Number
3	LED PWR-Anode	15	Accept Enable
4	Credit Relay	16	Send
5	Reset	17	\$1 Credit
6	Credit Relay	18	Serial/Pulse SEL
7	Stack	19	DATA
8	Credit COM	20	Out-of -Service
9	RS-232 RXD	21	INTERRUPT
10	Credit Out	22	+24 VDC IN
11	RS-232 TXD	23	GND
12	Program	24	POWER GND

- On PAA, set DIP Switches (**Figure 4**) to activate required functions indicated in **Table 3** for your unit.



**Note:** On DIP-Switches 1 through 5, the **ON** (closed ) setting is toward the number (down), and the **OFF** (open) setting is away from the number (up).



**Figure 4. Protocol Adapter Assembly — Location of DIP Switches**

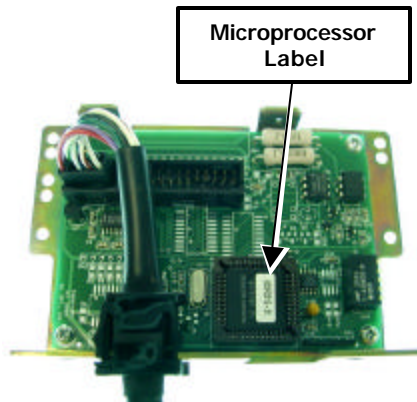
**Table 3. DIP-Switch Settings for Protocol Adapter Assembly**

DIP-Switch Number	OFF FUNCTION (DEFAULT)	ON FUNCTION
<b>Note:</b> Use these settings for VFM Protocol Adapter Assembly (350P0002-1) only:		
1	Fast credit pulse width: 50/50 ms	Slow credit pulse width: 300/60 ms
2	Stacker is required for operation.	Stacker is not required for operation.
3	Will send stacker message.	Will not send stacker message.
4, 5	No function.	No function.
<b>Note:</b> Use these settings for IGT <sup>®</sup> Protocol Adapter Assembly (350P0002-2) only:		
1	IGT 2.5 (IDO 23) protocol.	IGT Smoke (IDO 22) protocol.
2	For use with 60 Hz AC power supply.	For use with 50 Hz AC power supply.
3, 4, 5	No function.	No function.

**Table 3. DIP-Switch Settings for Protocol Adapter Assembly**

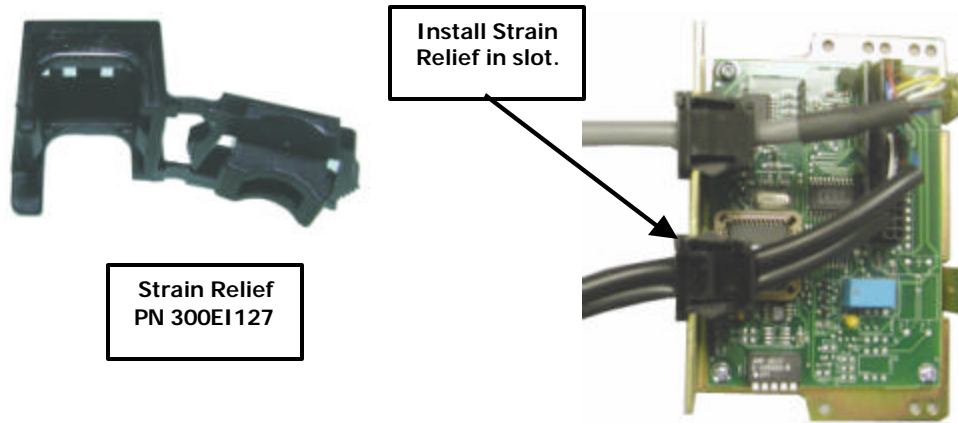
DIP-Switch Number	OFF FUNCTION (DEFAULT)	ON FUNCTION
<b>Note:</b> Use these settings for Bally® Protocol Adapter Assembly (350P0002-3) only:		
1	No function.	No function.
2	Stacker is required for operation.	Stacker is not required for operation.
3, 4, 5	No function.	No function.

7. Examine program number on Microprocessor Label (**Figure 5**), and then make the necessary settings to DIP Switches on Aurora Currency Validator as indicated in Program Specification Sheet.



**Figure 5. Location of Microprocessor Label**

8. Remove strain relief, which is tie-wrapped to cable, and then place it over 24-pin interface cable. Adjust cable length to allow strain relief to be fully seated in slot of PAA (**Figure 6**).

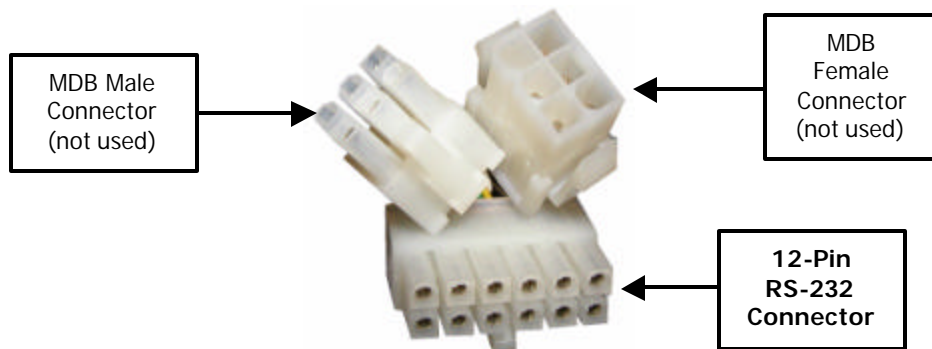


**Figure 6. Installation of Strain Relief**

9. Re-attach and secure cover to PAA with four screws retained in **Step 4**. Preparation of PAA is now completed.
10. Install and secure PAA into Host machine.
11. Install the Aurora Currency Validator into Host machine (refer to **Installation Guide for Aurora Currency Validators**).
12. Connect 12-Pin RS-232 Connector from PAA to 12-Pin RS-232 Connector (**Figure 7**) on Aurora Currency Validator. For RS-232 connector pin-signal assignments, refer to **Table 4**.



**Note:** Aurora's Main Cable Assembly has one male and one female 6-Pin MDB connector, and one 12-Pin RS-232 connector. Only the 12-Pin RS-232 connector is used for this hookup.



**Figure 7. Aurora Main Cable Connectors**

Table 4. Pin Assignments for RS-232 Connector

GND RETURN	BRN	7	1	WHT/GRN	RS-232 GND
RS-232 TXD	WHT/RED	8	2	WHT/BLU	RS 232-RXD
SCL	WHT/YEL	9	3	VIO	VCC
SDA	WHT/ORN	10	4	RED	/BK_EN
VDC IN	WHT	11	5	GRY	GND
GND IN	BLK	12	6	BLU	GND SENSE

Wire-Side View