

Bulletin No. GPB2T01D

Retrofit Replacement of GII with ARGUS Currency Validator

Purpose

This bulletin contains instructions to configure the Host machine for use with the ARGUS Currency Validator.

Scope

This bulletin applies to customers who replace their GII Currency Validator with an ARGUS Currency Validator and require either a Protocol Adapter Assembly (PAA) or a RS-232 Retrofit Assembly. The user will remove the Generation II (GII) Currency Validator and will prepare the appropriate Adapter Assembly for installation into the Host machine. For Host controllers that do not use V2.2 protocol, a PAA is required for installation. Otherwise, a RS-232 Retrofit Assembly is required for Host machines that use V2.2 protocol only.

Required Items

The items required for this procedure are:

1. Program Specification Sheet for your unit.
2. Adapter Assemblies (**Figure 1**):



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

- VFM Protocol Adapter Assembly (*GPT* PN **300P0001-1**),
 - IGT[®] Protocol Adapter Assembly (*GPT* PN **300P0001-2**),
 - Bally[®] Protocol Adapter Assembly (*GPT* PN **300P0001-3**), or
 - 24V High-Level Protocol Adapter Assembly (*GPT* PN **300P0003-1**).
 - ARGUS RS-232 Retrofit Assembly (*GPT* PN **300EX008**)
3. Lockit Strain Relief (*GPT* PN **300E1127**) (tie-wrapped to cable)
 4. No. 1 Phillips-head Screwdriver.
 5. **Installation Guide for ARGUS Currency Validators**, publication number G3M0082 (*GPT* PN **899A0012**).



PAA for use with Non-V2.2 Host Protocols



RS-232 Retrofit for use with Host V2.2 Protocol Only

Figure 1. Adapter Assemblies for Retrofits



Notes:

1. Verify that Part Number/Protocol ID label on cover of PAA identifies appropriate protocol (i.e., VFM, IGT® or Bally®) for your Host machine (Figure 2).
2. The Currency Denominations label, which specifies DIP-Switch settings of currency denominations for ARGUS 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., 300PD013-1) for the last digit on Microprocessor Label (Figure 6).



Figure 2. Protocol Adapter Assembly – Label Identification

Procedure to Install a Protocol Adaptor Assembly

If the Host controller requires a PAA, then perform the following 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 **WARNING** LABEL ON THE BOTTOM OF 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 24-pin interface cable from GII Currency Validator.
3. Remove GII Currency Validator from Host machine.
4. Remove and retain four screws that secure cover to PAA; remove cover by lifting it (**Figure 3**).

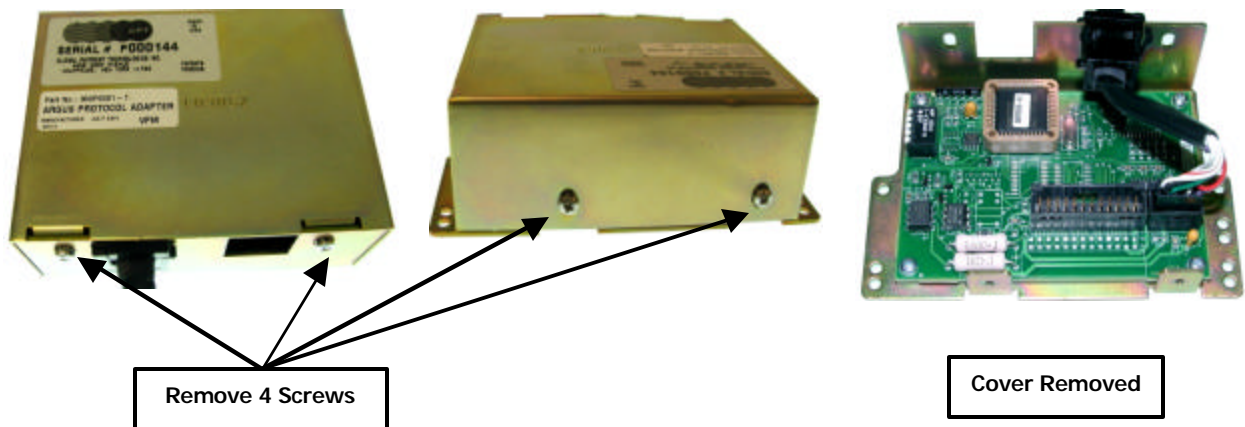


Figure 3. Protocol Adapter Assembly (Typical)



CAUTION: DO NOT hot plug 24-pin connector from Host controller to 24-pin Connector JP2 in PAA. 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 4**). For PAA Connector JP2 pin assignments, refer to **Table 1**.

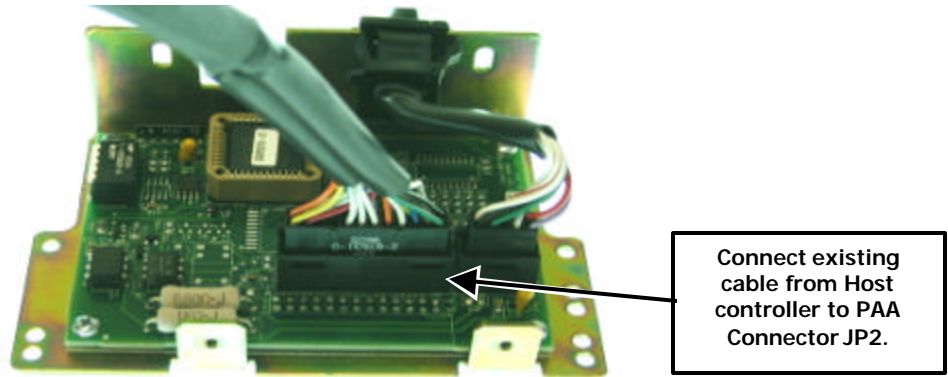


Figure 4. Protocol Adapter Assembly – Installation of 24-Pin Interface Cable

Table 1. Pin Assignments for PAA 300P0001-1 through 300P0001-3

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

6. On PAA, set DIP Switches (**Figure 5**) to activate required functions indicated in **Table 2** for your unit.



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

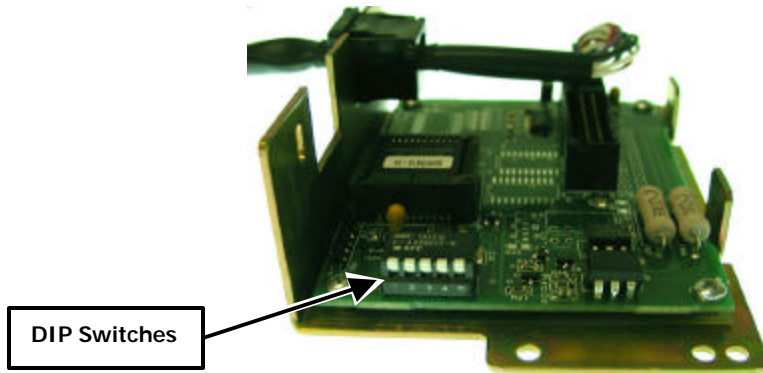


Figure 5. Protocol Adapter Assembly — Location of DIP Switches

Table 2. DIP-Switch Settings for Protocol Adapter Assembly

DIP-Switch Number	OFF FUNCTION (DEFAULT)	ON FUNCTION
Note: Use these settings for VFM PAA (300P0001-1) 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.
Note: Use these settings for IGT [®] PAA (300P0001-2) 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 2. DIP-Switch Settings for Protocol Adapter Assembly

DIP-Switch Number	OFF FUNCTION (DEFAULT)	ON FUNCTION
Note: Use these settings for Bally® PAA (300P0001-3) 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.
Note: Use these settings for 24V High-Level PAA (300P0003-1) only:		
1	Stacker is required for operation.	Stacker is not required for operation.
2	Set Logic level on the Enable Line to low , to activate the unit.	Set Logic level on the Enable Line to high , to activate the unit.
3	Fast-credit pulse width: 50/50 ms	Slow-credit pulse width: 300/60 ms
4 and 5	Defines credit multiplier/divider values. For switch settings, refer to Custom Application Information section in Program Specification Sheet for your unit.	

7. Examine program number on Microprocessor Label (**Figure 6**), and then make the necessary settings to DIP Switches on ARGUS Currency Validator as indicated in Program Specification Sheet for your unit.

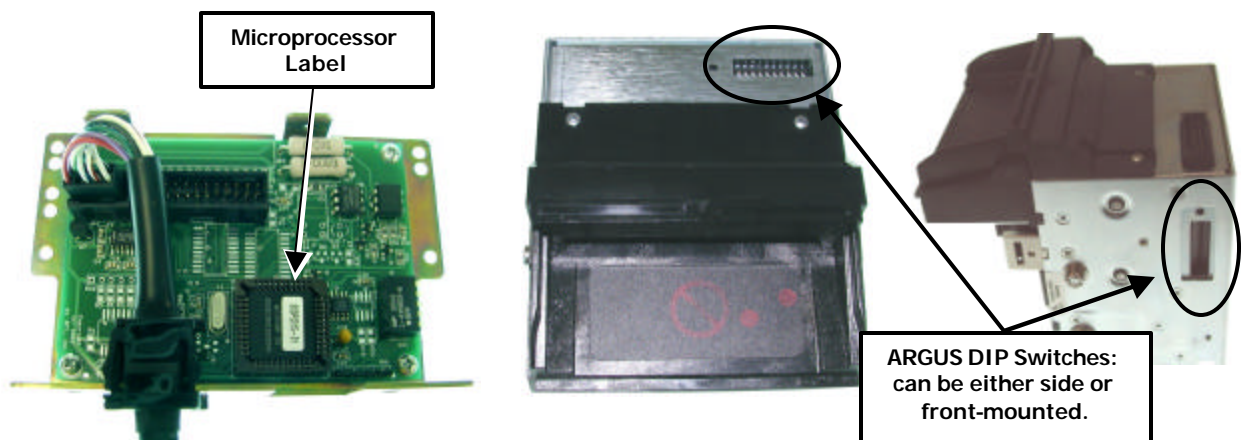


Figure 6. Microprocessor Label and DIP-Switch Locations

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 7**).



Figure 7. Installation of Strain Relief

9. Re-attach and secure cover to PAA with four screws retained in **Step 4** (**Figure 8**). For 22-pin connector pin assignments, refer to **Table 3**. Preparation of PAA is now completed.

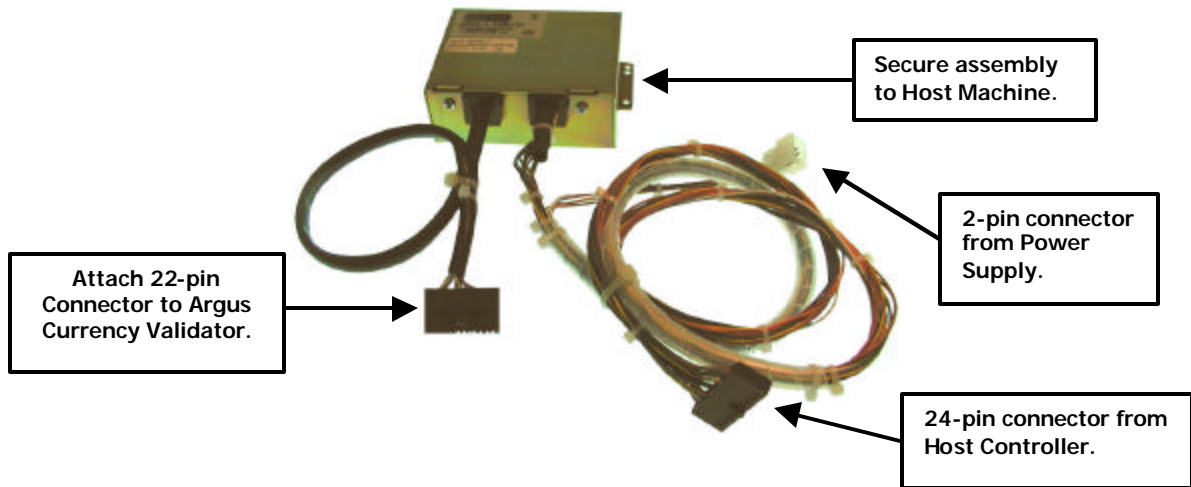
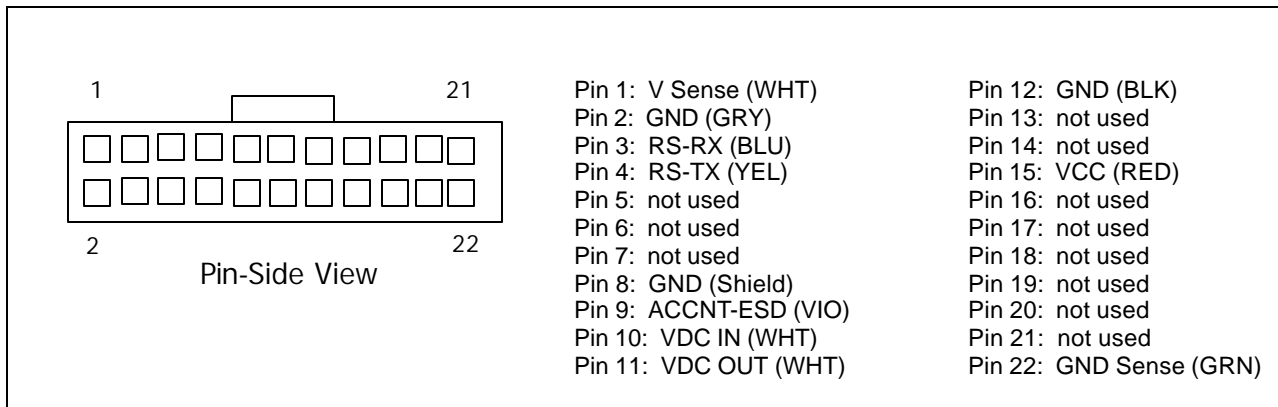


Figure 8. Protocol Adapter Assembly – Ready for Installation

Table 3. Pin Assignments for 22-Pin Connector



10. Install and secure PAA into Host machine.
11. The PAA is ready for communication with Host controller and can be connected to your ARGUS Currency Validator.
12. To install ARGUS Currency Validator, refer to **Installation Guide for ARGUS Currency Validators**.

Procedure to Install a RS-232 Retrofit Adaptor Assembly

To install the RS-232 Retrofit Adapter Assembly (**Figure 1**) into a Host machine that uses V2.2 Protocol, perform the following 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 **WARNING** LABEL ON THE BOTTOM OF 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 24-pin interface cable from GII Currency Validator.
3. Remove GII Currency Validator from Host machine.

4. While holding RS-232 Retrofit Adaptor Assembly with label facing you, remove two screws that secure cover to box; remove cover.

**Notes:**

1. One screw may be covered by the box's label. To locate screw to be removed, carefully peel corner of label to expose screw underneath (**Figure 9**). DO NOT remove label from box lid.
2. Retain screws for re-assembly of box.



Figure 9. Hidden Screw

5. Remove PCB from box (**Figure 10**).

**CAUTIONS:**

1. DO NOT incorrectly install 24-pin cable from Host controller. Ensure that connector is properly oriented with regard to its key-slot.
 2. DO NOT forcibly push/pull 24-pin cable since this can damage junction pins.
 3. DO NOT bend junction pins of 24-pin cable; bent or damaged pins can disable the Currency Validator.
6. Connect 24-pin cable from Host controller to 24-pin connector on PCB (**Figure 10**). For 24-pin connector pin assignments, refer to **Table 4**.

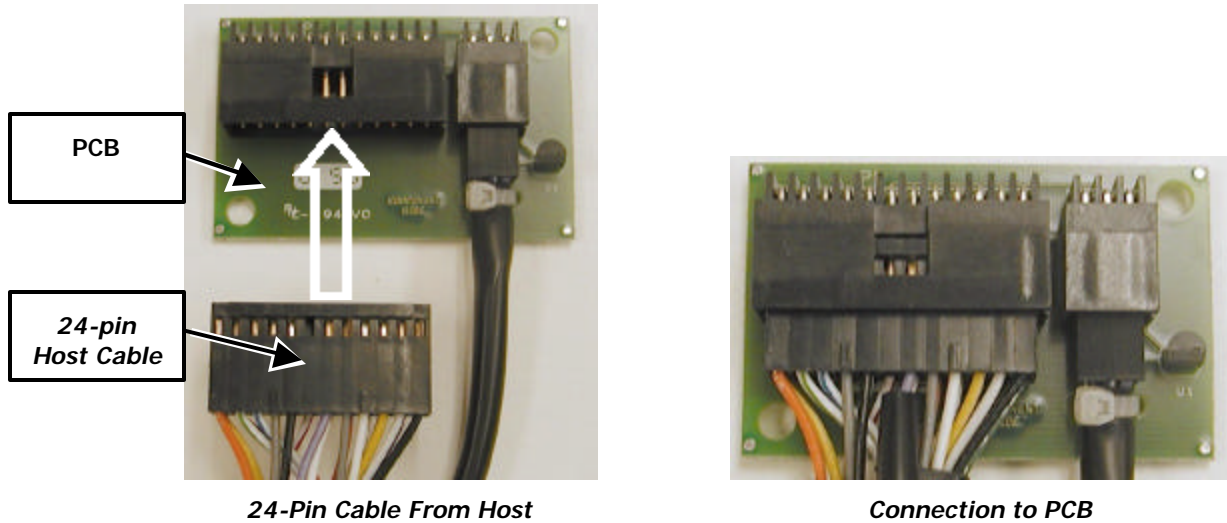


Figure 10. 24-Pin Connector Hookup to PCB

Table 4. Pin Assignments for 24-Pin Connector

<p>Pin-Side View</p>	<p>Pin 1: Enable COM Pin 2: Enable IN Pin 3: LED PWR-Anode Pin 4: Credit Relay Pin 5: TTL TXD Pin 6: Credit Relay Pin 7: TTL RXD Pin 8: Credit COM Pin 9: RS-232 RXD Pin 10: Credit Out Pin 11: RS-232 TXD Pin 12: Program</p>	<p>Pin 13: RS-232 GND Pin 14: Account Number Pin 15: Accept Enable Pin 16: Send Pin 17: \$1 Credit Pin 18: Serial/Pulse SEL Pin 19: DATA Pin 20: Out-of-Service Pin 21: INTERRUPT Pin 22: +24 VDC IN Pin 23: GND Pin 24: POWER GND</p>
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7. Reinstall PCB into RS-232 Retrofit Adaptor Box, and then align screw holes on board with box base standoffs.



Note: Prior to reassembling box, ensure cables from PCB are routed through cutouts on bottom-side of RS-232 Retrofit Adaptor Box.

8. Re-attach and secure cover with two screws retained in **Step 4**.
9. To install ARGUS, refer to **Installation Guide for ARGUS Currency Validators**.