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Video-Level Adjustment for GII/GII+ Currency Validators

The purpose of the Video-Level Adjustment (VLA) is to test the optics' performance of the GII and GII+ Currency Validators; this test is also a procedure that optimizes the optics' performance. Using a VLA Card (or new VLA Paper) only, the technician can calibrate the optical sensing circuitry (i.e., optics, Digital-to-Analog, and Analog-to-Digital converters) to optimum levels. Measurements are taken 16 times (stepping action) and the average value is computed for each photo-element.

Scope

The VLA Procedure is one of the most important maintenance actions that can be performed on the GII or GII+ Currency Validators. This procedure is applicable to all GII and GII+ Currency Validators and it must be performed under the following conditions:

- After the Currency Validator is disassembled and reassembled.

- After the optics are cleaned.

- After a new program is loaded.

- Before the Functional Test (refer to the latest revision of *GPT's **GII Service Manual***, Pub. Number **G2M9003**, **subsection 5.2.2**)

- Before the Service Acceptance Test (refer to the latest revision of *GPT's **GII Service Manual***, Pub. Number **G2M9003**, **subsection 5.2.3.**) is performed.

Required Items

In this procedure, the original VLA Card or one of three new VLA Papers will be used in the Video-Level Adjustment procedure; the appropriate card or paper is shown on your Program Specification Sheet.

1. Applicable Program Specification Sheet.

   > **CAUTION:** ONLY USE the correct *card* or *paper* as indicated in your Program Specification Sheet. When doing a VLA, the use of the wrong *card* or *paper* can result in impaired the Currency Validator performance.

2. *New* 70-mm Paper (*GPT* PN 300EO005), used with GII+ CAN/BB Models

3. *New* 85-mm Paper (*GPT* PN 300EO019), used with GII+ SBB Models

4. *New* 66-mm Paper (*GPT* PN 300EO035), used with GII+ STD Models

5. *Original* Card (*GPT* PN 65902), still used with GII Models

6. Small DIP switch manipulator (e.g., a small, non-metallic, non-conductive stick-like item such as a toothpick or plastic tweezers).

Procedure

1. Power down the Currency Validator.

2. Set DIP-Switch 9 to the **on** position (**Figure 1**).

Notes:

1. Ensure that DIP Switches 7 and 8 are set to the **off** position (i.e., up and away from the numbers). Otherwise, the Currency Validator will enter the Download Mode.

2. DIP-Switch 9 is used for servicing the Currency Validator. All other DIP switches are set in accordance with the applicable Specification Program Sheet and SHOULD NOT be changed.

3. The DIP-switch setting shown in **Figure 1** does not represent any particular setup or application. Refer to your Program Specification Sheet to obtain the DIP-switch settings for your particular software configuration.

DIP-Switch 9 is set to the on **position.**

Figure 1. 10-Position DIP-Switch Package

3. Power up the Currency Validator.

4. Insert the Video-Level Adjustment Card.

CAUTION: DIP-Switch 9 must be set to the **off** position within 15 seconds of ejecting Video-Level Adjustment Card. Otherwise, the Currency Validator will begin the Memory Clear Routine. This routine will clear all custom-configuration data, which was stored in the Currency Validator's memory.

5. Set DIP-Switch 9 to the **off** position.

Note: With new software installed, the Video-Level Adjustment Card will move forward into the currency channel until the leading edge of the card activates the Rear Flag Sensor. The Card will then be moved back out of the channel, until it clears the main optical array. This movement process is repeated once. After the second entry is completed, the Video-Level Adjustment Card is stepped back out of the channel.

6. Power down the Currency Validator.

7. Return all DIP switches to their normal positions per your Program Specification Sheet.

8. Return the Currency Validator to service.