Pyramid Apex 7600 Serial Support for HD

1.3

2026/01/06

Version	Department	Date	Audience	Comments
1.0 Chris Ward	Technical Services	2023/04/24	Peer review	First Draft
1.1 Chris Ward		2023/04/26	Tech End User, Technical Services	Change motherboard support definitions
1.2 Chris Ward		2024/04/02	Tech End User, Technical Services	Add Configuration card for TTL RS232, in Low Security & 4 way-bill insertion
1.3 Chris Ward		2026/01/06	Tech End User, Technical Services	Remove mentions of “COM3 TTL” rework label requirement on EFCO. Rework complete, production models include rework

Overview:

Instructions to set up a Pyramid Apex 7600 bill validator in serial to work with HD PC games.

Requirements:

- Printed Configuration Card (included in a later page)
- Game Support:
  - Open Operator Menu →Terminal Config → Bill Type = **PYRMD APX SRL** (We must see this setting displayed in the Bill Type list to work with the *TTL RS232* solution that is described below)
- Motherboard support:
  - Advantech DPX-S440 and DPX-S450 with JAMMA adapter board part number 190088 that has COM10 installed. Jumpers must be moved on the motherboard (described later)
- Serial Cable part numbers: (Only one of the mentioned cables is needed. The recommendation is 530310 or 530311)
  - 530310 (8.5 feet) or 530311 (6 feet) - TTL RS232
  - 530009 - NISR TTL (600 baud serial) cable

Instruction: TTL RS232 interface method

1. Print the configuration card page included at the end of this document. When printing, in the computer's print page window, be sure to set "Page Scaling" to "None", "Custom 100%" or "Actual" in the printer setup (the 3 terms have a similar function). This is critical for the configuration card to print in the correct size for the Apex to read it. Carefully cut along the black line of the card that you need to use (TTL RS232 card for this section of the instruction). One is left blank for you to create your own. Section 1 [Interface Type] is the most important and section 4 [Bill to Enable] is the second most to be marked correctly.
2. Power OFF the bill validator. Make sure all Dip Switch positions are set to OFF.
3. Power ON the bill validator.

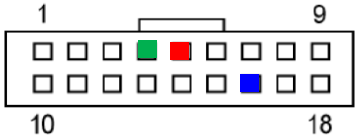
continued: TTL RS232 interface method

4. Press and hold the Diagnostic Pushbutton located at the left rear of the bill validator (looking from the rear of the bill validator). Hold the Diagnostic Pushbutton for at least ten (10) seconds, then release. The bezel lighting on the front of the validator will flash ten (10) times.
5. Insert the Configuration Card into the validator, arrows first, printed side face up. The validator will hold the Configuration Card for a second or two, then feed it back to you.
6. If the bezel lights are flashing rapidly, the validator has read the Configuration Card correctly. The configuration is now in permanent memory in the bill validator. The validator will reset itself by doing a stacker cycle.
    a. If the bill validator has not read the Configuration Card correctly, validator will quickly return the card and / or the bezel lights will flash slowly a certain number of times. The number of flashes will tell you which Section of the card it cannot read correctly. If this occurs, make sure that Section is filled in neatly. The bill validator will stay in the Configuration Mode until it has correctly read a Configuration Card.
7. Power OFF the Apex. **Power OFF the Motherboard.** Connect the serial cable:

Motherboard model:	Port:
Advantech DPX-S440 & DPX-S450	COM 10 (on the adapter board)
EFCO 8657	COM 3

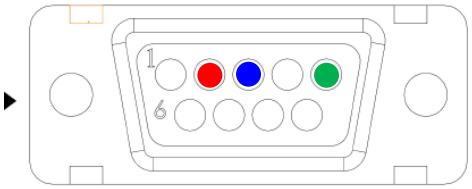
INSERTION SIDE

18-PIN



Pin#	Color
4	Green
5	Red
16	Blue

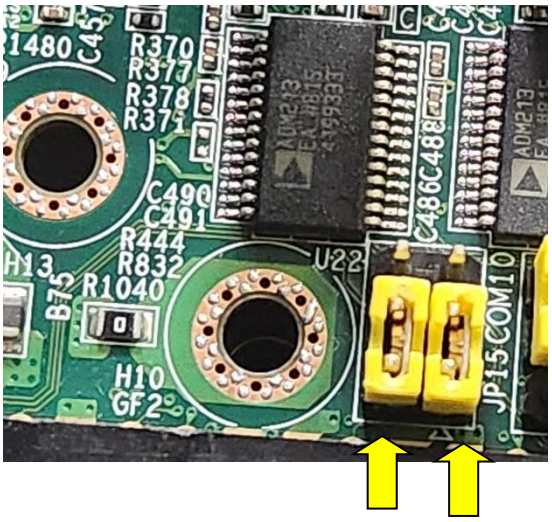
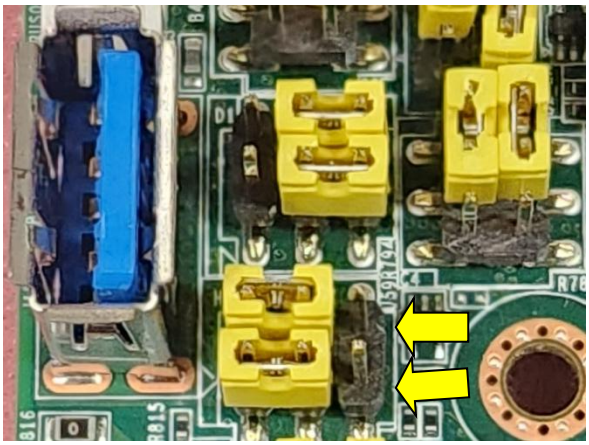
INSERTION SIDE



Pin#	Color
2	Red
3	Blue
5	Green

continued: TTL RS232 interface method

8. Advantech DPX-S440 & DPX-S450 Only (skip to step 9 on EFCO 8657). **Make sure the motherboard is powered OFF**. Verify each pair of jumpers are in correct position. Move if necessary.

DPX-S440: location JP15	DPX-S450: location JP13
	

9. With the game booted, open Operator Menu. Select TERMINAL CONFIG.

BILL TYPE	PYRMD APX SRL
BILL SIGNAL	TTL

10. You can now begin using the bill validator.

Alternate Instruction: TTL NISR (600 baud) interface method

Note: We encourage the use of the TTL RS232 interface method as a first choice. It is possible that a validator is already in the interface mode (for this section) if you are using pulse or your serial cable matches the pinout mentioned in this section.

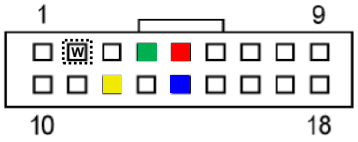
- The operation is the same as the last section. You will need to use the Configuration Card marked as “TTL NISR (600 baud)” for step# 5.

continued: TTL NISR (600 baud) interface method

- Serial Cable Diagram: match pin numbers by their color.

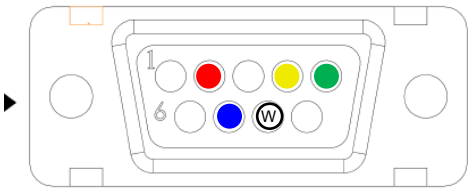
INSERTION SIDE

18-PIN



Pin#	Color
2	White
4	Green
5	Red
12	Yellow
14	Blue

INSERTION SIDE



Pin#	Color
2	Red
4	Yellow
5	Green
7	Blue
8	White

- Pick up at step 7 from previous section then skip step 8.

9. With the game booted, open Operator Menu. Select TERMINAL CONFIG

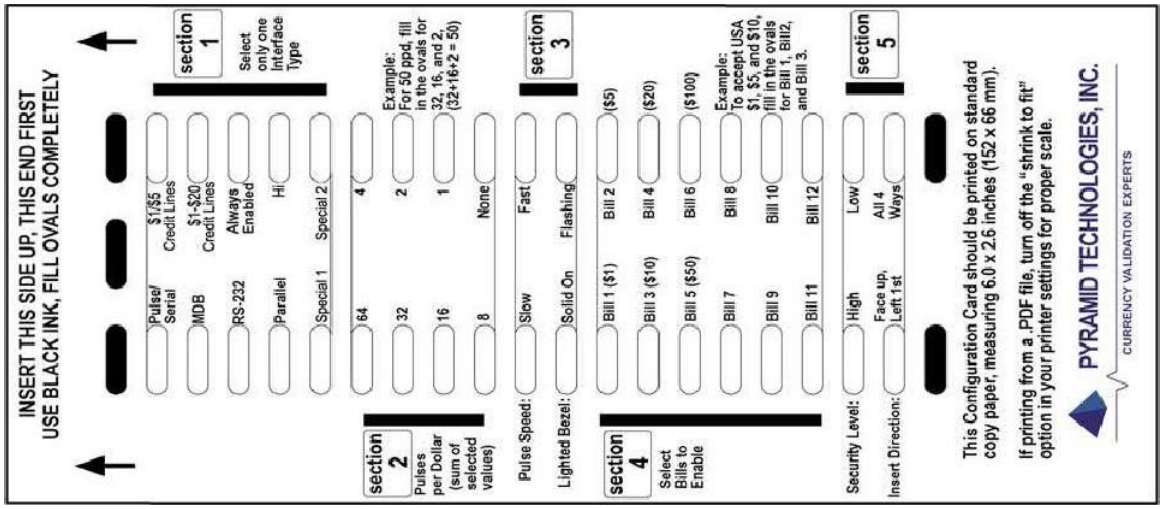
BILL TYPE	MARS or PYRAMID APEX
BILL SIGNAL	TTL

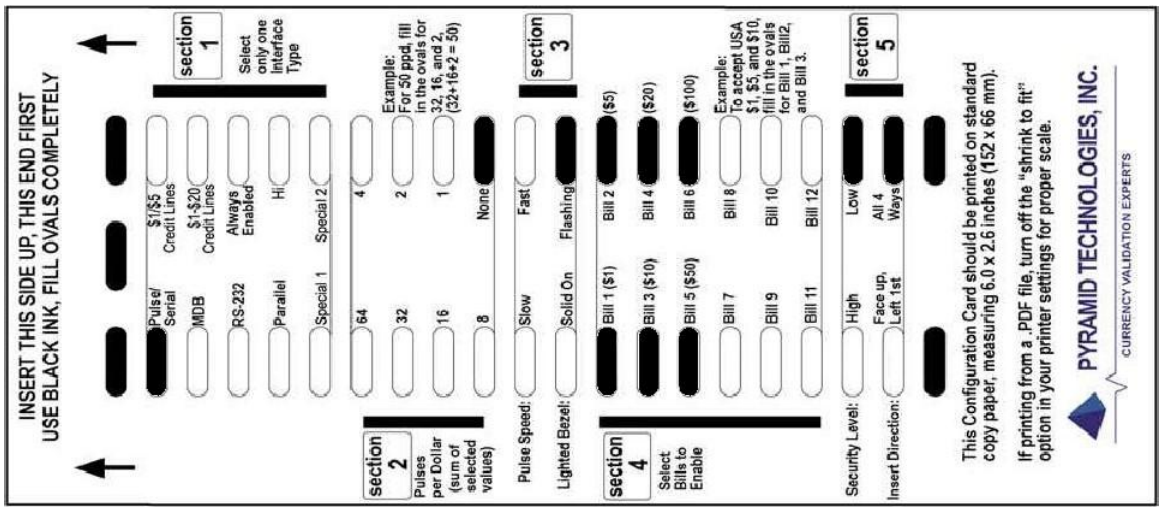
   - Note: it is possible to operate the MEI2800 bill validator with the serial cable, motherboard definitions, and game settings covered in this alternate section. Although the configuration card and the steps to use it are different. If you are using MARS and TTL settings with the MEI2800 validator on a MIG board, then it is possible that the validator is already in the correct “interface mode”.

10. You can now begin using the bill validator.

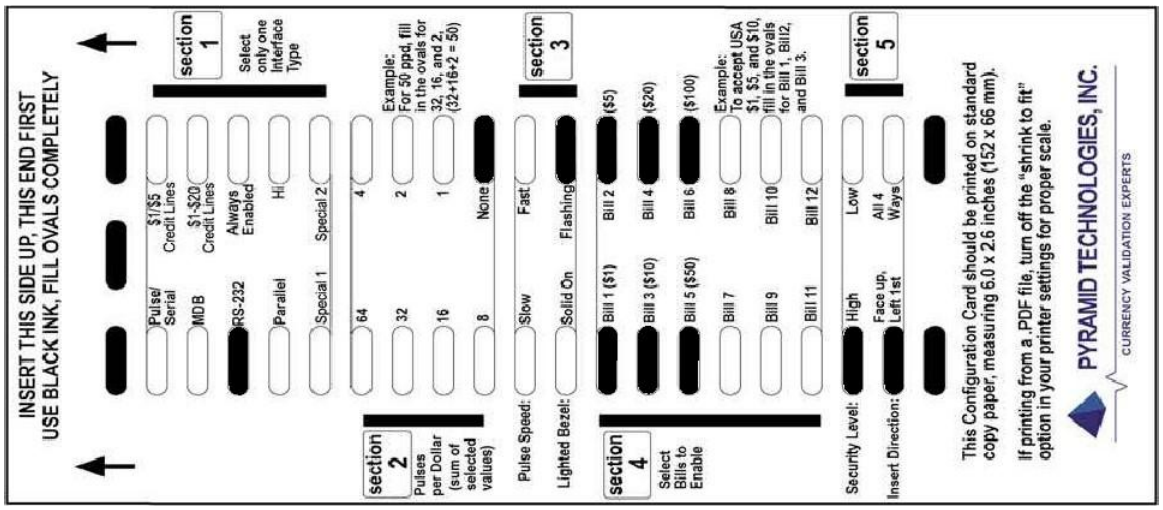
When printing, in the computer's print page window, be sure to set "Page Scaling" to "None", "Custom 100%" or "Actual" in the printer setup.

TTL NISR (600 baud)
Configuration Card.
• Low Security
• 4 way-bill insertion





TTL RS232
Configuration Card.
• High Security
• 1 way-bill insertion



TTL RS232
Configuration Card.
- Low Security
- 4 way-bill insertion