

PC10 Dual Monitor 4in1 Game Selector INSTALL GUIDE



Each PC10 Dual Selector includes the following items:

1. PC10 Dual Mon 4 Game Selector PWB
2. 2 power cables 16"
3. 40 conductor ribbon daisy chain cable
4. Mounting feet and screws

GAME SELECTOR OVERVIEW

The game selector is an intelligent controller utilizing up to four adapters. The power switching to each adapter uses highly efficient MOSFET's for quiet and reliable operation and does not have any mechanical wear issues like relays. There are four 10pin connectors for power distribution to each adapter board. Power status LED's for +5v & +12v power rails are provided. A single connector ribbon cable header handles all the control and video signal distribution to each of the adapters.

The selector board controls power switching and communicates with each adapter board on power up. It is necessary for the selector to know what types & how many adapters are plugged in. Since the ribbon cable is common to all adapter boards the power cables determine the order that each game board is powered on.

An example of this is if you had only two adapters installed and they were plugged into The Game1 and Game2 connectors, on power up Game1 would be powered first. When you cycled to the next game Game2 would be powered. Since the selector "knows" that there were no adapters plugged into Game3 & Game4 connectors, when you cycle to the next game it goes back to Game1.

Another example of this is if you plug your two adapters into Game2 and Game4 connectors on the selector board. On power up Game2 would be powered first. When you cycled to the next game Game4 would be powered. Since the selector "knows" that there were no adapters plugged into Game1 & Game3 connectors, when you cycle to the next game it goes back to Game2.

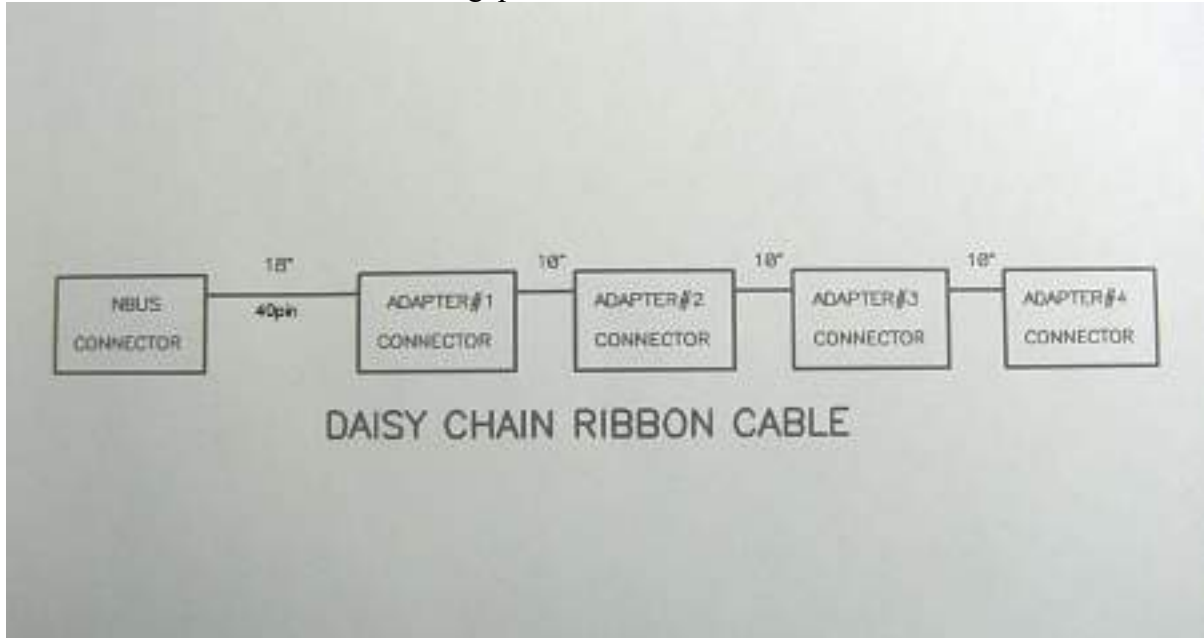
If the selector did not "know" which adapters were plugged in, then when you cycled to the next game and there was no adapter installed you would just get a blank screen until you cycled to one of the four connectors that had an adapter connected. Also on some adapters there are option jumpers that can tell the selector to do special operations.

DO NOT at any time plug or unplug ribbon or power cables when the power is on.

Each 4in1 Selector comes standard with two adapter power cables, additional cables can be purchased for \$5 each. The ribbon cable does support up to four adapters.

4 GAME SELECTOR CONNECTORS & CABLING

The supplied 40pin ribbon cable contains five connectors. This 4' cable has connectors spaced as described below. Please make sure that the selector is plugged into the first connector with strain relief and 18" gap as shown below.



If for some reason you need to add controls that your cabinet harness does not support, there are two 10 pin headers labeled Player1 & Player2 on the selector PWB as shown below.



Normally these headers are not installed from the factory, but can be requested free of charge by contacting support@vector-labs.com. The pinout of the connectors is defined below.

PLAYER1 CONNECTOR

1. PLAYER1 START
2. JOYSTICK UP
3. JOYSTICK DOWN
4. JOYSTICK LEFT
5. JOYSTICK RIGHT
6. BUTTON 1
7. BUTTON 2
8. BUTTON 3
9. BUTTON 4
10. GROUND

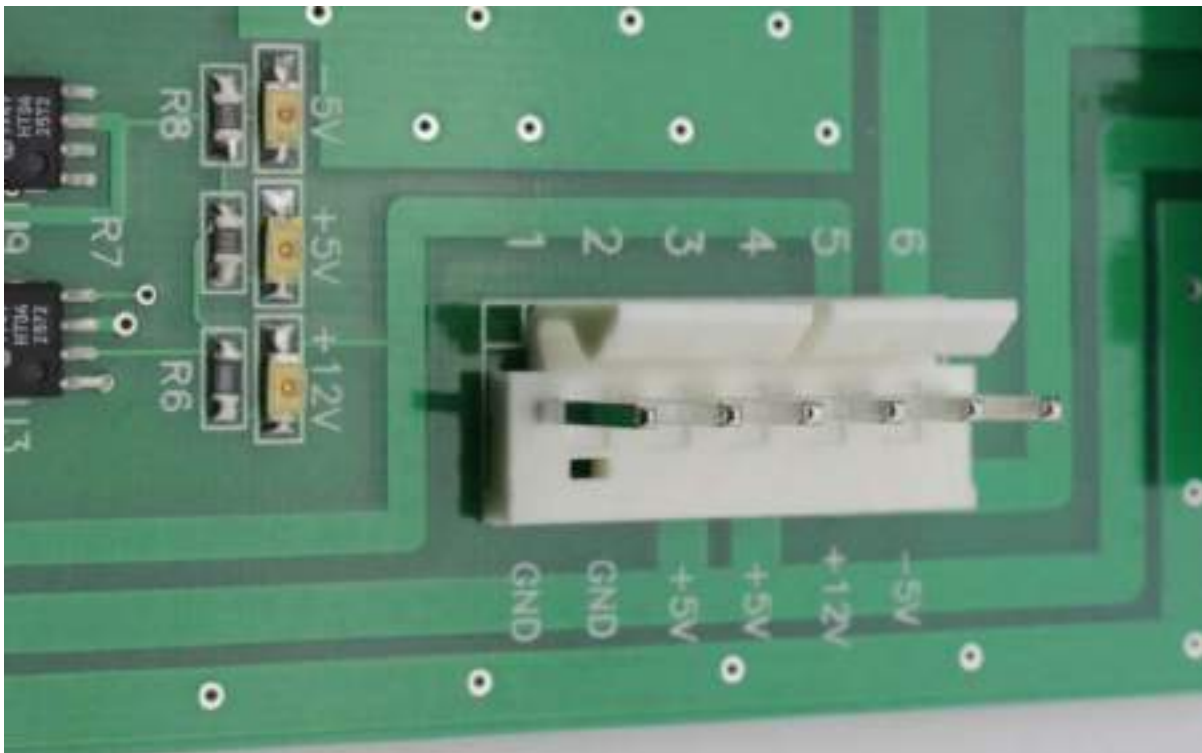
PLAYER2 CONNECTOR

1. PLAYER2 START
2. JOYSTICK UP
3. JOYSTICK DOWN
4. JOYSTICK LEFT
5. JOYSTICK RIGHT
6. BUTTON 1
7. BUTTON 2
8. BUTTON 3
9. BUTTON 4
10. GROUND

Also notice that there is a 500ma fuse in the picture, this fuse is for the selector microprocessor & standby power for the adapters. It is socketed and replaceable. One quick way to determine if the fuse is blown is that the Yellow standby LED's on the all of the connected adapters will not be lit.

The MONEXP1 & MONEXP2 connectors are used for an optional VGA conversion board to drive LCD displays. DO NOT use this connector for any other purpose as it may damage the selector.

There are ***three green LED's that monitor the +5v, +12V and -5V*** coming from the cabinet wiring harness and supply. However, if your cabinet harness for example only has +5V then only that LED will be lit. The other 6 pin white connector is for direct connection to a HAPP or PC type switching power supply. It is recommended that you use this direct connection to reduce the voltage drop due to long cabinet wire harness lengths. Those power supply options can be reviewed at the end of this guide.

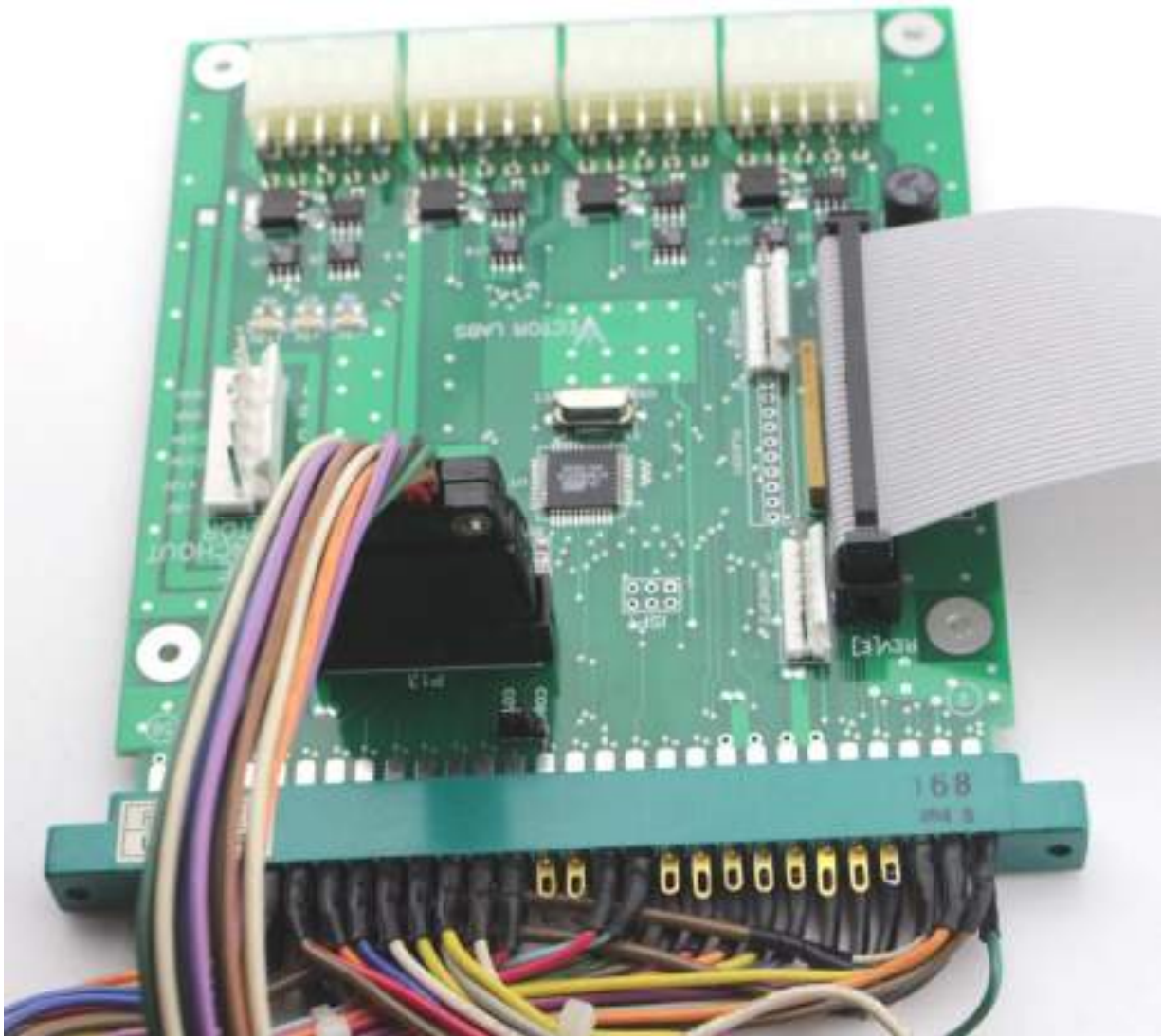


INSTALLING THE 4 GAME SELECTOR

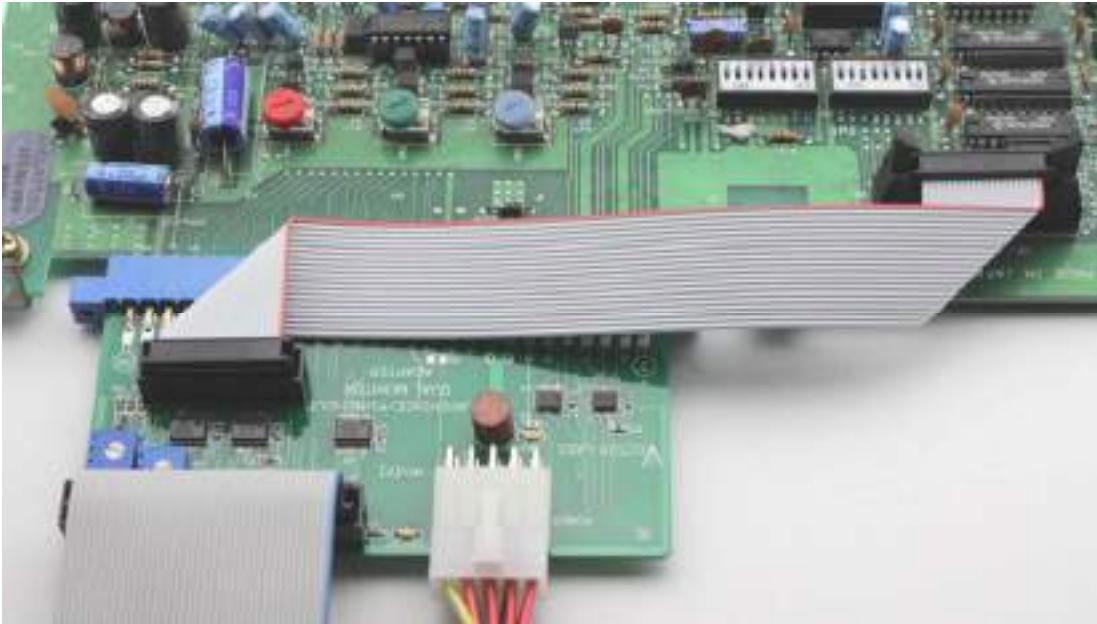
Attach cabinet harness card edge connectors to the selector, making sure to align the two “keys” into the slots on the board as shown below.



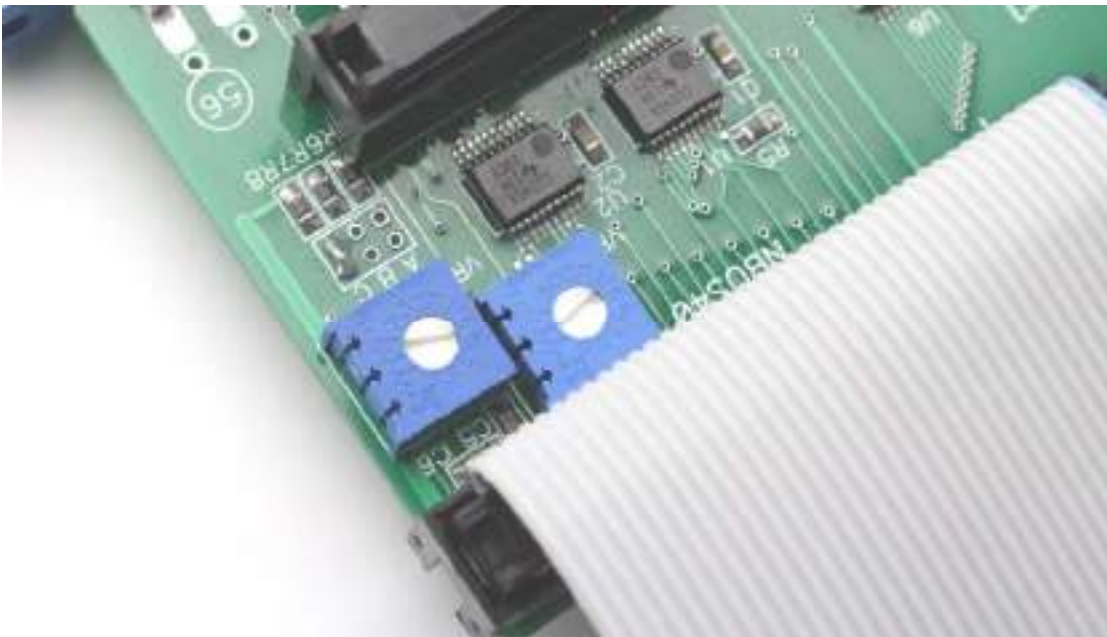
Attach ribbon cable connector that has a strain relief into the NBUS40 header and the black harness connector to P13 on the selector board as shown in the picture below.



Attach one of the 20 pin ribbon cables from the Playchoice Dual Monitor Adapter to the 20 pin connector on the PC10 game board. Now attach NBUS40 ribbon cable onto the 40 pin header on the adapter board and one of the two power cables into the white header marked power as shown below.



The PC10 dual adapter has separate volume control pots So that you can match volume levels with other adapters.



Take note of the following features of the adapters:

1. Standby LED: This is illuminated at all times when the ribbon cable is connected to the adapter and the game is powered up. It verifies that the bus isolation circuitry is operating normally
2. Individual green LED's monitor the fuse integrity at each power input to the adapter board. In this example the power inputs are +5V only. This LED will be illuminated when the adapter is activated by the selector board. If any of the LED's are not illuminated then its associated fuse has been blown due to an over current condition. The fuses are not resettable but can be unplugged and replaced.
3. Individual fuses for each power rail can be replaced when a critical over-current condition error has occurred.

The values are as follows:

+5v ---- 6.5A

SPECIAL CONTROL PANEL SEQUENCES

You can cycle through the four boards by holding down the Game Select button then pressing the Player 1 A button. To add credits if your board does not support free play hold down Game Select then Player1 joystick Up or Down.

POWER SUPPLY CONSIDERATIONS

The power supplies contained in classic arcade games in general are over 25years old, some may have "drifted" out of spec on the +5v power rails. It may be necessary to replace these aging power supplies with something newer and more stable. We recommend that you perform the following test to ensure reliable & trouble free operation of your arcade game & 4 game selector. It will require an accurate digital voltmeter.

Power up your game and take note of which adapter has its green LED's lit. Take your volt meter and probe the two corner pins of one of the 20pin IC's on the game PCB as shown in the picture on the next page.



THE VOLTAGE READING SHOULD BE NO LOWER THAT 4.75VDC.

If it is lower and your power supply does not have a way of adjusting the voltage to at least that minimum level then we strongly suggest you purchase a new switching power supply and install it like the one shown on the options page. TTL devices in these older arcade games require that the +5v line be in the range of 4.75v minimum to a maximum of 5.25v.

If you run your game PCB's at a voltage outside this spec it WILL cause intermittent failures at best, or not running the game at all as a worst case.

SELECTOR OPTIONAL ACCESSORIES

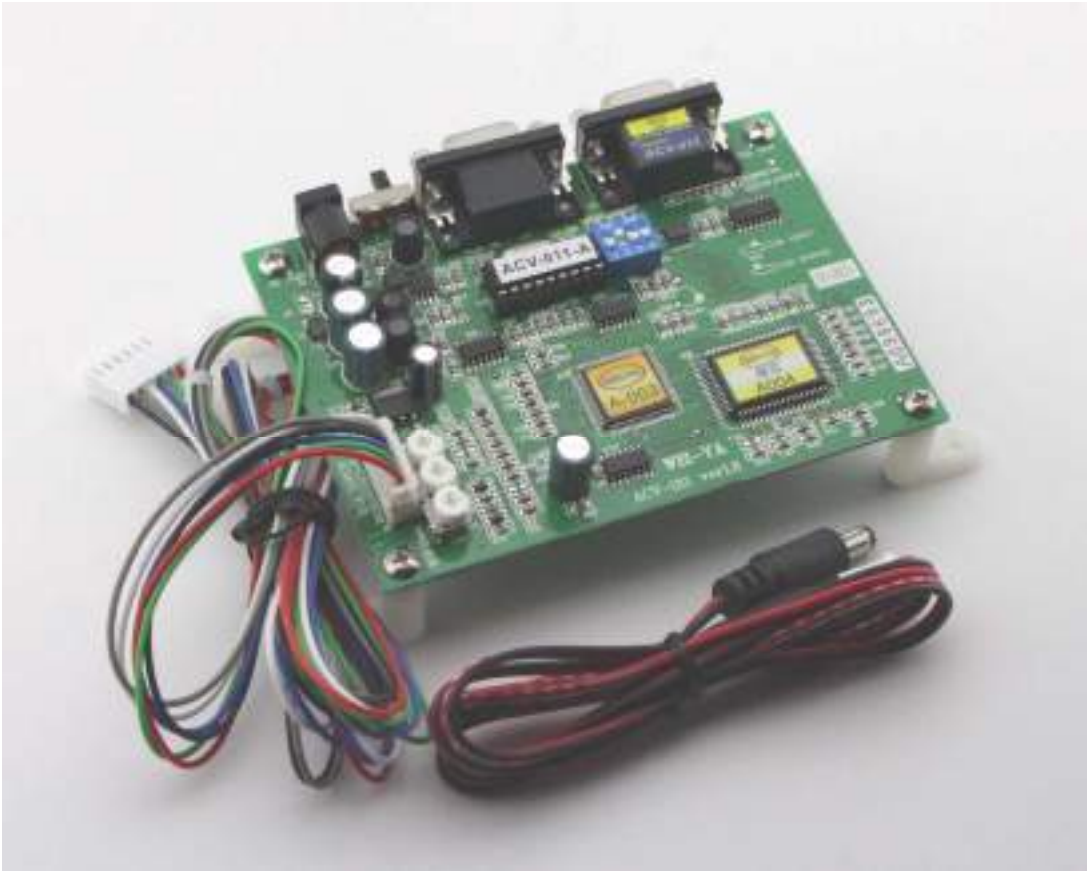
HAPP type switching power supply direct connect cable \$10



ATX PC switching power supply direct connect cable & PCB \$29



CONVERSION BOARD TO DRIVE VGA LCD DISPLAY \$99



IF YOU HAVE AND PROBLEMS OR SUGGESTIONS ON HOW TO IMPROVE THIS
INSTALL GUIDE PLEASE CONTACT SUPPORT@VECTOR-LABS.COM