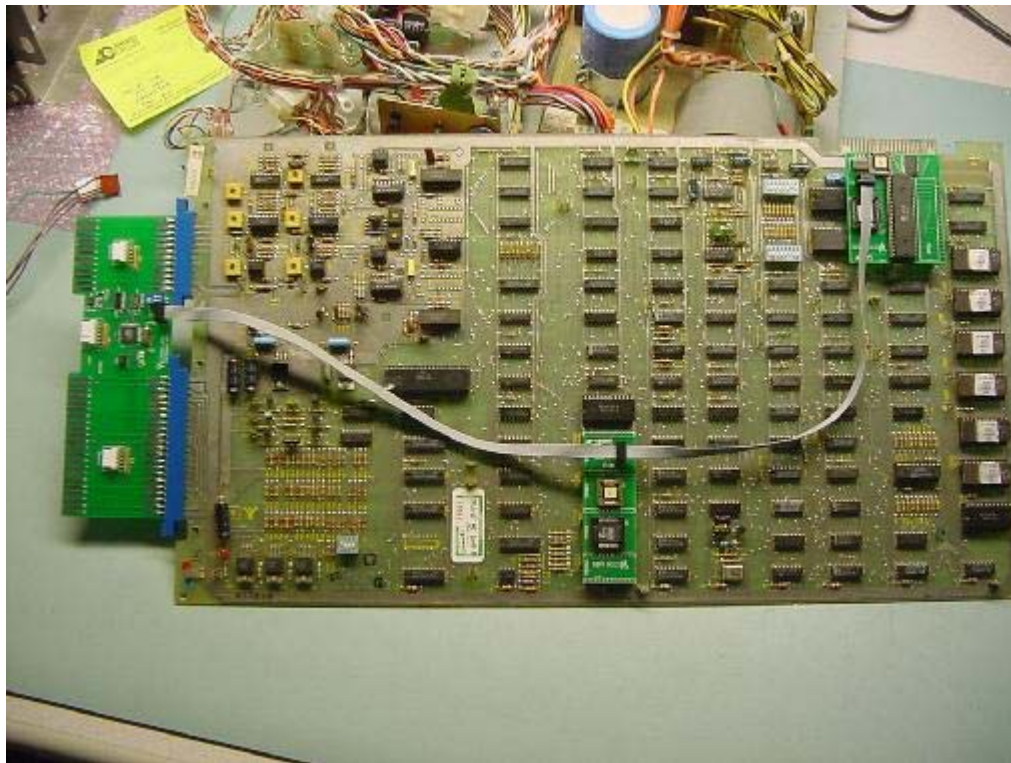


Black Widow, Gravitar, Lunar Battle MultiVector INSTALL GUIDE



The Black Widow 3 in1 MultiVector kit installed in the picture above.

There are 3 PWB's that come with the kit as pictured from left to right

1. Card Edge PWB
2. Vector ROM PWB
3. CPU PWB

Also a ribbon cable with 6 pin connectors that connect the 3 PWB's together

Some of the recommend tools for the install are pictured below.



IMPORTANT INFORMATION PLEASE READ AND UNDERSTAND FULLY

The MultiVector kit allows current users of Black Widow or Gravitator stand up arcade games to play Black Widow, Lunar Battle & Gravitator games on your original game PWB.

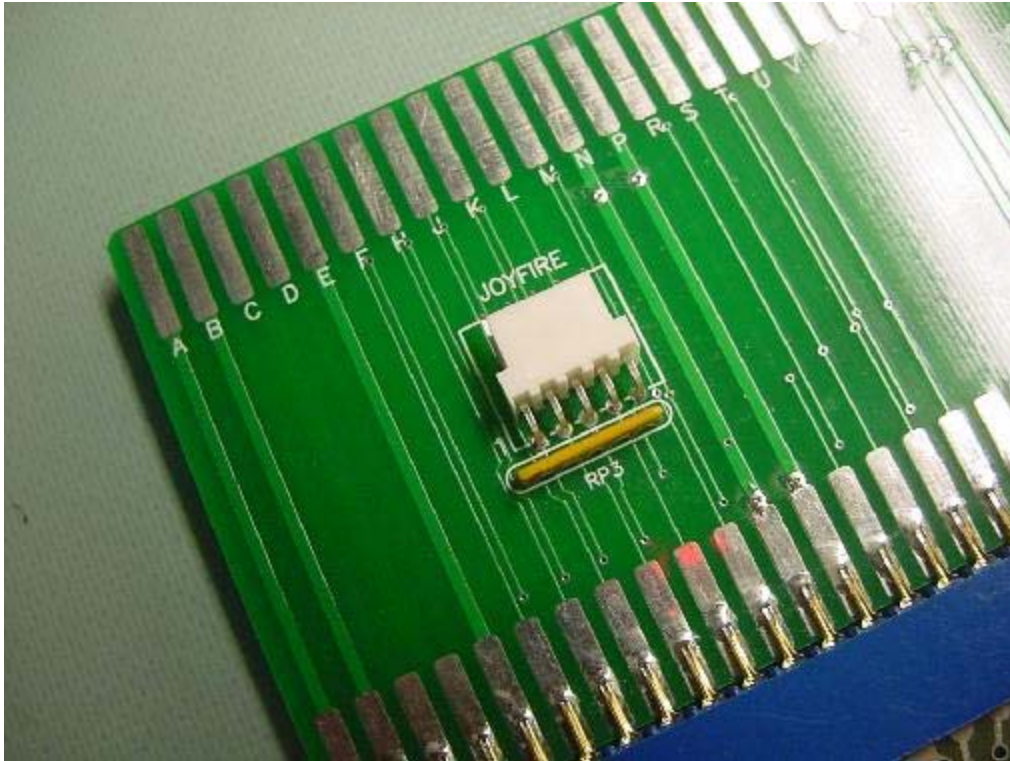
If you are installing the kit on a Gravitator then you will need to add 2 joysticks to your control panel in order to play Black Widow via the two 5 pin connectors labeled JOYMOVE & JOYFIRE. The pinouts are described below.

P4 - JOYFIRE

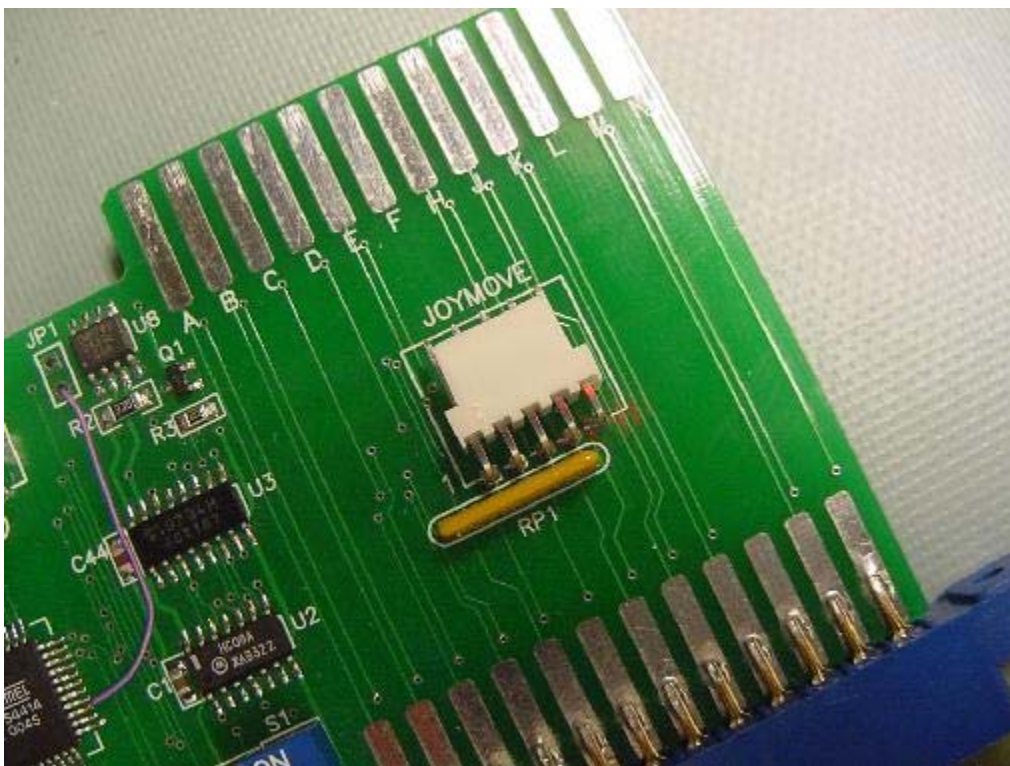
1. FIRE UP
2. FIRE DOWN
3. FIRE LEFT
4. FIRE RIGHT
5. GROUND

P1 - JOYMOVE

1. MOVE UP
2. MOVE DOWN
3. MOVE LEFT
4. MOVE RIGHT
5. GROUND



JOYFIRE CONNECTOR – NOTE PIN 1 ON LEFT SIDE



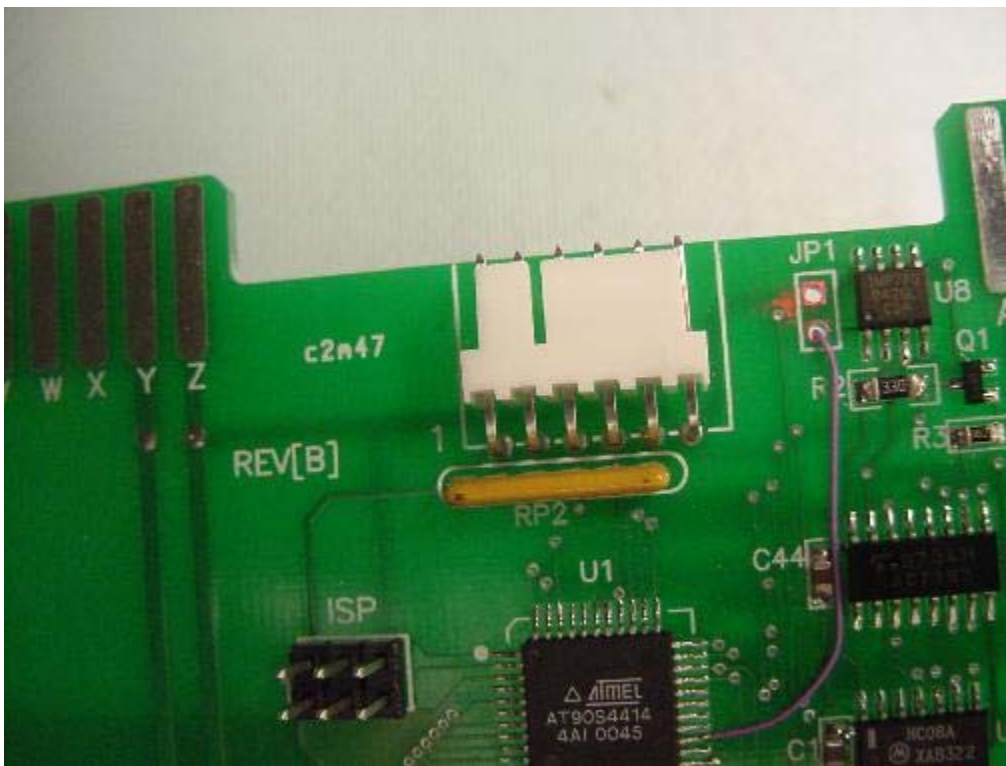
JOYMOVE CONNECTOR = NOTE PIN 1 ON LEFT SIDE

If you are installing the kit on a Black Widow then you will need to add the Gravitator buttons to your control panel via the 6 pin connector labeled GRAV. The pinouts are described below.

P7 - GRAVITAR

1. ROTATE LEFT
2. ROTATE RIGHT
3. FIRE
4. THRUST
5. SHIELD
6. GROUND

***NOTE the Rotate Left & Rotate Right buttons are mapped onto the Black Widows control panel Joystick move left & right so at a minimum you just need to install the Fire, Thrust & Shield buttons.



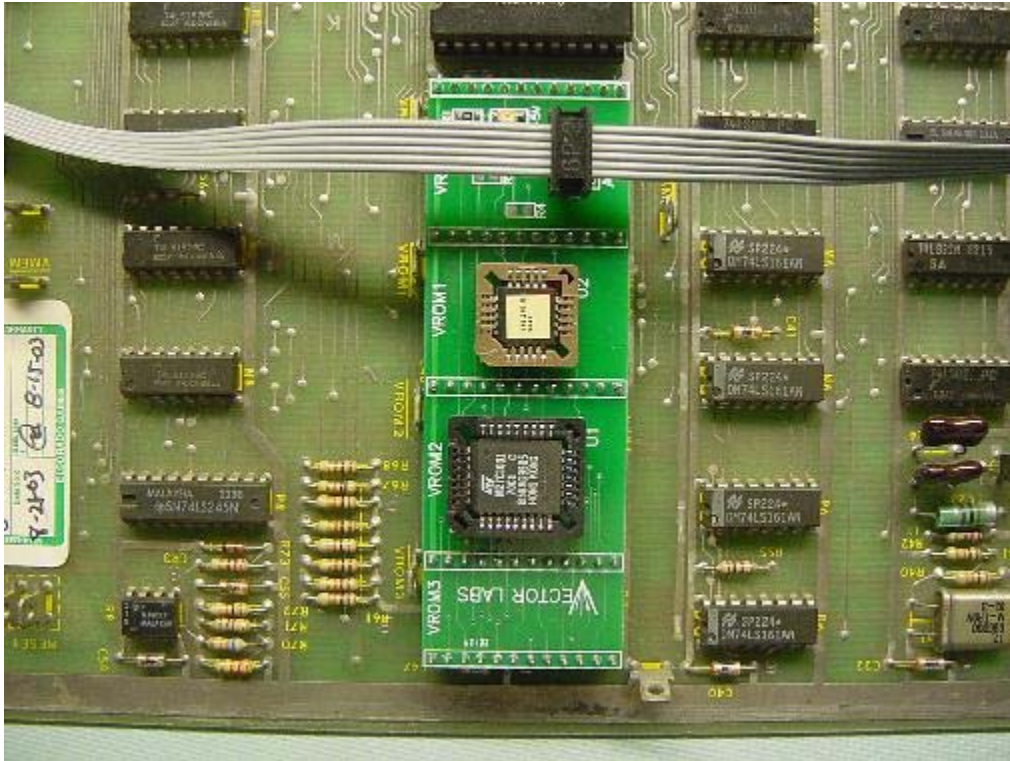
GRAV CONNECTOR – NOTE PIN 1 ON LEFT SIDE

THE TWO POSITION DIP SWITCH SELECT THE POWER UP DEFAULT

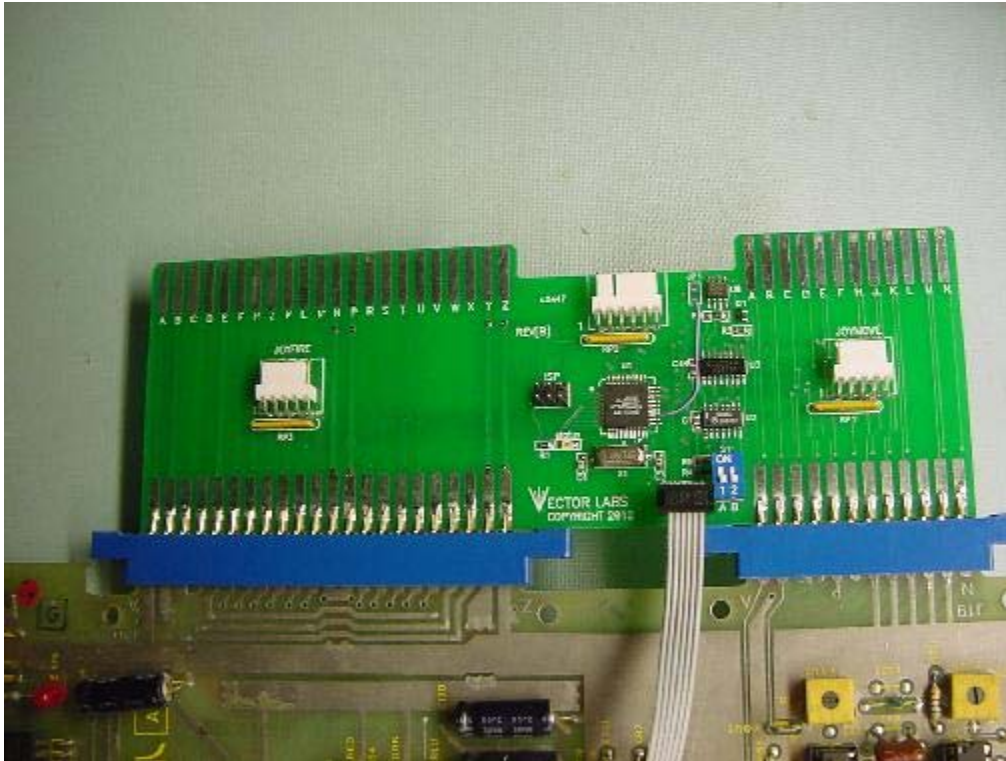
- S1 A OR 1 = OFF DEFAULT GRAVITAR
S1 A OR 1 = ON DEFAULT BLACK WIDOW



REMOVE 6502 CPU AND PLUG IN DAUGHTER PWB THEN PLUG 6502 INTO DAUGHTER CARD SOCKET AS SHOWN ABOVE.



REMOVE VECTOR ROMS AND PLUG IN DAUGHTER PWB AS SHOWN ABOVE.



PLUG IN EDGE CONNECTOR PWB AS SHOWN ABOVE.

There is also a green status LED that blinks to indicate the Microprocessor is functioning when the board is powered.

THE INSTALL IS NOW COMPLETE!!!

To switch games merely hold down
the Player2 button and then press the Player1 button to
cycle between the 3 games.

You can add credits on any game at any time by holding the
Player2 button and then press the Shields button to add as many credits
as desired.

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

THANK YOU FOR YOUR PURCHASE