

Installation Instructions for System 80 Replacement LED Displays

www.BostonPinballCompany.com

Version 5

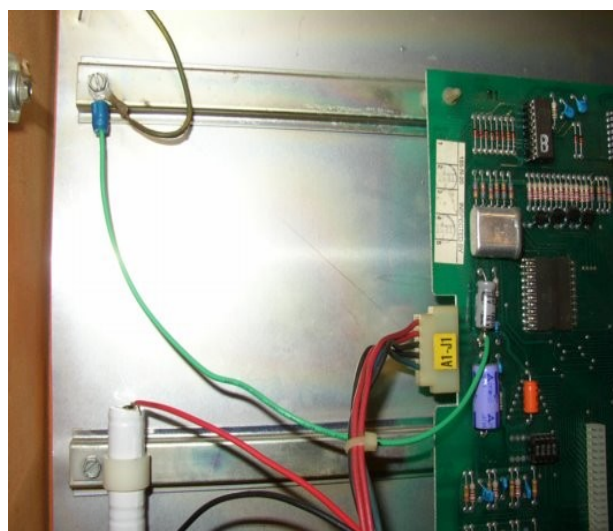
Please make sure your machine is in proper working order before installing this kit. Check out www.marvin3m.com for machine repair information. Check our web site www.bostonpinballcompany.com for information relating to existing display problems.

If you have any questions, please contact us before installing the display kit. E-mail: info@bostonpinballcompany.com

NOTE: If you have a Ni-Wumpf CPU board, see our web site for firmware update information. You will need to do the update to avoid a ghost display problem produced by the Ni-Wumpf CPU board. (If you have an original CPU board or Pascal CPU board you will not see a ghost problem.)

WARNING: Never unplug any connectors inside your machine with the power on. Be sure the power is off.

These are pictures showing ground wires added to power supply and control board. This is not part of this kit, but if your game is resetting during play or having other odd problems, these modifications may help. Check out www.marvin3m.com for additional information about this and other repair and service information of Gottlieb System 80 Pinball Machines.



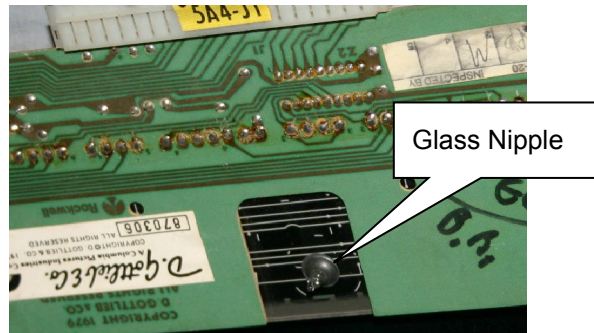
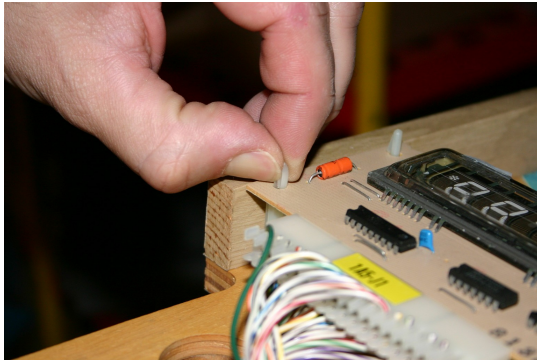
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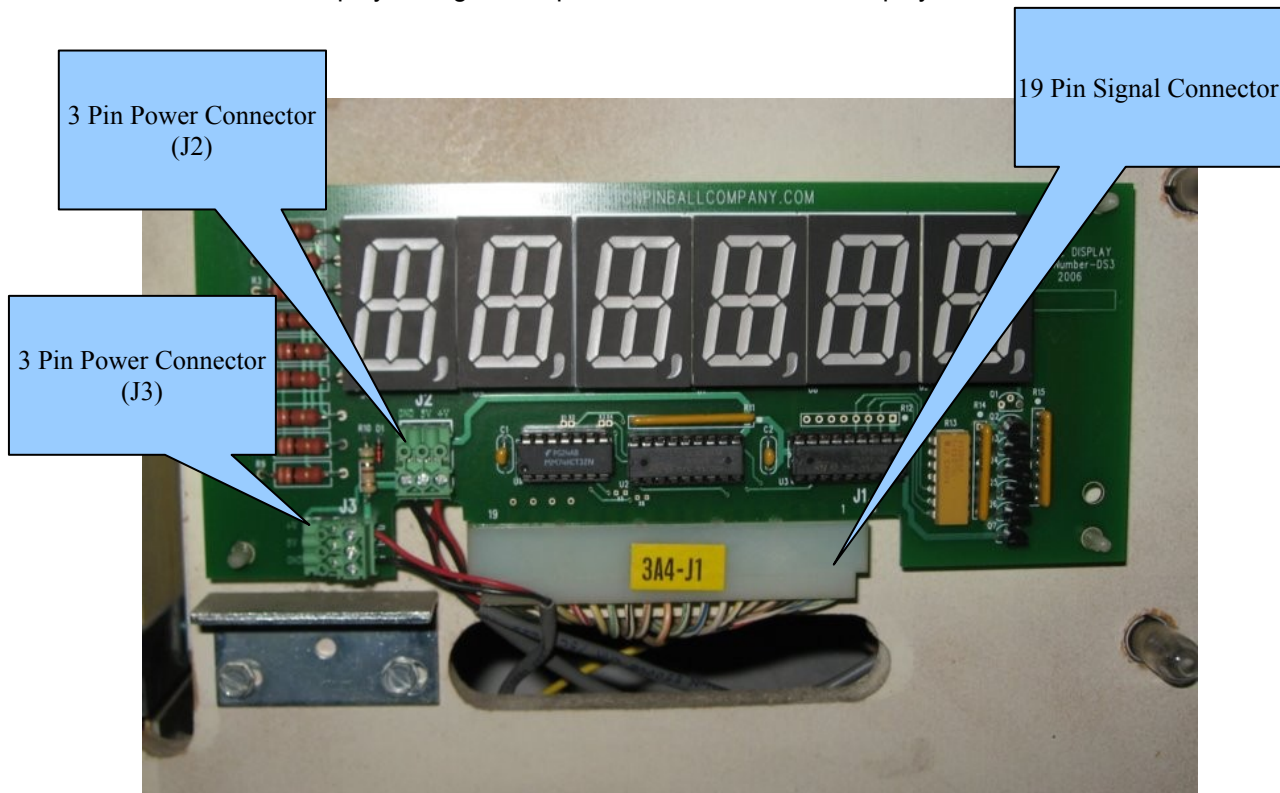
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Full Instructions;

- Turn your machine off
- Open the back box (requires key, normally located inside the cabinet to the left behind the coin door)
- Remove the connectors from the bottom of all the displays
- Remove all the displays (be careful not to break the standoffs, use your fingers to squeeze the tabs)



- (also be careful of the nipple on the back of the fluorescent tube display as you remove them, they break easily)
- Install the new LED displays. Plug the 19 pin connector onto each display.



For Haunted House only: if you are using the old green lenses, use a piece of the supplied double stick squares to attach you lenses. Be careful removing them from the old glass tubes, as these lenses get brittle over time. You may also decide to install new adhesive filters on the backglass (available from www.PinballPal.com, follow their instructions, we are not responsible for the use of their lenses on your backglass, read their instructions very carefully before you decide to use them, as improper installation can mess up your backglass paint.) You can also tape the lenses over our displays, we do not suggest sticking them to our displays as they can affect the black coating on the digits. First, stick them to a piece of clear mylar sheet, then install them with the double stick squares. (SEE PICTURES)

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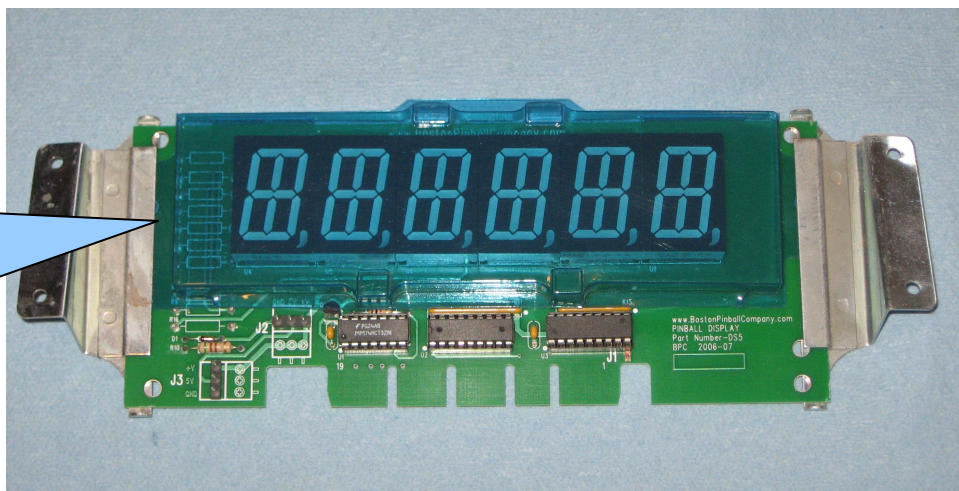
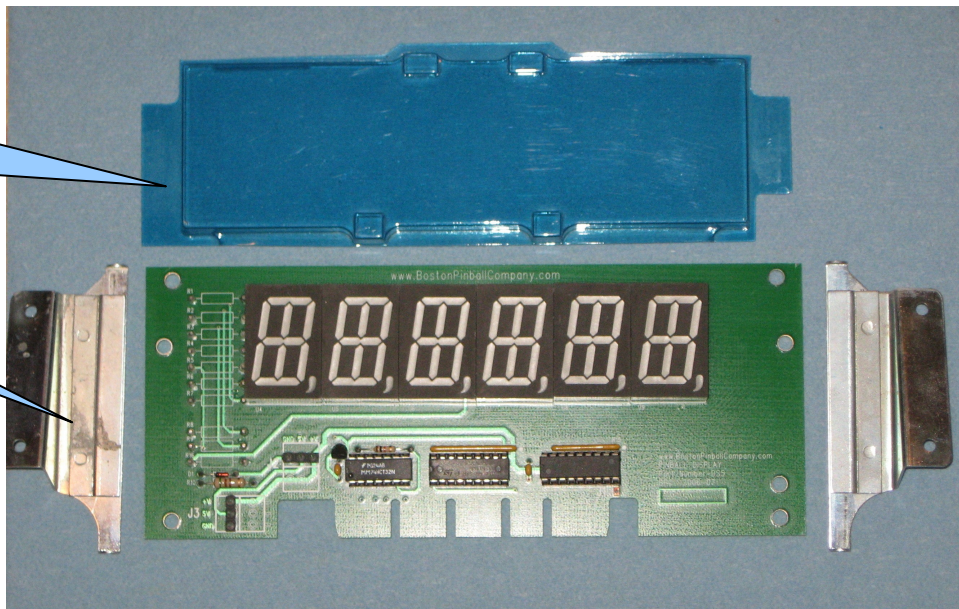
For Black Hole only: for the bonus display, you will need to install the blue lens over our display when re-installing it. It is a little snug, but just make sure the flaps are between the PCB and the metal brackets. (SEE PICTURE)

Black Hole Display Notes:

Black Hole Bonus Display
Blue Lens

Mounting Brackets

Slide the mounting brackets on
the edge of the Display and
over the lip of the lens. (You
can use a piece of Scotch tape
to hold the lens to the Display
before installing the brackets)



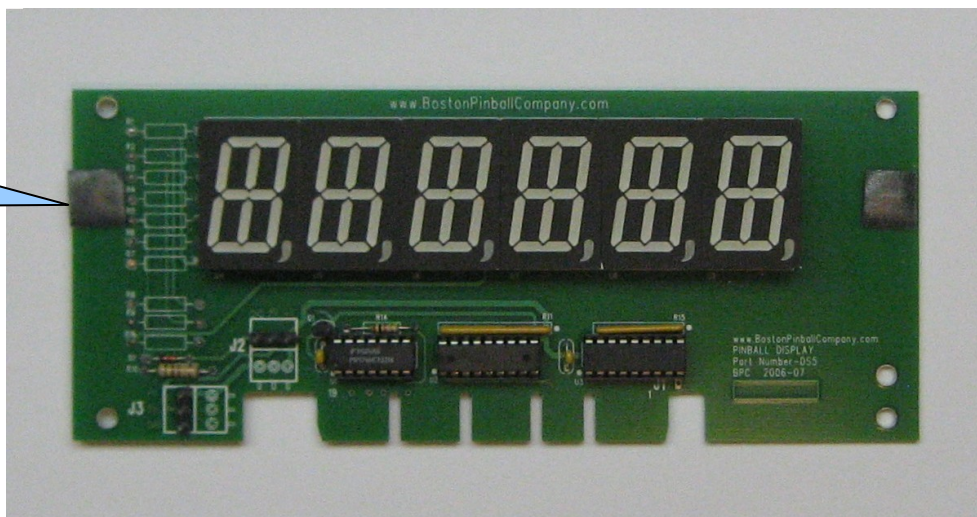
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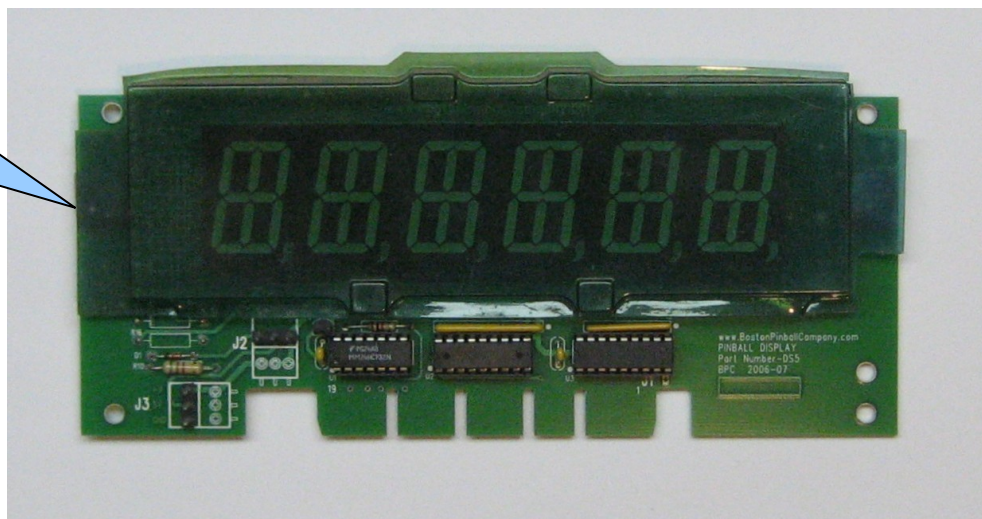
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Haunted House Display Notes:

Install double stick mounting squares as shown.

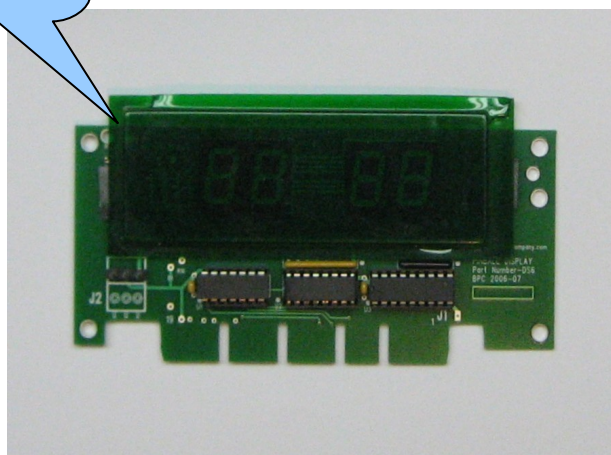
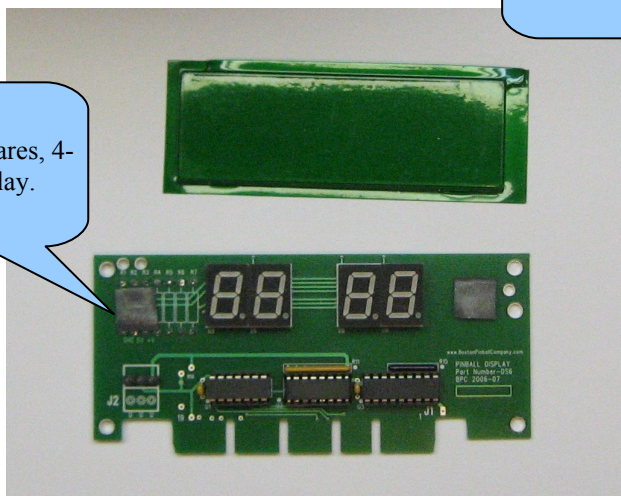


Install the Green Lens as shown.



Install Lens as shown,

Mounting squares, 4-Digit Display.

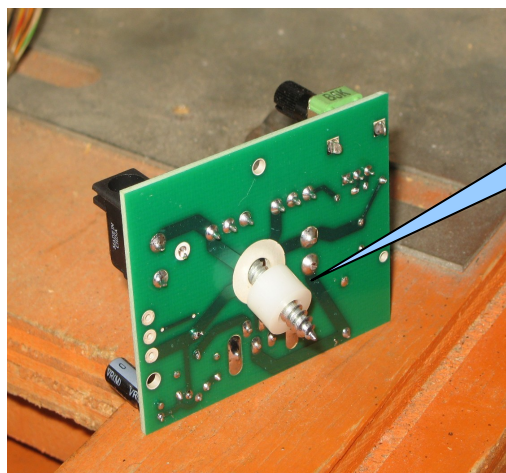
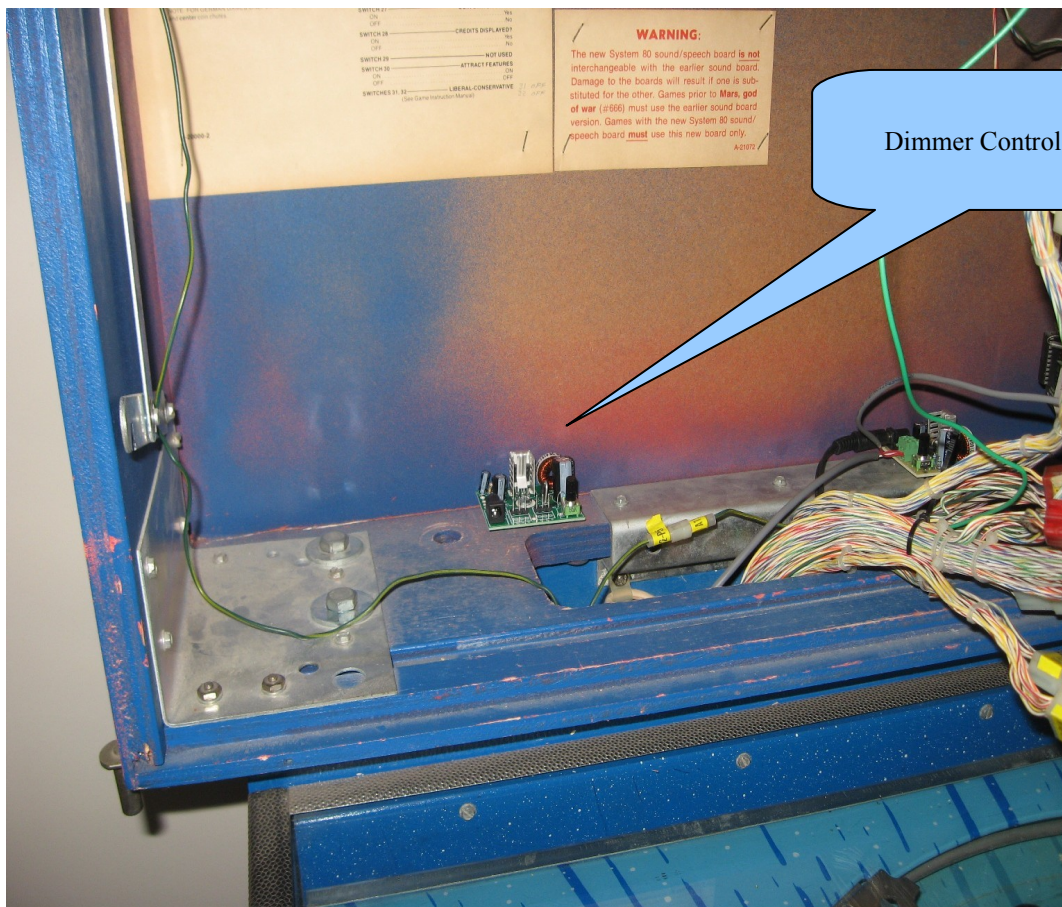


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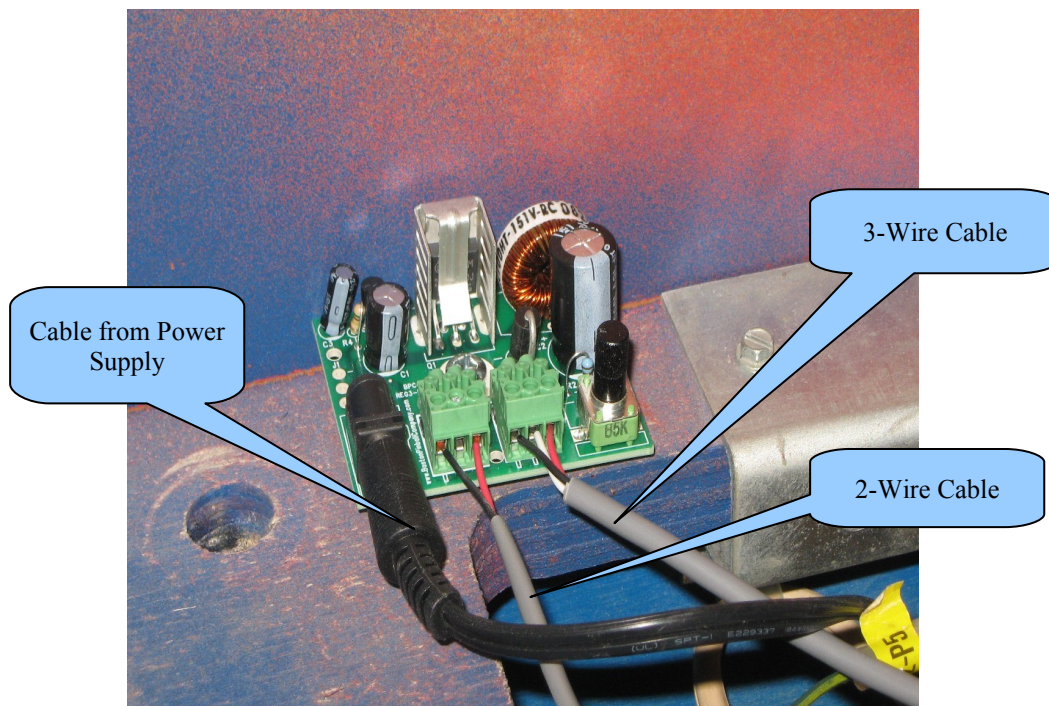
Installing the Dimmer PCB;



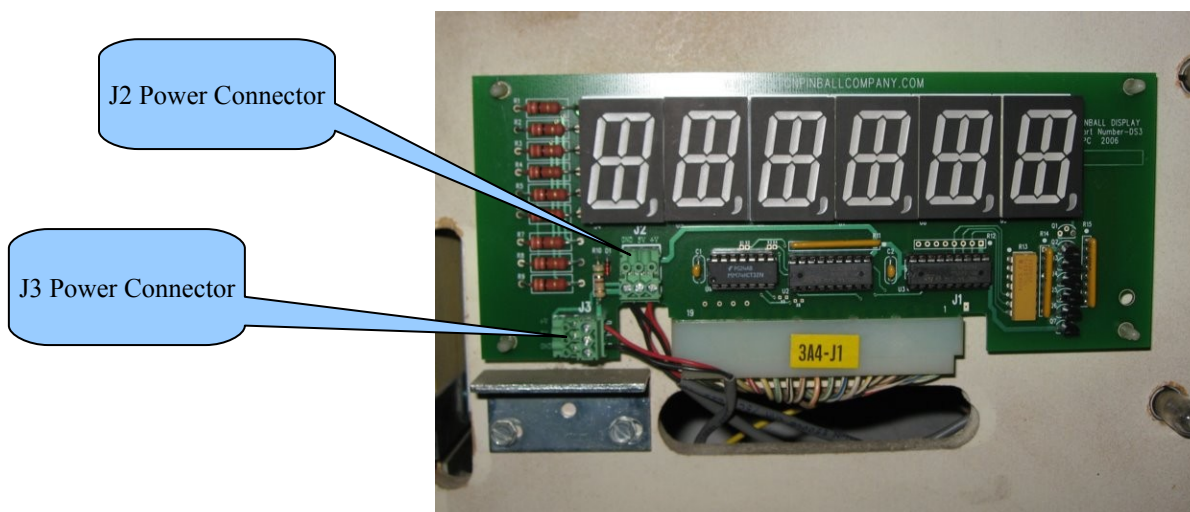
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- Install the dimmer PCB as shown in the picture, install the standoff under the dimmer PCB. Use the supplied screw to mount the dimmer to the backbox.
- Install the cables to the displays [refer to the proper cable connection diagram at the end of these instructions]
 - Take the cable with the 4 connectors and run this to J2 on each 6-Digit display.
 - Run the 18" cable (Black-Red wires) from the dimmer PCB J4 to one of the 6-Digit displays J3 connector.
 - Run the 36" cable (Black-White-Red wires) from the dimmer PCB J3, to the 4-Digit credit display.
[for Black Hole, Force II, or Mars God of War, see proper cable diagram with the full instructions, as your cable is slightly different]
 - Take the Power Supply, and attach the connector to the dimmer PCB. Now, lower the Power Supply down into the cabinet through the opening with the rest of the wires.

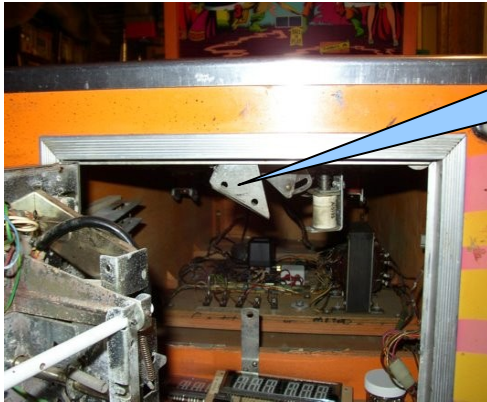


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- Close backbox.
- Remove the playfield glass; Open the coin door, pull down on the lever holding the lock down bar. Remove the lock down bar. Now carefully slide the glass down and remove it. Place it gently against a wall and be careful not



Lock down bar
lever.



to bang the corners.

- Remove the ball(s) from the playfield.
- Lift the playfield. Grab the playfield from the apron and lift. (Caution, if the apron is not properly screwed in or the screws are missing, you may bend the apron, so you may want to push the playfield from below as you lift it. Once you can get your hands to grab the sides of the playfield, lift and pull it towards you, then lift it all the way up and prop it against the backbox or use the support rod to hold it in place.
- BE SURE IT IS SUPPORTED BEFORE YOU WORK INSIDE THE CABINET.

WARNING; SOME OF THESE MACHINES HAVE EXPOSED WIRING, USE CAUTION OR UNPLUG YOUR MACHINE BEFORE COMPLETING THIS STEP. (YES, EVEN IF YOUR MACHINE IS OFF, THERE IS LIVE WIRING!)

- Now plug the power supply into the service outlet in the cabinet.



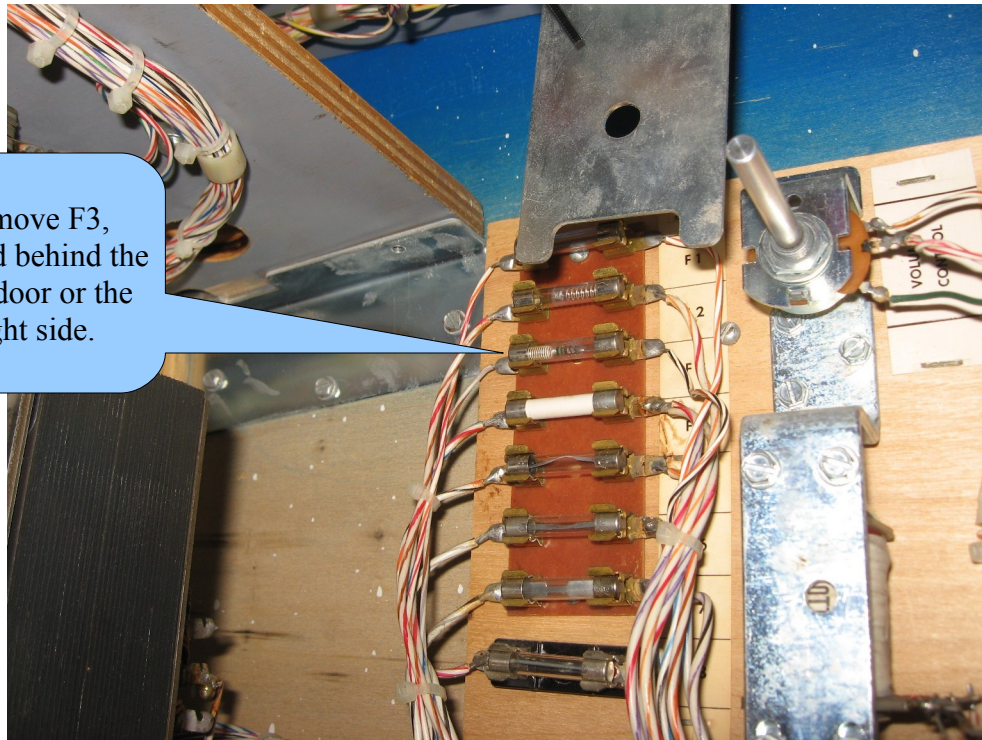
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- Remove the Fuse marked F3, as this is the high voltage for the old fluorescent displays and is no longer needed.

Remove F3,
located behind the
coin door or the
right side.



Carefully lower the playfield, install the ball(s), reinstall the glass and lock down bar.

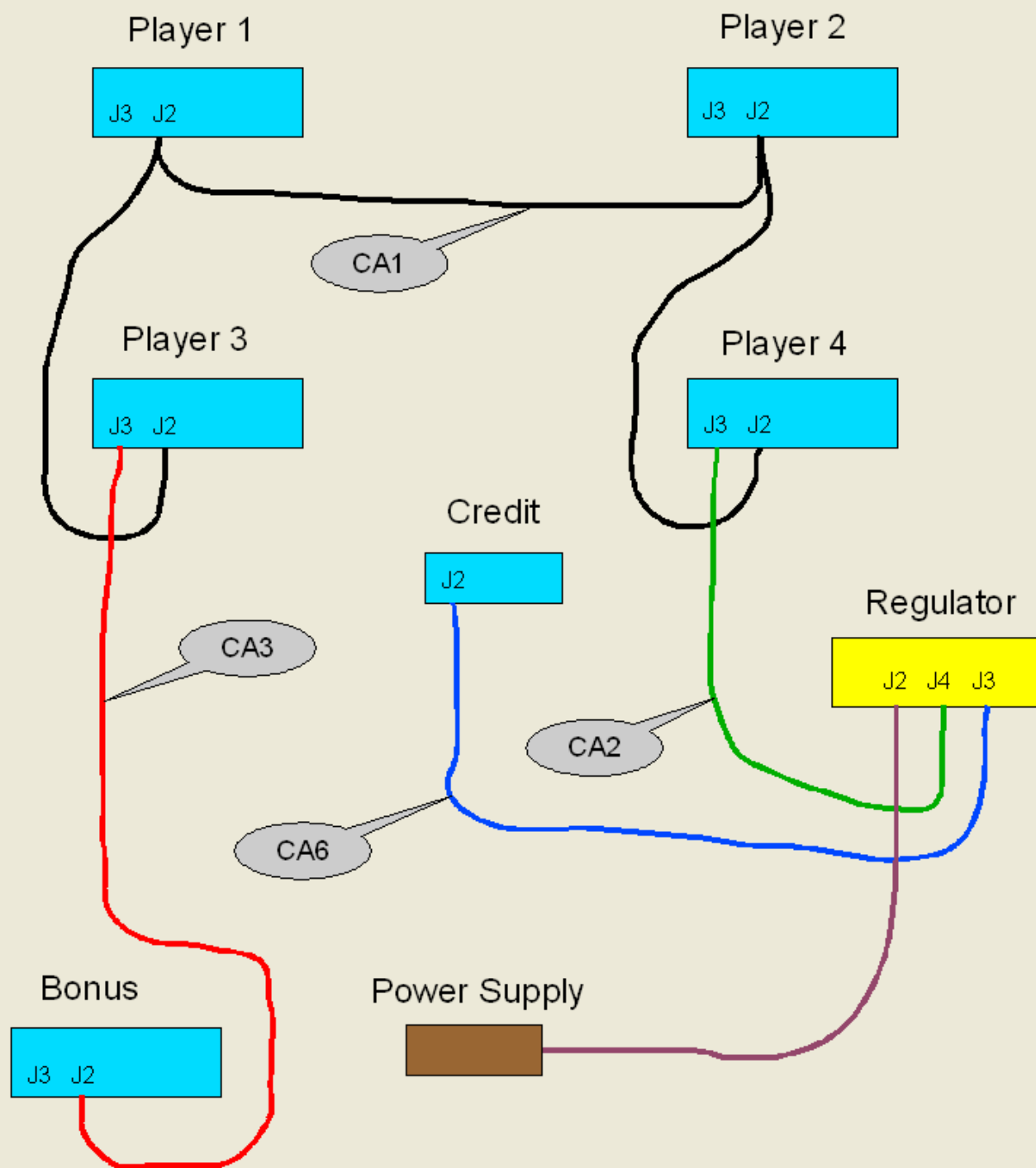
- Power up your machine.
- Open the backbox and adjust the dimmer for the desired brightness.
- Close the backbox and play a game of pinball with your new Boston Pinball Company LED Displays.

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Cable Connection Diagram System 80 Haunted House

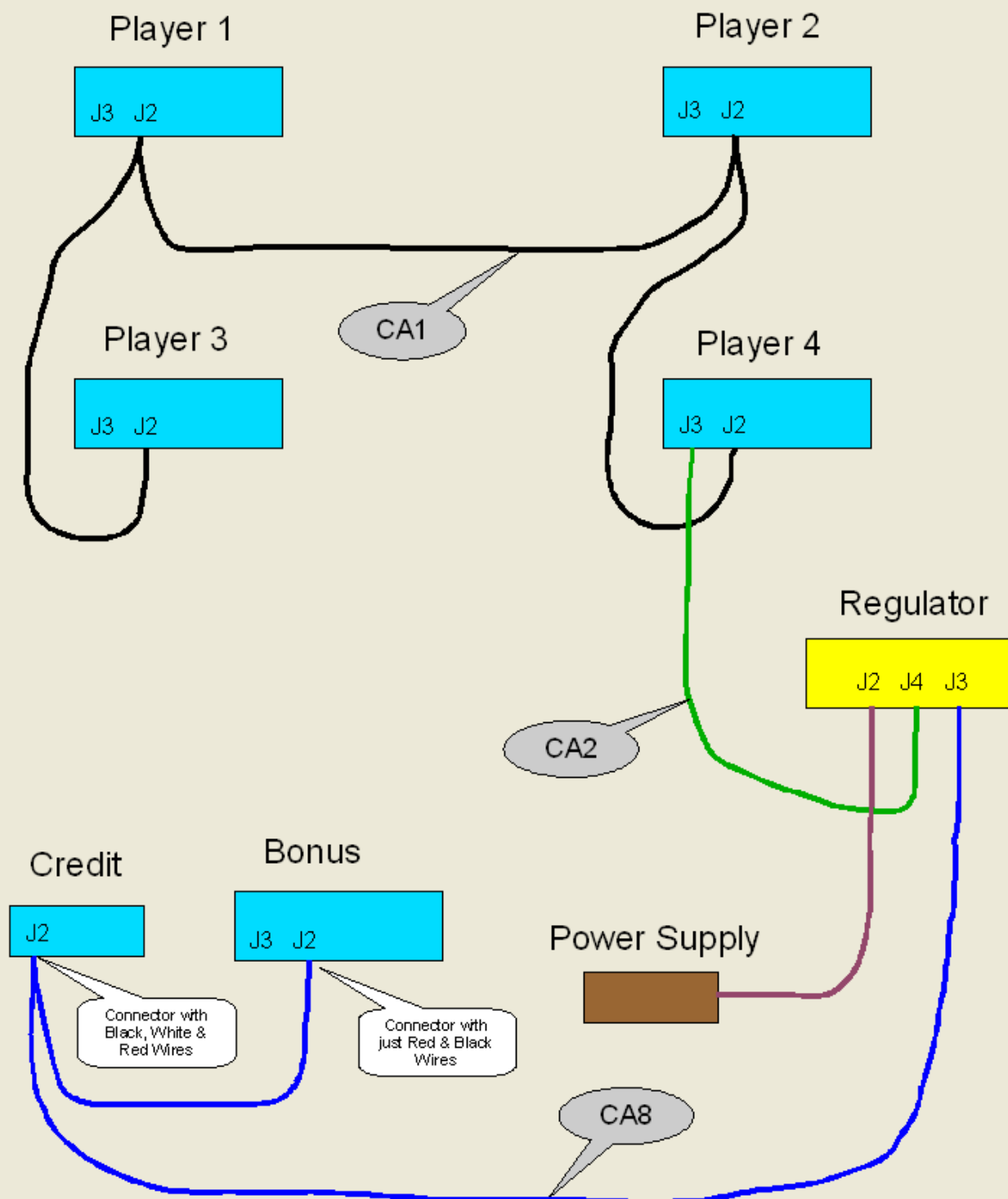


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Cable Connection Diagram System 80 Black Hole

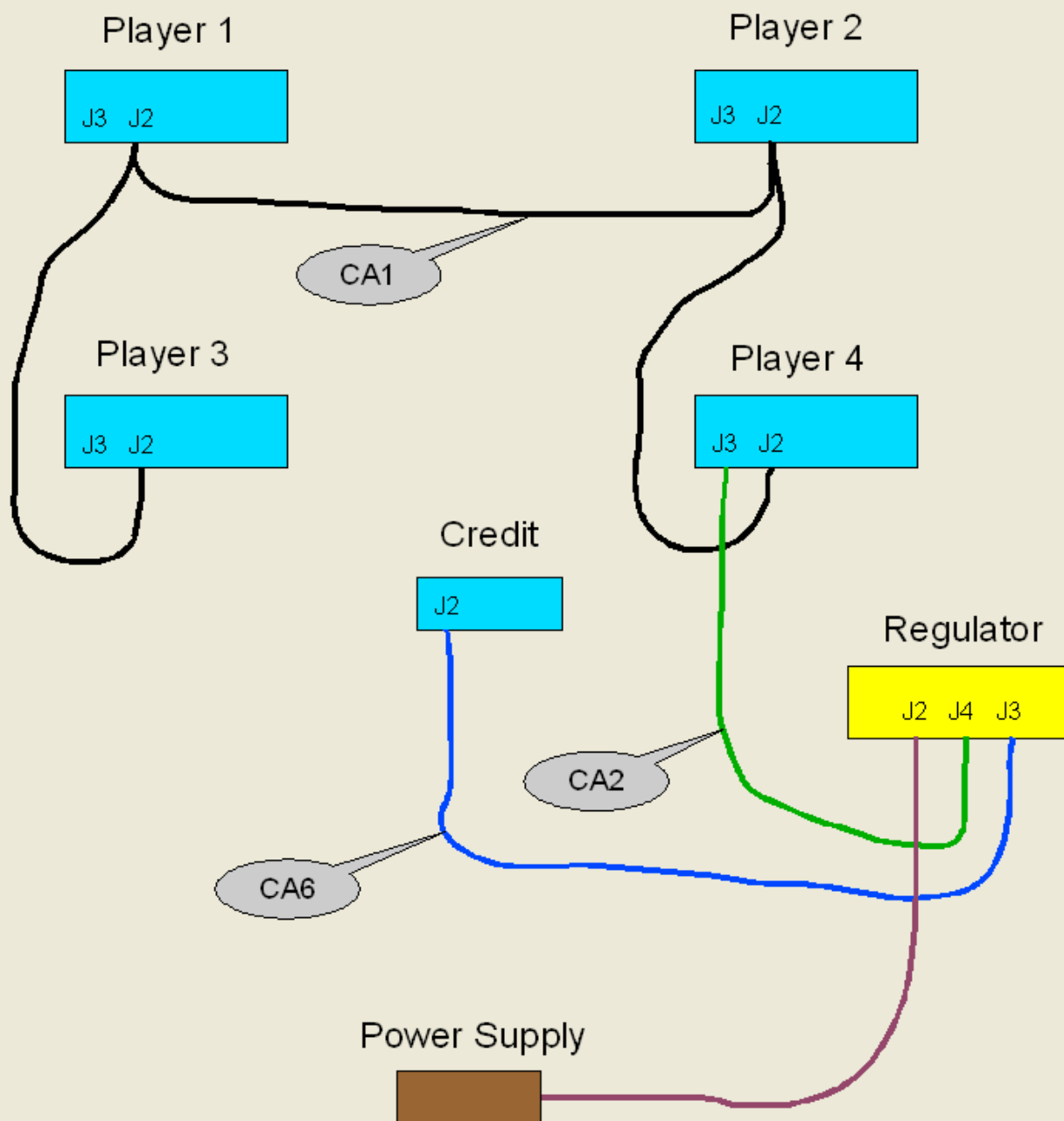


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Cable Connection Diagram System 80 Circus, Counter Force, Panthera, Star Race, Spider Man, Volcano

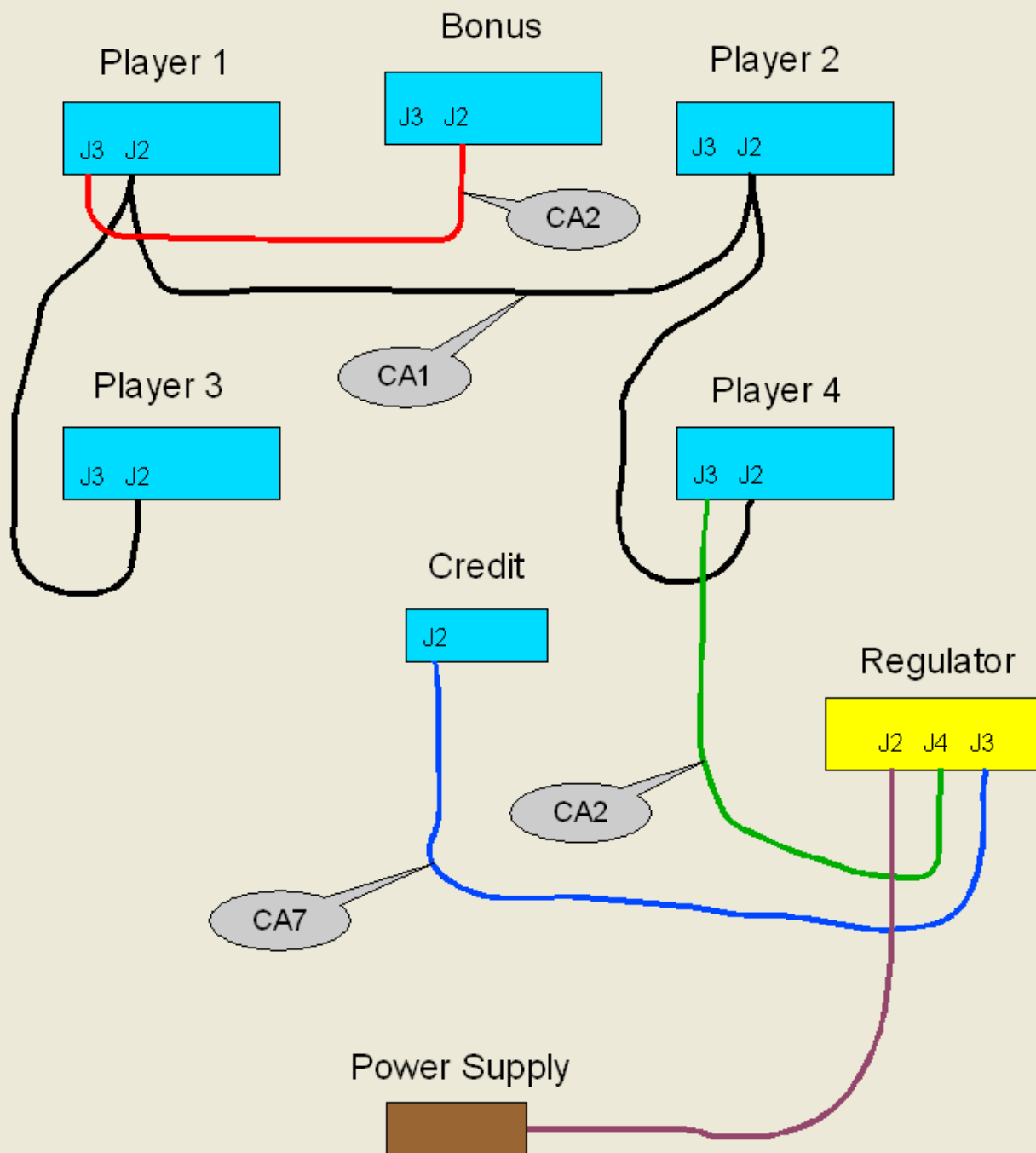


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Cable Connection Diagram System 80 James Bond, Pink Panther

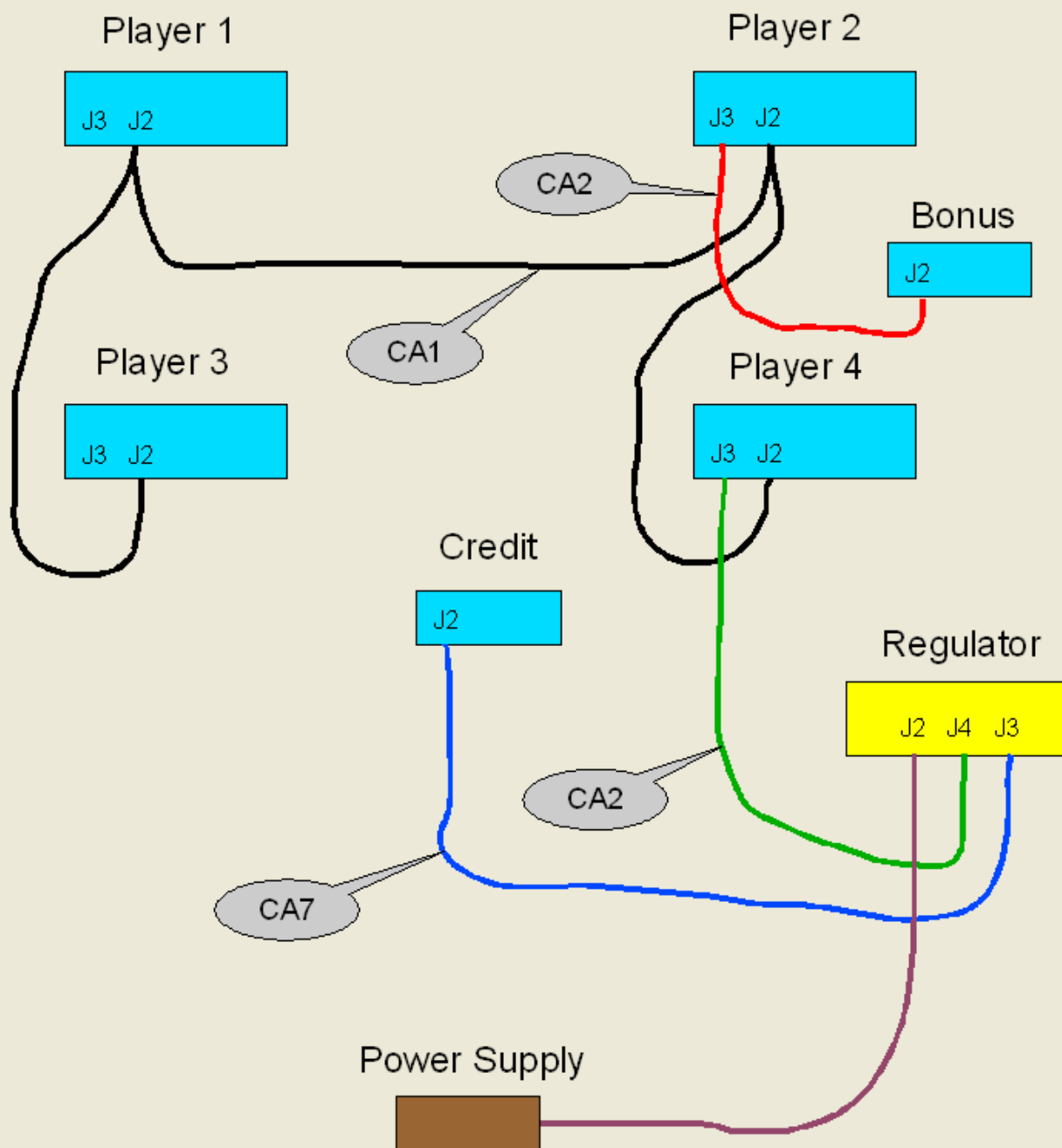


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Cable Connection Diagram
System 80
Time Line



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Cable Connection Diagram System 80 Force II, Mars God of War

