



# PINsub

## Multi System Installation Manual

Version 2.2 February 21, 2021

This manual covers the following product kits:

<b>PINsub Multi System</b>	<b>330-133</b>
<b>PINsub Multi System Push On</b>	<b>330-137</b>
<b>PINsub Multi System Blue</b>	<b>330-153</b>

Now you can easily connect any Pin to a subwoofer OR an external sound system with our PinSUB-MutiSystem!



Now you can easily connect any Pin to a subwoofer OR an external sound system with our PINsub-MSPO!

Now available with Push On connectors!



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## 1. Warnings and Agreements

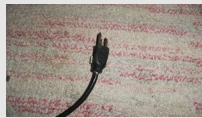
**Welcome!** As with any Pinball Machine modification and add on kit, there is a required level of expertise for the installation. If you are not proficient in basic pinball parts installation we recommend having our kit installed by someone who is proficient with the basics of pinball repair. Pinnovators requires our kit be installed by an experienced Pinball service technician with basic electrical skills. As with any electrical piece of equipment a danger does exist and you must agree to not hold Pinnovators responsible for any injury, damages, etc. before continuing.

**Sound Levels:** Pinnovators recommends running your headphone and subwoofer sound levels at a safe level to prevent long term hearing loss. For a good example of recommend sound levels, we recommend following suggestions given by major audio equipment manufacturers such as Apple and their IPod.

[phys.org/news80304823.html](http://phys.org/news80304823.html) [www.macworld.com/article/1060274/hearingprotection.html](http://www.macworld.com/article/1060274/hearingprotection.html)

**ESD:** We recommend always discharging yourself to a metal surface on your machine before touching the electronics inside it.

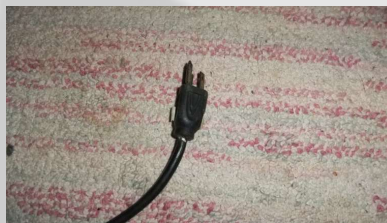
**Power Cord:** ALWAYS UNPLUG THE POWER CORD for safety when working on your pinball machine!



**Playfield Propping:** Pinnovators highly advises following Playfield propping instruction for your pinball machine. These instructions are typically found inside the Operators manual for each machine. Failure to follow these instructions can cause fatal injuries or even Death. Pinnovators also recommends having an assistant hold a propped playfield in the up position when servicing under the playfield.

## 2. Preparation

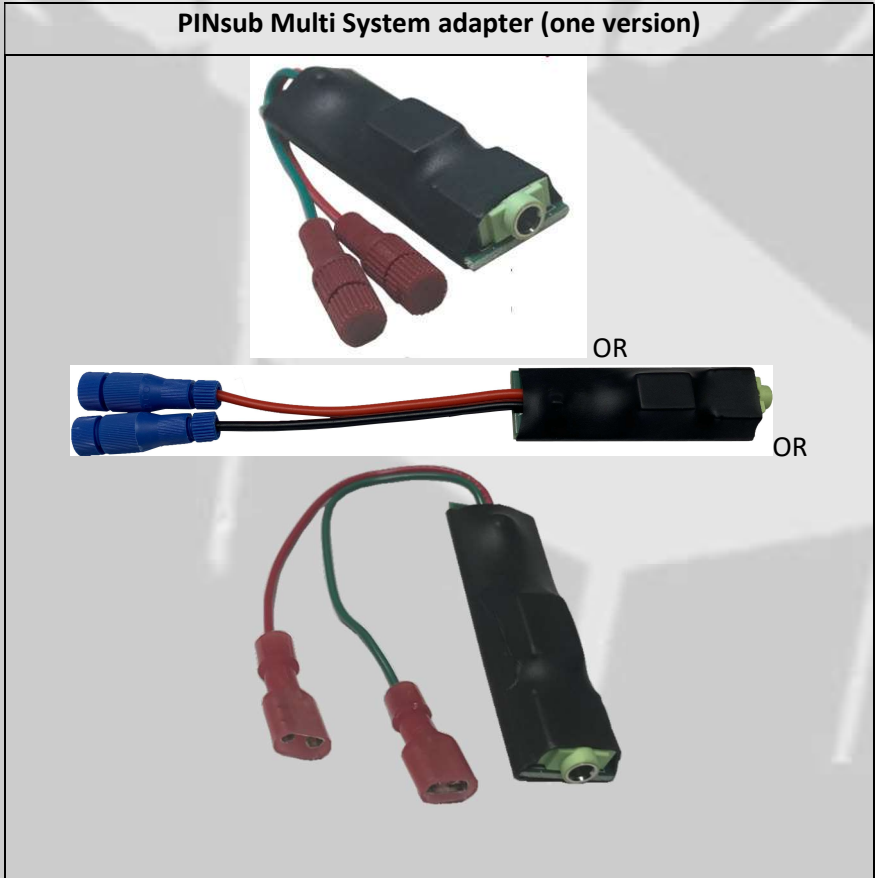
Unplug the Pinball Machine!



### 3. What's included in the Kits

<p>Interface Cable and adapter and RCA adapter.</p> <p>One Velcro tie is included to hold the cable to the leg of the machine.</p>	
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**PINsub Multi System adapter (one version)**



OR

OR

#### 4. Requirements:

The Machine must have an electronic sound board.

Please visit [IPDB.ORG](http://IPDB.ORG) to learn what system your machine has.



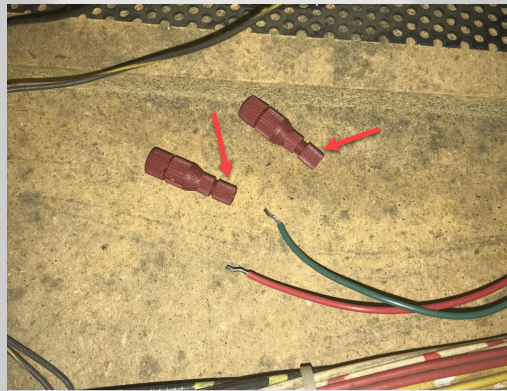
## 5. Connecting to the Cabinet Speaker Using Posi-taps

PINsub MS with PosiTaps Kit

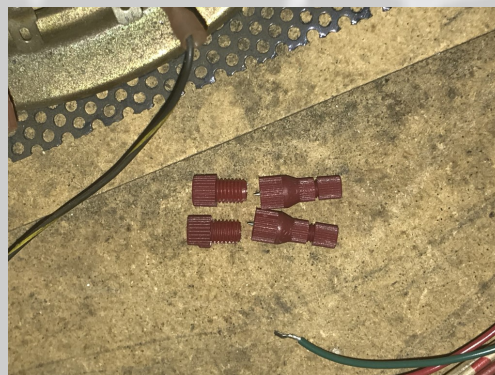
Position the PINsub MS next to your cabinet speaker.



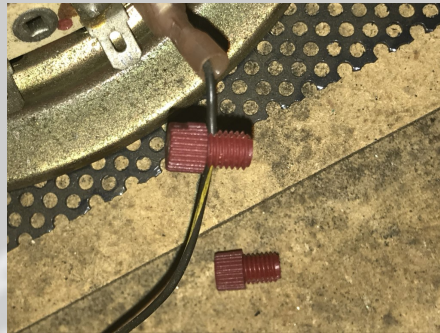
Remove the two PosiTaps by twisting the smaller end cap.



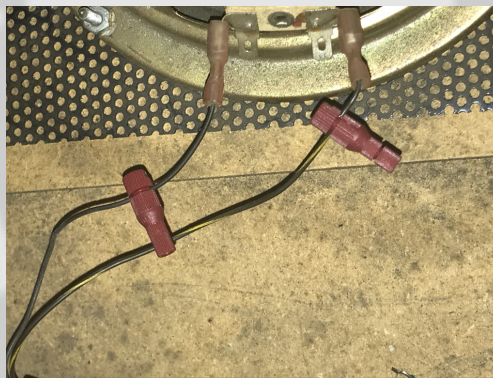
Remove the larger end caps.



Place the large endcaps over one of the two speaker wires.

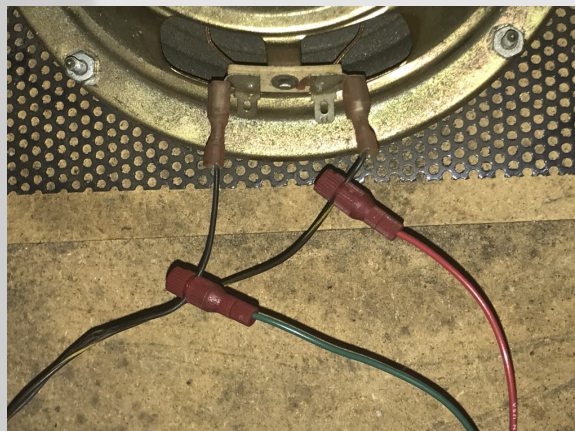


Twist the middle section back on to the larger endcap. Finger tighten but don't force it. Leave the smaller end cap unscrewed a few turns.



Insert the wires from the PINsub MS into the hole in the small endcaps. Carefully twist the small endcaps until finger tight.

Lightly pull on the wires to make sure they are secure. If they come out of the Positap, try again until they stay secure.



## 6. Connecting to the Cabinet Speaker Using Push-on connectors

This example show the install on a JJP Dialed In.



A lot of pinball systems have an extra set of terminals on the cabinet speaker. Simply push the connectors of the adapter onto these extra terminals.



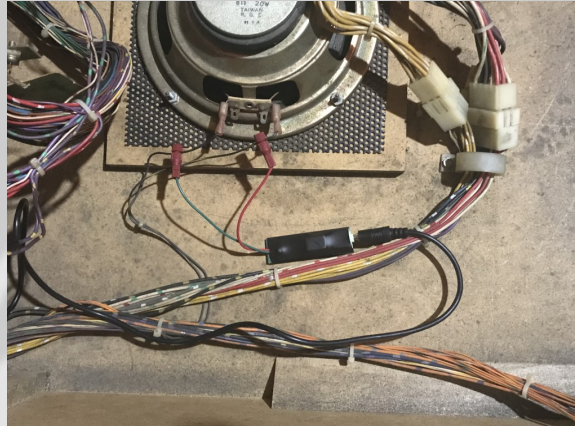
The view from another angle.





This next section applies to all kits.

Using the 12 foot 3.5mm to 3.5mm supplied subwoofer cable; plug one end into the green female connector on the PINsub MS adapter. Run the other end to the back of the pinball machine.

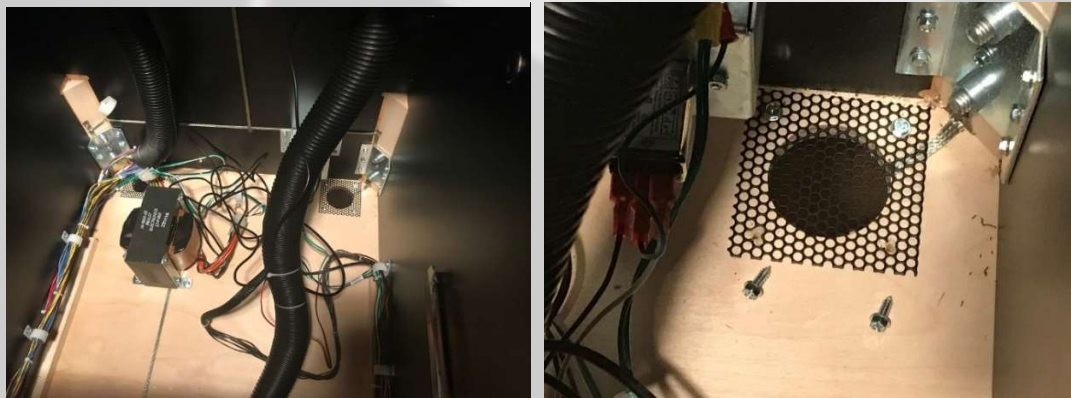


Locate the vent hole in the right rear of the cabinet. Push up on the vent screen to dislocate it to allow the 3.5 mm cable to be fed down through the vent hole.



JJP Dialed In example:

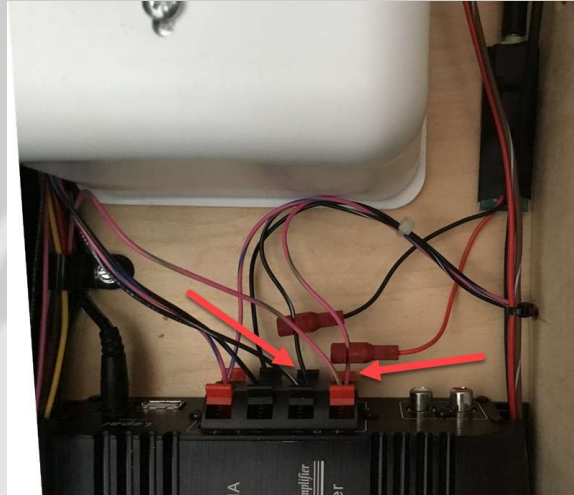
JJP uses as metal screen, bolted to the cabinet. Remove two of the bolts as shown below.



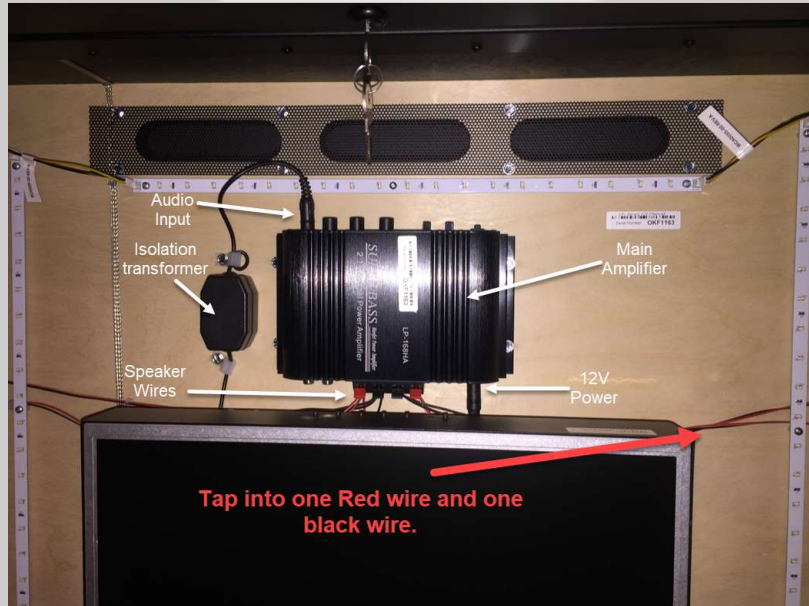
Fish the 3.5mm subwoofer cable through the vent hole in the bottom of the cabinet.

## 7. Spooky Pinball Amplifier connection

Connect the Posi-taps to the red and black wires that come out of the "Sub" outputs.



## 8. America Pinball Amplifier connection



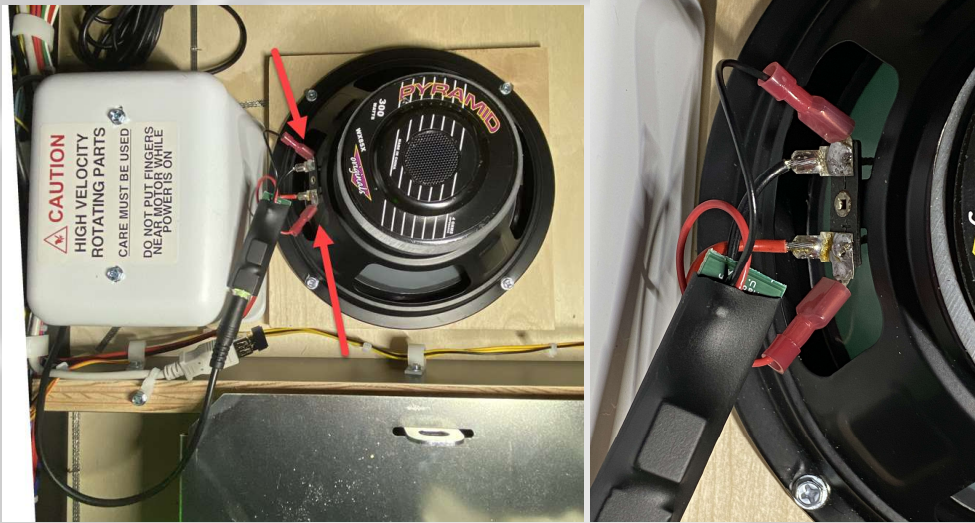
## 9. Jersey Jack Pinball (PINsub MS PO and MS PO)

Jersey jack uses different speakers with different terminals and different wires sizes.

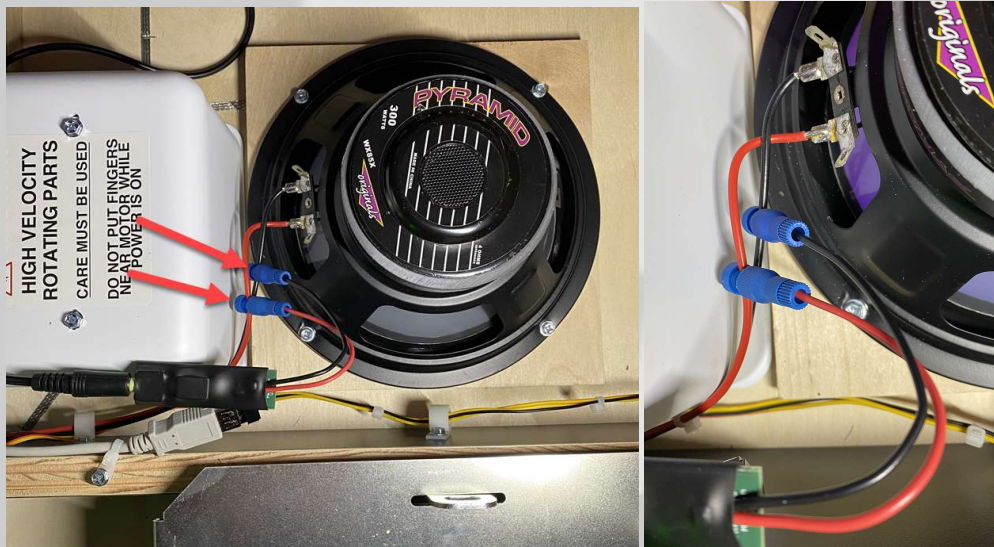
Use the PINsub MS with the red Pois-taps for smaller wire sizes (22 AAWG). Follow the instructions in the previous section.

The PINsub MS Blue is for systems with large speaker wires (Guns n Roses , Wonka CE)

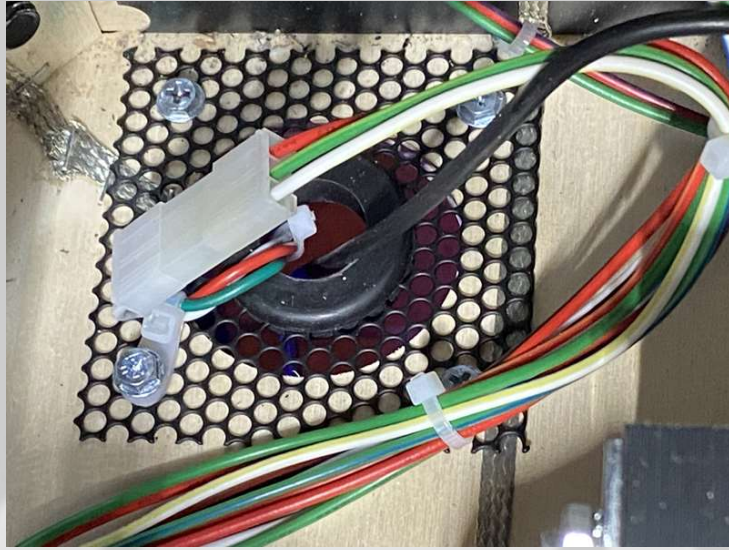
Guns n Roses CE also has push on terminals (check your speaker!) You can use the PINsub MS PO on this speaker OR



The PINsub MS BLUE can be used.



Guns n Roses (CE) provides a nice subwoofer cable exit in the vent hole.



## 10. Connecting a Subwoofer

Pinnovators provides a 12 foot cable to give you the flexibility of placing your subwoofer close by to your pinball machine. The end of the cable has a 3.5mm male plug on the end. Plug this end into a subwoofer that has a 3.5mm input. Some of the Yamaha home subwoofers only have a 3.5mm input so this will work great in that situation. Smaller computer subwoofer systems will also have a 3.5mm input as shown below.



Pinnovators recommends the Polk Audio PSW10 subwoofer. This model is very affordable and produces great sound!

Use the included 3.5mm female to RCA adapter cable to connect to this speaker.



## 11. Final Checkout

Power up your subwoofer!

Power up your pinball system!

Start a game!

Make sure the front panel switch on the PinPac Control panel is in the "UP" position if you have the headphone kit installed.

Verify sound can be heard from the Back Box speakers and the lower Cabinet speaker.

Adjust the subwoofer to your liking.

## 12. PIN-SMX

While we have your attention! Please check out our PIN-SMX passive subwoofer mixer kit at [Pinnovators.com](http://Pinnovators.com).

The PIN-SMX allows you to connect up to four pinball machines to one subwoofer. Each input is fully isolated from the others to prevent ground loops. Each input level is fully adjustable so you can adjust each game sub level to your liking.

Enjoy your new Subwoofer kit!

The Pinnovators team.



# PINSMX