

P2X

Tube hybrid pre-amp and headphone amp  
With IR remote control

Instructions

[www.apexhifi.com](http://www.apexhifi.com)

# Connections

## Power

The P2X is powered by the dedicated Apex PS40 power supply. Your P2X is shipped with the power supply, and a cable to connect the two.

Simply plug one end of the cable into the PS40, and the other into the P2X. Then, connect a standard IEC power cable from the inlet on the PS40, and plug it into an outlet. The PS40 automatically works from 85-265VAC, 50 or 60Hz.

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## Audio Inputs

There are two RCA line inputs located on the back of the P2X, labeled “In 1” and In 2”. There is also a third input, using a 1/8” phone jack, on the left-hand side of the front panel. This is “In 3”, and can be used to connect a phone or music player.

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## Audio Outputs

RCA jacks for the line output are located on the rear panel. A 1/8” stereo headphone jack is on the right-hand side of the front panel.

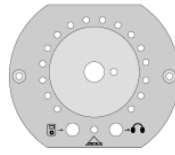
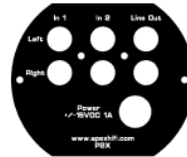
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## Installing the Tube

Before turning the P2X on, plug the tube into the tube socket, through the hole on the top of the P2X.

The P2X is supplied with a JJ Electronic ECC803S tube. You can also use any type of 12AU7 or ECC83 tube, or their variants. 12BH7 tubes also work.

Tubes tested and verified to work include the 12AU7 (all types), ECC82 (all types), 5814, 6211, 5963, 6680, 7057, and 12BH7.



# Operation

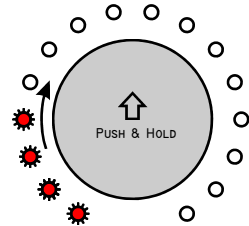
## Power-on and off

The P2X is powered on or off by pressing the control in and holding it for 5 seconds.

When the unit powers on, it enters a 30-second warm-up period for the tube to heat up and electronics to stabilize. During warm-up, the LEDs will illuminate red, starting with the first LED (all the way counterclockwise), and advance in a clockwise direction. When all of the LEDs are on, the 30-second warmup period is complete.

After warmup, the volume will be ramped from zero to the setting it was at when the unit was last powered off. If, during this ramp-up, the knob is rotated, the volume will stop increasing at the current level.

When powered off, the inverse of this happens, and the volume is ramped from it's current level to zero.



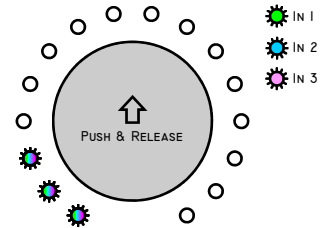
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## Input Selection

The P2X has three inputs. Pressing the control and releasing it will advance the input selection to the next input. For example, if you are currently on input 1, pressing the control will advance to input 2. If you are on input 3, pressing the control will return back to input one.

The LED color will change when you change inputs, indicating (via color) which input is selected.

When input 1 is selected, the LEDs are green. Input 2 makes the LEDs blue, and input 3 (the one on the front) light the LEDs Magenta (pinkish).



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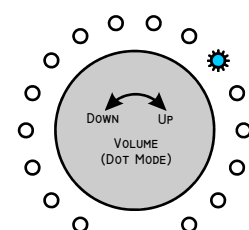
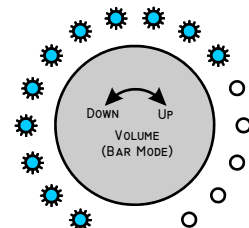
## Adjusting the Volume

Once powered on, rotating the control will change the volume.

Volume is adjusted in 1dB steps, with fully clockwise corresponding to maximum gain, and fully counterclockwise muted. The first step up from mute is -62dB.

Even though there are 64 volume steps, there are only 16 LEDs. So the LED will only advance with every 4 steps of volume change.

You can set the display brightness, as well as change the appearance of the display from "bar" mode to "dot" mode, in setup mode.



# Remote Control Operation

The volume control unit uses Philips RC05 remote control encoding. It is supplied with a small remote that can control all the functions of the unit. If desired, any remote control that supports RC05 codes can be used.

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## *Power-on and off*

The “standby” button of the remote is analogous to pressing and holding the control. It is used to power the unit on or off.

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## *Input Selection*

The “channel” buttons are used to change the selected input. “CH+” advances to the next input, “CH-” moves to the previous. Alternatively, the “1”, “2”, and “3” buttons can directly select an input.

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## *Adjusting the Volume*

The “volume” buttons are used to raise or lower the volume.

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## *Mute*

The “mute” buttons immediately lowers the volume to the muted state. The “volume” buttons must be used to unmute and turn the volume back up.

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## *Remote Address*

The default state of the unit is that it will respond to any remote control address. The address is used to select different pieces of equipment that may be in a system - for example, a TV, preamp, Blue-Ray player, etc.

The address that the unit responds to can be changed in setup mode.

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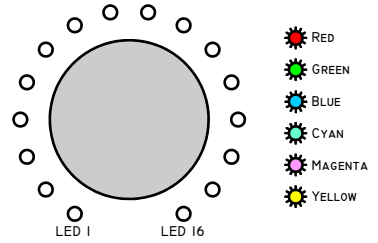
## *Implemented Codes*

To program a universal remote control, you may need to know what codes the unit responds to for various functions. The unit implements the following remote codes:

- 12 - Standby (power on and off)
- 16 - Volume Up
- 17 - Volume Down
- 13 - Mute
- 32 - Channel Up (next input up)
- 33 - Channel Down (next input down)
- 01 - Input 1
- 02 - Input 2
- 03 - Input 3

# Setup Mode

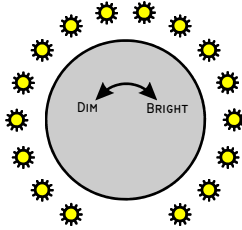
Setup mode uses the control knob and LEDs to allow you to set various operating modes of the P2X. Once you complete setup mode, your choices are saved in non-volatile flash memory, so they will remain until you change them again.



Setup mode is entered by holding the knob in for 5 seconds at the end of the warmup cycle, after the volume ramps up.

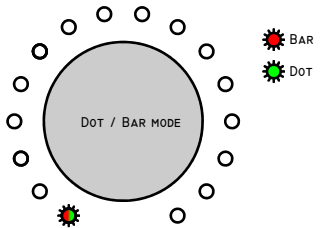
## Setup Step 1 - Brightness

The first setup step is to set the brightness. In brightness setup, all the LEDs will be illuminated yellow. Turn the knob clockwise to make the display brighter, or counterclockwise to dim. Then, press the control to move to the next setup step.



## Setup Step 2 - Dot or Bar Mode

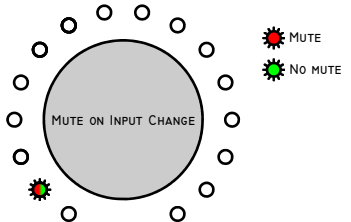
In setup step 2, LED 1 will be illuminated. The color of the LED corresponds to either "dot" mode, where only one LED is illuminated to indicate the current volume, or "bar" mode, where all LEDs up to the selected volume are illuminated. Rotate the knob until the LED color corresponds to the desired mode, as shown to the right.



Press the control to move to the next setup step.

## Setup Step 3 - Mute on Input Change

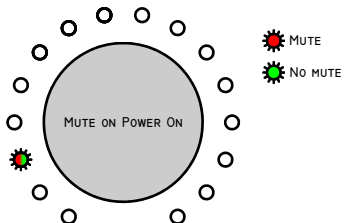
In setup step 3, LED 2 will be illuminated. The color of the LED indicates if the volume should be muted when you change inputs, or if the volume should remain as currently set. Rotate the knob until the LED color corresponds to the desired mode, as shown to the right.



Press the control to move to the next setup step.

## Setup Step 4 - Mute at Power On

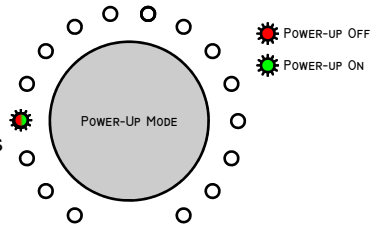
In setup step 4, LED 3 will be illuminated. The color of the LED indicates if the volume should be muted at power on, or if the volume should be restored to the level it was set the last time the unit was powered off. Rotate the knob until the LED color corresponds to the desired mode, as shown to the right.



Press the control to move to the next setup step.

### Setup Step 5 - Power-up to On or Off

In setup step 5, LED 4 will be illuminated. The color of the LED indicates if the unit should initialize to the power-on state when AC power is applied to the unit, or if it should come up in the off state. Rotate the knob until the LED color corresponds to the desired mode, as shown to the right.

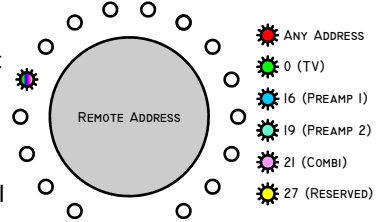


Press the control to move to the next setup step.

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### Setup Step 6 - Remote Address

In setup step 6, LED 5 will be illuminated. The color of the LED corresponds to the remote control address that you want the unit to respond to. Rotate the knob until the color of the LED corresponds to the desired address.



Press the control to exit setup. A new warmup cycle will begin.