

# **Owner's Reference**



# PERFECTWAVE SACD TRANSPORT



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### READ AND FOLLOW ALL INSTRUCTIONS HEED ALL WARNINGS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THE APPARATUS. THIS APPARATUS MUST BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTH CONNECTION.

Clean only with a dry cloth. Do not place flammable material on top of or beneath the unit.

PS Audio® products are passively cooled components that require adequate ventilation at all times during operation.

Do not remove or bypass the ground pin on the end of the AC cord. All PS Audio® products ship with a grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug this apparatus during lightning storms.

When making connections to this or any other component, make sure all components are powered off. Turn off all systems' power before connecting the PS Audio® component to any other component. Make sure all cable terminations are of the highest quality.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS PS AUDIO PRODUCT. REFER ALL SERVICE NEEDS TO QUALIFIED SERVICE PERSONNEL.

Please contact your authorized dealer, distributor, or PS Audio® directly if you have any questions or concerns that are not addressed in this reference manual.

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This product was designed and assembled in Boulder, Colorado with globally sourced components.

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# Introduction

Thank you for your purchase of the PS Audio PerfectWave SACD Transport.

### **Universal Disc Player**

The PerfectWave SACD Transport (PST) is PS Audio's most advanced universal disc transport and is capable of playing stereo audio from most types of optical discs, including SACD, CD, CD-R, CD-RW and DVD-R\*/-RW\*/+R\*/+RW\*(\*Audio data file only). It can also play MP3/ WMA/AAC (~48kHz/320kbps) WAV/FLAC/AIFF(~192kHz/24-bit) DSD (~5.6mHz) and ALAC (~96kHz/24-bit) files from discs or from its USB input.



### Symbols Found on the PerfectWave SACD Transport

**CE** Indicates compliance with European Union Legislation for relevant safety (Low Voltage Directive 2014/35/EU) and EMC (EMC Directive 2014/30/EU) requirements.

 $\swarrow$  Is intended to tell the user that parts inside the product are a risk of electric shock to persons.

Is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

Signifies that the instrument complies with European Union Waste Electrical and Electronic Equipment Directive.

(P) Indicates that the unit is in compliance with the European Union Reduction of Hazardous Substances Directive.



### **Easy Operation**

The PS Audio PerfectWave SACD Transport (PST) offers simple operation from its front panel or the included remote control. Be aware that many of the front panel buttons are multi-function in nature and will perform different functions according to whether they are pushed with a short press or a long press. The functions are explained in detail later in the manual.

### **Unique Architecture**

At the heart of the PST is PS Audio's Digital Lens. Invented in 1993 by PS Audio founder Paul McGowan and chief engineer, Bob Stadtherr. The Digital Lens electrically isolates the mechanical transport/laser mechanism from the unit's digital output stage, reducing jitter and timing artifacts, and focuses the audio data into a single bit-perfect and timing-accurate stream to your DAC.

### **Galvanically Isolated Output Stage**

The PST also incorporates a newly-developed galvanically isolated output stage. This feeds the output of the all-new drive mechanism to the transport's Digital Lens with a design that completely eliminates noise or ground contamination. The sonic results represent new levels of image specificity, openness and effortlessness of musical reproduction. Never before have we experienced noise levels this low, a seemingly velvet blackness that must be experienced to be understood.

### **Proprietary Digital Lens Technology**

In digital audio, timing is everything. Jitter, noise, and a lack of isolation all have major impacts on sound quality, especially affecting lower-resolution media such as CD. The PST's latest-generation Digital Lens technology solves timing, noise and isolation problems through a unique combination of buffer memory and FPGA (Field-Programmable Gate Array)-based digital processing.

### Plays the DSD Layer on SACD

PS Audio's engineering team has incorporated a host of additional advancements into the PerfectWave SACD Transport. The PST features a new Memory Player transport with an improved Digital Lens buffer. Separate power supplies are employed throughout the circuit. In addition, the PerfectWave SACD Transport requires no setup – just connect it to a DAC and press Play.

The PST is able to play the DSD layer of SACD discs when used with a compatible DAC such as the PS Audio DirectStream series DACs, or a component with a built-in DAC like the PS Audio Stellar Strata.

With the PST and a compatible DAC or audio component, listeners can now enjoy the highest level of DSD audio reproduction from SACD discs, and superior CD playback. Through our advanced interface, pure DSD is streamed to, and processed in, the same reference quality DAC used by mastering engineers like Gus Skinas, Cookie Marenco and Steve Hoffman to name a few. The PST will play back pure DSD only through DACs employing PS Audio's I<sup>2</sup>S protocols.

### **Getting Data Out of the PST**

There are a number of ways to get digital audio data out of the PST: via the S/PDIF, AES/EBU or  $I^2S$  outputs.  $I^2S$  is the preferred method if you have a PS Audio DAC or any manufacturer's DAC that can receive it.

Note that all of the PST's outputs are active at all times. There is no need to select which output is operational. If desired, multiple outputs can be connected to multiple DACs.

### I<sup>2</sup>S is the Preferred Delivery Method

Standard digital outputs require three separate internal clocks along with the raw music data and combine them into one stream to the DAC. This mashup of music and clocks causes the audio to sound flat and harsh compared to listening via I<sup>2</sup>S.

I<sup>2</sup>S offers a much better way of delivering the music. By transferring the clocks and data on separate wires within the HDMI cable, the audible results are impressive. Simply use any high-quality HDMI cable between the PST and a compatible DAC and the data will be transferred perfectly. The quality of the cable can have a significant effect on the sound quality. Experiment.

A growing number of DACs and devices are adopting the PS Audio I<sup>2</sup>S over HDMI standard for digital audio transmission because of its superior audio quality.

### Playback from a USB Drive

The PST can also play files from a USB drive that is plugged into its front panel USB port. Sub-folders are not supported and only files in the root directory are played.

### **Simple Front Panel Interface**

The PST features a simple, straightforward front panel control interface featuring an Open/ Close button and control ring, which operate in conjunction with the front panel display.

### **Placement of the PST**

A good location for the PST is in a cabinet or on a shelf at an easily accessible height.

The IR (infrared) receiver for the remote control is located to the left of the front panel display. A direct line of sight will help to ensure the PST's IR sensor operates properly.

### **Digital outputs**

The PST offers multiple digital output choices including: XLR, BNC, RCA coax, and I<sup>2</sup>S (HDMI). All outputs are capable of delivering high-definition digital audio signals.

The PST's I<sup>2</sup>S connector transfers I<sup>2</sup>S digital audio through the use of an HDMI cable. This data link can only be used with another compatible component and will not work in other HDMI equipment as the I<sup>2</sup>S format does not comply with the HDMI standards. The HDMI connector and cable were chosen to carry the I<sup>2</sup>S signal because of their superior high-speed data



transmission capabilities for multiple clocks and data lines. PS Audio publishes its I<sup>2</sup>S standard and it has been adopted by multiple other manufacturers as well.

The PST can deliver the locked DSD layer of an SACD disc to compatible PS Audio DACs and integrated amplifiers, such as the DirectStream DAC, Stellar GainCell Preamplifier and Stellar Strata integrated amplifier. Future PS Audio DACs may also have the same capabilities.

### HDMI for I<sup>2</sup>S

The DSD layer on an SACD may only be played through the PST's I<sup>2</sup>S output. DSD files on the USB drive or burned to a DVD may be played on any output.

### Unpacking the unit

Carefully unpack the PST. Use the included cotton gloves to remove the unit and place it in the chosen location.

The piano black top cover has a protective plastic film. Remove this.

Connect the PST to your digital sources using the appropriate connections.

Connect the AC cable into the receptacle in back and plug the unit into your PS Audio Power Plant, other power conditioner or into the wall.

### **Registering Your PerfectWave SACD Transport**

PS Audio products come from the factory with a three-year warranty. Please register your new PST. Registration takes just a few minutes, assures that you will be informed about future upgrades, keeps track of your serial number and allows us to maintain the highest standards of product quality of any company.

To register your new unit, look on the back panel of your PST and note the serial number. Then go to <u>www.psaudio.com</u> and click on Register Products.

Once you have completed the registration process, you can then go to the PS Audio website and look at the My Registered Products page. The link to this page is located at the top right hand corner of the website once you are logged in. If you do not have web access, you may register the unit via mail or phone. Notification of software upgrades to this product will be available only to owners who registered via the web and email.

### **PST Output Options**

The PST has multiple output options, including I<sup>2</sup>S through an HDMI connector, AES/EBU through the XLR balanced connector, and S/PDIF through the RCA and BNC coax connectors.

The stereo digital outputs of the PST can be transferred through three types of connections.



### **I<sup>2</sup>S Sources**

PS Audio's recommended connection to DACs is through its I<sup>2</sup>S protocol. I<sup>2</sup>S delivers the best sonic experience by separately transmitting data and clocks over an HDMI cable. A growing number of high-end audio DACs have adopted PS Audio's I<sup>2</sup>S standard, which we freely offer and support to the high-end audio manufacturing community. The PST is compatible with all properly implemented DACs that are compatible with our published protocols.

PerfectWave	SACD Transport					
		Digi	tal Outputs			CE
	Coax-	3 Coax-2	Coax-1	XLR-2 R DSD	XLR-1 128 — L	
	I <sup>2</sup> S	R – DS	D 128 – L		*	YOY
	· · · · · · · · · · · · · · · · · · ·			()		X
					(*	1
88	Designed and a	ssembled in Boulder	, Colorado with glob	cally sourced com	ponents	

Although an HDMI cable is used for the I<sup>2</sup>S connections, it's important to note that I<sup>2</sup>S data is not HDMI data, and the PST's I<sup>2</sup>S output should not be connected to the HDMI input on a DAC or receiver. The HDMI connector and cabling are used only to deliver audio via I<sup>2</sup>S.

Connect a high-quality HDMI cable between the PST's I2S output to a compatible DAC's I<sup>2</sup>S (via HDMI) input. Note: the quality and length of the HDMI cable have significant impacts on audio performance. The shorter the cable, the better the sound. We recommend using a ½-meter length, if possible. Longer cables will work, but make certain you install the highest-quality HDMI cable possible within your budget.



Users can select what comes out of this output when an SACD is played. The choices are: SACD (DSD), Stereo downsampled from the stereo SACD layer (PCM), or Red Book audio (PCM). The PST does not play multi-channel discs.

The pure DSD output on an SACD disc's master layer is available only through the I<sup>2</sup>S output. If that connection is not present, the PST will default to playing the SACD's CD layer.

Non I<sup>2</sup>S compatible DACs will not reproduce the DSD layer of SACD in order to protect copyright restrictions and restrict illegal copying of the master layer.

If desired, it is possible to toggle through an SACD's DSD layer and its CD layer if the appropriate and compatible I<sup>2</sup>S connection has been established. This can be selected via the Menu item: Layer.

### **Coax and XLR Connections**

### XLR

If an I<sup>2</sup>S input is not available on your connected DAC, PS Audio recommends XLR as the next-best connection. The XLR outputs provide a balanced digital output stream containing a combined version of the musical data and multiple clocks.

Using a high-quality XLR data cable, connect either of the PST's XLR outputs to the corresponding input of your DAC.

Two XLR connectors are provided for compatibility with DACs that use two cables for double-rate DSD. See section on System sub-menu: DoP Mode. If this mode is not enabled, both XLR connectors output the same signal.

### **RCA or BNC (Coax)**

Many DACs rely upon a coaxial digital connection to receive data. Digital audio transferred over a single RCA or BNC coaxial cable is in the S/PDIF format (Sony/Philips Digital Interface), which combines digital audio with multiple clocks on a single cable.

Using a high-quality RCA (or BNC) cable optimized for data transmission, connect the PST's RCA or BNC output to your DAC's RCA or BNC input. Two XLR connectors are provided for compatibility with DACs that use two cables for double-rate DSD. See section on System sub-menu: DoP Mode. If this mode is not enabled, both XLR connectors output the same signal.

### **Connecting to a network**

The PST connects to your home network using Wi-Fi or a standard Ethernet jack to receive firmware updates. Either enable Wi-Fi or connect the Ethernet jack to your home network. We recommend using a CAT5 or CAT6 cable for upgrades. In addition, in order to make sure your PST is fully compliant with international regulations, please install the included ferrite noise suppressor onto the Ethernet cable, around the end of the cable closest to the unit.

Note: It is not necessary to enable Wi-Fi or connect the Ethernet for normal playback operation of the PST.

The network connection should be to an internet-connected router or through a wireless Ethernet bridge connected to a router. The PST's internet connection via the network cable will be automatic through any DHCP-enabled network. Most internet setups in the home or office are DHCP-enabled, and connection should take place within a very short period of time.

You can look on the front panel display for verification of connection. When you are connected to the internet and the PST is powered up Ethernet icon will be displayed on the icon bar at the top of the screen. If the network is not connected, no icon will appear in the icon bar.

The PST can also receive factory firmware updates via its network connection, should they become available. In addition, the PST has a built-in Wi-Fi antenna, which can be used to receive factory-supplied network firmware updates.

### **Powering the PST**

Once all the digital audio and network connections are made, use a high-quality AC cable to connect the PST to an AC wall outlet or AC outlet of a power conditioner. The supplied AC power cord will work but upgrading to a high-end power cord, as well as the use of a PS Audio Power Plant AC Regenerator, will offer sonic benefits.



PS Audio produces an entire line of high-quality power cables that are generally accepted as being some of the best in the industry. Whatever you choose, make sure it honors the music.

Turn the AC power switch on the rear of the PST to the ON position. The power switch is located above the AC inlet as you face the rear panel.

The PS Audio logo button, located on the upper left hand corner of the unit, is the Idle/Operation



Mode control for the PST. This control has two modes: Idle Mode and Operational Mode. Idle Mode is designed to keep power on to critical internal circuitry including power supply capacitors, thermally sensitive semiconductors and integrated circuits.

### Idle Mode

The master power switch on the rear panel should remain on at all times. When your connected equipment is not in use, the PST can be placed in Idle mode. Putting your unit in Idle mode will deactivate all of its output relays.

Idle mode can be activated/deactivated by pressing the PS Audio logo button, located on the upper-left hand corner of the PST front panel. When the logo button is not lit, the PST is in Idle mode. Idle mode can also be activated/deactivated by pressing the On/Off buttons at the top of the remote.

CAUTION: Activate Idle mode before powering down your unit using the rear panel master power switch.

### **Operating the PST**

### Front panel controls

All functions of the PST can be accessed via the Open/Close/Menu Access button, front panel control ring and menu display.



### **Open/Close/Menu Access Button**

The Open/Close/Menu Access button is the round black button to the left of the display. It is used to open and close the disc loading tray. Press it to open the tray and press it again to close the disc tray. You can also press gently on the front of the tray itself to close it. Holding down the button will access the Menu display.

### The Display

The front panel display will show various information according to the function selected, including track number and duration, elapsed time, disc type and other information.

- By default, the display shows the track number and remaining time of the currently playing track.
- To display the elapsed time of the currently playing track, long press the up arrow navigation button on the control ring.
- To ensure it is set to the correct mode (remaining or elapsed), this may be done while a track is playing.
- Once selected, the remaining/ elapsed time mode will not change unless the unit is powered off in the back.

### **The Front Panel Control Ring**



The five buttons on the control ring can have different functions depending on whether the button is given a short press or a long press.

### **For Disc Playback**

### Center:

- A short press will begin play of the selected source.
- If a disc is playing, another short press will pause the disc.
- A long press will stop disc playback.
- The difference between pause and stop is that pause will halt at the current track and time and the SACD drive will continue to spin. Pressing stop will return to the beginning of track 1 and the SACD drive will spin down and stop.



### Left:

- A short press will skip backwards to the previous track.
- On the first press, it will skip back to the beginning of the current track.
- If pressed within the first three seconds of a track, it will skip back to the previous track.

### **Right:**

• A short press will skip to the next track.

### Up:

- While a track is playing, a short press will cause the player to enter fast-forward mode, scanning through the track at approximately ten times the normal playing speed.
- Pressing the Up key again or any key will bring the PST out of fast forward mode and the disc will go back to playing normally.
- A long press (more than two seconds) on the Up button will toggle the time display to show either remaining time (counting down) or elapsed time (counting up). The default is remaining time.

### Down:

- While a track is playing, a short press will cause the player to enter fast-rewind mode, scanning backward through the track at approximately ten times the normal playing speed.
- Pressing the Down key again or any other key will bring the PST out of fast rewind mode and the disc will go back to playing normally.
- A long press (more than two seconds) on the Down button will toggle the time display to be either remaining time (counting down) or elapsed time (counting up). The default is remaining time.



### **Playing from a USB Drive**

The front panel USB input on the PST is available for small music collections stored on USB drives. Simply plug in a USB stick and its contents can be accessed and played back through the PST using the same controls on the front panel or the remote control that would be used for disc playback. The tracks on the USB drive can be navigated via the front-panel controls or the remote control. The PST supports the same file formats for USB and DVD discs. Sub-folders are not supported and only files in the root directory are played.

Note that while this front-panel input is a convenient way to access a limited amount of music – for example, playing demo tracks from a friend's collection or at an audio show – it is necessary to scroll through the tracks one by one, which can be time-consuming. As such, this input should be viewed more as a courtesy port than a primary means of connecting music.

### Menu

The PST features a menu display system that is accessible using the small selector button and control ring. It's a good idea to familiarize yourself with the different functions in the PST's menu. To access the menu, simply press and hold the menu button to the left of the display. A gear icon will appear in the upper right corner showing that you are in the Settings menu.

To scroll through the available menu options, use the left and right arrow buttons on the control ring.

To scroll through the available options for a menu item, use the control ring up and down buttons.

### **Exiting the Menus**

Executing a long press of the menu button (holding for more than two seconds) or the center Play/Pause button will exit the menus and return the unit to the Home screen. The menus will also timeout after seven seconds. Note that some settings (such as repeat) take effect immediately, while other settings will not take effect until a final selection is made and you exit the menus (such as selecting Source).

### Menu Features

Repeat: Toggles between off, repeat song (Single) and repeat album (All).





Source: Toggles between disc or USB source.



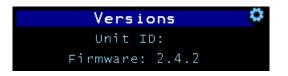
Layer: Toggles between DSD and CD layer on SACDs.



Layer Default: Sets the default layer (DSD or CD) for new SACDs.



**Versions**: This menu display shows the versions of the PST's firmware. If you need to contact our customer service team for help with your unit, please have this information ready.



### **More Settings**

There are additional, less frequently used features in the Settings sub-menus. The features are divided into two groups: System, and Network. Sub-menus are displayed on the screen with a triangle pointing to the right. To enter these sub-menus, use the navigation keys until the desired sub-menu is displayed, then double-press the menu button or single press the center Play/Pause button to go into the sub-menu.

### System sub-menu

**Backlight**: The brightness of the display can be adjusted. The range is from 1 to 10.



**IR Status**: Enables and disables the IR. This may be useful if you have a remote for other devices that causes the PST to perform unwanted operations.



**DoP Mode**: This feature determines how double rate DSD (DSD128) files will be sent over the Coax and XLR outputs. The options are Split and Stereo. Split is the default.



In "Stereo" mode, the DSD128 signal is encoded into a 352.8KHz PCM frame. The same signal is sent to all Coax and XLR connectors. However some DACs are not capable of decoding 352.8KHz frames. In "Split" mode, each channel (L and R) is encoded separately in a 176.4KHz PCM frame. The Left channel will be sent to the the "L" connectors and the Right channel will be sent to the "R" connectors. The Coax-3 output is always in stereo mode.

The DSD layer of an SACD will only be output on the I<sup>2</sup>S output connector. DSD from data files will output natively on the I<sup>2</sup>S output connector and in DoP format on the Coax and XLR output connectors.

**Update**: Check for a firmware update. The firmware will be downloaded over your network so the unit will need to be connected to the internet via Ethernet or Wi-Fi.



**PSAudio Access**: Turns on the ability for PS Audio to remotely access a unit over the Ethernet or Wi-Fi connection to debug issues.



**Factory Reset**: This feature allows you to reset all of the configuration settings back to what they were when the PST was shipped from the factory. Any custom settings, Wi-Fi networks, or any other settings you have made will be erased.



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### Network sub-menu

**Network Status**: This menu item will show you information about your network connection, including Wired/Wi-Fi, IP address, and connection status. This menu is information only; there are no settings.

	Network Status 🛛 🔅
Eth	MAC: 00:1f:f6:04:03:7f
	Auth: open

**Wi-Fi Enable**: This feature allows you to enable/disable the wireless (Wi-Fi) functionality. (Not available in Japan).



**WPS**: This feature is for using WPS (Wi-Fi Protected Setup) to configure your PST with your network without the need to enter passwords. Use this menu to activate the WPS feature, then press the corresponding WPS button on your router. Your PST will then be connected to your Wi-Fi network automatically.



The Wi-Fi Setup wizard is used to manually setup a Wi-Fi network connection. During the Wi-Fi setup process, you will see the following screens:

**Network Select**: Select your Wi-Fi router from the drop down menu using the Up or Down arrow keys to select the correct AP (access point). Press the menu select button or center Play/ Pause button to choose the AP.

Found	20	Networks	¢
	PSAU	JDIO	
	PSGU	JEST	

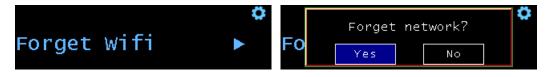
**SSID Accept**: Available network resources are identified by their SSID. Use the control ring to Accept or Cancel the AP SSID selection.



**Password Screen**: Press the Up or Down arrow keys to scroll through the characters. If you press and hold the Up or Down arrow key, the PST will scroll quickly through the characters. Press the menu select, the center Play/Pause button, or the Right key to select the character and enter the next character. Double-press the menu select button or use the Left arrow key to backup one character. Once the last character is entered long press the menu select button or long press the center Play/Pause button to save the password. The PST will connect to your access point (router). The characters are arranged by capital letters, lower case letters number 1-9, then 0. The character after the 0 is a space character. The remaining characters are special characters (!, @, #, etc...). It may be faster to find the number characters by going backwards from the A.

Enter Passw	ord 🔅

Forget Wi-Fi: Allows you to delete the current Wi-Fi configuration.







### **Using the Remote Control**

Your PS Audio PerfectWave SACD Transport is supplied with a full-function remote control. In addition to operating the PST, the remote can also control compatible PS Audio components such as the Stellar Strata Integrated Amplifier, Stellar GainCell Preamplifier, DirectStream DAC, BHK Signature Preamplifier and other PS Audio products.

The operation of the PST's remote control is intuitive, with standard icons and controls corresponding to familiar functions such as Play/ Pause, Stop, Next Track, Previous Track, direct track number access and so on.

The remote comes supplied with two AAA batteries. Please remove the back cover and insert the batteries in the correct orientation.

### On/Off

Use the "Off " button to put the unit in Idle mode. Use the "On" button to return it to the operating mode.

### **Display Dim**

Pressing the "Dim" button will turn off the display and all the indicators on your PST. Any time you press any button on your remote control, the PST will wake up and reactivate the display and indicators for 7 seconds. After 7 seconds with no button activity, the display will go dark again. Pressing the "On" button will restore the PST display to normal operation.



### Emergency eject of a stuck disc

In the unlikely event that a disc gets stuck in the PST, the first thing to try is a reboot of the unit. Turn off the main rear panel power switch. Wait 10 seconds, then turn the switch back on. Once the PST has initialized, use the front panel Open/Close/Menu Access button or the Open/Close button on the remote control to open the drawer and remove the disc.

If the reboot doesn't work, an emergency procedure is available.

Important note: do not tilt the PST backwards, as this may cause the disc to fall out of the tray and get stuck in the back of the drive. This can not only damage the disc, but could also potentially jam the drive and make it difficult or impossible to open the tray. If possible, have someone help hold the unit straight so that the bottom of the unit can be accessed from below.

On the bottom panel of the PST, there is a screw. While facing the bottom of the unit, use your hand/fingers to slide the screw along the slot from left to right (towards the center of the unit). This will engage the release mechanism, manually sliding the disc door open so the disc can be retrieved. If the screw is tight and cannot be moved, use a screwdriver to loosen the screw slightly so the mechanism can be slid along the slot. Do not completely unscrew.



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### **Upgrading the Firmware**

At times PS Audio may introduce firmware updates that upgrade the functionality of the PerfectWave SACD Transport. This is done through the network, or manually with a USB drive.

To check for the current firmware version of your unit go to Menu and scroll down to the Versions menu. Compare the version number to the latest firmware available on the PS Audio-Resources-Downloads section of <u>www.psaudio.com</u>. If you need the latest version, you can download the firmware update at no charge.

After downloading the files, transfer them to a blank USB stick. Then place the stick in the rear panel USB slot of the PST labeled FW. Turn off the rear panel power switch, wait for 10 seconds and then turn the power switch to the On position, which will reboot the PST. The front panel logo (Ready) light will begin blinking, indicating that the new firmware is being installed.

DO NOT SHUT OFF THE POWER OR DO ANYTHING ELSE WHILE THE UPDATE PROCESS IS TAKING PLACE. BE PATIENT AND WAIT UNTIL THE LOGO LIGHT STOPS BLINKING.

Once the light stops blinking, keep the power to the PST on until it has fully initialized and is ready for operation again. Then, remove the USB stick and then, once again using the rear panel power switch, power cycle the PST.

### Care of the PST

The PS Audio PerfectWave SACD Transport is constructed from durable and attractive materials. However, should minor scratches occur in the top cover, they can be removed with any high-quality automotive scratch removal product such as Kit's Scratch Out or the appropriate Meguiar's products. Automotive finishing polish and wax can both be used on the top plate to bring out a beautiful luster.

### **Specifications**

Physical Unit Weight Unit Dimensions Shipping Weight Shipping Dimensions Power requirements Input Power Model specific Fuses

Power Consumption Optical discs

USB Drive File Format

Outputs

22 lbs [9.97 kg] 14" x 17" x 4" [ 36cm x 43cm x 10cm] 31 lbs [14 kg] 20.5"x 24" x 10" [52cm x 61cm x 25cm] 100VAC, 120VAC, or 230VAC 50 or 60Hz 100V: 2.0A Time delay, H rated: 2.0AT(H) 120V: 1.6A Time delay, H rated: 1.06T(H) Time delay, H rated: 1.0AT(H) 230V: 1.0A 30W SACD/CD/CD-R/CD-RW/ DVD-R\*/-RW\*/+R\*/+RW\* (\*Audio data file only) USB Flash Drive with audio files MP3/WMA/AAC (~48kHz/320bps) WAV/FLAC/AIFF (~192kHz/24bit) ALAC (~96kHz/24bit) DSD (~5.6MHz)

1 I2S output for PCM and DSD (raw)
Coax 1 output for PCM and DoP
BNC 2 output for PCM and DoP
Use in tandem for Double-rate DoP
XLR Balanced 2 output for PCM and DoP
Use in tandem for Double-rate DoP
RJ45 and WIFI
Ethernet and WIFI for over-the-air code update





### **Product registration**

By registering your product, you are validating the start date of your limited warranty. This limited warranty is in effect for 3 years from the date the unit was first purchased from PS Audio or its dealers and agents. If you do not register your product within 30 days of service, a copy of your purchase receipt from an authorized PS Audio dealer may be used as proof of purchase to establish the warranty start date. If no proof of purchase from an authorized PS audio dealer or registration is provided, the production date of the product will be used to determine the warranty start date. You can register your product online, by phone, by mail, or by email.

### What this warranty covers

This warranty covers defects in material and workmanship for products purchased from PS Audio or its authorized dealers and agents. In the event your product fails, your sole remedy under this limited warranty shall be to return the product to PS Audio or an authorized PS Audio repair center. At the option of PS Audio, the product will be repaired without charge for parts or labor, replaced, or the purchase price refunded through the original point of purchase.

### Shipping

You are responsible to pay for the safe and proper shipment of the warrantied product to PS Audio or its authorized repair center. Under this limited warranty, PS Audio or its authorized repair center will pay the cost of returning the repaired or replacement product to you.

### What this warranty does not cover

This warranty does not cover damage due to:

- Accidents, carelessness, improper transportation, misuse, neglect, or abuse
- Failure to follow the operating instructions that are provided by PS Audio in the Owner's Reference Manual (available for download at www.psaudio.com)
- Use in any manner inconsistent with PS Audio's operating instructions (available for download at www.psaudio.com)
- Lack of routine maintenance
- Connection to an improper voltage supply
- Alterations or modifications to the unit
- Improper or unauthorized repair, including repairs not authorized by PS Audio or a PS Audio authorized repair center
- Fire, lightning, flood, "Acts of God," or other contingencies beyond the control of PS Audio
- Products purchased through an unauthorized source (if you have questions as to whether or not a dealer is authorized, please contact customer support at www.psaudio.com
- Products with a factory-applied serial number that has in any way been altered, defaced, or removed

### Limitations under this warranty

In no event will PS Audio's liability to you exceed the original purchase price of your unit. This warranty does not cover the cost of custom installation, customer instruction, setup adjustments, or signal reception problems. Consequential and incidental damages are not covered under

# Warranty Information

this warranty. However, some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. In the event that your warrantied product cannot be repaired, PS Audio will either replace or refund the cost of the unit. We reserve the right to replace any out-of-stock, discontinued, or limited edition products with a comparable product. Discontinued products may not be available for warranty

### Warranty transfer

This warranty is for the benefit of the original purchaser of the product. The warranty may be transferred to a subsequent purchaser during the 3 year warranty period. To do this, you must contact PS Audio directly to set up a transfer of warranty registration.



### Warranty service within North America

Please contact PS Audio customer support for service assistance, help with locating an authorized PS Audio repair center, help with the operation of a product, or for more information.

### **Obtaining An RMA#**

In order to receive warranty service, you must first obtain a Return Merchandise Authorization Number (RMA#) prior to returning any item. Please contact PS Audio or an authorized PS Audio repair center to receive an RMA#. The RMA# must be on all returned items. If it is not clearly marked, PS Audio will return the package back to you, freight collect.

### **Packaging and Shipping**

Original packaging should be used for the safe transit of your PS Audio unit to the repair center. If you do not have the original packaging, PS Audio can sell and ship replacement packaging to you. You are responsible for the cost of shipping the product to a PS Audio authorized repair center. You should insure the product for its full retail cost, in the event it gets lost or damaged in transit. PS Audio is not responsible for damage incurred during the transit of products sent to us. Shipping your product in non-PS Audio packaging may void this warranty. PS Audio reserves the right to charge you for new factory packaging to return your product after a repair.

### **State Law**

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

### International warranty service

PS Audio has authorized distribution in many countries of the world. In each country, the authorized importing distributor has accepted the responsibility for warranty of the products sold by that distributor. Warranty service should be obtained where the product was purchased.

### Changes to our products

PS Audio reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products, and to change the prices or specifications of any products without notice or obligation to any person.

# Your Product

Your Serial Number	
Your Purchase Information	
Date of Purchase	



# CONTRACTOR OF CO

At PS Audio, we're family.

Not just a family that runs in bloodlines, but in frequencies.

Because while we may not all share the same genes here, we are all related by a passion, nay, obsession with listening to the music we love at the highest, most breathtaking quality possible.

And in our minds, that makes us kin.

In fact, we believe that every nutty, hertz counting audiophile out there is part of our tribe.

That's how we've built our company over the last 50 years - with the kind of care and respect that you give to your family.

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