

VPI Signature 21 Turntable Manual



Setup and Instruction Manual

VPI Industries, Inc., 77 Cliffwood Ave. #5D, Cliffwood, NJ 07721
<http://www.vpiindustries.com>

Signature 21 Turntable Packing List

Serial #: _____

Signature 21 Chassis 		Prime Signature Platter 	
Fatboy Tonearm 		Signature Weight 	
Prime Signature Motor 		Isolation Feet 	
Counter Weight 		Drive Belt 	
Finger Lift 		Power Cord (US Only) 	
Alignment Jig 		Force Gauge 	
Azimuth / Hardware 			

Dear VPI Customer,

I wanted to thank you for joining our VPI Family! We have proudly been making turntables in America for 40 years. VPI was started by my mom and dad Sheila and Harry Weisfeld with the goal of bringing high-end performance into everyone's homes.

The following manual will help guide you through everything you need to about your Prime Signature turntable. If you run into trouble you can check out our set-up videos and online guides:

<https://www.vpiindustries.com/videos>

I want to invite you to join our VPI community on our VPI forum where fellow VPI owners share and communicate ideas, questions, and tips with each other and VPI staff members:

<http://vpiforum.com/>

I also want to invite you to join the VPI fan group, "I love my VPI turntable" on Facebook where everyone shares pictures of their tables and what they are listening to:

<https://www.facebook.com/groups/VPIturntablegroup/>

If you have any further questions or concerns, please contact your dealer, but also feel free to contact us at info@vpiindustries.com.

Again, welcome to the VPI Family!

Mat Weisfeld

President of VPI

This date: _____ this turntable was

Constructed by: _____

And packaged by: _____

Safety Instructions

Read and follow the Safety Instructions below and remember to save all packing material. The Prime Signature and all VPI products should only be moved/shipped in original packaging to ensure the product's safety. Also, be sure to place the table and components on a flat, level surface for easier setup.



The following instructions are to reduce risk of electrical hazard or injury.

- To avoid electrical shock/hazard, do not open the motor housing when plugged in.
- If the power cord provided with the Prime Signature does not reach an outlet, use a heavy-duty, grounded extension cord.
- To avoid electrical shock, always plug the Prime Signature into a grounded (three prong) outlet.
- Do not expose the Prime Signature to rain or excessive moisture.
- Do not touch the male pivot point of the tonearm assembly. It is extremely sharp and can cause injury.
- Do not turn your Prime Signature motor on/off at high volumes. To be safe, it is always good practice to mute your system before turning any motor or electrical component on or off.
- Your 3D arm is heat resistant and UV Light resistant; however it is still not recommended to leave your arm in extremely hot environments.

Minimum Specifications

- Chassis Composition: Vinyl Wrapped MDF, Aluminum, and Stainless Steel
- Platter Type & Size: 12" Aluminum, 20lbs
- Tonearm Included: JMW-10-3DR Tonearm
- Motor RPM: 300 RPM
- Motor Pulley Accuracy: +/- .0005"
- Wow and Flutter: .03%
- Speed Accuracy: .04%
- Rumble: 82 db Down
- Footprint: 19 ½" x 13 ¾"
- Overall Size: 21 ¾" x 15 ¾" x 11"
- Total Weight: 66lbs

Packaging and Repackaging Diagram

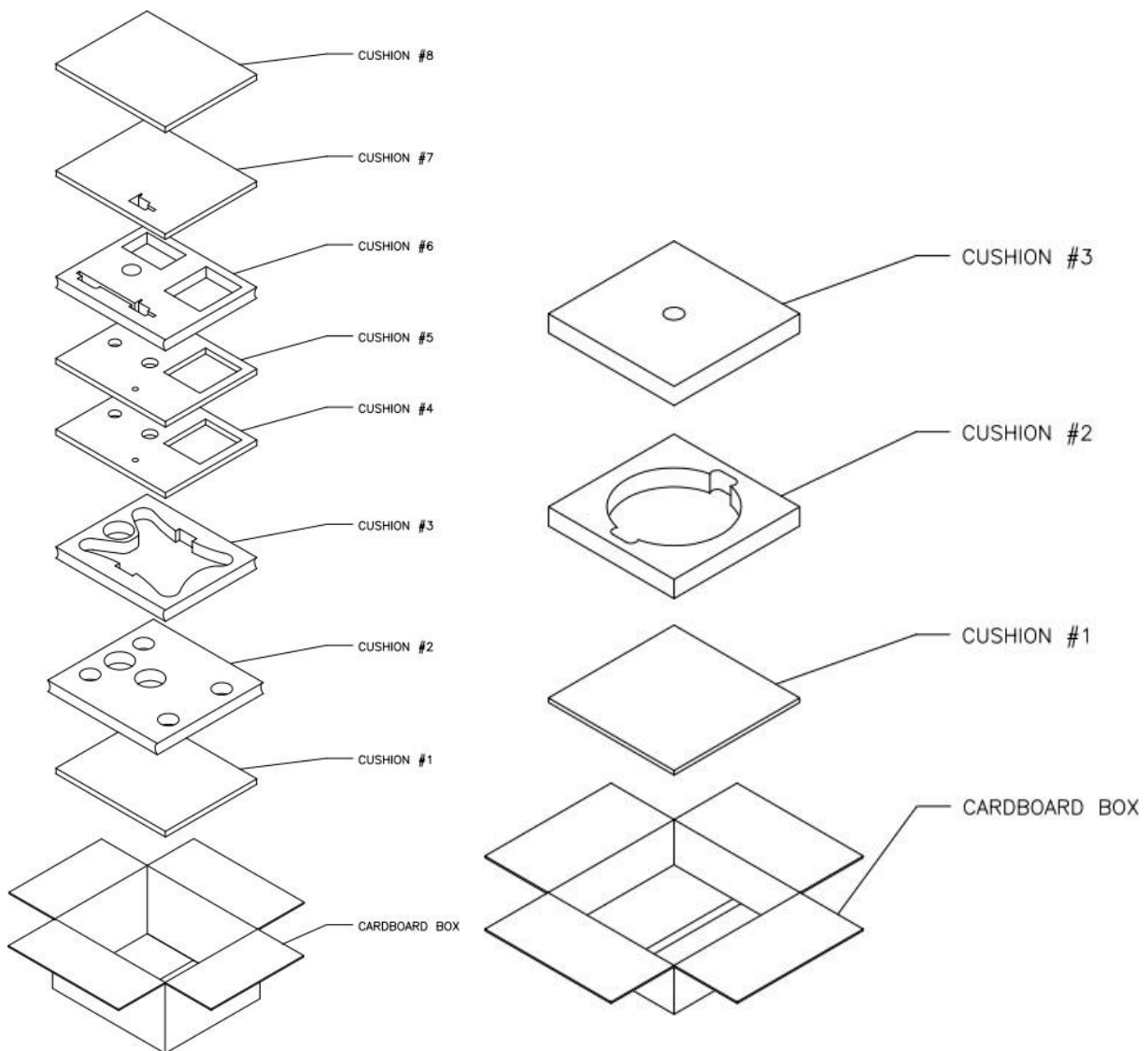


Figure 1 – Packaging

Anatomy of the Signature 21 Turntable



Figure 2 – Prime Signature Anatomy

Unpacking the Box

The above diagram (*Figure 1*) shows all packaging components in their correct packaging order. The packaging for the Prime Signature has been carefully designed to avoid shipping damage and high-impact stress. It is important to **save the packaging** in the event you move or ship your turntable.

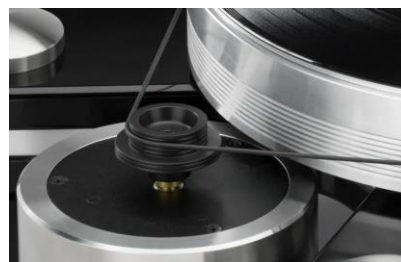
- Using a knife or scissor, carefully cut open the Prime Signature Box packaging tape.
- Remove the following tools and items and set safely to the side:
 - ✓ JMW 3DR 10 Tonearm
 - ✓ Alignment Jig
 - ✓ Signature Center Weight
 - ✓ Power cord
 - ✓ Stylus force gauge
 - ✓ Azimuth and Hardware tool kit
- Having a clear space ready, remove the Prime Signature Chassis from the box and place it carefully on an isolated platform.

- Remove the Prime Signature motor and place it in the cutout to the left. Be careful not to hit or damage the motor pulley. It measured +/- .0005" when it was tested at the factory.



Setting up the Signature 21

- Make sure your shelf / top-plate that your Signature 21 is sitting on is level.
- Remove the turntable platter from the bottom of the box in "Cushion #1".
- Peel the tape off the bearing hole under the platter.
- Remove the protective cap on the spindle to lower the platter on the Signature 21 spindle.
- Place the black drive belt around the platter and motor pulley, when you spin the platter, it will self-correct.
- 33 & 45 RPM Speeds are adjusted using the two-step pulley. Adjust your belt accordingly.



- We recommend placing your Signature 21 turntable on any 3 party Isolation turntable top-plate. Any sturdy top-plate and stand that can support the weight will do.

Note: The better the isolation for your turntable the better the sound.

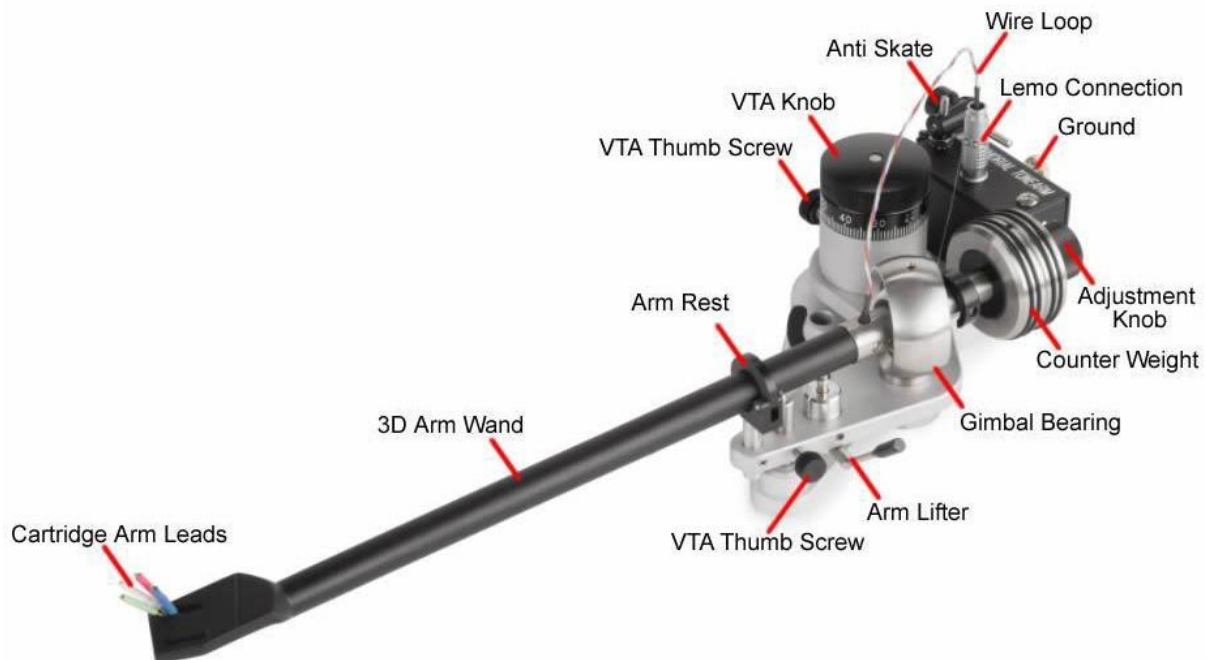
Installing your Tonearm and Aligning the Cartridge

VPI Turntables are available with Uni-pivot or Gimbal tonearms. This manual covers the procedures for installing a Gimbal as it is the standard stock option.



To avoid injury, do not touch the male pivot point. It is extremely sharp.

(Note: the parts are the same/similar and apply for standard and Fatboy Gimbal as well)

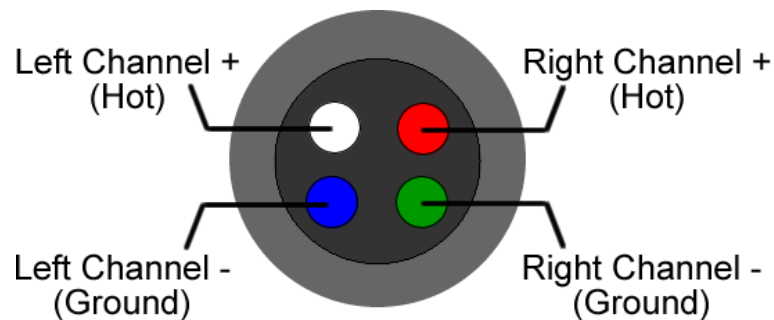


Installing and Aligning the Cartridge

- For cartridges with threaded mounting holes, use the screws supplied by the cartridge manufacturer. Other screws may not fit properly and may cause damage to the threads and cartridge.
- To avoid damage to the 3D tonearm, use the provided finger lift which also serves as a washer supplied by VPI under the screw heads and do not tighten the screws too tight.
- For cartridges with pass-through mounting holes, use the hardware supplied with the tonearm. Be sure to use washers under the screw heads.
- It is recommended to use the Vertical Tracking Alignment (VTA) base to raise and lower your arm.
- The arm should be placed in the arm rest when you are not playing a record.



- To avoid damage to the 3D tonearm, you can use the provided washers, finger lift, or both to be placed under the mounting screw head.
- For cartridges with pass-through mounting holes, use the hardware supplied with the tonearm. Be sure to use washers under the screw heads.
- VPI provides 2 short and long screws for mounting your cartridge. If the provided screws do not work with your cartridge, we recommend you use the screws provided by the cartridge manufacturer.
- The tonearm wires are color-coded as follows:



Note: The Left Channel may sometimes be identified as black.

If your phono section inverts phase, the hot color becomes the ground color.

- It is recommended to use tweezers or needle nose pliers to connect the tonearm leads to the cartridge terminals. You can also use your fingers if you are careful.
- Connect the remaining connectors in the same way. To avoid damage to the cartridge, do not push the connectors all the way on.



- Place the Alignment Jig on the spindle with the V-groove against the base of the bearing.
- Tighten the screws of the jig to fit snug against the male bearing and over the record spindle.
- Place the arm tube assembly on the male pivot point, using caution with the 4-color wire and Lemo connector. Set the arm in its rest.
- If the cartridge has a guard, remove it.
- The arm should be placed in the arm rest when you are not playing a record.
- Line up the red dot on the Lemo connector with the red dot on the receptacle on the junction box. The Lemo connector can plug in only one way and should not be forced.



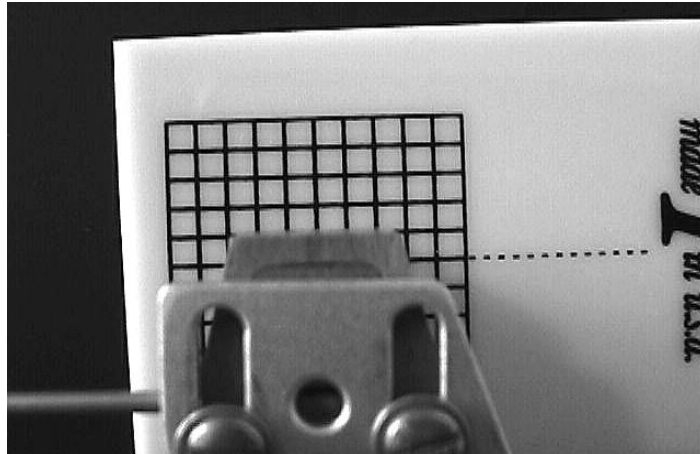
Line up the red dot on your lemo and the red dot on your junction box when connecting your tonearm

Ground Connection

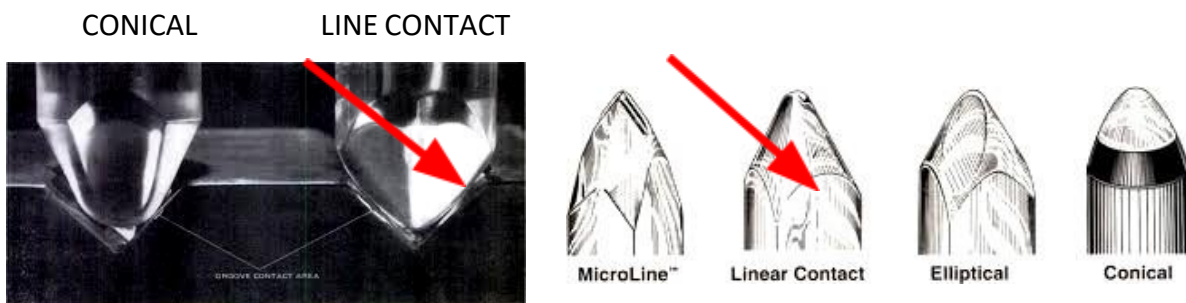


RCA Connection

- Swing the tonearm over the jig so the stylus is as close as possible to the dot in the center of the grid. If you find your arm moving while resting on the jig, set the counterweight for enough downward force to keep the stylus from moving
- Look down at the cartridge and align it between the lines of the grid. You should have the diamond stylus on the white dot and the cantilever lined up with the lines on the grid. Use a flashlight to look from the front and line up the cantilever with the grid lines. The only alignment that matters is the cantilever lined up with the white lines, and the diamond on the white dot. The angle of the cartridge is irrelevant.
- Adjust the cartridge mounting screws and the counterweight as needed until the cartridge is centered between the grid lines and the stylus is resting on the dot of the grid. The picture below shows the setup, the jig is in white for clarity, the provided jig is black.



- When the cartridge is properly positioned, tighten the cartridge mounting screws and remove the alignment jig. Do not make them overly tight, the 3D arm is self-damping and you can damage the surface by over tightening.



VIEW OF CONICAL AND LINE CONTACT STYLI AND GROOVE-TRACKING DIFFERENCES

Setting the Anti-Skating – Two Solutions

- VPI does not support the need to have anti-skate but does respect the customer's interest in having it enabled. Therefore, we provide a mechanism for anti-skate and the option of engaging it.
- For normal music listening all the anti-skate you need will be supplied by the lead out wire of the tonearm to junction box unless you are using test records and measuring sine waves.



If you try adjusting the anti-skate with a groove-less record, you will ruin the twist in the tonearm wire and void your warranty. Do this with the mechanical anti-skate if you want that much anti-skate.

General Use

- Before playing a record, make sure that both of the tonearm VTA thumbscrews are slightly tight.
- Allow at least 20 hours of break-in time.
- The motor will make some low-level noise. This will not get into the system. The motor and bearings will become quieter as you use your Prime Signature. Place the motor on a mouse pad for better isolation if this bothers you.
- If you notice hum in the system, remove the turntable to phono section interconnects and replace them with very cheap, standard VCR interconnects. These are well shielded and should eliminate the hum. If the hum goes away, get quality, well shielded interconnects.
- After at least one year of use the platter bearing should be re-lubed with PTFE super grease. The motor will need to be lubricated with 1 drop of 40-weight motor oil below the black drive pulley and right on the brass piece.
- You can experiment with mats but you need to adjust the VTA setting when doing this.

Additional Items Available from Your Dealer

- Periphery Ring Clamp - Improves record warp reduction and the shelf life of your cartridge.
- Dual Pivot/Stabilizer Kit - Improves focus on the vocals and makes the arm easier to handle.
- Analog Drive System (ADS) - Improves accuracy and speed adjustment.
- Reference Feet - Improves isolation and makes it even more quiet between the notes.

Possible Problems:

- **Noise in the system: a hum or buzz:**
 - o The answer is to ground the motor and system properly. A line filter that floats the grounds will not allow proper grounding of the phono system; the phono system must be grounded! Phono is not like a CD player and if this is your first table or your return to vinyl after a decade or so you must remember that phono amplification can be 1,000 times higher than CD or streaming so any noise that gets into the system will be amplified much more. Kill the noise with proper grounding and your system will sound better.
- **A pop on motor turns on or turn off:**
 - o In some systems the phono section is not well shielded and will pick up the EMF created by the switch opening to turn off the turntable. If your system is like that you can get into the habit of muting (the preferred method as you should really do that) or you can experiment with capacitors across the on-off switch. We supply the table with a .001 microfarad cap, you can change it to a .01 microfarad cap and it may eliminate to lower the problem to a tolerable level. A judicious grounding will many times solve this problem also.

- **Trembling of tonearm when playing records:**
 - If you have a uni-pivot tonearm, it sits on one point and is constantly moving with the record grooves; spiraling in and out as the record center changes and moving up and down with minute warps. It is perfectly normal and inaudible.
- **Distortion in left channel:**
 - Too much anti-skate.
- **Distortion in right channel:**
 - Too little anti-skate.
- **Noise at startup:**
 - If you get a screeching sound on startup, simply powder the drive belt with talc powder and the noise will dissipate.
- **Sibilance and distortion in both channels:**
 - Azimuth not set correctly or diamond stylus misaligned on cartridge. This is usually a setup or cartridge issue, not a tonearm issue. It can also be caused by a tracking force that is too light even if it reads correctly. Tracking force needed is determined by the temperature in the room, below 70 degrees requires greater tracking force. We have found almost all cartridges work and sound best at 72 degrees.
 - A 60-watt light put above a turntable in a cold room will heat up the cartridge just enough to make it much more compliant and track better.
 - Before going crazy try a slightly higher tracking force, it usually solves all the problems and zero in on the azimuth adjustment.
 - Another possibility is probably not as bad as the next photo but will definitely cause distortion and sibilance even in small amounts.



VPI Industries, Inc. Limited Warranty

VPI Industries, Inc. (VPI) warrants this unit against defects in materials and/or workmanship for five (5) years from the date of purchase by the original retail purchaser. VPI's sole obligation under this warranty is limited to the repair or replacement, at VPI's option, of any part(s) found to be defective. VPI's obligation to repair or replace defective parts is the purchaser's sole and exclusive remedy, and VPI shall not be liable for any direct or indirect injury and/or property damage arising out of the use of the product or defect in or failure of the product.

This warranty does not extend to any unit whose serial number has been defaced or altered. Any product that VPI determines causes a defect or malfunction due to incorrect installation, modification, misuse, or servicing by the purchaser, or service technician not authorized by VPI to perform such service will not be warranted. This warranty does not cover trivial or cosmetic defects that do not impair the unit's normal function.

VPI reserves the right to make changes in this product without assuming any obligation to install such change in any product previously manufactured. This warranty to repair or replace defective parts is in lieu of all other express or implied warranties of merchantability or fitness for a particular purpose. There are not warranties that extend beyond the description herein.

Some states do not allow exclusion of implied warranties or limitation of incidental or consequential damages, so the above exclusion or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Register your Product Online:

vpiindustries.com/pages/warranty

