

# Scoutmaster Turntable

## Setup and Instruction Manual



VPI Industries, Inc., 77 Cliffwood Ave. #3B, Cliffwood, NJ 07721  
phone: 732-583-6895 fax: 732-946-8578  
<http://www.vpiindustries.com>

# Table of Contents

Important: Read Before Proceeding! .....	1
Safety Instructions .....	1
Introduction .....	2
Minimum Specifications .....	2
Product Specifications .....	2
Unpacking the Box .....	3
Setting up the Scoutmaster .....	4
Installing and Aligning the Cartridge .....	5
Setting the Anti-Skating .....	6
Setting the Tracking Force and Tonearm Height .....	6
Setting the Azimuth .....	7
Playing Records .....	7
General Use .....	7
Additional Items Available from Your Dealer .....	7
VPI Industries, Inc. Limited Warranty .....	8

## Important: Read Before Proceeding!

- Read and follow the Safety Instructions below.
- Save all packing materials. The Scoutmaster should only be moved or shipped in its original packaging to reduce the risk of damage in transit.
- The Scoutmaster must be placed on a flat, level surface. This will make setup easy, provide better sound quality, and put less strain on the main bearing.

## Safety Instructions



**Follow the instructions below to reduce risk of electrical hazard or injury.**

1. To avoid electrical shock, do not open the motor housing.
2. If the power cord provided with the Scoutmaster does not reach an outlet, use a heavy-duty, grounded extension cord.
3. To avoid electrical shock, always plug the Scoutmaster into a grounded outlet.
4. Do not expose the Scoutmaster to rain or excessive moisture.
5. Do not touch the male pivot point of the tonearm assembly. It is extremely sharp.



**Follow the instructions below to avoid damage to the Scoutmaster.**

1. Do not leave the Scoutmaster running unattended.
2. Use the Scoutmaster in a well-ventilated area.
3. Place the Scoutmaster on a firm surface to allow proper ventilation to occur.

## **Introduction**

The Scoutmaster turntable is a precision instrument. It has been thoroughly tested and run for at least 4 hours. The speed accuracy, wow, flutter, and rumble have been checked, and this unit meets all of our specifications.

### **Minimum Specifications**

- Wow and flutter — Less than .02%.
- Rumble — Greater than 80db down.
- Speed accuracy — Within .1%.
- Total weight — 64 pounds.
- Platter runout — +/- .001 inch.

### **Product Specifications**

- 300 RPM AC synchronous drive motor.
- Drive belt custom-made for VPI from a single piece of nitrile.
- Aluminum cone feet with stainless steel ball bearings on the bottoms.
- Solid acrylic platter with bronze bushings and Teflon thrust surface.
- Platter sits on 60 Rockwell-hardened shaft and chrome-hardened ball bearing.

## Unpacking the Box

The turntable and tonearm are packed very carefully to avoid damage during shipping. It is important that you save the packing materials and box to use for shipping or moving the Scoutmaster.

1. Remove the 2 pieces of cardboard.
2. Set aside the bag containing the drive belt.



**Complete and return the warranty card. The warranty does not take effect until the warranty card is returned.**

3. Remove and set aside the items in the next layer:
  - o JMW Memorial Alignment Jig.
  - o Record clamp.
  - o Power cord.
  - o Bag containing screwdrivers and screws for mounting the cartridge.
4. Remove the pieces of foam covering the tonearm, then carefully remove the tonearm and set it down in a safe place. Use caution with the tonearm's delicate wires and Lemo connector.
5. Remove the foam pieces that surround the chassis. Lift one side of the turntable chassis, slide off the plastic bag, then do the same with the other side of the chassis.
6. Remove the turntable chassis from the box.
7. Remove the turntable platter and motor. Be very careful not to hit or damage the motor pulley. It measured +/- .0005" when it was tested at the factory. Try not to disturb it at all.

## Setting up the Scoutmaster

The Scoutmaster must be placed on a flat, level surface. This will make setup easy, provide better sound quality, and put less strain on the main bearing.

1. Place the turntable chassis, with the square cutout on the left, on the shelf or stand where it will be used. The better isolation you provide the Scoutmaster, the better it will sound.
2. Remove the tape from the spindle hole on the turntable platter and place the platter on the spindle. The platter bearing is lubricated; no additional lubrication is needed for at least one year.
3. Connect the power cord to the motor, then place the motor, with the power cord at the rear, next to the square cutout of the turntable chassis.
4. Lift the chassis and place it over the power cord. The motor should extend approximately .25 inch from the side of the turntable chassis.
5. Place the drive belt around the platter and around the pulley on the motor. The belt does not have to be level on the platter. It will self-level when the platter starts rotating.
6. For 33 RPM operation, place the belt on the upper part of the pulley. For 45 RPM operation, place the belt on the lower, wider part of the pulley. The center groove in each diameter is the correct speed. To determine the precise speed, use a strobe disc. The VPI Synchronous Drive System speed controller provides the ultimate speed accuracy and best sound. Check with your dealer about availability.
7. Verify the turntable is level by using a 9- or 12-inch bubble level front-to-back and side-to-side on the platter. If it is not level, rotate the aluminum cone feet up or down. If you must turn the Scoutmaster feet more than three full turns, level the shelf or platform the table sits on first.

## Installing and Aligning the Cartridge

1. Remove the red protective cover from the male pivot point on the arm base assembly.



**To avoid injury, do not touch the male pivot point. It is extremely sharp. In addition, skin oils can blemish and cause corrosion to the assembly.**

2. Place the JMW Memorial Tonearm on its side on a foam pad.
3. 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 tonearm, use one of the washers supplied by VPI under the screw heads.

4. For cartridges with pass-through mounting holes, use the hardware supplied with the tonearm. Be sure to use washers under the screw heads.
5. The tonearm wires are color-coded as follows:
  - o Red — right hot.
  - o Green — right ground.
  - o White — left hot.
  - o Blue — left ground.

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

6. Using tweezers or fine-tipped pliers, grip the center of the red wire's connector — **not** the wire itself — and push it onto the cartridge's right hot terminal pin. Connect the remaining connectors in the same way.

To avoid damage to the cartridge, do not push the connectors all the way on.

7. Adjust the tonearm counterweight halfway back on its mounting to reduce the amount of downforce on the cartridge.
8. Place the JMW Memorial Tonearm Alignment Jig on the spindle with the narrow end next to the pivot point. Tighten the screws of the jig so it fits snugly against the male bearing shaft
9. Place the arm tube assembly on the lower pivot point, using caution with the 4-color wire and Lemo connector. Set the arm in its rest.
10. If the cartridge has a guard, remove it.
11. 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.
12. Swing the tonearm over the jig so the stylus is as close as possible to the dot in the center of the grid. Set the counterweight for enough downward force to keep the stylus from moving when resting on the jig.

13. Look down at the cartridge and align it between the lines of the grid. Be careful to align the cartridge and not the tonearm headshell.
14. 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.
15. When the cartridge is properly positioned, tighten the cartridge mounting screws and remove the alignment jig.

## Setting the Anti-Skating

Anti-skating is one of the least understood forces acting on a tonearm. Skating force is created by friction between the stylus and the record, causing a force vector in a direction towards the center of the record when the headshell of the tonearm has an offset angle. Putting a stylus down on a flat, grooveless record will cause the arm to move toward the center of the record. Arm manufacturers have tried to compensate for this force, but that is impossible because the force is constantly changing as the music and velocity change.

VPI has conducted careful listening tests and determined that every tonearm we tried sounded better with its mechanical anti-skating disabled and the tracking force very slightly increased. All mechanical anti-skate devices add a negative sound to the music because they are made of parts that can vibrate.

VPI has a unique solution to anti-skating: the coiled wire of the JMW Memorial Tonearm acts as a spring and pushes the arm back without affecting the sound quality.

1. Adjust the counterweight so there is no downforce on the cartridge.
2. Swing the tonearm toward the spindle and release it. The arm should swing out toward the outer edge of the turntable.



**If you try adjusting the anti-skate with a grooveless record, you will ruin the twist in the tonearm wire and void your warranty.**

3. If additional anti-skate is needed, disconnect the Lemo connector and turn the wire once, uncoiling the twist. Align the red dot on the connector with the red dot on the junction box receptacle and plug it in. The Lemo connector can plug in only one way and should not be forced.

## Setting the Tracking Force and Tonearm Height

Tracking force is adjusted by moving the tonearm counterweight forward and back on its shaft. If your cartridge is heavy and the counterweight is all the way back, you can order a heavier weight from your dealer.

The JMW Memorial Tonearm does not have a built-in tracking force gauge. We recommend that you use the Shure Stylus Force Gauge.

1. Place the Shure gauge on the platter with the notch against the spindle.

2. Follow the gauge instructions and set the tracking force according to the cartridge manufacturer's recommendation. We recommend always going to the high side of tracking force. High frequency vibrations on a light tracking cartridge can cause more damage to the grooves of a record than running a cartridge at a heavy setting.
3. To adjust the arm height, loosen the setscrews on the base of the arm assembly and turn the adjustment wheel above the base. When the arm is at the desired height, tighten the screws.

## Setting the Azimuth

1. Set a fireplace match or coffee stirrer (something light and about 6" long) into the groove behind the mounting screws on the tonearm headshell.
2. If it is not level, use the supplied Allen wrench to loosen the setscrew on the counterweight and rotate the counterweight around the shaft until the headshell is parallel to the record. Be careful not to change the tracking force setting.

## Playing Records

Before playing a record, make sure that all of the tonearm screws are tight.

1. Place the black washer on the platter, then the record, then the record clamp. This system forces air out from under the record and creates a partial vacuum. When you release the clamp, the record does not pop up. This gives you the benefits of a vacuum without the problems or complications.
2. Press the power button on the motor. Sit down and enjoy listening to your records!

## General Use

- When changing the speed of the turntable, place one finger of your right hand on the drive belt on the rear of the platter and move the belt up to increase speed or down to decrease speed with your left hand.
- 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 Scoutmaster.
- If you notice hum in the system, remove your 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 and motor will need to be lubricated. For the platter bearing, use .25 teaspoon of white lithium grease. For the motor, use 1 drop of 40-weight motor oil below the brass piece.

## Additional Items Available from Your Dealer

- The VPI Synchronous Drive System power supply provides a major increase in musicality by feeding the 300 RPM synchronous motor a perfectly stable wave form at the frequency you choose. The SDS lets you change speed electronically.
- The HR-X periphery record clamp will fit the platter of the Scoutmaster and provide a vacuum-like grip on the record. The clamp removes all warps and damps the record to prevent ringing.

## **VPI Industries, Inc. Limited Warranty**

VPI Industries, Inc. (VPI) warrants this unit against defects in materials and/or workmanship for three (3) 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.