

TURNTABLE POWER LINE CONDITIONER

OWNERS MANUAL

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1. PRELIMINARY REMARKS

Save the carton and all internal fillers and plastic bags. If you should ever need to carry or ship the P.L.C. any distance, there is much less chance of it suffering damage in transit if it is properly packed in its original carton.

Claims for shipping damage can only be filed by the recipient (consignee). Inspect the P.L.C. carefully. If damage has occurred, save the carton for inspection by the carrier.

Electrical Requirements: P.L.C.'s are designed to run on 120Volts A.C., 60 Hz

CAUTION: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

2. GENERAL INSTRUCTIONS

Because you are undoubtedly anxious to be using your P.L.C., the instructions below cover how to get it connected right away. However, please take the time to read Section 5, WHERE TO PUT THE P.L.C. This will tell-you of some-special considerations about placing the P.L.C. for best performance and long service life.

<< WARNING #1: DO NOT USE THE P.L.C. WITH ANY DEVICE THAT DRAWS MORE THAN 20 WATTS. USING DEVICES WHICH DRAW MORE THAN 20 WATTS WILL NORMALLY RESULT IN BLOWN FUSES ON THE P.L.C. BUT MAY ALSO RESULT IN DAMAGE TO THE P.L.C. SUCH DAMAGE CAUSED BY PLUGGING IN A DEVICE WHICH DRAWS MORE THAN 20 WATTS IS NOT COVERED UNDER THE V.P.I. WARRANTY. >>

<< WARNING #2: THE P.L.C. IS INTENDED TO BE USED ONLY WITH AUDIO TURNTABLES WHICH USE 60 or 50 Hz AC SYNCHRONOUS (OR INDUCTION) MOTORS WHICH ARE CONNECTED DIRECTLY TO THE TURNTABLE'S AC POWER CORD. IN OTHER WORDS, DO NOT USE ANY TURNTABLE WITH D.C. AND/OR SERVO-CONTROLLED MOTORS OR ANY TURNTABLE WHOSE MOTOR IS RUN BY ANY ELECTRONIC CIRCUIT BUILT INTO THE TURNTABLE. IF YOU ARE NOT SURE ABOUT YOUR TURNTABLE'S DESIGN, CHECK WITH YOUR DEALER OR THE TURNTABLE'S MANUFACTURER. FAILURE TO OBSERVE THIS WARNING MAY RESULT IN DAMAGE TO THE

EQUIPMENT, WHICH IS, PLUGGED INTO THE P.L.C. AND POSSIBLY TO THE P.L.C. ITSELF. >>

While the P.L.C. contains some sophisticated circuitry, using it is very simple. Essentially, this is all that is necessary:

- Make sure that the PLC's front-panel Power switch is in the off position. You will notice that it is a "rocker" switch and that it can have either its top or bottom sticking out. The off position is when the top of the switch is sticking out.
- Also make sure that both knobs are at the center of their rotation (with the pointer pointing straight up to the dot on the panel).
- Plug the turntable's line cord into the outlet on the back of the PLC Plug the PLC's line cord into a 120 Volt, AC wall outlet (240 if overseas)
- Now turn on the PLC via its front-panel switch (the red LED between the knobs will light up). Turn on the turntable.
- Always turn off the PLC after you are finished using the turntable plugged into it. The PLC is, in effect, a variable frequency, fixed voltage power amplifier. Like all power amplifiers, it produces heat and requires ventilation.
- Both the P.L.C. and the turntable plugged into it may be turned on and off with the PLC's power switch.

3. USING THE PLC

The P.L.C. can be used in two ways. With turntables with a single-speed motor pulley, such as VPI's TNT, the PLC is used to change speeds from 33.33 to 45 rpm and for fine speed adjustment.

With turntables that have built-in provision for speed change, the plcis used for fine speed control. With these turntables, the preferred method is to change speed by moving the belt to the appropriate diameter on the motor pulley or by using the pulley adapter provided by the turntable's manufacturer. On older idler-wheel driven turntables, it is best to shift the idler wheel to the appropriate diameter on the motor capstan or pulley.

A. Using the PLC to change speeds and for fine speed control on single speed, 33.33 rpm turntables:

- To change from 33.33 to 45 rpm first make sure that the 45 knob's pointer is pointing straight up. Then set the "speed" switch located between the knobs to the 45 position.

- Using a strobe disk you can determine if your turntable is turning at the exact speed. The 45 knob can be turned as needed to get the exact speed or to vary musical pitch. Turning it clockwise increases speed and counterclockwise slows things down.
- Going back to 33.33 rpm. is now just a matter of setting the "speed" switch back to 33 again. The 33 knob can be turned as needed to get the exact speed or to vary musical pitch. Turning it clockwise increases speed and counterclockwise slows things down.
- There is a limitation to the extent that the PLC can be used in this way. When switching to the 45 control, some phase shift of the line frequency takes place. Some turntable motors are sensitive to this phase shift and the phase shift might be enough to prevent the turntable's motor from starting by itself. While the starting torque provided by the motor would be reduced, the running torque will be unaffected.

If the turntable will not start by itself when the "speed" switch is in the 45 position, set the switch to the 33 position, start the turntable, and then change to 45.

VPI cannot be responsible for any problems that may arise when using the PLC as a speed-change device with turntables other than the VPI TNT.

B. Using the PLC for fine speed control with turntables which can change speed:

- Set the PLC's "speed" switch to the 33 position.
- Using the strobe disk turn the 33 knob to adjust the turntable's speed. Turning it clockwise increases speed and counterclockwise slows things down.
- Please understand that the PLC will only allow control over the turntable's speed. It cannot correct for such things as wow or flutter. The turntable's motor, bearings, drive belt, or idler wheel causes these speed irregularities. If wow or flutter is present, a competent technician should service the turntable.

4. WHERE TO PUT THE PLC

The P.L.C. can get quite warm and, therefore, requires ventilation. Even if its small size tempts you to tuck it away in a small, confined space, resist temptation. Excess heat build-up will shorten the life of the PLC's circuitry and may well result in damage to it. Allow a minimum of three inches on each side and behind the unit and five inches above. If it is installed in a closed-back cabinet, make sure that the cabinet's back has ventilation holes in it and is not up flush against a wall.

Another consideration in placing the PLC is that it contains two power transformers. These have magnetic fields, which may induce hum in phono cartridges or tape heads. Keep the PLC at least three feet away from turntables and tape decks. Also, do not place magnetic recordings (such as cassettes, reels, or diskettes) on or near the PLC. If the magnetic field does not damage the recordings, the heat may.

5. CAUTIONS

- Do not plug any device that draws more than 20 Watts into the PLC. Damage to the device and/or the PLC may result. Do not plug more than one device at a time into the P.L.C. Cube taps are definitely not to be used.
- Under no circumstances should anything other than a turntable with a directly line-powered AC synchronous (or induction) motor be plugged into the PLC. Turntables which are servo-controlled or which have any electronic circuitry of their own must not be plugged into the PLC. Failure to heed this warning may result in damage to the turntable and/or the PLC.
- The PLC contains an internal 3 amp, fast-blow fuse. If the PLC should stop working, it is most likely that the fuse blew either because the device plugged into the PLC is defective, draws more than 20 Watts, or there is a fault in the PLC's circuitry. Replace the fuse only with one of the same rating. Under no circumstances should you use a slow-blow fuse. If the fuse blows again, contact VPI for the authorized service technician nearest to you.
- When using a strobe disk it sometimes happens that the pattern may appear to wander back and forth. This is because the strobe pattern is not exactly round. Should this happen, you can make sure that the pattern is not really moving forward or back in an absolute sense by holding a pencil with a sharp point over the strobe. See if any of the lines actually move past the point (not just drifting back and forth) in either direction and, if they do, adjust the PLC accordingly.
- Please remember, you can use the PLC to adjust the speed only on turntables which have AC Synchronous or Induction motors and which have no electronic circuitry of their own.

SPECIAL FEATURE

The new PLC has a variable control on the center rear panel for adjusting the final output voltage to the turntable. Rotating the control clockwise till it stops will give full output voltage. Turning the control fully counter-clockwise will drop the output voltage roughly 40%. Try to lower the voltage as much as possible for the lowest vibration from the motor.

This will give the best sound. If you go to low, the motor will not run. We have adjusted this at the factory for a sample turntable. You can fine-tune this on your own unit. This control does not affect speed, only noise from the motor.

This is a used unit that has been reconditioned and carries a 30-day warranty against defects. No other warranties are expressed or implied.