SDS

SYNCHRONOUS DRIVE SYSTEM

SETUP AND INSTRUCTION MANUAL

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INTRODUCTION

Your new SDS is a truly unique electronic accessory. Its computer-controlled circuitry provides frequency-stable clean power for the best of today's turntables, giving more natural musical sound to your record collection.

WHAT IT DOES?

The SDS provides the line voltage that all domestic turntable equipment requires. The difference between the SDS's conditioned output and that provided by your local electric company is that the SDS gives you a highly stable, pure sine wave instead of the often "dirty," and unstable line frequency you get from your wall outlet. While there are other devices that filter spikes, surges, and R.F. noise, only the SDS provides a pure, double filtered, stable line frequency and voltage. The SDS is like a “Black Hole” for noise.

WHAT CAN YOU EXPECT?

Any fine turntable will deliver even better performance. Such improved performance results from the purity of the Alternating Current supplied by the SDS. With the motor providing more even rotation, distortion is lowered throughout the audio range, bass is tighter and better defined, attacks are cleaner, and the mids and highs more detailed. You may also notice a greater openness and depth than before. The extent of the improvement depends upon how sensitive the turntable plugged into the SDS is to "dirty" line voltage. All turntables will improve in sound quality.

FINE SPEED CONTROL

Because the SDS lets you vary the line frequency, it allows fine speed control for many turntables, which have, up to now, lacked this refinement. The turntable must use an AC Synchronous motor without any intervening electronics of its own for this fine speed control. By varying the frequency of the line voltage supplied by the SDS, considerable speed variation is possible. Using a strobe disk, it is now possible to set the turntable for exact speed.

Varying the speed of the turntable will also change the pitch of the music. This allows for making corrections in the pitch of many historical recordings, which were not transferred, to LP at the proper speed.

1. PRELIMINARY REMARKS

- Save the carton and packaging materials. If you ever need to carry or ship the SDS any distance, there is 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 SDS carefully. If damage has occurred, save the carton for inspection by the carrier.

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 use your SDS, the instructions below cover how to get it connected right away. However, please take the time to read Section 5, WHERE TO PUT THE SDS. Section 5 tells you some special considerations about placing the SDS for best performance and long service life.

- **WARNING #1: DO NOT USE THE SDS WITH ANY DEVICE THAT DRAWS MORE THAN 30 WATTS. USING DEVICES WHICH DRAW MORE THAN 30 WATTS WILL NORMALLY RESULT IN BLOWN FUSES ON THE SDS BUT MAY ALSO RESULT IN DAMAGE TO THE SDS. DAMAGE CAUSED BY PLUGGING IN A DEVICE WHICH DRAWS MORE THAN 30 WATTS IS NOT COVERED UNDER THE VPI WARRANTY.**

- **WARNING #2: THE SDS IS INTENDED TO BE USED ONLY WITH AUDIO TURNTABLES. FAILURE TO OBSERVE THIS WARNING MAY RESULT IN DAMAGE TO THE EQUIPMENT. (PLUGGED INTO THE SDS AND POSSIBLY TO THE SDS ITSELF).**

While the SDS contains some very sophisticated circuitry, using it is very simple.

- Make sure the SDS front-panel power switch is in the off position. Notice that it is a "rocker" switch and that it has either its top or bottom sticking out. The off position is when the “1” of the switch is sticking out.

- Plug the turntable's line cord into the outlet on the left back of the SDS.

- Plug the grounded SDS line cord into the back of the SDS and then into a 120 Volt, AC line outlet. In other countries where the voltage and connectors may be different, you will need a special connector to plug into the line outlet.

- Now turn the SDS on via its front-panel switch; the lights will begin to activate and the SDS will go through its start up cycle.

- Turn on the turntable.

- The SDS runs cool for a power amplifier and requires minimum ventilation. The SDS is, in effect, a variable frequency, fixed voltage power amplifier.

- Both the SDS and the turntable plugged into it may be turned on and off with the SDS's power switch.

3. USING THE SDS

- Turn on the SDS as you normally would and start the turntable at 33. To change from 33 to 45 RPM, push the center of the button labeled 33-45. The SDS will light up the speed you are feeding the turntable.

- Using the supplied strobe disk you can determine if your turntable is turning at the exact speed. Push the up or down arrows until the strobe lines at the speed you are working stand still. Remember: side to side motion of the lines means that the hole in the center of the strobe disc is not dead on and is not an indication of speed. Continuous drift means the speed is off.

- Going back to 33 RPM is now just a matter of setting the “speed” switches back to 33 again.

- 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.

4. WHERE TO PUT THE SDS?

The SDS can get slightly warm and, therefore, requires minimal 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 circuitry and may well result in damage to it. Allow a minimum of three inches all around the unit for safety sake. 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 SDS is that it contains two power transformers. These have magnetic fields that may induce hum in phono cartridges or tape heads. Keep the SDS at least twelve inches away from turntables and tape decks. Also, do not place magnetic recordings (such as cassettes, reels, or diskettes) on or near the SDS. If the magnetic field does not damage the recordings, the heat may.

5. CAUTIONS

- Do not plug any device that draws more than 30 Watts into the SDS. Damage to the device and/or the SDS may result.

- The SDS contains a rear mount slow-blow fuse. If the SDS should stop working, it may mean that the fuse blew either because the device plugged into the SDS is defective, draws more than 30 Watts, or there is a fault in the SDS's circuitry.

Replace the fuse only with one of the same rating. Under no circumstances should you use a FAST-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 SDS accordingly.

- Remember, you can use the SDS for better sound on any turntable, but you can adjust the speed only on turntables which have AC synchronous or induction motors and which have no electronic circuitry of their own.

ELECTRICAL REQUIREMENTS

- LINE VOLTAGE: 85 TO 264 VOLTS AC
- LINE FREQUENCY: 47 TO 440 HZ.
- CURRENT REQUIREMENT: MAXIMUM OF 1.0 AMPS.
- FUSING: 1.0 AMP. SLOW BLOW
- OUTPUT VOLYAGE: 72 TO 115 VOLTS AC
- OUTPUT FREQUENCY: 52.0 TO 66.0 HZ. FOR 33 RPM,
  71.0 TO 90.0 HZ. FOR 45 RPM
- OUTPUT CURRENT: 175 mA AC (RMS)