BASIS AUDIO, INC.

BASIS VACUUM SYSTEM

USER'S GUIDE

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USERS GUIDE TO THE BASIS VACUUM SYSTEM

Thank you for purchasing the BASIS Vacuum System. Utilizing a High-Flow, Limited Vacuum (HFLV) system concept, BASIS has integrated superior functionality and user friendliness into a vacuum system that allows effective, adjustable, hassle-free clamping of the record to the platter surface. All the components in the Vacuum system are industrial and laboratory grade, reliable for decades of use, and virtually maintenance free. Keep all components in a dry, room temperature environment and they will last a lifetime.

FEATURES OF THE BASIS VACUUM SYSTEM:

- Laboratory-grade, fine adjustment vacuum regulator.
- Precision vacuum indicator.
- High-quality, large diameter vacuum lines for minimum noise and flow losses.
- Quick-connect hose fittings for neat, easy assembly and disassembly without tools, and reduced flow loss operation.
- Acoustically isolated, remote pump unit.

SET-UP:

1. Remove all components of the vacuum system from their packaging carefully, and identify the following items:

- Remote vacuum pump unit
- Vacuum control unit, with regulator and vacuum gauge
- Filter units (2)
- Quick-coupler hose union
- Vacuum Clamp
- Vacuum hoses: 30 FT (9 M), 5 FT (1.5 M). Keep the 30 FT hose coiled until ready to lay it out. This will prevent tangles and kinks.

Note the numbers on the hoses and components. You will be matching the numbers to make assembly and set-up easy.

2. **NOTE WELL:** When inserting the vacuum hose into the quick-connect fittings, the hose MUST BE PUSHED HARD, straight in, past the initial resistance, until fully and completely seated. The hose will go in ¾ inch (20 mm) when fully seated. In the more than twenty-five years that BASIS has been shipping vacuum turntables, the number one reason (and almost the only reason) that customers have installation and start-up issues, is that the hoses were not properly inserted and fully seated. You must push hard. Harder than you think is necessary. These components are industrial grade, so you aren't going to break anything. If you want to disconnect a hose, just push in on the small ring of the connector with two fingers, while pulling on the hose.

3. Find the Basis Vacuum System Hose Schematic and note the components and how they are connected in the schematic. Then follow the instructions below, while correlating them with the schematic. The combination of schematic and written instructions should be logical and allow you to understand the flow of air through the system and make it easy to hook everything up correctly.

4. Note that before you cut any hose you should re-number the hose at a location before its new end so that you do not lose track of which hose it is. Cut the hose cleanly and squarely with sharp scissors.

5. Place the remote pump unit in a suitable location. Sufficient cable and hose lengths have been provided to allow for considerable flexibility in placement of the pump, in a location away from your listening room so that even the minor pump noise will not be heard. For proper cooling of the pump, place the unit on a hard surface that will allow free air space below the housing. If placed on a rug or other soft surface put spacers under the feet to allow for air circulation. BASIS can provide extension cables and hoses for large rooms where more distance is needed.

6. Place the vacuum control unit in a suitable location. We find the most desirable location to be beside your turntable or preamplifier. The vacuum regulator in the unit is pre-set at the factory to give an initial vacuum of 2-5 inches of Mercury (in Hg) or -10 kPa. The regulator has a fine adjustment, and can be rotated many revolutions to go from minimum to maximum vacuum. When adjusting the regulator DO NOT TURN THE KNOB ANY MORE, ONCE RESISTANCE IS FELT.

7. Uncoil and untwist the flexible cable from the remote pump unit, which bears the Switchcraft type connector. When pulled straight and untwisted, the cable will lie perfectly flat, along the floor. Attach the cable connector to the rear of the vacuum control unit. The connector is "keyed" and cannot be inserted incorrectly. Simply align the triangular mark on the socket with the latch on the plug, and engage the connector. A "click" will be noted when the connector is fully seated.

8. Uncoil and untwist the flexible gray 30 foot (9 M) vacuum hose and route in an inconspicuous manner between the remote pump unit and the control unit. Be careful not to pinch or kink the tubing. This large diameter, high durometer hose was selected for it’s higher than normal resistance to kinking and lower than normal flow losses. Insert the gray vacuum hose into the quick-connector at the back of the remote pump unit. The hose and connector are marked with numbers. Simply push the hose into the connector firmly and fully. PUSH HARD!

9. Before plugging in the opposite end of the hose, grasp the hose at the end that is plugged in, and walk along the length of the hose while holding the hose in your hand with moderate pressure. This should cause the free end of the hose to unwind as you slide the length of hose through your hand. When the hose is properly unwound in this manner it will lay perfectly flat along the floor with no tendency to coil. Insert the opposite end of the 30 foot (9 M) gray vacuum hose into the quick-connector at the back of the vacuum control unit. Again, just follow the numbers. Be sure to PUSH HARD and STRAIGHT into the quick-connect.

10. Locate and uncoil the vacuum hose that is attached to your BASIS turntable, and attach the free end to the black bulb filter, following the numbers.

11. Following the numbers, connect the short hose between the filter and the vacuum control box.

12. Locate the remaining black filter assembly with a quick-connector fitting at one end, and a silencer at the other end. Following the numbers, connect the appropriate short hose to the filter.

13. Uncoil the electrical cord from the rear of the remote pump unit and insert into a power outlet.

14. Place a record on the platter. Install the vacuum clamp over the spindle and push down lightly.

15. Place the vacuum control unit toggle switch in the UP/ON position.

16. With the switch in this position the record should quickly pull down against the platter. The Vacuum gauge should register a reading of approximately 2 - 5 in Hg on the outer black scale. If the record is not pulled down, there will not be a vacuum reading on the gauge. Proceed to the following section to find the problem.

17. If the record is pulled down, check the vacuum gauge, and adjust the regulator until the gauge is reading in the 2 - 5 in Hg range. Initial adjustments are complete and you are now ready to enjoy your new BASIS VACUUM SYSTEM.

IF THE RECORD IS NOT CLAMPED TO THE PLATTER SURFACE:

1. Listen for leaks. Start at the turntable platter, and listen for any hissing sound. If you hear a leak at the platter, remove the platter and check to be sure there are vacuum seals on the bearing spindle. There should be a donut shaped piece of foam and a thin donut of rubber on the spindle. Occasionally the pieces stick to the underside of the platter. The vacuum system cannot pull down a record unless the platter seals are in place on the spindle, with the donut of rubber on top.

2. Inspect the rubber seal on the outer edge of the platter confirming that it is not folded under the record.

3. Check to see if the pump is running by pulling the hose out of the connector at the pump. A humming noise will be heard. If not, check for power and be sure the switch is in the UP position at the Vacuum control unit. You should be able to feel air pumping OUT of the connector when the hose and filter are disconnected. When you're sure the pump is running, reconnect the hose and filter.

4. Proceed along the hoses from the turntable to the control unit and then to the pump, listening for leaks. Be sure to check the filters. If you hear any leak, re-connect the hose at that point, by pulling it completely out and re-inserting it into the quick-connect. PUSH HARD! PUSH HARD AGAIN! It is possible for a small leak to exist and not make a detectable hiss.

5. Rotate the vacuum control knob clockwise two revolutions only, to increase the vacuum level at the record.

6. Double check all hose connections as described above. Be sure the numbers on hoses and fittings are matched properly. Wiggle the hoses and listen for any leaks at the connector.

7. If the record still remains free, disconnect one end of the filter that is between the turntable and vacuum control unit. With your finger block the end of the hose leading to the control unit to determine if the air is flowing into or out of the hose. If the air is flowing out away from the control unit then the positions of the two hoses plugged into the remote pump unit must be exchanged. When the vacuum lines are inserted into the correct connectors, the gauge should deflect counter-clockwise when the end of the hose leading to the filter between the turntable and vacuum control box is blocked, and you should feel your finger being sucked into the end of the hose.

8. Once the record is being pulled down, slowly rotate the control knob and determine the LOWEST vacuum gauge indication at which positive clamping of the record takes place. (i.e. when the record repeatedly pulls down against the platter within 5-7 seconds of activating the pump). Note that clockwise deflection of the meter means LESS vacuum, and counter-clockwise means MORE vacuum. We have found that a setting of approximately "2" works well, and doesn't harm the record.

NOTE THAT THE GAUGE WILL NOT REGISTER UNTIL THE RECORD IS PULLED DOWN.

ADDITIONAL NOTES AND OBSERVATIONS – BASIS VACUUM SYSTEM

1. Due to variations in record condition (i.e. not warped as opposed to severely warped), slight changes in the amount of vacuum required to securely clamp the record may be required. Just increase the vacuum as required to achieve record pull-down. In the case of SEVERELY warped records, it may be necessary to press the edges of the record down to the platter until a seal is formed.

2. When not playing records it is best to leave the pump off. This reduces pump heat and prolongs pump life.

3. The BASIS vacuum system uses non-contacting seals in the bearing. Therefore, the vacuum bearing exhibits no additional drag compared to the standard bearing. When used at high vacuum settings it is normal to hear slight air rushing sounds. This system has been designed to operate at less severe vacuum levels for reduced drag, reduced pump and leakage noise, and lower record risk than other systems.

4. Although the Basis HFLV system uses less severe vacuum levels than most systems, it is possible that dirt, sand or other particulate matter on the rear side of the record or platter top may get pressed into the record grooves during clamping. This could permanently damage records. In addition to using lower vacuum levels this potential damage may be further reduced by keeping the platter and records clean and dust free. At BASIS, we use a small air compressor to blow off records before placing them on the platter.

5. You may have noticed that the loose quick-connector union supplied with the system was not used in the set-up procedure. This coupler is included in the event that you cut the vacuum hose and at some later time wish to lengthen it.

6. You may have noted that in normal circumstances, you will be operating the system at the lower end of the vacuum gauge's range. A gauge with a larger vacuum range than is normally needed was chosen to prevent damage to the gauge when the hose is blocked with the regulator at high settings, and to facilitate pump trouble-shooting in the field should problems occur. The data that BASIS would need in that event would require the gauge to have this wider measurement range.