

DIAGNOSING THE AVL COMPUTOBBY 3

In order to diagnose the problems you are having we will need to look at whether it is a problem with the CompuDobby (CD) or the mechanical interface between the CD and the loom mechanisms.

In your weave program, have you selected the correct AVL Type III? If you do not have 40 harnesses or a Rug Loom, both of those boxes should remain unchecked.

If you bought a Keyspan High-Speed Serial Adapter from us, did you install the software that came with it? If your computer has more than one USB port, try operating from each, restarting your computer each time you make the physical change. The other step would be to go to your Control Panel>Device Manager. Depending on your operating system, you will be able to find a listing of the Ports and then it will tell to which Port the Keyspan software has been installed. Then you will know exactly which port to select - as there are more internal ports than physical ports available on most computers.

Is the CompuDobby self-testing when you turn it on? That is, are you hearing a series of rhythmic clicks, probably 8 distinct clicks (some CompuDobbys will sound irregular, and this is normal)? And when entering into the Weave Mode, do you hear another click, again? This is a good sign because it indicates the basic electronics are in good shape. If so, for the next step you will need a small magnet. You can use a strong refrigerator magnet if it is the right size, or take the little rectangular magnet off the Slide Plate in the Dobby Box. Remember, it must be strong enough to have an effect; not all magnets are the same.

You can leave the computer on, but quit Weave Mode. Turn the CD off. And unplug it. Take the CD off the loom and set it up so you can see the solenoid caps firing and see your computer screen at the same time.

Looking into the CompuDobby Box, on the left hand side, a narrow metal plate is mounted vertically. It is about 1/2" wide and 3+" long and has a little circle at each end. These circles are the magnet sensors and they are activated each time the Slide Plate,

carrying the magnet, goes down and up. The top sensor signals the CD to release the previous selection and, at the same time, make the selection for the new shed.

In the Dobby Box, which is the mechanical side of the CompuDobby system, find the Slide Plate. This bar rides up and down on the two metal rods and has with the notches for capturing the Dobby Cables/wires. At the right side of the Slide Plate is a small, vertically aligned rectangular magnet which is mounted to an L-shaped bracket. Make sure this Bracket is securely mounted to the Slide Plate Support and that the Magnet is securely mounted to the Bracket. The side of the Bracket to which the magnet is attached should be in alignment with the square tip of the Support above it.

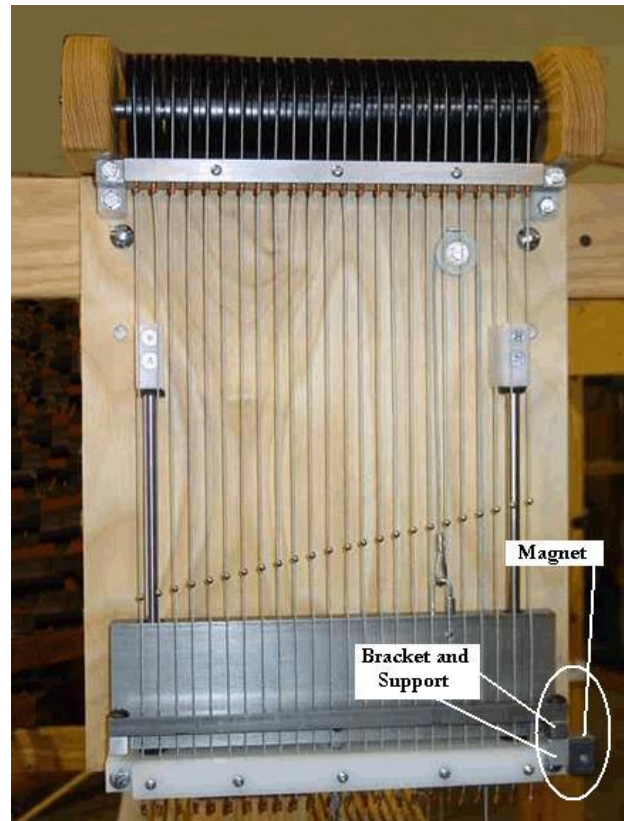


Fig. 1 – Magnet and Bracket

Another thing to understand, during the process, is that the Solenoid Cap furthest to your right, as you look into the Box, is the #1 Solenoid. #2 will be the next in vertical sequence, so it will be the first one on the next row. Then the third will be first on the third row, if you have a third row, otherwise it will be the second one on the first row, and

so on. Do not count them horizontally, but at an angle.

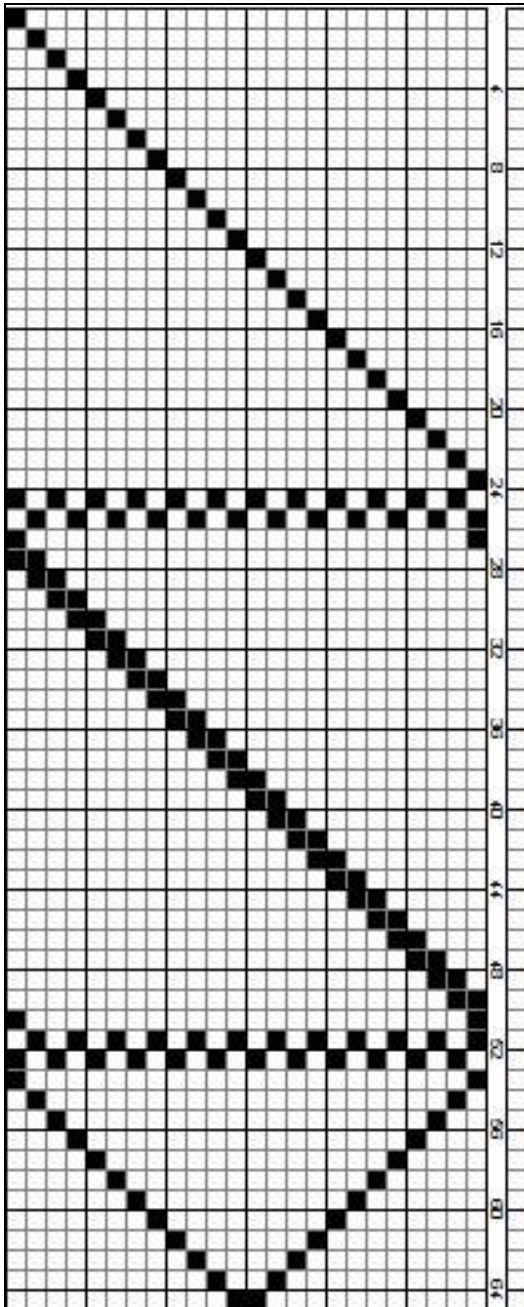


Fig. 2 - Example of a Test Draft

In your weave program, create a Test draft. Be sure to include all of your harnesses in the Lift Plan. You will not need to enter any threading, so just create it in the Lift Plan. Be sure to include a sequence for lifting each harness alone, then in a plain weave, and then a 2/2 twill. It will need at least 40 lifts to cover all of this. (If this is via e-mail, a

wif. file will be attached.) See See Fig. 2 for an example of a Test Draft.

Replace the power plug and turn on the CD. Watch the solenoid caps activate and hear the clicks. You may want to turn it on and off several times, to get used to what you are seeing and to watch for potential misfires. Now, when you enter weave mode, the selected solenoids will fire. This tells us the CD and the computer are talking.

When the test draft is ready, open to Weave Mode, and watch for the self-test. Now, take your magnet and pass it down and up the length of the metal Sensor Bar. It should activate the solenoids as dictated in your Test Draft. Check to see, as the Solenoids activate, if they are reflective of the Draft.

During the course of watching the Solenoid Caps, make a note of the distance out which they fire and retract. Are any of them either not pushing, or not retracting as far as the rest? Or do they all seem to perform with uniformity.

You may need to repeat these steps a few times to acquaint yourself with the process and see, with some accuracy, the movement of the respective Solenoid Caps. If, in the course of this process, it is clear that the CompuDobby is operating with precision, then you can be assured that the problematic performance in your AVL rests in the mechanical interaction with the CompuDobby or some other mechanical aspect of your loom, but is not caused by the CompuDobby.

Before re-installing the CompuDobby onto the loom, check that the Solenoids are positioned correctly, as shown below: Each cap must present the concave surface in order to correctly engage with the cable/wire Alignment issues can also be a problem if the cable/wire is not centered between the tips of each Solenoid Cap (shown at left) or the nicos at their Slide Plate Notch (at right).

