

Steps to programming a controller for a Paver:

Program the correct hydraulic type for your machine and make sure that depressing the up arrow on the controller will move the Tow Point Cylinder up and depressing the down arrow will move the Tow Point Cylinder down.

Note. If your Tow Point Cylinder will not move then take the following steps:

- a. The default value of the controller for the valve current may need to be increased for the tow-point to move.
- b. Make sure that there is not a cylinder shut off that is closed.
- c. Double-check the Hydraulic setting of the controller to match the machine.

Note. If your machines raise and lower are backward then take the following step:

- a. By swapping the connectors at the valve you will change the raise and lower.

With the above steps complete and you can raise and lower the Tow-Point Cylinder you can now start to program the valve speeds of the machine.

Steps to setting Valve Speeds:

1. Enter the Technicians menu of the controller and go to the Min Up value. Refer to page two for this procedure.

The standard parameter menu can be called up from the working menu only.

Therefore:

First switch over to the operator menu by pressing the A/M key and the ENTER key at the same time.



Hold on the ENTER key for 3 seconds until „PA“ is indicated.

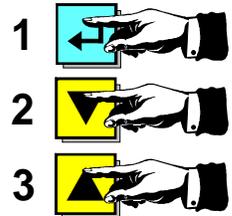


Hold on for 3 seconds



Within the next 3 seconds the key sequence:

- 1) - ENTER key
 - 2) - DOWN key
 - 3) - UP key
- has to be pressed.



Note.

After step 3 is complete you will see HYD in the Display. By depressing the blue button you will go to the Min Up symbol.

( _C) Min UP Current

( _C) Min DOWN Current

( _C) Max UP Current

( _C) Max DOWN Current

2. With the Min Up value in the display, lower this down to its lowest number. Then depress the blue button once and it will go to the Min Down value and lower this number as well. After this is complete depress the A/M button until you are at the working display.
3. Lower the Screed and set it on a pipe that is going perpendicular with the machine. this pipe should be no smaller than 1.5". By doing this step you have now made the screed so that it will pivot on the pipe and not be bound up at any point on the ground.
4. Connect a grade sensor to the end-gate or tow-arm, center the towpoint and set your sensor height to 14".
5. Zero your sensor by depressing the Blue button on the controller and the display should read 0.0
6. Put the controller in automatic by depressing the A/M button. At this time you should have 0.0 in the display and the Automatic light should be illuminated.
7. Depress the up arrow two times until the display reads 0.2. At this time you should have a flashing up arrow with the tow-point cylinder **Not Moving Up**.
8. While the controller is in **Automatic**, enter the Technicians menu and go to the Min up value and raise the number slowly until the machine goes to grade.
 - a. At this time you should still have Min Up in the display and you can now depress the Blue button and go to the Min Down value.
9. By using the manual switch for the tow-point cylinder, just bump the switch to make the cylinder go up and the Controller will flash a down arrow.
10. Increase the Min Down value slowly until the machine moves to grade and stops.
11. Jog the manual switch up and it should come to grade. Jog the manual switch down and the machine should come to grade. If it still flashes a little then just increase the current value one or two until it goes to grade and repeat this step.

Adjusting the Max Up and Max Down.

Note.

For Machines with **On / Off Valves** you will not have Max Up or Max Down you will however find in the bottom menu a setting for **Delta Pulse or (dp)**.

- a. Delta pulse is a combined number for max up and max down.
- b. The number that is displayed can be lowered to slow the large correction or raised to speed up a large response.
- c. The default value of **80** is generally fine for most applications.
- d. At this point your machine should be set-up and you can check the response by dialing the controller up 1.5" and then down 1.5" . Your tow-point should go to grade and stop without any Over Shooting.
- e. After checking the response set-up is complete and you should proceed to step 14.

Note.

For machines with **Proportional valves** a good starting point for Max Current is to add 20 - 30 to the Min current for example, if you have a Min Up value of 20 then you would set your Max UP to 40 - 50.

After confirming steps 3,4,5 and 6 proceed to the next step.

12. With the down arrow on the controller depressed, take the value down to -1.5" and the tow-point should go down and stop.

- a. If it is too slow, go to the Technicians Menu, refer to the Max Down value and add another 5 to 10 and repeat until its the speed you want.
- b. If it is too fast then drop your numbers another 5 to 10 and repeat the step.
- c. Once the Down side is good, proceed to 13.

13. With the Up arrow on the controller depressed, take the value down to 1.5" and the tow-point should go UP and stop.

- a. If it is too slow, go to the Technicians Menu, refer to the Max Up value and add another 5 to 10 and repeat until its the speed you want.
- b. If it is too fast then drop your numbers another 5 to 10 and repeat the step.

- c. Once the Up side is good, proceed to the next step.

14. With the above steps complete you are ready to get the machine on the road. A great help in knowing that you have tuned this machine correctly is watching the lights on the controller while your paving.

- a. You should see the **On Grade Symbol** most of the time **with a flashing up or down arrow** from time to time.
- b. If you see a lot of **flashing** in one direction or both then leave it in Automatic, go to the Technicians menu and adjust your Min up or Min down 1 - 2 and see if this helps.
- c. After your changes depress the A/M button and return to the working display keeping in mind that the **Automatic light should still be illuminated.**