

Assembly and operation manual of the LC-Display



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Assembly:

The LC-Display is already prepared for the assembly at a MTS-3.
For this purpose open the case of the MTS-3, remove the electronics board and the cord.
The LC-Display is now attached with the added screws through the borings for the cord.
Please don't fasten the screws too tightly, so that the windings of the plastic box are not torn out.
Also don't use other longer screws.
After this insert the electronics board and close the case of the MTS-3. At last the ribbon cable is connected.
With this the LC-Display is ready for use.
If you want to connect an autoguided or a PC, use the other ribbon cable with the extra connector.

Operation:

There are two small pushbuttons at the bottom of the LC-Display for brightness and contrast adjustment.
The easiest way to push them is to press the whole fingertip at the according position at the bottom of the case.
Even if you hardly can feel the pushbuttons, you can hear a click.
As long as you push the left pushbutton (view on screen), the brightness decreases continuously or becomes one level lower through a short push.
The brightness is increased accordingly through the right pushbutton.

To adjust the contrast, you first have to push both pushbuttons at the same time for a short moment.
After then you can decrease the contrast through the left pushbutton or increase it through the right pushbutton.
About 4 seconds after you released the last pushbutton, the operation mode changes again to brightness adjustment.
You can change immediately to brightness adjustment, if you push both pushbuttons at the same time for a short moment.

About 4 seconds after you released the last pushbutton, each altered adjustment is stored lastingly.
If you would remove the power supply before, these adjustments are not stored.
If you did accidentally a wrong adjustment, just try again.

Hints:

Adjust the brightness such way, that you can read the screen well and don't get dazzled.
The current consumption of the LC-Display is:
With no illumination: about 3,5mA.
With sufficient brightness (6 levels below maximum): about 11,5mA.
At maximum brightness: about 26,5mA.
If you have also encoders connected, it is recommended not to utilize the maximum brightness, in order to minimize the power dissipation of the 5V voltage regulator of the MTS-3 for a save operation.
This is especially valid, if a higher supply voltage than 12V is used.

If nothing is displayed on the screen, the contrast is adjusted too low.
If only dark rectangles are displayed, the contrast is adjusted too high.
Please consider that a change of the contrast can be observed with some delay. Therefore it is useful to make the optimal contrast adjustment by several smaller steps.

Usually an adjustment of the contrast is only necessary, if the LC-Display is used at very different temperatures.