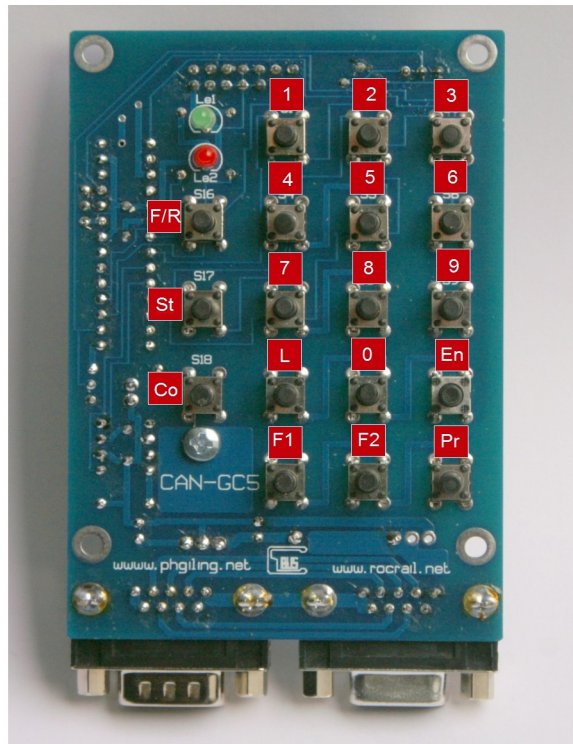# Giling Computer Applications

Manual CAN-GC5

This manual is a brief explanation of the CAN-GC5 .
It is derivied from the original CAN-CAB manual , as published by MERG.

1. OPERATING INSTRUCTIONS

When CAN-GC5 is connected and power is available, the green led will be lit and the diplay will show :

SEL LOCO

=

Use the numbered buttons to enter the adress of the loc that needs to be controlled.

Short adresses (1..127) can be typed in as is, and lang adresses, please enter leading zero's first.

Press the EN (Enter) button.

If speed controller was on zero speed set, and the display will show :

SPEED

XXXX   0

If speed controller was not on zero, the diplay will only change after the speed-controller is set to zero.

This is just a safety precaution to avoid a train start running directly.

Now speed can be controlled by the round knob.

If you did enter the wrong loc, just start again by pressing Lo (Loco) button and then enter adress.

Change of direction can be done by F/R button.

The loc will stop and direction is changed.

Can-GC5 is only able to control one loc at the time.

To change to another loc, just press Lo button , the diplay will show :

XXX 000

RELAESE?

Press En button and enter new adress followed by En button.

The CAN-GC5 can be disconnected and reconnected somewhere else in the network.

The maximum time between disconnecting and connecting again is 20 seconds.

Exceeding this time will cause the CAN-GC3 to release the loc, and you will have to enter the adress again to regain control.

Emergency stop

The St button will stop the loc immediately, using speed 1 for that.

It will apply only the loc adressed by thos CAN-GC5 unit.

This will override the settings in CV3 and CV4.

The display will show:

xxxx 001

STOP

To get the lok back running, first turn speed control to zero.

After that normal speed control is ready to use again.

Consisting

The system allows one or more locs run together in a consist.

But this only applies to loc adresses up to 127.

Your loc-decoder should support 'advanced consisting'.

To activate consisting first selct a loc as above and check if it is running, and if direction is correct set.

Then press Co button and display will show :

Consist

=

Now enter the adress of the consist and press En botton.

To remove a loc from a consist, press Lo,Re and En button.

Then selct loc you want tot take out and press two times Co. Display shows:

Consist

Clear?

Press En and you will have fuill control over this Loc.

Functions:

After a loc has been selected, the buttons from 0-9 are used to activate or disactivate function 0-9.

As long as yu press any of these buttns, the function of it will show in the display.

To select functions higher the 9, Press F1. The bottom line of display will show Fr1 (=function range 1) and number keys are corresponding with functions F10-F19.

For higher functions, press Fr2, which also will show on display. Now number keys correspondent wil function F20/F28.

Function F0 to F12 are only memorised by the CAN-GC3, and addionally refreshed. Higher functions are only sent once.

Programming on the main track (POM):

Programmin on the main track (POM programming) , but this does not count for all CV's. The decoder itself determines which ones are allowed.

To do this press Po button. Display will show:

CV number

=

Key in the CV number and press EN button. The diplay will show :

CV value

=

Key in the decimal CV valueand press En. The CV is now programmed into the Loco.

Changing CV values, while trains are moving on the track, can couse the CV not to be programmed.

Running trains do produce a lot of distorsion on the track, which can cause that the CV is not correctly programmed.

Programming on the program track.

The CAN-GC3 has a separate connection for reading and writing CV's. This programming traqck can be used by CAN-GC5.

Pulls the programming switch on the CAN-GC3 down, and proceed as above under 'Programming on the main.'

Display connections for CAN-GC5

As mentioned, various LCD-displays and OLED displays
can be connected to connect to CAN-GC5.

Please remark that only 2 rows and 8 characters per
row ill be used.

Basicly, a standard LCD or Oled display will have 2x7 or
2x8 pin connector, so called 'header'.
The CAN-GC5 is equiped with only 2x7 pin.

Also displays can have 14 or 16 pins in a single row.
Pin 15 and 16 are used for LCD displays with background
illumination. They are not available on this board.
Illumination can still be connected.

Samples of how to connect, on the following pages.

It is a standard for all displays with 7x2 or 8x2 connectors, to mount
connector in the front, according the way numbers are used on the pins.
But that is not the position you would like, so a connector will be soldered
on the backside, causing all adjoining numbers to be swapped (1 with 2, 3
with 4, etc).
For that reason also on CAN-GC5 the numbers are swapped in the same way,
creating the option of connection with simple flat cable on a one to one base.

LCD Display as in CAN-GC5 complete kit.

This display is of type MC20805B6W-FPT is white back-ground illuminated but need only 14 pins for connection as standard on CAN-GC5
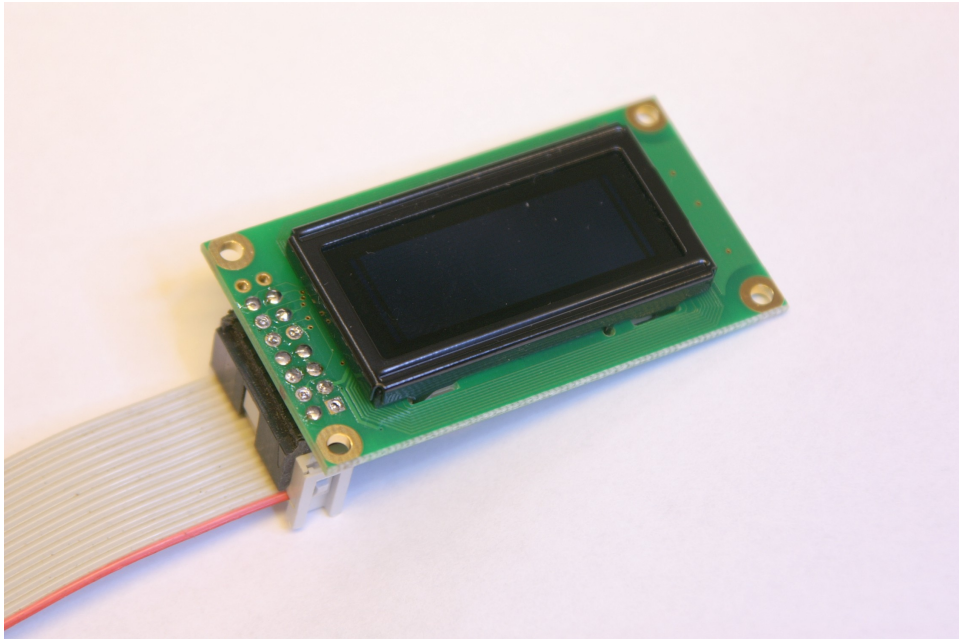

The backside needs several solder bridges as shown on picture below.
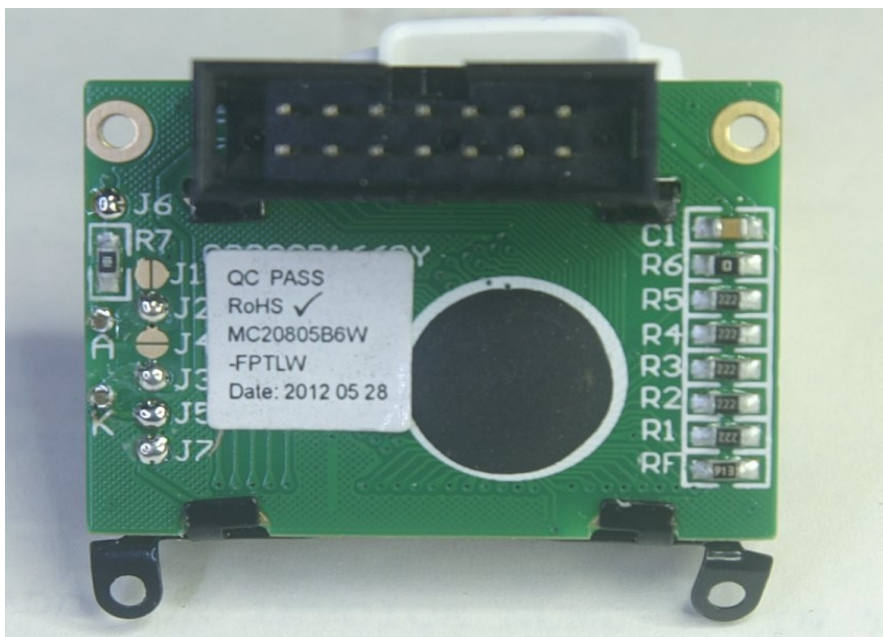
J2, J3,J5,J6 and J7 should be bridged.

**OLED dipslay with 16 pin connector.**

This is the display as included in CAN-GC5 kit.

Remark the position of the 'notch' .

OLED does not need any background illumination so pin 15 and 16 are not used.

The connections of the flat cable are 1-1, meaning that the mark pont on the connector 'V' should point to the same side of the ribbon cable.

Standard LCD display without background illumination.
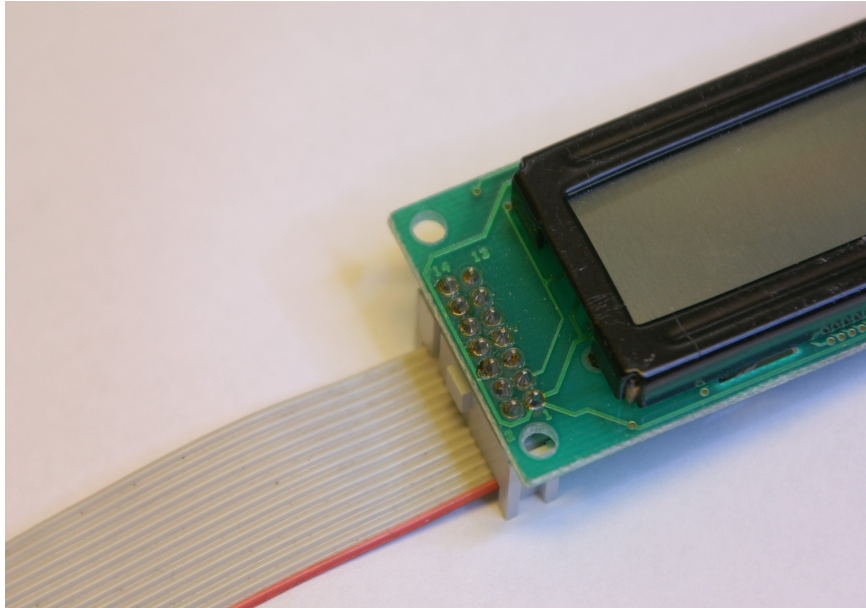
This is an old 40x2 LCD display.
Connection is virtually the same as previous page.

The connections of the flat cable are 1-1, meaning that the mark pont on the
connector 'V' should point to the same side of the ribbon cable.