

Kila/Planet Weighing Scales TECHNICAL INFORMATION

**TEC: H-NOTES
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These technical notes provide information on the following topics that are dealt with further in the technical manual. Here discussed is not so much mechanical or hardware issues but rather matters concerning programming and all the procedures for preparing the weighing scales for normal use.

1. **Setting up the weighing scales**
2. **Calibration.**
3. **Updating software.**
4. **Connecting to a Ditron ECR**

NOTE ON THE CONVENTION OF KEYS USED

By [+] and [-] the menu items and various parameters are selected.

By the [*] key, the menu item or parameter of a selected value is confirmed.

By [C] the next menu level up is selected: the current value of a parameter is cancelled so as to re-input it;

By [00] in a number of cases allows exit without saving the parameters.

1) SETTING UP THE WEIGHING SCALES:

SETTING UP THE WEIGHING SCALES WITH NEW HARDWARE:

Weighing scales with new hardware need a series of programming actions in order to work properly. Normally these programming actions are performed at the manufacturing plant but may be required if a CPU board and/or is replaced. Here below the various steps are shown and need to be followed scrupulously:

1. If taken from one environment to another with a different temperature, keep the weighing scales switched off even for a few hours, **calibration** is also to be performed.
2. With seals open close short circuit "INIT" on the board moving the jumper to position 2-3.
3. Switch on the weighing scales.
4. You will be asked to press a key. Indeed the software in recognising that this is a new CPU board will need to generate identification to assign to the board so as to be able to identify it when switched on later.
5. Then you may be asked to input the date in 6 figures as DDMMYY and to confirm it.
6. At this point, as the "INIT" circuit is shorted, control passes to the metrology software. Inputting the date and confirming is requested and then a menu is shown.
7. By [+] and [-] the following possible selections are available:

Param / Mod. / Weight / Events / Other

Select the "Other" menu, and within this, the item "rStvAL" to request initialling of the factory preset parameter values.

In reality this operation is already performed automatically where new hardware is present.

It may however be necessary to change the following parameters which differ by type of weighing scales.

Parameters : preset value

Model of weighing scales (from the Mod. menu): 12kg/2g/30kg/5g (select as necessary the one concerned)

8. Perform event reset, by selecting the "Events" menu and the item "reset events" confirming with the [*] key. You will be asked to key in the following password as confirmation "909090 and a specific message will advise you that this has taken place.
9. Perform the calibration procedure which is activated by the **Weight** item in the main menu as described in the "**Calibration**" paragraph.

It is to be borne in mind that to perform calibration of the weighing scales, it must have been switched on for around ten minutes at least in order to reach working temperature: a firm surface without vibrations must be used and ensure furthermore that the weighing scales are properly placed

by checking the spirit level is needed. If calibration is performed properly with the "OK" message viewed, any modifications made are also automatically saved.

Pressing key [C] allows running back up the menu until the main menu is reached, exiting from which by [C], saving is requested by pressing [*] or not saving changes by pressing [00]

10. Switch off the weighing scales; remove the "INIT" short circuit moving the jumper to position 1-2. Switch the weighing scales on again.
11. At this point the application system starts and after a test on display and the presentation of release software and the time needed to perform zero detection they set up in the transaction functioning mode. A 100 error message may be displayed indicating that the software, having recognised that it is dealing with a new board, performs initialling of files and programming actions and working variables of the weighing scales automatically. Press the confirm key to exit the message.
12. Though not necessary, being in this case done automatically, complete initialling of applications data can be performed through key 8 "INITIALISING" entering into which the key sequence 79513 is requested, and by function 15.

2) CALIBRATION:

See the document "Calibration of the weighing system from the keypad".

3) UPDATING SOFTWARE:

Updating the software except for boatload software is allowed only through a loading procedure utilising the serial interface device RS232. In particular through specific software running on a computer linked in its turn to the weighing scales through a specific RS232 serial cable (Use the standard Ditron PC cable), a logical connection is established with the motherboard resident bootloader of the weighing scales. Through a proprietary protocol the new software to program is transferred to flash in micro. For security reasons the software sent is encrypted prior (at the time of generation) with a secret key known to the bootloader.

Installing downloaded software.

In order to perform weighing scales software updating, if not already done, the downloaded program needs to be installed to a PC which has at least an RS232 type serial port (a USB RS232 converter will also suffice). The downloaded program is made up of an executable "Binloader.exe" and 3 OCX to be registered in windows according to the information supplied with the package.

Updating weighing scales software:

To perform uploading of the new firmware proceed as described as below:

- connect the serial cable to the COM 1 port of the computer and the serial socket fitted to the weighing scales. Run the executable "binloader.exe"

To synchronise the bin loader program with the weighing scales, press the "CONNECT" key and then after a few seconds switch on the weighing scales.

Once synchronised, first perform block erasure and then select the "FILE" to upload and then press the "WRITE" button to perform the download.

Press the DISCONNECT button and exit, closing the application.

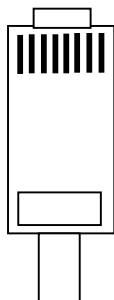
N.B.: for each session of programming action, run "bin loader" again.

4) CONNECTION TO A DITRON ECR:

The weighing scales may be connected to a DITRON ECR via a specific connector and preparing the serial port mentioned to work according to the RS232 standard and in compliance with the mode foreseen for this connection.

For the connection to the ECR the cable mirrors the following

1.....8



ECR (RJ45)	WEIGHING SCALES (RJ45)
8 (GND) -----	8 (GND)
5 (RX) <<<-----	6 (TX)
6 (TX) -----	>>> 5 (RX)
4 (RTS) -----	>>> 3 (CTS)
3 (CTS) <<<-----	4 (RTS)

To program the ECR connecting port IN THE WEIGHING SCALES to ECR follow the following instructions:

Enter into "Key 7" ; key in password 79513 ;

key in code 10; select and confirm the COM (RS232).

Then set the various parameters of the above port which are preset as 9600 – No parity - 8 bit per char - 1 bit of stop.

Followed by the parameters:

leave timeout 500 ms or increase it keying in [+] up to max 1450 if the ECR prints transaction record with a graphic logo.

Mode: select ECR

ECR Mode: select total /single trans.

The following significant parameters follow only if single trans. mode is selected

- Close Yes/No : send/do not send transaction record closure command to ECR
- Dept. not coded. indication of the department to be advised to ECR for those not coded
- Send Returns Yes/No : send/do not send negative values to ECR (returns)
- Department for returns : indication of the department to be advised to ECR for returns.
- Automatic send Yes/No : Sending to ECR takes place automatically after printing of the transaction record. sending to ECR is done if I key in confirm after printing.

For ECR in "KEY P" program via port com2:

TYPE: WEIGHING SCALES

PROTOCOL: 40180

MODEL:0

DEPARTMENT:1

Then execute 101 confirm

Return to "key REG"