

<b>SKIPPER DATA BULLETIN</b>		<i>Number</i>	SDB_DL850_14
<i>For System</i>	<i>Service</i>	<i>Date</i>	25.9.09
<i>Serial from / to</i>	< DT XX090199	<i>Author</i>	PC
<h1>Upgrading to SW 4.02.03 with New PLD (LG-T001)</h1>			

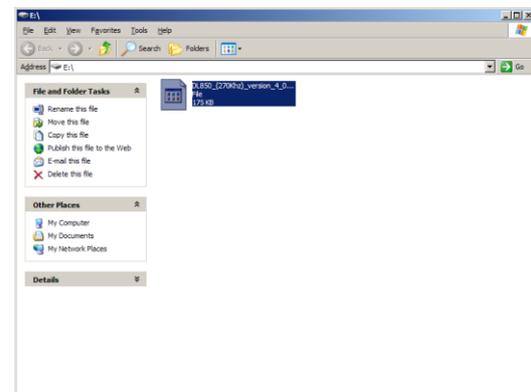
The new software and firmware for the DL850 270kHz Flatface system, includes many new improvements and features. Many of these improvements can be used on existing platforms by upgrading software, however to get full benefit the PLD in the transceiver cabinet will need to be replaced. This can be sent from SKIPPER or our Hubs.

If the Transceiver receiver card or the PLD are replaced with the new, **then the software must be updated** . The opposite is not true, software can be updated without the PLD being replaced.

## DL850 software upgrade procedure.

1. If you have received a programmed compact flash, skip stage 2.
2. Copy the received/Downloaded software file and into the root folder of Compact Flash card. The name of the file is not relevant. Also copy the latest version of SETUP.XXX into the root as setup.exe .

- Note! Standard Compact Flash reader is needed to be attached to the PC
- Note: it is possible to use the Compact Flash card, which is already installed in the display unit.



3. Switch OFF the mains of the display unit and insert Compact Flash card with the new software on it.
4. Press the “hidden” button inside the cabinet (Mounted on the solder side of the keyboard). This is the same button, which is used to activate internal settings.
5. Keeping the hidden button pressed, switch ON the mains in the display unit and keep the button pressed while the message **“You may release the hidden button”** appears in the lower part of the screen. If a new setup.exe is to be loaded follow the on screen instructions.

6. Release the hidden button. After few diagnostic text messages, the list of available software versions will appear in the lower part of the screen as in example below.
  - Note, that if the bootloader does not find any file with the software on the Compact Flash, the presently installed version will start automatically. In this case, make sure, that the upgrade has been copied correctly on the Compact Flash and repeat procedure.

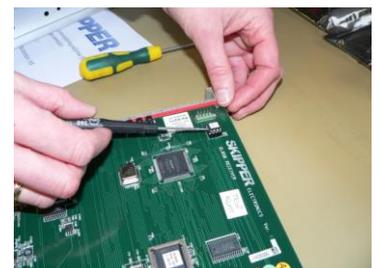
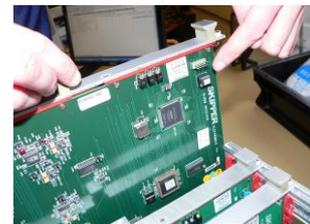
04.01.15	04.02.03				
Active	External				
040115. 850	v040203. 850				



7. Select a software version, which you would like to install. Normally, it is possible to choose one out of two: the version, which is currently installed in the internal memory (indicated as **Active**) and the upgrade version (indicated as **External**). The version name is displayed in the upper line of the text lines, located just above the corresponding softkey. In the example above, soft key #2 should be pressed to select the latest software version.
8. Confirm selection by pressing **YES** button (or go back to selection, pressing **NO**)
9. Press any button to start the upgraded software (or it will start automatically in 5 seconds)
  - Note. The file with a previous software version will be copied back to the Compact Flash card, so it would be possible to re-install it in the similar manner, if desired.
  - It is possible that some upgrades will write over the present settings. We will try to inform of this, but to be safe, note the calibration and setup settings (Outputs).

### Changing the PLD in the transceiver (LG-T001 )

1. Open the transceiver cabinet and turn off the power.
2. Remove the Receiver card (furthest to left with 3 LEDs)
3. Remove the existing PLD and insert the new, making sure pin 1 is in correct place (the 'notch' should face up)
4. Reseat and fasten the card. Turn on power.



The Status screen of the display should now say that PLD version 1.00.00 is installed (if it says 0.00.00 in red, then the old version is installed)



Status screen in new software with new PLD chip IC801 installed



Status screen in new software with old PLD version 0.0.0 installed

## Release notes for 4.02.03

### 1. Processing

1.1 Digital signal processing algorithm has been modified, which significantly improved accuracy and stability of the speed calculation when operating in shallow water.

1.2 New improved TVG curve factory default is set now.

1.3 New delay adjustment factory defaults.

1.4 New sampling algorithm was introduced, when both speed Bottom track and Water track measurements are done within a single sample. This algorithm is activated when the operating conditions (water depth) allow.

1.5 The maximal BT range has been reduced to 150m to ensure no failure due to poor quality.

1.6 If this software version is installed within the Doppler system with the old version of the receiver PLD, its revision number will be indicated by the red color.

### 2. User interface.

2.1 Echo sounder function is now hidden by default. To enable the switching soft-key, it necessary to press the hidden button (inside the cabinet) and keep it pressed for about 12 seconds (third beep must be heard while pressed).

If the same procedure is repeated once more, the ES control soft-key will not be visible again.

2.2 Scope screen ECHO CHAN on menu 5 re-enabled to allow service to check beam amplitudes.

2.3 Trip counter has been added on the screen Calibration. This counter is based on the Bottom Track speed (when available). It is implemented for ease of verification of the calibrations accuracy. It is reset to zero every time the counter is activated and will keep the value, when the counter is stopped by the operator.

2.4 If the calibration settings were not entered by the operator, the warning “Not calibrated WT BT” will be flashing. In case when calibrations are not needed (indications are accurate enough), it is recommended to enter “dummy” calibration settings (for example 0.1kn real and 0.1 kn measured).

### 3. Upgrade considerations.

3.1 The previous version of PLD (logic) is not compatible with this latest display software. In practice this means, that the PLD has been replaced by the new one (for example, as the result of changing the receiver PCB), the display software MUST be upgraded at the same time. Otherwise the system will not be operative. It will be seen, that the transmitter LED's inside the transceiver unit are constantly off.