

## Service data bulletin



Instrument: GDS101

Date: 23.03.2006

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### SUBJECT: Software release notes

Below is the SW release notes per March 2006

#### Standard 3.33, Singapore 2.46C, Simrad 1.43, February 96

1. "On/Off" text, Norwegian language corrected
2. Remote keyboard implemented
3. Internal. Both unit and PC keyboards are operating at the same time. For testing and debug purposes.
4. Internal. Demo data is included in DATA segment. Binary file is not required anymore for EEPROM file preparation.
5. Internal. New EEPROM/history RAM read/write function implemented. Now it is possible to place EEPROM/history RAM in any memory area below 4Gb.
6. Internal. EEPROM parameters read/write function optimised. Check sum byte is added to control contents of the EEPROM.

#### Standard 3.5, Simrad 1.5

***This software version is reflected in the latest [operating manual](#)***

1. Softkeys on the NMEA screen (8) have been changed. Soft key 2 BAUD has been moved to position of key 3.
  - Softkey IN/OUT [NMEA183/RS232] has been added. It selects the serial line, parameters of which (baud rate and output stream) can be adjusted by keys 3, 4 and 5. Therefore now it is possible to set SEPARATE parameters to each line. Please also note that the information, displayed at the NMEA messages window also corresponds to the selected serial line.
  - Softkeys 4 and 5 are operating in pair and should be used to configure serial output stream.
  - Softkey #4 MESSAGE [DPT, DBS etc] selects the message to be disabled/enabled on the serial (NMEA 183/RS232) output

- Softkey #5 STATUS [on/off] enable/disable the message, selected by key #4.
- Softkey #6 DISPLAY [input/output/off] controls the content of the NMEA messages window.

2. New option on the serial output (EN250: XXXX.X<CR><LF>) is added.

3. On/Off function has been corrected. When pushing the key after the unit has been switched off from the panel, this key will switch the system on only, doesn't execute its function as it was in earlier versions.

GDS101 standard, N/Nav software version 4.14, S/N v 2.46, EN250 software version 2.14. October 98

1. All following versions can be run on both UGH 386 and new combined CPU/VGA computers.

2. To be able to keep parameters and history, a new IC100 should be installed, when using the new combined CPU. I haven't got this new IC100 yet, so was not able to test it, but I think it should work.

v4.15, EN 250 v2.15 November 98

1. New memory map has been implemented to be used with a new version of IC100.

2. Printer control function has been changed. Introduced a delay between data byte writings to the printer logic.

3. History master reset has been implemented at a general master reset.

V4.15.1 November 98

1. 200KHz Maximum pulse length has been reduced to 1ms

v4.15.2

1. Power reduction at 10m range has been removed

2. Min pulse length is changed to 120us

3. Fixed range setting is ON by default.

4. EN250 depth value on the COM output for repeater is always the same as indicated on the master unit's screen.

4.15.3, September 2000

1. Bottom pulse qualifying parameter value has been reduced to prevent losing track at a very steep profiles.

2. Analogue output is corrected. If depth value exceeds lower analogue calibration setting, 10V/20mA is provided on the output.

4.15.4

Customized version for ice protection plate. November 2000.

1. Speed of sound is adjustable in the range of 1300-1600m/s regardless of the setting of enable bit in MAC220.

#### 4.15.5

Customized version for ice protection plate. February 2001.

1. Customer (MNS) claim: false secondary bottom detection in shallow waters 10m and less. Bottom detection algorithm modification.

#### 4.15.6 October 2001.

(Modified version 4.15.5) **Modifications require change in the operating manual**

I:\Programmer\GDS101\Software\GDS415\_6.bin

1. Individual draught setting for all frequencies is implemented. (IMO requirements)
2. Range scale is changed according to IMO requirements
3. Currently selected frequency is displayed in the bottom part of the screen. If transducer location (forward, aft, portside, starboard) is set at screen 10, this information is displayed as well.
4. Two soft push buttons are implemented at screen 10:

Soft Key 2	TRANSDUCER	38Khz/50Khz/200 Khz	Select channel to be set by mean of Soft Key3
Soft Key 3	LOCATION	Not inst.	Transducer, selected by Soft Key 2 is not installed
		installed (factory)	Transducer, selected by Soft Key 2 is installed, position is not defined
		fwd	Transducer, selected by Soft Key 2 is installed at forward part of the vessel
		aft	Transducer, selected by Soft Key 2 is installed at aft part of the vessel
		port	Transducer, selected by Soft Key 2 is installed at portside
		strb	Transducer, selected by Soft Key 2 is installed at starboard

5. Speed of sound is adjustable in the range of 1450-1550m/s depending on the setting of enable bit in MAC220.

6. Bottom pulse qualifying parameter value has been reduced to prevent losing track at a very steep profiles.
7. \$SDXDR,D,x.x,M,[Fore/Aft]<Cr><Lf> message has been added on the NMEA output as per Hitec request.
8. Internal : conversion functions modified (File CALC.C)

#### Software version 4.17/2.27 (modified v4.15/2.15)

1. Power setting function has been modified:
  - 200KHz/38KHz: 100% power - 48V output to the transmitter
  - 50KHz: 100% power - 25V output to the transmitter

#### Software version 4.18/2.28 (modified v4.17/2.17)

Includes all changes, made in v4.15.1 - 4.15.2.

#### Software version 5.00 (without thermo printer)

***This software version is reflected in the latest [operating manual](#)***

1. PCA6135 with 3x4Mbit FLASH IC's should be installed
2. Internal thermo printer function removed
3. 22 hours of the recorded history (depth/time/speed/pos) is stored in FLASH memory.
4. Automatic power reduction at 10m range has been removed
5. 200KHz Maximum pulse length has been reduced to 1ms
6. FLASH IC status is indicated on the status screen (ok or counter of bad sectors (512byte each)).

#### Software version 5.01 (without thermo printer)

1. Duration of the recorded data changed (24 hours, in v5.00 it was 22)
2. min pulse length (38/50KHz) is changed to 120ms
3. Fixed range setting is ON by default.
4. EN250 depth value on the COM output for repeater is always the same as indicated on the master unit's screen.
5. Simrad EN250 feature
  - 200KHz/38KHz: 100% power - 48V output to the transmitter
  - 50KHz: 100% power - 25V output to the transmitter

Software version 5.02(without thermo printer), September 2000

1. The bug in NMEA processor is fixed (earlier the unit will hang in case of fast messages source)
2. Watchdog function modified for 6135CPU. The watchdog update interval should be not longer than 5 seconds)

Software version 5.03 (without thermo printer), September 2000

**Modifications require change in the operating manual**

9. Individual draught setting for all frequencies is implemented.

Software version 5.03.1 (without thermo printer), December 2000

**Modifications require change in the operating manual**

To meet IMO requirements as per comments from DNV (12.11.2000), the following software modifications have been done in GDS101 software.

10. The graphic display is capable of showing depth marks (scale lines) at intervals no longer, than one-tenth of the range/scale in use.
11. Currently selected frequency is displayed in the bottom part of the screen. If transducer location (forward, aft, portside, starboard) is set at screen 10, this information is displayed as well.
12. Two soft push buttons are implemented at screen 10 :

Soft Key 2	TRANSDUCER	38Khz/50Khz/200 Khz	Select channel to be set by mean of Soft Key3
Soft Key 3	LOCATION	not inst.	Transducer, selected by Soft Key 2 is not installed
		installed (factory)	Transducer, selected by Soft Key 2 is installed, position is not defined
		fwd	Transducer, selected by Soft Key 2 is installed at forward part of the vessel
		aft	Transducer, selected by Soft Key 2 is installed at aft part of the vessel
		port	Transducer, selected by Soft Key 2 is installed at portside
		strb	Transducer, selected by Soft Key 2 is installed at starboard

### Software version 5.03.2 (without thermo printer), January 2001

1. Bug fix. Starting from v5.00, depth indication is not correct in case of first digit after decimal point is 0. Example 50.9 will be indicated instead of 50.1 if the actual depth is 50.09.
2. Bug fix. Starting from version 5.00, if both GPS and speedlog pulses are connected to the unit, the speed indication will switch between 2 sources. V5.03.2 : the pulses input has a highest priority.

### Software version 5.03.3 (without thermo printer), February 2001

1. Analogue output bug fixed: if depth is bigger, than analogue deep limit, maximal voltage/current is provided on the output.
2. Draft/transducer text overlapping bug fixed: both texts shares the same screen space, changing with rate of 3sec.

### Software version 5.03.4 (without thermo printer), February 2001

I:\Programmer\GDS101\Software\gds503\_4.bin

1. "Cosmetic" change : 24KHz text instead of 38KHz

### EN250 Software version 5.03.4 (EN250 only) (without thermo printer),

March 2001

I:\Programmer\GDS101\Software\en250\sim503\_4.bin

1. Fixed bug of transmitting only EN250 customized messages (RD repeater) (Mistakenly echosounder sent messages too often)
2. Bottom track algorithm is changed to increase stability in case of steep slopes. (Minimal bottom qualifier parameter is reduced).

Software version 5.03.5 (without thermo printer), October 2001  
I:\Programmer\GDS101\Software\GDS503\_5.bin

1. Bottom track algorithm is changed to increase stability in case of steep slopes. (Minimal bottom qualifier parameter is reduced).
2. \$SDXDR,D,x.x,M,[Fore/Aft]<Cr><Lf> message has been added on the NMEA output as per Hitec request.

Software version 5.04.00 (BETTA), March 2002  
I:\Programmer\GDS101\Software\GDS504\_0.bin

1. Selection of units of depth measurements bug fixed. In earlier versions program crashed, when changing from feet to meters in 10m range.
2. Range (scale) is added to DPT message according to NMEA standard, version 2.3 (1998)
3. Canon printer driver added. 3 types of printers are supported :
  - Built-in thermo printer
  - HP DeskJet
  - EPSON 24 pins dot matrix.

Type of the printer is selectable from the panel (status screen, PRINTER button)

4. Various optimisations of printer functions.

Item 3 requires revision of the operating manual.

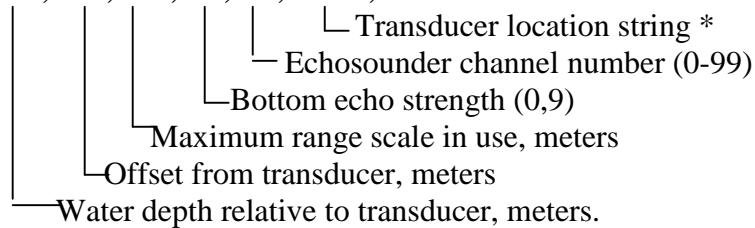
Software version 5.04.01 (BETTA), May 2002

1. Default settings has been changed
  - HP printer selected
  - Fix range off
  - Merchant vessel 1 symbol
2. External control of printer removed (Screen 6)
3. STPRINT-/STPRINT+ input is processed as transducer selector input (open – FORWARD/PORT transducer selected, closed – AFT/STARBOARD)

### Software version 5.04.04 (BETTA), May 2002-05-28

1. Skipper proprietary NMEA output sentence is implemented according to the following format:

`$PSKPDPT,x.x,x.x,x.x,xx,xx,c—c,*hh<CR><LF>`



\* AFT/FWD/PORT/STB. If operator does not preset location – empty field

2. NMEA output default settings: only DPT and PSKPDPT are provided

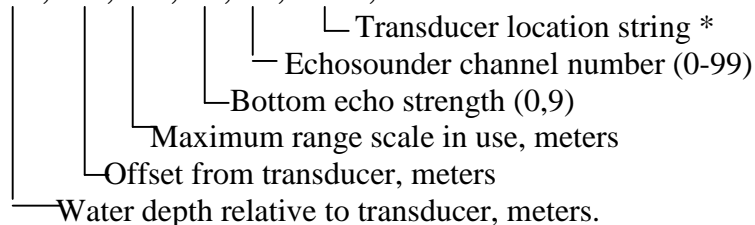
### Software version 5.04.05, November 2002

1. Softkey **SET LOW** is added to screen 5 to adjust the value of indicated frequency of the lowest frequency channel. The button has five preset values (24, 28, 30, 33, 38) and any other value in the range of 10-200Khz may be set by the mean of encoder. Factory setting is 38 KHz.

### Software version 4.19.00 (BETTA), February 2003

1. Skipper proprietary NMEA output sentence is implemented according to the following format:

`$PSKPDPT,x.x,x.x,x.x,xx,xx,c—c,*hh<CR><LF>`



- AFT/FWD/PORT/STB. If operator does not preset location – empty field

The message is selectable at NMEA screen (7), softkeys 4 and 5.

2. Check sum option is implemented. Selectable from NMEA screen (7), softkeys 4 and 5 (Similar to messages selection)

### Software version 5.04.06, June 2003-06-03

GDS101

Object file: G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_6.bin

Project files: G:\Programmer\GDS101\Software\Projects

EN250

Object file: G:\Programmer\GDS101\Software\Objetcs\EN250\Gds5\_04\_6.bin

Project files: G:\Programmer\GDS101\Software\Projects\EN250



1. Check sum added to the NMEA standard output messages. Check sum option is selectable from screen 8, softkeys 4 and 5. (CHECK SUM on/off). Default setting is CHECK SUM on.

Note : Upgrading the software will lead to factory master reset (automatically at first startup)

#### Software version 5.04.09, December 2004

GDS101

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_9.bin

1. Automatic detection of the AC inverter supply voltage and selection of the screen colour palette for B&W and colour screen versions.
2. Contrast key is used to select day/night vision for colour screen unit version
3. Night vision colour palette is modified to reduce brilliance in night vision
4. Transceiver high voltage is being read on a regular basis to provide correct operation of voltage adjustment
5. DA accesses function (Gain/TVG/Backlight/Ana out) is modified to prevent from power down mode DA. (2 Control words are always written prior digital data)

#### Software version 5.04.11, January 2005

GDS101

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_11.bin

1. SW bug fix. Thermo printer function; blank paper area is initialized to prevent printing random lines.
2. SW bug fix. Bottom line is being printed black in screen dump mode
3. External alarm reset function introduced. Can be connected at Key+/Key-, possibly in parallel with external keyboard. External reset will disengage alarm relay and reset audio alarm (if enabled). Visual alarm (blinking digital depth indication) is not affected and must be reset locally, by pressing any key on the panel.

#### Software version 5.04.11,d January 2005

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_11\_d.bin

1. 5000m depth.

#### Software version 5.04.12,beta January 2006

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_12 beta.bin

Note: operator manual must be revised.

1. Epson Stylus D88 printer (and compatible – 59 nozzles) function implemented
2. Various code optimizations
  - 2.1 Vessel name function has been removed
  - 2.1 Etc.

Software version 5.04.12 January 2006

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_12 .bin

Software version 5.04.13,beta February 2006

Object file:G:\Programmer\GDS101\Software\Objetcs\Gds5\_04\_13 beta.bin

Note: operator manual must be revised.

1. New softkey (NMEA OUT) has been introduced at screen 6 to be able to select between synchronous (with sampling rate) and asynchronous (1s period) NMEA output update.
2. Varoious minor optimizations (it is not possible anymore to set the year below 2000)