This file contains release notes of the Halcyon Symbios Dive computers (HUD and Handset)

FW V2.31.05

* Bugfix, buddy screen enable

FW V2.31.04

* Warning popup messages adapted according Halcyon suggestions
* pO2 warning adjustable in settings menu
  + enabled gas with highest MOD is using pO2 warning instead of OC pO2 MAX to trigger the pO2 high warning popup
* Scrubber counter counts until -199min
* Training menu added:
  + Available when NDT > 1 min and depth < 30 m
  + + 10min at 40 m and + 10min at 60 m can be added to the tissue saturations
* CCR deco and CNS calculation:
  + Sensors with a pO2 of <0.05 are excluded
  + Each pO2 sensor value gets stored for 30 s
  + For each second of the last 30 s, we calculate the average of the sensor values and check if the sensors are within 20% of the average and count those “agreements”.
  + If we have at least 10 agreements out of 30, we take the average pO2 for deco and CNS calculation.
  + Otherwise, we take the pO2 of the lowest sensor for deco calculation and the pO2 of the highest reporting sensor for CNS calculation**.**

FW V2.31.03

* Buddy screen added

FW V2.31.02

* CCR-POD FO2 value during pO2 calibration gets saved in settings struct
* GPS data gets logged in csv dive log
* GPS dive start waypoint gets automatically saved at start of the dive (if GPS signal is available)

FW V2.31.01

* CCR tissue saturation gets calculated based on the smallest received pO2 value
* Wireless IDs get visualized in 4 digits

FW V2.31.00

* Custom field TTS + 5 min added

FW V2.30.16

* CCR linearity check failed error message added
* Side mount SWITCH GAS popup message conditions changed
* Vibrator warning deactivated when wet contacts are dry

FW V2.30.15

* Wireless pairing enabled during Bluetooth communication

FW V2.30.14

* Error code added to CCR hardware error popup message
* Bluetooth firmware file name changed to BTPV12.BIN, resp, BTV12.BIN

FW V2.30.13

* Bluetooth interface extended

FW V2.30.12

* Bugfix in receiving pairing IDs via Bluetooth interface
* Divetime changed to mm:ss format in deco / tissue screen
* Custom field captions adapted

FW V2.30.11

* Italian language added
* Spanish language added
* pO2 max. range changed to 0.5 bar - 1.7 bar
* warning system algorithm improved
* 0.5 m tolerance added to best gas algorithm (each gas switch is now 0.5 m earlier)

FW V2.30.10

* Bugfix simulating Symbios CCR data
* Bugfix ignoring O2 tank pressure low warning
* Bugfix always showing diluent, resp. active OC gas at the left side bar graph

FW V2.30.09

* Button behavior for the HUD set equivalent to handset
* Standby menu entry disabled in dive mode
* Display brightness adaptation in realtime
* New warning popup messages added:
  + Symbios CCR solenoid failure
  + Symbios CCR ambient pressure sensor failure
  + Symbios CCR misc. hardware failure (SD-card/battery fuel gauge/housing pressure sensor)
  + CCR O2 tank pressure low (< 25 bar)
  + Dive computer battery state of charge low (< 15 %)
* Warning system adapted so that only the current shown warning/info message gets ignored when pushing both buttons
* Warning indicator added to gas pressure bar graphs
* HUD main screen label for scrubber counter custom field fixed
* Wireless data received icons added to HUD Symbios CCR screen
* Bugfix when switching to manual bailout in Symbios CCR mode
* Av. po2 added to custom field in HUD and handset detailed dive screen
* Ascent speed added to bottom timer mode
* Battery state of charge value added to HUD auxiliary screen
* Symbios CCR battery state of charge value added to auxiliary screen (handset and HUD)

FW V2.30.08

* Bluetooth advertising code changed to serial number
* BT name removed from system info menu
* Depth flashing in red is added while in OC / CC bailout mode on the big and detailed dive screen when pO2 exceeds the max. OC PO2 bar value configured in settings menu
* pO2 high message box is shown in OC and CC bailout mode on the big and detailed dive screen when pO2 exceeds max. OC PO2 bar + 0.1bar
* In CCR FSP mode O2 is only shown on the right site on the big and detailed dive screen if it is paired
* In CCR FSP mode the setpoint is the default custom field value
* Sleep menu entry added to root menu to switch off the dive computer
* Deco screen shows ceiling depth in the lower right corner instead of GF sur

FW V2.30.07

* logistic data gets written to blackbox when blackbox file gets created
* Wireless data received indicator added to the Symbios CCR screen

FW V2.30.06

* Bluetooth interface extended by CCR fixed setpoint high
* Bluetooth interface extended by CCR fixed setpoint low
* Bluetooth interface extended by language files update bits
* GPS screen improvements
* Deco screen enabled by default

FW V2.30.05

* Bugfix in U16 fonts

FW V2.30.04

* Delete pairing data when entering CCR mode got removed
* Bugfix in showing Symbios CCR SOC
* Greenflash / Symbios CCR SOC message timeout changed from 30 s to 45 s
* When Symbios CCR is paired, sentinel pO2 data added to .csv divelog

FW V2.30.03

* Dive simulation speed factor added to CNS/OTU algorithm
* Dive simulation gets stopped when app gets terminated

FW V2.30.02

* Bugfix in Bluetooth dive simulation

FW V2.30.01

* Depth graph gets updated when entering depth graph screen
* Depth graph gests clear after dive simulation
* CCR pairing data gets removed when changing dive mode
* CCR diluent gets grayed out in case of Symbios CCR high pressure sensor error
* CCR O2 gets grayed out in case of Symbios CCR high pressure sensor error

FW V2.30.00

* Depth chart added
* Deco ceiling depth added to custom field

FW V2.29.08

* BLE boundary check added in dive simulation
* Military mode added

FW V2.29.07

* BLE interface adapted
* Gradient factor chart added
* Dive timeout reset removed when a button is pressed on the surface and still in dive mode
* Bugfix in custom field battery SOC

FW V2.29.06

* HUD CNS visualization fix in custom field
* Diluent visualization fix in custom filed

FW V2.29.04/05

* TEA firmware update is not case sensitive anymore
* Menu style changed to 'modern'

FW V2.29.03

* Bugfix of black popup box overwriting gas switch popup box

FW V2.29.02

* Exception added in case that encypted firmware file size is empty

FW V2.29.01

* CCRFSP setpoint color coding bugfix
* Splashscreen START.DAT renamed to START.BMP
* dive .csv logging optimization
* bugfix when configuring display orientation via bluetooth

FW V2.29.00

* BLE file receive timeout adjusted
* BLE file transfer timeout adjusted
* Naming in the menu changed
* New firmware update file naming enabled

IMPORTANT: The new naming H0xxxxxx.DAT requires at least FW V2.27.02 otherwise you have to rename it to O2S001FW.eff for the HUD, resp. O2S007FW.eff for the handset before uploading it to the dive computers mass storage drive.

FW V2.28.04

* BLE file receive timeout adapted

FW V2.28.03

* BLE debugging output added

FW V2.28.02

* imperial units added to military compass navigation
* bugfix when canceling a screen flip

FW V2.28.01

* CCR battery SOC wrong timeout bugfix
* HUD jump to wrong screen during pO2 calibration bugfix
* Gas edit menu, wrong ‘delete’ caption removed

FW V2.28.00

* New external compass integrated
* Toggling between internal and external compass depending on the divers tilt

FW V2.27.02

* BLP\_bluetooth\_specification\_protocol.h cleaned
* O2 tank pressure added to BT\_remote\_control\_data
* bugfix is changing the style via bluetooth
* bugfix in enabling/disabling the wireless/deco screen via Bluetooth
* bugfix decrementing safety stop during simulation with speed factor higher than 1
* max. allowed dive simulation speed factor changed to 30
* pO2 < 0.4 blinking changed to blue/red

FW V2.27.01

* New Halcyon firmware file naming integrated
* CCR pO2 high/low added on surface if pO2 > 1.6 or < 0.18

FW V2.27.00

* Symbios CCR pO2 values cleared in USB mode
* Symbios CCR pO2 calibration error message added
* bugfix in Bluetooth dive simulation
* bugfixes in Bluetooth interface
* decompression calculation gets triggered in 5 s intervals (instead of 1 s intervals)
* jump back to main screen added in deco, Symbios CCR or auxiliary screen when a warning is triggered
* custom field diluent pO2 added
* custom field ascent speed added
* custom field setpoint added
* color coding for custom field loop pO2 added
* all paired OC gases are shown in custom field

FW V2.26.15

* housing pressure added to .csv dive log
* all paired gases but not active OC gases added to custom field
* bugfix in bluetooth interface when sending/receiving custom field settings

FW V2.26.14

* pO2 high/low warning popup added
* bugfix pO2 vibrator warning
* bugfix greenflash battery SOC timeout
* diluent PO2 added as label (handset only)
* timeout for deco screen removed. Does not switch back to large or detailed dive screen anymore
* pO2 set to default in large screen and deco screen in CCR mode
* lower button shortcut added in CCR FSP mode to toggle between BO, CC SP1 and CC SP2
* loop pressure gets shown when Symbios CCR is assembled, in CC state and O2 tank is closed

WARNING: Settings will be reset!

FW V2.26.13

* bluetooth command to get and set pairing IDs added
* custom field content can be enabled/disabled (SYSTEM => CF CONTENT) for each dive mode

FW V2.26.12

* CSV dive logs extended
* O2 transmitter pairing in CCR FSP mode bugfix

FW 2.26.11

* short vibration added if gas/diluent or CC/BO is changed
* CC/BO switch via long button press is possible in CCR FSP mode and for 3rd party CCR sensor board devices if no gas switch is pending and the stopwatch is not chosen as a shortcut
* Chinese font alignment bugfix

WARNING: Settings will be reset!

FW 2.26.10

* BLE settings read/write extended

FW 2.26.09

* temperature added in the production file
* timeout deco gas in deco screen added
* in OC numbers get red if pO2 > 1.6 - warning popup if pO2 > 1.7
* last digit removed in ascent speed custom field
* no flight time flipped with surface interval
* RTC offset set to 2024-01-01 00:00
* min. FO2 reduced from 20 % to 17 % so that TX18/45 does not trigger a gas switch on surface because toxic gas algorithm alarms
* active setpoint added to big screen next to pO2 label
* custom field added to deco screen
* jump to CCR screen added in case of calibration or USB mode
* CCR battery SOC false charging indicator bugfix
* Logboog details extended (details get scrolled when short pressing a button)

FW 2.26.08

* BLE dive simulation
* Bugfix CCRFSP dive logging

FW 2.26.07

* bugfix on CCR large screen showing pO2 as primary custom item
* pO2 high warning changed from 1.6 to 1.7
* pO2 difference popup message changed so that it is only shown when the difference is present for more than 20 s

FW 2.26.06

* ascent graph in CCR large screen got thicker
* best gas suggesting now based on MOD without tolerance
* gas information if OC gases are enabled/disabled are added to .csv log

FW 2.26.05

* - CEIL changed to STOP in detailed dive screen
* - CCR SOC added to auxiliary screen
* - dive settings struct reorganized
* - HUD lower left corner showing title for GF Surface fixed
* -Handset CCR big screen chopping the bottom
* row fixed

WARNING: Settings will be reset!

FW 2.26.04

* showing FO2 in CCR mode
* pO2 high is shown when depth > MOD instead of best gas
* ascent speed algorithm adapted
* MOD rounding removed
* ascent speed graph added in CCR mode
* DPV POD can be paired and data is shown in the custom field
* ceiling violation popup message added
* greenflash vbat <15 % popup message added

FW 2.26.03

* Bluetooth status output on detailed main screen
* bugfix in showing pO2 custom field (label is not blank anymore)
* Symbios handset label color changed to brighter blue

FW 2.26.02

* Watchdog reset after stop watch reset issue
* bugfix in showing custom field
* Reset average depth moved to root menu

FW 2.26.01

* HUD buttons flipped so that they behave like handset buttons
* Tn logging in binary log and csv log added
* Bin/csv logging improved to be more reliable
* CCR large screen also available in bailout mode
* Sleep after MSS bugfix (was randomly waking up)

FW 2.26.00

* Font load from RAM
* Large symbol screen in CC mode shows additional data in the custom field
* No default custom data label uses white color instead of blue to be easier to read

FW 2.25.05

* Depth warning after gas switch fixed
* Popup message box half-window wipe effect fixed
* Blank HUD SOC label for greenflash O2 sensor and rebreather fixed

FW 2.25.04

* Large CCR screen only shows pO2 in custom field and diluent at the left bar graph
* Ascent speed is shown in ft/min if imperial units are used

FW 2.25.03

* Bugfix in custom field incrementation
* Bugfix in CCR gas density calculation

FW 2.25.02

* Big screen for CCR mode added
* Bluetooth file receive error messages extended

FW 2.25.01

* BLE file receive bugfix
* Wireless CC battery status timeout changed to 3 min

FW 2.25.00

* Gas density added to custom field (just underwater)
* CCR SOC and greenflash SOC added to custom field (if Symbios CCR is paired)
* Deco stop violation popup if ceiling pressure > ambient pressure
* Deco stop depth blinks red if depth < deco stop depth
* CCR setpoints menu item removed in CCR mode (can only be changed in CCR fixed SP mode)
* Bugfix in Bluetooth file receive

FW 2.24.09

* BLE timeout reset bugfix

FW 2.24.08

* BLE file receive wrong block ID bugfix
* Ascent speed algorithm improved

FW 2.24.07

* HUD compass scale odd resolution fix
* HUD setpoint overwritten when stopwatch started is fixed
* .csv logging header unified
* New sidemount mode
  + Left gas is shown on the left side (inc. bar graph)
  + Right gas is always shown on the right side (inc. bar graph)
  + Ascent speed moved to custom field
* GF surface added to custom field
* pO2 high popup removed in OC mode
* Symbios wrong CCR battery status at startup fixed

FW 2.24.06

* Display blackout / freeze during popup message fixed

FW 2.24.05

* Automatic switch to symbios CCR screen during pO2 calibration
* .csv dive data logs reorganized
* Safety stop counts down between >=3 m and <=6 m and is displayed between >6 m and <=6.4 m
* LFT error popup bugfix (not shown any more after startup)
* added % in custom filed for battery SOC
* obsolete pixels cleared in the stopwatch field of big digits screen

FW 2.24.04

* Greenflash calibration factor is shown when symbios pO2 calibration results are displayed on the symbios CCR screen
* LFT error popup message added on CCR screen in case of no communication between rebreather and dive computer
* Dive timeout adjustable (SYSTEM → DIVE TIMEOUT)
* Bugfix in vibrator alarm switch off
* Safety stop counts down between >=3 m and <=6 m and is displayed between >6 m and <=6.3 m
* No standby in symbios CCR mode as long wireless data is received