Mundial 2

User Manual

CONTENTS

NOTICES

LIMITED TWO YEAR WARRANTY

COPYRIGHT NOTICE

TRADEMARK, TRADE NAME, AND SERVICE MARK NOTICE

Beuchat, the Beuchat logotype, Mundial 2, the Mundial 2 logo, and BCI (Beuchat Computer Interface) are all registered and unregistered trademarks, trade names, and service marks of Beuchat. All rights are reserved.

PATENT NOTICE

U.S. Patents have been issued, or applied for, to protect the following design features: Data Sensing and Processing Device (U.S. Patent no. 4,882,678).

INITIAL ACTIVATION

Beuchat Watch type dive gauges are placed in a Deep Sleep mode prior to being shipped from the factory. The intent is to extend storage life of the Battery for up to 7 years, before the unit is initially placed in service.

In this mode, Date and Time are updated as they normally would be. However, they are not displayed. Upon waking the Mundial 2 up, the correct Date and USA Pacific Time will be displayed and it will be ready to operate with full functions.

To wake the Mundial 2 up from Deep Sleep mode, simultaneously depress the upper/right (S) and lower/left (A) buttons for 2 seconds until the display comes full ON displaying the MAIN TIME screen, then release them.

Once the Mundial 2 is brought out of the Deep Sleep mode, it can only be placed back in it by the factory.

FULL LCD
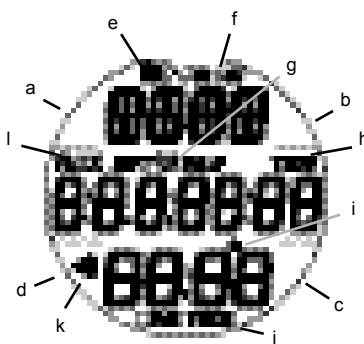
Components:
a. Mode (M) Button
b. Select (S) Button
c. Light (L) Button
d. Advance (A) Button
e. Icon - Low Battery
f. Icon - Time Am/Pmgh.
g. Icon - Log Modh
h. Icon - Surface Interval Time
i. Icon - Degrees (Temp)
j. Icon - Elapsed Dive Time
k. Icon - Daily Alarm set
l. Icon - Depth/Max Depth

Welcome

to

Beuchat

and

THANK YOU

for choosing the

Mundial 2

GENERAL

FEATURES & DISPLAYS

INTERACTIVE CONTROL CONSOLE

The Interactive Control Console consists of four Control Buttons that allow you to select mode options and access specific information. They are also used to enter Settings, operate the Backlight, and access additional screens of information.

Throughout this manual they will be referred to as the M, S, L, and A buttons.

- Upper/Left - Mode (M) button
- Upper/Right - Select (S) button
- Lower/Right - Light (L) button
- Lower/Left - Advance (A) button

OPERATING MODE STRUCTURE

Unless it is operating in Free Dive mode, the Mundial 2 will be On in the default Watch Main Time (home time) mode (Fig. 1), like a standard Watch, until the mode is changed.

The M button is used to access 4 other modes that include Alternate Time, Countdown Timer, Chronograph (stop watch/run timer), and Daily Alarm. It is also used to revert to the Local Default Time display and access Free Surface Mode.

The screens of the Main Modes and Sub Modes will remain on display until a button is pressed to access another screen or mode, activate a sequence, or for 2 minutes if no button is pressed. The Chronograph remains on display unless turned Off or another mode is accessed.

When operating in Free Mode, the Mundial 2 will enter Dive Mode upon descent to the DSD (Dive Start Depth) previously set which can be 2, 4, or 6 FT (feet) or 0.6, 1.2, or 1.8 M (meters) for 1 second. *See page 19 for Set DSD.*
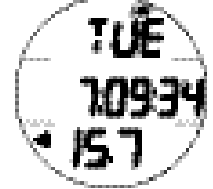
Fig. 1 - MAIN TIME

⚠ **WARNING: The Mundial 2 must be in Free Surface Mode in order for it to activate Dive Mode. Commencing a dive while in Watch modes will not activate Dive Mode.**

Main Sequence
(while at home)
Main Time
Alternate Time
Countdown Timer
Chronograph
Daily Alarm

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Alternate Sequence
(at a travel location)
Alternate Time
Main Time (home)
Countdown Timer
Chronograph
Daily Alarm

OPERATION AS A DIVING GAUGE

Entering Settings relating to diving activities is only available in Free Surface Mode which also allows access to a Countdown Timer (separate from the Watch CDT), Log, and History Modes.

PC INTERFACE

Interface with a PC, to allow uploading settings and downloading data, is accomplished by connecting the Mundial 2 to a PC USB Port using the special BCI (Beuchat Computer Interface) USB Interface Cable.

The software program together with the USB Driver required is on the BCI CD, as can be downloaded from the Beuchat web site. The program's HELP serves as the user manual which can be printed for personal use.

The Settings Upload portion of the BCI program can be used to set/change the Main Time, Date, Set A group (Alarms), and Set U group (Utilities) using the same Interface System.

Information available for retrieval (Download) from the Mundial 2 to the PC Download portion of the program includes dive number, surface interval time, start depth, end depth, maximum depth, elapsed dive time, start date, start time, lowest temperature under water, sampling rate, dive profile, and Set Points.

The BCI program also allows update of select versions of the Mundial 2's firmware (operating system software).

- Refer to page 24 for more details relating to PC Interface.

ALPHA NUMERIC MESSAGES

The upper line of digits on the LCD screen is used to convey alpha numeric graphic Messages such as Day of the Week, Mode of Operation, items being Set, and Alarm identification. At times, the lower line is also used to display graphics such as On/Off, Set, and Seconds.

AUDIBLE ALARM

The Audible will not activate if the Alarm is set OFF, a group A setting which completely disables it.

When Alarms strike, the Backlight will come On if Off and remain On until you turn it Off by pressing/releasing the L button or automatically after 10 seconds.

Situation that will sound (2) 2 second beeps -
- EDT (Repeating Elapsed Dive Time) Alarm, if set On.

Situations that will sound 3 sets of (3) 1 second beeps -
- Watch Daily Alarm (surface only), if set On.
- Watch Countdown Timer reaches 0:00 (hr:min), if set On.
- Free Mode Countdown Timer reaches 0:00 (min:sec), if set On.
- SRT (Surface Recovery Time) Alert, if set On.
- RDI (Repeating Depth Interval) Alarm, if set On.

Situation that will sound (3) sets of (3) .125 second beeps -
- Descending Depth Alarms DD 1, DD 2, and DD 3, if set On.

BACKLIGHT

To turn the Backlight On, press and release the L button (< 2 seconds). The Backlight will remain On for the Duration time set (a Set U selection) unless you turn it Off during that time.

- The Backlight will come On (even if set OFF) when Alarms strike and remain On until turned Off or automatically after 10 seconds .

- Pressing and releasing the L button (< 2 seconds) while the Backlight is On will turn it Off.

- Depressing the L button for 2 seconds while the Backlight is On, will reset the timer and extend the On time to the full Duration time set.

- If the L button is depressed for > 60 seconds, the Backlight will be disabled and not turn On until the button is released then pressed/released again.

- The Backlight will be disabled when there is a Low Battery condition, and be re enabled once the battery is replaced.

- Extensive use of the Backlight reduces Battery use life.

- Turning the Backlight Off when it is not being used will help extend Battery use life.

- The Backlight does not operate when the unit is connected to a PC.

POWER SUPPLY

The Mundial 2 utilizes (1) 3 volt CR2430 Lithium Battery.

The Mundial 2 checks Battery voltage every 2 minutes during operation while on the surface.

- If voltage decreases to the Warning level (2.75 volts), the Battery icon will appear on Surface display screens (Fig. 2a) as an indication that the Battery should be changed prior to commencing a series of dives.

- If voltage decreases to the Alarm level (2.50 volts), the Battery icon will flash and operation will automatically revert to Main Time screen. The Mundial 2 would then only operate in Watch modes until the Battery becomes completely depleted.

- Low Battery Warning/Alarm conditions are not displayed during Dive Modes.

- If a Low Battery Condition was not displayed prior to starting a Dive, and a Low Battery Condition occurs during the dive, there will be sufficient Battery power to maintain operation for the remainder of that dive. Upon surfacing, the message CHNG >> BATT will scroll (Fig. 3), then operation will automatically revert to the Main Time screen and only operate in Watch modes until the Battery becomes completely depleted.
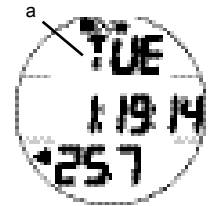
Fig. 2 - LOW BATTERY WARNING

Fig. 3 - LOW BATTERY ALARM

Each display represents unique pieces of information. It is imperative that you understand the formats, ranges, and values of the information represented to avoid any possible misunderstanding that could result in error.

Understand which Time displays are represented as Minutes: Seconds and which are Hours:Minutes.

You must also understand the icons, symbols, and alpha/numeric messages presented.

The Informational Displays are described in detail as the various operating modes they appear in are presented throughout this manual.

WATCH MODE

FEATURES & DISPLAYS

LOCAL DEFAULT TIME

Watch Main Time (Fig. 4) is the current Time at your home location and is normally selected as the Local Default Time.

The normal Watch screen sequence accessed with momentary presses (less than 2 seconds each) of the M button is -

Main Time > Alt Time > CD Timer > Chrono > Day Alarm.

Watch Alt (Alternate) Time (Fig. 5), which is normally set by Hour Differential, is the current Time at a remote travel location. Upon arrival at the location, Alt Time can be interchanged with Main Time to make it the Local Default Time while visiting the travel location.

- M will then access the screens in this sequence -

Alt Time > Main Time > CD Timer > Chrono > Day Alarm

- S (2 sec), while viewing Alt Time, will replace Main Time with Alt Time that will then become the Local Default Time until changed.

- M (2 sec), or no button (2 min), while viewing any of the Watch Mode displays, will revert to Watch Time.

MAIN TIME (home), information includes:
- > Battery icon, if a Low Battery Condition exists.
- > AM (or PM) icon, when set for 12 Hour Format.
- > Day of the Week graphic MON (or TUE, WED, THU, FRI, SAT, SUN).
- > Time of Day (hr:min:sec) (Fig. 6a).
- > Alarm icon, if the Daily Alarm is set On (Fig. 6b).
- > Month.Day (Day.Month if set for Metric) (Fig. 6c).

- A (< 2 sec) to access Temperature (Fig. 6A).
- A & S (2 sec) to access the Set Date Format.
- A (2 sec) to access Log and History.
- M (< 2 sec each time) to step through the Watch Modes.
- S (< 2 sec) to silence and acknowledge the Daily Alarm.
- L (press) to operate the Backlight.

SET DATE/TIME

This Mode allows the Date and Time of Day to be set at the location you are at (home or travel location).

There are 4 Set screens ->

Date Format >> Hour Format >> Time of Day >> Date.

- > Set Date/Time can only be accessed when the Local Default Time (Main or Alternate) is displayed.

- M (2 sec), or if no button (2 min), revert to Watch Time.

Set Date Format, information includes (Fig. 7):
- > Graphic D - M (or M - D) flashing, D = Day, M = Month.
- > Graphic dAtE.

- S (< 2 sec) to toggle between D - M and M - D.
- A (< 2 sec) to save the setting and access Set Hour Format.

Set Hour Format, information includes (Fig. 8):
- > Graphic HOUR.
- > 12 (or 24) flashing with TIME icon.

- S (< 2 sec) to toggle between 12 and 24.
- A (< 2 sec) to save the setting and access Set Time (Hour).

A (2 sec), repeatedly, will step through the Time/Date Settings, bypassing those that don't require setting.

The AM (or PM) icon is displayed on Time screens when Hour Format is set for 12 Hour.

The Year will not be displayed in any Mode other than Set Date. The Date will reset to 1.1 2011 when the Battery is replaced.

Day of the Week is set automatically based upon the Date that has been set.

Set Time, information includes (Fig. 9):
- > Graphics 12HR with AM (or PM) icon (or 24HR).
- > Time of Day (hr:min) last set with TIME icon, Hour digits flashing.

- S (hold) to scroll upward through the Hour Set Points from 12: AM to 11: PM (or 0: to 23: if set for 24 Hour Format) at a rate of 8 per second in 1 Hour increments.
- S (< 2 sec) to step upward through the Hour Set Points one at a time.
- M (< 2 sec) to step back through the Hour Set Points one at a time.
- A (< 2 sec) to save the Hour setting and flash the Minute digits.

- S (hold) to scroll upward through the Minute Set Points from :00 to :59 at a rate of 8 per second in 1 Minute increments.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A (< 2 sec) to save the Minute setting and/or advance to Set Date.

Time of Day will have to be set after the Battery is removed/replaced.
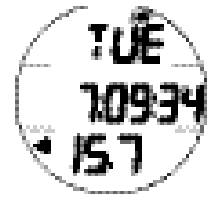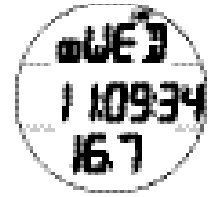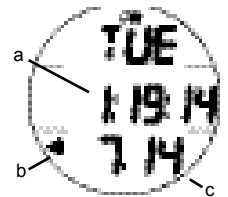
Fig. 4 - MAIN TIME

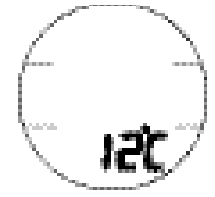Fig. 5 - ALT TIME

Fig. 6 - MAIN TIME
(July 14)

Fig. 6A - WATCH ALT

Watch Time/Date can also be set using the Settings Upload feature of the ACI PC Interface software.

Prior to shipment from the factory, any error of the Main Time is determined and corrected.

Fig. 7 - SET DATE FORMAT

Fig. 8 - SET HOUR FORMAT

Fig. 9 - SET TIME
(hr:min)

Set Date, information includes (Fig. 10):
> Graphic YEAR.
> Date (Year, Month, Day) with Year digits flashing.

- S (hold) to scroll upward through the Year Set Points from 2011 to 2054 (with leap year corrections) at a rate of 8 per second in 1 Year increments.
- S (< 2 sec) to step upward through the Year Set Points one at a time.
- M (< 2 sec) to step back through the Year Set Points one at a time.
- A (< 2 sec) to save the Year setting, replace graphic YEAR with MNTH, and flash the Month digits.

- S (hold) to scroll upward through the Month Set Points from 1 to 12 at a rate of 8 per second in 1 Month increments.
- S (< 2 sec) to step upward through the Month Set Points one at a time.
- M (< 2 sec) to step back through the Month Set Points one at a time.
- A (< 2 sec) to save the Month setting, replace graphic MNTH with DAY, and flash the Day digits.

- S (hold) to scroll upward through the Day Set Points from 1 to 31 max at a rate of 8 per second in 1 Day increments.
- S (< 2 sec) to step upward through the Day Set Points one at a time.
- M (< 2 sec) to step back through the Day Set Points one at a time.
- A (< 2 sec) to save the Day (and full Date) setting and revert to Watch Main.

Fig. 10 - SET YEAR

ALT (ALTERNATE) TIME

As previously indicated, ALT TIME is the current Time at a remote travel location. Upon arrival at the location, ALT Time can be interchanged with Main (home) Time to make it the Watch Default Time while visiting the travel location.

- M (< 2 sec) while viewing Watch Main to access ALT TIME.

ALT Time, information includes (Fig. 11):
> Battery icon, if Low Battery.
> AM (or PM) icon, if 12 Hour Format.
> Lazy 8 symbol (Fig. 11a) indicating Time is ALT Time.
> Day of the Week graphic MON (or TUE, WED, THU, FRI, SAT, SUN).
> Time of Day (hr:min:sec) at ALT location.
> Alarm icon (solid), if the Daily Alarm is set On
> Day.Month (or Month.Day (or).

- M (< 2 sec) to step through the other Watch Modes.
- S (< 2 sec) to silence and acknowledge the Daily Alarm.
- S (2 sec) to interchange ALT Time with Main Time making it the Watch Default Time.
- L (press) to operate the Backlight.
- A & S (2 sec) while viewing Main Time to access Set ALT Time.
- A & S (2 sec), when ALT (travel location) Time is selected as the Watch Default Time, to access Set Watch Time with the Hour Format Set Point flashing allowing Date and Time items to be set the same as they could be set at home.
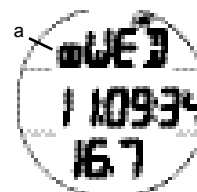- M (2 sec) to revert to Main Time.

Fig. 11 - ALTERNATE TIME

SET TIME DIFFERENTIAL

Time Differential can be set OFF, or to an Hour based numeric time ranging from + 1 through + 23 through - 23 through - 1 (hours).

Once the Differential is selected and saved, ALT Time/Date values will be based upon the Watch Main Time Set Points plus/minus the Differential set.

Time Differential can only be set when Main (home) Time is selected as the Watch Default Time and ALT Time is accessed by pressing the M button for 2 seconds.

Main (home) Time > ALT Time > Set Differential

If Watch Date/Time is set while ALT Time is selected as the Watch Default Time (while you are at a travel location), the Differential will automatically change Main (home) Time based upon an inverted Differential.

Set Time Differential, information includes (Fig. 12):
> Lazy 8 symbol and graphic SEt.
> Graphic OFF, or the +/- Hour Differential digits, flashing with TIME icon.

- S (hold) to scroll upward through Set Points from OFF to +01 through +23 then - 23 through - 01 to OFF at a rate of 8 per second in increments of 01.

- S (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- A (< 2 sec) to save the setting and/or advance to ALT TIME.
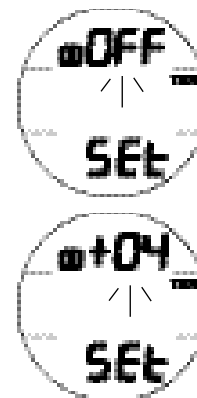- M (2 sec) or no button (2 min) to revert to Watch Main.

Fig. 12 - SET TIME DIFFERENTIAL

WATCH CDT (COUNTDOWN TIMER)

Once set ON, the Timer will run in the background until it counts down to 0:00, or it is set OFF, or a Dive is made at which time it will default to OFF and the value previously set.

When a set Countdown Time reaches 0:00, the Audible Alarm will sound and the warning LED will flash, unless it is set Off.

Watch CDT Status, information includes (Fig. 13):
> > Graphic TIMR.
> > Remaining CD Time (hr:min) if running, or the Time set if it was set and not yet started, or 0:00 if no time was previously set or none is remaining after running.
> > Graphic OFF (or ON), flashing.

- S (< 2 sec) to toggle between OFF and ON.
- A & S (2 sec) to access Set CDT.
- M (2 sec) or no buton (2 min) to revert to Watch Main.

Set Watch CDT, information includes (Fig. 14):
> > Graphics TIMR and SEt.
> > Timer setting (hr:min) TIME icon, Hour digits flashing.

- S (hold) to scroll upward through the Hour Set Points from 0: to 23: at a rate of 8 per second in 1 Hour increments.
- S (< 2 sec) to step upward through the Hour Set Points one at a time.
- M (< 2 sec) to step back through the Hour Set Points one at a time.
- A (< 2 sec) to save the Hour setting and flash the Minute digits.

- S (hold) to scroll upward through the Minute Set Points from :00 to :59 at a rate of 8 per second in 1 Minute increments.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A (< 2 sec) to save the Minute (and full Timer) setting indicated by the graphic OFF flashing in place of SEt.
- S (< 2 sec) to start the Timer (Fig. 15).
- M (< 2 sec) to advance to Chrono.
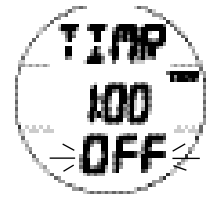- M (2 sec) or no button (2 min) to revert to Watch Main.
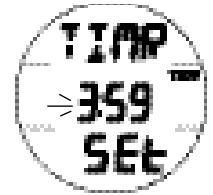

Fig. 13 - CDT STATUS
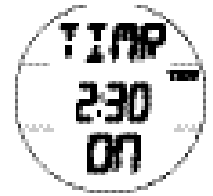

Fig. 14 - SET WATCH CDT

Fig. 15 - CD TIMER STARTED

CHRONOGRAPH (Stop Watch, Lap/Run Timer)

The Chrono is operational during Free Surface and Dive Modes as well as Watch Mode. Once started, the Chrono continues to run regardless of which mode the unit is operating in until it is stopped or it reaches the max Run Time. It runs unseen in the background when not on display.

> > Upon access to the Chrono Status screen, elapsed run time is displayed if previously started, or 0:00:00.00 (hr:min:sec.1/100th sec), flashing.

- S (< 2 sec) to start the Chrono/Run Timer which will start and begin counting up from 0:00:00.01 (Fig. 16) to 9:59:59.99 in increments of .01 (1/100th sec).

> > During the first 4 seconds, the .01 (1/100th) second values will be displayed, then 2 dashes (. - -) will be displayed. The 1/100th values will be recorded and displayed when Lap times are recalled.

- S (< 2 sec) to save additional Lap Times and start the next one (Fig. 17).

> > After 9 Laps are recorded, additional Laps will replace Lap 9, shifting the others to lower Lap numbers, while discarding Lap 1.
> > If total Run Time reaches 9:59:59.99, it will stop and save that time as a Lap. The S button will then have no effect.

- A (< 2 sec) to stop the Run Timer and recall Lap 1, displaying the graphic Lap1 (flashing) and the Lap 1 Run Time. Repeat presses will display other Laps/Run Times (Fig. 18).
- A (2 sec) to stop the Run Timer and reset the Time to 0:00:00.00 (flashing).
- M (2 sec) or no button (2 min) to revert to Watch Main.

While the Chrono is running, it will remain on the screen until M is pressed to access the Watch Daily Alarm, or if in Free Mode (surface or dive) to revert to the Main. It will then continue to run in the background.

Fig. 16 - CHRONO LAP 1 STARTED

Fig. 17 - CHRONO LAP 4 STARTED

Fig. 18 - CHRONO LAP RECALL

WATCH DAILY ALARM
When set ON, the Watch Daily Alarm will sound the Audible every day at the Time set.

DAILY ALARM STATUS, information includes (Fig. 19):
> AM (or PM) icon, if 12 Hour Format.
> Graphics ALRM, with ON (or OFF) flashing
> Alarm Time (hr:min) with TIME icon.
> Alarm (speaker) icon.

- S (< 2 sec) to toggle between ON and OFF.
- A and S (2 sec) to access Set Daily Alarm.
- M (2 sec) or no button (2 min) to revert to Watch Main.
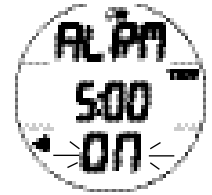- L (press) to activate the Backlight.

Fig. 19 - DAILY ALARM STATUS

SET DAILY ALARM, information includes (Fig. 20):
> AM (or PM) icon, if 12 Hour Format.
> Graphics ALRM and SEt.
> Alarm Time (hr:min) with the Hour digits flashing.
> Alarm (speaker) icon.

- S (hold) to scroll upward through Hour Set Points at a rate of 8 per second in 1 Hour increments from 12: AM to 11: PM (or 0: to 23: if 24 hour format).
- S (< 2 sec) to step upward through the Hour Set Points one at a time.
- M (< 2 sec) to step back through the Hour Set Points one at a time.
- A (< 2 sec) to save the Hour setting and flash the Minute digits.
- S (hold) to scroll upward through the Minute Set Points at a rate of 8 per second in 1 Minute increments from :00 to :59.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A (< 2 sec) to save the Minute setting (and full Alarm time) and revert to the Daily Alarm Status screen with the graphic ON (or OFF) flashing.
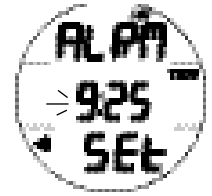- M (2 sec) or no button (2 min) to revert to Watch Main.

Fig. 20 - SET DAILY ALARM

If no dive is conducted within 2 hours after accessing Free Mode, operation will revert to Watch Main Time.

Operation will also revert from Free Surface Mode to Watch Main Time 2 hours after completion of a dive or if M is pressed (2 sec) while viewing Free Surface Main.

SURFACE MODE

FEATURES & DISPLAYS

ALPHA NUMERIC DISPLAYS

Time and Date Displays

Times appear in the middle and lower rows of the display (Fig. 21a/22a).

Times are shown in hour:minute format or minute:second format.

The colon that separates hours and minutes, or minutes and seconds, blinks once per second when the display is indicating real time (e.g., Surface Interval, Elapsed Dive Time), and is solid (not blinking) when times are calculated projections (e.g., Timers, etc.).

While operating in Watch Mode, Date appears in the lower row of the display (Fig. 21b). While operating in FREE mode, Date is only displayed in the Log Mode to identify dives.

- When Date Format is set for M - D, Month appears to the left of Day (month.day) separated by a decimal point.

- When set for D - M, the Month appears to the right of Day (day.month) (Fig. 23a).

Depth Displays

During dives, Current Depth (Fig. 24a) is displayed from 0 to 100 M (330 FT) in increments of 0,1 M (1 FT).

During the first hour while on the surface after dives, the Max Depth of the Last dive conducted will be displayed on the Post Dive Surface screen (Fig. 25a).

Temperature Display

Ambient Temperature (Fig. 26a) can be viewed on the surface and during dives by accessing an Alternate Display.

The lowest Temperature recorded during each dive is recorded in the Log for that dive.

Altitude

Adjustments to Depth calibration and displays are made in accordance with the type of water selected (Fresh or Sea/Salt).

An Altitude graphic is not displayed.

If the Chrono is on the display (while on the surface), it will remain on the display even if a descent is made (dive started), until M is pressed to revert to the Surface (or Dive) Main.
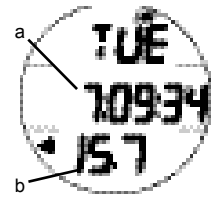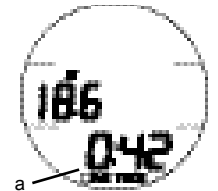

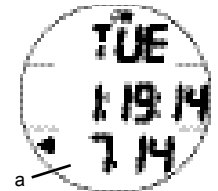Fig. 21 - WATCH MAIN
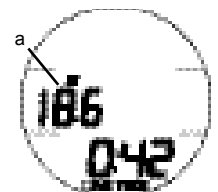

Fig. 22 - DIVE MAIN

Fig. 23 - WATCH MAIN
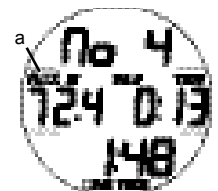(Month.Day)

Fig. 24 - DIVE MAIN
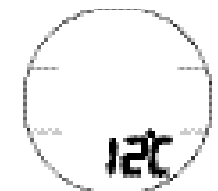

Fig. 25 - SURF MAIN
(post dive)

Fig. 26 - TEMPERATURE

SURFACE MODE

- M (2 sec), while viewing Watch Default Time, to access FREE SURF MAIN (Fig. 27).

Descent to the DSD (Dive Start Depth) set (0,6 , 1,2 , or 1,8 M; or 2, 4, or 6 FT) for 1 second will activate Dive Mode, which will run in the background if the Chrono is on display.

The Mundial 2 will enter Post Dive Surface Mode following a dive upon ascent to 2 FT (0,6 M) for 1 second.

The SURF icon will flash during the first 1 minute after a dive.

During the first hour after a dive, the Post Dive Surface screen will be displayed (Fig. 28). When the hour has elapsed, or M (< 2 sec), the SURF MAIN will be displayed and Watch Mode can be accessed by pressing M (2 sec). SURF MAIN can then be accessed again by M (2 sec).

When set ON, the SRT (Surface Recovery Time) alarm will sound and the graphic SRT will flash (Fig. 29) when the Surface Interval after surfacing reaches the Time set (min:sec).

SURF MAIN, information includes (Fig. 30):
- > Battery icon, if a Low Battery condition exists.
- > Graphic FREE.
- > Surface Interval Time (min:sec, hr:min if > 59:59 min:sec) with SURF and TIME icons.
- > Number of the last dive conducted that calendar day with DIVE icon. If no dive has been made yet that day, or if Dive # is reset by S (2 sec), 0 will be displayed.

- A (< 2 sec) to access SURF ALT 1.
- A (2 sec) to access Log 1.
- S (2 sec) to reset Dive # to 0.
- A and S (2 sec) to access Set Menu (A >> U) and a Serial Number screen.
- M (< 2 sec) to access Chrono Status.
- M (2 sec) to access Watch Main.
- L (press) to operate the Backlight.

SURF ALT 1 (CDT STATUS):
The FREE Mode CDT (Count Down Timer) counts down time values in minutes:seconds and is separate from the Watch CDT that counts down time in hours:minutes.

- > Graphic TIMR.
- > Remaining Countdown time (min:sec) with the colon flashing and the TIME icon, if ON and a CD is in progress (Fig. 31).
- > 0:00 and graphic OFF will be displayed, if the CD Timer was ON and no time is remaining.
- > If the CD Timer is OFF, the CD Time (min:sec) previously set will be displayed (Fig. 32).
- > Graphic OFF (or ON), flashing.

- S (< 2 sec) to toggle between ON (start) and OFF (stop).
- S (2 sec) to stop the CD if running and Reset the time to 0:00 with it OFF (Fig. 33).

  > *If a Time has been set, a toggle from OFF to ON will Start the CD Timer indicated by the colon flashing.*

- A and S (2 sec), with CD Timer set OFF, to access Set CDT.
- A (< 2 sec) to access SURF ALT 2.
- M (2 sec), or if no button (10 sec), to revert to SURF MAIN.

Once the CDT has been Set and Started (by selecting ON), it will continue to run in the background while on the surface until turned OFF (stopped) or the Time reaches 0:00 (min:sec) at which time the Alarm will strike, the graphic TIMR will flash (Fig. 34), and the CDT will revert to OFF.

Upon entry into Dive Mode, operation of the Free CDT will continue, if in progress.

During dives, the CDT can be turned OFF (stopped) and ON (started), but not Set.

Fig. 27 - SURF MAIN
(0 = no dive made)

Fig. 28 - POST DIVE
SURF (first hour)

Fig. 29 - POST DIVE SRT
ALARM

Fig. 30 - SURF MAIN
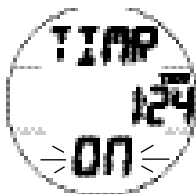(1 hr after dive 23)

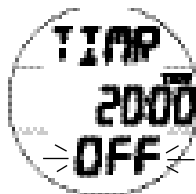Fig. 31 - CDT STATUS
(On, running)
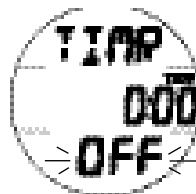

Fig. 32 - CDT STATUS
(Set, ready to Start)

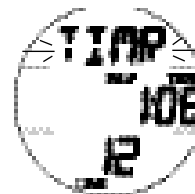Fig. 33 - CDT STATUS
(countdown complete)

Fig. 34 - SURF MAIN
CDT ALARM

SET FREE CDT (Surface only), information includes (Fig. 35) -
> Graphics TIMR and SEt.
> Timer setting (min:sec), colon solid and Minute digits flashing, with the TIME icon.

- S (hold) to scroll upward through the Minute Set Points at a rate of 8 per second from 0: to 59: in 1 Minute (1:) increments.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A(< 2 sec) to save the Minute setting and flash the Seconds digits.
- S (hold) to scroll upward through the Seconds Set Points at a rate of 8 per second from :00 to :59 in 1 Second (:01) increments.
- S (< 2 sec) to step upward through the Second Set Points one at a time.
- M (< 2 sec) to step back through the Second Set Points one at a time.
- A(< 2 sec) to save the Second (and full CDT) setting and revert to CDT Status with OFF flashing (Fig. 36).
- S (< 2 sec) to toggle to ON and Start the CDT.
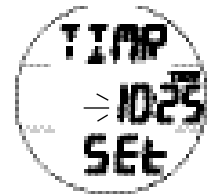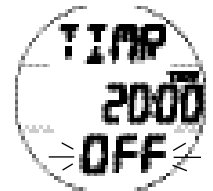- A (< 2 sec), or M (2 sec), or if no button (2 min), to revert to SURF MAIN.

SURF ALT 2, information includes (Fig. 37):
> Time of Day (hr:min:sec) with TIME icon.
> Temperature with degree icon and graphic F (or C).

- A (< 2 sec), or no button (5 sec), revert to SURF MAIN.
- L (press) to operate the Backlight.

LOG

Log Mode displays information from the latest 99 dives sequentially in reverse order (the most recent first).

Log information is retained until over written by another dive.

After exceeding 99 dives, the most recent Dive completed will be added to the Log and the oldest deleted.

Battery removal will not affect the Log data stored for viewing.

Dives will be numbered 1 to 99 starting at # 1 each new calendar day, or period of activity. After midnight, the first dive of the next day will be # 1. It will also be #1 if you reset the Dive # to 0 by pressing S (2 sec) while viewing the SUF MAIN.

- A (2 sec), while viewing FREE SURF Main or Watch Main Time, to access Log, regardless of the BDSI (Between Dive Surface Interval) time set.

Upon entering Log Mode, the most recent dive's Log 1 screen will be displayed.

- A (2 sec) to bypass other Log screens and access History.
- A (< 2 sec) to access that dive's Log 1, 2, 3 screens.
- S (hold), while viewing a Log 1, 2, or 3 screen to scroll through the previous dives' Log 1, 2, or 3 screens at a rate of 8 per second.
- S (< 2 sec) to step through the screens.
- M (< 2 sec) to step back through the screens.
- No button (2 min) to revert to FREE SURF Main or Watch Main Time.
- L (press) to operate the Backlight.

LOG 1, information includes (Fig. 38):
> Graphic **No** with the dive number (1 to 99) for that day, or period of activity.
> Max Depth with MAX and M (or FT) icons.
> Log (book) icon.
> Pre Dive SI (min:sec, hr:min if > 59:59) with SURF and TIME icons, blank if Dive #1.
> Elapsed Dive Time (min:sec) with DIVE and TIME icons.
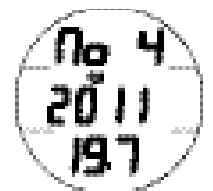
LOG 2, information includes (Fig. 39):
> Graphic **No** with the dive number (1 to 99).
> Log (book) icon.
> Date of the dive (Year, Day.Month or Month.Day).

LOG 3, information includes (Fig. 40):
> Am (or Pm) icon, if 12 Hour Format.
> Graphic **No** with the dive number (1 to 99).
> Log (book) icon.
> Time of Day (hr:min:sec) the dive began with TIME icon, and graphic A to the left if Alternate Time was selected as the Watch Default Time when the dive was conducted.
> Temperature (minimum recorded that dive) with degrees icon and graphic F (or C).

LOG 4 (Profile)
The Log 4 screen allows you to analyze dives on site without the use of the PC interface system. The dive's Depth can be observed while elapsed dive time is increased or decreased throughout the dive beginning at descent.

LOG 4, information includes (Fig. 41):
> Graphic **No** with the dive number (1 to 99).
> Max Depth with M (or FT) icon.
> Log (book) icon.
> Graphic **Pro** indicating that the screen is displaying interactive Profile data for that dive.
> Elapsed Dive Time (min:sec) with DIVE and TIME icons.

- S (< 2 sec) to start a slow auto step up of EDT at a rate of 1 second EDT per real time second, displaying the Depth values for each EDT value.
- S (< 2 sec) to stop/freeze the auto step up.
- S (press & hold) to start an upward scroll of EDT at a rate of 8 seconds of EDT per each real time second, displaying the Depth values for each EDT value.
- S (release from hold) to stop the scroll and freeze EDT.
- M (< 2 sec), when stopped, to step back EDT 1 second per pres/release.
- A (< 2 sec), at any time, or no button (2 min), to revert to the FREE SURF Main or Watch Main Time.

Fig. 35 - SET CDT

Fig. 36 - CDT STATUS
(Set, ready to Start)

Fig. 37 - SURF ALT 2

Fig. 38 - LOG 1

Fig. 39 - LOG 2

Fig. 40 - LOG 3

Fig. 41 - LOG 4
(Profile after 52 sec)

HISTORY

History Mode is comprised of 2 groups, Day History and Full History. The Day group presents data recorded during the last calendar day of diving, while the Full group presents data pertaining to all dives ever conducted.

Data is retained when the battery is removed/replaced.

- A (2 sec), while viewing the first Log 1 screen, to access Day History 1, then -
- A (2 sec), while viewing Day History 1, to access Full History 1, then -
- M (2 sec), or no button (2 min), at any time, to revert to SURF MAIN or Watch Main Time.
- L (press) to operate the Backlight.

DAY HISTORY 1, information includes (Fig. 42):
- > Graphic HIST.
- > Total accumulated Dive Time that day, up to 23:59:59 (hr:min:sec), with TIME icon.
- > Total number of Dives conducted that day, total up to 199, with DIVE icon

- A (< 2 sec) to access Day History 2.

DAY HISTORY 2, information includes (Fig. 43):
- > Graphics DAY and d - t, indicating that Max Depth is the deepest recorded that day and Dive Time is time associated with that Max Depth.
- > Max Depth with MAX and M (or FT) icons.
- > Elapsed Dive Time (min:sec) with DIVE and TIME icons.

- A (< 2 sec) to access Day History 3.

DAY HISTORY 3, information includes (Fig. 44):
- > Graphics DAY and t - d, indicating that Dive Time is the longest recorded during that day and Max Depth is associated with that time.
- > Max Depth with MAX and M (or FT) icons.
- > Dive Time (min:sec) with DIVE and TIME icons.

- A (< 2 sec) to access Day History 4.

DAY HISTORY 4, information includes (Fig. 45):
- > Graphics DAY and AVE, indicating that the data displayed represents Averages for all dives conducted that day.
- > Max Depth with MAX and M (or FT) icons.
- > Dive Time (min:sec)with DIVE and TIME icons.

- A (< 2 sec) to revert to SURF MAIN or Watch Main Time.

FULL HISTORY 1, information includes (Fig. 46):
- > Graphic HIST.
- > Dive Time, total up to 999:59:59 (hr:min:sec), then 1000 - Hr, then start over at 0:01 (min:sec), with TIME icon.
- > Number of Dives, total up to 9999, with DIVE icon

- A (< 2 sec) to access Full History 2.

FULL HISTORY 2, information includes (Fig. 47):
- > Graphics EVER and d - t, indicating that Max Depth is the deepest ever recorded and Dive Time is time associated with that Max Depth.
- > Max Depth with MAX and M (or FT) icons.
- > Elapsed Dive Time (min:sec) with DIVE and TIME icons.

- A (< 2 sec) to access Full History 3.

FULL HISTORY 3, information includes (Fig. 48):
- > Graphics EVER and t - d, indicating that Dive Time is the longest ever recorded and Max Depth is associated with that time.
- > Max Depth with MAX and M (or FT) icons.
- > Dive Time (min:sec) with DIVE and TIME icons.

- A (< 2 sec) to access Full History 4.

FULL HISTORY 4, information includes (Fig. 49):
- > Graphic AVE (meaning Averages).
- > Max Depth with MAX and M (or FT) icons, average of all dives ever recorded.
- > Graphic xxd, representing the average number of dives conducted during each day of diving activity.
- > Dive Time (min:sec), representing the average Dive Time of all dives recorded, with DIVE and TIME icons.

- A (< 2 sec) to revert to SURF MAIN or Watch Main Time.

Fig. 42 - DAY HISTORY 1

Fig. 43 - DAY HISTORY 2

Fig. 44 - DAY HISTORY 3

Fig. 45 - DAY HISTORY 4

Fig. 46 - FULL HISTORY 1

Fig. 47 - FULL HISTORY 2

Fig. 48 - FULL HISTORY 3

Fig. 49 - FULL HISTORY 4

SURFACE SET MODES

Sequence: SURF MAIN >> SET A >> SET U >> SN (serial number).

- A & S (2 sec) to access and step through.

> Set A (Alarms) and Set U (Utilities) Set Points can also be changed using the ACI PC Interface program.
> Settings remain at the values set until changed.

SET A GROUP (ALARMS)

Sequence: AUD >> SRT >> EDT >> RDI >> DD 1 >> DD 2 >> DD 3.

- A & S (2 sec), while viewing SURF MAIN, to access Set A (Fig. 50).

The Set Audible feature provides complete OFF control of the Audible. When set OFF, no beeps will be emitted when an alarm condition occurs, which some divers prefer during select activities. Icons and messages will still flash and the Backlight will still come On.

The SRT (Surface Recovery Time) Alarm provides an alert when a set 'recovery time' has elapsed after surfacing from a dive.

The EDT (Elapsed Dive Time) Alarm repeats each time the Time Interval set is reached during operation in Dive Mode.

The RDI (Repeating Depth Interval) Alarm repeats each time the Depth Interval set is reached, except when the DD Alarms strike. If a series of descents, ascents, descents is made, the Alarm will activate during each of the Descents.

The DD 1, 2, 3 (Descending Depth) Alarms can only be Set at progressively deeper Depths, with alerts given when each Depth set is reached during descents.

Fig. 50 - SET A

SET AUDIBLE ALARM, information includes (Fig. 51):
> Graphic AUD (meaning Audible).
> Graphic ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the setting and access Set SRT Alarm.
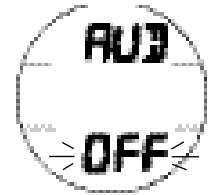- M (2 sec), or no button (2 min), to revert to SURF MAIN.

SET SRT ALARM, information includes (Fig. 52):
> Graphic SRT (meaning Surface Recovery Time).
> Time (min:sec) with SURF and TIME icons.
> Graphic ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the setting.

> *If OFF is accepted, operation will advance to Set EDT.*
> *If ON is accepted, the Minute digits will flash.*

- S (hold) to scroll upward through the Minute Set Points at a rate of 8 per second from 0: to 30: in increments of 1 minute.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A (< 2 sec) to save the Minute setting and flash the Seconds digits.
- S (hold) to scroll upward through the Second Set Points at a rate of 8 per second from :00 to :59 in increments of 1 second.
- S (< 2 sec) to step upward through the Second Set Points one at a time.
- M (< 2 sec) to step back through the Second Set Points one at a time.
- A (< 2 sec) to save the min:sec setting and access Set EDT Alarm.
- M (2 sec), or no button (2 min), to revert to SURF MAIN.

Fig. 51 - SET AUDIBLE ALARM

Fig. 52 - SET SRT ALARM

SET EDT ALARM, information includes (Fig. 53):
> Graphic EDT (meaning Elapsed Dive Time).
> Time (min:sec) with TIME icon.
> Graphic ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the setting.

> *If OFF is accepted, operation will advance to Set RDI.*
> *If ON is accepted, the Minute digits (min:sec) will flash.*

- S (hold) to scroll upward through the Minute Set Points at a rate of 8 per second from 0: to 9: in increments of 1 minute.
- S (< 2 sec) to step upward through the Minute Set Points one at a time.
- M (< 2 sec) to step back through the Minute Set Points one at a time.
- A (< 2 sec) to save the Minute setting and flash the Seconds digits.
- S (hold) to scroll upward through the Second Set Points at a rate of 8 per second from :00 to :59 in increments of 1 second.
- S (< 2 sec) to step upward through the Second Set Points one at a time.
- M (< 2 sec) to step back through the Second Set Points one at a time.
- A (< 2 sec) to save the min:sec setting and access Set RDI Alarm.
- M (2 sec), or no button (2 min), to revert to SURF MAIN.

Fig. 53 - SET EDT ALARM

18

SET RDI ALARM, information includes (Fig. 54):
> Graphic RDI (meaning Repeating Depth Interval).
> Depth Interval Set Point value with M (or FT) icon.
> Graphic ON (or OFF), flashing

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the ON/OFF setting.

> *If OFF is accepted, operation will advance to Set DD 1.*
> *If ON is accepted, the Depth digits will flash.*

- S (hold) to scroll upward through the Set Points at a rate of 8 per second from 3 to 33 M (10 to 100 FT) in increments of 3 M (1 FT).
- S (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- A (< 2 sec) to save the setting and access Set DD 1.
- M (2 sec), or no button (2 min), to revert to SURF MAIN.
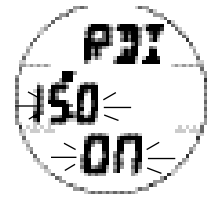
Fig. 54 - SET RDI ALARM

DD (DESCENDING DEPTH) ALARMS
> *If Alarm 1 is set OFF, then Alarms 2 and 3 will be disabled.*
> *If Alarm 2 is set OFF, Alarm 3 will be disabled.*
> *When each of the Depths are reached while descending during a dive, the Audible will sound during which the graphics DD1 (DD2, DD3) will flash.*

SET DD 1 ALARM, information includes (Fig. 55):
> Graphic DD1 (meaning Descending Depth 1).
> Depth with MAX and M (or FT) icons.
> Set Point ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the setting.

> *If OFF is accepted, Set DD 2 and DD 3 will be bypassed and operation will revert to SURF MAIN.*
> *If ON is accepted, the Depth digits will flash.*

- S (hold) to scroll upward through the Set Points at a rate of 8 per second from 10 to 100 M (30 to 330 FT) in increments of 1 M (1 FT).
- S (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- A (< 2 sec) to save the setting and access Set DD 2.
- M (2 sec), or no button (2 min), to revert to SURF MAIN.

Fig. 55 - SET DD 1 ALARM

SET DD 2 ALARM, information includes (Fig. 56):
> Graphic DD2.
> Depth with MAX and M (or FT) icons.
> Set Point ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.
- A (< 2 sec) to save the setting.

> *If OFF is accepted, Set DD 3 will be bypassed and operation will revert to SURF MAIN.*
> *If ON is accepted, the Depth digits will flash.*

- S (hold) to scroll upward through the Set Points at a rate of 8 per second from* 11 to 100 M (31 to 330 FT) in increments of 1 M (1 FT).
- S (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- A (< 2 sec) to save the setting and access Set DD 3.
- M (2 sec), or no button (2 min), to revert to SURF MAIN.
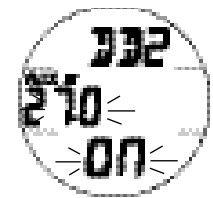
Fig. 56 - SET DD 2 ALARM

Fig. 57 - SET DD 3 ALARM

*Beginning at 1 M (or 1 FT) deeper than the DD1 setting.

Set DD3 (Fig. 57) is similar to Set DD2 with the range beginning at 1 M (1 FT) deeper than the DD2 setting.

SET U GROUP (UTILITIES)
Sequence: Water Type >> DSD >> Units >> Backlight Duration >> BDSI.

- A & S (2 sec), while viewing Set A, to access Set U (Fig. 58).

> Settings remain at the values set until changed.

The Water Type selection adjusts Depth calibration to accomodate activities in fresh or sea/salt water.

The DSD (Dive Start Depth) feature allows you to select the Depth at which Dive Mode will be activated upon descent. Regardless of the DSD set, every dive ends and the SURF MAIN is displayed upon ascent above 0,6 M (2 FT) for 1 second.

Fig. 58 - SET U

The BDSI (Between Dive Surface Interval) feature allows you to select the time interval between surfacing and descending that determines whether the descent is a new dive. Short intervals may be preferred for some activities and longer intervals for others, thus a selection may be helpful.

Backlight Duration determines how long the Backlight will remain On when the L button is pressed then released.

SET WATER TYPE, information includes (Fig. 59):
> Graphics TYPE and H2O.
> Graphic SEA (or FrESH) flashing.

• S (< 2 sec) to toggle between SEA and FrESH.
• A (< 2 sec) to save the setting and access Set DSD.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.

SET DSD, information includes (Fig. 60):
> Graphic DSD (meaning Dive Start Depth).
> Depth flashing, with M (or FT) icon.

• S (< 2 sec) to step upward through the Set Points of 0,6 , 1,2 , 1,8 M (2, 4, 6 FT) one at a time.
• M (< 2 sec) to step back through Set Points one at a time.
• A (< 2 sec) to save the setting and access Set Units.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.

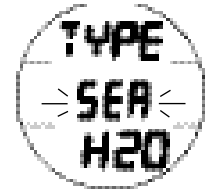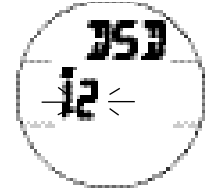**SET UNITS,** information includes (Fig. 61):
> Graphic UNIT.
> M icon and C graphic (or FT icon and F graphic) flashing, with degrees icon

• S (< 2 sec) to toggle between Metric (M, C) and Imperial (FT, F).
• A (< 2 sec) to save the setting and access Set Backlight Duration.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.

SET BACKLIGHT DURATION, information includes (Fig. 62):
> Graphics GLO and durA (meaning Backlight Duration.)
> Time (min:sec) flashing, with TIME icon.

• S (< 2 sec) to step upward through Set Points of 0:00, 0:05, 0:10, 0:30, 1:00 (min:sec) one at a time.
• M (< 2 sec) to step back through the Set Points one at a time.
• A (< 2 sec) to save the setting and access Set BDSI.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.
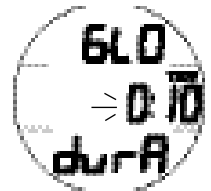
SET BDSI, information includes (Fig. 63):
> Graphic BDSI (meaning Between Dive Surface Interval).
> Time (min:sec) flashing, with SURF and TIME icons.

• S (hold) to scroll upward through the Set Points at a rate of 8 per second from 0:01 to 1:00 (min:sec) in increments of :01 (1 sec).
• S (< 2 sec) to step upward through the Set Points one at a time.
• M (< 2 sec) to step back through the Set Points one at a time.
• A (< 2 sec) to save the setting and revert to Set U.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.

SERIAL NUMBER (SN)
• A & S (2 sec), while viewing Set U, to access SN.

Information includes (Fig. 64):
> Graphic SN.
> Factory programmed Serial Number.
> Firmware (Mundial 2's operating software) revision number (e.g., graphic r1A).

• A & S (2 sec) to revert to SURF MAIN.
• M (2 sec), or no button (2 min), to revert to SURF MAIN.

This information will be required if a unit is sent to Beuchat for evaluation or service. Record it in the table provided in the back of this manual, and retain the sales receipt.

Fig. 59 - SET WATER
TYPE

Fig. 60 - SET DSD

Fig. 61 - SET UNITS

Fig. 62 - SET BACKLIGHT

Fig. 63 - SET BDSI

Fig. 64 - SN

DIVE MODE

Dive Mode is activated upon descent to the DSD (Dive Start Depth) set for 1 second, then the dive ends upon ascent above 0,6 M (2 FT) for 1 second.

If a descent is made while the Chrono is on the display, it will remain on the display (even after a dive is started), until M is pressed/released to display the Dive Main.

DIVE MAIN, information includes (Fig. 65):
> Current Depth with M (or FT) icon.
> EDT (Elapsed Dive Time, min:sec) with DIVE and TIME icons.

- A (< 2 sec) to access ALT 1.
- M (< 2 sec) to access Chrono (Run Timer) Status.
- L (press) to operate the Backlight.

Fig. 65 - DIVE MAIN

DIVE ALT 1 (CDT STATUS), information includes (Fig. 66):
> Graphic TIMR.
> Remaining CDT (Countdown Time, min:sec) with the colon flashing and TIME icon, if On and a CDT is in progress; 0:00 with the colon flashing if On and no time is remaining. If Off (set but not yet started), or it has been Reset, the CDT previously set will be displayed with the colon solid.
> Graphic ON (or OFF), flashing.

- S (< 2 sec) to toggle between ON and OFF.

    > *If a Time has been set but not yet started or it was started then turned OFF, a toggle from OFF to ON will Start (or restart) the CDT indicated by the colon flashing.*

- S (2 sec) to Reset it to the time previously set.
- A (< 2 sec) to access ALT 2.

    > *If the A button is not pressed during a period of 10 seconds, operation will revert to the MAIN.*

- L (press) to operate the Backlight.

Fig. 66 - DIVE ALT 1
CDT STATUS

DIVE ALT 2, information includes (Fig. 67):
> Time of Day (hr:min:sec) with TIME and AM (or PM) icons.
> Temperature with degrees icon and graphic C (or F).

- A (< 2 sec), or no button (5 sec), to revert to DIVE MAIN.
- L (press) to operate the Backlight.

Fig. 67 - DIVE ALT 2

ALARMS
When Alarms sound, the Backlight will come On (if Off) for 10 seconds, and a flashing icon or message will be displayed as an indication that an event is occurring and as a reminder to view the display to identify the event.

When the Audible stops, the message will clear.

If the Audible is set OFF, it will not sound for any cautionary situation. Any icons or messages associated with the condition will still flash, and the Backlight will still come On (if Off) for 10 seconds or if L is pressed.

CDT (Count Down Timer) Alarm
The Free CDT Alarm will operate during a dive or while on the surface, when it is set ON.

When the Free Mode CDT decreases to 0:00 (min:sec), 3 sets of (3) 1 second beeps will sound during which the message TIMR will flash on the display (Fig. 68), then clear.

Fig. 68 - CDT ALARM

EDT (Elapsed Dive Time) Alarm
During dives, the EDT Alarm will repeat each time the Interval set (min:sec) elapses.

When the EDT Alarm is set ON, (2) 2 second beeps will sound and the graphic EDT will flash on the display (Fig. 69) each time the alarm interval elapses, then clear.

Fig. 69 - EDT ALARM

RDI (Repeating Depth Interval) Alarm
When the RDI Alarm is set ON, 3 sets of (3) 1 second beeps will sound and the graphic DPTH will flash on the display (Fig. 70) when you descend the Depth Interval set (M/FT), then clear.

The alarm will repeat and clear each time the Depth Interval set (M/FT) is reached as descent continues.

The RDI will also sound at the depths the DD Alarms are set at.

Fig. 70 - RDI ALARM

DD (Descending Depth) Alarms
When the DD 1 Alarm is set ON, 3 sets of (3) .125 second beeps will sound and the graphic DD1 will flash on the display (Fig. 71) upon descent to the Alarm Depth set, then clear.

As descent continues, the DD 2 Alarm will then sound 3 sets of (3) .125 second beeps (if set ON) and the graphic DD2 will flash on the display upon descent to the DD 2 Alarm Depth set, then clear.

Similarly, as descent continues, the DD 3 Alarm will then sound 3 sets of (3) .125 second beeps (if set ON) and the graphic DD3 will flash on the display upon descent to the DD 3 Alarm Depth set, then clear.

Fig. 71 - DD 1 ALARM
(DD 2 & 3 similar)

SRT (Surface Recovery Time) Alarm
When set ON, the post dive SRT Alarm will sound 3 sets of (3) 1 second beeps and the message SRT will flash (Fig. 72) on the display when the set 'recovery time' has elapsed after surfacing from a dive.

   SRT is the time considered adequate for recovery from dive activities prior to proceeding with further dives.
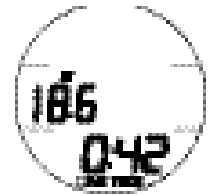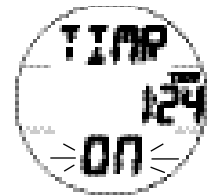
Fig. 72 - SRT ALARM
(post dive)

REFERENCE

UPLOADING SETTINGS AND DOWNLOADING DATA

The Mundial 2 is configured with a Data Port located on the back of the left side that enables it to be connected to a PC through a USB port using the BCI (Beuchat Computer Interface) Cable, when viewing the Watch Main Time screen or Free Surface Main screen.

The Settings Upload portion of the BCI program can be used to set/change the Main Time/Date selections, Set A group selections (Alarms), and Set U group selections (Utilities).

The Download portion of the program can be used to retrieve/copy data (Download it) from the Mundial 2.

   The data includes dive number, surface interval time, maximum depth, elapsed dive time, start date/time, start/end depth, lowest temperature underwater, sampling rate, dive profile, and Set Points.

The Mundial 2 checks for the presence of an interface device connection to the Data Port once every second while operating in Watch Main Time or Free Surface mode. Checks are not made if the Wet Activation contacts are wet.

When the cable is connected to the Mundial 2, a PC screen appears on the display with a 120 second countdown (Fig. 73).

Upon sensing an interface connection with the PC, the countdown will be terminated and all segments of the LCD will be displayed. This indicates that the PC and Mundial 2 are connected and prepared for Upload of settings or Download of data, which is then initiated using the PC program.

Operation reverts to the Watch Main Time or Free Surface Main screen after completion of the Upload or Download operation, or after 2 minutes (120 second countdown reaches 0) if no PC action was taken.

   Prior to attempting to Download data from your Mundial 2 or Upload Settings to it, review the HELP section of the BCI program which serves as its User Manual. Recommended is to print those sections of HELP that you consider appropriate for your Interface activities.

Fig. 73 - PCI

PC requirements:
- IBM®, or compatible, Personal Computer with USB Port.
- Intel® Pentium 200 MHz or better microprocessor.
- Microsoft® Windows® 2000, XP, Vista.
- Super VGA card or compatible video graphics adaptor (256 color or greater) with a minimum 800 X 600 pixel screen area of display settings.
- 16MB of available RAM and 20MB of available hard drive storage.
- Mouse, CDR drive, and printer.

⚠️ **WARNINGS:**

Never, under any circumstances, poke any object through any slots or holes of the module. Doing so may damage the depth sensor, possibly resulting in erroneous depth displays.

If you are in doubt about the accuracy of your unit's depth readings, DO NOT attempt to dive with it until it has been inspected by Beuchat.

Never pressure test the module in an air environment. Doing so may damage the depth sensor, possibly resulting in erroneous depth or time readings.

Never spray aerosols of any kind on, or near, an Beuchat instrument. The propellants may chemically attack the plastic.

When a Low Battery condition is displayed prior to a dive, DO NOT attempt to dive with the unit until the battery is replaced.

CARE AND CLEANING
Protect your Mundial 2 from shock, excessive temperatures, exposure to chemicals, and tampering. Protect the lens against scratches with a Instrument Lens Protector. Small scratches will naturally disappear underwater.

- Soak and rinse the Mundial 2 in fresh water at the end of each day of diving, and check to ensure that the areas around the Low Pressure (Depth) Sensor (Fig. 74a), PC Interface Data Port (Fig. 74b), and Buttons are free of debris or obstructions.
- To dissolve salt crystals, soak in lukewarm water or a slightly acidic bath (50% white vinegar/50% fresh water). After removal from the bath, place the Mundial 2 under gently running fresh water and towel dry before storing.
- Transport your Mundial 2 cool, dry, and protected.

INSPECTIONS AND SERVICE
Your Mundial 2 should be inspected annually by an Authorized Beuchat Dealer who will perform a factory prescribed function check and inspection for damage or wear. To keep the 2 year limited warranty in effect, this inspection must be completed one year after purchase (+/- 30 days).

Beuchat recommends that you continue to have an inspection performed every year to ensure it is working properly. The costs of annual inspections are not covered under the terms of the 2 year limited warranty.

To Obtain Service:
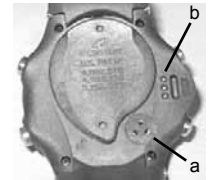Take your Mundial 2 to an Authorized Beuchat Dealer.

Fig. 74 - CASE BACK

BATTERY REPLACEMENT

⚠️ **NOTE: The procedures that follow must be closely adhered to. Damage due to improper Battery replacement is not covered by the 2 year warranty.**

The Battery Compartment should only be opened in a dry and clean environment with extreme care taken to prevent the entrance of moisture or dust. As an additional precautionary measure to prevent formation of moisture in the Battery Compartment, it is recommended that the Battery be changed in an environment equivalent to the local outdoor temperature and humidity (e.g., do not change the Battery in an air conditioned environment then take it outside during a hot sunny day).

Inspect the Buttons, Lens, and Housing to ensure they are not cracked or damaged. If there is any sign of moisture in the Mundial 2, DO NOT attempt to use it for diving until it receives proper service by the Beuchat factory.

⚠️ **CAUTION: Damage due to improper Battery replacement is not covered by the limited 2 year warranty.**

When the battery is removed, settings and calculations for repetitive dives are retained in the unit's memory while a new battery is installed.

Battery Removal
- Locate the Battery Compartment on the back of the unit.
- Rotate the Battery Cover clockwise 10 degrees using the special Battery Cover Tool provided (Fig. 75), or by pushing the lower portion to the left while pushing the upper portion to the right (Fig. 76).
- Lift the Cover with O-ring up and away from the Housing.

- Using care not to damage the Contact (Fig. 77a), slide the Battery up and out of the Left side of the Battery Compartment.
- Discard the Battery according to local regulations governing disposal of Lithium batteries.

⚠️ **CAUTION: DO NOT allow a metal object to short circuit the top of the Battery which is positive (+) to the negative (-) contact of the Battery Compartment.**

Fig. 75 - BATTERY COVER REMOVAL (using tool)

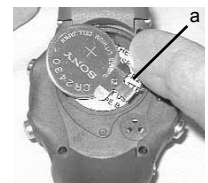Fig. 76 - BATTERY COVER REMOVAL (without tool)

Fig. 77 - BATTERY REMOVAL

Inspection
- Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the Buttons, Lens, and Housing to ensure they are not cracked or damaged.

⚠️ **WARNING: If damage or corrosion is found, return your Mundial 2 to an Authorized Beuchat Dealer, and DO NOT attempt to use it until it has received factory prescribed service.**

- Remove the Battery Cover O-ring and inspect it for any signs of deterioration or deformity. DO NOT use tools to remove the O-ring.
- To ensure proper sealing, O-ring replacement is highly recommended each time the Battery is replaced.
- Closely examine the Battery Cover and Housing for any signs of damage that might prevent proper sealing.
- Closely examine the inside of the Battery Compartment for any signs of corrosion indicating entrance of moisture into the unit.
- If corrosion is found, return the Mundial 2 to an Authorized Beuchat Dealer, and DO NOT attempt to use it until it has received factory service.
- If moisture is found, it is best to have the unit inspected and cleaned by an Authorized Beuchat Dealer.

Battery Installation
- Slide a new 3 volt type CR2430 Lithium Battery, negative side down into the Battery Cavity. Slide it in from the Left side (Fig. 78) and ensure that it slides under the contact clip on the lower/right rim of the cavity.
- Lightly lubricate the new Cover O-ring with silicone grease and place it on the inner rim of the Battery Cover. Ensure that it is evenly seated (Fig. 79).

⚠️ **NOTE: The Cover O-ring must be a genuine Beuchat part that can be purchased from an Authorized Beuchat Dealer. Use of any other O-ring will void the warranty.**

- Carefully place the Battery Cover (with O-ring) into position on the rim of the Battery Compartment, then press it evenly and completely down into place.
- Maintain the Battery Cover securely in place and turn it counter clockwise 10 degrees using the special Battery Cover tool provided (Fig. 80), or by pushing the lower portion to the right while pushing the upper portion to the left (Fig. 81).

Testing
- Activate the unit and observing the display to ensure it is consistently clear and sharp in contrast throughout the screen.
- If any portions of the display are missing or appear dim, or if a Low Battery Condition is indicated, return your Mundial 2 to an Authorized Beuchat Dealer for a complete evaluation before attempting to use it.

- *Set the Date, Main Time, Alternate Time, and Daily Alarm.*
- *Verify all Free Mode Set Points prior to diving.*

ALTITUDE SENSING AND ADJUSTMENT
Prior to the first dive of a series of repetitive dives, Altitude (i.e., Ambient Pressure) is measured upon activation of Free Surface Mode and every 15 minutes until a dive is made or operation reverts to Main Time after 2 hours.

- > While it is operating in Watch Modes after a dive, measurements are taken every 15 minutes during the 24 hour period after surfacing.
- > Measurements are only taken when the unit is dry.
- > Two readings are taken, the second reading 5 seconds after the first. The readings must be within 30 cm (1 foot) of each other to record that Ambient Pressure as the current Altitude.

When diving in high altitude waters from 916 to 4,270 meters (3,001 to 14,000 feet), the Mundial 2 automatically adjusts to these conditions providing corrected Depth indication at intervals of 305 meters (1,000 feet).

No adjustments are made during any time that the Wet Contacts are bridged.

The Mundial 2 will not function as a Dive Gauge above 4,270 meters (14,000 feet).
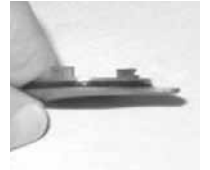

Fig. 78 - BATTERY INSTALLATION

Fig. 79 - BATTERY COVER O-RING

Fig. 80 - COVER INSTALLATION (using tool)

Fig. 81 - COVER INSTALLATION (without tool)

SPECIFICATIONS

CAN BE USED AS
• Watch
• Digital Gauge for Free Dive activity

WATCH MODES
• Main Time (home)
  > Set Time/Date
• Alternate Time (remote location)
  > Set Alternate Time (hour differential)
• Countdown Timer
  > Set/Start/Stop
• Chronograph (Stop Watch, Run/Lap Timer)
  > Start/Stop/Lap Recall/Reset
• Daily Alarm (Watch Mode)
  > Set Time, On/Off

FREE SURFACE SEQUENCE/MODES
• Surface Mode
• Dive Log
• History
• Set Alarms, Utilities, SN

SET MODES
• Set A Group (Alarms):   Factory Settings:
  Audible (OFF/ON)   ON
  SRT (OFF/ON, 0:00 to 30:00 min:sec)   OFF
  EDT (OFF/ON, 0:01 to 5:59 min:sec)   OFF
  RDI (OFF/ON, 3 to 33 M (10 to 100 FT)   OFF
  DD 1 (OFF/ON, 10 to 100 M (30 to 330 FT)   OFF
  DD 2 (OFF/ON, 11 to 100 M (31 to 330 FT)   OFF
  DD 3 (OFF/ON, 12 to 100 M (32 to 330 FT)   OFF
• Set U Group (Utilities):   Factory Settings:
  Water Type (Sea/Fresh)   Sea
  DSD (0,6 , 1,2 , 1,8 M; 2, 4, 6 FT)   0,6 M
  Units (Imperial/Metric)   Imperial
  Backlight Duration (0, 5, 10, 30, 60 sec)   5 sec
  BDSI (0:01 to 1:00 min:sec)   1 min
• Serial Number   Factory set, actual

NUMERIC DISPLAYS:

	Range:	Resolution:
• Dive Number	0 to 99	1
• Current Depth	0 to 100 M (330 FT)	0,1 M (1 FT)
• Maximum Depth	100 M (330 FT)	0,1 M (1 FT)
• Elapsed Dive Time	0:00 to 59:59 min:sec	1 sec
• Surface Interval Time	0:00 to 59:59 min:sec	1 sec
	1:00 to 23:59 hr:min	1 min
• Temperature	- 18 to 100°C (0 to 212°F)	1°
• Time of Day	0:00:00 to 23:59:59 hr:min:sec	1 sec
• Watch Countdown Timer	23:59 to 0:00 hr:min	1 min
• Free Mode Countdown Timer	59:59 to 0:00 min:sec	1 sec
• Chronograph (Run Timer)	0:00:00.00 to 9:59:59.99	0,01 sec
	hr:min:sec_ .01 sec	

OPERATIONAL PERFORMANCE

Function:	Accuracy:
• Depth	±1% of full scale
• Timers	1 second per day

Dive Counter:
• Dives 1 to 99, 0 if no dive made yet.
• Resets to Dive 1, after midnight or by S (2 sec).

Dive Log Mode:
• Stores 99 most recent dives in memory for viewing.
• After 99 dives, adds next dive in memory and deletes the oldest dive.

Altitude:
• Operational from Sea Level (= 0 to 915 meters, 0 to 3000 feet) to 4270 meters (14000 feet) elevation.
• Measures ambient pressure every 30 minutes in Watch Mode and every 15 minutes while in FREE Mode.

Power:
• Battery	(1) 3 vdc, CR2430, Lithium battery.
• Shelf life	Up to 7 years (when shipped from factory in Deep Sleep mode).
• Replacement	User replaceable (annual recommended).
• Use Life	300 hours using as a Watch/Dive Gauge.
	1 year using as a Watch only.

Battery Indicator:
• Warning - icon on solid < 2.75 volts > 2.50 volts, Battery change recommended.
• Alarm - icon on flashing at <= 2.50 volts, change the Battery, will function only as a Watch.

Dive Mode Activation:
• Automatic - by immersion in water (if set ON) then descent to Dive Start Depth set for 1 second.
• When in Watch Mode, Dive Mode will not activate.
• Cannot operate in Free Dive Mode at elevations higher than 4270 meters (14000 feet).
• Reverts to Watch Mode if no dive is made within 2 hours after entry into Free Surface Mode.

Operating Temperature:
• Out of the water - - between - 6 °C and 60 °C (20 °F and 140 °F).
• In the water - - between - 2 °C and 35 °C (28 °F and 95 °F).
• At extremely low temperatures, the LCD may become sluggish, but this will not affect it's accuracy.
  >> If stored or transported in extremely low temperature areas (below freezing), you should warm the unit and its battery with body heat before diving.

Storage Temperature:
• Out of the water (in storage case) - - between - 8 °C and 70 °C (14 °F and 158 °F).

GLOSSARY

Audible Alarm - A gauge emitted tone that alerts the diver to potential danger.

Depth Sensor - An electro-mechanical device that converts water pressure into an electrical signal, that is converted to a visual depth display.

Display - A visual readout of information.

Dive Log Mode - A gauge display of recorded dive information.

Elapsed Dive Time - The total time spent underwater during a dive between initial descent to the start depth and final ascent to the end depth.

Graphic Diver Interface™ - Feature of Beuchat digital gauges that indicate the diver's status (bar graphics, icons, graphic displays).

Icon - A small pictorial representation of an operational mode or information.

LCD - Abbreviation for liquid crystal display, an easily viewed low voltage display usually found on dive computers

Maximum Depth - The deepest depth attained during a dive.

Mode - A specific set of functions in a digital gauge.

Out of Range - The point at which a dive gauge can no longer supply correct dive information.

Transducer - An electro-mechanical device in a dive gauge that acts as a depth sensor.

⚠ **WARNINGS:**

- **Conducting Free dives within a 24 hour period after conducting SCUBA dives, combined with the effects of multiple rapid Free Dive ascents, increases your risk of decompression sickness. Such activities may result in accelerated entry into decompression which could cause serious injury or death.**

- **Combining competitive type Free Dive activities that involve multiple descents/ascents with activities utilizing SCUBA during the same 24 hour period is not recommended. Presently, there is no data relating to such activities.**

- **It is highly recommended that anyone planning to become involved in competitive type Free dive activities obtain proper instruction and training from a recognized Free Diving trainer. It is imperative that the physiological affects be understood and the diver is physically prepared.**

- **If your Mundial 2 stops working for any reason while operating in Free Dive Mode, it is important that you have anticipated this possibility and are prepared for it.**

- **If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your Mundial 2, a backup instrument system is highly recommended.**

INSPECTION / SERVICE RECORD

Mundial 2 Serial Number: _____

Mundial 2 Firmware Rev: _____

Date of Purchase: _____

Purchased from: _____

Below to be filled in by an Authorized Beuchat Dealer:

Date	Service Performed	Dealer/Technician

⚠ **WARNING: If you do not fully understand how to use the Mundial 2 after reading this manual, or if you have any questions, you should seek instruction in its use from your Authorized Beuchat Dealer before diving with it.**

Mundial 2

USER MANUAL