

Clock Mode Programming

If the Clock Mode is not enabled via the Analyst Personal Computer Interface the following screens will not be visible nor accessible by Touch Programming. When the Clock Mode is enabled, the Clock Menu Screen will be the first screen that is displayed when in Touch Programming.

Programming the Clock Time and Alarm settings follows the same sequence as Touch Programming.

Clock
Main Menu Selection



Bridge Contacts 1 & 2 with wetted fingers to access Clock Mode..

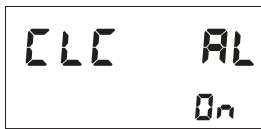
Clock Alarm
Off



Short Contacts 1 & 2 with a Coin or other highly conductive metal object to access Clock time setting screen.

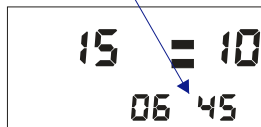
Bridge Contacts 1 & 2 with wetted fingers to toggle Clock Alarm on/off.

Clock Alarm
On



Short Contacts 1 & 2 with a Coin or other highly conductive metal object to access Clock Alarm setting screen.

Setting Alarm
Time

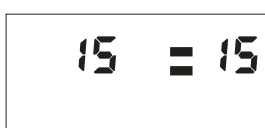


Short Contacts 2 & 3 with Coin to increment digit value. (Digit being programmed flashes)

Short Contacts 1 & 2 with a Coin selects the next programming option.

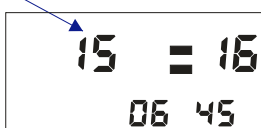
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Setting Time
w/Alarm



Bridge Contacts 1 & 2 with wetted fingers to select next digit.

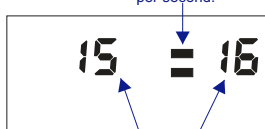
Short Contacts 2 & 3 with Coin to increment digit value. (Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the Clock Mode.

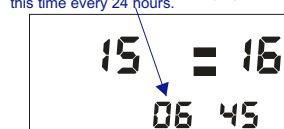
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Clock Mode
w/Alarm



Clock and Alarm times are displayed using a 24 hour Clock. 15:16 = 3:16 pm.

Flashes once per second.



Alarm will sound and TacLite will flash for one minute at this time every 24 hours.

Clock Mode must be exited before commencing a Dive.

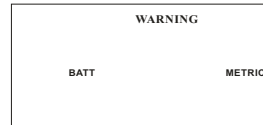
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TYPES OF AUDIBLE WARNINGS

Most Warnings are issued for five seconds and repeated every two minutes

- Single Beep: Depth Alarm, two minutes of NDC Time Remaining, Entering Decompression, Oxygen Toxicity (CNS, OTU, PO2), Sensor Malfunction, Ascent Rate (Continuous), Depth Shallower than Decompression Ceiling (Continuous).
- Double Beep: Oxygen Toxicity (CNS, OTU, PO2).
- Two Tone: Sensor Malfunction.
- High to Low Sweep: Ascent Rate (Continuous).
- Low to High Sweep: Depth Shallower than Decompression Ceiling (Continuous).

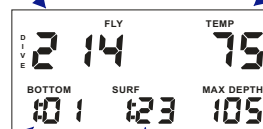
Any time the "WARNING" legend is on and/or flashing, some parameter is out of bounds. Look for the offending parameter that is flashing on and off every second.



When 'METRIC' legend is on, the unit is computing in Metric variables and displaying data in Metric units.

Any time the 'BATT' legend is on, battery voltage is below 2.5 volts and batteries should be changed. When 'BATT' legend is flashing, battery voltage is below 2.2 volts and batteries MUST be changed.

Dive Number & Time to Fly (Never Flash)



Temperature (Flashes if less than 20 or greater than 99 degrees F, or sensor is malfunctioning)

Bottom Time (Never Flashes)

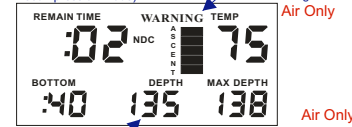
Surface Interval (Never Flashes)

Max Depth (Never Flashes)

NDC Time Remain (Flashes when two minutes or less remain before entering Decompression mode)

Ascent Rate Bar Graph (Flashes when ascending too fast based on Ascent rate alarm setting via Analyst)

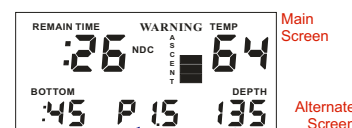
Temperature (Flashes if less than 20 or greater than 99 degrees F, or sensor is malfunctioning)



Depth (Flashes when user set maximum depth is exceeded.)

Depth (Flashes when 327 feet is exceeded or sensor is malfunctioning)

Sensor Failure (Sensor malfunction, 'T' is Temp Sensor, '-' is Depth Sensor)



PO2 (Flashes when user set maximum PO2 value is exceeded.)

Depth (Flashes when user set maximum depth or 327 feet is exceeded or sensor is malfunctioning.)

CNS (Flashes when user set maximum value is exceeded.)



Depth (Flashes when depth is less than Ceiling.)

OTU (Flashes when user set maximum value is exceeded.)

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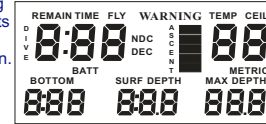
Cochran
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Fax 972.644.6286 877.288.3483 (US)

DISPLAY SCREENS
EMC-20H
Three Blend
FO2 w/Helium

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"CardEMC20H_3FO2He" 28November06

Diagnostic Mode (Unit Turning on)

Turn on by touching closest two Contacts on the side with wetted finger or coin.

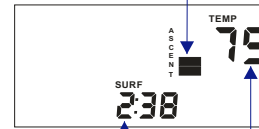


Unit automatically turns off one hour after a dive or one hour after being turned on. Bridging contacts 1 & 2 will make unit stay on for another hour.

Tap Unit at any time to enable the Alternate Screen and Fiber Optic back light.

Barometric Altitude (2500 feet per bar, No bars = 0 to 2500)

Surface Interval (No Nitrogen) (Blend #1 Set Point)



Surface Interval (Amount of time since the last dive)

Air Temperature

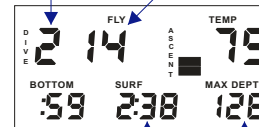


CNS Oxygen Toxicity in %
Battery Voltage
OTU Oxygen Toxicity in %

Dive of "Day" (Repetitive Dive Number)

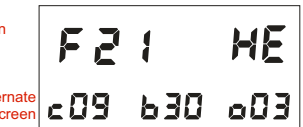
Time To Fly (Hours before safely flying.)

Surface Interval (With Nitrogen)



Bottom Time (Of the last dive)

Surface Interval (Amount of time since the last dive)



Fresh batteries are 3.2 volts. Suggest change at 2.1 volts. MUST change before 1.6 volts

NDC Time Remain (Time you can stay at current depth without Decompression)

Ascent Rate (Bar Graph shows current Ascent Rate) (5 bars = 60 fpm)

Dive Mode Water (Current Blend set point)

O2% (Current Blend set point)



Bottom Time (So far this dive)

Current PO2 (in ATA)

Depth (Depth you are currently at)

CNS Oxygen Toxicity in %
OTU Oxygen Toxicity in %
Max Depth (Of current dive)

Deco Stop Times (Alternates between Total Deco Time & time at the current Stop)

Deco Ceiling (Don't go above this Depth for optimum Decompression)

Decompression Mode

Deco Dive (Water Temperature)



Bottom Time (So far this dive)

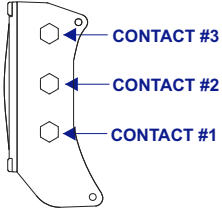
Depth (Depth you are currently at)

CNS Oxygen Toxicity in %
OTU Oxygen Toxicity in %
Max Depth (Of current dive)

Unit can be Upgraded to PO2 for Rebreather Diving.

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Touch Programming



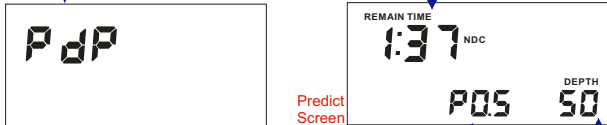
- To activate touch programming, the unit needs to be in a Normal Surface Interval.
- Shorting contacts 1 & 2 with a coin changes the top level menu selection.
- Shorting contacts 1 & 2 with wet finger takes you into that menu selection.
- The digit that is flashing is the one that is going to be incremented.
- Shorting contacts 2 & 3 with a wet finger or coin increments the digit that is flashing.

- Shorting contacts 1 & 2 with a wet finger makes the next digit flash.
- Touch Programming is automatically terminated after 5 minutes of no activity.
- Touch Programming is automatically terminated if a dive is started.
- Always scroll back through data to ensure it was entered and stored as desired.
- CLOCK comes from the factory disabled. If enabled, "CLC" will be the first screen seen in Touch Programming. See back page for details.

PreDive Prediction Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access PreDive Prediction.

Predict Time (h:mm)
(Programmed FO2 or PO2 value influences time).



Short Contacts 1 & 2 with a Coin selects the next programming option.

Predict Screen

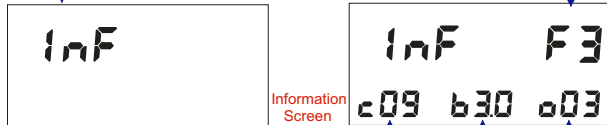
Calculated PO2
(Computed from FO2 Blend #1 Set Point for predict depth.)

Predict Depth
(Bridge Contact 1 & 2 with wetted finger to increment depth.)

Information Screen Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Information.

Mode/Blend Identifiers
(F0=Air only, F1=1 FO2
F2=2 FO2, F3=3 FO2
P1=1 PO2, P2=2PO2)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Information Screen

CNS Oxygen Toxicity in %

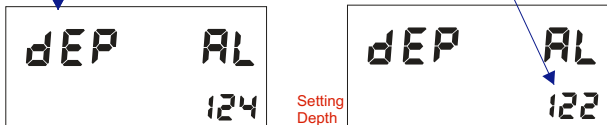
Battery Voltage

OTU Oxygen Toxicity in %

Depth Alarm Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Depth Alarm.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Depth

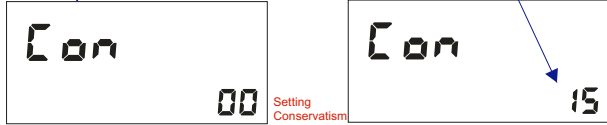
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Depth Alarm can be set from 0 to 410 Feet

Conservatism Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access COnservatism.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Conservatism

Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Conservatism can be set from 0 (no conservatism) to 50 (Maximum conservatism)

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- Use only fresh 3.0 volt Lithium batteries (CR12600SE).
- Rinse the unit with clean fresh water after each dive.
- Do not put the EMC-20H away while wet.
- Do not subject unit to compressed air.
- Do not remove the lens from the unit.
- Do not use a screwdriver to remove the battery cap.

Set Default Blend O2% Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #1 O2%.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Blend #1 O2%

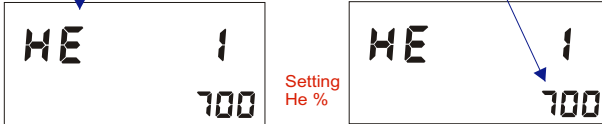
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #1 O2 percentage can be set from 5.0 to 99.9%

Set Default Blend Helium % Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #2 He%.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting He %

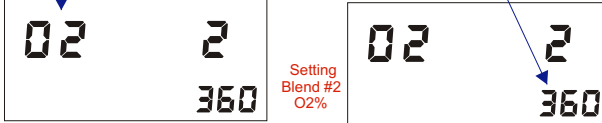
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #1 Helium percentage can be set from 0.00 to 95.0%

Set Blend #2 O2% Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #2 O2%.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Blend #2 O2%

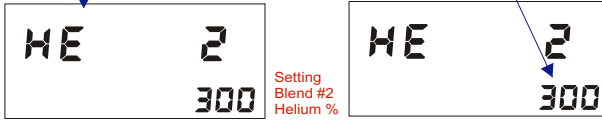
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #2 Oxygen percentage can be set from 5.0 to 99.9%.

Set Blend #2 Helium % Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #2 Helium %.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Blend #2 Helium %

Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #2 Helium percentage can be set from 0.0 to 95.0%.

Set Blend #2 Time Benchmark Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Time Benchmark.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Time Benchmark

Bridge Contacts 1 & 2 with wetted fingers to select next digit.

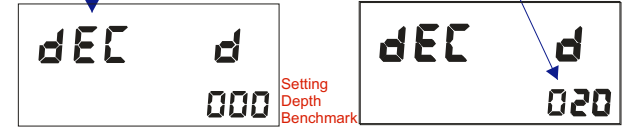
Blend #2 Bottom Time Benchmark can be set from 10 to 999 minutes

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Set Blend #2 Depth Benchmark Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Depth Benchmark.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Depth Benchmark

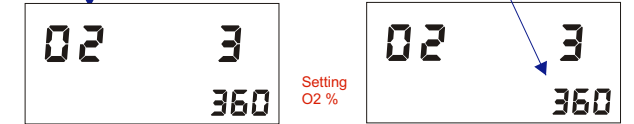
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #2 Depth Benchmark can be set from 0 to 400 feet

Set Blend #3 O2% Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #3 O2%.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting O2 %

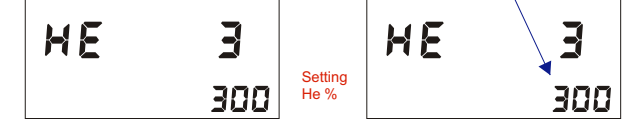
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #2 O2 percentage can be set from 5.0 to 99.9%.

Set Blend #3 Helium % Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Blend #3 Helium %.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting He %

Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #3 Helium percentage can be set from 0.0 to 95.0%.

Set Blend #3 Depth Benchmark Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Depth Benchmark.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Depth Benchmark

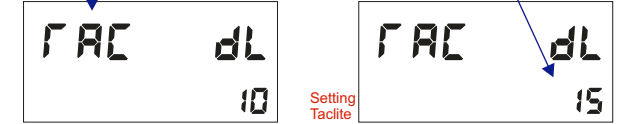
Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Blend #3 Depth Benchmark can be set from 0 to 400 feet

Tacite Dwell Time Main Menu Selection

Bridge Contacts 1 & 2 with wetted fingers to access Tacite on Time.

Short Contacts 2 & 3 with Coin to increment digit value.
(Digit being programmed flashes)



Short Contacts 1 & 2 with a Coin selects the next programming option.

Setting Tacite

Bridge Contacts 1 & 2 with wetted fingers to select next digit.

Tacite delay time can be set from 1 to 98. 0 = Tacite always off. 99 = Tacite always on.

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