

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..

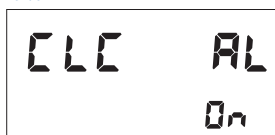
Clock Alarm
Off

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

Clock Alarm
On

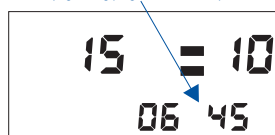


Short Contacts 1 & 2 with a Coin
or other highly conductive metal object
to access Clock time setting screen.



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

Setting Alarm
Time



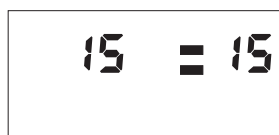
Short Contacts 1 & 2
with a Coin selects the
next programming option.

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

Setting Time
w/Alarm

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

Setting Time
w/Alarm



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

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

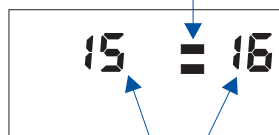
Bridge Contacts 1 & 2
with wetted fingers to
select next digit.

Clock Mode
w/Alarm

Flashes once
per second.

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

Clock Mode
w/Alarm



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

Short Contacts 1 & 2 with a Coin until unit
issues two beeps and exits to Surface Mode.

Clock Mode must be exited before commencing a Dive.

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).

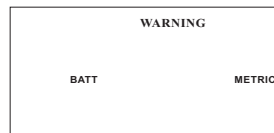
Depth Shallower than Decompression Ceiling (Continuous).

Double Beep

Two Tone

High to Low Sweep

Low to High Sweep



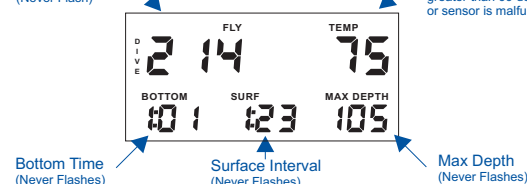
When 'METRIC' legend
is on, the unit is
computing in Metric
variables and displaying
data in Metric units.

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.

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)

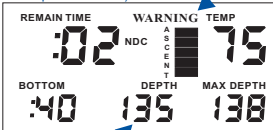
Temperature
(Flashes if less than 20 or
greater than 99 degrees F,
or sensor is malfunctioning)



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

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

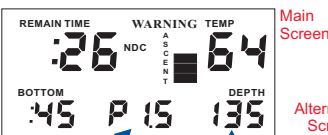
Temperature
(Flashes if less than 20 or
greater than 99 degrees F,
or sensor is malfunctioning)



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)



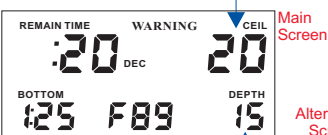
PO2
(Flashes when user
set maximum PO2
value is exceeded.)

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.)

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



Depth
(Flashes when depth
is less than Ceiling.)



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



Cochran
Undersea Technology
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Ph 972.644.6284 800.856.3483 (US)
Fax 972.644.6286 877.288.3483 (US)

DISPLAY SCREENS

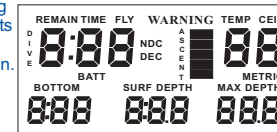
EMC-20H

Three Blend
FO2 w/Helium

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"CardEMC20H_3FO2He" 14Apr05

Diagnostic Mode (Unit Turning on)

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

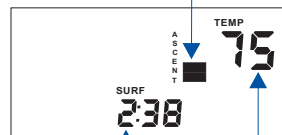


Unit automatically turns
off one hour after a dive
or one hour after being
turned on. Bridging
contacts 1 & 2 will make
unit stay on for another
hour.

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)
O2%
(Blend #1 Set Point)



Surface Interval
(Amount of time
since the last dive)

Air
Temperature



CNS Oxygen
Toxicity in %

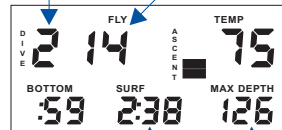
Battery
Voltage

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)

Max Depth
(Of the last dive)

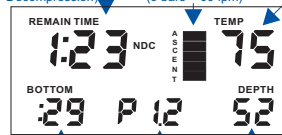
Fresh batteries are 3.2 volts. Suggest change
at 2.1 volts. MUST change before 1.6 volts

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
Temperature

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 %

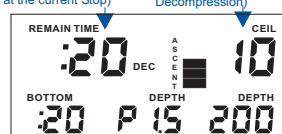
Max Depth
(Of current dive)

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

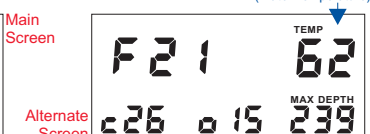
Deco Ceiling
(Don't go above this
Depth for optimum
Decompression)

Decompression Mode

Deco Dive
(Water Temperature)

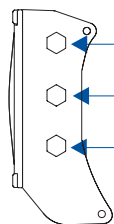


Deco Dive
(Water Temperature)



Unit can be Upgraded to PO2 for Rebreather Diving.

Touch Programming



CONTACT #3

CONTACT #2

CONTACT #1

- 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.

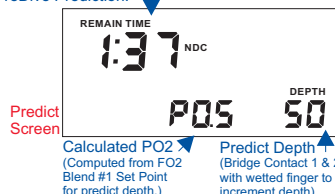
PreDive Prediction
Main Menu Selection

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

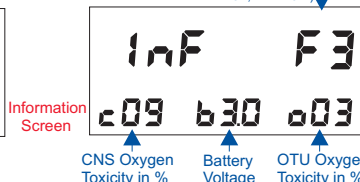
Information Screen
Main Menu Selection

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=2 PO2)



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)

Use only fresh 1.5 volt 'N' cell batteries (Alkaline recommended).
Rinse the unit with clean fresh water after each dive.
Do not put the Commander 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%



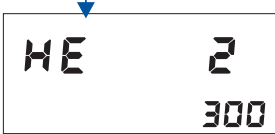
Bridge Contacts 1 & 2 with wetted
fingers to select next digit.

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 %



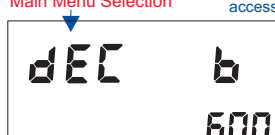
Bridge Contacts 1 & 2 with wetted
fingers to select next digit.

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

Set Blend #2
Time Benchmark
Main Menu Selection

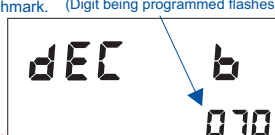
Bridge Contacts 1 & 2
with wetted fingers to
access Time Benchmark.

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

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



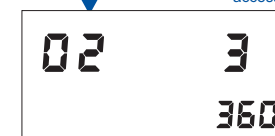
Bridge Contacts 1 & 2 with wetted
fingers to select next digit.

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

Set Blend #3 O2%
Main Menu Selection

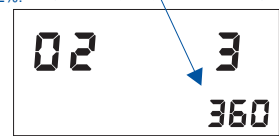
Bridge Contacts 1 & 2
with wetted fingers to
access Blend #3 O2%.

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 %



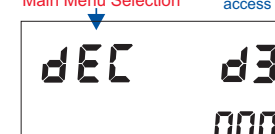
Bridge Contacts 1 & 2 with wetted
fingers to select next digit.

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.