



High Performance Electronic Components

9630 W. Irving Park Rd., Schiller Park, IL 60176

Phone (847) 671-5170

Fax (847) 671-4669

INSTRUCTIONS

IMPORTANT - Unit does not need to be left ON in order to take accurate readings. Read through instructions completely.

The more Good Runs and the more altitude span the more accurate your predictions will be.

GREETING MESSAGE

The PerformAIRE
By ALTRONICS
O2 EQUIPPED
VERSION 2.*

"O2 EQUIPPED" will only appear if the unit was purchased with an oxygen sensor.

GUIDELINES FOR ACCURATE PREDICTIONS

For ET predicting it is recommended that 5 to 6 runs be entered into a database and that there is a span of at least 1000' feet in DA or OA between the runs.

Ex: Typical Data

Run #1 1223' 10.20
Run #2 1301' 10.204
Run #3 1956' 10.236
Run #4 2000' 10.237
Run #5 2245' 10.249
Run #6 2269' 10.25

For TS predicting it is also recommended that 5 to 6 runs be entered into a database and that there is a span of at least 1000' feet in DA or OA between the runs. It is also recommended that there is some variance in the timer settings between the runs. In other words change the timer setting for at least 3 of the runs. The timer should be adjusted enough to cause up to a 0.30 second change in ET. Often using a run with no timer works very well. Just enter the run with 0.0 sec for the timer.

Good Runs -

- 1. Altitude goes up, car loses performance/altitude goes down, car gains performance**
- 2. 60' times consistent, no tire slip**
- 3. Wind effects minimal, 30 mph front or tail winds are not present**

TAKING AIR SAMPLES

1. Place PerformAIRE in an area that will constantly expose it to the air you will be racing in.
2. Do not place your hand or any other object near the air vent or black probe while PerformAIRE is in use.
3. Keep PerformAIRE out of direct sunlight.
4. Do not place PerformAIRE near soil or grass as it may pick up additional humidity.
5. Even though the PerformAIRE's sensors can stabilize very quickly, residual heat left in the enclosure when the PerformAIRE is moved from one environment to another may take more time to dissipate.

Example: When you arrive at the track and take the PerformAIRE out of your 70 degree transporting vehicle and put it in the 90 degree outside air, you must let it sit for fifteen minutes before taking a reading. During this time the PerformAIRE's enclosure and black probe will stabilize with the environment and allow it to take extremely accurate readings for the rest of the day. Allow time appropriately for differences in temperature. If the PerformAIRE is OXYGEN SENSOR equipped, allow twice as much time to stabilize. **UNIT DOES NOT NEED TO HAVE POWER ON IN ORDER TO STABILIZE!!!!!!!**

****IMPORTANT****

Units with oxygen sensors only:

When using a unit with an oxygen sensor that is set to Oxygen Altitude mode, the unit must remain stable while in use. If movement has agitated unit it must remain stable for 15 minutes before taking



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air samples. Unit does not need to have power on to stabilize!!!!

6. Although the PerformAIRE is reasonably durable, it can be damaged if dropped or abused. Keep this in consideration when using and storing the PerformAIRE.

7. For best results only turn PerformAIRE on when taking a reading.

KEYPAD FUNCTIONS

MENU key - allows the unit to leave any current menu and return to the MAIN menu. *When exiting CURRENT DATA Mode hold the MENU key down until the MAIN MENU is brought up.

SCROLL key - used to view runs that have been stored in the data base.

CLEAR key - allows runs to be deleted from the data base and allows the user to reenter a value if the wrong key was pressed.

ENTER key - must be pressed after keying in a value to confirm the value is correct.

MENUS

MAIN MENU - When unit is turned on the MAIN menu automatically is displayed after the greeting message. The user can make of the six following choices at this point:

CURRENT DATA	= 1
SELECT MODE	= 2
DATA ENTRY	= 3
SHOW ET/TS	= 4

Hit the "MENU" key again and see:

DOWNLOAD	=5
SET CLOCK	=6
BAD RUNS	=7

CURRENT DATA menu

By pressing "1" from the MAIN menu the unit displays all the sampled air parameters and the PREDICTION in the following format:

DATE	TIME
TEMP	HUMIDITY
PRESSURE	OXYGEN (if equipped)
ALTITUDE	PREDICTION (ET or TS)

NOTE: Barometric Pressure

The Pressure reading is "Absolute", which means it will NOT agree with the weather channel or local forecast. This is due to the fact that the local forecast is gives a corrected pressure reading that is compensated back down to sea level. If you were to stand at your local airport and dig a hole down to sea level the PerformAIRE pressure reading would then agree with the local airport reading!

The PREDICTION will be shown only after two runs in ET mode and three runs in TS mode have been stored in the selected data base. If less runs have been stored "****" will appear in the place of the PREDICTION value.

SELECT MODE

By pressing "2" from the MAIN menu the unit displays the following:

ET MODE	= 1
TS MODE	= 2
Press 1 OR 2	

The user must now press "1" or "2".

By pressing "1" sets the unit to the ET MODE. This means all runs added to the data base will be stored in the ET section and the PREDICTION will be an ET computed from the stored runs and the present ALTITUDE.

By pressing "2" sets the unit to the TS MODE. This means all runs added to the data base will be stored in the TS section and the PREDICTION will be a TS or timer setting computed from the stored runs and the present ALTITUDE.

After pressing "2" another menu is displayed as follows:

TS MODE SELECTED
index = 9.90
CHANGE?
YES = 1 NO = 2

The user must press "1" or "2".

If the user presses "1" the following will be displayed:

ENTER INDEX



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Now the user can enter an index, such as 8.90, then he must press the ENTER key.

or
SEA LEVEL ET =3

Now data base selection begins. The first menu appears...

Select Data Base
Yes = 1 No = 2

After selecting a data base you will be asked if you want to rename it. Note: You can use the default name if you wish "Data Base #1".

To enter a new name use the "SCROLL" key to change the letter. When the letter is correct select Yes by pressing "1" and you will go on to the next letter. When all the letters have been selected press the "ENTER" key to save the name.

"TSR" (throttle stop ratio) is only displayed if the unit in TS MODE and more then two runs have already been stored. Pressing "3" displays the throttle stop ratio.

"SEA LEVEL ET" is displayed only if the unit is in ET MODE and more then two runs have already been stored. Pressing three displays your SEA LEVEL ET.

By pressing "1" you can view or delete runs you have already stored. Use the SCROLL key to view runs. If you want to delete a run you have scrolled to press the CLEAR key. By pressing the ENTER key when viewing a stored run it will show the Temperature, Humidity, and Pressure values stored for that run.

By pressing "2" the following ADD RUNS menu will be displayed:

ENTER AS
Altitude = 1
Temp,Pres,Hum = 2
Press 1 or 2

The information in this box is only relevant if your unit is OXYGEN SENSOR EQUIPPED.

After pressing the ENTER key (from above) the following will be displayed:

PREDICT WITH
DENSITY ALT = 1
OXYGEN ALT = 2
PRESS 1 or 2

If your unit has the optional oxygen sensor you can choose to predict your ET or TS value with density altitude or oxygen altitude.

The unit will compute and store the density altitude and oxygen altitude after every sample. This means that when you add a run to your data base, the unit will automatically store both altitudes.

This enables you switch between predicting with either altitude and seeing how your stored runs compared with each.

You can store a run by using the LAST sampled altitude, entering your own altitude, or by entering a temperature, pressure, humidity, and oxygen (if equipped) value to compute a new altitude.

The following is the recommended procedure for entering a run:

By pressing "1" the following will be displayed:

LAST= **** DA
ALT=
ET 1000'=
TS=

"LAST=**** DA" contains the density altitude that was calculated from the last time you sampled the air.

"LAST=**** OA" would be displayed if the unit is OXYGEN EQUIPPED and the unit is set up to store oxygen altitude.

RUN ENTRY menu

By pressing "3" from the MAIN menu the unit displays the following:

VIEW/DELETE RUNS = 1
ADD RUNS = 2
TSR = 3



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By pressing the ENTER key the LAST value will be automatically put in for ALT =. You can also key in some other value for altitude if you wish. When you have entered the value you must press the ENTER key. If the value entered is wrong you can press CLEAR and reenter the value.

Next you can enter your 1000' ET if you want to be able to use run completion. (It is not mandatory to enter in a 1000' ET).

After entering your 1000' ET the line will change as follows:

"ET="

Now you will enter in your ET.

If you set the unit up in TS MODE, you can enter your TS. "TS=" will only appear in the menu if TS MODE was selected previously.

At any time you can press the MENU key to return to the MAIN menu and the run will not be saved.

****HINT****

The easiest way to enter a run is by starting from the main menu and pressing the keys 3, 2, 1, and ENTER. Now all you have to do is type in your ET and the run is stored.

Run Completion

In order use the run completion program effectively at least one previous run must be entered into a data base with a 1000' ET. To use run completion all you need to do is enter the 1000' et of the run you want to complete and then when it asks you to enter your final ET= simply press the enter key without any value. You will then see a *Run Completing!* message appear followed by ET=10.203 (example) your completed ET. This run will then be saved automatically and the main menu will be brought back, unless you are in TS mode, in which case, you will then be prompted to enter your TS.

Run Completion for 1/8 Mile Tracks

If you run 1/8 mile and want to be able to use *run completion* you must enter in a 330' time when the unit prompts you to enter the 1000' time.

SHOW ET/TS

Depending on the mode the unit is in (ET MODE or TS MODE) by selecting "4" you can input any altitude and the corresponding ET or TS prediction will be displayed. You need to have two or three runs respectively in the data base before you will see the prediction.

DOWNLOAD

By pressing "5" you will begin downloading into a personal computer if you have purchased that option. Detailed instructions about this feature our available when software is purchased.

SET CLOCK

By pressing "6" from the MAIN menu the unit will prompt you to enter the DATE and TIME.

BAD RUNS

By pressing "7" from the MAIN menu the unit will display any runs that do not "fit" with the rest of the data. These runs will not be removed, you will have to clear them out of the data base yourself.

Example:

Run #1:	Run #2	Run #3
DA = 1000	DA = 2000	DA = 1800
ET = 10.10	ET = 10.20	ET = 10.21

With these 3 runs in a data base BAD RUNS would display:

Run

3

does not fit.

The reason Run #3 does not fit is because the run should have been faster then Run #2 since it is 200'DA less in altitude.

It is now necessary for Run #3 to be removed from the data base. To do this you must use the View/Delete option in the Run Entry Menu and Clear out Run #3.

There may be times when multiple runs are shown that not to fit. When this occurs it is often useful to use the **downloading software** to help determine what is going wrong.

THE BATTERIES



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A 9 volt battery powers the PerformAIRE. A fully charged (DURACELL or ENERGIZER) battery will operate the PerformAIRE for approx. 12 hours . After approx. 12 hours of use the LOW BATTERY message will be displayed when you are sampling the air. At this time the battery must be replaced. Rechargeable batteries can be used.

Dead batteries will not cause loss of stored data. Removal of batteries will not cause loss of stored data.

OPERATING LIMITATIONS

The PerformAIRE is designed to operate within the following atmospheric conditions.

- TEMPERATURE: 0 to 50 degrees Celsius (32 to 122 degrees Fahrenheit)
- HUMIDITY: 0 to 100%
- BAROMETRIC PRESSURE: 23 inHg to 32 inHg.

STORAGE

Store the PerformAIRE at a temperature between 20 and 125 degrees Fahrenheit.

WARRANTY

The PerformAIRE by   is warranted for 1 Year against any defect in materials and workmanship from date of purchase. ALL WARRANTIES AND GUARANTEES ARE VOID if the PerformAIRE's enclosure is opened (not including battery door).

  shall not be liable for injury, consequential, or other types of damages resulting from the use or misuse of the PerformAIRE