



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 13 months from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal one (1) year product warranty to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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M2510/1003

- Weighs only 2 ounces with battery
- other programs
- Windows user friendly OMEGA[®] Software to view plots, make prints, and export data for use in dataloggers
- External RTD sensor for temperature
- PC compatible
- Single or Wrap-around recording
- Average, minimum or maximum recording
- 4 different launch modes
- Over 2 years operation on replaceable battery
- Nonvolatile EEPROM memory for record keeping
- Record length from 4 hrs 29 min to over 2 years
- 16,192 records

Features

NOMAD[™] Datalogger



WARNING: These products are not designed for use in, and should not be used for, patent connected applications. The information contained in this document is believed to be correct but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. CE mark to every appropriate device upon certification. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the it is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply.

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Canada: 976 Bergat, Lebel (Lubec) HTL 5A1, Lebel (Lubec) HTL 5A1, Lebel (Lubec) HTL 5A1. TEL: (514) 856-6928 FAX: (514) 856-6986

USA: One Omega Drive, P.O. Box 4047, Simons CT 06807-0047. TEL: (203) 359-1660 FAX: (203) 359-7700

Internet e-mail: info@omega.com

OMEGA[®] On-Line Service: www.omega.com

For immediate technical or application assistance:

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User's Guide

Shop on line at



www.omega.com

e-mail: info@omega.com

NOMAD[™] Datalogger OM-NOMAD-T OM-NOMAD-RH


NOMAD[™] Quick Start

Installing "NOMAD" software:

Verify your computer clock is set to correct time, and date since NOMAD obtains its time stamp from your computer.

! Before installation, make sure all other Windows programs have been closed. Having open programs may conflict with the installation process, causing the computer to lock-up. If this occurs, you will need to reboot your computer.

Windows 95 and above: Insert this CD into your CD-ROM drive, open your favorite browser and go to the file menu, select "open File..." go to the CD and Selet the file: "Setup.exe" (or Nomad24.exe).

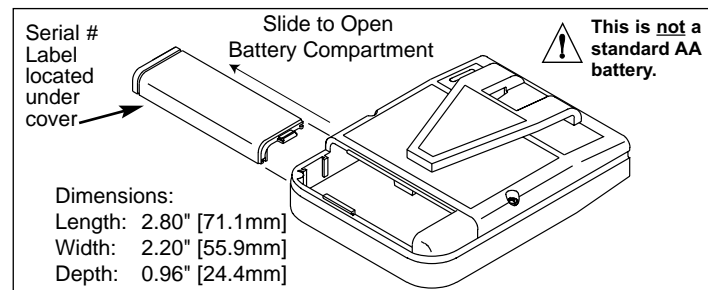
Follow the directions on the screen to complete installation. The installation will make a program group called NOMAD. Click on this icon  , to start the NOMAD software.

NOTE: Please review the on-line user manual for a complete description of all features. This is a text file included on the installation disk. File Name: manual.txt

Ordering Information

MODEL #	DESCRIPTION
OM-NOMAD-T-16	Temperature datalogger 16K memory (16,192 samples)
OM-NOMAD-RH-32	Temp/RH datalogger 32K memory (16,192 samples).
OM-NOMAD-RTD	External temp. sensor with 6ft cable NOTE: Not useable with OM-NOMAD-RH models
OM-NOMAD-CP9	RS-232 cable for IBM PC, 9 pin female D-sub. connector
OM-NOMAD-CP25	RS-232 cable for IBM PC, 25 pin female D-sub. connector
OM-NOMAD-WIN	Windows software, CD-ROM
OM-NOMAD-BATT	Replacement 3.6V Lithium battery

To place an order from the USA or Canada call: **1-800-TC-OMEGA[®]**



! This device is marked with the international hazard symbol. It is important to read the Setup Guide before installing or commissioning this device as it contains important information relating to safety and EMC.

Setup the NOMAD[™] DATALOGGER

NOTE: Close all programs before launching the NOMAD Datalogger.

Attach the NOMAD to an available Serial port of your computer using your RS-232 cable purchased with your unit (see ordering block).

If you wish to use the external RTD sensor with Temp dataloggers only, plug it in to the "Temp Probe" socket on the NOMAD.

From the Windows program manager select the NOMAD icon and start the program. The NOMAD Datalogger main menu screen will appear.

Choose "COM port" from the "Setup" menu to set and test serial communication with the datalogger.

NOTE: If NOMAD is not connected, an error message "Port is available, but no NOMAD was detected" will be displayed. Check cable connections and COM port settings on your computer. Select "Setup" again to test communication. If you still get an error message, choose an alternate COM port setting.

Once successful, you will be greeted by the "NOMAD Launch Utility" screen.

Follow your application requirements in choosing the appropriate menu item, using on-line help as needed.

NOMAD[™] Logger Specifications

Temperature:

Operating range with internal sensor: 0 to 50°C (32 to 122°F)

Measurement range with external sensor: -40 to 90°C (-40 to 194°F)

Accuracy: ±1.8°C using internal sensor

Electronics temperature coefficient of error using external sensor ±.025% Full Scale/°C

Resolution better than 0.9°C:
Sensor 1 K ohm, RTD alpha = 3750

Humidity:

Measurement range: 20 to 90% non-condensing

Operating temperature range: 0-50°C

Measurement accuracy: ±5% RH @25°C ±0.3%RH/°C away from 25°C

Sensor: Bulk polymer resistive

RH response: 63% of step change in less than 5 minutes

Measurement Interval:

Programmable: from 1 second to 3 hours

EEPROM memory size: 16K data samples

Battery: one 3.6 volt AA Lithium Cell operating for more than 2 years

Note: This is not a standard battery.

Launching the NOMAD™ DATALOGGER

Recording starts immediately upon Launch command.

Recording starts at time set in entry box.

Recording starts after "Run" button is pressed on Datalogger.

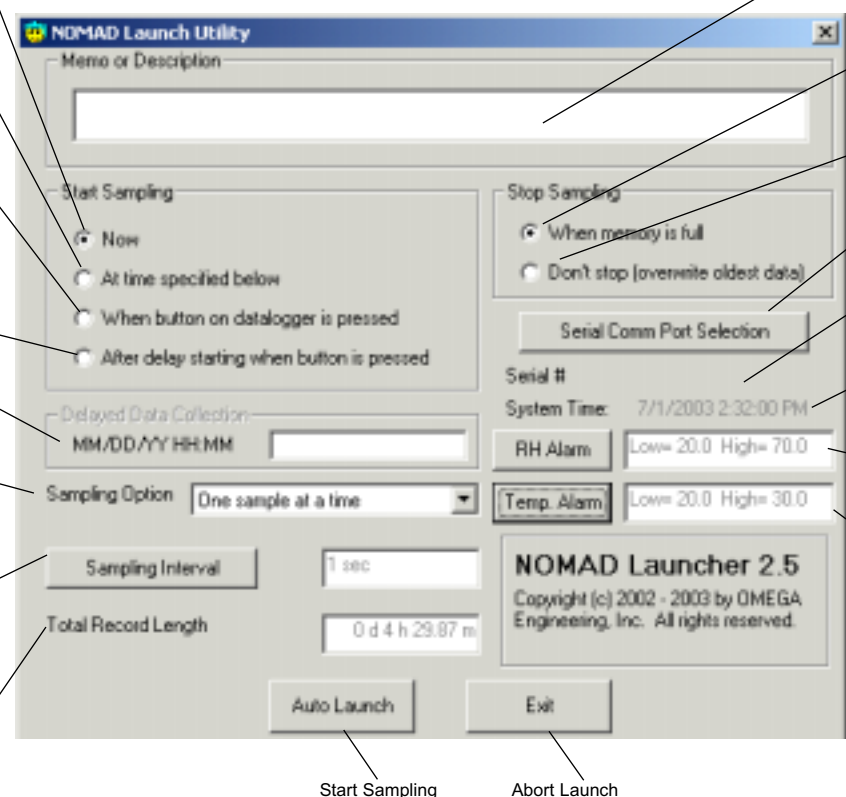
Recording starts, following a user specified delay time set in the entry box, after "Run" button is pressed.

Delayed Data Collection entry box.

Sampling option, selects single recording or the highest, lowest or average of 4 samples.

Sampling interval in seconds, minutes or hours may be specified.

Automatically calculated from interval entry and device capacity.



User entry Describe the NOMAD application, will appear on print plot. (48 characters max.)

Stop sampling when memory is full.

Continuous recording most recent data available.

Selects the Serial Port

NOMAD Serial # Factory Assigned.

Current time stamp based on host computer's internal clock setting.

Relative Humidity Alarm 20 to 70% allowed.

Temperature Alarm user specified limits in degrees F or C.

Pressing "RUN" button while recording will indicate alarm excursions on the NOMAD Led.

Readout and Plotting

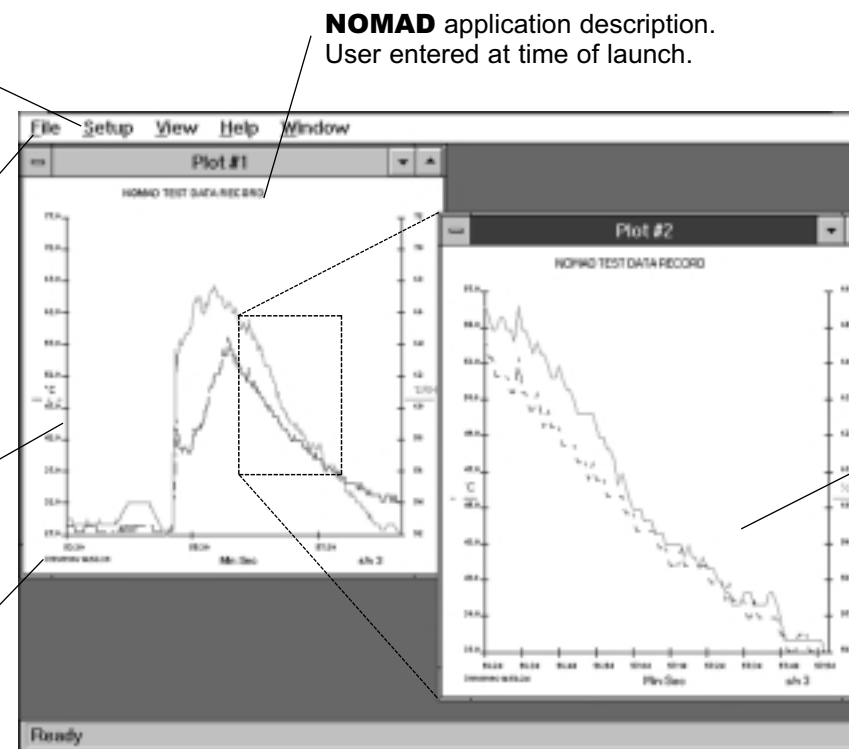
From NOMAD Datalogger menu select **Setup**, sub-menu **Readout**.

After data download the attached **NOMAD** information will appear.

Alternately from **File** select **Open** to view a previously saved data file. One file at a time.

The Y axis automatically scaled for maximum resolution based upon max and min data records. Temperature shown on left in segmented red while RH is shown on the right in continuous blue line.

Recording start date and time stamp along the X axis with serial number and units of sampling interval selected.



NOMAD application description. User entered at time of launch.

Zoom in on any selected plot. Using the mouse, click and drag draw box around area of interest. Multiple zooms are allowed.

Plots can be copied and imported into applications running under Windows.

Launching NOMAD

Shutdown any unnecessary programs before launching the NOMAD Data Logger, especially programs that would be busy processing data (and using much CPU time). Otherwise, the NOMAD Data Logger may not launch properly.

Run the NOMAD Launch Utility. Change the CommPort number if necessary. The Comm Port setting will be stored and then retrieved upon subsequent executions of the NOMAD Launch Utility.

After successfully completing a communication test the NOMAD datalogger can be launched. Choose "Configure & Launch Datalogger" from the "Logger" menu. The program establishes a serial link with the NOMAD and opens the "Launch the Datalogger" dialog window.

You can enter up to 48 characters of arbitrary descriptive text to the "Memo or Description" entry box. This text is saved in the NOMAD memory during the launching process and then retrieved along with the recorded data during the readout process.

There are 4 different ways to start data recording.

1. Now.
2. At time specified below.
3. When button on datalogger is pressed.
4. After delay starting when button is pressed.

There are 2 different data recording options when the NOMAD memory is full. The NOMAD may either stop recording data or it may start overwriting the oldest data. In addition, The datalogger stops recording when it is

connected to the computer, and the computer begins data readout or tries to launch the NOMAD again. In the latter case, new data starts filling the memory from the beginning, overwriting the previous record.

By pressing the "Sampling Option" pushbutton you can choose to record maximum, minimum, average, or one sample every interval. If maximum, minimum, or average is chosen, the datalogger takes 4 samples over the interval and uses these 4 points for the maximum, minimum, or average calculation. The "Sampling Interval" pushbutton allows you to select the interval at which the data is recorded. The highest sampling rate available internally is 1 sample per second. This means that the minimum sampling interval is 1 second for sampling option set to "single", and 4 seconds for the other sample options. If you select a sampling interval of less than 4 seconds, and then select a sampling option of minimum, maximum or average, the program will automatically adjust the sampling interval to 4 seconds. The displayed total record length indicates the recording time available until the NOMAD memory is full. This number depends on the memory size and sampling interval.

The displayed NOMAD Version Number is a firmware version number which allows you to distinguish between subsequent versions of the datalogger. Sample capacity indicates the amount of memory available. The system time is the computer current time. The NOMAD automatically sets its clock by reading the time from the computer. If the computer time is incorrect, use the appropriate Windows commands to set the computer clock.

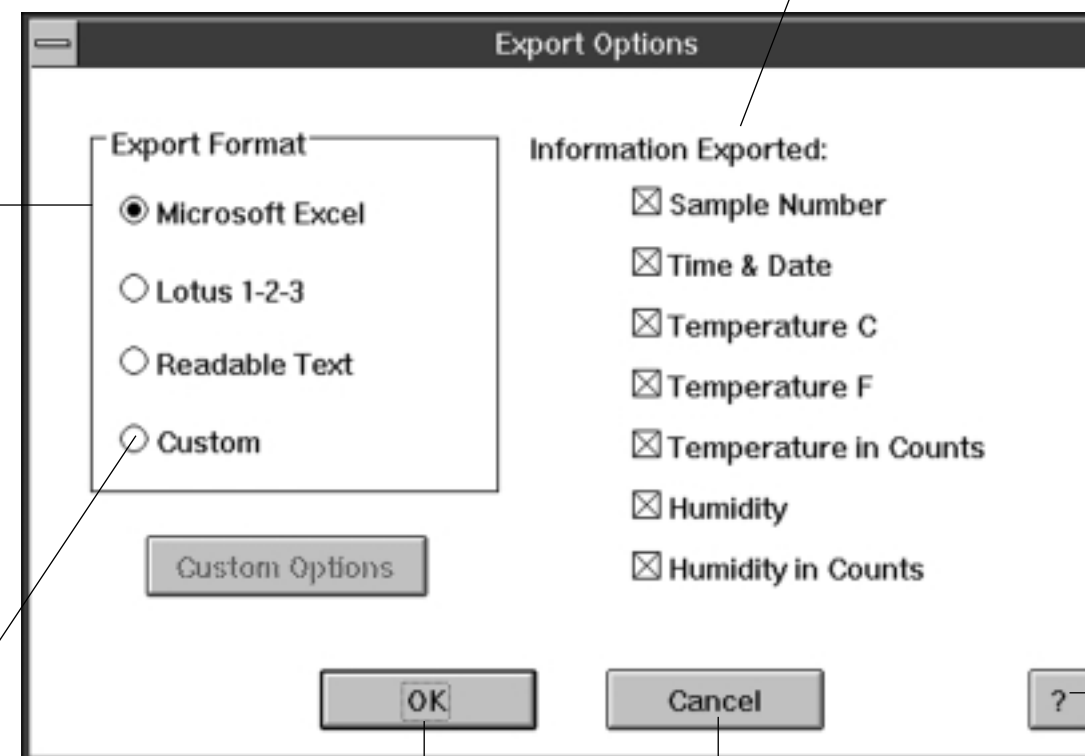
Export Setup

Select popular pre-defined data formats for applications.

Use **Export data summary** from the **View** menu for detailed information about the export format.

Custom allows user to specify time format and field separators.

Select information to export, temperature and humidity counts are used primarily as diagnostic tool.



Accept chosen parameters.

Abort selection process.

On-line help available.