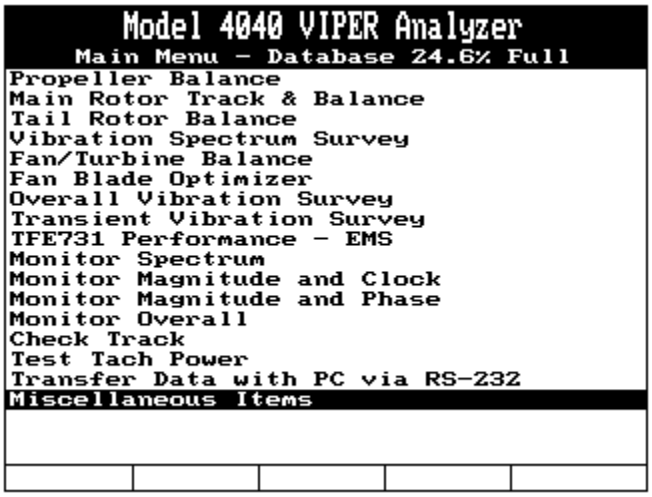
Chapter 18
Miscellaneous Items

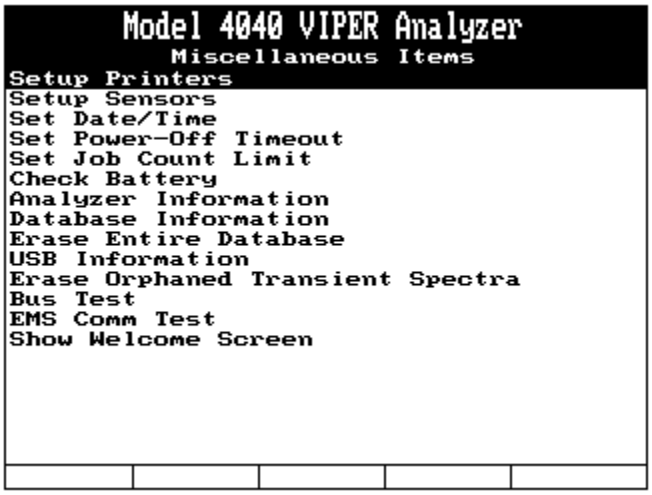
(Revision 3, Aug 2007)

18.1. Miscellaneous Items



The “Miscellaneous Items” banner menu screen contains several menu items, three of which are used for identification of the analyzer. The other items are user-accessible and editable items. All are described in the following sections.

18.1.1. - Setup Printers



The "Setup Printer" option allows you to select from three possible printer types, three print qualities, horizontal and vertical page margins, and paper size. The analyzer supports the following SERIAL PRINTERS: Epson FX compatible dot matrix printers, Hewlett-Packard Laser Jet II or higher version Laser Jet printers, and Seiko DPU-414 thermal printers. (See your specific printer manual for Epson FX compatibly information.) The analyzer supports only the three listed printer types with its direct serial output. However, the analyzer will also support parallel printers with the use of serial-to-parallel print converters. The converter can be purchased from ACES Systems. ACES Systems does not provide support for difficulties in printing associated with printer converters not purchased through ACES Systems due to the large number of converters available for which we have no technical information.

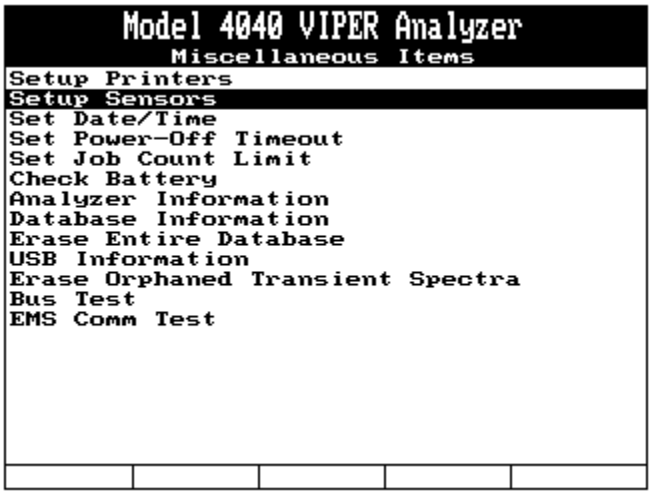
Print quality is largely determined by the visual quality of spectral graphics and print desired by the user. The higher quality print takes longer for the dot matrix printer to perform. Experiment with the three quality options to determine which best fits your needs.

To complete the "Setup Printer" process, do the following:

1. Select "Miscellaneous Items" from the Main Menu banner screen.
2. Select "Setup Printers" from the "Miscellaneous Items" banner screen menu.
3. Use the [⇒] key to toggle between the three printer choices in the "Printer" field to select a printer.
4. Use the [⇓] key to move down to the next field, "Quality." Select print quality by using the [⇒] key to toggle between the choices of: Low, Medium, and High.
5. Use the [⇓] key to move down to the next field, "Pg Margin, Horiz" Enter the desired margin size using the keypad. Use the [⇓] key to move to the next field in this area of the screen. Enter all dimensions in the four fields in this part of the screen using the keypad.

6. Press [ENTER] to accept your settings and exit the screen.

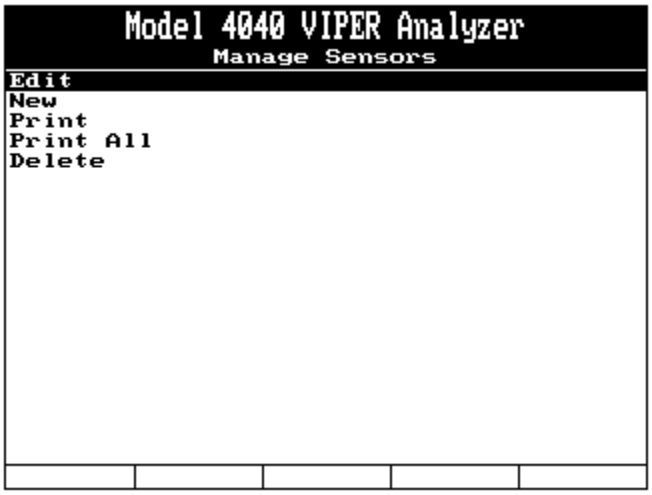
18.1.2. - Setup Sensors



The “Setup Sensors” option allows you to preprogram information about all the vibration sensors you own or use. Once all sensors are preprogrammed, they can be recalled and selected from an option list during a balance/analysis procedure, saving time during the procedure by eliminating the need to reinput sensor data.

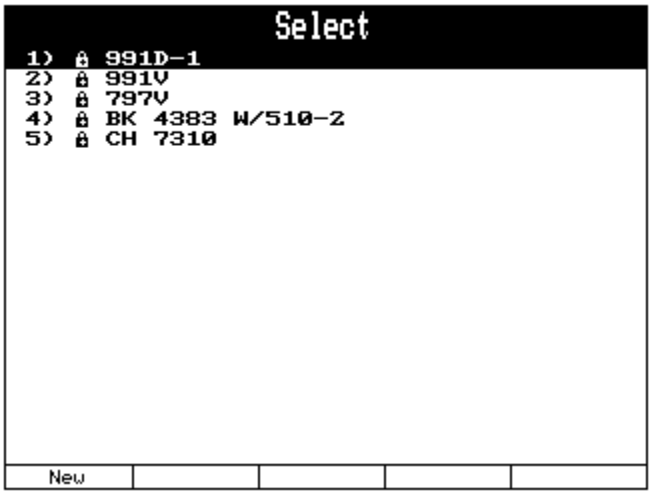
The “Setup Sensors” option also allows you to print, edit, and delete sensors from the analyzer’s memory.

When the “Edit” function is selected, the screen changes to the “Select” banner screen.



On this screen you may choose to “Edit” the information for any of the listed sensors that are unlocked simply by selecting that sensor from the list. The screen will then change to the

"Sensor Setup" screen and show the complete information currently in memory for the selected sensor.



18.1.2.1. – Add or Edit Sensor

Names for some industry-standard sensors have already been preloaded into the analyzer at the factory and appear with a small padlock to the left of the name. The default sensor list cannot be edited or deleted. If your sensor name appears in the preprogrammed list, you may not need to proceed further. If your sensor name does not appear, then you must select "Edit" to add a new sensor name and specifications.

To preprogram a sensor in the analyzer's memory, you will need the following sensor specifications which should be available from the data sheet supplied with your sensor.

1. The sensor's model or name that will be familiar to you and other users.

2. The sensor's amplitude units sometimes called EU or engineering units. This will be expressed in one of the following formats: g's (for equivalent gravities), IPS (Inches Per Second), mm/sec (millimeters per second), cm/sec (centimeters per second), mils (1000^{th} of an inch), microns ($1{,}000{,}000^{th}$ of a meter), ubars, Pascals, Volts, m/s/s (meters per second per second), cm/s/s (centimeters per second per second), db (decibels), or Special.

3. The sensor's sensitivity. This is normally expressed in mV per engineering unit, as described above. For instance, if using the model 991D –1 accelerometer, its engineering unit is in gs and it produces 20 mV for every g of force exerted on it, therefore its sensitivity is 20 mV/g.

To add a sensor or to edit the specifications for an already programmed unlocked sensor, do the following:

1. Select "Miscellaneous Items" from the Main Menu banner screen.

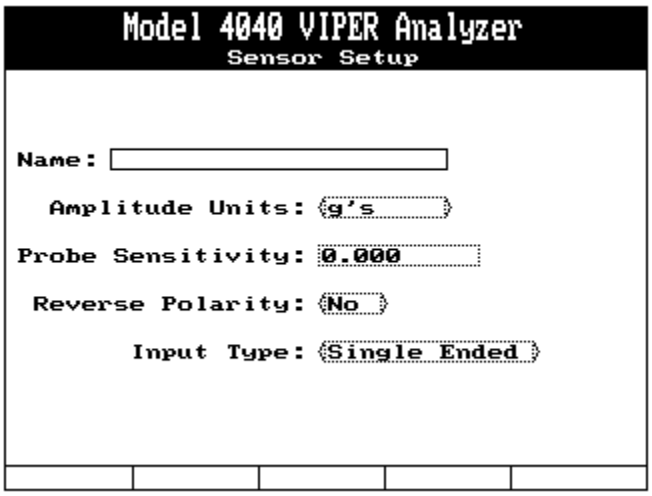
2. Select "Setup Sensors" from the "Miscellaneous Items" banner screen menu.

3. Select “Edit” from the “Manage Sensors” banner screen menu.

NOTE
To edit an existing unlocked sensor in the list, select it at this point, and proceed with step5. For adding a new sensor, go to step 4. Preset sensors cannot be edited, only those entered by the user.

4. Press the [F1] key, which corresponds, to the function key window labeled “New” at the bottom of the screen.

5. The Sensor Setup screen shown below will be displayed. Toggle between the fields using the [⇑] or [⇓] key.



6. Enter a name for the sensor in the “Name:” field, using the keypad. The field will accept up to twenty, alphanumeric characters.

7. The “Amplitude Units:” field is a toggle selection field. Use the [⇐] or [⇒] key to toggle between the selections until the appropriate units are displayed. The choices are gs; (for equivalent gravities), IPS (Inches Per Second), mm/sec (millimeters per second), cm/sec (centimeters per second), mils (1000th of an inch) or microns (1,000,000th of a meter).

8. The “Probe Sensitivity” field is a numeric data field. It is used to enter the millivolt (mV) output of the sensor. This information can be found on the Sensor’s Specification Sheet from the manufacturer. Valid entries are from 0.001 to 3000.0 mV.

9. The “Reverse Polarity” is a toggle selection field. The two selections are “Yes” and “No”. This is a special function that will only apply to a very few sensors available. The selection should be toggled to “No” for the majority of cases. The ACES 991V sensor uses the reverse polarity and is set to “Yes”. If you do not know the polarity requirements of the sensor, call ACES Systems and ask for Customer Support.

10. The “Input Type:” is a toggle selection field. The two selections are “Single Ended” and “Differential”. This information is obtained directly from the Sensor’s Specification

Sheet, Single Ended being the most common. If you do not know the polarity requirements of the sensor, call ACES Systems and ask for Customer Support.

11. When all fields are completed as required, press [ENTER] to accept your settings and exit the screen.

18.1.2.2. - Print, Print All, or Delete Sensor

Print, Print All, and Delete are all selections available on the "Manage Sensors" banner screen menu.

To access any of these functions, do the following:

1. Select Print, Print All, or Delete from the "Manage Sensors" banner screen menu.

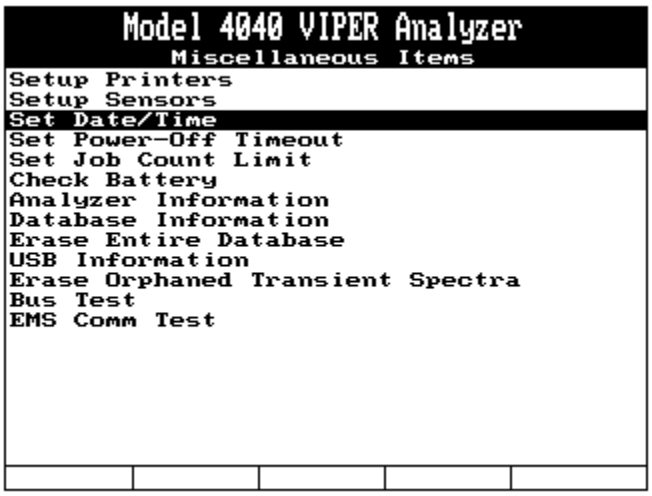
    1. If you select "Print," next select a sensor from the list that appears. The analyzer will display the message "Output to printer complete." Press [F5] to continue.

    2. If you select "Print All," the analyzer will display a message that asks "Are you sure?" Press [F1] to confirm "Yes," press [F5] for "No" and to return to the "Manage Setups" screen.

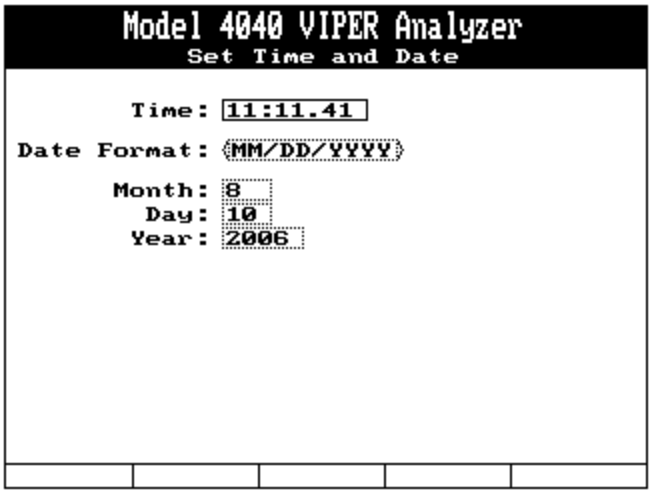
    3. If you select "Delete," next select a sensor to delete from the list that appears. Only unlocked sensors will appear in this list. The analyzer will display a message that asks "Are you sure?" Press [F1] to confirm "Yes," press [F5] for "No" and to return to the "Manage Setups" screen.

18.1.3. - Set Date and Time

The "Set Date and Time" selection allows you to set the desired date and time in the analyzer. These settings are entered directly using the analyzer keypad.



To set the date and time, do the following:



1. Select “Miscellaneous Items” from the Main Menu banner screen.

2. Select “Set Date /Time” from the “Miscellaneous Items” banner screen menu.

3. Enter the time in a 24-hour format as follows in the “Time” field.
   Hour - Valid range is 1 through 24, followed by a “.” (Decimal)
   Minute - Valid range is 0 through 59, followed by a “.” (Decimal)
   Seconds - Valid range is 0 through 60

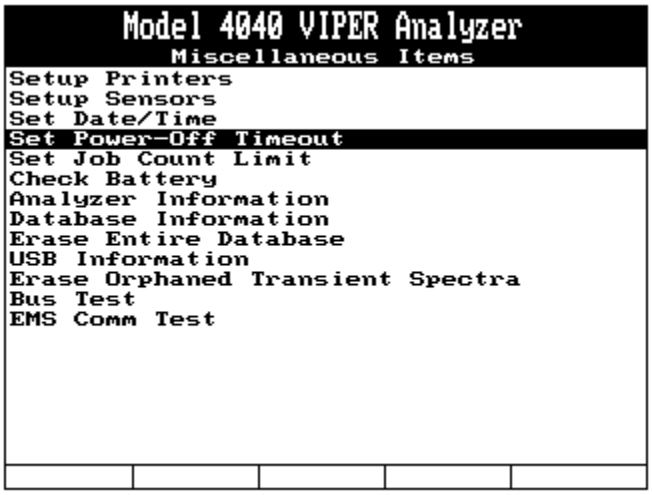
4. Use the [⇓] to move to the “Date Format” field. You may specify the date format you wish to use by using the [⇒] key to toggle the selection to the format you wish to use. Available formats are: MM/DD/YYYY, DD/MM/YYYY and YYYY/MM/DD, where YYYY = Year, MM = Month and DD = Day.

5. Use the [⇓] key to move to the “Month” field and enter the month. Valid range is 01 through 12.

6. Use the [⇓] key to move to the “Day” field and enter the say. Valid range is 01 through 31.

7. Use the [⇓] key to move to the “Year” field and enter the Year. Valid range is 1998 through 9999. Press [ENTER] to accept the entries and exit the screen.

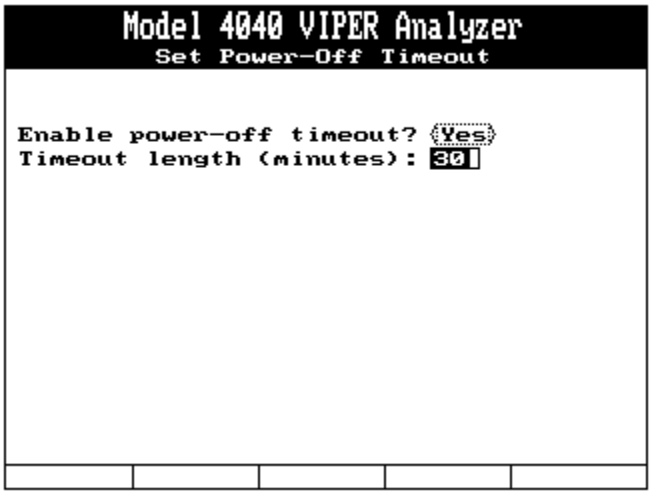
18.1.4. – Set Power-Off Timeout



To set the Power-Off Timeout, do the following:

1. Select "Miscellaneous Items" from the Main Menu banner screen and press [ENTER].

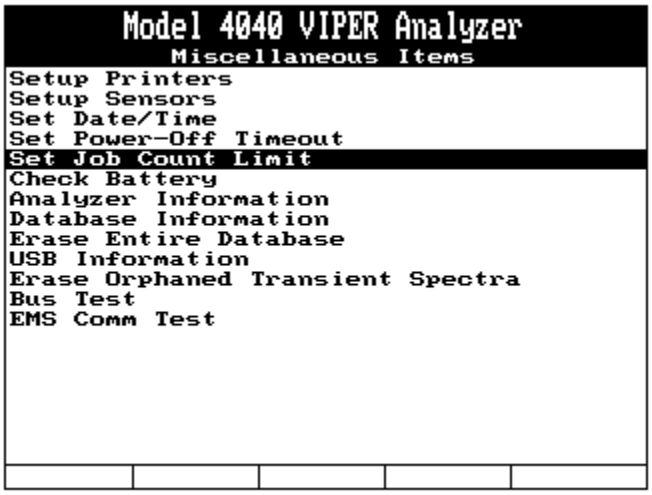
2. Select "Set Power-Off Timeout" from the Miscellaneous Items banner screen menu and press [ENTER]. The "Set Power-Off Timeout" screen will appear as shown below.



3. Use the [⇒] key to select "Yes" or "No" to answer the question "Enable power-off timeout?". Use the [⇓] key to exit the field.

4. Exiting the above field with "Yes" selected will cause the "Timeout length (minutes)" line to appear. Select a number of minutes between 5 and 60; this is the length of time the analyzer power will remain on before automatically shutting off. Press [ENTER] to exit this screen and return to the "Miscellaneous Items" menu.

18.1.5. – Set Job Count Limit

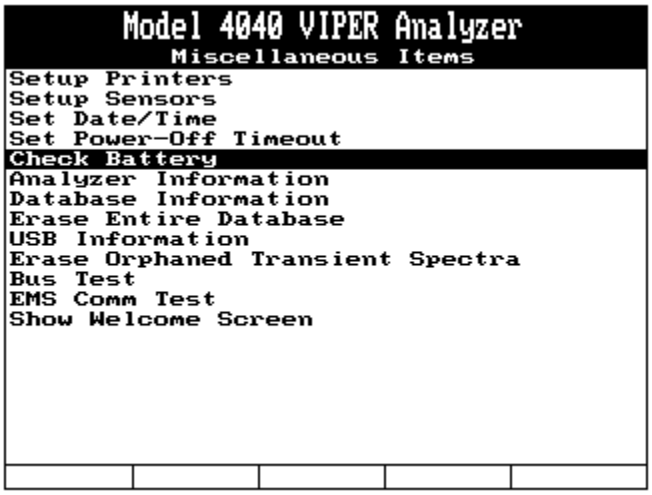


You can limit the number of jobs the analyzer will store for each type of job. For example, if you institute a 10-job limit, the analyzer will store a maximum of 10 propeller balance jobs, 10 Main Rotor Balance Jobs, 10 Vibration Survey Jobs, 10 Transient Vibration Survey jobs, etc. all at the same time.

To enable or disable this feature select "Set Job Count Limit" from the Miscellaneous Items menu and press **[ENTER]**. Then, from the "Job Count Limit" screen set "Enable job count Limit?" to "Yes" to enable and "No" do disable.

If you have enabled this feature you will be able to select the number of jobs the analyzer retains. Valid entries in the "Max jobs of each type:" field are integers between 10 and 50.

18.1.6. – Check Battery



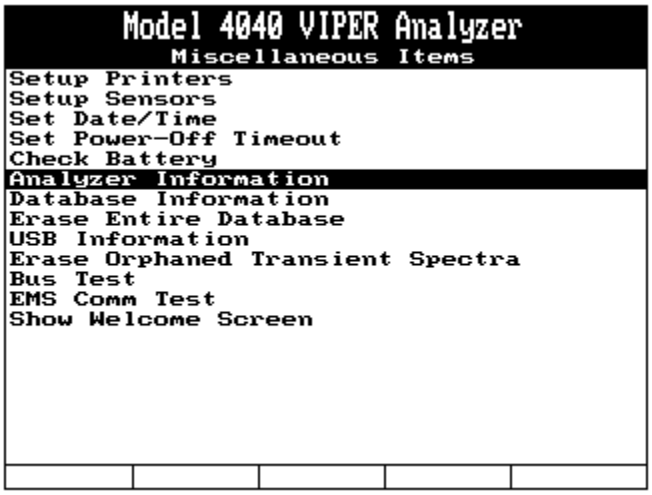
The “Check Battery” function allows the user to check the remaining battery life prior to beginning a job. The current state of the battery is presented in a percentage of full charge remaining. This check is for planning purposes only but should give you sufficient information to determine f you have enough battery capacity remaining to conduct a normal job. A fully charged, new battery should normally supply constant power to the analyzer using two vibration sensors and one optical tachometer for approximately 10 hours. This time will vary dependent on the number of sensors and tachometers and their power requirements. Therefore, for planning purposes, an indication of 50% should be sufficient charge remaining for 5 hours of operation.

To check the battery life, do the following:

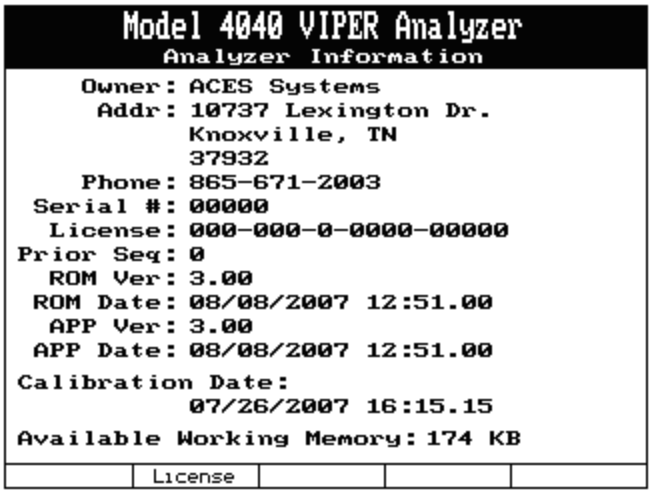
1. Select “Miscellaneous Items” from the Main Menu banner screen.
2. Select “Check Battery” from the “Miscellaneous Items” banner screen menu.
3. The analyzer will display the percentage of full battery charge remaining.

NOTE
We recommend the battery be charged on a regular schedule and that a job not be started with less than 50% of full charge remaining. See “Chapter 2, Analyzer Description” for instructions on charging the battery.

18.1.7. - Analyzer Information



The “Analyzer Information” banner screen contains information about the analyzer and its owner. The information is entered into each individual analyzer at the factory at the time of purchase.



This information is significant for two reasons. If your analyzer is ever stolen or lost, it can easily be identified by the information contained on this screen. The information cannot be deleted or altered and remains intact regardless of the availability of power to the analyzer. Also, if the analyzer is used in a business, this information can is used as advertisement and future reference to your customers as each printout from the analyzer contains a header based on the information from this screen. The analyzer information can only be entered or changed by technicians at the ACES Systems facility. Check to insure all information on this screen is correct. If changes are required, contact ACES Systems at the phone number listed at the front of this manual.

To access the "Analyzer Information" banner screen, do the following:

1. Select "Miscellaneous Items" from the Main Menu banner screen. Select "Analyzer Information" from the "Miscellaneous Items" banner screen menu.

   In addition to owner information, this screen displays the following information:

   Serial # - The serial number of the analyzer.

   License: - The license number determines which Main Menu items are accessible to this analyzer. The license number is specific to the serial number of the analyzer and can only be issued by ACES Systems.

   Prior Seq - Indicates whether you have purchased a limited-use license.

   ROM Ver – Indicates the version of Read Only Memory currently installed in your analyzer. This may also be referred to as the "BOOT ROM."

   ROM Date: - Indicates the date of the currently installed ROM Version.

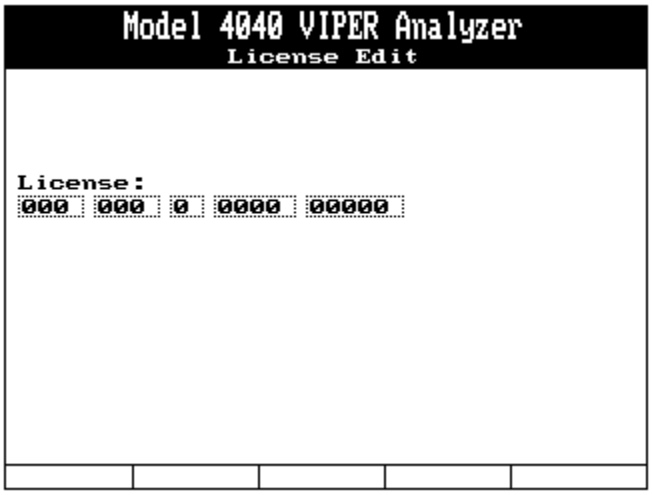
   APP Ver – Indicates the version of the currently installed application software running in your analyzer (The application version is upgraded by you, the user via ACES Systems' WinFlash Software.).

APP Date – Indicates the date of the currently installed application software.

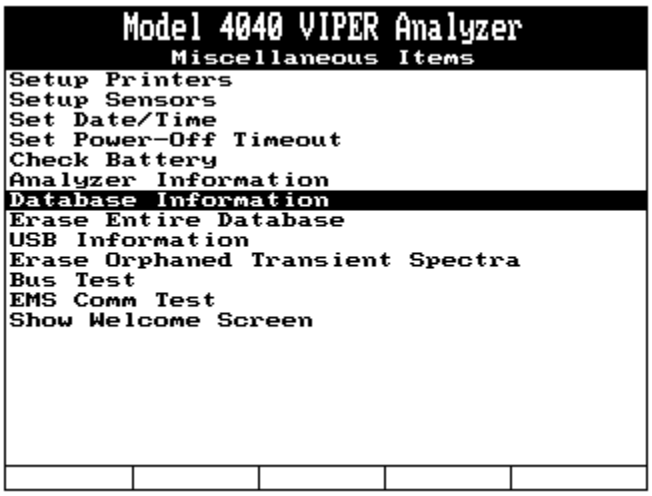
Calibration Date: - Indicated the date and time that the last calibration was performed on the analyzer. This date and time can only be changed by ACES Systems personnel.

Available Working Memory: - Indicates an approximate value of memory available to the analyzer for storing setups and jobs.

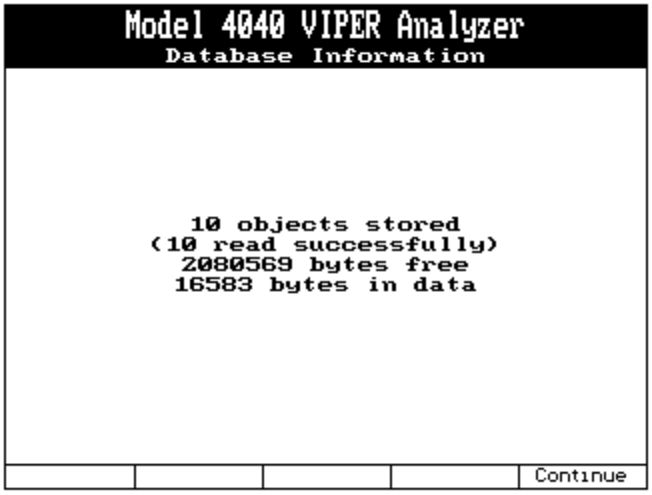
At the bottom of the screen, the [F2] key correlates to "License" on the screen. By pressing the [F2] key you will be taken to the "License Edit" screen shown below. You will enter the license number, typically found inside the lid of the analyzer, into the analyzer from this screen. Use the [⇓] key to move from field to field. When all fields are filled in, press [ENTER] to store the new configuration. When the analyzer is turned [OFF] then back [ON], any new menu items will become visible.



18.1.8. – Database Information



The “Database Information” selection will produce the “Database Information” banner screen. In the center of the screen the total number of objects stored and read successfully will be displayed. The total free memory (in bytes) and the total amount of stored data (in bytes) will also be displayed. This is an information (read only) screen and its contents cannot be altered by the user from within this screen. Press the [F5] “Continue” key or the [BACKUP] key to exit this screen.



18.1.9. – Erase Entire Database

The Erase Entire Database menu item is a fast method of removing all stored data, setups, and jobs that currently reside in the analyzer’s memory. After selecting this option and pressing the Enter key, the analyzer will show a message asking you to verify that this is what you intend to do. Pressing the [F1] “Yes” key or the [F5] “No” key verifies your intent.

18.1.10. – USB Information

The USB Information key is not yet functional.

18.1.11. – Erase Orphaned Transient Spectra

The Erase Orphaned Transient Spectra (EOTS) function checks the flash file system (FFS) to for any spectra that belong to any transient vibration survey that no longer exists. The transient vibration survey may have been intentionally erased or deleted by several available options in the analyzer.

For instance, if a transient survey in the RAM database becomes corrupt the analyzer will detect this during the next boot and present an information screen to notify you of the corrupt data. It will then provide the option to delete all corrupt data by pressing a function key. The software process that rebuilds the RAM database following the deletion of the corrupt data doesn't know what kind of corrupt object

was deleted, because that information, being corrupt, is unreliable. As a result, any spectra taken for that job get left behind in the flash file system (FFS), where they occupy memory space, but are not accessible or useful in any way.

Orphaned Spectra should be a rare occurrence. This function is made available to correct memory problems that may exist during those occasions. There is no need to run this function routinely unless memory errors occur and you are asked to run it during a troubleshooting exercise with a customer support representative of ACES. If you do not use the Transient Vibration Survey feature, this menu item is not a usable feature.

18.1.12. – Bus Test

The Bus Test feature of the Miscellaneous Items menu is a troubleshooting tool for boot related errors. There is no reason to run this test unless you are experiencing numerous boot errors or you do it as directed by an ACES support representative in the course of troubleshooting.

18.1.13. – EMS Comm Test

This feature will allow you to perform an EMS communications test to test your cable connections with the 1752B JEDA equipment. Specific diagnostic messages will help you troubleshoot connectivity issues.

18.1.14. – Show Welcome Screen

This option will display the welcome screen giving you a quick method to access the Boot and App versions of the analyzer operating software. Press [ENTER] to leave the welcome screen and return to the “Miscellaneous Items” menu.