

(3) Downloading the Data to the Software

To download the data from the meter to the software, turn the meter on and plug the meter into the USB port. Open the software, press **SETUP** on the meter, go to **Com Port(C)** and select **Com3(M)**.

To import and view the data, go to **DataLogger(D)** at the top of the window and this will open a new window. The words **Accepting data now! Waiting...** will appear whilst the data is being transferred and will disappear when the transfer is complete. You will notice that there is no information on the graph. This is because you have not selected the data you wish to view.

On the left hand side of the **DataLogger** window you will see three columns that have the headings **Set, DATE** and **TIME**. **Highlight** the row of information you wish to view in **blue** by **clicking on the row once**. With the row still highlighted, **double click** on the row and the data you have recorded will appear in the graph.

To zoom in on sections of the graph, **click on the graph and drag** the mouse to create a square in the place you wish to zoom in on. To **undo zoom**, click on the grey **Undo Zoom** box in the top left hand side of the window.

To save the data you have recorded from the **DataLogger** window, go to **Save Data(S)** at the top of the window.

8. Using the Graph/Interpreting the Graph

With the data imported into the **DataLogger** window on the software, select the data you wish to view and a red line graph will appear with information about the recorded data displayed above it.

Real-Time From: 2007-07-03 3:47:53 To: 2007-07-03 06:20:23 is the date and time of when the meter started and finished recording. This can be seen at the top of the **DataLogger** window.

DataNo. 916 is the total amount of recordings taken within the recording period.

Start Time 03:47:53 is the time that the meter began recording data.

Unit dBA is the frequency weighting that the meter was measuring in whilst recording, **dBA** being **A-Weighting** and **dBC** being **C-Weighting**.

Avg 44.95dB is the average taken from all the readings.

Maximum 79.6 @ 04:10:23 is the maximum sound detected and the time it was recorded.

Minimum 37.6 @ 05:02:43 is the minimum sound detected and the time it was recorded.

At the bottom of the **DataLogger** window you will see empty boxes labelled **CursorA**, **CursorB**, **Max.Between A and B**, **Min.Between A and B**, **Avg.Between A and B**.

To display information in each of these boxes, **double click** on any part of the graph once to display a green line and **double click** again on a different part of the graph (must be to the right of the green line) to display a blue line. The green line is **CursorA** and the blue line is **CursorB**. By using these cursors it allows you to focus on a sample of all the data recorded and find out information about the sample in the boxes below the graph.

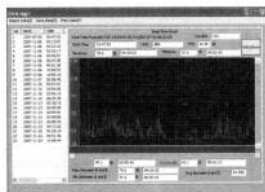
CursorA 46.2 @ 03:51:03 displays the time and sound of the recorded data where **CursorA** is positioned.

CursorB 62.6 @ 04:09:13 displays the time and sound of the recorded data where **CursorB** is positioned.

Max.Between A and B 70.7 @ 04:02:23 is the maximum sound detected by the meter between the two cursors and the time at which this sound was recorded.

Min.Between A and B 40.5 @ 03:57:43 is the minimum sound detected by the meter between the two cursors and the time at which this sound was recorded.

Avg.Between A and B 45.962 is the average from all the data between the two cursors.



To remove the cursors, press **Undo Zoom** or **double click** somewhere else on the graph where you would like **CursorA** to be moved to. You can also use the cursors when zoomed in on part of the graph, but this can only be done after you have zoomed in on the point you wish to view. If you try to zoom in after you have placed the cursors on the graph or zoom out with the cursors on the graph they will disappear and have to be placed on the graph again.

9. Deleting Data

When the memory is full, **FULL** will show on the bottom of the LCD screen. To delete the data turn the meter off, hold down **REC** and turn the meter on whilst still holding **REC**. On the LCD screen, **CLR** will appear. The data has now been cleared.



YORK Survey Supply

Sound Level Meter



Code: 343300



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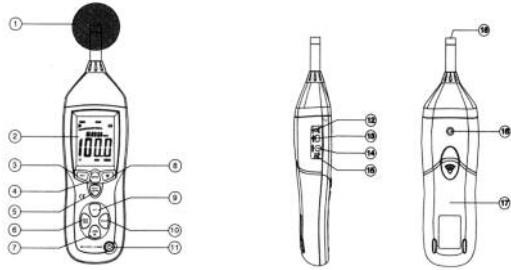
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Operating Instructions

Sound Level Meter

1. Name and Functions



(1) Foam Wind Muffler

(2) LCD Screen



(3) REC Button

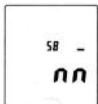
To record data press **REC** after turning the meter on. This will automatically start recording and saving data. In order to avoid data error, do not turn the meter off under **REC** condition. To stop recording press **REC**. When recording has finished then it is safe to turn the meter off.

(4) SETUP Button

Hold down **SETUP** and continue to hold whilst turning the meter on. When the word **TIME** is shown, release **SETUP**. This will take you into the time adjustment mode. On the LCD screen the date should be displayed as the following:



Press the **SETUP** button for a second time, the display should be showing:



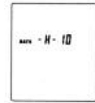
This will allow you to adjust the minutes by pressing **LEVEL**. Press **SETUP** for the third time for the display to show this:



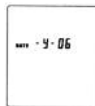
This will allow you to adjust the hour by pressing **LEVEL**. Press **SETUP** for the fourth time, with the display showing:



This is the date adjustment that can be adjusted using **LEVEL**. Press **SETUP** for the fifth time to adjust the month, adjust using **LEVEL**.



Press **SETUP** for the sixth time to alter the year using **LEVEL**.



To save these alterations press **HOLD** and this will return you to the main screen.

(5) FAST/SLOW Button

This is a time weighting selection.

FAST: for fast sampling measurements at 1 reading per 125mS.
SLOW: for slow sampling measurements at 1 reading per second.

(6) MAX/MIN Button

This button allows you to select maximum or minimum hold. To select maximum press the **MAX/MIN** button once and **MAX** will show in the right hand corner of the LCD screen. The displayed dB value will be the maximum level recorded since activation. For minimum press **MIN/MAX** again and **MIN** will show in the right hand corner. The displayed dB value will be the minimum level recorded since activation.

(7) LEVEL Button

By pressing **LEVEL** this allows you to manually change the **Level Range Selection**. Each time you press the **LEVEL** button the level will change between four settings: **Lo** level = 30 to 80dB, **Med** level = 50 to 100dB, **Hi** level = 80 to 130dB and **AUTO** level. If the recorded sound is higher than the selected level, **OVER** will show in the right hand corner of the LCD screen. If the recorded sound is lower than the selected level, **UNDER** will show in the right hand corner of the LCD screen. When **AUTO** level is selected, **AUTO** will show in the bottom left hand corner of the LCD screen.

(8) Backlight Button

This allows you to turn a blue backlight on the LCD screen on/off.

(9) A/C Button

The **A/C** button is a **Frequency Weighting Selection** button that allows you to change from **A-Weighting** and **C-Weighting**. When **A-Weighting** is selected, **dBA** will show at the bottom of the LCD screen. **dBC** will show when **C-Weighting** is selected.

(10) HOLD Button

Press **HOLD** to freeze a current reading on the display. Press **HOLD** again to release.

(11) Power button, Auto/Manual Off

For **manual operation**, press the power button and the unit will switch on. To switch the meter off press and hold the power button. The display will count down 3, 2, 1 and then switch off.

For **auto power off**, press the power button and the unit will switch on. Press **SETUP** and the clock symbol will appear in the bottom left hand corner of the LCD display. The unit will now auto power off after 15mins. Press **SETUP** at any time to revert back to **manual operation**.

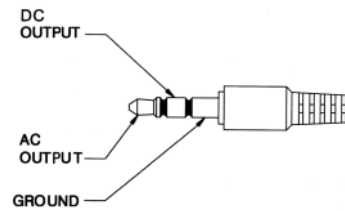
(12) External DC 9V Power Supply Terminal

For connection with a **DC 9V (max 300mA)** adaptor for continuous power supply to the meter.

(13) USB Interface

For connection with **USB** lead to connect to the computer. The **USB** signal output is 9600 bps serial interface.

(14) AC/DC Signal Output Earphone Outlet



(15) CAL Calibration Potentiometer

CAL is for external standard level calibration adjustments. (Only adjust using a traceable calibrator).

(16) Tripod Mounting Screw

(17) Battery Cover for 9V Battery

When battery is low the battery symbol will show, indicating that you must change the battery.

(18) Microphone

1/2inch Electret Condenser Microphone.

2. Operating Procedure

- Power on the meter.
- Press **LEVEL** to select the desired measurement range, so that the unit does not display **UNDER** or **OVER** in the top right or left hand corners of the LCD screen, as this is an indication that level you have chosen is too low or too high for the sounds the meter is capturing or select **AUTO** range.
- Select **A-Weighting** or **C-Weighting**.
- Select **FAST** for virtually instant sound (sampling at 1 x 125ms) or **SLOW** for average sound (sampling changes at 1 x 1sec).
- To measure just the maximum or minimum sounds, press the **MAX/MIN** button once for **MAX**, twice for **MIN** and three times to turn **MAX/MIN** off.

3. Storing the Meter

- Do not store or operate the instrument in high temperature and high humidity environment.
- When the meter is not in use for a long time please remove the battery to avoid battery liquid leakage on the instrument.
- When using the instrument in the presence of wind it is important to use the wind muffler to stop the meter from detecting undesirable signals.
- Must keep the microphone dry and avoid severe vibration to keep the meter in good working condition.

4. Installing the Software

- Start Windows.
- Insert the CD into the CD drive.
- Go to **START** at the bottom of the desktop then **Run...** then browse for **8852 (D:)** which is the name of the software you wish to install.
- By clicking on **8852 (D:)** it will open up the files stored within the CD. Open the **SETUP** file and follow the instructions to install the software.
- Once this is complete you will see a **green recycling symbol** appear on your desktop with **8852** underneath it. This means that installation was successful, but before you can use the software you need to install the hardware. Do not remove the CD.

5. Installing the Hardware

- With the CD for the software still in the CD drive turn the meter on and plug the meter into the computer using the USB cable supplied with the meter.
- At the bottom of the desktop on the right hand side a message will show that the computer has detected new hardware in the USB port, **double click** on this message.
- By double clicking on this message a window should appear asking you to install the hardware. On this window click **No, not this time** as you do not need to connect to the windows update. Follow the instructions to install the hardware but before you press **FINISH** check that it reads **CP2101 USB Composite Device** in the

window - this is the first hardware driver.

(4) Once you have clicked **FINISH** you will notice that the same box asking you to install the hardware will appear again, this is to install the second driver. Install in the same way as you did for the previous driver. In the last window it should show **CP2101 USB to UART Bridge Controller**. Click **FINISH** and both hardware drivers should now be installed.

If you wish to uninstall the drivers in the add or remove programs you will not find two separate drivers with the names **CP2101 USB Composite Device** and **CP2101 USB to UART Bridge Controller**, you'll find one driver called **CP210x USB to UART Bridge Controller**. This is because both drivers are saved together so by uninstalling this you are in fact uninstalling both of the drivers.

6. Using the Software

- Open the software and connect the meter to the computer with the USB cable.
- Turn the meter on and press **SETUP**.
- On the software you will see an image of a sound level meter that displays No Connection on the screen. To create a connection, go to **Com Port(C)** and on the drop down menu select **Com3(M)**. The sound level meter image on the software should now be displaying the same information as your sound level meter. In some cases this com port will not work and **Com4(4)** will have to be used instead but this will work exactly the same as it would with **Com3(M)** selected.



7. Recording Data

(1) With the Software

To record data using the software follow the instructions for 10. Using the **Software** then go to **Real Time(R)** at the top of the screen and select **Setup(U)** from the drop down menu and change the settings to meet your needs, then press **Start**.



On the graph you will see a red line appear, which moves with every reading detected by the meter. The graph should stop recording data when the recording period has finished. If you wish to stop the recording before the end of the recording period for any reason you can go to **Real Time(R)**, then **Stop(S)** or you can press the **red stop sign symbol** above the image of the sound level meter.

To save the data for future reference go to **File(F) Export Data**. This will automatically take you to the **Save As** window to save the file as a **Microsoft Excel** spreadsheet. Before saving the data, change the file name from ***.xls** to an appropriate name, as it will not allow you to save the data as ***.xls**.

To save the data as a **text** file rather than an **excel** file, go to **File(F), Save As** and change the file name from ***.txt** and press **Save**.

(2) Manually Recording Data

To record data in a different environment away from your computer, press **REC** when you are ready to record, leave the meter to record for as long as you need, then press **REC** when you have finished. The data will now be stored in the meter ready for you to download directly onto the software. (Note: do not turn the meter off whilst **REC** is still showing on the LCD screen as this could corrupt the data).

(cont...)