



# PAM PiCo Logging Application User Manual

Issue 1



Audio Workflow, Tally Systems and Power Management solutions

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## About this manual

This manual will provide you with a quick overview of the PiCo Logging Application functions.  
Happy reading!

Please note: TSL reserve the rights to change the content of this manual at any time. The latest revision of this manual can be downloaded from: [www.tsl.co.uk/products](http://www.tsl.co.uk/products)

## Important Notes

### **Disclaimer**

No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and scanning, for any purpose, without the prior written consent of TSL A/S. The company aims to ensure that all details in this document are correct at the time of publication, but reserves the right to alter specifications and equipment without notice. The latest version will be available upon request. This publication is for international usage.

Despite considerable effort to produce up to date information, no literature published by the company nor any other material that may be provided should be regarded as an infallible guide to the specifications available nor does it constitute an offer for sale of any particular product.

### **Warranty Maintenance and Repair**

- All TSL products have a one year warranty period starting from the date it leaves the factory.
- A repair warranty is to apply. That is, the product is to be returned for repair with no replacement and an exchange shipping policy is also to apply.
- TSL offers a seven day DOA policy together with an exchange shipping policy. That is, if a product has been declared 'dead on arrival' within a seven day period a warranty replacement will be shipped.
- A temporary replacement may be available where, for operational reasons, it is imperative that service is continued. The customer will be asked to enter into a 'loan agreement' for the duration of repair.
- All faulty equipment returned to TSL for repair will, where possible, be returned to the customer within seven working days.

### **TSL Returns Procedure**

Please telephone +44 (0)1628 6762221 (Fax: +44 (0)1682 676299) and ask for Customer Support, detailing the model and serial number of the equipment, who will provide a Returns Number. This will enable us to track the unit effectively and will provide some information prior to the unit arriving.

For each item, this unique Returns Number must be included with the Fault Report sent with the unit.

A contact name and telephone number are also required with the Fault Report sent with the unit.

### **Fault report details required**

- Company:
- Name:
- Address:
- Contact Name:
- Telephone number:
- Fax number:
- Email address:
- Returns Number:

Symptoms of the fault (to include switch setting positions, input signals etc):

### **Purpose**

Any fitness for purpose legislation or other determination that may be applied in the area where this equipment is installed must take due cognisance that it is designed for use in professional broadcast, audio and video systems by appropriately trained personnel. The equipment is not intended for use in a domestic environment and regulations designed for such situations are not applicable.

### **After sales modifications**

Any modifications to the equipment not specifically authorised and approved by TSL Professional Products may invalidate the equipment warranty. This includes changes to cabling and variations to the recommended installation as detailed in the documentation issued by TSL Professional Products. Modifications can invalidate EMC and safety features designed into this equipment and the manufacturer cannot be liable for any legal proceedings or problems that may arise relating to such modifications. No sales agent or other person involved in the supply chain is permitted to authorise variations from the content of this documentation.

### **Important Safety Instructions**

Read these instructions. Study carefully and understand all safety and operating instructions before you install and operate the unit!

Keep these instructions. Keep all safety and operating instructions for future reference!

Heed all warnings on the unit and in the safety and operating instructions before you install and operate the unit!

Follow all instructions to ensure against injury to yourself and damage to the unit or other objects connected to the unit.

To prevent possible electrical shock, death, fire, injuries and malfunctions, use this product only as specified.

Only use attachments and accessories specified by the manufacturer.

The units of the PAM PiCo range are **designed for indoor use only**

# PiCo Logging Application

## About the PiCo Logging PC Application

The PiCo Logging PC application allows you to instantly document, visualize and evaluate the loudness data of the PAM PiCo on your computer.

### **Suitable for ....**

The PiCo Logging PC application is compatible with all PAM PiCos. The Logging license is optional for some PAM PiCos, while included with others.

Please check your PAM PiCo owner's manual to clarify where the Logging license applies.

Please make sure that you run the latest PAM PiCo Application software. Refer to the 'How to software update PAM PiCo' paragraph for more information on this.

### **System Requirements**

The PiCo Logging application is compatible with Windows XP sp3 & Windows 7.  
PAM PiCo application software released later than 10-04-2013.

## Where to get a hold of the PiCo Logging Application

The Logging application itself is free of charge and may be downloaded from [www.tsl.co.uk/products.aspx](http://www.tsl.co.uk/products.aspx) at any point in time.

In order to enable the Logging application, your PAM PiCo is required to have the correct software license installed. To upgrade your meter, please contact TSL for further information.

## Connecting Your PAM PiCo

There are a couple of basic steps that you have to go through to prepare for Logging data:

1. Connect your Meter to your PC
2. Select or create the data base where the Logging Sessions will reside
3. Select your meter as the data source of logging information.

Here a few easy steps to up and running in a couple of minutes:

### **Connecting PAM PiCo to your PC**

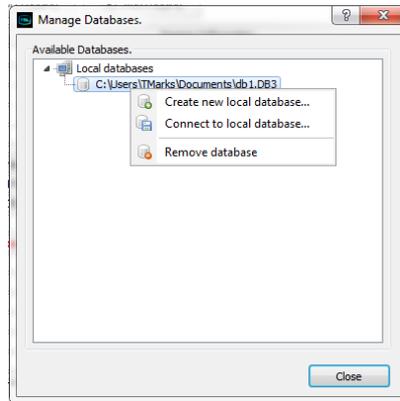
This is as simple as plugging the USB connector of the PAM PiCo cable into your computer.

### **Selecting or Creating the Logging Database**

- Open the PiCo Logging Application
- The first time you open the application, you will be prompted to create or select the database hosting your Logging sessions.
- If not prompted please select 'Manage databases' from the 'File' dropdown menu



- Right-click on the 'Local databases' line and select 'Create new local database'
- This will allow you to create and name a home for all your coming Logging sessions.

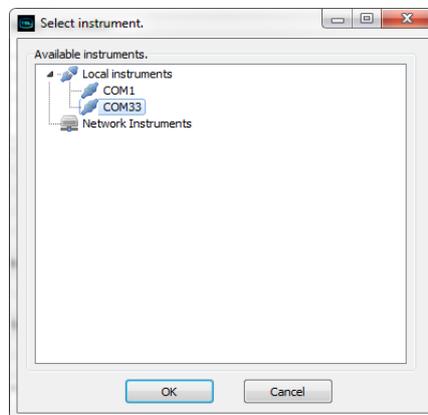


- In case you already have created a database from earlier use of the PiCo Logging Application, right-click and select 'Connect to local database'- This will allow you to select the specific database that you would like your logging sessions to be stored inside.

*NOTE: More details on the database structure are available in the Logging Session Database View section.*

### Selecting your instrument

- Now select 'Manage Instrument' from the 'File' dropdown menu.
- From the pop-up, select the appropriate COM port corresponding to your meter and click 'OK'
- The PiCo Logging Application returns a message saying: *"a new instrument was selected"*
- After returning to the 'Logging' window, hit the 'Connect' button and you are ready to start logging loudness data

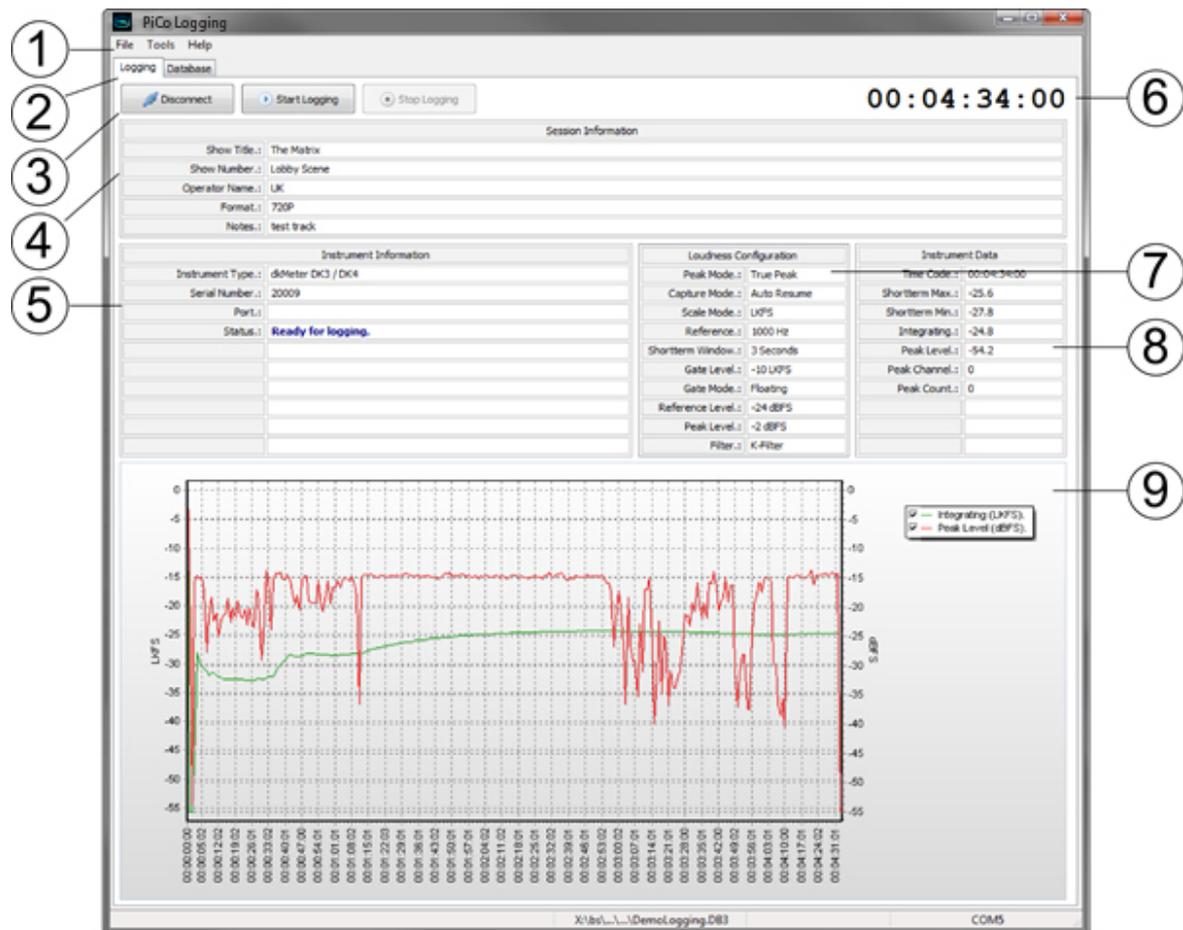


- In case your instrument COM port does not show up, right click and select 'Find Instrument'. The Logging application will now scan to find your instrument
- Now select your instrument and hit 'OK'.

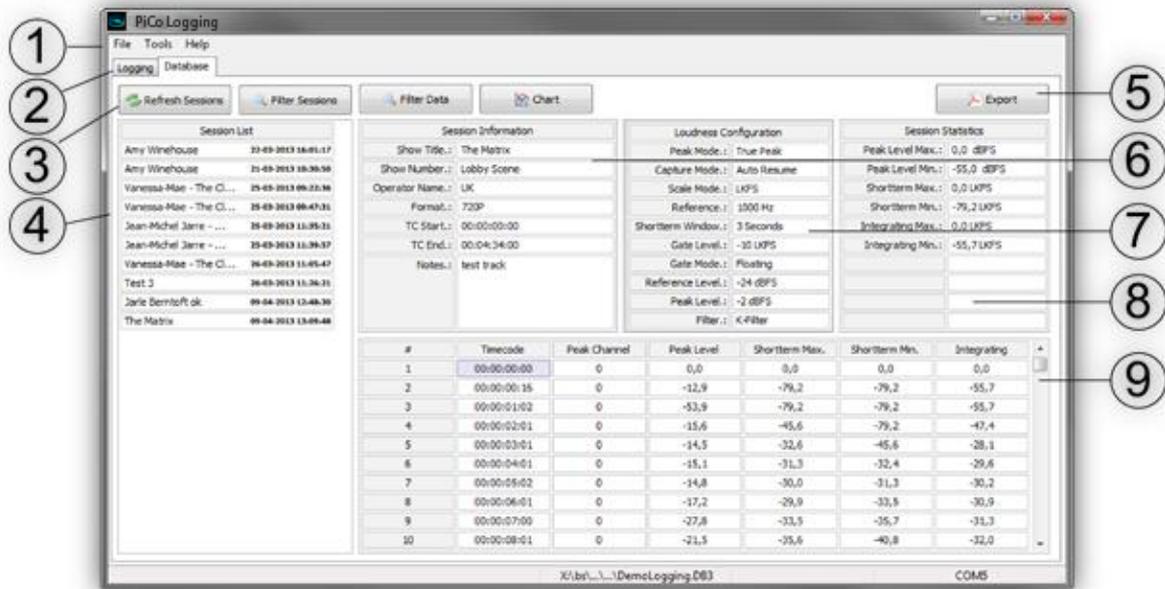
# The Windows & Functions

## Window Overview

This section will provide you with a quick overview of the various buttons, screens and information fields that you will see in the Logging Application. Each of the different windows and functions are described in further detail below.



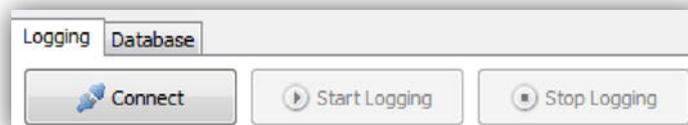
1. File and Tools drop-down menus
2. Selection of Logging Session or Logging Database view
3. Connecting/Disconnecting the Logging App. to your meter and Start/Stop of Logging Session
4. Session Information – Specific to the current Logging Session
5. Instrument information of the currently connected instrument
6. Time code indicator – the specific time of the current logging session
7. Loudness Configuration – View of the connected meters' Loudness settings specific for the logging session
8. Instrument data – Loudness data overview for the current logging session
9. Logging Chart – graphical overview of the logged data; Integrated Loudness and Peak level



1. File and Tools drop-down menus
2. Selection of Logging Session or Logging Database
3. Refresh Sessions, Filter Session or Data, Open Chart window
4. Session List – Full list of all Logging Sessions contained in the currently selected database
5. Export – Export logging data in various file formats
6. Session Information – The basic info about what the logging session contains
7. Loudness Configuration – View of the Loudness configuration used during the logging session
8. Session Statistics – Top level summary of the Logged session data and statistics
9. Session Data – All data entries of the specific Logging session

## Logging View

Make sure you are in the 'Logging' view and connect your meter by hitting the 'Connect' button.



Once your meter is connected, you are ready to start logging data. There are a few things worth knowing before initiating the logging of data:

### Session Information

The Session information field is where you enter the top level information about what the specific Logging session contains, including; Title, Operator, Format and other notes.

The Session information entry may be requested at the start of every session, edited during the logging session or altered in the Logging Database afterwards.

To define exactly how and when you prefer to enter your session information, please select 'Options' in the 'Tools' dropdown and tick off your preferred approach in the Global options window.

Session Information	
Show Title.:	The Matrix
Show Number.:	Lobby Scene
Operator Name.:	UK
Format.:	720P
Notes.:	test track

### Instrument Information

The Instrument information gives you a quick heads up on what meter the Logging application is currently connected to and ready to log data from.

Instrument Information	
Instrument Type.:	dkMeter DK3 / DK4
Serial Number.:	20009
Port.:	
Status.:	Ready for logging.

### Loudness Configuration

When connecting your meter to the Logging application, the meter loudness settings are retrieved and stored with every logging session. These settings may be changed inside the corresponding meter – you will need to re-connect to the logging application to update the settings stored with logging sessions.

The Loudness configuration is part of the session data, allowing you to always see how the specific session data were tracked.

Loudness Configuration	
Peak Mode.:	True Peak
Capture Mode.:	Auto Resume
Scale Mode.:	LKFS
Reference.:	1000 Hz
Shortterm Window.:	3 Seconds
Gate Level.:	-10 LKFS
Gate Mode.:	Floating
Reference Level.:	-24 dBFS
Peak Level.:	-2 dBFS
Filter.:	K-Filter

### Instrument Data

The Instrument data window, summarizes the overall loudness data of the reading indicated by the time-code, including time-code, Short-term Loudness Max/Min, Integrating Loudness value, Peak level, Channel and Count.

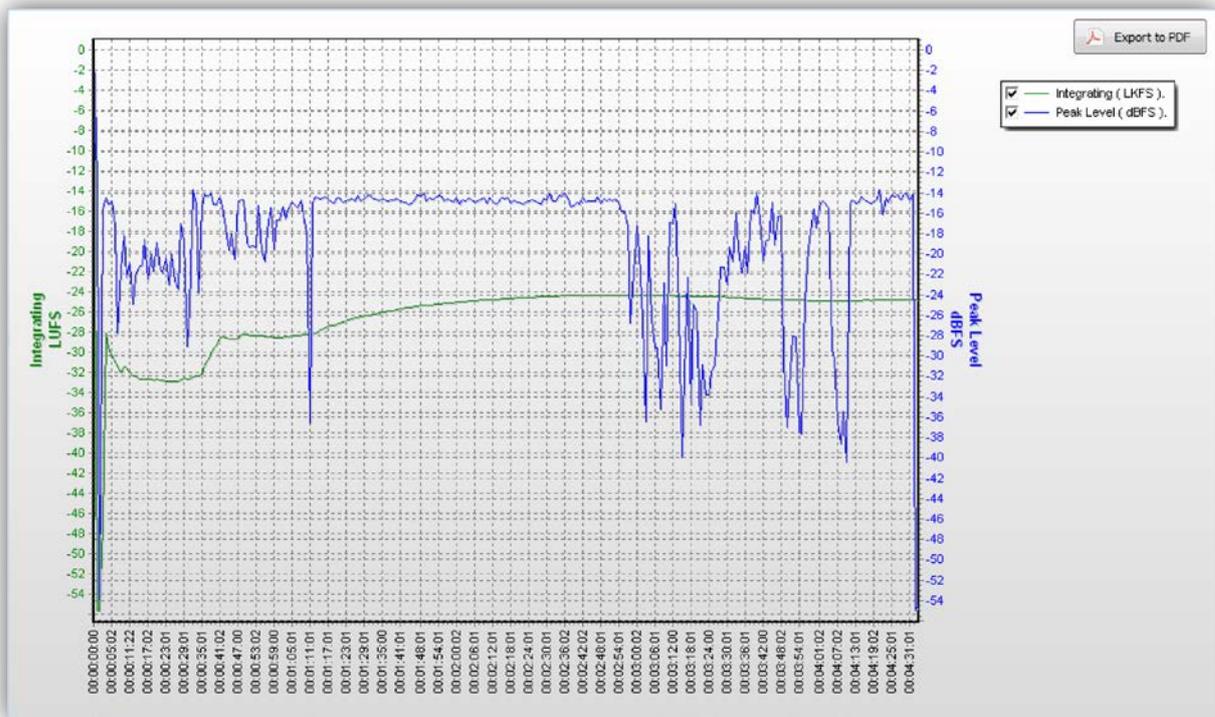
Instrument Data	
Time Code.:	00:04:34:00
Shortterm Max.:	-25.6
Shortterm Min.:	-27.8
Integrating.:	-24.8
Peak Level.:	-54.2
Peak Channel.:	0
Peak Count.:	0

### Logging Chart

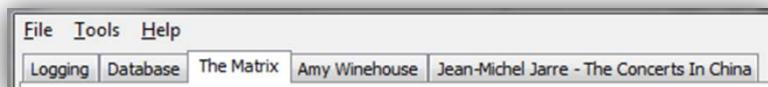
The Logging chart allows you to graphically follow the data entries as they are tracked during the Logging session.

Note how the chart displays Integrating Loudness following the LKFS scale on the left side of the chart (default colour green), while the Peak Level is relating to the right side dBFS scale (default colour blue)

Both data traces relates to the time-code on X-axis of the Logging chart.



You have the option of opening several chart tabs at the same time in order to compare data. The charts will open up as separate tabs next to the Database tab.



In order to close a tab, please right click and select 'Close tab'.

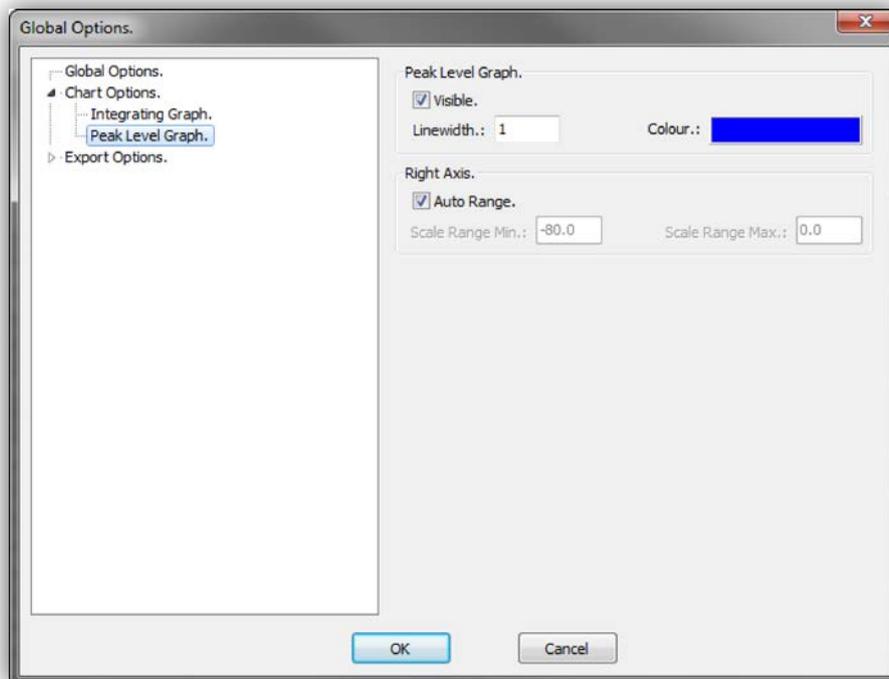
### Custom Chart Scales, Colour and Line Width

Each of the two data trace lines on the chart may be customized to your liking on both Scale range, line colour and line width.

Choose 'Options' from the 'Tools' drop-down menu and select 'Chart options'. Point the relevant Chart line that you want to alter.

The line width and colour may be chosen for each of the two chart lines. Choosing a new color will automatically align the color of the corresponding scale.

The range of the scale may also be customized. The Logging application defaults to 'Auto range' and scales with the incoming logged signal. However, for more specific scale range wishes, the range may be defined and locked to a specific min/max position. This allows you to focus on the data within a more specific window of the measurement as well as making it easier to compare multiple charts on a graphical level, using fixed rather than dynamics scaling.



## Database View

The SQLite Session Database can hold all your Logging sessions and allows for advanced search, filtering as well as a complete overview of your sessions.

Having created or selected the appropriate database, please select the 'Database' page of Logging Application.

*NOTE: The database file must only be accessed by one program at any time. Accessing the database file with more than one program might cause corruption of the file. Additionally please be aware that placing the SQLite database files on network file shares can reduce response time drastically, as well as cause multiple programs to access the same database. For further information, please refer to SQLite database documentation.*

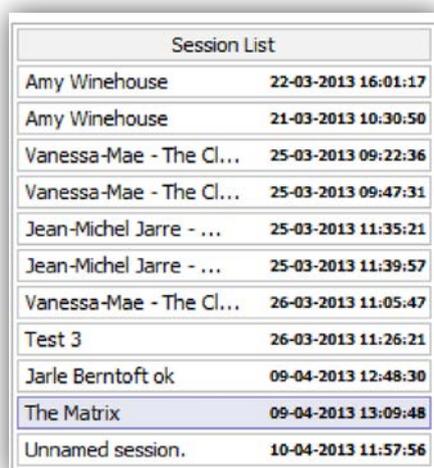
### Session List

The Session list gives you an instant listing of all the Logging Sessions stored in the current database.

If you do not see your latest logging sessions on the list, please hit the 'Refresh Sessions' button.

Select the sessions you want to view by double clicking the Title in the Session List window.

An active session can be retrieved while logging by hitting the 'Refresh Session' button. An active session is highlighted in green.



Session List	
Amy Winehouse	22-03-2013 16:01:17
Amy Winehouse	21-03-2013 10:30:50
Vanessa-Mae - The Cl...	25-03-2013 09:22:36
Vanessa-Mae - The Cl...	25-03-2013 09:47:31
Jean-Michel Jarre - ...	25-03-2013 11:35:21
Jean-Michel Jarre - ...	25-03-2013 11:39:57
Vanessa-Mae - The Cl...	26-03-2013 11:05:47
Test 3	26-03-2013 11:26:21
Jarle Berntoft ok	09-04-2013 12:48:30
The Matrix	09-04-2013 13:09:48
Unnamed session.	10-04-2013 11:57:56

### Editing Session information

You can alter the Session information, by right-clicking the specific session in the Session list and selecting 'Edit Session Information' from the pop-up window.

### Deleting a Session

You may remove a session by selecting a session, right-clicking and selecting the 'Delete Session' point from the pop-up window.

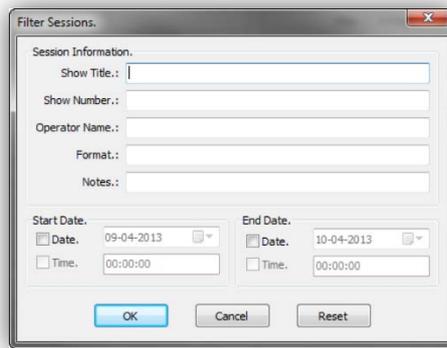
### Filter Sessions

The 'Filter Sessions' function allows you to perform targeted searches in your Session database.



Hitting the 'Filter Sessions' button will bring up the Filter prompt, allowing you to type in a number of Session information filter criteria e.g. Title, Number, Operator Name, format or a specific data & time range that you would like to filter by.

Hit the 'OK' button and the Session list will be filtered by your entered criteria.



### Session Information & Loudness Configuration

The Session information and Loudness Configuration windows are identical to their ditto in the 'Session' view. Please refer to the 'Logging Session View' section for further information.

### Session Statistics

The session statistics window gives you a quick overview of key logged parameters from the current session e.g. Peak level Max/Min, Short-term Loudness Max/Min, Integrating Loudness Max/Min.

Session Statistics	
Peak Level Max.:	0.0 dBFS
Peak Level Min.:	-55.0 dBFS
Shortterm Max.:	0.0 LKFS
Shortterm Min.:	-79.2 LKFS
Integrating Max.:	0.0 LKFS
Integrating Min.:	-55.7 LKFS

By holding the mouse over a specific parameter, a small pop-up prompt will indicate the timecode of the specific data e.g. Short-term Max at 00:04:33:01.

Session Statistics	
Peak Level Max.:	-13,7 dBFS
Peak Level Min.:	-55,0 dBFS
Shortterm Max.:	-22,1 LKFS
Shortterm Min.:	-79 Time Code. :00:04:33:01
Integrating Max.:	-24,3 LKFS

*NOTE: If you are using the Filter Data function, the Session Statistics will reflect filtered data. Please see the 'Filter Data' section for further detail.*

## Session Data

The Session data window, shows all data entries of the specific session selected. This is also the data that may be filtered as well as exported for further data analyzing, visualization etc.

#	Timecode	Peak Channel	Peak Level	Shortterm Max.	Shortterm Min.	Integrating
1	00:00:21:02	0	-15.8	-25.2	-25.4	-25.6
2	00:00:00:00	0	-10.2	-23.5	-2.9	-24.3
3	00:00:00:00	0	-74.7	-76.3	-76.3	-24.3
4	00:00:00:00	0	-72.2	-76.3	-76.3	-24.3
5	00:00:00:20	0	-41.6	-79.2	-79.2	-49.7
6	00:00:01:00	0	-40.8	-79.2	-79.2	-46.1
7	00:00:02:02	0	-30.1	-45.0	-79.2	-44.8
8	00:00:03:02	0	-27.0	-40.8	-44.8	-41.9
9	00:00:04:02	0	-27.9	-38.7	-40.6	-39.9
10	00:00:05:02	0	-31.1	-38.1	-38.7	-39.9
11	00:00:06:01	0	-35.0	-38.3	-39.4	-40.3
12	00:00:07:00	0	-37.4	-39.7	-42.6	-40.7
13	00:00:08:22	0	-26.1	-42.7	-44.1	-41.1
14	00:00:09:01	0	-16.0	-35.2	-43.6	-38.7
15	00:00:10:01	0	-14.9	-31.6	-34.4	-36.0
16	00:00:11:01	0	-15.1	-29.6	-31.4	-34.6
17	00:00:12:02	0	-15.3	-29.0	-29.5	-33.8
18	00:00:13:01	0	-15.3	-29.3	-29.6	-31.9
19	00:00:14:01	0	-16.1	-29.1	-29.5	-31.2
20	00:00:15:01	0	-15.6	-29.0	-29.4	-30.9
21	00:00:16:03	0	-15.0	-28.9	-29.3	-30.7
22	00:00:17:03	0	-15.6	-28.8	-29.2	-30.3
23	00:00:18:01	0	-15.5	-28.7	-28.8	-30.1
24	00:00:19:01	0	-15.2	-28.6	-28.9	-30.1
25	00:00:20:01	0	-15.7	-28.8	-29.2	-30.1
26	00:00:21:01	0	-15.4	-28.5	-29.4	-29.8
27	00:00:22:01	0	-16.1	-28.2	-28.5	-29.6

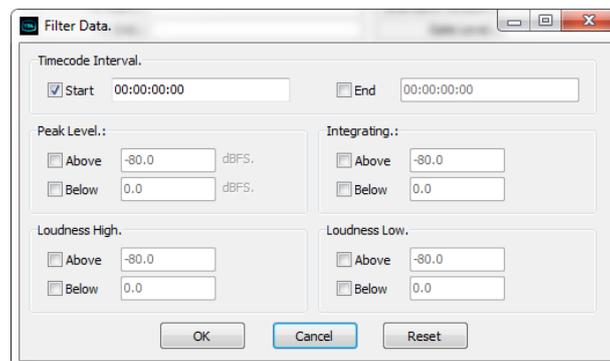
## Filter Data

The 'Filter Data' function allows you to investigate your logged data by a number of user defined filter criteria.



Hitting the 'Filter Data' button brings up the Data filter prompt, offering a wide range of Filter parameters including Timecode intervals, Peak level intervals as well as various Loudness intervals.

Hit the 'OK' button and your session data will be filtered by the criteria you've selected.



The 'Filter Data' dialog box contains the following sections and controls:

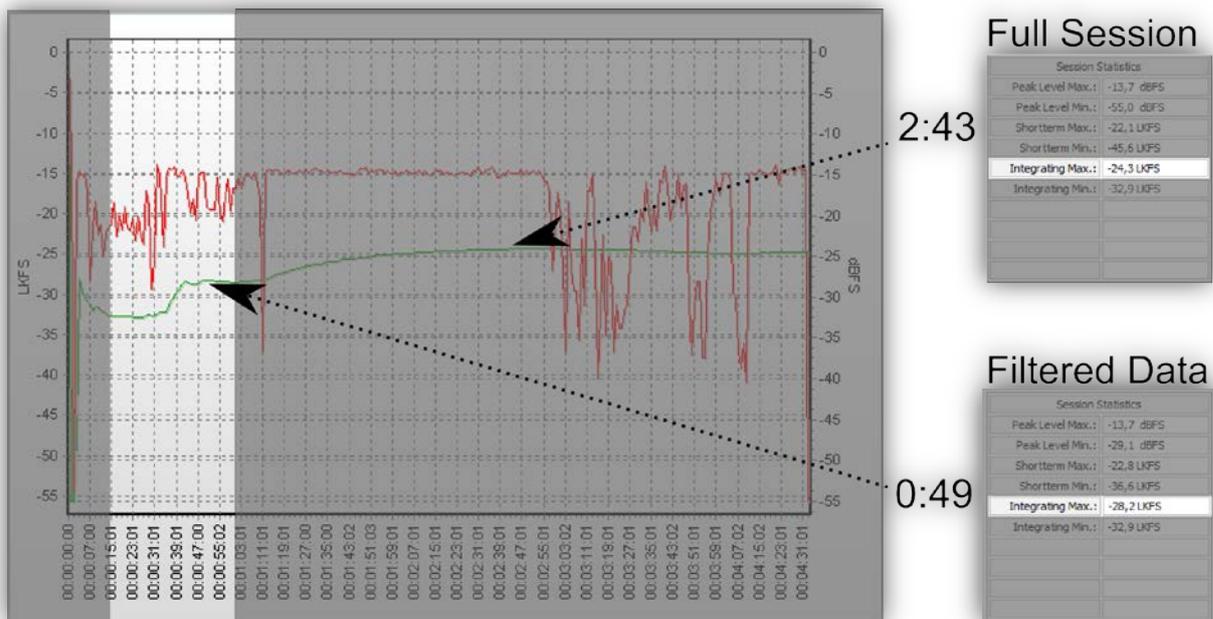
- Timecode Interval:** A checked 'Start' field with '00:00:00:00' and an unchecked 'End' field with '00:00:00:00'.
- Peak Level.:** Two rows: 'Above' with '-80.0' dBFS and 'Below' with '0.0' dBFS.
- Integrating.:** Two rows: 'Above' with '-80.0' and 'Below' with '0.0'.
- Loudness High:** Two rows: 'Above' with '-80.0' and 'Below' with '0.0'.
- Loudness Low:** Two rows: 'Above' with '-80.0' and 'Below' with '0.0'.

Buttons at the bottom: OK, Cancel, Reset.

When using the Filter Data, the overall Session Statistics min and max values will be determined by the specific filtered area, while the background calculation determining the specific min/max values will still be based on the entire session data.

As an example, the below session data has been filtered to find Integrating Max for the time start/end slot of 15sec – 1 minute.

Eventhough the basis for calculating Integrated Loudness is the full session, the maximum integrated loudness in the filtered data (white area) is at 0.49 minutes, while the Full Session max. integrated loudness is at 2.43 minutes. Similarly, the Peak and Short-term min and max values will express the chosen data value i.e. the min/max values of the filtered data.



### Session Chart

The Chart function, opens up the Logging Chart from the Session (see Logging Session View section for more info) as a separate tab.



### Exporting Logged Data

Hitting the 'Export' button, will allow you to export all logged data of the current session as either PDF or CSV file format.



The specific Export terms and information may be altered by selecting 'Export Options' in the 'Tools' 'Options' dropdown e.g. the basic PDF document information may be adapted to your desire.

Hitting the 'Export' button of a chart, similarly, will export the current graphical representation.

# Updating Your PAM PiCo

## How to Software update PAM PiCo

TSL constantly develop new software features, facilities and adjustments to adhere to all relevant scale and Loudness recommendations.

It is therefore recommendable that you, once in a while, check for new updates for your Meter on:

[www.tsl.co.uk/products.aspx](http://www.tsl.co.uk/products.aspx)

Every PAM PiCo can easily be software updated via the inherent USB connector.

Please follow these instructions to software update:

- Go to [www.tsl.co.uk/products.aspx](http://www.tsl.co.uk/products.aspx)
- Go to the PAM PiCo product page
- Locate the dkmeteronline.exe tool and download
- Connect the PAM PiCo to your computer
- Launch the PamPicoOnline application
- The PamPicoOnline application will automatically check for latest software for your meter specifically.
- Follow on-screen instructions to load the latest software.

