

# PAM PiCo Audio and Loudness Meter

Compact 'at-a-glance' Audio and Loudness Metering



## A model to suit every application

PAM PiCo is available in three versions:

### PAM PiCo One

Master Stereo Meter, 4 channel bargraph display, 2 x AES Inputs (4 audio channels) + 1 Analogue Pair and USB power (PSU and universal mounting bracket supplied).

Featuring Landscape mode, FFT spectrum analyser, SMPTE Timecode, Screen Grabber and Loudness Logging.

### PAM PiCo Two

**NEW** - Master 5.1 Surround Meter, 8 channel bargraph display, 3 x AES Inputs (6 audio channels) + 1 Analogue Pair and USB power (PSU and universal mounting bracket supplied)

Featuring Landscape mode, FFT spectrum analyser, SMPTE Timecode, Screen Grabber and Loudness Logging.

### PAM PiCo Five

**NEW** - Master 5.1 Surround Meter, 16 channel bargraph display, 3G HD-SDI (auto-sensing with loop through), 16 channel audio de-embedder, 3 AES Inputs (6 audio channels) + 1 Analogue Pair and USB power (PSU and universal mounting bracket supplied).

Featuring Video Preview, Landscape mode, FFT spectrum analyser, SMPTE Timecode, Screen Grabber and Loudness Logging.

## PAM PiCo

PAM PiCo is a compact, yet comprehensively equipped, standalone audio and Loudness meter, designed for use in any operational position where 'at a glance' audio metering is required.

PAM PiCo is now available in three fully featured formats; each able to display stereo, multichannel or surround sound audio from analogue, AES or embedded SDI (PAM PiCo Five only) signal sources. Each model can measure Loudness to ALL known international standards and recommendations and the PAM PiCo Loudness Logging Application is supplied as a free download to all PAM PiCo users.

With the complete range of features, including the brand new SMPTE Timecode display and Loudness Logging, across all three models and now that PAM PiCo Five is equipped with a unique Video Preview facility, PAM PiCo is now truly the most comprehensively equipped standalone meter in its class.

## Free Update for Existing PAM PiCo Users

All existing owners of PAM PiCo can benefit from the new improved feature set via the free update coming soon to [www.tslproducts.com](http://www.tslproducts.com).

PAM PiCo Three and Four owners can upgrade to PAM PiCo Five and, existing PAM PiCo Five users gain SMPTE Timecode and Video Preview functions – no cost.

PAM PiCo One and Two owners will benefit from the additional features and functions including SMPTE Timecode and Loudness Logging.

## Compact metering without compromise

The PAM PiCo has been designed to meet increasing market demands for simple, cost effective audio metering, specifically where loudness measurement and logging is required. Like the award winning TSL PAM1 and PAM2 audio monitoring units, PAM PiCo includes Loudness measurement as standard and recognises the many international recommendations and mandates.

Built around proprietary hardware the PAM PiCo does not rely on a 3rd party consumer electronics platform and is self contained; requiring only power and media to function.

The PAM PiCo is easy to use, easy to install and packaged with its own desk-mount and interface cable. The PiCo Five version can accept SDI video inputs with up to 16 channels of audio de-embedding, digital audio and analogue inputs. All models are supplied with ITU, EBU, ATSC and ARIB loudness measurement, with user selectable landscape mode as standard. All three models now offer SMPTE Timecode reporting, Loudness Logging, landscape views, FFT Spectrum Analyser and Screen Grabber software with PAM PiCo Five also benefiting from Video Preview.

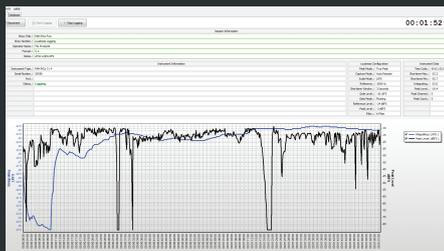
Online software updates ensure that PAM PiCo can be kept up to date with the latest international standards and recommendations.

## PAM PiCo Loudness Measurement

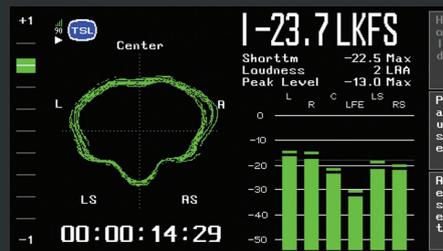
PAM PiCo provides reassurance throughout the production chain that loudness levels are consistent and with the addition of loudness logging, enables key operators to maintain a database of 'show by show' loudness history as a definitive record of compliance to the many regional and international standards that exist in today's broadcast world.

## Loudness Logging

Short and long form content is increasingly subject to exacting broadcast delivery standards which stipulate target loudness and True Peak values. The PAM PiCo can be used to ensure that these criteria are met and a loudness log can be created and used to prove compliance using the 'free to download' PAM PiCo Loudness Logging Application.



Loudness Logging



User-selectable landscape mode

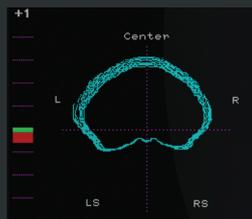
## PAM PiCo features.

All models unless stated:

- Loudness measurement to EBU, ITU and ATSC and many other recommendations
- Audio de-embedding from SDI input, maximum 16 channels (PAM PiCo Five only)
- AES and analogue audio inputs
- USB Powered (plug top PSU included)
- EBU Digital, BBC and EBU PPM, DIN, Nordic, VU and many other regional and international scale options
- Moving Coil Meter emulation including M/S
- LKFS or LUFS loudness scales
- Sliding Loudness Histogram display
- Video Preview (SDI model only)
- Phase indication bargraph
- StarFish™ display (Surround Sound Applications)
- Numerical indication of loudness and loudness range – LRA
- Adjustable reference level
- User selectable bargraph colours and indication
- Variable gate settings
- Loudness Reclaim value
- True Peak display (flying peak and numerical display)
- Simple and intuitive front panel controls
- Online upgrade and update capability via PC (USB connection)
- Desk or rack mount
- User selectable Landscape mode
- Screen Grab application and FFT spectrum analyser
- Loudness Logging Application – free download

## StarFish™ Display

The StarFish™ is a development of the JellyFish® surround audio display created by DK-Technologies. It provides a picture of the 5.1 surround audio energy field. The display has the front centre channel arranged towards the top with other directions as marked to represent the listeners' field of hearing. The image here shows the StarFish™ display with equal audio on all legs. Typical sound fields have energy in a variety of directions and more complex shapes are created which give an indication of sound energy within each channel. Unlike the earlier JellyFish display within which a representation of the equal signal would have shown a circle, the StarFish™ takes into account the summation which occurs when there is coherent (in-phase) content between adjacent legs such as left and centre. Polarity inverted (out of phase) signals can cause the shape to be pulled inwards towards the centre point, reflecting the perceived cancellation that occurs.



StarFish™ display



## Global reseller network

TSL Products has a network of distributors supporting its products all over the world. For further details about TSL Products' range and where to buy please visit [www.tslproducts.com](http://www.tslproducts.com)

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