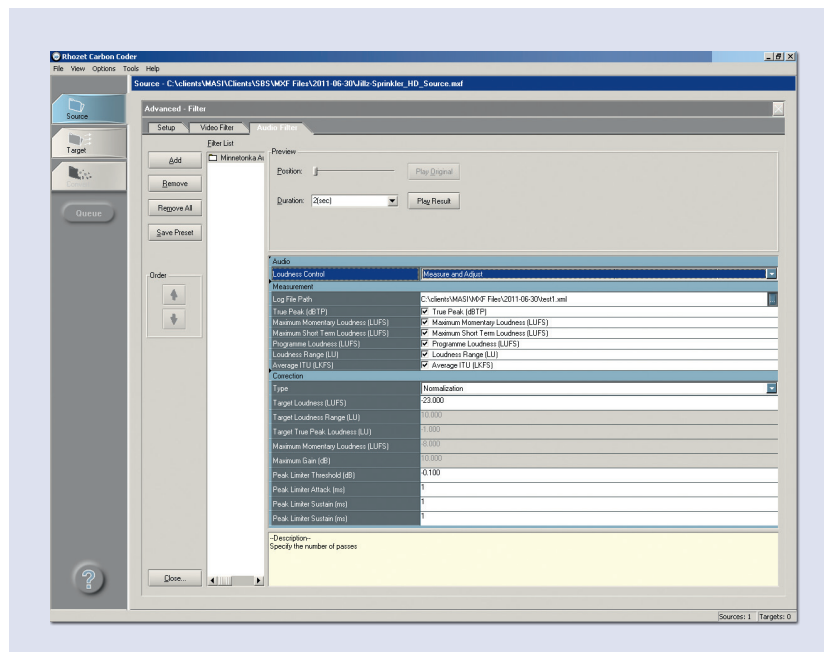


# AudioTools™ Loudness Control for Harmonic ProMedia™ Carbon

## A loudness measurement & control plug-in for Harmonic's ProMedia™ Carbon platform

The AudioTools Loudness Control for Harmonic ProMedia™ Carbon plug-in adds versatile and convenient loudness control to the file-based ProMedia™ Carbon transcoding software. The plug-in provides comprehensive loudness measurement and flexible loudness adjustment, all in a single package. AudioTools Loudness Control for Harmonic ProMedia™ Carbon is comprised of two separately licensed components, a loudness measurement module compliant with all current standards plus, an optional extension that delivers your choice of loudness adjustment actions. A cost saving feature of AudioTools Loudness Control for Harmonic ProMedia™ Carbon is its support for multiple instances from one license. So, your single authorization covers multiple instantiations simultaneously within several different workflows, allowing Carbon Server to handle complex branched processing without purchasing multiple licenses.



The key component of the product is the AudioTools Loudness Measurement for Harmonic ProMedia™ Carbon module. The measurement module covers all the bases, quantifying Momentary, Short Term and Programme Loudness, along with Loudness Range, Maximum True Peak Level and ITU-defined Program Loudness. Measurement results are formatted in XML format, making them available to ProMedia™ Carbon for logging and subsequent reporting. In addition to the overall loudness measurement results, minimum and maximum overall values are reported, as well as measured loudness parameters throughout the file at one second intervals.

AudioTools Loudness Measurement for Harmonic ProMedia™ Carbon handles mono, stereo and multichannel PCM configurations, up to eight channels. This allows you to prep any material for a wide range of target audiences and be assured that your content will always pass muster.

When you need to control as well as measure within ProMedia™ Carbon workflows, AudioTools Loudness Adjustment for Harmonic ProMedia™ Carbon is the right choice. The AudioTools Loudness Control for Harmonic ProMedia™ Carbon plug-in applies loudness adjustment to the incoming essence to reach your desired target Program Loudness or target Loudness Range value. Loudness adjustment can be performed in accordance with EBU R 128

and, as with the measurement module, mono, stereo and multichannel PCM configurations can be processed with target values set for Program Loudness, ITU Program Loudness and Loudness Range.

If the loudness level deviates from the Target Loudness Value, adjustment is applied, and Maximum True Peak Level and Maximum Momentary Loudness Levels are limited to previously specified target levels. Since AudioTools Loudness Adjustment for Harmonic ProMedia™ Carbon is designed for streamlined file-based workflows instead of real-time streams, any essence with a loudness value that already meets the requested target specification is passed unaltered to the next stage of processing.

Harmonic users now have a complete solution — an adaptable AudioTools plug-in to measure and maintain loudness on your already familiar Harmonic ProMedia™ Carbon platform. AudioTools Loudness Adjustment for Harmonic ProMedia™ Carbon amplifies the capabilities of ProMedia™ Carbon, so you can prepare any element for any format or job requirement, easily and automatically.

## AudioTools™ by Minnetonka Audio Software

### AudioTools Loudness Measurement for Harmonic ProMedia™ Carbon

- Supports ITU-R BS.1770-1, ITU-R BS.1770-2, and EBU R 128 2011 standards, and is in accordance with the Commercial Advertisement Loudness Mitigation (CALM) Act and ATSC's Recommended Practice A/85:v: Techniques for Establishing and Maintaining Audio Loudness for Digital Television.
- The module measures Momentary Loudness, Short Term Loudness, Programme Loudness, Loudness Range, Maximum True Peak Level, and Average Loudness ITU.
- The measurement results are formatted as XML in a log file.
- Mono, stereo and multichannel PCM configurations can be measured.
- In addition to the overall loudness measurement results, minimum and maximum overall values are reported as well as measured loudness parameters throughout the file at one-second intervals.

### AudioTools Loudness Adjustment for Harmonic ProMedia™ Carbon

- An option for the AudioTools Loudness Control for Harmonic ProMedia™ Carbon plug-in that applies loudness adjustment to the incoming essence to reach the desired target Programme Loudness or target Loudness Range values.
- Loudness adjustment is performed in accordance with EBU R 128.
- Mono, stereo and multichannel PCM configurations can be processed.
- Target values can be set for Programme Loudness and Loudness Range.
- If the loudness level is different than the Target Loudness Value, the amplitude is adjusted to match the target value and or a compressor / expander is used to adjust loudness range.
- Once Programme Loudness or Loudness Range is adjusted, Maximum True Peak Level and Maximum Momentary Loudness Levels will be limited to specified target levels.



17113 Minnetonka Blvd STE 300  
Minnetonka MN 55345 USA  
Phone 1-952 449-6481

Heimbachstrasse 40  
D-41747 Viersen Germany  
Phone 49-2162-1062622

[www.minnetonkaaudio.com](http://www.minnetonkaaudio.com)  
[contact@minnetonkaaudio.com](mailto:contact@minnetonkaaudio.com)

