## How-to Guide



# How to Guide: 16-Channel Audio Monitoring

WFM6120/7020/7120 & WVR6020/7020/7120 Version 5.2.4 Software



- This release version 5.2.4 has selection for 16-Channels of Embedded Audio along with selections for Embedded Audio 1 to 8 and 9 to 16 channels.
- The presence of 3 ANC Data types selected by the user in the Auxiliary Data Status display.

#### How To Configure 16 Channel Embedded Audio

- 1. Select one of the tiles (1,2,3,4) and press the Audio button
- 2. Select **FULL** to make the display full screen, pressing **FULL** again will toggle back to FlexVu<sup>™</sup>.
- 3. Press and hold the **Audio** button to display the menu.
- 4. Move up and down the menu using the Arrow Keys or General Knob to the **Display Type** menu.
- 5. Enter the sub menu by pressing SEL and navigate to the **Emb. 16-Ch** display. (Figure 1)



Figure 1. Audio display with audio input menu.

#### How to quickly configure selections of 1-8 or 9-16 Channels of Embedded Audio

- 1. Select one of the tiles (1,2,3,4) and press the **Audio** button
- 2. Select **FULL** to make the display full screen, pressing **FULL** again will toggle back to FlexVu<sup>™</sup>.
- 3. Press and hold the Audio button to display the menu
- 4. Move up and down the menu using the Arrow Keys or General Knob to the **Display Type** menu
- 5. Enter the sub menu by pressing **SEL** and navigate to the **Emb. 1-8** or **Emb. 9-16** displays. (Figure 2.)

This mode allows you quickly to select the upper and lower embedded audio channels to view in 8 channel modes.



Figure 2. Audio display with audio input selecting Emb. 1-8 audio channels.

#### **Quick Tip:-**

Note when in the audio input modes Emb. 16-Ch, Emb 1-8 or Emb 9-16 the user can quickly switch between the types of audio channel modes by using the left and right arrow keys when the audio tile is selected.

#### Configuring Audio Embedded Audio 16 Channel audio bars.

- 1. Press the **CONFIG** button to display the menu.
- 2. Move up and down the menu using the Arrow Keys or General Knob to select the **Digital Audio Displays** menu
- 3. Press **SEL** to enter sub menus and scroll up and down to **Embd 16-Ch Ballistics** as shown in figure 3.
- 4. Press **SEL** to enter the next sub menu to select the appropriate ballistics from the list of True Peak, PPM Type 1 and PPM Type 2.



Figure 3. Configuration menu for Embedded 16 Channel Ballistics.

### **Configuring Audio Alarms**

- 1. Press the **CONFIG** button to display the menu.
- 2. Move up and down the menu using the Arrow Keys or General Knob to select the **Digital Audio Displays** menu
- 3. Press **SEL** to enter sub menus and scroll up and down to **Alarm Thresholds** as shown in figure 4.
- 4. Press **SEL** to enter the next sub menu to configure the required alarm threshold for clips, mute, over and silence conditions.

The help menu provides the following information regarding the Alarm Thresholds. This can be displayed by pushing the **HELP** button on the front panel when the alarm threshold configuration menu is shown as in figure 4.

Digital Audio Alarm configurable thresholds are:

- Clip Samples: The number of consecutive all-high samples required to trigger an alarm.
- Mute Samples: The number of consecutive all-zero samples required to trigger an alarm.
- Silence Level: The level below which audio is considered not present.
- Silence Duration: The length of time audio is allowed to be silent before it triggers an alarm.
- Over Level: The level at which the audio is considered "too loud" and an over level alarm is triggered.
- **Over Duration**: The length of time audio is allowed to be "too loud" before triggering an alarm.
- **Channel Loud**: The level above which the loudness count is incremented. In effect, this sets the alarm for the loudness threshold for an individual channel (non-Dolby source).
- **Program Loud**: The level above which the loudness count is incremented. In effect, this sets the alarm for the loudness threshold for a Dolby source signal.



Figure 4. Configuration menu for Audio Alarm Thresholds

References

- WFM6000/7000 Series Waveform Monitors
- WVR6000/7000 Series Waveform Monitors

Data Sheets, Fact Sheets and additional product materials can be found at www.tektronix.com/video\_test/signal\_monitors.html

# 16-Channel Audio Monitoring

#### **Contact Tektronix:**

ASEAN / Australasia (65) 6356 3900 Austria 00800 2255 4835\* Balkans, Israel and other ISE Countries +41 52 675 3777 Belgium 00800 2255 4835\* Brazil + 55 (11) 3759 7600 Canada 1-800-833-9200 Central East Europe, Ukraine and the Baltics +41 52 675 3777 Central Europe & Greece +41 52 675 3777 Denmark +45 80 88 1401 Finland +41 52 675 3777 France 00800 2255 4835\* Germany 00800 2255 4835\* Hong Kong 400-820-5835 India (91) 80 30792600 Italy 00800 2255 4835\* Japan 81 (3) 6714-3010 Luxembourg +41 52 675 3777 Mexico, Central/South America & Caribbean (52) 55 53 35 10 85 Middle East and Africa +41 52 675 3777 The Netherlands 00800 2255 4835\* Norway 800 16098 People's Republic of China 400-820-5835 Poland +41 52 675 3777 Portugal 80 08 12370 Republic of Korea 82 (2) 6917-5000 Russia & CIS +7 (495) 7484900 South Africa +41 52 675 3777 Spain 00800 2255 4835\* Sweden 00800 2255 4835\* Switzerland 00800 2255 4835\* Taiwan 886 (2) 2722-9622 United Kingdom & Ireland 00800 2255 4835\* USA 1-800-833-9200 \* European toll-free number. If not accessible, call: +41 52 675 3777 Contact List Updated 09 December 2009

For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tektronix.com

Copyright © 2010, Tektronix. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

1/10 Internal/WWW

2PW-24918-0

