## Using AERO.10/100/2000/soft to create a 'cleared' feed.

Date: 2/4/16

## Background

Many broadcast feeds also go to the Internet. Sometimes the feeds are live and sometimes they are delayed. Either way there are often broadcast rights associated with the content. While it is typical for broadcasters to own the rights, or secure the rights, for program content, the commercials and other interstitial elements may also have broadcast rights associated with them. An announcers voice track or a music bed may not be cleared for use on the Internet without additional fees being paid. An engineer at one of our client's facilities came up with a unique use for the Local Replace feature on AERO loudness controllers.

The AERO DRC Local (DRC Program 3 in AERO.10) associated with Input 9/10, has a Local operating mode. A source routed to Input 9/10 can replace the programing on DRC Program 1 or DRC Program 2 or both. The Replace mode can be controlled manually, using GPI, or automatically. When placed in the auto mode, called Vox, audio on Input 9/10 will automatically trigger replacement. When Input 9/10 is silent, Program 1 (and/or Program 2) will return the normal program source.

#### Solution

There are two parts to the solution.

First, the AERO.10 loudness controllers were placed in-line with the SDI feed(s) to the codecs feeding the Internet. An unused, embedded audio pair was routed to AERO.10 input 9/10. DRC Local was placed in Local and Vox with the Duck Level set to Mute Program.

The second part requires cleared, or sanitized, audio to be placed in the SDI stream on the designated pair, wherever there is content that cannot be sent to the Internet. Whenever the sanitized audio appears it automatically replaces the program audio. When the sanitized audio stops the normal audio program returns.

## Configuration

Using NfRemote, navigate to Instance 1 > Input > Source and select the embedded pair with the sanitized audio. In Figure 1, below, SDI 11/12 is selected as the source for Input 9/10.

Aero 2000 - A2K-402072 - NrRemote														
Ц	Lacation: Rack CP		GPU	U Load: 12 % Client Volume: 0.0 dB			Headphone Vol: 0.0 dB Instance I - AES In 1/2 Client CPU Usage: 3%			1% N	lenu 1	2 3	4 5	6 5
Hardware I/O Mete 12 0 -12 -24 -36 -46 -66 <u>AES</u> A	rs IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	12 0 -12 -24 -36 -48 -48 -48 -48 -48 -48 -48 -48 -48 -48	AES SDI	THE TOP	DRC - Program 1 - TV 3 12 0 +12 -24 -36 -60 Input	38 LIGHT-5.1 HD Eaπ 18 0 12 -6 -6 -12 0 -18 -6 -24 12 AG Multiband	0 -2 -4 -6 -6 -10 -12 Final Limiter	12 0 -12 -24 -36 -48 -48 -40 Output	24 16 12 6 0 4 -12 -18 -24 DRC	Ness Program 1 423630	-24 -18 -12 -6 0	0 -6 -12 -18 -24 -30 -36 -42 -48 -9gm 1	P1 -23.5 LKFS Readout	Stop Readout 2
Instance 1	Instance 2	Instance 3	Output Routing	System	Client Audio	Input	UMX P1	DRC Pgm 1	DRC Pgm 2	DRC Local	UMX Local	Nielsen Watermk	Outp	ut
Source Dolby Decoder Bitst				Bitstre	am Bypass Input Switches Install			Installed	alled Options TCP Link Status			Display Settings		
	Input 1/2: SDI 1/2									-				
Input 3/4: SDI 3/4  Return A: AES 1/2										-				
Input 5/6: SDI 5/6							Return B: AES 3/4							-
Input 7/8: Off									Bitstrea	am Bypass I	nput: Off			-

Figure 1 Source Selection

Next configure Local Mode. See Figure 2, below.

- 1. Navigate to Instance 1 > Output > Local.
- 2. Set 9/10 Input Mode: Local using the 9/10 Input drop-down.
- 3. Set Local Audio Override to Vox for 9/10 input audio to trigger the override.
- 4. Set the Destination to Program 1 or Program 1 and Program 2, as shown below.
- 5. Set Source to Stereo.
- 6. Setting Vox Holdoff to the minimum value of 0.1 seconds so that 9/10 input audio replaces program content in 0.1 seconds.
- 7. Setting Crossfade Speed: Quick makes the switch back to program audio fast but not fast enough to jump back during a pause in the sanitized audio. Slower speeds can be selected if pauses in the sanitized audio cause unintended returns to program audio.
- 8. Setting Duck: Mute Program removes all program audio during replacement by sanitized audio.
- 9. In the example configuration upmixing of the sanitized audio is enabled. This may be disabled is upmixing is not desired.

Aero.2000 - A2K-402072 - NfRemote														
ել	Instance 1 Location: Rack		CPU Load: 11 %		Client Volume:	Client Volume: 0.0 dB		: 0.0 dB S In 1/2	Olient OPU Usage: 5%	Menu	1	2 3	4 5	6 🔮
Hardware I/O Meter 12 0 -12 -24 -36 -48 -60 <u>AE5</u> AB	s ES SDI S	12 0 -12 -24 -36 -48 -48 -46 -40 -AES	AES SOI	SD1 HP	DRC - Program 1 - TV SB L 12 0 +18 -12 -12 -12 -12 -12 -12 -12 -12	IGHT-5.1 HO East 0 -6 -12 -18 -38 -24 - G Multiband	0' 	12 0 -12 -24 -36 -48 -60 Output	24 18 12 6 0 -6 -12 -24 -24 -24 -24 -24 -24 -24 -2	Program 1 . 42 -36 -30 -24	-18 -12 -6 0	0 -6 -12 -24 -30 -36 -42 -48 Pgm 1	P1 -26.5 LKFS Readout	Stop Readout 2
Instance 1	Instance 2	Instance 3	Output Routing	System	Client Audio	Input	UMX P1	DRC Pgm 1	DRC Pgm 2	DRC Local	UMX Local	Nielsen Watermk	Outpu	ut
Output 7/8 Local Output Target DD+ 9/10 Level Encoder					DD+ Co Decod	DD+ Conf Loudness Test Tones Output TCP Link Displa Decode Meter Test Tones Delay Status Settin					Display Settings	5		
		9/10 Inp	out Mode: Loc	al			Vox Holdoff: 0.1 seconds							
Local Audio Override: Vox							Crossfade Speed; Quick							
Destination: Programs 1+2							Duck: Mute Program							
Source: Stereo									U	omix Enable				

Figure 2 Local Override configuration

# Save the Configuration

Navigate to System > System > Backup

Click Backup (Download) Configuration and save the current configuration to your computer.

Aero.2000 - A2K-40	2072 - NfRemote										- øx
L7	Instance 1 Location: Rack	CPU Load: 11 %	Client Volume: 0,0 dB Fi		eadphone Vol: 0.0 dB Instance 1 - AES In 1/2		Client CPU Usage: 4%		1 2	3 4 5	6 🔮
Hardware 1/0 Meters 1/2 -1/2 -2/4 -3/6 -4/8 -4/8 -4/8 -4/8 -4/8 -4/8 -4/8 -4/8	5D1 5D2 AE5	AES SDI SDI HP	DRC - Program 1 - TV SB L 2 -12 -24 -36 -46 -60 -12 -12 -24 -6 -6 -6 -12 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7	IGHT-5.1 HD East 0 	12 0 -12 -24 -36 -46 -40 -40 Out	24 18 12 6 0 -6 -12 -12 -18 -18 -24 tput D	Loudness Pro F M S	gram 1 -42, -36, -30, -24	1 -18 -12 -6 0 0 -6 -12 - -12 - -30 -30 -36 -47 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9 -9	P1 23.0 LKFS Readout	Stop Resdout 2
Instance Ins 1	ance Instance 2 3	Output Routing System	Client Audio	System	I/O Setup	G	PI	Network Access	File Recorder	Time	
System Information	Network Information	Dolby Information	SDI Status	Backup	Maintena	ance	License I	¢ey	Audio I/O Status	TCP Link Status	
		Backup (Download) Configuration									
	Restore (Upload) Configuration										
			IP configuration: Retain								
			Password: Retain								

Figure 3 Backup Configuration