

Verify if Hardware Echo Cancellation is being used

1. Verify that your Sangoma card has hardware echo cancellation by typing the following in your Linux command line
-> **wanrouter hwprobe**

at the end of the output if you see:

HWEC=0 <---no hardware echo cancellor

HWEC= <anything not 0> <---you have hardware echo cancellation

Example of "wanrouter hwprobe" for card with Hardware echo cancellation:

```
-----  
| Wanpipe Hardware Probe Info |  
-----  
1 . AFT-A108-SH : SLOT=1 : BUS=5 : IRQ=17 : CPU=A : PORT=1 :  
HWEC=256 : V=43  
2 . AFT-A108-SH : SLOT=1 : BUS=5 : IRQ=17 : CPU=A : PORT=2 :  
HWEC=256 : V=43  
3 . AFT-A108-SH : SLOT=1 : BUS=5 : IRQ=17 : CPU=A : PORT=3 :  
HWEC=256 : V=43  
4 . AFT-A108-SH : SLOT=1 : BUS=5 : IRQ=17 : CPU=A : PORT=4 :  
HWEC=256 : V=43
```

2. To verify if the hardware echo cancellation is activated, type the following command
-> **wanpipemon -i wXg1 -c ehw** (where X=1,2,3..for interface. ie w1g1)

If your hardware echo cancellor is activated and being used, the output should show the following for all your channels:

```
wanpipemon -i w1g1 -c ehw  
  
Sangoma HW Echo Canceller is enabled for channel 2  
Sangoma HW Echo Canceller is enabled for channel 3  
Sangoma HW Echo Canceller is enabled for channel 4  
.....
```

If your Sangoma card does NOT have hardware echo cancellation activated, you will see:

Sangoma HW Echo Canceller is disabled for all channels!

This means hardware echo cancellation is disabled, not used.

To troubleshoot this edit the following file by typing:

-> vi /etc/wanpipe/wanpipeX.conf (replace X with 1,2,3,4...)

Near the end of each file **TDMV_HWEC= YES** indicates proper active setting:

```
[w1g1]  
ACTIVE_CH          = ALL  
TDMV_HWEC         = YES  
MTU                = 8
```

- > If TDMV_HWEC=NO, change to YES, then restart wanpipe by typing "wanrouter restart" (make sure Asterisk/FreeSWITCH is stopped first)
- > If TDMV_HWEC=YES and you still have this issue, restart wanpipe:
 - > `wanrouter restart` (make sure Asterisk/FreeSWITCH is stopped first)
 - > run `wanpipemon -i wXg1 -c ehw` again and see if issue is resolved
 - > if issue not resolved, please contact [Sangoma Technical Support](#)

For Customers using Asterisk

-> If `wanpipemon -i wXg1 -c ehw` indicates echo cancellation is enabled, Dahdi software echo cancellation is NOT used. Disregard the MG2 /OSLEC information in `/etc/dahdi/system.conf`:

```
#Sangoma A104 port 1 [slot:1 bus:7 span:1] <wanpipe1>
span=1,1,0,esf,b8zs
bchan=1-23
echocanceller=mg2,1-23
hardhdlc=24
```

Dahdi software echo cancellation is only enabled if Sangoma Hardware echo cancellation is disabled/not present. Asterisk/Dahdi checks to see if Sangoma card has hardware echo cancellation. If it does, Asterisk/Dahdi uses Hardware echo cancellation and disabled software echo cancellation. It cannot run both hardware and software echo cancellation at the same time.

A further check to verify software echo cancellation is not being used:

- > During a call (with wanrouter started of course), run the following command:
 - > `lsdahdi`

The above command will indicate the live status of Dahdi's software echo cancellation for each channel
 The following is an example of "lsdahdi" during a call for a Sangoma card WITH hardware echo cancellation enabled:

```
## Span 1: WPT1/0 "wanpipe1 card 0" B8ZS/ESF
 1 PRI      Clear      (In use) (EC: MG2 - INACTIVE)
 2 PRI      Clear      (In use) (EC: MG2 - INACTIVE)
 3 PRI      Clear      (In use) (EC: MG2 - INACTIVE)
 4 PRI      Clear      (In use) (EC: MG2 - INACTIVE)
```

If software echo cancellation was enabled and being used instead of Hardware echo cancellation, the above output would have indicated:
 -> (EC: MG2 - **ACTIVE**)