

Kits 4 Hams Suggested SHARI Settings When Using HamVOIP

After comprehensive distortion measurements, we concluded that the SHARI receive audio is slightly better if the pre/de-emphasis is done in the SA818 instead of by HamVOIP.

We also found that the transmit audio is slightly improved if Volume is set to 6 instead of 8. Squelch is set to 6 so that low level on channel signals are less likely to activate COS. Use a lower value if you need to operate at a greater distance from the node.

Recent testing has also suggested that higher CTCSS frequencies increase the possibility of CTCSS falsing so we now suggest a CTCSS frequency of 91.5 Hz. However, be aware that CTCSS frequencies below 91.5 Hz begin to be distorted, being worst at the lowest possible CTCSS tone. This distortion causes low level hum in the TX audio.

Here are the new SA818 values we recommend. Of course, RF frequency, Subaudible CTCSS or CTCSS and Reverse burst are ultimately user preferences.

We suggest you use these values when you first program the SA818S in a kit. They are the values we use in an assembled SHARI.

Since filtering and pre/de-emphasis is turned on in the SA818, you need to turn them off in HamVoip. So you should use the following settings in your simpleusb-tune-menu if you use the above SA818 settings:

CTCSS: 91.5 Hz Reverse Burst: n Squelch Value: 6 Volume Value: 6 PreEmphasis Enabled: y High Pass Enabled: y Low Pass Enabled: y

```
Active simpleusb device stanza: [usb] -----
S) Select active USB device stanza
V) View COS, CTCSS and PTT Telemetry using real-time display
P) Print Current Parameter Values ---- 2) Set Rx Voice Level (using display)
3) Set Transmit A Level ---- 4) Set Transmit B Level
5) Set Tx Audio Level Method (currently LOG)
7) Set Transmit DSP Level
B) Toggle RX Boost Mode (currently Disabled)
C) Toggle Echo Mode (currently Disabled)
D) Flash (Toggle PTT and Tone output several times)
E) Toggle Transmit Test Tone/Keying (currently Disabled)
K) Manually key COS (currently Unkeyed)
F) Toggle PRE-emphasis Mode (currently Disabled)
G) Toggle DE-emphasis Mode (currently Disabled)
H) Toggle PLfilter Mode (currently Disabled)
Q) Toggle DCSfilter Mode (currently Disabled)
I) Toggle PTT Mode (currently active LOW)
J) Change COSFROM Mode (currently "usbinvert")
L) Change CTCSSFROM Mode (currently "no")
M) Change RXONDELAY value (currently "0")
N) Change RXAUDIODELAY value (currently "0")
W) Write (Save) Current Parameter Values
0) Exit Menu
```