

V1. 2026-4-8 @BI7JTA DV2fm for SVXLink settings template.

1 SVXLink Template :

vi /etc/svxlink/svxlink.d/ModuleEchoLink.conf

[ModuleEchoLink]

NAME=EchoLink

ID=2

TIMEOUT=60

#ALLOW_IP=192.168.1.0/24

#DROP_INCOMING=^()\$

#REJECT_INCOMING=^()\$

#ACCEPT_INCOMING=^(.*)\$

#REJECT_OUTGOING=^()\$

#ACCEPT_OUTGOING=^(.*)\$

#REJECT_CONF=0

#CHECK_NR_CONNECTS=2,300,120

SERVERS=servers.echolink.org

#PROXY_SERVER=the.proxy.server

#PROXY_PORT=8100

#PROXY_PASSWORD=PUBLIC

#BIND_ADDR=10.20.30.40

MAX_QSOS=10

MAX_CONNECTIONS=11

LINK_IDLE_TIMEOUT=300

#AUTOCON_ECHOLINK_ID=9999

#AUTOCON_TIME=1200

#USE_GSM_ONLY=1

#DEFAULT_LANG=en_US

#COMMAND_PTY=/dev/shm/echolink_ctrl

DESCRIPTION="You have connected to a SvxLink node,\n"

"a voice services system for Linux with EchoLink\n"

"support.\n"

"Check out <http://svxlink.sf.net/> for more info\n"

"\n"

"QTH: My_QTH\n"

"QRG: Simplex link on ??? ??? MHz\n"

"CTCSS: My_CTCSS_fq_if_any Hz\n"

"Trx: My_transceiver_type\n"

"Antenna: My_antenna_brand/type/model\n"

-R for SVXlink in openWebRXplus desktop, -L for Allstarlink visual node

CALLSIGN=BI7JTA-R
PASSWORD=*****
SYSOPNAME=BI7JTA-R
LOCATION=SVXlink/Power-SDR

cat /etc/svxlink/svxlink.conf

```
#####  
#####  
#                                     #  
#           Configuration file for the SvxLink server           #  
#                                     #  
#####  
#####  
  
[GLOBAL]  
#MODULE_PATH=/usr/lib/arm-linux-gnueabi/hf/svxlink  
LOGICS=SimplexLogic,ReflectorLogic  
LINKS=ReflectorLink  
CFG_DIR=svxlink.d  
TIMESTAMP_FORMAT="%c"  
CARD_SAMPLE_RATE=48000  
#CARD_CHANNELS=2  
LOCATION_INFO=LocationInfo  
  
[SimplexLogic]  
TYPE=Simplex  
RX=Rx1  
TX=Tx1  
MODULES=ModuleHelp,ModuleParrot,ModuleEchoLink,ModuleTclVoiceMail  
CALLSIGN=BI7JTA-R  
SHORT_IDENT_INTERVAL=60  
LONG_IDENT_INTERVAL=60  
#IDENT_ONLY_AFTER_TX=4  
#EXEC_CMD_ON_SQL_CLOSE=500  
EVENT_HANDLER=/usr/share/svxlink/events.tcl  
DEFAULT_LANG=en_US  
RGR_SOUND_DELAY=100  
#REPORT CTCSS=136.5  
#TX CTCSS=ALWAYS  
MACROS=Macros  
FX_GAIN_NORMAL=0  
FX_GAIN_LOW=-12
```

```
#ACTIVATE_MODULE_ON_LONG_CMD=4:EchoLink
#QSO_RECORDER=8:QsoRecorder
#ONLINE_CMD=998877
#MUTE_RX_ON_TX=1
#MUTE_TX_ON_RX=1
#STATE_PTY=/var/run/svxlink/state
DTMF_CTRL_PTY=/dev/shm/simplex_dtmf_ctrl

[RepeaterLogic]
TYPE=Repeater
RX=NONE
TX=NONE
MODULES=ModuleHelp,ModuleParrot,ModuleEchoLink,ModuleTclVoiceMail
CALLSIGN=BI7JTA-R
SHORT_IDENT_INTERVAL=10
LONG_IDENT_INTERVAL=60
#IDENT_ONLY_AFTER_TX=4
#EXEC_CMD_ON_SQL_CLOSE=500
EVENT_HANDLER=/usr/share/svxlink/events.tcl
DEFAULT_LANG=en_US
RGR_SOUND_DELAY=100
#REPORT CTCSS=136.5
#TX CTCSS=SQL_OPEN
MACROS=Macros
#SEL5_MACRO_RANGE=03400,03499
FX_GAIN_NORMAL=0
FX_GAIN_LOW=-12
#QSO_RECORDER=8:QsoRecorder
#NO_REPEAT=1
IDLE_TIMEOUT=30
OPEN_ON_1750=1000
#OPEN_ON CTCSS=136:2000
#OPEN_ON_DTMF=*
#OPEN_ON_SQL=5000
#OPEN_ON_SEL5=01234
#OPEN_SQL_FLANK=OPEN
#OPEN_ON_SQL_AFTER_RPT_CLOSE=10
IDLE_SOUND_INTERVAL=3000
#SQL_FLAP_SUP_MIN_TIME=1000
#SQL_FLAP_SUP_MAX_COUNT=10
#ACTIVATE_MODULE_ON_LONG_CMD=4:EchoLink
#IDENT_NAG_TIMEOUT=15
#IDENT_NAG_MIN_TIME=2000
#ONLINE_CMD=998877
```

#STATE_PTY=/var/run/svxlink/state
#DTMF_CTRL_PTY=/dev/shm/repeater_dtmf_ctrl

[ReflectorLogic]

TYPE=Reflector
HOST=reflector-sm.svxlink.org
PORT=5300
CALLSIGN=BI7JTA
AUTH_KEY="h1*****"
AUDIO_CODEC=OPUS
MONITOR_TGS=91
EVENT_HANDLER=/usr/share/svxlink/events.tcl
NODE_INFO_FILE=/etc/svxlink/node_info.json

[ReflectorLink]

CONNECT_LOGICS=SimplexLogic:9:REF,ReflectorLogic
DEFAULT_ACTIVE=1
#TIMEOUT=3600
#AUTOACTIVATE_ON_SQL=LinkTRX
#NO_DEACTIVATE=1

[LinkToR4]

CONNECT_LOGICS=RepeaterLogic:94:SK3AB,SimplexLogic:92:SK3CD
#DEFAULT_ACTIVE=1
TIMEOUT=300
#AUTOACTIVATE_ON_SQL=RepeaterLogic

[Macros]

1=EchoLink:9999#
9=Parrot:0123456789#
03400=EchoLink:9999#

[QsoRecorder]

REC_DIR=/var/spool/svxlink/qso_recorder
#MIN_TIME=1000
MAX_TIME=3600
SOFT_TIME=300
MAX_DIRSIZE=1024
#DEFAULT_ACTIVE=1
#TIMEOUT=300
#QSO_TIMEOUT=300
#ENCODER_CMD=/usr/bin/oggenc -Q \"%f\" && rm \"%f\"

[Voter]

TYPE=Voter
RECEIVERS=Rx1,Rx2,Rx3

VOTING_DELAY=200
BUFFER_LENGTH=0
#REVOTE_INTERVAL=1000
#HYSTERESIS=50
#SQL_CLOSE_REVOTE_DELAY=500
#RX_SWITCH_DELAY=500
#COMMAND_PTY=/dev/shm/voter_ctrl

[MultiTx]
TYPE=Multi
TRANSMITTERS=Tx1,Tx2,Tx3

[NetRx]
TYPE=Net
HOST=remote.rx.host
TCP_PORT=5210
#LOG_DISCONNECTS_ONCE=0
AUTH_KEY="Change this key now!"
CODEC=S16
#SPEEX_ENC_FRAMES_PER_PACKET=4
#SPEEX_ENC_QUALITY=4
#SPEEX_ENC_BITRATE=15000
#SPEEX_ENC_COMPLEXITY=2
#SPEEX_ENC_VBR=0
#SPEEX_ENC_VBR_QUALITY=4
#SPEEX_ENC_ABR=15000
#SPEEX_DEC_ENHANCER=1
#OPUS_ENC_FRAME_SIZE=20
#OPUS_ENC_COMPLEXITY=10
#OPUS_ENC_BITRATE=20000
#OPUS_ENC_VBR=1

[NetTx]
TYPE=Net
HOST=remote.tx.host
TCP_PORT=5210
#LOG_DISCONNECTS_ONCE=0
AUTH_KEY="Change this key now!"
CODEC=S16
#SPEEX_ENC_FRAMES_PER_PACKET=4
#SPEEX_ENC_QUALITY=4
#SPEEX_ENC_BITRATE=15000
#SPEEX_ENC_COMPLEXITY=2
#SPEEX_ENC_VBR=0
#SPEEX_ENC_VBR_QUALITY=4

```
#SPEEX_ENC_ABR=15000
#SPEEX_DEC_ENHANCER=1
#OPUS_ENC_FRAME_SIZE=20
#OPUS_ENC_COMPLEXITY=10
#OPUS_ENC_BITRATE=20000
#OPUS_ENC_VBR=1

[Rx1]
TYPE=Local
AUDIO_DEV=alsa:plughw:2 #the first sound card, check use command: aplay -l
AUDIO_CHANNEL=0 #Left channel
AUDIO_DEV_GAIN=-6.0
SQL_DET=SERIAL
SQL_START_DELAY=0
SQL_DELAY=0
SQL_HANGTIME=2000
#SQL_EXTENDED_HANGTIME=1000
#SQL_EXTENDED_HANGTIME_THRESH=15
SQL_TIMEOUT=600
#VOX_FILTER_DEPTH=20
#VOX_THRESH=1000
#CTCSS_MODE=2
CTCSS_FQ=88.5
#CTCSS_SNR_OFFSET=0
#CTCSS_OPEN_THRESH=15
#CTCSS_CLOSE_THRESH=9
#CTCSS_BPF_LOW=60
#CTCSS_BPF_HIGH=270
SERIAL_PORT=/dev/ttyUSB0
#SERIAL_PIN=CTS:SET
#SERIAL_PIN=DTR
SERIAL_PIN=DSR
#SERIAL_SET_PINS=DTR!RTS
#SERIAL_SET_PINS=DTR!RTS
#EVDEV_DEVNAME=/dev/input/by-id/usb-SYNIC_SYNIC_Wireless_Audio-event-if03
#EVDEV_OPEN=1,163,1
#EVDEV_CLOSE=1,163,0
#GPIO_PATH=/sys/class/gpio
#GPIO_SQL_PIN=gpio30
#PTY_PATH=/tmp/rx1_sql
#HID_DEVICE=/dev/hidraw3
#HID_SQL_PIN=VOL_UP
SIGLEV_DET=TONE
```

```
SIGLEV_SLOPE=1
SIGLEV_OFFSET=0
#SIGLEV_BOGUS_THRESH=120
#TONE_SIGLEV_MAP=100,84,60,50,37,32,28,23,19,8
SIGLEV_OPEN_THRESH=30
SIGLEV_CLOSE_THRESH=10
DEEMPHASIS=0
#SQL_TAIL_ELIM=300
#PREAMP=6
PEAK_METER=1
DTMF_DEC_TYPE=INTERNAL
DTMF_MUTING=1
DTMF_HANGTIME=40
DTMF_SERIAL=/dev/ttyS0
#DTMF_PTY=/tmp/rx1_dtmf
#DTMF_MAX_FWD_TWIST=8
#DTMF_MAX_REV_TWIST=4
#1750_MUTING=1
#SEL5_DEC_TYPE=INTERNAL
#SEL5_TYPE=ZVEI1
#FQ=433475000
#MODULATION=FM
#WBRX=WbRx1
```

```
[WbRx1]
#TYPE=RtlUsb
#DEV_MATCH=0
#HOST=localhost
#PORT=1234
#CENTER_FQ=435075000
#FQ_CORR=0
#GAIN=0
#PEAK_METER=1
#SAMPLE_RATE=960000
```

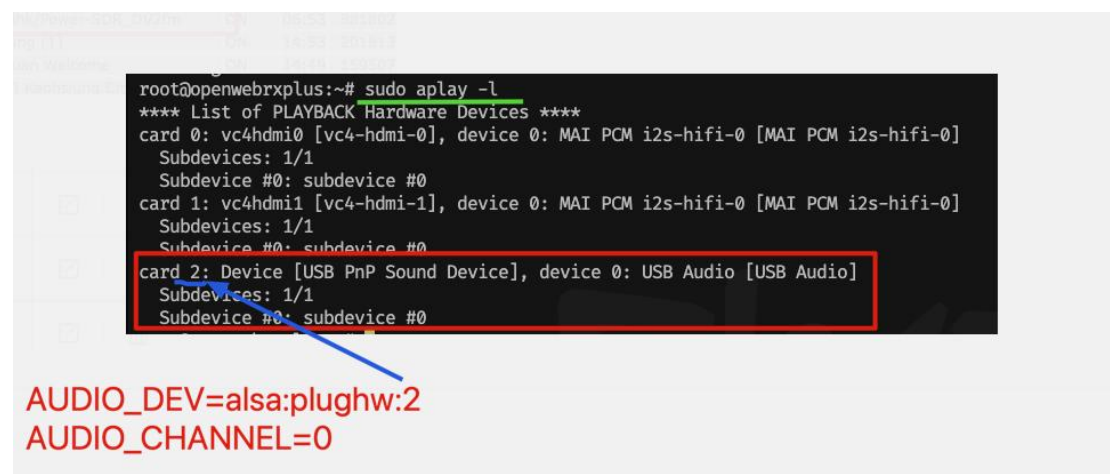
```
[Tx1]
TYPE=Local
AUDIO_DEV=alsa:plughw:2 #the first sound card, check use command: aplay -l
AUDIO_CHANNEL=0 #Left channel
PTT_TYPE=SerialPin
PTT_PORT=/dev/ttyUSB0
#PTT_PIN=DTRRTS
PTT_PIN=RTS
#HID_DEVICE=/dev/hidraw3
#HID_PTT_PIN=GPIO3
```

```

#SERIAL_SET_PINS=DTR!RTS
#GPIO_PATH=/sys/class/gpio
#PTT_HANGTIME=1000
TIMEOUT=300
TX_DELAY=500
#CTCSS_FQ=136.5
#CTCSS_LEVEL=9
PREEMPHASIS=0
DTMF_TONE_LENGTH=100
DTMF_TONE_SPACING=50
DTMF_DIGIT_PWR=-15
#MASTER_GAIN=0.0

[LocationInfo]
APRS_SERVER_LIST=asia.aprs2.net:14580
STATUS_SERVER_LIST=aprs.echolink.org:5199
LON_POSITION=12.10.00E
LAT_POSITION=51.10.00N
CALLSIGN=EL-BI7JTA
FREQUENCY=438.875
TX_POWER=8
ANTENNA_GAIN=6
ANTENNA_HEIGHT=20m
ANTENNA_DIR=-1
PATH=WIDE1-1
BEACON_INTERVAL=10
TONE=136
COMMENT=SvxLink by SMOSVX (www.svxlink.org)

```



```

root@openwebrxplus:~# sudo aplay -l
**** List of PLAYBACK Hardware Devices ****
card 0: vc4hdmi0 [vc4-hdmi-0], device 0: MAI PCM i2s-hifi-0 [MAI PCM i2s-hifi-0]
  Subdevices: 1/1
  Subdevice #0: subdevice #0
card 1: vc4hdmi1 [vc4-hdmi-1], device 0: MAI PCM i2s-hifi-0 [MAI PCM i2s-hifi-0]
  Subdevices: 1/1
  Subdevice #0: subdevice #0
card 2: Device [USB PnP Sound Device], device 0: USB Audio [USB Audio]
  Subdevices: 1/1
  Subdevice #0: subdevice #0

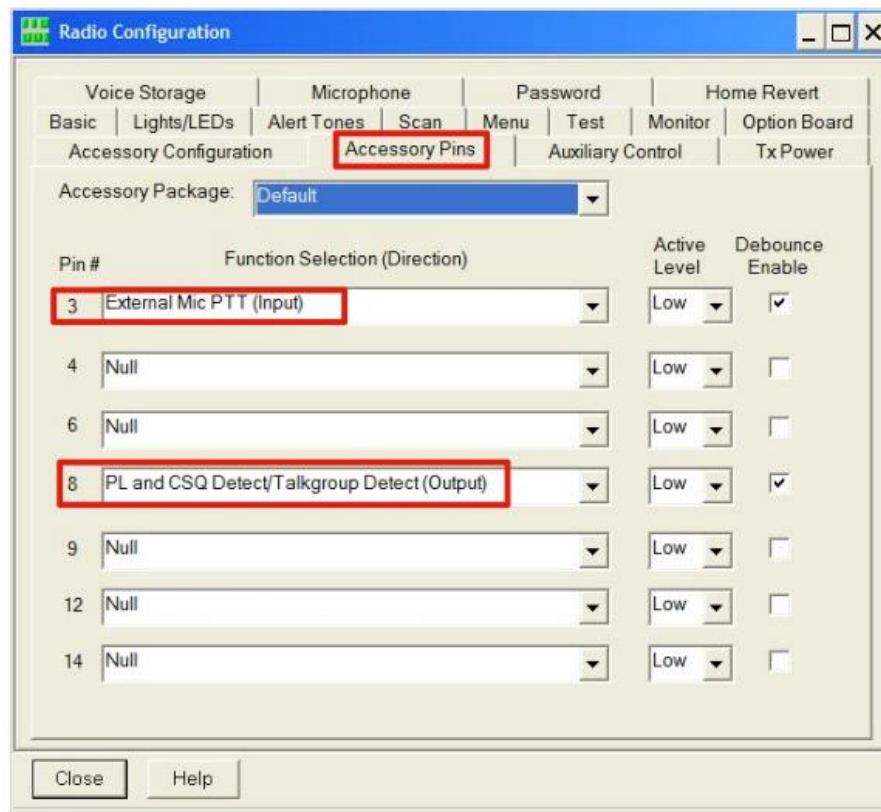
```

AUDIO_DEV=alsa:plughw:2
AUDIO_CHANNEL=0

2 Radio Programming :

Motorola GM340 GM360, CDM1550 CDM1250 serial 16PINS settings .

CDM-1250 "CPS" programming setting:



Accessories Terminal Settings by CPS:

RX Audio Type : Filtered Squelch

GMxx 16PINS connector

Pin #3 : Ext Mic PTT Action Level : Low

Pin #8 : PL/Talkgroup Detect Action Level : Low

XPR4550 20PINS connector

Pin #17 : Ext Mic PTT Action Level : Low

Pin #21 : PL/Talkgroup Detect Action Level : Low

3, DV2fm



****Existing issues:****

1. In alsamixer, the MIC gain cannot be set too high; otherwise, the noise becomes significant. This issue occurs when the MIC is in non-FLAT mode, but does not occur in FLAT mode.
2. Although there is no current noise, a strong noise remains after enabling squelch. The problem persists even after replacing the radios with MCX760 and CDM1250. It is necessary to test with FT-7800 (which works normally).
Power supply interference has been ruled out, as the same behavior occurs when using battery power.

Before configuring SVXLink, test the audio input:

```

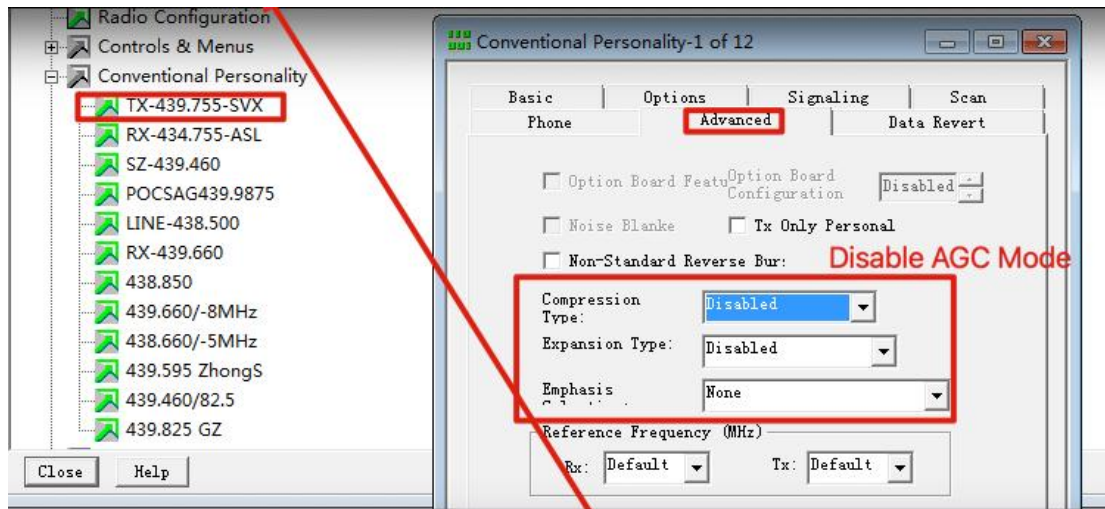
bash
arecord -D plughw:2,0 -f cd test.wav # Record (stop the svxlink service first)
aplay test.wav                      # Playback – the noise is found to be very loud

```

Is the issue due to the Motorola connector?

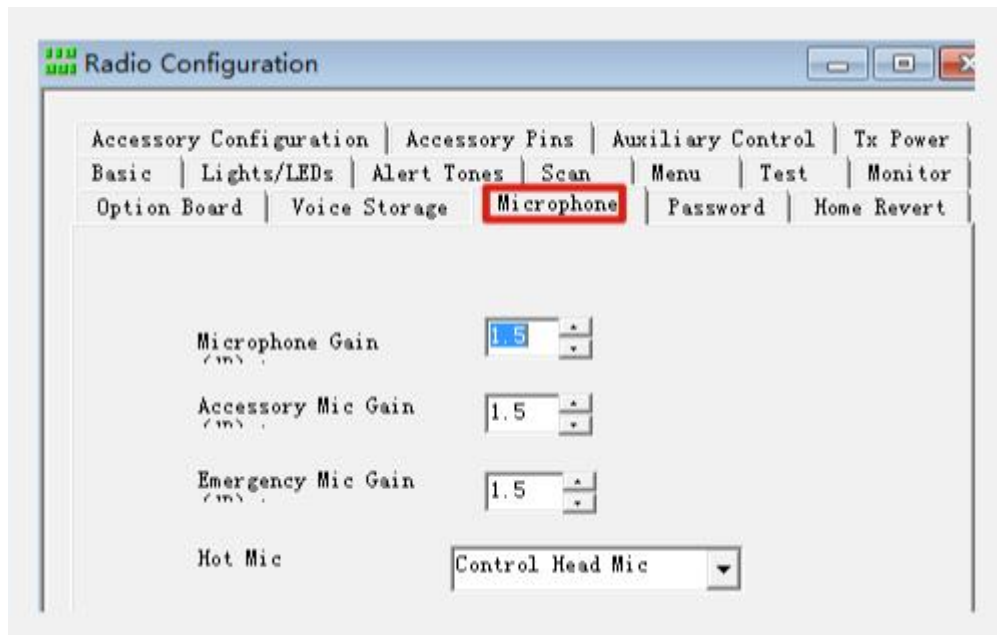
****Solution:****

Set the Mic Gain of the MCX760 to the minimum of 1.5 (as shown in the figure); then recording becomes normal.

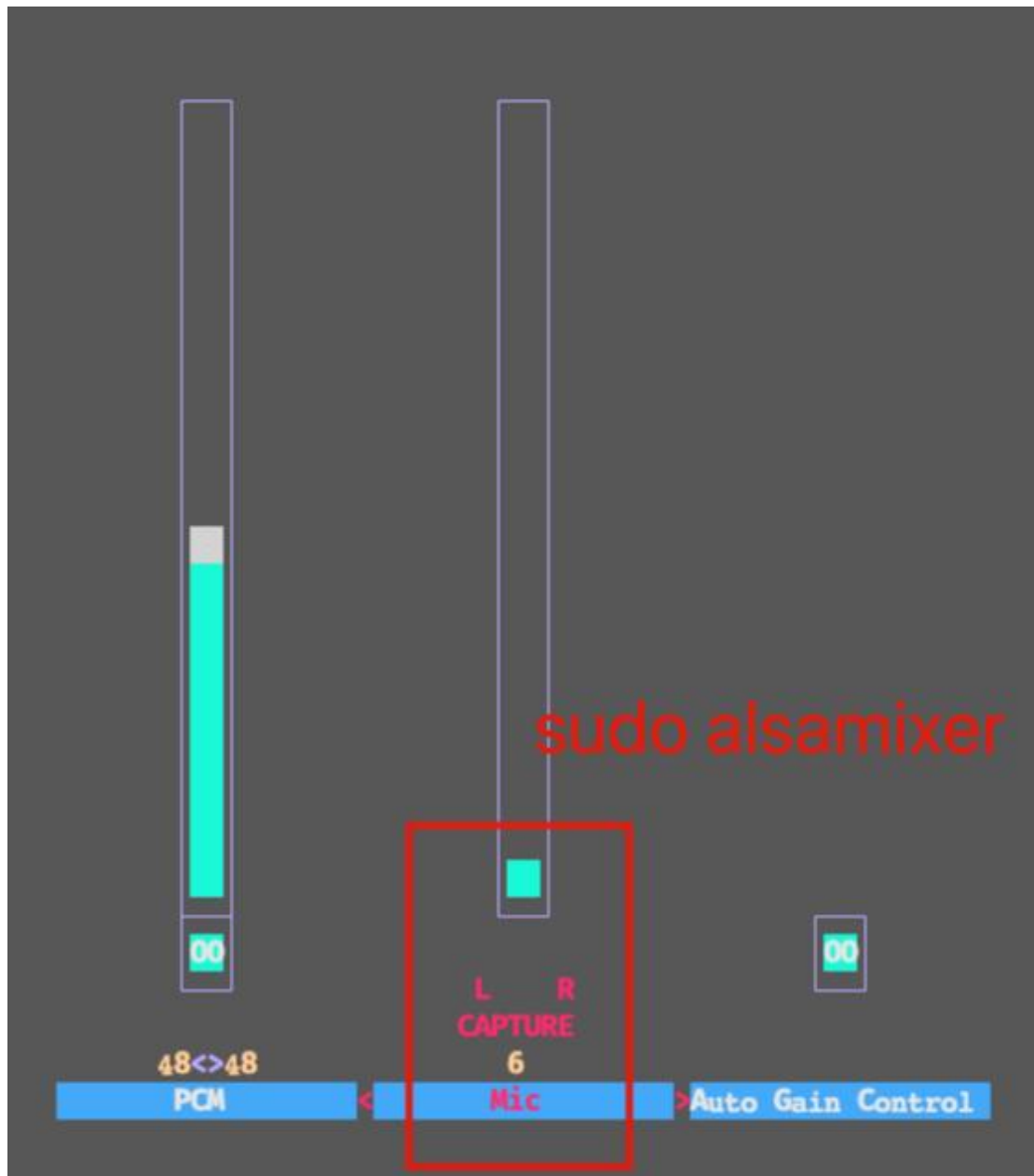


Important function microphone settings:

System audio management interface, do not select the microphone to enhance or AGC, if you select the option, the audio of other party will be very loud and noisy



The Raspberry Pi's Mic Gain has little effect on the issue.
Set the Raspberry Pi's Mic Gain to 6.



4, Test and view logs .