

OsmoTRX - Bug #3861

fix function call ordering to support LimeSuite 19.01

03/25/2019 06:52 PM - roh

Status: Resolved	Start date: 03/25/2019
Priority: Normal	Due date:
Assignee: sysmocom	% Done: 100%
Category: LimeSDR	
Target version:	
Spec Reference:	
Description	
LimeSuite 19.01 does enforce the order functions are called more strictly now. this results in failing filter calibrations which makes it not adhere to the envelope and generates a lot of phase noise. i requested some help from lime, and started to reorder the function calls accordingly: <ul style="list-style-type: none">• setting the reference clock needs to happen before LMS_Init()• setting the filters and doing calibrations on the channels needs to happen after setting the frequency etc. i thus moved filtersetting and calibrations from LMSDevice::open to LMSDevice::start and pushed the external clock calls to happen before LMS_init().	
Related issues:	
Related to OsmoTRX - Bug #3341: osmo-trx-lms RF Envelope FAIL on LimeSDR, but...	Stalled 06/13/2018
Blocks OsmoTRX - Bug #3775: properly debug limesdr usb and limesdr mini clock...	Stalled 01/31/2019

History

#1 - 03/25/2019 06:54 PM - roh

the attached patch is a test, but it currently still fails tx calibration.

note: it does not start up completely like before moving the functions (silently fails) but loops in the error state.

is there documentation about the behaviour of the osmo-trx in case of drivers reporting errors?

```
./osmo-trx-lms -C /etc/osmocom/osmo-trx-lms.cfg
Info: SSE3 support compiled in and supported by CPU
Info: SSE4.1 support compiled in and supported by CPU
Mon Mar 25 18:14:39 2019 DLGLOBAL <0004> telnet_interface.c:104 Available via telnet 127.0.0.1 4237
Mon Mar 25 18:14:39 2019 DLCTRL <000b> control_if.c:911 CTRL at 127.0.0.1 4236
Mon Mar 25 18:14:39 2019 DMAIN <0000> osmo-trx.cpp:431 [tid=140333477924672] Config Settings
  Log Level..... 0
  Device args.....
  TRX Base Port..... 5700
  TRX Address..... 127.0.0.1
  GSM BTS Address..... 127.0.0.1
  Channels..... 1
  Tx Samples-per-Symbol... 4
  Rx Samples-per-Symbol... 4
  EDGE support..... 0
  Extended RACH support... 0
  Reference..... 0
  C0 Filler Table..... 1
  Multi-Carrier..... 0
  Tuning offset..... 0
  RSSI to dBm offset..... 0
  Swap channels..... 0
  Tx Antennas..... 'BAND1'
  Rx Antennas..... 'LNAW'
```

```
Mon Mar 25 18:14:39 2019 DMAIN <0000> osmo-trx.cpp:387 [tid=140333477924672] Setting SCHED_RR priority 18
Mon Mar 25 18:14:39 2019 DDEV <0002> LMSDevice.cpp:68 [tid=140333477924672] creating LMS device...
Mon Mar 25 18:14:39 2019 DDEV <0002> LMSDevice.cpp:156 [tid=140333477924672] Opening LMS device..
Mon Mar 25 18:14:39 2019 DDEV <0002> LMSDevice.cpp:162 [tid=140333477924672] Devices found: 1
Mon Mar 25 18:14:39 2019 DDEV <0002> LMSDevice.cpp:172 [tid=140333477924672] Device [0]: LimeSDR Mini, media=U
```

SB 2.0, module=FT601, addr=24607:1027, serial=1D3B7AA1A9F5CC
Mon Mar 25 18:14:39 2019 DDEV <0002> LMSDevice.cpp:181 [tid=140333477924672] Using device[0]
Mon Mar 25 18:14:40 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333477924672] Reference clock 40.00 MHz
Mon Mar 25 18:14:40 2019 DDEV <0002> LMSDevice.cpp:212 [tid=140333477924672] Init LMS device
Mon Mar 25 18:14:40 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333477924672] Sample Rate: Min=100000 Max=3.072e+07 Step=0
Mon Mar 25 18:14:40 2019 DDEV <0002> LMSDevice.cpp:222 [tid=140333477924672] Setting sample rate to 1.08333e+06 4
Mon Mar 25 18:14:40 2019 DDEV <0002> LMSDevice.cpp:228 [tid=140333477924672] Sample Rate: Host=1.08333e+06 RF=3.46667e+07
Mon Mar 25 18:14:40 2019 DMAIN <0000> LMSDevice.cpp:203 [tid=140333477924672] Antennas configured successfully
Mon Mar 25 18:14:40 2019 DMAIN <0000> Threads.cpp:116 [tid=140333478209280] Thread 140333478209280 (task 3222) set name: CtrlService0
Mon Mar 25 18:14:40 2019 DMAIN <0000> osmo-trx.cpp:479 [tid=140333477924672] -- Transceiver active with 1 channel(s)
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWEROFF'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWEROFF 0'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWEROFF'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWEROFF 0'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'RXTUNE 1782000'
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:679 [tid=140333478209280] chan 0: Setting Rx Freq to 1.782e+09 Hz
Mon Mar 25 18:15:28 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Selected RX path: LNAH
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP RX TUNE 0 1782000'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'TXTUNE 1877000'
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:667 [tid=140333478209280] chan 0: Setting Tx Freq to 1.877e+09 Hz
Mon Mar 25 18:15:28 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Selected TX path: Band 2
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP TX TUNE 0 1877000'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'SETTSC 7'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:830 [tid=140333478209280] Changing TSC from 0 to 7
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP SETTSC 0 7'
Mon Mar 25 18:15:28 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON'
Mon Mar 25 18:15:28 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:28 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:28 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:28 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:15:31 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order=4th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:32 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:32 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:15:32 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON'
Mon Mar 25 18:15:32 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:32 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...

Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:32 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:32 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:33 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:33 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:33 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:33 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:15:38 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON 1'
Mon Mar 25 18:15:38 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:38 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:38 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:38 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:38 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:38 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:15:43 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON 1'
Mon Mar 25 18:15:43 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:43 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:43 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:43 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:15:44 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:44 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:44 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:44 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:44 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:44 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop

back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:44 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:44 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POW
WERON 1'
Mon Mar 25 18:15:49 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON
,
Mon Mar 25 18:15:49 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:49 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:49 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:49 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 18:15:49 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:49 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:50 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:50 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:50 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:50 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop
back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:50 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:50 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POW
WERON 1'
Mon Mar 25 18:15:55 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON
,
Mon Mar 25 18:15:55 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:15:55 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:15:55 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 18:15:55 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:15:55 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:15:55 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:15:55 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:15:55 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:15:56 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop
back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:15:56 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:15:56 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POW
WERON 1'
Mon Mar 25 18:16:01 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON
,
Mon Mar 25 18:16:01 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:16:01 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 d
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Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0

Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4 th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:16:01 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:16:01 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:16:01 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:16:01 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:16:06 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON '
Mon Mar 25 18:16:06 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:16:06 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:16:06 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:16:06 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:16:07 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:16:07 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4 th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:16:07 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:16:07 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:16:07 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:16:07 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:16:07 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:16:07 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:16:12 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON '
Mon Mar 25 18:16:12 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:16:12 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:16:12 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:16:12 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when TIA gain is set to -12 dB
Mon Mar 25 18:16:12 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tune Rx Filter: MCU error 13 (Rx CFB_TIA_RFE range limit reached)
Mon Mar 25 18:16:12 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:16:12 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP POWERON 1'
Mon Mar 25 18:16:17 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140333478209280] chan 0: command is 'POWERON '
Mon Mar 25 18:16:17 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140333478209280] Starting the transceiver
Mon Mar 25 18:16:17 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140333478209280] Starting radio device
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:256 [tid=140333478209280] starting LMS...
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:389 [tid=140333478209280] chan 0: Setting TX gain to 36.5 dB
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:404 [tid=140333478209280] chan 0: Setting RX gain to 36.5 dB
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Rx: Min=1.4001e+06 Max=1.3e+08 Step=0
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140333478209280] LPFBWRRange Tx: Min=1.4001e+06 Max=1.3e+08 Step=0

```

=1.3e+08 Step=0
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:286 [tid=140333478209280] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 18:16:17 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140333478209280] Setting LPFBW chan 0
Mon Mar 25 18:16:17 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 18:16:17 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] RX LPF configured
Mon Mar 25 18:16:18 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 18:16:18 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] TX LPF configured
Mon Mar 25 18:16:18 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140333478209280] Calibrating chan 0
Mon Mar 25 18:16:18 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Rx calibration finished
Mon Mar 25 18:16:18 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140333478209280] Tx Calibration: MCU error 5 (Loop
back signal weak: not connected/insufficient gain?)
Mon Mar 25 18:16:18 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140333478209280] Device failed to start
Mon Mar 25 18:16:18 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140333478209280] chan 0: response is 'RSP PO
WERON 1'
^Csignal 2 received
shutting down
Mon Mar 25 18:16:21 2019 DMAIN <0000> osmo-trx.cpp:436 [tid=140333477924672] Shutting down transceiver...
Mon Mar 25 18:16:21 2019 DDEV <0002> LMSDevice.cpp:81 [tid=140333477924672] Closing LMS device
*** Error in `./osmo-trx-lms': free(): invalid next size (fast): 0x000000000154cbe0 ***
signal 6 received
talloc report on 'OsmoTRX' (total 3427 bytes in 17 blocks)
telnet_connection contains 1 bytes in 1 blocks (ref 0) 0x15b0350
logging contains 3043 bytes in 9 blocks (ref 0) 0x152c640
struct trx_ctx contains 383 bytes in 5 blocks (ref 0) 0x152c370
msgb contains 0 bytes in 1 blocks (ref 0) 0x152c300
full talloc report on 'OsmoTRX' (total 3427 bytes in 17 blocks)
telnet_connection contains 1 bytes in 1 blocks (ref 0) 0x15b0350
logging contains 3043 bytes in 9 blocks (ref 0) 0x152c640
Configure logging
Set the log level for a specified category
Main generic category
TRX CTRL interface
Device/Driver specific code
Logging from within LimeSuite itself
Library-internal global log family
LAPD in libosmogsm
A-bis Input Subsystem
A-bis B-Subchannel TRAU Frame Multiplex
A-bis Input Driver for Signalling
A-bis Input Driver for B-Channels (voice)
Layer3 Short Message Service (SMS)
Control Interface
GPRS GTP library
Statistics messages and logging
Generic Subscriber Update Protocol
Osmocom Authentication Protocol
libosmo-sigtran Signalling System 7
libosmo-sigtran SCCP Implementation
libosmo-sigtran SCCP User Adaptation
libosmo-sigtran MTP3 User Adaptation
libosmo-mgcp Media Gateway Control Protocol
libosmo-netif Jitter Buffer
Deprecated alias for 'no logging level force-all'
contains 798 bytes in 1 blocks (ref 0) 0x156a190
logging level (main|trxctrl|dev|lms|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loop
|lss7|lscpp|lsua|lm3ua|lmqcp|ljibuf) everything contains 150 bytes in 1 blocks (ref 0) 0x1569fe0
Configure logging
Set the log level for a specified category
Main generic category
TRX CTRL interface
Device/Driver specific code
Logging from within LimeSuite itself
Library-internal global log family
LAPD in libosmogsm
A-bis Input Subsystem
A-bis B-Subchannel TRAU Frame Multiplex
A-bis Input Driver for Signalling
A-bis Input Driver for B-Channels (voice)
Layer3 Short Message Service (SMS)
Control Interface
GPRS GTP library
Statistics messages and logging
Generic Subscriber Update Protocol

```

```

Osmocom Authentication Protocol
libosmo-sigtran Signalling System 7
libosmo-sigtran SCCP Implementation
libosmo-sigtran SCCP User Adaptation
libosmo-sigtran MTP3 User Adaptation
libosmo-mgcp Media Gateway Control Protocol
libosmo-netif Jitter Buffer
Log debug messages and higher levels
Log informational messages and higher levels
Log noticeable messages and higher levels
Log error messages and higher levels
Log only fatal messages
contains 933 bytes in 1 blocks (ref 0) 0x1569bd0
  logging level (main|trxctrl|dev|lms|lglobal|lllapd|linp|lmux|lmi|lmib|lmsms|lctrl|lgtp|lstats|lgsup|loap
|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf) (debug|info|notice|error|fatal) contains 171 bytes in 1 blocks (ref
0) 0x1569a20
  struct log_target contains 214 bytes in 2 blocks (ref 0) 0x152ca90
    struct log_category contains 46 bytes in 1 blocks (ref 0) 0x152cba0
  struct log_info contains 776 bytes in 2 blocks (ref 0) 0x152c6b0
    struct log_info_cat contains 736 bytes in 1 blocks (ref 0) 0x152c740
  struct trx_ctx contains 383 bytes in 5 blocks (ref 0) 0x152c370
    LNAW contains 5 bytes in 1 blocks (ref 0) 0x15b03c0
    BAND1 contains 6 bytes in 1 blocks (ref 0) 0x15b09a0
    127.0.0.1 contains 10 bytes in 1 blocks (ref 0) 0x152c5c0
    127.0.0.1 contains 10 bytes in 1 blocks (ref 0) 0x152c540
  msgb contains 0 bytes in 1 blocks (ref 0) 0x152c300
Aborted

```

#2 - 03/25/2019 07:40 PM - roh

i tried moving the enable channel calls to ::Open, so they happen before set_freq, but this did not help as well.

```

./osmo-trx-lms -C /etc/osmocom/osmo-trx-lms.cfg
Info: SSE3 support compiled in and supported by CPU
Info: SSE4.1 support compiled in and supported by CPU
Mon Mar 25 20:38:13 2019 DLGLOBAL <0004> telnet_interface.c:104 Available via telnet 127.0.0.1 4237
Mon Mar 25 20:38:13 2019 DLCTRL <000b> control_if.c:911 CTRL at 127.0.0.1 4236
Mon Mar 25 20:38:13 2019 DMAIN <0000> osmo-trx.cpp:431 [tid=140515526344512] Config Settings
  Log Level..... 0
  Device args.....
  TRX Base Port..... 5700
  TRX Address..... 127.0.0.1
  GSM BTS Address..... 127.0.0.1
  Channels..... 1
  Tx Samples-per-Symbol... 4
  Rx Samples-per-Symbol... 4
  EDGE support..... 0
  Extended RACH support... 0
  Reference..... 0
  C0 Filler Table..... 1
  Multi-Carrier..... 0
  Tuning offset..... 0
  RSSI to dBm offset..... 0
  Swap channels..... 0
  Tx Antennas..... 'BAND1'
  Rx Antennas..... 'LNAW'

Mon Mar 25 20:38:13 2019 DMAIN <0000> osmo-trx.cpp:387 [tid=140515526344512] Setting SCHED_RR priority 18
Mon Mar 25 20:38:13 2019 DDEV <0002> LMSDevice.cpp:68 [tid=140515526344512] creating LMS device...
Mon Mar 25 20:38:13 2019 DDEV <0002> LMSDevice.cpp:156 [tid=140515526344512] Opening LMS device..
Mon Mar 25 20:38:13 2019 DDEV <0002> LMSDevice.cpp:162 [tid=140515526344512] Devices found: 1
Mon Mar 25 20:38:13 2019 DDEV <0002> LMSDevice.cpp:172 [tid=140515526344512] Device [0]: LimeSDR Mini, media=U
SB 2.0, module=FT601, addr=24607:1027, serial=1D3B7AA1A9F5CC
Mon Mar 25 20:38:13 2019 DDEV <0002> LMSDevice.cpp:181 [tid=140515526344512] Using device[0]
Mon Mar 25 20:38:14 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526344512] Reference clock 40.00 MHz
Mon Mar 25 20:38:14 2019 DDEV <0002> LMSDevice.cpp:212 [tid=140515526344512] Init LMS device
Mon Mar 25 20:38:14 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526344512] Sample Rate: Min=100000 Max=3.072
e+07 Step=0
Mon Mar 25 20:38:14 2019 DDEV <0002> LMSDevice.cpp:222 [tid=140515526344512] Setting sample rate to 1.08333e+0
6 4
Mon Mar 25 20:38:14 2019 DDEV <0002> LMSDevice.cpp:228 [tid=140515526344512] Sample Rate: Host=1.08333e+06 RF=
3.46667e+07
Mon Mar 25 20:38:14 2019 DMAIN <0000> LMSDevice.cpp:203 [tid=140515526344512] Antennas configured successfully
Mon Mar 25 20:38:14 2019 DMAIN <0000> Threads.cpp:116 [tid=140515526629120] Thread 140515526629120 (task 7516)

```

```

set name: CtrlService0
Mon Mar 25 20:38:14 2019 DMAIN <0000> osmo-trx.cpp:479 [tid=140515526344512] -- Transceiver active with 1 chan
nel(s)
Mon Mar 25 20:38:16 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140515526629120] chan 0: command is 'POWERON
'
Mon Mar 25 20:38:16 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140515526629120] Starting the transceiver
Mon Mar 25 20:38:16 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140515526629120] Starting radio device
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:263 [tid=140515526629120] starting LMS...
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:390 [tid=140515526629120] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:405 [tid=140515526629120] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:287 [tid=140515526629120] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 20:38:16 2019 DDEV <0002> LMSDevice.cpp:291 [tid=140515526629120] Setting LPFBW chan 0
Mon Mar 25 20:38:16 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] RX LPF configured
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] TX LPF configured
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:296 [tid=140515526629120] Calibrating chan 0
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx calibration finished
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Tx Calibration: MCU error 4 (SXT
tune failed)
Mon Mar 25 20:38:19 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140515526629120] Device failed to start
Mon Mar 25 20:38:19 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140515526629120] chan 0: response is 'RSP PO
WERON 1'
Mon Mar 25 20:38:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140515526629120] chan 0: command is 'POWERON
'
Mon Mar 25 20:38:19 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140515526629120] Starting the transceiver
Mon Mar 25 20:38:19 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140515526629120] Starting radio device
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:263 [tid=140515526629120] starting LMS...
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:390 [tid=140515526629120] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:405 [tid=140515526629120] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:287 [tid=140515526629120] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 20:38:19 2019 DDEV <0002> LMSDevice.cpp:291 [tid=140515526629120] Setting LPFBW chan 0
Mon Mar 25 20:38:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 20:38:20 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] RX LPF configured
Mon Mar 25 20:38:20 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 20:38:20 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] TX LPF configured
Mon Mar 25 20:38:20 2019 DDEV <0002> LMSDevice.cpp:296 [tid=140515526629120] Calibrating chan 0
Mon Mar 25 20:38:20 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx calibration finished
Mon Mar 25 20:38:20 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Tx Calibration: MCU error 4 (SXT
tune failed)
Mon Mar 25 20:38:20 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140515526629120] Device failed to start
Mon Mar 25 20:38:20 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140515526629120] chan 0: response is 'RSP PO
WERON 1'
Mon Mar 25 20:38:25 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140515526629120] chan 0: command is 'POWERON
'
Mon Mar 25 20:38:25 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140515526629120] Starting the transceiver
Mon Mar 25 20:38:25 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140515526629120] Starting radio device
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:263 [tid=140515526629120] starting LMS...
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:390 [tid=140515526629120] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:405 [tid=140515526629120] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140515526629120] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:287 [tid=140515526629120] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:291 [tid=140515526629120] Setting LPFBW chan 0
Mon Mar 25 20:38:25 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx LPF min bandwidth is 4MHz when

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TIA gain is set to -12 dB
Mon Mar 25 20:38:25 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] RX LPF configured
Mon Mar 25 20:38:25 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Filter calibrated. Filter order-4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 20:38:25 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] TX LPF configured
Mon Mar 25 20:38:25 2019 DDEV <0002> LMSDevice.cpp:296 [tid=140515526629120] Calibrating chan 0
Mon Mar 25 20:38:26 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Rx calibration finished
Mon Mar 25 20:38:26 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140515526629120] Tx Calibration: MCU error 4 (SXT
tune failed)
Mon Mar 25 20:38:26 2019 DMAIN <0000> Transceiver.cpp:263 [tid=140515526629120] Device failed to start
Mon Mar 25 20:38:26 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140515526629120] chan 0: response is 'RSP PO
WERON 1'
^Csignal 2 received
shutting down
Mon Mar 25 20:38:27 2019 DMAIN <0000> osmo-trx.cpp:436 [tid=140515526344512] Shutting down transceiver...
Mon Mar 25 20:38:27 2019 DDEV <0002> LMSDevice.cpp:81 [tid=140515526344512] Closing LMS device
*** Error in `./osmo-trx-lms': free(): invalid next size (fast): 0x00000000006f0be0 ***
signal 6 received
talloc report on 'OsmoTRX' (total 3427 bytes in 17 blocks)
telnet_connection contains 1 bytes in 1 blocks (ref 0) 0x754350
logging contains 3043 bytes in 9 blocks (ref 0) 0x6d0640
struct trx_ctx contains 383 bytes in 5 blocks (ref 0) 0x6d0370
msgb contains 0 bytes in 1 blocks (ref 0) 0x6d0300
full talloc report on 'OsmoTRX' (total 3427 bytes in 17 blocks)
telnet_connection contains 1 bytes in 1 blocks (ref 0) 0x754350
logging contains 3043 bytes in 9 blocks (ref 0) 0x6d0640
Configure logging
Set the log level for a specified category
Main generic category
TRX CTRL interface
Device/Driver specific code
Logging from within LimeSuite itself
Library-internal global log family
LAPD in libosmogsm
A-bis Input Subsystem
A-bis B-Subchannel TRAU Frame Multiplex
A-bis Input Driver for Signalling
A-bis Input Driver for B-Channels (voice)
Layer3 Short Message Service (SMS)
Control Interface
GPRS GTP library
Statistics messages and logging
Generic Subscriber Update Protocol
Osmocom Authentication Protocol
libosmo-sigtran Signalling System 7
libosmo-sigtran SCCP Implementation
libosmo-sigtran SCCP User Adaptation
libosmo-sigtran MTP3 User Adaptation
libosmo-mgcp Media Gateway Control Protocol
libosmo-netif Jitter Buffer
Deprecated alias for 'no logging level force-all'
contains 798 bytes in 1 blocks (ref 0) 0x70e190
logging level (main|trxctrl|dev|lms|lglobal|llapd|linp|lmux|lmi|lmib|lms|lctrl|lgtp|lstats|lgsup|loap
|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf) everything 150 bytes in 1 blocks (ref 0) 0x70dfe0
Configure logging
Set the log level for a specified category
Main generic category
TRX CTRL interface
Device/Driver specific code
Logging from within LimeSuite itself
Library-internal global log family
LAPD in libosmogsm
A-bis Input Subsystem
A-bis B-Subchannel TRAU Frame Multiplex
A-bis Input Driver for Signalling
A-bis Input Driver for B-Channels (voice)
Layer3 Short Message Service (SMS)
Control Interface
GPRS GTP library
Statistics messages and logging
Generic Subscriber Update Protocol
Osmocom Authentication Protocol
libosmo-sigtran Signalling System 7
libosmo-sigtran SCCP Implementation
libosmo-sigtran SCCP User Adaptation

```

```

libosmo-sigtran MTP3 User Adaptation
libosmo-mgcp Media Gateway Control Protocol
libosmo-netif Jitter Buffer
Log debug messages and higher levels
Log informational messages and higher levels
Log noticeable messages and higher levels
Log error messages and higher levels
Log only fatal messages
contains 933 bytes in 1 blocks (ref 0) 0x70dbd0
logging level (main|trxctrl|dev|lms|lglobal|llapd|linp|lmux|lmi|lmib|lms|lctrl|lgtp|lstats|lgsup|loap
|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf) (debug|info|notice|error|fatal) contains 171 bytes in 1 blocks (ref
0) 0x70da20
    struct log_target contains 214 bytes in 2 blocks (ref 0) 0x6d0a90
        struct log_category contains 46 bytes in 1 blocks (ref 0) 0x6d0ba0
    struct log_info contains 776 bytes in 2 blocks (ref 0) 0x6d06b0
        struct log_info_cat contains 736 bytes in 1 blocks (ref 0) 0x6d0740
    struct trx_ctx contains 383 bytes in 5 blocks (ref 0) 0x6d0370
        LNAW contains 5 bytes in 1 blocks (ref 0) 0x7543c0
        BAND1 contains 6 bytes in 1 blocks (ref 0) 0x7549a0
        127.0.0.1 contains 10 bytes in 1 blocks (ref 0) 0x6d05c0
        127.0.0.1 contains 10 bytes in 1 blocks (ref 0) 0x6d0540
    msgb contains 0 bytes in 1 blocks (ref 0) 0x6d0300
Aborted

```

#3 - 03/25/2019 08:07 PM - roh

- File patch_osmo_trx_lms_move_functions2.diff added

updated patch:

- removed loop in a loop over chans in ::start
- moved LMS_EnableChannel to ::open

this one actually starts streaming, but tx-calib still fails with "MCU error 5 (Loopback signal weak: not connected/insufficient gain?)"

```

./Transceiver52M/osmo-trx-lms -C /etc/osmocom/osmo-trx-lms.cfg
Info: SSE3 support compiled in and supported by CPU
Info: SSE4.1 support compiled in and supported by CPU
Mon Mar 25 21:03:17 2019 DLGLOBAL <0004> telnet_interface.c:104 Available via telnet 127.0.0.1 4237
Mon Mar 25 21:03:17 2019 DLCTRL <000b> control_if.c:911 CTRL at 127.0.0.1 4236
Mon Mar 25 21:03:17 2019 DMAIN <0000> osmo-trx.cpp:431 [tid=140002420920128] Config Settings
    Log Level..... 0
    Device args.....
    TRX Base Port..... 5700
    TRX Address..... 127.0.0.1
    GSM BTS Address..... 127.0.0.1
    Channels..... 1
    Tx Samples-per-Symbol... 4
    Rx Samples-per-Symbol... 4
    EDGE support..... 0
    Extended RACH support... 0
    Reference..... 0
    C0 Filler Table..... 1
    Multi-Carrier..... 0
    Tuning offset..... 0
    RSSI to dBm offset..... 0
    Swap channels..... 0
    Tx Antennas..... 'BAND1'
    Rx Antennas..... 'LNAW'

Mon Mar 25 21:03:17 2019 DMAIN <0000> osmo-trx.cpp:387 [tid=140002420920128] Setting SCHED_RR priority 18
Mon Mar 25 21:03:17 2019 DDEV <0002> LMSDevice.cpp:68 [tid=140002420920128] creating LMS device...
Mon Mar 25 21:03:17 2019 DDEV <0002> LMSDevice.cpp:156 [tid=140002420920128] Opening LMS device..
Mon Mar 25 21:03:17 2019 DDEV <0002> LMSDevice.cpp:162 [tid=140002420920128] Devices found: 1
Mon Mar 25 21:03:17 2019 DDEV <0002> LMSDevice.cpp:172 [tid=140002420920128] Device [0]: LimeSDR Mini, media=U
SB 2.0, module=FT601, addr=24607:1027, serial=1D3B7AA1A9F5CC
Mon Mar 25 21:03:17 2019 DDEV <0002> LMSDevice.cpp:181 [tid=140002420920128] Using device[0]
Mon Mar 25 21:03:18 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002420920128] Reference clock 40.00 MHz
Mon Mar 25 21:03:18 2019 DDEV <0002> LMSDevice.cpp:212 [tid=140002420920128] Init LMS device
Mon Mar 25 21:03:18 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140002420920128] Sample Rate: Min=100000 Max=3.072
e+07 Step=0
Mon Mar 25 21:03:18 2019 DDEV <0002> LMSDevice.cpp:222 [tid=140002420920128] Setting sample rate to 1.08333e+0
6 4
Mon Mar 25 21:03:18 2019 DDEV <0002> LMSDevice.cpp:228 [tid=140002420920128] Sample Rate: Host=1.08333e+06 RF=
3.46667e+07

```

Mon Mar 25 21:03:18 2019 DMAIN <0000> LMSDevice.cpp:203 [tid=140002420920128] Antennas configured successfully
Mon Mar 25 21:03:18 2019 DMAIN <0000> Threads.cpp:116 [tid=140002421204736] Thread 140002421204736 (task 9185)
set name: CtrlService0
Mon Mar 25 21:03:18 2019 DMAIN <0000> osmo-trx.cpp:479 [tid=140002420920128] -- Transceiver active with 1 chan
nel(s)
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'POWEROF
F'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP PO
WEROFF 0'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'RXTUNE
1782000'
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:678 [tid=140002421204736] chan 0: Setting Rx Freq to 1.782e
+09 Hz
Mon Mar 25 21:03:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Selected RX path: LNAH
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP RX
TUNE 0 1782000'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'TXTUNE
1877000'
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:666 [tid=140002421204736] chan 0: Setting Tx Freq to 1.877e
+09 Hz
Mon Mar 25 21:03:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Selected TX path: Band 2
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP TX
TUNE 0 1877000'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETTSC
7'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:830 [tid=140002421204736] Changing TSC from 0 to 7
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TTSC 0 7'
Mon Mar 25 21:03:19 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'POWERON
'
Mon Mar 25 21:03:19 2019 DMAIN <0000> Transceiver.cpp:255 [tid=140002421204736] Starting the transceiver
Mon Mar 25 21:03:19 2019 DMAIN <0000> radioInterface.cpp:177 [tid=140002421204736] Starting radio device
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:263 [tid=140002421204736] starting LMS...
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:388 [tid=140002421204736] chan 0: Setting TX gain to 36.5 d
B
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:403 [tid=140002421204736] chan 0: Setting RX gain to 36.5 d
B
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140002421204736] LPFBWRRange Rx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:113 [tid=140002421204736] LPFBWRRange Tx: Min=1.4001e+06 Max
=1.3e+08 Step=0
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:287 [tid=140002421204736] LPFBW: Rx=1.4001e+06 Tx=5.2e+06
Mon Mar 25 21:03:19 2019 DDEV <0002> LMSDevice.cpp:290 [tid=140002421204736] Setting LPFBW chan 0
Mon Mar 25 21:03:19 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Rx LPF min bandwidth is 4MHz when
TIA gain is set to -12 dB
Mon Mar 25 21:03:22 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] RX LPF configured
Mon Mar 25 21:03:22 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Filter calibrated. Filter order=4
th, filter bandwidth set to 5.2 MHz.Real pole 1st order filter set to 2.5 MHz. Preemphasis filter not active
Mon Mar 25 21:03:23 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] TX LPF configured
Mon Mar 25 21:03:23 2019 DDEV <0002> LMSDevice.cpp:295 [tid=140002421204736] Calibrating chan 0
Mon Mar 25 21:03:23 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Rx calibration finished
Mon Mar 25 21:03:23 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002421204736] Tx Calibration: MCU error 5 (Loop
back signal weak: not connected/insufficient gain?)
Mon Mar 25 21:03:23 2019 DDEV <0002> LMSDevice.cpp:450 [tid=140002421204736] Initial timestamp 27500
Mon Mar 25 21:03:23 2019 DMAIN <0000> radioInterface.cpp:198 [tid=140002421204736] Radio started
Mon Mar 25 21:03:23 2019 DMAIN <0000> Threads.cpp:116 [tid=140002421171968] Thread 140002421171968 (task 9189)
set name: TxLower
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP PO
WERON 0'
Mon Mar 25 21:03:23 2019 DMAIN <0000> Threads.cpp:116 [tid=140002421139200] Thread 140002421139200 (task 9190)
set name: RxLower
Mon Mar 25 21:03:23 2019 DMAIN <0000> Threads.cpp:116 [tid=140002421073664] Thread 140002421073664 (task 9192)
set name: TxUpper0
Mon Mar 25 21:03:23 2019 DMAIN <0000> Threads.cpp:116 [tid=140002421106432] Thread 140002421106432 (task 9191)
set name: RxUpper0
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'POWERON
'
Mon Mar 25 21:03:23 2019 DMAIN <0000> Transceiver.cpp:251 [tid=140002421204736] Transceiver already running
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP PO
WERON 0'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETRXGA
IN 1'
Mon Mar 25 21:03:23 2019 DDEV <0002> LMSDevice.cpp:403 [tid=140002421204736] chan 0: Setting RX gain to 1 dB
Mon Mar 25 21:03:23 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002321532672] L
Mon Mar 25 21:03:23 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C

```

LOCK 1845260
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TRXGAIN 0 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETPOWE
R 20'
Mon Mar 25 21:03:23 2019 DDEV <0002> LMSDevice.cpp:388 [tid=140002421204736] chan 0: Setting TX gain to 53 dB
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TPOWER 0 20'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
0 5'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 0 5'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
1 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 1 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
2 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 2 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
3 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 3 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
4 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 4 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
5 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 5 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
6 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 6 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:728 [tid=140002421204736] chan 0: command is 'SETSLOT
7 1'
Mon Mar 25 21:03:23 2019 DTRXCTRL <0001> Transceiver.cpp:859 [tid=140002421204736] chan 0: response is 'RSP SE
TSLOT 0 7 1'
Mon Mar 25 21:03:24 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1845476
Mon Mar 25 21:03:25 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1845693
Mon Mar 25 21:03:26 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1845910
Mon Mar 25 21:03:27 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1846127
Mon Mar 25 21:03:28 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1846344
Mon Mar 25 21:03:29 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1846560
Mon Mar 25 21:03:30 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1846777
Mon Mar 25 21:03:31 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1846994
Mon Mar 25 21:03:32 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1847211
Mon Mar 25 21:03:33 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1847428
Mon Mar 25 21:03:34 2019 DMAIN <0000> Transceiver.cpp:1043 [tid=140002421139200] ClockInterface: sending IND C
LOCK 1847645
^Csignal 2 received
shutting down
Mon Mar 25 21:03:34 2019 DMAIN <0000> osmo-trx.cpp:436 [tid=140002420920128] Shutting down transceiver...
Mon Mar 25 21:03:34 2019 DMAIN <0000> Transceiver.cpp:309 [tid=140002420920128] Stopping the transceiver
Mon Mar 25 21:03:34 2019 DMAIN <0000> Transceiver.cpp:322 [tid=140002420920128] Stopping the device
Mon Mar 25 21:03:35 2019 DLMS <0003> LMSDevice.cpp:102 [tid=140002109421312] popping from TX, samples popped 8
60/1020
Mon Mar 25 21:03:35 2019 DMAIN <0000> Transceiver.cpp:335 [tid=140002420920128] Transceiver stopped
Mon Mar 25 21:03:35 2019 DDEV <0002> LMSDevice.cpp:81 [tid=140002420920128] Closing LMS device

```

#4 - 04/12/2019 07:42 PM - roh

- File deleted (patch_osmo_trx_lms_move_functions.diff)

#5 - 04/12/2019 07:42 PM - roh

- File deleted (*patch_osmo_trx_lms_move_functions2.diff*)

#6 - 04/12/2019 07:43 PM - roh

- File *patch_osmo_trx_lms_roh_2019-04-12_2.diff* added

fix osmo-trx-lms function call order for LMS19.01

fix filter setting and calibration for static gain values

rework clock selection

add device dependant maximum gain values

needs atleast LimeSuite GIT 26de12a4f7e21a5fe938f2b915fe46e10d62dd58 to work, especially with LimeNet-Micro

TODO: allow ramping and runtime gain setting with correct calibration. the current code simply calibrates on maximum power.

#7 - 04/17/2019 07:19 PM - roh

- % Done changed from 10 to 90

the patches relating to this just passed gerrit and are now on master.

please note that one needs limesuite >= 26de12a4f7e21a5fe938f2b915fe46e10d62dd58 for this to work properly on limenet micro

gain ramping support is still a todo, but for lab use this should be much more usable than it was before.

#8 - 04/17/2019 07:25 PM - roh

- Related to Bug #3341: *osmo-trx-lms RF Envelope FAIL on LimeSDR, but not on LimeSDR-mini* added

#9 - 04/17/2019 07:26 PM - roh

- Blocks Bug #3775: *properly debug limesdr usb and limesdr mini clocking requirements and osmo-trx support* added

#10 - 04/17/2019 10:27 PM - pespin

Reminder for myself: Let's update the hash we build on nightly and latest deb packages to that LimeSuite hash you say.

#11 - 04/18/2019 11:04 AM - pespin

- Assignee set to *sysmocom*

I updated it for nightly only, since anyway osmo-trx-lms related patches are no available in latest yet.

<https://gerrit.osmocom.org/#/c/osmo-ci/+13696/> nightly-packages: Update limesuite hash to support LimeNet-Micro

#12 - 04/23/2019 07:33 AM - roh

- Status changed from *In Progress* to *Resolved*

- % Done changed from 90 to 100

i just did another test on limenet micro with only packages from -nightly and it works fine.

needs one line of config change (select band H or L, there is no W band on limenet micro) -> no need for changes

Files

patch_osmo_trx_lms_roh_2019-04-12_2.diff	10.3 KB	04/12/2019	roh
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