

Options
Title: Stereo F...RDS Decoder
Output Language: Python
Generate Options: QT GUI

Import
Import: math

QT GUI Range
ID: gain
Label: RF Gain
Default Value: 40
Start: 0
Stop: 49.6
Step: 1

QT GUI Range
ID: freq
Label: Frequency
Default Value: 88.7
Start: 77
Stop: 108
Step: 100m

QT GUI Range
ID: volume
Label: Volume
Default Value: -5
Start: -20
Stop: 10
Step: 1

Band-pass Filter Taps
ID: pilot_taps
Tap Type: Complex
Gain: 1
Sample Rate (Hz): 240k
Low Cutoff Freq (Hz): 18.98k
High Cutoff Freq (Hz): 19.02k
Transition Width (Hz): 1k
Window: Hamming
Beta: 6.76

Note
Note: Scanner Variables

Variable
ID: num_items
Value: 3.84M

Variable
ID: fft_size
Value: 128

Variable
ID: done
Value: 0

0 == Scanning in progress
1 == Finished scanning

Variable
ID: mode
Value: 1

Variable
ID: mute
Value: 1

Variable
ID: tau
Value: 75u

Variable
ID: tau_1
Value: 75u

QT GUI Range
ID: fir_cutoff
Label: Cutoff Frequency
Default Value: 135k
Start: 20k
Stop: 200k
Step: 1k

QT GUI Range
ID: fir_transition_width
Label: Transition width
Default Value: 20k
Start: 10k
Stop: 40k
Step: 1k

Variable
ID: samp_rate
Value: 1.92M

Variable
ID: freq_tune
Value: 88.45M

Variable
ID: freq_offset
Value: 250k

Variable
ID: decimation
Value: 6

UHD: USRP Source
Sync: PC Clock
Samp rate (Sps): 1.92M
Ch0: Center Freq (Hz): 88.45M
Ch0: AGC: Default
Ch0: Gain Value: 40
Ch0: Antenna: TX/RX

RTL-SDR Source
Device Arguments: rtl=0
Sync: Unknown PPS
Number Channels: 1
Sample Rate (sps): 1.92M
Ch0: Frequency (Hz): 88.45M
Ch0: Frequency Correction (ppm): 0
Ch0: DC Offset Mode: 0
Ch0: IQ Balance Mode: 0
Ch0: Gain Mode: False
Ch0: RF Gain (dB): 40
Ch0: IF Gain (dB): 20
Ch0: BB Gain (dB): 20

RRC Filter Taps
ID: rrc_taps
Gain: 1
Sample Rate (Hz): 19k
Symbol Rate (Hz): 2.375k
Excess BW: 1
Num Taps: 151

Variable
ID: rrc_taps_manchester
Value: [rrc_taps[n] - rrc_...

Note
Note: FM Scanner

Selector
Enabled: Enabled
Number of Inputs: 1
Number of Outputs: 2
Input Index: 0
Output Index: 1

Stream to Vector

FFT
FFT Size: 128
Forward/Reverse: Forward
Window: window.blackmanhar...
Shift: Yes
Num. Threads: 1

Complex to Mag^2
Vector Length: 128

Vector to Stream

Embedded Python Block
Fft_Size: 128
Samp_Rate: 1.92M
Freq: 88.7M
Done: 0

Message Pair to Var
Variable: done

QT GUI Waterfall Sink
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 320k

Frequency Xlating FIR Filter
Decimation: 6
Taps: firdes.low_pass(1, s...
Center Frequency: 250k
Sample Rate: 1.92M

Quadrature Demod
Gain: 679.061m

QT GUI Frequency Sink
Name: Base Band
FFT Size: 1024
Center Frequency (Hz): 88.7
Bandwidth (Hz): 320k

Frequency Xlating FIR Filter
Decimation: 10
Taps: firdes.low_pass(1.0,...
Center Frequency: 57k
Sample Rate: 320k

Rational Resampler
Interpolation: 240k
Decimation: 320k
Taps:
Fractional BW: 0

Note
Note: Pilot

Decimating FIR Filter
Decimation: 1
Taps: pilot_taps

Complex to Imag

Multiply

PLL Carrier Regeneration
Loop Bandwidth: 1m
Min Phase/sample: 496.895m
Max Phase/sample: 497.942m

Note
Note: L+R

Note
Note: L+R

Decimating FIR Filter
Decimation: 5
Taps: firdes.low_pass(1.0,...

Note
Note: L-R

Decimating FIR Filter
Decimation: 5
Taps: firdes.low_pass(-2.1...

QT GUI Frequency Sink
Name: L+R
FFT Size: 1024
Center Frequency (Hz): 88.7
Bandwidth (Hz): 64k

Add

Subtract

FM Deemphasis
Sample Rate: 48k
Tau: 75u

FM Deemphasis
Sample Rate: 48k
Tau: 75u

FM deemphasis,
Time constant in seconds
(75us in US, 50us in EUR)

Multiply Const
Constant: 0

Multiply Const
Constant: 0

Wav File Sink
File: Output.wav
Sample Rate: 48k
Output Format: WAV
Bits per Sample: float
Append to existing file: No

QT GUI Time Sink
Number of Points: 2.048k
Sample Rate: 1.92M
Autoscale: No

Audio Sink
Sample Rate: 48 kHz

Symbol Sync
Timing Error Detector: Zero Crossing
Samples per Symbol: 16
Expected TED Gain: 1
Loop Bandwidth: 10m
Damping Factor: 1
Maximum Deviation: 100m
Output Samples/Symbol: 1
Interpolating Resampler: MMSE, 8 tap FIR

Constellation Receiver
Constellation Object: ...6b0>
Loop Bandwidth: 62.8319m
Minimum Freq Deviation: -2m
Maximum Freq Deviation: 2m

Null Sink

QT GUI Constellation Sink
Number of Points: 1.024k
Autoscale: No

Differential Decoder
Coding: Differential
Modulus: 2

RDS Decoder
Log: Disable
Debug: Disable

RDS Parser
Log: Disable
Debug: Disable
PTY Locale: Europe

RDS Panel

RDS Panel