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gnuradio.analog

class gnuradio.analog.**cpm**

Return the taps for an interpolating FIR filter (gr::filter::interp_fir_filter_fff).

class gnuradio.analog.**squelch_base_cc**(**args*, ***kwargs*)

basic squelch block; to be subclassed for other squelches.

class gnuradio.analog.**squelch_base_ff**(**args*, ***kwargs*)

basic squelch block; to be subclassed for other squelches.

class gnuradio.analog.**am_demod_cf**(*channel_rate*, *audio_decim*, *audio_pass*, *audio_stop*)

Generalized AM demodulation block with audio filtering.

This block demodulates a band-limited, complex down-converted AM channel into the the original baseband signal, applying low pass filtering to the audio output. It produces a float stream in the range [-1.0, +1.0].

Parameters:
- **channel_rate** – incoming sample rate of the AM baseband (integer)
- **audio_decim** – input to output decimation rate (integer)
- **audio_pass** – audio low pass filter passband frequency (float)
- **audio_stop** – audio low pass filter stop frequency (float)

class gnuradio.analog.**demod_10k0a3e_cf**(*channel_rate*, *audio_decim*)

AM demodulation block, 10 KHz channel.

This block demodulates an AM channel conformant to 10K0A3E emission standards, such as broadcast band AM transmissions.

Parameters:
- **channel_rate** – incoming sample rate of the AM baseband (integer)
- **audio_decim** – input to output decimation rate (integer)

class gnuradio.analog.**fm_demod_cf**(*channel_rate*, *audio_decim*, *deviation*, *audio_pass*, *audio_stop*, *gain=1.0*, *tau=7.5e-05*)

Generalized FM demodulation block with deemphasis and audio filtering.

This block demodulates a band-limited, complex down-converted FM channel into the the original baseband signal, optionally applying deemphasis. Low pass filtering is done on the resultant signal. It produces an output float stream in the range of [-1.0, +1.0].

Parameters:
- **channel_rate** – incoming sample rate of the FM baseband (integer)
- **deviation** – maximum FM deviation (default = 5000) (float)
- **audio_decim** – input to output decimation rate (integer)
- **audio_pass** – audio low pass filter passband frequency (float)
- **audio_stop** – audio low pass filter stop frequency (float)
- **gain** – gain applied to audio output (default = 1.0) (float)
- **tau** – deemphasis time constant (default = 75e-6), specify tau=0.0 to prevent deemphasis (float)

class gnuradio.analog.**demod_20k0f3e_cf**(*channel_rate*, *audio_decim*)

NBFM demodulation block, 20 KHz channels

This block demodulates a complex, downconverted, narrowband FM channel conforming to 20K0F3E emission standards, outputting floats in the range [-1.0, +1.0].

Parameters:
- **sample_rate** – incoming sample rate of the FM baseband (integer)
- **audio_decim** – input to output decimation rate (integer)

class gnuradio.analog.**demod_200kf3e_cf**(*channel_rate*, *audio_decim*)

WFM demodulation block, mono.

This block demodulates a complex, downconverted, wideband FM channel conforming to 200KF3E emission standards, outputting floats in the range [-1.0, +1.0].

Parameters:
- **sample_rate** – incoming sample rate of the FM baseband (integer)
- **audio_decim** – input to output decimation rate (integer)

class gnuradio.analog.**fm_deemph**(*fs*, *tau=7.5e-05*)

FM Deemphasis IIR filter.

class gnuradio.analog.**fm_preemph**(*fs*, *tau=7.5e-05*, *fh=-1.0*)

FM Preemphasis IIR filter.

class gnuradio.analog.**nbfm_rx**(*audio_rate*, *quad_rate*, *tau=7.5e-05*, *max_dev=5000.0*)

class gnuradio.analog.**nbfm_tx**(*audio_rate*, *quad_rate*, *tau=7.5e-05*, *max_dev=5000.0*, *fh=-1.0*)

class gnuradio.analog.**ctcss_gen_f**(*sample_rate*, *tone_freq*)

class gnuradio.analog.**standard_squelch**(*audio_rate*)

class gnuradio.analog.**wfm_rcv_fmdet**(*demod_rate*, *audio_decimation*)

class gnuradio.analog.**wfm_rcv_pll**(*demod_rate*, *audio_decimation*)

class gnuradio.analog.**wfm_rcv**(*quad_rate*, *audio_decimation*)

class gnuradio.analog.**wfm_tx**(*audio_rate*, *quad_rate*, *tau=7.5e-05*, *max_dev=75000.0*, *fh=-1.0*)