

# Gnu Radio Layout

**Stacking, Fitting and Using Multiple tabs**

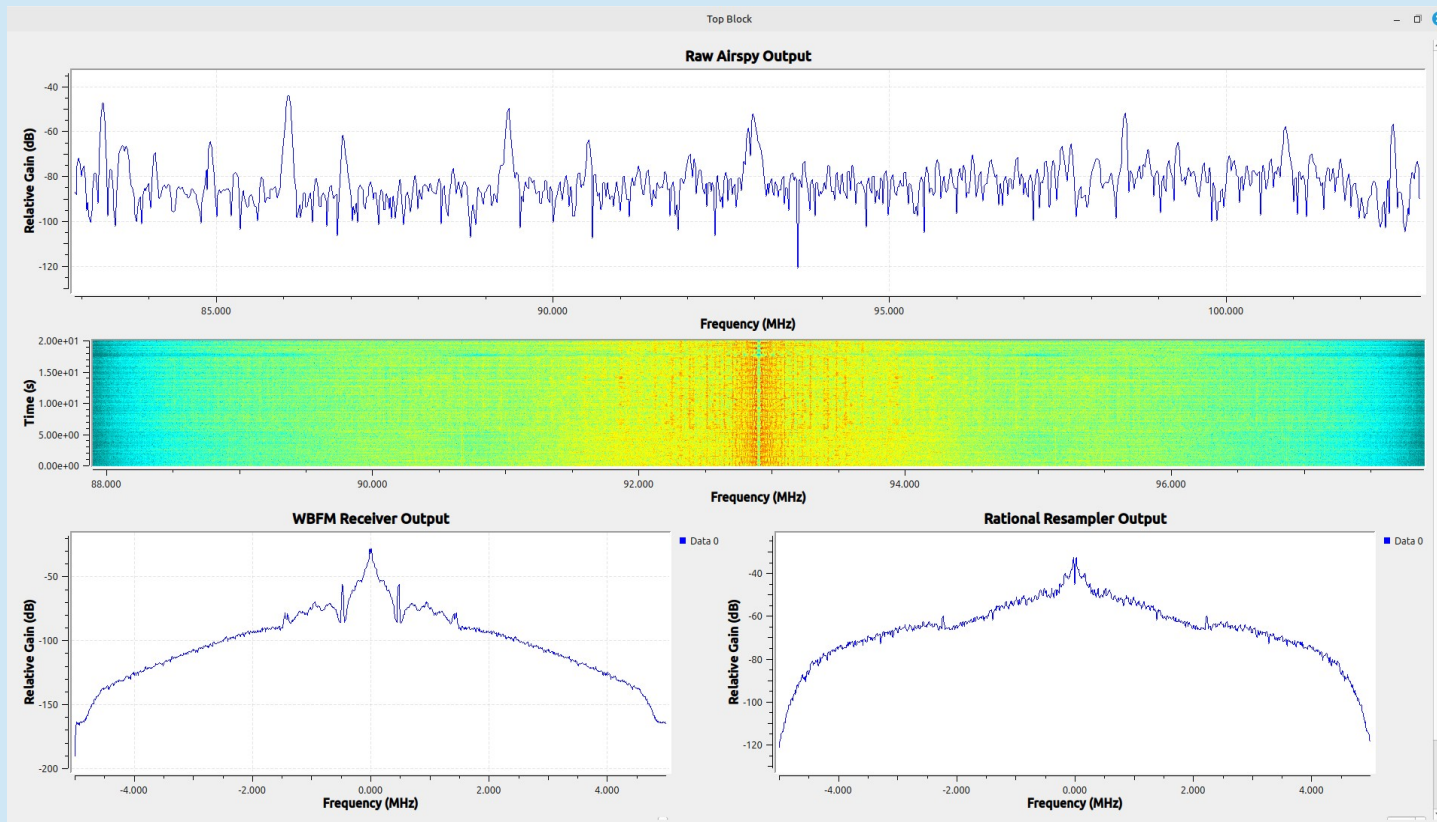
# Basic Layout

- GNU Radio uses the QT widget set and inherits its layout options
- If NO layout is specified, the program just stacks the controls
- Layout is specified by specifying a *GUI Hint* in the widget properties

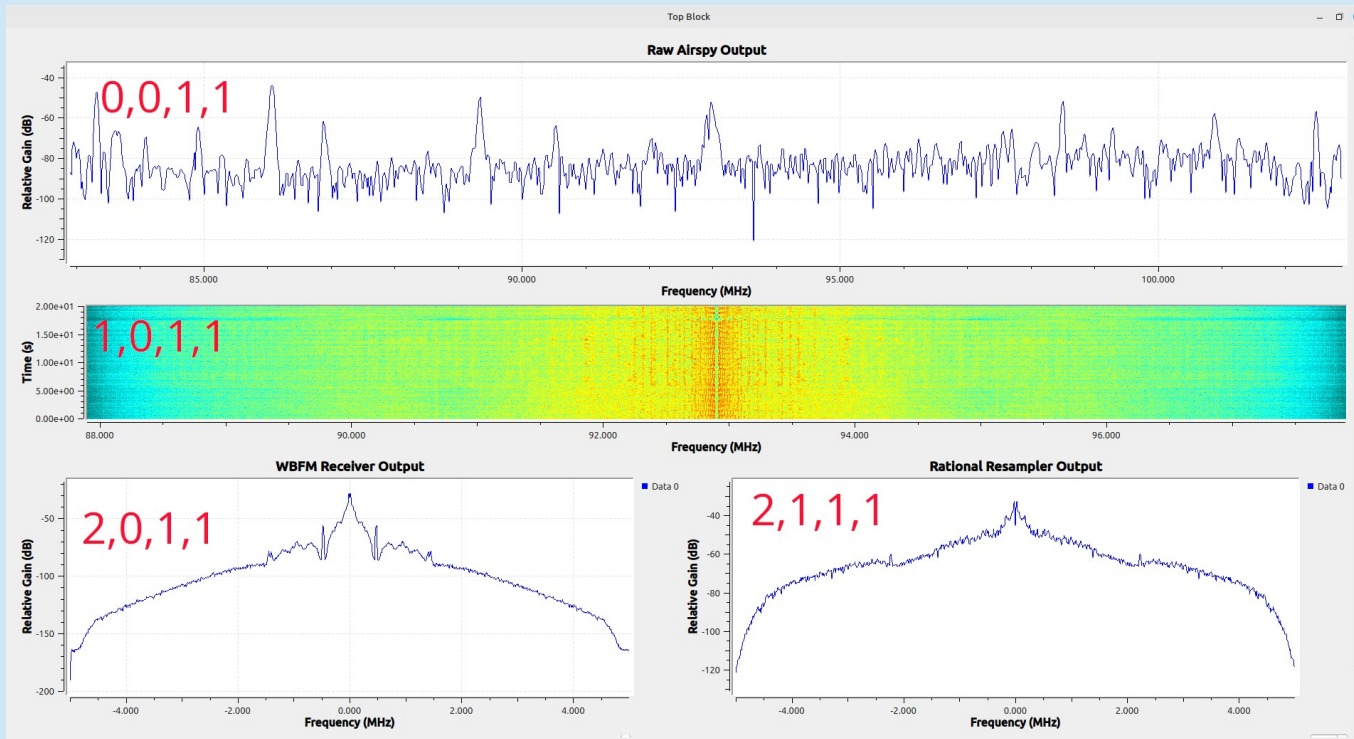
# Hint Format

- Gui Hint = Row #, Col #, Rowspan, Colspan
- Row and column numbers are zero-based
- The “span” options allow a control to stretch across multiple rows/columns
- So a component in the upper left has a hint of  
0,0,1,1
- If you give two controls the same hint, you get an error message instead of a layout
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# Example



# Hints Shown



# Tabs

- If you have many controls, you should use tabs
- Tabs are defined with the QT Gui Tab Widget

# Tab Widget and Properties

## QT GUI Tab Widget

**ID:** spectra

**Num Tabs:** 11

**Label 0:** RTSA

**Label 1:** Full Spectrum

**Label 2:** Station Channel

**Label 3:** L+R

**Label 4:** 19 kHz Pilot

**Label 5:** 38 kHz Pilot

**Label 6:** L-R

**Label 7:** Left & Right

**Label 8:** SCA 67 kHz

**Label 9:** SCA 92 kHz

**Label 10:** RDS Symbols

Properties: QT GUI Tab Widget

General | Advanced | Documentation | Generated Code

ID	spectra	
Num Tabs	11 ▼	
Label 0	RTSA	[string]
Label 1	Full Spectrum	[string]
Label 2	Station Channel	[string]
Label 3	L+R	[string]
Label 4	19 kHz Pilot	[string]
Label 5	38 kHz Pilot	[string]
Label 6	L-R	[string]
Label 7	Left & Right	[string]
Label 8	SCA 67 kHz	[string]
Label 9	SCA 92 kHz	[string]
Label 10	RDS Symbols	[string]
GUI Hint	2,0,1,9	

OK Cancel Apply

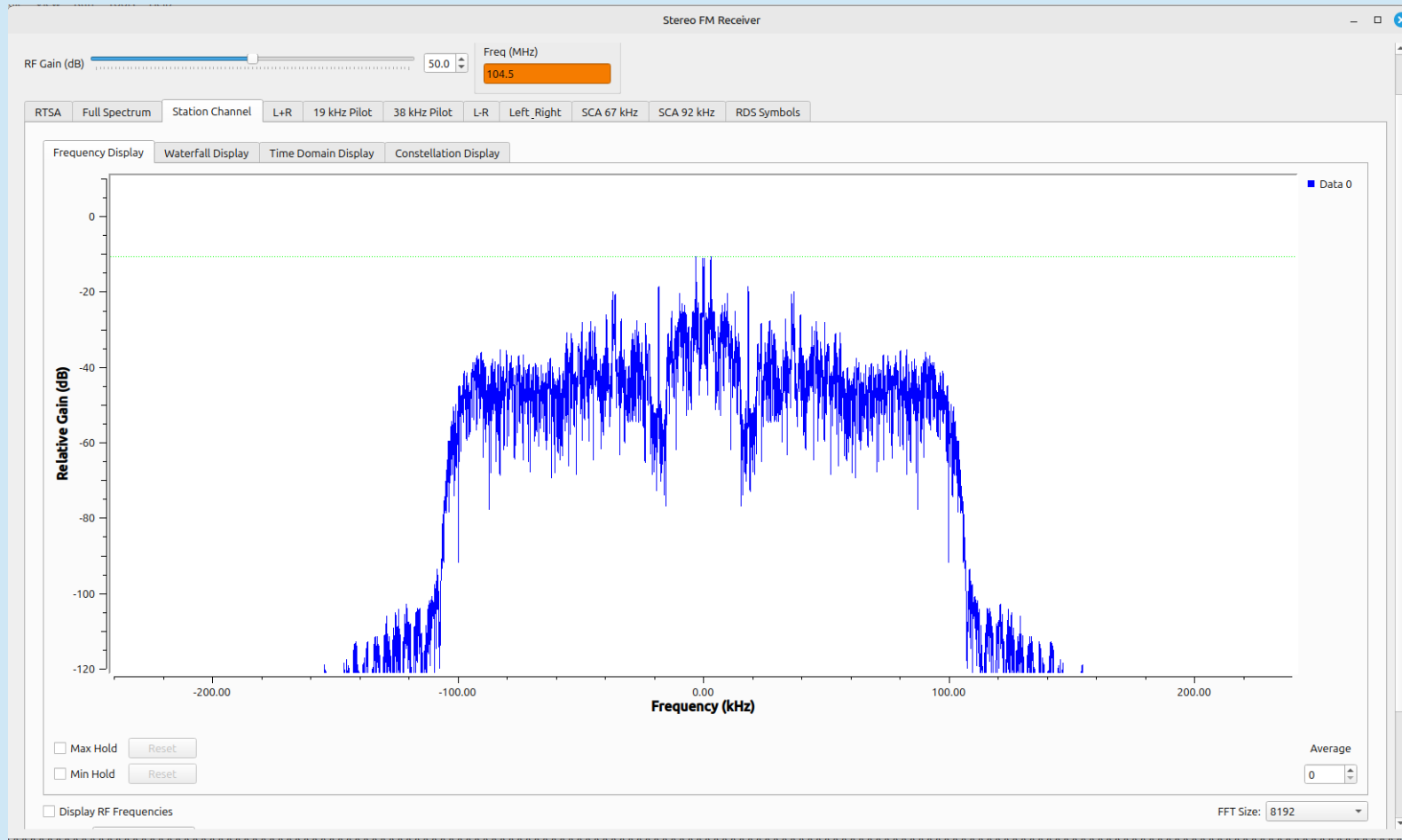
# Hint formats with tabs

- The hint now has a first element that identifies the tab set
- Even though each tabset has a name, QT won't let you use it in the hint – use array index instead. These are also zero-based
- `spectra@1:0,0,1,1`

# Free Bonus: the QT Gui Sink

- This control has a built-in set of tabs and looks really cool
- Haven't figured out how to hook it up yet

# Ignore top set of Tabs



# The Udel Radio Program

- This is the Most complicated example of layout I've found
- This will load for me but locks up GNU radio
- <https://udel.edu/~mm/gr/>

