Setting up an RPI with FLDIGI

This is a very rudimentary explanation of getting FLDIGI onto the raspberry PI once you have already configured the PI with Raspbian. I actually used a pre-built RPI image from SDRPLAY which has built in drivers for my SDR-PLAY but it was based on the standard Raspbian image most people use for RPI's. Once you can get on your PI do the following:

Open a Terminal Session and type:

sudo apt-get update

Next:

sudo apt-get install fldigi

Install drivers to allow control of USB signalink: sudo apt-get install pavucontrol

Select the USB Audio CODEC



Add user to dial out (use "pi" if you are using default rpi user) sudo adduser pi dialout

Restart the pi sudo reboot

After PI reboots Open FLDIGI from Ham Radio > FLDIGI under the raspberry "start button"



You will be walked through configuration of FLDIGI, make sure you select the following values for the USB soundcard:

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Devices	Settings Right	channel Wav					
	OSS				Device:		
	♥ PortAudio	Capture Playbaci	e: USB Audio c: USB Audio	CODEC:	- (hw:1,0) - (hw:1,0)	\$ \$	
	PulseAudio		Server string:				
	□ File I/O only						
Re	store defaults)			Save	Close	< <u>-</u>

Once in FLDIGI set up like any FLDIGI configuration

Turn off Automatic Frequency control

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NOTE – I have found some odd situations since loading it, one of the things I did was set the locale's to my correct country and keyboard using the RPI configuration tool under:

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	Character Set	ISO-88	59-1		
			Cancel	ОК	

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			Set Locale
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Keyboard: (test by typing Shift+2 and you should get @ otherwise you might have the wrong keyboard)



Here are some additional standard FLDIGI settings:

FLDIGI Settings:

- RSID Read Solomon ID should be turned on for the modes we are using, see the FLDIGI users manual here: http://www.w1hkj.com/FldigiHelp/id_configuration_page.html
- TxID and RxID buttons: Turned on:
- RxID button toggles the detection of <u>Reed Solomon Identification</u> codes.
- TxID button toggles the transmission of the RSID signal.
- VideoID: This is fun but not required, you can send your call sign using tones which will write the callsign into the waterfall of the receiving stations. A good tutorial of setting up a macro and your system for this is at: http://orcadigitalnet.com/macros/
- 1500hz Offset we will try to maintain this convention of transmitting at 1500hz, so in the waterfall you select 1500 with your mouse click than push the LK button

Here's a screenshot of how my FLDIGI Looks with all settings selected:



Go to Configure > ID's > RSID:

	Fldigi configuration		
Operator UI Waterfall Modems F	lg Audio ID Misc Web Autostart IO		
RsID Video CW			
Reed-Solomon ID (Rx)	The PsID notification message contents and	,	
Receive modes	"Notifications" configure dialog.		
Searches passband	Disable alert dialog		
Mark prev freq/mode Disables detector	Retain tx freq lock Disable freq change		
Medium Allow errors	5 Squeich open (sec)		
Pre-Signal Tone	Reed-Solomon ID (Tx) Transmit modes End of xmt ID		
Restore defaults	Save Close		<

Change "Video" tab to the following, filling in for your callsign and characters in your callsign(4,5, or 6)

	Fldigi configu	ration	-	×
Operator UI Waterfall Modems	Rig Audio ID Mise	Web Autostart IO		
RsID Video CW				
Video Preamble ID				
Transmit mode ID		Vide	o ID modes	
		Vide	o ib modes	
 Transmit video text 	: AG7GK			
Use small font	Chars/Row: 5			
500 Hz limit				
Mode width limit				
				-
Restore defaults		Save	Close	

Hardware

- Raspberry PI
- Signalink USB Soundcard
- FT2D HT with Signalink Interface Cable
- Powerwerx USBBuddy 5v @3amps, perfect to power the RPI 3 power needs including connected signalink
- Any 12v Battery, I had it hooked to a 12v/20ah battery and then to my deep cycle so I can run it all week or longer in receive mode
- Once the PI is initially configured I connect over VNC and do not run a screen

Pictures of my setup

PowerWerx USB Buddy





FT2D HT, Rpi (on top of the Signalink), Signalink USB

SIGNALINK Setup for YAESU FT2D

NOTE – when connecting an external soundcard interface to an HT radio some protection for voltages is required, look to your manual and the interface provider for specifics for your radio. In the case of the Yaesu FT2D radio the MIC and PTT share a circuit so you put a resistor and capacitor in place when PTT occurs you don't overload your radio input.

Screenshot of the Jumpers

2.2 k resistor and a 10uF capacitor connecting the signalink jumpers with wires and the resistor/capacitor.



Laptop Test with FT2D and Signalink

