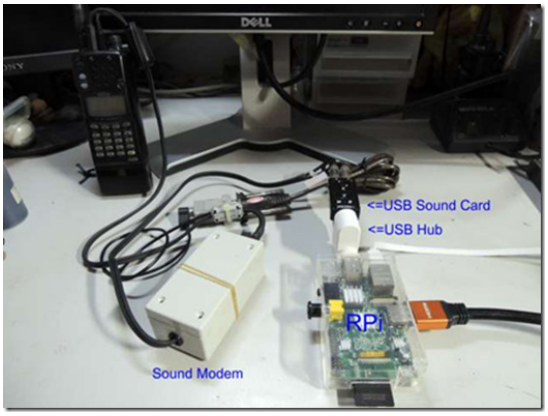
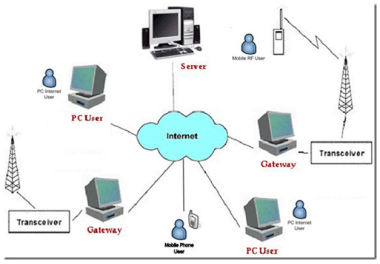
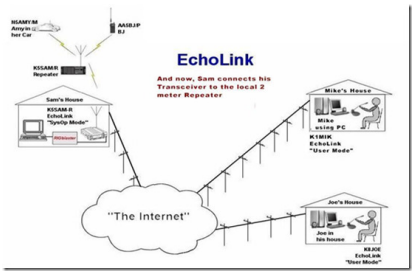




Echolink Overview

How it Works



Typical Configuration

Can be used with repeater or in a simplex mode

SvxLink is very extensible and modular

Voice services are implemented as modules which are isolated from each other. Modules can be implemented in either C++ or TCL. Examples of modules are:

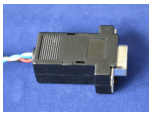
- Help -- A help system
- Parrot -- Play back everything that is received
- EchoLink -- Connect to other EchoLink stations
- DtmfRepeater -- Repeater received DTMF digits
- TclVoiceMail -- Send voice mail to other local users
- PropagationMonitor -- Announce propagation warnings from dxmaps.com
- SelCall -- Send selective calling sequences by entering DTMF codes

Applications

- Local “Close In” Repeater for Events
- Parrot Repeater for Balloon Launches
- Echolink Radio “Hot Spot” for Personal Use

Multiple Installation Strategies

USB to RS-232 with audio interface
GPIO (Build Your Own or Commercially Available) with Power Supply
Customized RS-232



Installation Today KISS

Avoiding the GPIO and Custom Interfaces
This installation will work on any computer
All Components Easily Sourced Locally (Tanners has it all!)

Hardware Requirements RPi

Use Known Hardware

- Use a USB Powered Hub (Any Kind)
- USB to RS-232 (with data cable)
- Build a Simple Interface (MSU Interface)
- All components available at Tanners Electronics

YES!

NO!

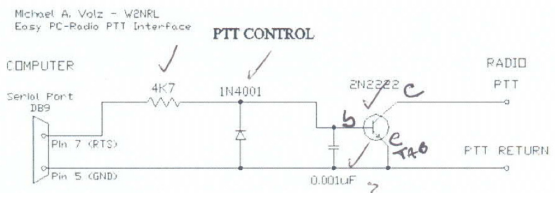
USB to RS-232

Available at Tanners

USB Sound Card

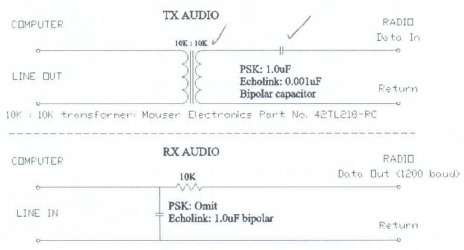
If it can be seen in Linux and the program Alsamixer
it will most likely work!

Simple PTT Control
Attached to RS-232 with Powered Hub

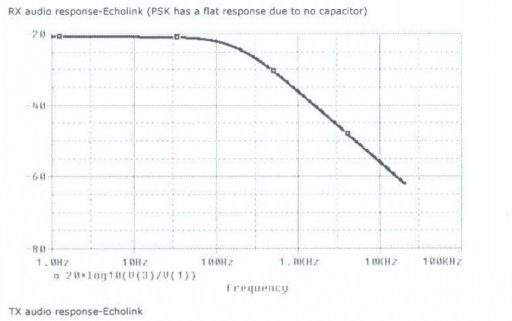


2N2222 and 1N4001 Widely Available

Very Simple Audio Interface
Add Audio Interface Cabling As Needed



Resulting Audio Curve with Optional Capacitor

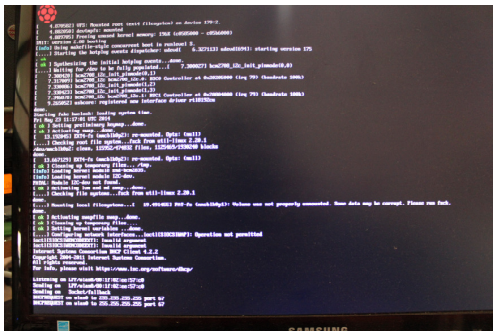


TX audio response-Echolink

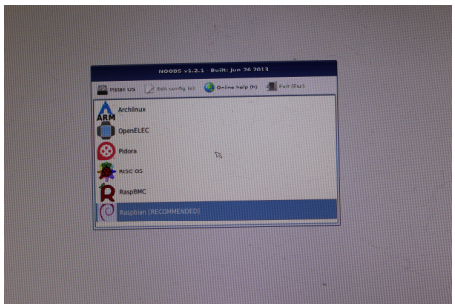
Svxlink Resource Pages

- svxlink.net
- svxlink.org
- http://www.vr2xkp.org/2013/03/13/life-rpi-svxlink-echolink-node-rpi/

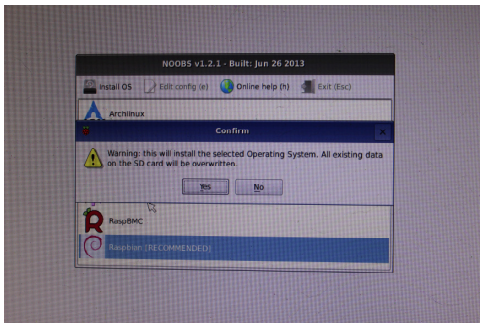
Noobs Start Up
Though Any Existing Setup Should Work



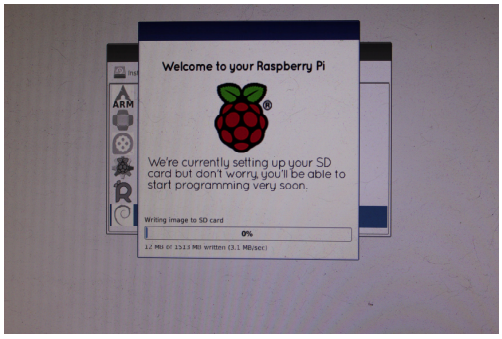
Select Raspbian



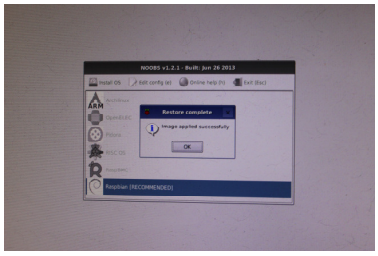
Card will be Written With Raspbian OS



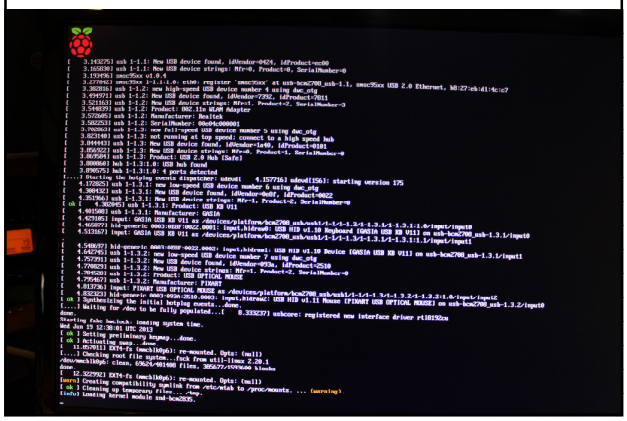
Allow Installation to Proceed



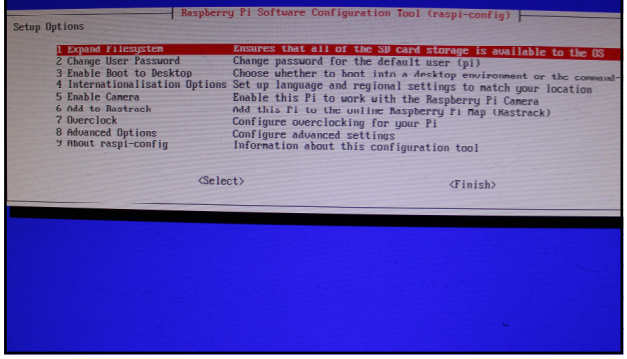
You should get “Image applied successfully”



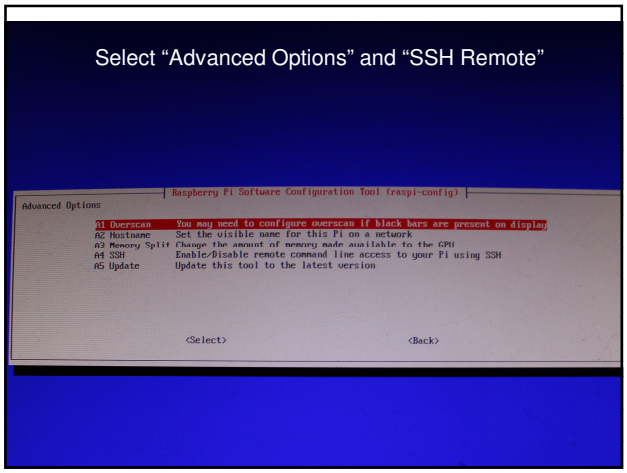
Allow reboot



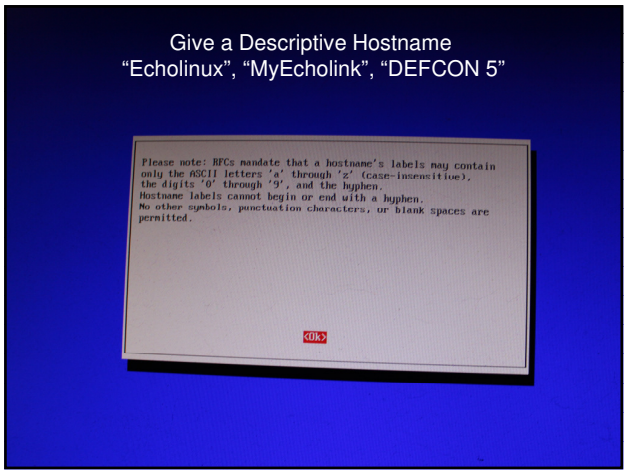
Your choice, I use Option 1: “Expand Filesystem”



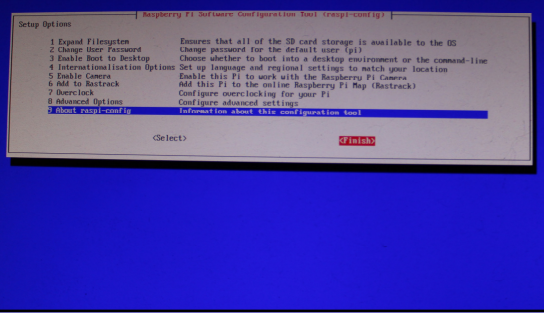
Select “Advanced Options” and “SSH Remote”



Give a Descriptive Hostname
“Echolinux”, “MyEcholink”, “DEFCON 5”



Click on “Finish”



RPi Should Come to Command Line Log In

Housekeeping

- Let’s Update Our OS
- sudo apt-get update && sudo apt-get upgrade

Optional

- We can build from the GUI (cut and paste is easier than typing).
- “startx”
- Command Line - “ctl-t” or Terminal Mode
- We will be building version “SVXLINK11.11” (Newer versions require “cmake” which doesn’t seem to work for me)
- http://www.vr2xkp.org/2013/03/13/life-rpi-svxlink-echolink-node-rpi/

We will be using VR2XKP’s Detailed “Step by Step” Instructions.

- http://www.vr2xkp.org/2013/03/13/life-rpi-svxlink-echolink-