# Instructions for Building DFT Raspi Operating System

1. Create SD Card with Raspian Operating System (Desktop Without the added Applications Preferred)
2. Insert in Loco and run until updated
3. Enable VNC Server and access remotely (Remember to use ALT-leftClick to get to bottom of screen
4. Alter config.txt. (**sudo nano /boot/config.txt**)
   1. Turn off Overscan
   2. Alter screen resolution to 1200 x 768 (to match touch screen)
   3. NB: This step can be done from a PC on the boot partition prior to inserting in the Pi.
5. Now install the necessary packages:
   1. **sudo apt-get install codeblocks**
   2. **sudo apt-get install libsdl2-dev**
   3. **sudo apt-get install libsdl2-mixer-dev**
   4. **sudo apt-get install libsdl2-ttf-dev**
6. If HIFI Berry Soundcard fitted – go to Raspi Preferences – Audio and select it as the default.
7. Now get the latest LocoSound Project code.
   1. From home folder – create ‘code’ folder (optional – I prefer to put all my projects in the folder **/home/pi/code/)**
   2. Open terminal window into the folder you wish to place the code directory structure
   3. Use this command to copy the Git repo:
      1. **git clone** [**https://github.com/shykiwibloke/LocoSound.git**](https://github.com/shykiwibloke/LocoSound.git)
   4. open the project file in CodeBlocks (hint – navigate to LocoSound directory and double-click **‘LocoSound.cbp**’ and CodeBlocks will open the whole project properly)
   5. Select ‘Release’ version at the top and compile.
   6. Now you will have to copy the sound files AND the graphic files into the ./bin/release subdirectory
   7. Now copy the ‘**LocoSound.conf’** from the source directory to the /bin/release subdirectory. (e.g.’**/home/pi/code/LocoSound/bin/release**’)
      1. Check the parameters for the terminal connection to the Arduino or other controlling device you are using.
      2. Check the parameters for the screen
      3. Check the sound volumes of the various sounds in the config file to your preferences.
   8. If all ok – set up the autostart by getting the pi’s autostart to call the file ‘start\_locosound’ which is located in the source directory /home/pi/code/LocoSound
      1. Navigate to/create the directory /home/pi/.config/lxsession/LXDE-pi
      2. Copy the source file ‘locosound autostart’ to this directory and rename it ‘autostart’
      3. Check the file ‘/home/pi/.config/lxsession/LXDE-pi/autostart’ has execute permission.
      4. Check the file ‘/home/pi/code/LocoSound/start\_locosound’ has execute permission
      5. Check the file ‘/home/pi/code/LocoSound/bin/Release/LocoSound’ has execute permission