Setting Up Trunking With Patriotwaves Dual TCXO SDR Radios

1. Download Unitrunker from their website www.unitrunker.com/

Dowload the latest version here http://www.unitrunker.com/download/

Version: UniTrunker-1.0.33.6.msi 23-Apr-2017 00:00 1556480

- 2. You will need to have installed the HDSDR. DSDPlus and Virtual Cable from our directions on the website here. <u>http://www.starsandstripes4sale.com/Home.html</u>
- 3. Install Unitrunker It will install automatically in your PROGRAM FILES folder or PROGRAM FILE (x86) folder if you have a 64 bit operating system.
- 4. Once installed, navigate to that Unitrunker folder and find the UNIFORM application file and make a shortcut to your desktop.
- 5. Right click the shortcut icon and select properties. Select the COMPATIBILITY tab and check "run this program as administrator" then hit apply and close.
- 6. PLUG IN YOUR RADIO. Start the program and select "first time installation?
- 7. When the windows opens look for the "+" (add receiver) icon.
- 8. Select the RTL2832U and another box will open. Enlarge the screen of the window.
- **9.** Select the INFO tab at the bottom and follow this window picture for settings
- **10. SETTINGS**

🕁 Receiver Control			
Receiver			
Туре	RTL2832U		
Model	Control		
Run	Stopped		
Status			
RTL Device	Bulk-In, Interface (Interface 0) (Interface 0) (Interface 0):00000001		
Correction	0.00000		
Drift Correct	X		
Applied	0.00000		
Baseband AGC	X		
Gain	300		
Auto Gain	×		
Center	0.00000		
Sample Rate	0.96 msps		
VCOs	1 VCO		
Logging			
Auto Gain			
Tuner Auto Gain	•		
Info VCO Sco	pe		

Change the settings as indicated above and then select the VCO tab at the bottom

🕁 Receiver Con	trol
Role	Signal
Status	
RSSI	0
Window	
Voice	
Deemphasis	
Mute	
Audio Output	Microsoft Sound Mapper
Digital Output	
Rank	50
Calls	Group and Unit Calls
Squelch	
Park	853.78750
Mode	FM
Analog	R
P25	
ProVoice	
- Listen	
Priority	Parked
Frequency	0.0000
Source	
Target	
Voice	
 Signal 	
Protocol	
Health	0
Discover	X
Chase	
Dwell	1000
APCO P25	X
Motorola	
EDACS48	X
EDACS96	X
MPT1327	X
Logging	
Info VCO Sc	ope

Follow these settings. Your RTL device will be the first listed of the two radios which is usually represented as RTL with a series of 0's ending with a 1.

Find the control channel for your system and put it into the PARK box. After this reduce the window and add "+" the next device RTL2832U.

Receiver VOIC	E
	N II > ■ () 日
Receiver	
Туре	RTL2832U
Model	VOICE
Run	Stopped
Status	
RTL Device	
Correction	0.00000
Drift Correct	X
Applied	0.00000
Baseband AGC	×
Gain	300
Auto Gain	x
Center	0.00000
Sample Rate	0.96 msps
VCOs	1 VCO
Logging	
COs umber of VCOs Info VCO Sco	pe

This is your voice chasing radio. Follow the setting here and after completion select the VCO tab. Please note you will select the second RADIO under the RTL DEVICE. This is usually shown as a number and then "&" and a series of letters and numbers. It is not shown in the picture

🗄 Receiver VOI	Œ _D>
Home	
NCO.	
Role	Voice
Status	
RSSI	0
Window	0
Voice	
Deemphasis	
Mute	
Audio Output	VB-Audio Point
Digital Output	VB-Audio Point
Rank	50
Calls	Group and Unit Calls
Squelch	0
Park	0.00000
Mode	FM
Analog	×
P25	X
ProVoice	X
Listen	
Priority	Parked
Frequency	0.00000
Source	
Target	
Voice	
Signal	
Protocol	
Health	0
Discover	
Chase	
Dwell	1000
APCO P25	
Motorola	
EDACS48	
EDACS96	
MPT1327	
Logging	
Info VCO Sc	ope

Follow the setting for your voice radio as shown and then reduce this window back to the smaller size as you did the CONTROL radio.

You will set the Virtual Cable for this radio and you will need DSDPlus installed and ready to go. Start the DSDPlus program and make sure your default settings are as follows; Four boxes will open and you will look at the big black DOS command screen. You will find the default devices on this screen.

audio input device #? (VB-Audio Point) initialized audio output device #? (Speakers or Sound device) initialized

If not as shown you will have to change computer sound settings to reflect this recording and playback device. You can also write a batch file to set these defaults as explained on our website instructions.

Once you have DSDPlus activated and correct you will start the two TCXO radios. This is found at the top of each device. Select the SCOPE tabs for both radios and start. If set up correctly you will see the CONTROL scope running and the VOICE radio as a straight line until a voice transmission is initiated. Look for the CONTROL radio to activate a new box which will appear and start populating the channels. Control channels in RED, alternate control channels in YELLOW and VOICE channels in WHITE. Any voice channel transmitting will turn from WHITE to GREEN and the ID, Source and TARGET is displayed on both Unitrunker and the activity window of DSDPlus. You can then size the windows for your best performance and viewing.

Refer to <u>www.radioreference.com</u> for ALL TRUNKED SYSTEMS in your county and local area. Contact us for troubleshooting and support if you need.

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