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PA-STARNet Interoperability

Standard Operating Procedures



Appendix D – Using the VHF Overlay

By overlaying the commonwealth’s 800 MHz system with a network of VHF base stations and mapping each one to an OpenSky talk group, the state allows users of VHF radio systems to communicate directly with state agencies.

Use of the VHF overlay is similar to use of the UHF overlay, except that it is simpler in that there are no repeaters or tones. The VHF overlay uses the National Emergency Police Frequency (NEPF) in wideband operational mode. Although every VHF overlay site encodes a specific tone, this is only for maintenance use as a means of identifying which VHF overlay site is transmitting.

Following is the VHF radio programming required to use the VHF overlay:

Alias	Transmit Freq/Tone	Receive Freq/Tone
NEPF	155.475 / none (CSQ)	155.475 / none (CSQ)

To ensure the ability to communicate with state agencies when using the VHF radio, it is essential that those agencies have the talk groups corresponding to NEPF available in their OpenSky radios. The naming convention for VHF uses *NP* for “National Police” in place of the *41*, *42*, or *43* used in the UHF naming convention (see Appendix C).

SRND recommends that local agencies program the overlay channels in their areas of operation into their radios in advance. Agencies might consider doing this when purchasing new radios or when reprogramming radios.

VHF Overlay Coverage and Connectivity

The document *PA-STARNet VHF overlay coverage maps* (Adobe PDF, 2.6 MB) shows coverage footprint maps for each serving site to help plan communications support using the VHF overlay. Table 2 below shows key information for each site. Note that NEPF is 155.475 wideband. CTCSS encode tone is for maintenance use only.

Table 2 – VHF Overlay Site Inventory

Region	Site ID	Site Name	TG Name	Call Sign	CTCSS Encode
1	BUTL01	PGC: Hilliards	NP_BT01	WQGN636	94.8
1	CRAW01	Townville	NP_CW01	KXH388	123
1	ERIE92	Washington Stockpile	NP_ER92	WQGN636	82.5
1	FORE07	Tylersburg	NP_FO07	WQGN636	162.2
1	JEFF02	Hays Lookout	NP_JF02	KXH361	173.8
1	LAWR06	Grindstone	NP_LW06	WQGN636	88.5
1	MERC92	New Vernon Stockpile	NP_MC92	WQGN636	114.8
1	WARR34	Kinzua Dam	NP_WR34	WQGN636	100
2	ALLE76	State Office Building	NP_AL76	WQGL632	173.8
2	BEAV02	Raccoon Creek	NP_BV02	WQGL632	107.2
2	CAMB02	Lower Yoder	NP_CB02	WQGL628	123
2	FAYE01	Pondfield	NP_FY01	KXH381	82.5
2	GREE08	Waynesburg PDOT	NP_GR08	WQGL632	100
2	INDI01	Clymer Fire Tower	NP_IN01	KXH377	151.4
2	SOME06	Negro Mountain	NP_SM06	WQGL629	114.8
2	WEST03	Beacon	NP_WS03	WQGL632	141.3
3	CAME05	Truman	NP_CM05	WQGL632	71.9
3	CLIN02	Tamarack	NP_CL02	WQGL632	141.3
3	CLIN41	Rainsares III	NP_CL41	WQGL629	151.4
3	LYCO02	Waterville	NP_LY02	KXO915	77
3	MCKE01	Port Allegheny	NP_MK01	WQGL628	114.8
3	POTT12	Denton Hill	NP_PO12	WQGL628	94.8
3	TIOG06	Pat Jr. Fire Tower	NP_TI06	WQGL628	131.8
4	BEDF02	Martin Hill	NP_BD02	WQGL628	94.8
4	BLAI02	Martinsburg	NP_BL02	WQGL628	88.5
4	CENT04	Rush	NP_CT04	WQGL628	131.8
4	CENT08	Little Flat	NP_CT08	WQGL634	192.8
4	CLEA51	SCIBootcamp	NP_CF51	WQGL634	107.2
4	HUNT01	Loop Lookout	NP_HT01	WQGL634	162.2
4	JUNI05	Ickesburg PGC	NP_JU05	WQGL634	114.8
4	SNYD02	Richfield	NP_SN02	WQGL634	123
5	BRAD41	Robwood III	NP_BR41	WQGL635	162.2
5	COLU01	Catawissa	NP_CO01	KXH332	173.8
5	COLU02	Vandine	NP_CO02	WQGL635	192.8
5	LUZE01	Wyoming Mtn	NP_LZ01	WQGL635	107.2
5	MONR03	Coolbaugh	NP_MR03	WQGL635	77
5	MONT01	Montour	NP_MT01	WQGL635	88.5
5	PIKE01	High Knob	NP_PI01	WQGL638	123
5	SULL03	Bear Wallow	NP_SL03	WQGL635	82.5
5	SUSQ06	Great Bend	NP_SQ06	WQGL636	88.5
5	WAYN31	Beach Lake	NP_WN31	WQGL636	151.4
5	WAYN33	Mount Ararat	NP_WN33	KXH345	141.3
6	BERK02	Hopewell	NP_BE02	WQGL636	131.8
6	BERK04	Port Clinton	NP_BE04	WQGL638	94.8
6	BUCK40	Nockamixon State Park	NP_BU40	WQGL636	114.8
6	PHIL02	PSP Phila. HQ. Troop K.	NP_PH02	WQGL636	82.5
7	CUMB04	Big Flat Heliport	NP_CU04	WQGL638	141.3
7	DAUP01	Ellendale	NP_DA01	WQGL638	151.4
7	LANC01	Cornwall	NP_LN01	WQGL638	100
7	YORK94	I-83 Rest	NP_Y094	WQGL638	107.2