

SNV-12 Voter Quick Reference Help Sheets

Chassis, Power Supply, and CIM Module

SNV-12 Configuration Settings and Adjustments (0=Off, 1=On)																																							
Chassis Rear Panel:	Designator	Factory Setting	Switch Choices																																				
AC Line Voltage Rear Panel	AC Input Module	110 VAC (Unless Customer Specifies 220 VAC)	110 VAC / 220 VAC (nominal)																																				
Power Supply Module:	Designator	Factory Setting	Switch Choices																																				
Charger ON/OFF (PSM-1A Module)	SW3	OFF	OFF = Charger Disabled , ON = Charger Enabled																																				
CIM Module Configuration:	Designator	Factory Setting	Switch Choices																																				
Console TX Audio Delay	SW1	60 ms	0=0, 1=30ms, 2=60 , 3=90, 4=120, 5=150, 6=180, 7=210, 8=240, 9=270, A=300, B=330, C=360, D=390, E=420, F=450ms																																				
Transmitter Control; TX Output Key Tones [For Function Tone Guided TX Steering, also enable Key Tone Detection (CIM SW2-6) and select groups on SVM modules] [EIA sequence standard levels (relative to voice): Alert +10 dB, Function 0dB, Hold -20 dB Optional levels (see CIM-2A switch SW4-3): Alert 0 dB, Function -10 dB, Hold, -20 dB]	SW2-1, 2, 3	Key Tones Disabled	<table><tr><td>SW2-1</td><td>SW2-2</td><td>SW2-3</td><td>Status</td></tr><tr><td>0</td><td>0</td><td>0</td><td>Disabled</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1950 Hz (single, constant)</td></tr><tr><td>0</td><td>1</td><td>0</td><td>2175 Hz (single, constant)</td></tr><tr><td>1</td><td>1</td><td>0</td><td>2600 Hz (single, constant)</td></tr><tr><td>0</td><td>0</td><td>1</td><td>2950 Hz (single, constant)</td></tr><tr><td>1</td><td>0</td><td>1</td><td>Reserved</td></tr><tr><td>0</td><td>1</td><td>1</td><td>Function Tone Guided TX Steering</td></tr><tr><td>1</td><td>1</td><td>1</td><td>EIA F1 (1950 Hz) function tone</td></tr></table>	SW2-1	SW2-2	SW2-3	Status	0	0	0	Disabled	1	0	0	1950 Hz (single, constant)	0	1	0	2175 Hz (single, constant)	1	1	0	2600 Hz (single, constant)	0	0	1	2950 Hz (single, constant)	1	0	1	Reserved	0	1	1	Function Tone Guided TX Steering	1	1	1	EIA F1 (1950 Hz) function tone
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Key Tone Output Level Relative to Voice Audio (Single Tones Only – Does not apply to EIA)	SW2-4, 5	-5 dB	<table><tr><td>SW2-4</td><td>SW2-5</td><td>Attenuation</td></tr><tr><td>0</td><td>0</td><td>-20 dB</td></tr><tr><td>1</td><td>0</td><td>-15 dB</td></tr><tr><td>0</td><td>1</td><td>-10 dB</td></tr><tr><td>1</td><td>1</td><td>-5 dB</td></tr></table>	SW2-4	SW2-5	Attenuation	0	0	-20 dB	1	0	-15 dB	0	1	-10 dB	1	1	-5 dB																					
SW2-4	SW2-5	Attenuation																																					
0	0	-20 dB																																					
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0	1	-10 dB																																					
1	1	-5 dB																																					
EIA Key Tone Detection-Console TX Audio Input Unless CPM SW1-5 is Off, EIA Key Tones will not enable or disable Repeat Mode	SW2-6	Disabled	0= EIA Key Tone Detection Disabled 1= EIA Key Tone Detection Enabled 1950 Hz = Key 1550 Hz = Enable Repeat Mode (CPM SW1-5 must be Off) 1450 Hz = Leave Repeat Mode (CPM SW1-5 must be Off)																																				
Site Unsquelch Time Limiter (three minute limit)	SW2-7	Disabled	0= Disabled , 1= Enabled																																				
High Pass Filter (Cuts 100 Hz & lower)	SW2-8	Engaged	0= Engaged , 1= Removed																																				
TX Source Priority Selection	SW3-1	Console	0=Console , 1= Field																																				

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CIM Module (continued)

SNV-12 Configuration Settings and Adjustments (0=Off, 1=On)					
CIM Module Configuration:	Designator	Factory Setting	Switch Choices		
Simplex Mode; Voting Hold Off After TX	SW3-2, 3	1 Second	<u>SW3-2</u>	<u>SW2-3</u>	<u>Voting Hold Duration</u>
			0	0	0.5 sec
			1	0	1.0 sec
			0	1	1.5 sec
			1	1	2 sec
TX Hangtime Duration	SW3-4, 5	1 Second	<u>SW3-4</u>	<u>SW3-5</u>	<u>Hangtime Duration</u>
Applies only to voted audio retransmissions when the voter is in Repeat Mode; Does not add hangtime to console transmissions unless SW3-8 is also Enabled.			0	0	0 sec
			1	0	0.5 sec
			0	1	1.0 sec
			1	1	2.0 sec
PTT / UNSQ Output Configuration	SW3-6, 7	PTT	<u>SW3-6</u>	<u>SW3-7</u>	<u>P2-5 Output Configuration</u>
These switches configure both the PTT/UNSQ output available at P2-5 and TB13-8, and the PTT/UNSQ relay at pins 13 through 16 of TB13			0	0	PTT Only
			1	0	Unsquelled
			0	1	Directed Active High Unsquelch
			1	1	Same, Delayed 200 ms
Console TX Hangtime (duration set by SW3-4,5)	SW3-8	Disabled	0= Disabled, 1= Enabled		
Repeat Audio Mixed with Console TX Audio	SW4-1, 2	Not Mixed	<u>SW4-1</u>	<u>SW4-2</u>	<u>Repeat Audio Mix Level</u>
Unit must also be in Repeat Mode (CPM SW3-7 On) and set to Console Priority (CIM SW3-1 Off) to enable this feature			0	0	No Repeat Audio Mixed
			1	0	Mix at -6 dB relative to Console TX Audio
			0	1	Mix at -3 dB
			1	1	Mix at 0 dB (No Attenuation)
EIA Key Tone Output; Alternate Level	SW4-3	Standard	0= Standard, 1= Lowered Amplitude (see CIM SW2-1,2,3)		
PTT Input Polarity: Active Low or Active High	SW4-4	Active Low	0= Active Low, 1= Active High		
Alternate TB13-17 function (Repeat Enable)	SW4-5	Disabled	0= Disabled, 1 = Enabled (Leave at 0 with CPM-1)		
Alternate TB13-12 function (STARS Enable)	SW4-6	Disabled	0= Disabled, 1 = Enabled (Leave at 0 with CPM-1)		
Spare Switches – Leave Off	SW4-7 to SW4-8	OFF	0= OFF; Reserved for future use		
Voted Audio Output Level	R67 (potentiometer)	-10 dBm	Voted Audio to Console or Other External Device		
Console TX Input Audio Level	R50 (potentiometer)	-10 dBm	Console TX Audio to Voter		
Speaker: Internal or External	JP1 (jumper plug)	Internal	Internal = 1&2, External = 2&3		
Console TX Input	JP2	600 ohm Balanced	600 ohm Balanced (2&3) or 47K ohm Single-Ended (1&2)		
Voted Audio Mute Input	JP7	Active Low	Active Low (1&2) or Active High (2&3)		
PTT/Unsquellch Output Configuration	JP8	+5V, 47k Pull-up	+5V, 47k Pull-up (1&2) or +12V, 10k Pull-up (2&3)		
Console PTT Input Configuration	JP9	Logic Level Input	Logic Level = 1&2; E&M = 2&3		

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CPM Module

SNV12 Configuration Settings and Adjustments 0=Off, 1=On			
CPM Configuration	Designator	Factory Setting	Switch Choices
Serial Port Baud Rate	SW1-1, 2, 3	9600	SW1-1 SW1-2 SW1-3 Baud Rate 0 0 0 300 1 0 0 1200 0 1 0 2400 1 1 0 4800 0 0 1 9600 1 0 1 19.2K 0 1 1 38.4K 1 1 1 57.6K
Serial Port Enable/Disable	SW1-4	Disabled	0=Disabled, 1=Enabled
Repeat Mode is EIA controlled (version 4.08 & later)	SW1-5	Disabled	0=Enable, 1=Disabled
Pilot Tone EOT Noise Cancellation	SW1-6	Disabled	0=Disabled, 1=Enabled for all SVM-2 Modules
Manufacturing Test	SW1-7	Disabled	0=Disabled, 1= Enabled <i>MUST BE DISABLED</i>
Default TX Site Selection	SW1-8	Home Site	0= Home Site, 1=Multicast
Voting Criteria; Signal Quality Difference	SW2-1, 2, 3	1 dB	<u>SW2-1 SW2-2 SW2-3 Difference</u> 0 0 0 Test Only – NOT For Field Use 1 0 0 1 dB 0 1 0 2 dB 1 1 0 3 dB 0 0 1 4 dB 1 0 1 5 dB 0 1 1 6 dB 1 1 1 7 dB
Front Panel Disable Reported As SVM Fault Note: Applies only to RS-232 status report	SW2-4	Standard Status Word	0=Front Panel Disable not reported as fault 1=Disable reported as fault
Line Fault Detection Timer Delay Setting	SW2-5, 6	30 Seconds	SW2-5 SW2-6 Line Fault Delay 0 0 OFF 1 0 5 seconds 0 1 15 seconds 1 1 30 seconds
STARS (TX Steering)	SW2-7	Disabled	0= STARS Disabled, 1= STARS Enabled
Software Normal/Update Setting	SW2-8	Normal	0= Normal, 1= CPM will update software at power up

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CPM Module (continued)

SNV12 Configuration Settings and Adjustments 0=Off, 1=On			
CPM Configuration	Designator	Factory Setting	Switch Choices
Transmit Steering; Hold-Over Timer Setting	SW3-1, 2	10 seconds	SW3-1 SW3-2 <i>Hold-Over Timer</i> 0 0 Infinite 1 0 3 seconds 0 1 10 seconds 1 1 30 seconds
Voting Locked on Active COR (Also called COR Lock)	SW3-3	Disabled	0=Voting Lock Disabled (Normal Voting) 1= Voting Lock Enabled
Voting Locked on Data Detection Not supported in s/w versions above 3.38 for SVM-1, or mixed SVM-2/SVM-1 chassis. Supported in all s/w versions for SVM-2s.	SW3-4	Disabled	0=Voting locked on DATA Disabled , 1= Voting locked on DATA Enabled
Duplex/Simplex Operation	SW3-5	Duplex	0= Simplex Operation, 1= Duplex Operation
Group Lockout on Primary Site Failure	SW3-6	Disabled	0= RX Group Lockout Disabled 1= RX Group Lockout Enabled
Repeat Mode	SW3-7	Enabled	0= Repeat Mode Disabled, 1= Repeat Mode Enabled
Vote Indication Hold After Squelch	SW3-8	Disabled	0 = Disabled , 1 = Enabled
Voting Criteria: Voting Transition Timer Applies to SW4 unless COR Lock (Voting Lock) is enabled via CPM SW3-3	SW4 <i>Note Dual Function</i>	250 ms <i>Note Dual Function</i>	0=Test Only – Not For Field Use , 1=50ms, 2=100ms, 3=150ms, 4=200ms, 5=250ms , 6=300ms, 7=350ms, 8=400ms, 9=500ms, A=1 sec, B=1.5 sec, C=2 sec, D=2.5 sec, E=3 sec, F= 5 sec
COR Lock Onset Delay Timer Applies to SW4 when COR Lock (Voting Lock) is enabled via CPM SW3-3	SW4 <i>Note Dual Function</i>	200 ms <i>Note Dual Function</i>	0=Undelayed COR Lock, 1=100ms, 2=125ms, 3=150ms, 4=175ms, 5=200ms , 6=225ms, 7=250ms, 8=275ms, 9=300ms, A=350ms, B=400ms, C=450ms, D=500ms, E=550ms, F= 600ms

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SVM Module

SNV12 Configuration Settings and Adjustments 0=Off, 1=On			
Site Voter Module Configuration	Designator	Factory Setting	Switch Choices
Receive (Site) Audio Delay	SW1	0 ms (No delay)	0=0ms , 1=30ms, 2=60, 3=90, 4=120, 5=150, 6=180, 7=210, 8=240, 9=270, A=300, B=330, C=360, D=390, E=420, F=450ms
Pilot Tone/Guard Tone Frequency	SW2-1	1950 Hz Pilot Tone & 2175 Hz Guard Tone	0=2175 Hz Pilot Tone and 1950 Hz Guard Tone 1=1950 Hz Pilot Tone and 2175 Hz Guard Tone
COR Type	SW2-2, 3	Pilot Tone	<u>SW2-2</u> <u>SW2-3</u> <u>COR Type</u> 0 0 None, Unsquelched, COR always active 1 0 Hardwired COR input 0 1 Pilot Tone Used 1 1 Audio Level COR, for squelched receivers
Guard Tone Operation	SW2-4	Disabled	0=Disabled , 1=Enabled
<u>Applies Only If SW2-2, 3 Set for Hardwired COR or Pilot Tone:</u>	<u>Note Dual Function</u>	<u>Note Dual Function</u>	<u>Note Dual Function</u>
TB1-TB12 Pin 16 Configuration	SW2-5	TX Selected Out	0=Unsquelch Out, 1=TX Selected Site Out
Site Designation	SW2-6	RX & TX Site	0=RX-Only Site, 1=RX & TX (site can transmit & receive)
-OR-	-OR-	-OR-	-OR-
<u>Applies Only If SW2-2, 3 Set For Audio Level COR:</u>	<u>Note Dual Function</u>	<u>Note Dual Function</u>	<u>Note Dual Function</u>
Audio Level COR Threshold	SW2-5, 6	Lowest Threshold	<u>SW2-5</u> <u>SW2-6</u> <u>Audio Derived COR Threshold</u> 0 0 Highest Threshold (lowest sensitivity) 1 0 0 1 1 1 Lowest Threshold (highest sensitivity)
COR Input Polarity: Active Low Active High	SW2-7	Active Low	0= Active Low , 1= Active High
High Pass Filter (Cuts 100 Hz and lower)	SW2-8	Engaged	0= Engaged , 1= Removed

NOTE: SW5 and JP2 thru JP6 available only with SVM-2. JP6 SVM-2 Rev E & higher.

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SVM Module (continued)

SNV12 Configuration Settings and Adjustments 0=Off, 1=On			
Site Voter Module Configuration	Designator	Factory Setting	Switch Choices
RX Group	SW3-1, 2, 3	Rx Groups Disabled	SW3-1 SW3-2 SW3-3 Group 0 0 0 Disabled; Not a member of an RX group 1 0 0 RX Group #1 0 1 0 RX Group #2 1 1 0 RX Group #3 0 0 1 RX Group #4 1 0 1 RX Group #5 0 1 1 RX Group #6 1 1 1 RX Group #7
RX Group Primary Site Designation	SW3-4	Not a Primary Site	0=Not a Primary Site, 1= Primary Site
Voting Mode: FM mode or AM/HF mode	SW3-5	FM mode	0=FM Mode, 1=AM/HF Mode
Simplex Repeat When Voted	SW3-6	Disabled	0= Disabled, 1= Enabled
Line Equalization /AGC Level	SW3-7, 8	Disabled	SW3-7 SW3-8 Equalization Level / AGC Level (dBm) 0 0 No Equalization / 1.5 to -1.5 1 0 Minimal / -1.5 to -4.5 0 1 Medium / -4.5 to -7.5 1 1 Highest / -7.5 to -10.5
Controls Line EQ Setting If SW5-1 (SVM-2) Disabled			
Controls AGC Setting If SW5-1 (SVM-2) Enabled (SVM-1 Users See Manual)			
Pilot Tone AGC (SVM-1 Users See Manual)	SW5-1	Disabled	0= Disabled, 1= Enabled
Pilot Tone Notch Filter (SVM-1 Users See Manual)	SW5-2	Enabled	0= Enabled, 1= Disabled
Term Block Pin 19 Function Configuration	SW5-3	TX Inhibit Input	0= TX Inhibit Input, 1=Unsquench Inhibit Input
COR Onset Delayed with RX Audio	SW5-4	COR Not Delayed	0= COR Not Delayed, 1=COR Delayed with RX Audio
Pilot Tone Detector Sensitivity	SW5-5	Full Sensitivity	0= Full Sensitivity, 1=Detector Sensitivity Reduced
RX Audio Output Delay	SW5-6, 7	Disabled	00=Disabled, 01=100ms, 10=200ms, 11=400ms
Spare Switch – Leave Off	SW5-8	OFF	0= OFF; Reserved for future use
RX Audio Input Level	R45 (potentiometer)	-10 dBm	Audio from associated Voting Receiver
TX Audio Output Level	R62 (potentiometer)	-10 dBm	Console or Repeat Audio to associated Transmitter
RX Audio Input Impedance High/Low	JP1 (jumper plug)	Low (600 ohms)	Low Z = 1&2; High Z = 2&3
RX Audio Input – Balanced / Unbalanced	JP2 (jumper plug)	Balanced	Balanced = 1&2; Unbalanced = 2&3
Hardwired COR Input Configuration	JP3 (jumper plug)	Logic Level Input	Logic Level = 1&2; E&M = 2&3
PTT Output Configuration	JP4 (jumper plug)	Logic Level Output	Logic Level (Open Collector) = 1&2; E&M = 2&3
TX Inhibit; Term Block Pin 19 Input Config.	JP5 (jumper plug)	Active Low	Active Low = 1&2; Active High = 2&3