4248 - UHF REPEATER SWITCH SETTINGS (E-MODELS ONLY)



4248 - UHF REPEATER CONFIGURATION: (E-MODELS ONLY)

• Set up the UHF Omi-Directional antenna and attach on end of the coaxial cable to the UHF base of the antenna mount. (See Antenna Instructions in User's Guide for detailed setup)

- Attach the other end of the UHF coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.
- Connect the subrack power cable to the SLA batteries using the provided Polarized fused cable. (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)
- Once power is connected, all modules are active. (No master power switch)
- Keep the power switches on both the "TX A" and "RX A" modules in the "NORM" position.

• Keep the "MIC Mode" on the "TX A" in the "ANALOG" position.

- Keep the speaker audio OFF by switching the Speaker Switch on the System Regulator to the "OFF" position.
- Test with two UHF handhelds to verify the repeater is operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site.)

Equipment Note:

- NIICD has implemented a RX/TX Fixed Tone of 110.9 on all UHF Frequencies to help minimize possible interference on UHF signals.
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.
- Switch A and Switch B on the Repeater Control Module have no effect on the operation of the UHF Stand Alone Repeater.



2025 NIICD Equipment Switch Settings

To Enable Audio to Internal Speaker for Troubleshooting:

- 1. Enable the speaker by switching the Speaker switch located on the System Regulator Module, to the "**ON**" position.
- Select the receiver A by turning the Function Switch located on the System Regulator Module to position 3 for RX A Audio.

Note: Select "**INT**" on the System Regulator Module to enable the audio to the internal speaker and "**EXT**" for the external speaker.

System Regulator Switch Functions (4248 -UHF Repeater) E-Models Only		
1 +13.8 V (Supply Voltage)		
2	2 +9.5 V Regulated	
3	3 RX A Audio	
4-12	NIICD Technician Testing	

Revised 2024

4248 - UHF REPEATER SWITCH SETTINGS



4248 - UHF REPEATER CONFIGURATION:

• Set up UHF Omni-Directional antenna and attach one end of the coaxial cable to the UHF base of the antenna mount. (See Antenna Instructions in User's Guide for detailed setup information) • Attach the other end of UHF coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.

• Connect the subrack power cable to the SLA batteries using the provided POLARIZED fused cable. (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)

• Turn the Power Switch to the "ON" position on the "System Monitor Module".

• Keep the power switches on both the "TX A" and "RX A" modules in "NORM" position.

• Keep the "Mic Mode" on the "TX A" in the "ANALOG" position.

• Keep the speaker audio OFF by switching the A/B Speaker switch on the System Monitor to the "Center" position.

• Test with two UHF handhelds to verify the repeater is operating correctly. (NIICD recommends testing with the field Units or ICP if possible before leaving the site.)

Equipment Note:

NIICD has implemented a RX/TX Fixed Tone of 110.9 on all UHF Frequencies to help minimize possible interference on UHF signals.

• The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

• Switch A and Switch B on the Repeater Control Module have no effect on the operation of the UHF Stand Alone Repeater.

bling Internal Speaker for Troubleshooting	Enablii
e the speaker Audio A by switching the speaker vitch Located on the System Monitor, to the "A" n.	• Enable th A/B Switc position.
System Monitor Switch Functions 248 - UHF Repeater Configuration)	Sy (424
+13.8 V (Supply Voltage	2
+9.5 V Regulated	3
RX A Audio	4
NIICD Technician Testing	1, 4-12
Revised 2024	

Close-Up View Switch A, Switch B Repeater Control Module



4312 - VHF STAND-ALONE REPEATER SWITCH SETTINGS (E MODELS ONLY)



4312 - VHF STAND-ALONE REPEATER CONFIGURATION: (E-MODELS ONLY)

• Set up the VHF Directional antenna and attach the coaxial cable to the appropriate VHF Base antenna mount. (See Antenna Instructions in the User's Guide for detailed setup information)

- Attach the other end of the VHF coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.
- Connect the subrack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power cable is connected, all modules are active. (No master power switch) (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)
- Keep the power switches on both the TX A and RX A in the "NORM" position.
- Keep the power switches on both the TX B and RX B in the "OFF" position. (Stand-alone Repeater Configuration No Linking, turn OFF UHF RX and TX Modules)
- Keep the **MIC MODE** switch on both the **TX A** and **TX B** in the "**ANALOG**" position.
- Keep the speaker audio OFF by switching the Speaker Switch on the System Regulator to the "OFF" position.

• Select the assigned tone by turning Switch A knob, located on the top portion of the Repeater Control Module, to associated position. (Switch A - VHF Tone Selection) 16-Position Switch, Position 1 is straight up. Test with two VHF handhelds to verify the repeater is operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)

Equipment Note:

• Selecting a tone will enable the tone on both the TX A and RX A modules.

Position A16

No Tone

- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone for each incident.
- ♦ Contact the CDO for a tone assignment @ 208-387-5644
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

	Switch A - V	HF Tone Table
	Position A1	Tone 1: 110.9
	Position A2	Tone 2: 123.0
	Position A3	Tone 3: 131.8
	Position A4	Tone 4: 136.5
Close Up View	Position A5	Tone 5: 146.2
Switch A, Switch B	Position A6	Tone 6: 156.7
Repeater Control Module	Position A7	Tone 7: 167.9
DEDEATED	Position A8	Tone 8: 103.5
	Position A9	Tone 9: 100.0
Switch A Switch B	Position A10	Tone 10: 107.2
Switch A Switch B	Position A11	Tone 11: 114.8
15 1/3 15 1/3	Position A12	Tone 12: 127.3
	Position A13	Tone 13: 141.3
	Position A14	Tone 15: 151.4
$11/9 \sqrt{-11/9} \sqrt{7}$	Position A15	Tone 15: 162.2

To Enable Audio to Internal Speaker for Troubleshooting:

- Enable the speaker by switching the Speaker switch located on the System Regulator Module, to the "ON" position.
- Select the desired receiver audio, A or B, by turning the Function Switch located on the System Regulator, to position 3 for RX Audio A or position 5 for RX audio B. Note: Select "INT" on the System Regulator Module to enable the audio to the internal speaker or "EXT" for the external speaker if connected.

System Regulator Switch Functions (4312-VHF Repeater Configuration) E-Model Only		
1 +13.8 V (Supply Voltage)		
2 +9.5 V Regulated		
3 RX A Audio		
5 RX B Audio		
4, 6-12 NIICD Technician Testing		
Revised 2024		

2025 NIICD Equipment Switch Settings

4312 - VHF REPEATER/LINK SWITCH SETTINGS (E MODELS ONLY)



4312 - VHF REPEATER/LINK CONFIGURATION (E-MODELS ONLY)

• Set up the VHF Antenna and attach the coax to the appropriate VHF Base and connector on the bulkhead mount located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for more info) • Set up the UHF antenna and attach the coax to the appropriate UHF base and connector on the bulkhead mount located on the back of the fiberglass box.

• Connect the subrack power cable to the SLA batteries using provided POLARIZED fused cable. Once the power cable is connected, all modules are active. (No master power switch)

- (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)
- Turn each module "ON" by keeping the switches on the TX A, RX A, TXB, and RXB in the "NORM" position.
- Keep the speaker audio off by switching the Speaker Switch on the System Regulator Module to the "OFF" position.
- Keep the MIC MODE switch on both the TX A and TX B in the ANALOG position.
- Select assigned tone by turning the Switch A knob, located on the top portion of the Repeater Control Module, to associated position. (See Switch A VHF Tone Table)
- Select assigned UHF frequency by turning the Switch B knob, located on the top portion of the Repeater Control Module, to associated position. (See Switch B UHF Link Frequency/Tone Table) Note:NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.
- Test with two VHF and one UHF handheld to verify both the repeater and link are operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)
- Before leaving the site, NIICD recommends turning the INT/EXT Speaker OFF on the System Regulator Module.

Equipment Note:

- Selecting a tone will enable the tone on both TX A and RX A modules.
- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone and UHF frequency for each incident.
- ◆ Contact the CDO for a dedicated Tone and UHF frequency assignment @ 208-387-5644
- + Both Switch A and Switch B is a 16 position rotary switch, with Position 1 being straight up.
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

Close-Up View
Switch A, Switch B
Repeater Control Module



Switch A - V	HF Tone Table	Switch I	B - UHF Link Frequen	cy/Tone Table
Position A1	Tone 1: 110.9	Position E	31 L1 RPTR Access	Tone: 110.9
Position A2	Tone 2: 123.0	Position E	32 L2 RPTR Access	Tone: 110.9
Position A3	Tone 3: 131.8	Position E	33 L3 RPTR Access	Tone: 110.9
Position A4	Tone 4: 136.5	Position E	34 L4 RPTR Access	Tone: 110.9
Position A5	Tone 5: 146.2	Position E	35 L5 RPTR Access	Tone: 110.9
Position A6	Tone 6: 156.7	Position E	B6 L6 RPTR Access	Tone: 110.9
Position A7	Tone 7: 167.9	Position E	B7 L7 RPTR Access	Tone: 110.9
Position A8	Tone 8: 103.5	Position E	B8 L1 RX Simplex	Tone: 110.9
Position A9	Tone 9: 100.0	Position E	39 L2 RX Simplex	Tone: 110.9
Position A10	Tone 10: 107.2	Position B	10 L3 RX Simplex	Tone: 110.9
Position A11	Tone 11: 114.8	Position B	11 L4 RX Simplex	Tone: 110.9
Position A12	Tone 12: 127.3	Position B	12 L5 RX Simplex	Tone: 110.9
Position A13	Tone 13: 141.3	Position B	13 L6 RX Simplex	Tone: 110.9
Position A14	Tone 14: 151.4	Position B	14 L7 RX Simplex	Tone: 110.9
Position A15	Tone 16: 162.2	Position B	15 Special Use 1	Tone: 110.9
Position A16	No Tone	Position B	16 Special Use 2	Tone: 110.9

To Enable Audio to Internal Speaker for Troubleshooting:

- 1. Enable the speaker by switching the Speaker switch located
- on the System Regulator Module, to the "ON" position.
- 2. Select the desired receiver audio, **A** or **B**, by turning the Function Switch located on the System Regulator, to
- position 3 for RX Audio A or position 5 for RX audio B. Note: Select "INT" on the System Regulator Module to enable the audio to the internal speaker or "EXT" for

external speaker if connected.

System Regulator Switch Functions (4312-VHF Repeater/Link Configuration) E-Models Only		
1	+13.8 V (Supply Voltage)	
2	+9.5 V Regulated	
3 RX A Audio		
5 RX B Audio		
4, 6-12 NIICD Testing		
Revised 2024		

4312 - VHF STAND-ALONE REPEATER SWITCH SETTINGS



4312 - VHF STAND-ALONE REPEATER CONFIGURATION:

• Set up the VHF Omni-Directional antenna and attach one end of the coaxial cable to the base of the VHF antenna base mount. (See Antenna Instructions in the User's Guide for detailed setup information) • Attach the other end of the VHF coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.

• Connect the subrack power cable to the SLA batteries using the provided POLARIZED fused cable. (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)

- Turn the Power Switch to the "ON" position on the System Monitor Module.
- Keep the power switches on both the TX A and RX A in the "NORM" position.
- Keep the power switches on both the TX B and RX B in the "OFF" position. (Stand-alone Repeater Configuration- No Linking, turn OFF UHF RX and TX Modules)
- Keep the MIC MODE switch on both TX A and TX B in the "ANALOG" position.
- Keep the A/B Audio Select Switch on the System Monitor Module at the center (OFF) position.
- Select the assigned tone by turning the Switch A knob, located on the top portion of the Repeater Control Module, to the associated position.
- (Switch A Tone Selection) 16 Position Switch, Position 1 is straight up)
- Test with two VHF handhelds to verify the repeater is operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)

Equipment Note:

- Selecting a tone will enable the tone on both the TX A and RX A modules.
- The Communications Duty Officer (CDO) will assign the appropriate tone for each incident.
- ♦ Contact the CDO for a tone assignment @ 208-387-5644.
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

	Switch A - V	HF Tone Table
	Position A1	Tone 1: 110.9
	Position A2	Tone 2: 123.0
	Position A3	Tone 3: 131.8
	Position A4	Tone 4: 136.5
Close Up View	Position A5	Tone 5: 146.2
Switch A Switch B	Position A6	Tone 6: 156.7
Repeater Control Module	Position A7	Tone 7: 167.9
PEDEATER	Position A8	Tone 8: 103.5
CONTROL	Position A9	Tone 9: 100.0
Switch A Switch B	Position A10	Tone 10: 107
Switch A Switch B	Position A11	Tone 11: 114.
15 1/3 15 1/3	Position A12	Tone 12: 127
	Position A13	Tone 13: 141
	Position A14	Tone 14: 151
$11/9\sqrt{-11/9}\sqrt{7}$	Position A15	Tone 15: 162.
	Position A16	No Tone

Switch A - V	
osition A1	Tone 1: 110.9
osition A2	Tone 2: 123.0
osition A3	Tone 3: 131.8
osition A4	Tone 4: 136.5
osition A5	Tone 5: 146.2
osition A6	Tone 6: 156.7
osition A7	Tone 7: 167.9
osition A8	Tone 8: 103.5
osition A9	Tone 9: 100.0
osition A10	Tone 10: 107.2
osition A11	Tone 11: 114.8
osition A12	Tone 12: 127.3
osition A13	Tone 13: 141.3
osition A14	Tone 14: 151.4
osition A15	Tone 15: 162.2
osition A16	No Tone

Enabling Internal Speaker for Troubleshooting

 Enable the speaker Audio A by switching the speaker A/B switch located on the System Monitor, to the "A" position. Enable the speaker Audio B by switching the speaker A/B switch located on the System Monitor, to the "B" position.

System Monitor Switch Functions (4312-VHF Repeater Configuration)		
2 +13.8 V (Supply Voltage)		
3	+9.5 V Regulated	
8	8 RX A/B Audio	
1, 4-7, 9-12	-7, 9-12 NIICD Technician Testing	
Revised 2024		

2025 NIICD Equipment Switch Settings

4312 - VHF REPEATER/LINK SWITCH SETTINGS



4312 - VHF REPEATER/LINK CONFIGURATION:

- Set up the VHF Omni-Directional antenna and attach the coaxial cable to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box.
- Set up the UHF antenna and attach the coaxial cable to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for more info)
- Connect the subrack power cable to the SLA batteries using the provided fused POLARIZED cable. (SLA Battery-4150 Kit or Solar Panel-4080 Kit is required to power up NIICD equipment.)
- Turn the Power Switch to the "ON" position on the System Monitor Module.
- Keep the power switches on the TX A, RX A, TX B, and RX B in the "NORM" position.
- Keep the A/B Audio Select Switch on the System Monitor Module at the center (OFF) position.
- Keep the MIC MODE switch on both the TX A and TX B in the ANALOG position.
- Select the assigned tone by turning the Switch A knob, located on the top portion of the Repeater Control Module, to the associated position. (See Switch A Tone Table)
- Select the assigned UHF link frequency by turning the Switch B knob, located on the top portion of the Repeater Control Module, to the associated position. (See Switch B UHF Link Frequency/Tone Table)
- Test with two VHF and one UHF handheld to verify the repeater and link are operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site) Note: NIICD has implemented a fixed RX/TX Tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.

Equipment Note:

- Selecting a tone will enable the tone on both the TX A and RX A modules.
- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone and UHF frequency.
- ◆ Contact the CDO for a tone and UHF frequency assignment @ 208-387-5644
- Both Switch A and Switch B are a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

Close-Up View Switch A, Switch B Repeater Control Module



Switch A - VHF Tone Table Position A1 Tone 1: 110.9 Position A2 Tone 2: 123.0 Position A3 Tone 3: 131.8 Position A4 Tone 4: 136.5 Position A5 Tone 5: 146.2 Position A6 Tone 6: 156.7 Position A7 Tone 7: 167.9 Position A8 Tone 8: 103.5 Position A9 Tone 9: 100.0 Position A10 Tone 10: 107.2 Position A11 Tone 11: 114.8 Position A12 Tone 12: 127.3 Tone 13: 141.3 Position A13 Position A14 Tone 14: 151.4 Position A15 Tone 15: 162.2 Position A16 No Tone

Switch B - UHF Link Frequency/Tone Table			
Position B1	L1 RPTR Access	Tone: 110.9	
Position B2	L2 RPTR Access	Tone: 110.9	
Position B3	L3 RPTR Access	Tone: 110.9	
Position B4	L4 RPTR Access	Tone: 110.9	
Position B5	L5 RPTR Access	Tone: 110.9	
Position B6	L6 RPTR Access	Tone: 110.9	
Position B7	L7 RPTR Access	Tone: 110.9	
Position B8	L1 RX Simplex	Tone: 110.9	
Position B9	L2 RX Simplex	Tone: 110.9	
Position B10	L3 RX Simplex	Tone: 110.9	
Position B11	L4 RX Simplex	Tone: 110.9	
Position B12	L5 RX Simplex	Tone: 110.9	
Position B13	L6 RX Simplex	Tone: 110.9	
Position B14	L7 RX Simplex	Tone: 110.9	
Position B15	Special Use 1	Tone: 110.9	
Position B16	Special Use 2	Tone: 110.9	

Enabling Internal Speaker for Troubleshooting

• Enable the speaker Audio A by switching the speaker A/B switch located on the System Monitor, to the "A" position. • Enable the speaker Audio B by switching the speaker A/B switch located on the System Monitor, to the "B" position.

System Monitor Switch Functions (4312 - VHF Repeater/Link Configuration)		
2 +13.8 V (Supply Voltage)		
3	+9.5 V Regulated	
8 RX A/B Audio		
1, 4-7, 9-12	NIICD Technician Testing	
Revised 2024		

4312 - VHF STAND-ALONE REPEATER SWITCH SETTINGS (MT-5 VERSION)



4312 - VHF STAND-ALONE REPEATER CONFIGURATION (MT-5 Version)

• Set up the VHF Antenna and attach the coax to the appropriate VHF Base and connector on the bulkhead mount located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for more info) • Connect the subrack power cable to the SLA batteries using provided POLARIZED fused cable. Once the power cable is connected, all modules are active. (No master power switch)

- (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)
- Turn each VHF module "ON" by keeping the switches on the TX A and RX A in the "NORM" position.
- Keep the UHF modules "OFF" by keeping the switches on the TX B and TX B in the "OFF" position. (Stand-alone Repeater Configuration No Linking, turn OFF UHF RX and TX Modules)
- Keep the MIC MODE switch on the TX A in the ANALOG position.
- Turn "ON" the Utility Module by turning the ON/OFF/VOL switch clockwise past the detent. (Note: The Utility Module does not have to be powered ON to switch VHF Repeater tones on the Repeater Control Module)
- Select the assigned VHF Repeater RX/TX Tone by turning the Switch A knob, located on the top portion of the Repeater Control Module, to associated assigned position. (See Switch A VHF Tone Table)
- Toggle the A/B Ch Side switch to the A position to for a visual indicator of the tone selected. (Note: Selecting a tone will enable the tone on both TX A and RX A modules.)
- Test with two VHF radios to verify the repeater is operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)
- Before leaving the site, NIICD recommends turning OFF the Utility Module by turning the ON/OFF/VOL switch counterclockwise past the detent.

Equipment Notes:

- Selecting a tone will enable the tone on both the TX A and RX A modules.
- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone.
- ◆ Contact the CDO for a tone assignment @ 208-387-5644.
- The Utility Module does not have to be powered ON to switch the VHF Repeater tones.
- The Function Switches on the Utility Module are only shop testing in conjunction with the meter leads.

Close-Up View Switch A, Switch B Repeater Control Module			
	REPE	ATER	
	CON	TROL	
	Switch A	Switch B	
	$15^{1/3}$		

Tone 1: 110.9				
Tone 2: 123.0				
Tone 3: 131.8				
Tone 4: 136.5				
Tone 5: 146.2				
Tone 6: 156.7				
Tone 7: 167.9	Cod	an Utility Module Functions		
Tone 8: 103.5	(4312-VHF Repeater Configuration)			
Tone 9: 100.0		MI-5 Version Only		
Tone 10: 107.2	1	+13.8 V (Supply Voltage)		
Tone 11: 114.8	2	+9.5 V Regulated		
Tone 12: 127.3	3	RX A Audio		
Tone 13: 141.3	6	RX B Audio		
Tone 14: 151.4				
	4,5,7-12	NIICD lesting		
Tone 16: 162.2		•		
	Tone 1: 110.9 Tone 2: 123.0 Tone 3: 131.8 Tone 4: 136.5 Tone 5: 146.2 Tone 6: 156.7 Tone 7: 167.9 Tone 8: 103.5 Tone 9: 100.0 Tone 10: 107.2 Tone 11: 114.8 Tone 12: 127.3 Tone 13: 141.3 Tone 14: 151.4	Tone 1: 110.9 Tone 2: 123.0 Tone 3: 131.8 Tone 4: 136.5 Tone 5: 146.2 Tone 6: 156.7 Tone 8: 103.5 Tone 9: 100.0 Tone 10: 107.2 Tone 11: 114.8 Tone 12: 127.3 Tone 13: 141.3 Tone 14: 151.4		

MORE TO

4312 - VHF REPEATER/LINK SWITCH SETTINGS (MT-5 VERSION)



4312 - VHF REPEATER/LINK CONFIGURATION (MT-5 Version)

• Set up the VHF Antenna and attach the coax to the appropriate VHF Base and connector on the bulkhead mount located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for more info)

- Set up the UHF Link Antenna and attach the coax to the appropriate UHF base and connector on the bulkhead mount located on the back of the fiberglass box.
- Connect the subrack power cable to the SLA batteries using provided POLARIZED fused cable. Once the power cable is connected, all modules are active. (No master power switch) (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)
- Turn each module "ON" by keeping the switches on the TX A, RX A, TXB, and RXB in the "NORM" position.
- Keep the MIC MODE switch on both the TX A and TX B in the ANALOG position.
- Turn "ON" the Utility Module by turning the ON/OFF/VOL switch clockwise past the detent.
- (Note: The Utility Module does not have to be powered ON to switch VHF Repeater tones or UHF Channels on the Repeater Control Module)
- Select the assigned VHF Repeater RX/TX Tone by turning the Switch A knob, located on the top portion of the Repeater Control Module, to associated assigned position. (See Switch A VHF Tone Table)
- Toggle the A/B Ch Side switch to the A position for a visual indicator of the VHF Repeater tone selected. (Note: Selecting a tone will enable the tone on both TX A and RX A modules.)
- Select the assigned UHF frequency by turning the Switch B knob, located on the top portion of the Repeater Control Module, to associated assigned position. (See Switch B UHF Link Frequency/Tone Table)
- Toggle the A/B Ch Side switch to the B position for a visual indicator of the UHF Channel selected.
- Note: NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.
- Test with two VHF and one UHF handheld to verify both the repeater and link are operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)
- Before leaving the site, NIICD recommends turning OFF the Utility Module by turning the ON/OFF/VOL switch counterclockwise past the detent.

Equipment Notes:

- Selecting a tone will enable the tone on both TX A and RX A modules.
- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone and UHF frequency.
- ◆ Contact the CDO for a tone and UHF frequency assignment @ 208-387-5644.
- The Utility Module does not have to be powered ON to switch tones or channels on the Repeater Control Module.
- The Function Switches on the Utility Module are only for shop testing and used in conjunction with meter leads.

Re	Close-Up View Switch A, Switch B Repeater Control Module			
	REPE	ATER		
	CON	TROL		
	Switch A	Switch B		
	$\overbrace{13}^{15} \overbrace{14}^{1} \overbrace{9}^{3} \overbrace{7}^{5}$	$15 \\ 13 \\ B \\ 11 \\ 9 \\ 7$		

Position A1Tone 1: 110.9Position B1L1 RPTR AccessTone: 110.9Position A2Tone 2: 123.0Position B2L2 RPTR AccessTone: 110.9Position A3Tone 3: 131.8Position B2L2 RPTR AccessTone: 110.9Position A4Tone 4: 136.5Position B4L4 RPTR AccessTone: 110.9Position A5Tone 5: 146.2Position B5L5 RPTR AccessTone: 110.9Position A6Tone 6: 156.7Position B6L6 RPTR AccessTone: 110.9Position A7Tone 7: 167.9Position B7L7 RPTR AccessTone: 110.9Position A3Tone 9: 100.0Position B4L1 RX SimplexTone: 110.9Position A10Tone 10: 107.2Position B10L3 RX SimplexTone: 110.9Position A11Tone 11: 114.8Position B11L4 RX SimplexTone: 110.9Position A12Tone 12: 127.3Position B13L6 RX SimplexTone: 110.9Position A13Tone 13: 141.3Position B14L7 RX SimplexTone: 110.9Position A14Tone 14: 151.4Position B15Special Use 1Tone: 110.9Position A15Tone 16: 162.2Position B16Special Use 2Tone: 110.9Position A16No TonePosition B16Special Use 2Tone: 110.9	Switch A - VHF Tone Table		Switch B - UI	HF Link Frequency/	Tone Table																																																																																																																																	
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2Tone: 110.9Revised 2024</td><td>Position A7</td><td>Tone 7: 167.9</td><td>Position B7</td><td>L7 RPTR Access</td><td>Tone: 110.9</td><td></td><td>Cod</td><td>an Utility Module Functions</td></tr> <tr><td>Position A9Tone 9: 100.0Position B9L2 RX SimplexTone: 110.9MI-5 Version OnlyPosition A10Tone 10: 107.2Position B10L3 RX SimplexTone: 110.91+13.8 V (Supply Voltage)Position A11Tone 11: 114.8Position B11L4 RX SimplexTone: 110.92+9.5 V RegulatedPosition A12Tone 12: 127.3Position B12L5 RX SimplexTone: 110.93RX A AudioPosition A13Tone 13: 141.3Position B14L7 RX SimplexTone: 110.96RX B AudioPosition A14Tone 14: 151.4Position B15Special Use 1Tone: 110.96RX B AudioPosition A15Tone 16: 162.2Position B16Special Use 2Tone: 110.94,5,7-12NIICD TestingPosition A16No TonePosition B16Special Use 2Tone: 110.9Revised 2024</td><td>Position A8</td><td>Tone 8: 103.5</td><td>Position B8</td><td>L1 RX Simplex</td><td>Tone: 110.9</td><td></td><td>(4312-V⊦</td><td>IF Repeater/Link Configuration</td></tr> 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V (Supply Voltage)</td></tr> <tr><td>Position A12Tone 12: 127.3Position B12L5 RX SimplexTone: 110.9Position A13Tone 13: 141.3Position B13L6 RX SimplexTone: 110.9Position A14Tone 14: 151.4Position B14L7 RX SimplexTone: 110.9Position A15Tone 16: 162.2Position B15Special Use 1Tone: 110.9Position A16No TonePosition B16Special Use 2Tone: 110.9</td><td>Position A11</td><td>Tone 11: 114.8</td><td>Position B11</td><td>L4 RX Simplex</td><td>Tone: 110.9</td><td></td><td>2</td><td>+9.5 V Regulated</td></tr> <tr><td>Position A13 Tone 13: 141.3 Position B13 L6 RX Simplex Tone: 110.9 Position A14 Tone 14: 151.4 Position B14 L7 RX Simplex Tone: 110.9 Position A15 Tone 16: 162.2 Position B15 Special Use 1 Tone: 110.9 Position A16 No Tone Position B16 Special Use 2 Tone: 110.9</td><td>Position A12</td><td>Tone 12: 127.3</td><td>Position B12</td><td>L5 RX Simplex</td><td>Tone: 110.9</td><td></td><td>3</td><td>RX A Audio</td></tr> <tr><td>Position A14 Tone 14: 151.4 Position B14 L7 RX Simplex Tone: 110.9 Position A15 Tone 16: 162.2 Position B15 Special Use 1 Tone: 110.9 Position A16 No Tone Position B16 Special Use 2 Tone: 110.9</td><td>Position A13</td><td>Tone 13: 141.3</td><td>Position B13</td><td>L6 RX Simplex</td><td>Tone: 110.9</td><td></td><td>6</td><td>RX B Audio</td></tr> <tr><td>Position A15 Tone 16: 162.2 Position B15 Special Use 1 Tone: 110.9 4,5,7-12 NIICD Testing Position A16 No Tone Position B16 Special Use 2 Tone: 110.9 Revised 2024</td><td>Position A14</td><td>Tone 14: 151.4</td><td>Position B14</td><td>L7 RX Simplex</td><td>Tone: 110.9</td><td></td><td></td><td></td></tr> <tr><td>Position A16 No Tone Position B16 Special Use 2 Tone: 110.9 Revised 2024</td><td>Position A15</td><td>Tone 16: 162.2</td><td>Position B15</td><td>Special Use 1</td><td>Tone: 110.9</td><td></td><td>4,5,7-12</td><td>NIICD lesting</td></tr> <tr><td></td><td>Position A16</td><td>No Tone</td><td>Position B16</td><td>Special Use 2</td><td>Tone: 110.9</td><td colspan="3">Revised 2024</td></tr>	Position A2	Tone 2: 123.0	Position B2	L2 RPTR Access	Tone: 110.9				Position A4Tone 4: 136.5Position B4L4 RPTR AccessTone: 110.9Position A5Tone 5: 146.2Position B5L5 RPTR AccessTone: 110.9Position A6Tone 6: 156.7Position B6L6 RPTR AccessTone: 110.9Position A7Tone 7: 167.9Position B7L7 RPTR AccessTone: 110.9Position A8Tone 8: 103.5Position B7L7 RPTR AccessTone: 110.9Position A10Tone 10: 107.2Position B10L3 RX SimplexTone: 110.9Position A11Tone 11: 114.8Position B10L3 RX SimplexTone: 110.9Position A12Tone 12: 127.3Position B11L4 RX SimplexTone: 110.9Position A13Tone 13: 141.3Position B14L7 RX SimplexTone: 110.9Position A14Tone 14: 151.4Position B15Special Use 1Tone: 110.9Position A15Tone 16: 162.2Position B16Special Use 2Tone: 110.9Position A16No TonePosition B16Special Use 2Tone: 110.9P	Position A3	Tone 3: 131.8	Position B3	L3 RPTR Access	Tone: 110.9				Position A5Tone 5: 146.2Position B5L5 RPTR AccessTone: 110.9Position A6Tone 6: 156.7Position B6L6 RPTR AccessTone: 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4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (E-MODEL BASE CONFIGURATION)



4370 - AIRCRAFT RADIO/LINK BASE CONFIGURATION: (E MODELS ONLY)

• Set up the VHF-AM antenna and attach the coaxial cable to the appropriate AM antenna base mount. (See Antenna Instructions in the User's Guide for more info)

• Attach the other end of the AM coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.

• Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all modules are active. (No Master Power Switch) (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)

- Keep both CTCSS toggle switches located on the Audio Control Module, in the "OFF" (down) position.
- Keep the power switches on both the TX A and RX A in "NORM" position.
- Keep the power switches on both the TX B and RX B in "OFF" position.
- Keep the Speaker Switch on the System Regulator Module in the "ON" position to enable the speaker.
- Place the function rotary switch on the System Regulator Module to Position # 3 to activate the RX A Audio.
- Keep the Speaker Switch on the System Regulator Module in the "EXT" position to enable the RA A Audio to the External Speaker.
- Connect the provided speaker to the "EXT SPRK" jack on the System Regulator Module, and adjust the Volume to the desired level.
- Select the assigned AM frequency for the AM TX A and AM RX A using the 16-position rotary Switch A on the Audio Control Module. (See Switch A AM Frequency Channel) Note: If the AM frequency is not listed, the user must program the AM frequency in Channel A-16 on both the "TX A" and "RX A". (See Manual AM frequency Programming)
- Connect the provided Microphone to the "MIC" jack on the "AM TX A Module"
- Test through the Microphone and AM handheld to verify proper operation. (NIICD recommends testing with the field units or Heli-Base before leaving the site)

Equipment Notes:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- ◆ Contact the CDO for an assigned AM frequency at 208-387-5644.
- Both Switch A and Switch B are a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the System Regulator Module are only for shop testing and used in conjunction with the meter leads.

Manual AM Frequency Programming: (Channel 16 ONLY)

- Note: <u>Both the AM transmitter and AM receiver modules must be individually programmed.</u> The Communications Duty Officer (CDO) will assign the appropriate FAA-issued AM Frequency.
- Turn the rotary Switch A on the Audio Control Module to Channel 16.
- Unlock each unit by momentarily pressing the " * " button and, before the "Locked" display goes blank, press the "down " button.
- The display should now show "Unlocked".
- Wait for the display to blank, then press either the "up" or "down" button to display the current
 programmed frequency.
- While the display is showing the frequency, press and hold either the "up" or "down" scrolling until the assigned frequency is reached.
- Lock each unit by momentarily pressing the " * " button, and before the "Unlocked" display goes blank, press the "up" button.
- The display should now show "Locked"
- The Aircraft Radio is now ready for base station operation on that AM programmed frequency.

Switch A - AM Frequency CH				
Position A1	Channel 1			
Position A2	Channel 2			
Position A3	Channel 3			
Position A4	Channel 4			
Position A5	Channel 5			
Position A6	Channel 6			
Position A7	Channel 7			
Position A8	Channel 8			
Position A9	Channel 9			
Position A10	Channel 10			
Position A11	Channel 11			
Position A12	Channel 12			
Position A13	Channel 13			
Position A14	Channel 14			
Position A15	Channel 15			
Position A16	Programmable			



Close-Up View of Switch A and Switch B on the Audio Control Module

Enabling Internal Speaker for Troubleshooting Enable the speaker by switching the speaker switch

 located on position. Enable the the Function Regulator Enable the switching to position. 	 located on the System Regulator, to the "ON" position. Enable the RX A Audio by selecting position 3 on the Function Switch located on the System Regulator for RX A Audio. Enable the Internal or External Speaker by switching the SPKR switch to the "INT" or "EXT" position. 				
Sys (4370 -	System Regulator Switch Functions (4370 - Aircraft Radio Base Configuration)				
1	+13.8 V (Supply Voltage)				
2 +9.5 V Regulated					
3 RX A Audio					
4-12	4-12 NIICD Technician Testing				
Revised 2024					

4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (E-MODEL



4370 - AIRCRAFT RADIO/LINK in LINK CONFIGURATION: (E-MODELS ONLY)

• Set up the VHF-AM antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for info)

Set up the UHF antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box.

• Connect the subrack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all modules are active. (No Master Power Switch)

- (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment) • Keep both CTCSS switches, located on the Audio Control Module in the "OFF" (down) position.
- Keep the power switches on the TX A. RX A. TX B. and RX B in the "NORM" position.
- Keep the MIC MODE on the TX B in the ANALOG position.
- Keep the Speaker Select Switch on the System Regulator Module to the "OFF" position.

• Select the assigned AM frequency for both TX A and RX A using the 16-position rotary Switch A on the Audio Control Module. (Switch A - AM Frequency Channel) Note: If the AM frequency is not listed, the user must program the AM frequency in Channel A-16 on both the "TX A" and "RX A". (See Manual AM Frequency Programming)

• Select the assigned FM UHF link frequency for both the TX B and RX B using the 16-position rotary Switch B on the Audio Control Module. (Switch B - UHF Link Frequency and Tone Table) (NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.)

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- Test with one AM and one UHF radio to verify link is operating correctly.
- (NIICD recommends testing with the field units or Heli-Base is possible before leaving the site)

Equipment Note:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- The CDO or COMC will assign the appropriate FM UHF Link Frequency
- Contact the CDO for an assigned AM and UHF frequency at 208-387-5644.
- Both Switch A and Switch B are a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the System Regulator Module are only for shop testing and used in conjunction with

Manual AM Frequency Programming: (Channel 16 ONLY)

Note: Both the AM transmitter and AM receiver modules must be individually programmed.

- Turn the rotary Switch A (top rotary switch) on the Audio Control Module to Channel 16.
- Unlock each unit by momentarily pressing the " * " button and, before the "Locked" display goes blank, press the "down" button.
- The display should now show "Unlocked".
- Wait for the display to go blank, then press either the "up" or "down" button to display the current programmed frequency.
- While the display is showing the frequency, press and hold either the "up" or "down" scrolling until the desired frequency is reached.
- Lock each unit by momentarily pressing the "*" button and before the "Unlocked" display goes blank, press the "up" button.
- The display should now show "Locked"
- The Aircraft radio is now ready to operate on that AM programmed frequency.

n the m	i the meter leads.					
tch A - AN	I Frequency CH		Switch B - L	JHF Frequency/TX/RX	Tone Table	
ition A1	Channel 1		Position B1	A/C 1 Simplex	Tone 1: 110.9	
ition A2	Channel 2		Position B2	A/C 2 Simplex	Tone 1: 110.9	
ition A3	Channel 3		Position B3	A/C 3 Simplex	Tone 1: 110.9	
ition A4	Channel 4		Position B4	A/C 4 Simplex	Tone 1: 110.9	
ition A5	Channel 5		Position B5	A/C 5 Simplex	Tone 1: 110.9	
ition A6	Channel 6		Position B6	A/C 6 Simplex	Tone 1: 110.9	
ition A7	Channel 7		Position B7	A/C 7 Simplex	Tone 1: 110.9	
ition A8	Channel 8		Position B8	A/C 8 Simplex	Tone 1: 110.9	
ition A9	Channel 9		Position B9	A/C 9 (L8 Simp)	Tone 1: 110.9	
tion A10	Channel 10		Position B10	A/C 10 (L8 RPTR)	Tone 1: 110.9	
tion A11	Channel 11		Position B11	A/C 11 (L9 Simp)	Tone 1: 110.9	
tion A12	Channel 12		Position B12	A/C 12 (L9 RPTR)	Tone 1: 110.9	
tion A13	Channel 13		Position B13	A/C 13 (L10 Simp)	Tone 1: 110.9	
tion A14	Channel 14		Position B14	A/C 14 (L10 RPTR)	Tone 1: 110.9	
tion A15	Channel 15		Position B15	A/C 15 (L11 Simp)	Tone 1: 110.9	
tion A16	Programmable		Position B16	A/C 16 (L11 RPTR)	Tone 1: 110.9	



Close-Up View of Switch A and Switch B Audio Control Module

• Enable the RX Audio by selecting position 3 on
the Function Switch located on the System
Regulator for RX A Audio. Use position 5 for RX B
Audio.
• Enable the Internal or External Speaker by
switching the SPKR switch to the "INT" or "EXT"
position.
System Regulator Switch Functions
(4370 - Aircraft Radio Link Configuration)

Enabling Internal Speaker for Troubleshooting

• Enable the speaker by switching the speaker switch

located on the System Regulator, to the

"ON" position.

System Regulator Switch Functions (4370 - Aircraft Radio Link Configuration)				
1	+13.8 V (Supply Voltage)			
2	+9.5 V Regulated			
3	RX A Audio			
5	5 RX B Audio			
Revised 2024				

2025 NIICD Equipment Switch Settings

4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (BASE CONFIGURATION)



4370 - AIRCRAFT RADIO/LINK (BASE CONFIGURATION):

• Set up the VHF-AM antenna and attach the coaxial cable to the appropriate AM antenna base mount. (See Antenna Instructions in the User's Guide for more info)

• Attach the other end of the AM coaxial cable to the appropriate connector on the bulkhead mount located on the back of the fiberglass box.

• Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. One power is connected, all modules are active. (No Master Power Switch) (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)

- Keep both CTCSS switches located on the Audio Control Module. in the "OFF" (down) position.
- Keep the power switches on both the **TX A** and **RX A** in "**NORM**" position.
- Keep the power switches on both the **TX B** and **RX B** in "**OFF**" position.
- Keep the Audio Select Switch on the System Monitor Module in the "A" position to activate RX A Audio.
- Place the rotary switch on the **System Monitor Module** to **Position #1** to activate the External Speaker.
- Connect the external speaker to the Meter Jacks on the System Monitor Module, observing the correct polarity, and adjust the Volume to desired level.
- Select the assigned AM frequency for the TX A and RX A using the 16-position rotary Switch A on the Audio Control Module. (Switch A AM Frequency Channel)
- Note: If the AM frequency is not listed, the user must program the AM frequency in Channel A-16 of both the "TX A" and "RX A". (See Manual AM frequency Programming) • Connect the provided Microphone to the "MIC" jack on the "AM TX A Module"
- Test through the Microphone and AM handheld to verify proper operation. (NIICD recommends testing with the field units or Heli-Base before leaving the site)

Equipment Notes:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- ◆ Contact the CDO for an assigned AM frequency at 208-387-5644.
- Both Switch A and Switch B are a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the System Monitor Module are only for shop testing and using in conjunction with the meter leads.

Manual AM Frequency Programming: (Channel 16 ONLY)

Note: Both the AM transmitter and AM receiver modules must be individually programmed.

- Turn the rotary Switch A on the Audio Control Module to Channel 16.
- Unlock each unit by momentarily pressing the " * " button and, before the "Locked" display goes blank, press the "down " button.
- The display should now show "Unlocked".
- Wait for the display to blank, then press either the "**up**" or "**down**" button to display the current programmed frequency.
- While the display is showing the frequency, press and hold either the "up" or "down" scrolling until the assigned frequency is reached.
- Lock each unit by momentarily pressing the " * " button, and before the "Unlocked" display goes blank, press the "up" button.
- The display should now show "Locked"
- The Aircraft Radio is now ready for base station operation on that AM programmed frequency.

Switch A - AM Frequency CH		Enabling	Internal Speaker for Troubleshooting
Position A1	Channel 1	- Enable the	speaker audio A by switching the
Position A2	Channel 2	speaker A	/B switch located on the System Monitor,
Position A3	Channel 3	to the "A"	position.
Position A4	Channel 4	• Enable the speaker A	B switch located on the System Monitor.
Position A5	Channel 5	to the " B "	position.
Position A6	Channel 6		
Position A7	Channel 7		
Position A8	Channel 8	Sy	vstem Monitor Switch Functions
Position A9	Channel 9	(4370	- Aircraft Radio Base Configuration)
Position A10	Channel 10	1	External Speaker
Position A11	Channel 11	2	+13.8 V Regulated
Position A12	Channel 12		+0.5 V Pogulated
Position A13	Channel 13	3	
Position A14	Channel 14	8	RX A Audio
Position A15	Channel 15	4-7, 9-12	NIICD Technician Testing
Position A16	Programmable		Revised 2024



Close-Up View of Switch A and Switch B on the Audio Control Module

4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (LINK CONFIGURATIO



4370 - AIRCRAFT RADIO/LINK: (LINK CONFIGURATION)

- Set up the VHF-AM antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for info)
- Set up the UHF antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box.
- Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all modules are active. (No Master Power Switch) (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)
- Keep both CTCSS switches, located on the Audio Control Module in the "OFF" (down) position.
- Keep the power switches on the TX A, RX A, TX B, and RX B in the "NORM" position.
- Keep the **MIC MODE** on the **TX B** in the **ANALOG** position.
- Keep the A/B Audio Select Switch on the System Monitor Module at the center position for "OFF"
- Select the assigned AM frequency for both TX A and RX A using the 16-position rotary Switch A on the Audio Control Module. (Switch A AM Frequency Channel) Note: If the AM frequency is not listed, the user must program the AM frequency in Channel A-16 of both the "TX A" and "RX A". (See Manual AM Frequency Programming)
- Select the assigned FM UHF link frequency for both the TX B and RX B using the 16-position rotary Switch B on the Audio Control Module. (Switch B UHF Link Frequency/Tone Table) Note: The NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.

• Test with one AM and one UHF radio to verify link is operating correctly. (NIICD recommends testing with the field units or Heli-Base is possible before leaving the site)

Equipment Notes:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- Contact the CDO for an assigned AM and UHF link frequency at 208-387-5644.
- Both Switch A and Switch B are a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the System Monitor Module are only for shop testing and used in conjunction with the meter leads.

Manual AM Frequency Programming: (Channel 16 ONLY)

Note: Both the AM transmitter and AM receiver modules must be individually programmed.

• Turn the rotary Switch A (top rotary switch) on the Audio Control Module to Channel 16.

• Unlock each unit by momentarily pressing the " * " button and, before the "Locked" display goes blank, press the "down" button.

- The display should now show "Unlocked".
- Wait for the display to go blank, then press either the "up" or "down" button to display the current programmed frequency.
- While the display is showing the frequency, press and hold either the "up" or "down" scrolling until • the desired frequency is reached.
- Lock each unit by momentarily pressing the " * " button and before the "Unlocked" display goes • blank, press the "up" button.
- The display should now show "Locked"
- The Aircraft radio is now ready to operate on that AM programmed frequency.

Switch A - AM Frequency CH			Switch	B - UHF Frequency/To	one Table
Position A1	Channel 1		Position B1	A/C 1 Simplex	Tone 1: 110.9
Position A2	Channel 2		Position B2	A/C 2 Simplex	Tone 1: 110.9
Position A3	Channel 3		Position B3	A/C 3 Simplex	Tone 1: 110.9
Position A4	Channel 4		Position B4	A/C 4 Simplex	Tone 1: 110.9
Position A5	Channel 5		Position B5	A/C 5 Simplex	Tone 1: 110.9
Position A6	Channel 6		Position B6	A/C 6 Simplex	Tone 1: 110.9
Position A7	Channel 7		Position B7	A/C 7 Simplex	Tone 1: 110.9
Position A8	Channel 8		Position B8	A/C 8 Simplex	Tone 1: 110.9
Position A9	Channel 9		Position B9	A/C 9 (L8 Simp)	Tone 1: 110.9
Position A10	Channel 10		Position B10	A/C 10 (L8 RPTR)	Tone 1: 110.9
Position A11	Channel 11		Position B11	A/C 11 (L9 Simp)	Tone 1: 110.9
Position A12	Channel 12		Position B12	A/C 12 (L9 RPTR)	Tone 1: 110.9
Position A13	Channel 13		Position B13	A/C 13 (L10 Simp)	Tone 1: 110.9
Position A14	Channel 14		Position B14	A/C 14 (L10 RPTR)	Tone 1: 110.9
Position A15	Channel 15		Position B15	A/C 15 (L11 Simp)	Tone 1: 110.9
Position A16	Programmable		Position B16	A/C 16 (L11 RPTR)	Tone 1: 110.9

Switch A С \bigcirc Switch B

Close-Up View of Switch A and Switch B Audio Control Module

Enabling Internal Speaker for Troubleshooting

• Enable the speaker Audio A by switching the speaker A/B switch located on the System Monitor, to the "A" position.

• Enable the speaker Audio B by switching the speaker A/B switch located on the System Monitor, to the "B" position.

System Monitor Switch Functions (4370 - Aircraft Radio Base Configuration)			
1	External Speaker		
2	+13.8 V Regulated		
3	+9.5 V Regulated		
8	RX A Audio		
4-7, 9-12	NIICD Technician Testing		
Revised 2024			

4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (BASE CONFIGURATION - MT5)



4370 - AIRCRAFT RADIO/LINK: (BASE CONFIGURATION - MT5 VERSION)

Set up the VHF-AM antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for info)
 Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all modules are active. (No Master Power Switch)

- Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all module (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)
- Keep both CTCSS switches, located on the Audio Control Module in the "OFF" (down) position.
- Keep the power switches on the TX A and RX A in the "OFF" position.
- Turn "ON" the Utility Module by turning the ON/OFF/VOL switch clockwise past the detent. Note: The Utility Module does not have to be powered ON.
- Turn "ON" the ICOM-A120 radio by pressing and holding the Blue Power sofkey until the radio turns on.
- Select the assigned AM RX and TX frequency by scrolling up or down using the Up/Down softkeys on the ICOM Mobile radio.
- Note: If VFO is not selected on the ICOM-A120 radio, See ICOM-A120 VFO Manual AM Frequency Programming)
- Test with one AM radio to verify base radio is operating correctly. (NIICD recommends testing with the field units before leaving the site)
- Before leaving the site, NIICD recommends turning "OFF" the Utility Module by turning the ON/OFF/VOL switch counterclockwise past the detent.

Equipment Notes:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- Contact the CDO for an assigned AM frequency at 208-387-5644.
- The Function Switches on the Utility Module are only for shop testing and used in conjunction with the meter leads.

ICOM-A120 VFO Manual AM Frequency Programming:

NIICD default of the ICOM-A120 Radio is set to VFO (Variable Frequency). The LCD will indicate "VFO" on the screen.

If the radio is not set to VFO, follow the following procedure:

- Press the "Menu/CLR" soft key
- Highlight "VFO Mode" using the Up/Down softkeys.
- Press the "Mhz/GRP" softkey.
- The radio will default back to the VFO Mode and ready for direct entry of AM frequencies using the Up/Down softkeys.
- Once the assigned frequency is set, press and hold the "SQL" key to lock the frequency. LCD will briefly indicate "Lock On"

For detailed information on programming the ICOM-A120 Radio, see the NIICD User's Guide.

System Monitor Switch Functions (4370 - Aircraft Radio Base Configuration) MT-5 Version Only			
1 +13.8 V Regulated			
2	9.5 V Regulated		
3	3 RX A Audio		
6	6 RX B Audio		
4-5, 7-12	-5, 7-12 NIICD Technician Testing		
Revised 2024			

4370 - AIRCRAFT RADIO/LINK SWITCH SETTINGS (LINK CONFIGURATION - MT5)



4370 - AIRCRAFT RADIO/LINK: (LINK CONFIGURATION - MT5 VERSION)

- Set up the VHF-AM antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for info)
- Set up the UHF antenna and attach to the appropriate antenna base and bulkhead connector located on the back of the fiberglass box.
- Connect the sub rack power cable to the SLA batteries using the provided POLARIZED fused cable. Once power is connected, all modules are active. (No Master Power Switch)
- (SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment) • Keep both CTCSS switches, located on the Audio Control Module in the "OFF" (down) position.
- Keep the power switches on the TX A and RX A in the "NORM" position.
- Keep the MIC MODE on the TX A in the ANALOG position.
- Turn "ON" the Utility Module by turning the ON/OFF/VOL switch clockwise past the detent.
- Toggle the A/B CH Side to the A position for a visual indicator of the UHF Link Channel selected.
- Note: The Utility Module does not have to powered ON to switch the UHF Link Channels on the Audio Control Module.
- Select the assigned FM UHF link frequency for both the TX A and RX A using the 16-position rotary knob on the Audio Control Module. (Audio Control Switch UHF Link Frequency/Tone Table) Note: The NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.
- Turn "ON" the ICOM-A120 radio by pressing and holding the Blue Power sofkey until the radio turns on.
- Select the assigned AM RX and TX frequency by scrolling up or down using the Up/Down softkeys on the ICOM Mobile radio.
- Note: If VFO is not selected on the ICOM-A120 radio See ICOM-A120 VFO Manual AM Frequency Programming)
- Test with one AM and one UHF radio to verify link is operating correctly. (NIICD recommends testing with the field units or Heli-Base is possible before leaving the site)
- Before leaving the site. NIICD recommends turning "OFF" the Utility Module by turning the ON/OFF/VOL switch counterclockwise past the detent.

Equipment Notes:

- The CDO or COMC will assign the appropriate AM frequency issued directly from the FAA.
- Contact the CDO for an assigned AM and UHF link frequency at 208-387-5644.
- The Audio Control Switch is a 16 position rotary switch with position 1 being straight up.
- The Function Switches on the Utility Module are only for shop testing and used in conjunction with the meter leads.

ICOM-A120 VFO Manual AM Frequency Programming:

NIICD default of the ICOM-A120 Radio is set to VFO (Variable Frequency). The LCD will indicate "VFO" on the screen.

If the radio is not set to VFO, follow the following procedure:

- ◆ Press the "Menu/CLR" soft kev
- + Highlight "VFO Mode" using the Up/Down softkeys.
- Press the "Mhz/GRP" softkey.
- The radio will default back to the VFO Mode and ready for direct entry of AM frequencies using the Up/Down softkeys.
- Once the assigned frequency is set, press and hold the "SQL" key to lock the frequency. LCD will briefly indicate "Lock On"

For detailed information on programming the ICOM-A120 Radio, see the NIICD User's Guide.

Audio Control	Switch - UHF Freque	ncy/Tone Table		
Position A1	A/C 1 Simplex	Tone 1: 110.9		
Position A2	A/C 2 Simplex	Tone 1: 110.9		
Position A3	A/C 3 Simplex	Tone 1: 110.9		
Position A4	A/C 4 Simplex	Tone 1: 110.9		
Position A5	A/C 5 Simplex	Tone 1: 110.9		
Position A6	A/C 6 Simplex	Tone 1: 110.9		
Position A7	A/C 7 Simplex	Tone 1: 110.9		
Position A8	A/C 8 Simplex	Tone 1: 110.9	Syste	em Monitor Switch Functions
Position A9	A/C 9 (L8 Simp)	Tone 1: 110.9	(4370 - A	ircraft Radio Link Configuration
Position A10	A/C 10 (L8 RPTR)	Tone 1: 110.9		
Position A11	A/C 11 (L9 Simp)	Tone 1: 110.9	1	+13.8 V Regulated
Position A12	A/C 12 (L9 RPTR)	Tone 1: 110.9	2	9.5 V Regulated
Position A13	A/C 13 (L10 Simp)	Tone 1: 110.9	3	RX A Audio
Position A14	A/C 14 (L10 RPTR)	Tone 1: 110.9	6	RX B Audio
Position A15	A/C 15 (L11 Simp)	Tone 1: 110.9	4-5, 7-12	NIICD Technician Testing
Position A16	A/C 16 (L11 RPTR)	Tone 1: 110.9		Revised 2024

k Configuration)

4281 - CROSSBAND LINK SWITCH SETTINGS



4281 Crossband Link: (Link Configuration)

- Set up the VHF Antenna and attach the coax to the appropriate VHF Base and connector on the bulkhead mount located on the back of the fiberglass box. (See Antenna Instructions in the User's Guide for more info) • Set up the UHF Antenna and attach the coax to the appropriate UHF Base and connector on the bulkhead mount located on the back of the fiberglass box.
- Connect the subrack power cable to the SLA batteries using the provided **POLARIZED** fused cable. Once the power cable is connected, all modules are active. (*No master power switch*)
- (SLA Battery-4150 kir or Solar Panel-4080 kit is required to power up NIICD equipment) • Turn each module "ON" by keeping the power switches on the TX A, RX A, TX B, and RX B in the "NORM" position.
- Keep both Mic Mode on TX A and TX B in the "ANALOG" position.
- Keep the speaker audio OFF by switching the Speaker Switch on the System Regulator to the "OFF" position.
- Select the assigned VHF frequency/tone for both the TX A and RX A modules using the 16-position rotary Switch A on the Repeater Control Module. (Switch A, VHF Frequency Select)
- Select the assigned UHF frequency/tone for both the TX B and RX B modules using the 16-position rotary Switch B on the Repeater Control Module. (Switch B, UHF Frequency Select) Note: NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.
- Test with the appropriate handhelds to verify the link is operating correctly. (NIICD recommends testing with the field units or ICP if possible before leaving the site)

Equipment Note:

- Selecting a tone will enable the tone on both **TX A** and **RX A** modules.
- The Communications Duty Officer (CDO) or COMC will assign the appropriate tone and UHF frequency for each incident.
- Contact the CDO for dedicated Tone and UHF frequency assignment @ 208-387-5644
- Both Switch A and Switch B is a 16 position rotary switch, with Position 1 being straight up.
- The Function Switches on the System Regulator Module are ony for a shop testing and used in conjunction with the meter leads

Close-Up View of Switch A and Switch B on the Repeater Control Module



2025 NIICD	Equi	pment	Switch	Settings
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sting and used in conjunction with the meter leads.				
Switch A - VH	Switch A - VHF Frequency List		Switch B - UH	IF Frequency List
Position A1	C1 RPTR		Position B1	L1 RPTR
Position A2	C2 RPTR		Position B2	L2 RPTR
Position A3	C3 RPTR		Position B3	L3 RPTR
Position A4	C4 RPTR		Position B4	L4 RPTR
Position A5	C5 RPTR		Position B5	L5 RPTR
Position A6	C6 RPTR		Position B6	L6 RPTR
Position A7	C1 RPTR		Position B7	L7 RPTR
Position A8	C1 RX Simplex		Position B8	L1 RX Simplex
Position A9	C2 RX Simplex		PositionB 9	L2 RX Simplex
Position A10	C3 RX Simplex		Position B10	L3 RX Simplex
Position A11	C4 RX Simplex		Position B11	L4 RX Simplex
Position A12	C5 RX Simplex		Position B12	L5 RX Simplex
Position A13	C6 RX Simplex		Position B13	L6 RX Simplex
Position A14	C1 RX Simplex		Position B14	L7 RX Simplex
Position A15	Special Use		Position B15	Special Use
Position A16	Special Use		Position B16	Special Use

To Enable Audio to Internal Speaker for Troubleshooting: 1. Enable the speaker by switching the Speaker switch located on the System Regulator Module, to the "ON"		
 Select the desired receiver audio, A or B, by turning th Function Switch located on the System Regulator, to position 3 for RX Audio A<u>or</u> position 5 for RX audi 	ю о В.	
Note: Select " INT " on the System Regulator Module to enable the audio to the internal speaker or " EX the external speaker) T " for	

System Regulator Switch Functions (4281 - Crossband Link VHF to UHF)			
1	+13.8 V (Supply Voltage)		
2	+9.5 V Regulated		
3-12	NIICD Technician Testing		
Revised 2024			