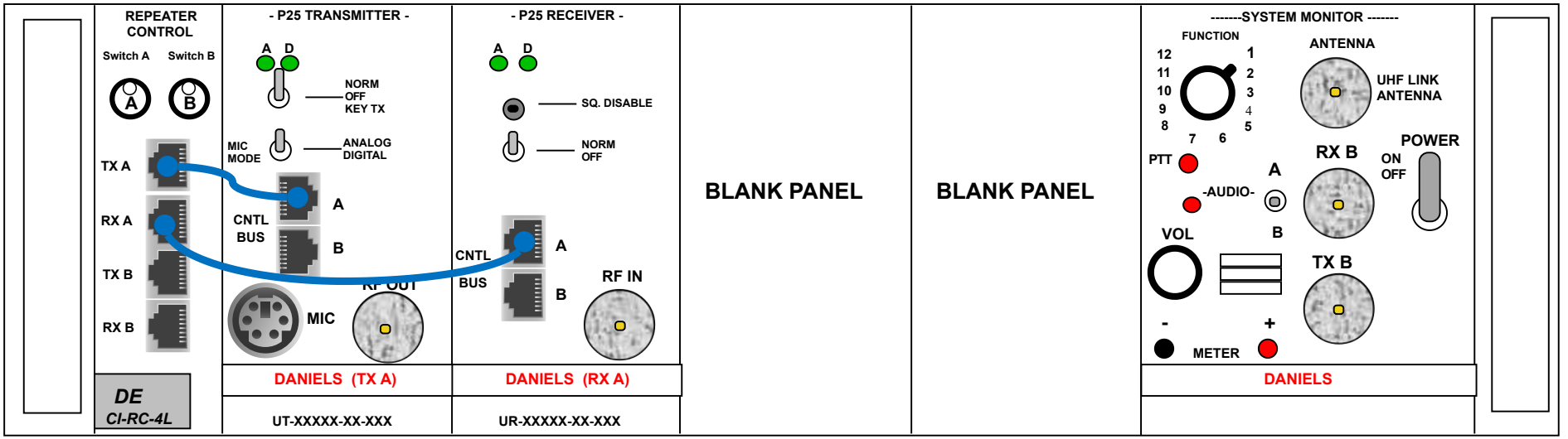
4248 - UHF REPEATER SWITCH SETTINGS



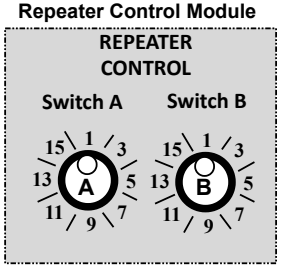
4248 - UHF REPEATER:

- Set up the UHF **Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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"** to provide power to the sub rack.
- Turn "**ON**" each module by switching the "**TX A" and "RX A"** modules to the "**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 Module** to the "**Center**" position.
- Test the repeater function with **two** UHF **handheld radios** to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site.)***

Equipment Notes:

- *NIICD has implemented a **RX/TX** Fixed Tone of **110.9** on all UHF Frequencies to help minimize possible interference on UHF signals.*
- ***Switch A** on the **Repeater Control Module** is a **16** position rotary switch, with Position 1 being straight up.*
- ***Switch A** on the **Repeater Control Module** has no effect on the operation of the UHF RX/TX Tone since all channels are programmed with RX/TX tone of 110.9.*
- *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

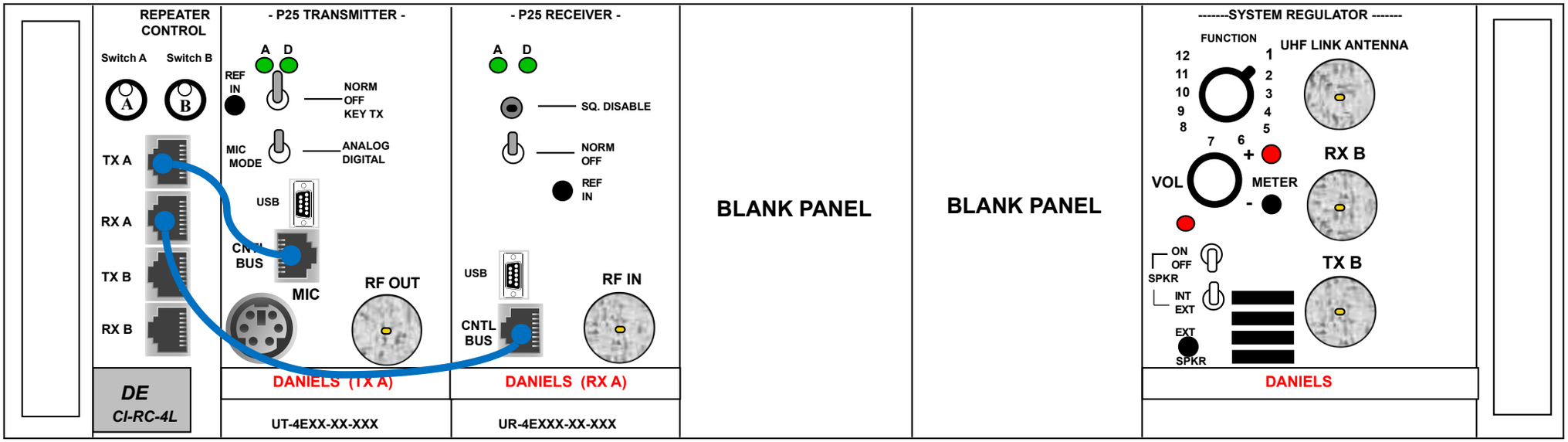


Switch A - UHF Tone Table	
Position A1	Tone 1: 110.9
Position A2	Tone 1: 110.9
Position A3	Tone 1: 110.9
Position A4	Tone 1: 110.9
Position A5	Tone 1: 110.9
Position A6	Tone 1: 110.9
Position A7	Tone 1: 110.9
Position A8	Tone 1: 110.9
Position A9	Tone 1: 110.9
Position A10	Tone 1: 110.9
Position A11	Tone 1: 110.9
Position A12	Tone 1: 110.9
Position A13	Tone 1: 110.9
Position A14	Tone 1: 110.9
Position A15	Tone 1: 110.9
Position A16	Tone 1: 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.

System Monitor Switch Functions (4248 - UHF Repeater Configuration)	
2	+13.8 V (Supply Voltage)
3	+9.5 V Regulated
4	RX A Audio
1, 4-12	NIICD Technician Testing
Revised 2025	

4248 - UHF REPEATER SWITCH SETTINGS (E-VERSION)



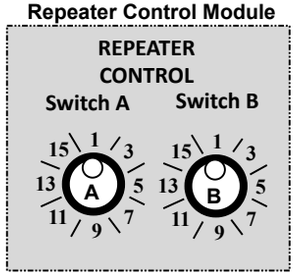
4248 - UHF REPEATER: **(E-Version)**

- Set up the **UHF** **Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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.)*** ***(No master power switch)***
- Turn "**ON**" each module by switching the "**TX A**" and "**RX A**" modules to the "**NORM**" position.
- Keep the "**MIC Mode**" on the "**TX A**" in the "**ANALOG**" position.
- Turn the **speaker audio "OFF"** by switching the **Speaker Switch** on the **System Regulator** to the "**OFF**" position.
- Test the repeater function with **two** **UHF** **handhelds** to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site.)***

Equipment Notes:

- *NIICD has implemented a **RX/TX** Fixed Tone of **110.9** on all **UHF** Frequencies to help minimize possible interference on **UHF** signals.*
- ***Switch A** on the **Repeater Control Module** is a **16** position rotary switch, with Position 1 being straight up.*
- ***Switch A** on the **Repeater Control Module** has no effect on the operation of the UHF RX/TX Tone since all channels are programmed with RX/TX tone of 110.9.*
- *The **Function Switches** on the **System Regulator 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 - UHF Tone Table	
Position A1	Tone 1: 110.9
Position A2	Tone 1: 110.9
Position A3	Tone 1: 110.9
Position A4	Tone 1: 110.9
Position A5	Tone 1: 110.9
Position A6	Tone 1: 110.9
Position A7	Tone 1: 110.9
Position A8	Tone 1: 110.9
Position A9	Tone 1: 110.9
Position A10	Tone 1: 110.9
Position A11	Tone 1: 110.9
Position A12	Tone 1: 110.9
Position A13	Tone 1: 110.9
Position A14	Tone 1: 110.9
Position A15	Tone 1: 110.9
Position A16	Tone 1: 110.9

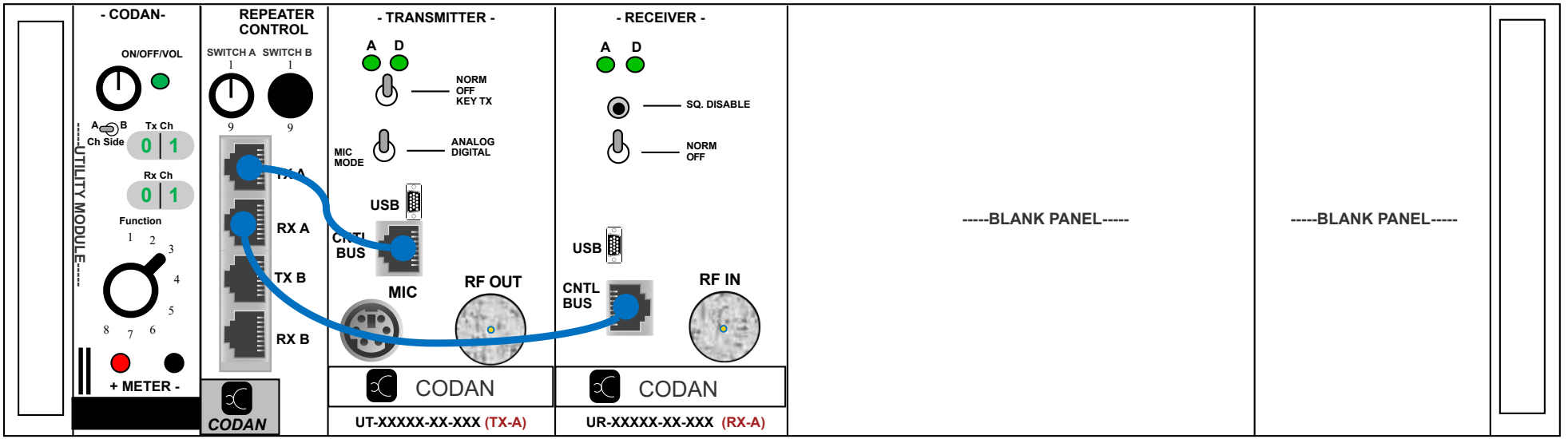
Enabling Internal Speaker for Troubleshooting

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** by turning the Function Switch located on the System Regulator, to **position 3** for **RX Audio A.**

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

System Regulator Switch Functions (4248 -UHF Repeater) E-Version	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
4-12	NIICD Technician Testing
Revised 2025	

4248 - UHF REPEATER SWITCH SETTINGS *(MT-5 VERSION)*



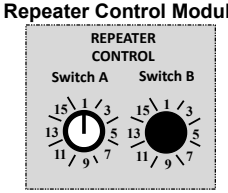
4248 - UHF REPEATER: *(MT-5 Version)*

- Set up the **UHF Omni-Directiona**l antenna as per the NIICD recommended kit setup procedure. *(See Antenna Instructions in User's Guide for detailed setup)*
- Connect the subrack power cable to the SLA batteries using provided **POLARIZED** fused cable. *(SLA Battery-4150 kit or Solar Panel-4080 kit is required to power up NIICD equipment)* *(No master power switch)*
- Turn "**ON**" each module by switching the **TX A and RX A** to the "**NORM**" position.
- 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.
- Toggle the **A/B Ch Side** switch to the **A** position for a visual indicator of the **RX A and TX A tone** selected. (*Note: Selecting a tone will enable the tone on both TX A and RX A modules.)*
- Select the **assigned UHF 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 - UHF Tone Table)*
- Test the repeater function with **two UHF** radios to verify the equipment 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:

- *NIICD has implemented a **RX/TX** Fixed Tone of **110.9** on all **UHF** Frequencies to help minimize possible interference on **UHF** signals.*
- ***Switch A** on the **Repeater Control Module** is a **16** position rotary switch, with Position 1 being straight up.*
- ***Switch A** on the **Repeater Control Module** has no effect on the operation of the UHF RX/TX Tone since all channels are programmed with RX/TX tone of 110.9.*
- *The **Function Switches** on the **Utility Module** are only for shop testing and used in conjunction with the meter leads.*

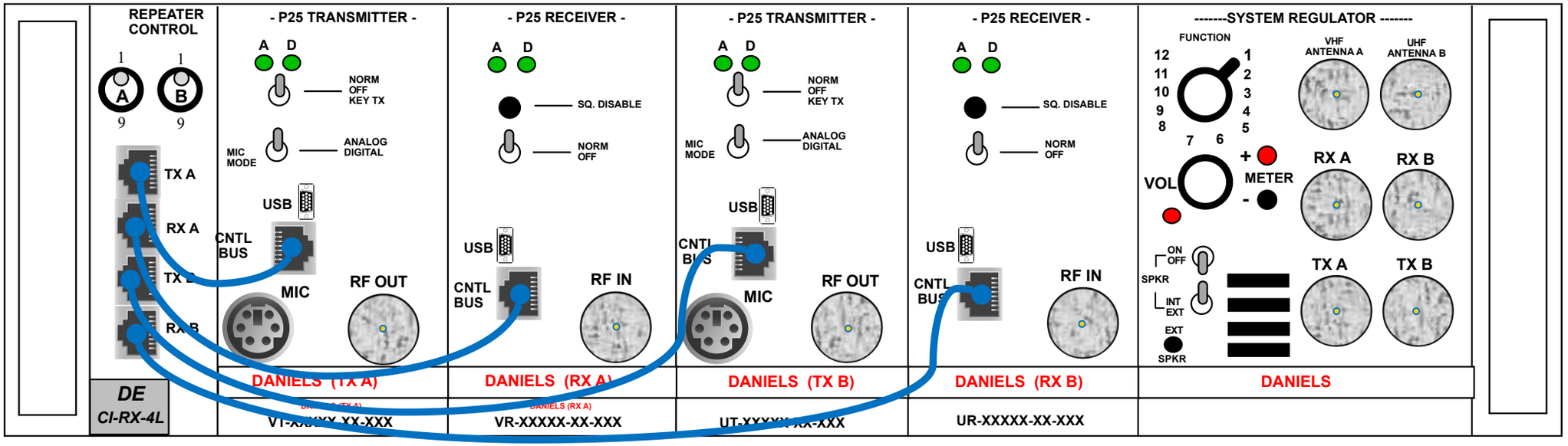
Close-Up View
Switch A, Switch B
Repeater Control Module



Switch A - UHF Tone Table	
Position A1	Tone 1: 110.9
Position A2	Tone 1: 110.9
Position A3	Tone 1: 110.9
Position A4	Tone 1: 110.9
Position A5	Tone 1: 110.9
Position A6	Tone 1: 110.9
Position A7	Tone 1: 110.9
Position A8	Tone 1: 110.9
Position A9	Tone 1: 110.9
Position A10	Tone 1: 110.9
Position A11	Tone 1: 110.9
Position A12	Tone 1: 110.9
Position A13	Tone 1: 110.9
Position A14	Tone 1: 110.9
Position A15	Tone 1: 110.9
Position A16	Tone 1: 110.9

Codan Utility Module Functions (4248-UHF Repeater Configuration) *MT-5 Version*	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
6	RX B Audio
4,5,7-12	NIICD Testing
Revised 2025	

4281 - CROSSBAND LINK SWITCH SETTINGS (E-VERSION)



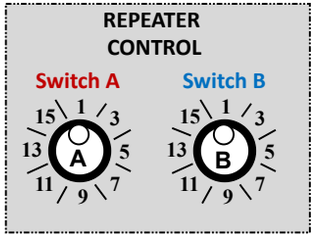
4281 Crossband Link: E-Version

- Set up the VHF **Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the UHF antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the subrack power cable to the SLA batteries using the provided **POLARIZED** fused cable. ***(SLA Battery-4150 kir or Solar Panel-4080 kit is required to power up NIICD equipment)***
  (No master power switch)
- Turn "**ON**" each modjule by switching the **TX A**, **RX A**, **TX B**, **and RX B** to the "**NORM**" position.
- Keep the **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** 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** 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)***
- Test the crossband link with one **VHF** and one **UHF** handheld radio to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site)***

Equipment Notes:

- *The Communications Duty Officer (CDO) or COMC will assign the appropriate **VHF** and **UHF** frequency.*
- *Contact the CDO @ 208-387-5644*
- *Both **Switch A** and **Switch B** on the **System Regulator Module** are 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.*
- ***All 4281 kits will come preprogrammed with incident frequencies from NIICD.***

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



Switch A - VHF Frequency List	
Position A1	C1 RPTR
Position A2	C2 RPTR
Position A3	C3 RPTR
Position A4	C4 RPTR
Position A5	C5 RPTR
Position A6	C6 RPTR
Position A7	C1 RPTR
Position A8	C1 RX Simplex
Position A9	C2 RX Simplex
Position A10	C3 RX Simplex
Position A11	C4 RX Simplex
Position A12	C5 RX Simplex
Position A13	C6 RX Simplex
Position A14	C1 RX Simplex
Position A15	Special Use
Position A16	Special Use

Switch B - UHF Frequency List	
Position B1	L1 RPTR
Position B2	L2 RPTR
Position B3	L3 RPTR
Position B4	L4 RPTR
Position B5	L5 RPTR
Position B6	L6 RPTR
Position B7	L7 RPTR
Position B8	L1 RX Simplex
PositionB 9	L2 RX Simplex
Position B10	L3 RX Simplex
Position B11	L4 RX Simplex
Position B12	L5 RX Simplex
Position B13	L6 RX Simplex
Position B14	L7 RX Simplex
Position B15	Special Use
Position B16	Special Use

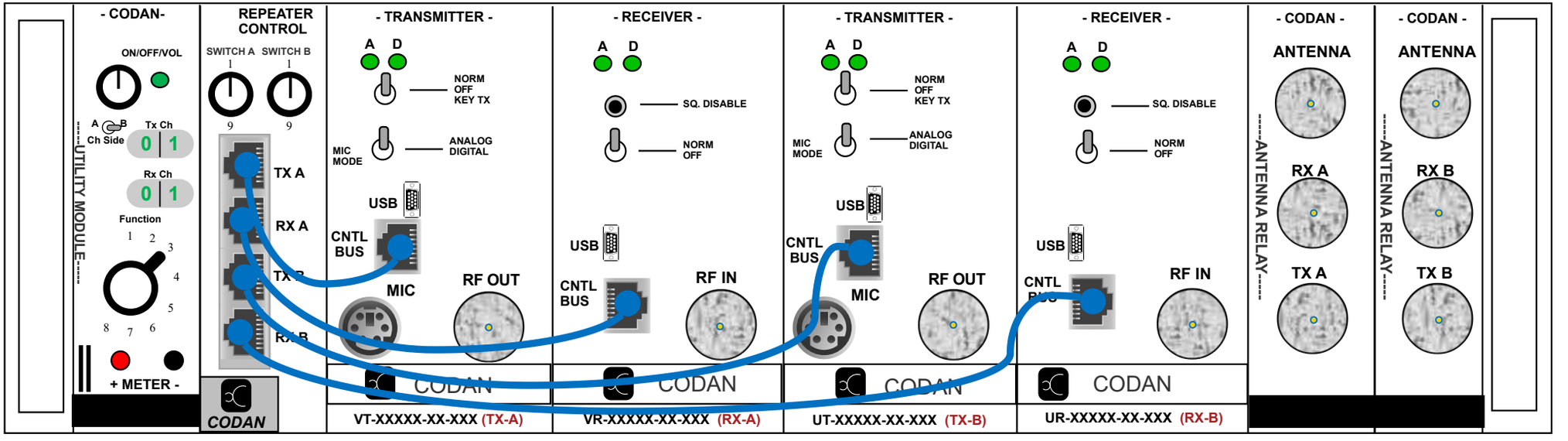
Enabling Internal Speaker for Troubleshooting

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 the external speaker if connected and provided.*

System Regulator Switch Functions *(4281 - E-Version Crossband Link VHF to UHF)*	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3-12	NIICD Technician Testing
Revised 2025	

4281 - CROSSBAND LINK SWITCH SETTINGS (MT-5 VERSION)



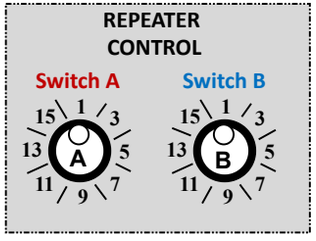
4281 Crossband Link: MT-5 Version

- Set up the **VHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the subrack power cable to the SLA batteries using the provided **POLARIZED** fused cable. ***(SLA Battery-4150 kir or Solar Panel-4080 kit is required to power up NIICD equipment) (No master power switch)***
- Turn "**ON**" each module by switching the **TX A**, **RX A**, **and TX B**, **RX B** in the "**NORM**" position.
- Keep the **Mic Mode** on **TX A and TX B** in the "**ANALOG**" position.
- Turn "**ON**" the **Utility Module** by turning the **ON/OFF/VOL** knob clockwise past the detent.
- Toggle the **A/B CH Side** switch to the "**A**" position for a visual incidactor of the **TX A and RX A VHF Frequency** selected.
- Select the assigned **VHF frequency** for both **RX A and TX A** by turning the **Switch A knob, located** on the **Repeater Control Module** to assigned position. ***(Switch A, VHF Frequency Select)***
- Toggle the **A/B CH Side** switch to the "**B**" position for a visual incidactor of the **TX B and RX B UHF Frerquency** selected.
- Select the assigned **UHF frequency** for both **TX B and RX B** by turning the **Switch B knob**, located on the **Repeater Control Module** to assigned position. ***(Switch B, UHF Frequency Select)***
- Test the crossband link with one **VHF** and one **UHF** handheld radio to verify the equipment 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 **Utlity Module** by turning the **ON/OFF/VOL** switch counterclockwise past the detent.

Equipment Notes:

- *The Communications Duty Officer (CDO) or COMC will assign the appropriate **VHF** and **UHF** frequency.*
- *Contact the CDO @ 208-387-5644*
- *Both **Switch A** and **Switch B** on the **Repeater Control Module** are a **16** position rotary switch, with Position 1 being straight up.*
- *The **Function Switches** on the **Utility Module** are ony for a shop testing and used in conjunction with the meter leads.*
- ***All 4281 kits will come preprogrammed with incident frequencies from NIICD.***

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



Switch A - VHF Frequency List	
Position A1	C1 RPTR
Position A2	C2 RPTR
Position A3	C3 RPTR
Position A4	C4 RPTR
Position A5	C5 RPTR
Position A6	C6 RPTR
Position A7	C1 RPTR
Position A8	C1 RX Simplex
Position A9	C2 RX Simplex
Position A10	C3 RX Simplex
Position A11	C4 RX Simplex
Position A12	C5 RX Simplex
Position A13	C6 RX Simplex
Position A14	C1 RX Simplex
Position A15	Special Use
Position A16	Special Use

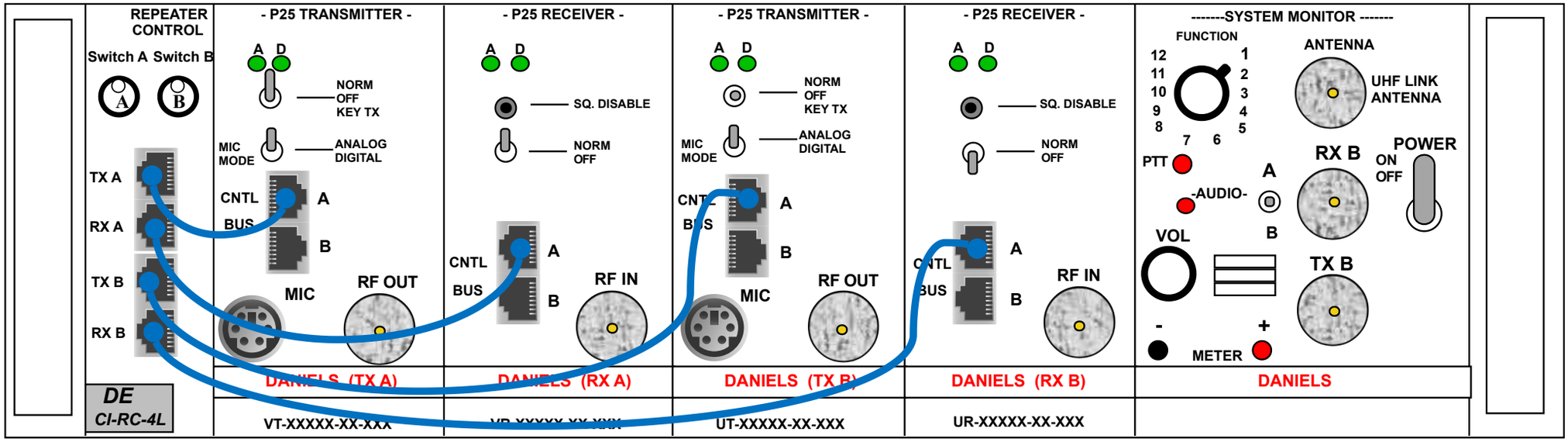
Switch B - UHF Frequency List	
Position B1	L1 RPTR
Position B2	L2 RPTR
Position B3	L3 RPTR
Position B4	L4 RPTR
Position B5	L5 RPTR
Position B6	L6 RPTR
Position B7	L7 RPTR
Position B8	L1 RX Simplex
PositionB 9	L2 RX Simplex
Position B10	L3 RX Simplex
Position B11	L4 RX Simplex
Position B12	L5 RX Simplex
Position B13	L6 RX Simplex
Position B14	L7 RX Simplex
Position B15	Special Use
Position B16	Special Use

Enabling Internal Speaker for Troubleshooting

1. Enable the speaker by turning "**ON**" the **Utility Module** and adjusting the Volume to desired level.
2. Select the desired receiver audio, **A** or **B** by turning the **Function Switch** located on the **Utility Module**, to **position 3** for **RX Audio A or position 5 for RX audio B**

Utility Module Switch Functions (4281 - MT-5 Version Crossband Link VHF to UHF)	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
6	RX B Audio
4,5, 7-12	NIICD Technician Testing
Revised 2025	

4312 - VHF REPEATER SWITCH SETTINGS



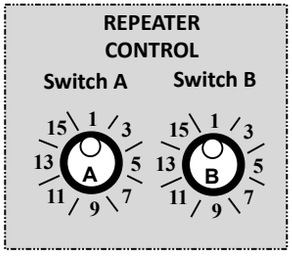
4312 - VHF REPEATER:

- Set up the VHF **Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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 **TX A** in the "**ANALOG**" position.
- Keep the **A/B Audio Select** Switch on the **System Monitor Module** at the center (**OFF**) position.
- Select the **assigned VHF Repeater tone** by turning the **Switch A** knob, located on the top portion of the **Repeater Control Module**, to the associated position. ***(See Switch A - VHF Tone Table)***
- Test the repeater with **two VHF handheld radios** to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site)***

Equipment Notes:

- *Selecting a tone will enable the tone on both the **VHF TX A** and **VHF RX A** modules.*
- *The Communications Duty Officer (CDO) will assign the appropriate VHF tone for each incident.*
- *Contact the CDO for a tone assignment @ 208-387-5644.*
- *Both **Switch A** and **Switch B** on the **Repeater Control Module** 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



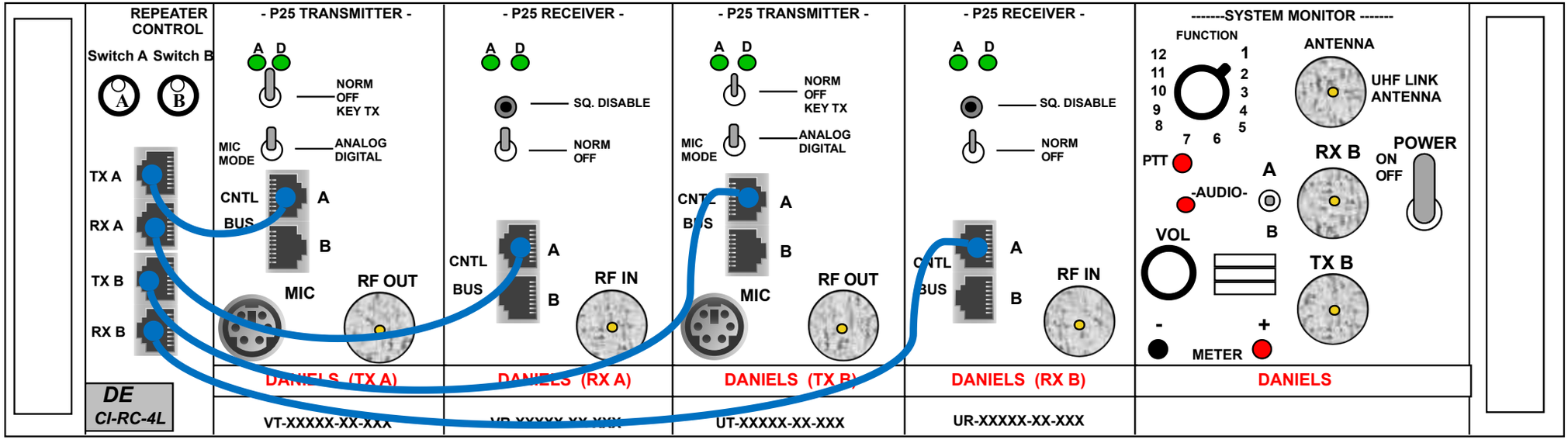
Switch A - VHF Tone Table	
Position A1	Tone 1: 110.9
Position A2	Tone 2: 123.0
Position A3	Tone 3: 131.8
Position A4	Tone 4: 136.5
Position A5	Tone 5: 146.2
Position A6	Tone 6: 156.7
Position A7	Tone 7: 167.9
Position A8	Tone 8: 103.5
Position A9	Tone 9: 100.0
Position A10	Tone 10: 107.2
Position A11	Tone 11: 114.8
Position A12	Tone 12: 127.3
Position A13	Tone 13: 141.3
Position A14	Tone 14: 151.4
Position A15	Tone 15: 162.2
Position 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	RX A/B Audio
1, 4-7, 9-12	NIICD Technician Testing
Revised 2025	

4312 - VHF REPEATER/LINK SWITCH SETTINGS



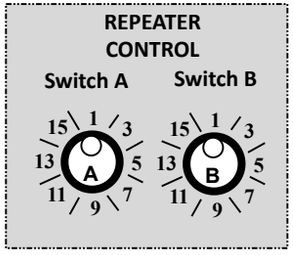
4312 - VHF REPEATER/LINK:

- Set up the **VHF Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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 the **TX A, RX A and TX B, RX B** in the "**NORM**" position.
- 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 VHF Repeater tone** by turning the **Switch A** knob, located on the top portion of the **Repeater Control Module**, to the associated position. ***(See Switch A - VHF 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 Frequenecy/Tone Table)***
- Test the repeater link with **two VHF and one UHF handheld radios** to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site)***

Equipment Notes:

- *Selecting a tone will enable the tone on both the **VHF TX A** and **VHF RX A** modules.*
- *NIICD has implemented a **fixed RX/TX Tone of 110.9** on all **UHF frequencies** to help minimize interference on incoming **UHF** signals.*
- *The Communications Duty Officer (CDO) will assign the appropriate VHF tone and UHF Link frequency for each incident.*
- *Contact the CDO for a tone assignment @ 208-387-5644.*
- *Both **Switch A** and **Switch B** on the **Repeater Control Module** 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
Position A13	Tone 13: 141.3
Position A14	Tone 14: 151.4
Position A15	Tone 15: 162.2
Position A16	No Tone

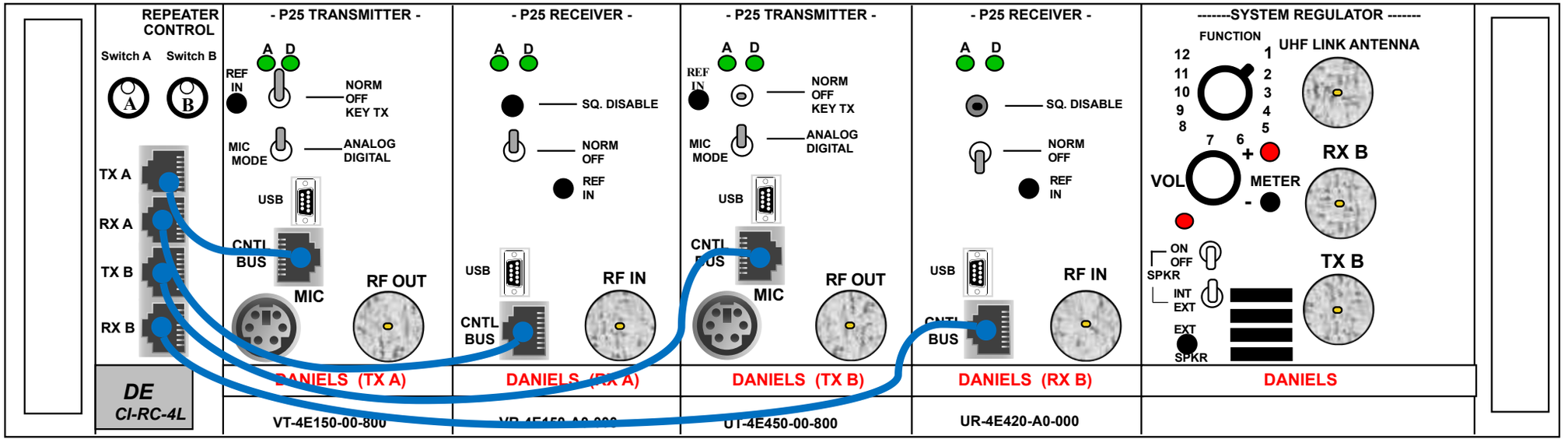
Switch B - UHF Link Frequency/Tone Table		
Position B1	L1 RPTR Access	Tone: 110.9
Position B2	L2 RPTR Access	Tone: 110.9
Position B3	L3 RPTR Access	Tone: 110.9
Position B4	L4 RPTR Access	Tone: 110.9
Position B5	L5 RPTR Access	Tone: 110.9
Position B6	L6 RPTR Access	Tone: 110.9
Position B7	L7 RPTR Access	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 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 2025	

4312 - VHF REPEATER SWITCH SETTINGS (E-VERSION)



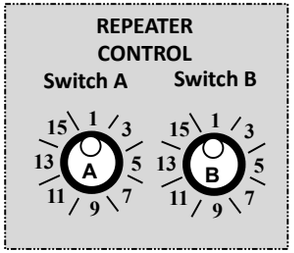
4312 - VHF REPEATER: **(E-Version)**

- Set up the **VHF Omni-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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.)***
  (No master power switch)
- 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 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.
- Select the **assigned VHF Repeater tone** by turning **Switch A** knob, located on the top portion of the **Repeater Control Module**, to associated position. ***(Switch A - VHF Tone Selection)***
- Test the repeater with **two VHF handheld radios** to verify the equipment is operating correctly. ***(NIICD recommends testing with the field units or ICP if possible before leaving the site)***

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 VHF tone for each incident.*
- *Contact the CDO for a tone assignment @ 208-387-5644*
- *Both **Switch A** and **Switch B** on the **Repeater Control Module** 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.*

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
Position A13	Tone 13: 141.3
Position A14	Tone 15: 151.4
Position A15	Tone 15: 162.2
Position A16	No Tone

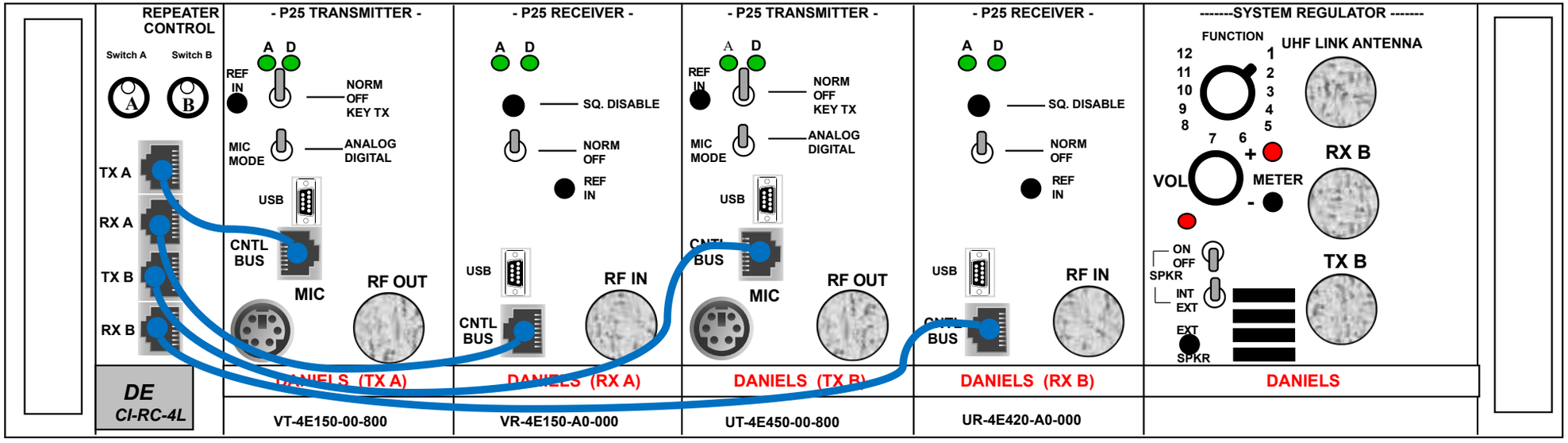
Enabling Internal Speaker for Troubleshooting

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 the external speaker if connected and provided.*

System Regulator Switch Functions (4312-VHF Repeater Configuration) E-Version	
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 2025	

4312 - VHF REPEATER/LINK SWITCH SETTINGS (E-VERSION)



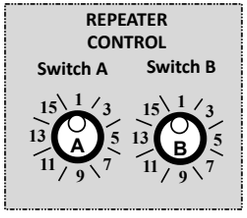
4312 - VHF REPEATER/LINK: ***(E-Version)***

- Set up the VHF **Omni-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the UHF antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the subrack power cable to the SLA batteries using provided **POLARIZED** fused cable. ***(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, and TXB, 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 the **assigned** VHF Repeater 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 the **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)***
- Test the repeater link with **two** VHF and **one** UHF **handheld radios** to verify the equipment 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 **VHF TX A** and **VHF RX A** modules.*
- *NIICD has implemented a fixed **RX/TX Tone of 110.9** on all **UHF frquencies** to help minimize interference on incoming **UHF** signals.*
- *The Communications Duty Officer (CDO) or COMC will assign the appropriate VHF tone and UHF Link frequency for each incident.*
- *Contact the CDO for a dedicated Tone and UHF frequency assignment @ 208-387-5644*
- *Both **Switch A** and **Switch B** on the **Repeater Control Module** 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.*

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
Position A13	Tone 13: 141.3
Position A14	Tone 14: 151.4
Position A15	Tone 16: 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

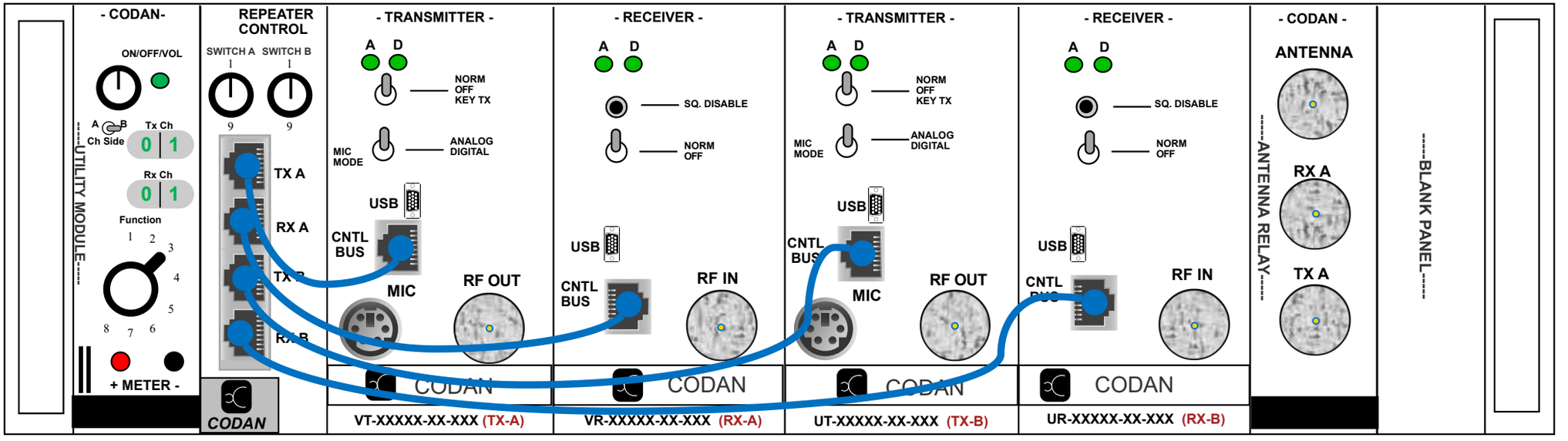
Enabling Internal Speaker for Troubleshooting

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 the external speaker if connected and provided.*

System Regulator Switch Functions (4312-VHF Repeater/Link Configuration) E-Version	
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 2025	

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



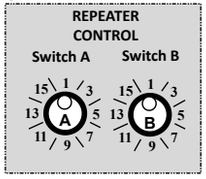
4312 - VHF REPEATER/LINK: ***(MT-5 Version)***

- Set up the **VHF Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- 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, and TXB, 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.
- Toggle the **A/B Ch Side** switch to the "**A**" position for a visual indicator of the **TXA and RX A VHF Repeater tone** selected.
- 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 "**B**" position for a visual indicator of the **TX B and RX B UHF Channel** selected.
- Select the **assigned UHF Link 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)***
- Test the repeater link with **two VHF** and **one UHF handheld radios** to verify the equipment 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 **TX A and RX A** modules.*
- *NIICD has implemented a **fixed RX/TX Tone of 110.9** on all **UHF** frequencies to help minimize interference on incoming **UHF** signals.*
- *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**, it is only for visual channel verification on the LCD.*
- *The **Function Switches** on the **Utility Module** are only for shop testing and used in conjunction with 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
Position A13	Tone 13: 141.3
Position A14	Tone 14: 151.4
Position A15	Tone 16: 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

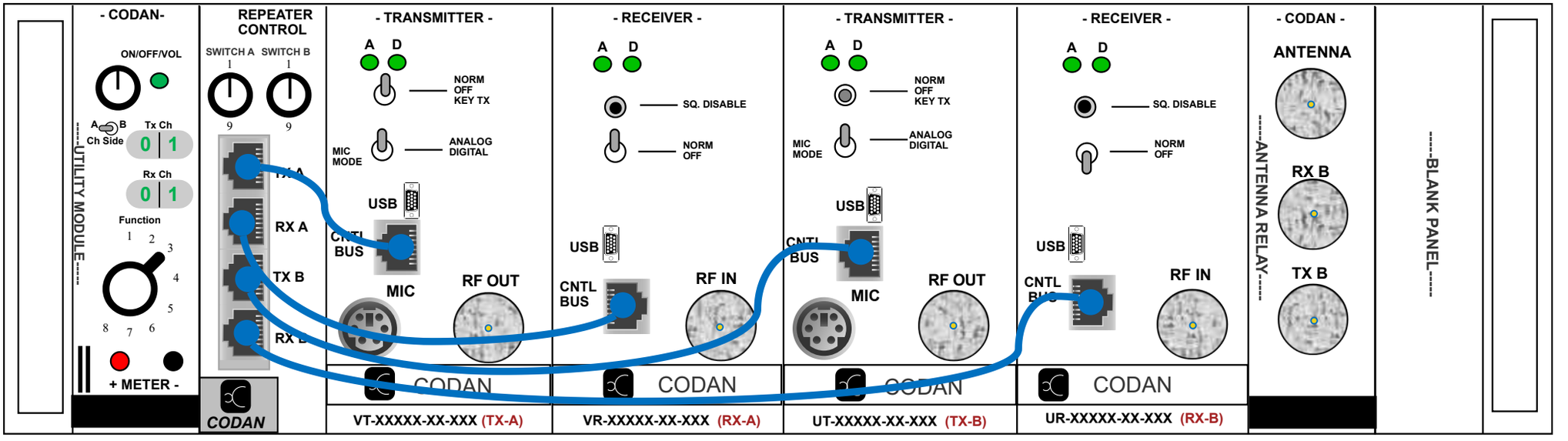
1. Enable the speaker by turning "**ON**" the **Utility Module** and adjusting the Volume to desired level.
2. Select the desired receiver audio, **A** or **B** by turning the **Function Switch** located on the **Utility Module**, to **position 3** for **RX Audio A** or **position 5 for RX audio B.**

Codan Utility Module Functions (4312-VHF Repeater/Link Configuration) ***MT-5 Version***

1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
6	RX B Audio
4,5,7-12	NIICD Testing

Revised 2025

4312 - VHF REPEATER SWITCH SETTINGS *(MT-5 VERSION)*



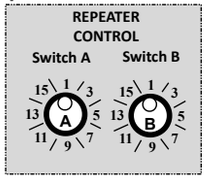
4312 - VHF REPEATER: *(MT-5 Version)*

- Set up the **VHF Omni-Directiona**l antenna as per the NIICD recommended kit setup procedure. *(See Antenna Instructions in User's Guide for detailed setup)*
- 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.
- Toggle the **A/B Ch Side** switch to the **A** position for a visual indicator of the **TX A and RX A tone** selected.
- 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)*
- Test the repeater with **two VHF handheld radios** to verify the equipment 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 **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, it is only for visual channel verification on the LCD.*
- *The **Function Switches** on the **Utility Module** are only for shop testing and used in conjunction with meter leads.*

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



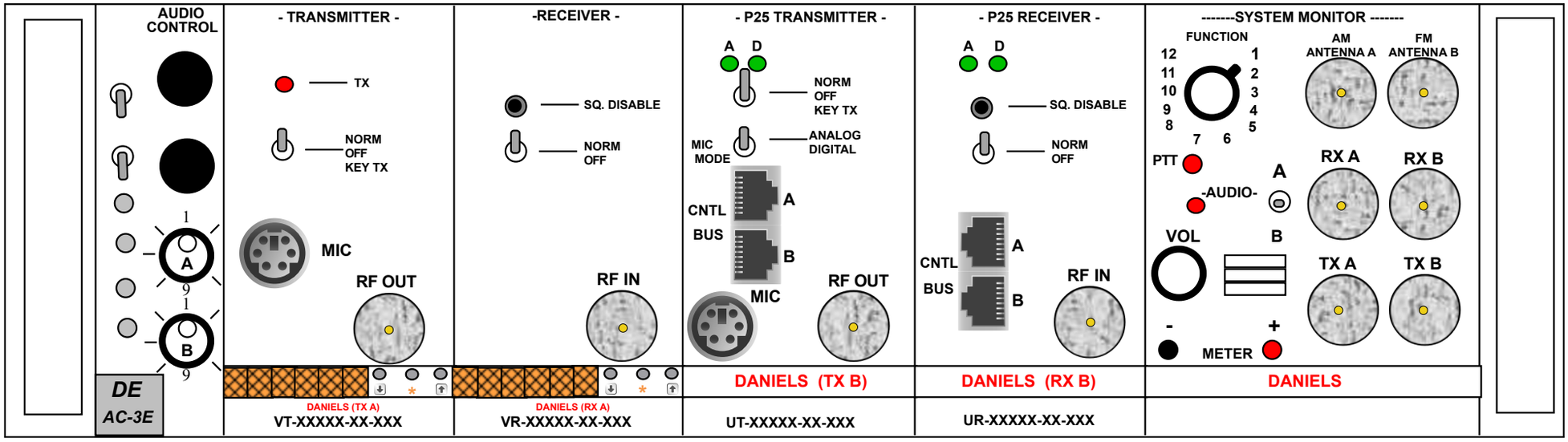
Switch A - VHF Tone Table	
Position A1	Tone 1: 110.9
Position A2	Tone 2: 123.0
Position A3	Tone 3: 131.8
Position A4	Tone 4: 136.5
Position A5	Tone 5: 146.2
Position A6	Tone 6: 156.7
Position A7	Tone 7: 167.9
Position A8	Tone 8: 103.5
Position A9	Tone 9: 100.0
Position A10	Tone 10: 107.2
Position A11	Tone 11: 114.8
Position A12	Tone 12: 127.3
Position A13	Tone 13: 141.3
Position A14	Tone 14: 151.4
Position A15	Tone 16: 162.2
Position A16	No Tone

Enabling Internal Speaker for Troubleshooting

1. Enable the speaker by turning "**ON**" the **Utility Module** and adjusting the Volume to desired level.
2. Select the desired receiver audio '**A**" by turning the **Function Switch** located on the **Utility Module**, to **position 3** for **RX Audio A.**

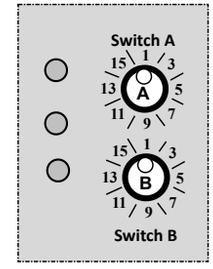
Codan Utility Module Functions (4312-VHF Repeater Configuration) *MT-5 Version*	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
6	RX B Audio
4,5,7-12	NIICD Testing
Revised 2025	

4370 - AIRCRAFT LINK SWITCH SETTINGS



4370 - AIRCRAFT LINK:

- Set up the **VHF Omi-Directional** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the sub rack power cable to the SLA batteries using the provided **POLARIZED** fused cable. ***(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 the **TX A**, **RX A**, **and TX B**, **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: NIICD has implemented a fixed RX/TX tone of 110.9 on all UHF frequencies to help minimize interference on incoming UHF signals.
- *Test the Aircraft Link with **one** AM and **one** UHF **handheld radio** to verify the equipment is operating correctly.*
  (NIICD recommends testing with the field units or Heli-Base is possible before leaving the site)



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

Equipment Notes:

- *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 Link frequency at 208-387-5644.*
- *Both **Switch A** and **Switch B** on the **Audio Control Module** 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.*

AM Frequency Manual 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	
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

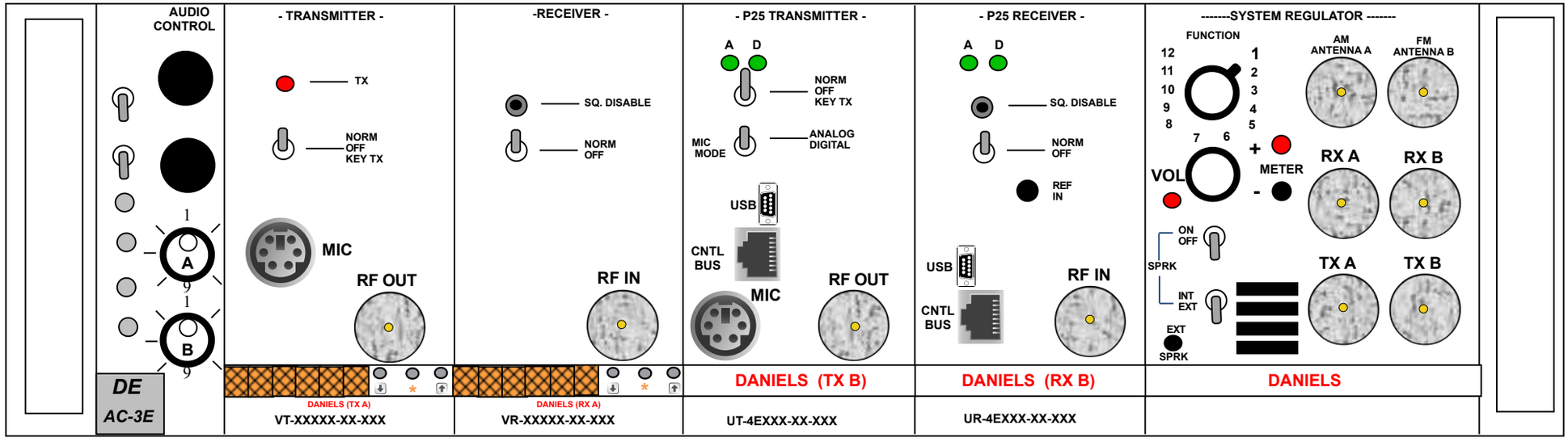
Switch B - UHF Frequency/Tone Table		
Position B1	A/C 1 Simplex	Tone 1: 110.9
Position B2	A/C 2 Simplex	Tone 1: 110.9
Position B3	A/C 3 Simplex	Tone 1: 110.9
Position B4	A/C 4 Simplex	Tone 1: 110.9
Position B5	A/C 5 Simplex	Tone 1: 110.9
Position B6	A/C 6 Simplex	Tone 1: 110.9
Position B7	A/C 7 Simplex	Tone 1: 110.9
Position B8	A/C 8 Simplex	Tone 1: 110.9
Position B9	A/C 9 (L8 Simp)	Tone 1: 110.9
Position B10	A/C 10 (L8 RPTR)	Tone 1: 110.9
Position B11	A/C 11 (L9 Simp)	Tone 1: 110.9
Position B12	A/C 12 (L9 RPTR)	Tone 1: 110.9
Position B13	A/C 13 (L10 Simp)	Tone 1: 110.9
Position B14	A/C 14 (L10 RPTR)	Tone 1: 110.9
Position B15	A/C 15 (L11 Simp)	Tone 1: 110.9
Position B16	A/C 16 (L11 RPTR)	Tone 1: 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.

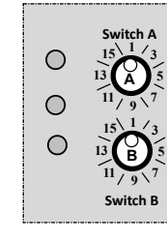
System Monitor Switch Functions (4370 - Aircraft Radio Base Configuration)	
1	External Speaker
2	+13.8 V (Supply Voltage)
3	+9.5 V Regulated
8	RX A Audio
4-7, 9-12	NIICD Technician Testing
Revised 2025	

4370 - AIRCRAFT LINK SWITCH SETTINGS (E-VERSION)



4370 - AIRCRAFT LINK: (E-Version)

- Set up the **VHFAM Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the subrack power cable to the SLA batteries using the provided **POLARIZED** fused cable. ***(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 the **TX A**, **RX A**, **and TX B**, **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.)
- *Test the Aircraft Link with **one** AM and **one** UHF **handheld radio** to verify the equipment is operating correctly.*
  (NIICD recommends testing with the field units or Heli-Base is possible before leaving the site)



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

Equipment Notes:

- *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** on the **Audio Control Module** 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.*

AM Frequency Manual 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	
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

Switch B - UHF Frequency/TX/RX Tone Table		
Position B1	A/C 1 Simplex	Tone 1: 110.9
Position B2	A/C 2 Simplex	Tone 1: 110.9
Position B3	A/C 3 Simplex	Tone 1: 110.9
Position B4	A/C 4 Simplex	Tone 1: 110.9
Position B5	A/C 5 Simplex	Tone 1: 110.9
Position B6	A/C 6 Simplex	Tone 1: 110.9
Position B7	A/C 7 Simplex	Tone 1: 110.9
Position B8	A/C 8 Simplex	Tone 1: 110.9
Position B9	A/C 9 (L8 Simp)	Tone 1: 110.9
Position B10	A/C 10 (L8 RPTR)	Tone 1: 110.9
Position B11	A/C 11 (L9 Simp)	Tone 1: 110.9
Position B12	A/C 12 (L9 RPTR)	Tone 1: 110.9
Position B13	A/C 13 (L10 Simp)	Tone 1: 110.9
Position B14	A/C 14 (L10 RPTR)	Tone 1: 110.9
Position B15	A/C 15 (L11 Simp)	Tone 1: 110.9
Position B16	A/C 16 (L11 RPTR)	Tone 1: 110.9

Enabling Internal Speaker for Troubleshooting

- **Enable the speaker** by switching the speaker switch located on the System Regulator, to the "**ON**" position.
- **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)	
1	+13.8 V (Supply Voltage)
2	+9.5 V Regulated
3	RX A Audio
5	RX B Audio

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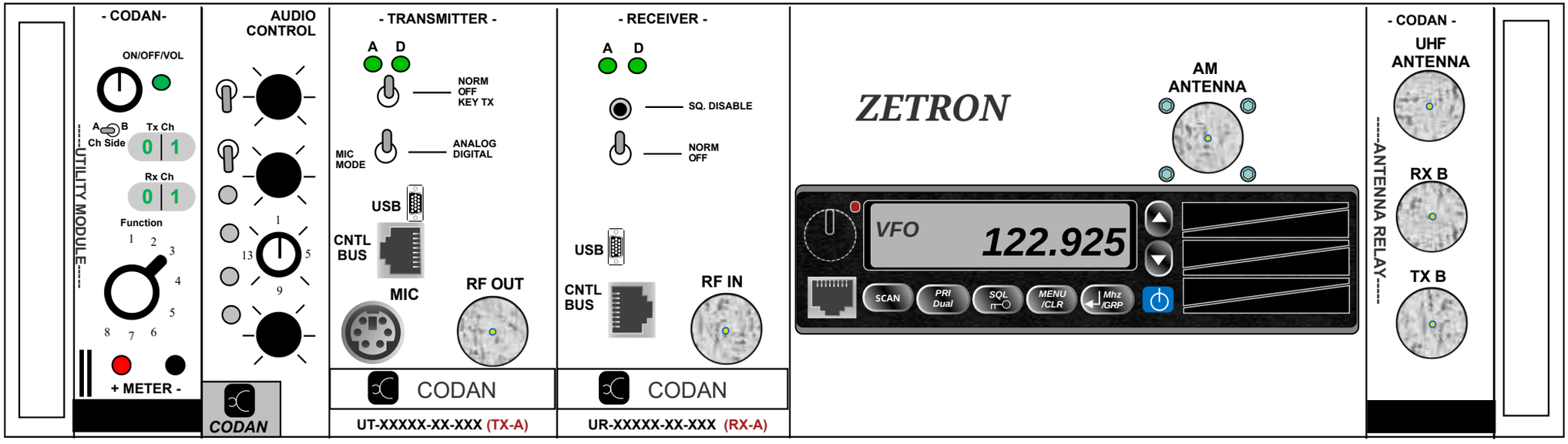
4370 - AIRCRAFT LINK SWITCH SETTINGS (MT5 MODELS ONLY)



4370 - AIRCRAFT LINK: (MT-5 Version)

- Set up the **VHFAM Omi-Directiona**l antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Set up the **UHF** antenna as per the NIICD recommended kit setup procedure. ***(See Antenna Instructions in User's Guide for detailed setup)***
- Connect the sub rack power cable to the SLA batteries using the provided **POLARIZED** fused cable. ***(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 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 **RX A and TX A UHF Link Channel** selected.
- Select the **assigned FM UHF link frequency** for both the **TX A and RX A** using the 16-position rotary knob on the **Utility 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 AM Frequency Manual Programming
- *Test the Aircraft Link with **one** AM and **one** UHF **handheld radio** to verify the equipment 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 **Utilty Module Rotary Switches** are 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 - AM Frequency Manual 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.

Utility Module - UHF Frequency/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
Position A9	A/C 9 (L8 Simp)	Tone 1: 110.9
Position A10	A/C 10 (L8 RPTR)	Tone 1: 110.9
Position A11	A/C 11 (L9 Simp)	Tone 1: 110.9
Position A12	A/C 12 (L9 RPTR)	Tone 1: 110.9
Position A13	A/C 13 (L10 Simp)	Tone 1: 110.9
Position A14	A/C 14 (L10 RPTR)	Tone 1: 110.9
Position A15	A/C 15 (L11 Simp)	Tone 1: 110.9
Position A16	A/C 16 (L11 RPTR)	Tone 1: 110.9

Utility Module Switch Functions (4370 - Aircraft Radio Link Configuration) MT-5 Version	
1	+13.8 V (Supply Voltage)
2	9.5 V Regulated
3	RX A Audio
6	RX B Audio
4-5, 7-12	NIICD Technician Testing
Revised 2025	