

Application Note

AN #: 536

DATE: 22-Jan-03

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PYRAMID MODEL #: 2012 / 2016 / Merlin
RADIO MODEL: Standard GX-4800/5800/5850
ENGINEER: C. Carbajal

APPROVAL INITIALS

ENGINEER

DEPT. HEAD

Connections:	Pyramid	Function	Radio
	Black/Shield	Ground	JL03 Pin 1 - Control PCB
	White	Tx Audio Out	JL03 Pin 17 - Control PCB
	Blue	On Air Detect	Q305(RF PA) Pin 2 - RF PCB
	Green	PTT Out	JL03 Pin 9 - Control PCB
	Red	Switched B+	JL03 Pin 10 - Control PCB
	Yellow	Rx Audio In	JL04 Pin 16 - Control PCB
	Violet	COR	QA03 Pin 4 - Control PCB
	Brown	RX Audio Mute	N/C
	Grey	Mic Mute / Ch. Chng.	* See Note 2

Merlin	J1	[Out]	Tx audio level	Pyramid	Mobile COR Polarity:	Low
Jumpers:	J2	[Out]	Local PTT Loop	Program:	Mobile Type:	Conv.
	J4	[Out]	COR Pull Up		On-Air Polarity:	High
					I/O Pin 9	*See Note 1
2012	J1	[Out]	Tx audio level			
Jumpers:	J2	[Out]	Local PTT Loop			
	J3	[Out]	COR Pull Up			
2016	J1	[Out]	Local PTT Loop			
Jumpers:	J2	[Out]	TX audio level			

Additional Modifications (2012 / 2016 / Merlin): None

Note 1. If you use channel change in the 2012/Merlin Program **I/O Pin 9 to Channel Change, Method = Pulse**. You will be limited to use 2 groups in each system.

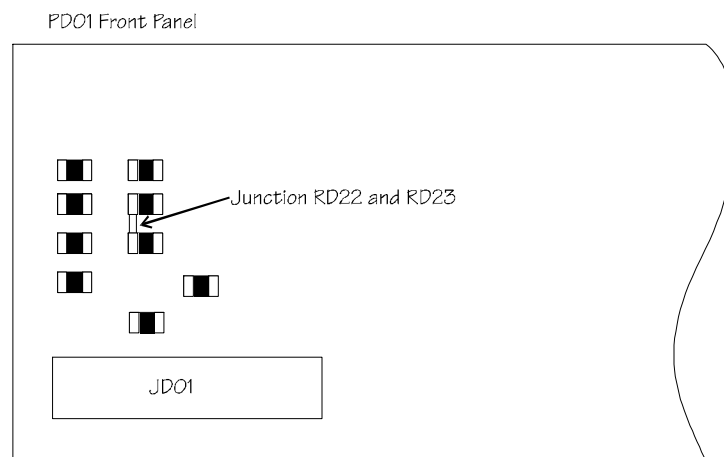
Additional Modifications (Radio):

1. You will need to modify the microphone to make the audio from the mic switched with Mic PTT. Without this modification, the microphone will be hot at all times. See figure 2 on page 2 to for details.

Note 2: If you would like to use a separate talk group for data, connect the **Grey** wire from the Merlin/2016/2012 through a 2.2K Ohm resistor to the junction of RD22 and RD23. This is located in the control head of the radio. See figure 1 on page 2 to for details.

Additional Modifications (Radio): Continued...

1. Run the **Grey** wire from the 2012/Merlin to this point through a 2.2K Ohm resistor. This is the point that the 2012/Merlin pulses low to change channels in the GX-4800/5800/5850.



2. In the Microphone, disconnect the **Red** wire from the PTT Switch. Insert a diode between the **Red** wire and the PTT Switch as shown below. Cut the **Blue** (Mic Ground Return) wire from the mic element and jumper it to the PTT side of the PTT Switch (This is the same side of the switch that the cathode of the diode is connected to, and not the side of the switch that the **Blue** wire from the mic cord is connected to).

