

Application Note

AN #: 539

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PYRAMID MODEL #: 2012 / 2016 / Merlin

RADIO MODEL: Kenwood TK-7150 / 8150

ENGINEER: C. Carbajal

APPROVAL INITIALS

ENGINEER

DEPT. HEAD

Connections:	Pyramid	Function	Radio	DB-25 Connector
	Black/Shield	Ground	Pin 7	Ground
	White	Tx Audio Out	Pin 5	DI
	Blue	On-Air Detect	Pin 15	TXS
	Green	PTT Out	Pin 21	Input 1
	Red	Switched B+	Pin 14	SW B+
	Yellow	Rx Audio In	Pin 19	DEO
	Violet	COR	Pin 8	Output 2
(Optional)	Brown	Audio Mute Out	N/C	
(Optional)	Grey	Channel Change	Pin 13	Input 2

2012/Merlin	J1	[Out]	TX audio level	Pyramid	Mobile COR Polarity:	Low
Jumpers:	J2	[Out]	PTT loop back	Program:	Mobile Type:	Conv/Trunk
					On-Air Polarity:	Low
2016	J1	[Out]	PTT loop back		I/O Pin 9	Ch. Change
Jumpers:	J2	[Out]	TX audio level			Method = Continuous

Additional Modifications (2012/2016/Merlin): None.

Additional Modifications (Radio):

- In the **Option Features** menu set the following:
 - In the **Common1** tab, set Com2 = Data
 - In the **Extended Function** tab, set External PTT for:
 - Mic Line = Disconnected
 - MI2 = Disconnected
 - DI = Connect
 - /w QT/DQT = YES
 - /w STE = YES
- In the **Function Port** menu set the following:
 - Aux Input 1 = External PTT
 - Aux Input 2 = DTC
 - Aux Output 2 = TOR

KDS-100 Support:

To use a KDS-100 /w a Pyramid AVL or Mobile Data Terminal, you will need to make a cable from the DB-25 connector on the radio to the Pyramid Communications KDS-100 "Y" PCB (P/N 9100-00-2017).

Connections:	Radio DB-25	Function	15 Pin Molex Female
	Pin 5	DI	Pin 9
	Pin 7	Ground	Pin 6
	Pin 8	Output 2	Pin 11
	Pin 9	RXD3	Pin 15
	Pin 10	TXD3	Pin 14
	Pin 13	Input 2	Pin 3
	Pin 14	SW B+	Pin 7
	Pin 15	TXS	Pin 5
	Pin 19	DEO	Pin 4
	Pin 21	Input 1	Pin 8

Additional Modifications (2012/2016/Merlin): Use TK-x80 series cable to connect Pyramid to Y PCB.
TK-x80 series cable P/N 7524-10-1044.

Additional Modifications (Radio):

1. In the *Option Features* menu set the following:
 - a. In the *Common1* tab, set Com2 = Data
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Additional Modifications (KDS-100):

1. Set the KDS-100 Model Information to Protocol = PC Mode.