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Interfacing The Motorola Quantar To The RC210

Introduction

There are several different methods of interfacing the very capable Quantar repeater to the RC210. In this document, we will offer another method that we believe to be the best option in order to take full advantage of the capability of the Quantar/RC210 pairing.

This document assumes you have the Wildcard Option installed in the Quantar, as this allows for maximum flexibility in interfacing.

Cabling

The interfacing to the Quantar is done via the 50 pin Telco connector on the back panel.

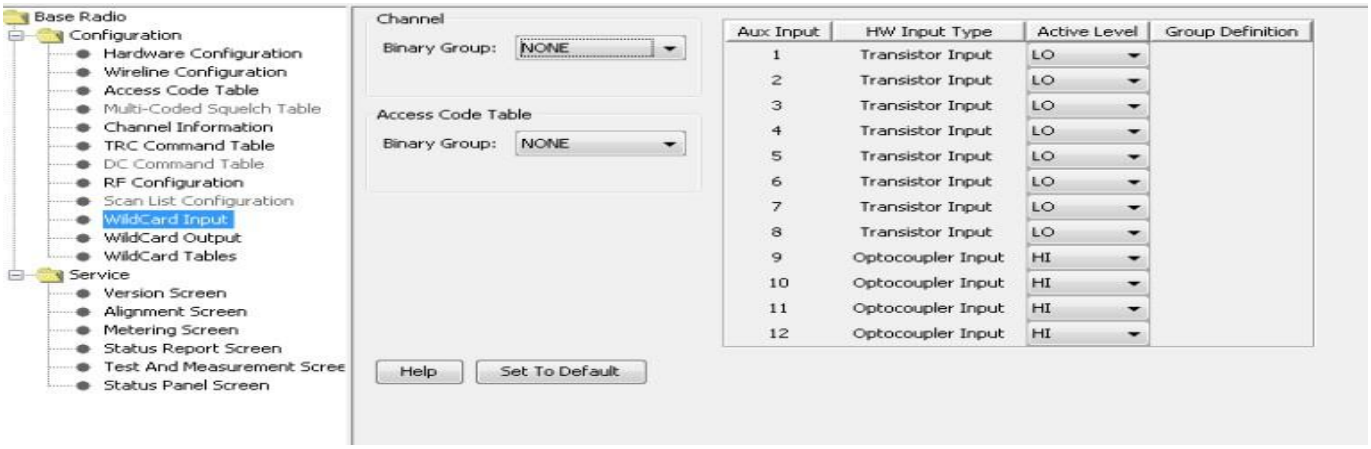
RC210	Quantar	SIGNAL	NOTES
Pin 1	Pin 17	PL/DPL Encode Control	Active Low
Pin 2	Pin 37	PL/DPL Decode Out	Active High
Pin 3	Pin 47	PTT	Active Low
Pin 4	Pin 5	Transmitter Audio	Preemphasized
Pin 5	Pin 30	Receiver Audio	Deemphasized
Pin 6	Pin 7	Ground	Ground
Pin 7	Pin 18	Receiver COR (COS)	Active High
Pin 8	Unused		
Pin 9	Unused		

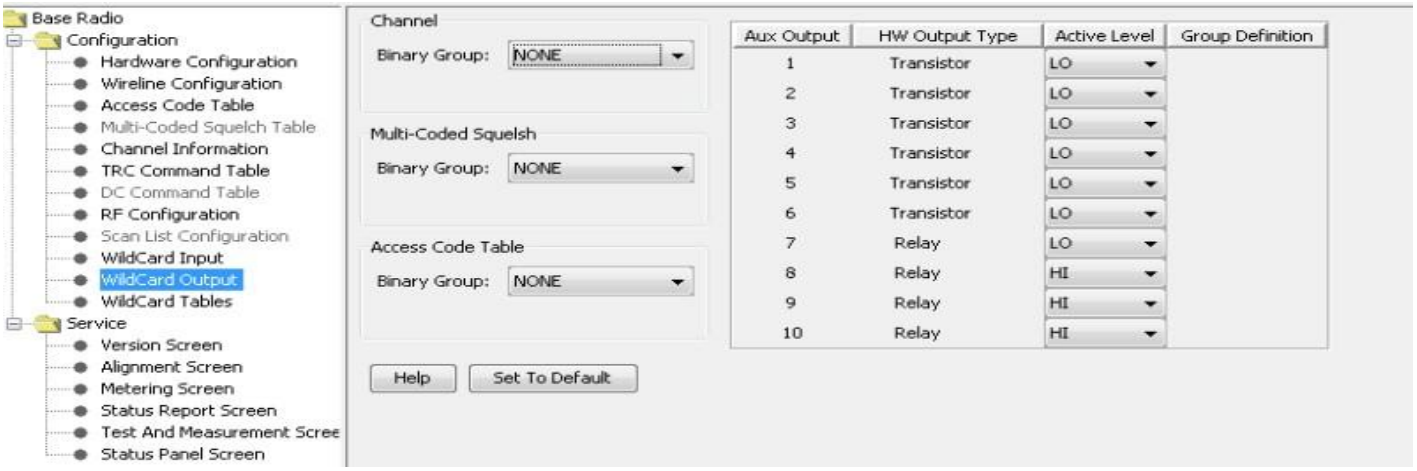
*****It is also needed to Jumper Pin 8 to 22 and Pin 32 to 43***

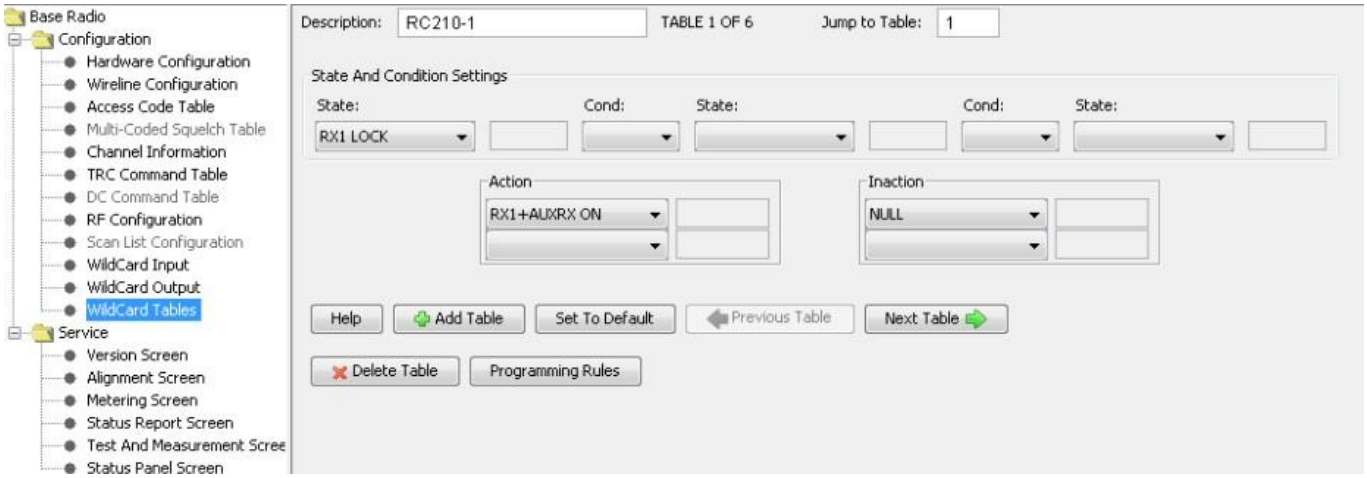
*****Optionally, you may also use Pin 33 of the Telco Connector to power the RC210 (+14.4 volts)***

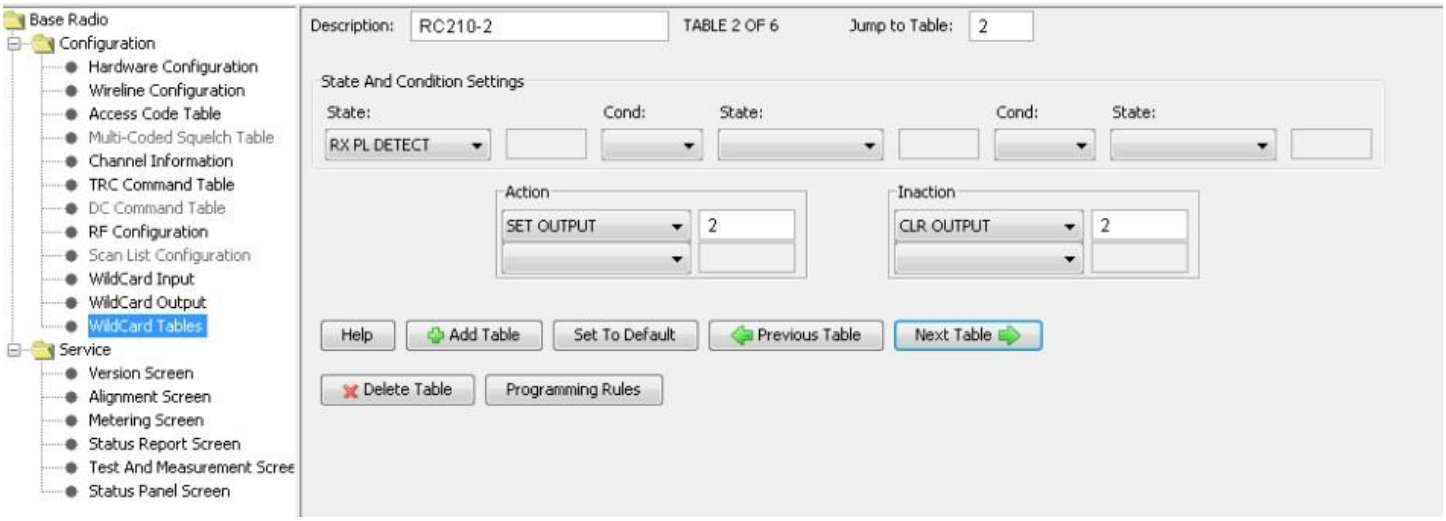
Programming the Quantar

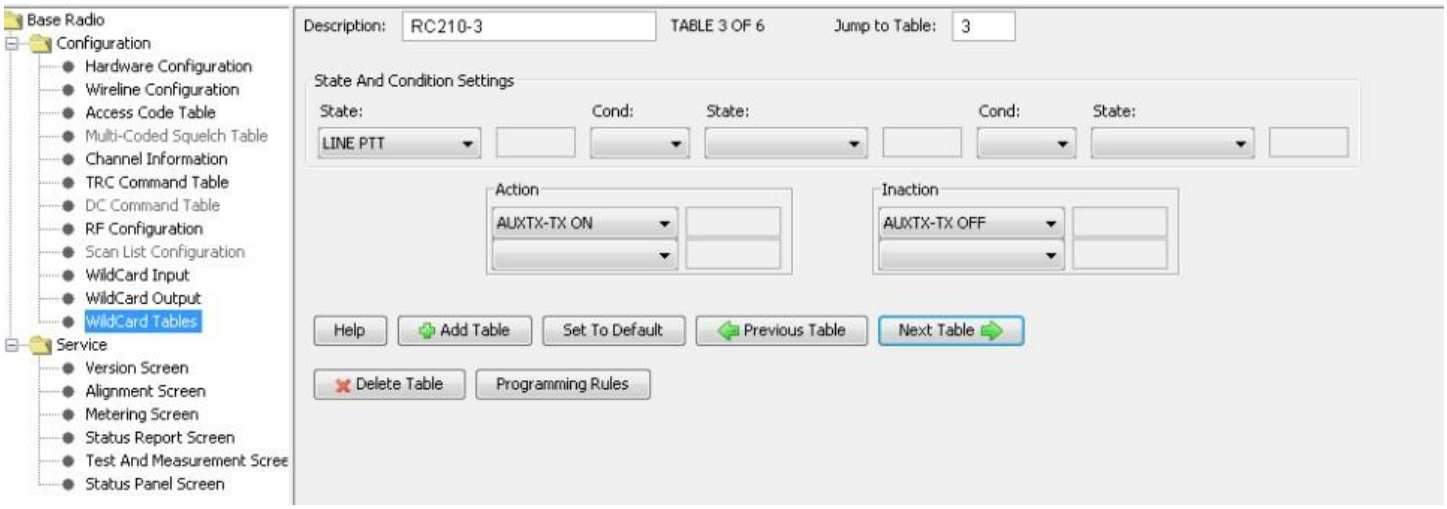
Using the Motorola CSS software, it is necessary to configure the Quantar properly for the wiring we chose. Use the following screen captures to configure it.

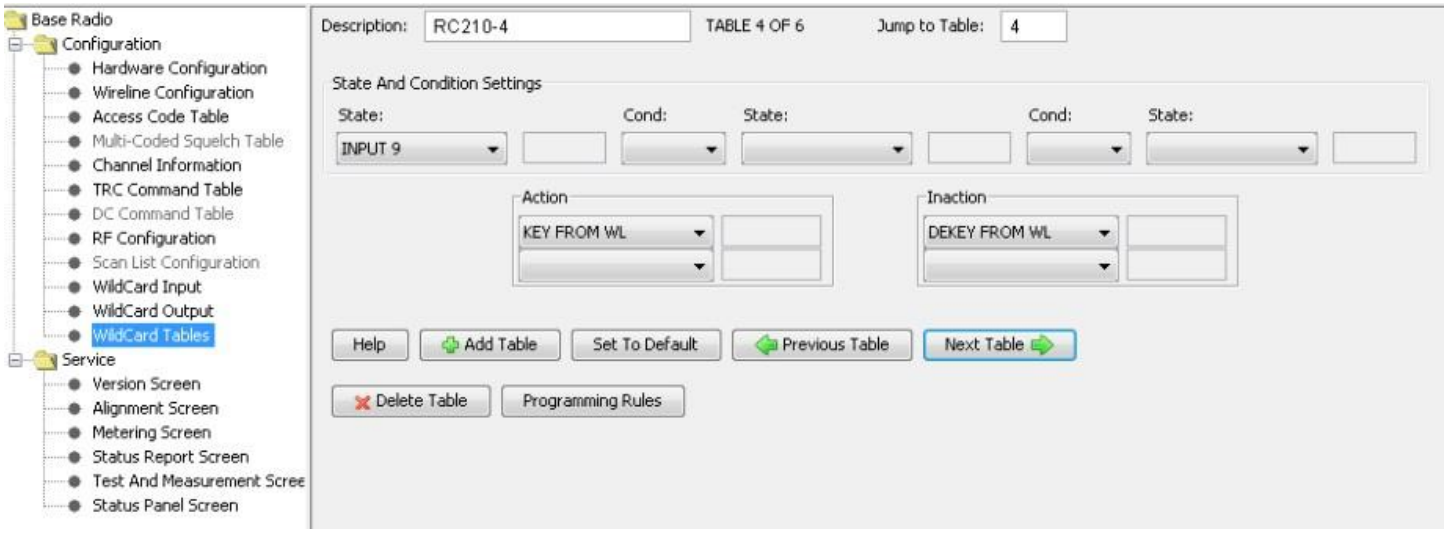



Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Channel
Binary Group: NONE
Multi-Coded Squelsh
Binary Group: NONE
Access Code Table
Binary Group: NONE
Help
Set To Default
Aux Output
HW Output Type
Active Level
Group Definition
1 Transistor LO
2 Transistor LO
3 Transistor LO
4 Transistor LO
5 Transistor LO
6 Transistor LO
7 Relay LO
8 Relay HI
9 Relay HI
10 Relay HI

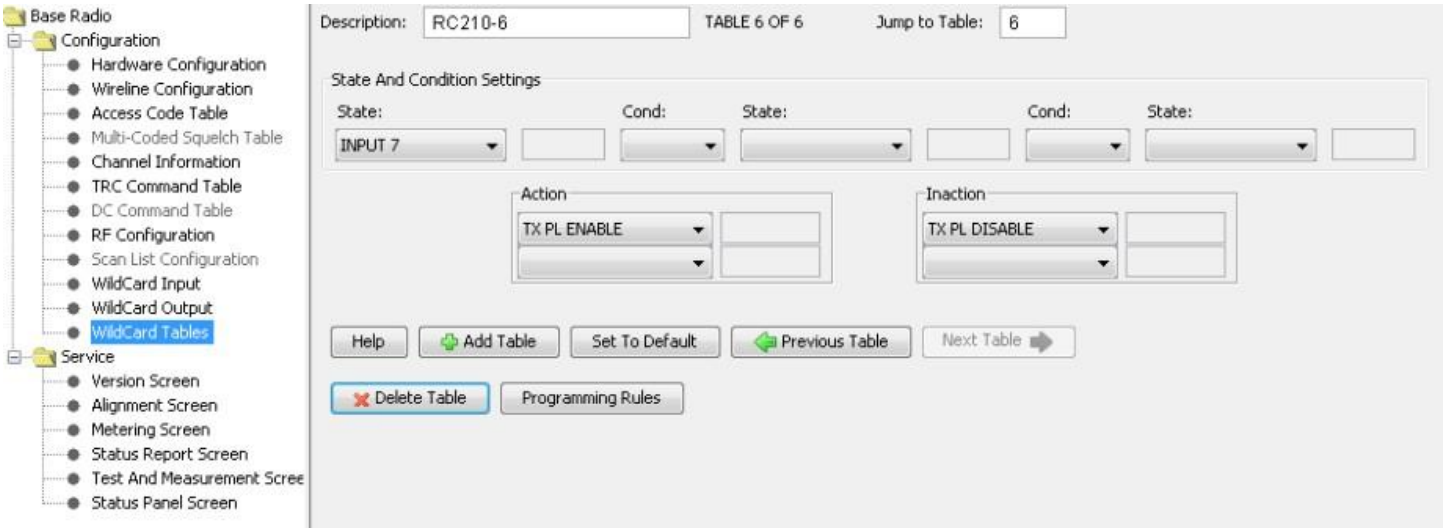

Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description: RC210-1
TABLE 1 OF 6
Jump to Table: 1
State And Condition Settings
State: RX1 LOCK
Cond:
State:
Cond:
State:
Action: RX1+AUXRX ON
Inaction: NULL
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules


Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description: RC210-2
TABLE 2 OF 6
Jump to Table: 2
State And Condition Settings
State: RX PL DETECT
Cond:
State:
Cond:
State:
Action: SET OUTPUT 2
Inaction: CLR OUTPUT 2
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules


Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description: RC210-3
TABLE 3 OF 6
Jump to Table: 3
State And Condition Settings
State: LINE PTT
Cond:
State:
Cond:
State:
Action
AUXTX-TX ON
Inaction
AUXTX-TX OFF
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules


Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description: RC210-4
TABLE 4 OF 6
Jump to Table: 4
State And Condition Settings
State: INPUT 9
Cond:
State:
Cond:
State:
Action
KEY FROM WL
Inaction
DEKEY FROM WL
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules


Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description: RC210-5
TABLE 5 OF 6
Jump to Table: 5
State And Condition Settings
State: RX CAR DETECT
Cond:
State:
Cond:
State:
Action
SET OUTPUT
7
Inaction
CLR OUTPUT
7
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules


Base Radio
Configuration
Hardware Configuration
Wireline Configuration
Access Code Table
Multi-Coded Squelch Table
Channel Information
TRC Command Table
DC Command Table
RF Configuration
Scan List Configuration
WildCard Input
WildCard Output
WildCard Tables
Service
Version Screen
Alignment Screen
Metering Screen
Status Report Screen
Test And Measurement Scree
Status Panel Screen
Description:
RC210-6
TABLE 6 OF 6
Jump to Table:
6
State And Condition Settings
State:
Cond:
State:
Cond:
State:
INPUT 7
Action
TX PL ENABLE
Inaction
TX PL DISABLE
Help
Add Table
Set To Default
Previous Table
Next Table
Delete Table
Programming Rules