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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 8 Channel 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.

PINOUT

Quantar Telco Connector

5 (TX Audio In)
7 (Ground)
17 (PL Enc. Disable)
18 (COS Out)
30 (De-emphasized RX Audio Out)
33 (+14 Out)
37 (PL Decode Out)
47 (PTT In)

RC210

4
6 and Ground Input on Power Connector
1
7
5
RC210 +VDC Input on Power Connector
2
3

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

Hardware Configuration

While your particular Quantar may not be exactly the same as the one below, the important thing to ensure is that your Wireline card is enabled and Enhanced is selected

Serial Number: 509CWT0127 Station Name: AH8LE_146.920_1Z

Hardware Platform: QUANTAR

System Type: CONVENTIONAL

Rx Freq Band 1: VHF_R2_150-174 MHz Tx Freq Band: VHF_R2_150-174 MHz

Rx Freq Band 2: NONE MHz

PA Power Rating: 125 Watts

Power Supply: AC HIGH Battery Type: NONE

Options:

Wireline: 8-WIRE WildCard: ENHANCED

Freq Ref: INTERNAL - STANDARD Simulcast Operation: DISABLED

Multi-Coded Squelch: DISABLED Phone Patch Interface: DISABLED

Scanning Receiver: DISABLED

External Wattmeter: NONE Main/Standby: DISABLED

Help Validate Configuration

Wildcard Configuration

There are several settings that must be properly configured in order for the RC210 to correctly control the Quantar. See the screenshots below and configure your Quantar accordingly.

Channel

Binary Group: NONE

Access Code Table

Binary Group: NONE

Aux Input	HW Input Type	Active Level	Group Definition
1	Transistor Input	LO	
2	Transistor Input	LO	
3	Transistor Input	LO	
4	Transistor Input	LO	
5	Transistor Input	LO	
6	Transistor Input	LO	
7	Transistor Input	LO	
8	Transistor Input	LO	
9	Optocoupler Input	HI	
10	Optocoupler Input	HI	
11	Optocoupler Input	HI	
12	Optocoupler Input	HI	

Help Set To Default

Channel

Binary Group: NONE

Multi-Coded Squelch

Binary Group: NONE

Access Code Table

Binary Group: NONE

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	

Help Set To Default

Description: RC210-1 TABLE 1 OF 6 Jump to Table: 1

State	Cond	State	Cond	State
R01 LOOK				

Action: R01+ALIBX ON Injection: NULL

Help Add Table Set To Default Previous Table Next Table

Delete Table Programming Rules

Wildcard Configuration (Continued)

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 Screen
 - Status Panel Screen

Description: RC210-2 TABLE 2 OF 6 Jump to Table: 2

State And Condition Settings

State: RX PL DETECT Condi: State: Condi: 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 Screen
 - Status Panel Screen

Description: RC210-3 TABLE 3 OF 6 Jump to Table: 3

State And Condition Settings

State: LINE PTT Condi: State: Condi: State:

Action: AUX TX-TX ON Inaction: AUX TX-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 Screen
 - Status Panel Screen

Description: RC210-4 TABLE 4 OF 6 Jump to Table: 4

State And Condition Settings

State: INPUT 9 Condi: State: Condi: 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 Screen
 - Status Panel Screen

Description: RC210-5 TABLE 5 OF 6 Jump to Table: 5

State And Condition Settings

State: RX CAR DETECT Condi: State: Condi: 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 Screen
 - Status Panel Screen

Description: RC210-6 TABLE 6 OF 6 Jump to Table: 6

State And Condition Settings

State: INPUT 7 Condi: State: Condi: State:

Action: TX PL ENABLE Inaction: TX PL DISABLE

Help Add Table Set To Default Previous Table Next Table

Delete Table Programming Rules