

Motorola XTS/XTL Series Auto-Test and Alignment

CX300-TPMA25

XTS/XTL Series Cable Configuration

Hardware Required

Motorola XTS/XTL

Portable (Handheld) Radio

1. RG-233 RF Cable BNC(M)
(Option CX300-ACBL)(Qty. 2)
2. N(M) to BNC(F) adapter
(included with CX300)
3. Programming Cable
4. Battery Eliminator Motorola

Mobile Radio

1. RG-233 RF Cable BNC(M)(Option CX300-ACBL)(Qty. 2)
2. N(M) to BNC(F) adapter (included with CX300)
3. Mini UHF (M) to BNC (F)
4. HKN6183A/HKN6184A programming cable
 - a. HKN6183A requires a Serial to USB Adapter with an FTDI Chipset
5. Motorola supplied DC Cables
6. DC Power Supply (Switching) 30 A
7. Current Shunt CX300-ACS10 (for Current Bias Alignment only)
8. Binding Post/BNC (M)(2) Pomona 3430-2
9. BNC(M) to Binding Post (qty. 2)(ex. Pomona 3430-2)

- Items above (Portable 4-5) and (Mobile 4) refer to chart below
- Items above (Portable 1) and (Mobile 1) required for cable loss procedure

Motorola Part Numbers

Subscriber	Type	Radio Interface Box - RIB	Smart RIB -SRIB	Programming Cable - Serial RS232	Programming Cable - USB	Battery Eliminator	Audio Break out box	Antenna Test Adapter (Portables only)
MCS2000	Mobile	RLN4008	RLN1015	RKN4063				
MTS2000	Portable	RLN4008	RLN1015	RKN4035				
Astro Saber	Portable			RKN4046				
Astro Spectra	Mobile	RLN4008	RLN1015	30-80369B73				58-80367B21
Astro Spectra +	Mobile			30-85001D01				58-80367B21
XTL1500	Mobile			HKN6183A	HKN6184A			58-80367B21
XTL2500	Mobile			HKN6183A	HKN6184A			58-80367B21
XTL5000	Mobile			HKN6183A	HKN6184A			58-80367B21
XTS1500	Portable			RKN4106A	RKN4105A	01-80305G54	RLN4460	58-80348B33
XTS2500	Portable			RKN4106A	RKN4105A	01-80305G54	RLN4460	58-80348B33
XTS3000	Portable	RLN4008	RLN1015	RKN4035D		REX-4424	RLN4460	58-80348B33
XTS3500	Portable	RLN4008	RLN1015	RKN4035D				58-80348B33
XTS4000	Portable							58-80348B33
XTS4250	Portable							58-80348B33
XTS5000	Portable			RKN4106A	RKN4105A			58-80348B33

- RKN4106A requires a Serial to USB Adapter with an FTDI Chipset

XTS/XTL Auto-Test Cable Configurations

Prerequisite

Complete Cable Loss Procedure:

Link to Document: [Initial Setup Auto Test Configuration \(including Cable Loss\)](#)

Link to Video: [How to Measure Insertion Loss of Your Test Cable Using the CX300](#)

Connecting the Radio to the CX300

1. Fig.1 is the connection information using Programming Cable: RNK4105A
2. Fig.2 is the connection information using Programming Cable: RKN4106A
 - a. This is a Serial (RS-232) programming cable and needs to be converted to USB using a Serial to USB adapter that has a FTDI Chipset.
3. Fig.3 is the connection information with Current Shunt and programming cable: HKN6184A
 - a. With this configuration PA Bias Alignment can be performed
 - b. HKN6183A can be used with a Serial to USB adapter (FTDI Chipset)
4. Fig.4 is the connection information without the Current Shunt and using programming cable: HKN6184A
 - a. With this configuration PA Bias Alignment cannot be performed
 - b. HKN6183A can be used with a Serial to USB adapter (FTDI Chipset)

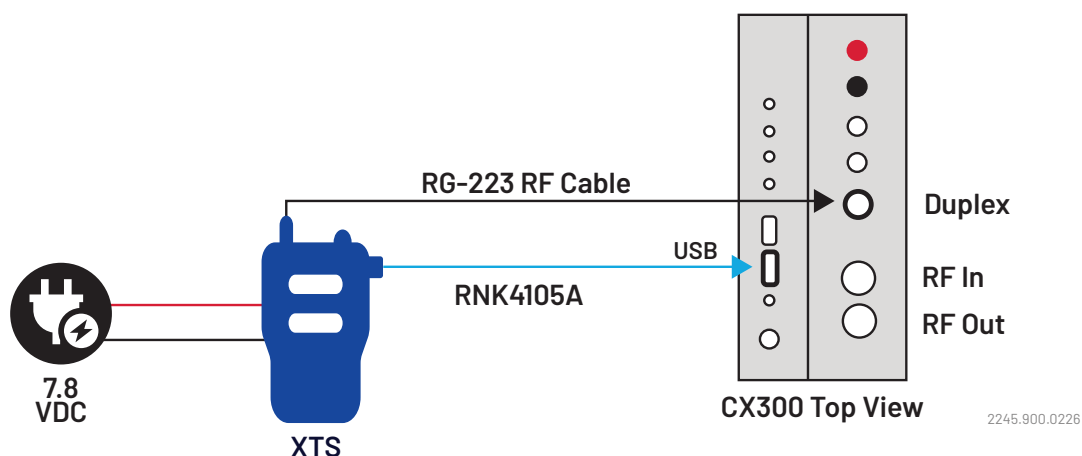


Figure 1. Portable Radio

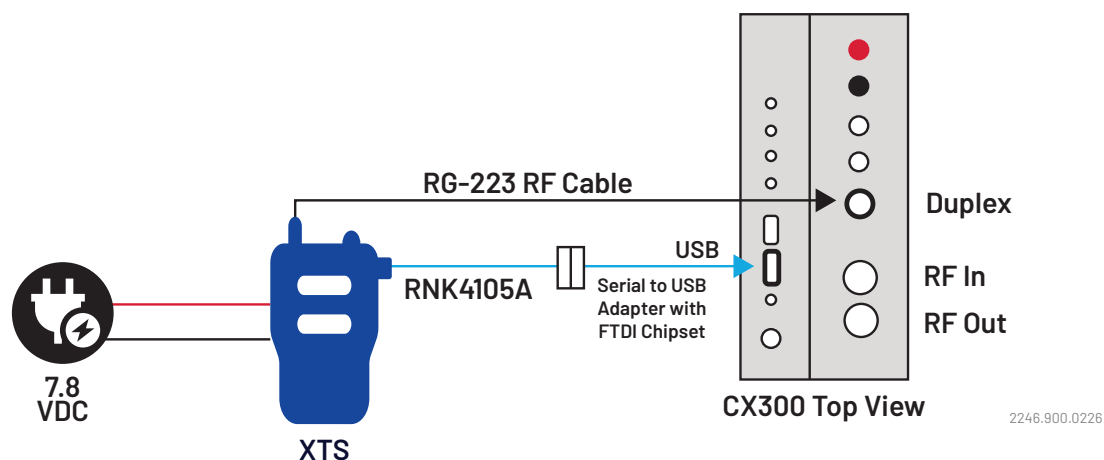


Figure 2. Portable with Serial to USB

APX Auto-Test Cable Configurations continued

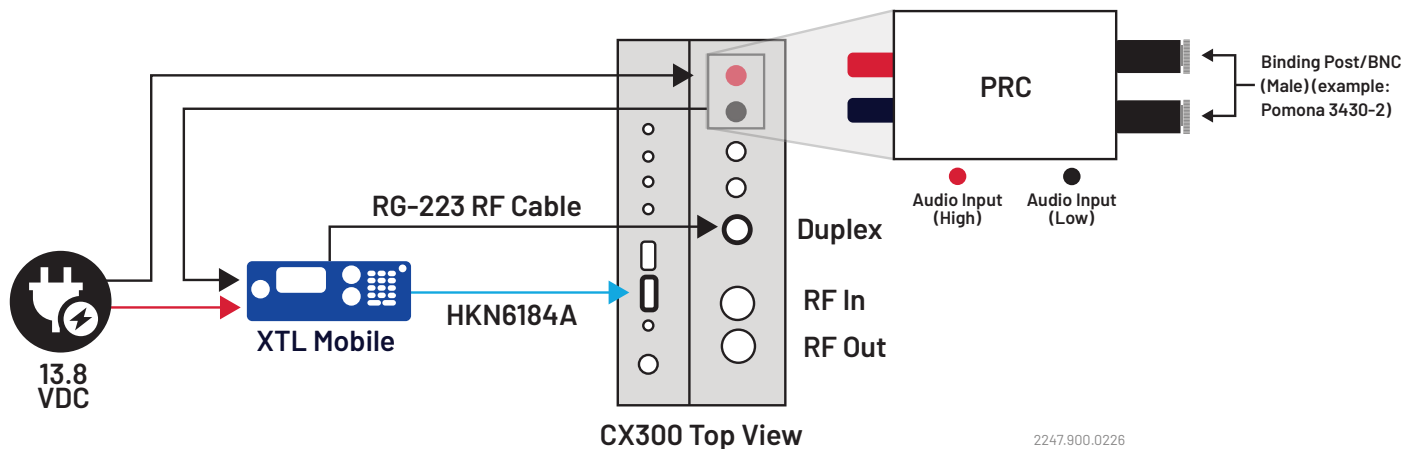


Figure 3. Mobile with Current Shunt

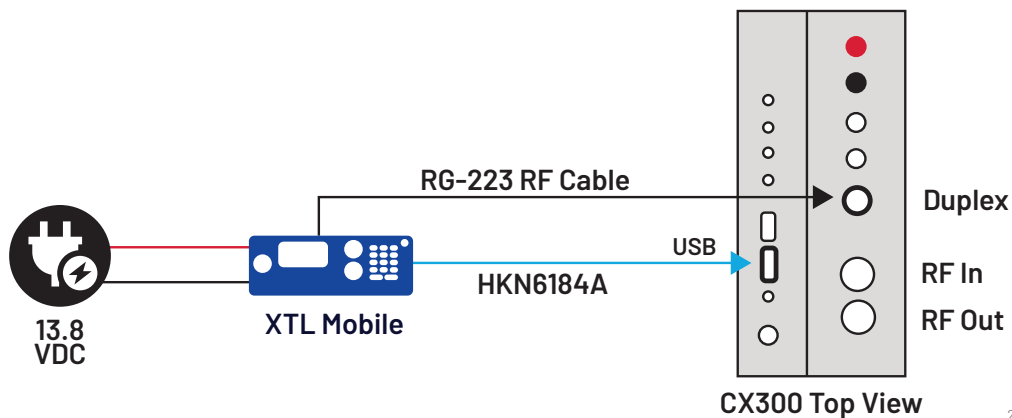


Figure 4. Mobile With No Shunt

Autotest Sequence

With your choice of connection shown in the previous page proceed with the following:

- With the connected radio turned on, tap **“Read Device”** (Fig. 4)
 - This will bring up unique parameters for the Model of radio identified.
 - If run consecutive radios of the same model this step is only required with the first radio.
- Tap the **“Test Type”** and select **“Test”** or **“Align and Test”** (Fig. 5)
 - Selecting **“Test”** allows all tests enabled in the left column to be executed.
 - By tapping the **“Enable”** tab in the left column allows the user to enable a subset of tests.
 - Selecting **“Align and Test”** will align all parameters selected in the Left column.
 - The user can also select a subset of parameters by tapping the **“Enable”** tab.
- At this point the user is ready to Start **“Test”** or **“Align and Test”**. (Fig. 6)
 - On the Run tab, select **“Start”**.
 - By following the previous instructions in **“Initial Setup”** the user has configured Autotest to generate a report upon completion.
 - Once the Test/Alignment is complete tap the **“Reports”** tab (Fig. 7) and highlight the Report and select **“View Report”**.

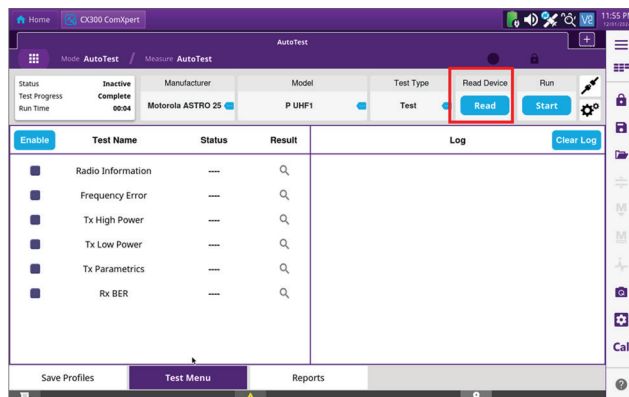


Figure 4

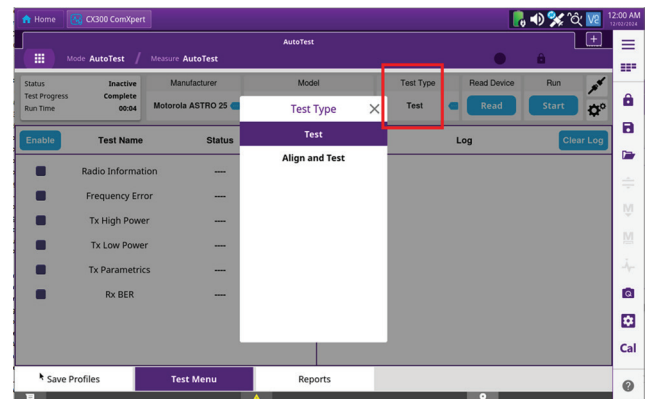


Figure 5

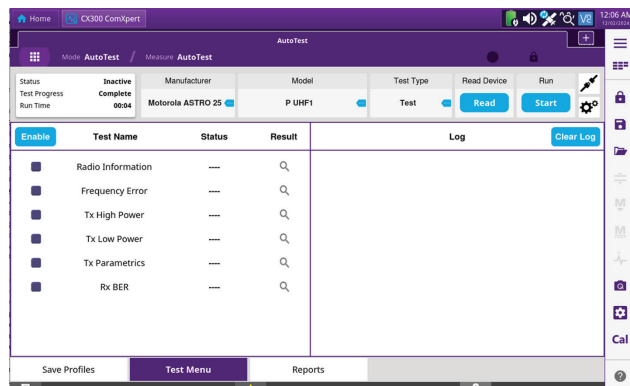


Figure 6

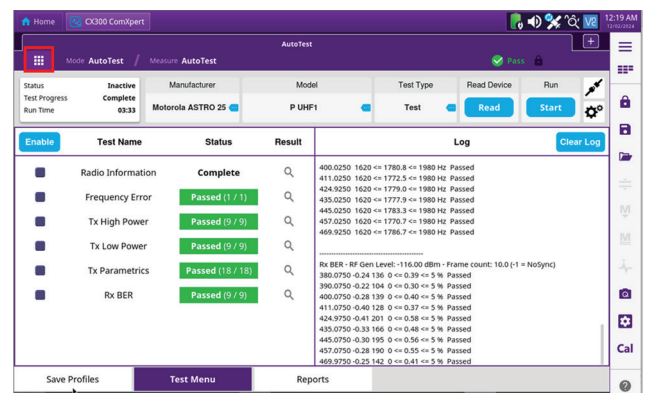


Figure 7

Closing the .pdf

4. To close the .pdf and return to Autotest Select **"Exit"** then CX300 ComXpert (Fig.8)
 - a. The user can now proceed to the next radio.
 - b. If the user is testing the same model radio the user can skip **"Read Radio"** and simply select **"Run"**.

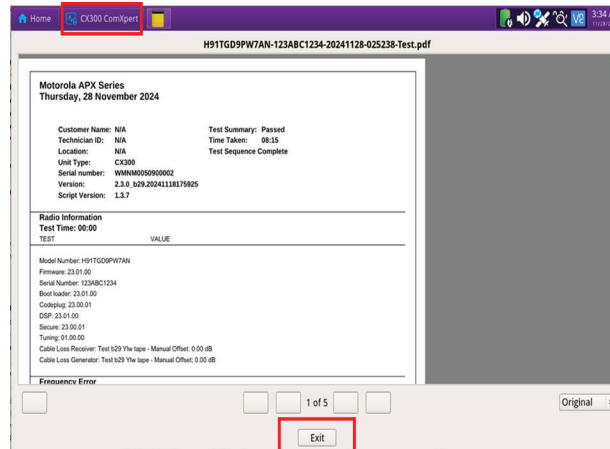


Figure 8



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