

Motorola APX Series Auto-Test and Alignment

CX300-TPMA

APX Series Cable Configuration

Hardware Required

Motorola APX

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. RF Adapter BNC (F) to SMA (F)
4. Programming Cable
5. Battery Eliminator
6. DC Power Supply (Switching) 30A recommended

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). For mobiles with QMA ports, use N(F) to QMA(M)
4. Programming Cable
5. Motorola supplied DC Cables
6. DC Power Supply (Switching) 30A recommended
7. Current Shunt CX300-ACS10 (for Current Bias Alignment only)
8. BNC(M) to Binding Post (qty. 2)(ex. Pomona 3430-2)

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

Motorola Part Numbers				
Subscriber	Type	Programming Cable - USB	Battery Eliminator	Antenna Test Adapter
APX 900	Portable	PMKN4013	66-012031001	58-80384G68
APX 1000	Portable	PMKN4013	66-012031001	58-80384G68
APX 2000	Portable	PMKN4013	66-012031001	58-80384G68
APX 3000	Portable	PMKN4013	66-012031001	58-80384G68
APX 4000/4000 Li	Portable	PMKN4013	66-012031001	58-80384G68
APX 6000	Portable	PMKN4013	66-009254002	58-80384G68
APX 7000/7000 XE	Portable	PMKN4013	66-009254002	58-80384G68
SRX 2200	Portable	PMKN4013	N/A	58-80384G68
APX 8000	Portable	PMKN4013	66-009254002	58-80384G68
APX 1500	Mobile	HKN6184C	N/A	58-80367B21
APX 6500	Mobile	HKN6184C	N/A	58-80367B21
APX 7500	Mobile	HKN6184C	N/A	58-80367B21
APX 8500	Mobile	HKN6184C	N/A	1 ft N (M)-to-QMA (M)
N70	Portable	PMKN4265A	TL000163A01	TL000173A03
N50	Portable	PMKN4265A	TL000166A01	AY000811A01
N30	Portable	PMKN4265A	TL000166A01	AY000811A01

APX 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) shows the connection information using Programming Cable: PMKN4012B
2. (Fig.2) shows the connection information using the Current Shunt and programming cable: HKN6184C
 - a. All Alignments and Tests can be performed with this configuration
3. (Fig.3) shows the connection information Without Current Shunt and using programming cable: HKN6184C
 - a. With this configuration PA Bias Alignment **can not** be performed

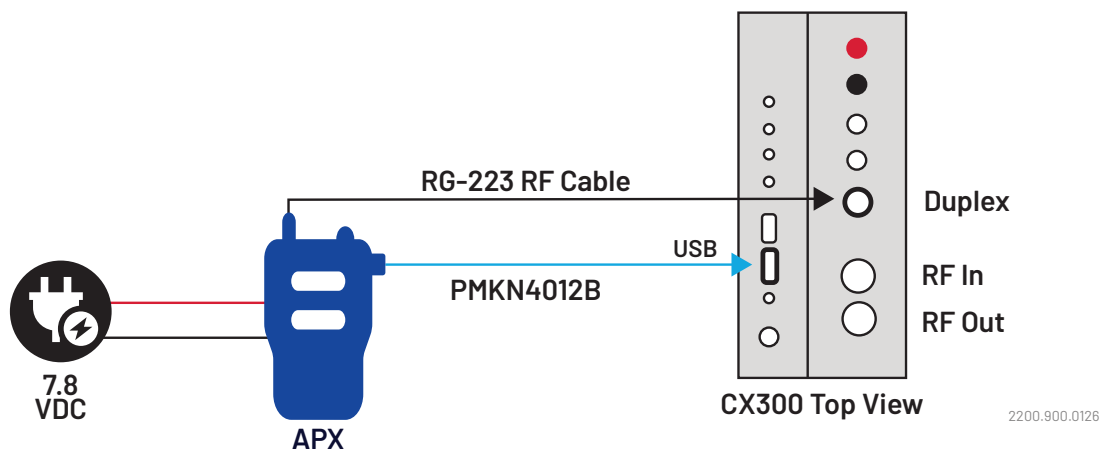


Figure 1. Portable Radio

APX Auto-Test Cable Configurations continued

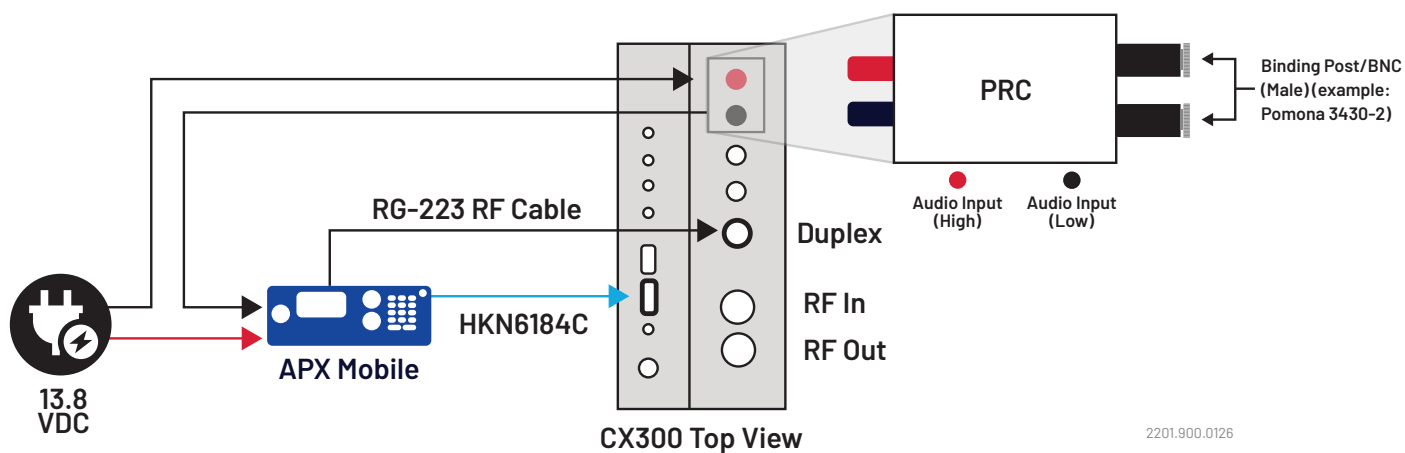


Figure 2. Mobile with Current Shunt

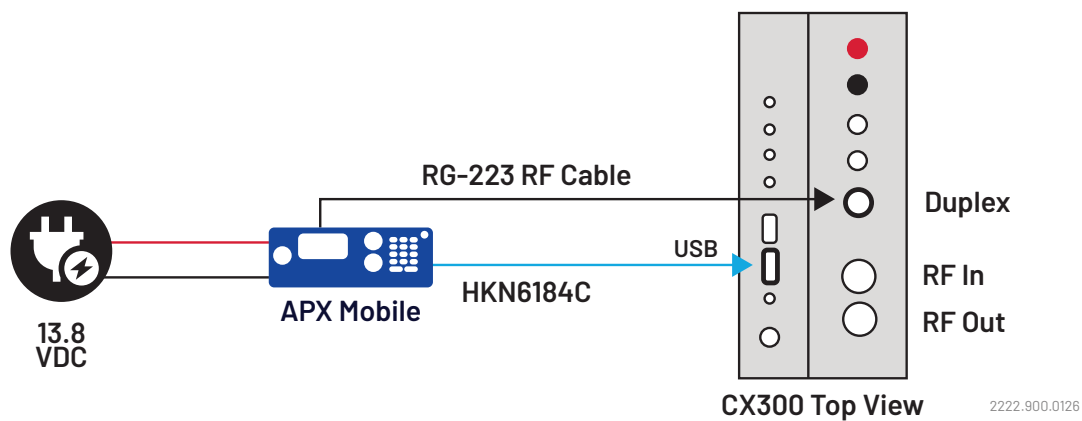


Figure 3. Mobile Without Current Shunt

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 running 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 the **"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"**.

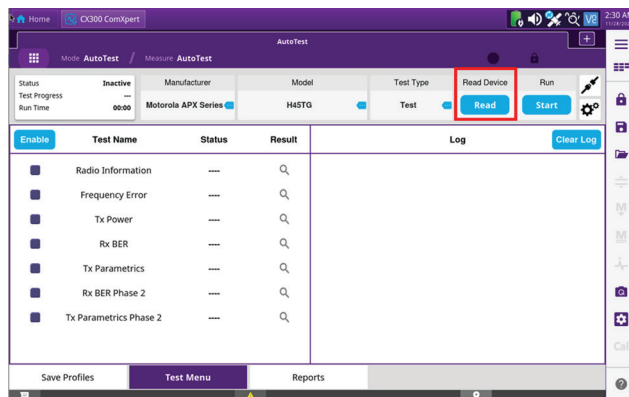


Figure 4

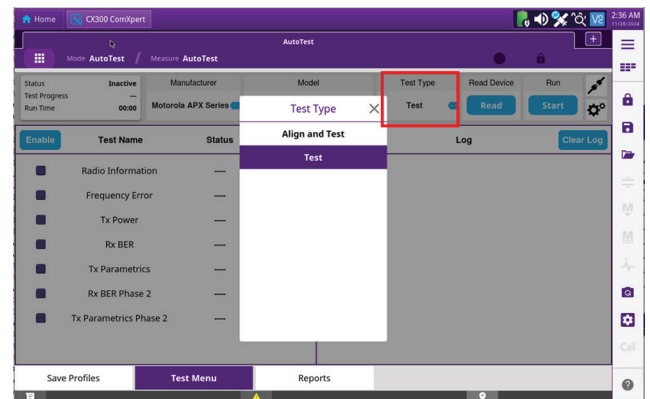


Figure 5

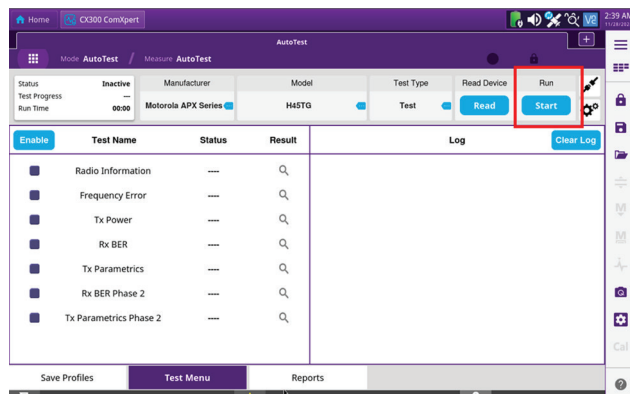


Figure 6

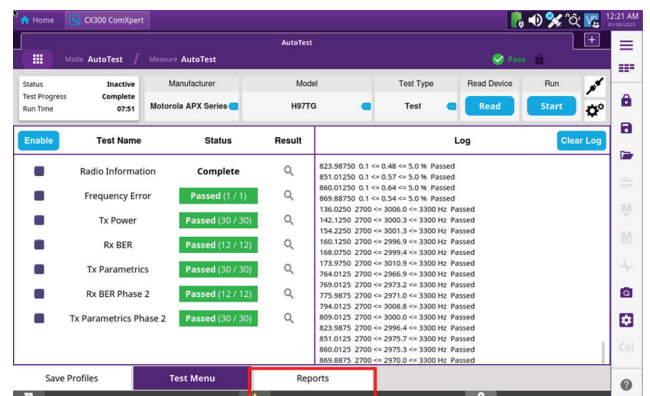


Figure 7

Closing the .pdf

4. To close the .pdf and return to Autotest Select **"Exit"**. (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"**.

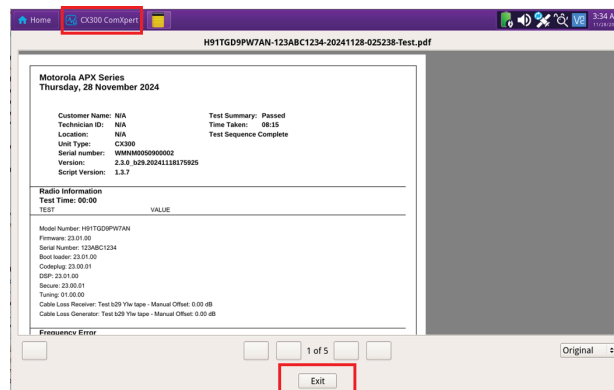


Figure 8



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