Ver 1.0

Introduction of Digital Radio Tester RWC2010B

RedwoodComm

Contents

- **Introduction of RWC2010B**

Key Feature (1/3)

Ver 1.0

Function	Description
DAB/DAB+/T-DMB	Support Band II/Band III/L-Band Built-in Ensemble Multiplexer Easy and Flexible Ensemble Editing Up to 15 service components Various functional Test: Reconfiguration, Announcement, TII, etc..
DRM30/DRM+	Support LF/MF/HF for DRM30 and Band I/II/III for DRM+ Built-in Ensemble Multiplexer Easy and Flexible Ensemble Editing Up to 4 Streams Various functional Test: Reconfiguration, TIME, etc..
AM/FM RDS	FM(Mono/Stereo/Wave), AM(Mono/Wave) Test function Support RDS test, most protocol parameters are editable in GUI
ETI/MDI file player	Downloaded ETI(DAB/DAB+/T-DMB), MDI(DRM30/DRM+) file play fun ction Display ETI/MDI File Information
Seamless Linking	Two RWC2010B testers are connected by data cable and synchronized automatically Powerful Test functions: DAB-DAB, DAB-DRM, DAB-FM, DRM-FM

Key Feature (2/3)

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- DAB/DMB
  - Support all TX Mode: I, II, III, IV
  - Configurable Ensemble
    - Max 15 services, 15 service components
  - Easy Configurable Components
    - DAB, DMB, DAB+, BWS, TPEG, EWS, etc…
  - Functional Tests
    - Reconfiguration, Announcement, TII, Time, etc…
- DRM
  - Robustness Mode: A, B, C, D, E
  - Bandwidth option (kHz): 4.5, 5, 9, 10, 18, 20, 100
  - Modulation parameters: 64QAM, 16QAM, 4QAM
  - Protection Type: UEP & EEP
  - Easy Configurable Service structure
    - Max 4 services, 4 streams
  - Functional Tests
    - Reconfiguration, Announcement, Time, etc…

Key Feature (3/3)

Ver 1.0

- ETI/MDI File Player
  - Downloaded ETI(DAB/DAB+/T-DMB), MDI(DRM30, DRM+) file play function
  - Display ETI/MDI File Information

- RDS/FM/AM
  - Supports Configurable RDS protocol Parameters
  - Stereo/ Mono FM Radio Test function
  - AM Radio Test function
  - Wave file Player function

RF Specification

- Frequency
  - LF/MF/HF Bands: 150kHz ~ 30MHz
  - BAND I: 47MHz ~ 65MHz
  - BAND II: 87MHz ~ 108MHz
  - BAND III: 174MHz ~ 230MHz
  - BAND L: 1452MHz ~ 1492MHz
  - Resolution: 1kHz
  - Stability: 1ppm
- Level
  - Range: -10dBm ~ -120dBm for BAND I/II/III/L
  - Range: -20dBm ~ -120dBm for LF/MF/HF BAND
  - Resolution: 0.1dB
  - Accuracy: +/- 1dB
- VSWR
  - 1:1.5 or better

Easy Ensemble Configuration

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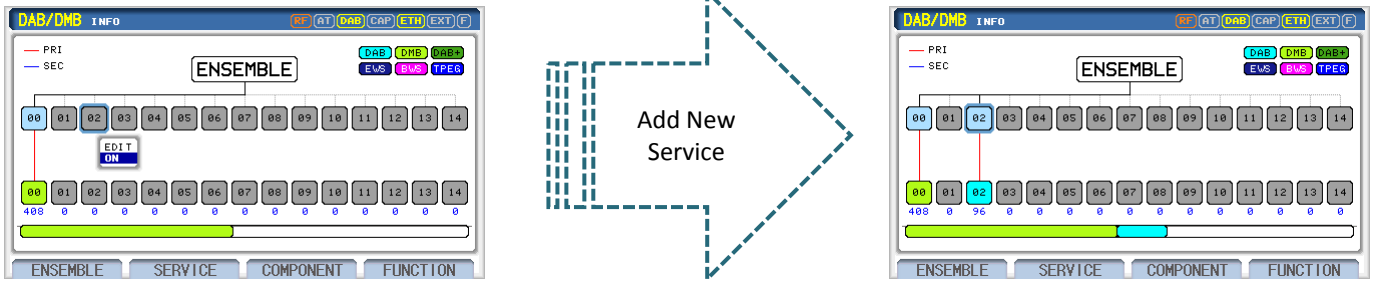
DAB



DRM

Component Configuration

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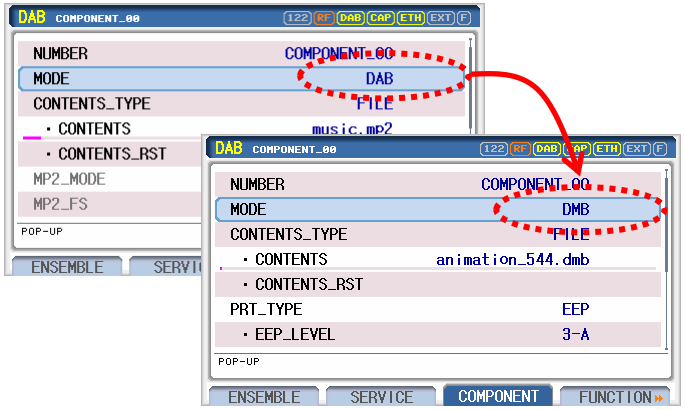
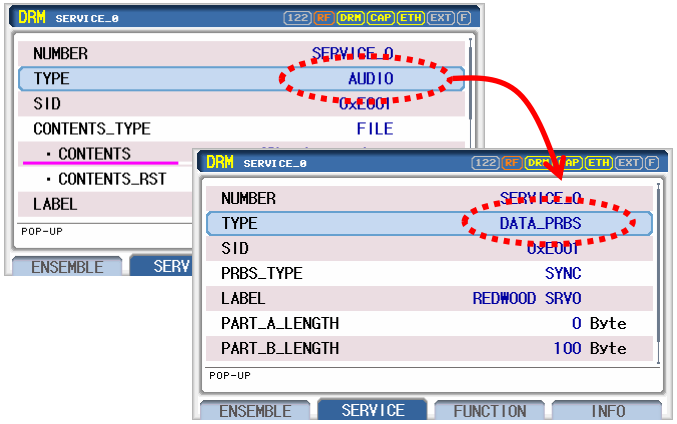
- Easy set component mode by GUI
  - DAB(MP2), DMB, DAB+, BWS, TPEG, EWS, etc…
  - By just setting the MODE parameter, many related protocol parameters are set automatically
- Most Protocol related parameters are editable
  - Protection Type, Level, Bit rate, etc…
- Easy Select Content file to play



DAB Component



DRM Stream

Reconfiguration Test

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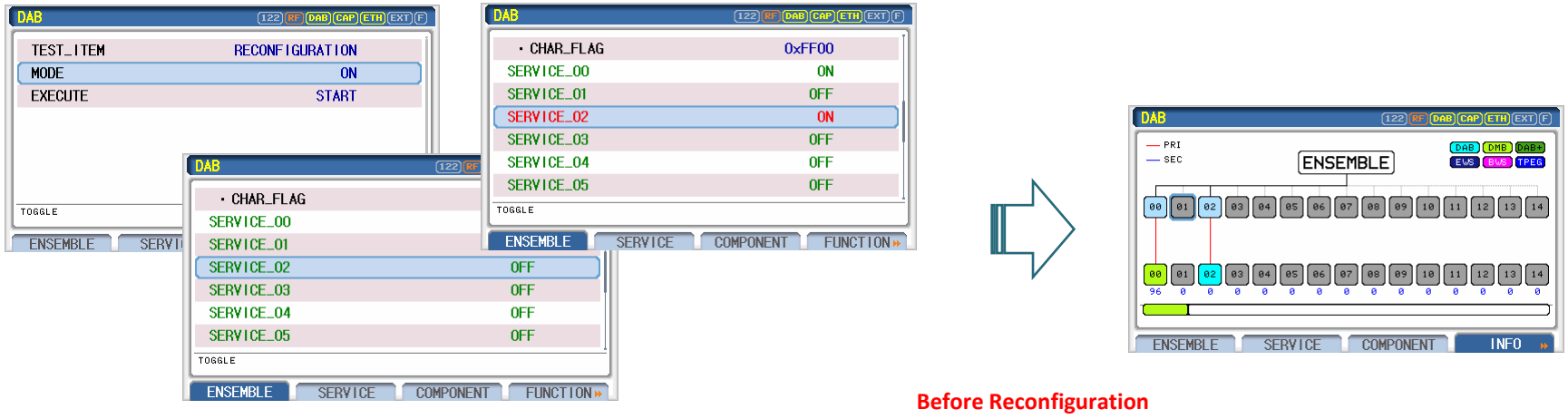
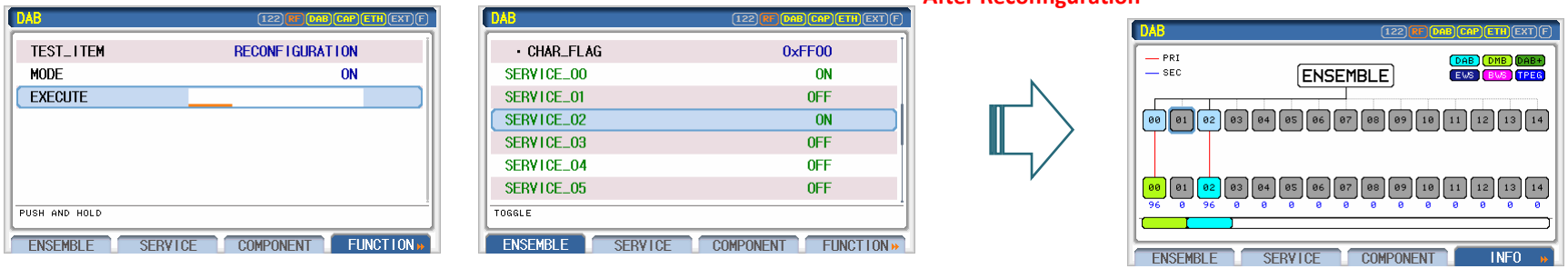
- Provides the required mechanisms of DAB/DRM for changing the multiplex configuration whilst maintaining continuity of services



Before Reconfiguration

After Reconfiguration



Announcement Test

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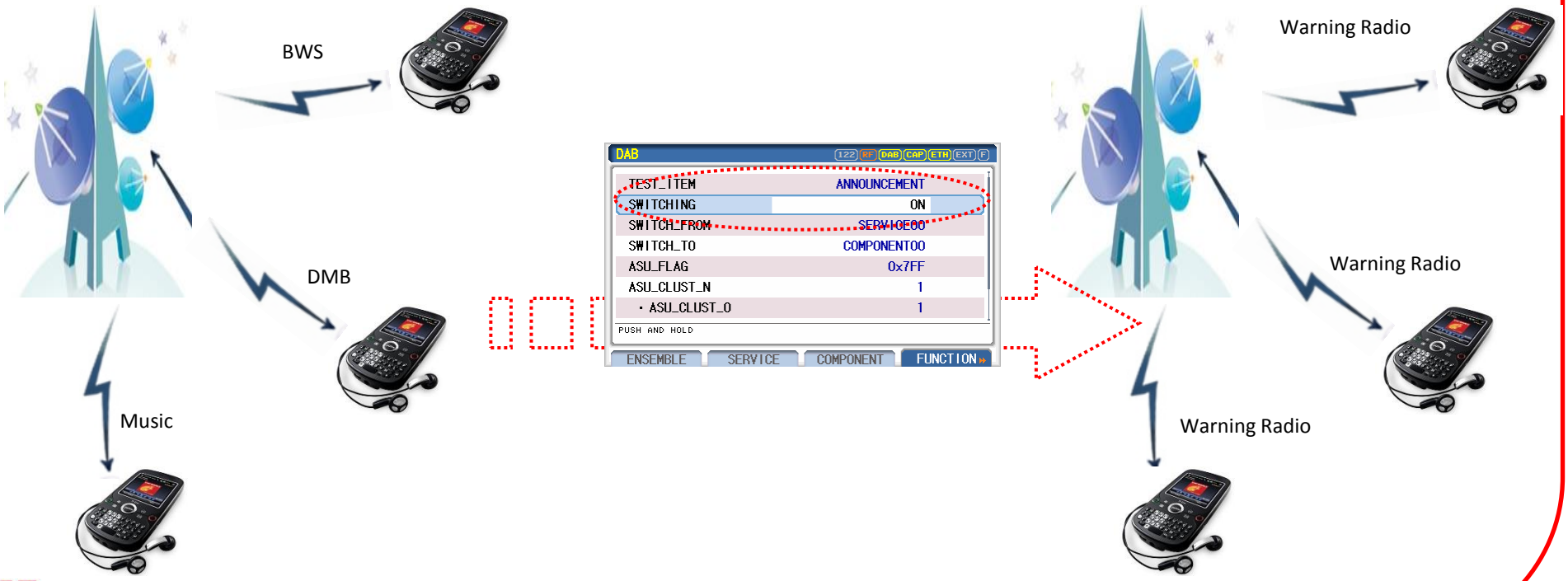
- Configurable Announcement support parameters
  - ASU_FLAG: Announcement Support Flag
  - ASU_CLUST: Announcement Support Clusters (up to 5)
- Easy to Switching
  - Just Set the ‘SWITCHING’ parameter as ON



DAB TII Configuration

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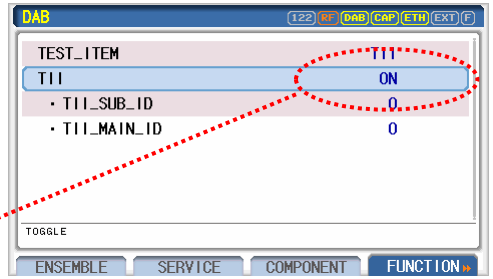
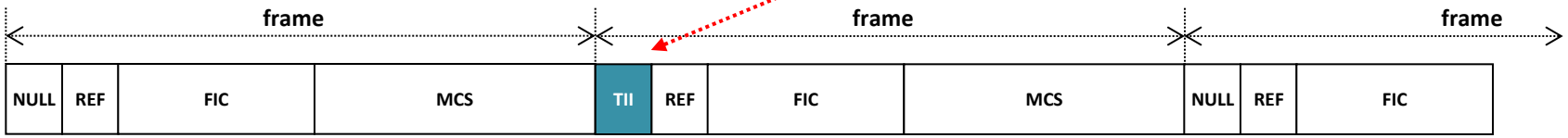
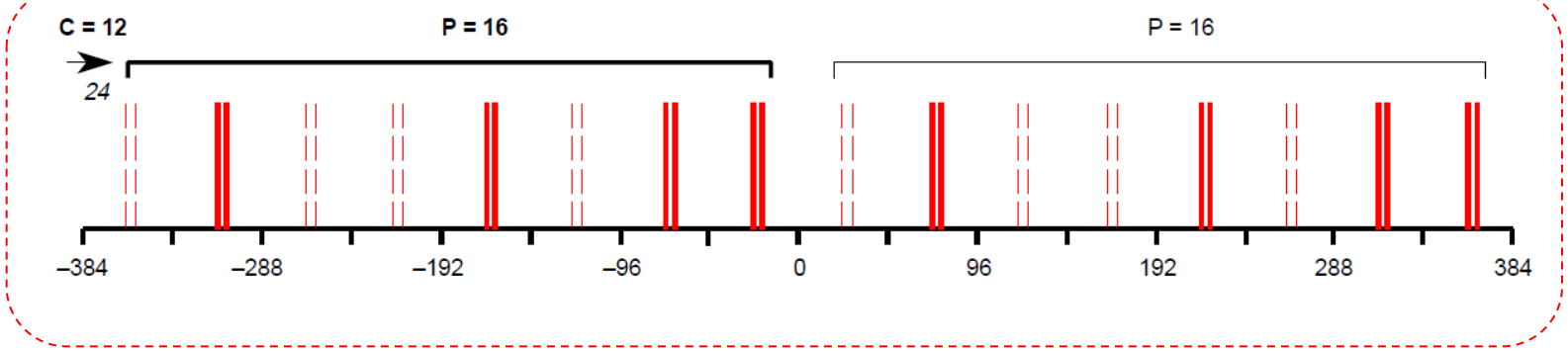
- Easy Turn On/Off TII signal
- Configurable TII Parameters
  - TII_PATTERN (MAIN_ID)
  - TII_COMB (SUB_ID)







ETI/MDI File Player

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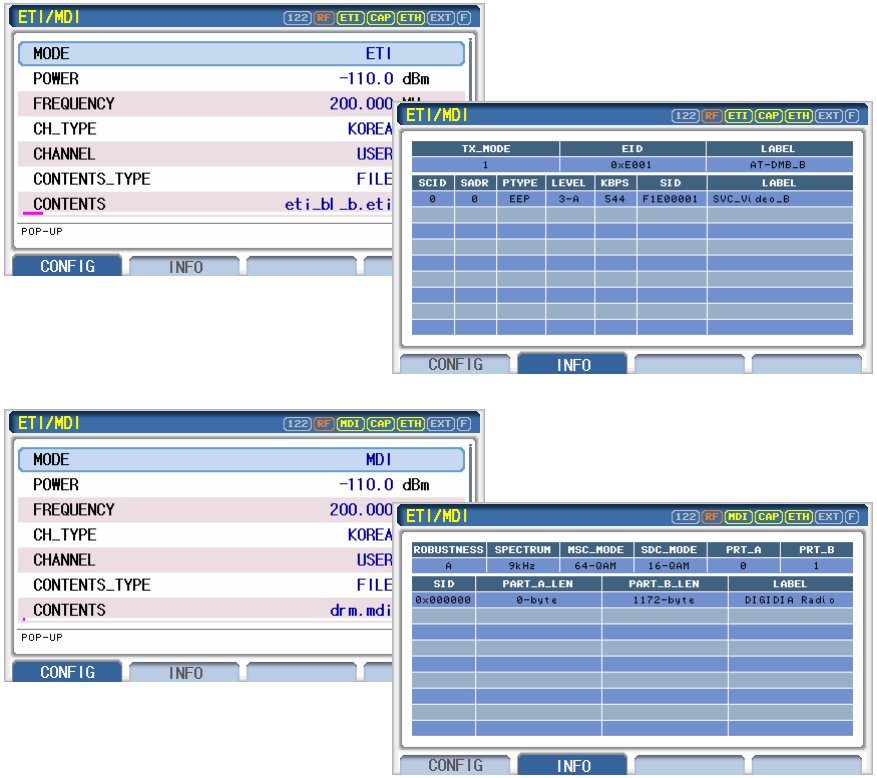
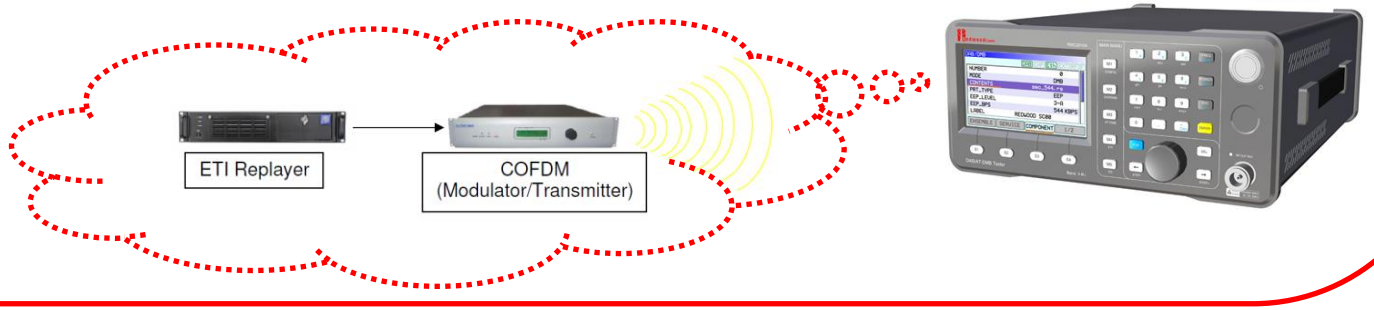
- RWC2010B combines ETI/MDI file player and COFDM Modulator functions in one box.
- ETI File
  - describes full DAB ensemble, comprising a number of sub-channels and a formatted FIC
  - Regenerate the specific broadcasting station's signal in the LAB
- MDI File
  - describes full DRM ensemble, comprising a number of streams and a formatted FAC/SDC
  - Regenerate the specific broadcasting station's signal in the LAB
- Support two ETI file format
  - ETI(NI, G.703) / ETI(NI, V11)
- ETI/MDI File information Screen





Seamless Linking Test

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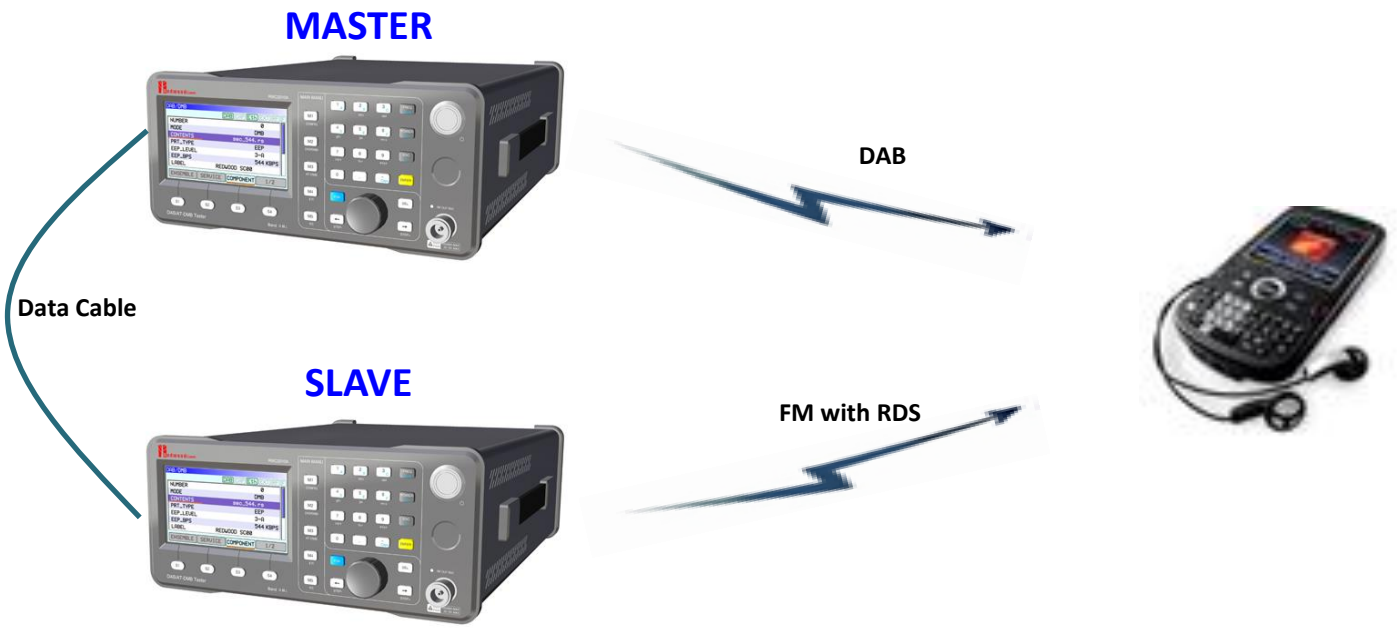
- Easy Seamless Linking Testing with two RWC2010B
- One Tester works as a Master and the other Tester works as a Slave
- The Master sends sync command to the Salve periodically
- Provide Time Delay adjust parameter between two units



Competitor (DRM)

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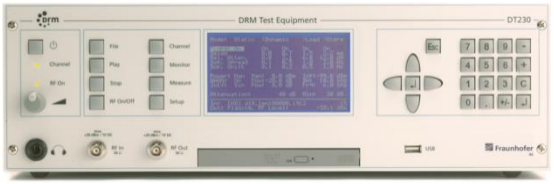
- Fraunhofer (German)
  - DT230
    - Only for DRM30 (100KHz ~ 27.4MHz)
    - Just MDI File Player
  - DT4030
    - Only for DRM+ (5MHz ~ 170MHz)
    - Just MDI File Player



- Advantage of RWC2010B
  - Support DAB, DAB+, DRM30, DRM+, RDS, AM, FM in one box
  - Self Ensemble Multiplexer function
    - Easy and powerful Protocol Test
  - ETI/MDI File Player function
  - Support Reconfiguration, Announcement, Seamless Linking test

Thank you!