DAB DATA CHANNEL Test Solution

————DATA CHANNEL TEST : SLS/EPG/SPI/DLS

Doewe Technologies Application Notes-007-V1.0

http://www.doewe.com

1. Introduction

2. SLS Test

The RWC2010C supports SLS testing using the PAD or packet data channel. You can download your own image files to the RWC2010C. The image files for SLS testing must be in PNG format and small in size. Some PNG files can be downloaded from RedwoodComm's file server using a PC program, or you can import your own.

2.1 SLS Test Using Packet Data Channel

The SLS packet data channel can be configured as a secondary component of an existing DAB service, as follows.

2.1.1 ENSEMBLE Overall Settings:

SERVICE_00

PRIMARY	COMPONENT_00
SECONDARY_1	COMPONENT_01

COMPONENT_00

MODE	DAB
— CONTENTS	any mp2 file

COMPONENT_01

MODE	SLS
— CONTENTS	peyto_lake.png (208 x 104)

rwc_logo_240x160.png
rwc_logo_320x240.png
rwc_logo_480x320.png

2.1.2 INFO Interface Status:
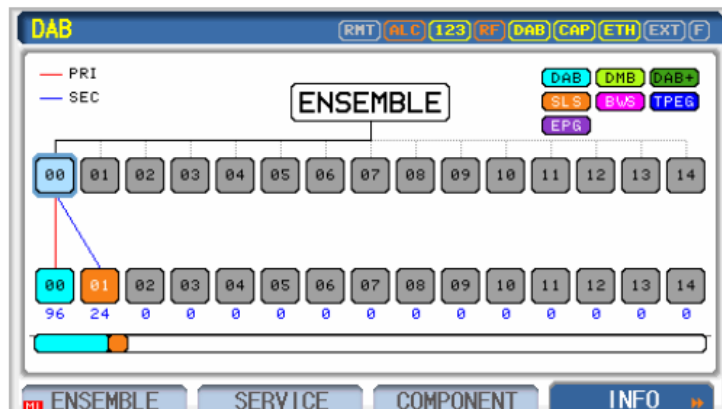
[Ensemble Structure]

2.1.3 SERVICE Interface Settings:

[Service 00]

2.1.4 COMPONENT 00 Settings:

[Component 00 - DAB]

2.1.5 COMPONENT 01 Settings:
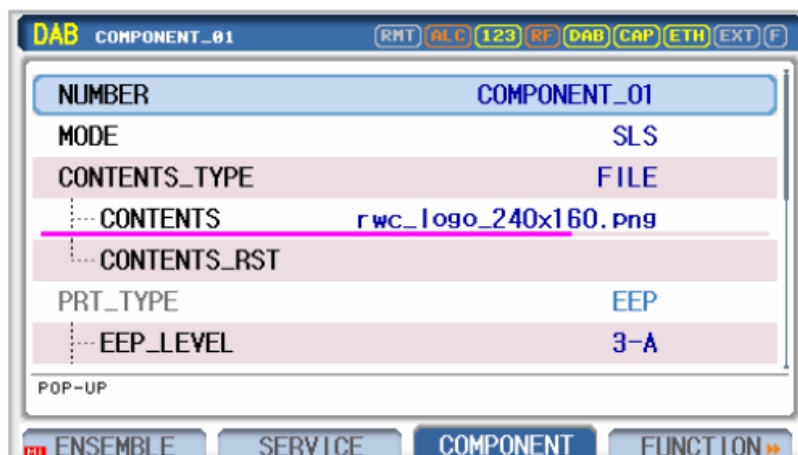
[Component 01 - SLS]

2.1.6 Notes:

1. Does your receiver support displaying images in the current format?
2. Does your receiver support EEP_BPS?

2.2 SLS Test Using PAD Mode

SLS using the PAD channel can be configured in the primary component, as follows.

2.2.1   ENSEMBLE Overall Settings:

SERVICE_00
  PRIMARY   COMPONENT_00

COMPONENT_00
  MODE   DAB

  CONTENTS   any mp2 file
  PAD_TYPE   SLS
  CONTENTS   peyto_lake.png (208 x 104)
           rwc_logo_240x160.png
           rwc_logo_320x240.png
           rwc_logo_480x320.png

2.2.2 INFO Interface Status:
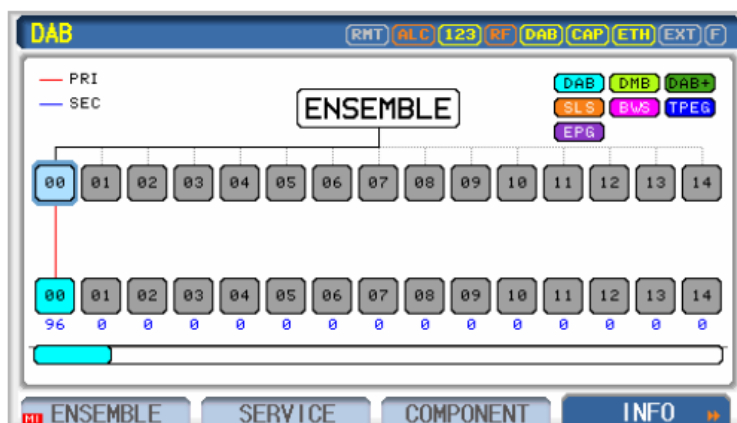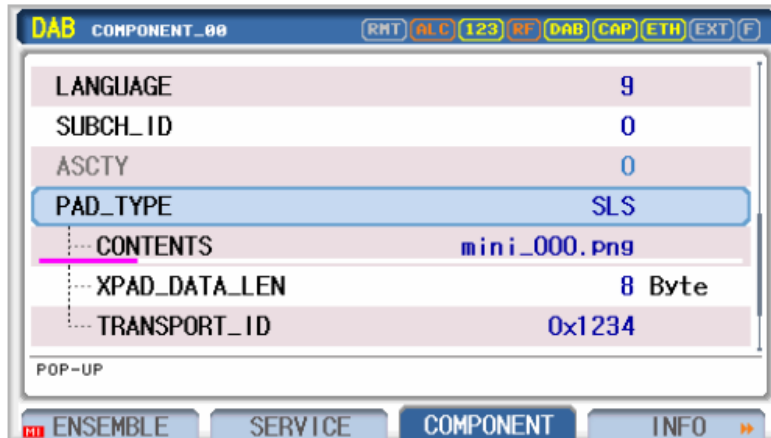

[Ensemble Structure]

2.2.3 SERVICE Interface Settings:

[Service 00]

2.2.4 COMPONENT 00 Settings:

[Component 00 - DAB]

[Component 00 PAD - SLS]

2.3 Example of Downloading PNG Files Using a PC Program

To obtain example PNG files, run the RWC2010_utility.exe program and select FILE MANAGER. Then, click the update list icon to get the file list from RedwoodComm's file server in the lower-left corner. Select the files to download and click the download icon (the arrow button between the RWC FILE server and the PC).
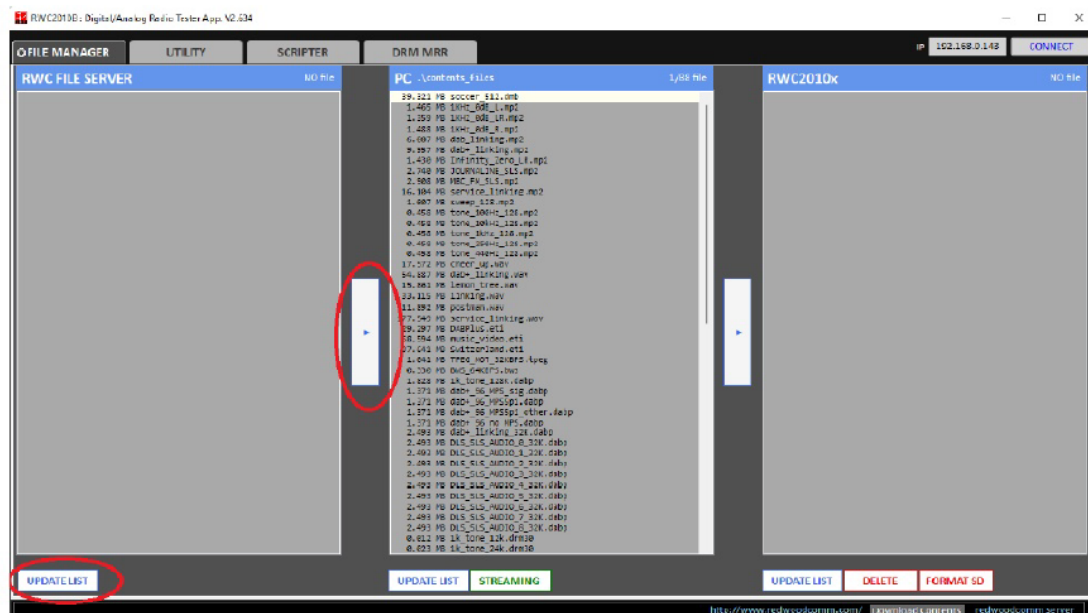
3. EPG (Electronic Program Guide) Test

The RWC2010C supports EPG testing using the PAD or packet data channel. The start time and duration of programs can be edited in the RWC2010C GUI. Up to 10 program

schedules can be edited.

3.1 EPG Test Using Packet Data Channel

The EPG packet data channel can be configured as a secondary component of an existing

DAB service, as follows.

3.1.1 ENSEMBLE Overall Settings:

```
SERVICE_00
        PRIMARY          COMPONENT_00
        SECONDARY_1      COMPONENT_01

COMPONENT_00
        MODE             DAB
          CONTENTS       any mp2 file

COMPONENT_01
        MODE             EPG
          CONTENTS       (none; internally allocated)
        EEP_BPS          32 KBPS
```
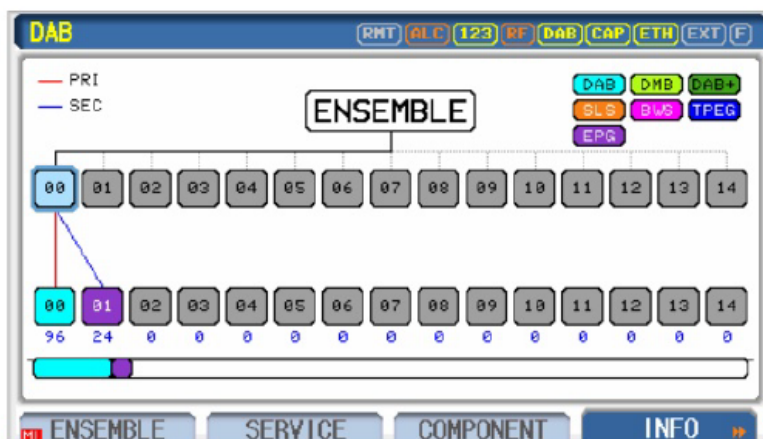
3.1.2 INFO Interface Status:

[Ensemble Structure]

3.1.3 SERVICE Interface Settings:

[Service 00]

3.1.4 COMPONENT 00 Settings:

[Component 00 - DAB]

3.1.5 COMPONENT 01 Settings:

[Component 01 - EPG]

3.2 EPG Test Using PAD Mode

EPG using the PAD channel can be configured in the primary component, as follows.

3.2.1 ENSEMBLE Overall Settings:

SERVICE_00
        PRIMARY   COMPONENT_00

COMPONENT_00
        MODE   DAB
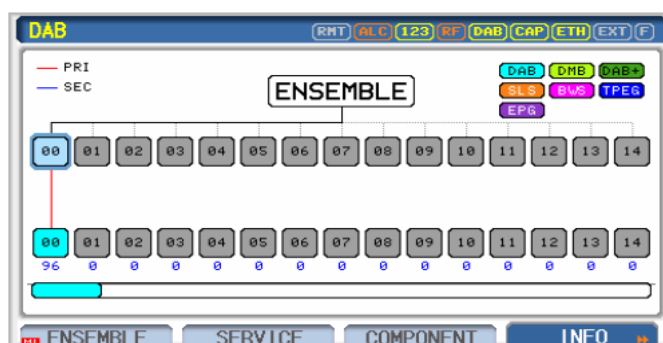   CONTENTS   any mp2 file
        PAD_TYPE   EPG
           CONTENTS   (none; internally allocated)
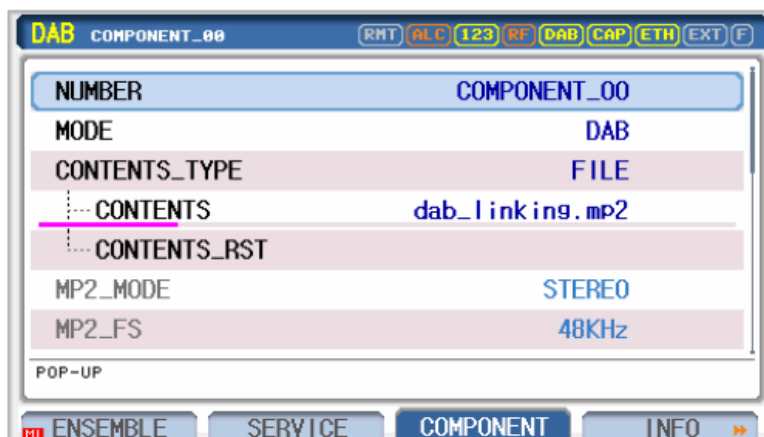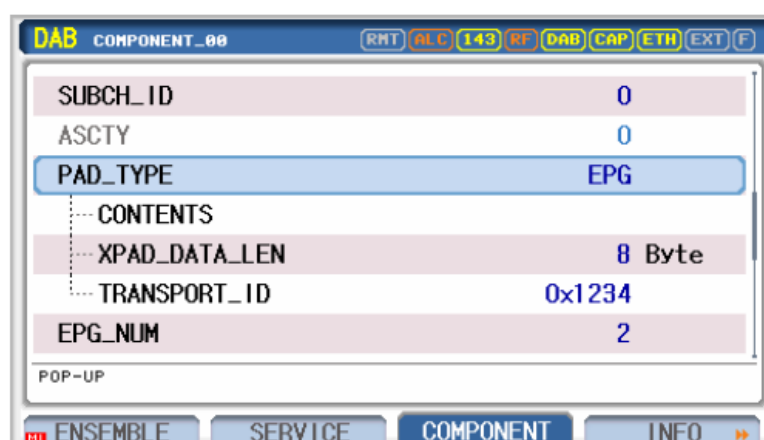
3.2.2 INFO Interface Status:

[Ensemble Structure]

3.2.3 SERVICE Interface Settings:

[Service 00]

3.2.4 COMPONENT 00 Settings:

[Component 00 - DAB]

[Component 00 PAD - EPG]

4. SPI (Service and Project Information) Test

The RWC2010C supports EPG testing using the PAD or packet data channel. The program logo file is fixed as a RedwoodComm file, so users do not need to download the logo file. Some example PNG files can be downloaded from RedwoodComm's file server via a PC.

4.1 SPI Test Using Packet Data Channel

The SPI packet data channel can be configured as a secondary component of an existing DAB service, as follows.

4.1.1 ENSEMBLE Overall Settings:

SERVICE_00

     PRIMARY   COMPONENT_00

     SECONDARY_1   COMPONENT_01

COMPONENT_00

     MODE   DAB

      CONTENTS   any mp2 file
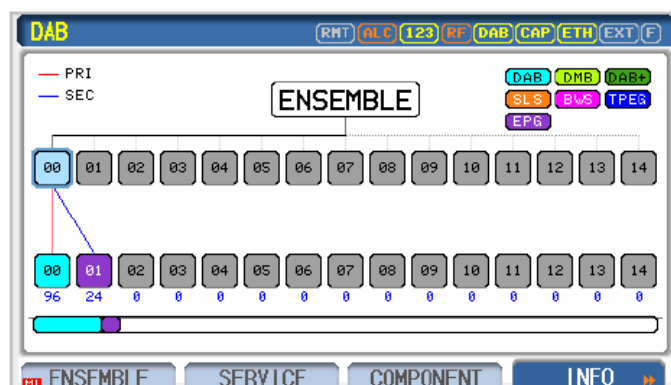
COMPONENT_01

     MODE   SPI

      CONTENTS   (none, internally allocated)

     EEP_BPS   32 KBPS

4.1.2 INFO Interface Status:

[Ensemble Structure]

4.1.3 SERVICE Interface Settings:

[Service 00]

4.1.4 COMPONENT 00 Settings:
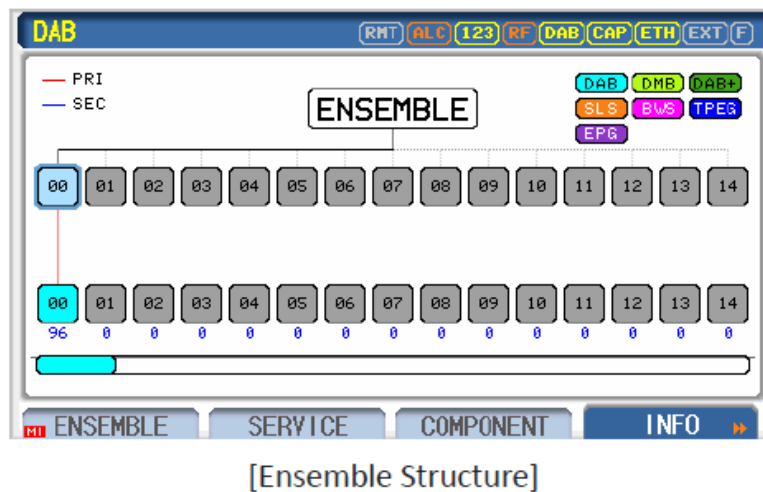
4.1.5 COMPONENT 01 Settings:

4.2 SPI Test Using PAD Mode

EPG using the SPI channel can be configured in the primary component, as follows.

4.2.1 ENSEMBLE Overall Settings:

SERVICE_00
    PRIMARY   COMPONENT_00

COMPONENT_00
    MODE   DAB
      CONTENTS   any mp2 file
    PAD_TYPE   SPI
      CONTENTS   (none; internally allocated)

4.2.2 INFO Interface Status:

[Ensemble Structure]

4.2.3 SERVICE Interface Settings:

[Service 00]

4.2.4 COMPONENT 00 Settings:

[Component 00 - DAB]

[Component 00 PAD - SPI]

5. DLS (Dynamic Label Service) Test

The RWC2010C supports DLS/DL+ testing using the PAD. DLS strings can be edited in the RWC2010C's GUI. It is recommended to use the RWC2010_utility.exe program for DLS editing as described in 4.2, which makes editing non-Latin text easier.

5.1 DLS/DL+ Test Using PAD Mode

The DLS/DL+ packet data channel can be configured as a secondary component of an existing DAB service, as follows.

5.1.1 ENSEMBLE Overall Settings:

SERVICE_00

PRIMARY	COMPONENT_00

COMPONENT_00

MODE	DAB
CONTENTS	any mp2 file
PAD_TYPE	DLS
DLS	Editable

5.1.2 INFO Interface Status:
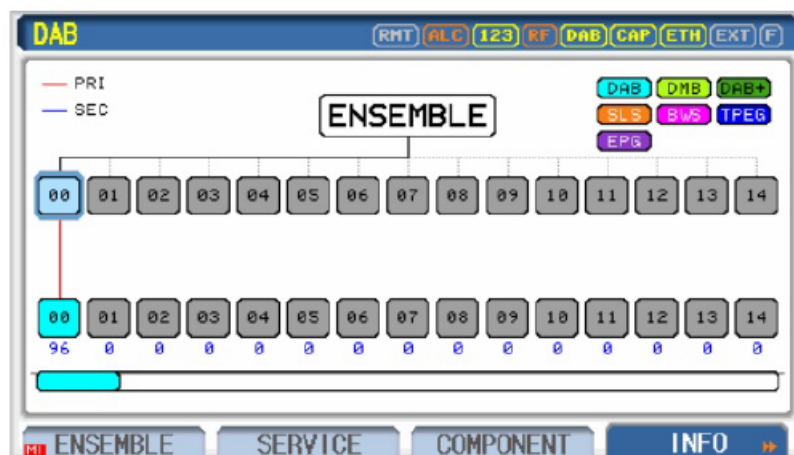
[Ensemble Structure]

5.1.3 SERVICE Interface Settings:

[Service 00]

5.1.4 COMPONENT 00 Settings:

[Component 00 - DAB]

[Component 00 PAD - DLS]

[DLS Editor]

5.2 DLS Editing Using a PC Program

6. Introduction to Typical Test Instruments

For DAB CHANNEL testing, our company's RWC2010C device fully meets the requirements.

This device supports AM and FM analog modulation, as well as DAB/DRM digital modulation, and can output multiple FM signals simultaneously. It is particularly noteworthy that the device supports flexible baseband multiplexing, an industry-unique function, which enables stream-level multiplexing configuration for DAB and DRM, thus greatly enhancing test flexibility and efficiency. The device supports comprehensive DAB additional function testing, such as Seamless Linking (which may require other devices and software for testing) and DAB Announcement.

It should be noted that this device also supports the ETI stream-based testing method. For details, please refer to the RWC2010C product brochure and related materials, and feel free to consult our company by phone (010-64327909).

If readers need to test based on IQ-collected data streams, they can consider using the MP7600, which supports 16-bit depth and high-speed sampling, enabling almost distortion-free restoration of RF signals. In particular, its maximum real-time bandwidth of 100M can be used to record broadband signals simultaneously.