Quick User Guide

SmartGen 4.1

UECP Compatible RDS/RBDS Encoder with LAN & USB Connectivity

⟶ BEFORE YOU USE THIS PRODUCT ⟵

In order to be able to enjoy all the benefits of owning your new DEVA product, please verify first that the latest software and firmware release were installed.

Visit **www.devabroadcast.com/downloads** for the most recent software and firmware downloads, prior the installation.

DEVA Broadcast Limited is an ISO 9001:2008 certified company.

This Quick user guide will make the installation of the RDS/RBDS Encoder SmartGen 4.1 quick and easy. Applying these principles, you can simplify the process and save yourself extra time and effort. **For more information about the Safety precautions and the Operating environment recommendations please refer to the complete User Manual.**

STEP 1 | Connection

1. Install the unit on its operation place;
2. Before connecting the AC Power, make sure that the mains supply at your location matches SmartGen 4.1 Power Supply Factory Settings - 100-240 V / 50-60 Hz;
3. Configure the desired operating mode - sidechain or loop-through before the device is installed in the signal path (*For more information refer to* **Step 4** & **Step 5**);
4. Before connecting SmartGen 4.1 to other air-chain equipment, use the SmartGen Encoders Manager to confirm that the encoder is properly configured;
5. In order to program the 'static' message registers and operating defaults, install the operating software, before connecting the device to the computer (*Refer to* **Step 2**).

NOTE: We recommend testing the encoder with the controlling interface (computer, terminal, automation, etc.) before SmartGen 4.1 joins the air chain. This will confirm whether the encoder is properly initialized and two-way communication can be established.

STEP 2 | SmartGen Encoders Manager Installation

1. Use the Installation file which can be found on the supplied CD or downloaded from www.devabroadcast.com/downloads;
2. Find SmartGen 4.1 folder and double click on the installation file to launch the Wizard;
3. Accept the default recommendations and select "Next>" in the end of each step;
4. When asked to place an icon on the Desktop of your computer, make sure that the check box is enabled and click "Next> Finish";
5. Finally select NOT to launch the program.

STEP 3 | USB Drivers Installation for Windows® 7

1. Connect the front-panel USB port to the computer. A **"New Hardware"** notification will appear. Click on the Status balloon or proceed with the next step;
2. If an installation failure occur, a notification status will appear. Close the status window and proceed with the next step;

3. To start the Device manager go to Start> Control Panel> Device Manager> Other devices;
4. Right click on "SmartGen" and select "Update Driver Software". The Update Driver Wizard will appear;
5. Click on "Browse my computer for driver software" and select the drivers folder (usually: C:\Program Files \SmartGen Encoders Manager\Drivers.) then click "OK" and "Next";
6. Windows® 7 will advise that this driver is 'unsigned'. Disregard the message and click 'Install this driver software anyway';
7. After the installation process is completed a notification message will be displayed.
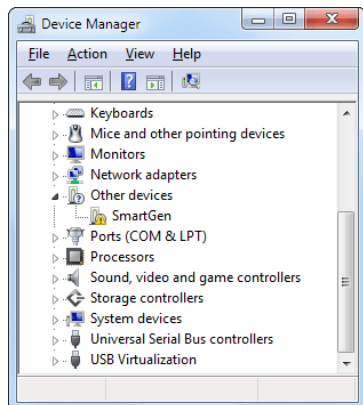
NOTE: During the installation process a USB RS-232 Emulation will be made. Administrator rights might be needed in order for the USB drivers to be installed.

Sidechain operating mode

In order to derive timing information from the 19kHz stereo pilot, the rear-panel PILOT OR MPX INPUT connector monitors the output of the stereo generator. When sidechain operation mode is chosen, the RDS OR MPX OUTPUT contains only the RDS sub carrier, the composite MPX signal is not routed through SmartGen 4.1. This operating mode preserves the multiplex signal integrity and assures uninterrupted program transmission, in case of encoder failure event. **Originally SmartGen 4.1 is configured for sidechain operation.**

"Sidechain" Encoder Connection

1. Connect a BNC 'T' adapter to the composite/MPX output of the stereo generator;

2. Using a suitable cable, connect one side of the 'T' adapter directly to the wideband (composite/ MPX) input of the FM exciter;

3. Using a suitable cable, connect the other side of the 'T' adapter to the PILOT OR MPX INPUT of SmartGen 4.1;

4. Cable the RDS OR MPX OUTPUT of the encoder to the second wideband (subcarrier) input of the FM exciter.

**NOTE:** We strongly recommend the usage of Sidechain operating mode.
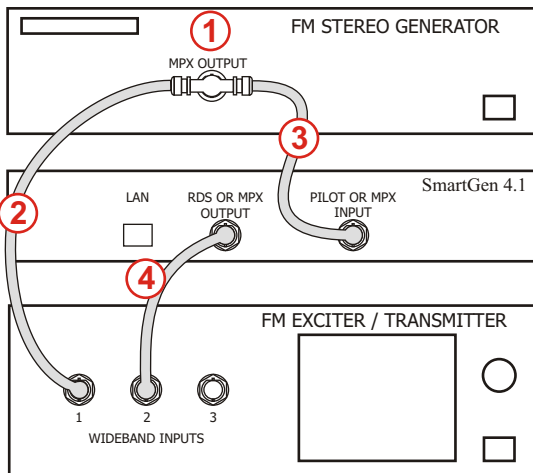
Loop-through operation mode

If Loop-through operation mode is chosen, the RDS OR MPX OUTPUT includes the composite MPX program signal to the RDS sub carrier. In loop-through mode the internal bypass relay will pass-through the multiplex signal in case of an encoder power failure event.

"Loop-through" Encoder Connection

1. Connect the output of the stereo generator directly to the PILOT OR MPX INPUT of SmartGen 4.1;

2. Connect the RDS OR MPX OUTPUT of the encoder to the composite/MPX wideband input of the FM exciter.
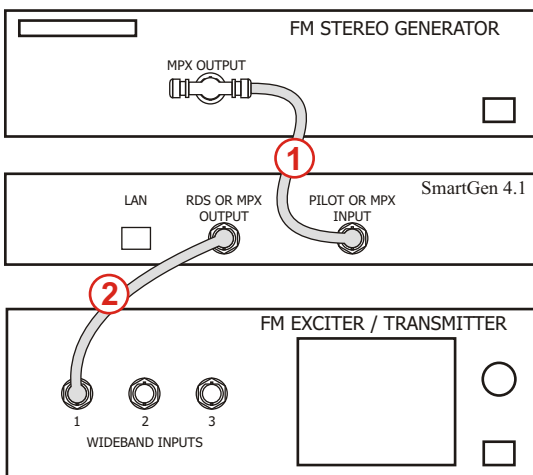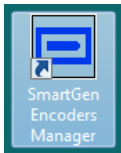
Upon completion of the installation process, a shortcut to the software will appear on the desktop of your PC. Double click on the shortcut to open the Software. Most of the functions will be disabled as no devices are listed in the SmartGen Encoders Manager so far.

To add new device, press the "New Device" button (1), a dialog box requiring information about the device will appear. Fill in the following fields:

- **Identification** - the default values are User (2): **user**, Password (3): **pass**.
- **Group** - Enter Group Name (4) to which the encoder will be included.
- **Connection** - Select COM as Connection (5) type. Specify COM Name (6), and Select 9600 bps for speed (7).

Finally, press [OK] to save the changes. Group, Device and Connection will appear in the software device list. Press the "Connect" button (9) or double click on the connection (8) to open the device main window.
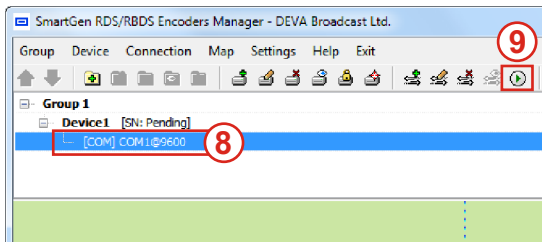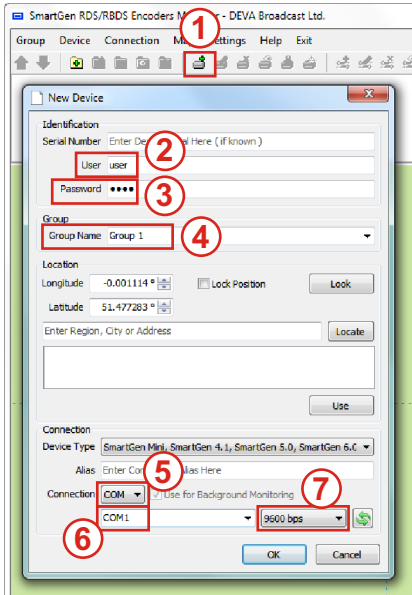
A successful connection with the device will look like this:
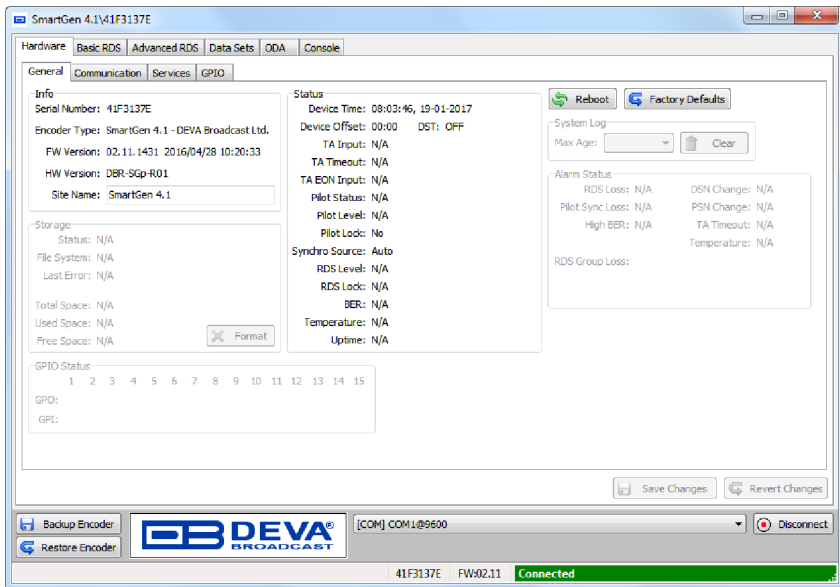
This screen allows reading and editing of all important RDS parameters needed for the Basic RDS applications.
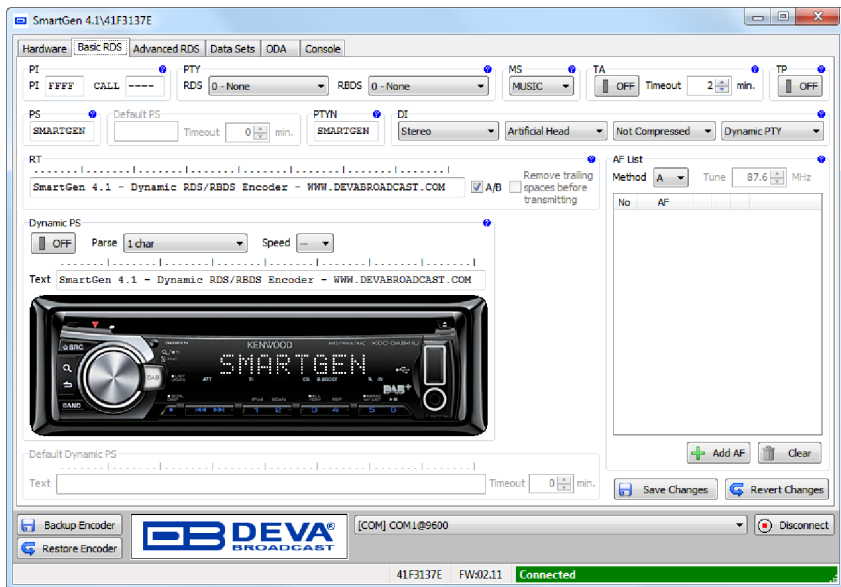
PI Code Calculator

The PI code is your station's 'digital address'. This is a hexadecimal code assigned by the broadcasting authorities in most countries, except for the United States where the PI code is numerically calculated from the station's callsign.

NOTE: For further information on how to use the PI Code Calculator, refer to the complete *User manual.*

PTY Selection

The Program Type identifies the station's programming format from a list. There are two lists, for the European RDS system and for the American RBDS specification. The proper PTY can be selected from a drop-down menu.

TA Timeout

An automatic timeout option has been included into SmartGen 4.1 to prevent from an extended software-activated TA flag. The timeout can be set choosing between 1 and 255 minutes. This will automatically deactivate the TA flag after the programmed time elapses.

Dynamic PS

The Dynamic PS can hold up to 64 characters of a text, which can be set to scroll across the RDS radio faceplate.

*Please refer to the User manual for detailed information on
how to configure and explore your device.*