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Once read the Hardware configuration tab will be visible and ready for editing. All other tabs will also be enabled and ready for usage. As it is usual for all DEVA Software and WEB Interfaces, the tabs are divided into several subsections, each corresponding to relevant settings.

### General

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*The 'Info' and 'Status' section of the 'General' tab will be active for all of the supported RDS/RBDS Encoders. The information considering Storage, Status, System Log etc. will be visible only for SmartGen 6.0 (as indicated below).*

#### Applicable for all of the Supported RDS/RBDS Encoders

**Info** is intended for maintenance purposes and reads the hardware characteristics of the RDS/RBDS encoder. The only editable field is '**Site Name**' (e.g. physical location).

**Status** is intended for real-time monitoring and includes Pilot, RDS and TA Input status. The information is updated automatically.

[**Reboot**] – will reboot the device

[**Factory Defaults**] – All DEVA RDS encoders can be restored to their 'Factory Defaults' from the non-volatile memory, when an emergency recovery is necessary. Hopefully this function will never be used. If needed, though, press the 'Factory Defaults' button.

**WARNING:** Perform Emergency Recover with caution, as the remote users would not be aware that the unit was restored to its factory defaults, hence they may cease communication with the device.

### Applicable only for SmartGen 6.0

**Storage** – Information about the device storage space is found in this section. The internal storage could be deleted by pressing the [Format] button.

**GPIO Status** – General Purpose Inputs/Outputs status is indicated here.

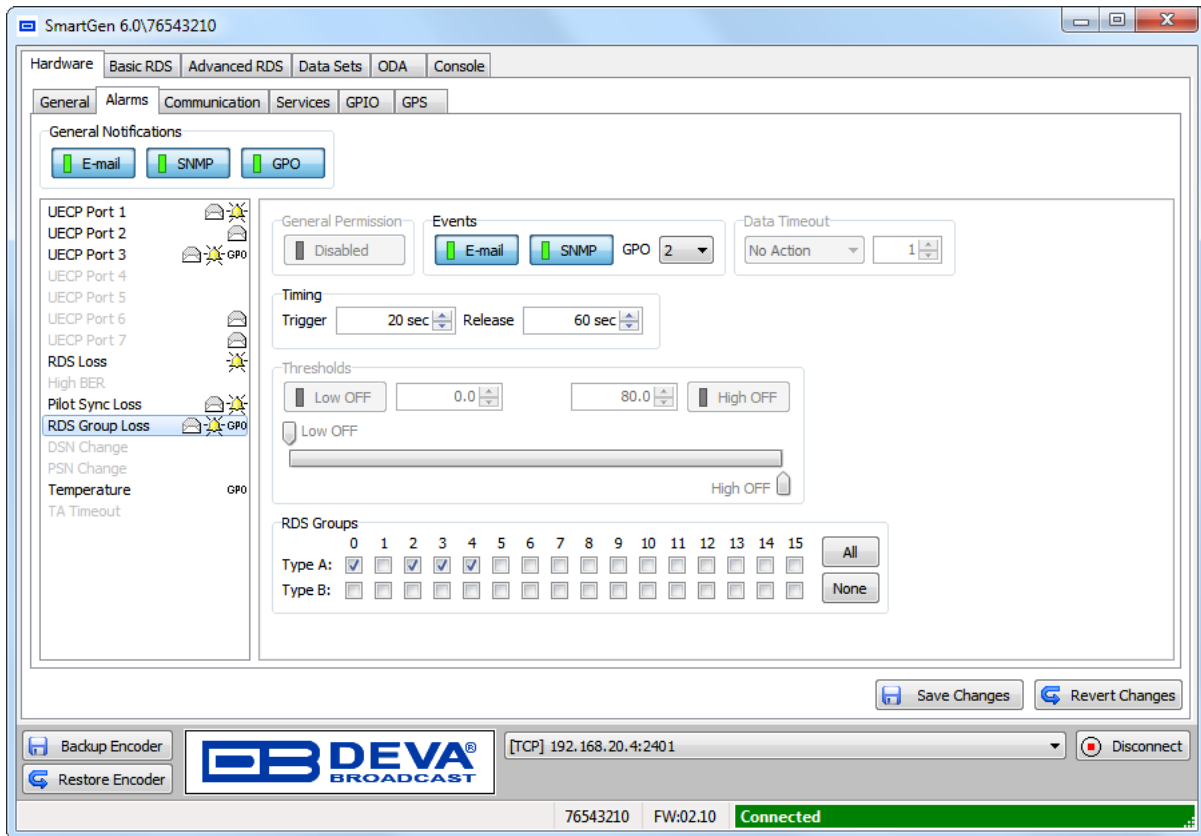
**System Log** – the maximum storage time of the log files is chosen from here. Log files older than the specified will be permanently deleted.

**Alarm Status** – If an alarm is generated, this will be indicated in this section of the Software.

**RDS Groups Loss** – When group presence is detected, corresponding LED illuminates in green. When group Loss is detected, corresponding LED illuminates in red. ([see “Alarm set-up for RDS Group Loss” on page 38](#))

## Alarms

*This function is supported only by SmartGen 6.0. Thus, the tab will not be active for the other RDS/RBDS Encoders.*



**General Notification** – Generally enables the type of notification/s to be used in case an alarm event is generated.

**NOTE:** Please note that if the types of alarm notification are generally disabled (from section ‘General Notifications’), nevertheless whether the alarm is turned on, an alarm notification will not be received and the event will be stored in the Log files of the unit.

The section below allows the alarms to be enabled and set at the preferred parameters. On the left part are listed all available alarms. Please have in mind that in order for an alarm to be activated the ‘General permission’ and ‘Events’ should be enabled/selected.

The setup for all parameters is simplified. Below is an explanation on the procedure depending on the Alarm:

### Alarm set-up for UECP Ports 1 to 7

1. Enable the ‘**General Permission**’;
2. Select the preferred alarm method(s)/‘Event’ – **E-mail**, **SNMP** or **GPO**. In order for the GPO notification to be enabled, the GPO port number should be specified from the drop-down menu;
3. Specify the ‘**Data Timeout**’ after which an alarm event should be generated.

### **Alarm set-up for RDS Loss, High BER, Pilot Loss**

1. Enable the '**General Permission**';
2. Select the preferred alarm method(s)/'Event' – **E-mail**, **SNMP** or **GPO**. In order for the GPO notification to be enabled, the GPO port number should be specified from the drop-down menu;
3. Specify the '**Trigger**' (waiting time before Active Alarm is generated) and '**Release**' time (waiting time before Idle Alarm is generated) after which an alarm event should be generated.

### **Alarm set-up for RDS Group Loss**

1. Select the preferred alarm method(s)/'Event' – **E-mail**, **SNMP** or **GPO**. In order for the GPO notification to be enabled, the GPO port number should be specified from the drop-down menu;
2. Specify the '**Trigger**' (waiting time before Active Alarm is generated) and '**Release**' time (waiting time before Idle Alarm is generated) after which an alarm event should be generated.
3. Selected the groups for which the alarms should be generated.

### **Alarm set-up for TA Timeout, DSN and PNS Change**

1. Enable the '**General Permission**';
2. Select the preferred alarm method(s)/'Event' – **E-mail**, **SNMP** or **GPO**. In order for the GPO notification to be enabled, the GPO port number should be specified from the drop-down menu.

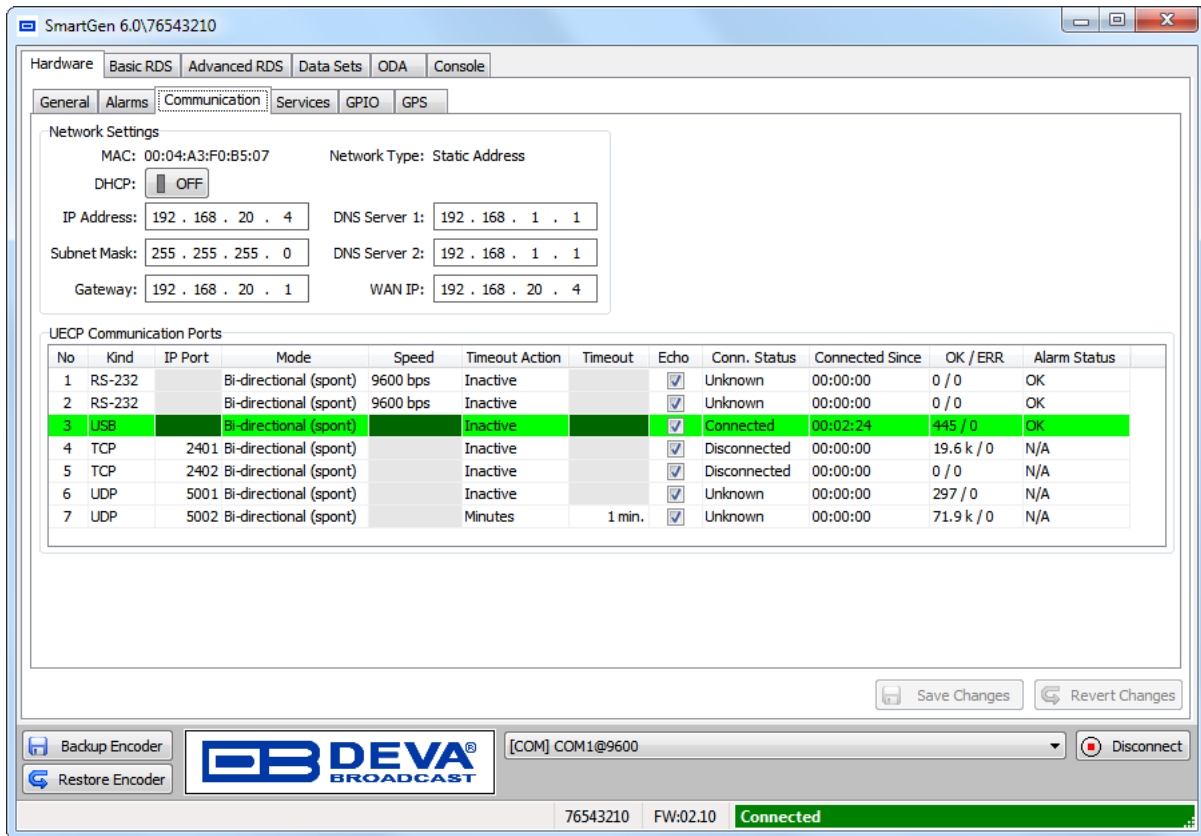
### **Alarm set-up for Temperature**

1. Select the preferred alarm method(s)/'Event' – **E-mail**, **SNMP** or **GPO**. In order for the GPO notification to be enabled, the GPO port number should be specified from the drop-down menu;
2. Specify the '**Trigger**' (waiting time before Active Alarm is generated) and '**Release**' (waiting time before Idle Alarm is generated) time after which an alarm event should be generated;
3. Specify '**Low**' and '**High**' temperature. In order for an alarm to be generated, the [Low] and [High] buttons should be enabled (turned on).

For additional information see [“APPENDIX E” on page 74](#).

## Communication

Depending on the RDS Encoder in use, some of the requisites in the 'Network Settings' section will be disabled. For example, DSN Server 2 and WAN IP are property of SmartGen 6.0 only.



The screenshot shows the 'Communication' tab in the SmartGen 6.0 software. The 'Network Settings' section is active, showing a static IP configuration. The DHCP is turned OFF. The IP Address is 192.168.20.4, Subnet Mask is 255.255.255.0, and Gateway is 192.168.20.1. DNS Server 1 and 2 are both 192.168.1.1. The WAN IP is also 192.168.20.4. Below this, a table lists UECP Communication Ports. Port 3 (USB) is highlighted in green and is in a 'Connected' state.

No	Kind	IP Port	Mode	Speed	Timeout Action	Timeout	Echo	Conn. Status	Connected Since	OK / ERR	Alarm Status
1	RS-232		Bi-directional (spont)	9600 bps	Inactive		<input checked="" type="checkbox"/>	Unknown	00:00:00	0 / 0	OK
2	RS-232		Bi-directional (spont)	9600 bps	Inactive		<input checked="" type="checkbox"/>	Unknown	00:00:00	0 / 0	OK
3	USB		Bi-directional (spont)		Inactive		<input checked="" type="checkbox"/>	Connected	00:02:24	445 / 0	OK
4	TCP	2401	Bi-directional (spont)		Inactive		<input checked="" type="checkbox"/>	Disconnected	00:00:00	19.6 k / 0	N/A
5	TCP	2402	Bi-directional (spont)		Inactive		<input checked="" type="checkbox"/>	Disconnected	00:00:00	0 / 0	N/A
6	UDP	5001	Bi-directional (spont)		Inactive		<input checked="" type="checkbox"/>	Unknown	00:00:00	297 / 0	N/A
7	UDP	5002	Bi-directional (spont)		Minutes	1 min.	<input checked="" type="checkbox"/>	Unknown	00:00:00	71.9 k / 0	N/A

**Network Settings** – The network addresses could be set manually (static IP) or automatically via a DHCP server. To set a static IP, Netmask, Gateway, DNS addresses and WAN IP, the DHCP should be disabled. In order for the built-in DHCP client to be activated, the function should be enabled. When the DHCP client is activated, all assigned values will be shown in the relevant fields.

**NOTE:** Because of your IP private configuration some modifications and customizations to the settings of your Router and Firewall might be needed in order for all the communication core requirements to be met.

**UECP Communication Ports** – here are listed all available communication ports. Have in mind that the different ports have some limitations as regards the settings to be applied. Columns Connection Status, Connected Since, Frames OK/ERR and Alarm Status have informative characteristics only.

Please note the following information:

- The TCP/IP ports cannot be duplicated;
- The ‘Mode’ can be changed, but it is recommended, unless you are an experienced broadcaster, the Bi-directional (spont) mode to be used;
- Timeout action – the following actions are available – Inactive, No Action, Minutes. In order for Timeout to be undertaken, “Minutes” should be set as Timeout Action;
- Echo – This option enables/disables the local echo for the corresponding port. It is applicable only for SmartGen 6.0.

Below is a table indicating the settings to be applied for each of the communication ports.

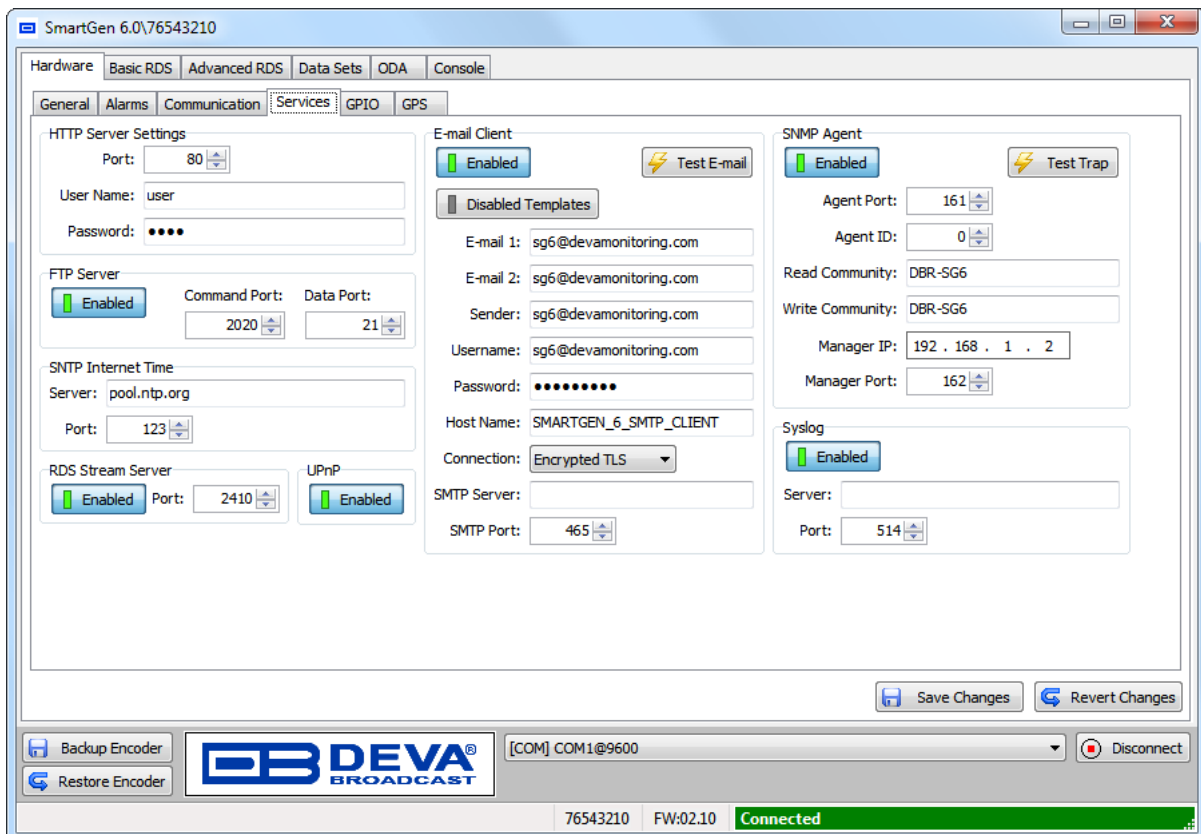
UECP Communication Ports	Settings				
	IP Port	Speed	Timeout action	Timeout	Echo
RS-232	✗	✓	✓	✓	✓
USB	✗	✗	✓	✓	✓
TCP	✓	✗	✓	✓	✓
UDP	✓	✗	✓	✓	✓



## Services

For the RDS/RBDS Encoders listed below, only the HTTP Server setting section will be visible. All other functionalities are supported only by SmartGen 6.0

- SmartGen 5.0 - Professional Dynamic RDS/RBDS Encoder, RS-232, USB & TCP-IP Ports, UECP Compatible
- SmartGen 4.1 - UECP Compatible RDS/RBDS Encoder with LAN & USB Connectivity
- SmartGen Mini - UECP Compatible, Compact RDS/RBDS Encoder with LAN & USB Connectivity



**HTTP Server** – Enable/Disable the HTTP Server. Specify the Server Port and session timeout.

**FTP Server** – Enable/Disable the FTP Server. Specify the Command and Data Ports to be used.

**SNTP Internet Time** – Synchronizes automatically SmartGen's clock to a millisecond with the Internet time server. This function can be enabled in the 'Advanced RDS' tab and will be active only if Internet is chosen as a preferred 'Sync Source'. (Specifying the server closest to your location will improve the accuracy).

**RDS Stream Server** – In order to use the RDS stream Server, enable this function and specify server port.

**UPnP** – Enable this function in order for the SmartGen to be accessible through the UPnP.

**E-mail Client** – Enter the desired alarm recipients in e-mail 1 and/or e-mail 2 fields. Fill in your e-mail account settings: Sender, Username and Password, Server, SMTP port and connection type.

We recommend you to use the [Test] button and generate a test e-mail, which upon success will be delivered to the specified E-mail 1 and/or E-mail 2.

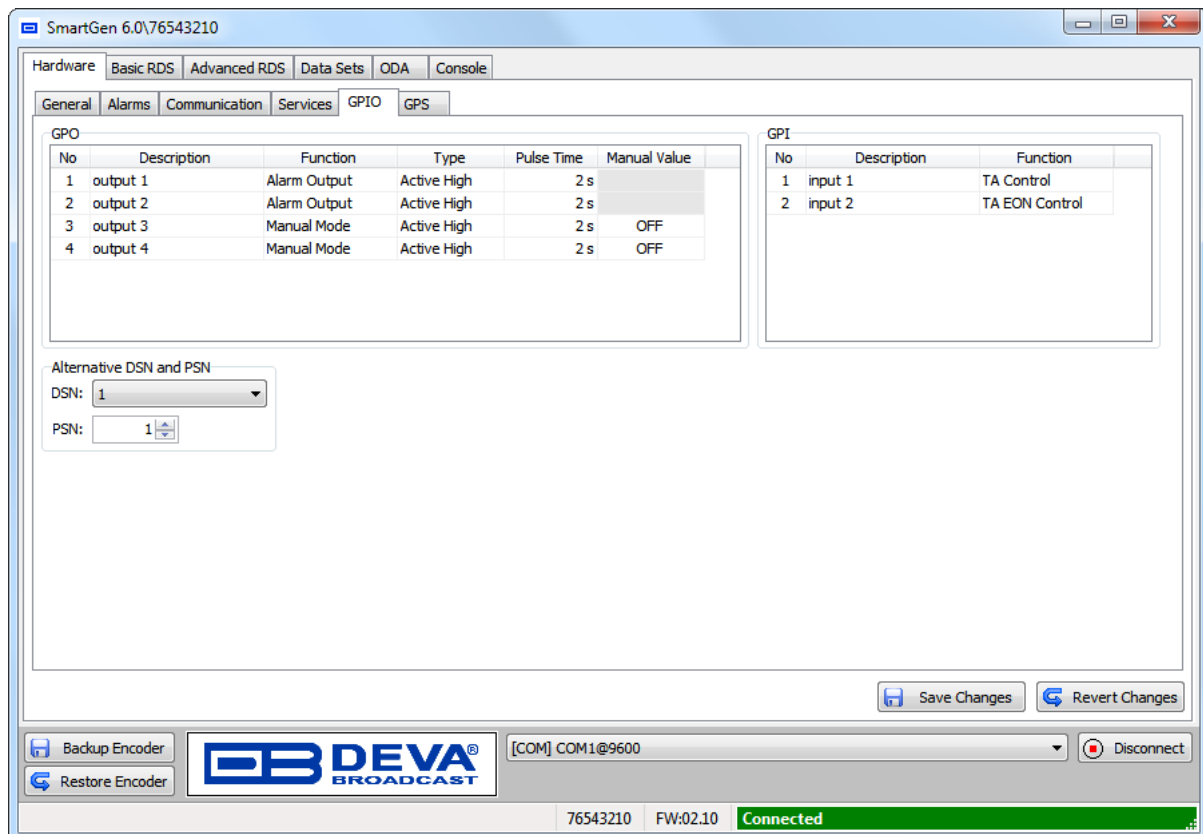
**SNMP Agent** – Enable the function in order to use it, and then specify Agent ID, Agent Port, Read/Write Communities, Manager IP, Manager Port and session timeout. Agent ID is used for identification of the device among others, when an SNMP notification is being sent. Once all needed settings are applied, use the [Test] button to generate a test notification, which upon success will be received by the SNMP Manager.

**Syslog** – Enable or disable the Syslog feature. Specify Server address and port to be used.

## GPIO

Only the GPO section will be visible for the RDS/RBDS Encoders listed below. All other functionalities are supported only by SmartGen 6.0

- SmartGen 5.0 - Professional Dynamic RDS/RBDS Encoder, RS-232, USB & TCP-IP Ports, UECP Compatible
- SmartGen 4.1 - UECP Compatible RDS/RBDS Encoder with LAN & USB Connectivity
- SmartGen Mini - UECP Compatible, Compact RDS/RBDS Encoder with LAN & USB Connectivity



The general purpose outputs/inputs settings are applied through this page.

Function, type and pulse time for each of the GPOs could be set individually. You can choose between the following functions: Alarm Output, Manual mode, RDS Lock, TA Flag, TA EON Flag and TP Flag. 'Type' is used for specifying of the active level. When an alarm is generated the output can change the level to Active High/Low or to generate Pulse High/Low.

**NOTE:** if the GPO's function is not assigned as "Alarm GPO" and the same is chosen as a preferred alarm, notifications will not be indicated, nevertheless one is being generated.

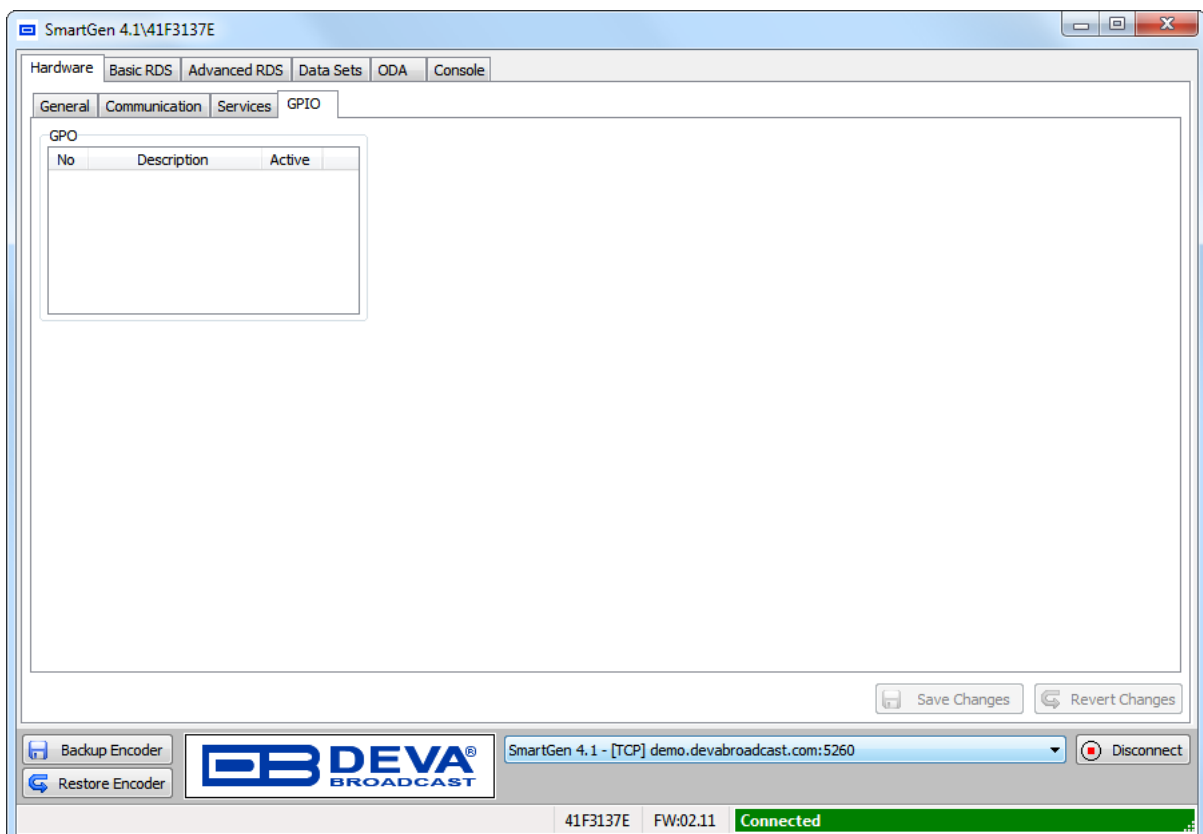
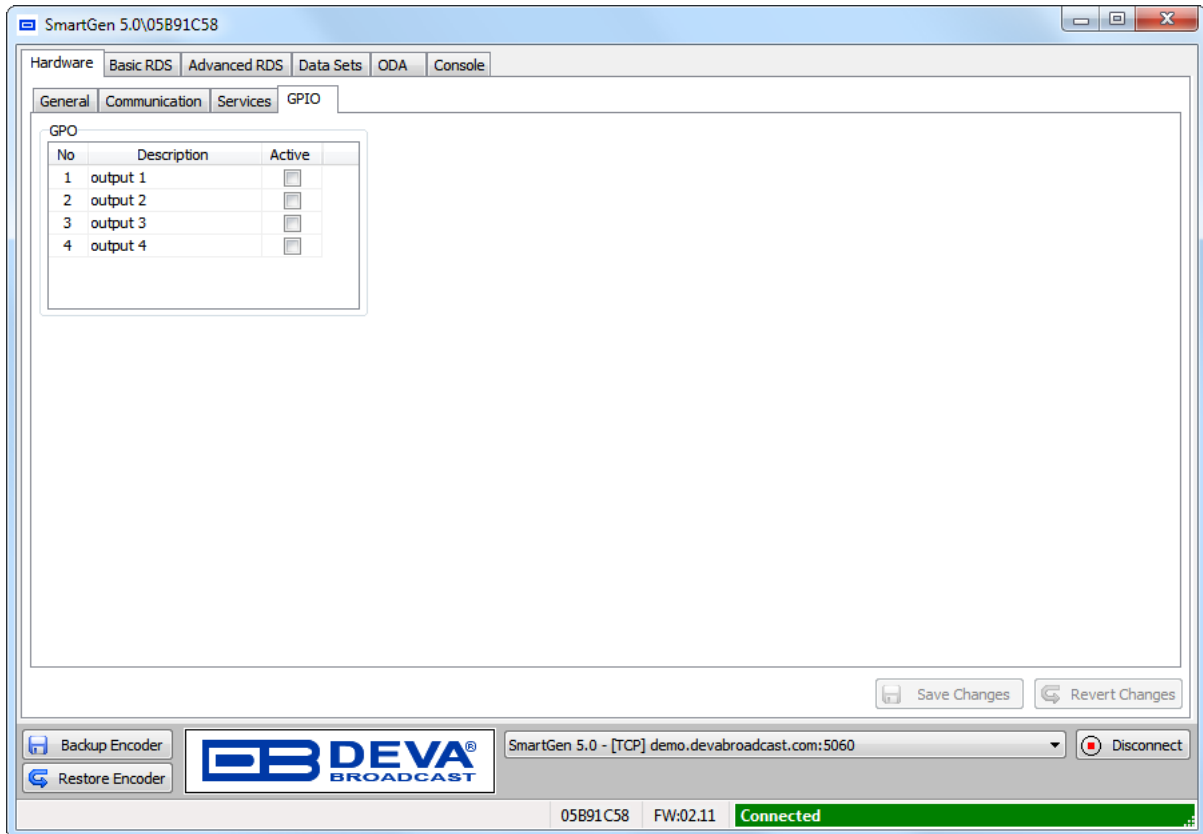
Port Description and Function for each of the GPIs could also be set individually. You can choose between the following functions: Not assigned, DSN Selection, PSN Selection, TA control, TA EON Control.

Alternative DSN and PSN can also be specified. They are used when DSN Selection, PSN Selection functions are selected.

Alternative DSN can be assigned with values from 1 to 6 (6 DSNs are available in SmartGen 6.0) and when GPI with DSN selection is activated, the DSN will become current, and Main PSN will be selected for this (alternative) DSN.

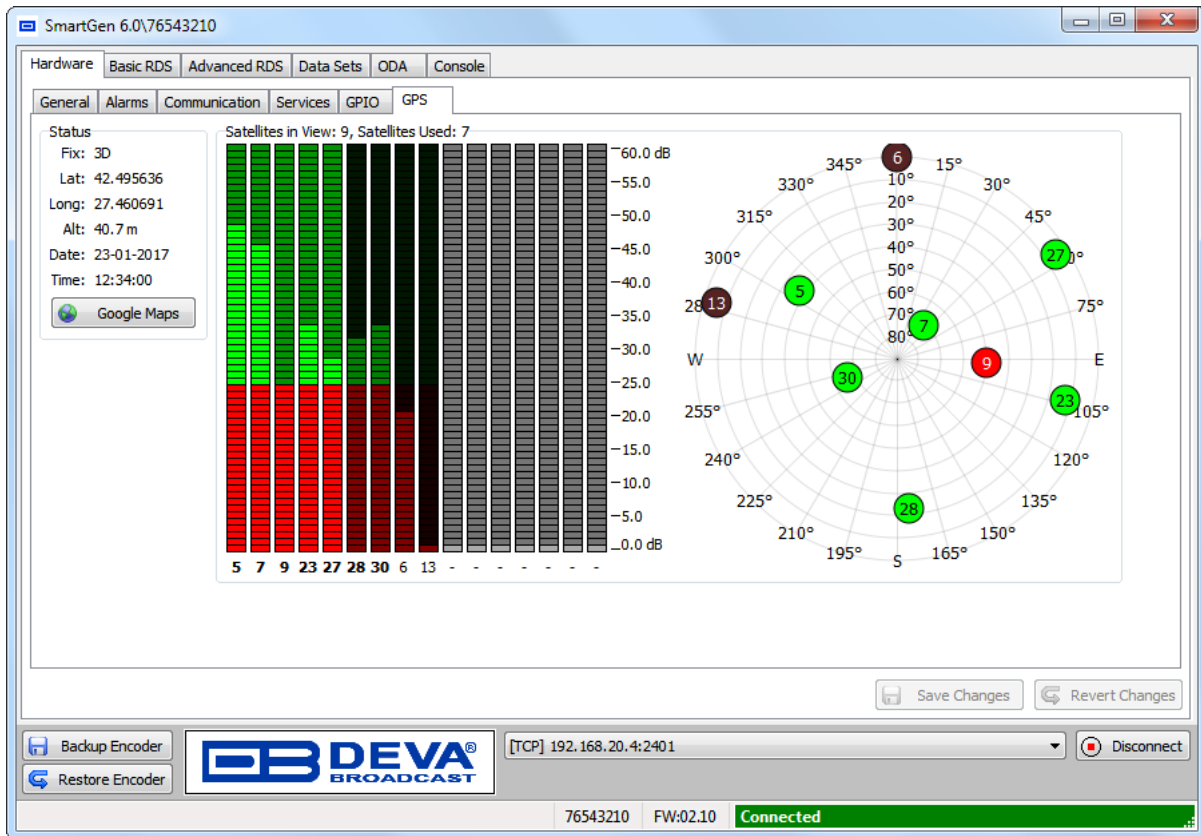
Alternative PSN – can be assigned with values from 1 to 255 and activation of the GPI with PSN selection. This PSN (if available) will become main PSN for the current DSN.

This is how the GPIO section for the RDS/RBDS Encoders models different than SmartGen 6 will look like:



## GPS

*This function is supported only by SmartGen 6.0. Thus, the tab will not be active for the others RDS/RBDS Encoders.*



GPS should be chosen as ‘Sync Source’ in order for the GPS to be available. The ‘Sync Source’ is set in the Advanced RDS tab.

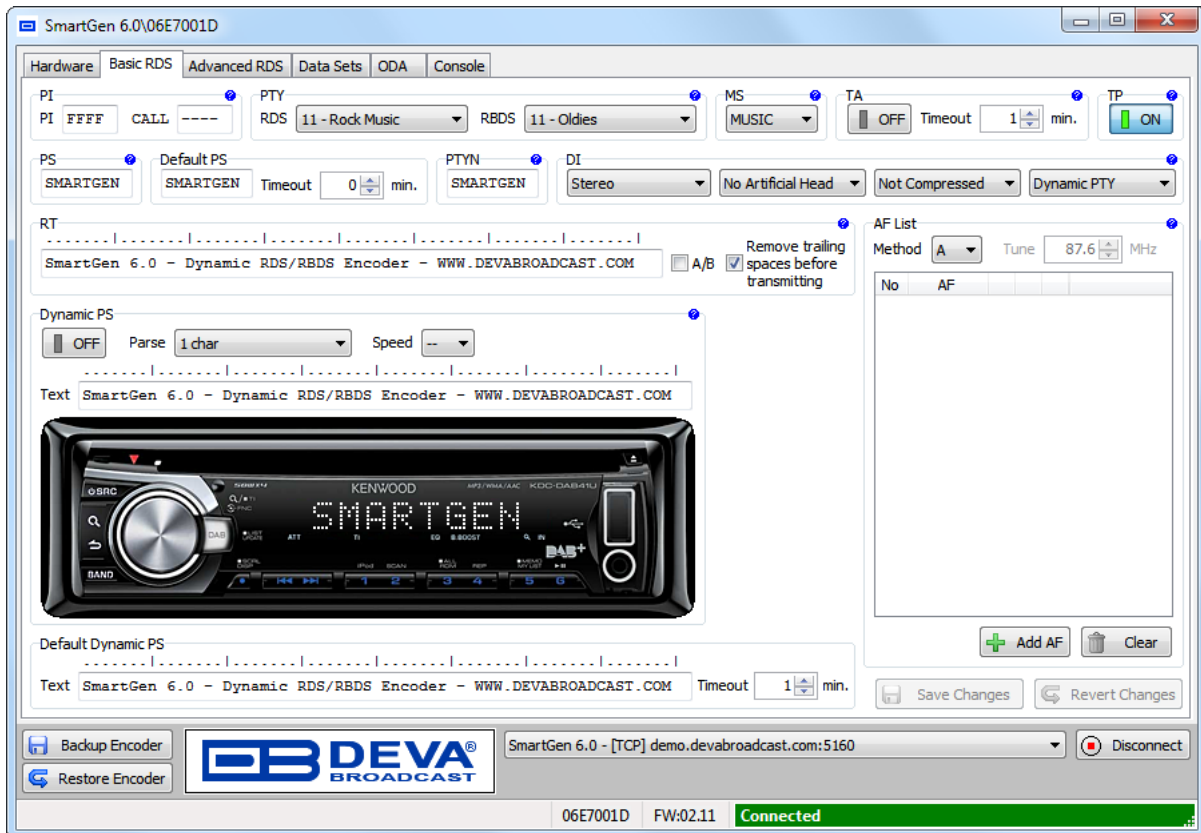
**Status** – This section contains information about the GPS attributes – Fix, Latitude, Longitude, Altitude, Date, Time. ‘View on Google Maps’ option is also available.

**Satellites in View** – This section contains information about satellites in view. The LED indicators show the reception quality for every satellite. The number beneath every LED is Satellite ID.

**Sky View** is an alternative representation of “Satellites in View”. Every satellite is represented as a 2D point in space, according to Elevation, Azimuth and signal quality of the satellite.

## BASIC RDS

*These functionalities are supported by all RDS/RBDS Encoders.*



In this tab you will find all the essential RDS parameters needed for the Basic RDS applications. Explanation of the most important basic RDS/RBDS parameters can be found below. For all other RDS/RBDS applications supported, please [refer to “APPENDIX B.1” on page 68](#).

**NOTE:** The question mark placed on the top right corner of each section is intended to provide you with details as regards the parameter. A click with the mouse will open an information balloon.

### PI Code Calculator

The PI code is your station’s ‘digital address’. This is a hexadecimal code that is assigned by an appropriate broadcasting authority in most countries, but in the United States the PI code is numerically calculated from the station’s call sign. We have provided a calculator utility within the SmartGen Encoders Manager. An in-depth discussion of the mathematical calculation is given in RDS/RBDS Standard.

To use the PI calculator for US ‘K’ and ‘W’ call signs, simply enter call letters into the CALL box. The hexadecimal code will automatically be calculated into PI box. If the hexadecimal code for a US station is known, you may enter it under PI, and then the Callsign will be calculated automatically into CALL box.

When PI calculator fails to calculate PI or CALL the corresponding box will be filled with ‘----’.

**Program Type (PTY)** Selection identifies the station’s programming format from a list. There are two lists, one for the European RDS system and one for the American RBDS specification, hence, open the appropriate drop-down list and select suitable PTY.

### **TA Timeout**

An optional safety feature is built into the SmartGen to guard against an extended software activated TA flag. For example, presuming that the TA flag has been activated via software command and the data link is suddenly lost. A command that deactivates TA flag would not be received, and the TA flag would remain raised indefinitely. As this is not acceptable, an automatic timeout option has been included for software-activated TA flags.

In order for this function to be used – the interactive TA button should be enabled. The timeout can be set from 1 to 255 minutes. This will automatically deactivate the TA flag after the programmed time has elapsed.

**NOTE:** The Timeout should not be used to define the actual period that the TA flag is raised. The TA flag must be reset to zero immediately following a traffic announcement. Again, it's best to use the manual switch option for this command as described in section “ACTIVATING THE TA FLAG” in the complete user manual.

### **Dynamic PS**

DPS is proprietary setting, which not conform with RDS/RBDS Standard. Because of driving safety considerations, broadcasters have, from the start, been discouraged from making the PS “dynamic”; that is, to send long messages in a succession of 8-character frames. As a matter of note, it remains a violation of both the CENELEC and the NRSC standards to flash or scroll the PS display. Nevertheless, this nefarious practice of “Scrolling-PS” has become very common, both in the US and abroad.

The Dynamic PS can hold up to 64 characters of text, which can be made to scroll across the RDS radio faceplate. Left undisturbed, the encoder will scroll the same message endlessly.

**Parsing** is the encoder’s “smart” mode of message transmission. Parsing breaks messages down into meaningful character groups for efficient display on the 8-character alphanumeric readout common to all RDS receivers.

When **Parse** is set to 0 (words centered) or 9 (words left justified) parsing sends short words together. Longer words, up to and including 8 characters, are sent individually. Words that exceed 8 characters are “sidestepped” through two or more consecutive displays.

When **Parse** is set between 1 and 8 the message is scrolled 1 to 8 characters at a time without divisions into word groups.

Immediate preview of Dynamic PS could be seen on virtual Radio faceplate. Feel free to experiment with different Text and Parse values.

**NOTE:** When the Dynamic PS is turned OFF, the Preview will show the PS instead.

**PLEASE HAVE IN MIND** that changing the ‘Speed’ is not a permanent setting and will not be saved. Upon next log-in the value will be as per default.

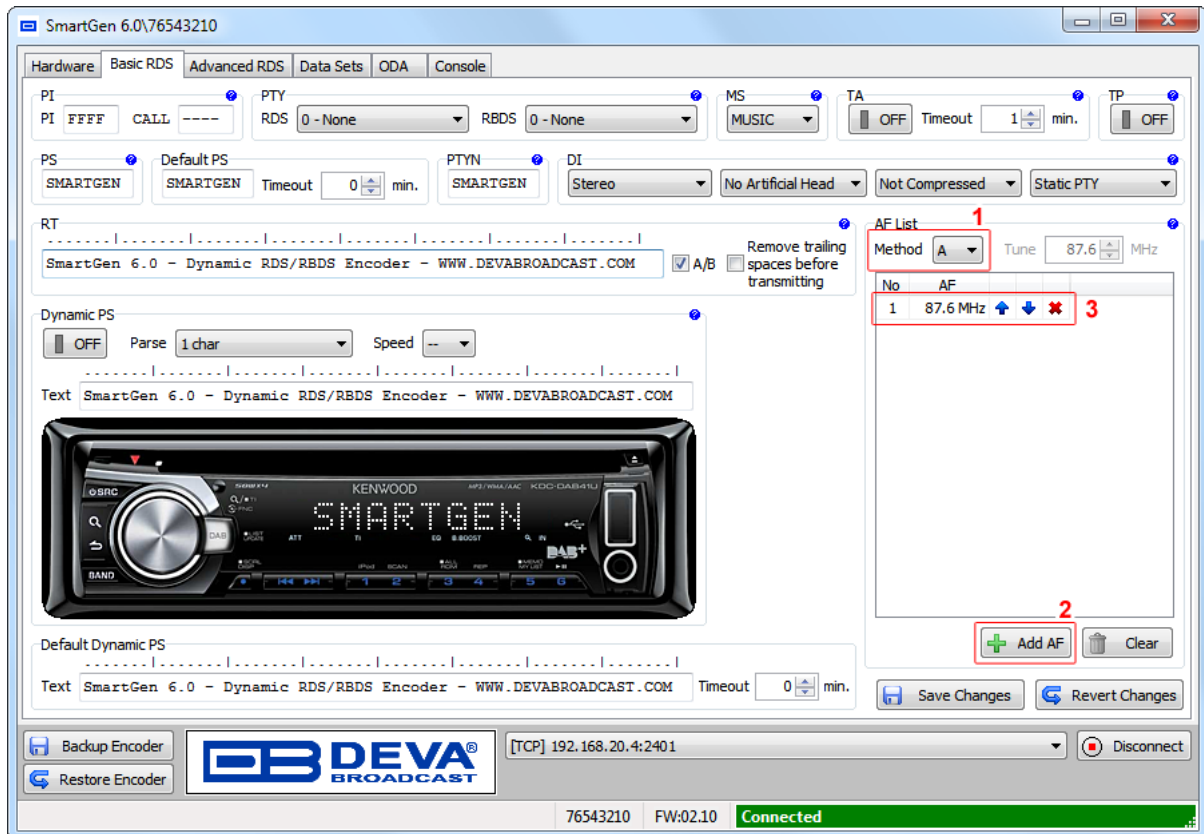
*These functions are supported only by SmartGen 6.0. Thus, they will not be active for the others RDS/RBDS Encoders.*

**Remove trailing spaces before transmitting** - Trims the radio text trailing spaces with carriage return symbol (\$0D), when the radio text is shorter than 64 symbols.

**Default PS / Default Dynamic PS** – replaces the broadcasted PS string with the specified Default PS, when the option is enabled, and the timeout expired. This option is very convenient when the PS is set by an automation software as it prevents transmission of outdated PS string, in case of connection loss between the SmartGen and the automation software.

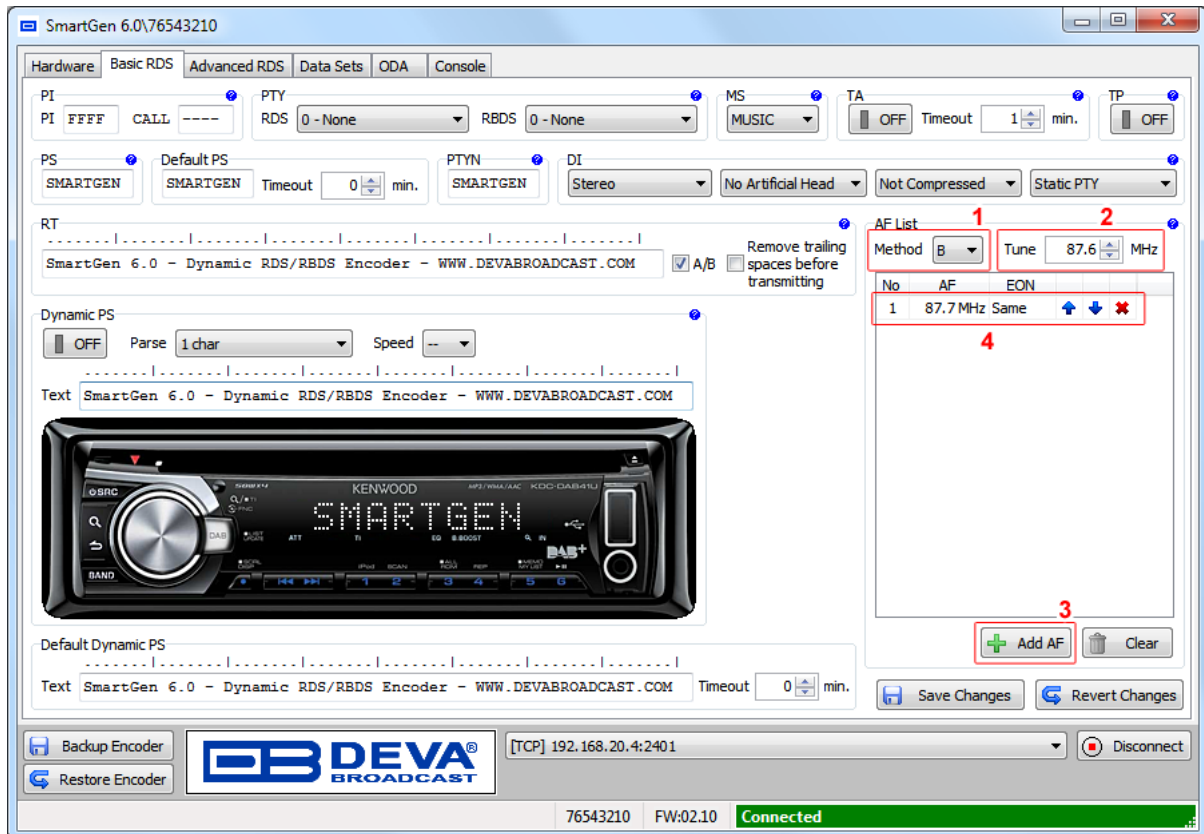
**Default PS Timeout / Default Dynamic PS Timeout** – Enables and sets the Default PS/DPS timeout in minutes. When the timeout is set to 0 (Timeout=0) the function is disabled.

## How to add a new AF by Method A



1. Select Method A;
2. Press [+Add AF];
3. Specify frequency by typing it in the relevant field, or via the [Up] and [Down] buttons, placed on the right of the frequency box (spin control);
4. Repeat steps from 2 to 3 for all AF Method A to be added;
5. Press [Save Changes].

## How to add a new AF by Method B

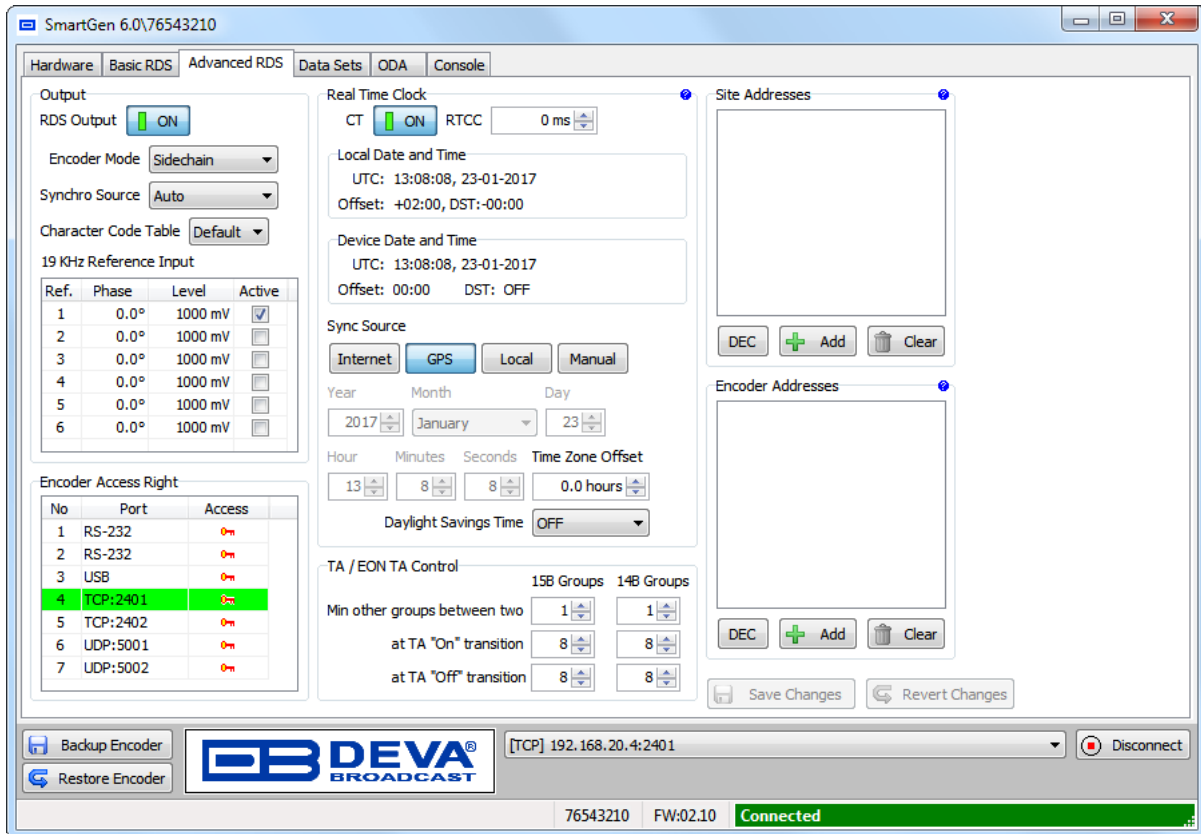


1. Select Method B;
2. Specify tuning frequency (Tune);
3. Press [+Add AF];
4. If not already done that, specify frequency by typing it in the relevant field, or via the [Up] and [Down] buttons, placed on the right of the frequency box. Then from the drop-down menu specify Same or Regional;
5. Repeat steps from 3 to 4 for all AF Method B to be added;
6. Press [Save Changes].



## ADVANCED RDS

*These functionalities are supported by all RDS/RBDS Encoders. Except for the GPS ‘Sync source’ function, enabled for SmartGen 6.0 only.*



This screen reads the parameters for control and adjustment of the SmartGen. The unit should be properly configured for the preferred operating mode (sidechain or loop-through) before it is installed in the signal path. All the needed settings are applied in section ‘**Output**’.

The “**Real Time Clock**” function provides several types of Sync sources that you can choose from. The need of highly-accurate time source is satisfied not only by the supported SNTP (Simple Network Time Protocol), but for SmartGen 6.0 also by the built-in GPS Module. The used GPS technology provides a means for synchronizing the unit with UTC. Once the preferred ‘Sync Source’ is selected, the Time Zone Offset should be set manually (Local time excluded, as the values will be automatically assigned from the computer’s time).

The **Daylight Saving Time** mechanism operates in four modes:

- **Auto USA** – will apply the rules used in the US and Canada (as of 2007);
- **Auto EU** – will apply the rules used in the European Union;
- **+1** – will apply constant DST (one hour);
- **OFF** – will not apply DST.

All needed settings for the **TA and EON TA Control** are also applied through this tab of the Software.

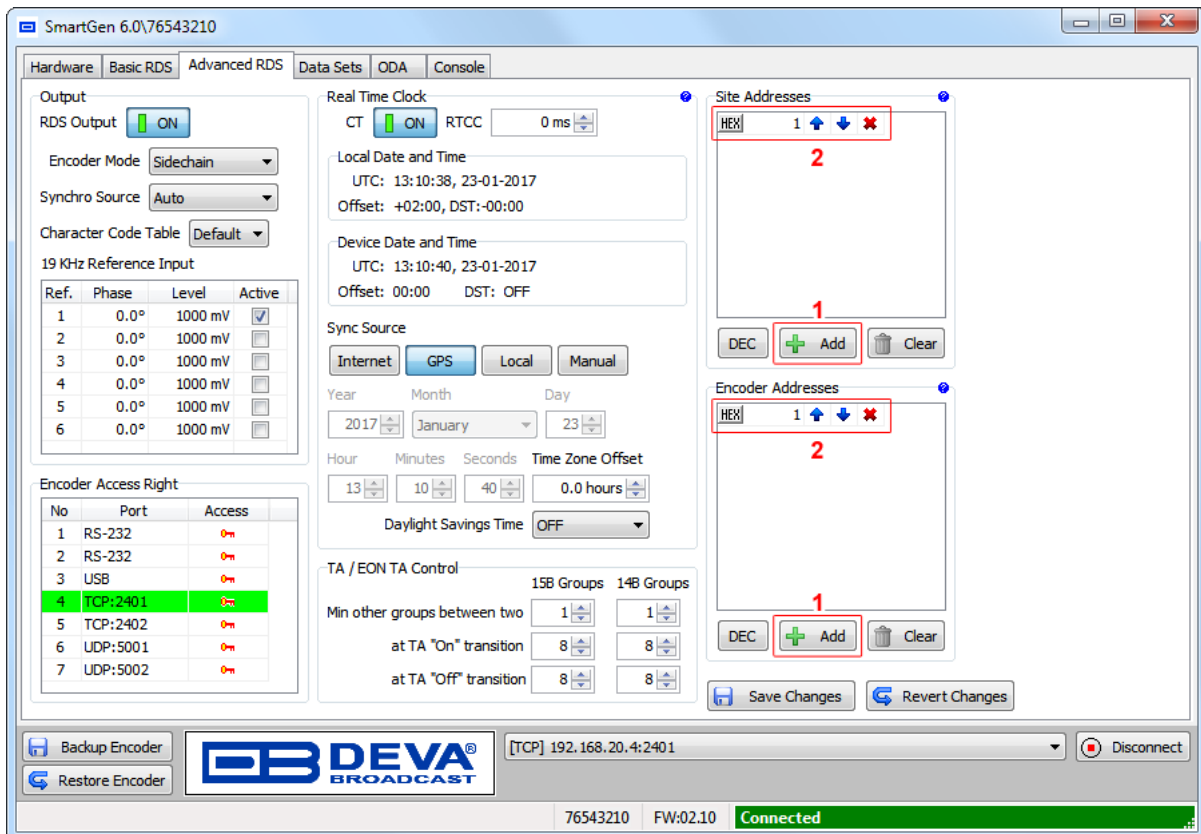
**Site Address & Encoder Address** – Each encoder has two address lists, one of acceptable site addresses and the other of acceptable encoder addresses. The site address list includes “0” (the global site address), the unique site address and any additional site group addresses. The

encoder address list includes “0” (the global encoder address), the unique encoder address and any additional encoder group addresses. See UECP Specification for detailed explanation about Encoder Addressing.

To add new Site/Encoder Addresses, press the [DEC]/[HEX] button to select the proper value, then press [+ Add] and specify number from the drop-down menu, or just type it in the field.

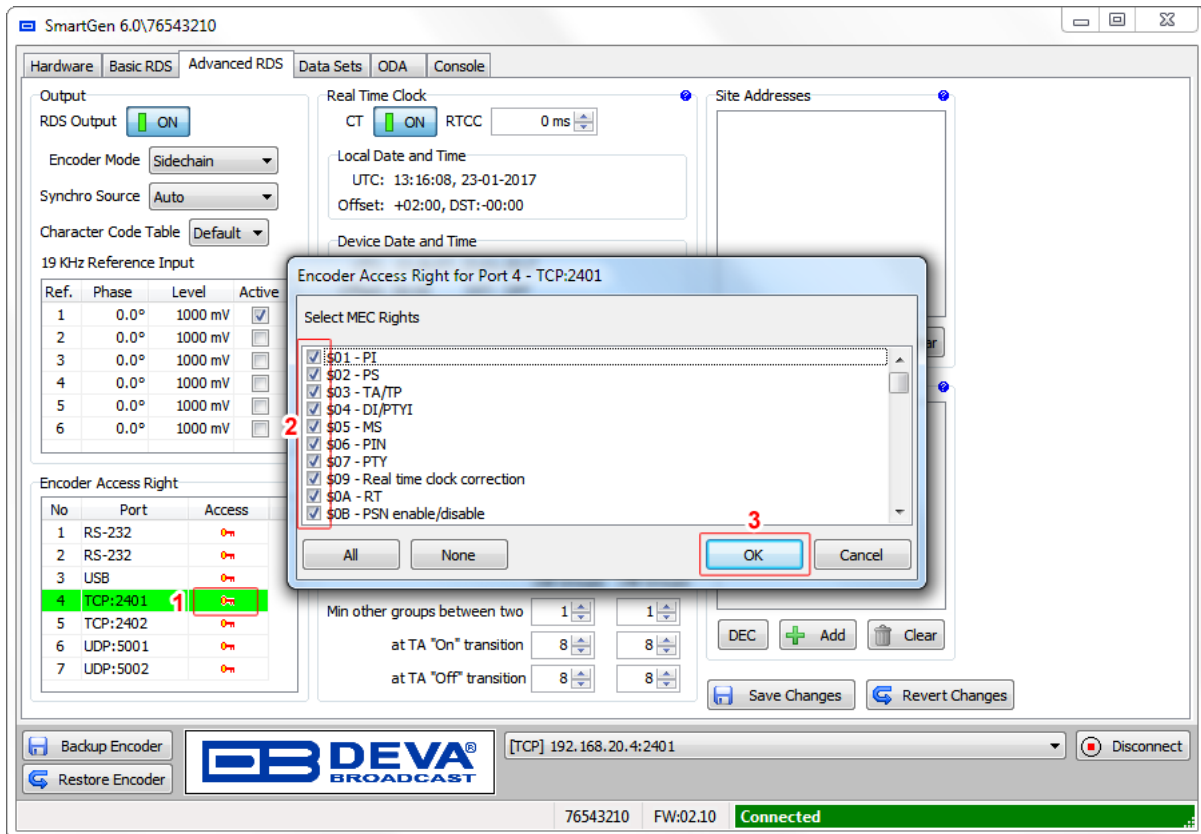
## How to add Site/Encoder address

The procedure is identical and explained in details below



1. Press [+Add];
2. Specify Address by typing it in the relevant field, or via the [Up] and [Down] buttons, placed on the right of the address box
3. Repeat steps from 1 to 2 for all addresses to be added;
4. Press [Save Changes].

## How to manage the Encoder Access rights



1. Click on the key icon, placed right next to the Port you would like to manage;
2. Select the MEC rights for the port.
3. Once ready, press [OK];
4. Repeat steps from 1 to 3 for all Ports to be managed;
5. Press [Save Changes].

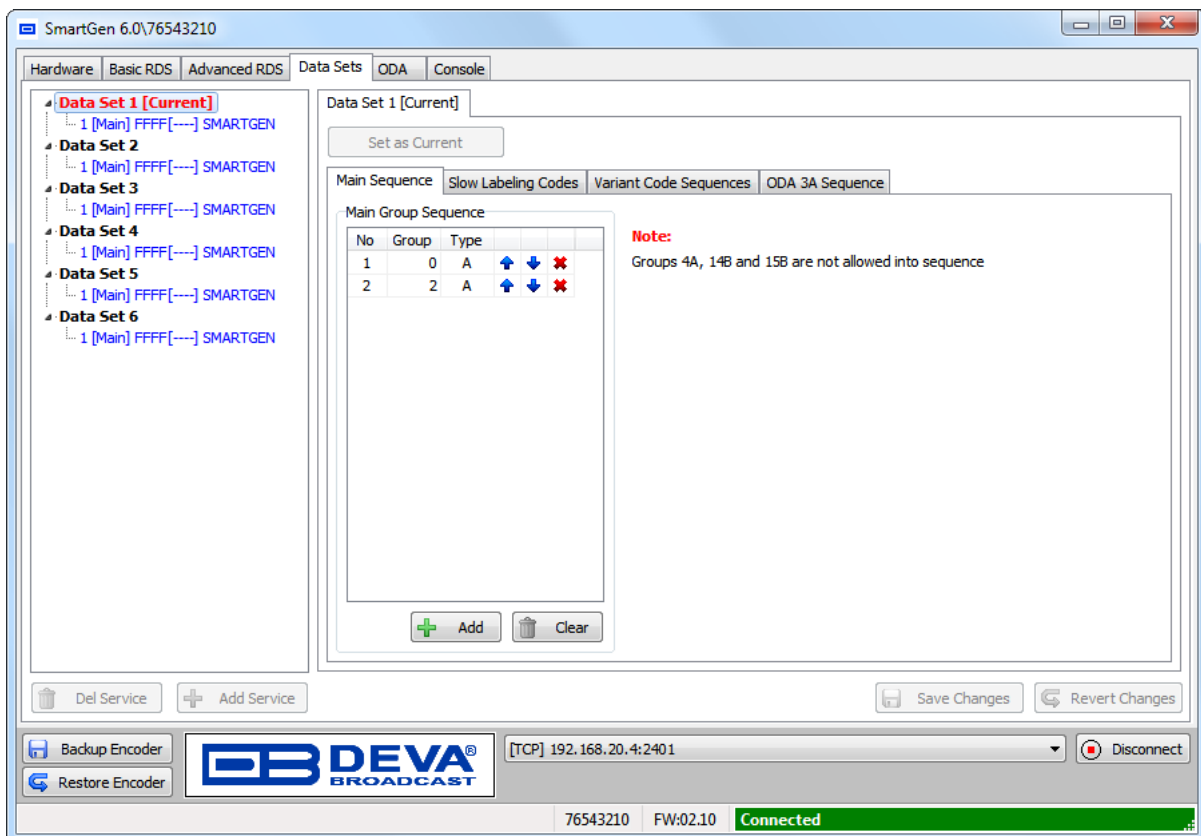
## DATA SETS

An encoder has one or more data sets, and each of them results in a particular RDS output. Each data set may refer to many Program Services using the RDS EON feature. Only one data set is responsible at any one time for the encoder's output and is known as the Current Data Set.

On the left side are visible the currently available Data Sets with their respective Program Services. The Current Data Set is colored in red.

### Main Group Sequence

*These functionalities are supported by all RDS/RBDS Encoders.*

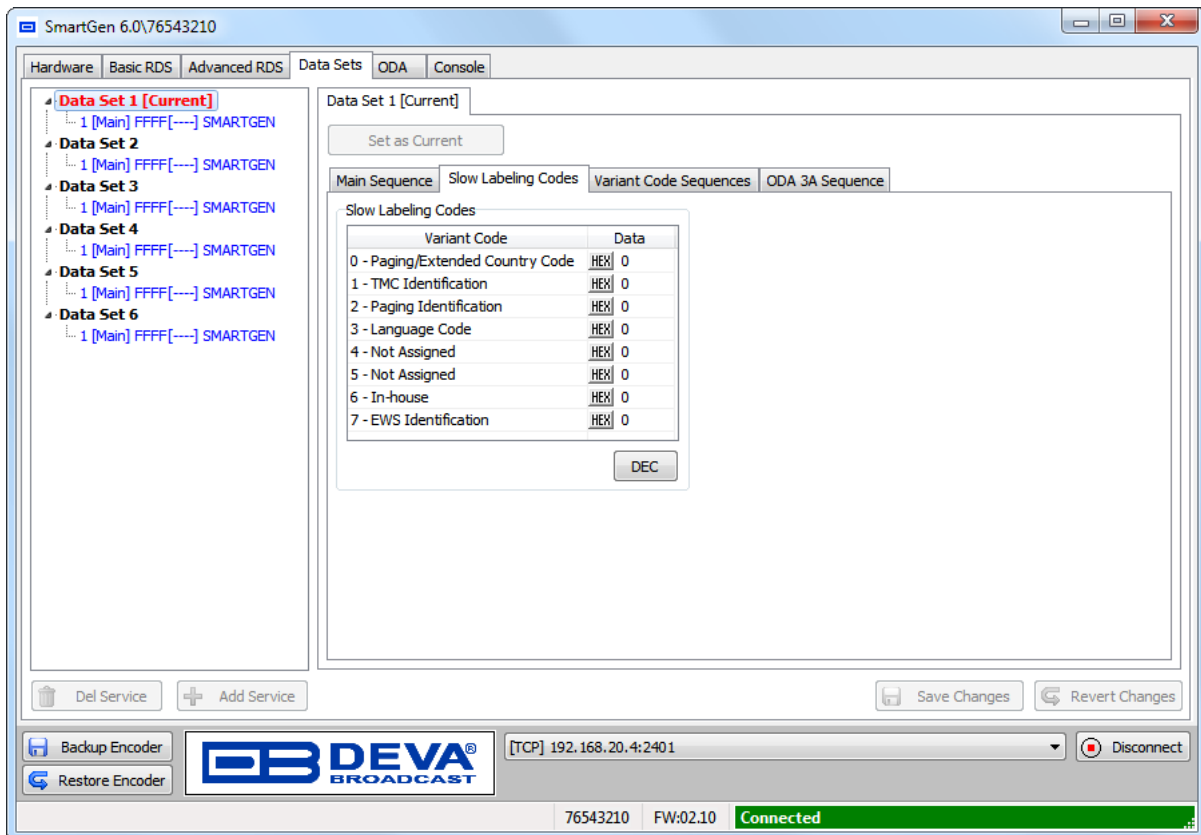


The **Main Group Sequence** has direct influence over the transmission of RDS groups, their succession and repetition rate. Unless there are any special conditions, it is recommended at least 0A and 2A groups to be included in the sequence, because they carry the basic RDS information - PS, TA, MS, DI, AF and RT.

**NOTE:** The Group Sequence cannot be left empty. Groups 4A, 14B and 15B are not allowed in the Group Sequence, they are generated automatically. Groups 2A and 2B cannot coexist.

## Slow Labeling Codes

*These functionalities are supported by all RDS/RBDS Encoders.*

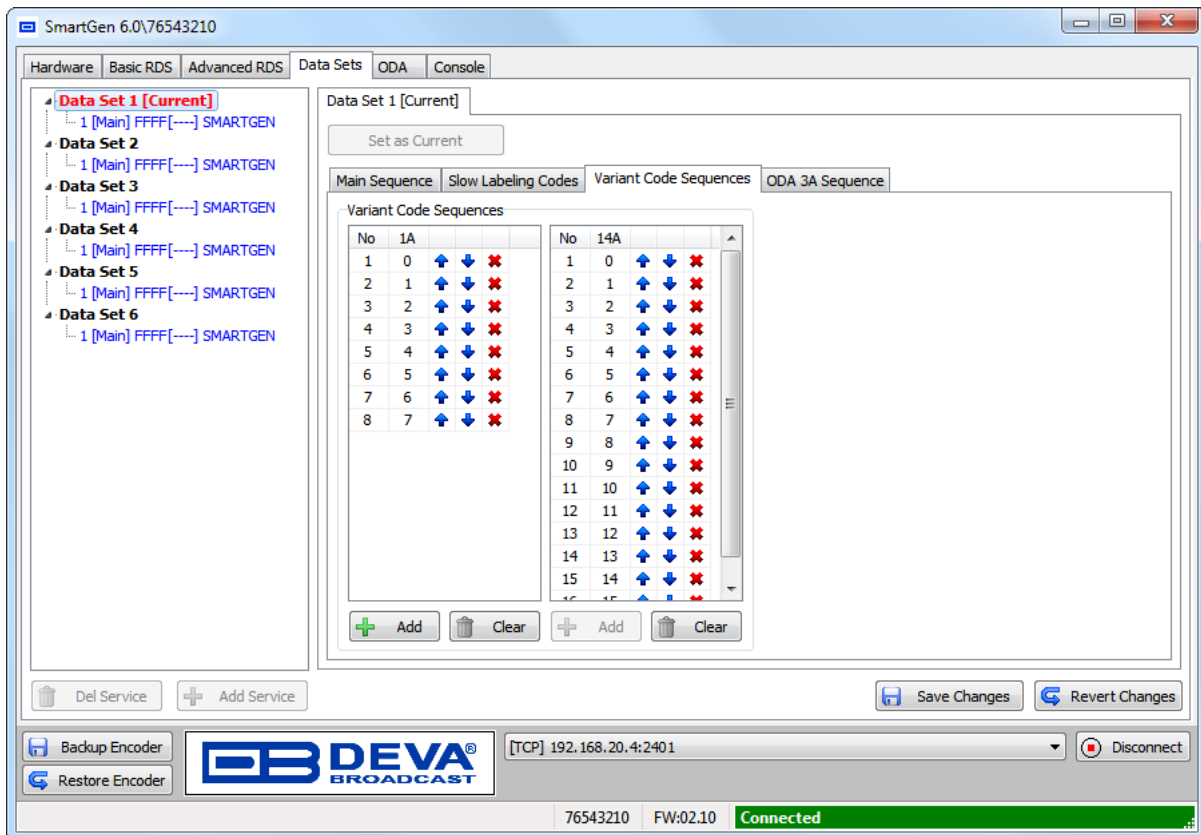


The 'Slow Labeling Codes' are transmitted along with 1A group and their SLC values can be defined through this section of the software. Please have in mind that the transmission of SLC depends on Variant Code Sequence and some of the Variant Codes are dynamic (e.g. TMC, EWS). For further information refer to RDS/RBDS standard and UECP Specification for detailed information.

**NOTE:** To edit the data, click on the row to be edited, then on the Data field.

## Variant Code Sequence

*These functionalities are supported by all RDS/RBDS Encoders.*

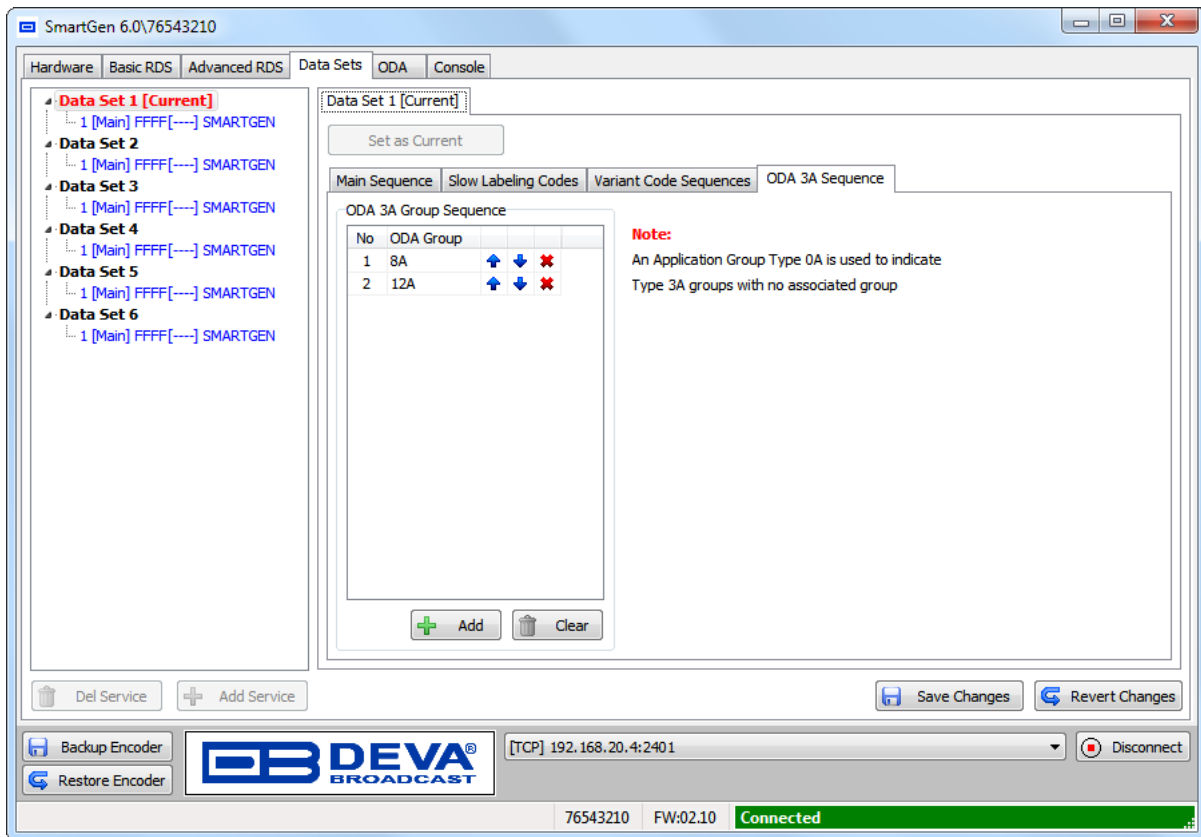


There are two Variant Code Sequences. One for transmission of VC carried in group 1A and one for group 14A.

**ATTENTION:** It is important that the Variant Codes in group 1A, which denotes Slow Labeling Codes, not to be confused with Variant Codes in group 14A, which carry the EON information.

## ODA 3A Sequence

*These functionalities are supported by all RDS/RBDS Encoders.*



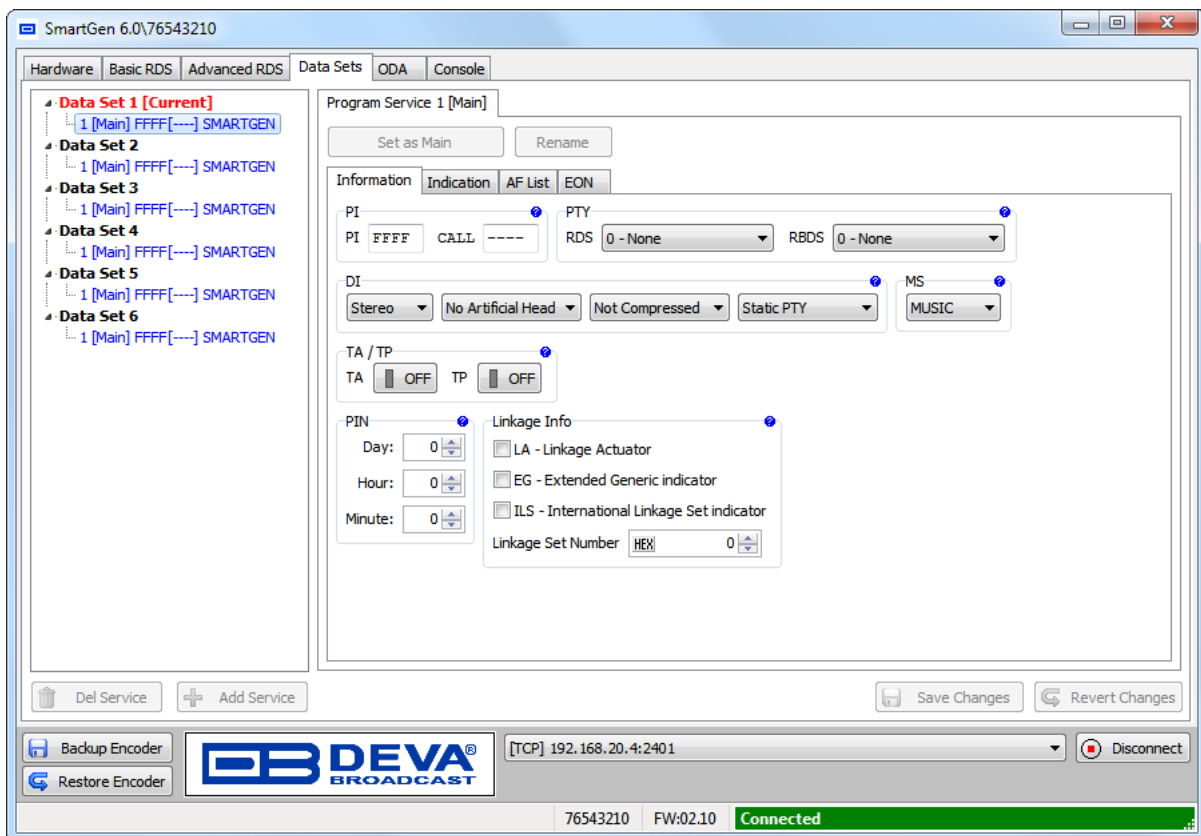
This sequence is responsible for succession of the ODA Identification, which is transmitted with group 3A. For further information, please refer to the RDS/RBDS standard.

## PROGRAM SERVICES

The Program Service can be set to Main or EON. Only one Main Program Service at a time can be active. The Main and EON information do not mutually restrict the editing, but the encoder decides which information to use with reference to the Service role (i.e. Main or EON). Service may become Main or EON every moment without need the information to be edited.

### Information

*These functionalities are supported by all RDS/RBDS Encoders.*



PI and PS are used as identifiers to distinguish every Program Service when looking at the left-side Data Set tree-view. If Program Service is not designated as Main, there is an option to be disabled at all (from the EON tab).

**NOTE:** The Program Service could be set as Main only when the Data Set to which it belongs is not the Current.

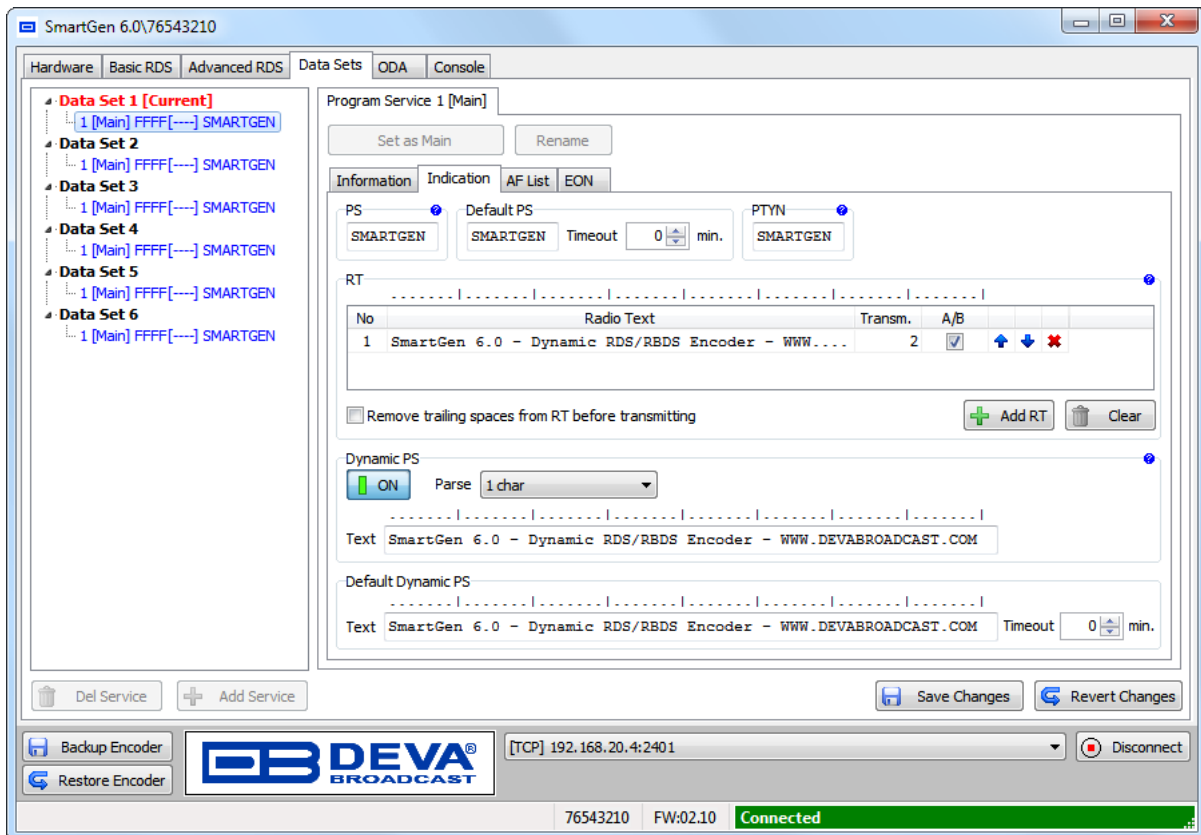
Each Main Program Service will utilize the following parameters: PI, PTY, DI, MS, TA, TP, PIN, LI, PS, RT, PTYN, AF.

Each EON Program Service will utilize the following EON parameters: PS, AF, PTY, LI, PIN. When signalled for usage, each EON parameter will be taken from Main fields, but will be transmitted through EON groups. The AF List has specific limitations for EON transmission, thus having independent editing.



## Indication

*These functionalities are supported by all RDS/RBDS Encoders.*

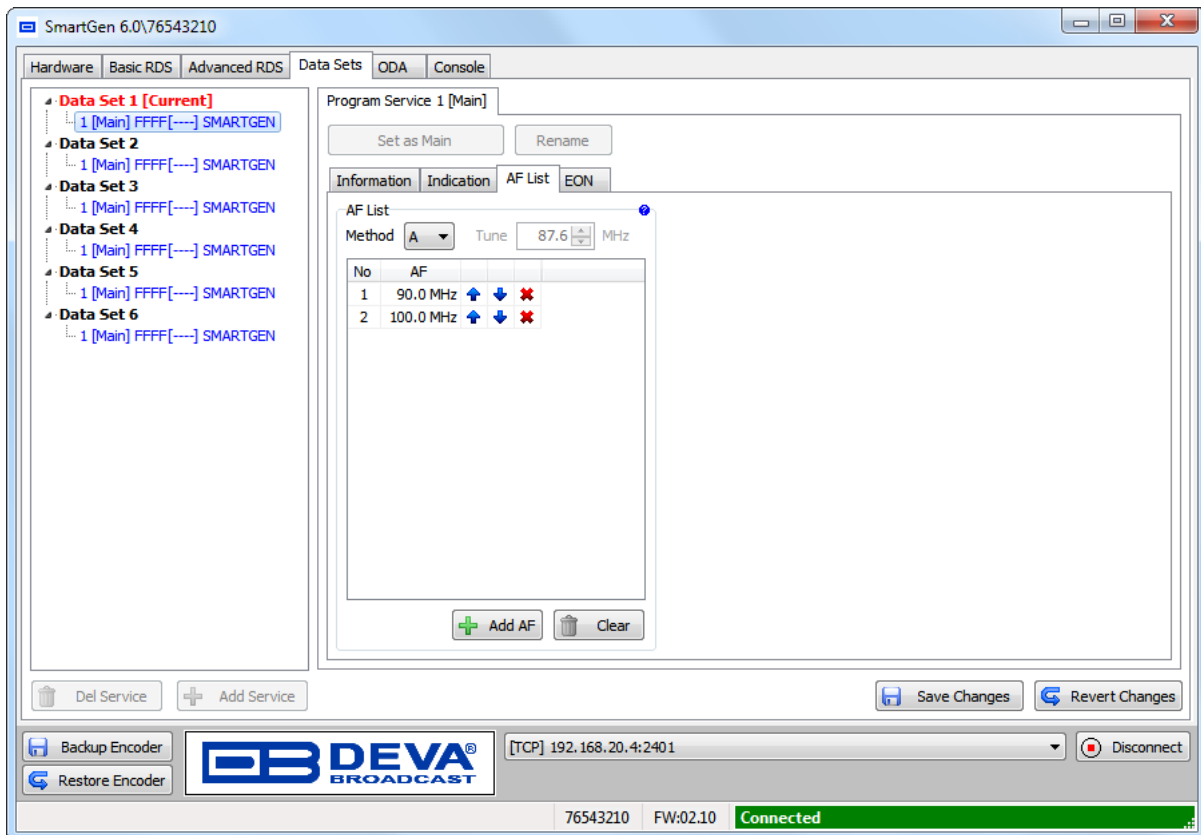


The PS, Default PS, PTYN and RT display the currently assigned text. The table below contains a list with all the broadcasted radio texts. You can change the broadcasting priority using the interactive arrow buttons and delete RT with the ‘X’ button. A new text is added via the relevant button. Of course, ‘Clear’ will delete the entire content.

For information on the Dynamic PS, Default Dynamic PS and Default PS please refer to the ‘Basic RDS’ tab. ([see “Basic RDS” on page 45](#))

## AF List

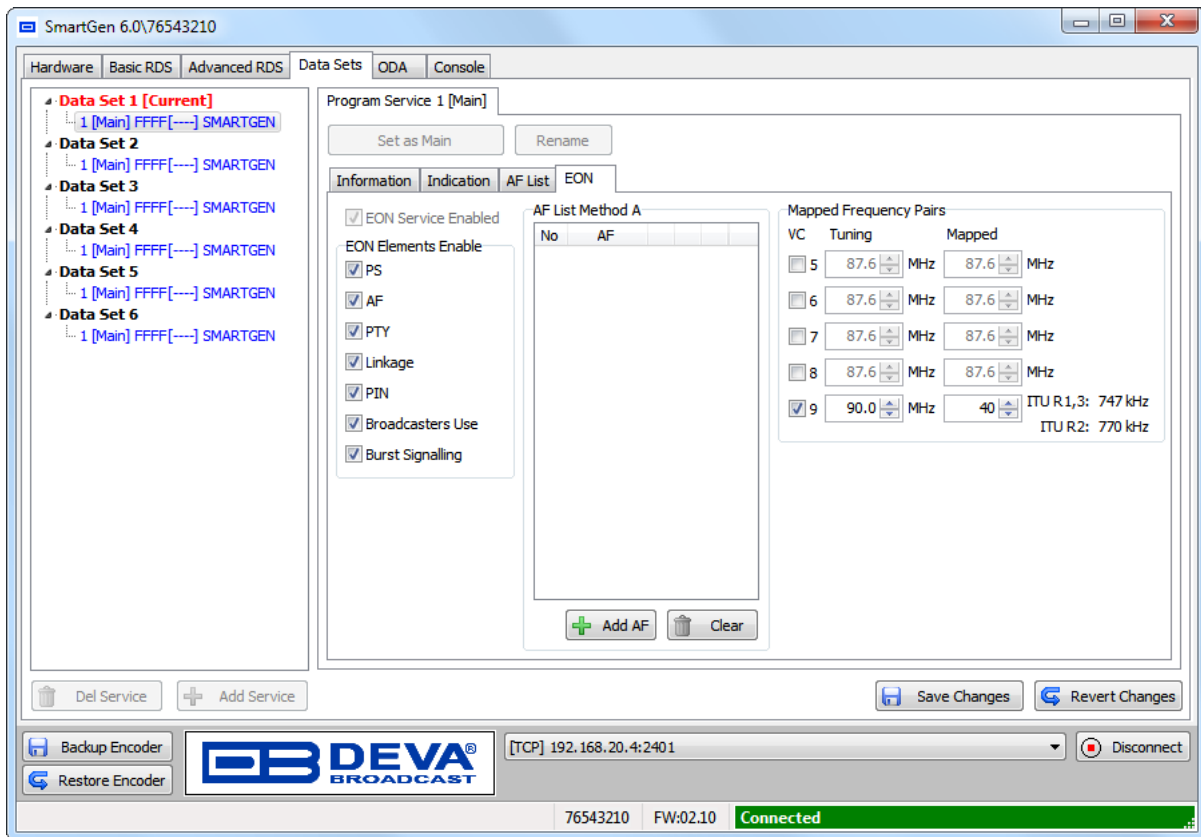
*These functionalities are supported by all RDS/RBDS Encoders.*



List of the alternative frequencies is found here. You can change the priority of the AFs using the interactive arrow buttons and delete the unneeded with the [X] button. A new AF is added via the [+Add AF] button. Use the drop-down menu options to change the Method from A to B and vice-versa. Of course, [Clear] will delete the table's entire content.

## EON

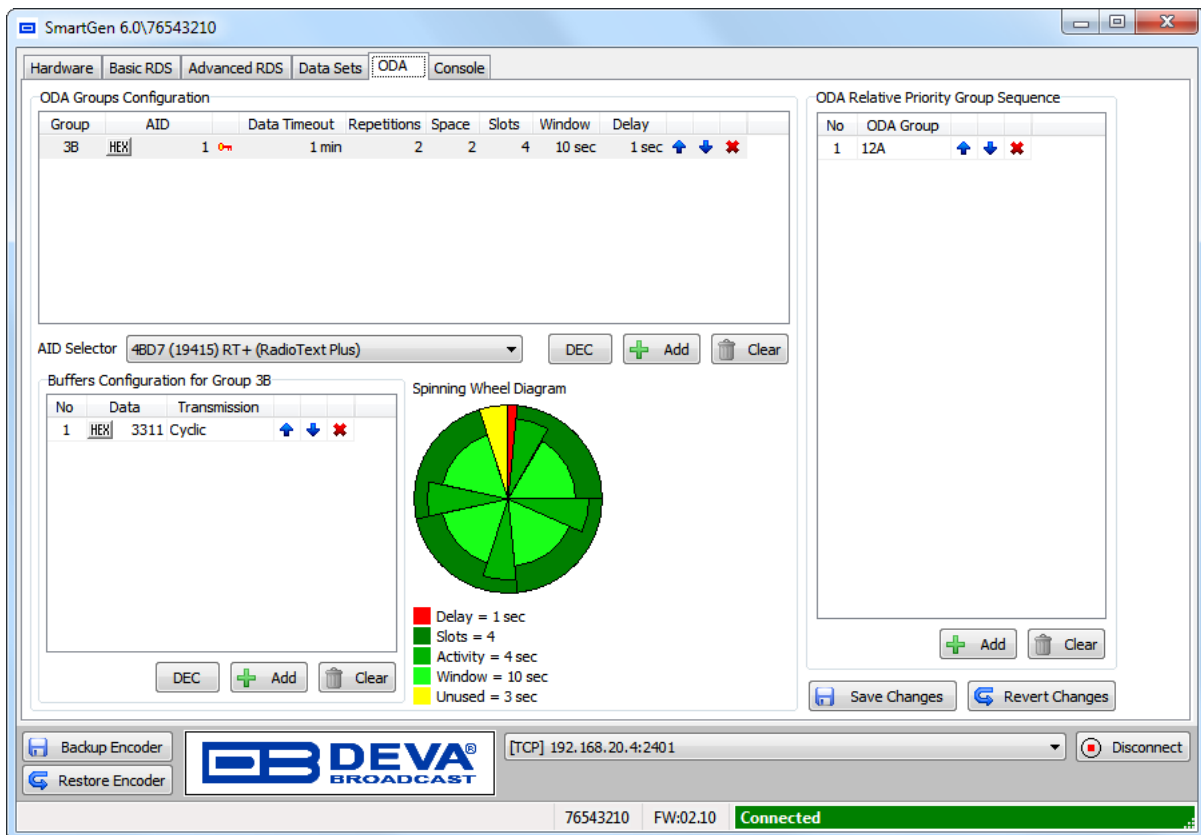
*These functionalities are supported by all RDS/RBDS Encoders.*



In this tab you can generally enable the EON service and enable or disable the transmitted EON Elements. The ones that are not needed can be disabled.

## ODA

*These functionalities are supported by all RDS/RBDS Encoders.*



This screen visualizes the essential parameters needed for every ODA RDS applications.

ODA Group Configuration contains different aspects of the ODA Group parameters. The groups listed here are closely connected with the transmission of group 3A. For further information refer to the UECP standard.

Application identification for Open data (AID) Selector is unique identification associated with one ODA group, and is used to identify which application data is carried with ODA group. AID could be edited manually or changed by using AID selector. To facilitate AID usage software offers predefined AIDs for commonly used ODA Application, as well opportunity to append custom defined. Use AID section from the Software Settings ([see "AIDs" on page 30](#)).

**ATTENTION:** The 'key' image appearing next to AID defines the ODA Data command access rights, which is different from Encoder Access Rights. The yellow background color of the 'key' indicates that the Access Rights for this ODA are disabled and the transmission of this ODA can be stopped.

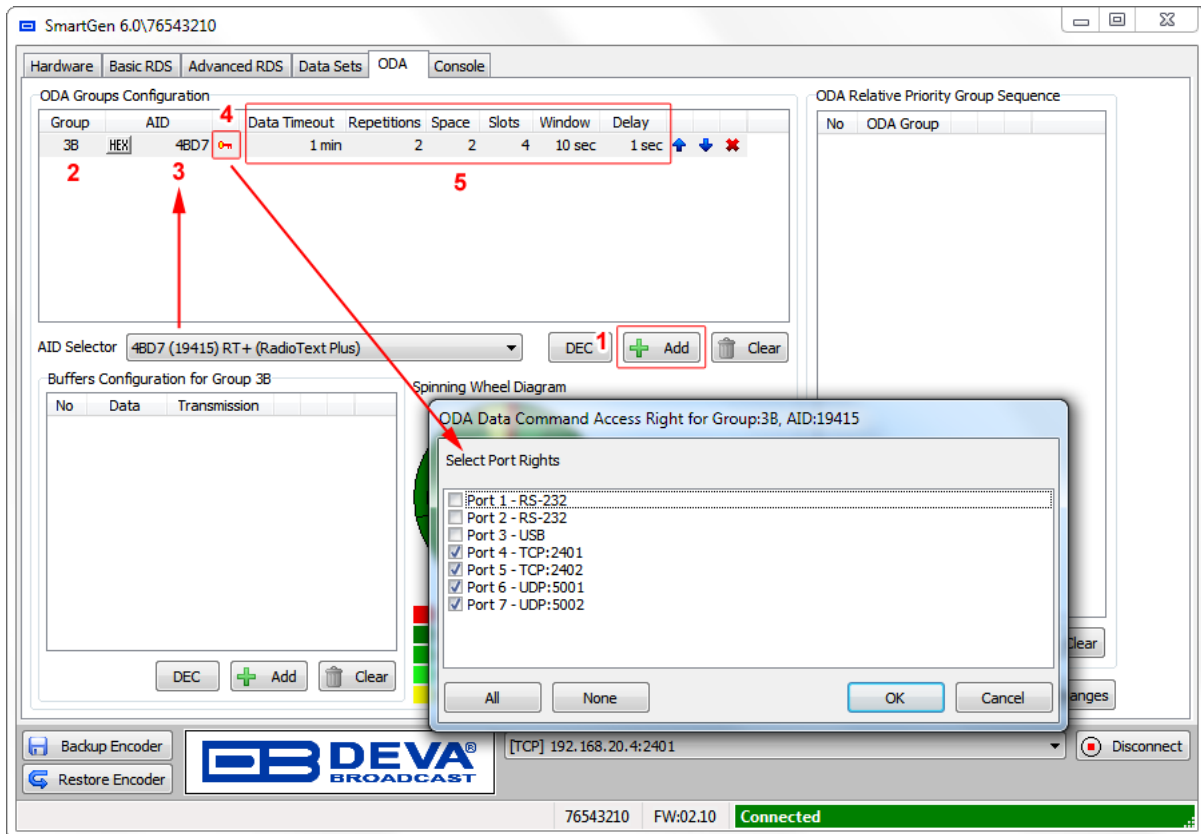
ODA Buffers Configuration is bound with the selected ODA group and is used for adding short messages, which are transmitted within the 3A groups.

Space, Time Slots, Window Time and Delay Time are the parameters which envelop the Spinning Wheel mode of transmission. A graphical representation is also at one's disposal.

ODA Relative Priority Group Sequence is used to set the relative priority level for the groups transmitted using the ODA free format command with "immediate" priority.

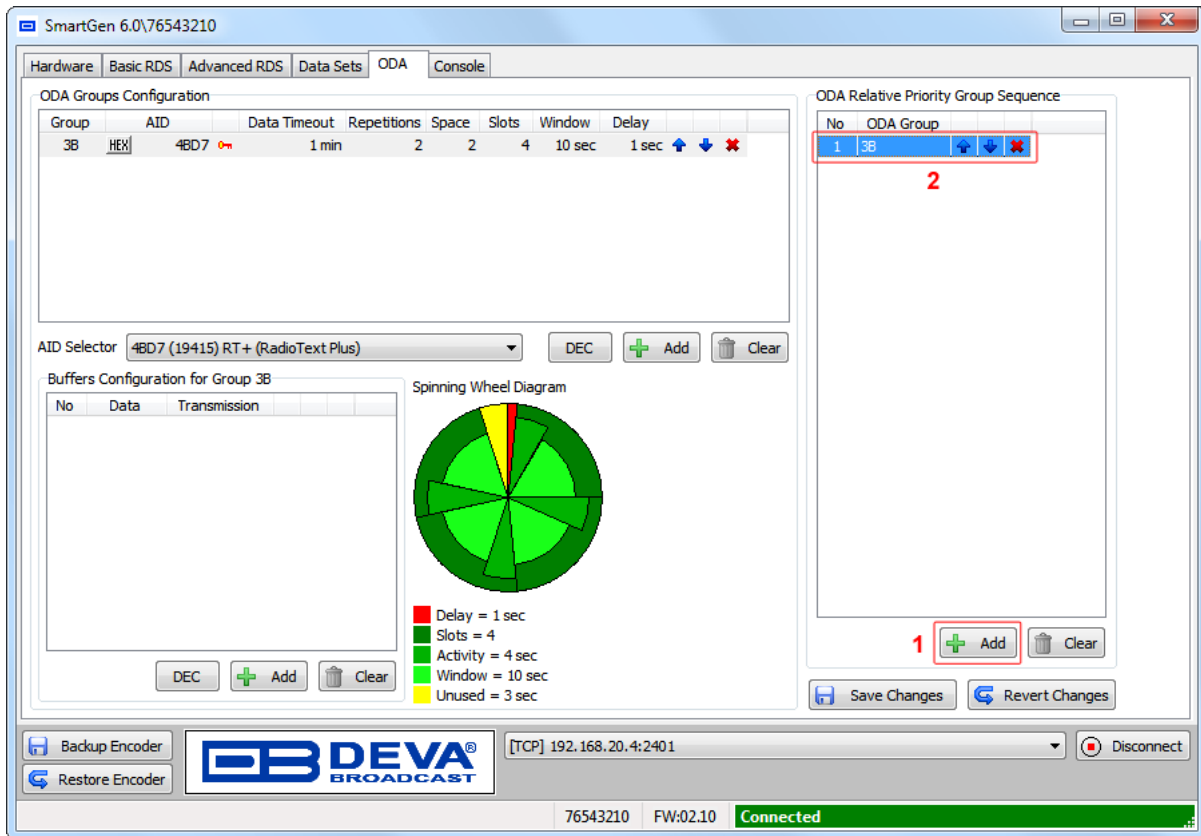
**NOTE:** The SmartGen Encoders Manager software only configures the ODA groups and is not capable of feeding the encoder with streamed custom data.

## How to create an ODA Groups Configuration



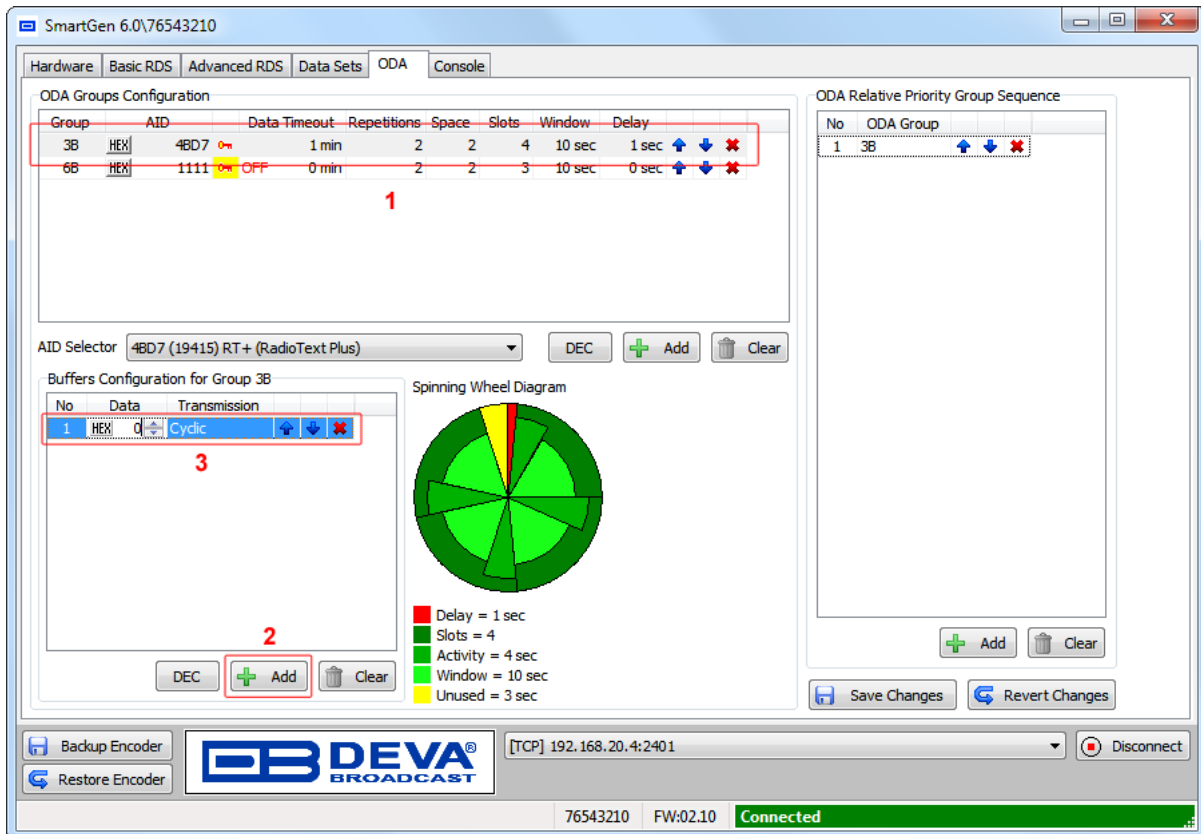
1. Press [+Add];
2. Select the Group number;
3. Specify AID;
4. Select Port Rights and press [OK];
5. Specify Data Timeout, Repetitions, Space, Slots, Window and Delay;
6. Repeat steps from 1 to 5 for all ODA groups to be added;
7. Press [Save Changes].

## How to create an ODA Relative Priority Group Sequence List



1. Press [+Add];
2. Select the group number from the drop-down menu;
3. Repeat steps from 1 to 2 for all ODA groups to be added;
4. Press [Save Changes].

## How to create a Buffers Configuration for ODA Group



The screenshot shows the SmartGen 6.0 interface with the following components:

- ODA Groups Configuration Table:**

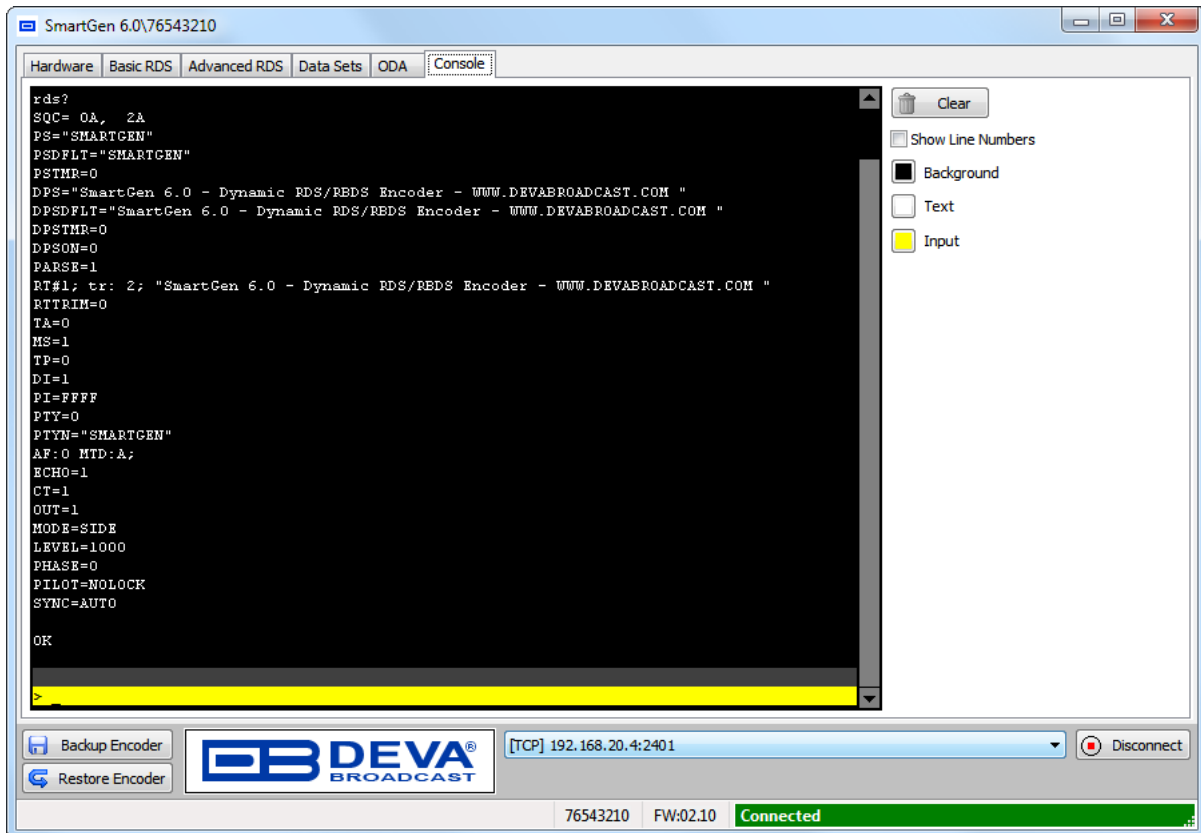
Group	AID	Data-Timeout	Repetitions	Space	Slots	Window	Delay
3B	HEX  4BD7	1 min	2	2	4	10 sec	1 sec
6B	HEX  1111	OFF	2	2	3	10 sec	0 sec
- AID Selector:** 4BD7 (19415) RT+ (RadioText Plus)
- Buffers Configuration for Group 3B Table:**

No	Data	Transmission
1	HEX  0	Cyclic
- Spinning Wheel Diagram:** A circular diagram with 7 segments. A legend indicates:
  - Red: Delay = 1 sec
  - Green: Slots = 4
  - Light Green: Activity = 4 sec
  - Dark Green: Window = 10 sec
  - Yellow: Unused = 3 sec
- Buttons:** DEC, Add, Clear, Save Changes, Revert Changes.
- Status Bar:** 76543210 FW:02.10 Connected

1. Select ODA Group;
2. Press [+Add];
3. Click on HEX/DEC and specify number. Then select Transmission type from the drop-down menu;
4. Repeat steps from 2 to 3 for all Buffers to be added;
5. Press [Save Changes].

## CONSOLE

*These functionalities are supported by all RDS/RBDS Encoders.*



This is a simplified terminal, which allows ASCII commands to be sent to SmartGen encoder. The Console is mainly used for test purposes and for possible adjustments to the arbitrary Automation System.

Please refer to the complete User manual for detailed information on the encoder commands and prompts.



## PRODUCT REGISTRATION CARD

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## APPENDIX E

### ALARMS

The alarms are fast and reliable reporting mechanism in case of change in pre-defined parameters. Below you will find an explanation of the types of event that might trigger an alarm, the settings that should be applied and their properties.

Type of event	Enable	Trigger & Release	Thresholds	Description	NOTE
UECP data port timeout	YES	NO	NO	There are NO valid UECP messages for the time determined by UECP port timeout parameter.	Applicable for all UECP ports (1-7).
RDS loss	YES	YES	NO	Loss of the RDS at the output of the encoder.	Will be also triggered when the RDS signal is stopped, or when the level is manually set to 0mV by the user.
High BER	YES	YES	NO	Presence of BER in the RDS signal	If the device is operating normally, this alarm will not be triggered.
Pilot synchronization loss	YES	YES	NO	Loss of synchronization with the external pilot tone	
RDS group loss	NO	YES	NO	Loss (absence) of a specific RDS group/s in the RDS data stream for a pre-defined time	There is an 'Enable flag' for each of the RDS Group types
DSN change	YES	NO	NO	Change of the current DSN	
PSN change	YES	NO	NO	Change of the main PSN	
Temperature	NO	YES	YES	The internal temperature of the equipment is lower or higher than the specified threshold	High and Low threshold are enabled/ disabled separately
TA timeout	YES	NO	NO	TA timeout has occurred	

**NOTE:** The change of DSN and PSN can be a dynamic process, which makes the “Idle” status definition of alarms PSN change and DSN change impossible. Therefore, in case PSN and/or DSN alarm occurs and is finalized through one of the authorized channels (E-mail, SNMP), the alarm status will remain OK, and the GPO will not be triggered through these alarms.

Due to the diverse nature of the observed physical alarm events, the alarms cannot be completely unified.