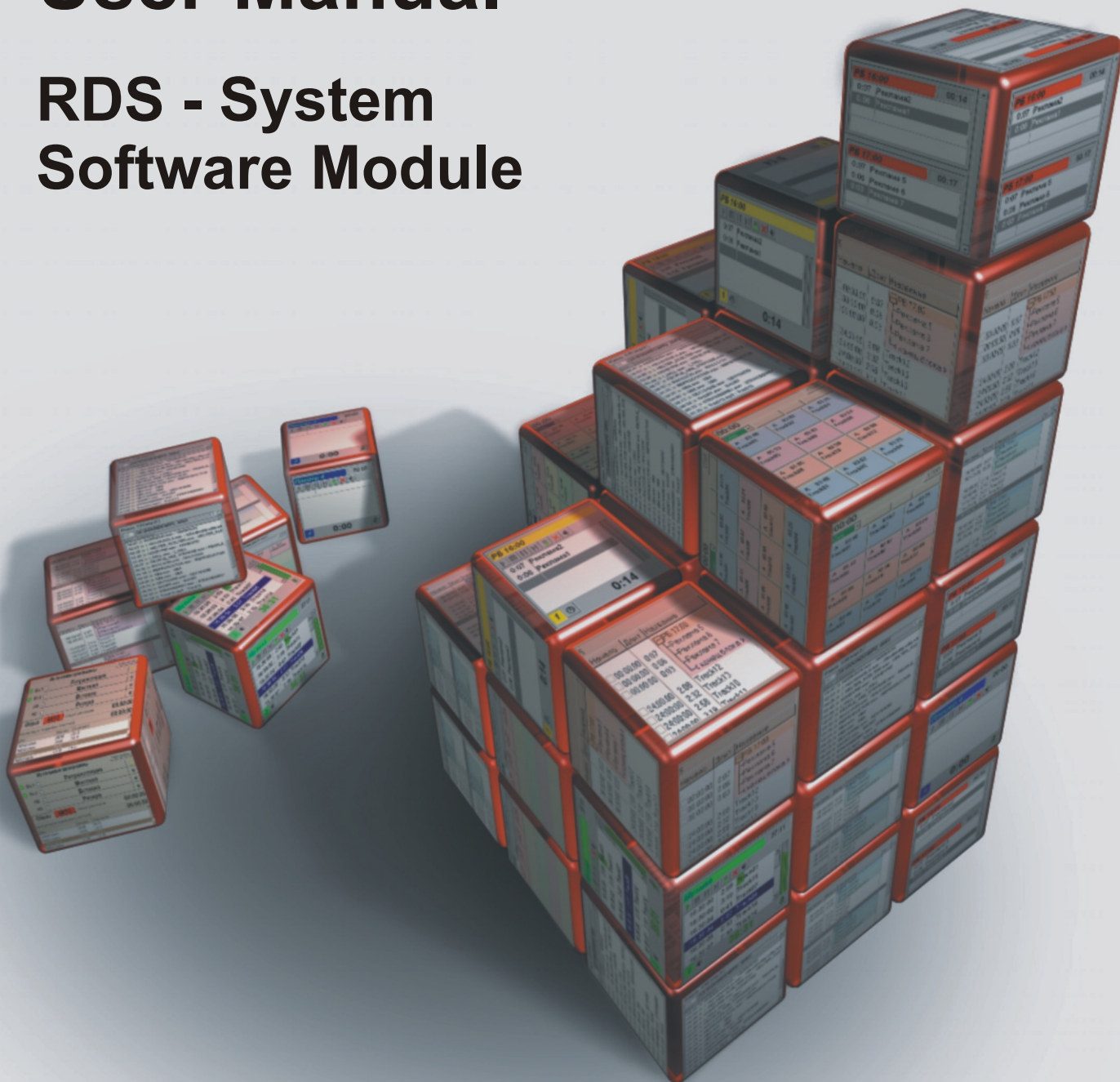


# **DIGISPOT® II**

## **Broadcast - System**

### **User Manual**

### **RDS - System Software Module**



**The Building Blocks to set up a complete System for  
Radio Broadcast operation to grow with the Needs.**

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## 1 RDS Service configuration

RDS service is used for generating of serial data stream to be sent to RDS-coder.

Service allows data loading from external sources (in particular, to obtain fresh weather reports, currency rates etc.), process it by XSLT-transform, save data and send it over to coder. RDS service provides displaying of static and dynamic information on receiver's display. Static data may be a line with e.g. the station WEB site, radio station name and frequency; dynamic data may be data loaded dynamically from external sources, e.g. title and artist of currently played piece of music. Data may be shown on a display as a creeping line or may stay unchanged for a given period of time.

Main source for RDS data is radio broadcast automation system DIGISPOT II, providing direct communication with DJin in real time for acquiring Meta data of musical piece being played back in one of its players. For every musical item of DIGISPOT II Media Data Base you can use Artist and Title parameters shown in General tab of Properties window, or alternative information set in RDS tab (if parameters are set on RDS tab, they will be used obligatory). Service also allows adding proprietary static strings in the stream.

Apart from direct communication with DJin, possibility is provided for data import from XML-files (this technology was used also in old versions of DIGISPOT II; direct communication was implemented in DJin starting from version 2.13).

Setting of the RDS service is done by editing of configuration file stored in the installation folder of the service: `../rds_server/server.xml`. The file describes sequence of actions performed with data (e.g., loading of data with the help of `LOAD_XML`, then applying `PARSE_XSL` transform, storing and sending over to coder c `SAVE_DST_FORA_600`), as well as informational string exposure on a display settings (exposure duration or number of runs of creeping line). Detailed description of service parameter settings could be found below in this document.

Editing of configuration file could be done in any text editor. RDS parameters are entered in XML-format; the opening angle bracket is followed by parameter name, then come attributes and their values in format:

```
<PARAMETER ATTRIBUTE1='VALUE1' ATTRIBUTE2='VALUE2' />
```

List of attributes is closed by closing angle bracket.

RDS service is sensible to letter case in the configuration file.

On finishing editing of configuration file and after saving it you have to restart service in order to apply all the changes you made.

## 2 Description of parameters

### 2.1 RDS\_SERVER

RDS\_SERVER – allows specifying parameters of RDS service.

Available attributes:

#### 2.1.1 PERIOD

- period of repeated running of actions (in seconds);

#### 2.1.2 RETRY

– number of repeats;

#### 2.1.3 PORT

– server port, used for getting data from DIGISPOT II DJin.

String example:

```
<RDS_SERVER PERIOD='1000' RETRY='30'>
```

## 2.2 LOAD\_XML

LOAD\_XML parameter allows controlling data acquisition from remote XML - source.

Available attributes:

### 2.2.1 XML\_ID

- source ID (string); later, data will be identified in the service according to this ID;

### 2.2.2 INET\_SRC

- data location address (URL) (e.g., <ftp://ftp.data.com/data.xml>);

### 2.2.3 LOGIN

- user name;

### 2.2.4 PASSWORD

- password;

### 2.2.5 PROXY

- proxy server address (URL) (format address:port);

### 2.2.6 PASSIVE

- type of connection to server, which owns data source (parameter may have value: ON or OFF).

String example:

```
<LOAD_XML XML_ID='XML_1' INET_SRC='ftp://ftp.prime-tass.ru/cuts/brent.xml'  
LOGIN='login' PASSWORD='password' PROXY='192.168.0.254:3128' PASSIVE='ON' />
```

## 2.3 PARSE\_XSL

PARSE\_XSL parameter allows applying XSLT-transform to loaded XML data.

Available attributes:

### 2.3.1 STYLE

- full path and the name of XSL-transform file on a local disk;

### 2.3.2 XML\_ID

- data ID (must match previously assigned ID on the stage of loading data).

String example:

```
<PARSE_XSL XML_ID='XML_1' STYLE='C:\Parse.xsl' />
```

## 2.4 WORD

Parameter WORD allows loading of a word (no more than 8 symbols) to RDS service.

Available attributes:

### 2.4.1 VAL

- data being loaded (8 symbols);

### 2.4.2 DUR

- duration of exposing of loaded data on receiver's display (seconds).

String example:

```
<WORD VAL='RDS' DUR='5' />
```

## 2.5 STR

Parameter **STR** allows loading of a string with data into coder. Unlike parameter **WORD**, described previously, **STR** can handle data of unlimited length.

Available attributes:

### 2.5.1 VAL

– data being loaded;

### 2.5.2 GROUP

– group start identifier (due to RDS service internal logic, data stream may be broken not in any point; group start identifier shows point of possible break); attribute may have values **ON** or **OFF**.

String example:

```
<STR DUR='1' VAL='FM' GROUP='ON' />
```

## 2.6 SAVE\_DST\_FORA\_600

**SAVE\_DST\_FORA\_600** parameter allows sending data to RDS coder.

Available attributes:

### 2.6.1 COM

- COM-port number, connected to the device;

### 2.6.2 MAX\_COUNT

– coder buffer size; by default equals to '15'.

String example:

```
<SAVE_DST_FORA_600 COM='4' MAX_COUNT='15' />
```

## 2.7 SAVE\_XML

**SAVE\_XML** parameter allows saving loaded data **LOAD\_XML** to a file.

Available attributes:

### 2.7.1 XML\_ID

– source ID (must match previously assigned ID on the stage of loading data);

### 2.7.2 FILE\_DST

– full path and file name for saving data.

String example:

```
<SAVE_XML XML_ID='' FILE_DST='C:\dest_xsl.xml' />
```

## 2.8 SAVE\_DST\_XML

**SAVE\_DST\_XML** parameter allows saving data processed **PARSE\_XSL** to a file.

Available attributes:

### 2.8.1 FILE

- file.

String example:

```
<SAVE_DST_XML FILE='C:\dest_xsl.xml' />
```



## 2.9 Example of XML file:

```
<RDS_SERVER PERIOD='120' RETRY='30' PORT='10003'>
<TODO>
    <WORD VAL='RADIO' DUR='5' />
    <STR VAL='Sunshine for 90% of the day' />
    <SAVE_DST_FORA_600 COM='4' MAX_COUNT='15' />
</TODO>
```

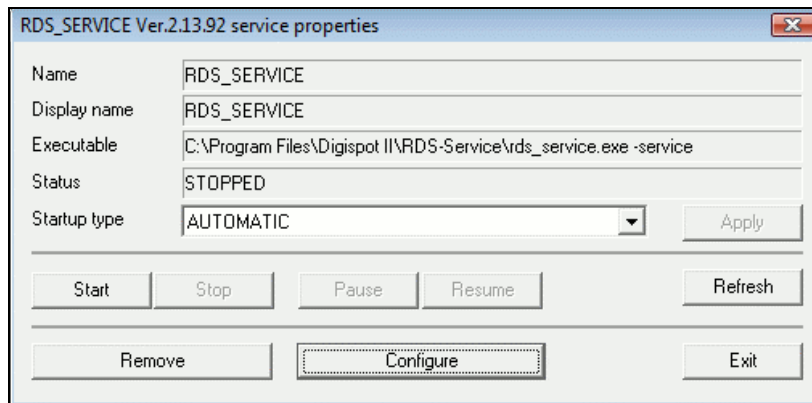
To display of RDS receiver:

"RADIO" 5 sec

"Sunshine for 90% of the day" by creeping line

## 3 Control interface

Figure 1 shows RDS service control interface.



**Abb. 1.** RDS service properties

Parameters **Name**, **Display name**, **Executable**, **Status** and **Startup type** are standard for system processes. Buttons **Start**, **Stop**, **Pause** and **Resume** provide start and stop of system process.

Button **Configure** opens RDS service configuration window; **Remove** – deletes it.



## 4 DIGISPOT® II DJin settings

All settings enumerated below are performed in menu **Service - Settings – Other – RDS**.  
For correct working with RDS you have to set the following parameters:

### 4.1.1 Connect to RDS

– Yes.

### 4.1.2 Service address

- IP address of a PC with working RDS (if service is started locally, 127.0.0.1).

### 4.1.3 Port number

– must match value stated in the XML service file string `<RDS_SERVER ... PORT='10003'>`

### 4.1.4 Show playing element

– if that parameter is set, information about all element of «Music» type, being played in a player, will be sent to RDS. By default the following information is shown: title of a song, artist and duration; - all that is taken from MDB. If element's tab RDS is being filled, then particular that information will be sent to RDS.

### 4.1.5 Show format

– string of information generation from file's Meta data:

4.1.5.1 %A - Artist

4.1.5.2 %T - Title

4.1.5.3 %D – Duration

### 4.1.6 Number of demonstrations

– number of string exposures during playing of element. During the rest time of element playing, static information will be displayed.



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## 6 Notes

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