



# Supported RDS Encoders

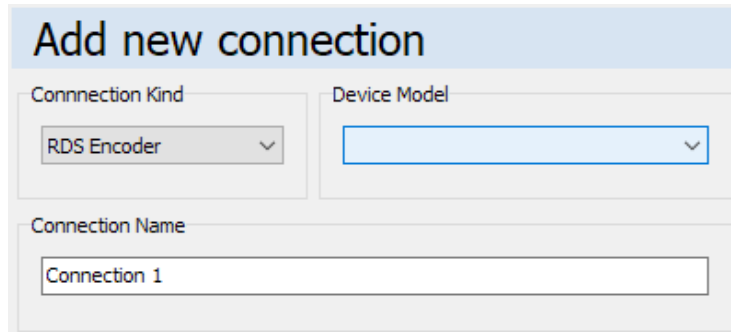
## Quick Guide

# To Add New RDS Encoder

1. Double-click on **Add new connection** icon.



2. In the **Connection Kind** field, select **RDS Encoder**.




The screenshot shows a dialog box titled "Add new connection". It contains three main sections: "Connection Kind" with a dropdown menu showing "RDS Encoder", "Device Model" with an empty dropdown menu, and "Connection Name" with a text input field containing "Connection 1".

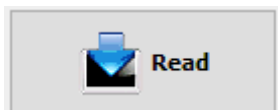
3. Select the **Device Model**.
4. Configure the connection parameters.
5. Confirm by **Add** button.

# To Activate the Application

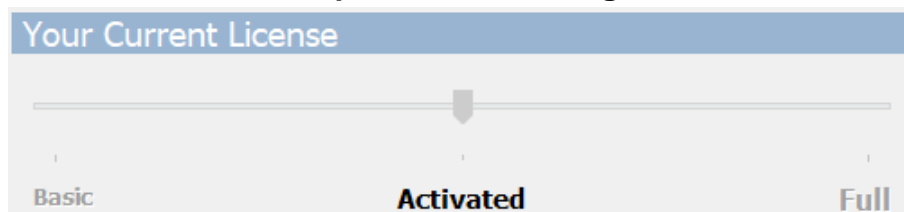
The Activation is a simple and automated process of getting access to all functions and features associated with the RDS encoder.

The Activation is completely free of charge and it's supported by all RDS encoders and communication protocols with the exception of Demo encoder and those marked with the  icon.

1. Make sure the connection is set up as **bidirectional**.
2. Perform any bidirectional operation with the RDS encoder, for example **RDS Content – Program – Read**:



3. Check the status in **Help – License Manager**:



4. The Activation is permanent in the context of the installation and it's valid for all connections.

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Note:

Users who purchased the Full license also got all benefits of the Activated license. For most of the RDS encoders the Magic RDS 4 is completely free and the Full license is not required.

# RDS Encoder / Device Model: P164

<b>Communication interface</b>	Ethernet, USB
<b>Minimum firmware version required</b>	2.2b *)
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP, XCMD
<b>Default communication protocol</b>	ASCII, XCMD
<b>RDS Spy support</b>	Yes ✓
<b>Data Sets</b>	6 **)
<b>Direct virtual port support</b>	Yes ✓

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Notes:

\* Option 'Encapsulate All Outgoing Data to UECP' requires firmware version 2.2c or later.

\*\* From firmware version 2.2c. In previous versions the number of supported Data Sets is 2.

# RDS Encoder / Device Model: P132

<b>Communication interface</b>	Ethernet, USB
<b>Minimum firmware version required</b>	2.1f *)
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP, XCMD
<b>Default communication protocol</b>	ASCII, XCMD
<b>RDS Spy support</b>	Yes ✓
<b>Data Sets</b>	6 **)
<b>Direct virtual port support</b>	Yes ✓

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Notes:

\* Option 'Encapsulate All Outgoing Data to UECP' requires firmware version 2.2c or later.

\*\* From firmware version 2.2c. In previous versions the number of supported Data Sets is 2.

# RDS Encoder / Device Model: P232

<b>Communication interface</b>	Device dependent
<b>Minimum firmware version required</b>	2.1f *)
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP, XCMD
<b>Default communication protocol</b>	ASCII, XCMD
<b>RDS Spy support</b>	Yes ✓
<b>Data Sets</b>	6 **)
<b>Direct virtual port support</b>	Yes ✓

The P232 encoder is widely used in various FM equipments. It can be identified by 44-pin '46K80' integrated circuit and 16.000 MHz crystal on the device's board.

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Notes:

\* Option 'Encapsulate All Outgoing Data to UECP' requires firmware version 2.2c or later.

\*\* From firmware version 2.2c. In previous versions the number of supported Data Sets is 2.

# RDS Encoder / Device Model: P232U

<b>Communication interface</b>	Serial / USB
<b>Minimum firmware version required</b>	2.1f *)
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP, XCMD
<b>Default communication protocol</b>	ASCII, XCMD
<b>RDS Spy support</b>	Yes ✓
<b>Data Sets</b>	6 **)
<b>Direct virtual port support</b>	Yes ✓

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Notes:

\* Option 'Encapsulate All Outgoing Data to UECP' requires firmware version 2.2c or later.

\*\* From firmware version 2.2c. In previous versions the number of supported Data Sets is 2.

# RDS Encoder / Device Model: P332

<b>Communication interface</b>	Ethernet, Serial
<b>Minimum firmware version required</b>	2.1f *)
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP, XCMD
<b>Default communication protocol</b>	ASCII, XCMD
<b>RDS Spy support</b>	Yes ✓
<b>Data Sets</b>	6 **)
<b>Direct virtual port support</b>	Yes ✓

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Notes:

\* Option 'Encapsulate All Outgoing Data to UECP' requires firmware version 2.2c or later.

\*\* From firmware version 2.2c. In previous versions the number of supported Data Sets is 2.



## RDS Encoder / Device Model: **PIRA32**

<b>Communication interface</b>	Device dependent
<b>Minimum firmware version required</b>	1.6a
<b>Free use (supports Activation)</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP
<b>Default communication protocol</b>	ASCII
<b>RDS Spy support</b>	No
<b>Data Sets</b>	2
<b>Direct virtual port support</b>	Yes ✓

The PIRA32 encoder is widely used in various FM equipments. It can be identified by 28-pin '18F25...' integrated circuit and 4.332 MHz crystal on the device's board.

# RDS Encoder / Device Model: **Readbest**

<b>Communication interface</b>	Device dependent
<b>Free use (supports Activation)</b>	Yes ✓ (ASCII protocol)
<b>Communication protocol support</b>	ASCII, UECP ⇄
<b>Default communication protocol</b>	ASCII
<b>RDS Spy support</b>	Yes (from firmware version 1.5)
<b>Data Sets</b>	Device dependent
<b>Direct virtual port support</b>	Yes ✓

The Readbest encoder is a C-based software library which is implemented in several FM broadcasting devices, like BW TX V3.

Change log from version 1.4 to version 1.5 (please request the latest firmware from your vendor):

- real-time output monitoring by RDS Spy via any communication port
- UECP MEC 13, 14 now automatically inserts filler if required
- UECP MEC 24 @ buffer config 0x00 is now ignored if the group is not included in the group sequence
- UECP MEC 0A now toggles RT type bit according to the specification
- UECP MEC 0A now clears entire RT prior to filing by new text
- UECP MEC 17 now works also with DSN parameter set to 0
- UECP MEC 18 now returns sequence counter as well
- UECP MEC 34 fixed
- unwanted sequence counter reset fixed
- EON variant code 13 now includes TA

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Notes:

\* For this device model, the option 'Encapsulate All Outgoing Data to UECP' is not applicable to ASCII commands which have no UECP equivalent.

# RDS Encoder / Device Model: **Demo Encoder**

<b>Communication interface</b>	TCP/IP (localhost only)
<b>Free use</b>	Yes ✓
<b>Communication protocol support</b>	ASCII, UECP
<b>Default communication protocol</b>	ASCII
<b>RDS Spy support</b>	Yes
<b>Data Sets</b>	4
<b>Direct virtual port support</b>	Yes ✓

The Demo Encoder is not a physical device. Rather than this, it establishes a connection to the embedded software emulator of real FM broadcast encoder. The emulation is based on the Readbest encoder. User may visualize output data by clicking on the RDS Spy button.

For further details about how to configure the remote Demo Encoder, please follow the document [readbest.pdf](#) (READBEST RDS Encoder), section **Annexes / Demo Encoder**.

# RDS Encoder / Device Model: **Remote Bridge**

<b>Communication interface</b>	Ethernet, Serial
<b>Free use</b>	Yes ✓
<b>Transfer protocol</b>	Internal Magic RDS 4 protocol (ASCII compatible)
<b>Output communication protocol</b>	Target device dependent
<b>RDS Spy support</b>	N/A
<b>Data Sets</b>	N/A
<b>Direct virtual port support</b>	Yes ✓

The Remote Bridge is not a physical device. Rather than this, it forwards data using unidirectional communication mode to another (remote) Magic RDS 4 application for the purpose of data distribution to remote RDS encoder(s). The Remote Bridge does not need a specific RDS encoder model, i.e. it can send data to a network of different models.

Typically, the Remote Bridge connects to a Virtual port of a Bridge established in the remote Magic RDS 4 application.

For further details about how to configure the remote Magic RDS 4 application, please follow the document [m4vp.pdf](#) (Bridges and Virtual Ports), section **Remote Bridge**.

# To Buy the Full License of the Application ↩

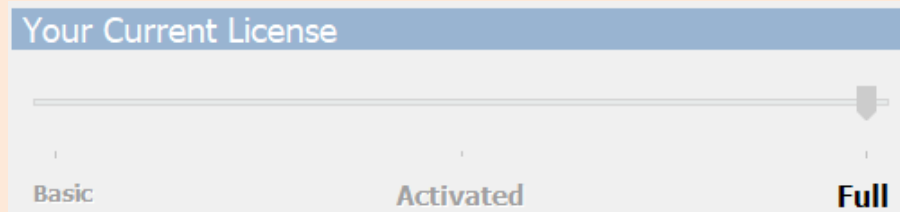
The Full licence brings an unlimited access to all functions and features of the application:

The Full license is necessary for RDS encoders or communication protocols whose are marked by the ↩ icon. It is also required for functions and features which are not associated with particular RDS encoder model (for example plain text export or web publishing on local server).

**Before buying the Full license, the application is still fully functional** in the trial mode except the text services which may contain ads.

Purchasing the Full license is simple and typically takes no more than a few minutes:

1. In the Magic RDS 4 main menu, select **Help – License Manager**.
2. Click on the **Get Full version** button to purchase the license online.
3. If you're a new user, continue using the option **Get new User ID**. Follow the instructions in the web browser to pay and generate your User ID and License key.
4. Finally, go again to the **Help – License Manager**. Fill your License key and click on **Apply** button:



5. The license is life-time and includes all future updates. Keep your User ID for future use.

# RDS Encoder / Device Model: **MRDS1322**

<b>Communication interface</b>	Device dependent
<b>Free use (supports Activation)</b>	No, requires full version
<b>Communication protocol</b>	Binary
<b>RDS Spy support</b>	No
<b>Data Sets</b>	1
<b>Direct virtual port support</b>	No

These encoders are embedded in various FM equipments as a basic RDS encoder solution. So far, they have been used with Tiny RDS application. The Magic RDS 4 now gives access to most of advanced RDS features also to users of the MicroRDS / MRDS1322 encoders:

- Common or independent control of up to 128 encoders
- Direct support of connection over Ethernet
- Radiotext Plus (RT+) and real-time (CT) transmission
- External text sources with powerful text processing tools
- Task scheduler, Text conditions, SNMP, ASCII terminal emulator, encoder backup/restore
- Connection bridges with virtual ports and communication protocol translation (for example from UECP)

The MRDS1322 encoder can be identified by 20-pin '13K22' integrated circuit and 4.332 MHz crystal on the device's board.

# RDS Encoder / Device Model: **Generic UECP**

<b>Communication interface</b>	Device dependent
<b>Free use (supports Activation)</b>	No, requires full version
<b>Communication protocol</b>	UECP
<b>RDS Spy support</b>	No
<b>Data Sets</b>	Device dependent
<b>Direct virtual port support</b>	No

This option applies to all RDS encoders which support a substantial part of the UECP (SPB 490) specification. The Magic RDS 4 now gives access to advanced RDS functions, including features which are not contained in the original UECP document:

- Common or independent control of up to 128 encoders
- Radiotext Plus (RT+) software extension
- Dynamic PS software extension
- External text sources with powerful text processing tools
- Task scheduler, Text conditions, SNMP, ASCII terminal emulator
- Connection bridges with virtual ports

# RDS Encoder / Device Model: **Lite ASCII**

<b>Communication interface</b>	Device dependent
<b>Free use (supports Activation)</b>	No, requires full version
<b>Communication protocol</b>	Basic set of ASCII commands
<b>RDS Spy support</b>	No
<b>Data Sets</b>	1
<b>Direct virtual port support</b>	No

These encoders are available either stand-alone or embedded in various FM equipments as a basic RDS encoder solution. The Magic RDS 4 now gives access to some advanced RDS features also to users of the 'Lite ASCII' encoders:

- Common or independent control of up to 128 encoders
- Radiotext Plus (RT+), if supported by the encoder
- External text sources with powerful text processing tools
- Task scheduler, Text conditions, SNMP, ASCII terminal emulator
- Connection bridges with virtual ports and communication protocol translation

The 'Lite ASCII' encoder can be identified by its communication protocol (see the original device manual):

- The 'Lite ASCII' encoder uses specific command set including TEXT, DPS, DPSS, PARSE
- Any command entry is confirmed by 'OK' or 'NO' sequence



# RDS Encoder / Device Model: **User Defined 1**

<b>Communication interface</b>	Device dependent
<b>Free use (supports Activation)</b>	No, requires full version
<b>Communication protocol</b>	User defined ASCII commands
<b>RDS Spy support</b>	No
<b>Data Sets</b>	N/A
<b>Direct virtual port support</b>	No

By selecting this model, user can define any command (prefix) for Radiotext and Dynamic PS. This option is intended only for use with External text tool. Static content cannot be edited this way.

To define the commands, go to Device Setup – Special. To find the correct command, please follow your device documentation.

## **Example:**

If following command is defined for Radiotext: **RT=**

resulting output string will be: **RT=The text from External text source here**↵