INTRODUCTION

The Magic RDS 4 is a new generation middleware which adds value especially to your existing radio broadcast:

For FM and DAB+ radio stations

The software is designed to manage, generate, and automate Radio Data System (RDS/RBDS) content for FM broadcast transmitters and audio processing equipment. It serves as a central platform for collecting metadata from various external sources—such as broadcast automation systems, network services, serial devices, or structured files—and converting it into the appropriate formats required by RDS encoders.

The software enables broadcasters to automate dynamic text fields like Radiotext, RT+, Program Service names, and advertising messages, while also offering tools for device control, scheduling, monitoring, and integration with third-party systems. Its flexible communication interfaces, scripting capabilities, and wide protocol support make Magic RDS 4 suitable for both simple standalone installations and complex multi-transmitter networks.

For all radio stations and for general use

- Web publishing of text messages
- Scheduling of text content and control commands
- Data interface conversion

Flexible Licensing for All Users

The software is written for Windows operating system and its use is free of charge for most encoders. A paid version with enhanced features and general purpose usability is available for other encoders and for internet radio stations.

Developer

Ing. Jan Kolář, PIRA Digital s.r.o., Czech republic

pira.cz/rds/
pira-online.com
magicrds.com

Magic RDS 4 Technical Requirements

	Minimum	Recommended
Operating system	Windows 7	Windows 10 or later
PC configuration	256 MB of RAM, 100 MB of HDD free space	8 GB of RAM 2 GB of HDD free space RJ-45 network adapter
RDS encoder (optional)	MicroRDS / MRDS1322 or ASCII or UECP control interface	P232(U) or P164 RDS Encoder

Recommended Operator Knowledge

To operate the Magic RDS 4 effectively, the user should have a basic understanding of general data communication principles, including serial and TCP/IP networking, as well as the ability to work with file system and common data formats such as XML and JSON. It is recommended that the operator can read and interpret technical documentation for the devices and systems being integrated with the software, including protocol descriptions and command references.

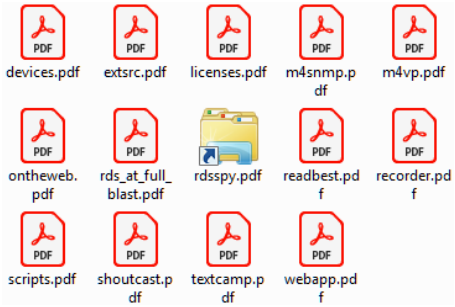
For more advanced configurations, familiarity with broadcast-specific terminology, simple scripting, automation workflows and English-language technical materials is beneficial.

Complete List of Help Files, Manuals and Guides

To access the files, select Help - Magic RDS Help.

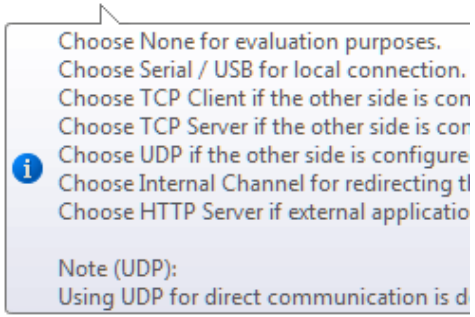
Document title	File name
License Options	licenses.pdf
Supported RDS Encoders and other devices	devices.pdf
Web-based Control Application	webapp.pdf
External Text Sources	extsrc.pdf
Text Campaigns	textcamp.pdf
Bridges and Virtual Ports	m4vp.pdf
Script Commands API Reference	scripts.pdf
Event-Driven MP3 Audio Recorder	recorder.pdf
Put Artist and Title on the Web	ontheweb.pdf
Put Artist and Title to Shoutcast DNAS Server	shoutcast.pdf
SNMP Basics	m4snmp.pdf
Assign Network Adapter	netadapt.pdf
READBEST Demo RDS Encoder	readbest.pdf
RDS AT FULL BLAST	rds_at_full_blast.pdf
RDS Spy Decoder	rdsspy.pdf

Available Technical Support and Help Resources



Help Files

Select menu item Help - Magic RDS Help



Context Bubble Help

Hover your mouse over the item you want to know more about

Online Technical Forum

Visit
https://pira.cz/forum/

License Setup

The license settings can be accessed via the menu item Help - License Manager. What kind of license you need depends on the purpose of use. You can find more information in licenses.pdf.

To get the Standard or Full license, please visit https://magicrds.com.

Installation

Installation on a new PC

1. Download and run the MagicRDS_Setup.exe.
2. Choose a new folder for the installation.
3. Follow the instructions from the RDS encoder's manual.

Update from older 4.x.x version

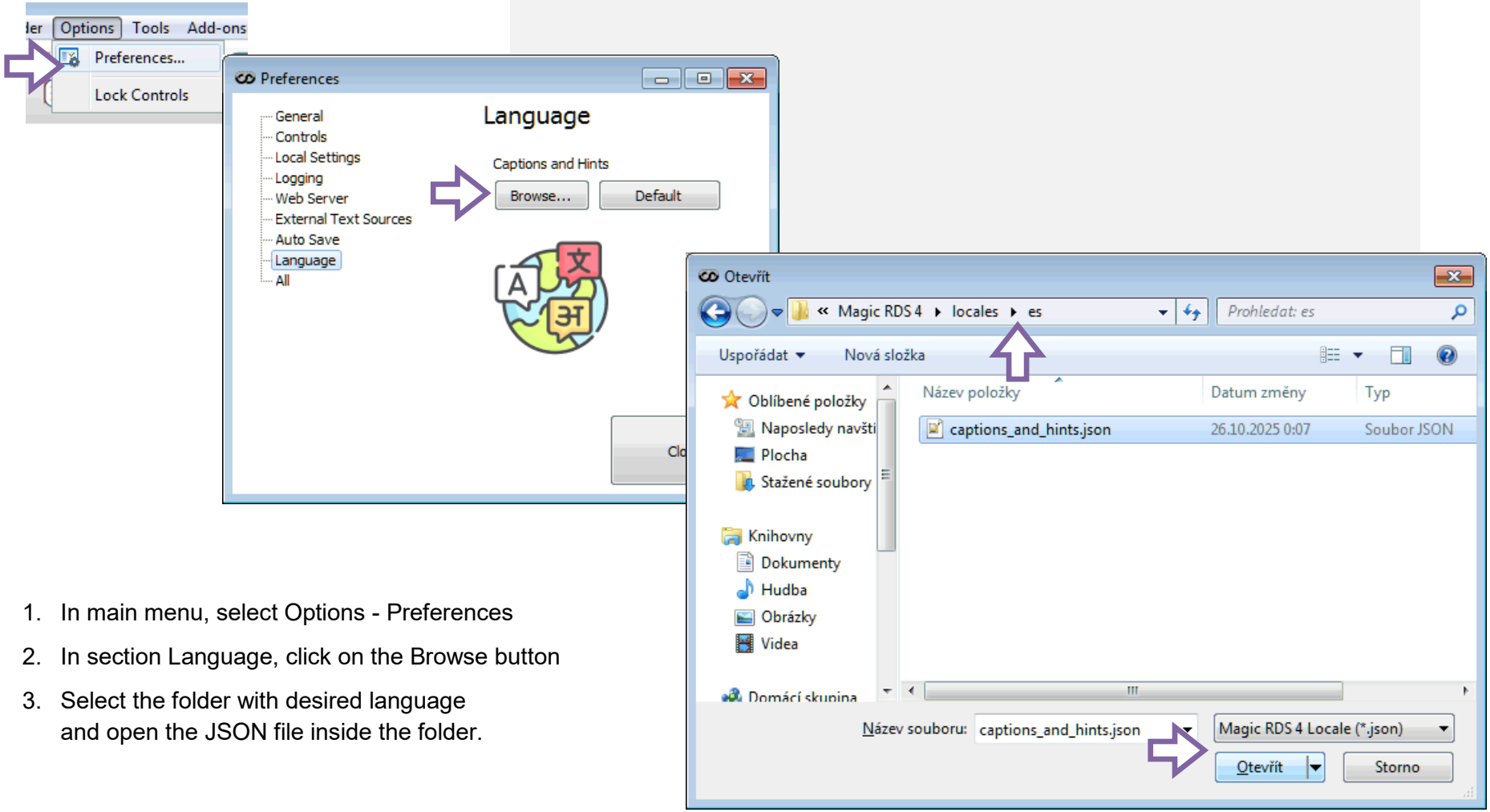
1. Close your current version.
2. Download and run the MagicRDS_Setup.exe.
3. Select the folder where the previous version is placed. Your settings will remain.

Moving existing installation to a new PC

1. Select menu item View - Application Data Folder
2. Close the Magic RDS 4.
3. Copy all files from the Data Folder to a USB flash stick.
4. Install the Magic RDS 4 on the new PC
5. Select menu item View - Application Data Folder
6. Close the Magic RDS 4.
7. Copy the files from the USB flash stick to the Data Folder.

First Steps

Language selection for the GUI



1. In main menu, select Options - Preferences
2. In section Language, click on the Browse button
3. Select the folder with desired language
   and open the JSON file inside the folder.

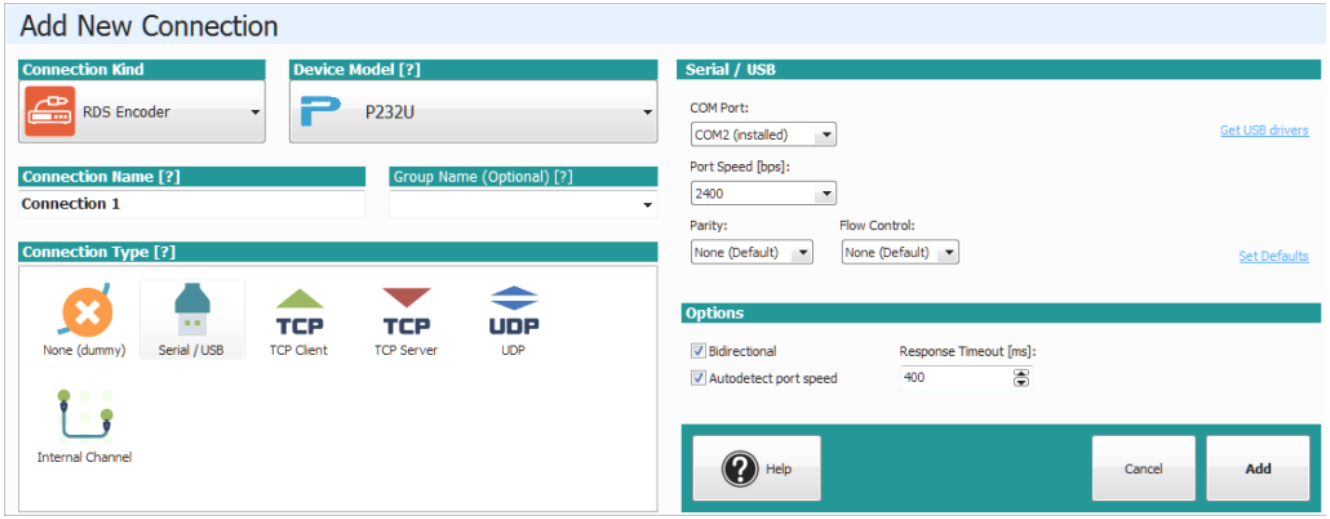
Adding a Connection

The Connection represents a way how to drive to the device or provide the data.
The Magic RDS 4 supports up to 128 Connections.

1. In the application main window, double-click on the Add New Connection icon.
2. Configure the Connection parameters.
   Follow the bubble hints and the device manual.
3. Click on the Add button.

See more information in

- devices.pdf, m4vp.pdf, licences.pdf
- readbest.pdf (section 4.3. Demo Encoder)



Connection Troubleshooting

Message	Connection Type	Solution
"Port opening attempt failed"	Serial / USB	Selected serial COM port is either not installed or is already being used by another process. Check the port selection or close other application using the same port.
"Exception: Port already in use"	TCP Server, UDP	Selected TCP/UDP port is already being used by another process. Change the port selection on both ends or close other application using the same port.
"Connecting" or "Listening"	TCP Client, TCP Server	No connection is established at this time. ▪ Target device has not been configured yet for this connection ▪ Connection parameters do not match (IP address, port numbers, server↔client type) ▪ Target device does not operate (is switched off or not running) ▪ The network route does not exist (the device belongs to different subnet while port forwarding is not set on the router) ▪ The connection is blocked by network firewall ▪ The device is rebooting or is currently operating in alternative configuration ▪ The network is partially down due to a failure (cable, switch, router etc.) ▪ Another application is using the device ▪ Inactivity timeout has not elapsed yet **The application will connect automatically once the device is available.**
"Response timeout"	All	The communication port was opened successfully but now when attempting to communicate with the device, no expected response has been received in given timeframe. If this problem persists, check the data cable, connection parameters, port selection, device model selection and the device power. Increase the Response timeout setting or turn off the Bidirectional option.
"Command not accepted"	All	The Model selection does not match with the device connected. Or the device has old firmware.

Where to Go Next?

External Text Sources

The External Text tool is a key feature of Magic RDS 4. It reads metadata from predefined sources and forwards it to RDS encoders, streaming servers, or websites. Its primary use is delivering “now-playing” and other program information, optionally alternating with ads or public messages. It can also trigger actions based on keywords to control other services or devices.

extsrc.pdf

Preferences

Application setup, incl. language selection, web server, user accounts, data logging etc.

Context bubble help

Task Scheduler

The Task Scheduler is a complex tool for scheduling the application settings, RDS control and RDS content. It is a preferred tool for scheduling RDS text messages in all cases where permanent connection exists to the RDS encoder.

Context bubble help

Text Campaigns

This add-on is designed for broadcast program announcements and paid text ads, based on combined weekly and calendar planning for text messages. It uses the Dynamic Text Loop feature so if different text messages overlap, they are automatically sent in a loop to allow seamless operation together with other text sources.

textcamp.pdf

Web-based Control Application

Remote management of the Magic RDS software and all RDS encoders.

webapp.pdf