RDS Logger
RDS logging and log replay software package

User Manual

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Content

1. Introduction

2wcom RDS Logger is software for MS Windows 2000, XP, Vista and can be used to record log files of the RDS UECP data stream, as received from a local or remote 2wcom RDS Decoder (e.g. 2wcom A20 with optional device right "RDS Logger"). The generated log files can be replayed with the 2wcom Log Player, which is part of the 2wcom RDS Logger package.

The parts of the 2wcom RDS Logger package in detail:

The Log Service (2wcomLogService.exe)

This is the program that actually does the scheduling and execution of log jobs. The service keeps a list of available Log Jobs. The log-files created by the service will by default be saved in the RDS Logger subdirectory "\logs".

The log service cannot be started directly. The service has no GUI (Graphical User Interface), which means it is not "visible", but can be installed / controlled by the Log Control program.

Log Control (2wcomLogControl.exe)

A system tray application that communicates via TCP with the Log Service.
Using Log Control you can add/edit/ remove jobs and displays their status.
It can control jobs on the local or remote computers.
You need Log Control to install / start / stop / uninstall a Log Service on the local system.

Log Player (2wcomLogPlayer.exe)

Displays the data in log files created by the Log Service.
The Log Player has two modes:

Soft Decoder Mode: The recorded data are sent to the RDS SoftDecoder / RDS Lab decoder that decodes them and displays the results.

Transparent Mode: The recorded data are sent to a 2wcom $C02_{DSP}$ or $C04_{DSP}$ RDS Encoder, which puts them on the air again.

Soft Decoder (RDSSoftDecoder.exe, Version 4.54 or newer required!)

Used by the LogPlayer to analyse and display the decoded RDS data that was recorded with a 2wcom device without RDS Lab option.

RDS Lab decoder (RDSLab.exe, Version 1.00 or newer required if the corresponding device option is present!)

Used by the LogPlayer to analyse and display the decoded RDS data that was recorded with a 2wcom device with RDS Lab option.

Important

Please read the entire manual before you start to use the software. Keep this manual for future use. It contains important operating instructions.

Explicit definitions

This software is developed for the use with the MS Windows operating system. Its usage is similar to MS Windows. Please see your MS Windows manual for details of windows operations. For necessary mouse operations please place the mouse pointer on the specified display area and execute one of the following corresponding actions.

Click or Mouse-click	Single push on left mouse button
Double-click	Quickly push left mouse button twice
Right-click	Single push on right mouse button

Additional notes:

The figures in the manual may differ from the actual screen display.

Errors and omissions excepted.

Configurations, functions and specifications are subject to change without notice.

2. Manufacturer

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3. Installation

System requirements

Win XP/Vista

Windows XP and Vista systems with a system performance as recommended for these operating systems are usually ready for the RDS Logger and do not need any update.

For Windows Vista the program Log Control requires administrator rights because it works with Windows services.

If the Windows Vista Firewall is activated it may be necessary to unblock the RDS Logger application in the Firewall.

Win 2000

If the RDS Logger is used on a Windows 2000 system, it is usually required to install the Microsoft DLL "GDI +" (error message "unable to locate gdiplus.dll").

You can download the latest version of Microsoft GDI+ for Windows 2000 directly and free of charge from the Microsoft Download Center Homepage. Visit "microsoft.com/downloads" and enter "redistributable GDI+" at the search input field. Then you should find the page "Platform SDK Redistributable: GDI+" of the MS download center. Please follow the instructions on the page to download and install the files (validation may be required).

Installation of the program files

Please start the provided RDS Logger setup.exe and follow the instructions on the screen to perform the installation on a local drive.

Notes:

The RDS Logger software works only with A20 RDS decoder instruments that contain the optional device right "RDS Logger". If you have an A20 without this device right, you can easily buy it additionally. Please contact us e.g. by email (contact@2wcom.com) for further details.

Do not start the log service directly! After the installation, the log service will be automatically started as a windows system service. Windows will start the service on every system start automatically. The service installation can be done by using the Log Control program (Windows Vista: Administrator rights are required for this purpose as well as for uninstalling the software).

It is not possible to use the Log Control program to install and configure a service on a remote computer.

Installation of the log service

1. Start the "2wcomLogControl" program. As being a "Tray Application", the program will reside in the Windows System Tray with its icon ![RDS LOG] until you click "File / Exit" in the main menu or "Exit" in the tray icon's menu.
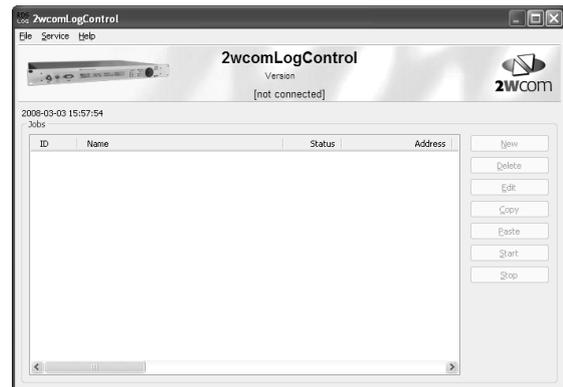
2. To install / start / stop the service, the program should not be connected to a service. If connected to any Log Service, in the main menu select "Service / Disconnect".

3. In the main menu select "Service / Settings". The "service settings" dialog pops up.

4. Activate the "connect to local service" radio button.

5. Click the "Install"– button to install the service. If the button is disabled, the service is already installed.

6. To define the directory where the service should place the recorded log files, use the "Log Directory"- button.

7. You can define a password in the "password" edit box (click button "Set Service Password"), if you want the service to be password – protected. Then the service will refuse connections from remote computers if they do not provide this password (case-sensitive).

8. Click the "Start" button to start the service. If this button is disabled, the service is already running.

9. Click "Ok" to close the dialog.

10. Read page 7 for details on how to connect the log service.

Notes: The "Log Service Settings" dialog is only available if the Log Control program is not connected to a Log Service.

The directory cannot be changed while the service is running ("Log Directory" - button is disabled). To change the log directory stop the service and restart it after having changed the log directory.

To stop or uninstall the service, you may use the "Stop" and "Uninstall" buttons of the "service settings" dialog.

4. General operation

Connect to a log service

As the Log Service has no user interface, the Log Control program needs to be used to work with the Service. To view and control the jobs and activity, Log Control needs to be connected to a service.

Note: Only one client (LogControl) can be connected to a log service at a time.

*Connect to a service, running on a remote computer*

Log Control uses an IP-network connection to connect to a Log Service that is installed and started on another computer.

1. Start Log Control (click the RDSlog symbol 📟 in the system tray if Log Control is already active).
2. If you are currently connected to any other Log Service, click in the menu "Service / Disconnect" to disconnect.
3. In the menu click "Service / Settings". A "service settings" dialog pops up.
4. In the dialog, check the "connect to remote service" radio button.
5. In the "Port" edit box enter the TCP- port of the remote service (6665 by default).
6. In the "Host/IP" edit box enter the hostname or the IP-address of the computer that runs the service.
7. In the "Password" edit box enter the service password if necessary (case-sensitive). Services on remote computers may require a password.
8. Click "Ok" to close the dialog.
9. In the menu click "Service / Connect" to connect to the remote service (2wcom Log Service needs to be installed and started on the remote computer). To add a job, read page 8.

Connect to a service, running on the local computer

1. Start Log Control (click the RDSlog symbol 📟 in the system tray if Log Control is already active).
2. If you are currently connected to any other Log Service, in the main menu click "Service / Disconnect" to disconnect.
3. In the main menu click "Service / Settings". A "service settings" dialog pops up.
4. In the dialog, click the "connect to local service" radio button.
5. If the Log Service is not installed or started, see page 6.
6. Click "Ok" to close the dialog.
7. In the menu select "Service / Connect" to connect to the local service. To add a job, read page 8.

Log Control - Adding "Jobs"
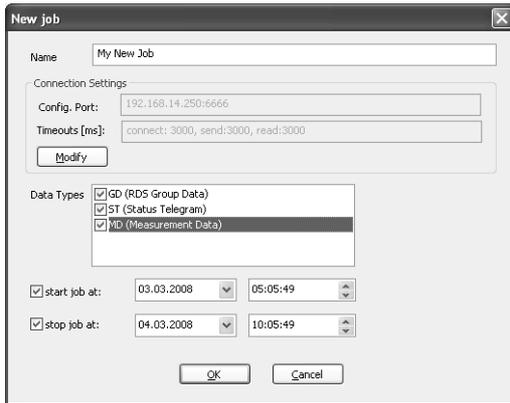
To add a Job do the following:

1. Start Log Control (click the RDSlog symbol 🖳 in the system tray if Log Control is already active).
2. If not already connected, connect to a Log Service.
3. In the main view click the "New" – button. A "New job" dialog pops up.
4. Enter a name for the job (which will also be used for the log-filename).
5. In the "Connection Settings" group box click the "Modify" - button and enter the IP address/Hostname and TCP-Port of the 2wcom RDS decoder to be logged (e.g. A20). The IP connection makes it possible to log local and also distant 2wcom RDS decoders.
6. Select the data types to be logged (at least one):
   "GD" is data from the RDS groups.
   "ST" is the operation status data, sent by specific 2wcom RDS decoders (e.g. A20).
   "MD" is the measurement data, sent by specific 2wcom RDS decoders (e.g. A20).
7. Optionally select the jobs start and/or end time.
8. Click "Ok" to close the dialog.

Start and end time are local times on the computer the Log Service is running on. If a start time is declared, the Log Service scheduler starts the job automatically. If an end time is declared, the Log Service scheduler stops the job automatically. The scheduler will ignore jobs with no start time. Jobs with a start time but no end time will be considered as "infinite" jobs.

To edit a job, double-click the non active job in the list view or use the "Edit job" button.

Notes: The "Edit Job" and "Delete Job" buttons will be disabled as long as the selected Log Job is active.

The 2wcom A20 RDS Decoder allows up to 5 jobs simultaneously.

The max. number of all jobs in total is limited by the PC/network system performance.

Log Control - Running "Jobs"

Starting a Job

The Log Service Scheduler will start a Job automatically if:

- The Jobs "Use Start Time" property is set (Job settings dialog)
- The current time is greater or equal compared to the jobs "Start Time" property
- The current time is smaller compared to the jobs "End Time" property

To start a job immediately, you can use the "Start Job" - button in the Log Control main view.
If you start a job this way, the "Start Time" property is set to the current time.
If the jobs "End Time" property is smaller than the current time, it will be set to infinite ("End Time" not set).

Eyery hour a single log file is saved in the configured log directory (default: RDS Logger subdirectory "\logs").

Stopping a Job

The Log Service Scheduler will stop a job automatically if:

- The "Use End Time" property of a job is set (Job settings dialog).
- The current time is greater or equal compared to the "End Time" property of a job.

Also you may use the "Stop Job" button in the Log Control main view to stop the job immediately. If you stop a job this way, the "End Time" property is set to the current time.

Restarting a Job

After a job was stopped either by the Log Service scheduler or by the Log Control program, it can be restarted at any time and a new log file will be created.

To restart a job just set the "Start Time / End Time" properties or click the main views "Start Job" – button to start immediately.

Log Player
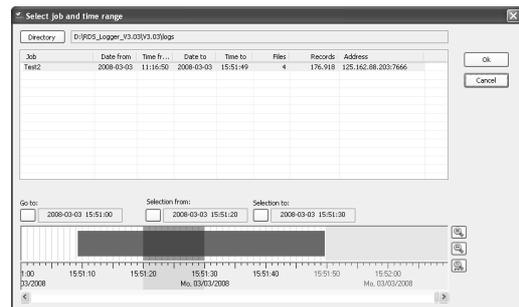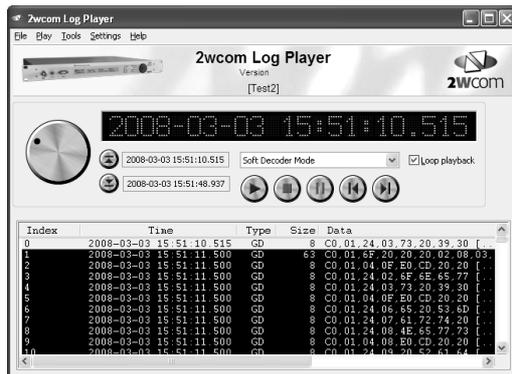
The log player can open, display and play single recorded log files ("*.2wcom_log") as well as selected job's time ranges. To open a log file click in the menu "File/Open…". To select a time range of a job select "File/Open Job". Please see the next pages for function and configuration details.

Open a log file

or

To open a log-file click the "File/Open…" – menu entry. Navigate to the configured log folder (default is subfolder "\log" of the RDS Logger folder). Then open the desired *.2wcom_log file.

Open a selectable time range of a log job

To select a time range of a log job, click the "File / Open Job" menu entry. If necessary, use the "Directory" button to select the configured log folder (default: \2wcom Logger folder\logs). Then click on one of the listed jobs, and select the time range to be played with the mouse. Note that active jobs are listed, but cannot be opened.

Alternatively use the mouse context menu or the buttons next to the time/date displays to jump to a specific time/date, to select the start time/date, and to select the end time/date.

You can also use the graphical range display to select the log range to be opened.
Use the zoom buttons to scale the graphical display to the desired range:

Zoom in

Zoom out

Zoom selection – the display is optimized in steps for the selected range.

Direct scale adjustments:

Place the mouse pointer over the time/date scale (hand symbol), then push the left mouse button for shifting the displayed range. Alternatively you can use the scroll bar to shift the displayed range.

Select the range:

Place the mouse pointer at the start position of the desired range (fingertip symbol); push the left mouse button while moving the mouse right, until the end position is reached. Alternatively you can use the context menu (right mouse button on graph).

Finally click on "Ok" to open the log player with the selected range.

Please see the next page for details about replaying the opened RDS log data.

Log Player Functions

If not already done, please see the foregoing page for details about opening a log file or log job.

Select the player mode	The log player can be used in two different modes. Select "Soft Decoder Mode" or Encoder (C0x) Mode in the drop-down menu entry or the window menu ("Play / Select Target").
	Soft Decoder Mode: The played log data feeds the 2wcom RDS Softdecoder / RDS Lab decoder. The decoder software shows the decoded RDS content. So you can e.g. see the PS, PI, RT, CT, AF, EON, group histogram. Other optional functions (depends on 2wcom RDS decoder hardware options) are RT+ and TMC.
	Encoder (C0x) mode: The played log data feeds a local or remote 2wcom C02$_{DSP}$ or C04$_{DSP}$ RDS encoder to genenerate an RDS Signal.
Select single playback or loop playback mode	The log player can play the opened log from the log start to the log end, and supports also a loop mode, to play the log repeatedly. To activate the loop playback mode, just activate the "loop playback" checkbox.
Play the opened log file / job	Click on ▶ to start play. The virtual dot matrix display then shows the recording time as a counter and the scrolling log data area shows the currently played data. Click on ⏸ to pause and unpause the play. Click on ■ to stop the play.
Play just a selected range of the displayed hex data	The log player just plays the log data that is selected in the log data area, which is displayed at the lower part of the program window. By default, all opened log data is selected in the log data area. If you want to play just a part of the listed log data, click on the start row, click on ▲, click on the end row, click on ▼, then activate play. Alternatively right-click on the data list to use the context menu for selection.
Navigate in the displayed data list	The round jog wheel knob can be used to navigate in the log data area. Just move the mouse pointer to the jog wheel, push the left mouse button while moving the mouse pointer. Move the mouse pointer clock-wise to shift the list up, and move it counter clock-wise to shift the list down. You can also click on ⏮ to go to the start position, and click on ⏭ to go to the end position of the selected list part.
Export a text file of the log data	To export a text file of the selected log data, click on "Tools / Export Text File…", select a folder and file name, and click "OK".
View the header information of the data log file	The header information of a log file contains detailed file data (e.g. Job-ID, Job-Name, Data Type, Log Start, Log End etc.). To open the window with the header information, click on "Tools / View Header Information".
Synchronized start with a second 2wcom log player	If two log player windows are opened, it is possible to start the replay of both opened log job/files simultaneously. Click on "Sync. Start", then both opened log/job names are displayed, and click on "Start".
Search a text string in the log data	To search specific content of the opened log data, you can use the search function. Click "Tools / Search", select the message type and enter the string to be searched. Alternatively you can select search strings you used before, after a click on the arrow of the text input field. If the checkbox "Text" is activated, you can enter a text string and the function searches this text string in the hex value data.
	If you insert "HEX:" in the front of your search string, you can enter hex data to search for.

Please see the next page for details about the Log Player configuration.

Log Player Configuration

Configure Softdecoder port	Click "Settings/edit…" to configure the TCP port number for the data connection of the RDS soft decoder tool (required for "Soft Decoder Mode").
Configure the max. frame interval	Click "Settings/edit…" to enter a value in seconds at "max. frame interval". This is to choose if the log player plays a time data gap in real-time (value=0 secs) or if the gap is skipped after a delay time (value=1…60 secs).
Configure Softdecoder file path	Click "Settings/edit…" if the 2wcom RDS soft decoder tool is not located in the RDS logger folder (default) and select the alternative path and the file of the RDS soft decoder (required for "Soft Decoder Mode" if data was recorded on a 2wcom device <u>without</u> the RDSLab option).
Configure RDS Lab Decoder file path	Click "Settings/edit…" if the 2wcom RDS Lab software is not located in the RDS logger folder (default) and select the alternative path with the file of 2wcom RDS Lab (required for "Soft Decoder Mode" if data was recorded on a 2wcom device <u>with</u> the RDSLab option).
Configure C0x RDS encoder connection	Click "Settings/edit…" to configure the data connection to the 2wcom C0x RDS encoder (required for "Encoder (C0x) mode").
	For a TCP/IP connection it is necessary to enter the IP address / hostname and the TCP port of the C0x Coder to be connected.
	For a serial RS-232 connection it is necessary to select the COM port that is used at the PC and eventually the interface settings.
Select displayed language	Click "Help / Language" to select the displayed language. Select between "German" and "English".