

R10 Version 2.0.X **Manual**

General Information

R10 Version 2.0.X
Manual

Manual version 2.3 EN, 07/2011, D2300.EN .02

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1. Introduction

The d&b R10 Service software provides access to d&b amplifiers (D6, D12, E-PAC with Display) when connected to the d&b Remote network. R10 runs on a PC or laptop computer (Windows 7/XP), equipped with a CAN interface.

While the d&b R1 software is particularly designed to operate a d&b sound system the R10 Service software is focused on service and administration issues.

R10 can be downloaded from the d&b website at www.dbaudio.com.

This manual describes how to operate a R10 Service software environment. It will not detail the settings of the d&b amplifiers. Please refer to the respective amplifier and loudspeaker manuals for the correct configuration.

A number of publications with supplementary information on our products such as the TI 312 d&b Remote network (d&b Code: D5312.EN) are available from the Documentation section of our website at www.dbaudio.com. You can either download these directly or use the online order form to request a printed version.

1.1. Functions of R10 Service software

- Scan the network to detect all connected devices.
- Update the firmware of multiple amplifiers (D6/D12/E-PAC with Display) via the d&b Remote network or using the individual Service ports.
- Display amplifier properties.
- Copy amplifier properties.
- Display the amplifier Log data.
- File data on a PC for cloning of amplifier settings and backup.

1.2. System requirements

- Windows 7 / XP SP3.
 - PC with Intel/AMD (1 GHz or more).
 - 2 GB RAM.
 - 60 MB free hard disk capacity (Windows).
- Mac OS 10.4 or higher.
 - Apple Mac Intel or PowerPC.
 - 2 GB RAM.
 - 160 MB free hard disk capacity
- Mouse.
- Screen resolution of 1024 x 768 or higher recommended.
- CAN interface (see section [CAN interfaces](#)).

2. R10 Installation

The installation process consists of the following steps:

- Installing R10.
- Installing the CAN interface drivers (R60).
- Downloading the firmware files using R10.

2.1. Windows systems

To install R10 on Windows, start 'setup.exe' and follow the instructions in the setup dialog.

2.1.1. Installing R10 for multiple users

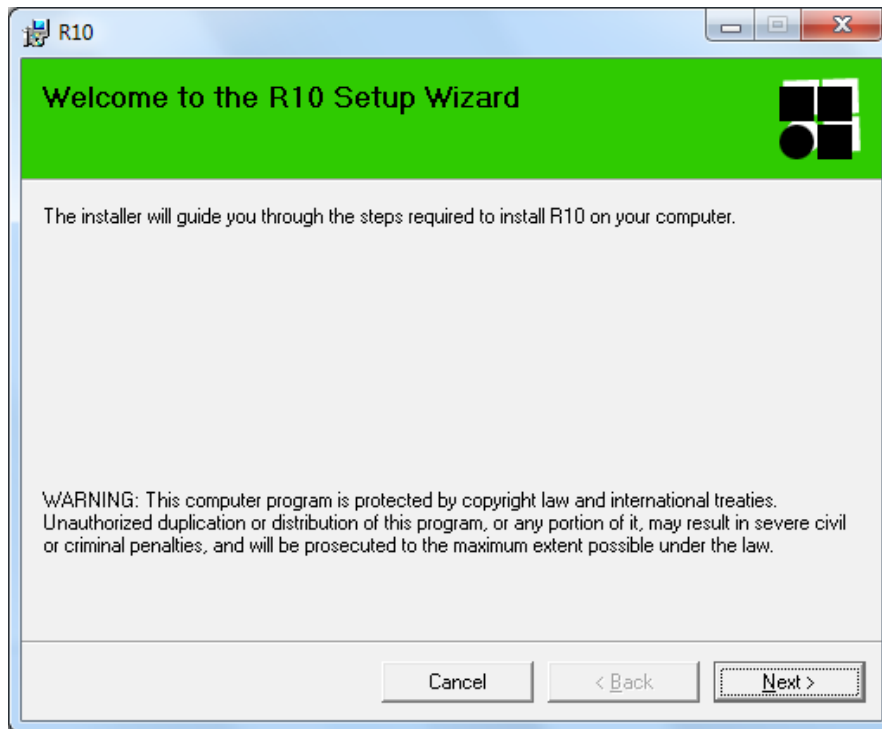


Fig. 1: Installing R10 Service software

1. Log in as administrator.
2. Create a new folder with read access for every user account you want to create, e.g. C:\MySoftware\dbaudio\R10.
3. Extract the ZIP file to this folder.
4. Start 'setup.exe' from this folder and install R10.
5. Log in as a user and start R10. To operate R10 from this account, several files are now copied to the directory of this user account.
6. Repeat step 5 for any user account you want to add.

Note:

Do not delete any of the extracted files as long as R10 is installed on your computer.

2.1.2. Uninstalling R10 Service software

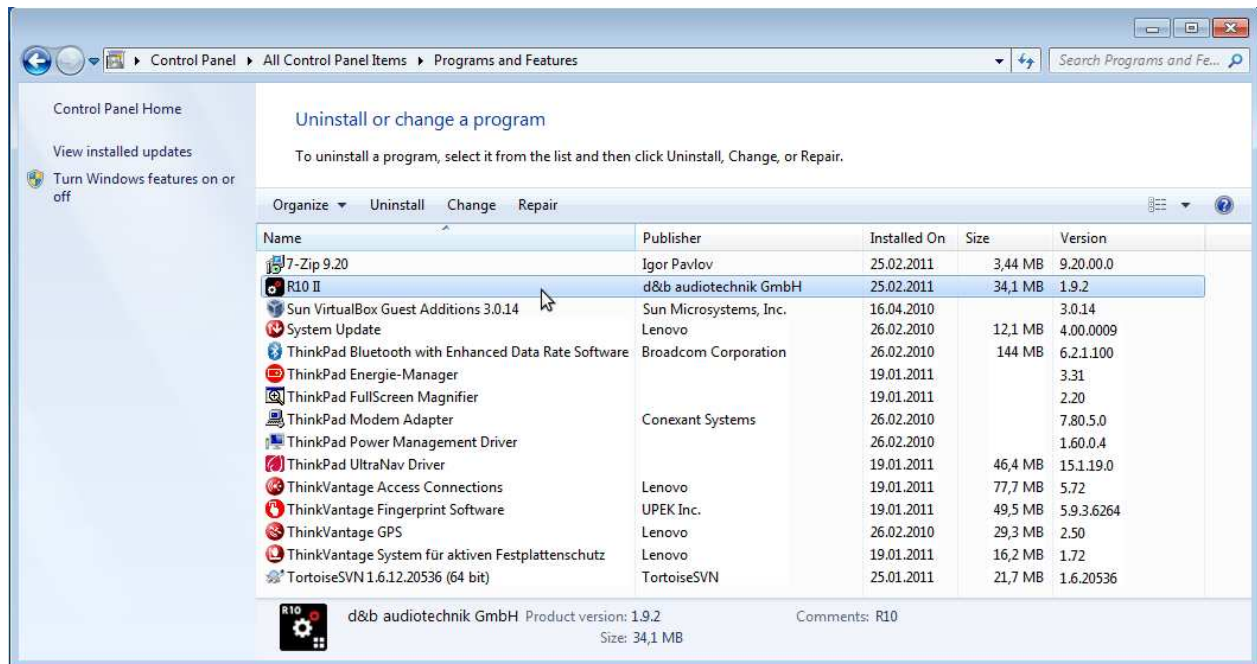


Fig. 2: Uninstalling R10 Service software

To remove R10 from your system, go to 'Start – Settings - Control Panel - Add or Remove Programs' in the Control Panel Folder. Select the 'R10' entry from the list and click the 'Change/Remove' button. The uninstall routine starts and removes the program.

2.2. Macintosh systems

To install R10 on Macintosh systems, double-click on the R10.dmg file and drag R10 to your Applications folder.

To remove R10 from your system, drag it into the trash bin.

2.3. CAN interfaces

Two CAN interfaces are available from d&b. For installation details, refer to the respective manuals.

2.3.1. R60 USB to CAN interface

The Z6118 R60 USB to CAN interface provides two RJ 45 CAN connectors with a built-in switchable terminator as well as a USB type B connector and comes with drivers for Windows and Macintosh operating systems. For Windows, the required drivers for R60 can be found in the R1 installation folder e.g.: C:\program files\dbaudio\R60_D6_USB_DRIVER, for Macintosh systems in the R10.dmg file or at www.dbaudio.com.



2.3.2. R70 Ethernet to CAN interface

The Z6124 R70 Ethernet to CAN interface provides two RJ 45 CAN connectors with a built-in switchable terminator as well as a LAN connector. The R70 contains a web interface and does not require its own drivers for use with a computer. All configurations can be set using a standard web browser with JavaScript enabled.



2.3.3. Additional interfaces

In addition, the following interfaces are supported by the d&b Remote network:

- Peak USB to CAN interface (isolated, single CAN channel on D-SUB 9 connector). Only a single Peak USB interface may be connected, however, it may be combined with additional d&b interfaces.
- Peak PCI to CAN interface (isolated, single CAN channel on D-SUB 9 connector). Only a single Peak PCI interface may be installed, however, it may be combined with one Peak USB to CAN interface or additional d&b interfaces.

For installation details, refer to the respective manuals.

3. R10 Service software

3.1. Components of the R10 window

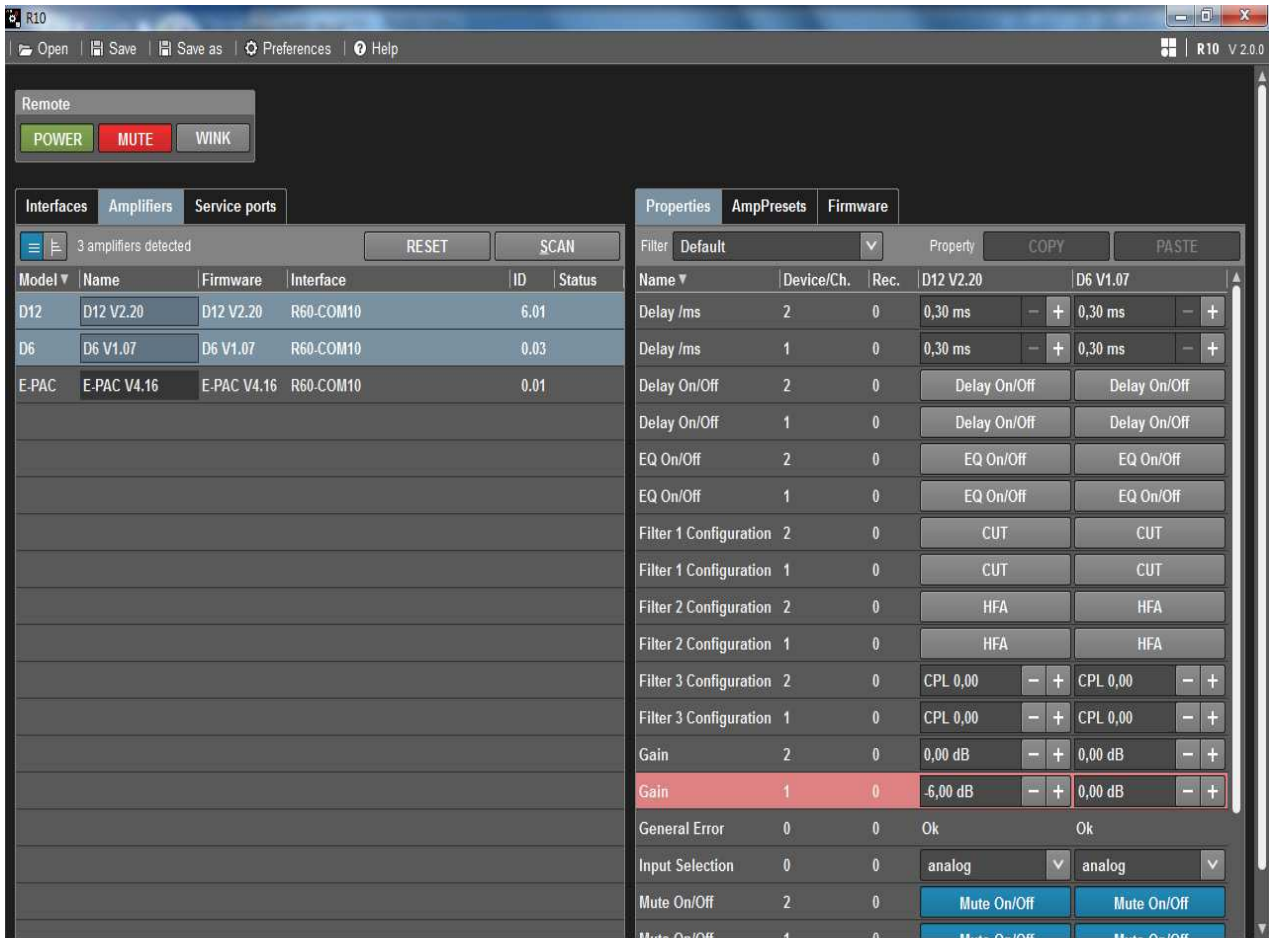


Fig. 3: R10 main window

3.1.1. Menu bar / Toolbar

The Menu bar/Toolbar contains the following items.

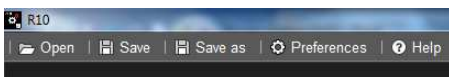


Fig. 4: Menu bar/Toolbar

Symbol	Function	Shortcut Windows	Shortcut Mac OS
 Open	Open	Ctrl+O	Cmd+O
 Save	Save	Ctrl+S	Cmd+S
 Save as	Save as	Ctrl+Shift+S	Cmd+Shift+S
 Preferences	Preferences	Alt+P	Cmd+,
 Help	Help menu	Alt+H	
	Help	F1	Cmd+?

Tab. 1: Menu bar/Toolbar symbols

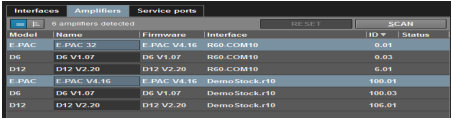


Fig. 5: Open an R10 file

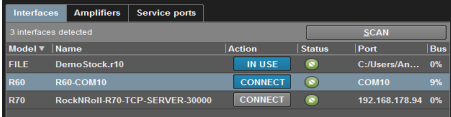


Fig. 6: Close an R10 file

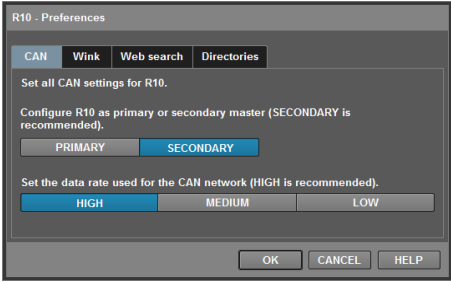


Fig. 7: Preferences dialog - CAN

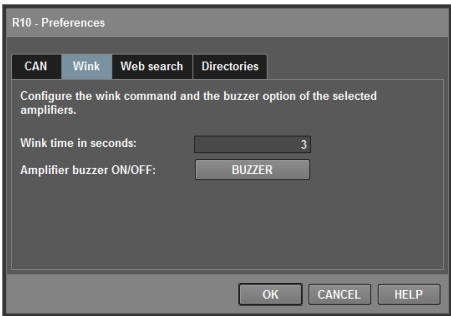


Fig. 8: Preferences dialog - Wink

3.1.2. R10 files

An R10 file contains lists of all connected interfaces and amplifiers including their properties. These lists are displayed on the Interfaces and Amplifiers tabs.

Open

Opens an existing R10 file (*.r10). The file contents is displayed in the same way as an amplifier that is connected to the remote network. The file name is listed on the Interfaces tab. The amplifiers included in the file are displayed on the Amplifiers tab. To maintain a unique ID for every amplifier, the number 100 is added to each amplifier ID saved in the file.

Close

To close a file, click the corresponding button in the Action column on the Interfaces tab.

Save / Save as

Saves the data to an *.r10 file.

3.1.3. Preferences

Clicking the Preferences button  opens the Preferences dialog. The following settings can be made:

CAN

Master (Primary/Secondary)

If two masters (e.g. one PC running R1 and one PC running R10) are used in one CAN network, one must be configured as the 'primary' and the other one as the 'secondary' master. This setting applies to all connected CAN interfaces.

Data Rate

In more complex CAN networks using multiple bus segments and/or dual masters it might be necessary to reduce the CAN data rate.

Wink

A Wink command allows you to physically identify an amplifier.

To activate the Wink command, mark the amplifier in the Device list and click the WINK button on the Remote bar. The amplifier's display flashes and shows its dbCAN ID.

You can define the duration of the flashing (Wink time in seconds) and also the generation of an audible signal (Amplifier buzzer).

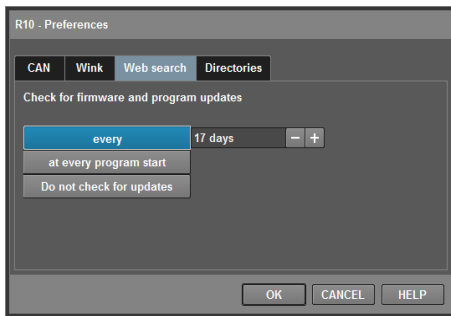


Fig. 9: Preferences dialog – Web search

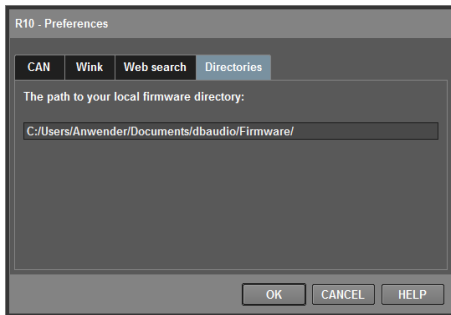


Fig. 10: Preferences dialog - Directories

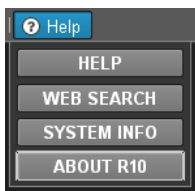


Fig. 11: Help menu

Web search

Our concern is that programs do not access the internet without any prior authorization. Here you can enable or disable an automatic check for program updates or new firmware and define the frequency.

You can choose between the following options:

The program either checks for updates at a defined number of days, every time the software starts or it does not perform an automatic check at all. To perform a manual check for program and firmware updates, select WEB SEARCH from the Help menu. To check manually for Firmware updates only, click the SEARCH button on the Firmware tab.

Directories

The Directories tab displays the local directories to which the program stores information.

3.1.4. Help

The Help menu item provides the following options:

Help: Opens the help viewer for the software (see Fig. 12: dbaudio Help).

WEB SEARCH: Searches for a new version of R10 on the d&b web page.

SYSTEM INFO: Generates a report with information about the system on which the software is running. This information can be saved to a file and might help d&b offer you quick and adequate support in case of a problem with any d&b software.

ABOUT R10: General information about the R10 software.



Fig. 12: dbaudio Help

Interfaces					
3 interfaces detected					
Model	Name	Action	Status	Port	Bus
FILE	DemoStock.r10	IN USE		C:/Users/An...	0%
R60	R60-COM10	CONNECT		COM10	9%
R70	RockNRoll.R70-TCP-SERVER-30000	CONNECT		192.168.178.94	0%

Fig. 13: Interfaces tab

3.1.5. Interfaces tab

R10 cyclically scans the network to detect all connected interfaces. All interfaces that are detected are listed on the Interfaces tab. Clicking the CONNECT button of an interface entry enables communication with the corresponding interface and R10 starts scanning for connected amplifiers. The list on the Interfaces tab also includes any file that has been opened. To close a file, simply deactivate the CONNECT button.

Model: Designates the interface model, e.g. R60, R70 or FILE.

Name: Shows the name of the interface.

CONNECT button: Enables/Disables communication with the interface.

Status:  Interface is connected.

 Interface is disconnected.

 R70 Interface conflict. The marked interfaces do not have unique IP addresses or host names. If two interfaces have the same IP address, disconnect one of them and change the IP address of the one that is still connected using the [Properties tab](#), then press the SCAN button (the R70 must be restarted). Then reconnect the other interface. If two interfaces have the same host name, you can change the name without disconnecting an interface.

Port: Displays the connected COM port of an R60 interface or the IP address of an R70 interface.

Bus load: Indicates the CAN bus traffic of this interface.

If you select an R70 interface from the list, the Properties tab on the right will show the web interface of this R70. The settings that are displayed here can be modified.

Interfaces Amplifiers Service ports					
6 amplifiers detected					
			RESET	SCAN	
Model	Name	Firmware	Interface	ID	Status
E-PAC	E-PAC 32	E-PAC V4.16	R60.COM10	0.01	
D6	D6 V1.07	D6 V1.07	R60.COM10	0.03	
D12	D12 V2.20	D12 V2.20	R60.COM10	6.01	
E-PAC	E-PAC V4.16	E-PAC V4.16	DemoStock.r10	100.01	
D6	D6 V1.07	D6 V1.07	DemoStock.r10	100.03	
D12	D12 V2.20	D12 V2.20	DemoStock.r10	106.01	

Fig. 14: Amplifiers tab

3.1.6. Amplifiers tab

After communication with an interface has been enabled (CONNECT), R10 scans the network for connected amplifiers. All amplifiers that are detected are listed on the Amplifiers tab and the program starts reading the properties of the device.



Switches between table and tree views.

RESET

Resets the amplifier to its factory default settings.

SCAN

Scans the network for connected amplifiers.

Model:

Designates the amplifier model, e.g. D12 or D6.

Name:

Shows the name of the device. While R10 is reading the properties of the device, a progress bar is displayed behind the name.

Firmware:

Designates the firmware version of the amplifier.

Interface:

Designates the interface to which this amplifier is connected.

ID:

Shows the unique network ID (dbCAN ID) of the amplifier.

Status:

 Timeout: Amplifier did not respond to requests.

For any further action regarding one or more amplifiers, mark the corresponding row(s). The contents of the tabs in the right pane depends on the type of the amplifier you selected on the Amplifiers tab.

See [Properties tab](#), [AmpPreset tab](#) and [Firmware tab](#).

3.1.7. Service ports tab

R10

Open

Save

Save as

Preferences

Help

Remote

POWER

MUTE

WINK

Interfaces

Amplifiers

Service ports

1 port detected

Port ▾	Info	Model	Status
COM11		D6	
COM9		Unknown ▾	

Properties

AmpPresets

Firmware

UPDATE AMPLIFIER

Amplifier firmware

Web

SEARCH

Model ▾	Version	Available	Action	Rel. notes	Remark
D12	V2.19	Local			
D12	V2.20	Local			
D12	V2.18	Online	DOWNLOAD		New setups added (B4-SUB, E12-S)
D6	V1.06	Local			
D6	V1.07	Local			
D6	V1.05	Online	DOWNLOAD		New setups added (B4-SUB, E12-S)
E-PAC	V4.16	Online	DOWNLOAD		New setups added (E6 and M6).
E-PAC	V4.15	Online	DOWNLOAD		Improved compatibility with RIB

Fig. 15: Service ports tab

The Service ports tab lists amplifiers that are connected to the computer via their service ports. D6 amplifiers connected via USB (USB and COM drivers must be installed) are displayed by their respective COM number and model name. For D12 and E-PAC amplifiers, the amplifier type (model) must be selected manually from the drop-down list in the "Model" column. To update the firmware of an amplifier, select the amplifier from the list by clicking on the corresponding entry. For further details on the firmware update, refer to section [Firmware tab](#).

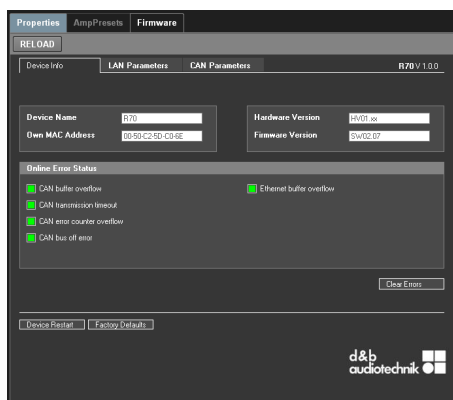


Fig. 16: Properties tab - R70

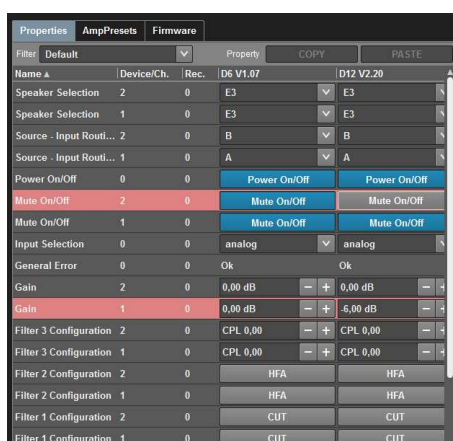


Fig. 17: Properties tab - Amplifiers

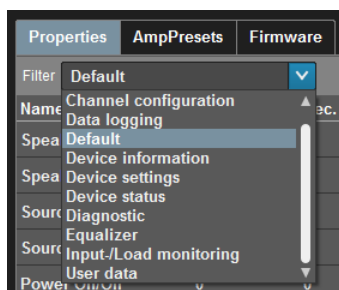


Fig. 18: Properties tab - Filters

3.1.8. Properties tab

The contents of the Properties tab changes depending on the active tab in the left pane.

If an R70 interface is selected on the Interfaces tab, the corresponding web interface is displayed on the Properties tab and the R70 can be configured.

If an amplifier is selected on the Amplifiers tab, the Properties tab shows the amplifier's properties. Properties are all data that is stored in the amplifier (e.g. channel configurations or data loggings). The list of properties can be filtered using the 'Filter' drop-down menu.

If two or more amplifiers are selected, the properties of each amplifier are displayed in a column. If the amplifiers show different values for a particular property, this property is marked in red to allow a quick comparison of the data.

Filter

The following Filters can be selected:

All: Displays all properties.

Channel Configuration: Displays channel specific settings.

Default: Shows the most common settings.

Device information: Provides information about the device.

Device settings: Displays global settings of the device.

Device status: Provides status information of the device.

Diagnostics: Details all errors that occurred.

Equalizer: Shows settings of the parametric equalizer.

Input/Load Monitoring: Displays all data related to input/load monitoring.

Data Logging: Shows logged operational data of the device.

COPY / PASTE

You can copy and paste properties from one amplifier to another using keyboard shortcuts or the COPY and PASTE buttons.

Interfaces Amplifiers Service ports				
6 amplifiers detected				
	Model	Name	Firmware	Interface
	E-PAC	E-PAC 32	E-PAC V4.16	R60.COM10
	D6	D6 V1.07	D6 V1.07	R60.COM10
	D12	D12 V2.20	D12 V2.20	R60.COM10
	E-PAC	E-PAC V4.16	E-PAC V4.16	DemoStock.r10
	D6	D6 V1.07	D6 V1.07	DemoStock.r10
	D12	D12 V2.20	D12 V2.20	DemoStock.r10
				ID # Status
				0.01
				0.03
				6.01
				100.01
				100.03
				106.01

Fig. 19: AmpPresets

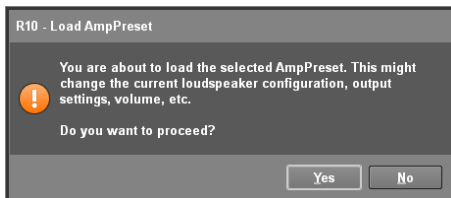


Fig. 20: Load AmpPreset

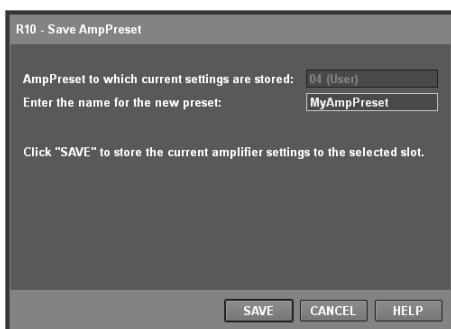


Fig. 21: Save AmpPreset

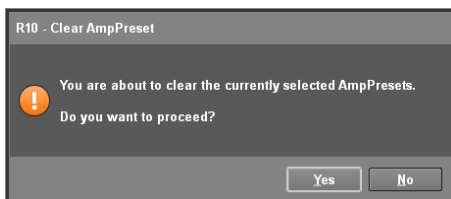


Fig. 22: Clear AmpPreset

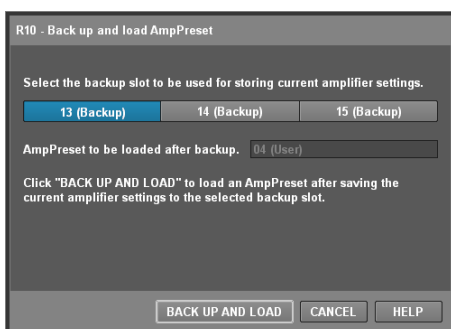


Fig. 23: Back up and load AmpPreset

3.1.9. AmpPreset tab

D12 amplifiers from firmware version V2.12 and D6 amplifiers provide AmpPresets which contain all important user settings for the entire device such as input, output and channel configurations, EQ and delay settings. There are three types of AmpPreset memories:

- User AmpPreset: Nine AmpPresets which can be accessed locally or via remote control (R10 service software, media control system, PLC). These AmpPresets are used to set the complete D12/D6 to a previously defined configuration for a particular application and can be named individually.
- Alarm AmpPreset: Three AmpPresets which can only be accessed via the remote network (R10 service software, media control system, PLC). Intended for use in alarm systems to protect the system settings from local modifications.
- Backup AmpPreset: Three AmpPresets which can only be accessed via the remote network (R10 service software, media control system, PLC). Intended for temporary use to back up the current system settings when another AmpPreset is loaded.

The AmpPreset tab within R10 provides the following functions. When activated, these functions take effect on the amplifier(s) currently selected on the Amplifiers tab.

Load

Restores the settings of a stored AmpPreset.

Save

Stores the current amplifier settings to the selected preset memory and names it.

Clear

Clears an AmpPreset.

Backup and Load

Stores the current amplifier settings to the selected AmpPreset backup slot (slot numbers 13-15) and loads a selected preset (numbers 1-9).

Status indicators:



AmpPreset is loaded.



AmpPreset is loaded but the amplifier's settings have been modified and do not correspond to the loaded preset.

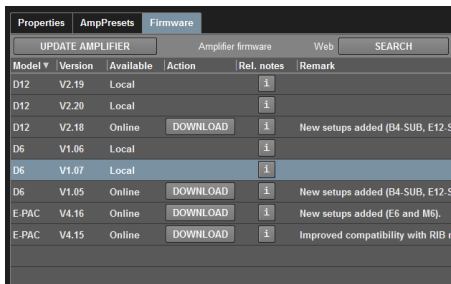


Fig. 24: Firmware tab

3.1.10. Firmware tab

This tab lists all available firmware updates and indicates whether they are stored locally on the computer or are available for download from the internet. If the firmware is available locally, you can start the update procedure by clicking the "UPDATE DEVICE" button. If the firmware is only available online, you first have to download the firmware to your computer. Clicking "Web SEARCH" starts a new search on the internet for the latest available firmware versions. If new versions are available, the displayed list is refreshed.

If the firmware is stored locally on the computer and matches amplifiers in the Amplifiers tab or if a service port is selected, the "UPDATE DEVICE" button becomes accessible and a firmware update of the amplifier can be started.

Web SEARCH:	Starts a web search for available firmware updates.
UPDATE DEVICE:	Starts the amplifier firmware update dialog.
Model:	Designates the model for which the firmware is intended.
Version:	Designates the firmware version.
Available:	Indicates whether the firmware is stored locally on the computer or is available online.
Action:	If the firmware is available online, a download button is provided.
Rel. notes:	Opens the release notes.
Remark:	Provides a brief description of the online firmware.

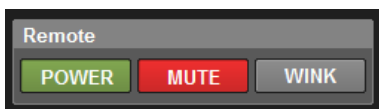


Fig. 25: Remote bar

3.1.11. Remote bar

The Remote bar provides quick-access buttons to basic functions of the amplifier currently selected on the Amplifiers tab.

POWER:	Switches between standby and on.
MUTE:	Mutes and Unmutes the amplifier.
WINK:	Triggers the Wink command on the amplifier (blinking display and buzzer). See Preferences - Wink .

-  The settings of the selected amplifiers have different values.
-  Timeout: At least one amplifier did not respond in time.
-  Waiting for response.

3.2. Tooltips/Infotips

When you hold the mouse cursor over a user interface element for more than 1 second, a small window appears and provides information on this element.

3.3. Shortcuts

Function	Shortcut Windows	Shortcut MacOS	Scope
Open	Ctrl+O	Cmd+O	
Save	Ctrl+S	Cmd+S	
Save as	Ctrl+Shift+S	Cmd+Shift+S	
Preferences	Alt+P	Cmd+,	
Help menu	Alt+H	Alt+H	
Help	F1	Cmd+?	
Copy to clipboard	Ctrl+C	Cmd+C	Properties tab
Paste from clipboard	Ctrl+V	Cmd+V	Properties tab
Select all	Ctrl+A	Cmd+A	All tabs
Minimize window		Cmd+M	
Zoom in	Ctrl++	Cmd++	HelpViewer
Zoom out	Ctrl+-	Cmd+-	HelpViewer
Zoom reset	Ctrl+0	Cmd+0	HelpViewer
Search	Ctrl+F	Alt+S	HelpViewer
Find in text	Ctrl+F	Cmd+F	HelpViewer
Find next		Cmd+G	HelpViewer
Find previous		Cmd+Shift+G	HelpViewer
Quit	Alt+F4	Cmd+Q	HelpViewer
New tab		Cmd+T	HelpViewer
Close tab		Cmd+W	HelpViewer
Copy selected text		Cmd+C	HelpViewer
Next tab page		Alt+Cmd+→	HelpViewer
Previous tab page		Alt+Cmd+←	HelpViewer
Navigate home	Alt+Pos 1	Alt+⌘	HelpViewer
Navigate back	Alt+←	Cmd+[	HelpViewer
Navigate forward	Alt+→	Cmd+]	HelpViewer

3.4. Firmware update via CAN

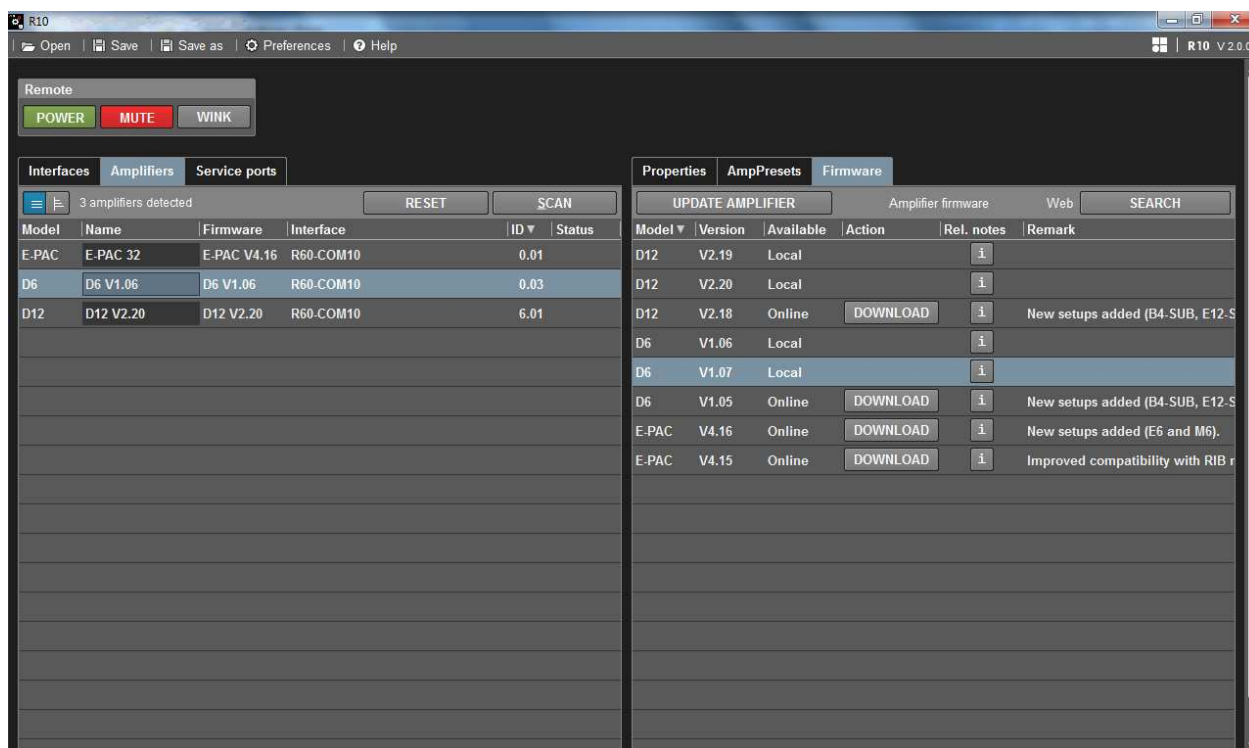


Fig. 26: CAN update start page

Notes:

An update resets the amplifier to factory defaults.

A firmware update via CAN bus using the R10 software is only possible for D6 and D12 amplifiers with firmware V1.02 or higher and/or E-PAC amplifiers with firmware V4.04 or higher. Ensure the CAN network is set up properly and complies to the CAN specifications as described in TI 312. If a failure occurs during the update procedure, each amplifier must be updated via its service port (serial update).

Do not use any other dbCAN Master such as R1 in the network during the update procedure.

During the update procedure, make sure the power supply of the involved devices (amplifiers, PC) is not interrupted and the CAN network is not disrupted.

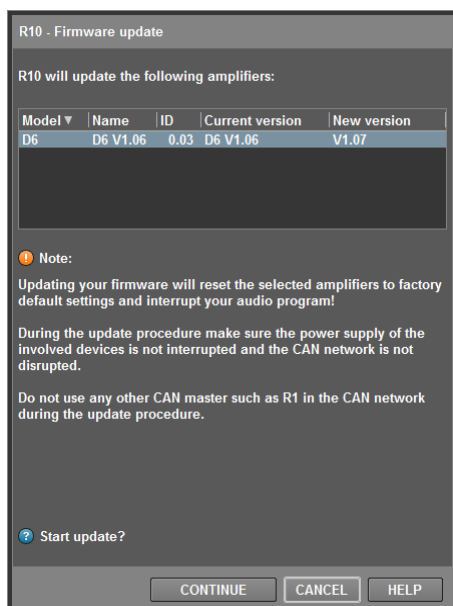


Fig. 27: CAN update in progress

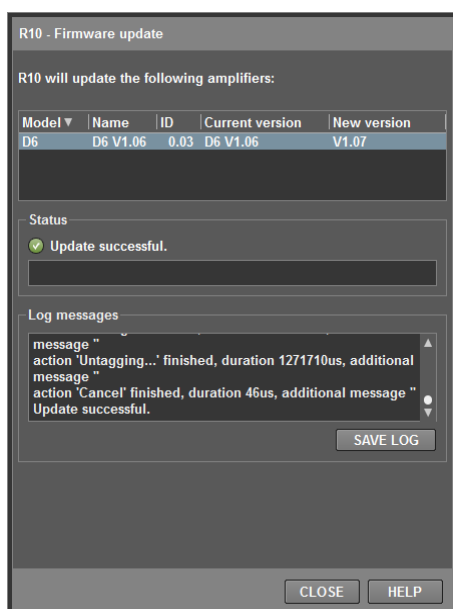


Fig. 28: CAN update successful

To update the firmware of one or more amplifiers of the same type, go to the Amplifiers tab and select the amplifiers you want to update. On the Firmware tab all available firmware versions are listed. Click the Web SEARCH button to check whether a later version of this firmware is available online. If there is a later version, download this version first. Then select a firmware version that is marked "Local" and corresponds to the selected amplifier model. The UPDATE DEVICE button becomes accessible. Click this button to open the Firmware update dialog.

This dialog once again lists all selected amplifiers and the chosen firmware. Please read the notes carefully.

Click the CONTINUE button to start the firmware update. The update dialog guides you through the update process. A progress bar is displayed in the Status section to show the progress of the update.

3.5. Firmware update via service port

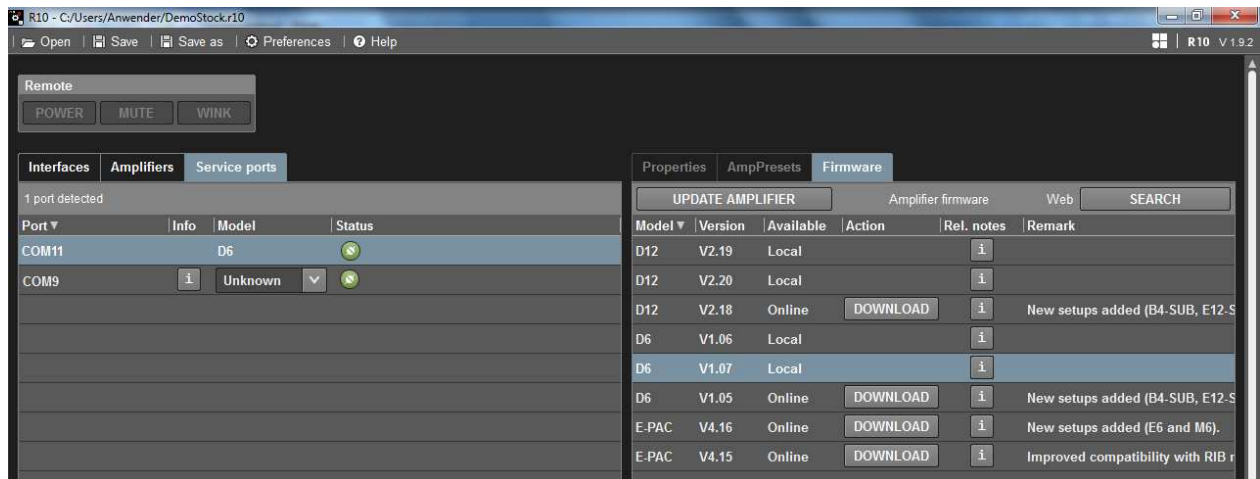


Fig. 29: Service port update start page

Note: | An update resets the amplifier to factory default settings.

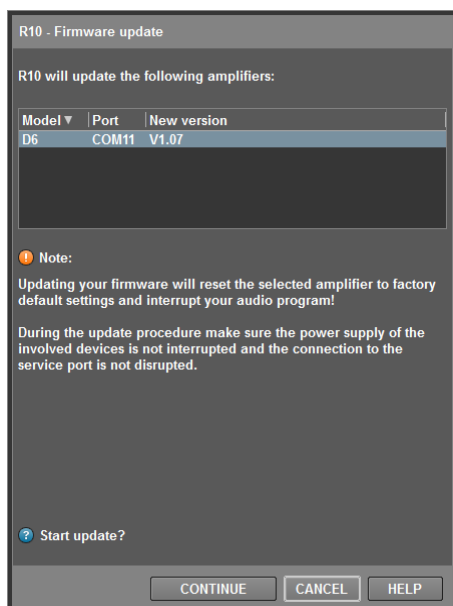


Fig. 30: Service port update in progress

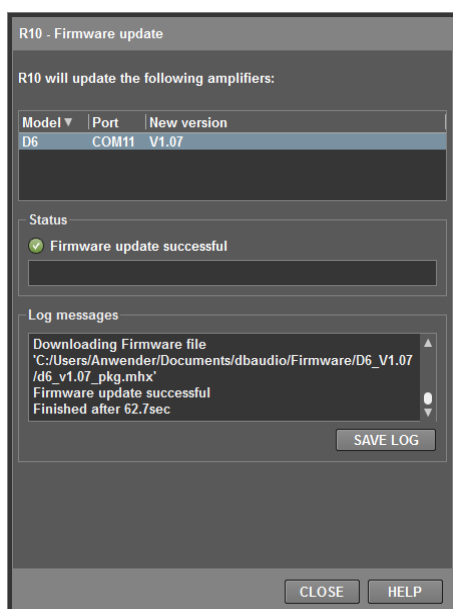


Fig. 31: Service port update successful

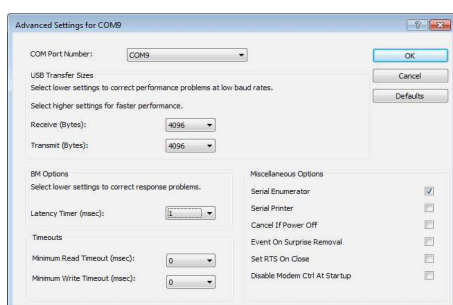


Fig. 32: FTDI Advanced Settings

On the Service ports tab, select the Port to which an amplifier is connected. D6 amplifiers connected via USB (USB and COM drivers must be installed) are displayed by their respective COM number and model name. For D12 and E-PAC amplifiers, the amplifier type (model) must be selected manually from the drop-down list in the "Model" column.

To update the firmware of an amplifier, select the amplifier from the list by clicking on the corresponding entry.

On the Firmware tab, select the firmware version you want to install. The UPDATE DEVICE button becomes enabled. Click this button to open the Firmware update dialog.

This dialog once again lists all selected amplifiers and the chosen firmware. Please read the notes carefully.

Click the CONTINUE button to start the firmware update. The update dialog guides you through the update process. A progress bar is displayed in the Status section to show the progress of the update.

3.6. USB to RS232 serial adapter

Updating E-PAC and D12 via USB to RS232 serial adapter has been successfully tested using different adapters with FTDI or Keyspan chips.

In particular, when using the combination E-PAC with FTDI USB to RS232 adapter in Windows, it is recommended to make certain settings in the driver to speed up communication. Go to Control Panel → Device Manager. Open the Properties dialog of the relevant USB Serial Port. On the Port Settings tab, click Advanced... and in the BM Options section, select 1 instead of 16 for the Latency Timer (msec).

