

# BECKER AVIONICS

## **Configuration Software**

**for the Digital Voice  
Communication System  
DVCS6100**

**CSW6100-2**

**Version 2.03**

## **Installation & Operation**

Manual      Configuration Software

Issue 10    March 2023

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## Approved Production and Maintenance Organization

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To the extent that Becker Avionics GmbH provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Term definition: User in the sense of user, installer, installation company.

## Preface

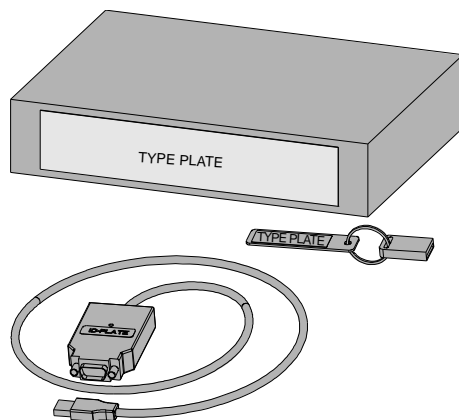
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Thank you for purchasing a Becker Avionics product. We are pleased that you have chosen our product and we are confident that it will meet your expectations.

For development and manufacturing of our product, the guidelines for highest quality and reliability have been borne in mind, supplemented by selection of high quality material, responsible production and testing in accordance to the standards.

Our competent customer support department will respond on any technical question you may have. Please do not hesitate to contact us at any time.

## Configuration Set - CSW6100-2



Configuration Set - CSW6100-2

design depends on built standard

### List of Effective Pages and Changes

Only technical relevant modifications are described in this table.

<b>Document: issue 10 Article Number 0608.939-071</b>			
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## List of Abbreviations

### List of Abbreviations


ACU	Audio Control Unit (ACU is here used as general indication for audio control devices)
CAN	CANbus
CSW	Configuration Software
DVCS	Digital Voice Communication System
EASA	European Aviation Safety Agency
EM	External Memory Module
FAA	Federal Aviation Administration
IC	Intercom
PC	Personal Computer
REU	Remote Electronic Unit
USB	Universal Serial Bus


## Units


### Units


dBm	Power Ratio In Decibel referenced to 1 mW
g	Gram
kg	Kilogram
Mbps	Mega Bits Per Second
mm	Millimeter
Ohm ( $\Omega$ )	Resistance
s	Second
V	Volt
mV	Millivolt
W	Watt
mW	Milliwatt


## General Safety Definitions

 **DANGER** Indicates a hazardous situation which, if not prevented, will result in death or serious injury.

 **WARNING** Indicates a hazardous situation which, if not prevented, could result in death or serious injury.

 **CAUTION** Indicates a hazardous situation which, if not prevented, could result in minor or moderate injury.

 **NOTICE** Is used to address practices not related to physical injury.

 **SAFETY INSTRUCTIONS** Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.



## Disposal

**⚠ CAUTION** The packaging material is inflammable, if it is disposed of improperly by burning, toxic fumes may develop.

This product contains materials that fall under the special disposal regulation. We recommend the disposal of such materials in accordance with the current environmental laws.

- Dispose circuit boards by a technical waste dump which is approved to take on e.g. electrolytic aluminium capacitors. Do under no circumstances dump the circuit boards with normal waste dump.

## Warranty Conditions

### User conversions and changes are not permitted.

Any change made by the user excludes any liability on our part (excluding the work described in this manual).

- The device must not be opened.
- Do not make any modifications to the device, except for those described in the manual.
- Make connections to the inputs, outputs and interfaces only in the manner described in the manual.
- Fix the devices according to the instructions.  
We cannot give any guarantee for other methods.

## Conditions of Utilization

### General introductory notes

With this device you bought a product which was manufactured and tested before delivery with the utmost care.

Please take your time to read the notes which you ought to follow closely during installation and operation.

Otherwise all claims under the warranty will become void and a decreased service life or even damages must be expected.

**⚠ CAUTION** The user is responsible for protective covers and/or additional safety measures in order to prevent damages to persons and electric accidents.

### Additional Conditions of Utilization

Please refer to "Safety-Conscious Utilization", page 14.

## Non-Warranty Clause

We checked the contents of this publication for compliance with the associated hard and software. We can, however, not exclude discrepancies and do therefore not accept any liability for the exact compliance. The information in this publication is regularly checked, necessary corrections will be part of the subsequent publications.

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## 1 General Description

### In this chapter you can read about:

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This manual describes the usage and functionality of the components from the Becker Configuration Software Set CSW6100-2.

The type plate on your device shows the part number for identification purposes (see "Type Plate", page 18).

Before starting operation of the device(s) please read this manual carefully, with particular attention to the description referring to your device(s).

## Introduction

**1.1 Introduction**

- The Configuration Software Set CSW6100-2 is used to prepare configurations for the Digital Voice Communication System DVCS6100.
- This document is an introduction and explanation of the configuration software CSW6100 delivered and license controlled by a CodeMeter stick.

For a description of the Digital Voice Communication System DVCS6100, refer to the DVCS6100 manuals:

ACU6100	DV 64440.03	"Installation and Operation"	Article-No. 0589.845-071
ACU6101	DV 64470.03	"Installation and Operation"	Article-No. 0614.564-071
REU6100	DV 64460.03	"Installation and Operation"	Article-No. 0589.829-071

\* For details please contact Becker Avionics or refer to manual: <http://www.becker-avionics.com/downloads/> → Intercom

The manual "Installation and Operation" (**I&O**) contains the sections:

Section	I&O
General	X
Installation	X
Operation	X
Theory of Operation	N/A
Maintenance and Repair	N/A
Illustrated Parts List	N/A
Modification and Changes	N/A
Circuit Diagrams	N/A
Certifications	N/A
Attachments	N/A

## 1.2 Purpose of Equipment

- The CSW6100 is a desktop application to make and edit configuration data sets.
- The configuration data is necessary and used with the device(s) of the Digital Voice Communication System DVCS6100.

### NOTICE

- With the CSW6100 software it is possible to make configuration data sets without a connected device.

The CSW6100-2 configuration software set contains:

- Hardware:
  - 1x CAN-USB-adapter
  - 1x CodeMeter stick.
- Software:
  - CSW6100.
  - Driver software for CAN-USB-adapter.

### 1.2.1 Short Description

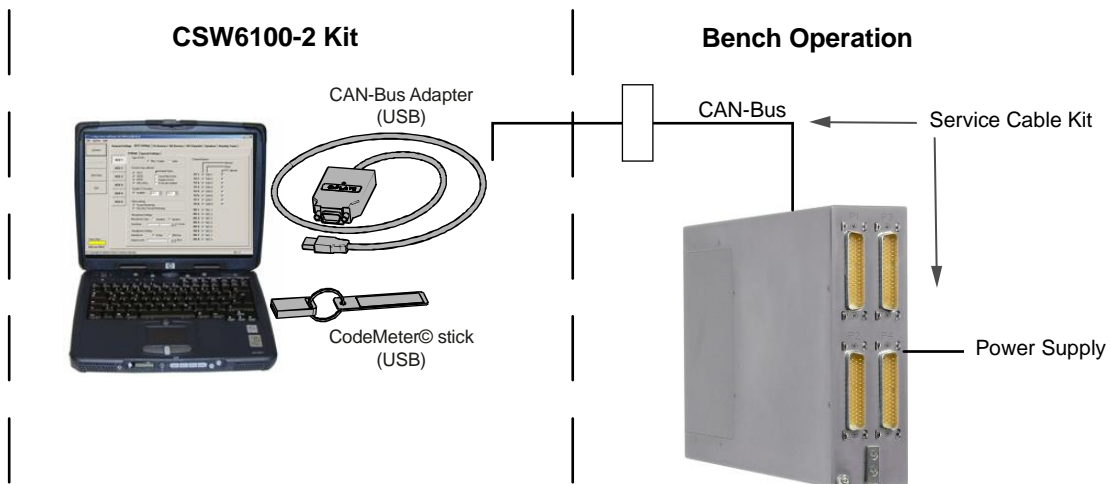


Figure 1: Software Configuration - Bench Operation (example)

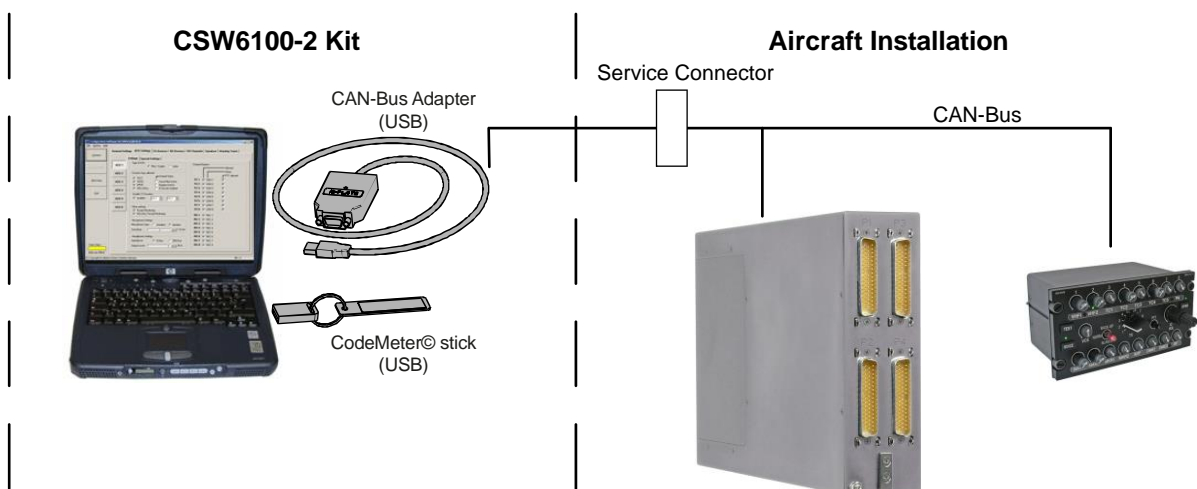


Figure 2: Software Configuration - Aircraft Installation (example)

### 1.3 Safety-Conscious Utilization

For safe operation of the product the notes have to be obeyed:

#### NOTICE

- Before starting the programming procedure:
  - Make sure that all components are connected correctly.
  - Do not remove or equip the components during programming procedure.

### 1.4 Restriction for Use

#### SAFETY INSTRUCTIONS

The product is to be used inside the declared limits.

## 1.5 Technical Data

### 1.5.1 CodeMeter Stick

CodeMeter Stick	Specifications
Usage	Data medium to provide: <ul style="list-style-type: none"> <li>• CSW-Software</li> <li>• Driver-Software</li> <li>• User manual (pdf format)</li> </ul>
Description	CodeMeter stick (registered USB stick)

### 1.5.2 CAN-USB Adapter

	Specifications
Usage	PC (USB) → Connector (CAN) → Device
Description	CAN-USB adapter, 0.55 m + connectors
Connector type	<b>USB:</b> USB connector type A, USB 1.1, compatible with USB 2.0 <b>D-Sub:</b> Connector type D-Sub 9-pol, male, pin assignment according to specification CiA® 102,
Bitrate	5 kbit/s...1 Mbit/s

## 1.6 Order Code

### 1.6.1 CSW6100

Qty	Configuration Software Set	
1	CSW6100-2 configuration software set <ul style="list-style-type: none"><li>• 1x CAN-USB-adapter</li><li>• 1x CodeMeter stick<ul style="list-style-type: none"><li>○ CSW6100 software</li><li>○ Driver software for CAN-USB-adapter</li><li>○ CSW6100-2 manual (pdf)</li><li>○ Driver software manual (pdf)</li></ul></li></ul>	Article-No. 0608.602-919

### 1.6.2 Documentation

Qty	Documentation	
1	(I&O) Installation and Operation CSW6100-2, English	Article-No. 0608.939-071

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## 2 Installation

This manual must be available close to the device during the performance of all tasks.

Any deviations from the installation instructions in this document are under own responsibility.

### In this chapter you can read about:

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### 2.1 Packaging, Transport, Storage

Visually inspect the package contents for signs of transport damage.



**CAUTION** The packaging material is inflammable, if it is disposed of improperly by burning, toxic fumes may develop.

Keep the packaging material and use it in the case of a return shipment. Improper or faulty packaging may lead to transport damages.

Make sure to transport the device always in a safe manner and with the aid of suitable lifting equipment if necessary. Do never use the electric connections for lifting. Before the transport, a clean, level surface should be prepared to put the device on. The electric connections may not be damaged when placing the device.

#### First Device Checkup

- Check the device for signs of transport damages.
- Please make sure that the indications on the type plate agree with your purchase order.
- Make sure that the equipment is complete ("Scope of Delivery", page 18).

#### Storage

If you do not use the components immediately, make sure to store it in a dry and clean environment.

## 2.2 Device Assignment

This manual is valid for the:

- CSW6100-2 configuration software set with CSW6100 software version 2.02 or later.

### 2.2.1 Scope of Delivery

- Manuals
  - CSW6100-2 manual (PDF on CodeMeter stick).
  - CAN\_USB-adapter manual (PDF on CodeMeter stick).
- CSW6100-2 configuration software set.
  - CodeMeter stick.
  - CAN-USB-adapter.
  - Driver software for CAN-USB-adapter (on CodeMeter stick).
  - Software CSW6100 (on CodeMeter stick).

### 2.2.2 State of Delivery

- The data medium contains the current released CSW software tools, driver and the user manuals (pdf format).

### 2.2.3 Additional Required Equipment

- Computer with minimum two USB ports.

### 2.2.4 Type Plate

The device type is specified by the type plate:

Example:

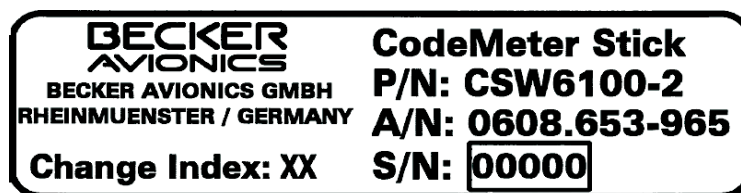


Figure 3: Type plate (example)

#### Explanation:

<b>P/N:</b>	<b>Type designation:</b> CSW = Configuration Software Set 6100-2 = for device(s) used in the Digital Voice Communication System DVCS6100
<b>S/N:</b>	Unique number of the particular device
<b>A/N:</b>	Article number
	<b>Change Index:</b> Related to the shown hardware built standard

## 2.3 System Requirements

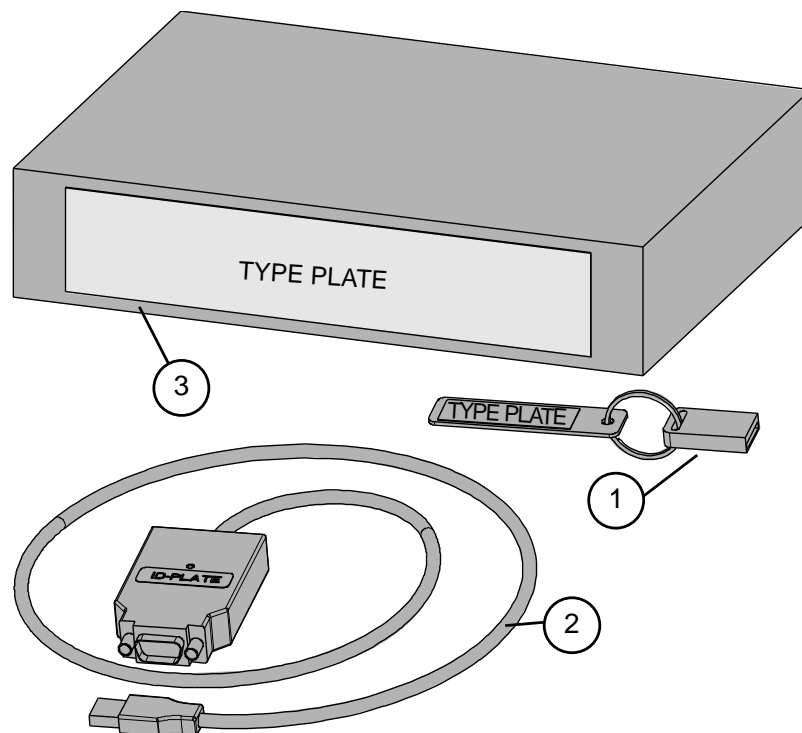
System requirements:

- Computer (PC) with minimum two USB ports.
- Operating system: Microsoft® Windows XP, Windows 7 or Windows 10.

### SAFETY INSTRUCTIONS

- The equipment is not qualified for installation in areas where fluid contamination is quite likely.
- Changes or modifications made to this equipment not expressly approved in written form by Becker may void the authorization to operate this equipment.

## 2.4 CSW6100-2 - Configuration Software Set



- 1 CodeMeter stick
- 2 CAN-USB-adapter
- 3 Carton

Figure 4: CSW6100-2 - Configuration Software Set

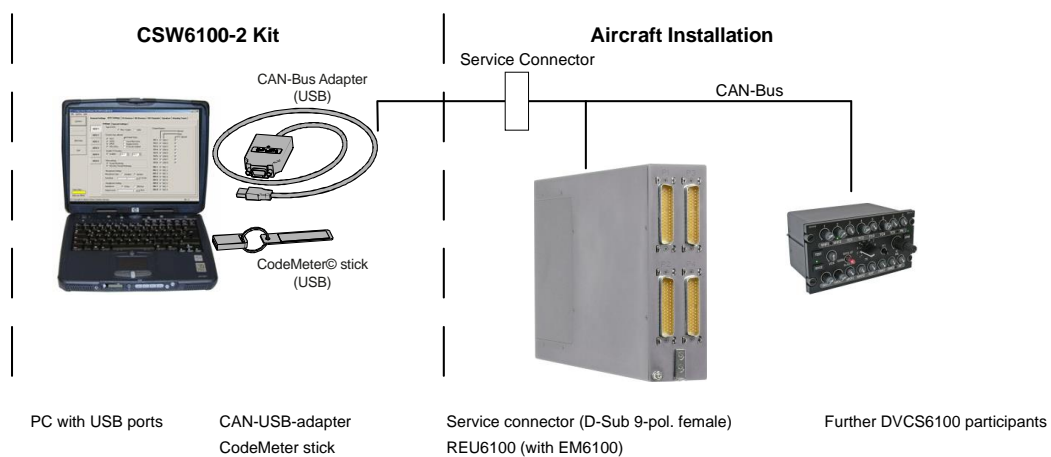
## 2.5 Hardware Installation

To connect the configuration software set to a DVCS6100 a special cable set is necessary. This set is for the connection of the CAN-USB-adapter to the CANbus system of the DVCS6100.

- Prepare a CAN-connection anywhere in the bus system of the DVCS6100 installation.
  - For Airbus H145 helicopter\* standard installations is a service connector available in the cockpit.
- Use the delivered CAN-USB-adapter for the connection between PC and the CANbus-connection.
  - Connect the D-Sub 9-pol (male) connector with the bus system in your aircraft installation or test bench.
    - Pin 2 = CAN L
    - Pin 7 = CAN H
  - Connect the other end of the CAN-USB-adapter to the USB port on the PC.

\*Please refer to the corresponding documentation from manufacturer.

For details please contact Becker Avionics or refer to REU manual: <http://www.becker-avionics.com/downloads/> → Intercom



The hardware installation depends on the type of installation and its equipment and therefore only general information can be given.

Figure 5: Example - Hardware Installation

- Use the delivered CAN-USB-adapter to connect the DVCS6100 bus system to a free USB port at the computer.
- Connect the CodeMeter stick to a free USB port on the PC.

### NOTICE

#### Data backup:

We recommend to make a data backup of the existing configuration data before you send new configuration data to the REU.

- Save existing data (see "Save Configuration" page 50).
- If there is a memory module (EM6100) label it to avoid confusion with other memory modules.

## 2.6 Software Installation

- The files for operation of the CSW6100 software are available on the CodeMeter stick (...exe).

### NOTICE

#### Possible operation of CSW6100:

##### Operation from CodeMeter stick:

- Start the program CSW6100start.exe directly from the connected CodeMeter stick (easiest workflow).
  - The screen shows the "CSW6100 Start Menu".
- The CodeMeter stick must be connected during the use of the CSW6100 software after installation.

##### Software installation on a computer:

- Install the configuration software on a computer and start it from the menu icon on the desktop.
  - The screen shows the "CSW6100 Start Menu".
- The CodeMeter stick must be also connected during the use of the CSW6100 software after installation.

- For operate the CAN-USB-adapter it is necessary to install a dedicated driver.
  - The drivers for the CAN-USB-adapter are available on the CodeMeter stick.
  - Please install the drivers first.

### 2.6.1 Driver Software

### NOTICE

It is recommended to install the driver before the CAN-USB-adapter is connected to the PC at the first time.

- Please make sure that you have access to the PC as user with administrator rights (not required for later use of the CAN-USB adapter).
- Please make sure that the selected file version agrees to your operating system.
- The view on your screen can vary and depends on the installed operating system.
- The described process for driver installation is based on a 32bit Windows® system.
- The drivers for a 64bit Windows® system are on the CodeMeter stick available.

### NOTICE

- The text in the examples are in English. The language of the installation wizard depends on your locale computer settings.

### 2.6.1.1 CAN-USB Driver Installation



Figure 6: Driver Installation - CAN Driver Folder

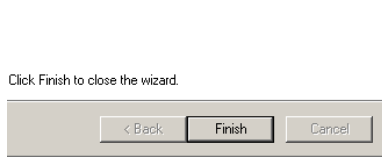


Figure 7: Driver Installation - Installation Completed

### 2.6.1.2 CAN-USB-Adapter Initialization

#### CAN-USB driver installation on the PC

- Connect the CodeMeter stick to a free USB port on the PC.
- Start the driver setup program "PeakOemDrv.exe" from the CodeMeter stick (CSW6100-2\Driver\CAN-USB\PeakOemDrv.exe).

- An installation wizard with a setup assistant starts.
- Do all the steps from setup assistant.
- Click button "Finish" to complete the installation.

### 2.6.1.3 CAN-USB Driver Deinstallation

#### CAN-USB-adapter initialization

- Connect the CAN-USB-adapter to another free USB port on the PC.
  - It is not necessary to power-off the PC.
- The PC initializes the new connected hardware.
- The LED on the CAN-USB-adapter lights red for successful initialization.

#### Apps & Features

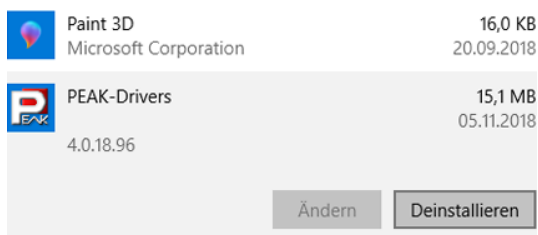


Figure 8: Driver Deinstallation - PC System Properties

#### CAN-USB driver deinstallation

The view and the designation can vary and depends on the installed operating system.

Example with Win10:

- Open the system properties from the PC operating system.
- Open the area for apps and features.
- Search for the driver software.
- Do a click on the entry to select it.
- Select button "Deinstall" and do the step to complete the deinstallation.

### 2.6.2 CSW6100 - Configuration Software

Please see chapter "Operating Instructions" page 23.

### 3 Operating Instructions

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### 3.1 General

- The CSW6100 is a desktop application to make, change, up- and download and store configuration data.



## 3.2 Device Description

### 3.2.1 Start Configuration Software

#### NOTICE

- The method how the configuration software CSW6100 starts depends on the settings of the operating system on the PC.
- For manually start of the software read further instructions.



Figure 9: CSW6100 - Start Menu

#### CSW6100 program start

- Connect the CodeMeter stick to a free USB port on the PC.
- Select the file "CSW6100start.exe" from the CodeMeter stick content.
- Double click the file.
  - The screen shows the "CSW6100 Start Menu".

#### Description "CSW6100 Start Menu"

- Open the configuration interface:
  - Click the button "Start CSW6100" to start the configuration software.
  - The screen shows the CSW6100 user interface.
- Open the CSW manual:
  - Click the button "Show Manual" to open the CSW6100-2 user manual (pdf) from the CodeMeter stick.
- Click the button "Exit" to complete the use of the CSW6100.
- Click the button "Start CSW6100" to start the configuration software.
  - The screen shows the CSW6100 user interface.
- The user interface starts always with an empty configuration data screen.

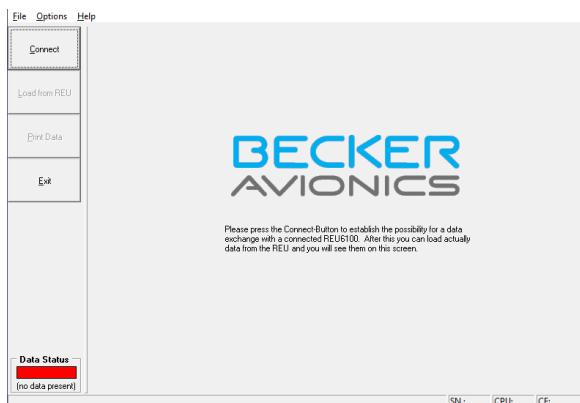


Figure 10: CSW6100 - User Interface

### 3.2.2 User Interface

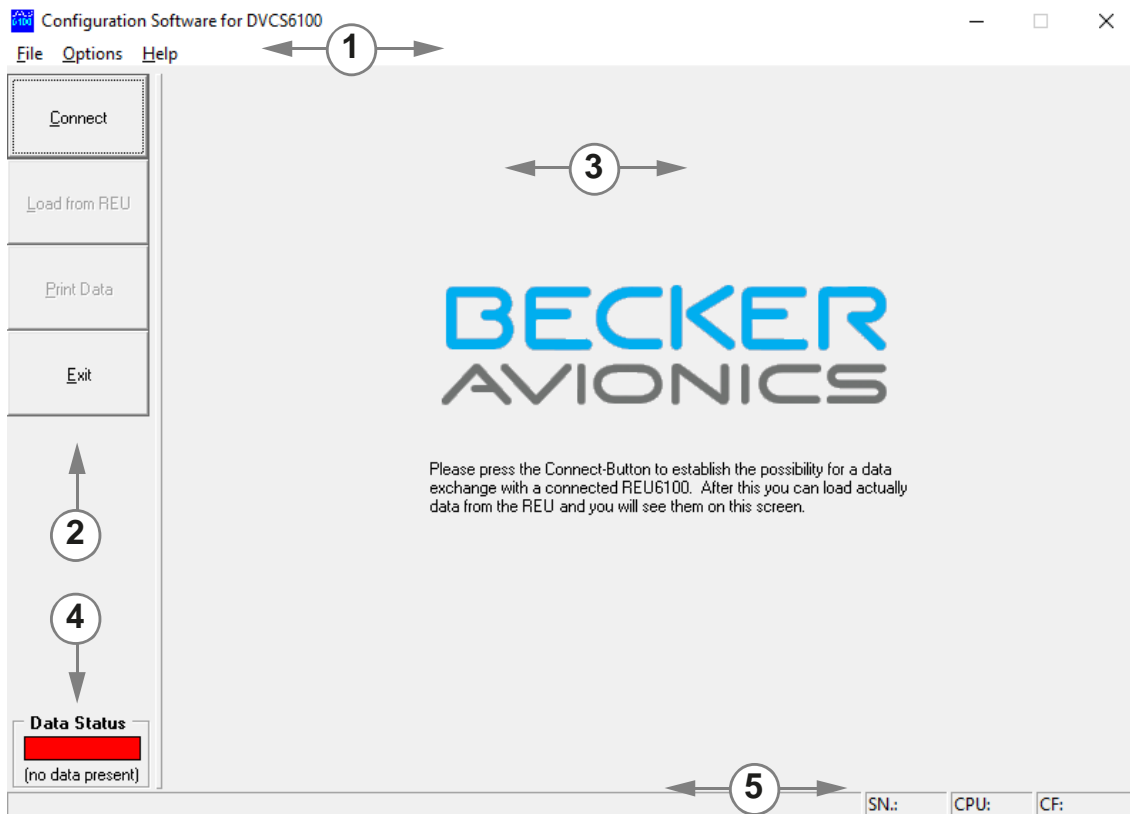
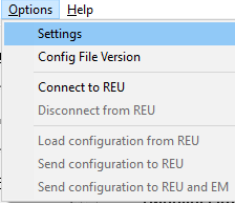
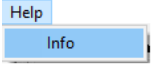


Figure 11: CSW6100 - User Interface Areas

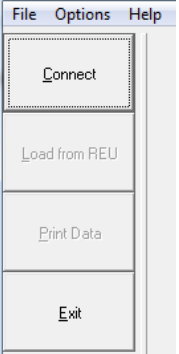
The interface consists of different basic parts:

#### 3.2.2.1 Menu Bar (1)

<b>1</b>	<p><b>Menu Bar</b></p> <p><b>The Menu Bar contains commands for:</b></p> <ul style="list-style-type: none"> <li>• File</li> <li>• Options</li> <li>• Help</li> </ul>
	<p><b>File: Commands for data file handling, print, save and close.</b></p> <ul style="list-style-type: none"> <li>• <b>New Data Set:</b> <ul style="list-style-type: none"> <li>○ Is used to make a new configuration data set from a predefined template.</li> </ul> </li> <li>• <b>Open Data File:</b> <ul style="list-style-type: none"> <li>○ Opens an already stored configuration data set.</li> </ul> </li> <li>• <b>Restricted Primary File Load:</b> <ul style="list-style-type: none"> <li>○ Is used to open stored configuration data sets made with software versions before.</li> </ul> </li> <li>• <b>Save Data to File:</b> <ul style="list-style-type: none"> <li>○ Saves the configuration data set to a file (file format .DV6).</li> </ul> </li> <li>• <b>Save as ...</b> <ul style="list-style-type: none"> <li>○ Starts the save procedure with a dialog box with the possibilities to change file name and storage space.</li> </ul> </li> <li>• <b>Printer Setup:</b> <ul style="list-style-type: none"> <li>○ Is used to select printer and related settings.</li> </ul> </li> <li>• <b>Print Configuration Data:</b> <ul style="list-style-type: none"> <li>○ Sends the current configuration data set to the printer.</li> </ul> </li> <li>• <b>Exit:</b></li> </ul>

<p><b>1</b></p>	<p><b>Menu Bar</b></p>
 <p>The screenshot shows a menu with 'Options' and 'Help' at the top. The 'Options' menu is open, and 'Settings' is highlighted. Other items include 'Config File Version', 'Connect to REU', 'Disconnect from REU', 'Load configuration from REU', 'Send configuration to REU', and 'Send configuration to REU and EM'.</p>	<ul style="list-style-type: none"> <li>○ Is used to complete the use of the CSW6100.</li> </ul> <p><b>Options: Commands to change settings, for system connections, and commands for load/send configuration data to the connected device:</b></p> <ul style="list-style-type: none"> <li>• Settings:             <ul style="list-style-type: none"> <li>○ The command starts a dialog box with possibilities to change some basic settings (display values, special settings, user level).</li> <li>○ Display values: Adjustment if the CSW6100 shows the values in percentage or as absolute value.</li> <li>○ Special settings: Adjustment for the appearance of the store data dialog at program exit.</li> <li>○ User level: Adjustment for the user levels with different scope of functions.</li> </ul> </li> <li>• Connect to REU:             <ul style="list-style-type: none"> <li>○ Is used to make a connection between CSW6100 and the device for data interchange.</li> <li>○ This menu item is disabled when the connection exists.</li> </ul> </li> <li>• Disconnect from REU:             <ul style="list-style-type: none"> <li>○ Is used to terminate the connection between CSW6100 and the device.</li> <li>○ This menu item is disabled when the connection is terminated.</li> </ul> </li> <li>• Load configuration from REU:             <ul style="list-style-type: none"> <li>○ The command starts a configuration data load from the connected REU to the CSW6100.</li> <li>○ This menu item is selectable only when the connection between CSW6100 and the device exists.</li> </ul> </li> <li>• Send configuration to REU:             <ul style="list-style-type: none"> <li>○ The command sends the configuration data from the CSW6100 to the connected REU.</li> <li>○ This menu item is selectable only when the connection between CSW6100 and the device exists.</li> </ul> </li> <li>• Send configuration to REU and EM:             <ul style="list-style-type: none"> <li>○ The command sends the configuration data from the CSW6100 to the connected REU and its connected external memory module EM6100 (optional).</li> <li>○ This menu item is selectable only when the connection between CSW6100 and the device exists.</li> </ul> </li> </ul>
 <p>The screenshot shows a menu with 'Help' at the top. The 'Help' menu is open, and 'Info' is highlighted.</p>	<p><b>Help: Information about software properties:</b></p> <ul style="list-style-type: none"> <li>• This menu item shows information about software etc.:             <ul style="list-style-type: none"> <li>○ Software version.</li> <li>○ Manufacturer address.</li> </ul> </li> </ul>

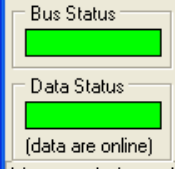
### 3.2.2.2 Function Buttons Bar (2)

<b>2</b>	<b>Function Buttons Bar</b>
	<p><b>The Function Buttons Bar contains commands for a direct access to most used commands:</b></p> <ul style="list-style-type: none"> <li>• <b>Connect:</b> <ul style="list-style-type: none"> <li>○ Is used to make a connection between CSW6100 and the device for data interchange.</li> <li>○ It can be used to terminate the connection between CSW6100 and the device.</li> </ul> </li> <li>• <b>Load from REU:</b> <ul style="list-style-type: none"> <li>○ The command starts a configuration data load from the connected REU to the CSW6100.</li> </ul> </li> </ul> <p>Note: It is the same command as the menu item Options-Load configuration from REU.</p> <ul style="list-style-type: none"> <li>• <b>Print Data:</b> <ul style="list-style-type: none"> <li>○ Sends the current configuration data set to the printer</li> </ul> </li> </ul> <p>Note: It is the same command as the menu item File-Print Configuration Data.</p> <ul style="list-style-type: none"> <li>• <b>Exit:</b> <ul style="list-style-type: none"> <li>○ Is used to complete the use of the CSW6100.</li> </ul> </li> </ul> <p>Note: It is the same command as the menu item File- Exit.</p>

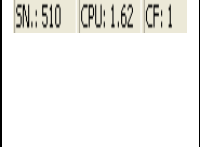
### 3.2.2.3 Configuration Data Screen (3)

<b>3</b>	<b>Configuration Data Screen</b>
	<p><b>This part shows the tools for configuration of the DVCS6100 and its devices.</b></p> <ul style="list-style-type: none"> <li>• It is possible to load the configuration data from a connected REU.</li> <li>• It is possible to open a configuration data file from a connected storage medium.</li> <li>• It is possible to make a new configuration data set with a default template.</li> </ul>

### 3.2.2.4 Data Status Display (4)

<b>4</b>	<b>Data Status Display</b>
	<p><b>This part shows the current status for configuration data and bus connection.</b></p> <ul style="list-style-type: none"> <li>• <b>Bus Status:</b> <ul style="list-style-type: none"> <li>○ This display is visible only when the connection between CSW6100 and the device exists.</li> <li>○ The display lights green if the connection is ok.</li> <li>○ The display lights yellow if the system tries to connect a REU6100 but it gets no answer.</li> <li>○ The display lights red if there is a failure.</li> </ul> </li> <li>• <b>Data Status:</b> <ul style="list-style-type: none"> <li>○ The display lights green if the configuration data is identical with the data stored in the connected REU6100.</li> <li>○ The display lights yellow if there are any changes</li> <li>○ The display lights yellow if the connection is terminated (data is offline).</li> <li>○ The display lights red if no configuration data set is started (no data present).</li> </ul> </li> </ul>

### 3.2.2.5 Data Status Bar (5)

5	Data Status Bar
	<p><b>This part shows information about the connected device.</b></p> <ul style="list-style-type: none"> <li>• REU serial number.</li> <li>• CPU version.</li> <li>• Config File Version.</li> </ul>

## 3.3 Operating

For the configuration work it is necessary to have the configuration data interface with the areas and tools to do the related settings.

### NOTICE

- The availability of the configuration tools depends on the selected user level. For details please see "User Levels" page 48.

### 3.3.1 CSW6100 - Configuration Data Interface

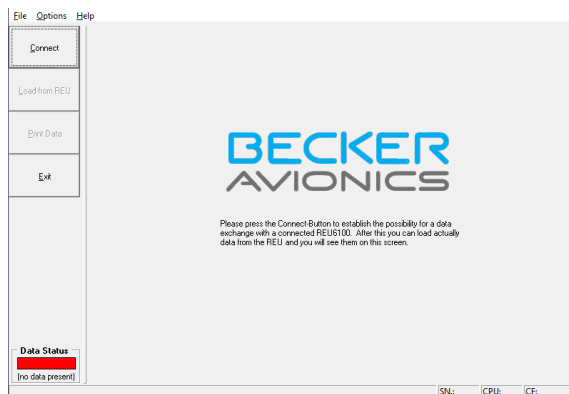


Figure 12: CSW6100 - User Interface

#### CSW6100 configuration data screen

- The user interface starts always with an empty configuration data screen.
- It is necessary to open a configuration data set to do the configuration work.

### 3.3.2 CSW6100 - Configuration Data Sets

With the configuration data set starts also a set of configuration tools. The configuration settings are available in different configuration pages.

### NOTICE

- The scope of the configuration tools depends on the selected user level. For details please see "User Levels" page 48.



Figure 13: System Integrator - Scope of Configuration



Figure 14: Customer - Scope of Configuration

#### CSW6100 configuration tools

- Configuration tools in the user level "System Integrator".
- Configuration tools in the user level "Customer".

Operating

### 3.3.3 Start a Configuration Data Set

There are different possibilities to start an applicable configuration data interface:

- Open a new data set (see "Configuration File Version" page 51).
- Use an existing data set.

#### 3.3.3.1 New Data Set

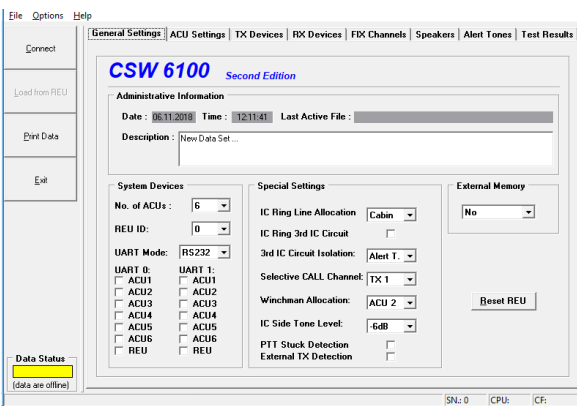
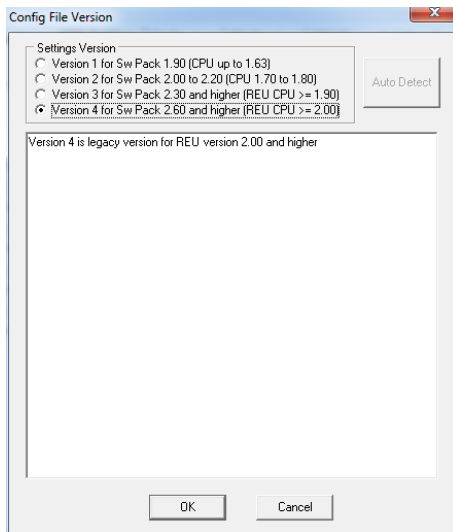
**NOTICE**

- When you do the configuration work offline (no REU connected) please make sure that the selected configuration file version matches the version of your REU software package.
- If you are not sure, please connect your REU and select the button "Auto Detect".
  - The CSW6100 selects automatically the correct configuration file version.

**CSW6100 new configuration data set**

**Open a new data set:**

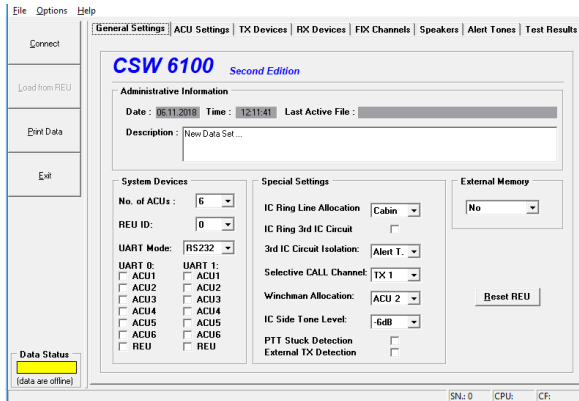
- Select Menu → File → New Data Set.
  - Is used to make a new configuration data set from a predefined template.
- Select in the dialog box a template version related to your REU software package.



- A configuration data set with default settings starts.

See also "Configuration File Version" page 51.

### 3.3.3.2 Existing Data Set

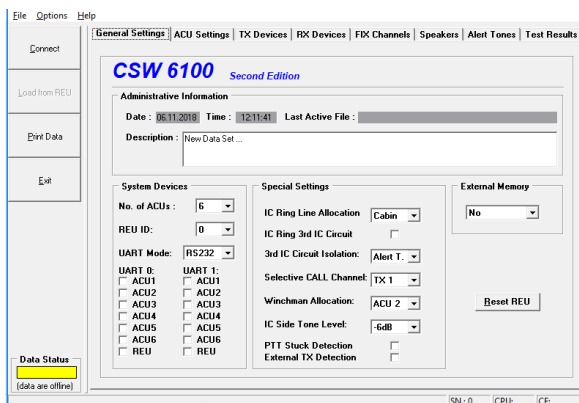


#### CSW6100 existing configuration data set

##### Open an existing data file:

- Select Menu → File → Open Data File.
  - Opens an already stored configuration data set (file format .DV6).
- Select the folder where the applicable file (.DV6) is stored.
- Select the file and click the button "open".
- A prepared configuration data set starts.

### 3.3.3.3 Existing Data Set (older versions)



#### CSW6100 existing configuration data set (older version)

##### Open an existing restricted primary file:

- Select Menu → File → Restricted Primary File Load.
  - Is used to open stored configuration data sets made with software versions before (file format .DV6).
- Select the folder where the applicable file (file format .DV6) is stored.
- Select the file and click the button "open".
- A prepared configuration data set made with an older CSW6100 version starts.
  - All functions which differ from the current CSW6100 software versions are disabled to avoid possible malfunctions.

### 3.4 Configuration Page - General Settings

Use this page to do the general configuration settings for the DVCS6100 system.

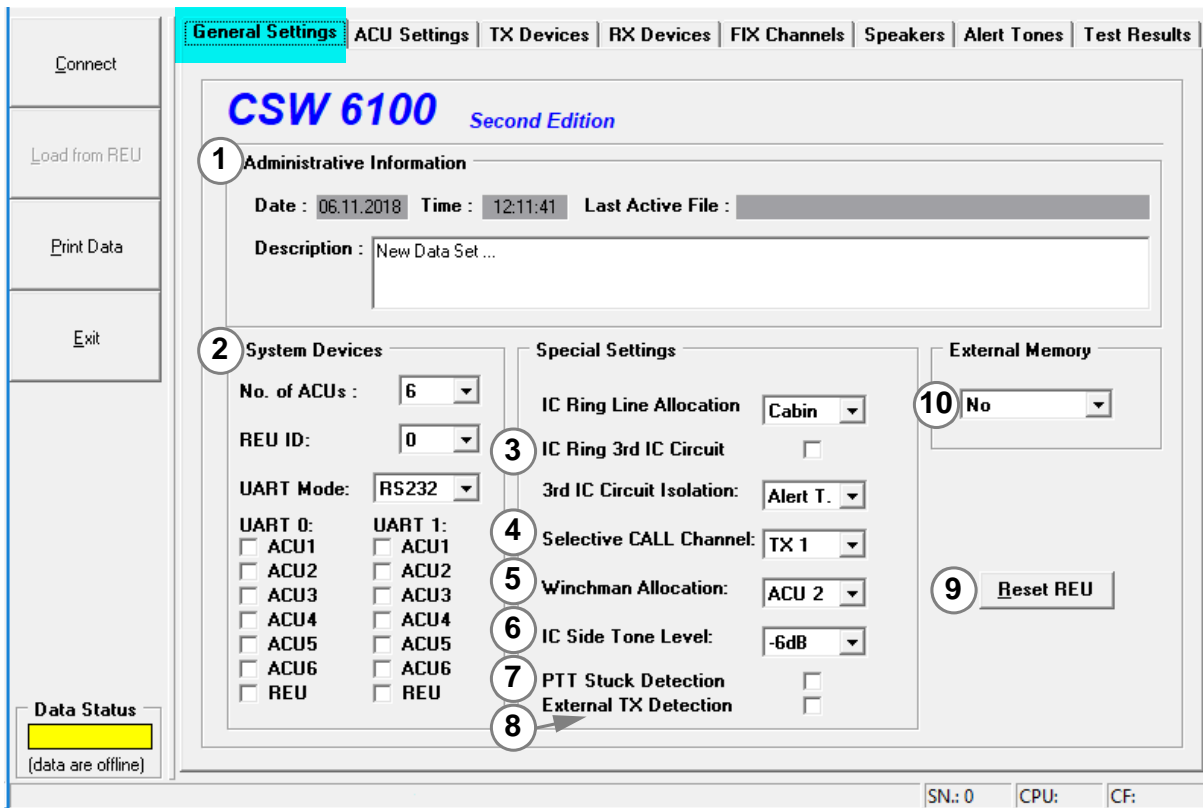


Figure 15: CSW6100 Configuration Page - General Settings

#### 3.4.1 Administrative Data (1)

Information about:

- The date and the time of storage of this configuration data set.
- The file name.
- The individual description.

#### 3.4.2 System Settings (2)

- Setting the number of devices in the system.
- Setting of the REU ID number:
  - Please set the REU ID in Multi-REU applications from 0 to 2.

#### Only for configuration data sets with REU6100-X-(3XX):

- Setting of the UART mode:
  - Select RS232 or RS422 (always for both UART channels).
  - It is possible to set up to two ACUs (glass cockpit) or one REU on one UART channel.

#### 3.4.3 IC-Ring Settings (3)

- Setting for cockpit or cabin allocation.
- Setting to include the IC-ring line in the 3<sup>rd</sup> IC circuit.
- Setting for alert tone or selective call isolation.

#### 3.4.4 Selective Call Settings (4)

- Setting of the TX-channel for selective call functionality.
  - Please set the channel to "No" if selective call is used for 3<sup>rd</sup> IC isolation.



### 3.4.5 Winchman Settings (5)

- The selected ACU does the winchman functionality.

### 3.4.6 IC Sidetone Settings (6)

- Settings for the attenuation value of the sidetone signal in the system.
  - -15...0 dB in steps of 3 dB are available.

### 3.4.7 PTT Stuck Settings (7)

- Select the check box to enable the PTT stuck detection.

### 3.4.8 External TX Detection (8)

- Select the check box to set all the alert tone inputs as external TX detection inputs.
  - Note: With variants **not** REU6100-X-(3XX) all alert tones will be disabled.

### 3.4.9 Reset (9)

- The reset command starts the initialization of the configuration data in the REU.

### 3.4.10 External Memory (10)

- Enable/disable (yes/no) the external memory of the connected REU.

### 3.5 Configuration Page - ACU Settings

Use this page to do the configuration settings for the ACUs.

**NOTICE**

- The availability of the configuration field depends on the selection of device type and/or configuration settings.

The page ACU settings has two subpages:

- Subpage Settings: for basic settings of the ACUs.
- Subpage Special Settings: for function settings of the ACUs.
- The pages show all the configuration data settings for the selected device.
- Each device can have its own configuration.
- Select the device you want to configure with the buttons on the left side.

### 3.6 ACU Settings - Settings for Cockpit and Cabin ACU Types

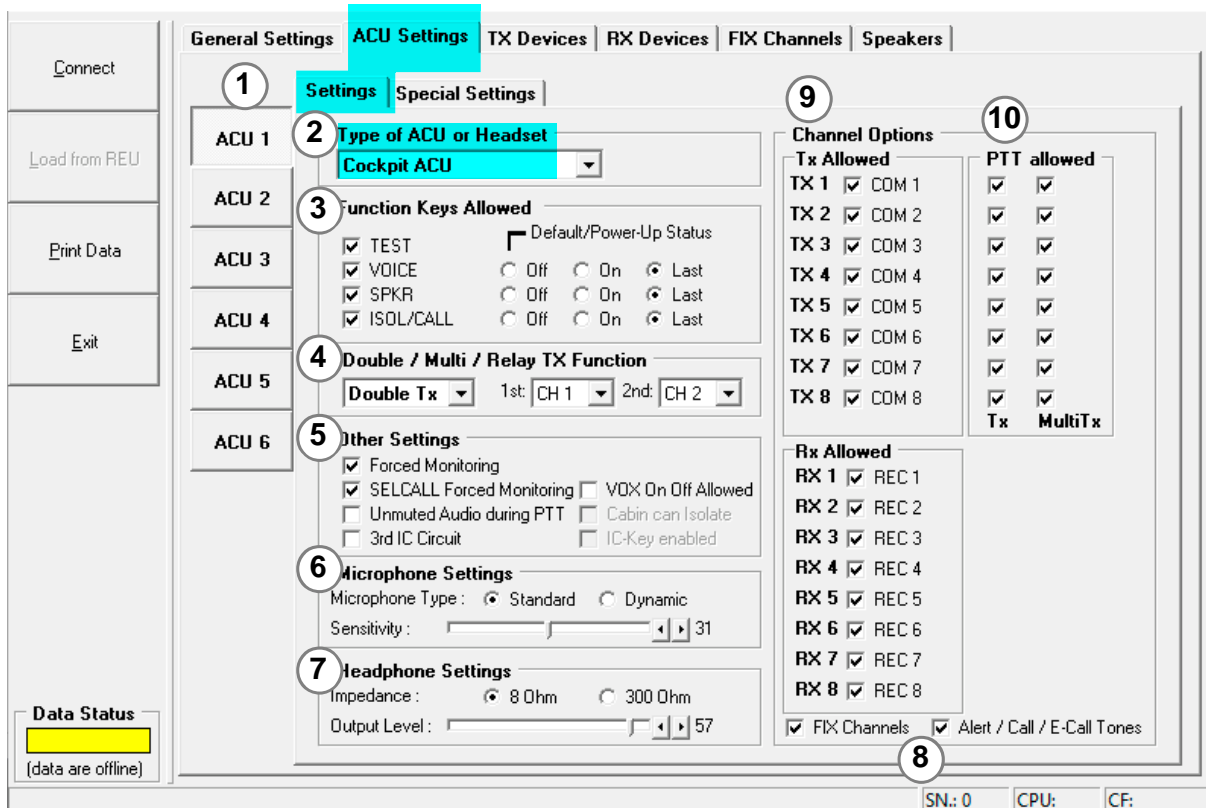


Figure 16: CSW6100 Configuration Page - ACU Settings-Settings (ACU)

#### 3.6.1 List of Devices for Configuration (1)

- Select the button for the device you want to configure.
  - You can see and change the configuration data of the selected device.

#### 3.6.2 Type of Device (2)

- Selection as what the selected device will be configured.
  - Cockpit ACU.
  - Cabin ACU.
  - Cockpit headset.
  - Cabin headset.

### 3.6.3 Function Keys and Start-up Status (3)

- Select the check boxes to enable/disable functions keys for the ACUs.
- Settings how the selected device works at power-on/off.
  - Off: Always off at startup.
  - On: Always on at startup.
  - Last: Keep the state at power down.

#### NOTICE

- The function ISOL/CALL is a group function and is always for all connected devices!
- The enable/disable function SPKR (speaker) works for the devices 1..3 only.

### 3.6.4 Double-, Multi-, Relay-, TX-Function (4)

- Selection of the mode for the TX-function.
  - No.
  - Double TX
  - Multi TX
  - Relay TX
- Selection of the channels for the TX-function (depends on mode):
  - CH1...CH8.

#### Mode Double TX-function:

- Select the mode Double TX from the dropdown box.
  - Two channel dropdown boxes are available to set the channels.

#### NOTICE

- It is not possible to select the same channel in both dropdown boxes.
- Make sure that the channel number in left box is lower than the channel number in the right box.
  - Please make sure that the selected channels are compatible to the settings for the channel options (see description "Channel Options (9) page 36) There is no other control if the selected channels are available and enabled!

#### Mode Multi TX-function:

- Select the mode Multi TX from the dropdown box.
  - The channel dropdown boxes are not available.
- Use the ACU to select the channels.

#### Mode Relay TX-function:

- Select the mode Relay TX from the dropdown box.
  - The channel dropdown boxes are not available.
- Use the ACU to select exactly two channels.

### 3.6.5 Other Settings (5)

The availability of some settings depends on the configuration settings.

- Forced Monitoring:
  - Enables/disables the automatic monitoring of the current transmit channel.
- SEL CALL Forced Monitoring:
  - Enables/disables the function forced monitoring with additional selective call functionality.
- Unmuted Audio during PTT:
  - Enables/disables if the operator can hear audio during transmission when he uses the PTT.
- 3<sup>rd</sup> IC-Circuit:
  - Enables/disables the connection of the ACU in a virtual 3<sup>rd</sup> IC-circuit.
- VOX ON/OFF Allowed:  
(This setting is only for REU6100 Software Package version 1.50 or higher!)
  - Enables/disables the VOX function from the ACU.  
With a selected check box are VOX on/off from the ACU not possible.
- Cabin can Isolate:
  - Enables/disables the function isolate for the cabin ACU.

### 3.6.6 Microphone Settings (6)

- Selection of the microphone type:
  - Standard
  - Dynamic
- Setting of the sensitivity for this input.

### 3.6.7 Headphone Settings (7)

- Selection of the headphone impedance:
  - 8 Ω or 300 Ω.
- Setting of the output level:
  - The level is set automatically to good level when the impedance is changed.
  - The output level can also be changed manually. Please be careful and prevent overmodulation of the headphone.

### 3.6.8 Auto Routing of FIX Inputs and Tones (8)

- Fix Channels:
  - Enables/disables the audio routing function for the ACUs.
  - If the check box is selected you can hear audio.
- Alert/Call/E-Call Tones:
  - Enables/disables the audio routing function for the ACUs.
  - If the check box is selected you can hear audio.

### 3.6.9 Channel Options (9)

- Selection to enable/disable TX and RX channels for the selected device.

### 3.6.10 PTT Settings (10)

- Selection to enable/disable the PTT function for the related TX channel.
- It is possible to do this for the TX and the Multi TX mode (see "Double-, Multi-, Relay-, TX-Function (4)" page 35).

### 3.7 ACU Settings - Settings for Headset Types

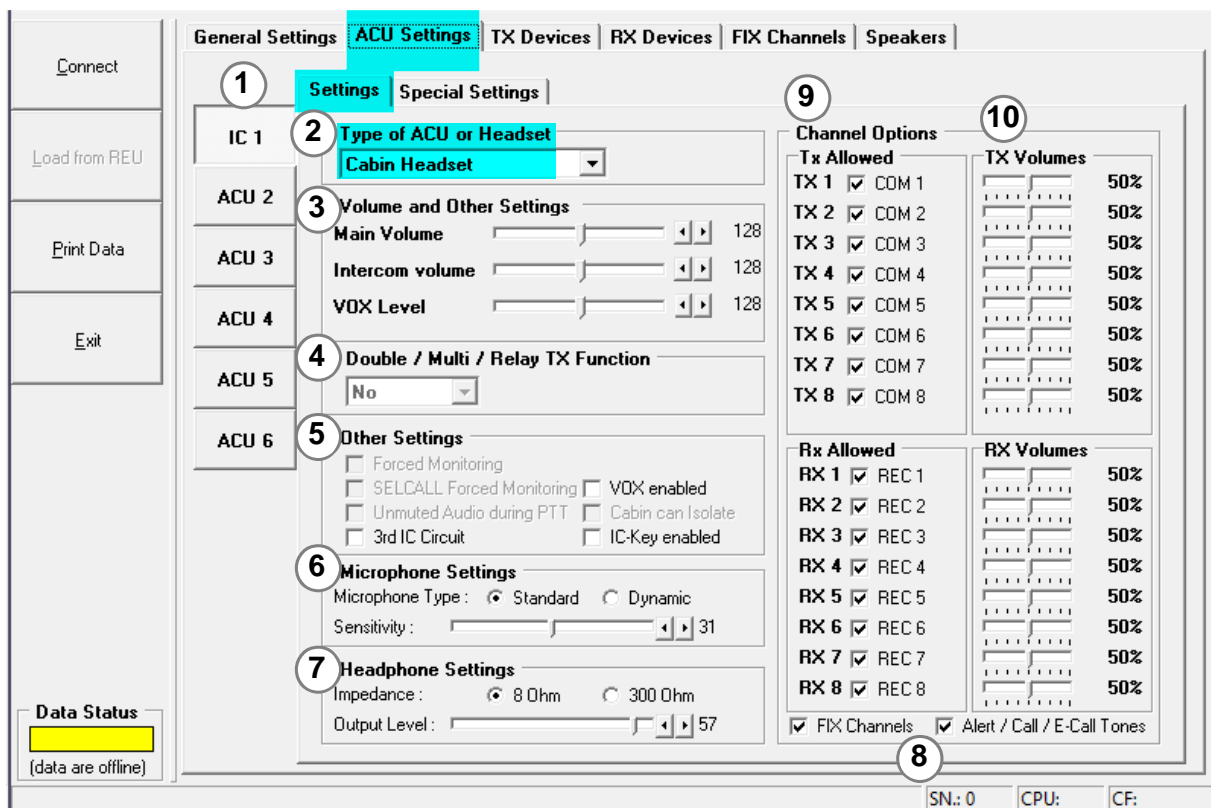


Figure 17: CSW6100 Configuration Page - ACU Settings-Settings (Headset)

#### 3.7.1 List of Devices for Configuration (1)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

#### 3.7.2 Type of Device (2)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

#### 3.7.3 Volume and Other Settings (3)

- Settings for the volume levels for:
  - Main Volume.
  - Intercom Volume.
  - VOX Level.
- The levels are set by poti for real ACU.

#### 3.7.4 Double-, Multi-, Relay-, TX-Function (4)

- Not available for headset types.

### 3.7.5 Other Settings (5)

The availability of some settings depends on the configuration settings.

- 3<sup>rd</sup> IC-Circuit:
  - Enables/disables the connection of the ACU in a virtual 3<sup>rd</sup> IC-circuit.
- VOX enabled
  - Enables/disables the VOX function for the headsets without ACU.
- Cabin can Isolate:
  - Enables/disables the function isolate for the cabin ACU.
- IC-Key enabled:
  - Enables/disables the hot mike functionality for headsets.
  - Enables/disables the IC-key function for the headsets without ACU.
  - The related alert tone is canceled.

### 3.7.6 Microphone Settings (6)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

### 3.7.7 Headphone Settings (7)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

### 3.7.8 Auto Routing of FIX Inputs and Tones (8)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

### 3.7.9 Channel Options (9)

- Selection to enable/disable TX and RX channels for the selected device.

### 3.7.10 TX and RX Volume (10)

- Settings for the TX and RX volume levels.
- The levels are set by poti for real ACU.

### 3.8 ACU Settings - Special Settings

This page shows the function settings of the ACUs.

- Each device can have its own configuration.
- Select the device you want to configure with the buttons on the left side.

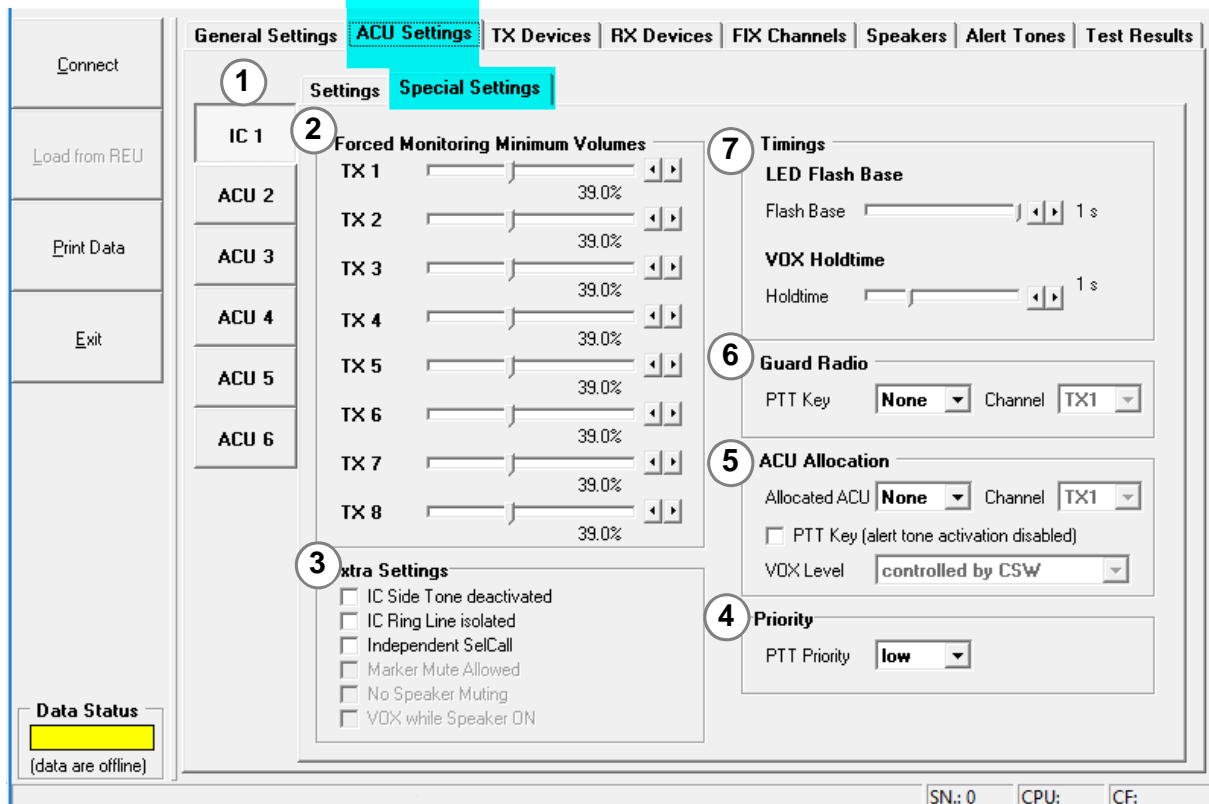


Figure 18: CSW6100 Configuration Page - ACU Settings-Special Settings

#### 3.8.1 List of Devices for Configuration (1)

Please see "ACU Settings - Settings for Cockpit and Cabin ACU Types" page 34.

#### 3.8.2 Forced Monitoring Minimum Volumes (2)

The availability of some settings depends on the configuration settings.

- Settings for the TX volume level in forced monitoring condition.

#### 3.8.3 Extra Settings (3)

The availability of some settings depends on the configuration settings.

- IC Side Tone deactivated:
  - Enables/disables the sidetone for the selected device.
- IC Ring Line isolated:
  - Isolates the ACU from the IC-ring.
- Independent SelCall:
  - Enables/disables the selective call functionality for the selected device.
- Marker Mute Allowed:
  - Enables/disables the marker mute functionality for the selected device.
- No Speaker Muting:
  - Enables/disables the speaker auto mute during intercom for the selected device.
- VOX while Speaker ON:
  - Enables/disables the functionality to keep VOX on also while the speaker is on.

#### 3.8.4 Priority (4)

- Selection for the PTT priority for the selected device.

### 3.8.5 ACU Allocation (5)

The availability of some settings depends on the configuration settings.

- Allocated ACU:
  - Selection/connection of an ACU to a headset only operator.
  - All control function from this ACU are then also applicable to the headset operator.
- Channel:
  - Selection of a TX channel for PTT transmission for a headset only operator without connection to an ACU.
- PTT-Key - Headset operator with a connection to an ACU:
  - Enables/disables the use of an alert tone line for PTT transmission.
  - The related alert tone is then not available.
- PTT-Key - Headset operator without a connection to an ACU:
  - Enables/disables the use of a selected TX channel (dropdown box) for PTT transmission.
- VOX Level:
  - Selection of the control subject for the VOX level, CSW or ACU.

### 3.8.6 Guard Radio (6)

- PTT-Key:
  - Selection of a guard radio channel for the headset or the ACU and a PTT-key input.
  - The PTT-key has the highest priority
- Channel:
  - Selection of a TX channel for transmission

### 3.8.7 Timing (7)

The availability of some settings depends on the configuration settings.

- Settings for LED flash time and VOX holdtime.



### 3.9 Configuration Page - TX-Devices

Use this page to do the configuration settings for the TX-devices.

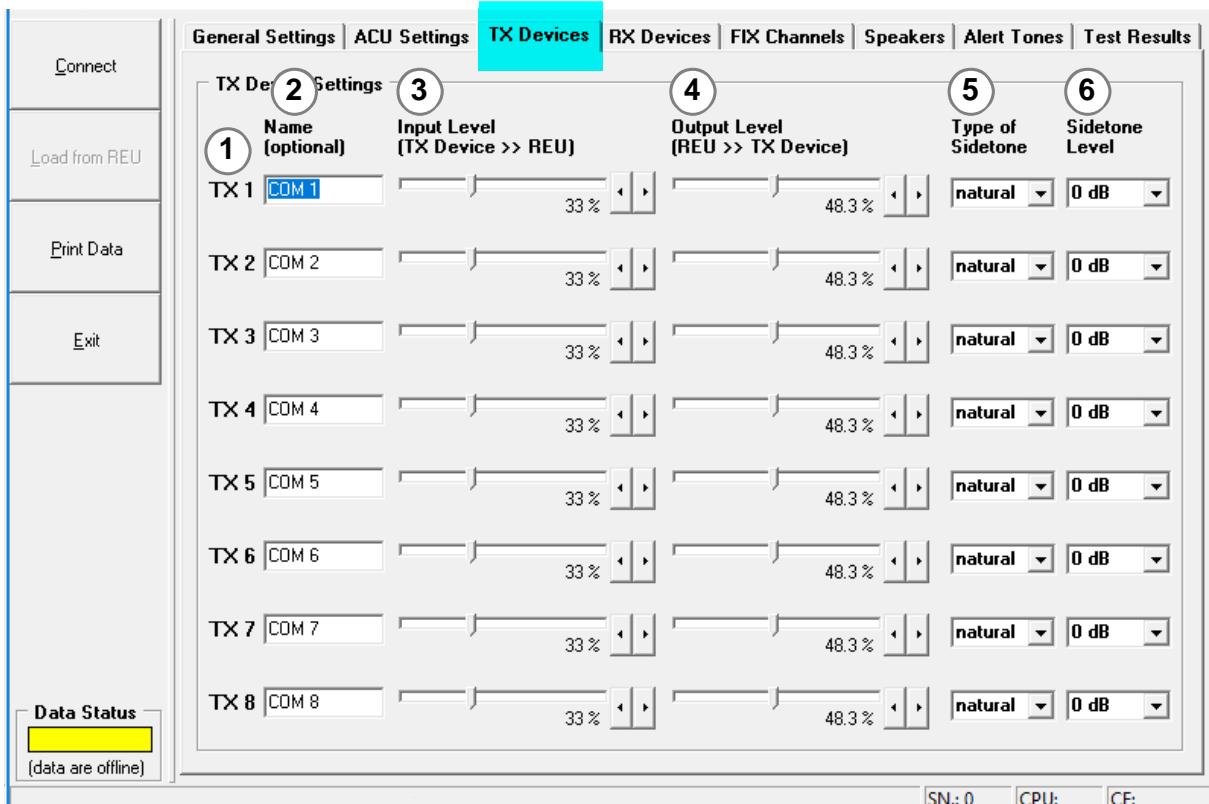


Figure 19: CSW6100 Configuration Page - TX Devices

#### 3.9.1 List of the TX-Devices (1)

- This list shows the standard name for the TX-devices.

#### 3.9.2 TX-Device Name (2)

- Possibility to give a special name to the TX-devices for a better identification.

#### 3.9.3 TX Input Level (3)

- Settings for the TX-input level.
  - Change the value with the sliders or the up/down function of the device keys.

#### 3.9.4 TX Output Level (4)

- Settings for the TX-output level.
  - Change the value with the sliders or the up/down function of the device keys.

#### 3.9.5 Type of Sidetone (5)

- Selection of the sidetone type for the TX.
  - Natural, the availability depends on the transmitter. Sometimes it is replaced with an artificial tone.
  - Artificial.
  - Duplex, this mode uses the natural and the artificial tone.

#### 3.9.6 Sidetone Level (6)

- Settings for the attenuation value of the sidetone for each TX-device.
  - 0...-15 dB in steps of 3 dB are available.
  - In duplex mode the selected level is applicable for the artificial sidetone only.

### 3.10 Configuration Page - RX-Devices

Use this page to do the configuration settings for the RX-devices.

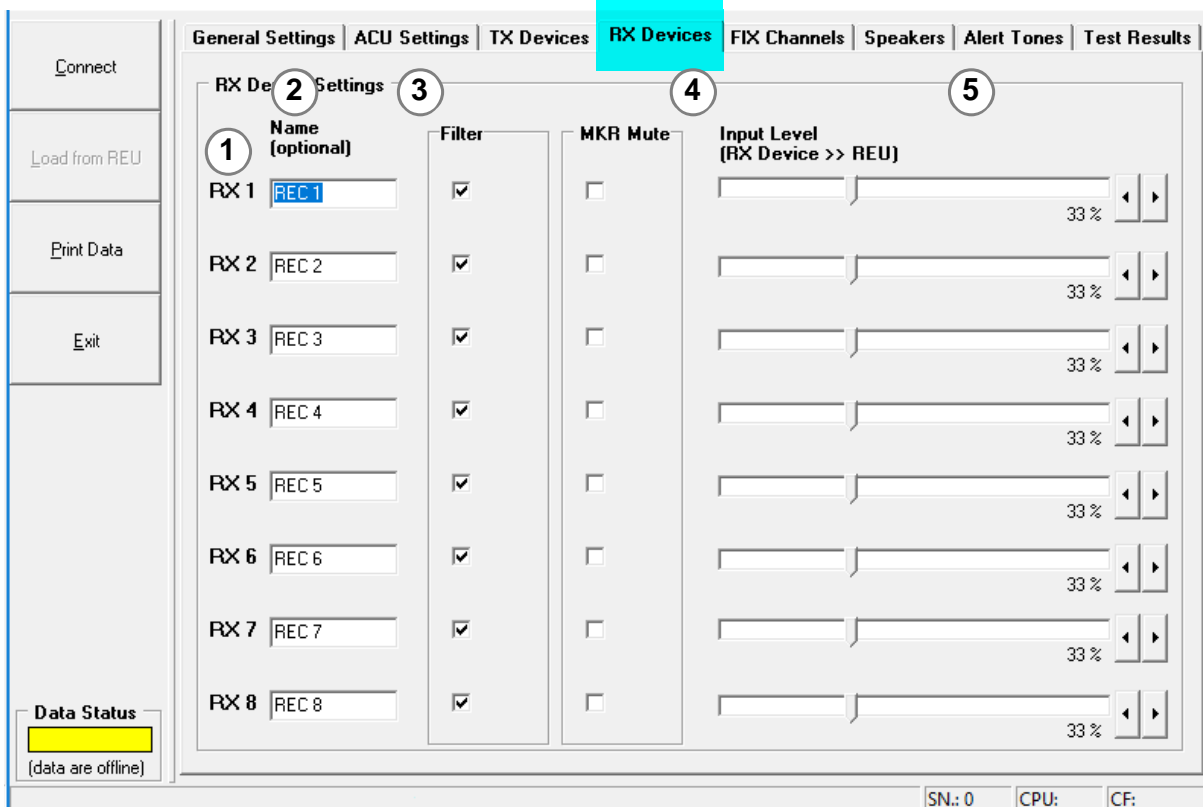


Figure 20: CSW6100 Configuration Page - RX-Devices

#### 3.10.1 List of the RX-Devices (1)

- This list shows the standard name for the RX-devices.

#### 3.10.2 RX-Device Name (2)

- Possibility to give a special name to the RX-devices for a better identification.

#### 3.10.3 RX Filter (3)

- Enables/disables a voice filter for each RX-device.
  - The operator can use the filter function with a selection of the device key VOICE.

#### 3.10.4 Marker Mute for RX-Devices (4)

- Selection of the marker mute function for each RX-device.

#### 3.10.5 RX Input Level (5)

- Settings for the RX-input level.
  - Change the value with the sliders or the up/down function of the device keys.

### 3.11 Configuration Page - FIX Channels

Use this page to do the configuration settings for the FIX channels.

- Up to six FIX channels are available for special audio signals.
- The operator cannot change the volume of this signals.

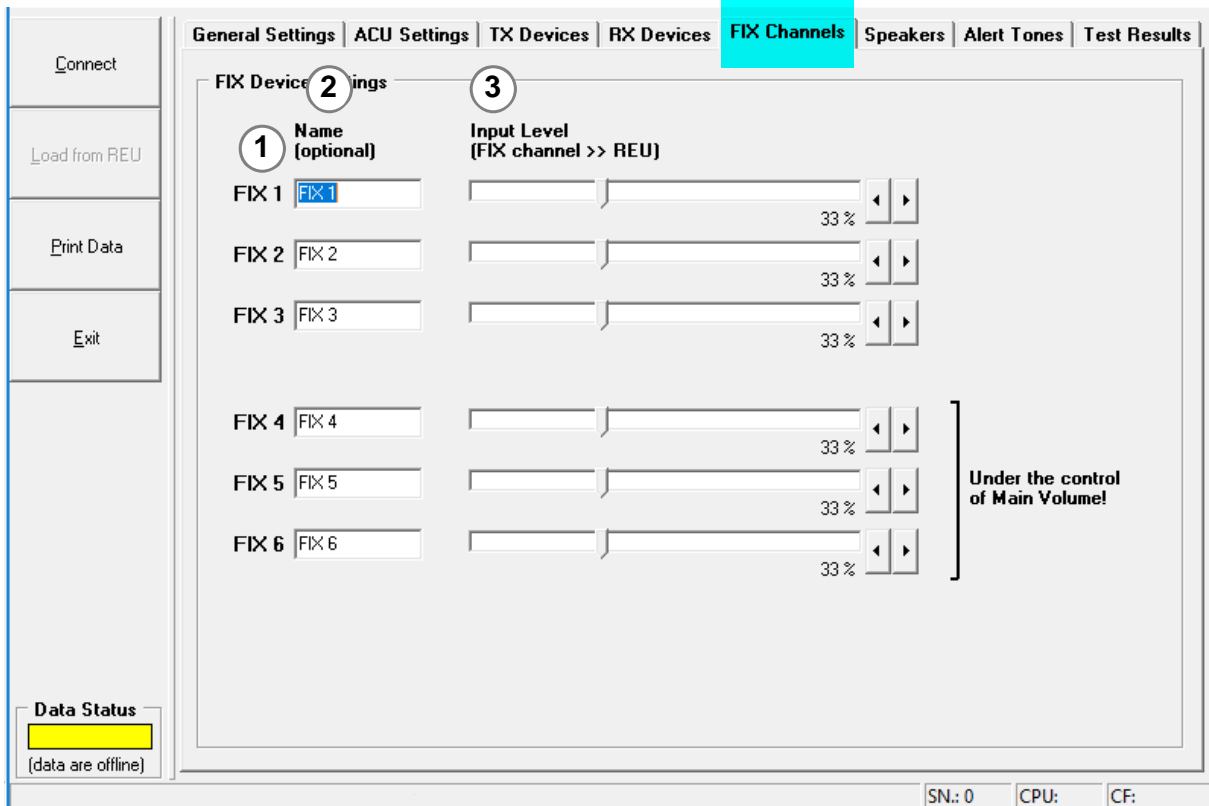


Figure 21: CSW6100 Configuration Page - FIX Channels

#### 3.11.1 List of the FIX-Channels (1)

- This list shows the standard name for the FIX-channels.

#### 3.11.2 FIX-Channel Name (2)

- Possibility to give a special name to the channel for a better identification.

#### 3.11.3 FIX Input Level (3)

- Settings for the FIX-input level.
  - Change the value with the sliders or the up/down function of the device keys.

### 3.12 Configuration Page - Speaker Settings

Use this page to do the configuration settings for the speaker settings.

- You can use up to two independent speaker systems in the DVCS6100 application.

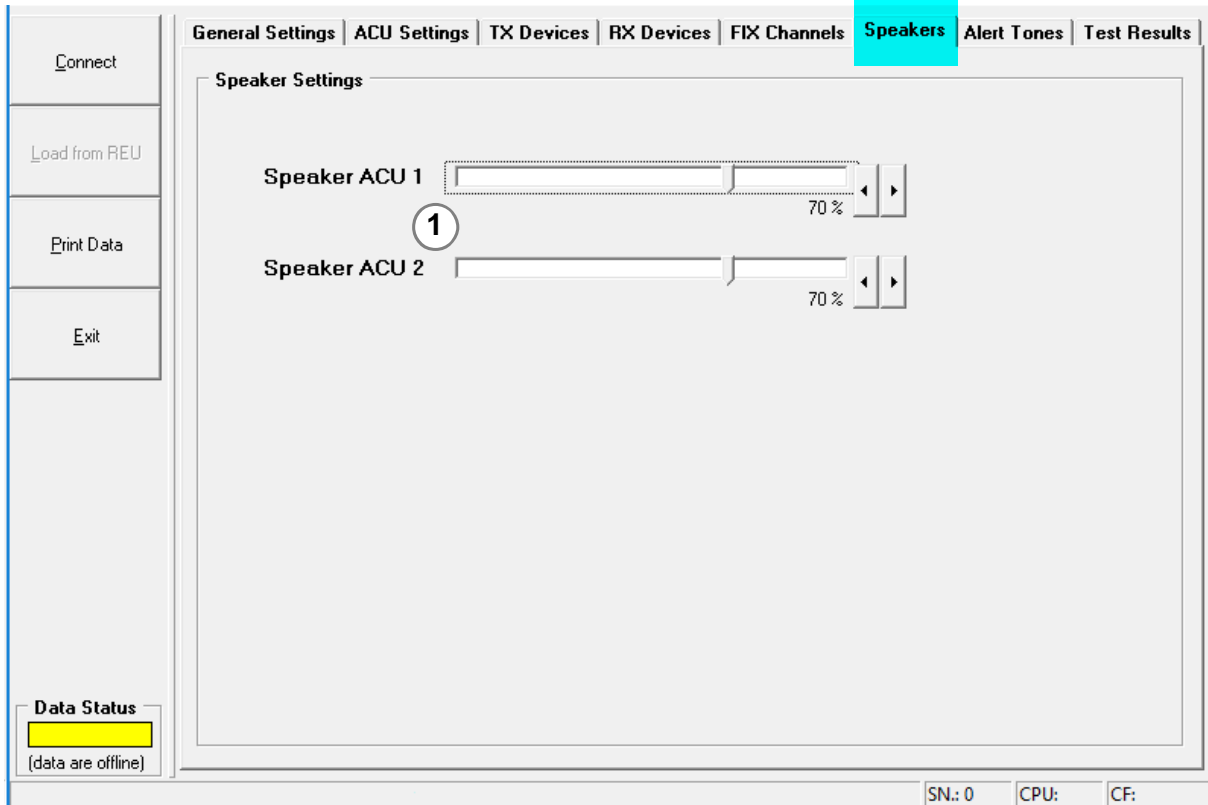


Figure 22: CSW6100 Configuration Page - Speaker Settings

#### 3.12.1 Speaker ACU1, Speaker ACU2 (1)

- List of the possible speaker lines with the related fields for the volume setting.
  - Change the value with the sliders or the up/down function of the device keys.

### 3.13 Configuration Page - Alert Tone Settings

Use this page to do the configuration settings for the alert tone settings.

- Up to eight different alert tones are available.
- The availability of some settings depends on the configuration settings.

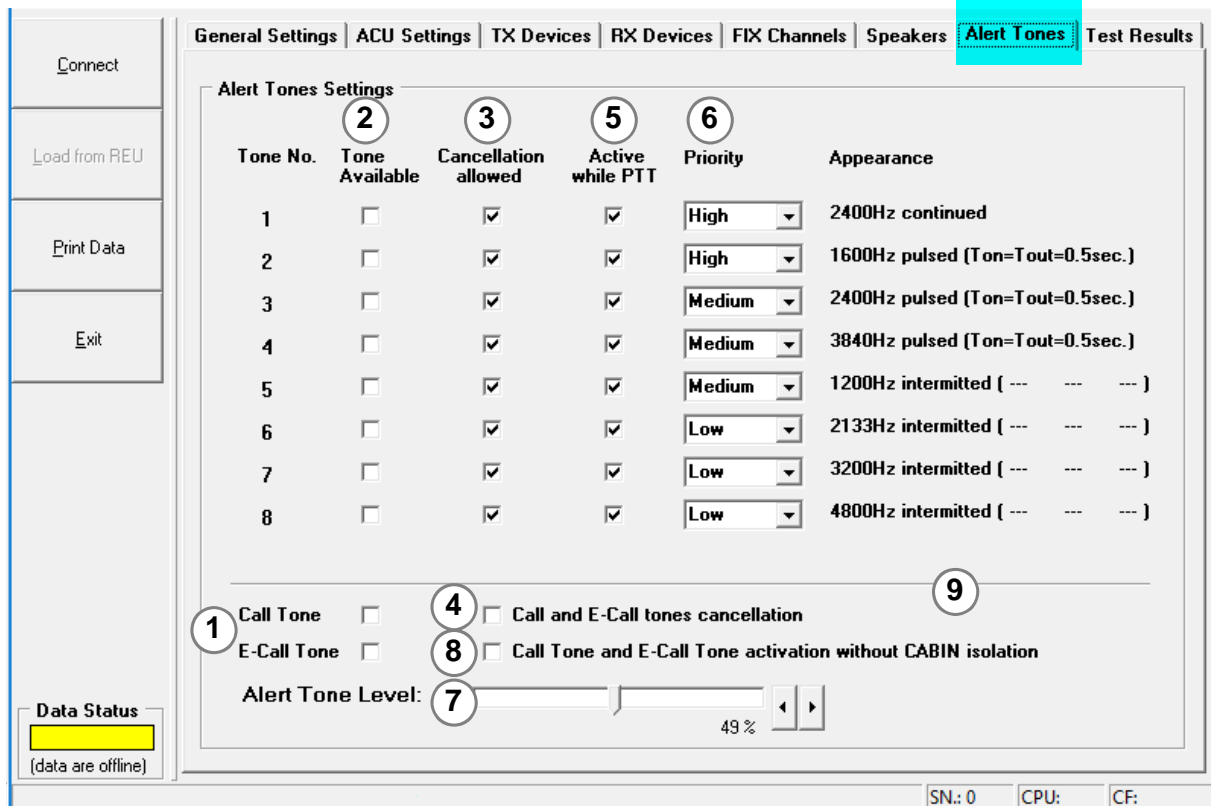


Figure 23: CSW6100 Configuration Page - Alert Tone Settings

#### 3.13.1 Call, E-Call Tone (1)

- Enables/disables the availability of this tones.

#### 3.13.2 Alert Tone Available (2)

- Selection of the call and E-call tone.
  - Enables/disables the availability of this tones.

Note: A tone is not available if the related IC-Key input is enabled (see IC-Key enabled on "ACU Settings - Settings for Headset Types" page 37).

#### 3.13.3 Alert Tone Cancellation (3)

- Selection if the cancellation of a alert tone is possible.
  - An applicable system wiring is necessary.

#### 3.13.4 Call, E-Call Tone Cancellation (4)

- Selection if the cancellation of the call and E-call tone is possible.

#### 3.13.5 Alert Tone while PTT (5)

- Selection if the alert tone is available while PTT transmission.

### 3.13.6 Alert Tone Priority (6)

- Selection for the priority of the related alert tone.
  - An alert tone with a higher priority mutes tones with lower priority.

### 3.13.7 Alert Tone Level (7)

- Setting for output level of all alert tones.

### 3.13.8 Call, E-Call Tone without Cabin Isolation (8)

- Selection if the call and E-call tones are also available when the cabin circuit is not isolated.

## 3.14 Configuration Page - Test Results

The failures of the DVCS6100 system are in a failure history.

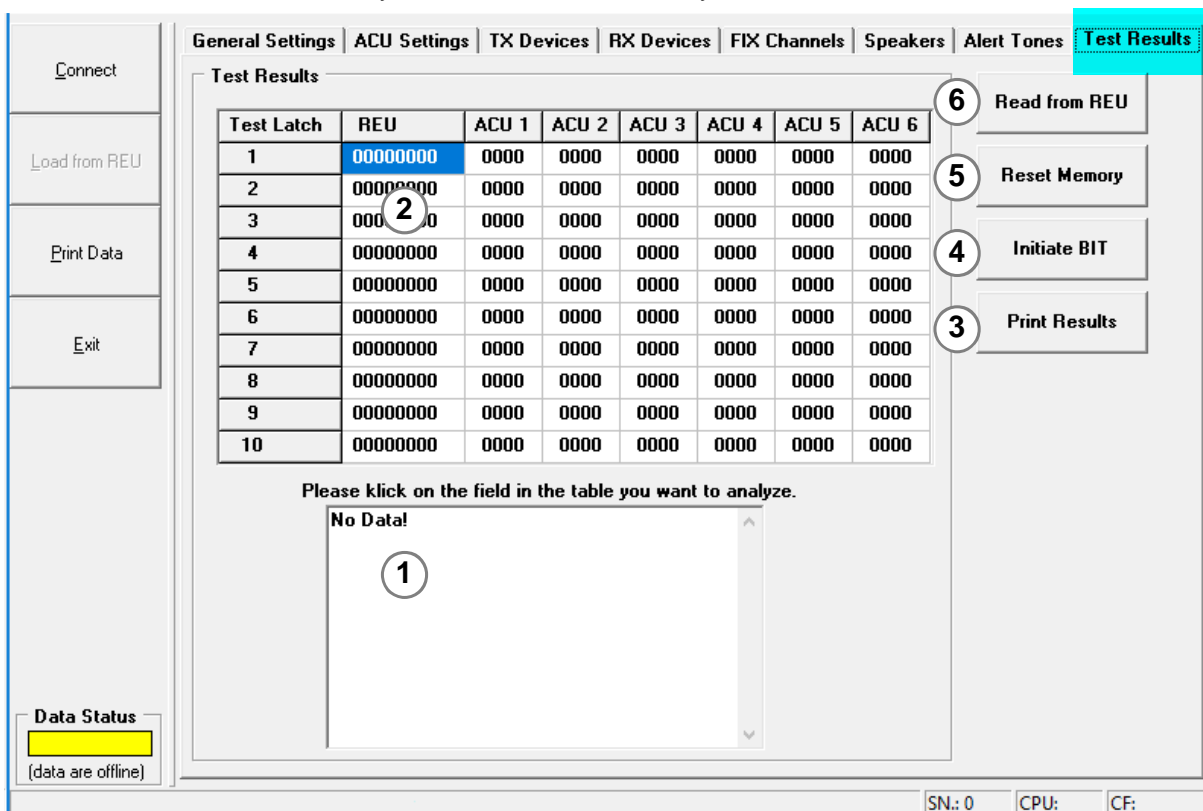


Figure 24: CSW6100 Configuration Page - Test Results

### 3.14.1 Failure Description (1)

- Failure description from the selected device field.
- Possibility to add own information.

### 3.14.2 Failure Code (2)

- Failure description in hexadecimal code.

### 3.14.3 Print Results (3)

- Command to print the results on a printer.

### 3.14.4 Initiate BIT (4)

- Command to start a REU self-test (BIT).

**3.14.5 Reset Memory (5)**

- Command to reset the REU failure history.
  - Note: It is necessary to read the failure history from REU to get the current view:

**3.14.6 Read from REU Memory (6)**

- Command to read the REU failure history again from the REU and show the result.

**3.14.7 REU Error Codes**

Bit	Error	Description
2	CAN0	CAN0 bus malfunction, check CAN connectivity
3	CAN1	CAN1 bus malfunction, check CAN connectivity
5	ACU connection	A configured ACU is not attached
6	DPRAM	Internal error, no user serviceable part
8	FLASH	Internal error, no user serviceable part
14	NOVRAM	no external memory module or internal error, no user serviceable part
15	POTIAPP	Internal error, no user serviceable part

**3.14.8 ACU Error Codes**

Bit	Error	Description
0	ADC	Internal error, no user serviceable part
2	CAN0	CAN0 bus malfunction, check CAN connectivity
3	CAN1	CAN1 bus malfunction, check CAN connectivity
5	ACU settings	ACU settings not received from REU
6	DIMMCTRL	Internal error, no user serviceable part
7	EEPROM	Internal error, no user serviceable part
8	FLASH	Internal error, no user serviceable part
12	IOE	Internal error, no user serviceable part

### 3.15 User Levels

Different user levels with different scope of functions are available to do the configuration work. The selection for these settings are available at the menu "Options" - "Settings".

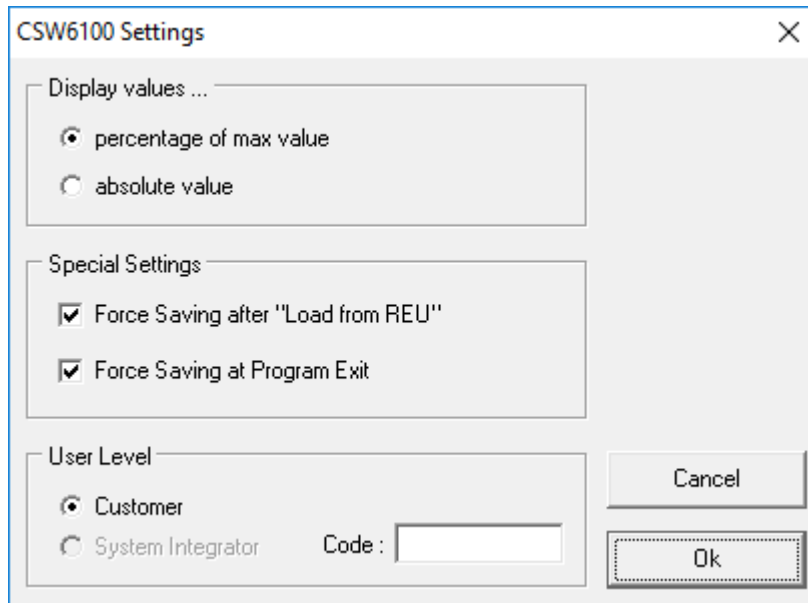


Figure 25: Menu - Options - Settings - User Levels

#### 3.15.1 User Level - "Customer":

After the first start of the CSW6100 software on a computer, the user level is "Customer".

The level "Customer" is for end users to configure the system for the own requirements and contains settings for:

- General settings (number of devices, etc.).
- ACU settings.
- Availability and levels for TX/RX channels, FIX-channels, filters.
- Speaker levels.
- Some configuration fields are shown in gray color and are not editable in this level.

#### 3.15.2 User Level - "System Integrator":

The level "System Integrator" is for the technicians to do the full configuration setup for the DVCS6100 application.

- This level gives access to configure the full system for the aircraft requirements.

#### **NOTICE**

The modifications in the level "System Integrator" can have an effect on the airworthiness of the aircraft.



### 3.15.3 Change User Levels

#### Change User Levels

##### For level "Customer" to "System Integrator":

- Select menu "Options" - "Settings".
  - A dialog box is shown.
- A password is necessary to get into the level "System Integrator".
- Write the password.12348765 into the empty box (Code:).
  - Now the level "System Integrator" is selected.
- Click button "Ok" to complete the change.

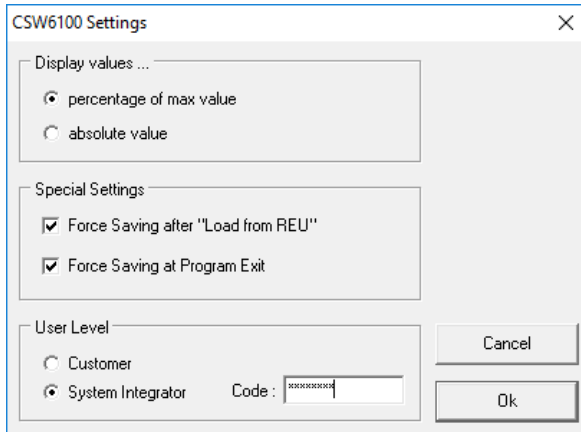


Figure 26: Settings - User Level Password



Figure 27: System Integrator - Scope of Configuration

- The CSW6100 interface shows additional register tabs for configuration.

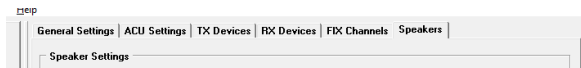


Figure 28: Customer - Scope of Configuration

##### For level "System Integrator" to "Customer":

- Select menu "Options" - "Settings".
  - A dialog box is shown.
- Select the level "Customer".
- Click button "Ok" to complete the change.
- The CSW6100 interface shows less register tabs for configuration.

### 3.16 Save Configuration

**NOTICE****Save configuration data:**

Configuration data can be saved on computer or CodeMeter stick.

- Save configuration data for reuse with other REUs.
- Use a clear file name with version number e.g. REU6100-3-(1XX)\_AC1-10\_V3.00.DV6.
- The configuration data can be saved as .DV6 format.

**Save and open configuration data:**

- Select File - "Open Data File", "Save Data to File" or "Save as...".
  - Opens standard folder selection dialog box (.DV6 format).
- Select the file format (.DV6 format).
- Select destination path.
  - Save/open on/from computer or on CodeMeter stick.
  - Write/Select file name and confirm the selection.

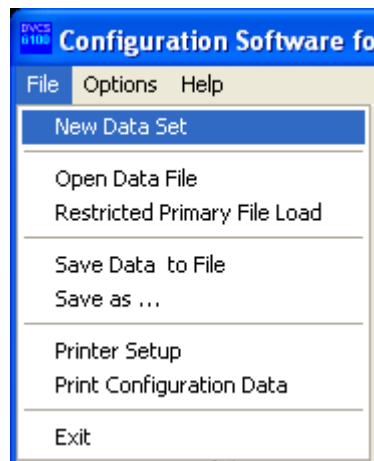


Figure 29: Dialog Box "File" - .DV6 File

**NOTICE****Data backup:**

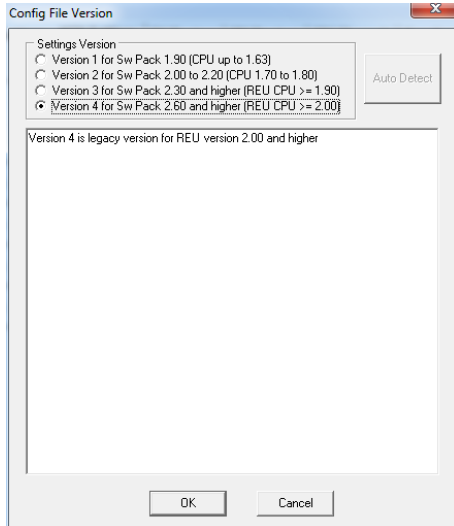
We recommend to make a data backup of the existing configuration data before you send new configuration data to the REU.

- Save the already existing data.
- Label the memory module after saving the configuration data to avoid confusion with other modules.

## 3.17 Configuration File Version

The scope of configuration settings depends on the REU variant and software version.

### 3.17.1 Open a New Configuration Data Set



#### CSW6100 new configuration data set

##### Open a new data set:

- Select Menu → File → New Data Set.
  - Is used to make a new configuration data set from a predefined template.
- Select in the dialog box a template version related to your REU software package.
- A configuration data set with default settings starts.

See also "Start a Configuration Data Set" page 30.

#### **NOTICE** Auto Detect:

- To use the function auto detect it is necessary to connect the REU6100 and the CSW.
- Use the auto detect button to select the applicable configuration file version of the connected REU (see also "New Data Set" page 30).

### 3.18 Use of Predefined Configurations

With the CSW6100 software it is possible to make configuration data sets (files) without a connected device.

**NOTICE****Save configuration data:**

Configuration data sets can be saved on computer or CodeMeter stick.

Details see "Menu Bar (1)" page 26 (commands for data file handling, print, save and close).

**NOTICE****File versions:**

Please read also the information about the use of configuration file versions.

Details see "New Data Set" page 30.

### 3.19 Contact Data

In case of additional questions contact your local Becker Avionics dealer or forward your request direct to Becker Avionics "Customer Service".

In the event of damage or a defect, the entire device must be returned for repair. The repair must be done by trained Becker Avionics personnel.

**For relevant department and addresses, please see contact info page 2.**

### User Conversions and Changes are Not Permitted

Any change by the user excludes any liability on our part (excluding the work described in this manual).

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