

ezAudit

Copyright 2002-2023 C-R Media. All Rights Reserved.

ezAudit

Copyright 2002-2023 C-R Media. All Rights Reserved.

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Printed: January 2023 in Eden Prairie, MN USA.

Publisher

Rich Habedank

Special thanks to:

All those who have offered insights and suggestions for enhancement of this product.

Printed

*January 2023 in Eden Prairie,
MN USA*

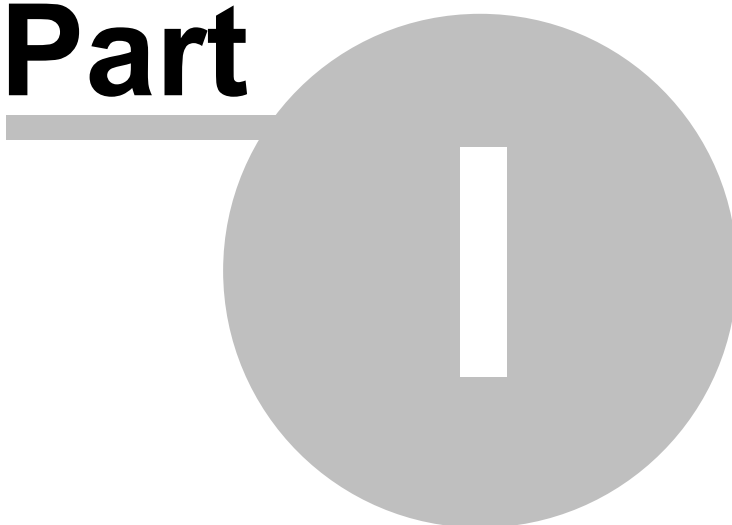
Table of Contents

Part I Welcome to ezAudit	5
1 Features	9
2 What's New	11
3 Warranty and License Agreement.....	12
Part II System Requirements & Installation	15
1 System Requirements.....	16
2 Installing ezAudit.....	17
Part III Configuration	19
1 Stations Setup.....	20
2 Cart Categories.....	24
Using the Cart Mask Edit Panel	26
3 User Interface Settings.....	28
4 Miscellaneous Settings.....	29
Part IV Operation - Using ezAudit	31
1 Selecting a Station & Date.....	32
2 Working with a Report.....	33
Switcher Status Panel	36
3 Selecting Transaction Filters.....	37
4 Printing Reports.....	38
5 Saving Reports to a File.....	40
6 Report Template Maintenance.....	42
7 Multi-Day Reports.....	45
8 User-Defined Data Views (Custom Data Views).....	50
User-Defined Fields (Custom Fields)	55
Part V Reference	57
1 Menus & Toolbars.....	58
2 Keyboard Shortcuts.....	58
3 Audit Times Information.....	60
Time Zone Information	61
4 Cart Masks Explained.....	64
5 Transaction and Status Codes.....	66
6 Sample Printed Audit Report.....	70
7 Using Data Navigators.....	71

Part VI Troubleshooting	72
1 Extended Event Logging.....	74
2 Specific Error Messages.....	76
3 Viewing Raw Audit Data.....	78
Part VII Contacting dcsTools.com	79
Part VIII Appendices	81
1 Registration.....	82
2 List of Files	83
3 Command Line Switches.....	85
4 Audit File Specification.....	86
Fixed Length Segment	87
Transaction Types.....	89
Status Types.....	91
Variable Length Segment	96
5 Revision History.....	98
Index	105

Welcome to ezAudit

Part



ezAudit - Audit Reporting for XStudio, DCS and Maestro

ezAudit is an application for displaying, analyzing and printing XStudio, DCS and Maestro audit data files. As a control room XStudio, DCS, or Maestro system is running, it writes performance data to a special file, known as an audit data file. The data in the file is stored as binary information and reflects what the host audio system knows happened or did not happen during operation. Information includes such things as the successful play of an audit item (or failure of same), receipt of external stimulus (relays or closures), and actions taken by the host audio system.

ezAudit provides a true Windows reporting environment, with additional conveniences in the areas of display of data, printing data, and selecting data to be included in a report.

ezAudit allows for a virtually unlimited number of station audit reporting configurations, including the ability to easily view and/or print reports for stations located somewhere other than the application's home environment. Audit file source directories can be different for each station and a station's associated time zone information (required to report accurate event times) can be different.

ezAudit is particularly well-suited for an enterprise environment where audited performance data for several sites and/or time zones is reviewed and analyzed.

ezAudit reads audit data files adhering to Computer Concepts' DCS Audit File (.ADT) Specification, version 1.6. This includes all DCS software versions and all Maestro software versions through v3.3.

The Origins of ezAudit

ezAudit was originally created to replace Computer Concepts Corporation's DOS audit reporting utility, known as "**CMAD**". "**CMAD**" is a DOS application that is a good report tool for CCC's audit files but has shortcomings in the areas of viewing or printing a report and the ease with which you can "slice and dice" report information to view only the data that is important to you. It is also difficult to administer, requiring multiple shortcuts (in Windows) and multiple configuration files especially created and maintained for audit reporting purposes. CMAD is also dependent on your PC's time zone settings and requires changes to those settings if the audit data to be reviewed was created with time zone settings that vary from your PC's settings.

Copyrights and Trademarks

Copyrights

Copyright © 2002-2023 dcsTools.com, C-R Media. All rights reserved

Portions copyright © Microsoft Corporation. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of those agreements. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of C-R Media.

C-R Media
8494 Saratoga Lane
Eden Prairie, MN 55347
USA

Trademarks

DCS™ and Maestro™ are trademarks of WideOrbit, Inc., San Francisco, CA (formerly Computer Concepts Corporation, Lenexa, KS, dMarc Broadcasting, Newport Beach, CA and Google, Inc., Mountain View, CA)





Windows 95®, Windows 98®, Windows Me®, Windows NT®, Windows 2000®, Windows XP®, Windows Server 2003®, Windows Vista®, Windows Server 2008®, Windows 7®, Windows 8®, Windows 8.1®, Windows Server 2012®, Windows Server 2012R2®, Windows Server 2016®, Windows Server 2019®, Windows 10®, Windows Server 2022 and Windows 11® are registered trademarks of Microsoft Corporation.

Other brands and their products are trademarks or registered trademarks of their respective holders and should be noted as such.

Documentation Conventions

The following table describes important conventions used in the ezAudit documentation

<u>Convention</u>	<u>Description</u>
menu menu command	Describes a menu item followed by a menu command.
[button or mouse]	Text between square brackets refers to a keystroke, i.e. [F10], button, i.e. [Save], or mouse click, i.e. [Left-Click].

<u>Convention</u>	<u>Description</u>
	Signifies important information that may have an impact on operation of the software.
	Signifies an informational note on using the software more efficiently or things that may affect operation of the software.
	Signifies a hint that may be useful when using or setting up the software.
	Where present, additional information is available by clicking on the graphic to display a hint window.

1.1 Features

ezAudit offers a number of features to make the task of viewing, analyzing and printing audit data from XStudio, DCS and Maestro systems easier.

- **View multiple reports simultaneously** - great for side-by-side comparisons. Multiple report windows can be tiled horizontally or vertically, as well as cascaded.
- **Multiple data views** - change how you look at audit data on the fly. You can even create your own custom views!
- **Dynamic filtering of cart numbers** (audio items) on the fly.
- **Dynamic filtering of transaction types, status codes and play channels** without having to create a report template
- **Multi-day reports** - generate an audit report for user-specified date ranges..
- **Create new templates on the fly** from the main display. Have the right combination of data displayed? Just click a button, provide a name for the template, and you're all done!
- **Sort displayed data by column** - on the fly.
- **Select and apply report templates** from the main display, on the fly.
- Support for a virtually **unlimited number of stations**.
- Create and maintain a virtually **unlimited number of report templates**, which include selected transaction types, selected status codes, selected audio playback channels, cart filter and data "view" information. The number of stored templates is limited by available disk space only.
- **Selective printing**. Print only the hours you wish using available hourly data views.
- **Copy to Clipboard** - copy selected report line items to the Windows clipboard for subsequent pasting in another application, such as an e-mail.
- **Save reports to file** in any of three formats, including CSV (Comma-Separated Values).
- **Create reconcile export reports** for direct use by Selector™ and MusicMaster music scheduling systems, and CBSI traffic system. See the section on [Saved Report File Types](#) for more information.
- **No dependencies**. An audit file created anywhere in the world can be viewed and/or printed without having to change time zone settings on the host PC.
- Can be used with XStudio, DCS, or Maestro systems.
- **Integrated context-sensitive help** in all dialogs.

- **Support for "Dynamic DST"**. Audit reports generated for dates in 2006 and prior years correctly handle the different "spring forward" and "fall back" dates in time zones affected by [2007 changes in DST](#) (Daylight Savings Time) dates.

1.2 What's New

Here are the latest changes, enhancements and corrections to ezAudit by version number and date. For information on less-recent changes and enhancements, see the [Revision History](#) topic.

Version 2.9.1.110 - 01/11/2023

1. **Enhancement.** Support for latest Windows 11 builds has been added.

Version 2.9.0.100 - 06/06/2022

1. **Enhancement.** When working with multiple audit reports, ezAudit can now use a tabbed interface for each document. This simplifies switching among documents. If you wish to turn on this feature, use the main menu item **View | Tabbed Windows**. Your preference is saved when you exit ezAudit and restored on the next program launch.
2. **Enhancement.** ezAudit now detects Windows 11 and adjusts its display accordingly.
3. **Change.** Support for operating systems prior to Windows XP has been dropped. In order to use ezAudit, the host operating system must be Windows XP or later.

1.3 Warranty and License Agreement

PLEASE READ THIS DOCUMENT CAREFULLY. BY INSTALLING AND USING THE SOFTWARE, YOU ARE AGREEING TO BECOME BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THE AGREEMENT, PLEASE DO NOT INSTALL OR USE THE SOFTWARE.

This is a legal agreement between you and C-R Media. This Agreement states the terms and conditions upon which C-R Media offers to license the software. Whether contained in the disk package or having been pre-loaded by C-R Media on the machine's hard drive, together with all related documentation and accompanying items including, but not limited to, the executable programs, drivers, libraries and data files associated with such programs (collectively, the "Software").

LICENSE

Grant of License. The Software is licensed, not sold, to you for use only under the terms of this Agreement. You own the disk or other media on which the Software is originally or subsequently recorded or fixed; but, as between you and C-R Media (and, to the extent applicable, its licensors), C-R Media retains all title to and ownership of the Software and reserves all rights not expressly granted to you.

For Use on a Single Computer. You may use the Software only on a single computer by a single user at any one time. You may transfer the machine-readable portion of the Software from one computer to another computer, provided that

- (a) the Software (including any portion or copy thereof) is erased from the first computer, and
- (b) there is no possibility that the Software will be used on more than one computer at a time.

Stand-alone Basis. You may use the Software only on a stand-alone basis, such that the Software and the functions it provides are accessible only to persons who are physically present at the location of the computer on which the Software is loaded. You may not allow the Software or its functions to be accessed remotely, or transmit all or any portion of the Software through any network or communication line.

One Archival Copy. You may make one (1) archival copy of the machine-readable portion of the Software for backup purposes only in support of your use of the Software on a single computer, provided that you reproduce on the copy all copyright and other proprietary rights notices included on the originals of the Software.

No Merger or Integration. You may not merge any portion of the Software into, or integrate any portion of the Software with, any other program, except to the extent expressly permitted by the laws of the jurisdiction where you are located. Any portion of the Software merged into or integrated with another program, if any, will continue to be subject to the terms and conditions of this Agreement, and you must reproduce on the merged or integrated portion all copyright and other proprietary rights notices included on the originals of the Software.

Network Version. If you have purchased a "network" version of the Software, this Agreement applies to the installation of the Software on a single "file server". It may not be copied onto multiple systems. Each "node" connected to the "file server" must also have its own license of a "node copy" of the Software, which becomes a license only for that specific "node".

Transfer of License. You may transfer your license of the Software, provided that

- (a) you transfer all portions of the Software or copies thereof,
- (b) you do not retain any portion of the Software or any copy thereof, and,
- (c) the transferee reads and agrees to be bound by the terms and conditions of this Agreement.

Limitations on Using, Copying, and Modifying the Software. Except to the extent expressly permitted by this Agreement or by the laws of the jurisdiction where you acquired the Software, you may not use, copy or modify the Software. Nor may you sub-license any of your rights under this Agreement.

Decompiling, Disassembling, or Reverse Engineering. You acknowledge that the Software contains trade secrets and other proprietary information of C-R Media and its licensors. Except to the extent expressly permitted by this Agreement or by the laws of the jurisdiction where you are located, you may not decompile, disassemble or otherwise reverse engineer the Software, or engage in any other activities to obtain underlying information that is not visible to the user in connection with normal use of the Software. In any event, you will notify C-R Media of any information derived from reverse engineering or such other activities, and the results thereof will constitute the confidential information of C-R Media that may be used only in connection with the Software.

TERMINATION

The license granted to you is effective until terminated. You may terminate it at any time by returning the Software (including any portions or copies thereof) to C-R Media. The license will also terminate automatically without any notice from C-R Media if

you fail to comply with any term or condition of this Agreement. You agree upon such termination to return the Software (including any portions or copies thereof) to C-R Media. Upon termination, C-R Media may also enforce any rights provided by law. The provisions of this Agreement that protect the proprietary rights of C-R Media will continue in force after termination.

LIMITED WARRANTY

C-R Media warrants, as the sole warranty that the disks on which the Software is furnished will be free of defects, as set forth in the Warranty Card or printed manual included with the Software. No distributor, dealer or any other entity or person is authorized to expand or alter this warranty or any other provisions of this Agreement. Any representation, other than the warranties set forth in this Agreement, will not bind C-R Media.

C-R Media does not warrant that the functions contained in the Software will meet your requirements or that the operation of the Software will be uninterrupted or error-free. EXCEPT AS STATED ABOVE IN THIS AGREEMENT, THE SOFTWARE IS PROVIDED AS-IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

You assume full responsibility for the selection of the Software to achieve your intended results, and for the installation, use and results obtained from the Software. You also assume the entire risk as it applies to the quality and performance of the Software. Should the Software prove defective, you (and not C-R Media, or its distributors or dealers) assume the entire cost of all necessary servicing, repair or correction.

This warranty gives you specific legal rights, and you may also have other rights, which vary from country/state to country/state. Some countries/states do not allow the exclusion of implied warranties, so the above exclusion may not apply to you. C-R Media disclaims all warranties of any kind if the Software was customized, repackaged or altered in any way by any third party other than C-R Media.

LIMITATION OF REMEDIES AND DAMAGES

THE ONLY REMEDY FOR BREACH OF WARRANTY WILL BE THAT SET FORTH IN THE WARRANTY CARD OR PRINTED MANUAL INCLUDED WITH THE SOFTWARE. IN NO EVENT WILL C-R MEDIA OR ITS LICENSORS BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR FOR ANY LOST PROFITS, LOST SAVINGS, LOST REVENUES OR LOST DATA ARISING FROM OR RELATING TO THE SOFTWARE OR THIS AGREEMENT, EVEN IF C-R MEDIA OR ITS LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL C-R MEDIA'S LIABILITY OR DAMAGES TO YOU OR ANY OTHER PERSON EVER EXCEED THE AMOUNT PAID BY YOU TO USE THE SOFTWARE, REGARDLESS OF THE FORM OF THE CLAIM.

Some countries/states do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you.

PRODUCT RETURNS

IF YOU MUST SHIP THE SOFTWARE TO C-R MEDIA OR AN AUTHORIZED C-R MEDIA DISTRIBUTOR OR DEALER, YOU MUST PREPAY SHIPPING AND EITHER INSURE THE SOFTWARE OR ASSUME ALL RISK OF LOSS OR DAMAGE IN TRANSIT.

U.S. GOVERNMENT RESTRICTED RIGHTS

All Software and related documentation are provided with restricted rights. Use, duplication or disclosure by the U.S. Government is subject to restrictions as set forth in subdivision (b)(3)(ii) of the Rights in Technical Data and Computer Software Clause at 252.227-7013. If you are sub-licensing or using the Software outside of the United States, you will comply with the applicable local laws of your country, U.S. export control law, and the English version of this Agreement.

CONTRACTOR/MANUFACTURER

The Contractor/Manufacturer for the Software is:

C-R Media
8494 Saratoga Lane
Eden Prairie, MN 55347 USA

GENERAL

This Agreement is binding on you as well as your employees, employers, contractors and agents, and on any successors and assignees. Neither the Software nor any information derived therefrom may be exported except in accordance with the laws of the United States or other applicable provisions. The laws of the State of Minnesota govern this Agreement (except to the extent federal law governs copyrights and federally registered trademarks). This Agreement is the entire agreement between us and supersedes any other understandings or agreements, including, but not limited to, advertising, with respect to the Software.

If any provision of this Agreement is deemed invalid or unenforceable by any country or government agency having jurisdiction, that particular provision will be deemed modified to the extent necessary to make the provision valid and enforceable, and the remaining provisions will remain in full force and effect.

For questions concerning this Agreement, please contact C-R Media at the address stated above. For questions on product or technical matters, contact the C-R Media technical support center nearest you.

SPECIAL PROVISIONS APPLICABLE TO THE EUROPEAN UNION

If you acquired the Software in the European Union (EU), the following provisions also apply to you. If there is any inconsistency between the terms of the Software License Agreement set out above and the following provisions, the following provisions shall take precedence:

Decompilation.

You agree not for any purpose to transmit the Software or display the Software's object code on any computer screen or to make any hard copy memory dumps of the Software's object code. If you believe you require information related to the interoperability of the Software with other programs, you shall not decompile or disassemble the Software to obtain such information, and you agree to request such information from C-R Media at the address listed above. Upon receiving such a request, C-R Media shall determine whether you require such information for a legitimate purpose and, if so, C-R Media will provide such information to you within a reasonable time and on reasonable conditions.

Limited Warranty.

EXCEPT AS STATED ABOVE IN THIS AGREEMENT, AND AS PROVIDED BELOW UNDER THE HEADING "STATUTORY RIGHTS", THE SOFTWARE IS PROVIDED AS-IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, QUALITY AND FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Remedy and Damages.

THE LIMITATIONS OF REMEDIES AND DAMAGES IN THE SOFTWARE LICENSE AGREEMENT SHALL NOT APPLY TO PERSONAL INJURY (INCLUDING DEATH) TO ANY PERSON CAUSED BY C-R MEDIA'S NEGLIGENCE AND ARE SUBJECT TO THE PROVISION SET OUT BELOW UNDER THE HEADING "STATUTORY RIGHTS".

Statutory rights.

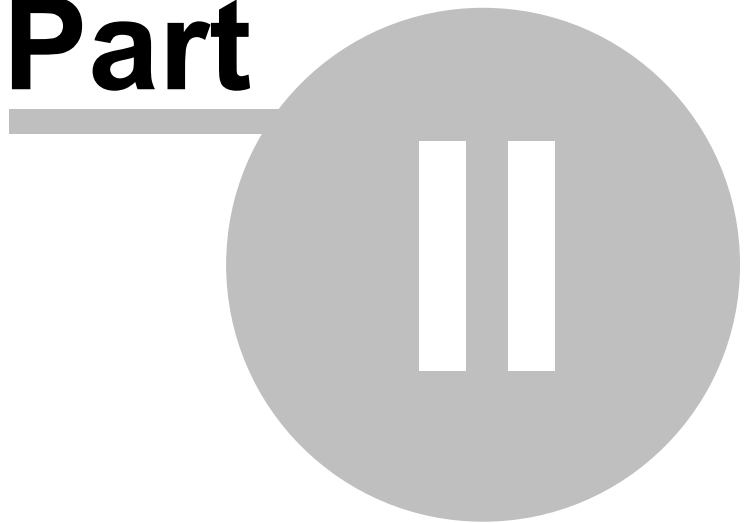
Irish law provides that certain conditions and warranties may be implied in contracts for the sale of goods and in contracts for the supply of services. Such conditions and warranties are hereby excluded, to the extent such exclusion, in the context of this transaction, is lawful under Irish law. Conversely, such conditions and warranties, insofar as they may not be lawfully excluded, shall apply. Accordingly nothing in this Agreement shall prejudice any rights that you may enjoy by virtue of Sections 12, 13, 14 or 15 of the Irish Sale of Goods Act 1893 (as amended).

General: the laws of the Republic of Ireland govern This Agreement.

The local language version of this agreement shall apply to Software acquired in the EU. This Agreement is the entire agreement between us and you agree that C-R Media will not have any liability for any untrue statement or representation made by it, its agents or anyone else (whether innocently or negligently) upon which you relied upon entering this Agreement, unless such untrue statement or representation was made fraudulently.

System Requirements & Installation

Part



ezAudit requires certain hardware and Windows operating system minimums. You must also install the ezAudit software on the PC using an installation program.

This section documents the system requirements for ezAudit and covers the process of installing, updating and removing the ezAudit software.

2.1 System Requirements

Here are the base hardware and operating system requirements to run ezAudit:

Operating System	Windows XP Pro or later.
CPU Speed	1 GHz or greater.
RAM Memory	256 MB RAM (XP), 4GB RAM (Windows 7 and later).
Display	A minimum of 800 x 600 resolution, 1024 x 768 or greater is highly recommended.
Default Print Device	You must have a default print device assigned. ezAudit can produce printed reports and expects to have an available default printer. If you do not have a printer, you can use one of the available non-printing devices like the Microsoft XPS Document Writer.
Hard Disk Space	At least 18 MB free disk space for ezAudit, support files and documentation.
A LAN card (NIC)	A LAN card (NIC), known to be working (if you will be connecting to a LAN for audit data file retrieval)

To use ezAudit, you need access to the XStudio, DCS, or Maestro audit files, which are located in the same folder as their associated log files. Typically, this means you must be connected to the network (LAN) on which the audio systems are running. Be sure that your system administrator has provided you the necessary access rights to these file locations. For audit files, you need only have read rights (to open and view the audit data).

2.2 Installing ezAudit

The ezAudit installation program provides step-by-step instructions on every screen displayed during the installation. Follow the instructions on each screen to install ezAudit.

Before you install

1. Close all other programs, including any anti-virus programs.
2. Log on to your computer with administrator privileges.

To install ezAudit from a downloaded file

1. After you have downloaded the installation program to your computer, locate the setup program, **ezAuditSetup.exe**, in the folder to which you downloaded the file. **[Double-click]** on the setup program to begin installation.
2. Follow the instructions on each screen to install the software.

Updating ezAudit

1. If you have downloaded or otherwise received a revision for ezAudit, the process for updating the software is virtually identical to the initial installation. However, the installation dialogs may be a bit different. When updating, you are not typically given an opportunity to select the target folder for installation, as that choice has already been made in a previous installation.
2. You may be prompted that an old version of ezAudit has been found and that it must be uninstalled (removed) before continuing with the update. If you see this prompt when updating ezAudit, you should answer "Yes" to remove the old version, and if prompted to confirm the removal of the old version, again answer "Yes".
3. On occasion, updating ezAudit may require some additional tasks be performed during the update. Such tasks might include validating and/or updating your registration and making adjustments to your preferences settings. If these tasks are needed, you will be prompted for any input required and notified if the update task could not be completed successfully.



You must have administrator privileges to perform an update on all supported operating systems.

To Uninstall ezAudit

To remove ezAudit from your PC, select the Control Panel applet Add/Remove Programs. Select ezAudit and click on the **[Remove]** button. Follow the prompts to uninstall the software.



Only files originally installed are removed. Event log files and your preferences files are not removed. See the topic on [Application-Created Files](#) for more information on files that are installed or created by ezAudit.

Configuration

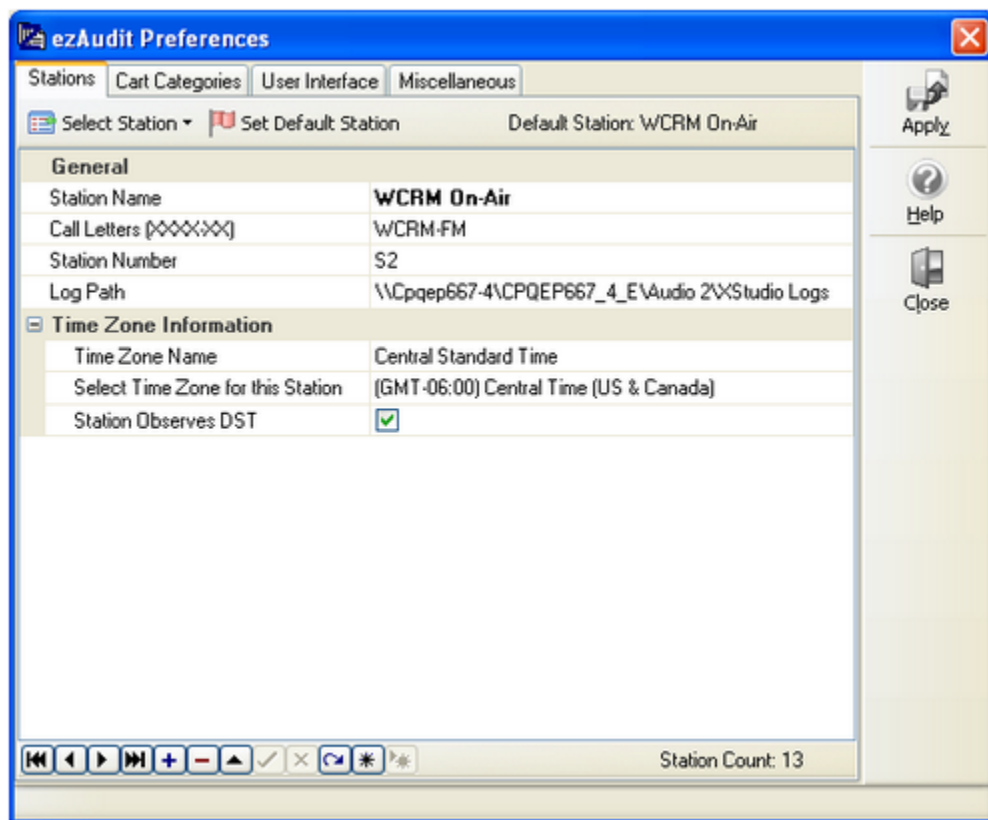
Part



In order to use ezAudit, the application needs to know about the station(s) for which you will be processing audit file data. In the preferences area, you define the stations, their call letters, location of the audit files and associated time zone information. Optionally, you can also define cart filters (or masks) that can be used to "filter" the audit report information to display only those carts that meet your filter criteria. You can also enable a security feature that prevents users from changing the preferences without a password.

3.1 Stations Setup

The Stations tab in Preferences is where you define the various stations for which you will be generating audit reports. Each station setup can be named something that's meaningful to you. You also identify the station's call letters, audit file path (the same location as logs, generally) and time zone information.



Maintaining Stations

Add a Station. To add a station to the Configured Stations list, click on the "+" button on the navigation toolbar. A new station record will be created and you can fill in the fields with the appropriate information. To save your changes, click on the "Save Changes (Post Edit)" button, represented by a check mark.



Float your mouse over the navigation toolbar for hints on the use of each of the buttons. For additional information, refer to the [Using Data Navigators](#) topic.

Edit a Station. To edit information, select the station to be edited by either clicking on the [**Select Station**] button to display the stations list, or use the navigation buttons to move among the stations.



Station selection list

Once you have selected the station you wish to edit, make appropriate changes and click on the "**Save Changes (Post Edit)**" button, represented by a check mark.

Delete a Station. To delete a station configuration, select the station you wish to delete by clicking on the station name in the station list, or use the navigation buttons to move among the stations. Once you have selected the station you wish to delete, click on the "Delete Record" (-) button on the navigation toolbar. After confirming you wish to delete, the station information will be deleted.



Deleting a station definition removes all information about that station. If you didn't mean to delete the station, you must close the Preferences dialog and choose not to save the changes. When you re-open Preferences, the Configured Stations list is restored to its last saved state. Be aware that not saving changes on exiting the Preferences dialog saves no changes you may have made while working in the Preferences dialog.

Setting a Default Station

If desired, you can make one of the defined stations the "default station". If a default station is defined, it is the station initially displayed when opening a new audit report or multi-day audit report.

To set the default station, select a station and click on the [**Set Default Station**] button to make it the default station.

Station Setup Field Information

Items with a check mark in the **REQ** column require user entry, while unchecked items have default values which can optionally be changed.

Field	REQ	Usage
Station Name	✓	Identifies the station you're configuring and is used within ezAudit only. It appears on station selection lists and other places in ezAudit where the station name helps identify what audit data you are working with. The name entered here should be unique so as to easily distinguish among station records.
Call Letters	✓	The call letters of this station.
Station Number	✓	The assigned station number (in DCS, Maestro or XStudio) for this station. Typically, it would be in a range of 1..9 . It is a single-character identifier normally, but can be a two-character value if needed - i.e. " 13 ".
Log Path	✓	The storage location (drive, folder) of audit file data for a station. UNC paths can be used, if desired, but may slow performance.



If you are using a **UNC path** or **mapped network drive**, ensure that you are logged in to the host server machine or you will get an error message that no audit files can be found when you select a station in the Open Audit File dialog.

Time Zone Name		The official name of the selected time zone. This value is automatically updated each time you select a different time zone for the station and cannot be manually changed by the user.
Selected Station Time Zone	✓	In order to properly calculate the real time of audit records, the time zone in which the audit file was created must be known. Select the time zone from the list of available zones displayed.



You can click on the button adjacent to the time zone display to set the time zone value to your PC's current time zone.

Station Observes DST	✓	If you have selected a time zone that is not correct, audit reports displayed for this station will be "off", time-wise. For more information on possible causes and corrections, see the sections on Specific Error Messages and Audit Times Information . Check this item if the XStudio, DCS, or Maestro machine that created the audit file data is set to observe DST (Daylight
----------------------	---	---

Field**REQ Usage**

Savings Time). Most DCS systems **DO NOT** observe DST since April 2007 when the Energy Policy Act of 2005 went into effect, and most Maestro systems **DO NOT** observe DST. Check with your DCS or Maestro system administrator if you are unsure.

Importing and Exporting Station information

You may wish to save your station information for use with another ezAudit system or for archival purposes. ezAudit provides the means to export and import station information via the Stations context menu. **[Right-Click]** anywhere on the Stations page to invoke the context menu.

To export information, select the **Export Station Info** menu item. You'll be prompted to select a file name for exported information.

To import information, select the **Import Station Info** menu item. You'll be prompted to select the file containing the station information. If you already have some stations defined in ezAudit, you have the option to replace them with the imported information or to append the imported information to the existing station information.



No duplicate checking is done when importing station information into existing station information using the option to append station records. You should check for duplicates when the import process has completed and remove any duplicates. You should also check your default station setting, particularly if you replace existing station information with imported information.

As a default, ezAudit uses the file extension **.stns** when exporting or importing station information. The information is stored in an ini file structure.

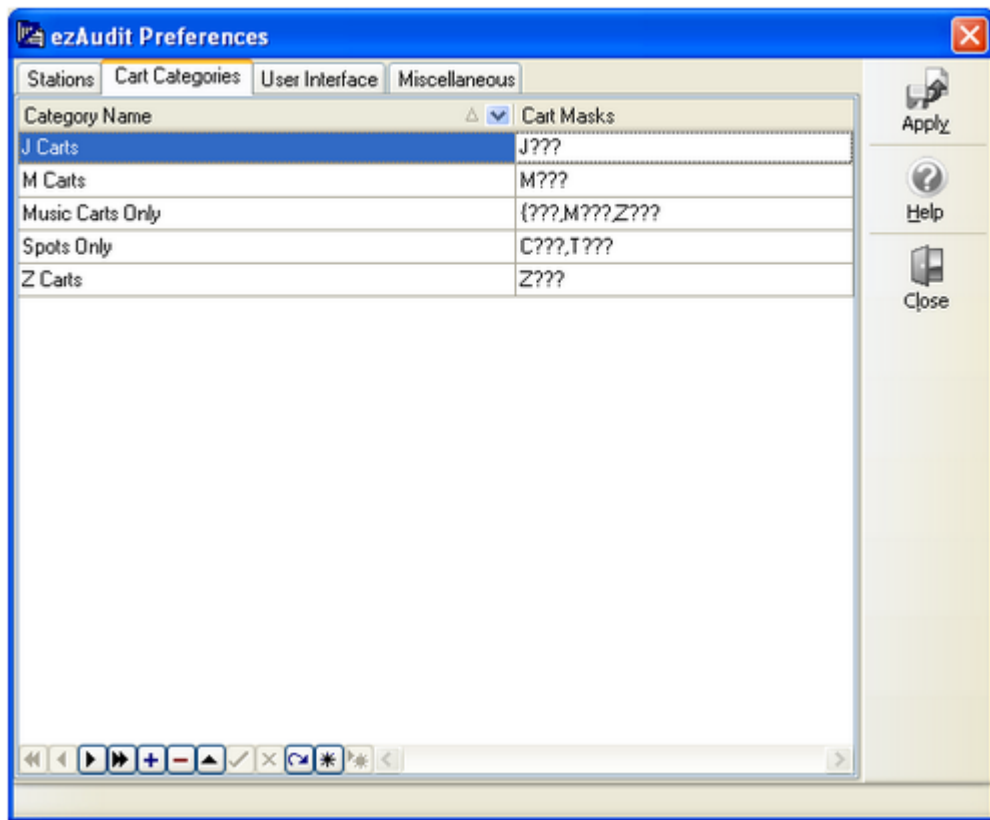
3.2 Cart Categories

ezAudit provides the ability to create "**Cart Categories**". A cart category is essentially a single cart number mask or group of cart number masks that can be used when displaying an XStudio, DCS, or Maestro audit report. A cart number mask is a representation of a group of cart numbers that you wish to be **included** in the display. You can have as many cart filter definitions as you wish, and as many cart masks per filter as you wish.



There must be at least **one** cart mask defined for each cart category you create.

The use of a cart category will reduce the displayed cart items (audio files) to just those matching your filter definition. For instance, the sample display shows several filter definitions, including one called "Spots Only". You can see from the display that there are two cart mask associated with the Spots Only definition. One reads "C???", the other "T???". This filter definition means that, when selected, only carts beginning with the letter "C" or the letter "T" will be displayed.



The initial display of the Cart Categories page shows a table of available (defined) filters, if any, and a navigator bar which can be used to add, edit and delete cart filters.

Maintaining Cart Filters

Add a Category Name. To add a filter, click on the "+" button and type in the name you wish to use for the new category when prompted. You'll also be prompted to enter an initial cart mask. You can also use the **[Insert]** key on the keyboard.



Float your mouse over any of the controls and a description of the button or control's usage will be displayed at the bottom of the dialog.

Edit a Category Definition Name. To edit a category name, select the name from the list, then click on the Category Name field and type your changes. Finish by clicking on the **"Save Changes"** (Post) button. The **[F2]** keystroke also invokes edit mode. The content being edited will be the column you had selected when the **[F2]** key was pressed. For more information data navigation buttons, see the topic [Using Data Navigators](#).

Delete a Category Definition. To delete a cart category definition completely, select the category name and click on the **"Delete"** button, represented by a "-" symbol (minus sign). After confirming that you want to delete, the category definition will be removed, including associated cart masks. You can also use the **[Delete]** key on the keyboard.



Deleting a category definition also deletes all cart masks associated with the cart filter. If you didn't mean to delete the category definition, you must close the Preferences dialog and choose not to save the changes. When you re-open Preferences, the category definitions are restored to their last saved state. Be aware that not saving changes on exiting the Preferences dialog saves no changes you may have made while working in the Preferences dialog.

Editing Cart Masks. To edit a cart mask, **[Double-Click]** on the mask in the mask column. A [dropdown panel](#) displays, providing the means to add, edit, and delete individual cart masks.

A cart mask must be exactly 4 (four) characters in length. The mask table will not allow entries that are too short and will not accept more than 4 characters entered. For information on specific cart mask combinations that can be used, see the topic [Cart Masks Explained](#).

When all editing for a category is complete, save your changes by clicking on the **"Save Changes"** (Post Edit) data navigation button, represented by a check mark.

Importing and Exporting Cart Categories

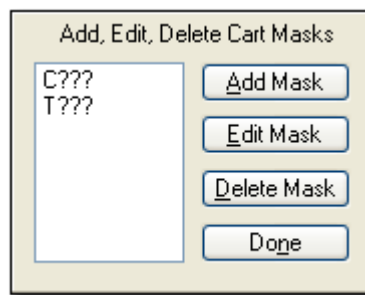
For convenience, you can import and export cart filter settings. **[Right-Click]** anywhere on the displayed cart categories table and select either **Import Cart Categories** or **Export Cart Categories**. In either case, you are prompted for a file name to import from or export to.



When importing cart categories and some categories already exist, you have the option to either add (append) the imported categories to the existing list or replace the existing categories with the imported categories.

3.2.1 Using the Cart Mask Edit Panel

ezAudit requires the creation of cart masks for applying filters to include only certain cart numbers. When cart masks need to be added, edited or deleted, the Cart Mask Edit Panel is displayed.



The panel is intended to make the tasks associated with cart mask maintenance easier and more fool-proof with buttons for adding, editing and deleting cart masks.

Add Mask Button

When the Add Mask button clicked, a dialog appears for entry of the new cart mask. The entered mask is validated to ensure it meets cart mask rules before being accepted and added to the cart mask list.

Edit Mask Button

To edit a cart mask in the list, select the item to be edited and click on the Edit Mask button. The mask text appears in a dialog for editing. The revisions are validated to ensure the changes meet cart mask rules before being accepted.

Delete Mask Button

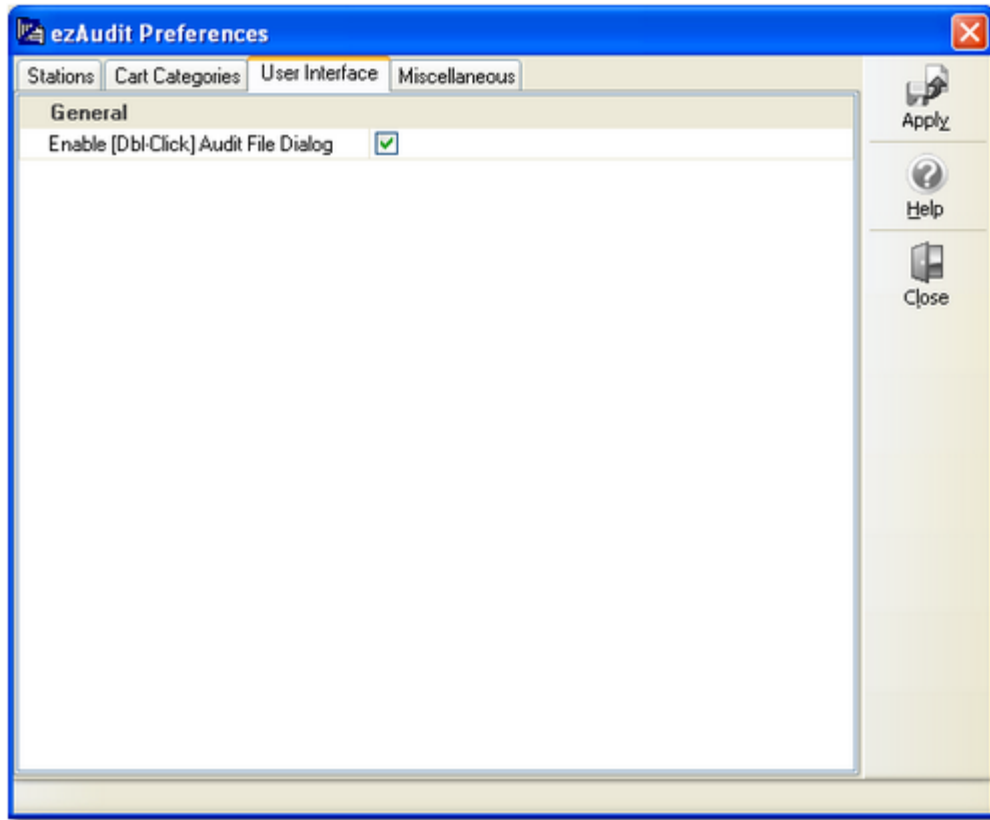
To delete a cart mask in the list, select the item to be deleted and click on the Delete Mask button. The selected cart mask is immediately removed from the list.

Close Cart Mask Edit Panel Button (Done)

Click when finished editing cart masks to close the panel and update the cart mask field contents.

3.3 User Interface Settings

The User Interface Settings page contains items that affect user interaction with ezAudit.

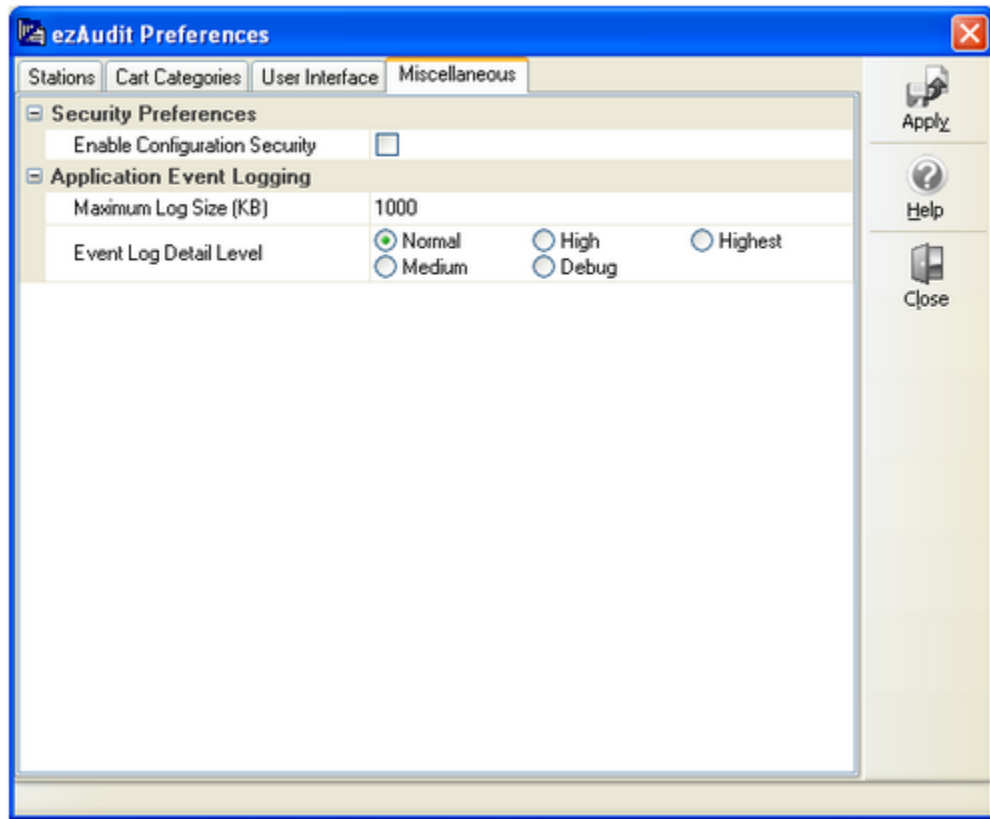


General Settings

Enable Double-Click for Audit File Dialog. If checked, you can double-click on a calendar date for an audit file and the file will be loaded without having to click on the [OK] button at the bottom of the dialog. Some users prefer this approach, although it may have the side-effect of inadvertently double-clicking on an unwanted date or a date for which an audit file does not exist. For this reason, the feature is optional. The default is not enabled (unchecked).

3.4 Miscellaneous Settings

This page of user preferences allows you to configure some miscellaneous features and functionalities of ezAudit.



Security Preferences

You can secure your ezAudit preference settings if you wish. When set, users are unable to open the Preferences dialog and make changes unless they enter a password.

Enabling Security. Click on the Enable Configuration Security check box. When this item is checked, a dialog appears asking you to enter a password twice to confirm your password choice. If the two entered passwords match and you save (apply) the changes, the next time a user attempts to access Preferences, a password prompt will appear and access will be granted only if the correct password is entered. **Passwords are not case sensitive, but are stored in the ezAudit settings file as "scrambled" text, ensuring a moderate level of security.** Save your changes by either clicking on the [Apply] button or when prompted when you close Preferences.

From this point on, users will have to enter the password you created in order to display the Preferences dialog.



The password is encrypted and cannot be determined by looking in the ezAudit preferences file. If you forget the password, you will be unable to change any of the Preferences.

Disabling Security. Remove the check mark in the Enable Configuration Security check box. Save your changes by either clicking on the **[Apply]** button or when prompted on exiting Preferences.

Event Logging Properties

As ezAudit runs, information relating to its performance and problems encountered is written to an application event log. The event log is a text file that is maintained automatically by ezAudit. Event logs are generally used in troubleshooting problems or determining why ezAudit behaved in a certain way. Review the topic on [Extended Event Logging](#) for additional information.

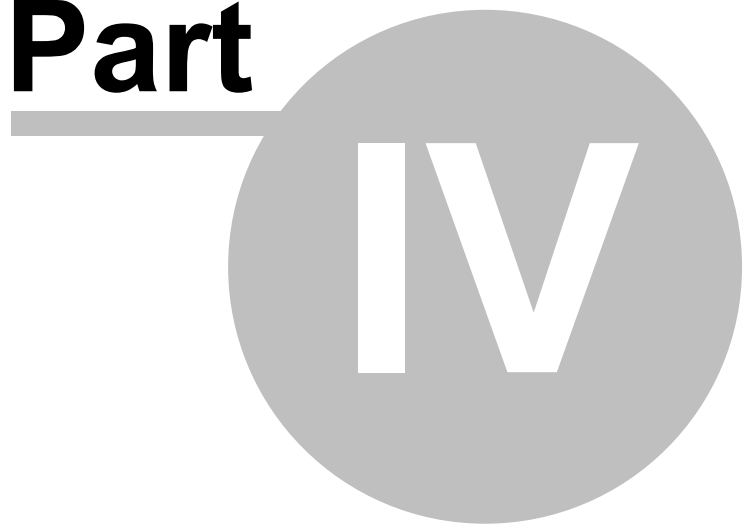
This group of properties provides the means to control the maximum size of the ezAudit event log file, and to adjust the amount of information that is stored to the file as ezAudit runs - the so-called "detail level".

Maximum Log Size (KB). Use this value to control the maximum size of the ezAudit event log file. ezAudit periodically checks the size and removes old items to ensure the event log stays at or below the defined maximum size. The default value is **1000 KB** (1 MB).

Event Log Detail Level. The default detail level is "**Normal**". As you change the detail level to Medium, High, Debug, and Highest, ezAudit logs more and more information to the application event log. The higher the detail level, the more information stored in the application event log.

Operation - Using ezAudit

Part



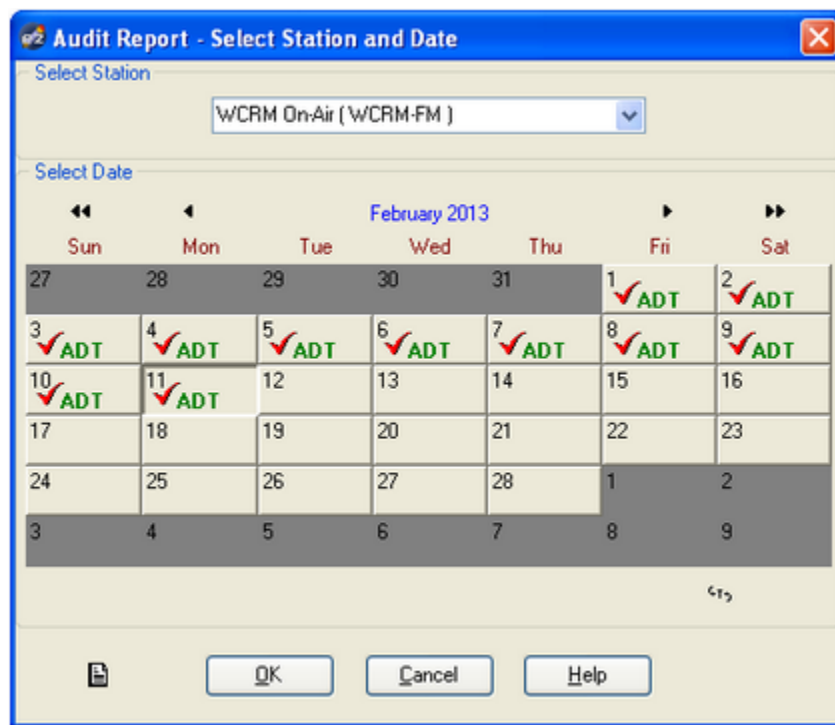
The basic steps in using ezAudit day-to-day are simple. Before using, be sure you've created station information - see the section in Preferences on [Setting Up \(Configuring\) Stations](#).

When ezAudit is first started, it looks pretty bland - just a basic blank display with some menu items. You can have several audit reports open at once, each appearing in its own "window" within the main display area.

To run a new audit report, select the menu item **File | New Audit Report**. A new report window is created, and you'll be prompted to select a station and date for the report from the Open Audit Report dialog and, once a date is selected, the report is displayed.

4.1 Selecting a Station & Date

Each date for the selected station for which there is a valid audit data file is marked on the calendar for your convenience. If a date has no check-mark, no audit file for the station and date in question exists.



Select the date (and station) you want, then click on the **[OK]** button. The audit file will be loaded and displayed.



You can enable double-click actions on the calendar so you don't have to click on the **[OK]** button. See the section in [Preferences | User Interface](#) for information on enabling double-click.

4.2 Working with a Report

As initially displayed, **all data** is shown when you create a new report. You can then "slice and dice" the information to narrow down what you're looking at. As you change settings, the displayed data information is immediately updated. If desired, you can then print the displayed data or copy selected items to the Windows clipboard for subsequent pasting in another application.

Real Time	Log Time	Action	Function	Seq	CartNo	Description	Length	Agency	CustNo
00:00:00		PcToSw				SetRowB Dout 9876543210		111003FFDD	
00:02:59		SwToPc	Break			Internal 70 [BusD Din 10]		1C300400AA	
00:02:59		PcToSw				SetBusA Ch 4 XxYy		140F101AB3	
00:02:59		PcToSw				SetRowA DoutHL98765 3210		11000FEFF1	
00:02:59	00:02:01	PlayCart			Wx05	12a-6a	00:30:00	dk	
00:03:00		SwToPc	SMN #3			BusA Din 17 [17]		1C020000C4	
00:03:00		SwToPc	Do Nothing			Internal 66 [BusD Din 06]		1C300040E6	
00:03:29	00:02:02	PlayCart		14	T375-30	SMP Direct Response	01:00:00	Toothpick	SMP
00:04:29	00:02:03	PlayCart		1	T493-03	K R C Q News Promos	00:30:00	8:08am DDFH/MB	KRCQ
00:04:59	00:02:04	PlayCart		8	T275-10	Airtime Media	01:00:00	Diabetes Line	AIRT
00:05:59		PcToSw				SetBusA Ch 1 4 XxYy		140F90F05D	
00:05:59		PcToSw				SetRowA DoutHL98 65 3210		11000F6F71	
00:05:59		PcToSw				SetRowB Dout 98 6543210		1110037F5D	
00:05:59		SwToPc	SMN #6			BusA Din 14 [14]		1C00400086	
00:05:59		SwToPc	Liner			Internal 68 [BusD Din 08]		1C300100A7	
00:05:59		PlayCart		19	JUB-98	John Beard Liners	00:06:29	Our Name	
00:05:59		PcToSw				SetRowB Dout 9876543210		111003FFDD	
00:10:11		SwToPc	SMN #1			BusA Din 19 [19]		1C0800008E	
00:10:11		SwToPc	Magicall			Internal 71 [BusD Din 11]		1C300800AE	
00:10:11		PlayCart		3	MCJB-02	John Beard Magicals	00:02:99	FM 102.3 KRCQ	
00:13:03		SwToPc	SMN #9			BusB Din 12 [32]		1C101000F3	
00:13:03		SwToPc	PLAY BKMD			Internal 48 [BusC Din 08]		1C20010087	
00:13:03		PlayCart		3	BKMD-04	Back End Jingle Medium	00:04:80	KRCQ	
00:16:32		SwToPc	SMN #1			BusA Din 19 [19]		1C0800008E	
00:16:32		SwToPc	Magicall			Internal 71 [BusD Din 11]		1C300800AE	
00:16:32		PlayCart		4	MCJB-04	John Beard Magicals	00:02:99	RC 102 KRCQ	
00:21:01		SwToPc	SMN #3			BusA Din 17 [17]		1C020000C4	
00:21:01		SwToPc	Break			Internal 70 [BusD Din 10]		1C300400AA	
00:24:02		SwToPc	SMN #6			BusA Din 14 [14]		1C00400086	
00:24:02		SwToPc	Liner			Internal 68 [BusD Din 08]		1C300100A7	
00:24:02		PlayCart		21	JUB-99	John Beard Liners	00:06:38	All Day Long	
00:29:36		SwToPc	SMN #1			BusA Din 19 [19]		1C0800008E	
00:29:36		SwToPc	Magicall			Internal 71 [BusD Din 11]		1C300800AE	
00:29:36		PlayCart		1	MCJB-01	John Beard Magicals	00:02:99	FM 102.3 KRCQ	

The status bar at the bottom of the display provides basic information about the report you are viewing, including the original file name, the total number of records extracted from the audit data file, and the displayed number records. The majority of the report window is taken up by the data display. You can navigate in the data display using the horizontal and vertical scroll bars or with keystrokes. See the section on [Keyboard Shortcuts](#) for details on keystrokes you can use to quickly navigate the report display.

Display Columns

As with most reporting tools, audit report data is displayed in a columnar format.



Report columns can be moved and re-sized as desired for each data report view. The columns' location and size information are saved when the report window is closed and restored the next time a report window is opened. Report view layouts are stored as a separate XML file in the application directory. See the topic on [application-generated files](#) for specific information on file names, etc.

Here's a brief description of the information displayed, by column:

<u>Column Name</u>	<u>Description</u>
Real Time	The actual time the event occurred.
Log Time	If an event came from the broadcast log, the log scheduled time appears here.
Action	The transaction type for the item, or action taken by the host DCS or Maestro system. For more information on action (or transaction) types, see the appendices.
Function	If the action is a DCS or Maestro function or an XStudio action, the function/action name is displayed in this column. For XStudio-generated audit files, this column will optionally display the log record ID value.
Seq (Sequence)	Any time a multi-cut cart is played, the rotational sequence number of that cut appears here.
Cart No	The number of the cart (audio file) played.
Description	Description of item. If the item is a cart, the description from the DCS, Maestro or XStudio systems. If the item is a switcher action, a description of what the action was.
Length	The actual playback length of a cart, expressed as minutes, seconds and hundredths of a second.
Agency	If the item is a cart, the agency description field from the host DCS, Maestro or XStudio. If the item is a switcher action, the switcher data associated with the action.
Cust No	If the item is a cart, the customer number associated with the (Customer Number) cart, if originally present on the broadcast log.

<u>Column Name</u>	<u>Description</u>
Ch (Channel)	If the item is a cart, the channel on which the cart played.
Status	The status of the event. For more information on status codes, see the appendices.



You can sort displayed data by column by clicking on the column text. The first time a column is sorted, it is in ascending order. The second time, it is sorted in descending order. A small graphic in the column heading indicates the sorted column and whether it's ascending or descending.

Filtering Data

You can reduce the number of items displayed by "filtering" the information. You can elect to show only certain types of information, only certain status codes, certain audio playback channels, certain cart numbers and logged items only. When you change filtering, the effects are immediately reflected in the displayed data.

- a) **Transaction Codes** (or Actions). There are over 20 transaction codes (or Actions) that may be created by the host DCS or Maestro unit. You can select as many or few as you wish to be included in the report. Selection of Transaction Codes is made in the [Set Transaction Filters](#) dialog.
- b) **Status Codes**. For each action, there is a status of the action - was it successful, did it fail, what exactly happened? You can select as many or few as you wish to be included in the report. Selection of Status Codes is made in the [Set Transaction Filters](#) dialog.
- c) **Playback Channels**. Each DCS or Maestro unit may have as few as 1 playback channel available on the unit and as many as 8 playback channels. You can select the playback channels to include in the report. This is useful if you know that all "to-air" playback, for instance, occurs on playback channel one and wish to report only those playback actions that went "to air". Selection of Playback Channels is made in the [Set Transaction Filters](#) dialog.
- d) **Cart Filters**. You can report only certain cart numbers or ranges of cart numbers. Selection of a filter is made from the main report display. For information on setting up cart filters, see the topic on setting up [Cart Filters](#).
- e) **Data Views**. The Data View is a way to change how the report information is displayed. You can group information by hour, show only logged items and group logged items by hour in addition to the standard view of the information. Select a different view using the Data View dropdown list.

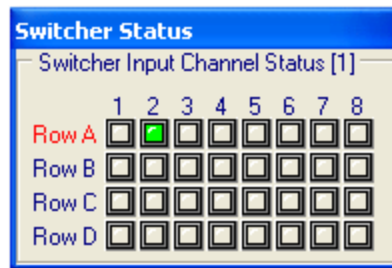
Once you have a group of settings (transaction and status filters, cart filters, views, etc.) that you like, you can save those settings as a report "template". Report templates are stored on disk and can be recalled at any time from the main report display using the Selected Report Template combo box. All settings contained in the template are used in immediately refreshing the displayed audit information when a template is selected. For more information on report templates, see the section on [Report Template Maintenance](#).

4.2.1 Switcher Status Panel

While working with displayed audit report data, you can optionally view a small audio switcher status panel. It is a visual way of seeing what a particular switcher item in a report did in terms of audio channels that were either turned on or off.

To display the status panel, select the main menu item **View | Switcher Status Panel**. If the menu item is unchecked, click on it to check it and display the panel. Move the panel around on the screen by **[Left-Click]** on the menu bar, holding the mouse down and dragging it to the new location. ezAudit will remember where you located the panel and restore its location next time you use the program.

The display, shown below, consists of 4 rows of 8 LED's, consistent with a typical audio switcher hardware front-panel display. if a LED on a given row is "lit", that means it's on (the channel is open).



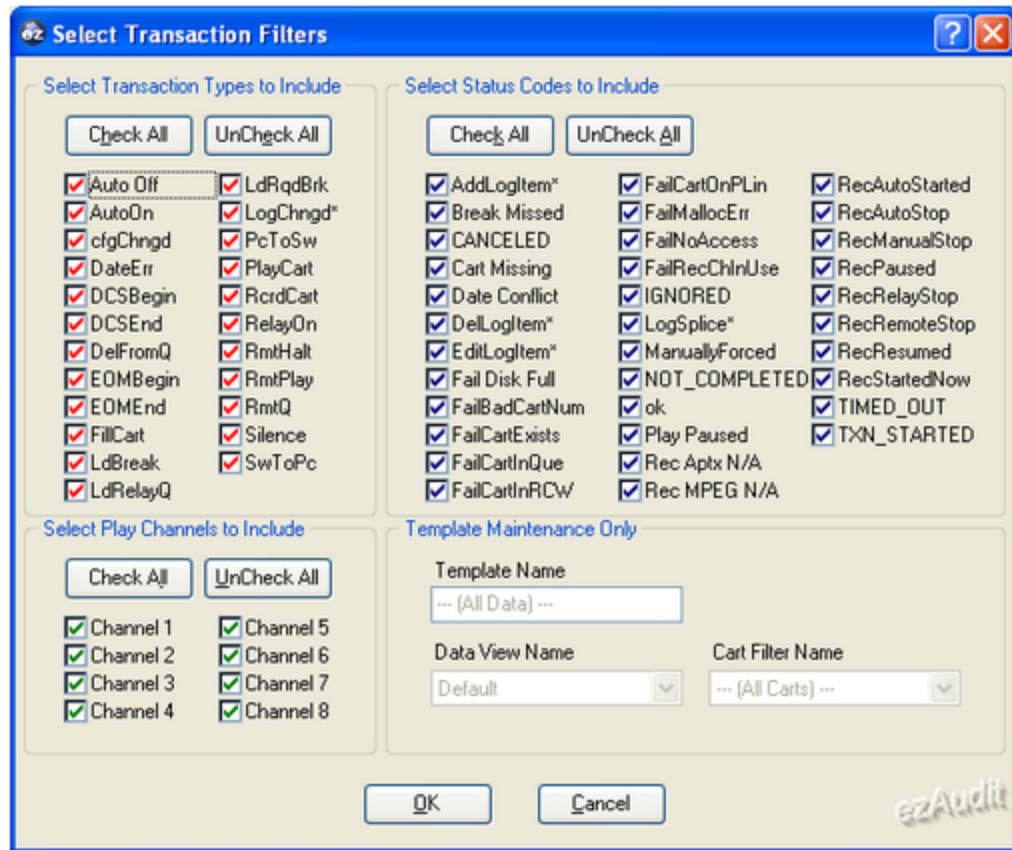
If you select a row in the displayed audit report, the switcher will be updated - if the selected row is a switcher command that affects the selected channels. Scroll down in the display with the **[DnArrow]** key and each time an item that changes the channel configuration is encountered, the status display will be updated to reflect the changes.

Hint

Audit report records only report changes on a single output bus. Thus, if you had a function that updated 4 output buses, there would be 4 audit report records, one for each bus. Scrolling through all 4 using the method described above would show you the state of the switcher after all 4 buses were updated by the function.

4.3 Selecting Transaction Filters

Choosing which transaction (action) codes, status codes and playback channels to include in an audit report is handled by the Set Transaction Filters dialog. Select **View | Select Transaction Filters** from the main menu to display the dialog.



Here, you can select transaction types to include in the report, status codes to include, and play channels to include. Checked items in each area are **included** in the report, unchecked items are not included (filtered out). You can check or uncheck all items in a category using the buttons associated with each. You can also select multiple items in a category, using standard mouse and key combinations, then **[Right-Click]** and choose to check or uncheck the selected items. Of course, clicking on an individual item will toggle the check mark.

When you have completed your selections, click **[OK]** to return to the report window - the displayed data will be immediately updated to reflect your choices.



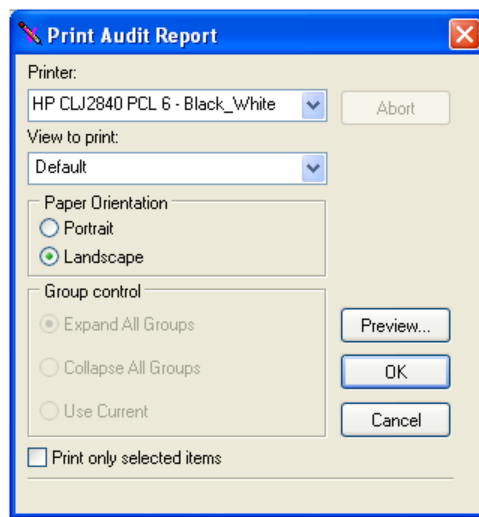
This dialog is also used in report template maintenance. The **Template Maintenance Only** items are disabled when using this dialog in conjunction with the main report window.

4.4 Printing Reports

You can print **displayed data** two ways - either all displayed data or selected records only. The information you're viewing is essentially a print preview - what you see is what you'll get, with a few minor differences. Reports are always printed in **landscape orientation**, meaning printed the "long way" on the page, to accommodate all columns and still be readable.

Printing a Complete Report

To print a complete report, select the menu item **File | Print Report**. You can also use the data view's pop-up menu. When you print the entire report, **all displayed data** is printed. A printer selection dialog is presented, allowing you to choose the target printer, as well as preview the output before it's actually sent to the printer.



Print Audit Report Dialog

During the print process, print status is reflected on the status bar at the lower left edge of the main display.

Printing Selected Records

You can "select" one record or more and print only the selected records. To select multiple records for printing, first select a single record. Then, use either the [**Shift-Left-Click**] or [**Ctrl-Left-Click**] mouse combinations. Selected records are highlighted. Finally, [**Right-Click**] to pop up a menu and select the menu item **Print Selected Records Only**. Only the highlighted records will be printed. As with printing a full report, you have the option of previewing the printed output before actually sending it to the printer.

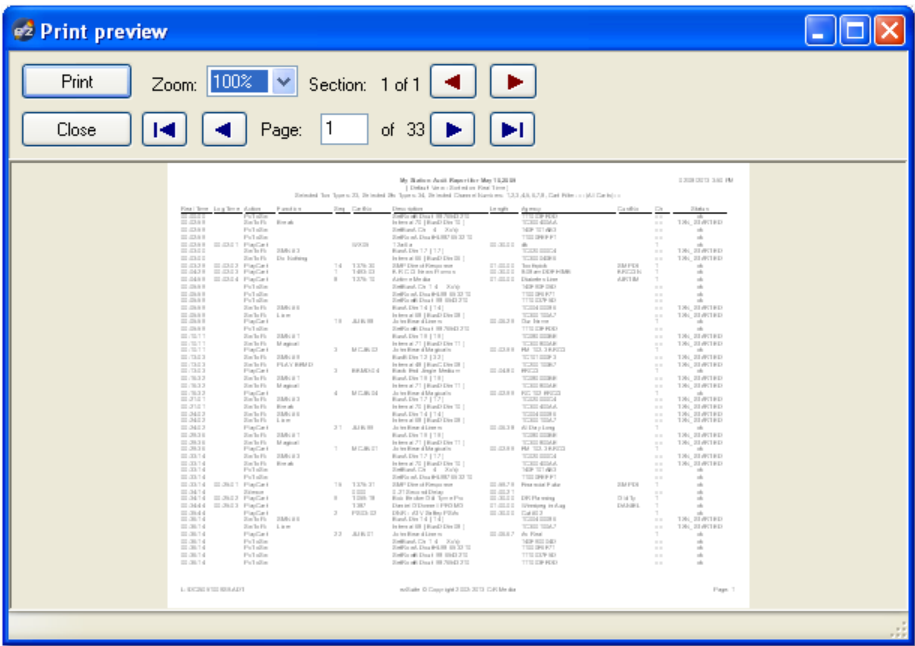


Printed reports reflect the information displayed on-screen. If you have sorted the information by, say, "**Description**", that's the way the printed

report will be done. If you are viewing a report by hour and have just two of the hours displayed (expanded), just those two hour's detail data will be printed.

Previewing a Report Prior to Printing

While the ezAudit report display is essentially a preview of what will print, you can get a more complete representation by clicking the [Preview] button in print dialog. The print preview dialog shows the exact header layout and pagination.



Print Preview Dialog

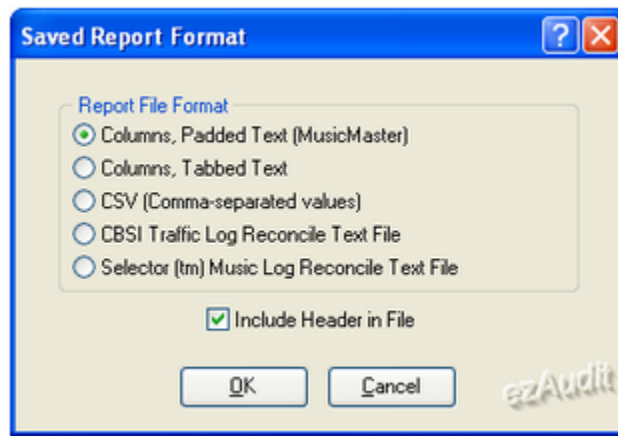
When initially displayed, the print preview dialog shows the report as a complete page within the borders of the dialog, as shown in the example. You can page forward and backward using the supplied buttons.

To make the preview more readable, expand the dialog to full-screen and use the [Zoom] control to set the size. Use [Left-Click] to zoom larger when the mouse cursor is over the report image, [Right-Click] to zoom smaller.

4.5 Saving Reports to a File

Once you have created an audit report, you can save the displayed report data to a file of your choosing. To save, select the menu item **File | Save Report to File** or click on the **[Save Report]** button on the toolbar.

A dialog showing the available types (formats) of files to save is shown, similar to the one shown here. Select the file type you wish to save the data as, select any applicable options, then click **[OK]**.



You can choose to include a report header. If the **Include Header in File** item is checked, the first line of the saved file will be each column's description.

You'll be next prompted to select a filename and folder location. Click **[OK]** after completing this task and the report is saved to the file you've designated.

Saved File Formats

ezAudit provides for the following types (formats) of files to be saved. File types and their usage is outlined below.



To use the reconcile features of Selector™ and CBSI, you must correctly set up cart filters so that only music or commercials that need to be reconciled in the target scheduling system are included in the report.

Format (Type)

Explanation

Columns, Padded Text	The report information is saved as an ASCII text file. Each column's data is padded with spaces to a fixed length.
----------------------	--

Format (Type)	Explanation
Columns, Tabbed Text	The report information is saved as an ASCII text file. Each column's data is separated by a [TAB] character.
CSV (Comma-Separated Values)	The report information is saved as an ASCII text file. Each column's information is bracketed with quote (") and each column is separated by a comma (,).
CBSI Traffic Log Reconcile Text File	The report information is saved as an ASCII text file. Columns are ordered to match the requirements of the CBSI Traffic System.



If you are migrating from CMAD and are using CBSI's ELR Limits, you may have to adjust these for the reconcile to work properly. Off CBSI's main ELR screen where eligible dates are displayed, there is a section called ELR Limits. In that section, there is a screen labeled "**Computer Concepts DCS Limits**", where you can set channel limits. You may have set a limit for channel 1 only, for instance. The entry may read something like "**CH1**". In ezAudit, only the channel number is picked up from the audit data, not the channel's name (defined in the DCS or Maestro configuration and not accessible to ezAudit). So, you'd need to change the channel limit to read "**1**" (in this example). CBSI looks for an exact channel name match if limits have been imposed.

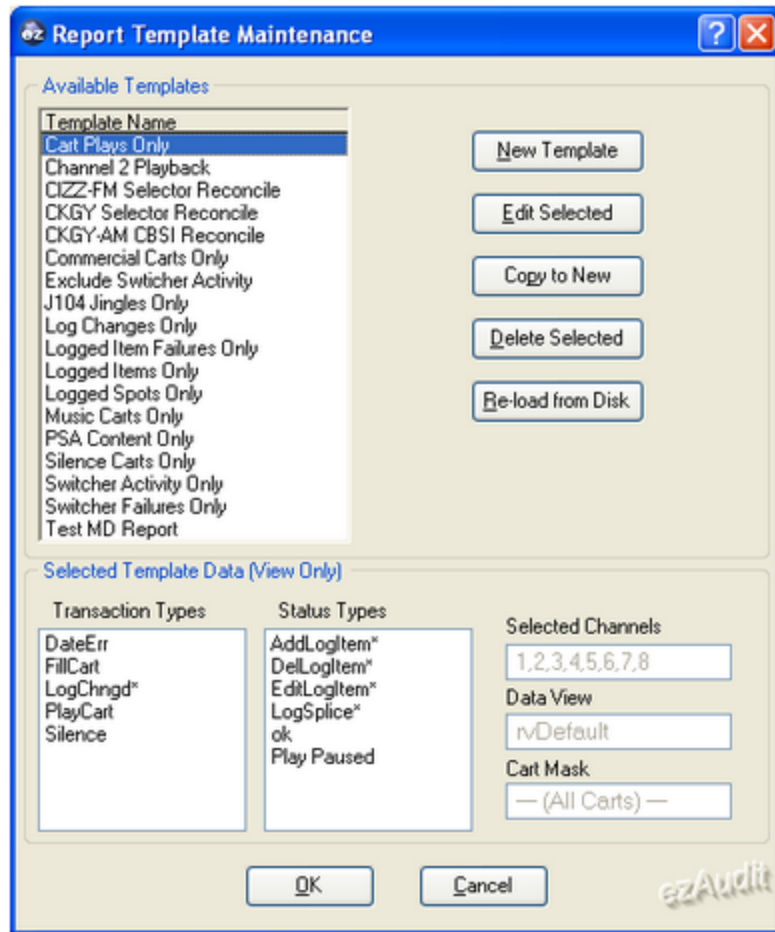
Selector™ Music Log Reconcile Text File	The report information is saved as an ASCII text file with an extension of .INP. This file meets the Linker Standard Schedule Output/Input Specification for electronic reconcile of the music log. To use the file, in Linker, go to Utilities, Interface to Other Products, then Schedule Reconciliation. Input the location, name of the file and the automation system. Then run the reconciliation.
---	--

4.6 Report Template Maintenance

A report template consists of a group of transaction codes, status codes, play channels, cart filters and a data view. Templates are organized by a user-defined name for each (which must be unique) of up to 30 characters in length. ezAudit stores all templates together in a file in the application directory. See the appendices for a list of files used and/or created by ezAudit.

You may have as many templates as you wish, limited only by available disk space.

You can create new templates on the fly from the main report window and you can select any of the available templates from the main report window. However, there are times when you may wish to edit, copy or delete templates. Access these functions by selecting the menu item **Edit | Report Template Maintenance** in the report window. A dialog similar to the one shown here is displayed.



The display contains a list of all available templates by name. The selected template's settings are displayed in the lower panel of the dialog.

Maintenance functions are performed by clicking on clearly-labeled maintenance buttons:

1. **New Template.** Create a new template. The current report settings are used. You will be prompted for a name for the new template.
2. **Edit Template.** Edit the selected template. A second dialog will be displayed, allowing you to edit each of the template items.
3. **Copy to New.** The selected template in the list will be copied to a new template. You will be prompted for the new template name.
4. **Delete Selected.** The selected template will be deleted. You will be asked to confirm the deletion.
5. **Re-Load from Disk.** If you have made changes to templates, and do not wish to keep your changes, you can re-load the template information from disk. This action will restore the last saved template information, losing your changes in the process.to templates, added or deleted.



Changes made to templates in this dialog are not saved to disk until you click on the **[OK]** button and exit the dialog. If you click on the **[Cancel]** button, any changes made are lost and the original template information is restored from the hard disk.

When you click on the **[Edit Selected]** button (or double-click on a template name in the list), a secondary edit template dialog appears, similar to the example shown here. This dialog is where you make changes to transaction types, status codes, play channels, the data view and cart mask information.

Edit Template Information

Select Transaction Types to Include

Check All Uncheck All

Auto Off LdRqdBrk
 AutoOn LogChngd*
 cfgChngd PcToSw
 DateErr PlayCart
 DCSBegin RcrdCart
 DCSEnd RelayOn
 DelFromQ RmtHalt
 EOMBegin RmtPlay
 EOMEnd RmtQ
 FillCart Silence
 LdBreak SwToPc
 LdRelayQ

Select Status Codes to Include

Check All Uncheck All

AddLogItem* FailCartOnPLIn RecAutoStarted
 Break Missed FailMallocErr RecAutoStop
 CANCELED FailNoAccess RecManualStop
 Cart Missing FailRecChInUse RecPaused
 Date Conflict IGNORED RecRelayStop
 DelLogItem* LogSplice* RecRemoteStop
 EditLogItem* ManuallyForced RecResumed
 Fail Disk Full NOT_COMPLETED RecStartedNow
 FailBadCartNum ok TIMED_OUT
 FailCartExists Play Paused TXN_STARTED
 FailCartInQueue Rec Aptx N/A
 FailCartInRCW Rec MPEG N/A

Select Play Channels to Include

Check All Uncheck All

Channel 1 Channel 5
 Channel 2 Channel 6
 Channel 3 Channel 7
 Channel 4 Channel 8

Template Maintenance Only

Template Name
Channel 2 Playback

Data View Name Cart Filter Name
Default ... (All Carts) ...

OK Cancel

ezAudit

Once you have completed your changes, click on **[OK]** to accept the revised information, or click on **[Cancel]** to abort the editing of the template.

4.7 Multi-Day Reports

On occasion, it's useful to be able to generate an audit report for a range of days. For instance, you might want to produce a report of all carts played on the air for a particular customer over the course of the month.

ezAudit's **Multi-Day Report** is designed for just this kind of need. In many ways, generating a report that covers multiple days is very similar to a standard daily audit report. However, because such a report could include a large number of days, therefore a large number of audit transactions loaded in memory, a Multi-Day Report differs from a daily report in that **only data matching the criteria in a specific report template is retrieved from disk**. Therefore, there's not as much on-the-fly flexibility when you're working with a Multi-Day Report.

Before generating your first Multi-Day Report, it's recommended that you review the section on [creating and maintaining report templates](#) and that you've created a template that restricts the report data to just those items you're interested in. To experiment with a template, you should generate a standard report for a single day, modify the transaction filters until you have what you're looking for, and save the settings as a new template.

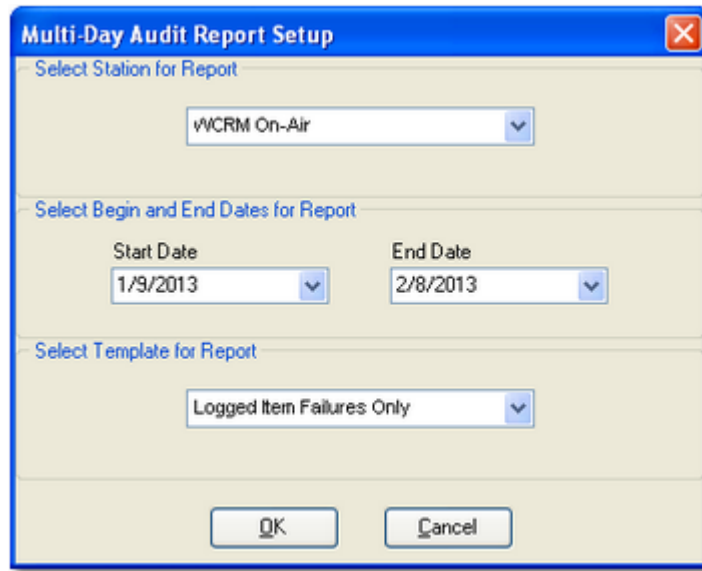


Creating report templates and modifying transaction filters **is not supported** within a multi-day report view. Therefore, you must create a template while working with a single audit report date, save the template and then run the multi-day report.

You can, however, apply any defined cart filters and report views within the multi-day report view.

Creating a Multi-Day Report

To create a report, select the menu item "**Create Multi-Day Report**". A report settings dialog will appear, similar to the one shown here:

The image shows a dialog box titled "Multi-Day Audit Report Setup" with a close button (X) in the top right corner. The dialog is divided into three sections. The first section, "Select Station for Report", contains a dropdown menu with "WCRM On-Air" selected. The second section, "Select Begin and End Dates for Report", contains two date pickers: "Start Date" with "1/9/2013" and "End Date" with "2/8/2013". The third section, "Select Template for Report", contains a dropdown menu with "Logged Item Failures Only" selected. At the bottom of the dialog are two buttons: "OK" and "Cancel".

Here, you select the station you wish to report on, the start and end dates for the report, and a report template.



Audit report templates are common to both single-day and multi-day reports, making it easy to create a template while working with a single date, then apply that template to a multi-day report.

Once you've made your selections and click on the **[OK]** button, the report generation begins. During generation, a status dialog is displayed, advising you of the progress of the report. It includes the current data file being processed and a progress bar indicating the percentage of completion.

Real Time	Log Time	Action	Function	Seq	CartNo	Description	Length	Agency	CustNo
- Date : 1/12/2013 (1)									
03:52:36	03:00:16	PlayCart	1200081		(CHE	As Any Fool/T.Lawrence	02:53.00		
- Date : 1/13/2013 (8)									
01:14:31	01:00:04	PlayCart	1300027		J951	FM 105	00:09.24		
01:53:40	01:00:21	PlayCart	1300044		J800	B101 / Amy Grant	00:07.92		
02:43:16	02:00:18	PlayCart	1300067		J951	FM 105	00:09.24		
02:49:28	02:00:21	PlayCart	1300070		J800	B101 / Amy Grant	00:07.92		
02:53:00	02:00:23	PlayCart	1300072		J801	B101 Jingle (.05)	00:02.60		
03:40:33	03:00:16	PlayCart	1300091		J800	B101 / Amy Grant	00:07.92		
03:45:53	03:00:19	PlayCart	1300094		J801	B101 Jingle (.05)	00:02.60		
03:53:23	03:00:22	PlayCart	1300097		J955	Y98 FM Jingle	00:02.00		
- Date : 1/14/2013 (1)									
09:45:57	09:00:12	PlayCart	1400194		(CN8	GoodniteSweetht/D.Kersh	03:22.00		
- Date : 1/15/2013 (8)									
01:12:59	01:00:04	PlayCart	1500027		J951	FM 105	00:09.24		
01:52:08	01:00:21	PlayCart	1500044		J800	B101 / Amy Grant	00:07.92		
02:41:44	02:00:18	PlayCart	1500067		J951	FM 105	00:09.24		
02:47:56	02:00:21	PlayCart	1500070		J800	B101 / Amy Grant	00:07.92		
02:51:28	02:00:23	PlayCart	1500072		J801	B101 Jingle (.05)	00:02.60		
03:39:01	03:00:16	PlayCart	1500091		J800	B101 / Amy Grant	00:07.92		
03:44:21	03:00:19	PlayCart	1500094		J801	B101 Jingle (.05)	00:02.60		
03:51:51	03:00:22	PlayCart	1500097		J955	Y98 FM Jingle	00:02.00		
- Date : 1/16/2013 (3)									
00:53:39	00:01:19	PlayCart	1600021		(CDZ	Can I Trust U../T. Tritt	03:23.00		
04:19:46	04:00:05	PlayCart	1600090		(CHL	My Kind Of Girl/C.Raye	02:45.00		
16:18:22	16:00:05	PlayCart	1600323		(COB	Old Flame/Alabama	02:49.00		
- Date : 1/17/2013 (8)									
01:14:27	01:00:04	PlayCart	1700027		J951	FM 105	00:09.24		
01:53:35	01:00:21	PlayCart	1700044		J800	B101 / Amy Grant	00:07.92		
02:43:10	02:00:18	PlayCart	1700067		J951	FM 105	00:09.24		
02:49:23	02:00:21	PlayCart	1700070		J800	B101 / Amy Grant	00:07.92		
02:52:55	02:00:23	PlayCart	1700072		J801	B101 Jingle (.05)	00:02.60		
03:40:28	03:00:16	PlayCart	1700091		J800	B101 / Amy Grant	00:07.92		
03:45:47	03:00:19	PlayCart	1700094		J801	B101 Jingle (.05)	00:02.60		

Multi-Day Report Grouped by Date

When report generation is complete, all data selected for inclusion on the report is displayed. The display looks virtually identical to the standard single-day report, with the exception that the combo box for choosing a different report template is missing.

In the example report shown, only cart items that were on the log and failed to play have been included in the report, which is grouped by log date. While the example report covers only a few days, there is no limitation on the number of log dates that are used in a report, with the exception that the dates must be contiguous.

You can sort the report information on any of the columns, ascending or descending. There are also several standard data views available, which additionally filter and/or change the grouping of the information. See the topic on [Report Data Views](#) for specific column information and how columns can be moved and re-sized.



Two additional standard report views are provided for the multi-day report, including one for grouping the selected items by day and one

for grouping logged items only by day. Additionally, any [user-defined data views](#) you have created specifically for multi-day reports are available.

As with the standard single-day audit reports, you can print the information, preview the printed output or [save it to a file](#). For more information on printing a report, see the topic [Printing Reports](#).

Filtering Data

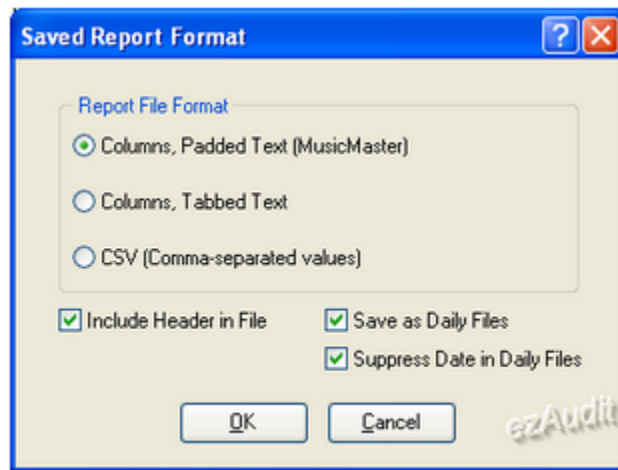
Multi-day reports are mostly pre-filtered - a template has already been applied to the data to restrict which audit records are selected when the initial creation of the report is done, unlike standard single-day reports. You can, however, change the viewed report data in a couple of ways without having to recreate a report using a different template.

- a) **Cart Filters.** You can report only certain cart numbers or ranges of cart numbers. Selection of a filter is made from the Cart Filters dropdown list. For information on setting up cart filters, see the topic on setting up [Cart Filters](#).
- b) **Data Views.** The Data View is a way to change how the report information is displayed. You can group information by hour, show only logged items and group logged items by hour in addition to the standard view of the information. Select a different view using the Data View dropdown list.

For more information on working with a report on-screen, see the section on [Working with a Report](#).

Saving Multi-Day Reports to a File

When saving multi-day reports to a file, the available options are slightly different from a single-day report. The save report dialog will look similar to the example shown here.



In addition to limiting the available output file types to just those that will work with a multi-day report, the options "**Save as Daily Files**" and "**Suppress Date in Daily Files**" are available.

- a) **Save as Daily Files.** If you check this option, you are prompted to select an output folder. A file will be created for each day included in the multi-day report that data available. The file names are automatically generated and have the naming convention "**mmddySx.**", plus the appropriate file extension, where "**mm**" is the month, "**dd**" is the day, "**yy**" is the year and "**Sx**" is the station number being reported.
- b) **Suppress Date in Daily Files.** As a default, daily files include the audit date. Check this item to remove the date portion when saving the files. This has the effect of making the report format for each of the available files types exactly the same as a single-day report.

See the topic on [Saving Reports to a File](#) for more information on the available file formats.

4.8 User-Defined Data Views (Custom Data Views)

A data view is set of information that defines how data is displayed when looking at an audit report. This set of information includes things like the specific columns of information that will be displayed and grouping of information (by day, by hour, etc.).

ezAudit features a number these views pre-defined for both standard audit reports and multi-day audit reports. The pre-defined views cannot be modified.

However, there are times when you might want to view - or print - an audit report with an appearance different from the pre-defined data views. ezAudit provides the means to make a copy of an existing data view, then edit it to suit your purpose. Or, you can create a completely new data view from scratch. User-defined data views are saved automatically when you close an audit report window and will be available for use the next time you open a report.



Creating and saving your own data views will affect the time it takes to open an audit report dialog. The larger the number of user-defined views, the longer it will take to recreate those views when opening a report dialog, as they are reloaded from disk.

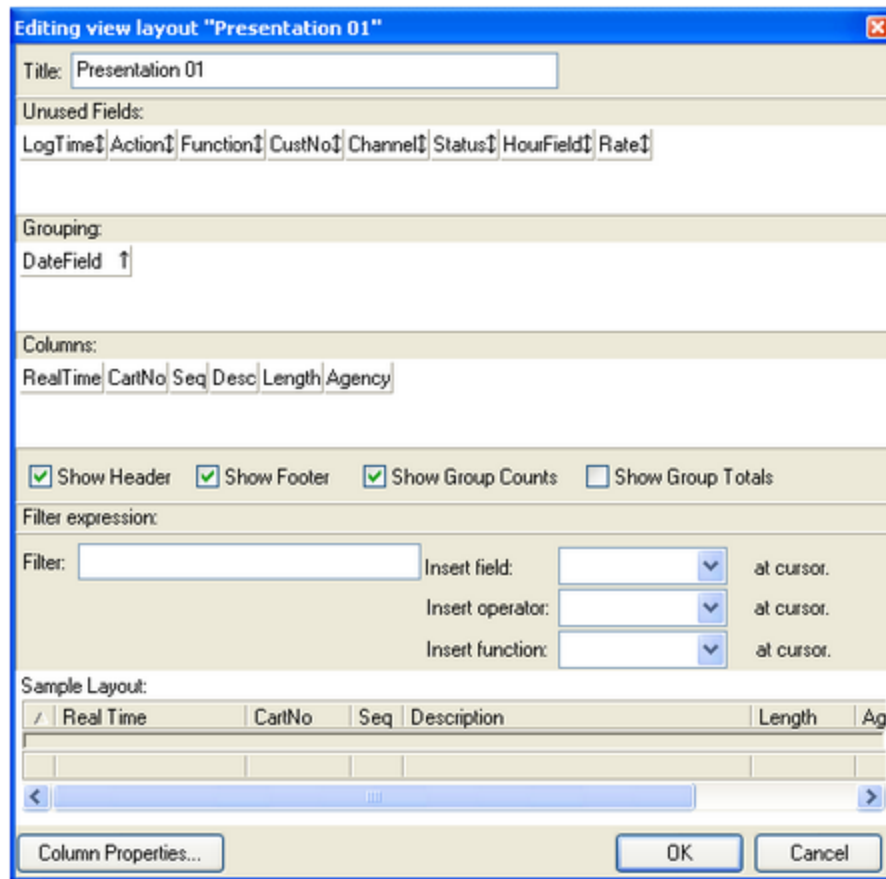
Creating a User-Defined Data View

To create a new view, select the menu item **Edit | Data Views | Create New Layout**. You'll be prompted for a name for the view and a dialog similar to the one shown here will appear:

The dialog box is titled "Editing view layout: 'Presentation01'". It features a "Title" field containing "Presentation01". Below this is a list of "Unused Fields" including RealTime, LogTime, Action, Function, Seq, CarNo, Desc, Length, Agency, CustNo, Channel, Status, HourField, DateField, and Rate. There are sections for "Grouping" and "Columns", both of which are currently empty. Below these sections are four checkboxes: "Show Header" (checked), "Show Footer", "Show Group Counts", and "Show Group Totals". A "Filter expression" section includes a "Filter" field and three "Insert" fields (field, operator, function) each with a dropdown menu and "at cursor." text. At the bottom, there is a "Sample Layout" area and buttons for "Column Properties...", "OK", and "Cancel".

In this dialog, you select the columns (fields) you want displayed by dragging items from the "**Unused Fields**" list to the "**Columns**" list. As you drop a field on the columns list, the "**Sample Layout**" near the bottom of the display is updated to reflect the appearance of the data view. You can also group items by dragging an unused field to the "Grouping" list. For instance, dragging the field named "HourField" in the above example will cause all data for a specific hour to be grouped together.

Here's an example of the dialog once some fields have been dropped and a group field assigned:



This particular example would be used in a multi-day report and groups the information by log date ("DateField"). Displayed information will include the actual air time ("RealTime"), the cart number, sequence (cut, if any), the description, length, and agency field information. This sort of layout would be useful, for instance, if you needed to generate a report for a customer that reflects all times a spot ran for a given date range. Information that the advertiser would not be interested in is not displayed, making for an easier-to-understand report for the customer. You may have noticed another field in the layout, called "Rate" - it was included as an example of a [User-Defined Field](#) being used in a custom view.

You can also choose whether or not to display column headings ("Show Header" check box), footers, Group Counts (recommended if you are grouping items) and Group Totals.

Once you have organized the fields you want displayed, click on the **[OK]** button to save your changes. The main report display will reappear, with data displayed using your new data view.

Using Filter Expressions

You may have noticed a section in the dialog entitled "Filter Expression:". This section allows you to further filter information based on very flexible criteria.



If you create a Filter Expression in a data view, the Cart Filters combo box on the main display is disabled and only the filtering criteria you've established in the Filter Expression is used to determine the visibility of specific items. **Cart filters and Filter Expressions are mutually exclusive.**

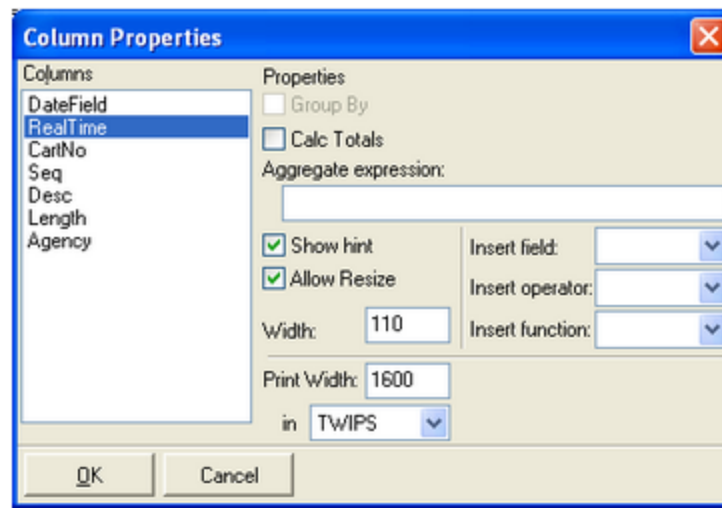
A Filter Expression has three (3) parts - a field to operate on, an operator ("=", ">", etc.), and a function. You can experiment with Filter Expressions by creating one, saving the data view and reviewing the results. If the results are not what you want, simply edit the data view and revise the Filter Expression until you get the desired results. If you wish to remove a filter expression, simply delete the contents of the Filter field by backspacing until the field is empty.

Filter Expressions can be simple or quite complex. Here are some example Filter Expressions and their meaning:

<u>Expression</u>	<u>Meaning</u>
LogTime > DATE '1899-12-30'	Using the field "LogTime", display only records whose date is greater than December 30, 1899. The effect is that only items that were on the log will be displayed in the data view.
CartNo = 'J104'	Using the field "CartNo", display only records whose cart number is J104. This would be similar to the standard Cart Filter.
CartNo = 'J104' OR CartNo = 'J105'	Using the field "CartNo", display only records whose cart number is J104 OR J105. This would be similar to the standard Cart Filter.
LogTime > DATE '1899-12-30' AND CartNo = 'J104'	Using the field "LogTime", display only records whose date is greater than December 30, 1899 AND using the field "CartNo", display only records whose cart number is J104. The effect is that only items that were on the log AND have a cart number of J104 will be displayed in the data view.

Setting Column Properties

You can edit various column settings for your data view by clicking on the [**Column Properties**] button. A dialog similar to the one shown here appears:



As you can see, there are several items you can modify. Of these, the one most often used is the "Print Width" property. This value controls with width of the selected field when printing and is independent of the displayed width. You can change this setting using any of the available measurement types in the dropdown combo box. The most common measurement width is "Inches".

You can also cause the selected field to be totaled, if desired, by checking the "Calc Totals" check box. The total value for the field is displayed in the footer for the column associated with the field, if the custom report's "Show Footer" check box is checked. The displayed value is equivalent to an Aggregate Expression of "SUM(FieldName)".



The use of Aggregate Expressions is beyond the scope of this documentation. It is recommended that the Aggregate Expression field be left empty. Aggregate Expression results are displayed in the footer of a column and the "Calc Totals" check box must be checked. A sample of an Aggregate Expression that formats a dollar value and puts the dollar sign in front of the value is:

'\$ ' + FORMATNUMBER(SUM(RATE),2,TRUE)

4.8.1 User-Defined Fields (Custom Fields)

User-defined fields can be created for use in constructing a custom data view. Since no additional actual audit report data is available from the audit data file, by nature any fields you might create for use in a custom data view are **calculated fields**. This means the displayed field information is calculated within the report, based on criteria you define.

You might, for instance, create a custom field named "**Rate**" and assign a value to the field based on whether or not the report item is a valid cart number. Then, you could create a report for a customer, showing exact air-play times of the commercial along with the associated rate for the commercial. By customizing a data view, this new column can also be totaled.

Creating a New Custom Field

To create a new field, select the menu item **Edit | Data Views | Edit Calculated Fields**. A dialog similar to the one shown here will appear, listing any custom fields you have defined. Click on on the [**New Field**] button to create a new field and fill in the information.

As shown above, you can assign a name to the field, a caption that will be displayed on the report (both on-screen and printed), alignment of the text, width and print width.

The most important part of the new field definition is the "**Expression**" used to calculate the displayed value. The expression can be quite simple or very complex, depending on your needs. Here are some example expressions and their meanings:

<u>Expression</u>	<u>Meaning</u>
'\$12.50'	This is the simplest of expressions. This field will display the text "\$12.50" for every item in the report. Notice the single quote surrounding the expression.
Case When (Cartno = "") then '\$0.00' else '\$12.50' end	This expression is more complex. When the CartNo field is blank, this column's text is "\$0.00", otherwise, the column text is "\$12.50".
case When (CartNo LIKE 'C305%') then '\$12.50' else '\$0.00' end	In this case, when the CartNo field has a value LIKE "C305" (the percent symbol is a wildcard), the this field's text is "\$12.50", otherwise it is "\$0.00". The LIKE operator is useful if you're working with multi-cut carts, for instance, and want all cuts to be included in the calculation.
Case When (CartNo in ('S147','BY63','ID25')) then '\$12.50' else '\$0.00' end	This example sets this field's text to "\$12.50" when the CartNo field is any of the cart numbers "S147", "BY63" or "ID25", otherwise it is "\$0.00".

It is important to note that you surround plain text entries in expressions with single quotes, as shown in the examples. Plain text entries would include things like the cart numbers in the examples and resulting value in the examples.

Deleting Custom Fields

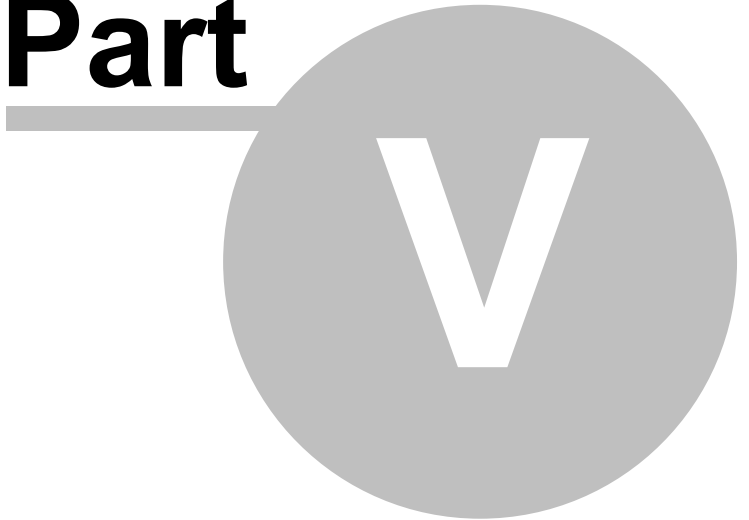
If you no longer need a custom field you've created, you can delete the field by selecting the menu item **Edit | Data Views | Edit Calculated Fields**. When the edit dialog is displayed, select the field you wish to delete and click on the **[Delete]** button. The field will be removed from the list. Once a field is removed, it must be re-created from scratch if you decide you need it again.



If the custom field is being used by one of your custom data views, you will not be able to delete the custom field until you have edited the custom data view and removed the field from either the Grouping or Columns section.

Reference

Part



This section contains more detailed background information on a number of key subjects that will help you to gain a better understanding of how ezAudit works.

Studying these sections is not absolutely essential but it will make it much easier for you to use ezAudit more efficiently and effectively.

5.1 Menus & Toolbars

Main Tool Bar

The tool bar provides convenient shortcuts to often-used functionality. Note that some buttons may be disabled if a particular item is not applicable.



Main Menu

The ezAudit menu structure is dynamic in nature. Some menu items are enabled or disabled, and additional menu items may appear, depending the task being performed.

5.2 Keyboard Shortcuts

There are a number keyboard shortcuts implemented in ezAudit. The tables below show available shortcuts and their meaning.

NOTE: Where applicable, special mouse actions are also listed.

Main Report Window (Global Shortcuts)

These shortcut keys are active anywhere on the main report window. It does not matter which control is active, these keystrokes are global in nature.

<u>Shortcut</u>	<u>Meaning</u>
[F1]	Help - launches the help file.
[Ctrl-X]	Exit - closes the application.
[Tab], [Shift-Tab]	Tab key - move from one control to another on the main display. You will be cycled through the report view selection, filter selection, template selection and the report data view. [Tab] moves forward, [Shift-Tab] moves backward.

Report Data Display Area (Report View Window Only)

When the report data is the active control on the main display, the following shortcuts may be used.

<u>Shortcut</u>	<u>Meaning</u>
[F2]	Jump to time - displays a dialog to enter the time value to search for.
[F5]	Refresh audit data - the source audit data file is reloaded (refreshed) from disk.
[Ctrl-C]	Copy selected report records to the Windows clipboard.
[Ctrl-M]	Displays the Report Template Maintenance dialog.
[Ctrl-T]	Save the current report settings as a new template.
[Right-Click]	Displays pop-up menu for printing, copying data to clipboard.
[Left-Click]	Selects the record you click on. This single record can now be printed or copied to the clipboard.
[Shift-Left-Click]	If another record is selected, all records between it and the record you click on are selected. Used to select records for selective printing or copying to the clipboard.
[Ctrl-Left-Click]	If other records are selected, the record you click on is added to those already selected. Used to select records for selective printing or copying to the clipboard.
[UpArrow], [DnArrow]	Move up or down one item in the report.
[PgUp], [PgDn]	Page up or down - moves one page up or down in the report.
[Home]	Move to the beginning of the report.
[End]	Move to the end of the report.
[LeftArrow], [RightArrow]	Scroll left or right on the current row of the report.

5.3 Audit Times Information

You may encounter a situation where ezAudit displays the "real time" of audit report items incorrectly. Most often, you'll see that the audit report data starts at a time that doesn't seem reasonable - either an hour behind or perhaps a couple of hours ahead what you think the correct time should be.

This generally occurs because of the way that an XStudio, DCS or Maestro system stores the actual time of an event in the audit data file and the likelihood that you mismatched the station configuration information to the DCS or Maestro system's actual storage method.



Starting in the spring of 2007, daylight saving time (DST) start and end dates for the United States transitioned to comply with the Energy Policy Act of 2005. There have also been other related DST changes, time zone behavior, and settings for other parts of the world. Canada, for instance, also had significant changes.

These changes can have a dramatic impact on the accuracy of audit data report times. See the topic on [Time Zone Information](#) for clarification on how you might be affected.

How Audit Data Time Values are Stored

In short, an XStudio, DCS or Maestro system stores the actual event time (also called real time) in reference to GMT (Greenwich Mean Time), offset by the on-air system's time zone settings. It boils down to what time zone a given XStudio, DCS or Maestro unit "thinks" it's in, not necessarily the real time zone the system is operating within.



The GMT (Greenwich Mean Time) time reference is now more popularly known as **UTC** (Universal Time Code). For purposes of this document, they mean one and the same thing.

As an example, a DCS unit running with no time zone settings applied (via the AUTOEXEC.BAT file) "thinks" it's in the Pacific Time Zone (US) as a default. This means that if a spot (cart) plays at noon on, say, 9/21/2007, the event time is written to the audit file as an adjusted value of 7pm, 9/21/2007. This is because the time is adjusted forward 7 hours, the difference between PST & GMT (8 hours) minus 1 hour because the date, 9/21/2007, falls within Daylight Savings Time for the Pacific Time Zone. If your DCS unit is actually located in, say, the Central Time Zone (US), the audit report's actual or real time will display as 2pm, 2 hours "off" what it should be. The two-hour difference is the difference between the Central Time Zone (US) and Pacific Time Zone (US).

If your DCS unit is located in a time zone much further away from the Pacific Time Zone used in the example, the number of hours the report seems to be "off" can get very large.

With XStudio and Maestro systems, the basic time zone information is most often closer to "correct". As Maestro runs on the NT family of operating systems, most units will have had their time settings adjusted for the appropriate time zone in which the machine is located. However, Maestro documentation generally recommends that DST not be observed - that the machine's time zone settings be changed by un-checking (de-selecting) the "Automatically Adjust Clock for Daylight Saving Changes" checkbox in the operating system's Date/Time Properties dialog. In this scenario, you may find audit report information that's right during the non-daylight savings dates of the year, but "off" an hour during those dates that fall within daylight savings time.

How Does ezAudit Handle Report Times?

ezAudit is intended to provide the ability to report audit data's actual (or real) times without regard to the host PC's settings (that is, the machine on which you're running ezAudit). In order for the times to display correctly, though, you must set a given station's time zone settings, both the time zone and observe DST items, correctly. In addition, for complete accuracy, your host PC needs to have all current and historical time zone information in its registry - see the topic on [Time Zone Information](#) for additional details.

Nothing ezAudit does with audit data is destructive, so if you need to experiment with time zone settings, go ahead. Load an audit file for the station who's times seem to be "off". Then, open the [Preferences | Stations](#) tab and change the station's time zone or observe DST settings, preferably one at a time. Apply the changes and close the Preferences dialog. The data's times will be updated to reflect your new time zone settings.

5.3.1 Time Zone Information

Windows operating systems from Windows 98 forward store time zone information in the registry. Entries for each known time zone worldwide contain information such as the name, offset from GMT (UTC) and specific dates or formulas for calculating the dates that a transition from Standard Time to Daylight Saving Time (and back to Standard Time) are to occur. Not all time zones observe Daylight Saving Time.

ezAudit uses the operating system's stored time zone information to calculate time values for audit report records, specifically the "**Event Time**" (the actual time something occurred) and "**Log Time**" (log date and time that an event is scheduled to occur). When an audit report is created, ezAudit uses information from the selected station's configuration to read time zone information from the registry in order to correctly interpret the date and time information in the report.

What Changed in 2007?

Starting in the spring of 2007, daylight saving time (DST) start and end dates for the United States transitioned to comply with the Energy Policy Act of 2005. DST dates in the United

States start three weeks earlier (2:00 A.M. on the second Sunday in March) and end one week later (2:00 A.M. on the first Sunday in November).

There have also been other related DST changes, time zone behavior, and settings for other parts of the world, some taking effect in 2007, while others went into effect after some versions of Microsoft operating systems went end-of-life.

How Do I Know if my Time Zone Information is Up-to-Date?

Determining whether your time zone information tables in the registry are correct and up-to-date may take a bit of effort, depending on the operating system you're using with ezAudit.

1. **Windows Vista and later operating systems.** If you're using any of these operating systems, the time zone information tables in the registry are up-to-date and should require no changes unless there are changes to time zone information after their respective product releases.
2. **Windows XP.** Microsoft offered an optional download that updated all time zone information. If you ran Windows Update and selected the Time Zone Update, the registry information is up-to-date. Users also had the option of downloading a manual update tool that provides the means to update a **single** time zone at a time.
3. **Windows NT 4, Windows Me, Windows 98.** Microsoft did not offer any updates for these operating systems. A number of companies provided free tools to update the time zone information in the registry, including dcsTools.com. Depending on which tool you used, the updated information may or may not include the means to deal with historical audit data - audit data files generated prior to 2007.



If you used a manual means to update a single time zone, the only time zone for which data created in 2007 and beyond will have correct times is the one you updated. Thus, if you are generating reports for stations that created data in time zones other than the one updated, the report times will be off, particularly in the range of dates between "old" DST dates and "new" DST dates.

Additionally, dates for 2006 and prior for **all** time zones will be off for the dates between "old" and "new" DST dates.

Manual inspection of the Windows registry to determine whether or not Dynamic DST information exists is probably the surest way to know if a PC is up-to-date. Instructions on how to perform this task are beyond the scope of this document.

What About Audit Data Generated Prior to 2007?

The introduction of new "spring forward" and "fall back" dates in many time zones in 2007

creates a problem for those who have a need to use the "old" time zone information - as ezAudit does.

To deal with the need to preserve previous time zone information, Microsoft introduced additional information for each time zone, stored in the registry as applicable. Called "**Dyamic DST**", in Windows XP and later operating systems additional information about prior years DST dates is available. In XP, this additional information is only available if you installed the Time Zone Update Microsoft offered.

If you are running Windows 98, Me, or NT4, Dynamic DST information will not be available unless you updated the time zone information with a third-party tool that includes the Dynamic DST updates. dcsTools.com made such a tool available.



If you are running an audit report for a date in 2006 or prior and do not have Dynamic DST information in the registry, the reported times will be an hour off in all days between the "old" and "new" DST switch dates. In the U.S., for instance, this means that 3 weeks of spring dates and 1 week of fall dates for all years prior to 2007 will be off one hour. It is highly recommended that for PC's running ezAudit, you install a complete time zone update package, whether it's from Microsoft (XP) or some other vendor who provides a complete update package.

5.4 Cart Masks Explained

Cart masks are used to identify carts (audio files) that might be grouped together. A cart mask must be exactly 4 (four) characters in length. Mask entry dialogs will not allow entries that are too short and will not accept more than 4 characters entered.

The "?" (question mark) or the "*" (asterisk) characters are "wildcards", meaning a letter or number is valid in its position in the mask. The "?" and "*" characters can be used interchangeably as they have the same meaning in cart mask evaluation. A third wildcard that can be used is the "#" (pound sign) character. When used in a cart mask, only numbers (0 through 9) are valid in its position in the mask. These are the only wildcard characters allowed for a cart mask - all other characters will be interpreted literally.

Valid characters for a cart mask, besides the "?" (question mark), "*" (asterisk) and "#" (pound sign) include the letters **A .. Z**, the numbers **0 .. 9** and the characters "{", "}" and "!" (exclamation).

A valid cart mask will include one or more "?", "*", or "#" characters (although it doesn't have to) and other letters or numbers that match up with cart types that you wish to have grouped together. Examples of valid cart mask include:

<u>Mask</u>	<u>Result</u>
C???	Carts beginning with the letter "C" and any 2nd, 3rd and 4th character will be included.
PR??	Carts with the first two characters of "PR" and any 3rd and 4th character will be included.
?R??	Carts with any first character, a second character of "R" and any 3rd and 4th characters will be included.
Z?A?	Carts with a first character of "Z", any 2nd character, a third character of "A" and any 4th character will be included.
VT##	Carts with the first two characters of "VT" and a number in the 3rd and 4th characters will be included.
C***	Carts beginning with the letter "C" and any 2nd, 3rd and 4th character will be included.
C??#	Carts beginning with the letter "C", containing any character in the 2nd and 3rd positions, and a number (0 through 9) in the 4th position will be included.
####	Only carts with a number (0 through 9) in each character position will be included.



A cart mask of "????", "****" (or any combination of the two wild card characters) is the same as saying "***any cart number is valid***", which means all carts would match such a mask.

Combining a number of cart masks for use in a cart category will group all carts that meet at least one of the cart masks. For instance, you could have a filter called "**R** Carts" that has 4 cart masks - "**R**???", "?**R**??", "??**R**?" and "???**R**". The result of using this cart filter would be that every cart in the inventory that has the letter "**R**" in any character position (1st, 2nd, 3rd or 4th) would be a match.

5.5 Transaction and Status Codes

Transaction codes created by an XStudio, DCS or Maestro system when writing audit data, as well as the status of the transaction, are documented in Computer Concepts' DCS Audit File (.ADT) Specification, version 1.6. For ease of understanding, a table of each transaction (or action) type and status code, along with their meanings, are presented here. Extended transaction and status codes that are XStudio-specific are also documented.

Transaction Codes

Transaction codes describe the type of activity the audio delivery system is engaged in or the base type of a problem the system encountered.

<u>Displayed Transaction Code (Action)</u>	<u>Meaning</u>
PlayCart	A cart (audio file) is played.
LdRelayQ	A "relay queue" is being loaded. This differs from the standard "queue" and happens as the result of a function (action) executing.
LdRqdBrk	A Required Break is loaded into the queue.
LdBreak	An Optional Break is loaded into the queue.
DelFromQ	Items were deleted from the "queue".
RcrdCart	A cart (audio file) is being recorded.
FillCart	A fill cart is played as an automated function. These occur when DCS or Maestro automatically adds content to a break in Satellite mode, most typically.
Silence	Silence has been inserted to "spread" a break of a specified length.
AutoOn	Automation mode has been turned on.
Auto Off	Automation mode has been turned off.
RelayOn	A relay was turned on by XStudio, DCS or Maestro.
RmtPlay	A cart is played via remote control.
RmtQ	The queue has been activated/deactivated via remote control.
RmtHalt	A playing cart has been halted via remote control.

<u>Displayed Transaction Code (Action)</u>	<u>Meaning</u>
EOMBegin	The End-of-Message is beginning. Corresponds to the Aux mark on a cart.
EOMEnd	The End-of-Message is complete. Corresponds to the end of the cart.
PcToSw	Communications from the XStudio, DCS or Maestro unit to an audio switcher.
SwToPc	Communications from an audio switcher to the XStudio, DCS or Maestro unit.
DCSBegin	XStudio, DCS or Maestro is starting up.
DCSEnd	XStudio, DCS or Maestro closed.
DateErr	A date error has occurred.
cfgChngd	The DCS or Maestro configuration has been changed.
<i>XStudio-Specific</i>	
LogChngd*	A change has occurred in the broadcast log. The log was manually-edited in XStudio or updated automatically as a result of the source log changing.

Status Codes

Status codes provide documentation of what happened with a particular transaction initiated by the audio delivery system, generally reporting either success of the system action or the reason for failure of the action.

<u>Displayed Status Code</u>	<u>Meaning</u>
TXN_STARTED	An action has started that may have several components who's action results are unknown at the start of the sequence.
ok	The action completed successfully.
NOT_COMPLETED	The action was not completed.
CANCELED	The action was canceled - typically, this would refer to the playing of a cart.

<u>Displayed Status Code</u>	<u>Meaning</u>
IGNORED	The action was ignored. This status code is most often associated with an audio switcher input relay.
TIMED_OUT	The action could not be completed in the allocated time.
Date Conflict	A cart could not be queued or played because it was out-of-date for the date the action was attempted.
Break Missed	Typically seen when items on the log are queued but not played before the next log directive clears them from the queue. Most often seen when running in satellite mode of operation.
ManuallyForced	A cart was not valid for the date, but was forced to the play line or queue by the operator.
FailRecChInUse	A recording failed because the record channel was already in use.
FailMallocErr	The action failed because of a memory allocation error. Most often seen with DCS units.
FailCartOnPLin	The action, usually a recording, failed because the cart was on a play line at the time the action was attempted.
FailCartInQue	The action, usually a recording, failed because the cart was in the queue at the time the action was requested.
FailCartExists	The action failed because the cart already exists. Typically, this is seen when a recording is to be made and the recording function has been set to NOT overwrite the cart if it already exists.
Fail Disk Full	The action failed because the target hard was full. Typically, this code appears when a recording is being made and the system runs out of hard disk space.
RecAutoStarted	A recording action has started with AutoStart option set.
RecStartedNow	A recording actually began at the time indicated. An record action with AutoStart might have been "armed" several seconds (or even minutes) ago, but this is the time the recording actually began.
Rec Aptx N/A	A recording action failed because the data reduction method for the recording was apt-X and apt-X data reduction was

<u>Displayed Status Code</u>	<u>Meaning</u>
	not available on the DCS or Maestro unit attempting the recording.
RecManualStop	A recording was manually stopped.
RecAutoStop	A recording was automatically stopped based on a maximum recording length.
RecRelayStop	A recording was stopped based on an input relay received.
FailBadCartNum	The action failed because of a bad cart number.
Play Paused	A cart play was paused.
RecPaused	A recording was paused.
RecResumed	A recording was resumed from a paused state.
RecRemoteStop	A recording was stopped by remote control, using Computer Concepts' published control protocol.
Rec MPEG N/A	A recording action failed because the data reduction method for the recording was ISO-MPEG and ISO-MPEG data reduction was not available on the DCS or Maestro unit attempting the recording.
FailNoAccess	The action failed because DCS or Maestro did not have access to a required resource.
FailCartInRCW	A recording failed because the cart was already in the recording control window.
Cart Missing	An action failed because a specified cart number was missing.
<i>XStudio-Specific</i>	
AddLogItem*	An item was added to the active log in XStudio.
DelLogItem*	An active log item was deleted within XStudio.
EditLogItem*	An active log item was edited within XStudio.
LogSplice*	An updated log on disk was spliced into the active XStudio log.

5.6 Sample Printed Audit Report

When you print an audit report using ezAudit, the printed output will appear similar to the sample shown here:

WBYY Audit Report for September 05, 2002											09/22/2002 4:51 PM	
[Default View - Sorted on Real Time]												
Selected Txn Types: 22, Selected Sts Types: 30, Selected Channel Numbers: 1,2,3,4,5,6,7,8, Cart Filter: --- (All Carts) ---												
Real Time	Log Time	Action	Function	Seq	CartNo	Description	Length	Agency	CustNo	Ch	Status	
05:46:15		PlayCart	BUZZ				01:13.19			2	ok	
05:52:53		SwToPc	Net 861			BusA Din 14		1C00400007		---	TXN_STARTED	
05:52:53		SwToPc	play break			BusD Din 08		1C300100A7		---	TXN_STARTED	
05:56:32		SwToPc	Net 865			BusA Din 13		1C00200027		---	TXN_STARTED	
05:56:32		SwToPc	PremireLnr			BusD Din 10		1C300400AA		---	TXN_STARTED	
05:56:32		PlayCart		15	PL01-08	AFTER MIDNIGHT SWEEPERS	00:08.42	BLAIR		1	ok	
06:00:02		SwToPc	NET 864			BusB Din 15		1C10800037		---	TXN_STARTED	
06:00:02		SwToPc	TonSelect			BusD Din 06		1C300040E6		---	TXN_STARTED	
06:01:00	06:00:01	DelFromQ			ID01	LEGAL ID				---	Break Missed	
06:01:00	06:00:02	DelFromQ			NEWS	News Sounder	00:18.15	**Don't Erase**		---	Break Missed	
06:01:00	06:01:01	DelFromQ			0231	POWERTELL	01:00.00	AVACOR	00dgS0	---	Break Missed	
06:01:00	06:04:01	DelFromQ			TEAM	THE B TEAM DROPS	00:15.00			---	Break Missed	
06:01:00	06:04:02	DelFromQ			(324	I SHOULD SLEEP/DRIVE	02:47.81		F	---	Break Missed	
06:01:00	06:08:01	DelFromQ			PR01		00:28.00		008c5b	---	Break Missed	
06:01:00	06:09:02	DelFromQ			(498	I KEEP LOOKIN/SARA EVANS	03:48.82		F	---	Break Missed	
06:01:00	06:09:03	DelFromQ			ATSW	ATTITUDE	00:30.00			---	Break Missed	
06:01:00	06:09:04	DelFromQ			(C7H	Aibis/Tracy Lawrence	02:55.38		C	---	Break Missed	
06:01:00	06:01:01	PlayCart			0231	POWERTELL	01:00.00	AVACOR	00dgS0	1	ok	
06:01:06		Auto Off								---	ok	
06:01:06		PcToSw				SetBusA Ch 3 XxYy		140F20EFCE		---	ok	
06:01:06		PcToSw				SetRowA DoulHL9876 43210		11000FDF01		---	ok	
06:01:06		PcToSw				SetRowB Doul 9876 43210		111003DFFD		---	ok	
06:01:07		PcToSw				SetRowB Doul 9876543210		111003FFDD		---	ok	
06:03:24	06:00:01	PlayCart		3	ID01-03	LEGAL ID	00:07.90	USA		1	ok	
06:03:32	06:00:02	PlayCart			NEWS	News Sounder	00:18.15	**Don't Erase**		1	ok	



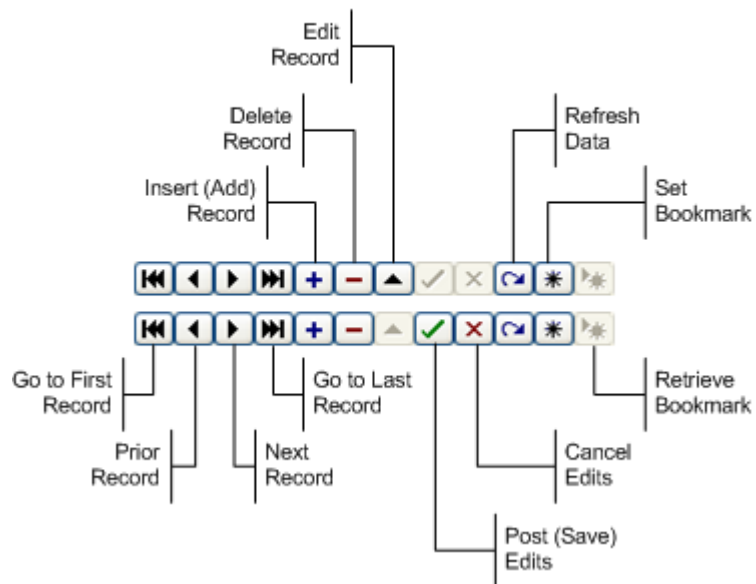
Audit reports are always printed in the selected printer's **landscape** orientation.

5.7 Using Data Navigators

Some areas in ezAudit make use of so-called "data navigators". Essentially, a data navigator is an organized set of buttons that provides an easy-to-use interface for navigating around in displayed data like station definitions and cart filters. In addition to navigation, some of the navigators include buttons to add (insert), edit, & delete items.

Two example navigators are shown here - there are two because the "state" (availability) of buttons will vary depending on the current task. For instance, if you are at the beginning of a cart filter list, the navigator buttons for moving backwards through the log are disabled - at least, until you move away from the beginning of the list.

Data Navigator Button Map



Depending the area of ezAudit you're working in, some of the navigator buttons depicted are not visible - because the functionality they provide is not allowed.

Troubleshooting

Part



ezAudit has been designed to be as trouble-free as possible and has been thoroughly tested. However, not every usage scenario can be anticipated. This section is intended as a starting point diagnosing and solving problems, but should not be viewed as an all-encompassing source of problem resolution.

If the difficulty you're experiencing is not covered here, contact the dealer who provided you with ezAudit first. Alternatively, you can contact dcsTools.com - see the topic on [technical support](#).

Application Bugs or Errors

Bugs and errors generally fall into one of two categories - a bug, which is the application not doing something as you might have predicted it would, or; an error, which is the failure of the application to run or perform a specific task altogether.

If you find a bug, report it. Every effort is made to ensure ezAudit performs as expected, but there may be circumstances that were not predicted in the development of the software. See the section on [Technical Support](#) for information on reporting a bug.

If you encounter an error, you will get an error message indicating a severe failure and ezAudit may terminate. Provisions are made to "catch" such errors and log the error information to a file in the ezAudit application directory. The filename is **ezAudit.ELF** or **ezAudit.EL**, depending on the version of ezAudit you are using. Again, report any application errors you encounter. You may be asked to send the appropriate log file for analysis.

Basic Troubleshooting Steps

Before getting too far down the road in trying to find your problem, check these items to be sure your environment for running ezAudit is correct.

1. Make sure your PC (the one on which you are running ezAudit) meets the minimum hardware requirements for this application. See the section on [hardware requirements](#) for more information.
2. Make sure your PC is functioning properly. This is a broad statement, but suffice it to say that if your PC is suffering from "blue-screens" or is "locking up" for no apparent reason, the PC may be a part of the problem.
3. Ensure that the pathway to retrieving audit files is correct and "reachable" from your PC. If you are retrieving audit files from a LAN (local area network), make sure you are correctly connected to the LAN and can "see" the host file server. The logged-in user must have at a minimum "Read" privileges in the folder containing audit data files.
4. Make sure that you have a default printer assigned in your operating system. Some functions in ezAudit might fail if you have no printers defined. These problems may at first

seem unrelated to printing. Some of the dialogs in ezAudit offer print capability and automatically check for a printer when the dialog is opened.

6.1 Extended Event Logging

You can force ezAudit to increase the detail level as it "tracks" what's happening within the application by setting ezAudit to run in extended event logging mode. The easiest method of increasing the event log detail level is to change your preference settings for event logging, which are located on the [Miscellaneous](#) page of the preferences dialog.

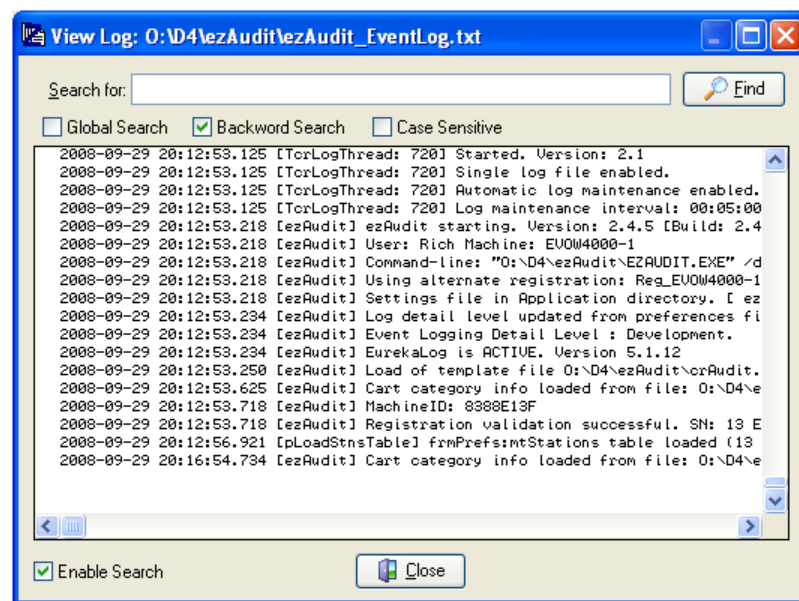
Another way to increase the detail level is to add the command-line switch **"/debug"** (no quotes) to your ezAudit shortcut. For more information on command-line switches, see the topic [Command Line Switches](#).



You can temporarily enable or disable additional application logging detail by checking or unchecking the menu item **Help | Extended Event Logging**.

Viewing the Application Event Log

When you run ezAudit, actions the program takes, along with actions you take, are recorded to a file in the ezAudit application directory. You can view the file while using ezAudit by selecting **Help | Troubleshooting | View Application Event Log**, or view it later using a standard text editor like NotePad. The application event logging file name is documented in the topic [List of Files](#). The application event log view is similar to the example shown.



ezAudit Event Log Dialog

Use the horizontal and vertical scroll bars to navigate the display. Standard [**PgUp**] and [**PgDn**] keystrokes work, too. You can search for specific text in this dialog by checking the "**Enable Search**" item, which reveals a panel for entering the text to search for, setting search direction and other options.

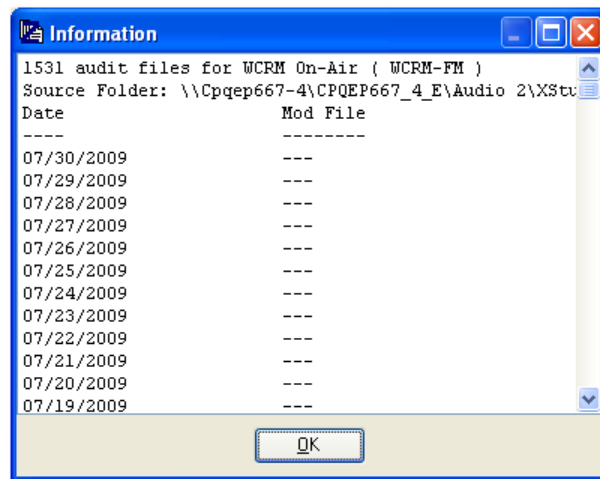


When viewing text, you can assign up to 10 temporary bookmarks. To assign a bookmark, use the keystroke combination [**Ctrl-Shift**] + **0** to **9**. A small marker becomes visible in the left margin of the line. To jump to a bookmark, use the keystroke [**Ctrl**] + **0** to **9**. Bookmarks are lost when the dialog is closed.

You can also enlarge & reduce the event log text size. Use the plus "+" or minus "-" keys or [**Right-Click**] to select a text size from the pop-up menu.

Viewing Available Audit Files for a Station

When the event logging detail level is set to Debug or higher, a small graphic appears on the Open Audit File dialog. [**Double-Click**] on the graphic to display a list of all audit files found for the selected station. When you view this dialog, its appearance is similar to the example shown.



The information includes a count of audit files, the station to which the log files are assigned, the source path of the files, and a list of of each date for which an audit file exists, sorted in descending order. The Mod File column indicates whether or not a Maestro Voice Tracker modification file, or "mod file" exists for a given date, if applicable.

6.2 Specific Error Messages

Here are some specific error messages you might see or situations you might encounter, their explanation and the solution.

<u>Error Message</u>	<u>Attempted Task / Solution</u>	<u>Explanation</u>
Audit "Real Time" seems to be off	Loading (opening) an audit file.	There is probably a mismatch between what you think a station's time zone's settings are and what the DCS, Maestro or XStudio unit's settings really are.
<p>Solution: Open the Preferences dialog and change the station's time zone or observe DST settings, preferably one at a time. Apply the changes and close the Preferences dialog. The data's times will be updated to reflect your new time zone settings. See the topic Audit Times Information for a more detailed explanation of audit times.</p>		
Audit "Real Time" is off no matter what time zone settings I use.	Loading (opening) an audit file.	If you have eliminated the possibility of a mismatch between a configured station's time zone settings and the system that created the audit data file, the problem is likely related to incomplete time zone information in your PC's registry.
<p>Solution: Examine your PC's registry to verify that all current time zone information is up-to-date. See the topic Time Zone Information for more details.</p>		
Total Records & Displayed Records do not match	Loading (opening) an audit file.	This is not necessarily a displayed error message, but you may notice that the two counts on the status bar do not match, even though you have "---- All Data ----" selected as the report template.
<p>Solution: First, make sure you select the "---- All Data ----" template. If the total records count and displayed records count do not match, the problem is most likely that a portion of the audit file data has been corrupted in some way and is unreadable. The data you are seeing reflects only records that are valid. The difference between the total number of records and the displayed number of records is the number of "bad" or unrecognizable records. There is no way to fix the bad data so it can be displayed.</p>		

<u>Error Message</u>	<u>Attempted Task / Solution</u>	<u>Explanation</u>
"Invalid Class Typecast"	Printing an audit report.	When attempting to print an audit report, this message occurs. The cause is the current default printer is not available.

Solution: To correct the problem, you must close ezAudit and select a different default printer.



ezAudit requires that a printer be defined in the operating system in order for any of the print functions to work properly.

6.3 Viewing Raw Audit Data

All audit records in a single-day report view can be saved as raw (unprocessed) data to a text file for trouble-shooting purposes. Select **Help | Troubleshooting | Dump Raw Audit Data to Disk** to save the data to a file. The file name is automatically set by ezAudit and will be saved to the ezAudit application folder. Following the save, you are offered the option to view the file immediately. Data is displayed similar to the example shown.

RealTime	Log Time	Txn Type	Length	Status	Seq Ch	CartNo	CustNo	Description	AgencyTape	Swiftg	WindowName
1241985200	0	PoToSw	0	ok	0	0				111003FFDD	
1241985379	0	SwToPo	0	TXN_STARTED	0	0				1C300400RA	Break
1241985379	0	PoToSw	0	ok	0	0				140F101AB3	
1241985379	0	PoToSw	0	ok	0	0				11000FEFF1	
1241985379	1241985321	PlayCart	3000	ok	0	1	WV05	12a-6a	dk		
1241985380	0	SwToPo	0	TXN_STARTED	0	0				1C020000C4	SMN #3
1241985380	0	SwToPo	0	TXN_STARTED	0	0				1C300040E6	Do Nothing
1241985409	1241985322	PlayCart	6000	ok	14	1	T375-30	SMP DI SMP Direct Response	Toothpick		
1241985469	1241985323	PlayCart	3000	ok	1	1	T493-03	KRCO N K R C 0 News Pronos	S:08am DDFH/MB		
1241985499	1241985324	PlayCart	6000	ok	8	1	T275-10	AIRTIN Airtine Media	Diabetes Line		
1241985559	0	PoToSw	0	ok	0	0				140F90F05D	
1241985559	0	PoToSw	0	ok	0	0				11000F6F71	
1241985559	0	PoToSw	0	ok	0	0				1110037F5D	
1241985559	0	SwToPo	0	TXN_STARTED	0	0				1C00400006	SMN #6
1241985559	0	SwToPo	0	TXN_STARTED	0	0				1C300100A7	Liner
1241985559	0	PlayCart	629	ok	19	1	J1JB-98	John Beard Liners	Our Name		
1241985559	0	PoToSw	0	ok	0	0				111003FFDD	
1241985811	0	SwToPo	0	TXN_STARTED	0	0				1C0000000E	SMN #1

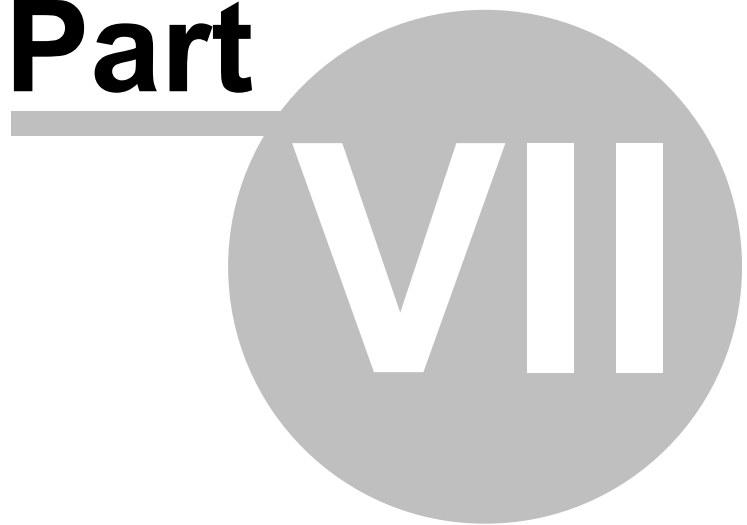
Viewing Raw Audit Data

The saved file will have a name in the format **mmddyysx.dmp**, where **mm**=month, **dd**=dd, **yy**=year and **x**=station number. This is the same format as the standard audit file name, except a different extension. See the topic [List of Files](#) for a complete list of file names that ezAudit creates and/or uses.

The saved file is not automatically removed and can be viewed later using NotePad or other similar text editor.

Contacting dcsTools.com

Part



If you need to contact dcsTools.com, you can do so using one of the following methods. We are here to help, so do not hesitate to communicate with us when needed.

Mailing Address

C-R Media
8494 Saratoga Lane
Eden Prairie, MN 55347
USA

Telephone Information

Sales and Technical Support can be reached from 9:00 AM to 5:00 PM, U.S Central Time

Voice: 952-949-9450

FAX: 952-949-9448

Email Information

To contact us via email, use our [on-line contact form](#). If you wish to use a standard email client, send correspondence to: rich@c-rmedia.com.

Technical Support

To contact technical support for our products, use the telephone numbers or email information provided above. You can also send an [on-line product-specific email](#).

Web Site

Visit our [web site](#) for information on product updates and other products we offer.

Appendices

Part  **VIII**

The topics placed in this section might be useful to the end-user but do not fit into the major categories (chapters) used in this documentation as they are not germane to day-to-day usage of ezAudit.

8.1 Registration

ezAudit requires a valid registration code to enable full use of the product. If you have purchased ezAudit, you should have received a registration code or instructions on how to obtain your registration code with your installation materials. The registration code contains the product serial number and is unique to each PC on which ezAudit is installed.

If no registration code is entered or available, you will be able to run ezAudit, but application functionality will be limited.

Enter registration information by selecting **Help | Register** from the main menu. You'll be presented with a dialog similar to the following:



The screenshot shows a 'Product Registration' dialog box. The title bar is blue and contains the text 'Product Registration'. The main area has a light beige background. At the top, it says 'ezAudit Registration' in a large, bold, blue font. Below this, there are two text input fields. The first is labeled 'Licensed To (Company Name):' and the second is labeled 'Registration Code:'. Below the input fields, there is a section titled 'Registration Information' in a bold, blue font. Underneath this section, the text 'Not registered.' is displayed. At the bottom of the dialog, there are three buttons: 'Save' (with a key icon), 'Cancel' (with a red X icon), and 'Help' (with a question mark icon).

Enter the company name and/or call letters in the "**Licensed To**" field. Then, enter the code you were supplied with in the "**Registration Code**" field. If you received the registration code electronically, you may use standard Windows cut and paste methods to paste the code in the field. After entering the information, click on the [**Save**] button to save the information.

After you have completed registration initially, if you re-display this dialog, your registration specifics will be displayed in the **Registration Information** panel.



If you wish to change your company name and/or call letters at a later date, you will need to re-enter the registration code.

8.2 List of Files

When ezAudit is installed, a number of files are placed on your computer. As ezAudit is used, other files are generated. Below is a table of files, their locations, and usage.

Note: *AppDir* is the drive and folder location where you installed ezAudit.

<u>File</u>	<u>Location</u>	<u>Usage</u>
ezAudit.exe	<i>AppDir</i>	The main program file.
ezAudit.chm	<i>AppDir</i>	The on-line help file.
crAudit.afb	<i>AppDir</i>	The audit template file. User-created templates are stored in this data file.
ezAudit_EventLog.txt	<i>AppDir</i>	This text file is created and appended to as you use the application. It contains information about application activity.
ezAudit.ini	<i>AppDir</i>	Preferences file that contains user-defined preferences, including station configurations and cart filters.



Beginning with version 2.1.0 of ezAudit, the preferences file is located in the application folder. Prior version's preferences file was located in the Windows folder.

mmddySx.dmp	<i>AppDir</i>	A raw data text dump of an audit report (Debug Mode only). This file can be created by the user on-demand. The filename syntax is mm =month, dd =day, yy =year, x =station number. The file name is the same as the original audit file, except for the file extension.
crAuditMDViews.xml	<i>AppDir</i>	An XML file that contains the custom data view layouts for Multi-Day audit reports.
crAuditViews.xml	<i>AppDir</i>	An XML file that contains the custom data view layouts for standard audit reports.
ezAuditDebug.txt	<i>AppDir</i>	No longer used. Replaced by ezAudit_EventLog.txt.
gdipplus.dll	<i>AppDir</i>	No longer used. Graphics support file for Windows 2000 (installed only if needed). Windows 2000 is no

longer supported.



Some ezAudit installations include additional documentation files. These files are typically PDF files and are placed in the application folder. Additional documentation files may include an on-disk Operations Manual and Quick Start Guide.

8.3 Command Line Switches

ezAudit provides for the use of a minimal number of command-line switches that can be implemented as needed. These switches can be entered in any order and are not case-sensitive. To add a command-line switch, modify the ezAudit shortcut. Add the switch (as documented below), separating each switch with a space.

Note: You must have a space between the end of the executable (program) name and the first command-line switch.

An example command-line switch would look like: **C:
\\dcsTools\ezAudit\ezAudit.exe /debug**

Available Command-Line Switches

Switch	Usage
/Debug	This command-line switch enables additional tracking of information during application execution. ezAudit application event log detail can also be controlled with settings in the Preferences dialog. The command-line setting will override preference settings only if the detail level is less than the Debug setting.

Discontinued Switches

1. The **"/LAN"** switch, which forced the ezAudit preferences file to be located in the application folder. Beginning with ezAudit version **2.0.0**, the preferences file is always located in the application folder. The change from the original location, the Windows folder, was made to accommodate increased security functionality in Windows XP and later operating systems.

8.4 Audit File Specification

The Generic Audit File Specification documents the file naming convention and record structure for audit data files created by XStudio, DCS and Maestro audio delivery systems.



This specification was originally published by Computer Concepts Corporation, Lenexa, KS in 1989 and updated to version 1.6 in October 1992. The specification was released to all interested parties, including traffic system vendors and music scheduling system vendors.

This document (the one you are reading) is referred to as:

dcstools Audit File Specification Version 1.7 (Updated 12/17/2012)

It updates version 1.6 of the specification published by Computer Concepts Corporation, including later additions to audit transaction types and status codes, along with items unique to dcsTools products.

Audit File Name

Audit files are named in such a way as to provide for one unique file for each day of each year for each station. This allows usage of a single file folder location all stations in a multi-station environment.

Audit file names have the form **MMDDYYxx.ADT**, where:

MM = Month (01-12)

DD = Day (01-31)

YY = Year (00-99)

xx = Station Number (any 2 characters in 0..9, A..Z)

.ADT = The audit file extension

Audit File Structure

The audit file data is stored in binary format as a group of records. Each record has a [fixed length segment](#) followed by a fixed number of [variable length fields](#).



Where possible, descriptive names that match the originally-published specification have been retained. New types added use naming conventions similar to the original documentation.

8.4.1 Fixed Length Segment

The fixed length segment of an audit record includes information about when the event occurred, the type of event, the length of the event, and status of the event. The table describes the structure and field usage.

Field	Data Type (C)	Description
eventTime	time_t	The time the event occurred. "time_t" is Microsoft's C compiler v6.0A definition of the number of seconds since 00:00:00 January 1, 1970. It is a 4-byte signed integer.
txnType	auditTxnTypeEtyp	An enumerated type that describes the type of transaction. See the topic Transaction Types for details.
logTime	time_t	If applicable, the log time of the event. Otherwise, the value will be zero. "time_t" is Microsoft's C compiler v6.0A definition of the number of seconds since 00:00:00 January 1, 1970. It is a 4-byte signed integer.
length	long	The event length in centiseconds. A length of 30.05 seconds is expressed as 3005. If the event has no applicable length, the value will be zero.
status	audtTxnStatEtyp	An enumerated type that describes the status of the transaction. See the the topic Status Types for details.
seqNum	Byte	If the event relates to the play of a multi-cut cart, this field contains the cut rotation sequence number. Otherwise, the value will be zero.



The eventTime and logTime field values are stored by the audio delivery system based on the Pacific Time Zone. When calculating the actual event time and log time, the actual time zone in which the record was created by the audio delivery system needs to be taken into account in order to arrive at the correct date and time value.

8.4.1.1 Transaction Types

The transaction type variable is an enumerated type. Transaction type codes describe the type of activity the audio delivery system is engaged in or the base type of a problem the system encountered.

<u>Enumerated Transaction Type</u>	<u>Displayed Transaction Code (Action)</u>	<u>Meaning</u>
AUDIT_PLAY	PlayCart	A cart (audio file) is played.
LOAD_WINDOW	LdRelayQ	A "relay queue" is being loaded. This differs from the standard "queue" and happens as the result of a function (action) executing.
LOAD_STOP_SET_REQ	LdRqdBrk	A Required Break is loaded into the queue.
LOAD_STOP_SET	LdBreak	An Optional Break is loaded into the queue.
CANCEL_Q_ELEMENT	DelFromQ	Items were deleted from the "queue".
AUDIT_RECORD	RcrdCart	A cart (audio file) is being recorded.
FILLER_SELECTION	FillCart	A fill cart is played as an automated function. These occur when DCS or Maestro automatically adds content to a break in Satellite mode, most typically.
SILENCE_INSERTED	Silence	Silence has been inserted to "spread" a break of a specified length.
SET_AUTO_ON	AutoOn	Automation mode has been turned on.
SET_AUTO_OFF	Auto Off	Automation mode has been turned off.
RELAY_EVENT	RelayOn	A relay was turned on by XStudio, DCS or Maestro.
REMOTE_PLAY	RmtPlay	A cart is played via remote control.

<u>Enumerated Transaction Type</u>	<u>Displayed Transaction Code (Action)</u>	<u>Meaning</u>
REMOTE_QUEUE	RmtQ	The queue has been activated/deactivated via remote control.
REMOTE_HALT	RmtHalt	A playing cart has been halted via remote control.
EOMB	EOMBegin	The End-of-Message is beginning. Corresponds to the Aux mark on a cart.
EOME	EOMEnd	The End-of-Message is complete. Corresponds to the end of the cart.
MSG_XMIT_TO_SW	PcToSw	Communications from the XStudio, DCS or Maestro unit to an audio switcher.
MSG_RCV_FROM_SW	SwToPc	Communications from an audio switcher to the XStudio, DCS or Maestro unit.
DCS_STARTED	DCSBegin	DCS or Maestro is starting up.
DCS_EXITED	DCSEnd	DCS or Maestro closed.
TT_DATE_FRAME	DateErr	A date error has occurred.
TT_NEW_CFG	cfgChngd	The DCS or Maestro configuration has been changed.
<i>dcstools-Specific</i>		
TT_LOG_CHANGE	LogChngd*	A change has occurred in the broadcast log. The log was manually-edited in XStudio or updated automatically as a result of the source log changing.

8.4.1.2 Status Types

The status type variable is an enumerated type. Status codes provide documentation of what happened with a particular transaction initiated by the audio delivery system, generally reporting either success of the system action or the reason for failure of the action.

<u>Enumerated Status Type</u>	<u>Displayed Status Code</u>	<u>Meaning</u>
TXN_STARTED	TXN_STARTED	An action has started that may have several components who's action results are unknown at the start of the sequence.
COMPLETED	ok	The action completed successfully.
NOT_COMPLETED	NOT_COMPLETED	The action was not completed.
CANCELLED	CANCELED	The action was canceled - typically, this would refer to the playing of a cart.
IGNORED	IGNORED	The action was ignored. This status code is most often associated with an audio switcher input relay.
TIMED_OUT	TIMED_OUT	The action could not be completed in the allocated time.
TS_DATE_CONFLICT	Date Conflict	A cart could not be queued or played because it was out-of-date for the date the action was attempted.
BREAK_MISSED	Break Missed	Typically seen when items on the log are queued but not played before the next log directive clears them from the queue. Most often seen when running

<u>Enumerated Status Type</u>	<u>Displayed Status Code</u>	<u>Meaning</u>
TS_MANUAL_FORCE	ManuallyForced	in satellite mode of operation. A cart was not valid for the date, but was forced to the play line or queue by the operator.
TS_REC_FAIL_CH_IN_USE	FailRecChInUse	A recording failed because the record channel was already in use.
TS_REC_FAIL_MALLOC_ERR	FailMallocErr	The action failed because of a memory allocation error. Most often seen with DCS units.
TS_REC_FAIL_CART_ON_PLINE	FailCartOnPLin	The action, usually a recording, failed because the cart was on a play line at the time the action was attempted.
TS_REC_FAIL_CART_IN_QUE	FailCartInQue	The action, usually a recording, failed because the cart was in the queue at the time the action was requested.
TS_REC_FAIL_CART_EXISTS	FailCartExists	The action failed because the cart already exists. Typically, this is seen when a recording is to be made and the recording function has been set to NOT overwrite the cart if it already exists.
TS_REC_FAIL_DISK_FULL	Fail Disk Full	The action failed because the target hard was full. Typically, this code appears when a recording is being made and the

<u>Enumerated Status Type</u>	<u>Displayed Status Code</u>	<u>Meaning</u>
		system runs out of hard disk space.
TS_REC_AUTO_START	RecAutoStarted	A recording action has started with AutoStart option set.
TS_REC_START_NOW	RecStartedNow	A recording actually began at the time indicated. An record action with AutoStart might have been "armed" several seconds (or even minutes) ago, but this is the time the recording actually began.
TS_REC_APTX_NA	Rec Aptx N/A	A recording action failed because the data reduction method for the recording was apt-X and apt-X data reduction was not available on the DCS or Maestro unit attempting the recording.
TS_REC_MANUAL_STOP	RecManualStop	A recording was manually stopped.
TS_REC_AUTO_STOP	RecAutoStop	A recording was automatically stopped based on a maximum recording length.
TS_REC_RELAY_STOP	RecRelayStop	A recording was stopped based on an input relay received.
TS_REC_FAIL_BAD_CARTNUM	FailBadCartNum	The action failed because of a bad cart number.
TS_PAUSED	Play Paused	A cart play was paused.
TS_REC_PAUSED	RecPaused	A recording was paused.

<u>Enumerated Status Type</u>	<u>Displayed Status Code</u>	<u>Meaning</u>
TS_REC_RESUMED	RecResumed	A recording was resumed from a paused state.
TS_REC_REMOTE_STOP	RecRemoteStop	A recording was stopped by remote control, using Computer Concepts' published control protocol.
TS_REC_MPEG_NA	Rec MPEG N/A	A recording action failed because the data reduction method for the recording was ISO-MPEG and ISO-MPEG data reduction was not available on the DCS or Maestro unit attempting the recording.
TS_REC_FAIL_NO_ACCESS	FailNoAccess	The action failed because DCS or Maestro did not have access to a required resource.
TS_REC_FAIL_CART_IN_RCW	FailCartInRCW	A recording failed because the cart was already in the recording control window.
TS_CART_MISSING	Cart Missing	An action failed because a specified cart number was missing.
<i>dcstools-Specific</i>		
TS_LOG_ADD	AddLogItem*	An item was added to the active log in XStudio.
TS_LOG_DEL	DelLogItem*	An active log item was deleted within XStudio.
TS_LOG_EDIT	EditLogItem*	An active log item was edited within XStudio.

<u>Enumerated Status Type</u>	<u>Displayed Status Code</u>	<u>Meaning</u>
TS_LOG_SPLICE	LogSplice*	An updated log on disk was spliced into the active XStudio log.

8.4.2 Variable Length Segment

The variable length segment of the audit record includes 6 ASCII fields delimited by a byte having a value of **0xFF** (decimal 255). The table below lists the field order and their possible lengths.

Field	Data Type	Description
cartNumber	AnsiChar [8]	The cart number field. If the transaction involves a cart (audio item), the cart number will be in this field. Otherwise, the field will be empty.
custNum	AnsiChar [7]	Customer number field. If the transaction involves a log item and a customer number was included in the log, that value appears in this field. Otherwise, the field will be empty.
description	AnsiChar [25]	Description field. If the transaction involves a cart (audio item), the description of the item appears in this field. If the transaction is of another type, text appearing in this field could be a decoded switcher message or information about an automated function or action.
agencyTapeNum	AnsiChar [16]	Agency tape number field. If the transaction involved a log item and an agency number was included in the log, that value appears in this field. Otherwise, the field would include raw switcher data for an audio switcher transaction or be empty.
switcherMsg	AnsiChar [11]	Switcher message field. If the transaction involves an audio switcher, the data in this field

Field	Data Type	Description
		represents the switcher command type and result.
windowName	AnsiChar [14] (Original) AnsiChar [30] (dcsTools)	Window name field. Originally 14 characters in length, expanded to 30 for dcsTools products. If the transaction involves an automation function or action, its name appears in this field. For XStudio, if the transaction involves a log item, the unique log record ID appears in this field. Otherwise, the field is empty.

All text stored in the variable length segment of the audit record is ANSI text. This convention has been retained for compatibility across all audio delivery systems that write records described in this document.

8.5 Revision History

This topic contains historical information on changes, enhancements and corrections to ezAudit by version number and date. For the most recent changes and enhancements, see the [What's New](#) topic.

Version 2.8.0.90 - 09/08/2016

1. **Enhancement.** [Multi-day audit reports](#) can now optionally be saved as daily files, one for each day included in the report. **Version 2.7.3.75 - 04/26/2016**
1. **Enhancement.** ezAudit now detects Windows 10 and adjusts its display accordingly.

Version 2.7.2.65 - 06/08/2015

1. **Enhancement.** Station configuration information can now be exported and imported in [Preferences](#). Exported station information can be used by ezEdit, ezSuite and XStudio with minor adjustments after importing the information into one of these applications.
2. **Enhancement.** Minor changes have been made to some dialogs to improve text readability in some operating systems, most notably Windows Server 2003.
3. **Fix.** When displaying the audit report selection dialog, the **Scanning Files** information panel would very occasionally get hidden behind the selection dialog as ezAudit was scanning for available files.

Version 2.7.1.60 - 10/24/2014

1. **Enhancement.** ezAudit now detects Windows 8.1 and Windows Server 2012 R2 operating systems and adjusts its display accordingly.

Version 2.7.0.55 - 02/12/2013

1. **Enhancement.** The ezAudit user interface has been updated to improve general appearance.
2. **Enhancement.** ezAudit now detects Windows 8 and Windows Server 2012 operating systems and adjusts its display accordingly.
3. **Fix.** When a user attempted to register ezAudit by copying and pasting the registration key into the registration dialog, the registration key would be invalid because the user inadvertently copied leading spaces instead of just the registration key text. Now, any extraneous spaces are removed when the user pastes the registration key into the dialog. Additional feedback is provided when manually entering a registration key that is not the correct length, which can occur if a character is missed in typing or if copying only a portion of the registration key and pasting it.
4. **Fix.** Very occasionally, when ezAudit was creating a temporary file to store information for display, the temporary file was not correctly created and the information would not be displayed. The problem has been corrected.

Version 2.6.0.52 - 02/05/2010

1. **Enhancement.** ezAudit now reports the host operating system in more detail and has been updated to reflect the release of Windows 7.
2. **Enhancement.** Application icons for ezAudit have been updated.
3. **Enhancement.** ezAudit is now aware of multiple monitor host systems and properly saves and restores its position on the correct monitor.
4. **Fix.** The switcher status display dialog used with audit reports is now restored on next use to the correct screen location. Previously, user placement of the dialog was not remembered from session to session.

Version 2.5.0.49 - 08/07/2009

1. **Enhancement.** This version of ezAudit introduces an all-new Preferences dialog. The preferences area has been completely redesigned, featuring a more logical organization of settings that is easier to use and understand. Some additional properties have been introduced, including control over application event logging detail and maximum size. See the [Configuration](#) section for more details.
2. **Enhancement.** A default station can now be assigned. When a default station is assigned, it is selected when a log, audit report or log reconcile window is initially displayed.
3. **Enhancement.** When importing cart categories (cart masks), the imported categories can now be optionally appended to the existing categories.
4. **Enhancement.** The Open Audit dialog has been updated for better performance when working with a station with a large number of available files.

Version 2.4.6.47 - 03/23/2009

1. **Enhancement.** The ezAudit main status bar has been updated with better-quality graphics and better visual appearance.
2. **Fix.** If a user minimized ezAudit and either rebooted the PC or logged out, the next time ezAudit was launched, it would either show up on the task bar (minimized) or disappear altogether. In reality, the program was running, but the user could not see it. Now, ezAudit will not restore itself to a minimized state on startup.
3. **Fix.** ezAudit would not launch on operating systems older than Windows 2000. This included Windows 98, Windows Me and Windows NT4. The problem was introduced in version 2.4.5 and has been resolved.

Version 2.4.5.45 - 10/04/2008

1. **Enhancement.** A number of dialogs have been updated to be more visually consistent in the XP and Vista operating systems. Included are the about ezAudit, registration, machine ID and password dialogs.

2. **Fix.** If a user manually edited the ezAudit preferences file and changed a station number to a single-digit value or a value of more than 2 digits, ezAudit would not correctly find an audit file for a given station date. This scenario is now correctly handled, although manual entries of more than 2 digits are truncated to the first two characters.
3. **Fix.** If the host PC has more than 2GB RAM installed, the reported amount of available RAM was incorrect. On PC's running Windows 2000, XP and Vista, the correct amount of RAM is now displayed.
4. **Fix.** When previewing a printed report on-screen, context help would be inadvertently triggered if the user used **[Right-Click]** to reduce the size of the previewed information. Context help is now suppressed in the print preview displays.

Version 2.4.4.42 - 07/03/2008

1. **Fix.** A situation where the database table containing stations did not get activated if there are no stations defined has been corrected. This prevented the end-user from adding stations in the preferences area.

Version 2.4.3.41 - 05/30/2008

1. **Change.** Version numbers of the "ez" series of products, including ezAudit, have been synchronized. These products share several pieces of core functionality and the version numbering change was made to reflect this.
2. **Fix.** An **eDatabaseError** that could occur when installing and starting ezAudit for the very first time has been corrected.
3. **Fix.** A spelling error on the configuration password dialog has been corrected.

Version 2.1.1.38 - 07/09/2007

1. **Enhancement.** Changes have been made to the way ezAudit handles loading and saving preference information to improve performance. Improvement is particularly noticeable if ezAudit is launched from a network drive.

Version 2.1.0.36 - 06/06/2007

1. **Change.** The ezAudit preferences file is now kept in the application directory (install folder). If you updated the software using the standard installer, the installation process should have been able to move the preferences file from the Windows folder, where it had been located in previous versions. If the move failed, you can still manually copy the preferences file to the application folder.
2. **Change.** The PC characteristics considered when registering ezAudit has been changed. If you updated the software using the standard installer, the installation process automatically updated your registration. On rare occasions, the automatic update could fail, particularly you updated from a very old version of ezAudit. If the automatic registration update failed, contact your vendor to obtain a new registration key. You will

need to supply the original registration serial number and machine ID information to obtain your new registration.



If you previously experienced a problem with ezAudit complaining that your registration was invalid as a result of either adding or removing a USB device that registers itself as fixed disk, you should now be able to add or remove the device without a registration error.

3. **Enhancement.** ezAudit has been updated to correctly handle new 2007 DST dates and dates prior to 2007. See the topic [Time Zone Information](#) for details on DST date changes made in 2007, along with their impact on tools like ezAudit.
4. **Fix.** The date on which a switch to or from DST occurs now reports the event time (Real Time) properly. Previously, the entire day was processed using either the DST offset or standard time offset. Now, each time is evaluated to determine whether or not the target switch **time** has been met, generally 2:00 AM for most time zones that observe DST.
5. **Enhancement.** Audit transaction and status codes specific to XStudio have been implemented. XStudio audit reports now contain information on spliced logs and user-initiated log edits from within XStudio.
6. **Change.** The help documentation has been updated to work with Windows Vista. Vista does not as a default support the traditional help file (*.HLP). The help documentation is now supplied as a compiled HTML file (*.CHM).



[Microsoft Security Update 896358](#) not only fixes a vulnerability in HTML Help, it prevents HTML Help files from execution if the CHM file is installed on a network drive. CHM files installed locally continue to work.

Symptoms: When you open a CHM file from a UNC path or from a network drive even if the network drive is mapped to a drive letter, the HTML Help viewer opens and instead of displaying the topic, it displays an error message "Action canceled" in the topic pane.

Solutions: Install the application on a local drive to avoid this problem. Alternatively, there are some registry changes that can be made manually to re-enable using CHM help files from a network drive. A free [HTML Help Registration Utility](#) is available at the EC Software web site.

7. **Enhancement.** Users can now import/export cart category information (Cart Masks). The features are accessible via a pop-up menu on the cart [category maintenance page](#) in Preferences.

8. **Enhancement.** The application event log, where details of program operation are stored, is now automatically maintained so as not to grow beyond 2MB in size. Additional detail on user actions is now placed in the event log.
9. **Enhancement.** The "Function" column in audit reports will now optionally display XStudio's log record ID number. The XStudio log record ID is a unique value for a given log and follows the log record even if the record is moved.
10. **Fix.** If an audit report contained invalid audio switcher data, a program AV would occur, resulting in a less than complete report display. This has been corrected.
11. **Change.** The visual appearance of certain controls in the application now conform to the Windows XP look.

Version 1.1.2.22 - 06/06/2005

1. **Fix.** Items with no cart number are now properly not included when using a cart number filter.
2. **Enhancement.** Users can now hide the tool bar if desired. The tool bar state (visible or hidden) is saved and restored on program startup.
3. **Enhancement.** Event log display and search settings are now saved on exit and restored the next time the event log is viewed.

Version 1.1.1.21 - 04/04/2005

1. **Enhancement.** Minor changes have been made to support longer function names generated by XStudio. The changes do not affect reporting on standard CCC audit files.

Version 1.1.0.20 - 12/16/2004

1. **Enhancement.** Multi-Day Reports have been added. You can now create an audit report that spans multiple days for a station. See the section on **Multi-Day Reports** for more information.
2. **Enhancement.** Users can now modify or create their own data views. Functionality to edit, create, copy, and delete data views is included. See the section on **User-Defined Data Views** for more information.
3. **Enhancement.** Users can now create custom fields and include them in custom data views. Functionality to create, edit, and delete custom fields is included. See the section on **User-Defined Fields** for more information.

Version 1.0.4.16 - 12/08/2004

1. **Enhancement.** The ability to jump to a specific time in an audit report has been added. Pressing the **[F2]** key displays a dialog to enter the time to search for. The search finds the nearest match to the time entered. This option is also available from the Edit menu.

2. **Enhancement.** On-demand refresh of the data for the current audit report has been added. Pressing the [F5] will reload all audit data from the DCS or Maestro audit data file. This is useful primarily when viewing an audit report for today, where additional information may be added to the audit data file by DCS or Maestro during the time a report is being viewed. This option is also available from the Edit menu.
3. **Enhancement.** Users can now enable or disable extended text logging, using the **Help | Debug Mode** menu item.
4. **Enhancement.** When viewing a text file, users can now search the displayed text for any combination of information. Searches can be forward or backward from current location and can be case-sensitive, if desired.
5. **Enhancement.** Additional error logging has been added to better support end-users.

Version 1.0.3.15 - 12/31/2003

1. **Enhancement.** Audit report displays of relay (Din) data has been revised for enhanced readability. Relay transactions that are internal functions (relays) are now displayed as "Internal" with the DCS/Maestro function number. External relays (Bus A-D, Din 12-19) are displayed as before with the addition of the DCS/Maestro function number.

Version 1.0.2.14 - 9/27/2003

1. **Fix.** Fixed a problem with audit reports not printing the last page of a report in some cases. The problem manifested itself mostly in Win9x OS's, but could also show up in Windows NT v4.

Version 1.0.2.13 - 8/27/2003

1. **Enhancement.** Column widths of the audit data view are now saved when the dialog is closed, then restored at startup. Use the menu item "**Help | Reset Display Defaults**" to re-set the column widths to their default values next time you start the program.
2. **Enhancement.** Print preview is now available when printing an audit report. Users can choose to preview (and/or print) all data in the report or just those items that have been selected by the user.
3. **Fix.** Corrected a problem with decoding switcher information when the switcher command was for setting the Pulse Timing. ezAudit would report an error similar to "an invalid value passed to argument %n" and processing of the display data would stop, leaving the user with only a partial display of the audit data.
4. **Fix.** Under unusual conditions, the audit report view would generate an error when a row with incomplete data was selected. This error would occur when data was missing from one or more columns in the row, usually as the result of an error in retrieving the information from the audit data.

Version 1.0.1.12

1. **Fix.** When a user's registration expired by date, the application would close without allowing the opportunity to re-register. This has been corrected.

Version 1.0.1.11

1. **Enhancement.** Minor cosmetic changes have been made to some of the dialogs for readability.
2. **Enhancement.** Generating the machine ID for registration and copying the ID to the clipboard now includes the machine's name in the text copied to the clipboard. This was done to make identification of which ID is for which machine easier when registering more than one copy of the application.
3. **Enhancement.** A menu item for saving reports to file has been added to the pop-up menu.

Version 1.0.1.10

1. **Enhancement.** Support for Maestro station numbers that do not conform to the published specification has been added. 2-digit station numbers like "13" (instead of the documented "SD") are now supported. You can now enter any 2-character combination in a station's Station Number field in [Preferences](#).
2. **Change.** The tool bar and hinting has been re-organized to be more intuitive.

Version 1.0.0.9

1. **Fix.** Printed audit reports would occasionally incorrectly identify the sort column of the report. This has been corrected.
2. **Change.** The CBSI reconcile export has been updated and now works properly in situations where the user has implemented limitations in CBSI's ELR Limits section. See the section on **Saved Report File Types** under the CBSI item for special notes on reconciling if you have implemented limits.
3. **Fix.** If the user wanted to reset the display defaults, not all saved settings were being erased. This has been corrected.

Version 1.0.0.8

1. **Change.** The Selector™ export has been revised to match the Linker Standard Schedule Output/Input Specification, as published by RCS. You can now directly import the output file (*.INP) that is created by ezAudit. See the section on **Saved Report File Types** under the Selector item for instructions on how to use this file.

Version 1.0.0.6

1. Initial release of ezAudit.

Index

- A -

Application Event Logging 74
Audit Report Display Times 60

- C -

Cart Filter Setup 24
Cart Masks
 Creating 24
 Editing 26
 Explained 64
 Exporting 24
 Importing 24
Changes and Updates 11
Codes
 Status 66
 Transaction 66
Command-Line Switches 85
Configuring
 Cart Filters 24
 Miscellaneous Settings 29
 Overview 20
 Stations 20
Contacting dcsTools.com
 Mailing Address 80
 Sales 80
 Tech Support 80
 Web Site 80
Copyrights 6

- D -

Data Navigator 71
dcsTools.com
 Address 80
 Email Address 80
 Telephone Numbers 80
Display Columns, Reports 33
DST 60
 Dynamic 61
Dynamic DST 61

- E -

Editing Cart Masks 26
Error Messages 76
Extended Application Logging 74

- F -

Features 9
Fields
 User-Defined 55
Files
 List of Application & Generated Files 83

- H -

Hardware Requirements 16

- I -

Installing 17

- K -

Key, Registration 82
Keyboard Shortcuts 58

- L -

License Agreement 12

- M -

Menus Reference 58
Multi-Day Reports 45

- N -

Navigator, Data 71

- O -

Open Report File Dialog 32

- P -

Preferences
 Cart Filters, Cart Categories 24
 Miscellaneous 29
 Printed Report 70
 Printing a Report 38

- R -

Reference 58
 Keyboard Shortcuts 58
 Menus 58
 Toolbars 58
 Registration 82
 Removing 17
 Report Codes
 Status 66
 Transaction 66
 Report Templates
 Maintenance 42
 Using 33
 Reports
 Display Columns 33
 Multi-Day 45
 Printing 38
 Saving to a File 40
 Switcher Status Panel 36
 User-Defined Fields 55
 User-Defined Views 50
 Working with Reports 33
 Requirements, Hardware 16

- S -

Sample Printed Report 70
 Saving Reports to a File 40
 Selecting a Station and Date 32
 Selecting Transaction Filters 37
 Shortcuts, Keyboard 58
 Software Registration 82
 Stations Setup 20
 Status Codes 66
 Switcher Status Panel, Using 36
 Switches, Command-Line 85

- T -

Templates
 Maintenance 42
 Transaction Filters 37
 Time Zone Information
 Overview 61
 Updating 61
 Times, Audit Report Displayed 60
 Toolbars Reference 58
 Trademarks
 apt-X 6
 DCS 6
 Maestro 6
 Windows 6
 Transaction Codes 66
 Transactions Filters 37
 Troubleshooting
 Basic Steps 73
 Error Messages 76
 Extended Application Logging 74
 Overview 73
 Specific Errors 76

- U -

Uninstalling 17
 Upgrade Instructions 17
 Upgrading 17
 User-Defined Data Views 50
 User-Defined Fields 55

- V -

Views
 User-Defined 50
 Working With 33

- W -

Warranty 12
 Welcome 6
 What's New 11

Copyright 2002-2023 C-R Media. All Rights Reserved.