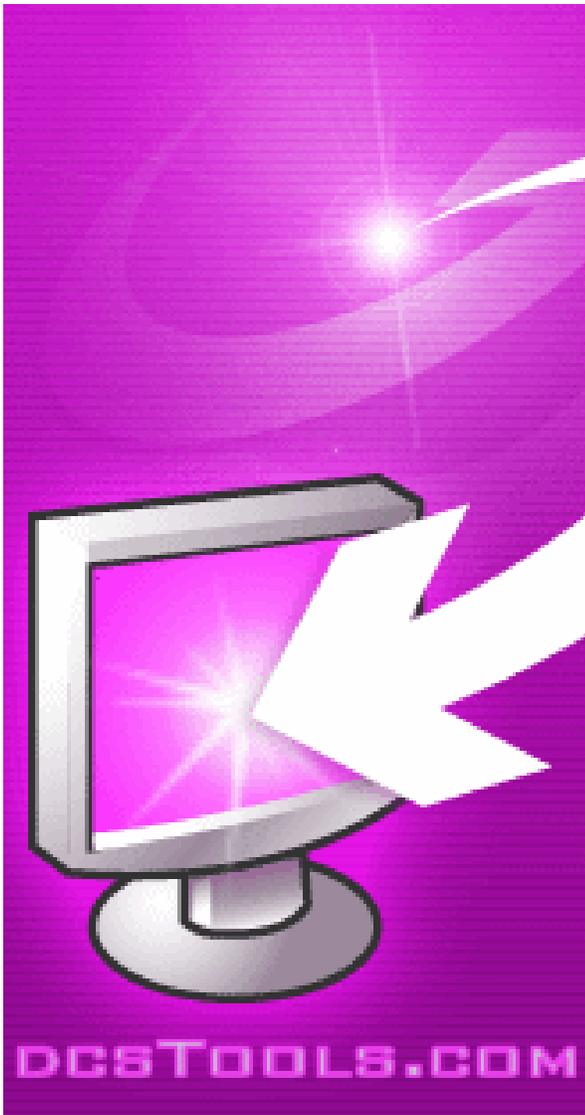


ezCart 2001

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ezCart 2001

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Special thanks to:

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Printed

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Welcome to ezCart 2001

Part



ezCart 2001 is a "hot button" application for DCS™, Maestro™ and XStudio systems.

ezCart 2001 runs on a standard PC and provides the ability to control a host Maestro, DCS or XStudio unit. You can play any of as many as 400 carts (audio files) instantly using buttons organized in pages of 20 buttons each and, if desired, use the provided channel queues (one for each of three channels) to "stack" a list of one-shot plays and then use the transport controls (**[Play]**, **[Pause]**, **[Stop]**). Access to the host audio unit's inventory is provided, too.

You can optionally enable touch-screen mode, which changes ezCart 2001's behavior to mimic that of loading cart decks and playing what's in the deck on-demand.

You connect the PC running ezCart 2001 to a DCS or Maestro 3 unit directly (via serial cable) or use [rcServer](#) to communicate with the host audio unit via TCP/IP. For XStudio, communications are TCP/IP. When using TCP/IP, the user PC (and ezCart 2001) can be literally anywhere that accommodates the TCP/IP connection to rcServer or directly to XStudio.

See the sections on [Setting Up DCS](#) or [Setting Up Maestro 3](#) for more information on setting up the host audio unit for use with ezCart 2001.

Supported Host Systems

- DCS version 2.x
- Maestro version 3.x
- XStudio (all versions)

Note: Maestro versions 1 and 2 are not supported. DCS version 1 is not supported.

Introduction

Part



2.1 Whats New in ezCart 2001

Changes, enhancements and corrections to ezCart 2001 by version number and date.

Version 2.0.0.7 - 01/30/2002

1. The initial release of ezCart 2001.

2.2 Features

- **400 instant play buttons**, organized in 20 pages of 20 buttons each.
- As many "sets" of buttons as you wish for virtually unlimited numbers of buttons. Load different button files on the fly.
- **User-selectable colors** for each button.
- Program buttons to play carts or to execute functions on the host audio unit.
- **Touch Screen Mode** - optimizes ezCart 2001 for use with a touch screen.
- Cart queues for each available audio channel - stack carts from a button or inventory list.
- Drag and drop re-organization of cart queues.
- Transport controls to Pause, Stop, Play audio on each available audio channel.
- Drag and drop button programming of buttons.
- Validation of buttons for availability of audio and dated usage.
- User-configurable display.
- Pop-up page selection panel for touch screen users.
- Instant messaging (chat) among users (TCP/IP connections only). Send both broadcast and private messages.
- Transfer of files from remote host (TCP/IP connections only).



To use TCP/IP connectivity available in ezCart 2001 for DCS & Maestro, you must have rcServer software. [Click here](#) for more information on rcServer.

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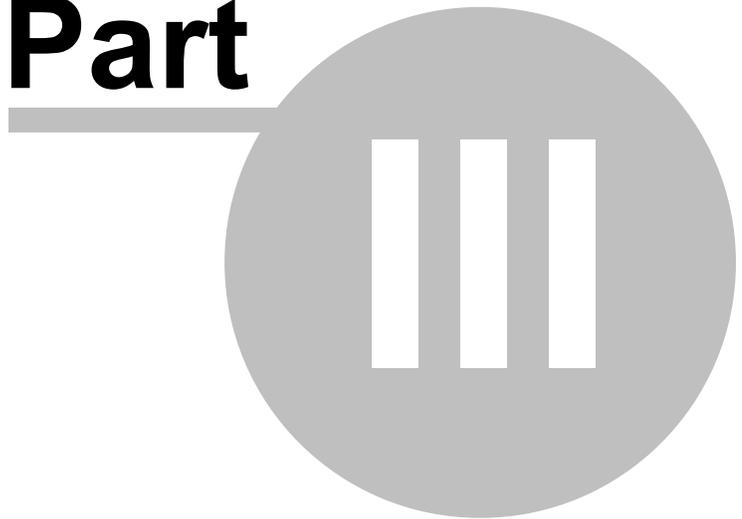
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Updated: Dec 23 2007

Installing ezCart 2001

Part



3.1 Hardware Requirements

Certain minimum hardware requirements must be met to use ezCart 2001, both on the PC on which you will be running the application, and the host DCS or Maestro 3 machine which will be used as the play back host unit.

ezCart 2001 PC

The user needs a PC that supports Microsoft Windows™ 95, 98, ME, NT4, 2000 or XP.

- a 100% IBM-compatible Pentium™ personal computer with a hard disk and a floppy drive.
- 32MB RAM (Windows 95, 98, ME), 64MB RAM (NT, 2000), 128MB RAM (XP).
- 5MB free disk space (for this application only)
- VGA monitor, with adapter, running 800x600 minimum display resolution
- Microsoft mouse or compatible pointing device.
- A LAN connection for reading inventory information.
- A working serial port (for serial connection to DCS or Maestro)
- TCP/IP networking installed and functional (if using [rcServer](#) or connecting to XStudio)

DCS Unit

In order to use the play back features of ezCart 2001, you must have a DCS unit (DOS) available that you can connect to via a serial cable. The DCS unit must have an available serial port for remote control purposes.



If a production room unit is used with ezCart 2001, it must be running the CMCR.EXE (control room) program. Consult your DCS documentation or talk to the DCS support staff for additional information if you need help.

Since use of the DCS machine for purposes of playing audio will utilize at least one of the playback channels, the potential for interference with a user working in the host studio arises and cooperation among the staff - people in the studio where the DCS machine is being used and the ezCart 2001 user - is important.

For information on setting up a DCS unit for audition use, see [Setting Up DCS](#).

Maestro 3 Unit

In order to use the play back features of ezCart 2001, you must have a Maestro 3 unit available that you can connect to via serial cable. The Maestro unit must have an available serial port or remote control purposes.



On Maestro machines equipped with two audio board sets (more than 3 channels), only the first three channels are made available to external control via the serial port. This corresponds to the first board set installed in a Maestro machine.

Since use of the Maestro 3 machine for purposes of playing audio will utilize one of the playback

channels, the potential for interference with a user working in the host studio arises and cooperation among the staff - people in the studio where the Maestro machine is being used and the ezCart 2001 user - is important.

For information on setting up a Maestro unit for audition use, see [Setting Up Maestro 3](#).

Additional Hardware Needed for Remote Control Usage

1. A "null modem" serial cable connecting the DCS or Maestro 3 machine being used for audition purposes and the ezCart 2001 work station that will be playing audio. For information on wiring the serial data connection between the two machines, see the section on [Serial Interface](#).
2. Audio cable from the audio channel on the DCS, Maestro or XStudio unit that will be used for playing audio to the ezCart 2001 work station area - if you wish to hear the audio being played back.
3. A speaker in the ezCart 2001 work station area to hear the audio, preferably with a volume control.

3.2 Installing ezCart 2001

The ezCart 2001 installation program provides step-by-step instructions on every screen displayed during the installation. Follow the instructions on each screen to install ezCart 2001.

Before you install ezCart 2001

1. Close all other programs, including any anti-virus programs.
2. If you are installing ezCart 2001 on Windows NT, Windows 2000 or Windows XP, log on to your computer with administrator privileges.

To install ezCart 2001 from a CD

1. Insert the CD into your CD-ROM drive. The installation program should start automatically. If it does not start, locate your CD-ROM drive in Windows Explorer and double-click in the SETUP.EXE program.
2. Follow the instructions on each screen to install the software.

To install ezCart 2001 from a downloaded file

1. After you have downloaded the installation program to your computer, locate the setup program (**ezCart2001Setup.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.

After Installation

After installing ezCart 2001, you will need to configure the software by setting a number of user preferences and telling ezCart 2001 how to connect to the host audio unit. You will also need to tell ezCart 2001 where certain items, such as button files and inventory file, are located. To configure ezCart 2001, click on the [**Configure**] button on the main display, or select **Edit | Configuration** from the menu. See the section on [ezCart 2001 Preferences](#) for more information.

Removing ezCart 2001 from your PC

To remove ezCart 2001 from your PC, go to **Control Panel | Add/Remove Programs** and select ezCart 2001. Follow the prompts to remove ezCart 2001. All files will be removed, with the exception of your preferences file. The preferences file is named **ezCart.ini** and is located in your Windows directory (e.g. C:\Windows or C:\WinNT). After you have removed ezCart 2001, you can safely delete the preferences file if you wish.

Configuration

Part

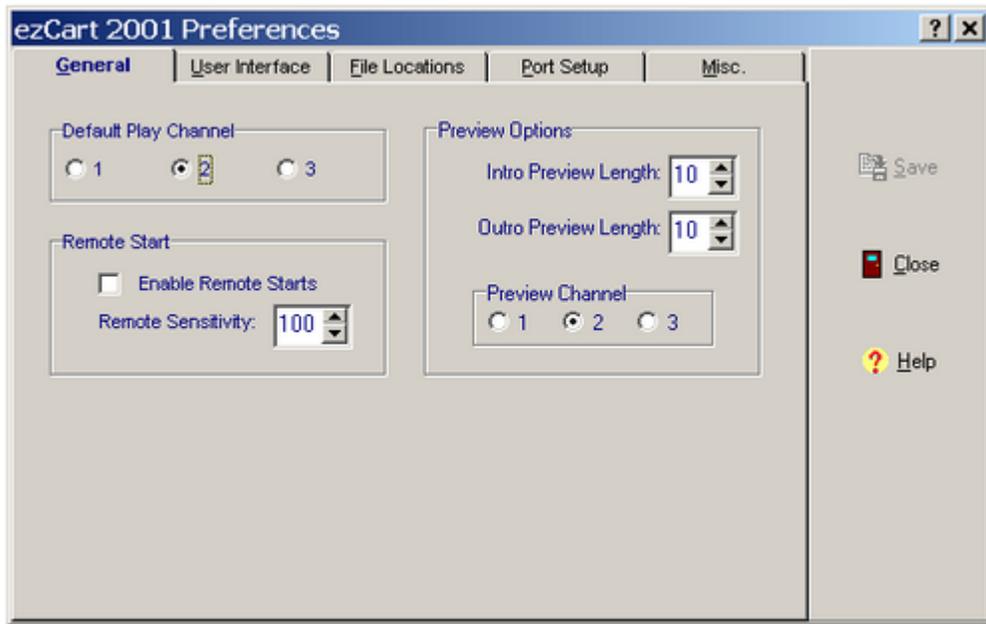


4.1 ezCart 2001 Preferences

When ezCart 2001 is run for the very first time, you will need to set a number of preferences that control how the program appears on-screen and what kinds of features are enabled.

To modify your preferences, either select the menu item **Edit | Configuration** or click on the button labeled "Configure" on the main display. A dialog similar to the following will appear. The ezCart 2001 preference settings (configuration) are divided into pages (or tabs), organized according to preference category.

General



The General page provides for setting the default play channel, whether or not to enable remote starts in ezCart 2001, and setting up your cart preview intro/outro lengths and preferred play back channel.

Default Play Channel

The play channel that will be used as a default when a button is set up as a play cart button. When you drag an inventory item from the inventory display to a button and drop it, the play channel for the button is set to the "Default" play channel. You can change a button's designated play channel from the button configuration dialog to set a specific play channel for a button.

Remote Start

You can set ezCart 2001 to respond to remote starts so that when you press an external "start button" for say, channel 1, the cart at the top of the channel 1 queue (if there is one) will be played. Each play back channel has a separate remote start. The remote sensitivity item should be left at the default value unless you are having difficulties getting the remote starts to work properly.

Enable Remote Starts. If checked, ezCart 2001 will attempt to use remote start functionality. At startup, the application will check to see if there's a valid remote start port available and if the buttons are functional. If not, an error message will be displayed.

Remote Sensitivity. The default value is **100**. Unless you are having trouble with remote starts, this

value should be left at the default. The value corresponds to the number of milliseconds between polling of the game port to detect button pushes (remote starts fired). The minimum allowed value is 50, the maximum value is 250. A smaller number means that the game port will be polled more frequently, meaning more responsive to button pushes.

You will need to construct the needed remote start buttons and cable to connect to the ezCart 2001 PC. See the section on [Setting Up Remote Starts](#) in Appendix D.

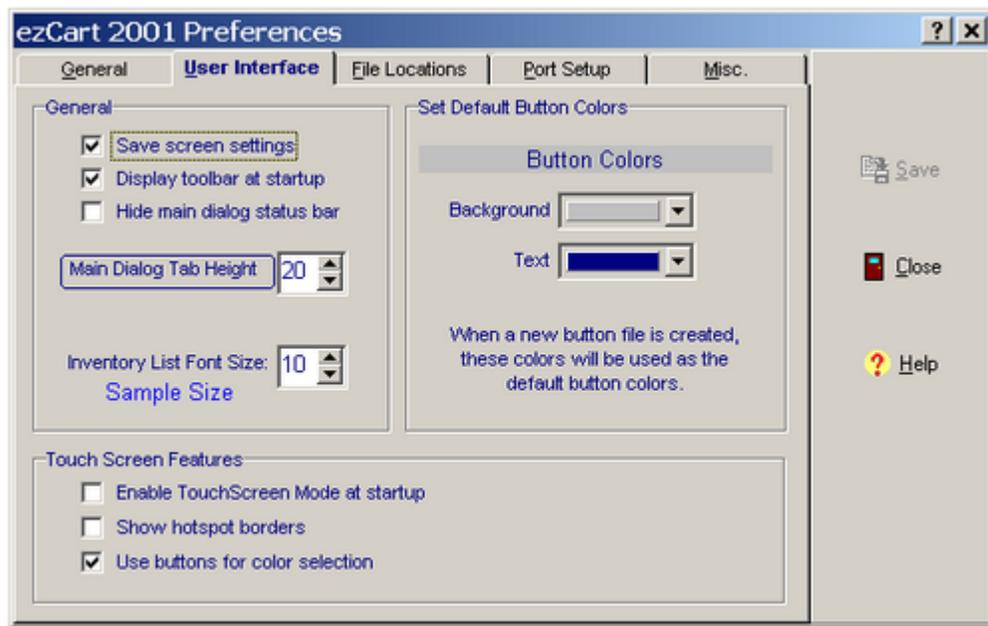
Preview Options

Intro Preview Length. Sets the length of time (in seconds) that a cart will be played from the beginning when previewing a cart.

Outro Preview Length. Sets the length of time (in seconds) that a cart will be played from the end when previewing a cart.

Preview Channel. Selects the playback channel that will be used for previewing a cart. Typically, this will be channel 2 or channel 3, depending on many discreet outputs the host DCS or Maestro machine has available. Cart preview is available on the [Button Configuration](#) dialog.

User Interface



The User Interface page provides the ability to set items that affect how ezCart 2001 displays information and how it acts or reacts to user actions.

General

Save Screen Settings. If checked, ezCart 2001 will remember the size and location of the main dialog and other display items from session to session.

Display Toolbar at Startup. If checked, the ezCart 2001 toolbar will be displayed at startup.

Hide Main Dialog Status Bar. If checked, the ezCart 2001 status bar, located at the bottom of the main display, will not be visible at startup. Items that will be hidden include the connection status (TCP/IP or serial), button hinting, and error status (if applicable).



The toolbar and status bars can be shown or hidden from the main display's **View** menu if you wish to change them while using ezCart 2001.

Set Default Button Colors

Background Color. This color is the default color used for the button (button face color) whenever a new button file is created. To select the color of your choosing, click on the drop down icon and select the color from the displayed list.

Text Color. This is the default text color used for buttons whenever a new button file is created. To select the color of your choosing, click on the drop down icon and select the color from the displayed list.

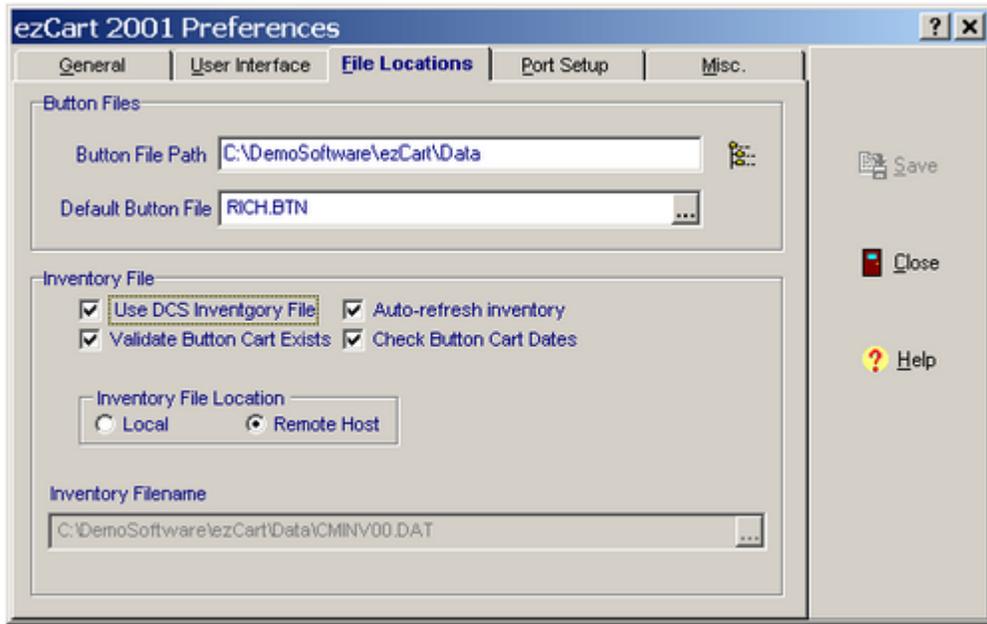
Touch Screen Features

Enable Touch Screen Mode at Startup. If checked, ezCart 2001 will operate in "touch screen mode" at startup. Clicking on a button will not cause the cart assigned to the button to be played. Instead, dragging of the button will be enabled, so you can "touch" (or click) on a button, then "touch" (or click) on a queue or cart deck. If a queue is the target, the cart item will be added to that queue. If a cart deck is the target, ezCart 2001 will play the cart immediately.

Show HotSpot Borders. If checked, buttons that are normally flat and blended in with the rest of the main dialog will have borders painted around them to make it easier to see where to "touch" (or click) for an action.

Use Buttons for Color Selection. If checked, the button configuration dialog will display button background and text color selections as a pop-up dialog rather than a drop-down list. the pop-up dialog is much easier to use if you are using a touch screen - the colors are displayed in a large color box style rather than slim color bars.

File Locations



The File Locations page provides settings for the location of button files, the default button file name, and settings that relate to use of the host DCS or Maestro inventory file. The inventory file is used for two things: 1) setting up buttons; and 2) validating button contents for availability of a cart and/or whether or not the cart is valid for a given date.

Button Files

Button File Path. The default location (folder) for ezCart 2001 button files. Each button configuration is stored as a file. This option sets the default location for these files. You can use the folder button to select the directory (recommended) or you can type the location directly in this field.

Default Button File. The name of the button configuration file that will be loaded by ezCart 2001 at startup. This field contains the file name only and it is assumed that the default button file will be located in the default Button File Path. You can use the file selection button in this field (the ellipse button) to select the filename (recommended) or you can type the filename.



All button configuration files used by ezCart 2001 will have an extension of ".**BTN**" (no quotes).

Inventory File

Use DCS Inventory File. If checked, ezCart 2001 will attempt to load an inventory file at startup. The inventory file is the host unit's inventory list - carts that are available to the host unit. The inventory file is used in ezCart 2001 to aid in selecting carts for buttons (configuring buttons) and may also be used to validate that carts associated with buttons exist in the host inventory and/or are valid for today's date.



If the use of an inventory file is disabled (not checked), all other settings in this section are ignored by ezCart 2001.

Auto-refresh Inventory. If checked, ezCart 2001 will monitor the host inventory file for changes and refresh the inventory list as needed. ezCart 2001 will check for changes at one-minute intervals.



If the inventory file location is remote rather than local, the host [rcServer](#) will notify ezCart 2001 of inventory changes. When the inventory file changes at the remote location and ezCart 2001 is notified, the updated inventory file will be downloaded automatically and the inventory list refreshed.

Validate Button Cart Exists. If checked, ezCart 2001 will check each button's programmed cart number against the host unit inventory to see if the cart exists. If the cart does not exist, a red "X" will be placed on the button, indicating that the cart is missing from the host machine. The button will be disabled. This action occurs each time a button file is loaded. The validation of button existence also occurs when the inventory list is refreshed.

Check Button Cart Dates. If checked, ezCart 2001 will check each button's programmed cart number to see if that cart is valid for today's date. In other words, does today fall between the begin and end dates of the cart? If the cart dates are invalid, a blue "X" is placed on the button, indicating the cart is out-of-date. The affected button will be disabled. Checking for valid dates occurs each time a button file is loaded and each time the inventory is refreshed.

Inventory File Location. Select the correct location of the inventory file. Local means you will be loading an inventory file of your choosing somewhere within your LAN (local area network). Local is the option you must use if you are communicating with the host DCS or Maestro unit via a serial

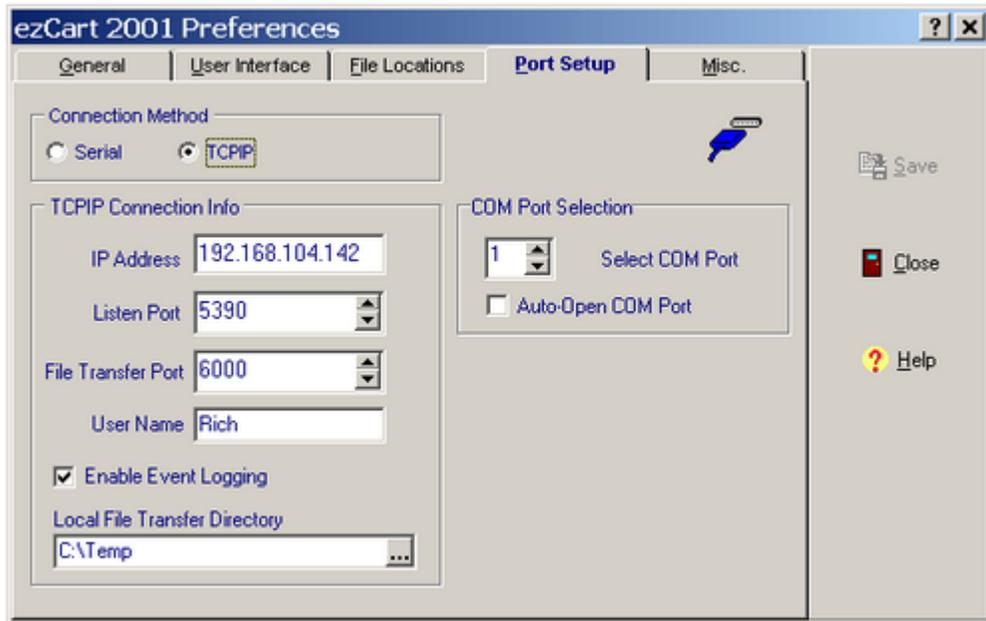
connection. Remote means that you are getting inventory information from an [rcServer](#), which may be located within your building or may be somewhere else entirely. If the remote option is selected, you need not select an inventory file name - the rcServer application will handle getting you the correct inventory information. The actual inventory file, when downloaded from rcServer, will be placed in your local transfer file directory. See the section on [Port Setup](#) for more information.

Inventory File Name. This option is enabled only if you select an inventory file location of Local. If you choose to use a local inventory file, you must provide a complete host unit inventory filename. You can use the file selection dialog by clicking on the ellipse button in the field (recommended) or by typing the fully-qualified filename in the field.



ezCart 2001 supports UNC file locations. However, it is recommended that you use mapped drives. UNC locations may or may not be available each time ezCart 2001 is launched and may require different user names and/or passwords in order to be accessed.

Port Setup



The Port Setup page is where you tell ezCart 2001 how to communicate with the host unit. The two available methods are Serial and TCP/IP. Depending on the communications method selected, portions of this dialog will be disabled as they are not needed for the option you selected.



In order to use the TCP/IP option, you must have an rcServer installed and working or be connecting to XStudio. See [Appendix C - rcServer Information](#) for more information.

Connection Method

Select the radio button that matches the type of connection you will be using with ezCart 2001. Depending on your selection, other portions of this dialog will be disabled as they are unneeded for

your selection. Choose the Serial radio button if you are connecting directly to the host DCS or Maestro unit via a serial cable. Choose the TCP/IP radio button if you will be connecting to an rcServer or XStudio.

TCP/IP Connection Info

IP Address. Sets the TCP/IP address of the host rcServer or XStudio application. If rcServer or XStudio is running on the same machine as ezCart 2001, an address of 127.000.000.001 will work as well as the address assigned in **Windows Networking | TCP/IP Properties**.

Listen Port. Selects the TCP/IP port that will be used for text & commands (Listen Port). The default port is 5390 and can be in the range 5300-6999.

File Transfer Port. Selects the TCP/IP port that will be used for file transfer. The default port is 6000 and can be in the range 5300-6999.



Ports must be unique and unused by other applications installed on the ezCart 2001 machine. If the port you select is in use, the file transfer service (File Transfer Port) will not start. If you have other applications that use rcServer installed on the ezCart 2001 machine, they will not conflict.

User Name. Enter a username by which you will be identified to other users and rcServer.

Enable Event Logging. If the communications method is TCP/IP, checking this option enables logging of TCP/IP events - connection to rcServer or XStudio, disconnection, file transfer, etc. The events are logged to a file in the ezCart 2001 application directory (install folder). You can view the log files from the main dialog. See the section on [Using ezCart 2001](#) for details.

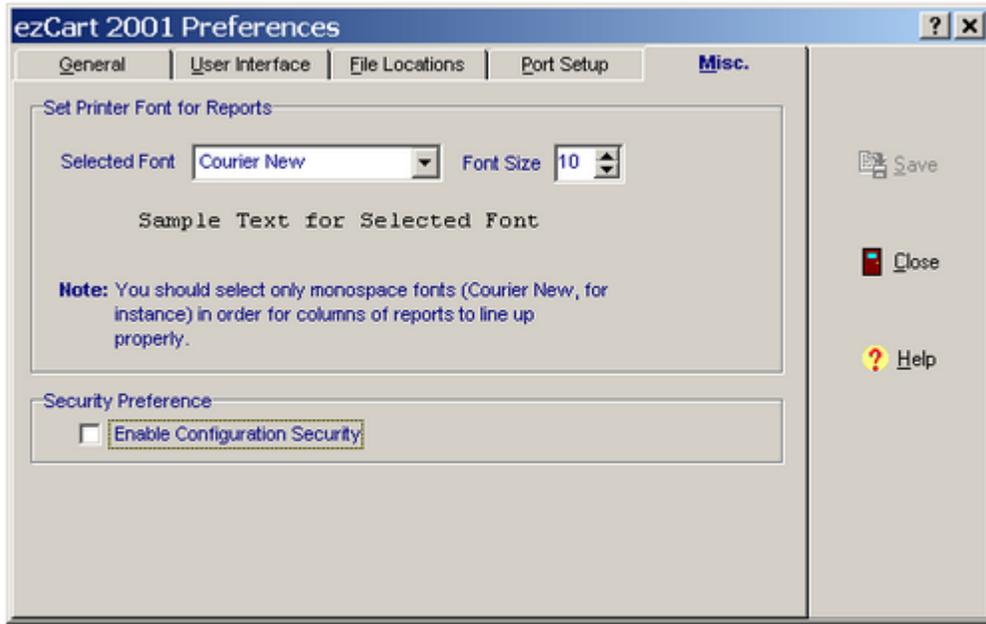
Local File Transfer Directory. The location (folder) where files transferred from the host rcServer will be placed. Available only if TCP/IP communications is enabled. You can use the ellipse button in this field (...) to select a folder rather than typing in the name.

COM Port Selection

COM Port Number. The COM port that will be used on the ezCart 2001 PC to communicate with a DCS or Maestro unit (if serial communications are enabled). You can use the **[Select COM Port]** button to select the port from a list of those available on your ezCart 2001 machine.

Auto-Open COM Port. If this item is checked, ezCart 2001 will always attempt to establish serial communications (if serial communications is enabled) with a DCS or Maestro unit immediately on startup. If not selected, the user will have to open the COM port manually by selecting the **File | Open COM Port** menu item. If a serial connection is always present, you should check this item as a matter of convenience.

Miscellaneous



The Miscellaneous page includes items to set up fonts for printed reports (future use) and to enable or disable basic configuration security.

Set Printer Font for Reports

This section is for future enhancements to ezCart 2001 and is not currently used.

Selected Font. Selects the base font for printed reports. Mono space fonts are preferred. Courier New is the default value.

Font Size. Selects the font size (in points) for printed reports. 10 is the default value.

Security Preference

Enable Configuration Security. If checked, you will be prompted to enter and then confirm a password. After saving your changes, each time users try to launch the preferences dialog, they will be prompted for the password and must enter it correctly in order to access the preferences dialog and change settings. The password is stored in an encrypted format in the preferences file (ezCart.ini).



Be sure to save your preferences before exiting the configuration dialog. If you have changed items and not saved, ezCart 2001 will prompt you to save before closing the dialog.

4.2 Configuring Buttons

ezCart 2001 is built around the idea of having a large number of audio carts ready to play instantly, on-demand. The method to make these carts available quickly to the end user is to have 20 pages of 20 buttons per page, each of which can be configured to play a certain piece of audio (cart) simply by pressing the button. Each set of buttons, therefore, represents 400 possible carts that can be played. Further, you can have as many "button files" as you wish and retrieve the one you want on-demand.



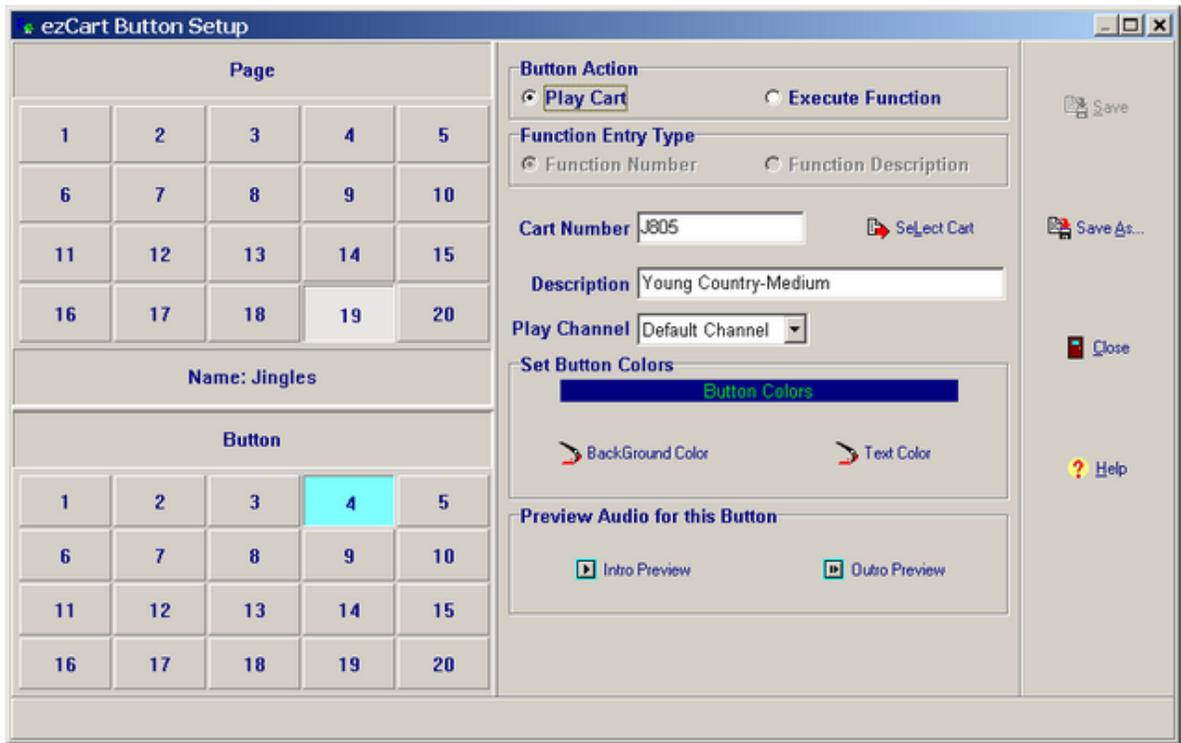
You can also link DCS or Maestro user functions to a button, using either the function number or function name. When the button is pressed, the function is performed by the host DCS or Maestro unit.

There are several ways to configure a button:

- Drag and drop a cart from the inventory list.
- Right-click on a button of your choice and select Configure Button from the pop-up menu.
- Open the Button Configuration dialog.

The first two methods listed are covered in the [Using ezCart 2001](#) topic. The third method, using the Button Configuration dialog, allows you configure multiple buttons. You access this dialog by clicking on the **[Buttons]** button on the speed bar, selecting **Edit | Button Setup** from the main menu, or using the keyboard shortcut **[Ctrl-B]**.

The display is sizeable - you can enlarge or reduce the size to suit your preference and it will be shown that same way next time you open the dialog. You can select the button page you wish to work with, along with the specific button to be programmed. If the button action is a Play Cart action, you can also preview the cart, both intro and outro, providing the cart exists on the host audio unit or is available to the host audio unit.



Programming a Button

Follow these steps to program a button with ezCart 2001 Button Setup dialog:

- Select the button page where the button is located by clicking on a page number. As you select a page, the page name is displayed beneath the pages buttons.
- Select the button you wish to program by clicking on a button number. If the button is currently programmed, the appropriate information is displayed in the data entry portion of the dialog.
- Select whether the Button Action will be a Play Action or a Function. This choice determines which of the remaining fields are enabled.

Play Action

- Enter the 4-digit cart number in the "Cart Number" field.
- Enter a description in the "Description" field.



You can select a cart from the inventory by clicking on the **[Select Cart]** button. Locate the cart you wish and drag it to the cart number or description field, then drop it. The cart number and description will be filled in automatically.

- Select the Play Channel for the cart from the drop-down list. The default value is "Default Channel", which means that this cart will be played on the channel you set in ezCart 2001 Preferences. You can also select a particular playback channel - 1, 2, or 3 (if available on the host audio unit).
- Change the button color and text color, if desired.



Button colors can be chosen either from a drop-down list of colors or from a pop-up color chart. The drop-down list is the default method. You can change that to the color chart by setting the "[Use buttons for color selection](#)" in ezCart 2001 Preferences.

5. If the cart exists, you can play the intro or outro by clicking on the buttons [Intro Preview] and [Outro Preview].

Function

1. Select the "Function Entry Type". Function Number requires the host audio unit's function number from it's configuration. Function Name requires the function name from the host unit's configuration.



The function name is case-sensitive! Make sure you type the function name (if used) exactly as it appears in the host unit configuration.

- i. If you select function number as the entry type, enter the function number in the "Function No." field. Enter a description of your choosing in the "Desc (Display)" field.
 - ii. if you select function name as the entry type, enter the function name in the "Func. Name" field.
2. The "Play Channel" field is disabled when programming a button to perform a function.
 3. Change the button color and text color, if desired.



Button colors can be chosen either from a drop-down list of colors or from a pop-up color chart. The drop-down list is the default method. You can change that to the color chart by setting the "[Use buttons for color selection](#)" in ezCart 2001 Preferences.

4. The [Intro Preview] and [Outro Preview] buttons are disabled when programming a function.

Repeat these steps for each additional button you wish to program.



Be sure to save your work before you exit the Button Configuration dialog. If you try to exit without saving, you will be prompted to save.

4.3 Setting Up DCS (Remote Control)

There are a few steps you must take to ensure that DCS' remote control feature is enabled. See the hardware requirements section of this application for further information on what's needed on the PC from which you will be running this application. These instructions presume a working knowledge of DCS and configuring DCS - if you are unsure of what to do, consult your DCS documentation or contact your DCS support staff.

Once all hardware requirements are met, including proper serial port cable connections, ensure that the DCS unit is set up in the following way:

1. DCS must be running in **Control Room** mode (CR) to support audition features. DCS allows serial control only in CR mode.
2. If you are using a Production Room machine, use **CMCF** (DCS' configuration editor) to edit your **CR.CFG** configuration file. Ensure that:
 - a) The node number assigned is the same as the one assigned in your **PR.CFG** file.
 - b) The stations configured are the same as in the **PR.CFG** file.
 - c) In the DCS Equipment section, select the menu item **Remote Control** and make sure that the serial control protocol version is set to **v1.4** and that the **Control Channel Initial State for Serial Channel** is **"Enabled"**.
 - d) **DCS Playline Display Mode** must be set to **Out1/Out2**. Do not set the play line mode to **Foreground/Background**.



You may wish to simply open the PR.CFG file in CMCF and save it as CR.CFG to ensure all necessary basic settings are correct and then verify the settings for remote control and play line display mode.

3. You must configure DCS to accept serial data and tell it which serial port you are going to use. This is accomplished by setting a file name in the root directory of the DCS unit boot drive (C:\). You will find a file named **_REMOT_1.OFF** or **_REMOT_2.OFF**. One of these files needs to be renamed to **_REMOT_x.ON**, where the "x" value represents the COM port number to use. Typically, you'd use COM2: for serial control, as COM1: is used for an audio switcher, if present. DCS reacts to the presence of this file at startup and enables the COM port hardware on the DCS unit.



Only one COM port can be enabled on DCS for remote control. If both **_REMOT_1.ON** and **_REMOT_2.ON** exist, DCS will end up using the COM port for the file name last detected. Be sure that if both files exist, one is named .OFF to avoid unintended results.

4. If the machine you're using is in a production room or otherwise does not need to load a log, you'll also want to set DCS to not look for a log. This is done by checking the root directory of the DCS boot drive (C:\) for the presence of a file named **_LOADLOG.ON**. If found, rename the file to **_LOADLOG.OFF** (i.e., ren **_LOADLOG.ON *.OFF**).

Once all of these settings are confirmed, you would launch DCS as normal, ensuring you use the command-line: **DCSCR**.

4.4 Setting Up Maestro 3 (Remote Control)

There are a few steps required to set up Maestro to enable remote control features. These instructions presume a working knowledge of Maestro and configuring Maestro - if you are unsure of what to do, consult your Maestro documentation or contact your Maestro support staff.



You must be running Maestro v3.x or greater to use remote control features. Earlier versions of Maestro do not support serial control.

Remote Control Setup (Serial)

You must set up the Maestro work station that you will be using with this application to enable serial control. To do this, follow the steps outlined below:

1. Launch the Maestro configuration program, select the **WorkStation** tab and select the Maestro workstation that you will be connecting to.
2. Click on the **Modify** button and select the **External Controls** tab.
3. If the serial port to which you want to use is not listed, click on the **Add** button to add the port.
4. Set the **Port Type** to **Remote Control/FlexKey**.
5. Set the **Port Number** to the appropriate COM port (typically COM1 or COM2).
6. Set the **Baud Rate** to 2400.
7. The ID field appears to be unnecessary, so it can be left blank.
8. Make sure the **FlexKey** checkbox is de-selected (not checked)
9. **Save** and exit the Maestro configuration

Maestro should now be configured to send and receive serial control data.

Enabling the "SendAllInfoToRemote" Option in Maestro

There is a registry setting in Maestro 3 that enables or disables extended cart information. If enabled, the information sent by Maestro (out the serial port) when a cart starts playing includes additional information - cart category defined in Maestro, length to AUX mark, title, artist. To turn the feature on, find and change the following registry key to the value "1" (turn on):

HKEY_LOCAL_MACHINE\Software\CCC\Maestro\3.0\General\SendAllInfoToRemote = 1

When restarted, Maestro will now send the additional cart information when the audio starts playing. This setting has no impact on ezCart 2001 operations.

4.5 Serial Interface

The ability to control DCS or Maestro from a remote host is achieved through a RS-232 serial connection and the protocol described below. The serial connection is to be a **2400 baud, 8 data bit, no parity, full-duplex** connection. The DCS serial connection is via the IBM AT standard 9 pin connection with the serial port configured as DTE equipment. In order to communicate with another IBM AT serial port, a modem pair may be used for long distances or for distances estimated to be up to 500 feet, a null modem wired direct connection cable may be used. The pin connections are described below:

DCS/Maestro Side		Host Side
1 Carrier Detect (Not used)		1 Carrier Detect
2 Receive Data	<--	3 Transmit Data
3 Transmit Data	-->	2 Receive Data
4 Data Terminal Ready	-->	6 Data Set Ready
5 Signal Ground	----	5 Signal Ground
6 Data Set Ready	<--	4 Data Term Ready
7 Request To Send (Not used)		8 Clear To Send
8 Clear To Send (Not used)		7 Request To Send
9 Ring Indicator (Not used)		9 Ring Indicator

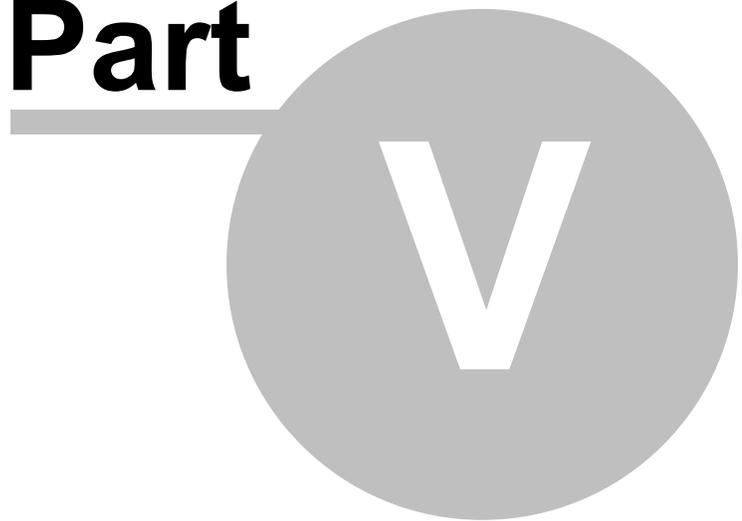
The DCS or Maestro will use the Data Set Ready signal (host's Data Terminal Ready) as a 'power-on' signal from the host and likewise, DCS or Maestro will provide Data Terminal Ready to the host to indicate that it is powered-on and ready.



ezCart 2001 is preset to handle the proper baud rate, data bits, parity and duplex settings for DCS. No user adjustments are required.

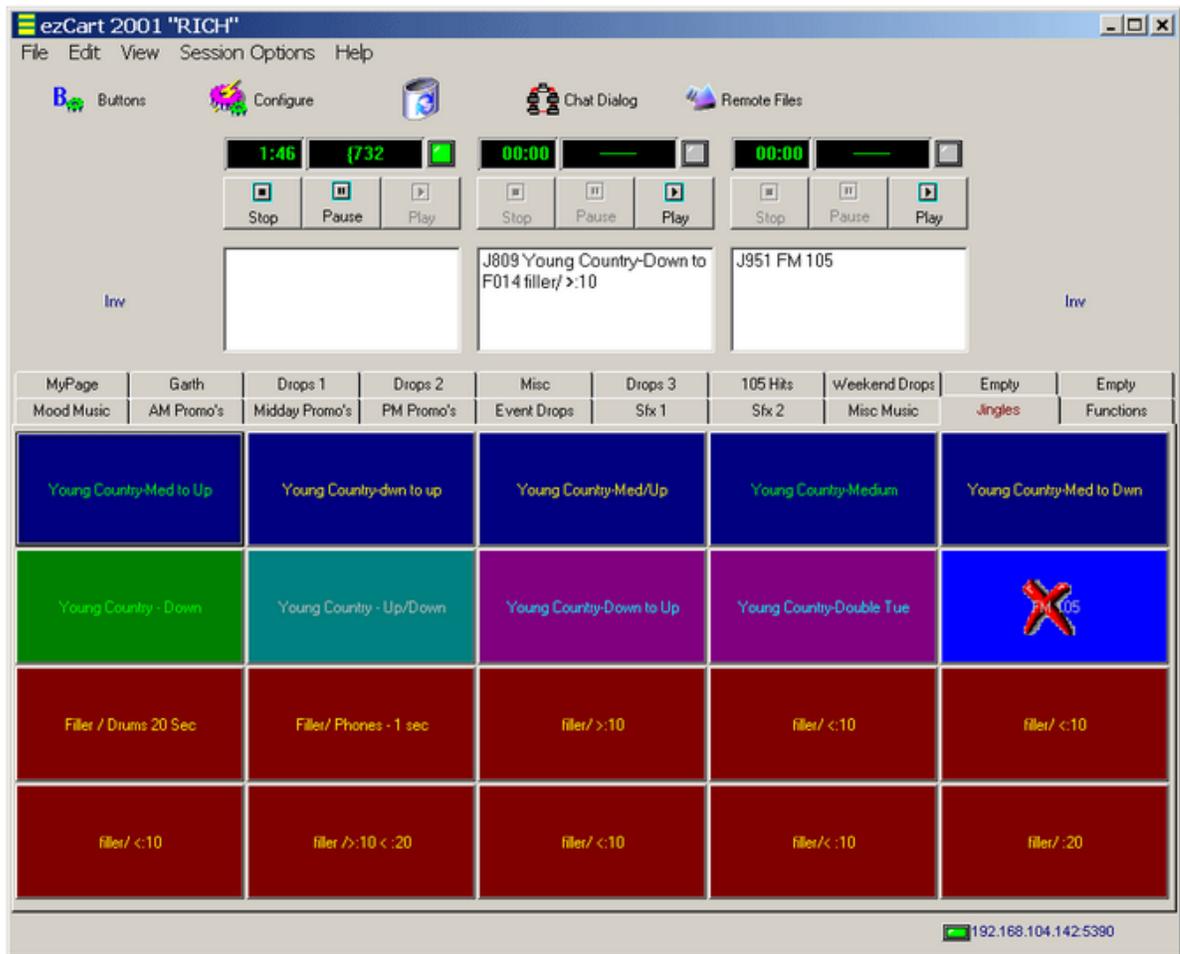
Operation - Using ezCart 2001

Part



5.1 General Operation

ezCart 2001 operation is fairly intuitive. The main display, shown here, can be modified to fit your preferences, including such things as display size, location of the display on the screen, and whether or not to display certain portions of the main display.



Before you use ezCart 2001

Before using ezCart 2001, you need to configure the software, setting a number of user preferences and telling ezCart 2001 how to connect to the host audio unit. See the section on [ezCart 2001 Preferences](#) for more information.

Standard Mode Use

The default behavior of ezCart 2001 is that all buttons are "armed" and ready to play simply by clicking on the button. The button's configuration dictates which play channel the cart (audio) associated with the button will be played on. Once the buttons are set up with the carts you wish to use, it's a matter of simply clicking on the button to play the cart.

Touch Screen Mode Use

If you have enabled Touch Screen features, either via your user preferences or by selecting **Session Options | TouchScreen Mode** from the main menu, the behavior of ezCart 2001 changes. Programmed buttons are no longer instantly played by clicking (or touching) them. Instead, touching (or clicking) the button "selects" the content of the button. Then, you can touch (or click) any one of the three queues to place that button's cart in the queue. You can also touch (or click) any of the three playback decks, which causes the selected button's cart to be played immediately on the deck you've selected.

Using Transport Controls (Stop/Pause/Play)

ezCart 2001 allows you to Play, Stop or Pause carts using buttons similar in appearance to standard tape deck controls.



The Transport Controls can be displayed or hidden by selecting **View | Transport Buttons**. This menu item serves as a toggle, alternately displaying and hiding the transport controls. If you do not plan to use the transport controls, you can hide them with this menu option.

Stop Button

The **[Stop]** button is armed and available on any cart deck that has a cart (audio file) playing. It does not matter whether you started the cart with ezCart 2001 or if it was started at the host audio unit. Clicking on the **[Stop]** button will halt the play of the current cart on that channel.



If more than one audio item (cart) is playing on a given channel, the cart that started playing first is the first one stopped, and so on.

Pause Button

The **[Pause]** button is armed and available on any cart deck that has a cart (audio file) playing. It does not matter whether you started the cart with ezCart 2001 or if it was started at the host audio unit. Clicking on the **[Pause]** button will suspend the play of the current cart on that channel. Clicking on the **[Pause]** button again will resume the play of the current cart on that channel.



The Pause feature is not available in XStudio. Clicking on the **[Pause]** button will have no effect.

Play Button

The **[Play]** button is armed and can be used when a given cart deck's queue is not empty. If there are, say, three items in a queue, clicking on the play button will cause first (top) item to play. If a cart deck's queue has no items, the **[Play]** button is disabled.

Using Queues

ezCart 2001 features an individual "queue" (or stack of carts) for each playback channel. The queues are simply a place you can place carts you may wish to play at a later time.



The queues can be shown or not shown by selecting **View | Deck Queues**. This menu item serves as a toggle, alternately displaying and hiding the queues. If you do not use the queues, you may wish to hide them to provide more screen space for the buttons.

Adding Carts to a Queue

Carts can be placed in the queue by dragging them from the Cart Inventory List or dragging them from a button. In Standard Mode, **[Shift-Right-Click]** on a button will start the drag operation. In TouchScreen Mode, simply touch (or click) the button, then touch or click on the queue you wish to add the cart to. The queue can be re-ordered by dragging the queue items within the list. You can also drag an item in the queue to another queue.

Playing Carts in a Queue

When a given queue has carts in it, the corresponding cart deck's **[Play]** button is armed. To play the cart at the top of the queue, click on the **[Play]** button. The cart will be played on the host audio unit and will disappear from the queue. You can also play a cart that's in a queue by dragging the cart to a cart deck and dropping it. The cart will be played on the play channel (cart deck) you've dropped the cart on and the cart will be deleted from the source queue.

In either play scenario, only the cart selected for play will be played. The queues are not activated, as they are on a DCS or Maestro unit. They are "one-shot" lists. Each time you play a cart from the queue, only that cart will be played. The rest of the list is not affected in any way.

Deleting Carts from a Queue

You can remove (delete) a cart from a queue by either dragging it to the trash can on the toolbar or **[Right-Click]** on the queue with an item selected. A pop-up menu will appear. Select **Delete Cart from Queue**. The cart will be removed from the queue.



Deleting a cart from the queue has no impact other than removing that item from the queue.

Playing or Queuing Non-Button Carts

You can play or place in a queue carts that have not been programmed on a button. To do so, click on the **[Inv]** buttons on either side of the queues (if displayed), select **View | Show Inventory** from the main menu, or use the shortcut key **[Ctrl-I]**. The Cart Inventory List will be displayed. You can select a cart from the list and either drag it to one of the queues or drag it to one of the cart decks. In the case of dragging the cart to a cart deck, it will be played immediately.

Navigating Button Pages

You can navigate through the 20 pages of buttons (20 buttons per page) by clicking on the tab (page) you wish to view. Each page can be named (see the section on [Naming Button Pages](#)). An alternative method of navigation is to use the [Button Pages](#) dialog. You can activate this dialog by selecting **View | Page Select Buttons** on the main menu. This menu option toggles the Buttons Pages dialog on and off.

Programming a Button from the Main Display

You can program buttons any of three ways - drag and drop operations, selecting a single button to program, or launching the button configuration dialog.

Drag and Drop

The easiest method for programming a single button is to display the Cart Inventory List, then drag a selected cart to a button and drop it. If the button already has a cart or function assigned, you'll be prompted to confirm the change. Dropping a cart on a button does not change the button color or text color and assigns the "Default Channel" as the play back channel for the cart. If you wish to program a single button and change the colors or playback channel, use either the single button method or [Button Configuration Dialog](#).

Select a Single Button

To program a single button, including changing the button colors and/or the play back channel, [**Right-Click**] on the button you wish to change. A pop-up menu appears. Select **Configure Button**. The Button Configuration Dialog will be displayed with the correct button selected. Make any changes you wish to the button and click on the [**Save**] button to save the changes.

Button Configuration Dialog

You can access and change all buttons by selecting **Edit | Button Setup** from the main menu, or clicking on the [**Buttons**] button on the toolbar. The [Button Configuration Dialog](#) will be displayed and you can change any or all buttons.

Erasing (Clearing) a Button

To erase or clear a button you no longer need, [**Right-Click**] on the button you wish to erase. A pop-up menu appears. Select **Clear the Button**. The button contents will be cleared. The button colors will be set to the default button color and text color you set in [User Preferences](#).



You can also clear buttons in the Button Configuration Dialog by erasing the contents of the cart number and description fields.

Naming Button Pages

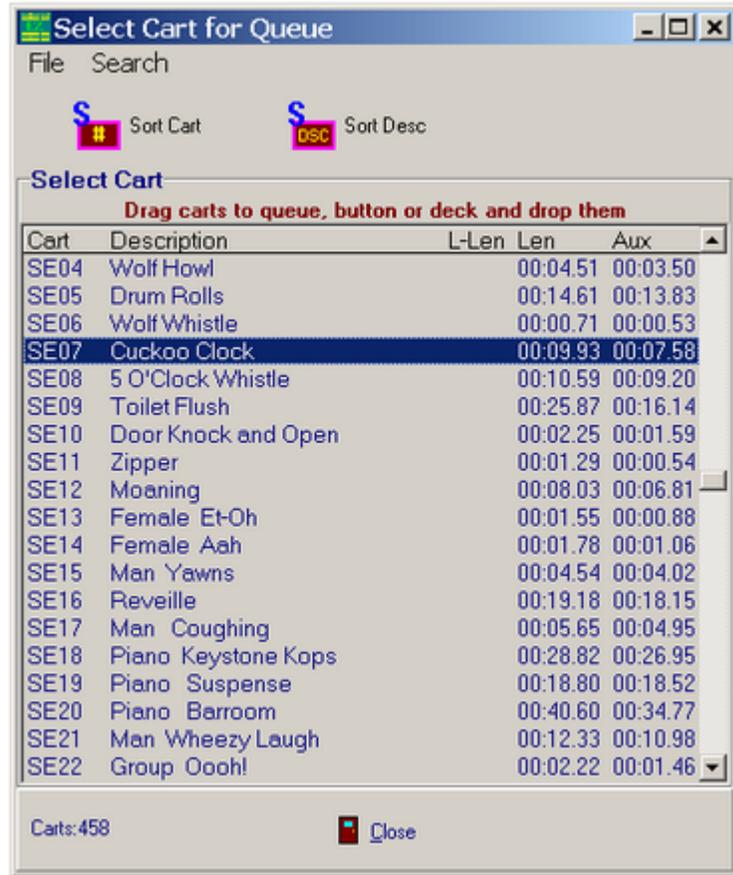
To name a button page, [**Right-Click**] on the page, then select the Page Name item from the pop-up menu. The default naming of the pages is the numbers 1 through 20. You do not have to name the pages, but naming them may be helpful in identifying the contents (types of carts, for instance) on a given button page.

5.2 Cart Inventory List

You can display a list of available carts (cart inventory list) in ezCart 2001 in two places - 1) On the [Main Display](#); and 2) On the [Button Configuration](#) dialog. In either case, a window similar to the example below is displayed. The list shows available carts, including begin and end dates for the carts. Expired carts and future-dated carts are displayed in different colors. The inventory list can be sorted by cart number (the default) or by description. You can also search for a particular cart by either cart number or description.



You can change the font size of the displayed list on the [User Preferences, User Interface](#) page.



The Cart Inventory List is sizeable and includes a "roll-up" feature, which minimizes the list display but keeps the list caption bar displayed exactly where you've positioned it.

Using the Cart Inventory List to select carts

The Cart Inventory List is used primarily to program buttons by selecting the cart you want and then dragging it to the appropriate button (main display) or dragging it to the Cart Number or Description field (Button Configuration). On the main display, you can also drag carts to any of the available queues and/or available cart decks. If you drag a cart from the Cart Inventory List to a cart deck, it will be played immediately on the deck you selected. If you drag a cart to the queue, it will be added to the queue in the position you drop it. In Touch Screen Mode, clicking on or touching a cart in the list "selects" the cart. Then, touch or click on a queue, button or cart deck to complete the action.



If you attempt to drag a cart to a button that has already been programmed, you will be prompted to confirm that you want to change the button contents.

Sorting the Cart Inventory List

You can sort the list of carts by either cart number (default) or by description. To sort, click on the sort buttons, [**Sort Cart**] or [**Sort Desc**]. You can also click on the header items "Cart" or "Description" to sort the list.

Searching the Cart Inventory List

To search for a cart, select the menu item Search - then choose either By Cart Number [**Ctrl-N**] or By Description [**Ctrl-D**]. You'll be prompted to enter what you wish to search for.

The searches will look for the combination of characters you entered anywhere in the selected field (cart number or description). For instance, if you enter "01" as the search criteria for a cart number, the search will find "0001", "0010", "0100", "Z01A", etc. The same applies to searching the description field. If a match is found, you'll be prompted to continue searching for more matches. If a matching cart cannot be found, a prompt is displayed, indicating no matching carts were found.

5.3 Button Pages Dialog

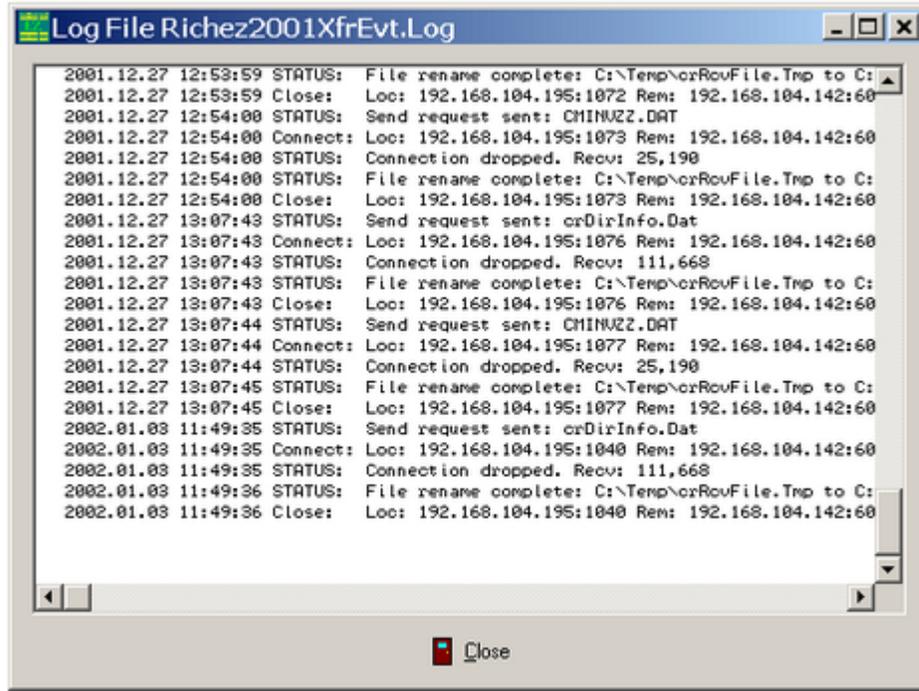
The Button Pages Dialog is a graphical display of the pages of buttons available. Its primary use is for easy selection of a page of buttons when running ezCart 2001 in Touch Screen Mode. Each available page is represented by a button, including the assigned page name. The dialog can be placed anywhere on the screen and sized to your preference. Clicking on one of the page buttons select the associated page of buttons on the main display.

You can activate this dialog by selecting **View | Page Select Buttons** on the main menu. This menu option toggles the dialog on and off.



5.4 Viewing Event Logs

A number of event and activity logs are kept by ezCart 2001. Some can be enabled from [User Preferences](#), others are kept automatically. When you select a menu item that calls for viewing a log, a dialog similar to the one below appears. You can scroll through the items, up and down, left and right.



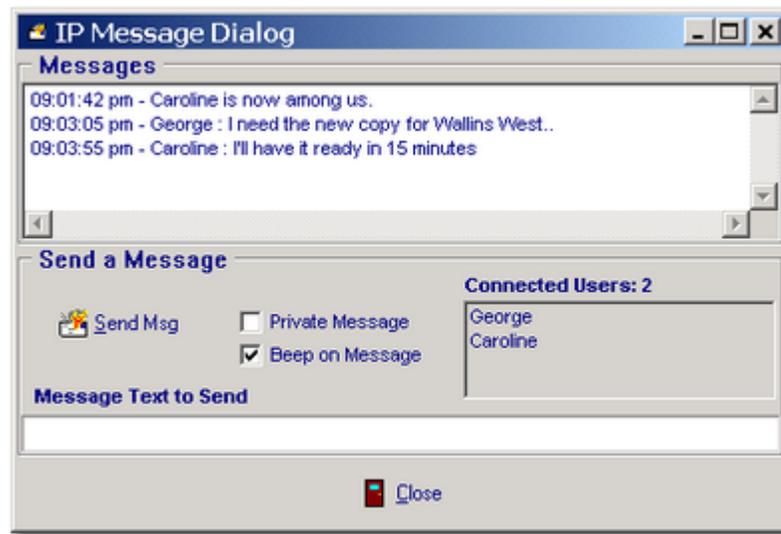
You save these log files to a file name and location of your choosing. **[Right-Click]** on the log items, then select **Save Log File As**. You'll be prompted for a file name and folder location. The file is saved as a standard ASCII file.

5.5 TCP/IP Only

5.5.1 Instant Messaging

If you are using ezCart 2001 via a TCP/IP connection, you can communicate with other users who are also connected to the same host [rcServer](#) via the IP Message Dialog. You can send text messages to all connected users or send a private message to one selected user. Each message is limited to 80 characters in length, including spaces. You will also receive messages, which are displayed in this dialog, either those sent as part of a broadcast message to all users or a private message from another user to you only.

To use the messaging feature, click on the **[Open IP message dialog]** button on the main display. A dialog similar to the following will be displayed:



Display Roll-Up

To help with screen clutter, this dialog has a "roll-up" feature. Click on the Windows **[Minimize]** button and the dialog "rolls up" - only the title bar is displayed. To "unroll" it, click on the Windows **[Maximize]** button.



To truly minimize the display, click twice on the **[Minimize]** button. The first click will "roll up" the display, the second will minimize it. To restore the display, click on the **[Maximize]** button once to restore it to it's "rolled up" state, then again to make the full display visible.

Messages

The Messages area displays messages sent and received in chronological order. The time of the message, the user who sent the message, and the message text is displayed for each message. The messages window can be scrolled up and down, left and right as needed.



Messages are not retained when you exit ezCart 2001.

Send a Message

The text of the message you wish to send is entered in the Message Text to Send edit control. You control whether the message is sent to all users or to just one user by checking or un-checking the Private Message check box.

All Users

A message you've entered is sent to all users connected to the host rcServer when the Private Message check box is not checked. After typing the message, click on the [**Send Msg**] button.

Private Message

A message is sent privately to only one user when the Private Message check box is checked and you have selected a user from the Connected Users list by clicking on one of the user names. After typing the message, click on the [**Send Msg**] button. It will be sent only to the selected user - other connected users will not receive the message.



A private message is private only in the sense that it is not sent to connected users other than the one you select. Be aware that the host rcServer application records and displays all message traffic among connected users, including private messages. The rcServer administrator would therefore be able to see any messages declared as "private" by ezCart 2001. In addition, the message is sent as standard text, non-encrypted, so the message content could be intercepted if you are connecting to the host rcServer via the Internet.

Beep on Message

Because you might not always have the messaging dialog displayed or may have it "rolled up", you can have ezCart 2001 "beep" when a new message is received. Enable this feature by checking the Beep on Message check box.



The "beep" volume is controlled by the Windows audio volume setting on your PC. Some PC's do not implement this feature well and the sound may be very low level or even non-existent, depending on whether or not you have a sound card installed and/or and adequate PC speaker.

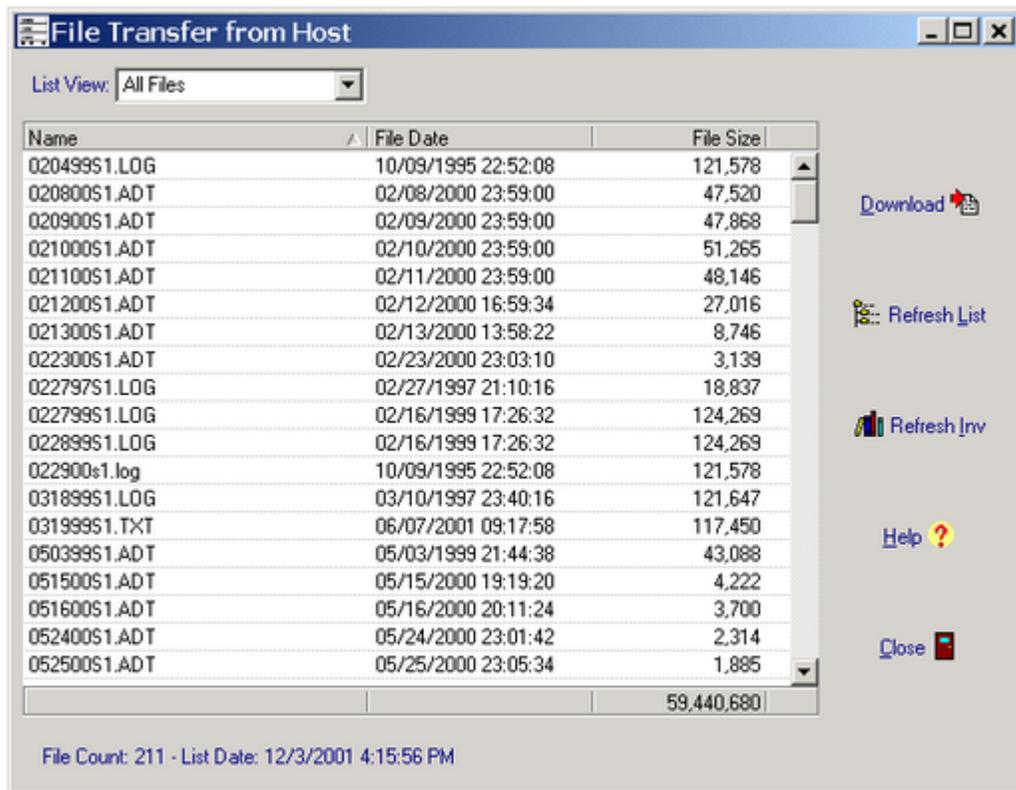
5.5.2 Transferring Files

If you are using ezCart 2001 via a TCP/IP connection, you can transfer files from the host [rcServer](#) to your PC. The administrator of the host server application will decide which files, if any, will be made available for download. Files made available could include station logs, audit reports, even audio files. There are no restrictions on either the type or size of files you may be able to download, other than the usual requirements of having enough disk space locally to receive the entire file. Keep in mind that large files may take quite a bit of time to download, particularly if your connection to the host rcServer is via modem on the Internet.

The actual transfer of a file is a background process, so you can start a download and go back to other work you may be doing within ezCart 2001. Although ezCart 2001 will transfer only one file at a time, it will create a "queue" or list of files to be downloaded if you start a file download while another file is already being downloaded (in-progress).

ezCart 2001 will automatically download the cart inventory file from the host server application if you so desire. See the section on [Configuration - General Preferences](#) for information on setting ezCart 2001 to automatically refresh the inventory.

To use the file transfer capability, click on the **[File Xfr]** button on the main display of ezCart 2001. A display similar to the following will appear:



Display Roll-Up

To help with screen clutter, this dialog has a "roll-up" feature. Click on the Windows **[Minimize]** button and the dialog "rolls up" - only the title bar is displayed. To "unroll" it, click on the Windows **[Maximize]** button.



To truly minimize the display, click twice on the **[Minimize]** button. The first click will "roll up" the display, the second will minimize it. To restore the display, click on the **[Maximize]** button once to restore it to it's "rolled up" state, then again to make the full display visible.

File List

The file transfer display includes a list of available files, retrieved automatically from rcServer. The file

list can be displayed in several ways. Select the List View of your choice from the drop down list of choices. Choices include:

- **All Files.** This list displays all available files, including file name, file date, and file size. This is the default view.
- **Log Files Only.** Only files with an extension of .LOG will be displayed. Typically, these would be DCS or Maestro Logs.
- **Audit Files Only.** Only DCS or Maestro audit files are displayed - those with a file extension of .ADT.
- **All Information.** Lists all files, and additionally displays the file's directory location on the host rcServer machine.

The list can also be sorted, either ascending or descending, by clicking on the header names. Clicking on the File Date column heading, for instance, will sort the files by date from earliest to latest. Clicking on the same column heading again will reverse the sort to become, in this example, the newest to oldest dated files. A "caret", which is displayed in one of the column headings, indicates the column the list is currently sorted on and indicates the order of sorting. An "UpCaret" indicates ascending order, a "DownCaret" descending order.

Download a File

To download a file, select one in the list by clicking on it, then click on the **[Download]** button. When the download is complete, a status message indicating the success (or failure) of the download will appear on this display as well as in the IP Status Messages section (if displayed) on the main display.



Once you have started the download, you can return to the main display if you wish. File transfer is a background task.

Refresh the File List

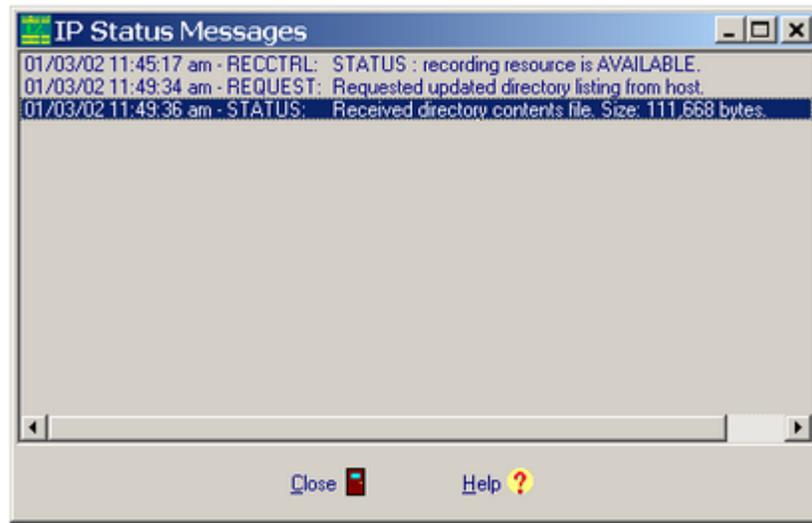
The list of available files can be updated on-demand by clicking on the **[Refresh List]** button. ezCart 2001 will then request an updated list from the host rcServer. Upon completion of retrieval of the updated list, the list display is updated to reflect the current, available files.

Refresh Inventory

Click on the **[Refresh Inv]** button to manually request an updated host DCS or Maestro inventory file. Once the updated inventory file has been retrieved from the host rcServer, it will be displayed on the main display if the remote host inventory is the selected inventory.

5.5.3 TCP/IP Status Dialog

This dialog is available only when connected to the host audio unit via TCP/IP using [rcServer](#). It can be shown or hidden by using the menu item **Help | Trouble Shooting | Display IP Status Messages**. Essentially, this dialog is a log of important communications between ezCart 2001 and the rcServer. The dialog can be re-sized and moved to a location on the screen of your choosing. It also features "roll-up" functionality.



This information can be saved to a file for trouble-shooting purposes - **[Right-Click]** on the log items and select **Save Status Message Log to File**. You'll be prompted for a filename and folder location. The file is saved as a standard ASCII text file.

Appendices

Part



6.1 Appendix A - Registration

ezCart 2001 requires a valid registration code to enable full use of the product. If you have purchased ezCart 2001, you should have received a registration code with your installation materials. The registration code contains the product serial number.

If no registration code is entered or available, you will be able to run ezCart 2001 for 1 hour at a time to evaluate the product. ezCart 2001 will shut down automatically after 1 hour in trial mode (unlicensed copy).

Enter registration information by selecting **Help | Register ezCart 2001** from the main menu. You'll be presented with a dialog similar to the following:



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. **Do not save the registration information without a valid registration code entered!**

6.2 Appendix B - Troubleshooting

ezCart 2001 should be trouble-free, but there are some areas where problems could occur. Typically, these problems are related to initial setup and use of ezCart 2001. In general, problems encountered will fall into four areas - 1) serial communication with the DCS or Maestro unit (if applicable); 2) TCP/IP communications problems (if applicable); 3) locating and loading inventory files; and 4) bugs in ezCart 2001 and/or application errors related to running ezCart 2001 on a particular PC.

Serial Communications Problems

By far, the largest number of difficulties fall into this area. In order to make finding the problem as simple as possible, ezCart 2001 includes a built-in debugging tool, known as a terminal component. It is accessible from the **Help | Troubleshooting | Display Serial Data** menu on the main application display.

The terminal component, when enabled, displays as a popup dialog and provides functionality similar to the Windows Terminal program or Windows 95, Windows 98, Me, NT, and Windows 2000's HyperTerminal program. It would be normally used as a tool to view serial communications. If you're seeing data, the communications link is working - if not, then you need to investigate why. You can also manually enter commands in the terminal component, using the documented DCS External Interface Specification.

Serial Trouble Shooting Steps:

1. Check to be sure that you have a working cable connected between the ezCart 2001 machine and the DCS or Maestro unit. This cable must be configured as a "null-modem" cable. See the section on [serial interface](#) for details on wiring pin-outs for the serial cable.
2. Ensure that you have selected a valid, working serial port on the PC on which ezCart 2001 is running. There should be no other devices using the same port. A common example would be an internal modem using the same port number as a serial port that appears on the exterior of the PC, but is not enabled. You may also have inadvertently chosen the modem port instead of the available serial port on two port machines. Use the [**Select COM Port**] button in the ezCart 2001 configuration display to select a port. This dialog interrogates the PC and returns only valid ports.
3. Ensure that the serial port you've selected on the DCS or Maestro unit is a valid, working port.
4. Check the DCS or Maestro machine configuration to be sure you've set up the machine properly for serial communications. See the section on [Setting Up DCS](#) or [Setting Up Maestro 3](#) for more information, or consult your system manual.
5. If you have performed all of the above steps and communications are still not happening, it's time to experiment. Perform these steps one at a time, then test, then the next, etc., to isolate the problem.
 - a) Try changing which serial port is used, if possible, on the PC that's running ezCart 2001.
 - b) Try changing which serial port is used on the DCS machine.
 - c) Try to locate a known-to-be working serial cable configured as a null modem cable and substitute it for the cable you have been using.

TCP/IP Communications Problems

Most often, TCP/IP communications problems will occur if you don't have the host and client applications using the same ports, TCP/IP is not installed on either the rcServer machine or the ezCart 2001 machine, or the port(s) selected for ezCart 2001 are already in use by another application. If you are connecting remotely, it may be that the ports you are trying to use are blocked by a firewall.

Debugging Tools

- A. ezCart 2001 includes a built-in debugging tool, known as a terminal component. It is accessible from the **Help | Troubleshooting | Display Serial Data** menu on the main application display.

The terminal component, when enabled, displays as a popup dialog and provides functionality similar to the Windows Terminal program or Windows 95, Windows 98, Me, NT, and Windows 2000's HyperTerminal program. It would be normally used as a tool to view serial communications data sent to ezCart 2001 via the rcServer. If you're seeing data, the communications link is working - if not, then you need to investigate why.

- B. Another tool available is the [TCP/IP Status Dialog](#), which provides information on data communications between ezCart 2001 and the host rcServer. Status information on file transfer requests and results of the transfer are examples of information available in this dialog. TCP/IP communications problems - disconnects or other sorts of problems - are also available in the dialog.
- C. Event Logs are available for both text communications (commands, instant messaging, etc.) and File Transfer. You can view these logs from the **Help | Trouble Shooting** menu. See the section on [Viewing Event Logs](#) for more information.

Ports must be the same on both ezCart 2001 and rcServer

You must use the same port number for both ends of the TCP/IP communication. For example, if rcServer's file transfer port is 6000, then ezCart 2001 must be configured for port 6000 or communications will fail. The same applies to the text & command service. Be careful not to reverse port numbers - i.e. inadvertently assigning the file transfer port to the text and command port or vice versa.

TCP/IP is not installed or wrong version

TCP/IP networking must be installed on both the ezCart 2001 machine and the rcServer machine. Further, the TCP/IP networking version number should be version 2 or above. Consult your operating system documentation for assistance in assuring that you have TCP/IP installed correctly and working.

A selected TCP/IP port is already in use

If you configure ezCart 2001 to use a port that is already in use by another application, communications will fail. ezCart 2001 provides a fairly wide range of port numbers to choose from - you may use port numbers 5300 through 6999.



The port numbers for the text & command service (Listen Port) and file transfer service must be different.

Problems Loading Inventory Files

If ezCart 2001 can not find an inventory file, an error message will be displayed. The cause of the problem is that ezCart 2001 did not find the file where you indicated it was in your user configuration, that you selected the wrong node to configure, or that you have mapped directory locations using UNC conventions and there's a problem with the UNC address.

To prevent erroneous directory locations, use the directory picker button in the ezCart 2001 preferences form to select the directory from a list of available drives and directories. If you can't see the directory you want, either you do not have rights to access the directory, or you're not logged into the server that has the directory location you want.

Be sure that you're selecting the correct node in the ezCart 2001 configuration area. It should match the node number assigned in the DCS configuration file for a given work station. If the node number assigned in DCS is 3, then you should configure node 3 in the ezCart 2001 preferences display.



ezCart 2001 will work with UNC directory names, but may fail to find the file if you've not logged in to the server on which the file is located. ezCart 2001 will not automatically log you in. It is recommended that you use mapped drives for your connections to inventory files when using ezCart 2001.

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.

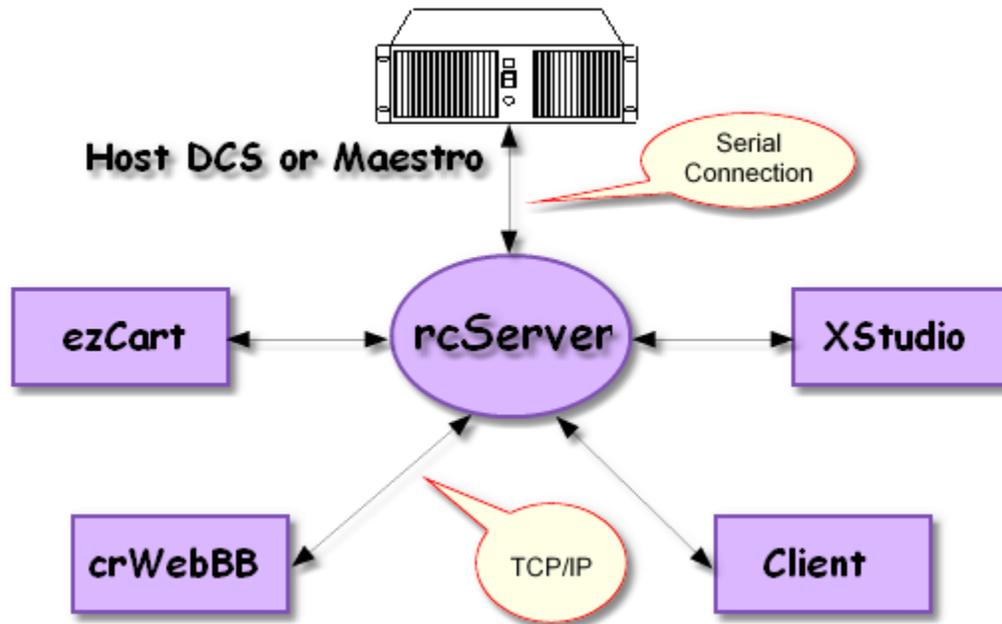
If you find a bug, report it. Every effort is made to ensure ezCart 2001 performs as expected, but there may be circumstances that were not predicted in the development of the software.

If you encounter an error, you will get an error message indicating a severe failure and ezCart 2001 may terminate. Provisions are made to "catch" such errors and log the error information to a file in the ezCart 2001 application directory named **cr2001Except.Log**. This log can be viewed from within ezCart 2001 by selecting **Help | Trouble Shooting | Application Error Log** from the main menu display. See the section on [Viewing Event Logs](#) for more information. Again, report any application errors you encounter. You may be asked to send the appropriate log file for analysis.

You may also be asked to enable the ezCart 2001 "debug mode", which adds additional trouble shooting capabilities. When debug mode is enabled, you can display the debugging information by selecting the menu item **Help | Trouble Shooting | Display Debug Window**. For more information, see the sections [Debug Window](#) and [Appendix E - Command-Line Switches](#).

6.3 Appendix C - rcServer Information

rcServer(remote control Server) is a program that serves as a communications bridge between multiple "client applications" and a Maestro v3.0 (or above) or DCS unit. It might also be called an "application server" or "host server". "Client applications" include any software program that needs or wants to communicate with these audio delivery systems. ezCart 2001 is one such client application.



As the diagram illustrates, there are some major benefits of using rcServer:

- A. As the DCS or Maestro unit requires a serial connection, there can be only one serial connection to the host audio delivery unit. rcServer overcomes this by being the single serial connection and hosting multiple TCP/IP connections by clients.
- B. rcServer communicates with the client applications via TCP/IP, which allows for more flexible connections. The client application is not limited by the requirement for a physical serial cable connection to the host audio unit. Client applications can even connect via the Internet if your in-house LAN infrastructure permits.
- C. rcServer supports multiple, concurrent connections by client applications, allowing more than one application to utilize the resources of the host audio delivery unit.



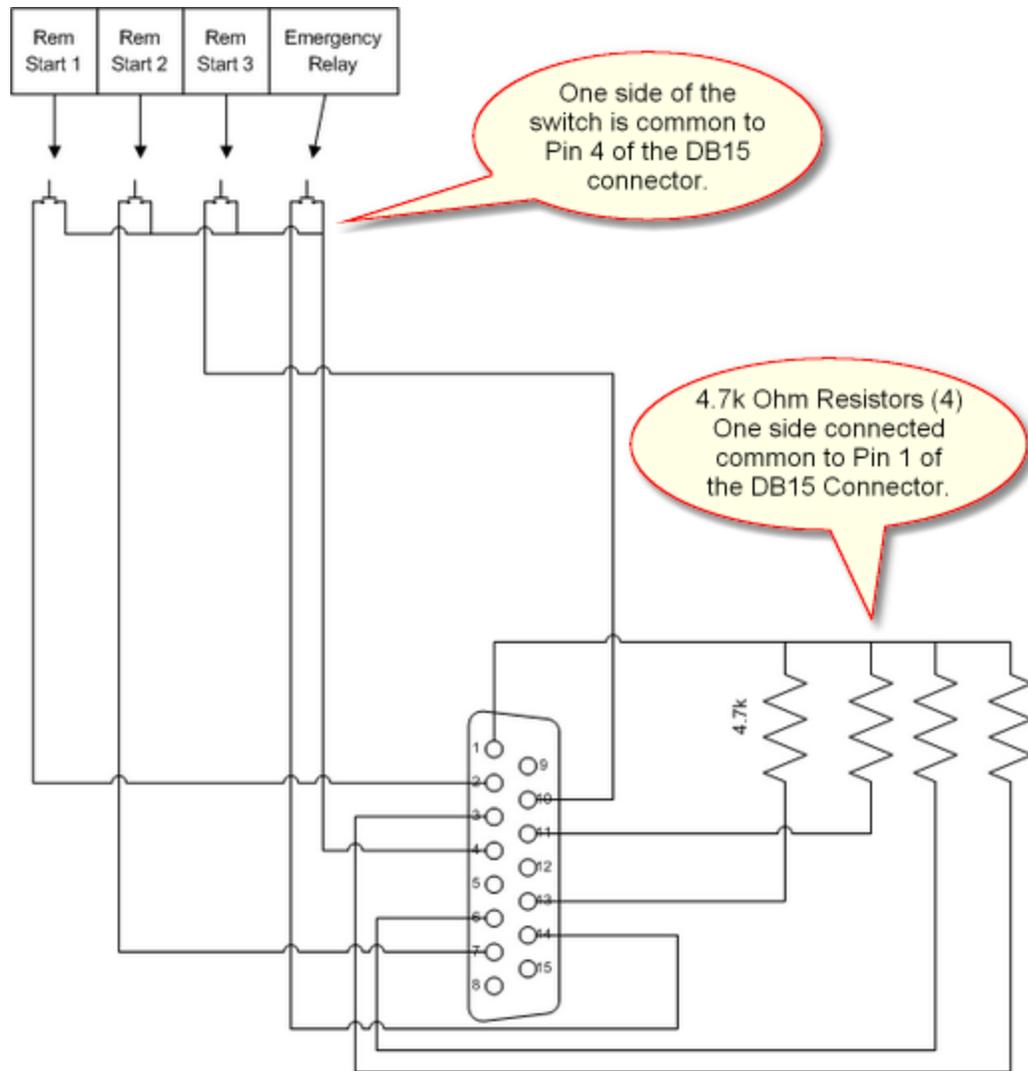
While multiple connections are supported, there are still certain limitations, including only one recording activity at a time and no more than two or three (depending on number of discreet audio outputs) playback actions at the same time. These limitations are imposed by the host audio delivery unit.

For more information on acquiring and using rcServer, contact your ezCart 2001 vendor.

6.4 Appendix D - Setting Up Remote Starts

If you wish to use the remote starts feature of ezCart 2001, you need to have an available game port (joystick port) on the PC on which ezCart 2001 is running. Further, you will need to wire a connector using the diagram provided here. ezCart 2001 uses the associated buttons 1, 2 and 3 to remote start carts in it's respective cart decks (Deck 1, Deck 2, Deck 3). The push buttons used could be either a console remote start or a custom-made set of normally-open push buttons.

Button 4 is can be used for triggering an action that executes in case of an emergency.



Set Game Port to 2-axis, 4 button

You need to be sure that the game port on the ezCart 2001 PC is enabled and set to **2-axis, 4-button** operation. You may need to install the joystick port driver.



In the Windows NT v4.0 environment, install the **analog** joystick port driver, located on your NT setup CD.

6.5 Appendix E - Command Line Switches

ezCart 2001 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 ezCart 2001 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:\ez2001\ezCart2001.exe /debug /lan`

Available Command-Line Switches

<u>Switch</u>	<u>Switch Usage</u>
/Debug	This command-line switch enables additional tracking of information during application execution. ezCart 2001 will add a menu item (Help Show Debug Window) to the main display. You can view this additional information in the debug window dialog and/or save the debug file by using a pop-up menu item in the dialog. See the section on Debug Window for more information.
/Lan	Normally, ezCart 2001 stores preferences (configuration information) in the operating system's windows directory of the host PC. The information is stored in an INI file (a text file). Occasionally, users would prefer this information be stored in the application directory (co located with the program). Use the /lan switch to accomplish this. If this switch is used, preferences information is stored in the ezCart 2001 program directory, which might be on a shared LAN drive.



If you start with the default storage location (the windows directory) and later invoke the /lan switch, you should copy the ezCart 2001 INI file to the application directory before restarting ezCart 2001. The INI file name is **ezCart.INI**.

6.6 Appendix F - List of Files

This table is a list of files that are either created by or a part of ezCart 2001.



Log files, including the text event, file transfer, application error and button file save logs, are not automatically deleted or truncated. Over time, it is possible these files will grow in size and it may be desirable to delete them to avoid wasted disk storage space. The files will be re-created as necessary by ezCart 2001 during normal program operation.

<u>File Name</u>	<u>Folder</u>	<u>Purpose</u>
ezCart2001.EXE	Application	The ezCart 2001 program.
ezCart2001.CNT	Application	Table of contents file for the ezCart 2001 help system.
ezCart2001.HLP	Application	ezCart 2001 help file.
ezCart.ini	Windows (default)	ezCart 2001 preferences file. License information and user preferences are stored in this file. See the section on Preferences File for more information.
usernameez2001TxtEvt.Log	Application	A text file that contains communications & commands event information. The filename is in the form usernameez2001TxtEvt.Log , where the user name is the one entered by the user in the preferences dialog. Note: This file is only created and present if you are using TCP/IP as the communications method and have enabled event logging in preferences.
usernameez2001XfrEvt.Log	Application	A text file that contains file transfer event information. The filename is in the form usernameez2001XfrEvt.Log , where the user name is the one entered by the user in the preferences dialog. Note: This file is only created and present if you are using TCP/IP as the communications method and have enabled event logging in preferences.
ez2001Except.Log	Application	A text file that contains information about "exceptions" or failures of ezCart 2001 to operate properly. When a "fault" is detected, information is automatically written to this file. The file may be requested by support personnel. See the section on Application Errors for more information.
ezcart .err	Application	A text file that contains a log of ezCart 2001 button file saves. Information included is when the save of a button started, errors (if any) and when the save completed.

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