HDCC-708 (CEA-608/CEA-708)

HD/SD-SDI Closed Captioning Solution

HDCCRegEdit708 User Guide HDCCRegEdit708: V1.22 HDCC-708 FPGA: V2.25 HDCC-708 PIC: V1.10

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CHAPTER 1 Modifying the Registers

Introduction

Overview

This chapter describes how to install and use the HDCCRegEdit708 application, and modify the HDCC registers.

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Chapter 1Modifying the Registers Downloading and Installing the Application

Downloading and Installing the Application

	1.	Launch your web browser and navigate to www.wohler.com.	
	2.	Click the Products tab.	
		A. Mouse down to Caption and Data.	
		B. Mouse right to 608/708 Capable.	
		C. Mouse down to HDCC-708MULTI and click to select.	
	3.	When the product displays, click the Downloads tab about halfway down the page.	
	4.	Click on HDCCRegEdit708.zip.	
	5.	When the Save As dialog box appears, navigate to the desktop and click Save .	
	6.	Unzip the application and save it to the desktop.	
ortant:	HE Env http	OCCRegEdit708 requires the latest version of Java Runtime vironment to be installed. It is available for download at: p://java.com/en/download/index.jsp.	

Setting Up the Hardware

Imp

- 1. Refer to the *HDCC Configuration Guide* (PN 821141) for instructions to connect your HDCC card to your PC and video sources.
- 2. In our example, we're using the serial port to demonstrate how to set the serial communications. Set **Switch 1 to E** to access the engineering menu via the serial port.

Establishing Communications from the PC to the HDCC

- 1. On the PC, launch HDCCRegEdit708.
 - **Note:** The HDCCRegEdit708 application runs on Microsoft[©] Windows XP, Windows Vista, and Windows 7.
- 2. When the application window displays (Figure 1–1 below) press Scan to display the available COM ports.

Figure 1–1 HDCC Registry Editor Application Window

🕅 HDCC 708	Registry Editor	
Preferences Set	tings About	
Registry editor for the Wohler HDCC 708 closed captioning card	Connected device: Card message: Connected for the setting of the	Scan
v1.2.2	PIC Microcode version:Xilinx Firmware version:	=Ĵ≇ (Disconnect

Chapter 1Modifying the Registers Establishing Communications from the PC to the HDCC

- 3. On the **Connection** tab, do not change the port setings. Use the settings shown in Figure 1–2 below. Click **Connect**.
 - **Note:** Port settings should remain at 38400, 8N1 in the communication tab for the current HDCC hardware platform. This includes Codan, Evertz and IRT form factor cards.

Figure 1–2 Setting the Port Settings

🖾 HDCC 708	Registry Editor	
🧟 Preferences Set	tttings About	
Registry editor for the Wohler HDCC 708 closed captioning card	Image: Select port: Serial port : COM1 (AVAILABLE) Port settings: Baud rate : 38400 Stop bits : 1 Parity : None	Scan
	Connected device: Card message: PIC Microcode version: Xilinx Firmware version:	- State (Disconnect)
v1.2.2		

Chapter 1 Modifying the Registers Establishing Communications from the PC to the HDCC

When the PC has established communications with the HDCC card, the **HDCCRegEdit708** application window will display the Wohler copyright and the software part number and version (Figure 1–3 below).

HDCC 708	Registry Editor - C	Connected to COM1	
Wohler Registry editor	Select port: Serial port : COM1 (BU	Channel A Channel B	Scan
for the Wohler HDCC 708 closed captioning card	Port settings: Baud rate : 38400 Stop bits : 1	Data bits : 8 Parity : None	✓ ✓ =₩= Connect
	Connected device:		
	Card message:	Wohler 4D Broadcast Platform Copyright (c) 2011 Wohler Technologies, Inc. All Rights Reserved. E-Mail: support@wohler.com	
	PIC Microcode version:	848116 V1.09	
	Xilinx Firmware version:	847132 V2.25	- Disconnect
v1.2.2			

Figure 1–3 Establishing Communication

Chapter 1Modifying the Registers Editing the Register Table

Editing the Register Table

1. Click on the **Channel A** tab as shown in Figure 1–4 to display the current register values for all the registers affecting Channel A.

Figure 1–4

Displaying the Channel A Registers (Top)

HDCC 708 Registry Editor - Connected to COM1	×
Rreferences Settings About	
Connection Channel A Channel B	
Wohler Channel A registers	
Registry editor Register 0×00 9 HD line for CEA-708 insertion	
HDCC 708 closed Register 0×02 21 SD line for CEA-608 insertion	
captioning card Register 0x08 (Transmission features)	
Com port speed : 9600 Bauds	
Enable SMPTE333 protocol [not used yet]	
Register 0×0a 13 SD line for GPI data	
Register 0x0b 13	
Register 0x0e (GPI leds settings)	
GPI monitoring LEDs settings : GPI Rx Ch.A => LEDs 0-3 GPI Rx Ch.B => LEDs 4-7	
Register 0x0f (GPI Tx and Rx polarity control)	
GPI Rx 1 polarity : Normal (active low) GPI Rx 2 polarity : Normal (active low)	
GPI Rx 3 polarity : Normal (active low) GPI Rx 4 polarity : Normal (active low)	
GPI Tx 1 polarity : Normal (active low) GPI Tx 2 polarity : Normal (active low)	
GPI Tx 3 polarity : Normal (active low) GPI Tx 4 polarity : Normal (active low)	
Register 0x10 (Special features 2)	
Video outputs : Normal	
GPI Tx source : GPI mapped input (see reg. 0x13/0x33)	
Register 0×11 (Regen/blank control with external GPI)	
GPI control : No GPI control (recen operation) 🗸	
v1.2.2]

Scroll down to see the rest of the register values (shown in Figure 1–5 below).

Figure 1–5 Displaying the Channel A Registers (Bottom)

🕅 HDCC 708	Registry Editor - Connected to COM1	
Rreferences Sett	ings About	
	Connection A Channel A Channel B	1
Registry editor for the Wohler	Register 0×11 (Regen/blank control with external GPI) GPI control : No GPI control (regen operation) GPI 1 control polarity : Normal (active low) GPI 2 control polarity : Normal (active low)	
HDCC 708 closed captioning card	GPI 3 control polarity : Normal (active low) GPI 4 control polarity : Normal (active low)	
	Register 0x12 (GPI data insertion control and encoder timeout)	
	Insert mode timeout (.5 seconds steps): 7.5	
	Insert mode : Normal (automatic fallback to regen mode after timeout)	
	GPI data insertion	
	Register 0×13 (GPI mapping for Tx)	
	GPI Tx 1 source : External GPI 1 GPI Tx 2 source : External GPI 2	
	GPI Tx 3 source : External GPI 3 🔮 GPI Tx 4 source : External GPI 4	
	Register 0x1d (Decoded channel on mon. output)	
	Decoded channel on mon. output : CC1	
	Common registers	
	Register 0xfd 0x06 Timing offset do not change	
	Register 0xfe (GPO 1 & 2 mapping)	
	GPO 1 source : CH A GPI Rx 1 GPO 2 source : CH A GPI Rx 2	
	Register 0xff (GPO 3 & 4 mapping)	
	GPO 3 source : CH A GPI Rx 3 GPO 4 source : CH A GPI Rx 4	
v1.2.2	Set defaults to ch. A 🦓 Reload ch. A reg. 🗸 Apply to ch. A 💜 Apply to both channels	

Important: Before making any register value changes, refer to the configuration guide associated with your product. The examples in Figure 1–4 and Figure 1–5 above show the register values of the HDCC-708MULTI.

In the event you want to start over and reload the factory defaults, click **Set defaults to ch. A.** (or Set **defaults to ch. B.** for Channel B).

Chapter 1Modifying the Registers Editing the Register Table

3. Modify the register values as needed by using either the dropdown lists, or by typing in the register values. When all of the registers' values are correct, click **Apply to ch A** to save your new settings to the card.

To restore the registers values that the card had before your changes, click **Reload ch. A reg**. button.

To restore the factory defaults register values, click **Set defaults to ch. A** button.

- 4. Click the **Channel B** tab and repeat the same process for Channel B.
- 5. Remember to click **Apply to ch B** to save your changes.

CHAPTER 2 Saving the Configuration and Setting Preferences

Introduction

Overview

This chapter describes how to export the register settings to a file, how to import them from a file, and how to save your preferences.

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Chapter 2Saving the Configuration and Setting Preferences Exporting/Importing the Configuration

Exporting/Importing the Configuration

1. Click **Settings** button at the top left corner of the application window.

Figure 2–1 Settings Options

🚵 Import to current settings	CTRL+I
🛃 Export current settings	CTRL+E

- Click **Export current settings** (or press Ctrl+E) to export your current card settings, or
- Click **Import to current settings** (or press Ctrl+I) to import the configuration settings stored in the file.

Exporting the Configuration

- 1. When the dialog displays, navigate to the location where you want to create the file .
- 2. Name the file and click **Save**. (The file stores in XML format.)

Importing the Configuration

- 1. When the dialog displays, navigate to the location where you stored your configuration file.
- 2. Double-click the filename. As soon as the dialog disappears, the HDCCRegEdit708 will import the register values from the file.

Setting Preferences

1. To set your preferences for the **HDCCRegEdit708** application, click to check (or uncheck) the boxes under **Settings** in the right pane (Figure 2–2 below).

Preferences	
Settings	Settings
	Show internal fields values in tooltips
	Show min / max fields values in tooltips
	Select All Clear All Restore Defaults Apply
	OK Cancel

Figure 2–2 Preferences Dialog

2. Click **OK** to save and close the dialog, or click **Cancel** to cancel your changes and close the dialog.

Chapter 2Saving the Configuration and Setting Preferences Displaying the Application Information

Displaying the Application Information

1. To display the application name, part number, and revision number, click on the **About** button shown in Figure 2–3 below.

Figure 2–3 About Dialog



2. Click **OK** to close the dialog.