

## 4. Summary of remote control commands

All normal remote control commands have a security level of 1 unless otherwise noted. Security is discussed in detail in the *CDQPrima Technical Reference Manual*. The commands and keypad sequences shown here are for revision 33/6.33 and later, and may be different than earlier versions. If you are using an earlier software version, refer to the manual that came with your *CDQPrima* for those commands.

All commands, listed here alphabetically, show the associated keypress sequence in the first column, as well as the Windows clicks required in the third column. If the Windows description says 'DC', then the Direct Command window is used for the command. A check mark (✓) in the last column indicates that the function is available when using the *EasyCall Prima* remote front panel.

### 4.1 CAA Set TA Auto Answer Mode

<Common><TA Setup><DIFs><Auto Ans>	CAA	DC	N/A
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**Definition:** This command is used to set a TA type digital interface to auto answer (allow incoming calls. It does this by asserting the DTR line on the Terminal Adapter (TA). This command can also be used to hang-up a connected call. If auto answer is set to NO, then a connected call (if any) is disconnected.

Once a digital interface line is set to auto-answer NO, then it will not receive any calls. If a call is pending, and auto-answer is enabled, the call will be answered. The auto-answer status of each digital interface is set independently.

Syntax:     **CAA di ?**     print auto answer status for interface **di**  
               **CAA di aa**    set auto answer status for digital interface **di**  
                                   to **aa**  
                                   **di**     =     1, 2, ... 6  
                                   **aa**     =     YES or NO

Factory default:    YES

#### 4.2   CAC            Set TA Auto-Reconnection State

<Common><TA Setup>DIFs<AutoReCon>	CAC	DC	N/A
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Definition:    This command is used to set the TA auto-reconnection status. If **ad** is set to YES, then if a TA connection is dropped, it will automatically be re-established. Only the originating side will attempt to re-connect.

Notes:         Auto reconnect is a powerful feature that is useful in areas where less-than-ideal connections are typical. If auto-reconnect is set to YES, then only the originating *CDQPrima* can drop the call. Otherwise, the originating *CDQPrima* will re-dial the line indefinitely.

Syntax:        **CAC ?**            print TA auto-reconnection state  
               **CAC ad**            set TA auto-reconnection state to **ad**  
                                   **ad**     =     YES or NO

Factory default:    NO

#### 4.3   CAN            Set Ancillary Data Mode

<Common><Anc Data><ASY Adata><MUX mode>	CAN	Setup, Ancillary data	N/A
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Definition:    This command is used to set the ancillary data mux/demux configuration. Ancillary data from the rear panel port can either be muxed (**an** = MUX) with other internally generated ancillary data, or can be routed around (**an** = NOMUX) the data multiplexer for higher throughput and compatibility with older codecs.





Notes: Ancillary data mode must be set to MUX to enable time code, far-end remote control and imported/exported actions (links) available in Prima Logic Language.

Modes 0 through 6 are special DAB application modes. Please contact the factory for more information on these modes.

Syntax: **CAN ?** print current ancillary data configuration  
**CAN an** set ancillary data configuration to **an**  
**an** = MUX, NOMUX, 0, 1, 2, 3, 4, 5, or 6

Factory default: MUX

#### 4.4 CAR Clear Action Word Latched Value

<Common><Status><LS Clear>	CAR	<b>PLL</b>	N/A
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Definition: This command clears the latched value of the action word. The action outputs are printed as a hex number with the msb at the left and the lsb at the right. If a bit is high in the action word, then the corresponding action is high.

The meaning of these bits are as follows:

- BIT 0 RL0 - relay 0
- BIT 1 RL1 - relay 1
- BIT 2 RL2 - relay 2
- BIT 3 RL3 - relay 3
- BIT 4 RL4 - relay 4
- BIT 5 RL5 - relay 5
- BIT 6 RL6 - relay 6
- BIT 7 RL7 - relay 7
- BIT 8 SC1 - send cue 1 LED
- BIT 9 RC1 - receive cue 1 LED
- BIT 10 RLS - summary relay
- BIT 11 VA0 - virtual action 0
- BIT 12 VA1 - virtual action 1
- BIT 13 VA2 - virtual action 2
- BIT 14 VA3 - virtual action 3
- BIT 15 unused
- BIT 16 LN0 - link 0 to far end *CDQPrima*
- BIT 17 LN1 - link 1 to far end *CDQPrima*

BIT 18	LN2 - link 2 to far end <i>CDQPrima</i>
BIT 19	LN3 - link 3 to far end <i>CDQPrima</i>
BIT 20	LN4 - link 4 to far end <i>CDQPrima</i>
BIT 21	LN5 - link 5 to far end <i>CDQPrima</i>
BIT 22	LN6 - link 6 to far end <i>CDQPrima</i>
BIT 23	LN7 - link 7 to far end <i>CDQPrima</i>
BIT 24	LN8 - link 8 to far end <i>CDQPrima</i>
BIT 25	LN9 - link 9 to far end <i>CDQPrima</i>
BIT 26	LN10 - link 10 to far end <i>CDQPrima</i>
BIT 27	LN11 - link 11 to far end <i>CDQPrima</i>
BIT 28	ESM - encoder summary alarm
BIT 29	DSM - decoder summary alarm
BIT 30	unused
BIT 31	unused

Syntax:       **CAR**           clear the latched value of the action word

#### 4.5    **CBR**           Set Loopback Bit Rate

<Common><System LB><Lp Bk Br>	CBR		✓
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Definition:   This command is used to set the digital transmission bit rate when the *CDQPrima* is in system loopback. Loopback testing is ideal for troubleshooting audio input and output.

Syntax :       **CBR ?**           print loop back bit rate  
               **CBR lr**           set loop back bit rate to **lr**  
                   **lr**       =     24, 32, 48, 56, 64, 96, 112,  
                                   128, 192, 224, 256, 384



Special notes: The *CDQPrima* is shipped with default value **lr** = 256. Since this command controls the system loopback before any digital interfaces, it is possible to set the loopback rate to a rate higher than is set for end-to-end transmission. If this is done, the loopback audio quality may be better than the actual audio quality of the transmission.

**The loopback bit rate overrides the selected encoder bit rate when in the *CDQPrima* is in loopback.** If the encoder line format is set to 2-line mode, only loop-back bit rates of

112 and 128 are supported. If any other loop back bit rate is selected, the audio will be muted.

Factory default: 256

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#### 4.6 CBZ Control Internal Buzzer


<Common><Buzzer><Buzzer>	CBZ	DC	N/A
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**Definition:** The internal buzzer is turned on and off using this command. The buzzer can be activated from the far end for alarm signaling.

**Syntax:**      **CBZ ?**                      Prints current buzzer state  
                   **CBZ st**                      set buzzer state to **st**  
    **st**      =      ON or OFF

Factory default: OFF

#### 4.7 CCD Get Last Number Dialed and Data Rate of TA

<Common><TA Setup> <Conn Time><Dspl Num>	CCD		✓
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**Definition:** This command is used to get the last number dialed on an internal terminal adapter. It also displays the data rate of the last call. The form is:

xx yyyyyyyyyyyyyyyyyyyyyyy

where xx = 56 or 64 and yyyyy... is the phone number.

This information, combined with the connect time is useful for determining the cost of a session.

The normal response will be '56' with no phone number when the buffer is empty or after power-up.

**Syntax:**      **CCD di**                      print last number dialed and data rate of a DIF  
    **di**      =      1, 2, ... 6



#### 4.10 CCT Cancel Timer

<Common><PLL><Stop timr>	CCT	PLL	N/A
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**Definition:** This command is used to cancel one of four available internal timers. These timers are used by Prima Logic Language (PLL) to generate events that will occur at some future time. A timer canceled by this command does not create any action.



**Note:** Don't confuse the PLL timers with the VCR-like event timers available with the Windows Remote Control program.

**Syntax:** **CCT tn** cancel timer **tn**  
**tn** = 0 ... 3



#### 4.11 CCV Set LCD Display Contrast

<Common><Contrast>	CCV	<i>Right-click on LCD display</i>	N/A
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**Definition:** The CCV command is used to adjust the contrast of the LCD display over a wide range. There are 128 contrast levels, 0 to 127, lightest to darkest.

**Note:** This command is only supported on hardware revision 6.

**Syntax:** **CCV ?** Print current contrast level  
**CCV cv** Set contrast level to **cv**  
**cv** = +, -, 0...128

#### 4.12 CDC Display TA Digital Interface Connect Time.

<Common><TA Setup><DIFs> <Conn Time><LCD Dsply>	CDC	DC	N/A
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**Definition:** This command is used to display the number of seconds a terminal adapter type of digital interface is connected. When the display is requested, then it is continually displayed on the LCD screen. Displaying the connect time may cover up part of another display.

When the TA enters the connect state, a timer for that digital interface is started and the connect seconds are displayed. When the line is disconnected, the timer is stopped *but not cleared* and it is still displayed. When the digital interface is again connected, the timer is reset and begins counting again. This command is useful for monitoring the time a call is in progress.

Syntax: There are three forms for the command:

```

CDC ?      print the TA connect time display status
CDC NO     stop printing the connect time on LCD
              display
CDC YES di display TA digital interface connect time on
              DIF di
              di = 1, 2, . . . , 6
    
```

The **CDC ?** command has two possible responses. They are:

```

NO
YES di
    
```

The **CDC NO** is used to inhibit the display while the last form is used to display the connect time on digital interface **di** on the LCD display.

Factory default: NO

#### 4.13 CDF Set Default Parameters

<Common><General><Set dflts>	CDF	Setup, Default System	N/A
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Definition: This command is used to set the CODEC to the factory default values, which are listed in Appendix B. Using this command has the same effect as performing a '1' reset.



Note: **Factory defaults do not specify a Digital Interface Module.** After resetting the factory defaults, the *CDQPrima* has no knowledge of any installed Digital Interface Modules or terminal adapters. These must be re-installed.

Syntax: **CDF** sets the factory defaults into the *CDQPrima*

#### 4.14 CDI Dial TA Phone Number

<b>DIAL</b>	CDI		✓
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**Definition:** This command is used to manually dial an ISDN line on a specific digital interface. This command is used to set up a phone call. To manually dial from the keypad, use the **DIAL** button.

To re-dial the last number dials, use **CDI LAST#**, to hang-up a dialed line, use the **CHU** command or press the **END** button.

**Syntax:**

<b>CDI LAST#</b>		re-dial the last number dialed
<b>CDI di db dn</b>		dial phone number <b>dn</b> on digital interface <b>di</b> at bit rate <b>db</b> .
	<b>di</b> =	1, 2, . . . 6
	<b>db</b> =	56 or 64
	<b>dn</b> =	24 digit phone number (versions 30/6.30 and earlier allow 20 digit numbers)

#### 4.15 CDM Display TA Call history

N/A	CDM	N/A	N/A
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**Definition:** This command, available only when using a terminal (or Direct Command window) is used to display a history of the last eight connect attempts. The displayed information includes both calls made and received for all installed terminal adapters

**Syntax:**

<b>CDM</b>	clear call history
<b>CDM ?</b>	display call history

#### 4.16 CDR Set Ancillary Data Rate for Encoder and Decoder DSP

<Common><Anc Data> <ASY Adata><DSP Rate>	CDR	Setup, Ancillary data	N/A
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**Syntax:** This command is used to set the ancillary data rate for the encoder and decoder DSP. The control processor is also involved in the ancillary data process. This data rate is used for communications from the data multiplexer to the encoder DSP and from the decoder DSP to the demultiplexer.



**Note:** When using the MUX mode of ancillary data, the DSP rate must be set higher than the MUX rate. For example, to pass RS232 data at 9600 baud, you must set the DSP rate to 19,200 baud when using the MUX mode, but 9600 baud when using the NOMUX mode.

**Syntax:**

**CDR ?** print encoder and decoder DSP ancillary data rate.

**CDR dr** set encoder and decoder DSP ancillary data rate

**dr = 300, 1200, 2400, 4800, 9600 or 38400**

**Factory default:** 9600

#### 4.17 CDS Delete a Speed Dial Number

<Common><Spd Dial><Del entry>	CDS	Speed Dial, Delete Entry	✓
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**Definition:** This command is used to delete a Speed Dial or Quick Configuration entry **sn** from the directory.

**Syntax:**

**CDS sn** delete speed dial number **sn**

**sn = 0, ... 255**

#### 4.18 CDT Set State of the DTR/CON Line

<Common><Dig I/F><DTR/CON>	CDT	Setup, Digital Interface	N/A
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**Definition:** This command is used to set the state of the DTR/CON line on non-TA type of interfaces. Certain external terminal adapters or CSU/DCUs can use this line for handshaking or call termination. Others require this line to be at a fixed state to operate correctly.

**Syntax:** **CDT di ?** prints the state of the DTR/CON line on digital interface **di**  
**CDT di st** set the state of DTR/CON line on digital interface **di** to **st**  
**di** = 1, 2, ... 6  
**st** = H or L

CDT State	V.35	X.21	RS422
H	+5v	ConA = 5v ConB = 0v	Not Defined
L	-5v	ConA = 0v ConB = +5v	Not Defined

#### 4.19 CEA Set Event To Action Logic


<Common><PLL><Program>	CEA	<b>PLL</b>	N/A
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**Definition:** This command is used to set the event to action logic, and is part of PLL programming. See the Prima Logic Language chapter in this reference for details.

**Syntax:** **CEA lf ?** print the action linked to event **lf**  
**CEA lf [e1]** set event **e1** to action **lf**  
**lf** = LN0..LN11, RL0..RL7, SC1, RC1, VA0..VA3, RLS, ESM, DSM. May be preceded with: (, ), +, -, !, +!, -! or @!  
**e1** = optional event logic

**Factory defaults:** See Appendix C of the CDQPrima Technical Reference Manual.

## 4.20 CEV Print PLL Event Inputs

<Common><PLL><Prt evnt>	CEV		N/A
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**Definition:** This routine is used to print the compiled program for an event-to-action. The event inputs are printed as a hex number with the msb at the left and the lsb at the right. The meaning of these bits are as follows.

If a bit is high in the event word, then the corresponding event is also high.

BIT 0	OI0 - optical isolator input 0	BIT 29	TS1 - timer 1 stopped
BIT 1	OI1 - optical isolator input 1	BIT 30	EPL - encoder phase locked loop
BIT 2	OI2 - optical isolator input 2	BIT 31	DPL - decoder phase locked loop
BIT 3	OI3 - optical isolator input 3	BIT 32	LN0 - decoder link 0
BIT 4	OI4 - optical isolator input 4	BIT 33	LN1 - decoder link 1
BIT 5	OI5 - optical isolator input 5	BIT 34	LN2 - decoder link 2
BIT 6	OI6 - optical isolator input 6	BIT 35	LN3 - decoder link 3
BIT 7	OI7 - optical isolator input 7	BIT 36	LN4 - decoder link 4
BIT 8	BER - decoder bit error detector	BIT 37	LN5 - decoder link 5
BIT 9	OOF - decoder out of frame detector	BIT 38	LN6 - decoder link 6
BIT 10	SEL - enc left channel silence detector	BIT 39	LN7 - decoder link 7
BIT 11	SER - enc right channel silence detector	BIT 40	LN8 - decoder link 8
BIT 12	SDL - dec left channel silence detector	BIT 41	LN9 - decoder link 9
BIT 13	SDR - dec right channel silence detector	BIT 42	LN10 - decoder link 10
BIT 14	SE - encoder stereo silence detector	BIT 43	LN11 - decoder link 11
BIT 15	SD - decoder stereo silence detector	BIT 44	DSPD - decoder DSP dead
BIT 16	CI0 - optical isolator input 0	BIT 45	DSPE - encoder DSP dead
BIT 17	CI1 - optical isolator input 1	BIT 46	DSPR - Reed-Solomon DSP dead
BIT 18	CI2 - optical isolator input 2	BIT 47	DSPV - VU DSP dead
BIT 19	CI3 - optical isolator input 3	BIT 48	FRAMED - decoder framed
BIT 20	CI4 - optical isolator input 4	BIT 49	CD1 - DIF 1 carrier detect / indicator
BIT 21	CI5 - optical isolator input 5	BIT 50	CD2 - DIF 2 carrier detect / indicator
BIT 22	CI6 - optical isolator input 6	BIT 51	CD3 - DIF 3 carrier detect / indicator
BIT 23	CI7 - optical isolator input 7	BIT 52	CD4 - DIF 4 carrier detect / indicator
BIT 24	DDAPLL - decoder digital audio PLL locked	BIT 53	CD5 - DIF 5 carrier detect / indicator
BIT 25	EDAPLL - encoder digital audio PLL locked	BIT 54	CD6 - DIF 6 carrier detect / indicator
BIT 26	TI0 - timer 0 running	BIT 55	TI2 - timer 0 running
BIT 27	TI1 - timer 1 running	BIT 56	TI3 - timer 1 running
BIT 28	TS0 - timer 0 stopped	BIT 57	TS2 - timer 0 stopped
BIT 29	TS1 - timer 1 stopped	BIT 58	TS3 - timer 1 stopped

Syntax:     **CEV ev**     print event inputs **ev**  
                   **ev**     =     ALL, OI0...OI7, BER, OOF,  
                                   SEL, SER, SDL, SDR, SE, SD,  
                                   CI0...CI7, DDAPLL, EDAPLL,  
                                   TI0...TI3, TS0...TS3,  
                                   LN0...LN11, ESM, DSM, EPL,  
                                   DPL, DSPD, DSPE, DSPR, DSPV,  
                                   FRAMED, CD1...CD6

#### 4.21 CFB           Set Front Panel Remote Control Baud Rate

<Common><FPRmt Ctl><FP baud>	CFB	DC	N/A
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Definition: This command is used to set the front panel remote control baud rate. The baud rate can be 1,200, 2,400, 4800, 9,600 or 38,400 baud. The front panel remote control port baud rate is independent of the rear panel remote control port.

Syntax:     **CFB ?**     print front panel remote control baud rate  
                   **CFB fb**    set front panel remote control baud rate to  
                                   **fb**  
                                   **fb**     =     1200, 2400, 4800, 9600 or 38400

Factory default:    9600

#### 4.22 CFE           Set Front Panel Remote Control Command Response Echo

<Common><FPRmt Ctl><Echo>	CFE	DC	N/A
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Definition: This command is used to set the front panel remote control command echo. If the terminal used does not support full duplex, set the echo to YES. When downloading new software in flash, it is advisable to turn off command echo to speed the download process.

Syntax:     **CFE ?**     print front panel remote control command  
                                   response echo state  
                   **CFE re**    set front panel remote control command  
                                   response echo state to **re**  
                                   **re**     =     YES or NO

Factory default:    YES

### 4.23 CFM Set Rear Panel 485 Port Mode

N/A	CFM	DC	N/A
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**Definition:** This command is used to set the rear panel RS485 port RS485 mode. The modes are 2 and 4 wire master and 4 wire slave. The available RS485 modes are discussed earlier in this chapter. Currently, this port is unavailable, however, if you have an application that requires RS485 ancillary data, please contact MUSICAM USA.

**Syntax:** **CFM ?** print rear panel RS485 port RS485 mode  
**CFM fm** set rear panel RS485 port RS485 mode to **fm**  
**fm** = 2WIRE, 4WIRES or 4WIREM



**Notes:** Do not confuse the **CFM** command, which is used to set up the RS485 ancillary data port available on the 200 series models with the **CFR** command that is used to set the mode of the RS485 remote control port. There is no keypad or Windows equivalent to this command.

**Factory default:** 4WIRES

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### 4.24 CFN Set Fan State

<Common><Fan>	CFN	DC	N/A
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**Definition:** This command is used to toggle the state of the thermostatically controlled cooling fan. The cooling fan can be turned off for silent operation. The built-in thermostat will not allow the fan to be turned off if an over-temperature condition exists. The state of the fan is not remembered when the *CDQPrima* is turned off.

**Syntax:** **CFN ?** print the current fan state  
**CFN st** set the fan to **st**  
**st** = ON or OFF

**Factory default:** ON

#### 4.25 CFP Set Front Panel Remote Control Protocol Usage

<Common><FPRmt Ctl> <FP protp>	CFP	DC	N/A
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**Definition:** This command forces the *CDQPrima* to use the protocol mode for all front panel remote control commands and messages. If no protocol is used, then point to point communications is assumed (a PC is connected to only 1 *CDQPrima*). If protocol is used, then each CODEC device must have an ID set by the **CID** command. The protocol can then select the specified device. Protocol communication can be used for point to point and point to multipoint communication.

If protocol was not enabled and it is then enabled, the response will be in protocol mode (even though the input command was not in protocol mode) with a BSN of 0.



**Notes:** Most terminal emulation programs require that the protocol be set to 'NO'. The Windows Remote Control Program uses protocolled communications, and will automatically set this parameter to YES when loaded and to NO when normally terminated.

**Syntax:**      **CFP ?**            print remote control protocol mode  
                   **CFP fp**            set remote control protocol mode to **fp**  
                                  **fp**        =        YES or NO

**Factory default:**    NO

#### 4.26 CGH Set G.722/H.221 Framing Mode

<Common><G722/H221>	CGH	DC	N/A
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**Definition:** Some older PKI telephone products used throughout Europe use a non-standard H.221 framing format. This command is used to select the type of framing for the G.722 algorithm when the H221Lx is selected.

The choices are OLDPKI and NEWPKI. The NEWPKI corresponds to standard H.221 while OLDPKI selects a non-standard form of H.221

Syntax: **CGH ?** print current G.722/H.221 framing mode  
**CGH gh** set current G.722/H.221 framing mode to **gh**  
**gh** = OLDPKI or NEWPKI

Factory default: OLDPKI

#### 4.27 CHK Define Hot Key

<Common><Hot Key>	CHK	Extra, Define hotkeys	N/A
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**Definition** This command is used to define a hot key. A hot key is front panel push button F1 to F8 available only on model 230, which when pushed, activates any user defined command. Hot keys are supported on all *CDQPrima* models when using Revision 1.25 (or later) of the Windows Remote Control program.

Syntax: **CHK hk ?** print command associated with hot key **hk**  
**CHK hk cm** attach command **cm** to hot key **hk**  
**hk** = 1 .. 8  
**cm** = any *CDQPrima* Remote Control Command (PRCC)

Example: **CHK 2 CSD 5**  
 assigns the *CDQPrima* remote control command **CSD 5** 'Speed dial ID #5' to hot key 2.

Factory default: undefined

#### 4.28 CHP Set Headphone Audio Source

<i>Short-cut keys are available on all models with headphone outputs</i>	CHP		N/A
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**Definition:** This command is used to set the headphone audio source. The possibilities are the encoder (E, EL or ER), decoder (D, DL or DR) or mute (M).

For both the encoder and the decoder, there exist the possibilities of both channels (E or D), left channel only (EL or DL) or right channel only (ER or DR). The LEDs under the HP label indicate which source you are listening to. If only one LED is illuminated, you are listening to only one channel, but through both ears.

Syntax: **CHP ?** print headphone audio source  
**CHP hp** set headphone audio source to **hp**  
**hp** = E, EL, ER, D, DL, DR or M

Factory default: E

#### 4.29 CHU Hang-Up A Line Or Lines.

<b>END</b>	CHU		✓
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Definition: This command is used to hang up a connected line. It can only be used on digital interface lines designated as TA's, either internal or external.

If either end has auto-reconnect enabled, then only the originating side should end the call.

Syntax: **CHU df** hang-up a line or lines.  
**df** = ALL, 1, 2, ... 6

#### 4.30 CHV Set Headphone Volume Level Of Current Device

<b>VOL+</b> <b>VOL-</b>	CHV		N/A
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Definition: This command is used to set the volume level of the currently selected device (encoder or decoder). The level applies to the selected device only, and controls the level of the audio output to the headphone jack.

Syntax: **CHV ?** print headphone volume level of currently selected device  
**CHV hv** set decoder headphone volume to **hv**  
**hv** = 0 .. 127, + or -



Note: Setting volume level too high will cause an audible distortion not in the source signal. Using high quality headphones will lessen this distortion.

#### 4.31 CIB Set Inband For TA101 Terminal Adapter

<Common><TA Setup><DIFs> <Inband>	CIB	DC	N/A
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Definition: This command is used enable inband remote control and troubleshooting if an internal TA101 terminal adapter. TA201 and TA301 do not support inband remote control.

Turning inband ON allows remote control of the TA101 by factory support personnel. Inband ON should *not* be used in normal operation and should only be used for maintenance under factory guidance.

Syntax: **CIB di ?** prints the inband for digital interface **di**  
**CIB di ib** set inband for digital interface **di** to **ib**  
**di** = 1, 2, ... 6  
**ib** = ON or OFF

Factory default: OFF

#### 4.32 CID Set RS485 Remote Control ID

<Common><RPRmt Ctl><Set ID>	CID	<i>automatic</i>	N/A
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Definition: This command is used to set the RS485 ID of the CODEC. Up to 32 *CDQPrimas* can be controlled by the same device using the RS485 remote control interface. Each *CDQPrima* must therefore have a unique ID. This ID is used by remote control software to address the CODEC in an RS485 environment.

Syntax: **CID ?** prints the RS485 ID  
**CID id** set the RS485 ID to **id**  
**id** = 0, 1, ... 30

Factory default: 0

### 4.33 CIE Display DIF Enabled Status

<Common><Status><DIF Enabl>	CIE	DC	N/A
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**Definition:** This command displays the enabled status of all the DIFs (digital interfaces). The enabled status of each of the interfaces, 1 .. 6 is displayed as shown below:

```

1 2 3 4 5 6
xyxyxyxyxyxy
    
```

where x is the encoder status and y is the decoder status. The status is \* for enabled, - for disabled or \_ for DIF not defined. A line is enabled by the **ELI** or **DLI** commands. Lines are connected by dialing or always connected in the case of V.35 or RS422. Only enabled lines are considered for carrying audio even if they are connected.

**Syntax:** **CIE ?** display DIF enabled status

### 4.34 CIF Set Digital Data Interface Type

<Common><Dig I/F><Def I/F>	CIF	Setup, Digital Interface	N/A
----------------------------	-----	--------------------------------	-----

**Definition:** This command is used to set the type of digital data interface. For the *CDQPrima* 2xx series, the interfaces are numbered from 1 through 6. On the *CDQPrima* 1xx series, the interfaces are numbered 1 and 2. Each plug-in Digital Interface Module contains 2 interfaces.

If the interface is set to a TA, then auto answer is turned on. If the interface type is X.21, V.35 or RS422, then the line state is set to CONNECTED (the CST command displays the connection status) permanently.

If the interface type is X.21XTA or V.35XTA, then the digital interface is assumed to be connected to an external TA through the appropriate electrical interface card. Setting a device to an external TA assumes that the

external TA can hang up a call by dropping DTR (V.35) or CON (X.21). It also indicates the presence of a connected call by asserting DCD (V.35) or IND (X.21).

If the interface type is a type of TA, then the connection state is set to CONNECTED once the connection has been established.

Syntax:     **CIF di ?**   prints the interface type, enabled and connected state for digital interface **di** **CIF**  
**CIF di it**   set digital interface **di** to **it**  
          **di**    =     1, 2, ... 6  
          **it**    =     TA101, TA201, TA301, X.21, V.35, X.21XTA, V.35XTA, RS422 or NONE

Factory default:    NONE

#### 4.35 CIS            Display DIF State

<Common><Status><DIF State>	CIS	<i>always displayed</i>	N/A
-----------------------------	-----	-------------------------	-----

Definition:    This command displays the state of all the DIFs (digital interfaces). The state of each of the interfaces, 1 .. 6 is displayed. The display is of the form:

```


1 2 3 4 5 6
x x x x x x

```

where x is the state of the interface. The possible states are C for connected, D for dialing, - for disconnected and \_ for not defined by CIF command.

Syntax:     **CIS ?**        Display DIF state

#### 4.36 CLA            Print Action Word Latched Value

<Common><Status><LS Read>	CLA		N/A
---------------------------	-----	---	-----

Definition:    This command prints the latched value of the action word. If a specific bit is requested, then the resulting value is 0 or

1. If all is specified, the entire action word is printed in hex with the right most bit (LSB) corresponding to BIT 0.

The action outputs are printed as a hex number with the msb at the left and the lsb at the right. If a bit is high in the action word, then the corresponding action is also high. The meaning of these bits are as follows:

BIT 0	LN0 - link 0 to far end <i>CDQPrima</i>	BIT 16	RL0 - relay 0
BIT 1	LN1 - link 1 to far end <i>CDQPrima</i>	BIT 17	RL1 - relay 1
BIT 2	LN2 - link 2 to far end <i>CDQPrima</i>	BIT 18	RL2 - relay 2
BIT 3	LN3 - link 3 to far end <i>CDQPrima</i>	BIT 19	RL3 - relay 3
BIT 4	LN4 - link 4 to far end <i>CDQPrima</i>	BIT 20	RL4 - relay 4
BIT 5	LN5 - link 5 to far end <i>CDQPrima</i>	BIT 21	RL5 - relay 5
BIT 6	LN6 - link 6 to far end <i>CDQPrima</i>	BIT 22	RL6 - relay 6
BIT 7	LN7 - link 7 to far end <i>CDQPrima</i>	BIT 23	RL7 - relay 7
BIT 8	LN8 - link 8 to far end <i>CDQPrima</i>	BIT 24	SC1 - send cue 1 LED
BIT 9	LN9 - link 9 to far end <i>CDQPrima</i>	BIT 25	RC1 - receive cue 1 LED
BIT 10	LN10 - link 10 to far end <i>CDQPrima</i>	BIT 26	RLS - summary relay
BIT 11	LN11 - link 11 to far end <i>CDQPrima</i>	BIT 27	VA0 - virtual action 0
BIT 12	ESUM - encoder summary alarm	BIT 28	VA1 - virtual action 1
BIT 13	DSUM - decoder summary alarm	BIT 29	VA2 - virtual action 2
BIT 14	unused	BIT 30	VA3 - virtual action 3
BIT 15	unused	BIT 31	not used

Syntax:       **CLA aw**       print latched value bit **aw** of the action word  
                  **aw**       =       ALL, LN0..LN11, ESM, DSM,  
  RL0..RL7, SC1, RC1, RLS,  
  VA0..VA3

#### 4.37 CLB                   Set Loopback On A Digital Data Interface

Common><TA Setup><DIFs> <LB>	CLB		N/A
------------------------------	-----	---	-----

Definition: This command is used to set a loopback at the digital interface of type TA101, TA201, TA301, DIF101 or DIF102, whose number is given by **di**. For the *CDQPrima*, the interfaces are numbered from 1 through 6. In the LB state, any data sent to the digital interface by the encoder is "looped back" to the decoder at the digital interface.

The **CLB** type of loopback is performed at the digital interface such as the TA. The **CSL** loopback is performed

before the signals reach the digital interface. Therefore, encoder bit rate cannot exceed the bit rate of the digital interface combined digital interfaces.

Syntax: **CLB di ?** prints the digital interface type  
**CLB di lb** set loopback state **lb** on digital interface **di**  
**di** = 1, 2, ... 6  
**lb** = LB or NORM

Factory default: NORM

#### 4.38 CLC Set Local Check For A TA101 Terminal Adapter

<Common><TA Setup><DIFs><Lcl Chk>	CLC	TA, Configuration	N/A
-----------------------------------	-----	-------------------	-----

Definition: This command is used to set the local check for the digital interface TA101. The local check is only used on TA101 terminal adapters used in most areas of North America, and in countries where *subaddressing* is not supported and port selection is performed by way of the own call number supplied by the network. The local check value tells the TA101 terminal adapter in which internal buffer to look for the line ID number for each ISDN BRI port.

Syntax: **CLC di ?** prints the local check for digital interface **di**  
**CLC di lc** set local check for digital interface **di** to **lc**  
**di** = 1, 2, ... 6  
**lc** = T5, T6 or NO

Example: **CLC 1 T5** Sets BRI port 1 to look for the ID number at location T5  
**CLC 2 T6** Sets BRI port 2 to look for the ID number at location T6  
**CLC 1 T6** *Invalid* - port 1 (3, 5) can only associated with T5, and port 2 (4, 6) with T6.



Note: In some instances in North America you may be given only one SPID number, or you may be told that your service does not require SPID numbers. In either case, set local check to 'NO' for both interfaces.

#### 4.39 CLD Set ID / LDN / MSN For An Internal Terminal Adapter

<Common><TA Setup><DIFs><ID>	CLD	TA, Configuration	N/A
------------------------------	-----	-------------------	-----

**Definition:** This command is used to set the ID (or MSN in Europe) for the digital interface where needed. The ID is only used for most areas of TAs in North America. For the TA101, the ID is the last 4 digits of the ISDN 'phone' number, and for the TA201 and TA301, the ID is the seven digit ISDN phone number.

**Syntax:**

```

CLD di ? prints the ID for digital interface di
CLD di ld set ID for digital interface di to ld
di = 1, 2, ... 6
ld = a 2 to 20 digit number
  
```

#### 4.40 CLI Set LED Display Intensity

<Common><Lvl LED's><Intensity>	CLI	<i>Click on LED display</i>	N/A
--------------------------------	-----	-----------------------------	-----

**Definition:** This command is used to set the intensity of the LED display on models so equipped. The intensity can range from 0 to 15 where 15 is the brightest intensity. Using this command with far-end control can be used to signal a remote operator.

**Syntax:**

```

CLI gr ? print current intensity
CLI gr iy set LED group gr to intensity iy
gr = STATUS, ENCODER and DECODER
iy = 0..15
  
```

**Factory default:** 10

#### 4.41 CLL Set TA LLC State for European Operation, Different Speed Operation for North America

<Common><TA Setup><DIFs><country><LLC>	CLL	TA, Setup	N/A
--	-----	-----------	-----

**Definition:** In some areas of Europe and the United Kingdom, it may be necessary to change the low-level ISDN signaling command syntax for proper operation. If you cannot get acceptable ISDN connections, try toggling this setting.

**Syntax:**     **LLC ?**           prints the current state of LLC  
               **LLC st**           set LLC state to **st**  
                   **st**       =    ON or OFF

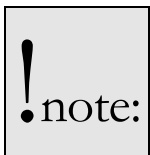
#### 4.42 CLM           Display LED Message

<Common><Lvl LED's><Message>	CLM	<i>Click on LED display</i>	N/A
------------------------------	-----	-----------------------------	-----

**Definition:** This command is used to scroll a text message across the LED screen on models so equipped. It can cancel an existing message on the LED screen. This is ideal for sending short text messages to a remote studio or operator.

**Syntax:**     **CLM du [ms]**       displays message **ms** for duration **du**  
                   **du**       =    0 .. message duration in seconds  
                   **ms**       =    any ASCII message up to 30  
                                   characters

**Example:**    **>CLM 2 5 MIN TO AIR**  
                   displays the message '5 MIN TO AIR' for 2 seconds  
                   on the remote codec.  
                   **CLM 20 BER OCCURRED**  
                   displays the message 'BER OCCURRED' for 20  
                   seconds.  
                   **CLM 0**  
                   terminates the display of any message on the LED  
                   and returns the display to VU mode.



**Note:**        Preceding the command with a **>**, will send the message to the far end *CDQPrima*. This is useful for sending cue information to a remote location.

#### 4.43 CMA Set MUX Ancillary Data Baud Rate

<Common><Anc Data><ASY Adata><MUX Rate>	CMA	Setup, Ancillary data	N/A
---	-----	-----------------------	-----



**Definition:** This command is used to set the asynchronous ancillary baud rate when using the MUX mode (**CAN MUX**). The MUX ancillary data rate is different from the DSP ancillary data baud rate. **For correct operation, the MUX rate should be set to the baud rate of the external equipment and the DSP rate should be set higher.**

**Syntax:**

**CMA ?** print MUX ancillary baud rate

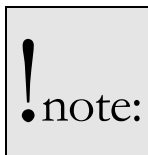
**CMA ma** set mux ancillary data baud rate to **ma**

**ma** = 300, 1200, 2400, 4800, 9600 or 19200

**Factory default:** 2400

#### 4.44 COB Set Other RS232 Port Baud Rate

<Common><Other RS232><Baud Rate>	COB	DC	N/A
----------------------------------	-----	----	-----



**Definition:** This command is used to set the RS232 port baud rate. This command is part of the Extended Control Link command package available after software release 17. For a full explanation of this package, see the **EXI** command. Don't confuse the RS232 port with the RS232 remote control port. The RS232 port on all Series 200 *CDQPrima's* can be used a second RS232 ancillary data path. Remember that the combined RS232 data rate (ancillary data port plus RS232 port) cannot exceed 14,400 when using both simultaneously.

**Note:** The *CDQPrima* codec at both ends of the link must be Rev 17 or later.

**Syntax:**

**COB ?** print OTHER RS232 port baud rate

**COB ob** set OTHER RS232 port baud rate

**ob** = 1200, 2400, 4800, 9600, or 38400

**Factory default:** 1200



Syntax:     **CON ?**        print OTHER RS232 port response time-out  
                                  in seconds  
           **CON se**        set OTHER RS232 port time-out to **se**  
                                  seconds  
                  **se**        =     0...99

#### 4.48 COS            Set OTHER RS232 Port Terminating Characters

<Common><Other RS232><EOM chars>	COS	DC	N/A
----------------------------------	-----	----	-----

Definition: This command is used to set the command terminator string when sending a command to the far-end OTHER RS232 port using the **COC** command.

Syntax:     **COS ?**        print the EOM (end of message) string  
           **COS**            set EOM string to none  
           **COS t1 [t2 [t3 [t4 [t5]]]]**    set EOM string to  
                                  **t1, t2, t3, t4, and t5**  
                  **t1...t5**     =     any group of EOM characters

Factory default:   None

#### 4.49 COT            Set OTHER RS232 Port Usage

<Common><Other RS232><Usage>	COT	DC	N/A
------------------------------	-----	----	-----

Definition: This command is used to set the usage of the OTHER RS232 port. This command is part of the Extended Control Link package available on software revision 17 or later. See the EXI command for a full definition of the ECL package. On version 21 or later, this port was made active, and can be used as a second RS232 ancillary data port.

The CR setting allows the far-end user to send a command to the port from their remote control port and wait for a command response.



Notes:        The MCCURDY setting is for a custom application, and should not be used. The NONE setting turns this port off, and the NORM setting sets this port as the second RS232

port. The combined RS232 data rate when using both ports simultaneously cannot exceed 14,400 baud.

Syntax: **COT ?** print OTHER RS232 port usage  
**COT ot** set OTHER RS232 port usage  
**ot =** NONE, NORM, CR or MCCURDY

Factory default: NONE

#### 4.50 CPC Set Protocol Mode For Rear Panel Remote Control Port

<Common><RPRmt Ctl> <Protocol>	CPC	<i>automatic</i>	N/A
--------------------------------	-----	------------------	-----

Definition: This command forces the *CDQPrima* to use the protocol mode on all remote control messages. If no protocol is used, then point to point communication is assumed (a PC is connected to only 1 encoder). If protocol is used, then each *CDQPrima* must have a unique ID set by the **CID** command. The protocol can then select the specified device. Protocol communication can be used for point to point or point to multipoint communication.

If protocol was not enabled and is then enabled, the response will be in protocol mode (even though the input command was not in protocol mode) with a BSN of 0. If the RS-485 remote control interface is selected by way of the **CRI** command, then multiple CODECs (up to 30) can be on the bus. The protocol format can be found in Section 2.1.

Syntax: **CPC ?** print remote control protocol mode  
**CPC pc** set remote control protocol mode to **pc**  
**pc =** YES or NO

Factory default: NO

#### 4.51 CPU Save Or Load User Profile

<Common><User Profile>	CPU	DC	N/A
------------------------	-----	----	-----

Definition: The User Profile can be considered user defaults. A reset of all factory defaults will reload a factory configuration

which is probably not what is wanted. The user profile overwrites some of these factory default parameters, so the user can tailor new defaults to a usable application. Saving the user profile will save all current encoder and decoder configurations, including loopback state and bit rate.

Syntax:      **CPW sn**      Save, load or reset User Profile  
                   **sn**        =      SAVE, LOAD or RESET

#### 4.52 CPW      Log In As Factory User

**security level 0**

<Common><Logon><Factory>	CPW	DC	N/A
--------------------------	-----	----	-----

Definition: This command allows the user to enter factory authorization password, thus raising his/her security level to 9 (the highest level). Security level 9 is required for commands that should be used only under factory guidance. Setting security level to 9 requires a password that must be supplied by the factory. A security level of 9 is temporary. The security level will be automatically returned to zero 30 minutes after the execution of the last correct **CPW pw** command even if no logoff command is executed.



Notes: The security level is only raised for the port that executed the CPW command. For example, raising the security level of the remote control port does not raise the security level of the keypad. In addition, you can only raise the security level of the port you are using. You cannot raise the security level of the keypad from the remote control port.



Syntax:       **CRA aw**       print real-time value bit **aw** of the action word  
                   **aw**       =       ALL, LN0..LN11, RL0..RL7, SC1, RC1, RLS, VA0..VA3, ESM, DSM

4.55 CRB       Set Baud Rate For Rear Panel Remote Control Port

<Common><RPRmt Ctl><Prot baud>	CRB	<i>automatic</i>	N/A
--------------------------------	-----	------------------	-----

Definition:   This command is used to set the rear panel remote control interface baud rate. The baud rate can be 1200, 2400, 4800, 9600 or 38400 baud.

Syntax:       **CRB rb**       set remote control baud rate to **rb**  
                   **rb**       =       1200, 2400, 4800, 9600 or 38400

Factory default:   9600

4.56 CRD       Set Number Of TA Redial Attempts

<Common><TA Setup><Redial>	CRD	TA, Settings	N/A
----------------------------	-----	--------------	-----

Definition:   This command is used to set the number of TA redial attempts. If the call is not completed on the first attempt it is attempted again. The number of these redial attempts is controlled by the **CRD** command. It may be any number from 0 to 5.

Calls may not complete for a variety of reasons that might include the far end is busy, the central office is busy or there is intermittent line trouble. This command helps insure successful call completion by making multiple attempts at the call.

Syntax:       **CRD ?**       print current number of TA redial attempts  
                   **CRD rd**       print number of TA redial attempts to **rd**  
                   **rd**       =       0, 1, 2, 3, 4 or 5

Factory default:   1

#### 4.57 CRE Set Rear Panel Remote Control Command Echo

<Common><RPRmt Ctl><Echo>	CRE	<i>automatic</i>	N/A
---------------------------	-----	------------------	-----

**Definition:** This command is used to set the rear panel remote control command echo. If using a terminal or emulation package that does not support full duplex, set the echo to 'YES'. When downloading new software in flash, it is advisable to turn off (set to 'NO') command echo to speed the download process.

**Syntax:**

**CRE ?** print current rear panel remote control command echo state

**CRE re** set rear panel remote control command echo state to **re**

**re** = YES or NO

**Factory default:** YES

#### 4.58 CRI Set Remote Control Interface Type

<Common><RPRmt Ctl><Interface>	CRI	<i>automatic</i>	N/A
--------------------------------	-----	------------------	-----

**Definition:** This command is used to set the rear panel remote control interface type to RS232 or RS485.

**Syntax:**

**CRI ?** print remote control input source

**CRI ri** set remote control input source **ri**

**ri** = 232 or 485

**Factory default:** 232

#### 4.59 CRM Set Rear Panel Remote Control 485 Port Mode

<Common><RPRmt Ctl><485 mode>	CRM	<i>automatic</i>	N/A
-------------------------------	-----	------------------	-----

**Definition:** This command is used to set the rear panel remote control configuration (not RS232 configuration). The modes are 2 and 4 wire master and 4 wire slave. Refer to Section 5.3 for a full discussion of the various RS485 modes.

Syntax:     **CRM ?**       print rear panel remote control RS485 mode  
               **CRM rm**       set rear panel remote control RS485 mode to  
                                   **rm**  
                                   **rm**     =     2WIRE, 4WIRES or 4WIREM

Factory default:     4WIRES

#### 4.60 CSA           Set S/T Subaddress For A Terminal Adapter

<Common><TA Setup><DIFs> <Sub addr>	CSA	TA, Configuration	N/A
-------------------------------------	-----	----------------------	-----

Definition:    This command is used to set the S/T subaddress for the internal terminal adapter. The subaddress is only used on S/T ISDN interfaces. This parameter should be set to 0 for the U (North American) interface since it is not used.

Syntax:       **CSA di ?**   prints the current subaddress for digital interface **di**  
               **CSA di sa**   set subaddress for digital interface **di** to **sa**  
                               **di**     =     1, 2, ... 6  
                               **sa**     =     1..8

#### 4.61 CSC           Clear All Speed Dial Or Quick Configuration Entries

<Common><Spd Dial><Clear all>	CSC	DC	N/A
-------------------------------	-----	----	-----

Definition:    This command is used to clear all Speed Dial or Quick Configuration entries. entries.

Syntax:       **CSC YES**   clear all speed dial entries

Notes:        This command clears *all* entries in the speed dial directory. Once cleared, the directory is not recoverable. Remember, that Quick Configurations are stored in the Speed Dial directory, and will also be cleared.



#### 4.62 CSD Speed Dial A Number, Load Quick Configuration

<b>SDIAL</b>	CSD	Speed Dial, Speed Dial	✓
--------------	-----	------------------------	---

**Definition:** This command is used to speed dial a number or to load a 'Quick Configuration'. It assumes that a speed dial entry or Quick Configuration in the directory exists.

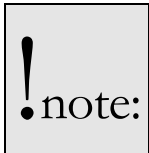
**Syntax:** **CSD sn ?** prints the description for speed dial number **sn**  
**CSD sn** speed dials speed dial number **sn**  
**sn =** 1 to 3 digit speed dial number as defined by the *CDQPrima*

#### 4.63 CSE Add An Entry In The Speed Dial Directory

<Common><Spd Dial><Add entry>	CSE	Speed Dial, New Entry	✓
-------------------------------	-----	-----------------------	---

**Definition:** This command is used to insert a Speed Dial entry or 'Quick Configuration' into the directory. All necessary parameters for the connection or configuration are entered at this point.

**Notes:** Not all combinations of entries are possible. The first decision is to determine the line format. This breaks down into several general categories and these are H.221 (BONDING), one line, two line independent mono and broadcast. Complete discussions can be found in chapters 2 and 3 of this manual.



For the H.221 (BONDING) case, then the:

- bit rate (**br**) determines the number of connected lines and must be an integer multiple of 64
- sampling rate (**sr**) must be 32, 44 or 48
- encoder algorithm (**ea**) must be MPEGL2
- decoder algorithm (**da**) must be MPEGL2

The number of lines connected will determine the actual bit rate used. You must specify the bit rate for the maximum number of lines that may be used. The lines

called must utilize 64 kb/s only. H.221 cannot currently support  $n * 56$  kb/s or MPEG Layer III.

For the L1 .. L6 (single line), independent mono, and all broadcast modes, any valid combination of the parameters (bit rate, sample rate, algorithm, etc.) may be used. In this case, at least one phone number must be supplied for a Speed Dial entry, and a dummy number (the # character) must be entered as the only phone number to create a Quick Configuration.

For CCS 2-Line (CCSL12 .. CCSL56), then

- bit rate (**br**) must be set to 112 or 128, or 2 times the basic line rate of 56 or 64 kb/s
- sampling rate (**sr**) must be 24, 32 or 48
- encoder algorithm (**ea**) must be MPEGL2, CCSO, CSN or MPEGL3
- decoder algorithm (**da**) must be MPEGL2, CCSO, CSN or MPEGL3
- at least two phone numbers (**d1** and **d2**) must be supplied to create a Speed Dial entry, or a single dummy number (the # character) must be entered as the only phone number to create a Quick Configuration.

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For independent mono the algorithm must be G.722, MPEGL2, CCSO or CCSN (For dual-channel receive, only G.722 can be used for the decoder algorithm, dual-channel send can be G.722 or and Layer 2 algorithm). You can also combine independent mono with broadcasting.

**Advanced Feature - Creating a 'Quick Configuration':** Creating a speed dial entry and entering a '#' character instead of a number to dial will create a 'Quick Configuration.' If you change configurations often, this method is a useful shortcut. Your *CDQPrima* comes loaded with over two dozen of these configurations, listed in Chapter 6 or the *CDQPrima Users Guide*. To use any of these configurations, simply speed dial them using the ID numbers shown. To create your own Quick Configurations, just create a Speed Dial entry, and use the


# character as the phone number. The '#' character tells the CDQPrima to load the configuration, but do not dial.

**Advanced Feature - Automatic creation of speed dial entry:** You can now make a Speed Dial entry using the current CDQPrima configuration and dialed numbers. Configure your CDQPrima as you normally would (you can use a quick-configuration), and dial another codec. If you are satisfied with the configuration, enter **CSE** and a descriptive name (or **SDSET** <Save>). CDQPrima will automatically save all settings and numbers.

Syntax: **CSE na ?** print speed dial entry **na**  
**CSE name** save current configuration and numbers into **name**  
**CSE na br sr ea em el NO d1 d2 d3 d4 d5 d6**  
 create speed dial entry with decoder *not* independent.  
**CSE na br sr ea em el YES dr da d1 li d1 d2 d3 d4 d5 d6**  
 create speed dial entry with decoder independent

**na** = name of entry  
**br** = **dr** = 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320, 384, A  
**sr** = 16, 22, 24, 32, 44 or 48  
**ea** = **da** = MPEGL2, CCSO, CCSN, MPEGL3 or G.722  
**em** = M, DM, JS, S  
**el** = **dl** = H221Lxxxxxx, (x=1..6)  
 L1, L2, L3, L4, L5, L6,  
 CDSLxy (x,y = 1..6)  
 IML-r (l,r = 1..6)  
**in** = YES or NO  
**d1** = 24 digit phone number or '#'  
**d2** = 24 digit phone number or '#'  
**d3** = 24 digit phone number or '#'  
**d4** = 24 digit phone number or '#'  
**d5** = 24 digit phone number or '#'  
**d6** = 24 digit phone number

#### 4.64 CSF Print First Of Speed Dial Entry

<b>SDSET</b> <View dir>	CSF		✓
-------------------------	-----	---	---

**Definition:** This command is used to display the first entry in the speed dial table. If the optional parameter **sh** is set to A (abbreviated), only the entry number and speed dial description are displayed. To print subsequent entries, see the **CSN** command. The list is alphabetical by description.

**Syntax:**       **CSF** [**sh**] print first speed dial entry  
                  **sh**    =    A

**Sample output:**

DES:	DPTEST	user defined description
SID:	3	speed dial entry ID
BR:	128	bit rate
EAL:	MPEGL2	encoder algorithm
EAM:	JS	algorithm mode
ELI:	H221L12	encoder lines format
DIN:	NO	decoder independent
DBR:	128	decoder bit rate
DAL:	MPEGL2	decoder algorithm
DLI:	H221L12	decoder lines format
D1:	5551234	called ISDN number 1
D2:	5551235	called ISDN number 2

#### 4.65 CSI Set SPID For A Terminal Adapter

<Common><TA Setup><DIFs> <SPID>	CSI	TA, Setup	N/A
---------------------------------	-----	-----------	-----

**Definition:** This command is used to set the SPID for the terminal adapter. The SPID, or Service Provider Identification, is given at time of service connection, is only used for ISDN service in North America.

**Syntax:**

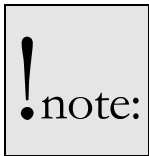
<b>CSI di ?</b>	prints the SPID for digital interface <b>di</b>
<b>CSI di sd</b>	set SPID for digital interface <b>di</b> to <b>sd</b>
<b>CSI di</b>	erase all previously stored SPIDs for interface <b>di</b>
<b>di</b>	= 1, 2, ... 6
<b>sd</b>	= (up to) 20 digit number

## 4.66 CSL Set System Loopback

<Common><System LB><Sys LB>	CSL		✓
-----------------------------	-----	---	---

**Definition:** This command is used to set the system into loopback. Individual digital interfaces may be looped back (see the CLB command) but this command performs the loopback inside the CODEC, before the digital interface.

If the *CDQPrima* is powered down and powered up, the state of the loop back is *not* forgotten and the unit is set to the state before the power was removed.



**Note:** The loopback bit rate overrides the setting of the encoder bit rate. Therefore, if the chosen loopback bit rate combined with the current encoder settings results in an invalid combination, audio is muted.

**Syntax:**

```

CSL ?          print current system loopback state
CSL s1        set system loop back state to state s1
                s1 = NORM or LB

```

**Factory default:** LB

## 4.67 CSN Print Next Speed Dial Entry

<b>SDIAL</b> <View dir>	CSN		✓
-------------------------	-----	---	---

**Definition:** This command prints the next entry in the speed dial list. The list is alphabetical by description. If an optional entry number is given, then that entry is displayed. If the optional parameter **sh** is set to 'A' (abbreviated), only the entry number and speed dial description are displayed.

When the end of the list is reached, the message 'END OF LIST' is displayed. If the CSN command is given again after the END OF LIST is displayed, the list will wrap around to the beginning. This means that continually entering the CSN command will repeatedly traverse the speed dial list.

Syntax:       **CSN** [**sn**] [**sh**]   Print next speed dial entry  
                   **sn**     =     entry number  
                   **sh**     =     A

See the **CSF** command for a description of the command output.

#### 4.68 CST           Report CODEC Status

N/A	CST	DC	N/A
-----	-----	----	-----

Definition:   This command reports the general status of the CODEC with more detail than available using any other status display. The screen output is a valuable tool for troubleshooting both the codec and connections. This command is not available from the keypad.

Syntax:       **CST**           report status

Sample output from **CST** command:

```

SYSTEM LOOP BACK STATE:NORM  XIS:00000080  FTEMP:9  PERM:1
ANCILLARY DATA CONFIG:MUX   INPUT TC SPEED:NO TC  OUTPUT TC SPEED:NO TC
ENC-ALGORITHM:G.722   ALGORITHM MODE:M1  PLL STATE:LOCKED
DEC-ALGORITHM:        ALGORITHM MODE:    PLL STATE:LOCKED
ENC-SR:16 BR:56   TIMING:NORM            DPLL:UNLOCKED
DEC-SR:16 BR:56   TIMING:NORMAUTO   SYNC DPLL:UNLOCKED FRAMED:NO
I/F LINE I/F       ENC:CLK   DEC:CLK   LB   DTR/AA CD   ED STATE
1        U.35       +:56     +:56     NORM   H     L   ** CONNECTED
2        U.35       M:56     M:56     NORM   H     H   -- CONNECTED
3        NONE
4        NONE
5        NONE
6        NONE
I/O IN 0 = 1   I/O OUT 0 = 0
I/O IN 1 = 1   I/O OUT 1 = 0
I/O IN 2 = 1   I/O OUT 2 = 0
I/O IN 3 = 1   I/O OUT 3 = 0
I/O IN 4 = 1   I/O OUT 4 = 0
I/O IN 5 = 1   I/O OUT 5 = 0
I/O IN 6 = 1   I/O OUT 6 = 0
I/O IN 7 = 1   I/O OUT 7 = 0
OK
00>
    
```

First line:       **SYSTEM LOOP BACK STATE** - Norm or LB - state of the system loopback  
                   **XIS, FTEMP,** - Factory use only.  
                   **PERM** - permission (security) level.  
 Second line:   **ANCILLARY DATA CONFIG:** - Mux or Nomux - State if the asynchronous ancillary data uses the Mux or not.  
                   **INPUT/OUTPUT TC SPEED** - NO TC for time code

- not present, or time code speed.
- Third line: ENCODER ALGORITHM - displays selected algorithm.  
ALGORITHM MODE - displays selected mode.  
PLL STATE - locked or unlocked state of the encoder PLL. If unlocked, audio cannot be passed.
- Forth line: DECODER ALGORITHM - displays selected algorithm. If blank, indicates CDQPrima could not frame or no PLL lock.  
ALGORITHM MODE - displays selected mode. Blank of no frame or phase lock.  
PLL STATE - locked or unlocked state of the encoder PLL. If unlocked, audio cannot be passed.
- Fifth line: ENC-SR - encoder sampling rate.  
BR - Encoder bit rate  
TIMING: - encoder timing source, normal, internal, or AES/EBU  
DPLL - Digital phase lock loop state, will be unlocked for analog audio.
- Sixth line: DEC-SR - decoder sampling rate.  
BR - decoder bit rate.  
TIMING: - decoder timing source, normal auto, internal auto, internal, or AES/EBU.  
DPLL - digital phase lock loop state.  
FRAMED - decoder state - NO means the decoder is not framed to the received signal. In independent mono modes, this position will show FF if both channels are frames, F- is only the left channel framed and -F is only the right channel is framed.
- Seventh line: Header for columns in next 6 lines.  
Lines 8 - 13 Col 1: Interface line number.  
Col 2: Interface type - V.35, X.21, TA, etc.  
Col 3: Encoder clock rate, + indicates clocked, M indicates master.  
Col 4: Decoder clock rate, + indicates clocked, M indicates master.  
Col 5: State if interface loopback.  
Col 6: State of DTR/ Auto Answer - H = ON, L = OFF.  
Col 7: State of the carrier detect - H = ON, L = OFF.  
Col 8: ED = encoder/decoder state, \* = active, - = inactive.  
Col 9: DIF state - will always say connected for all interfaces except TA type interfaces.
- Lines 14 - 21: Current state of 8 optical inputs and 8 relay outputs.

## 4.69 CSU Logon At Super-User Level

**security level 0**

<Common><Logon><Sup User>	CSU	DC	N/A
---------------------------	-----	----	-----

**Definition:** This command allows the entry of the super-user password, thus raising his/her security level to 7. This security level applies only to the port from which the command was executed. The possibilities are the rear panel remote control, front panel remote control, front panel keypad, inband control and digital interface ports. It is therefore possible to lock out access from any port.

**Syntax:**

```

CSU 0    sets permission level to lowest value (1)
CSU su   logon with password su to user level (7)
su      =      8 alpha characters

```

**Factory Default:** A.

## 4.70 CSW Set Switch Type For A Terminal Adapter

<Common><TA Setup>DIFs> <Sw type>	CSW	TA, Configuration	N/A
-----------------------------------	-----	----------------------	-----

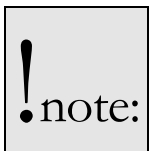
**Definition:** This command is used to set the switch type for the TA type of digital interface when using North American or German protpcols. The switch type refers to the telephone company central office switch. Switches are made by such companies such as AT&T, Northern Telecom, Seimens, and others. These switches run different versions of ISDN software. This command sets the TA to work with a particular type of switch software. This command sets the switch type for both interfaces (DIFs) on the TA.

**Syntax:**

```

CSW ta ?  prints the switch type for TA ta
CSW ta si set switch type for TA ta to si
ta      =      DIF12, DIF34 or DIF56
si      =      NI1, 5E6, 5E8 or NTI (North
                  American, using TA101)
                  =      AT&T or NI1 (North American

```



using TA201 or TA301)

= DSS1, ITS6, or AUTO (Germany)

Note: AUTO (Germany) does not work if a PBX is used.

#### 4.71 CSX Display Serial Number

<Common><General><Serial No	CSX	DC	N/A
-----------------------------	-----	----	-----

Definition: This command is used to display the serial number of the codec. This command is only available if the serial number has been set at the factory at time of production or upgrade.

Syntax: **CSX** display serial number

#### 4.72 CTA Load A Stored TA Configuration

<Common><TA Setup><TA Cnfgs> <Load>	CTA	DC	N/A
-------------------------------------	-----	----	-----

Definition: This command is used to load a previously stored TA configuration. Parameters that are reloaded with stored values include TA type, SPID and ID numbers, switch type, local check values, subaddress, inband and interface state. Each stored configuration is capable of storing all necessary parameters for up to three installed terminal adapters and six ISDN 'B' channels.

Syntax: **CTA id ?** display stored TA configuration **id**  
**CTA id** load stored TA configuration **id**  
**id** = 0...19

#### 4.73 CTB Display A Stored TA Configuration

N/A	CTB	DC	N/A
-----	-----	----	-----

Definition: This command is used to view the directory of stored TA configurations. Please remember that configurations are saved in alphabetic order, but are addressed in numeric order.

Syntax:     **CTB ?**     display the description of the first TA  
              **CTB**        configuration  
                          display the first TA configuration

#### 4.74 CTC Connect To Terminal Adapter Control Port

N/A	CTC	not allowed	N/A
-----	-----	-------------	-----

**Definition:** This command is used to connect a terminal directly to the TA control port. This allows access to all the TA functionality. In particular, it allows configuration and call monitoring. There is no keypad equivalent to this command, and execution from the Windows program is not allowed and will close the application. The primary function of this command is for debugging, and should only be used with factory guidance.

The TA control ports are named as follows:

<b>tc</b>	<b>digital interface</b>
DIF12	DIF 1 and DIF 2
DIF34	DIF 3 and DIF 4
DIF56	DIF 5 and DIF 6

**Syntax:**

**CTC ?** print current TA connection

**CTC tc** set connection to TA **tc**

**tc** = NONE, DIF12, DIF34 or DIF56

#### 4.75 CTD Delete One Or All Stored TA Configurations

<Common><TA Setup><TA Cnfgs><Del entry> <Common><TA Setup><TA Cnfgs><Del all>	CDT	DC	N/A
--	-----	----	-----

**Definition:** This command is used to erase one or all of the stored TA configurations. To avoid confusion later, TA configurations that will no longer be used should be erased.

**Syntax:**

**CTD ?** print number of stored configurations

**CTD id** delete TA configuration **id**

**CTD** delete all stored TA configurations

**id** = 0...19

#### 4.76 CTE Save Current TA Configuration

<Common><TA Setup><TA Cnfgs> <Save>	CTE	DC	N/A
-------------------------------------	-----	----	-----

**Definition:** This command is used to save the current TA configuration for later recall. Location dependent parameters for up to three installed terminal adapters are saved in non-volatile memory. Parameters saved are (North American):

- TA type
- SPID numbers
- ID numbers
- Switch type
- Local check values
- Subaddress
- Inband and interface modes

**Syntax:**

- CTE ?** print current TA configuration
- CTE name** save current TA configuration as **name**
- CTE name ?** check if this name is already used
- name** = up to 30 alphanumeric characters

#### 4.77 CTF Set Internal TA Interface Mode

<Common><TA Setup><DIFs> <I/F>	CTF	TA, Configuration	N/A
--------------------------------	-----	----------------------	-----

**Definition:** This command sets the state of the internal TA interface. For North American operation, the state must be set to IGNORE for the TA101 and ACTIVE for the TA201 and TA301. For operation elsewhere, set the state to IGNORE, but if reliable communications cannot be established, set the state to ACTIVE.

**Syntax:**

- CTF di ?** prints the interface mode for digital interface **di**
- CTF di lc** Set interface mode for digital interface **di** to **lc**
- di** = 1, 2, ..., 6
- lc** = IGNORE or ACTIVE

#### 4.78 CTI Set Time Code Readout Source

<Common><Time Code><Dsply src>	CTI	DC	N/A
--------------------------------	-----	----	-----

**Definition:** This command is used to display the Time Code on the LCD display. The displayed Time Code can be the Time Code input to the encoder, or the Time Code output from the decoder or no time code displayed. If the time code is being displayed on the display, then depressing any front panel key or issuing the **CTI NONE** command terminates the Time Code display on the LCD. This command is useful to check if time code is being received correctly by the encoder or the decoder.

**Syntax:** **CTI ?** print Time Code readout source  
**CTI ti** set Time Code readout source to **ti**  
**ti** = NONE, INPUT or OUTPUT

**Factory default:** NONE

#### 4.79 CTL Print Last Time Code Received

<Common><Time Code><Dsply 1st>	CTL	DC	N/A
--------------------------------	-----	----	-----

**Definition:** This command is used to display the last time code received.

**Syntax:** **CTL tf** print last time code received for source **tf**  
**tf** = INPUT or OUTPUT

#### 4.80 CTM Set Timer Time-Out Duration

<Common><PLL><Set timr>	CTM		N/A
-------------------------	-----	---	-----

**Definition:** This command is used to set one of the four available internal timers. These timers are used by Prima Logic Language (PLL) to generate events. This command starts the specified timer **tn** for the duration **ti**, in seconds.

Syntax: **CTM tn ?** print timer **tn** time left in seconds  
**CTM tn t1** set timer **tn** to time-out in **t1** seconds  
**tn** = 0 ... 3  
**t1** = 0..999999

Factory default: **CTM tn 0**

#### 4.81 CTN Display Next Stored TA Configuration

N/A	CTN	DC	N/A
-----	-----	----	-----

Definition: The **CTN** command is used to display the TA information of the next stored configuration. The first configuration stored is displayed using the **CTB** command. Use both of these commands to scroll through the entire TA configuration memory.

Syntax: **CTN ?** display the description of the next TA configuration  
**CTN** display the next TA configuration

#### 4.82 CTO Set TA Dialing Time-Out

<Common><TA Setup><Dial TO>	CTO	DC	N/A
-----------------------------	-----	----	-----

Definition; This command is used to set the terminal adapter dialing time-out. This time-out is used to terminate the dialing sequence for an individual TA if a connection cannot be established within the required time.

Syntax: **CTO ?** print TA dialing time-out value  
**CTO to** set TA dialing time-out value **to** (in seconds)  
**to** = 5..24

Factory default: 15 seconds

#### 4.83 CTP Set TA101 Remote Control Protocol Usage

<Common><TA Setup><RCProtocol>	CTP	DC	N/A
--------------------------------	-----	----	-----

Definition: This command forces the control processor to use protocol protected communication on all TA remote control messages. If no protocol is used, then point to point communications is assumed (a PC is connected to only 1

encoder). If protocol is used, then each CODEC device must have an ID set by the **CID** command. The protocol can then select the specified device. Protocol communication can be used for point to point and point to multipoint communication. If protocol was not enabled and it is then enabled, the response will be in protocol mode (even though the input command was not in protocol mode) with a BSN of 0. This command is for factory debugging.

Syntax:     **CTP ?**        print TA remote control protocol mode  
           **CTP tp**        set TA remote control protocol mode to **tp**  
                   **tp**        =        YES or NO

#### 4.84 CTR            Reset The Internal Terminal Adapter

<Common><TA Setup><DIFs><Reset>	CTR	DC	N/A
---------------------------------	-----	----	-----

**Definition:**   Reset the internal terminal adapter.        This command is used to reset the internal terminal adapter. It may take between 15 and 40 seconds to complete a reset a TA101, and may longer for a TA201 or TA301. The internal terminal adapter should be reset after changing any of the TA parameters.

The following messages may be returned **when using a TA101:**

SP1 OK SP2 OK	SPID 1 and SPID 2 initialized OK
SP1 BAD SP2 OK	SPID 1 not initialized and SPID 2 initialized OK
SP1 OK SP2 BAD	SPID 1 initialized OK and SPID 2 not initialized
SP1 BAD SP2 BAD	SPID 1 not initialized and SPID 2 not initialized

If the TA is not used in NORTH AMERICA, or the North American switch type is 5E6, then both SPIDs are always returned as bad.

The TA201 or TA301 will return "RESET OK", which only indicates that the reset process has completed. It is no indications that the SPIDs have been entered correctly.



Syntax:     **CTR ta**     reset internal TA **ta**  
                   **ta**     =     DIF12 , DIF34 or DIF56

Note:        If issuing this command from the internal keypad, the response will be on the top line of the display and will only be displayed briefly.

4.85 CTS           Print Time Code Speed

<Common><Time Code><Dsply spd>	CTS	DC	N/A
--------------------------------	-----	----	-----

Definition:   This command is used to display the Time Code speed. Time code can be 24, 25 or 30 frames per second. Although drop-frame is supported, there is no indication of its use.

Syntax:     **CTS tf**     print the time code speed for source **tf**  
                   **tf**     =     INPUT or OUTPUT

4.86 CTT           Enable/disable Time Code

<Common><Time Code><On/Off>	CTT	DC	N/A
-----------------------------	-----	----	-----

Definition:   This command is used to enable or disable the time code feature. In the US, time code frames are transmitted at 30 frames per second. In Europe, they are transmitted at 25 frames per second and 24 frames per second is the film standard. The time code sub-system in the *CDQPrima* automatically senses and adapts to the input time code rate. Drop-frame is also supported.

If time code is present at the encoder, the *CDQPrima* attempts to deliver it to the far end decoder. To do this the ancillary data channel is used. Although this requires approximately 2400 bits per second of ancillary data, the DSP rate must be set to 38,400 using the **CDR** command to insure even delivery.

If **tt** is set to OFF, then the time code input is always ignored and no ancillary data channel capacity is used. If **tt** is set to ON and there is no time code signal present at the input, then no ancillary data resources are utilized.

Syntax: **CTT ?** print current Time Code type  
**CTT tt** set time code type to **tt**  
**tt** = ON or OFF

Factory default: OFF

#### 4.87 CUP Logon At User Level

**security level 0**

<Common><Logon><User>	CUP	DC	N/A
-----------------------	-----	----	-----

Definition: This command allows the entry of the user password, thus raising the security level to 5. **This security level applies only to the port from which the command was executed.** The possibilities are the rear panel remote control, front panel remote control, front panel keypad, inband control and digital interface ports

Syntax: **CUP 0** sets permission level to lowest value (1)  
**CUP up** logon with password **up** to user level (5)  
**up** = password, up to 8 alpha characters

Factory Default Password: A.

#### 4.88 CVA Define Virtual Action

<Common><Virt Act>	CVA	Extra, Virtual Action	N/A
--------------------	-----	-----------------------	-----

Definition: This command is used to define a virtual action. The command associated with the virtual action is executed when the calling event becomes true. The Event to Action logic determines when an action becomes true. Please refer to the chapter on Prima Logic Language for details.

Syntax: **CVA va ?** print command associated with virtual action **va**  
**CVA va** clear virtual action **va**  
**CVA va cm** define virtual action **va** as the command **cm**  
**va** = 0 .. 3  
**cm** = any CDQPrima Remote Control Command (PRCC)

Example: **CVA 2 CSD 5** assigns the *CDQPrima* Remote Control Command **CSD 5** (speed dial entry 5) to virtual action 2.

Factory default: All virtual actions cleared

#### 4.89 CVN Print Software Version Number

<Common><General><Version>	CVN	Help	N/A
----------------------------	-----	------	-----

Definition: This command is used to print the software version number for a selected software module in FLASH ram. All modules do not have the same version number.

Syntax: **CVN tx** print version and verify checksum of program **tx**

<b>tx</b>	=	DSPD	decoder DSP program 1
		DSPDX	decoder DSP program 2
		DSPDXX	decoder DSP program 3
		DSPV	VU meter DSP program
		DSPE	encoder DSP program 1
		DSPEX	encoder DSP program 2
		DSPR	Reed-Solomon DSP program
		G722D	G.722 decoder program
		G722E	G.722 encoder program
		CP	command processor program 1
		CPX	command processor program 2
		DL3D	Layer 3 decoder 1
		DL3DX	Layer 3 decoder 2
		DL3DXX	Layer 3 decoder 3
		DL3E	Layer 3 encoder 1
		DL3EX	Layer 3 encoder 2
		DL3EXX	Layer 3 encoder 3
		DL3R	Layer 3 Reed-Solomon 1
		DL3RX	Layer 3 Reed-Solomon 2
		DL3RXX	Layer 3 Reed-Solomon 3
		DL3S	Layer 3 decoder 4
		DL3SX	Layer 3 decoder 5
		DL3SXX	Layer 3 decoder 6

#### 4.90 CVR Get Version of Internal TA

<Common><TA Setup><DIFs><Dif><country><Version>	CVR	DC	N/A
---	-----	----	-----

**Definition:** This command is used to display the ROM version of the TA201 or TA301 internal terminal adapter. It does not work with the TA101.

**Syntax:** **CVR ta** = Display version of TA firmware  
**ta** = DIF12, DIF34 or DIF 56

#### 4.91 CVU Set Level Meter Mode

<Common><Lvl LED's><Mode>	CVU	Click on level meters	N/A
---------------------------	-----	-----------------------	-----

**Definition:** This command selects the level meter mode. The level meter can be used to display the level of the audio as a normal peak and VU meter. It can also be used to display the channel phase difference of the input as well as the stereo image. Short cut keys are available on CDQPrima model 230.

**Syntax:** **CVU ?** print current level meter mode.  
**CVU vu** set level meter mode to vu  
**vu** = LEVEL, IMAGE or PHASE

**Factory defaults:** LEVEL

#### 4.92 DAF Set Decoder Ancillary Data Format (Layer II)

<Common><Anc Data><Fmt/L2> <Dec Fmt>	DAF	Setup, Ancillary Data	N/A
--------------------------------------	-----	-----------------------	-----

**Definition:** This command is used to set the decoder ancillary data format for ISO/MPEG Layer II.

The **DAF** command describes the various formats. See the **DAF** command description for the definitions of the available formats.

**Syntax:** **DAF ?** print decoder Layer 2 ancillary data format  
**DAF af** set decoder Layer 2 ancillary data format to  
**af** = CCS, CCSPLUS, GENERIC, DAB or ADR

Factory Default: CCS

#### 4.93 DAH Set Decoder Ancillary Data Format (Layer III)

**Rev. 6**

<Common><Anc Data><Fmt/L3> <Dec Fmt>	DAH	Setup, Ancillary Data	N/A
--------------------------------------	-----	-----------------------	-----

**Definition:** This command is used to set the decoder ancillary data format for ISO/MPEG Layer III.

The **EAH** command describes the various formats. See the EAH command description for the definitions of the available formats. Use the **CCS PROTECT** mode when connecting to a Telos Zephyr

**Syntax:**     **DAH ?**           print decoder Layer 3 ancillary data format  
               **DAH af**           set decoder ancillary data format to af  
                           **af**       =     CCS, CCS PROTECT

Factory Default: CCS

#### 4.94 DAL Set Decoder Algorithm

<Decoder><More><Algorithm>	DAL		✓
----------------------------	-----	---	---

**Definition:** This command is used to set decoder algorithm. This command has no effect when the decoder independent mode, **DIN**, is set to NO.

**Syntax:**     **DAL ?**           print the current decoder algorithm  
               **DAL a1**           set decoder algorithm to **a1**  
                           **a1**       =     MPEGL2, MPEGL3, CCSO, CCSN,  
   or G.722

**Rev. 6**

Factory default: MPEGL2

#### 4.95 DAS Set Decoder Ancillary Data Channel for Independent Mono

**Rev. 6**

<Decoder><Line Fmt> <Ind Mono>	DAS	DC	N/A
--------------------------------	-----	----	-----

**Definition:** When in the independent mono mode, it is possible to send and receive two discrete monaural audio programs

to/from two or more locations. The *CDQPrima* is only capable of receiving ancillary data information from one of these locations. This command is used to set which far-end codec to receive ancillary data information from when using the independent mono mode.

Although you can send ancillary data to all connected locations, you can only receive ancillary data from one.

Syntax:     **DAS ?**        Print current decoder ancillary data channel  
              **DAS an**       Set decoder ancillary data channel to **an**  
                           **an**       =     LEFT or RIGHT

#### 4.96 DBR            Set Decoder Bit Rate

<Decoder><Bit rate>	DBR		✓
---------------------	-----	---	---

Definition: This command is used to set the decoder bit rate. Normally, the decoded bit stream dictates the sampling rate when the decoder operates independently from the encoder (see the **DIN** command). This command has no effect when **DIN** is set to NO.

Setting **br** to A lets the *CDQPrima* choose the bit rate based on the clock and the line type (see the **DLI** command). See Chapter 6 of the *CDQPrima Users Guide* for further information regarding bit rates and sampling rates.

Syntax:     **DBR ?**        print decoder bit rate  
              **DBR br**       set decoder bit rate to **br**  
                           **br**       =     24, 32, 40, 48, 56, 64, 80,  
   96, 112, 128, 144, 160, 192,  
   224, 256, 320, 384, A

Factory default:    256

## 4.97 DCO Set Decoder Decoding Mode

<Decoder><More><Algo Mode>	DCO	DC	N/A
----------------------------	-----	----	-----

**Definition:** This command is used to control decoding of audio bit streams. If ISO is selected, then only ISO layer 2 bit streams are decoded. If ISOCCS is selected, then ISO layer 2 and older CCS bit streams are decoded. This command is for compatibility checking of bit streams. For normal operation, set to ISOCCS (default)

**Syntax:**     **DCO ?**       print decoder decoding mode  
               **DCO co**       set decoder decoding mode to **co**  
                   **co**       =       ISO or ISOCCS

**Factory default:**   ISOCCS

## 4.98 DCS Set Decoder Channel Copy/Swap Mode

<Decoder><More><Audio Out> <Copy/Swap>	DCS	Setup, Audio I/O	N/A
--	-----	------------------	-----

**Definition:** This command is used to control the audio output. It allows the left channel to be copied over the right channel (CLTOR), the right channel to overwrite the left channel (CRTOL) or the left and right channels to be swapped (SWAP). If **cs** is set to NORM, then the output of the decoder is the same as received, i.e. left channel to left channel and right channel to right channel.

This command is useful for controlling the action of the *CDQPrima* in the presence of mono audio signals.

**Syntax:**     **DCS ?**       print decoder copy/swap mode  
               **DCS cs**       set decoder copy/swap mode to **cs**  
                   **cs**       =       NORM, CLTOR, CRTOL, SWAP

**Factory default:**   NORM

4.99 DDA Calibrate DA converter

<Decoder><More><Cal DA>	DDA	DC	N/A
-------------------------	-----	----	-----

**Definition:** This command is used to calibrate the DA converter. This operation takes about .1 second and during the calibration process, the audio output is muted. The DA converter is calibrated during power up but can be recalibrated at any time.

**Syntax:** **DDA** calibrate D/A converter

4.100 DDO Set digital output sampling rate.

<Decoder><AES><Output SR>	DDO		N/A
---------------------------	-----	---	-----

**Definition:** The digital audio is output from the ISO/MPEG decoder at the sampling rate specified in the ISO/MPEG header. This digital audio output, sampled at the selected rate can be used directly, or can then be converted to other rates via an external sample rate converter.

The internal sample rate converter is capable of sampling rate changes between 0.51 and 1.99. For example, if the MUSICAM receiver received a bit stream that indicated that the sampling rate was 24 kHz, then the output sampling rate could be set to 32 or 44 kHz but not 48 kHz since 48 kHz would be a sampling rate conversion of 2.0 to 1. This is out of the range of the sampling rate converter.

The following table outlines the valid sampling rate conversions:

Input Sampling	Output Sampling Rates			
	29.5	32	44.1	48
16	X			
22.05	X	X		
24	X	X	X	
32	X	X	X	X
44.1	X	X	X	X
48	X	X	X	X

Notice that the 16 kHz sampling rate cannot be output through the AES/EBU output port since it cannot be sample rate converted to any allowed value.

This command sets the digital audio (AES/EBU, SPDIF or optical) sampling rate. Setting **do** to M means that the sampling rate should follow the value contained in the MUSICAM audio frame.

Syntax:     **DDO ?**         print the decoder output sampling rate  
           **DDO do**         set digital output sampling rate to **do**  
                   **do**         =         29, 32, 44 or 48

Factory default:    48

#### 4.101 DES            Enable Decoder AES Sync Timing

<Decoder><AES><Sync>	DES		N/A
----------------------	-----	---	-----

Definition:    This command is used to enable/disable the use of the decoder AES/EBU sync signal. Normally, the AES/EBU sync signal for the decoder is used to determine the rate of the output of the AES/EBU decoder output. The AES/EBU decoder sync input can be ignored by setting **es** to NOTREQ. See Figures 4-1 through 4-4 in the [CDQPrima Technical Reference Manual](#) for details.

If there is no cable connected to the decoder sync input or **DES** is set to DISABLE, then the D/A converter and the AES/EBU transmitter in the decoder is timed off the network clock. The exact value of the clock is phase locked to the network clock at a rate given by information in the received ISO/MPEG data stream.

If there is a sync signal present at the decoder sync input, then the signal going to the decoder D/A converter and to the AES/EBU transmitter is rate adapted to the frequency of the received sync input. This insures the AES output is in sync with the external digital audio equipment.

Syntax:     **DES ?**        print status of decoder AES sync timing  
               **DES es**       enable decoder AES sync timing  
                   **es**        =       REQ or NOTREQ

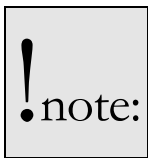
Factory default:     NOTREQ

#### 4.102 DHV            Set decoder headphone volume level

<b>VOL+</b> <b>VOL-</b>	DHV		N/A
-------------------------	-----	---	-----

Definition:    This command is used to set the decoder headphone volume level. The level applies when the decoder is selected as the source of audio output to the headphone jack.

Syntax:        **DHV ?**        print decoder headphone volume level  
               **DHV hv**        set decoder headphone volume to **hv**  
                   **hv**        =       0 .. 127, + or -



Note:           Setting the headphone level too high may cause an audible distortion not present in the source signal.

#### 4.103 DIN            Set Decoder - Encoder Interaction

<Decoder><Indep>	DIN		✓
------------------	-----	---	---

Definition:    This command is used to control the interaction between the decoder and the encoder. If **in** is set to NO, then the decoder and encoder interact, meaning that they work together and all encoder settings are reflected in the decoder. This is necessary for H.221 and one mode of two line CCS inverse multiplexing.

Setting **in** to YES forces the decoder to operate completely independently from the encoder. Any settings of the encoder have no effect on the decoder and visa versa. The encoder and decoder must be configured separately.




- Notes:
1. If ELI is set to H221, **DIN** is automatically set to NO.
  2. For communication with non-CCS/MUSICAM codecs, **DIN** must be set to YES.
  3. When using any of the broadcast or independent mono modes available, **DIN** must be set to YES

Syntax:     **DIN ?**           print current decoder - encoder interaction state  
               **DIN in**         set decoder - encoder interaction to **in**  
                   **in**         =         YES or NO

Factory default:     NO

#### 4.104 DLI           Set Decoder Digital Lines Format

<Decoder><Line fmt>	DLI		✓
---------------------	-----	---	---

Definition:     This command sets the format for the decoder digital interface lines. This command is only valid if the decoder is set to operate independently. Otherwise, the decoder line format is set when the encoder line format is set. See the **DIN** command.

The **ls** parameter is defined as follows:

Lx indicates that only line x should be used.  $1 \leq x \leq 6$   
 CCSL12 .. CCSL56 indicates that CCS two line combined mode is to be used (see the ELI command).

H221L123456 indicates that H.221 bonding should be used with the lines indicated. Up to six lines are supported.

IMx-y indicates that independent mono receive is being used. Line x for the left channel, line y for the right channel.

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Syntax:     **DLI ?**           print current decoder digital line format.  
               **DLI ls**         set decoder digital line format **ls**  
                   **ls**         =         L1, ... L6,  
                                   CCSLxx, x = 1, ... 6  
                                   H221Lxxxxxxx, x = 1, ... 6  
                                   IMx-y, x ≠ y = 1, ... 6



Notes: When a 2 line mode is used, the encoder bit rate must be 2 times the basic line rate, i.e., 112 (2 x 56) or 128 (2 x 64). You cannot set the decoder line format if **DIN** is set to NO

Factory default: L1

#### 4.105 DMU Mute Decoder Output Channels

<Decoder><More><Audio Out><Mute>	DMU		N/A
----------------------------------	-----	---	-----

Definition: This command is used to mute the decoder audio output channels.

Syntax: **DMU ?** print the channels muted  
**DMU mu** mute decoder outputs **mu**  
**mu** = LEFT, RIGHT, BOTH, or NONE

Factory default: NONE

#### 4.106 DQQ Print Command Summary For Decoder Commands

N/A	DQQ		N/A
-----	-----	---	-----

Definition: This command is used to print a summary of all the Dxx commands. As with all help commands, it is not available from the front panel keypad.

Syntax: **DQQ** print command summary for all decoder commands

#### 4.107 DRS Print Decoder Real-Time Status Bits

<Decoder><More><Stat bits>	DRS	DC	N/A
----------------------------	-----	----	-----

Definition: This command is used to print the decoder status bits from the ISO/MPEG Layer II frame header. The emphasis, copyright, private, protection and copy bits are displayed by this command.

If the decoder is not framed, then the words 'NOT FRAMED' are displayed. If the decoder is framed, then the following is displayed.

ee o w v mm

The **ee** characters are one of the following

<i>ee</i>	<i>description</i>
NONE	no emphasis
50/15	50/15 microsecond
RES	reserved
J.17	CCITT J.17 emphasis

The **o** character is one of the following:

<i>o</i>	<i>description</i>
O	original version
C	copied version

The **w** character is one of the following:

<i>w</i>	<i>description</i>
W	copyrighted version
.	non-copyrighted

<i>v</i>	<i>description</i>
V	the private bit is on
.	the private bit is off


The **v** character is one of the following:

The **mm** characters are one of the following:

Syntax:     **DRS ?**     print decoder real-time status bits  
               **DRS**     print decoder real-time status bits

<i>mm</i>	<i>description</i>
PC	CRC algorithm is old ISO and frame type is CCS
PM	CRC is the old ISO and the frame type is ISO
MC	CRC is ISO and the frame type is CCS
MM	CRC is ISO and frame type is ISO
NC	there is no CRC on the frame

## 4.108 DSP Scale Factor Protection

<Decoder><More><ACE>	DSP		N/A
----------------------	-----	---	-----

**Definition:** This command is used to enable or disable the use of scale factor protection. If scale factor protection checking is disabled, a bit error can have a much greater effect on the audio output than if scale factor protection is used. If scale factor protection is used by the decoder, the encoder must also have scale factor protection enabled. Scale factor protection may not be compatible with other codecs. See Section 4.4 in the *CDQPrima Technical Reference Manual* for details.

**Syntax:**

**DSP ?** print decoder scale factor protection status

**DSP sp** set decoder scale factor protection to **sp**

**sp** = YES or NO

**Factory default:** NO

## 4.109 DSS Report Decoder Status Summary

<Decoder><QStatus>	DSS		N/A
--------------------	-----	---	-----

**Definition:** This command is used to display the settings of the decoder parameters. An example of the display follows:

```
CBR SR MO D A
128 48 JS N 2 LF
```

CBR = decoder bit rate  
 SR = decoder sampling rate  
 MO = decoder algorithm mode (M, DM, JS, or S)  
 D = Decoder independent: Y = YES, N = NO  
 A = Algorithm: 2 = MPEGL2, 3 = MPEGL3, N = CCSN, O = CCSO, G = G.722

The last two characters are defined as follows:


L = loopback  
 N = normal (loopback off)  
 F = framed (normal operation)  
 - = not framed (normal operation)

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1, 2, or 3 = framed, independent mono operation: 1 = framed left only, 2 = framed right only, 3 = framed both.

Syntax: **DSS** display decoder status

#### 4.110 DTI Decoder AES/EBU or S/PDIF Output Timing

<Decoder><AES><TimingSrc>	DTI		N/A
---------------------------	-----	---	-----

Definition: This command sets decoder digital audio output timing source. See the Timing Section ([CDQPrima Technical Reference Manual](#) Chapter 4) for a detailed description of this command.

Syntax: **DTI ?** print decoder timing source  
**DTI ts** set decoder timing source **ts**  
**ts** = NORMAUTO, INTAUTO, INT or AES

#### 4.111 EAD Calibrate AD Converter

<Encoder><More><General><Cal AD>	EAD	DC	N/A
----------------------------------	-----	----	-----

Definition: This command is used to calibrate the AD converter. This operation takes about 0.1 second and during the calibration process, the audio output is muted. The AD converter is calibrated at power up. Calibrating the AD converter before critical recording results in the highest possible quality. Calibration of the audio input removes any small DC offset that may be present.

Syntax: **EAD** calibrate A/D converter

#### 4.112 EAF Set Encoder Ancillary Data Format (Layer II)

<Common><Anc Data><Fmt/L2> <Enc Fmt>	EAF	DC	N/A
--------------------------------------	-----	----	-----

Definition: This command is used to set the encoder ancillary data format. If **DIN** is set to NO, then it also sets the format for the decoder. The CCS format is compatible with the CDQ codec family. The CCSPLUS format is incompatible with the older CCS format.



Notes: The GENERIC format is for asynchronous ancillary data only and its format is available to OEM's. The DAB and ADR formats include scale factor protection and are the formats specified by the IRT. CCSPLUS and DAB formats are not available in Revision 17 and earlier. ADR is not available in Revision 23 or earlier.

Syntax: **EAF ?** print encoder ancillary data format  
**EAF af** set encoder ancillary data format to **af**  
**af** = CCS, CCSPLUS, GENERIC, DAB or ADR

#### 4.113 EAH Set Encoder Ancillary Data Format (Layer III)


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<Common><Anc Data><Fmt/L3> <Enc Fmt>	EAH	DC	N/A
--------------------------------------	-----	----	-----

Definition: This command is used to set the encoder ancillary data format when MPEG Layer III encoding is used. Two choices are available, CCS and CCS PROTECT. CCS PROTECT must be used when communicating with a Telos Zephyr

Syntax: **EAH ?** print current state  
**EAH af** set ancillary data format to **af**  
**af** = CCS or CCS PROTECT

#### 4.114 EAI Set Encoder Audio Input Source

<Encoder><Audio src>	EAI		Set encoder audio input source
----------------------	-----	--	--------------------------------

Definition: This command selects the type of input to the encoder. It can be either an analog or a digital input. The type of digital input (AES/EBU, SPDIF or optical) is selected by switches or jumpers.

Syntax: **EAI ?** print current encoder audio source  
**EAI ai** set encoder audio source **ai**  
**ai** = A or D

Factory default: A

## 4.115 EAL Set Encoder Algorithm

<Encoder><Algorithm>	EAL		✓
----------------------	-----	---	---

**Definition:** This command is used to set encoder algorithm. MPEGL2 sets the encoder to output ISO/MPEG Layer II frames. CCSN outputs CCS "new" frames. CCSO outputs CCS "old" frames. All of the above are MUSICAM enhanced layer II. MPEGL3 outputs standard Layer III and G.722 outputs the standard G.722 algorithm.

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The various CCS algorithms are variations of the ISO/MPEG Layer II standard, enhanced with MUSICAM encoding. They were implemented before the standard was finalized and are included for backward compatibility with older CDQ200x CODECs.

**Syntax:**

```

EAL ?          print encoder algorithm
EAL al         set encoder algorithm to al
                al = MPEGL2, MPEGL3, CCSO, CCSN or
                    G.722

```

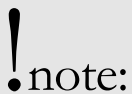
**Factory default:** MPEGL2

## 4.116 EAM Set Encoder Algorithm Mode

<Encoder><Algo mode>	EAM		✓
----------------------	-----	---	---

**Definition:** This command is used to set encoder algorithm mode when the algorithm is MPEGL2, MPEGL3 CCSO or CCSN. See the **EAL** command. The possible modes are mono (M), dual mono (DM), joint stereo (JS) or stereo (S).

Mono allocates all available bits to a monaural input. Dual mono, stereo, and joint stereo are all dual channel modes using different bit allocation schemes.



**Note:** If G.722 encoding is selected, the encoder algorithm mode defaults to 'M1' and cannot be changed.

Syntax: **EAM ?** print encoder algorithm mode  
**EAM am** set encoder algorithm mode to **am**  
**am** = M, DM, JS or S

Factory default: JS

#### 4.117 EAS Set Encoder Ancillary Data Channel for Independent Mono

<Encoder><Line fmt><Ind. Mono> <Anc channel>	EAS	DC	N/A
--	-----	----	-----

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**Definition:** This command is used to select which lines are used for ancillary data when using the independent mono mode. It is possible to send the ancillary data to all selected lines, only those lines that left channel audio is sent, or only those lines that right channel audio is sent.

Syntax: **EAS ?** Print current encoder ancillary data channel  
**EAS an** Set current encoder ancillary data channel to **an**  
**an** = BOTH, LEFT or RIGHT

#### 4.118 EBR Set Encoder Bit Rate

<Encoder><Bit rate>	EBR		✓
---------------------	-----	---	---

**Definition:** This command is used to set the encoder digital audio compression bit rate. If **A** is selected, the bit rate is determined by the input digital interface clock and the line format (**ELI**). If the line format is set to H221, the encoder bit rate is automatically set to the necessary bit rate to match the number of connected lines. The bit rate set by this command is ignored in the H221 mode.

Upon changing to any line format, the bit rate will be set to the bit rate set by this command. See Section 6.2 for further information regarding bit rates and sampling rates.

**Notes:** If auto mode is selected, and then the line format is set to H221, the H221 mode 'erases' the auto mode setting. Therefore, when switching back out of H221 format, **EBR**

**! note:**

**A** must be re-entered. In the 2-line mode, only 112 and 128 kb/s bit rates are allowed.

Syntax:     **EBR ?**       print encoder bit rate  
              **EBR br**       set encoder bit rate to **br**  
                   **br**     =     24, 32, 40, 48, 56, 64, 80,  
                                   96, 112, 128, 144, 160, 192,  
                                   224, 256, 320, 384, A

Factory default:    256

#### 4.119 ECR        Set Encoder Copyright Bit In Header

<Encoder><More><ISO Hdr><Copyright>	ECR	Setup, ISO Header	N/A
-------------------------------------	-----	-------------------	-----

Definition:    This command is used to enable or disable copyright bit in the ISO MPEG Layer II header.

Syntax:     **ECR ?**       print encoder copyright bit status  
              **ECR cr**       set encoder copyright bit status to **cr**  
                   **cr**     =     YES or NO

Factory default:    NO

#### 4.120 ECS        Set Encoder Audio Input Channel Swap Mode

<Encoder><More><Audio In><Copy/Swap>	ECS	Setup, Audio I/O	N/A
--------------------------------------	-----	------------------	-----

Definition:    This command is used to control the encoder audio input. If **ew** is set to SWAP, then the left and right audio channels are swapped before input to the compression algorithm. The LED level meter always shows the physical inputs and does not change its display based on the **ECS** command. The LCD status window encoder overload indicators reflect the *logical* left and right channels. Their meanings depend on the setting of the ECS command. If **ew** is set to NORM, then the input audio is passed unchanged to the encoder.

This command is useful for controlling the action of the *CDQPrima* in the presence of mono audio signals as well as correcting input cabling mistakes. When in the mono

mode, the *CDQPrima* uses encoded audio only from the left input. The swap mode will force the *CDQPrima* to encode the audio from the right input. You can also use the channel swap mode to switch between two mono sources.

Syntax:     **ECS ?**        print encoder audio input channel swap mode  
               **ECS ew**     set encoder audio input channel swap mode to **ew**  
                               **ew**        =     NORM or SWAP

Factory default:    NORM

#### 4.121 EEP        Set Encoder Emphasis Bit In Header


<Encoder><More><ISO Hdr><Emphasis>	EEP	Setup, ISO Header	N/A
------------------------------------	-----	-------------------	-----

Definition:    This command is used to enable or disable emphasis bit in the ISO Layer II header.

Syntax:     **EEP ?**        print encoder emphasis bit status  
               **EEP ep**     set encoder emphasis bit status to **ep**  
                               **ep**        =     NO, 50, or J.17

Factory default:    NO

#### 4.122 EHV        Set Encoder Headphone Volume Level

<b>VOL+</b> <b>VOL-</b>	EHV		N/A
-------------------------	-----	---	-----

Definition:    This command is used to set the encoder volume level. The level applies when the encoder is selected as the source of audio output to the headphone jack.

Syntax:     **EHV ?**        print encoder headphone volume level  
               **EHV hv**     set encoder headphone volume to **hv**  
                               **hv**        =     0 .. 127, + or -

Notes:        Setting the headphone level too high may cause an audible distortion not present in the source signal or in the encoded audio.



## 4.123 ELI Set Encoder Digital Lines Format

<Encoder><Line fmt>	ELI		✓
---------------------	-----	---	---

**Definition:** This command sets the format for the encoder digital interface (DIF) lines.

Four line formats are supported: H.221 BONDING, Single line, two line and independent mono.

If H221Lxxxxxx is selected, a maximum 6 lines is possible, yielding bit rates up to 384 kb/s. The xxxxxx field contains 1 to 6 numbers which can be any combination of the numbers 1 to 6. The xxxxxx field represents the lines to use, and the order to use them, for the H.221 connection. For example, H221L125 indicates that DIF 1, 2 and 5 should be used for the connection. DIFs 3, 4 and 6 are not used for this H221 connection. The encoder bit rate should be set for the number of lines used times 64. H221 does not support N x 56 kb/s operation. H.221 BONDING is only supported when internal terminal adapters are used. H.220 BONDING can only be used with MPEG Layer II algorithms.

The actual number of DIFs used determined by the number of lines dialed. The encoder/decoder bit rate is set to 384 kb/s and the decoder is set to not independent (**DIN NO**). The TA lines are set **CONNECTED** when they are manually dialed, automatically dialed or connected to an incoming call.

Single line mode supports any allowable bit rate when using external terminal adapters. With internal TA's, only 56 or 64 kb/s is supported. When in the single line mode, the identical data is sprayed to all installed interfaces above the one selected. This makes broadcasting to multiple locations possible.

Two line mode is supported by internal and external terminal adapters. Only 112 and 128 kb/s is supported. If

only one line is connected when using the two line mode, the *CDQPrima* will default to 56 or 64 kb/s mono.

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Independent mono allows two independent audio programs to be sent to two (or more, when combined with broadcasting) locations using MPEG Layer II.

The **li** parameter is defined as follows:

- H221L123456 indicates that multiple DIFs are combined utilizing H.221.
- H221L1 indicates that only DIF 1 should be used (H.221 BONDING)
- L2 indicates that DIF 2 should be used in single line mode.
- ⋮
- L6 indicates that only DIF 6 should be used in single line mode.
- CCSL12 .. CCSL56 indicates that CCS two line mode is to be used.

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IMl-r indicates that left audio should be sent to line(s) l and right audio should be sent to line(s) r

Syntax: **ELI ?** print current encoder digital line format.  
**ELI li** set encoder digital line format (**li**)  
**li** = L1, ... L6,  
 CCSLxx, x = 1, ... 6  
 H221Lxxxxxx, x = 1, ... 6  
 IMx-y, x ≠ y = 1, ... 6

Factory default: L1

#### 4.124 ELU Set Link Message Update Rate

N/A	ELU	DC	N/A
-----	-----	----	-----

Definition: This command is used to set the link message update rate. The link messages are the exported part of the action word. Link messages are sent to the far end *CDQPrima* every time the action word changes. If no changes in the action occur, the link message is sent at a rate given by **ru**.

An **ru** of 1 means link message updates every 0.1 second, while **ru** = 5 means update link messages every 0.5 second. An update rate of 0 turns off link messages.

Syntax:     **ELU ?**       print link message update rate  
              **ELU ru**       set the link message update rate to **ru**  
                   **ru**       =     0 .. 10

Factory default:     1

#### 4.125 EMM       Set Encoder Mono Mix

<Encoder><More><Audio In><Mono Mix>	EMM	Setup, Audio I/O	N/A
-------------------------------------	-----	------------------	-----

Definition:   This command enables or disables the mono mix feature. If mono mix is enabled, the left and right audio inputs are summed to mono and the result is output to the left and right channel of the encoder. The algorithm mode must be set to mono (**EAM MONO**). Mono mix has no effect when using G.722 or MPEG Layer 3 algorithms. Mono mix is used when stereo source material must be mixed to mono for transmission.

The values for the mono mix can be M0, M3, or M6, ON, or OFF, representing the following:

M0=       L + R  
 M3=       L + R - 3dB  
 M6=       L + R - 6dB  
 ON        =     same as M3  
 OFF       =     stereo

where L and R are the left and right channel signals respectively

Syntax:     **EMM ?**       print current encoder mono mix state  
              **EMM mm**       set encoder mono mix state to **mm**  
                   **mm**       =     OFF, ON, M0, M3, or M6

Factory default:     OFF

4.126 EOR Set Encoder Original Bit In Header

<Encoder><More><ISO Hdr><Original>	EOR	Setup, ISO Header	N/A
------------------------------------	-----	-------------------	-----

Definition: This command is used to enable or disable original bit in the ISO header.

Syntax: **EOR ?** print encoder original bit status  
**EOR or** set encoder original bit status to **or**  
**or =** YES or NO

Factory default: NO

4.127 EPB Load All Default Psychoacoustic Parameters

<Encoder><More><Psycho><Reset>	EPB	Psycho, Reset	N/A
--------------------------------	-----	---------------	-----

Definition: This command is used to load the default (factory supplied) MUSICAM psychoacoustic parameters. This is done by setting the tables for each sampling rate and bit rate to point to the factory supplied parameters. This command is the same as executing the following two commands for each possible sampling rate and bit rate.

**EPD br sr**  
to find the default table number for sampling rate **sr** and bit rate **br**

**EPT tb br sr**  
to set table **tb** (found from the above command) as the table to be used for sampling rate **sr** and bit rate **br**

Syntax: **EPB** load all default psychoacoustic parameters

4.128 EPD Get Default Psychoacoustic Parameter Table Number

<Encoder><More><Psycho><Tbl Num>	EPD		N/A
----------------------------------	-----	---	-----

Definition: This command is used to get the default psychoacoustic parameter table number for the specified bit and sampling

rates. The table number will be between 120 and 239. It also returns a second number to the right of the first number. This number is the suggested table number for the user defined bit rate and sampling rate. This suggested table number can be ignored.

Syntax: **EPD br sr** get default psychoacoustic parameter table number  
**br** = 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320, 384  
**sr** = 16, 24, 32 or 48

#### 4.129 EPI Set Encoder Private Bit In Header

<Encoder>More<>ISO Hdr<>Private<>	EPI	Setup, ISO Header	N/A
-----------------------------------	-----	-------------------	-----

Definition: This command is used to enable or disable private bit in the ISO Layer II header.

Syntax: **EPI ?** print encoder private bit value  
**EPI pb** set encoder private bit value to **pb**  
**pb** = ON or OFF

Factory default: OFF

#### 4.130 EPL Load Psychoacoustic Parameter Table From Flash

<Encoder><>More<>Psycho<>Load Tbl<>	EPL	Psycho, Load Parameters	N/A
-------------------------------------	-----	-------------------------	-----

Definition: This command is used to load psychoacoustic parameters from FLASH into RAM memory. These parameters become the current parameters and are downloaded to the encoder.

Syntax: **EPL tb** load psychoacoustic parameter table from flash table **tb**  
**tb** = 0..239

#### 4.131 EPP Set Psychoacoustic Parameter

<Encoder><More><Psycho><Set parm>	EPP		N/A
-----------------------------------	-----	---	-----

**Definition:** This command is used to set a psychoacoustic parameter. The parameter type (**EPY**) must be set for each parameter before this command can be used. Although all methods can be used, we recommend using the Windows Remote Control program if you want to adjust the psychoacoustic parameter tables.

**Syntax:**

**EPP pp ?** print the value of psychoacoustic parameter **pp**

**EPP pp pv [ 0 ]** set psychoacoustic parameter **pp** to value **pv** with optional type **0** indicating **pv** is in hex

**pp** = 0 . . 31

**pv** = floating point or integer number

#### 4.132 EPR Set Encoder Protection Bit In Header

<Encoder><More><ISO Hdr><Protect>	EPR	Setup, ISO Header	N/A
-----------------------------------	-----	-------------------	-----

**Definition:** This command is used to enable or disable protection bit in the ISO Layer II header.

**Syntax:**

**EPR ?** print encoder protection bit status

**EPR pr** set encoder protection bit status to **pr**

**pr** = YES or NO

**Factory default:** YES

#### 4.133 EPS Store Psychoacoustic Parameter Table In Flash

**security level 1 or 9 (see below)**

<Encoder><More><Psycho><Store Tbl>	EPS	Psycho, Store Parameters	N/A
------------------------------------	-----	--------------------------	-----

**Definition:** This command is used to store the current psychoacoustic parameter settings into flash memory. Table numbers



Syntax:     **EPT tb ?**           print the bit rate and sampling rate for table **tb**  
               **EPT tb br sr**       assign psychoacoustic parameters table **tb** to be used for sampling rate **sr** and bit rate **br**

**tb**    =    0 .. 239  
               **br**    =    24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320, or 384  
               **sr**    =    16, 22, 24, 32, 44, or 48

4.135 EPY           Set Psychoacoustic Parameter Type

N/A	EPY	DC	N/A
-----	-----	----	-----

Definition:   This command is used to set the psychoacoustic parameter type. This command is used in conjunction with the **EPP** command. This command should not be used without factory guidance.

Syntax:     **EPY pp ?**   print psychoacoustic parameter type  
               **EPY pp pt**   set psychoacoustic parameter **pp** to type **py**  
               **pp**     =    0..31  
               **pt**     =    0..4

4.136 EQQ           Print Command Summary For Encoder Commands

N/A	EQQ		N/A
-----	-----	---	-----

Definition:   This command is used to print a summary of all the **Exx** (encoder) commands.

Syntax:     **EQQ**           print command summary

4.137 ESD           Set Encoder Sine Wave Detector

<Encoder><More><General><Sine Det>	ESD	DC	N/A
------------------------------------	-----	----	-----

Definition:   This command enables or disables the encoder sine wave detector. If the sine wave detector is enabled, then typical

objective measurements such as THD will show the quality of the analog circuitry and not the effects of compression.

Sometimes the sine wave detector can be fooled by rare passages of music, which may result in a slight distortion of the passage. Turning the sine wave detector off, prevents false sine wave detection. However, turning off the sine wave detector may cause poorer objective measurements when using test signals.



**Note:** Turning the sine wave detector off, in no way, harms the audio compression algorithm and may improve subjective audio quality. The sine wave detector should be turned OFF for normal operation.

**Syntax:**     **ESD ?**         print current encoder sine wave detector state  
                   **ESD ed**         set encoder sine wave detector state to **ed**  
                                   **ed**         =         ON or OFF

**Factory default:**     OFF

4.138 ESP             Set Encoder Scale Factor Protection

<Encoder><More><General><ACE>	ESP		N/A
-------------------------------	-----	---	-----

**Definition:** This command is used to enable or disable the use of scale factor protection for error concealment. If scale factor protection checking is disabled, bit errors can have a much greater effect on the audio output than if scale factor protection is used. If scale factor protection is used by the encoder, the decoder must also have scale factor protection enabled. However, scale factor protection is not bi-directional, can be enabled in the encoder and not enabled in the decoder. To enable scale factor protection for both directions, encoder and decoder scale factor protection must be enabled on both codecs. Scale factor protection is not compatible with other manufacturers codecs, and is only backward compatible with the CDQ2001 codec.

Syntax:     **ESP ?**       print encoder scale factor protection status  
               **ESP sp**       set decoder scale factor protection to **sp**  
                           **sp**     =     YES or NO

Factory default:   NO

#### 4.139 ESR       Encoder Sampling Rate

<Encoder><Smpl rate>	ESR		✓
----------------------	-----	---	---

Definition:   This command sets the sampling rate for the AD converter or the digital audio input. See Section 2.7 of the *CDQPrima Technical Reference Manual* and Section 6.6 of the *CDQPrima Users Guide* for further information regarding bit rates and sampling rates.



Note:         Encoder sample rate only applies for the MPEGL2, MPEGL3, CCSN and CCSO algorithms. For G.722 the sampling rate is fixed at 16 kHz.

Syntax:     **ESR ?**       print current encoder sampling rate  
               **ESR sr**       set encoder sampling rate (**sr**) to one of the following:  
                           **sr**     =     16, 24, 32 or 48

Factory default:   48

#### 4.140 ESS       Report Encoder Status Summary

<Encoder><QStatus>	ESS		Default display
--------------------	-----	---	-----------------

Definition:   This command is used to display the settings of the encoder parameters. An example of the display follows:

```
CBR SR MO I A
128 48 JS A N L
```

CBR =       encoder bit rate (if in loopback, loopback bit rate will be shown)  
 SR   =       decoder sampling rate  
 MO   =       decoder algorithm mode (M, DM, JS, or S)

I = Input: Analog or Digital  
 A = Algorithm: 2 = MPEGL2, 3 = MPEGL3, N = CCSN, O = CCSO, G = G.722

The last character is defined as follows:

L = loopback  
 N = normal (loopback off)

Syntax: **ESS** display encoder status

#### 4.141 ESW Set A Simulated Switch

<Encoder><More><Contacts><Set Switch>	ESW	DC	N/A
---------------------------------------	-----	----	-----

Definition: This command is used to simulate a contact closure and possibly send a signal to a far-end codec. This command causes actions based on the Event-Action logic. Refer to the Prima Logic Language chapter for more information.

Syntax: **ESW sw ?** print status of simulated switch number **sw**  
**ESW sw ss** set simulated switch number **sw** to state **ss**  
**sw** = CI0 .. CI7  
**ss** = ON or OFF

Factory default: All OFF

#### 4.142 ETI Encoder Timing

<Encoder><More><General><Timing>	ETI		N/A
----------------------------------	-----	---	-----

Definition: This command sets encoder timing source. The three choices are normal, which sets the digital (transmission) line as the timing source, internal uses an internal crystal clock and AES/EBU uses the digital audio for timing.

Syntax: **ETI ?** print encoder timing source  
**ETI ts** set encoder timing source **ts**  
**ts** = NORM, INT or AES

Factory default: NORM

#### 4.143 EXB Display Status Of Opto-Isolator Inputs

<Encoder>More<>XInputs<>Xstatus<>Op-Input<>	EXB	DC	N/A
---	-----	----	-----

**Definition:** This command is used to set the display the status of the optional optically isolated inputs. This command is for a custom application, sending relay control through the optical inputs.

**Syntax:**     **EXB ?**       display opto-isolator input status bits  
                  **EXB**         display opto-isolator input status bits

#### 4.144 EXD Set Extended Optical Isolator Debounce Time

<Encoder>More<>XInputs<>Debounce<>	EXD	DC	N/A
------------------------------------	-----	----	-----

**Definition:** This command is used to set the extended optical isolator debounce time. This means that for the specified number of milliseconds, all inputs must be stable before any extended link message is sent to the far end.

This command is part of the Extended Control Link package available on version 17 and later. For a full explanation of the ECL package, refer to the **EXI** command.

**Syntax:**     **EXD ?**       print extended optical debounce time  
                  **EXD xd**     set extended optical debounce time  
                           **xd**     =     1, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Factory default:    50

#### 4.145 EXI Set Extended Input Usage

<Encoder><>More<>XInputs<>Enable<>X-Input<>	EXI	DC	N/A
---	-----	----	-----

**Definition:** This command is used to set the usage of the extended optical isolated inputs. There are 16 optically isolated inputs on the optional card, installed in an external receiver.

This command is part of the Extended Control Link package. The Extended Link feature allows an additional 16 bits of information to be transmitted from the encoder to the decoder. The source of these inputs can either be Extended Inputs provided by the Extended Input interface card or the OTHER RS232 port. There is no corresponding feature on the decoder. The Extended Link feature is designed to support use of the encoder in satellite uplink operations.

The OTHER RS232 port is enabled by the **COT** command and the baud rate of this input is defined by the **COB** command. The input to this port is assumed to be 5 bytes.

The Extended Inputs are enabled by the **EXI** command. These 16 optically isolated (or TTL) inputs are scanned every .01 seconds. Once any input changes, a period of time defined by the **EXD** command elapses in which other inputs are scanned to see if any other input changes. If another input changes during this debounce period, no output is generated until all inputs have been stable for the debounce time set by the **EXD** command. The sense of the Extended Inputs is defined by the **EXM** command. This command allows the inversion of the input sense. This means that a contact closure on the input can result in either a 1 or a 0 being transmitted depending on the **EXM** input.

The OTHER RS232 inputs and the Extended Inputs are bit-wise OR'ed together and sent as an Extended Link message. This means that if either the OTHER RS232 input OR the Extend Input is a 1, then the Extended Link value transmitted will be a 1. Both the OTHER RS232 input AND the Extended Input must be a 0 for the Extended Link value transmitted to be a 0. This applies for all of the 16 Extended Link Bits.

The real-time status of the OTHER RS232 inputs and the Extended Inputs is obtained by the **EXR** and **EXO** commands respectively. The real-time Extended Link value is obtained by the **EXL** command. The **EXL** result is

the bit-wise or of the **EXR** and **EXO** status bits. Since these are real-time status displays, it is very difficult to use these displays to capture transient input changes.

Syntax:     **EXI ?**       print extended input usage  
              **EXI xi**       set extended input usage to **xi**  
                   **xi**       =       ON or OFF

Factory default:   OFF

#### 4.146 EXL       Display Extended Link Real-Time Status

<Encoder><More><XInputs><X Status><X-Link>	EXL	DC	N/A
--	-----	----	-----

Definition:   This commands displays the real time status of the link. The value displayed is in binary and represents each of the 16 inputs. The left most value corresponds to extended input 15m and the right most value to extended input 0. The value displayed is the value sent to the decoder and is the bit-wise OR of the OTHER RS232 input and the inputs from the extended inputs.

This command is part of the Extended Control Link package available on version 17 and later. For a full explanation of the ECL package, refer to the **EXI** command.

Syntax:     **EXL ?**       display extended input real time status  
              **EXL**       display extended input real time status

#### 4.147 EXM       Set Extended Input Inversion Mask

<Encoder><More><XInputs><Invert><X-Input>	EXM	DC	N/A
---	-----	----	-----

Definition:   This command is used to set to extended input inversion mask. This mask allows the definition of the input sense. The mask is of the form:

abcdefghijklmnop

where a corresponds to extended input 15 and p corresponds to extend input 0.

Setting **xm** to all zeros means that the sense of the input is unaltered. Setting **xm** to all ones means that the sense of the input is inverted. The sense of any input can be ascertained by use of the **EXR** command.

This command is part of the Extended Control Link package available on version 17 and later. For a full explanation of the ECL package, refer to the **EXI** command.

Syntax:     **EXM ?**            print extended input inversion mask  
           **EXM xm**            set extended input usage to **xm**  
                   **xm**        =     abcdefghijklmnop (a=15, p=0)  
                                   a...p     =     0 or 1

Factory default:     1111111111111111

#### 4.148 EXO            Display Real Time Status Of Extended Inputs

<Encoder><More><XInputs><X Status><X Inputs>	EXO	DC	N/A
--	-----	----	-----

Definition: This command displays the real-time status of the extended inputs. The value displayed is in binary and represents each of the 16 inputs. The left most value is corresponds to extended input 15 and the right most value corresponds the extended input 0.

The value displayed is bit wise OR'ed with the extended inputs before being sent as the extended link value.

This command is part of the Extended Control Link package available on version 17 and later. For a full explanation of the ECL package, refer to the **EXI** command.

Syntax;     **EXO ?**            display real-time status of extended inputs  
           **EXO**                display real-time status of extended inputs

#### 4.149 EXP            Set On-Board Optical Input Usage

<Encoder><More><XInputs><Enable><Op-Input>	EXP	DC	N/A
--	-----	----	-----

**Definition:** This command is used to enable the optional optically isolated inputs. This command is for a custom application, sending relay control through the optical inputs.

**Syntax:**     **EXP ?**        print on-board optical input usage  
                  **EXP xp**       set on-board optical input to **xp**  
                           **xp**       =       NO or OFF

4.150 EXR        Display Real Time Status Of OTHER RS232 Port Inputs

<Encoder><More><XInputs><X Status><O-RS232>	EXR	DC	N/A
---	-----	----	-----

**Definition:** This command displays the real-time status of the OTHER RS232 port inputs. The value displayed is in binary and represents each of the 16 inputs. The left most value is corresponds to extended input 15 and the right most value corresponds the extended input 0.

The value displayed is bit wise OR'ed with the extended inputs before being sent as the extended link value.

This command is part of the Extended Control Link package available on version 17 and later. For a full explanation of the ECL package, refer to the **EXI** command.

**Syntax:**     **EXR ?**        display real-time status of OTHER RS232 port inputs  
                  **EXR**        Display real-time status of OTHER RS232 port inputs

4.151 EXV        Set On-Board Optical Input Inversion Mask

<Encoder><More><XInputs><Invert><Op-Input>	EXR	DC	N/A
--	-----	----	-----

**Definition:** This command is used to set the inversion mask for the on-board optical inputs. This command is for a custom application, sending relay control through the optical inputs.

Syntax:     **EXV ?**       print on-board optical input inversion mask  
               **EXV xv**       set on-board optical input usage inversion mask to **xv**  
                               **xv**     =     abcd (a=4, d=0)  
   a..d = 0 or 1

4.152 HELP       Print Command Summary For All Commands

N/A	HELP		N/A
-----	------	---	-----

Definition:   This command is used to print a summary of all help commands.

Syntax:       **HELP**       print command summary

4.153 MBC       Display BER Counter

<Maint><BER Det><Dsply Cnt>	MBC	DC	N/A
-----------------------------	-----	----	-----

Definition:   This command displays the BER counter. See the **MBD**, **MBL**, **MBR** and **MBU** commands.

Syntax:       **MBC ?**       display the BER counter  
               **MBC**       display the BER counter

4.154 MBD       Set BER Down Count Rate

<Maint><BER Det><Down Cnt>	MBD	DC	N/A
----------------------------	-----	----	-----

Definition:   This command is used to set the BER down count rate. It is used in conjunction with the **MBL** command. For a detailed explanation of the **MBD** command, see the **MBL** command.

Syntax:       **MBD ?**       print current BER down count rate  
               **MBD bd**       set BER down count rate to **bd**  
                               **bd**     =     0 .. 9

Factory default:   1

## 4.155 MBE Set Remote Boot Enable

<Maint><Soft Dld><RmtBt Enb>	MBE	DC	N/A
------------------------------	-----	----	-----

**Definition:** This command enables the remote boot over a digital interface port. To actually boot the *CDQPrima* from a remote port, the multiplexer must be enabled and the *CDQPrima* must be in one of the MPEG compatible modes.

**This command requires that the user be logged on at Level 4 or higher.**

**Syntax:**     **MBE ?**        print remote boot enable  
               **MBE be**       set remote boot enable state to **be**  
                           **be**     =       YES or NO

**Factory default:**   NO

## 4.156 MBL Set BER Count Rate Limit

<Maint><BER Det><Reset Cnt>	MBL	DC	N/A
-----------------------------	-----	----	-----

**Definition:** This command is used to set the threshold limit for bit error rate. If the bit error rate counter goes above this limit, then the BER event is set to true.

Each time a decoded frame is received (every 24 ms. for 48k sampling rate MPEG algorithms), the status of the BER bit is checked. The BER bit is set to a 1 by the decoder if MPEG frame protection is found and the frame CRC is in error. If the BER bit is on, the BER counter is incremented by the value set by the **MBU** command. If the BER bit is off, then the BER counter is decrement by the value set by the **MBD** command. When the BER counter is equal or above the level set by the **MBL** command, then the BER event is set to true, otherwise it is set to false.

The contents of the BER counter may be displayed by the **MBC** command. The BER counter may be set to 0 by the **MBR** command.

In a typical application using the BER counter, the following commands are used:

- MBU 1** set to count up by one on each frame with an error
- MBD 0** set not to count down on OK frames
- MBR** clear the counter
- MBL 1234** wait until the BER count goes to 1234

The above sequence of commands can be used count the total number of bit errors and set the BER event when the count goes above 1234. The above sequence has the drawback that it never resets the BER count in the presence of good frames. The following remedies the situation by providing a leaky counter:

- MBU 10** set to count up by one on each frame with an error
- MBD 1** set not to count down on OK frames
- MBR** clear the counter
- MBL 1234** wait until the BER count goes to 1234

In the case above, every time a frame with a BER occurs, the count increments by 10. If a good frame occurs, then the count decrements by one. A long string of good frames erases a bad frame.

Syntax: **MBL ?** print current BER up count rate  
**MBL b1** set BER up count rate to **b1**  
**b1** = 0 .. 32767

Factory default: 1

#### 4.157 MBM Boot The *CDQPrima* From ROM

<Maint><Soft Dld><Boot ROM>	MBM	DC	N/A
-----------------------------	-----	----	-----

**Definition:** This command is can only be used when the *CDQPrima* is executing out of the FLASH. It is used to boot the *CDQPrima* so that it runs out of ROM. In the ROM mode, new software, including the control processor, can be downloaded.

This command can be used to force the control processor into the software download mode. When control is passed



#### 4.161 MBU Set BER Up Count Rate

<Maint><BER Det><Up Cnt>	MBU	DC	N/A
--------------------------	-----	----	-----

**Definition:** This command is used to set the BER up count rate. It is used in conjunction with the **MBL** command. For a detailed explanation of the **MBU** command, see the **MBL** command.

**Syntax:**     **MBU ?**        print current BER up count rate  
                  **MBU bu**       set BER up count rate to **bu**  
                           **bu**       =     0 .. 9

Factory default:     1

#### 4.162 MBX Enable Keypad Beeper

<Common><Buzzer><Pb Click>	MBX	DC	N/A
----------------------------	-----	----	-----

**Rev. 6**

**Definition:** The MBX command is used to control the state of the built-in keypad beeper (optionally available on pre- hardware Revision 6 *CDQPrima*, standard on Rev 6 and higher hardware platform).

**Syntax:**     **MBX ?**        print current state of the beeper  
                  **MBX st**       set beeper to state **st**  
                           **st**       =     ON or OFF

Factory default:     ON

#### 4.163 MCP Set Connect Port

N/A	MCP	DC	N/A
-----	-----	----	-----

**Definition:** This command is used to connect the current remote port to a connect port. This allows a direct RS232 connection from the remote port the to connect port. This allows manual control of the connected port.

The remote port is the front panel or the rear panel remote control port.

Syntax:     **MCP ?**       print current connect port  
               **MCP cp**       set connect port to **cp**  
                           **cp**   =     NONE, 0 ... 7, TA0, TA1 or  
   TA2

Factory default:   None

#### 4.164 MET        Enable Hardware Tests

<Maint><Hrdw Tst><EnDis Tst>	MET	DC	N/A
------------------------------	-----	----	-----

Definition:   This command is used to enable hardware tests. When hardware tests are enabled, then the normal operation of the *CDQPrima* hardware is disabled. If hardware tests are enabled, then the various hardware subsystems may be tested.

Syntax:     **MET et**       enable hardware tests  
                           **et**   =     ENABLE or DISABLE

Factory default:   DISABLE

#### 4.165 MHT        Perform Hardware Tests

<Maint><Hrdw Tst><Hrdwr Tst>	MHT	DC	N/A
------------------------------	-----	----	-----

Definition:   This command is used to perform hardware tests. Setting **ht** to ALL performs all hardware tests.

Syntax:     **MHT ht**       perform hardware test **ht**  
                           **ht**   =     ALL, TC, IO, LED

#### 4.166 MLK        Set The Access To The *CDQPrima* **security level 6**

<Maint><Security><Lock Out>	MLK	DC	N/A
-----------------------------	-----	----	-----

Definition:   This command is used to restrict the access to the *CDQPrima*. All access can be controlled. This means that if access is restricted to a command port of the *CDQPrima*, then the user must logon via the **CUP**, **CSU** or **CPW** commands to execute any commands. Restricting access to a port effectively stops all access to the *CDQPrima* via

that port. For example, the front panel keypad can be deactivated for all normal use by restricting its access. Users who know the user, super user or factor password can still use a restricted port once they have logged on.

If access is not restricted, then the logon process is not required for most commands. There are commands, such as **EPS**, that require the port be logged on (logon) before full command access is granted.

The ports that may be restricted are front panel keypad (KEYPAD), front panel remote control port (FRONT), rear panel remote control port (REAR), digital interface (DIF), inband ancillary data port (INBAND) or virtual action (VA).

Syntax;     **MLK ap ?**   print the access restriction of port **ap**  
               **MLK ap st**   set the access restriction of port **ap** to **lk**  
                   **ap**     =     KEYPAD, INBAND, REAR, FRONT,  
                                   DIF, VA  
                   **lk**     =     YES or NO

Factory default:   All ports NO

4.167 MOC        Display OOF Counter

<Maint><OOF Det><Dsply Cnt>	MOC	DC	N/A
-----------------------------	-----	----	-----

Definition:   This command displays the OOF counter.

Syntax:       **MOC**           display the OOF counter  
               **MOC ?**        display the OOF counter

4.168 MOD        Set OOF Down Count Rate

<Maint><OOF Det><Down Cnt>	MOD	DC	N/A
----------------------------	-----	----	-----

Definition:   This command is used to set the OOF down count rate. It is used in conjunction with the **MBL** command. For a detailed explanation of the **MOD** command, see the **MBL** command.

Syntax:     **MOD ?**       print current OOF down count rate  
               **MOD od**       set OOF down count rate to **od**  
                           **od**     =     0 .. 9

Factory default:     1

#### 4.169 MOL       Set OOF Count Rate Limit

<Maint><OOF Det><Set Thresh>	MOL	DC	N/A
------------------------------	-----	----	-----

**Definition:** This command is used to set the threshold limit for frame error rate. If the frame error (out of frame) counter goes above this limit, then the OOF event is set to true.

Each time a decoded frame is received (every 24 ms for 48K sampling rate MPEGII), the status of the OOF bit is checked. The OOF bit is set to a 1 by the decoder if MPEG frame protection is found and the frame CRC is in error. If the OOF bit is on, the OOF counter is incremented by the value set by the **MOU** command. If the OOF bit is off, then the OOF counter is decremented by the value set by the **MOD** command. When the OOF counter is above the level set by the **MOL** command, then the OOF event is set to true, otherwise it is set to false.

The contents of the OOF counter may be displayed by the **MOC** command, and the OOF counter may be set to 0 by the **MOR** command.

In a typical application of the OOF counter, the following commands are used:

**MOU 1**       set to count up by one on each frame with an error  
**MOD 0**       set not to count down on OK frames  
**MOR**       clear the counter  
**MOL 1234**   wait until the OOF count goes to 1234

The above sequence of commands can be used count the total number of bit errors and set the OOF event when the count goes above 1234.

The above sequence has the drawback that it never resets the OOF count in the presence of good frames. The following remedies the situation by providing a leaky counter.

- MOU 10** set to count up by one on each frame with an error
- MOD 1** set not to count down on OK frames
- MOR** clear the counter
- MOL 1234** wait until the OOF count goes to 1234

In the case above, every time a frame with a OOF occurs, the count increments by 10. If a good frame occurs, then the count decrements by one. A long string of good frames erases a bad frame.

Syntax: **MOL ?** print current OOF up count rate  
**MOL o1** set OOF count rate limit to **o1**  
**o1** = 0 .. 32767

Factory default: 10

#### 4.170 MOP Set OOF Count Maximum

<Maint><OOF Det><Set Peak>	MOP	DC	N/A
----------------------------	-----	----	-----

Definition: This command is used to set the maximum count of the OOF counter. If any further OOF conditions are encountered, they are not counted.

Syntax: **MOP ?** print current OOF count maximum  
**MOP op** set OOF count maximum  
**op** = 0 .. 32767

Factory default: 20

#### 4.171 MOR Reset OOF Counter

<Maint><OOF Det><Reset Cnt>	MOR	DC	N/A
-----------------------------	-----	----	-----

Definition: This command sets the OOF counter to 0.

Syntax: **MOR** Reset OOF counter

#### 4.172 MOU Set OOF Up Count Rate

<Maint><OOF Det><Up Cnt>	MOU	DC	N/A
--------------------------	-----	----	-----

**Definition:** This command is used to set the OOF up count rate. It is used in conjunction with the **MOL** command. For a detailed explanation of the **MOU** command, see the **MOL** command.

**Syntax:**

```

MOU ?          print current OOF up count rate
MOU ou         set OOF up count rate to ou
                ou = 0 .. 9
    
```

**Factory default:** 2

#### 4.173 MPC Change Access Level Of Commands

N/A	MPC	DC	N/A
-----	-----	----	-----

**Definition:** Unlike the **MLK** command that is used to lockout control ports, this command is used to lockout individual commands from all ports. The **MPC** command works by raising the security level of the command specified. To use this command, you must be logged in at a security level higher than the level you want to change the command to. **This command is only available from the remote control port.** The new security level is assigned to all control ports.

**Syntax:**

```

MPC cm ?      print access level of command cm
MPC ?         print access level of current port
MPC cm pr     set access level of command cm to pr
MPC cm       set access level of command cm to default
                cm = command
                pr = access level, 0..9
    
```

**Example:** Once a Digital Interface Module (DIF) has been defined, you want to be able to lock out any changes in the definition of the DIF. To do this, you must log in as a user:

**CUP A**

Now, raise the security level of the Define I/F command 2, requiring users to log in to change definition:

**MPC CIF 2**

Now, logoff:

**CUP 0**

At this point, only users who are logged in can change the DIF definition.

#### 4.174 MPD Display Peak Detector Level

<Maint><Peak Det><Peak lvl>	MPD	DC	N/A
-----------------------------	-----	----	-----

**Definition:** This command is used to read the level of the peak detector. The value of the peak is measured in dB down from the maximum. For example a peak reading of -10 indicates that the highest peak value since the last peak level status request was -10 dB down from maximum, or 8 dB.

The largest value the peak can be is 0 dB. Once the peak value is read, it is set to -150 dB.

**Syntax:** **MPD pd** read peak detector level in dB down from maximum.  
**pd** = EL, ER, DL or DR

#### 4.175 MQC Display Quiet Detector Level Time Left

<Maint><Quiet Det><Time left>	MQC	DC	N/A
-------------------------------	-----	----	-----

**Definition:** This command is used to read the quiet detector time left counter. This is the time left in seconds before the specified input is declared as quiet.

The time returned is between 0 and 255. If it is 255, then the quiet time has been set to 0 and the quiet detector for the input has been disabled.

**Syntax:** **MQC qd** read quiet detector time left on input **qd**  
**qd** = EL encoder left channel  
ER encoder right channel

DL decoder left channel  
 DR decoder right channel  
 E or D encoder or decoder,  
 both channels

#### 4.176 MQD Display Quiet Detector Level

<Maint><Quiet Det><Read lvl>	MQD	DC	N/A
------------------------------	-----	----	-----

**Definition:** This command is used to read the level of the quiet detector. This allows the monitoring of the average level of the audio signal averaged over 1 second. The value reported is in dB down from the maximum value. Thus a value of -12 dB represents -12 dB down from the highest value of +18 dB. The largest value returned is 0 dB.

The quiet detector level readings are updated approximately every 1 second. This means that if the **MQD** command is issued more often than once per second, it will return the same value.

A **qd** value of E means encoder left or encoder right, whichever ever has the highest value. If the encoder left channel has a level has a quiet detector level of -87 dB and the encoder right channel has a value of -33 dB, the command **MQD E** would return a value of -33. A similar definition applies for the D command.

**Syntax:** **MQD qd** read quiet detector level in dB down from maximum.  
**qd** = EL, ER, DL, DR, E or D (see **MQC**)

#### 4.177 MQL Set Quiet Detector Level

<Maint><Quiet Det><Set lvl>	MQL	DC	N/A
-----------------------------	-----	----	-----

**Definition:** This command is used to set the threshold level, in dB, relative to the maximum for silence detection. This level is

always a negative number. The input audio level must be below this threshold for a certain period of time to be considered as a silent input. The time duration is set by the **MQT** command.

Syntax: **SQL qd ?** print quiet level for input **qd**  
**SQL qd ql** set the quiet level in dB relative to maximum input to **ql** for input **qd**  
**qd** = EL, ER, DL, DR, E or D (see **MQC**)  
**ql** = -1 to -120

Factory default: -60

4.178 MQQ Print Command Summary For Decoder Commands

N/A	MQQ		N/A
-----	-----	---	-----

Definition: This command is used to print a summary of all the Mxx (maintenance) commands.

Syntax: **MQQ** print command summary

4.179 MQT Set quiet time duration

<Maint><Quiet Det><Set time>	MQT	DC	N/A
------------------------------	-----	----	-----

Definition: This command is used to set the time in ticks (1 tick = 0.01 second) that the input level must be below the threshold level before it is considered to be silent. The resolution is 10 ticks. The threshold level is set by the **SQL** command.

Syntax: **MQT qd ?** print quiet time duration for input **qd**  
**MQT qd qt** set the quiet time duration to **qt** for input **qd**  
**qd** = EL, ER, DL, DR, E or D (see **MQC**)  
**qt** = 0 (to set no quiet level checking on input **qd**), 1 .. 65534 (number of ticks of quiet)

Factory default: 10



The **CST** command can be executed to print the current security level for the port executing the command.

Syntax:     **MSU ?**       print current super user password  
              **MSU su**       sets super user password to **su**  
                           **su**     =     8 alpha characters Factory default =  
   'A'

#### 4.183 MSY       Synchronize RAM And BBM

<Maint><BBM Sync>	MSY	DC	N/A
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Definition: This command is used to write any unwritten bytes to nonvolatile memory. Many of the variables that are kept in nonvolatile are first written to standard RAM and at a later time, they are flushed to battery backed up RAM (BBM). This command forces all bytes that are in RAM but not in BBM to be written to non-volatile memory. This command can be issued just before turning off the power to insure that all "dirty" bytes are written to RAM.

Syntax:     **MSY**           synchronize RAM and BBM.

#### 4.184 MUP       Change User Password

**security level 4**

<Maint><Security><User Pwd>	MUP	DC	N/A
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Definition: This command changes the super user password. To execute this command, the security level must be set to level 7 or greater, which is done by executing either the **CSU** or the **CPW** command. The **CST** command can be executed to print the current security level for the port executing the command.

Syntax:     **MUP ?**       print current user password  
              **MUP up**       sets user password to **up**  
                           **up**     =     8 alpha characters

Factory default:    A

4.185 MVN Print Software Version Number

<Maint><Status><Ver Num>	MVN	Help	N/A
--------------------------	-----	------	-----

Definition: This command is print the software version number of a program.

Syntax: **MVN ty** print version number of program **ty**  
**ty** = ALL  
 DSPD decoder DSP program 1  
 DSPDX decoder DSP program 2  
 DSPDXX decoder DSP program 3  
 DSPV VU meter DSP program  
 DSPE encoder DSP program 1  
 DSPEX encoder DSP program 2  
 DSPR Reed-Solomon DSP program  
 G722D G.722 decoder program  
 G722E G.722 encoder program  
 CP command processor program 1  
 CPX command processor program 2  
 DL3D Layer 3 decoder 1  
 DL3DX Layer 3 decoder 2  
 DL3DXX Layer 3 decoder 3  
 DL3E Layer 3 encoder 1  
 DL3EX Layer 3 encoder 2  
 DL3EXX Layer 3 encoder 3  
 DL3R Layer 3 Reed-Solomon 1  
 DL3RX Layer 3 Reed-Solomon 2  
 DL3RXX Layer 3 Reed-Solomon 3  
 DL3S Layer 3 decoder 4  
 DL3SX Layer 3 decoder 5  
 DL3SXX Layer 3 decoder 6

4.186 MWP Set Watch Port

<Maint><Debug><Wtch Port>	MWP	DC	N/A
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Definition: This command is used to set the output RS232 port for debugging messages from internal processes. For example, each time a relay or cue message is sent or received, then a message is output to the port issuing the command. The

watch port, when enabled, allows a look at internal communication in the *CDQPrima*.

Syntax:     **MWP ?**                   print current watch port  
**MWP wb**     set watch port to **wp** to watch **wb** items  
**wb = NONE**  
A = decoder HF2=0 DSP interrupts  
B = encoder DSP interrupts  
C = Reed Solomon DSP interrupts  
D = VU DSP interrupts  
E = event to action results (action word)  
F = quiet detector scaled values from VU DSP  
G = quiet detector raw values from VU DSP  
I = decoder HF2=1 DSP interrupts  
J = messages to TA port  
K = messages from TA port  
L = decoder DSP host vector messages  
M = encoder DSP host vector messages  
N = Reed Solomon DSP host vector messages  
O = VU DSP host vector messages  
P = phase check in phase process  
Q = time code buffer to encoder  
R = time code buffer from decoder  
S = out going link word message  
T = incoming link word message  
U = peak detector scaled values from VU DSP  
V = peak detector raw values from VU DSP  
W = command from far end *CDQPrima*  
X = response to far end *CDQPrima*  
Y = command sent to far end *CDQPrima*  
Z = response from far end *CDQPrima*  
[ = Psychoacoustic table loaded into encoder  
\ = Encoder / decoder bit rate setting  
] = Virtual action to be executed

Example:     Executing **MWP ]** will cause the virtual action commands to be displayed the next time a virtual action is executed.

Factory default:     **NONE**

## 4.187 XBM Set Box Mode

**Security Level 9**

<Support><Setup><Box Mode>	XBM	DC	N/A
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**Definition:** This command is used to set the mode of operation. The *CDQPrima* operation mode can be encoder only, decoder only, or normal. You must log in as a factory user to set the box mode.

**Syntax:**

**XBM ?** prints the current box mode

**XBM *bm*** set box mode to ***bm***

***bm*** = E, D or C

**Factory default:** C

## 4.188 XBT Set Box Type

**Security Level 9**

<Support><Setup><Box Type>	XBT	DC	N/A
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**Definition:** This command is used to set control software to the correct *CDQPrima* model. It may be necessary to change the box type after a software upgrade. You must log in as a factory user to set the box type.

**Syntax:**

**XBT ?** prints the current box mode

**XBT *bt*** set box mode to ***bt***

***bt*** = 110, 120, 210, 220 or 230