

ZETA THREE

INSTRUCTION MANUAL

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Display Menu List

ADAMS-SMITH ZETA-THREE

Quick Reference Card - Software Version 3.60 and 3E60

(Items in braces apply to the ZETA-THREE^{em} only.)

Groups	Selections	Menu Items
Generator (G)	G_TC 01 00 00 00 G_UB 00 00 00 00	G01 PRESET 01000000 G02 COPY MODE = XFER/JAM G03 TC COPY = TC/UB/ZETATIME G04 UB COPY = UB/TC/OFF G05 CONSTANTS ->
Master (M)	M_TC 00 00 00 00 M_UB 00 00 00 00	M01 PRESET ----- M02 MASTER = READER/GENERATOR M03 OUTPUT = TRANSPORT/OFF/AUX3-10 (//TRACK SEL) M04 LIMIT ----- M05 TRANSPORT -> M06 SAVE TRANSPORT-> M07 CONSTANTS ->
Slave (S)	S_TC 00 00 00 00 S_UB 00 00 00 00 S_OFS 00 00 00 00.00 S_ERR 00 00 00 00.00 S_SLEW 00.00	S01 PRESET ----- S02 LOCK MODE = ADR/FWL/AUTO S03 SLOW RELOCK = OFF/ON S04 SPLICE TRAP = OFF/ON S05 LIMIT ----- S06 TRANSPORT -> S07 SAVE TRANSPORT-> S08 CONSTANTS -> {S09 EDITOR/YTR ->}
MIDI (D)	D_B120.00 0001/01.1 D_TC 00 00 00 00 D_OFS 00 00 00 00.00 D_ERR 00 00 00 00.00 D_SLEW 00.00	D01 EDIT -> D02 SONG SETUP -> D03 LEARN MODE -> D04 LEARN QNTIZE = 8 D05 FPB FRM = 24 D06 MERGE = OFF/REAL-TIME/NO REAL-TIME/ALL D07 MIDI CLK = ON/ON+SSEL/DT LOCK/OFF D08 MIDI THRU = IN/OUT-2 D09 MIDI TC = OFF/ZETATIME D10 MIDI TC ----- D11 LOCK MODE = ADR/FWL/AUTO D12 SLOW RELOCK = OFF/ON D13 SPLICE TRAP = OFF/ON D14 TIMEBASE -> D15 MAP LOAD/SAVE -> D16 BEEP = OFF/RMT/RMT COUNT/MIDI/MIDI COUNT/RMT+MIDI/RMT+MIDI CT D17 MIDI CONSTS ->
System (Z)	Z_G0 ----- Z_IN ----- Z_OUT ----- Z_END -----	Z01 IN/OUT = RECORD/REHEARSE Z02 AUTO EDIT = OFF/ON/ON+CUE Z03 PREROLL = 00 00 Z04 LOOP = OFF/CYCLE/AUTO REWIND/AUTO STOP Z05 FRAMES = 30.00/24/25/29.97/29.97 DF Z06 RESOLVE = OFF/VIDEO/AUX IN Z07 ZETATIME = MASTER/SLAVE Z08 COMPUTER PORT -> Z09 RS-232 BAUD -> Z10 RS-232 FORMAT -> Z11 CONTROL PORT -> Z12 SYS ADDR = 0/8282 Z13 XOUT TIP = AUX 1/TIMBASE/OFF/SYS PRK Z14 XOUT RNG = AUX 2/OFF/SYS PRK/REC TLY Z15 XIN = OFF/RECORD HOLD/REC'D TOGGLE/ALL ENABLE/STOP/CONT/SYS PARK IN Z16 LOCAL CHASE = ON/OFF Z17 AUTO REC'D = OFF/SLAVE Z18 RMT REC'D = SYSTEM/SLAVE Z19 RMT Z_ECHO = OFF/ON Z20 ZETA TC LINK = OFF/ON Z21 SENSE = OFF/MIDI_IN/SLAVE/SLV+MID_IN/MASTER/MAST+SLV Z22 SENSE OUTPUT -> Z23 CLEAR REGISTERS Z24 SYSTEM RESET ->
Event (E)	E_01 ----- E_02 ----- E_03 ----- E_04 ----- E_05 ----- E_06 ----- E_07 ----- E_08 ----- E_09 ----- E_10 -----	E01 EV_01 = DISARMED/AUX OUT/NOTE ON/OFF/NOTE ON/NOTE OFF/PROG CHNG/REMOTE FN : : : E10 EV_10 = DISARMED/AUX OUT/NOTE ON/OFF/NOTE ON/NOTE OFF/PROG CHNG/REMOTE FN E11 EV_ALL DISARM E12 MIDI TRIGGERS -> E13 EVENT CONSTANTS ->

Basic Operation

ADAMS-SMITH ZETA-THREE

Quick Reference Card - Software Version 3.60 and 3E60

Entering Data into a Group Selection

DISPLAY GROUP X_XX CURSOR ⇌ (to number to be changed) INDEX ⊗ (to change number)

Set GOTO Point

DISPLAY GROUP Z_XX SHIFT SELECT CURSOR ⇌ (to number to be changed) INDEX ⊗ (to change number)

Synchronize Master Slave MIDI

ENABLE MASTER ENABLE SLAVE ENABLE MIDI

Capturing a GOTO Point

(move tape to desired GOTO point) DISPLAY GROUP Z_XX SHIFT SELECT CAPTURE (captures current master time code)

Transport Start / Stop

ENABLE TRANSPORT(S) SYSTEM STOP / CONT

Entering an END Point

DISPLAY GROUP Z_XX SHIFT SELECT CURSOR ⇌ (to number to be changed) INDEX ⊗ (to change number)

Generator Start / Stop

DISPLAY GROUP G_XX SHIFT SELECT (enter generator starting address) GEN RUN

Set Slave Lock Mode

DISPLAY GROUP S_XX MENU SXX INDEX ⊗ S02 lock mode = XX CURSOR ⇌ (move cursor to right) INDEX ⊗ (choose lock mode)

Locating to GOTO Point

(enter or CAPTURE GOTO point) SHIFT GOTO

Setting CYCLE Function

(enter GOTO and END points) DISPLAY GROUP Z_XX MENU ZXX INDEX ⊗ Z04 CURSOR ⇌ (move cursor to right) INDEX ⊗ (loop = cycle)

Capture Slave Offset

DISPLAY GROUP S_XX SHIFT SELECT CAPTURE offset = STC - MTC

Slewing Slave Offset

DISPLAY GROUP S_XX SHIFT SELECT CURSOR ⇌ (select slew rate) INDEX ⊗ (advance/retard slave xport) CAPTURE or CLEAR

Pressing DISPLAY GROUP changes the display to the next group.

Pressing DISPLAY SHIFT SELECT moves to the next selection in the group.

Pressing MENU shows the current group menu.

Pressing PREV (SHIFT MENU) moves the display to the previously accessed menu level.

Set System Frame Rate

DISPLAY GROUP Z_XX MENU ZXX INDEX ⊗ Z05 frames = XX CURSOR ⇌ (move cursor to right) INDEX ⊗ (choose frame rate)

Regenerate Time Code

Connect old code into master reader
Select XFER or JAM in GEN COPY menu
Press SHIFT COPY
Start old code source
Generator outputs regenerated code

Select Master (or Slave) Transport

	DISPLAY GROUP	MENU	INDEX ⊗	MENU	INDEX ⊗	CAPTURE
Master:	M_XX	MXX	M05 TRANSPORT ->	.XX TRANSPORT	(to name of master xport)	CONSTS LOADED
Slave:	S_XX	SXX	S06 TRANSPORT ->	.XX TRANSPORT	(to name of slave xport)	CONSTS LOADED

Resolving

DISPLAY GROUP Z_XX MENU ZXX INDEX ⊗ Z06 resolve = XX CURSOR ⇌ (move cursor to right) INDEX ⊗ (choose EXT SYNC source) VIDEO / AUX / OFF connect external reference to VIDEO IN or AUX IN amber LED will be on solid if locked to XREF

Setting an Event

DISPLAY GROUP E_XX SHIFT SELECT (enter or CAPTURE desired time code address or event) MENU EXX INDEX ⊗ E01 thru E10 CURSOR ⇌ - DISARMED then INDEX ⊗ (choose arming function of event listed on display)

Automate Record Function (Punch In / Punch Out)

enter or CAPTURE record start address (punch in) Z_IN enter or CAPTURE record stop address (punch out) Z_OUT MENU ZXX INDEX ⊗ Z01 in/out = XX INDEX ⊗ (choose RECORD or REHEARSE function) ENABLE M-REC and/or S-REC (to arm master and/or slave record function)

1 INTRODUCTION - Getting Started

1.1 The ZETA-THREE Manual

The ZETA-THREE is easy to use, but it is capable of performing some very diverse and sophisticated synchronizing and MIDI tasks. This manual includes three chapters which describe how to basically use the ZETA-THREE. Other chapters in the manual provide additional information for reference and for more complex operations.

IMPORTANT - Unless you are **very** familiar with time code and synchronization operations, **please** read Appendices A and B. These Appendices provide background information which is **needed** to use this manual. The appendices will not only help you understand time code and synchronizing in general, but will also inform you about ZETA-THREE functions and routines which will help you in various synchronizing situations.

1.2 Finding the Information You Need

Chapter 2, **Installing Your ZETA-THREE**, provides instructions for installing the ZETA-THREE unit. This chapter also includes information about providing power to the unit, i.e. power cord attachment, power requirements and limitations, and fusing.

Chapter 3, **Getting Acquainted with Your ZETA-THREE**, provides instructions to help you become familiar with the basic operation of the ZETA-THREE. This chapter also includes information about locating Groups and Menus and how to enter or change information in Group and Menu items.

Chapter 4, **Basic ZETA-THREE Operations**, presents step-by-step procedures for generating, recording, and reading time code and how to synchronize two transports. This chapter also describes the cable connections needed for all the procedures described. The information in this chapter, along with the information found in Chapter 3, explains the general use of each of the front panel keys.

Chapter 5, **General Operations**, assumes that the user has a working knowledge of the ZETA-THREE and describes its most commonly used functions. Chapter 5 also provides common set-up schemes for various synchronizing operations.

Chapter 8, **MIDI Section**, describes all MIDI operations in detail. Functions include synchronizing a sequencer to time code via the ZETA-THREE's internal Tempo Map, and entering, learning and editing the Tempo Map.

Chapter 13, **Computer Port [Adams-Smith Protocols]**, will be needed by anyone writing software to communicate serially with the ZETA-THREE. The chapter contains general descriptions of the internal software operations and hardware connections, plus a complete list of communication protocols.

Appendix A, **Time Code**, provides information about what SMPTE/EBU time code is, and how time code is used by synchronizers such as the ZETA-THREE.

Appendix B, **Synchronization**, provides valuable general information about the synchronizing process.

Appendix C, **Cable and Back Panel Information**, includes power information and pin connections for each connector found on the ZETA-THREE's rear panel.

Appendix D, **ZETA-THREE Menus**, describes each of the items in the ZETA-THREE's Menu. Each possible setting of each item, and its effect on the ZETA-THREE, is also described.

Appendix E, **Slave Transport Constants**, lists and describes internal parameters which are used to adapt the ZETA-THREE slave synchronizer section to specific tape transports. These are loaded automatically when a transport is selected, but may be further manipulated by the user if so desired.

The **Master Transport** section uses a subset of these parameters.

Appendix F, **MIDI Section Constants**, describes similar operating parameters for the MIDI section.

Appendix G, **Generator Constants**, contains parameters for control of the Time Code generator.

Appendix H, **Events Constants**, lists parameters to control the finer points of Event triggering.