



SYSTEM 10 GUIDEBOOK

SECTION 4

ALPHABETICAL DIRECTORY OF SYSTEM 10 MNEMONIC COMMANDS

SECTION 4.A INTRODUCTION

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Section 4.A

Introduction



System 10 Guidebook

The purpose of this Guidebook section is to supply a quick-reference directory of all System 10 MNEMONIC COMMANDS that are of use to the operator. It contains an alphabetical listing of the basic three-letter MNEMONICS recognized by various System 10 "smart" elements (CENTRAL PROCESSOR, VIDEO CARDS, HISTORY CARD, SATELLITE CARD, etc.). For each MNEMONIC, the following are given:

1. the NAME applied to the MNEMONIC (and from which, in most cases, it is literally derived);
2. the GENERAL (FUNCTIONAL) CATEGORY to which the MNEMONIC belongs;
3. the FORM (SYNTAX) of each command beginning with the MNEMONIC; and
4. a brief description of the FUNCTION of each form of the command.

For complete information on any given MNEMONIC COMMAND, you may refer to the GUIDEBOOK SECTION(S) listed for that MNEMONIC. The section or sections printed in **boldface** contain the *primary* discussion(s) of the MNEMONIC, and should therefore be consulted first.

For "Conventions Used in Command Expressions," you should review Section 1.C.2 of this Guidebook. In particular, note that all commands are shown in the Directory with the DataPAC's "standard" COMMAND TERMINATOR of **CARRIAGE RETURN ([CR])**. You may at any time set your DataPAC to recognize a different COMMAND TERMINATOR for all commands entered through the COMPUTER INTERFACE PORT, AUXILIARY COMPUTER INTERFACE ("ACI") PORT, or FIFO COMPUTER PORT (Model 10AFIFO), via the **COMMAND TERMINATOR (CMT)** command (see Section 2.B.5). Also note that, unless altered by means of an **OUTPUT TERMINATOR (OPT)** or **END OF TRANSMISSION TERMINATOR (EOT)** command (Section 1.H.3(f)), every standard RESPONSE FORMAT—as issued by the COMPUTER INTERFACE PORT or an ACI PORT in response to a "READ" or "DATA INTERROGATION" COMMAND—will be terminated by **CARRIAGE RETURN, LINE FEED ([CR][LF])**.*

If an "E" appears in the **EEPROM** column following a given command form, it tells you that the DataPAC's EEPROM Write Protect Switch must be ON for that command to be effective.** In almost all cases, such a command is a "WRITE" (or "SETUP") COMMAND—see Section 1.C.1.

If an "R" appears in the **RANGE** column following a given command form, it tells you that the command can take a "range" form. This means that the variable argument (CHANNEL, BIT, BIT GROUP, RECORDER, etc.) can be entered as a *number range* (**x TO y, r TO q, k TO l, n TO m**, etc., respectively). The range form of a "WRITE" (SETUP) COMMAND may be entered either through the DataPAC's plug-in keyboard or through its COMPUTER INTERFACE, ACI, or FIFO COMPUTER PORT. The range form of a "READ" (INTERROGATION) COMMAND, however, will only be effective when entered through the COMPUTER INTERFACE, ACI, or FIFO COMPUTER PORT. As explained in Section 1.C.4, when such a command is entered via the *keyboard*, only the *first* answer of the requested series will be displayed on the DataPAC BILLBOARD. You may then, however, use the keyboard's **STEP** key to display the answer for the next argument in numerical sequence, and continue thereby to "step" as far as you wish through a whole range of answers.

If an "I" appears in the **IMPL ADDRESS** column following a given command form, it tells you that the command is one which is "implicitly" addressed. This means that, in a SATELLITE NETWORK SYSTEM, if the command is entered at a "B-sized" DataPAC "NODE" where the **GBL = ON [CR]** command is in effect, the HOST DataPAC's CENTRAL PROCESSOR knows immediately which other network NODE to route the command to, by virtue of the GLOBAL DATA CHANNEL(S) or GLOBAL LOGIC BIT(S) contained in the command itself. It therefore needs no other ("explicit") instructions—such as an **OPEN (OPN)** or **NODE (NOD)** command—in order to send that command to the unique NODE to which it applies (see Sections 3.B.3(c.1 through c.5)). Note that there are many commands which contain a DATA-CHANNEL or LOGIC-BIT argument but which are *not* "implicitly" addressed.

To assist in GENERAL SYSTEM TROUBLESHOOTING, there are also listed for each MNEMONIC the main product(s) in which the relevant command software resides, and also, for each listed product, the

* The initial END-OF-TRANSMISSION TERMINATOR for a FIFO COMPUTER PORT (Model 10AFIFO) is **CARRIAGE RETURN, 3 LINE FEEDS ([CR][LF][LF][LF])**.

** Commands relating to the Model 10AFIFO are an exception. For most of them, the "E" indicates that the 10AFIFO EEPROM must be enabled (not the DataPAC EEPROM).

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FIRST SOFTWARE VERSION that permits the command to function in most, if not all of the ways here described.

Note here that the "implicit addressing" of commands, as explained above, is enabled only by 10ACP100 or 10BCP100 software of Version "9.0" or higher.

The following table lists the MNEMONIC COMMANDS included in the Directory.

Table 4.A.1 Commands Included in the Directory

ADD	ADDRESS	DHT	DEFAULT HEADER/TAILER
ANO	ANALOG OUTPUT	DIR	DIRECTORY
ASL	A SLOT	DIS	DISPLAY
ASN	ASSIGN SATELLITE NUMBER	DLB	DOWNLOAD BITS
ATC	ASSOCIATED TEXT COLOR	DLC	DOWNLOAD CHANNELS
ATT	ATTACH	DLY	DELAY
		DMP	DUMP
BAU	BAUD RATE	DPT	DEPTH
BCD	BINARY CODED DECIMAL	DSB*	DUMP SYSTEM BIT DATA
BCP	B CENTRAL PROCESSOR	DSD*	DUMP SYSTEM DATA
BDP	BIT DESIGNATOR PAIR	DSF*	DUMP SYSTEM FIELD DATA
BEE	ZERO OFFSET ("b")	DSM*	DUMP SYSTEM MESSAGE
BFC	BUTTON FIELD COLOR	DTE	DATE
BIN	BINARY		
BIT	SET BIT	ECO	ECHO
BLS	BLANK LINE SUPPRESS	EID	EXTERNAL INPUT DISABLE
BOF	BUTTONS OFF	EIE	EXTERNAL INPUT ENABLE
BON	BUTTONS ON	EMM	SCALING FACTOR ("m")
BSD	BIT STATE DISPLAY	EMP	EMPTY
BSL	B SLOT	EOI	END OR IDENTIFY
BTS	BITS	EOL	END OF LINE
BVS	B VIDEO SIGNAL	EOP	END OF PAGE
BVT	B VIDEO TEXT	EOT	END OF TRANSMISSION
BYP	BYPASS	ESC	ESCAPE
		EXM	EXECUTE MODE
CAL	CALIBRATE	EXU	EXECUTE
CAT	CATALOG		
CCH	CONVERSION CHANNEL	FCH	FRAME CHANNELS
CDL	CONDITIONAL	FCL	FIFO CLEAR
CHN	CHANNEL	FDM	FLOATING POINT DUMP
CHS	CURRENT HALT STATUS	FIL	FILTER
CLC	CALCULATE	FPF	FLOATING POINT FORMAT
CLK	CLOCK	FRC	FORCE
CLM	COLUMNS	FRQ	FREQUENCY CALIBRATION
CLQ	CLEAR QUEUE	FRZ	FREEZE
CLS	CLEAR SCREEN		
CMD	COMMAND	GBL	GLOBAL
CMT	COMMAND TERMINATOR	GCL	GRAPH CLEAR
COC	COUNTER CLEAR	GRX	GRAPH RANGE X
COH	COUNTER HOLD	GRY	GRAPH RANGE Y
COLD	BOOTV	GRZ	GRAPH RANGE Z
COM	COMMUNICATIONS	GZL	GRAPH ZERO LEFT
CON	CONFIGURE	GZR	GRAPH ZERO RIGHT
COR	COUNTER RESET		
COU	COUNTER UPDATE	HCL	HISTORY CLEAR
CPC	CHARACTERS PER CHANNEL	HCY	HARD COPY
CPL	CHANNELS PER LINE	HDP	HALT DEPTH
CSB	COMPUTER STATUS BIT	HDR	HEADER
CSF	CHECKSUM FIFO	HDU	HISTORY DUMP
		HEX	HEXADECIMAL
DDI	DESTRUCTIVE DATA INPUT	HIL	HIGH LIMIT
DDO	DESTRUCTIVE DATA OUTPUT	HLT	HALT
DEC	DECREMENT		
DEL	DELETE	ICD	INTERCHARACTER DELAY
DET	DETACH	IMA	OUTPUT IMAGE
DFC	DATA FIELD COLOR	INC	INCREMENT
		INT	INTERVAL

**A binary transmission command, not described in this directory. See Appendix L.1.

ITR	COMPUTER INTERRUPT	SAT	SATELLITE
KEY	KEY	SAV	SAVE
LBT	"BETWEEN" LOGIC	SBC	SYSTEM BASE CHANNEL
LCT	LOCATE	SBL	SHOW BUTTON LOCATIONS
LEG	LEGEND	SCN	SCAN
LGO	LOGO	SEL	SATELLITE ERROR LOG
LGT	"GREATER THAN" LOGIC	SEN	SENSITIVITY
LIM	LIMITS	SHN	SHUNT CALIBRATE-NEGATIVE
LIN	LINEARIZE	SHO	SHOW
LLT	"LESS THAN" LOGIC	SHP	SHUNT CALIBRATE-POSITIVE
LNE	LINE	SMD	SETUP MODE
LOK	LOCK	SND	SEND
LOL	LOW LIMIT	SNP	SNAPSHOT
LST	LIST	SOP	SIGN-ON PAGE
LZN	LIMIT ZONE	SRC	LOGIC SOURCE
MEM	MEMORY	SSB	SATELLITE SYSTEM BITS
MES	MESSAGE	STH	START FROM HALT
MOD	MODE	STO	STORE
MTC	MASTER TIMING CLOCK	STR	STREAM
MVV	MILLIVOLT/VOLT CALIBRATION	STS	STATUS
NCH	NO CHANNEL	TAR	TARE
NDI	NONDESTRUCTIVE DATA INPUT	TBT	TIMER BIT
NDO	NONDESTRUCTIVE DATA OUTPUT	TER	TERMINATOR
NOB	NO BITS	THC	TRACK HOLD CONTROL
NOD	NODE	TLR	TAILER
NOL	NO LIMITS	TME	TIME
NVH	NONVOLATILE HISTORY	TMO	TIMEOUT
OPN	OPEN	TMP	TEMPLATE
OPT	OUTPUT (END-OF-LINE) TERMINATOR	TMR	TIMER
PAG	PAGE	TST	TOUCHSCREEN TYPE
PBR	PRINTER BAUD RATE	TYP	TYPE
PEN	PEN	UNL	UNLOCK
PGL	PAGE LIST	VBC	"BIT CONTROL" STATUS
PGT	PAGE TYPE	VBT	"BETWEEN" STATUS
PLA	PLAYBACK	VDL	VIDEO DOWNLOAD
PRI	PRINT PAGE	VDU	VIDEO DISPLAY UNIT
PRT	PRINT CHANNEL DATA	VEL	VIDEO ERROR LOG
PSB	PERIPHERAL STATUS BIT	VGT	"GREATER THAN" STATUS
PTY	PRINTER TYPE	VIA	VIA
RCL	RECALL	VID	VIDEO MODE
REC	RECORDER CLEAR	VLT	"LESS THAN" STATUS
REF	REFRESH	VSS	VIDEO SCAN SYMBOL
REH	RECORDER HALT	VUL	VIDEO UPLOAD
RES	RECORDER START	XBG	EXECUTE BASE GROUP
REL	RESET ERROR LOG	XDS	TRANSMISSION DISABLE
RFM	REACCESS FIFO MEMORY	XEN	TRANSMISSION ENABLE
RHM	REACCESS HISTORY MEMORY	ZRO	ZERO
RLS	RELEASE	ZUM	ZOOM
RMD	RECORD MODE		
RNG	RANGE		
RPL	REPLAY		
RSM	RESUME		
RSN	RESET SERIAL NUMBER		
RSP	RESET STATISTICAL PLAYBACK		
RST	RESET		

Section 4.B

Command Directory



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PLEASE NOTE

In most cases, a MNEMONIC COMMAND supported by the Model **10BVT60** Video Text Card will be supported by the Model **10BVT65** "Touchscreen" Video Text Card. Likewise, a command supported by the Model **10BCP100** Central Processor Card will in most cases be supported by the Model **10BCP100A** Central Processor Card.

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
ADD ADDRESS ADD [CR]				10BACI-488 Operation	3.B.5 Suppl. 3	10BACI-488	
				Reads the current IEEE-488 bus address setting of the 10BACI-488 to which the command is directed; returns the current decimal address value (0 through 30).			
ANO ANALOG OUTPUT				Analog Channel Setup	3.A.2(b.2); 3.A.2(b.3) ; 3.B.3(c.4)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
ANO x = e [CR]	E	R	I	Types Chn. x as "E1" (ANALOG OUTPUT) and sets it to a fixed millivolt value e (-5000 mV e 5000 mV).			
ANO x = m(CHN y) + b [CR]	E	R	I	Types Chn. x as "E0" (ANALOG OUTPUT) and sets it as a function of Chn. y (m and b are constants).			
ANO x [CR]	E	R	I	Reads current "data source" assignment for ANALOG OUTPUT CHANNEL x; returns e , m(CHNy)+b , or N/A (the latter appears if a "WRITE" form of the ANO command has not been applied to Chn. x or if Chn. x has been reset via a RESET (RST) command).			
ASL A SLOT				Logic I/O Setup	3.A.3(c.1)	10ACP100 10KU	8.0 8.0
ASL s = k [CR]	E			Assigns BIT GROUP k to the Model 10AIO-16 occupying A SLOT s.			
ASL s = N/A [CR]	E	R		Cancels current BIT-GROUP assignment for the Model 10AIO-16 occupying A SLOT s.			
ASL s [CR]			R	Reads current BIT-GROUP assignment for the Model 10AIO-16 occupying A SLOT s; returns k or N/A .			
ASN ASSIGN SATELLITE NUMBER				Satellite Network Setup	3.B.3(b.2)	10ACP100 10BCP100 10KU 10CON/CCON	8.9 8.9 8.9 1.0
ASN = n [CR]	E			Assigns a Satellite No. of "n" to the network member (NODE) to which the command is directly issued (0 n 99), and determines network role of the NODE: n = 0 for HOST; n > 0 for SATELLITE. Automatically sets the OUTPUT TERMINATOR ("OPT") and END-OF-TRANSMISSION TERMINATOR ("EOT") of the node to CARRIAGE RETURN ([0D]).			
ASN [CR]				Reads current Satellite No. of the NODE to which the command is directly issued; returns n .			
ATC ASSOCIATED TEXT COLOR				CRT Video Setup	—	10BVT60	1.0
ATC = c [CR]	E			Specifies foreground/background color or intensity combination for the display of all "associated" FIXED TEXT when in TEXT EDITOR mode; c is a two-character COLOR/INTENSITY code—see Table 2.C.2.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
ATC [CR]				Reads current color/intensity setting for "associated" FIXED TEXT in TEXT EDITOR mode; returns c .			
ATT ATTACH				General System Operation; Satellite Network; Aux. Comp. Interface	3.B.1 ; 3.B.3(b.2); 3.B.5(a); 3.B.5(c.1); 3.B.5(d.1)	10BCP100 10BACI	8.1 1.0
ATT = s [CR]				"Attaches" B SLOT s to the DataPAC command source (keyboard or COMPUTER INTERFACE PORT) from which the command originates. Cancelled by DETACH (DET) command.			
ATT [CR]				Reads the B SLOT currently "attached" to the DataPAC command source from which the command originates; returns s or, if no B SLOT is currently attached, "0."			
BAU BAUD RATE				Computer Interface Setup	2.B.2(b) ; 2.B.2(c); 3.B.5(c.3); 3.B.5(d.1)	10BCP100 10BACI	1.0 1.0
BAU = b, d, s, p [CR]	E			Sets Baud rate and other RS-232-C protocols for COMPUTER INTERFACE PORT: b = Baud rate: 1 = 300, 2 = 1200, 3 = 2400, 4 = 4800, 5 = 9600, 6 = 19.2K, 7 = 153.6K; d = No. of Data Bits: 7 or 8; s = No. of Stop Bits: 1 or 2; p = Parity: 0 = NONE, 1 = ODD, 2 = EVEN			
BAU [CR]				Reads current protocol values for COMPUTER INTERFACE PORT; returns b,d,s,p .			
BCD BINARY CODED DECIMAL				Digital I/O Setup	2.H.2(c.1); 3.B.3(e.3)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
BCD k = d [CR]		R		Sets BIT GROUP k to encode in BCD form the decimal value d (-7999 d 7999); overrides any other bit-control sources for the bits of BIT GROUP k.			
BCD k = CHN c [CR]		E		Types Chn. c as "B2" (BCD CONVERSION CHANNEL) and causes BIT GROUP k to encode in BCD form the current data value for Chn. c (see CONVERSION CHANNEL (CCH) command); overrides any other bit-control sources for the bits of BIT GROUP k. A subsequent interrogation of LCT c [CR] will return N/A .			
BCD k [CR]		R		Returns d, the decimal value currently represented by the BCD configuration of BIT GROUP k—unless a command of BCD k = CHN c [CR] has been entered, in which case it returns CHNc .			
BCP B CENTRAL PROCESSOR				10BACIA Setup	3.B.5 Suppl. 1 ; 3.B.5 Suppl. 2; 3.B.5 Suppl. 3	10BACIA 10BACI-422 10BACI-488	
BCP = 100 [CR]	E			Informs all system 10BACIA's, 10BACI-422's, and 10BACI-488's that the DataPAC CENTRAL PROCESSOR is a Model 10BCP100 or 10BCP100A.			
BCP = 200 [CR]	E			Informs all system 10BACIA's, 10BACI-422's, and 10BACI-488's that the DataPAC CENTRAL PROCESSOR is a Model 10BCP200.			
BCP [CR]				Reads current BCP setting; returns 100 or 200 .			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
BDP BIT DESIGNATOR PAIR				CRT Video Setup	2.C.12(c)	10BVT60 10CON/CCON	6.0 1.0
BDP q = s₁, TERM₁: s₂, TERM₂ [CR]	E			Defines BIT DESIGNATOR PAIR q; 1 ≤ q ≤ 32; s ₁ and s ₂ are "STATUS" codes (see Table 2.C.3); TERM ₁ and TERM ₂ are "words" of up to 7 characters each. Replaces like-numbered pair in Table 2.C.4.			
BDP q = s₁ : s₂ [CR]	E			Changes to s ₁ and s ₂ the "STATUS" codes of an existing BIT DESIGNATOR PAIR q.			
BDP q [CR]				Reads current definition of BIT DESIGNATOR PAIR q; returns s₁, TERM₁:s₂, TERM₂ .			
BEE ZERO OFFSET ("b")				Analog Channel Setup	1.G.2; 1.G.5; 2.G.1; 2.J.1; 2.P.3; 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
BEE x = b [CR]	E	R	I	Sets to b the ZERO OFFSET to be applied to Chn. x; may also be used to reset the precision of a CALCULATE PSEUDOCHANNEL (see Section 2.J.1).			
BEE x [CR]			R	Reads current ZERO OFFSET for Chn. x; returns b .			
BFC BUTTON FIELD COLOR				Touchscreen Video Setup	3.C.5(d.1)	10BVT65	1.0
BFC = c [CR]	E			Specifies foreground/background color or intensity combination for the display of every BUTTON upon application of a SHOW BUTTON LOCATIONS (SBL) command or upon entry of TEXT EDITOR mode; c is a two-character COLOR/INTENSITY code—see Table 2.C.2.			
BFC [CR]				Reads current color/intensity setting for button display after SBL or in TEXT EDITOR mode; returns c .			
BIN BINARY				Digital I/O Setup	2.H.2(c.1); 3.B.2(e.1); 3.B.4(d.9)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
BIN k = d [CR]			R	Sets BIT GROUP k to encode in BINARY form the decimal value d (-32000 ≤ d ≤ 32000); overrides any other bit-control sources for the bits of BIT GROUP k.			
BIN k = CHN c [CR]			E	Types Chn. c as "B1" (BINARY CONVERSION CHANNEL) and causes BIT GROUP k to encode in BINARY form the current data value for Chn. c (see CONVERSION CHANNEL (CCH) command); overrides any other bit-control sources for the bits of BIT GROUP k. A subsequent interrogation of LCT c [CR] will return N/A .			
BIN k [CR]			R	Returns d , the decimal value currently represented by the BINARY configuration of BIT GROUP k—unless a command of BIN k = CHN c [CR] has been entered, in which case it returns CHNc .			

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A T I O N	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
BIT SET BIT				System Logic Bits; FIFO Buffer Setup	2.H.2(c); 2.H(Appendix); 3.A.8(b.1); 3.B.2(e.1); 3.B.2(e.3)	10ACP100 10BCP100 10KU 10BACI 10AFIFO	1.0 1.0 1.0 1.0 1.0
BIT r = I [CR]		R		Sets logic state of LOGIC BIT r (I = 0 or 1); overrides any other bit-control source for Bit r.			
BIT r = INT [CR]		R		Returns control of LOGIC BIT r to the LOGIC SOURCE specified by the last-entered LOGIC SOURCE (SRC) command for that bit; overrides any other "external" bit-control source for Bit r.			
BIT 999 = 1 [CR]				Turns ON EEPROM Write Protect Switch for the DataPAC or Model 10AFIFO to which the command is issued.			
BIT 999 = 0 [CR]				Turns OFF EEPROM Write Protect Switch for the DataPAC or Model 10AFIFO to which the command is issued.			
BIT r [CR]		R		Reads logic state of LOGIC BIT r; returns r,0 or r,1 .			
BLS BLANK LINE SUPPRESS				Formatted Output Card Setup	3.C.3(d.3)	10VFO132	1.0
BLS = 1 [CR]				Suppresses all unused lines at the bottom of any VIDEO PAGE transmitted from the Model 10VFO132 in response to a PRINT PAGE (PRI) command.			
BLS = 0 [CR]				Cancels 10VFO132 blank line suppression.			
BLS [CR]				Reads current status of 10VFO132 blank line suppression; returns 1 or 0 .			
BOF BUTTONS OFF				Touchscreen Video Setup	3.C.5(b.2)	10BVT65	1.0
BOF [CR]				Disables all touchscreen buttons (see also BUTTONS ON (BON) command).			
BON BUTTONS ON				Touchscreen Video Setup	3.C.5(b.2)	10BVT65	1.0
BON [CR]				Enables all touchscreen buttons; in effect, by default, on DataPAC powerup (see also BUTTONS OFF (BOF) command).			
BSD BIT STATE DISPLAY				CRT Video Setup	2.C.12(c)	10BVT60 10CON/CCON	6.0 1.0
BSD r = q [CR]		E R		Assigns BIT DESIGNATOR PAIR q to the BIT-STATE FIELD displaying LOGIC BIT r. See Table 2.C.4 for standard BIT DESIGNATOR PAIRS.			
BSD r = /q [CR]		E R		Assigns BIT DESIGNATOR PAIR q to the BIT-STATE FIELD displaying LOGIC BIT r, but inverts logic-state polarity of the pair.			
BSD r [CR]		R		Reads the BIT DESIGNATOR PAIR currently assigned to the BIT-STATE FIELD displaying LOGIC BIT r; returns q or /q .			
BSL B SLOT				Logic I/O Setup	3.B.2(c.1)	10BCP100	1.0
BSL s = 1, k [CR]		E		Assigns BIT GROUP k to the Model 10BIO-16 occupying B SLOT s.			
BSL s = 255 [CR]		E		Cancels current BIT-GROUP assignment for the Model 10BIO-16 occupying B SLOT s.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
BSL s [CR]				Reads current BIT-GROUP assignment for the Model 10BIO-16 occupying B SLOT s; returns 1,k or 255 .			
BTS BITS				System Logic Bits	2.H.5; 2.K.2(f)	10ACP100 10BCP100 10KU	8.1 8.1 8.9
BTS [CR]				Cancels NO BITS (NOB) command, to resume normal reading of system LOGIC BITS with each scan cycle. May be used to re-enable system EXECUTE (EXU) functions (see Section 2.K.2(e)). In effect on powerup, by default.			
BVS B VIDEO SIGNAL				CRT Video Setup	2.C.1(a); 2.N.2; 3.C.4(b)	10BVT60 10CON/CCON	9.0 1.0
BVS = 90 [CR]	E			Sets DataPAC for operation with Model 10BVS90 Video Signal Card.			
BVS = 95 [CR]	E			Sets DataPAC for operation with Model 10BVS95 Graphics Video Signal Card.			
BVS [CR]				Reads current Video Signal Card setting; returns 90 or 95 .			
BVT B VIDEO TEXT				Touchscreen Video Setup	3.C.5(a)	10BVT65	1.0
BVT [CR]				Asks the DataPAC whether or not a Model 10BVT65 is present; if so, returns 65 ; if not, returns NO .			
BYP BYPASS				FIFO Buffer Operation	3.A.8(c.3)	10AFIFO	1.0
BYP = ON [CR]				Initiates "FIFO bypass" for all outputs from the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100). Principally used to obtain quick responses to "READ" COMMANDS received at the Model 10AFIFO's FIFO COMPUTER PORT which do not relate to the 10AFIFO itself; each such answer is transferred directly to the 10AFIFO's output buffer. When the bypass is ON, the 10AFIFO's standard input and output modes (DDI , NDI , XEN , and XDS) are suppressed. Can be entered only through the FIFO COMPUTER PORT.			
BYP = OFF [CR]				Cancels "FIFO bypass"; all outputs from the 10ACP100 are again received by and stored in the 10AFIFO's main memory; all standard FIFO input and output modes are again applicable. Can be entered only through the FIFO COMPUTER PORT.			
BYP [CR]				Reads current "FIFO bypass" status; returns ON or OFF .			
CAL CALIBRATE				Touchscreen Video Setup	3.C.5(b.3)	10BVT65	1.0
CAL [CR]	E			Initiates touchscreen recalibration sequence; the DataPAC's EEPROM Switch should be ON.			
CAT CATALOG				Formatted Output Card Operation	3.C.3(c.1)	10VFO132	1.0
CAT [CR]				Transmits DataPAC PAGE DIRECTORY from Model 10VFO132 PRINTER INTERFACE PORT.			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A R Y	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
CCH CONVERSION CHANNEL				Digital I/O and Peak Capture Card Setup	3.A.4(b.4); 3.B.2(e.1); 3.B.2(e.3); 3.B.4(d.9)	10ACP100 10BCP100 10KU	8.9 8.9 8.9
CCH c = x [CR]	E			Establishes DATA CHANNEL x as "data source" for CONVERSION CHANNEL c.			
CCH c [CR]				Reads the DATA CHANNEL currently assigned to CONVERSION CHANNEL c; returns x or N/A (the latter appears if the "WRITE" form of the CCH command has not been applied to Chn. c or if Chn. c has been reset via a RESET (RST) or TYPE (TYP) command).			
CDL CONDITIONAL				Automatic Command Execution	2.K.1; 2.K.3(a); 2.K.3(b) 3.B.4(e.2)	10BVT60 10CON/CCON	7.0 1.0
CDL q = B [CR]	E			Defines the logical combination of system conditions that will set CONDITIONAL BIT q to Logic 1 (1 q 10; B is a Boolean expression of up to 16 MNEMONIC terms and up to 15 OPERATORS—see Section 2.K.3). NOTE: When entering a CDL command via the Computer Interface Port, the expression "B" should not exceed 73 characters.			
CDL q = N/A [CR]	E			Cancels the current definition of CONDITIONAL BIT q.			
CDL q [CR]	R			Reads the current definition of CONDITIONAL BIT q; returns B or N/A .			
CHN CHANNEL				Data Trans- mission; System Pseudo- channels; Digital Input Setup	1.H.1; 1.H.2(a); 2.D.3; 2.D.4; 2.J.2; 2.M.2; 3.A.2(b.3); 3.B.2(e.2); 3.B.2(e.4); 3.B.3(c.1); 3.B.4(d.9); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
CHN x [CR]		R		Reads current data for Chn. x. When entered through COMPUTER INTERFACE PORT, outputs x,w,z , where x = Channel No. (optional—see ECHO (ECO) command); w = data value for Chn. x; z = LIMIT-ZONE Indicator No. (optional—see LIMITS (LIM) command). When entered through keyboard, displays CHN x = w only, even when the LIM command is in effect. Chn. x can be an ANALOG INPUT CHANNEL ("REAL," "PSEUDO," or "CONVERSION") or an ANALOG OUTPUT CHANNEL. The "range" form (CHN x TO y [CR]) is identical in effect to the "range" form of the DUMP (DMP) command. The mnemonic CHN may also be entered by pressing the keyboard's Chan key, <i>for purposes of interrogation only</i> .			
CHN x = w [CR]	(E)	R	I	Loads Chn. x with fixed data value w. Chn. x is normally a DOWNLOAD PSEUDOCHANNEL (VOLATILE or NONVOLATILE), a TIMER PSEUDOCHANNEL (INCREMENTAL or DECREMENTAL), or an ANALOG OUTPUT CHANNEL; it may, however, be a PSEUDOCHANNEL of any type, or even a scanned "REAL" CHANNEL—in which case the downloaded value is immediately overwritten with the next scan (see, for example, the procedure for resetting "MAX" and "MIN" CALCULATE PSEUDOCHANNELS, Section 2.J.2). The EEPROM Switch must be ON only if Chn. x is a NONVOLATILE ("KEEP-ALIVE") DOWNLOAD PSEUDOCHANNEL (Type "D1").			
CHN x = CHN a [CR]		R	I	Loads Chn. x with the current reading of DATA CHANNEL a, where Chn. x is a VOLATILE DOWNLOAD PSEUDOCHANNEL (only). An interrogation of CHN x			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
CHN x TO y = CHN a, b [CR]			I				[CR] following this command will return the current data value of Chn. x, and <i>not</i> CHNa . Loads each VOLATILE DOWNLOAD PSEUDOCHANNEL in the range from x through y with the current reading of the corresponding DATA CHANNEL in the range from a through b ($y > x$; $b > a$; $(y-x) = (b-a)$). An interrogation of CHN x TO y [CR] following this command will return the current data values of Chns. x through y, and <i>not</i> CHNa,b .
CHN x = BIN k [CR]	E		I				Types Chn. x as "B4" (BINARY INPUT "REAL" CHANNEL), and dedicates it to the reading of the BINARY configuration of BIT GROUP k. An interrogation of CHN x [CR] following this command will return the decimal equivalent of this configuration, and <i>not</i> BINK . A subsequent interrogation of LCT x [CR] will, however, return BINK .
CHN x = BCD k [CR]	E		I				Types Chn. x as "B3" (BCD INPUT "REAL" CHANNEL), and dedicates it to the reading of the BCD configuration of BIT GROUP k. An interrogation of CHN x [CR] following this command will return the decimal equivalent of this configuration, and <i>not</i> BCDk . A subsequent interrogation of LCT x [CR] will, however, return BCDk .
CHS CURRENT HALT STATUS				History Card Operation	3.B.4(e.4)	10BDR64	1.0
CHS n [CR]		R					Reads current "halt status" of Model10BDR64 Recorder n; returns r,q ($r = \text{no. of FRAMES recorded so far since occurrence of the predefined "halt" condition}$; $q = \text{total HALT DEPTH of the recorder}$).
CLC CALCULATE				Pseudo- channel Setup	2.J ; 3.A.4(c.4); 3.B.3(c.4);	10ACP100 10BCP100 10KU	1.0 1.0 1.0

Defines CALCULATE PSEUDOCHANNEL x as a function of one or more other DATA CHANNELS (m and b are constants, where the entered b value determines the precision of Chn. x); gives Chn. x a corresponding TYPE CODE ("F6," "FC," "F0," etc.—see Section 2.J):

CLC x = m(CHN y) + b [CR]	E		I	Multiplication of a single channel by a constant.
CLC x = (CHN y)/m + b [CR]	E		I	Division of a single channel by a constant.
CLC x = m(CHN y + CHN z) + b [CR]	E		I	Addition of two channels.
CLC x = m(CHN y - CHN z) + b [CR]	E		I	Subtraction of one channel from another.
CLC x = m(CHN y)(CHN z) + b [CR]	E		I	Multiplication of two channels.
CLC x = (CHN y)(CHN z)/m + b [CR]	E		I	Multiplication of two channels, divided by a constant.
CLC x = m(CHN y)/(CHN z) + b [CR]	E		I	Division of one channel by another (scaled numerator).
CLC x = (CHN y)/(CHN z)m + b [CR]	E		I	Division of one channel by another (scaled denominator).
CLC x = m/(CHN y) + b [CR]	E		I	Division of a constant by a channel.
CLC x = m(SQR CHN y) + b [CR]	E		I	Square root of a channel.
CLC x = m(ABS CHN y) + b [CR]	E		I	Absolute value of a channel.

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
CLC $x = m(\text{MAX CHN } y) + b$ [CR]	E		I				
CLC $x = m(\text{MIN CHN } y) + b$ [CR]	E		I				
CLC x [CR]		R	I				
CLK CLOCK				General System Setup	3.B.5 Suppl. 2	10BCP200	
CLK = ON [CR]	E						Synchronizes scanning of data channels to the time-of-day clock by pausing at the end of each scan until the clock registers its next tenth of a second.
CLK = OFF [CR]	E						Cancels delay between successive scan cycles.
CLK [CR]							Reads current CLOCK setting; returns ON or OFF .
CLM COLUMNS				Formatting of Data Transmissions	1.H.3(e); 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
CLM = n [CR]	E						Sets columnar format for STREAM (STR) and HARD COPY (HCY) transmissions from COMPUTER INTERFACE PORT (n = no. of columns).
CLM [CR]							Reads current column-number specification for STREAM (STR) and HARD COPY (HCY) transmissions; returns n .
CLQ CLEAR QUEUE				Formatted Output Card Operation	3.C.3(c.3)	10VFO132	1.0
CLQ [CR]							Clears a "queue" of VIDEO PAGES yet to be transmitted from the Model 10VFO132 PRINTER INTERFACE PORT.
CLS CLEAR SCREEN				Touchscreen Video Operation	3.C.5(d.3)	10BVT65	1.0
CLS = n [CR]							Temporarily disables all active BUTTONS on the currently displayed VIDEO PAGE for " n " seconds ($1 \leq n \leq 60$), so that the screen may be cleaned without activating any BUTTONS.
CMD COMMAND				Automatic Command Execution	2.K.1; 2.K.3(d); 3.B.4(e.2)	10BVT60 10CON/CCON	7.0 1.0
CMD $q = \$$ [CR]	E						Specifies one or more commands to be executed upon transition of CONDITIONAL BIT q from <i>Logic 0</i> to <i>Logic 1</i> ($\$$ is an ASCII string of up to 32 characters; command delimiter is colon (:)).
CMD / $q = \$$ [CR]	E						Specifies one or more commands to be executed upon transition of CONDITIONAL BIT q from <i>Logic 1</i> to <i>Logic 0</i> .
CMD $q = \text{N/A}$ [CR]	E						Cancels existing CMD command applying to the <i>Logic 0</i> to <i>Logic 1</i> transition of CONDITIONAL BIT q .

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST	
				CATEGORY	SECTION(S)		SOFTWARE	VERSION
<p>CMD /q = N/A [CR]</p> <p>CMD q [CR]</p> <p>CMD /q [CR]</p>	E			<p>Cancels existing CMD command applying to the <i>Logic 1 to Logic 0</i> transition of CONDITIONAL BIT q.</p> <p>Reads the command(s) to be executed upon the <i>Logic 0 to Logic 1</i> transition of CONDITIONAL BIT q; returns \$ or N/A.</p> <p>Reads the command(s) to be executed upon the <i>Logic 1 to Logic 0</i> transition of CONDITIONAL BIT q; returns \$ or N/A.</p>				
<p>CMT COMMAND TERMINATOR</p> <p>CMT = c [CR]</p> <p>CMT [CR]</p>	E			<p>Communi- 2.B.5; 10ACP100 8.0 cations 3.A.8(b.3); 10BCP100 8.0 Setup 3.B.3(b.1); 10KU 8.0 3.B.5(c.4); 10BACI 1.0 3.B.5(d.1) 10AFIFO 1.0</p> <p>1) If a Model 10AFIFO is not connected to the DataPAC's COMPUTER INTER- FACE PORT, specifies character c to be recognized as the COMMAND TERMINATOR for all commands received via the COMPUTER INTERFACE PORT; c must be an ASCII CONTROL CHARACTER entered as a hexadecimal word in brackets ("[00]" through "[1F]" only, excluding the [Esc] character—see Table 1.H.2).</p> <p>2) If a Model 10AFIFO is connected to the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100), specifies the COMMAND TERMINATOR c for all commands received by the 10AFIFO from its connected RS-232-C device; c must be an ASCII CONTROL CHARACTER entered as a hexadecimal word in brackets ("[00]" through "[1F]" only, excluding the [Esc] character—see Table 1.H.2). Can be issued to the 10AFIFO <i>only</i> through the FIFO COMPUTER PORT; enabling of the 10AFIFO EEPROM must precede entry of the command (see SET BIT (BIT) command); the DataPAC's EEPROM Switch must also be ON. Also changes to the COMMAND TERMINATOR recognized by the connected 10ACP100 (on DataPAC powerup, the 10AFIFO will assume the existing COMMAND TERMINATOR of the 10ACP100—see Section 3.A.8(b.3)).</p> <p>1) If a Model 10AFIFO is <i>not</i> connected to the DataPAC's COMPUTER INTERFACE PORT, reads the currently effective COMMAND TERMINATOR for the COMPUTER INTERFACE PORT; usually entered via keyboard, but will also be recognized by the DataPAC when entered via COMPUTER INTERFACE PORT with termination of CARRIAGE RETURN ([CR]), regardless of the COMMAND TERMINATOR currently in effect for that port; returns c.</p> <p>2) If a Model 10AFIFO is connected to the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100), reads the currently effective COMMAND TERMINA- TOR for the FIFO COMPUTER PORT; can be issued to the 10AFIFO <i>only</i> through the FIFO COMPUTER PORT, and is effective when terminated by CARRIAGE RETURN ([CR]), regardless of the 10AFIFO COMMAND TERMINATOR currently in effect; returns c.</p>				
<p>COC COUNTER CLEAR</p> <p>COC x [CR]</p>				<p>Counter/ 3.A.1(c.2); 10ACP100 8.0 Timer Card 3.A.1(d.4) 10BCP100 8.0 Operation 10KU 8.0</p> <p>Releases COUNTER RESET (COR) command, resuming normal updating (from zero) of the scanned data reading of Model 10ACT01 or 10ACC-4 "COUNTER" Chn. x; automatically in effect on application of a TYPE (TYP) or RANGE (RNG) command to Chn. x.</p>				

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
COH COUNTER HOLD				Counter/ Timer Card Operation	3.A.1(c.2); 3.A.1(d.4)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
COH x [CR]				Inhibits updating of the scanned data reading of Model 10ACT01 or 10ACC-4 "COUNTER" Chn. x.			
COLD BOOTV				CRT Video Rebooting	—	10BVT60 10CON/CCO	7.0 1.0
COLD BOOTV	E			Displays menu page with further instructions for selective "rebooting" of VIDEO CARD SET.			
COM COMMUNICATIONS				Communi- cations Setup	3.B.5(a); 3.B.5(d.1)	10BCP100 10BACI	9.0 1.0
COM = s [CR]	(E)			Designates the AUXILIARY COMPUTER INTERFACE provided by the Model 10BACI installed in B SLOT s to be the DataPAC's DEFAULT COMMUNICATIONS PORT (DCP). If the EEPROM Switch is OFF, the command will temporarily assign the function of DCP to the specified port; on powerup, the DCP will be the port specified by the last COM command to have been entered with the EEPROM Switch ON.			
COM = 26 [CR] COM [CR]	(E)			Returns the DataPAC's COMPUTER INTERFACE PORT to the function of DCP. Reads the B SLOT of the current DEFAULT COMMUNICATIONS PORT; returns s or 26.			
CON CONFIGURE				Backup Storage	2.P.2; 3.B.3(c.4)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
CON x = \$ [CR]	E		I	Sets Chn. x to the CONFIGURATION encoded by ASCII string \$ (100 characters maximum).			
CON x [CR]		R	I	Reads current CONFIGURATION of Chn. x; can only be entered via COMPUTER INTERFACE PORT, and outputs \$.			
COR COUNTER RESET				Counter/ Timer Card Operation	3.A.1(c.2); 3.A.1(d.4)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
COR x [CR]				Sets and holds at zero the scanned data reading of Model 10ACT01 or 10ACC-4 "COUNTER" Chn. x, unless the COUNTER HOLD (COH) command is in effect for that channel.			
COU COUNTER UPDATE				Counter/ Timer Card Operation	3.A.1(c.2); 3.A.1(d.4)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
COU x [CR]				Releases COUNTER HOLD (COH) command, updating the scanned data reading of Model 10ACT01 or 10ACC-4 "COUNTER" Chn. x; automatically in effect on application of a TYPE (TYP) or RANGE (RNG) command to Chn. x.			

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
CPC CHARACTERS PER CHANNEL				Formatting of Data Transmissions	1.H.3(d); 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	8.0 8.0 8.0 1.0
CPC = n [CR]	E			Formats the per-channel DATA FIELD for all STREAM (STR) and HARD COPY (HCY) transmissions from the COMPUTER INTERFACE PORT (n = no. of DATA-FIELD spaces; 2 n 9).			
CPC [CR]				Reads the number of DATA-FIELD spaces currently specified for all STR and HCY transmissions; returns n .			
CPL CHANNELS PER LINE				Formatted Output Card Setup	3.C.3(f.1)	10VFO132	7.0
CPL = n [CR]	E			Sets maximum number of channels to be included in each line of output issued by the Model 10VFO132 in response to a PRINT CHANNEL DATA (PRT) command (1 n 25).			
CPL [CR]				Reads maximum number of channels to be included in each line of PRT output; returns n .			
CSB COMPUTER STATUS BIT				Automatic Command Execution	2.H.2(d); 2.K.2(d)	10ACP100 10BCP100 10KU	8.1 8.1 8.1
CSB = r [CR]	E			Assigns "special bit" LOGIC SOURCE to LOGIC BIT r: r will be at Logic 1 only when the COMPUTER COMMAND QUEUE is empty.			
CSB = N/A [CR]	E			Cancels current COMPUTER STATUS BIT assignment.			
CSB [CR]				Reads current COMPUTER STATUS BIT assignment; returns r or N/A .			
CSF CHECKSUM FIFO				FIFO Buffer Operation	3.A.8(c.7)	10AFIFO	1.0
CSF = SUM [CR]	E			Stores the checksum value of the 10AFIFO's existing EEPROM contents and the checksum value of its existing RAM contents.			
CSF [CR]				Returns [Field 1] , [Field 2] , [Field 3] ; if the 10AFIFO CODE EEPROM checksum is equal to the prestored value, "Field 1" is PASSED ; if the 10AFIFO EEPROM checksum is equal to the value stored by the last CSF = SUM [CR] command, "Field 2" is PASSED ; if the 10AFIFO RAM checksum is equal to the value stored by the last CSF = SUM [CR] command, "Field 3" is PASSED . If any of these checksums FAILS, the corresponding field will contain some 4-character hexadecimal word.			
DDI DESTRUCTIVE DATA INPUT				FIFO Buffer Setup	3.A.8(b.5)	10AFIFO	1.0
DDI [CR]	E			Places the Model 10AFIFO in "CYCLIC" INPUT MODE; the 10AFIFO's main memory will continuously receive and store consecutive DATA RECORDS from the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100), rewriting over the oldest contents of the 10AFIFO's main memory when it is full. Requires the "FIFO bypass" to be OFF (see BYPASS (BYP) command). Enabling of the 10AFIFO EEPROM must precede entry of the command (see SET BIT (BIT) command). Can be entered only through the FIFO COMPUTER PORT; see also MODE (MOD) command.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
DDO DESTRUCTIVE DATA OUTPUT DDO [CR]				FIFO Buffer Operation	3.A.8(c.1)	10AFIFO	1.0
Causes the Model 10AFIFO to output through the FIFO COMPUTER PORT the oldest DATA RECORD in the 10AFIFO's main memory, one time only. A copy of this DATA RECORD is retained in the 10AFIFO's <i>output buffer</i> , the previous contents of which are <i>destroyed</i> (for retransmission of output-buffer contents, see NONDESTRUCTIVE DATA OUTPUT (NDO) command). Only effective when the 10AFIFO is in "GATED" OUTPUT MODE (see TRANSMISSION DISABLE (XDS) command) and the "FIFO bypass" is OFF (see BYPASS (BYP) command); can be entered only through the FIFO COMPUTER PORT.							
DEC DECREMENT DEC x [CR]			R I	Internal Counter Functions	2.M.1; 3.B.3(c.1); 3.D.5(c.7)	10ACP100 10BCP100 10KU 10BACI	8.1 8.1 8.1 1.0
Decrements by "1" the current data value of DOWNLOAD PSEUDOCHANNEL x.							
DEL DELETE DEL p [CR]			E	CRT Video Setup	2.C.10	10BVT60 10CON/CCON	1.0 1.0
Deletes VIDEO PAGE FORMAT No. p from EEPROM storage; requires special confirmation, and can only be entered through the keyboard.							
DET DETACH DET [CR]				General System Operation; Satellite Network; Aux. Comp. Interface	3.B.1; 3.B.3(b.2); 3.B.5(c.1)	10BCP100 10BACI	8.1 1.0
Cancels the ATTACH (ATT) command, detaching the B CARD presently "attached" to the DataPAC command source (keyboard or COMPUTER INTERFACE) from which the command originates; a subsequent interrogation of ATT [CR] will return "0" (zero).							
DFC DATA FIELD COLOR DFC = c [CR] DFC [CR]			E	CRT Video Setup	—	10BVT60	1.0
Specifies foreground/background color or intensity combination for the display of all DATA FIELDS when in TEXT EDITOR mode; c is a two-character COLOR/INTENSITY code—see Table 2.C.2.							
Reads current color/intensity setting for DATA FIELDS in TEXT EDITOR mode; returns c .							
DHT DEFAULT HEADER/TAILER DHT = h, t [CR] DHT [CR]			E	Formatted Output Card Setup	3.C.3(e.2)	10VFO132	7.0
Specifies DEFAULT "HEADER" PAGE h and DEFAULT "TAILER" PAGE t for Model 10VFO132 PRINT CHANNEL DATA (PRT) transmissions.							
Reads current 10VFO132 DEFAULT "HEADER" and "TAILER" specification; returns h, t .							

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
DIR DIRECTORY DIR [CR]				CRT Video Operation	2.C.2(b)	10BVT60 10CON/CCON	1.0 1.0
				Calls DataPAC PAGE DIRECTORY to display.			
DIS DISPLAY DIS = 1 [CR] DIS = 2 [CR] DIS [CR]				General System Setup	1.A.4	10ACP100 10KU	1.0 1.0
	E			This command must be in effect for proper functioning of an "A-sized" DataPAC with <i>two-line "billboard" display</i> , local or remote (e.g., a Model 10KU-KD or 10K4T-KD, or a Model 10KU that is being used with a Model 10DISU Display Option or with a Model 10P80D Extended Keyboard); must also be in effect for an "A-sized" DataPAC with <i>no display</i> (e.g., a Model 10KU, 10K1C, or 10K4T with <i>no optional display capabilities</i>).			
	E			This command must be in effect for proper functioning of an "A-sized" DataPAC with <i>multichannel LCD or VFD data display</i> , local or remote (e.g., a Model 10K2D or 10K4T-DA, or a Model 10KU, 10K1C, or 10K4T that is being used with a Model 10VFD-2 Display Option).			
				Reads current DIS setting for an "A-sized" DataPAC; returns 1 or 2 .			
DLB DOWNLOAD BITS DLB = k [CR] DLB = k, I [CR] DLB = N/A [CR] DLB [CR]				Satellite Network Setup	3.B.3(b.6)	10BD4	3.0
	E			Causes the Model 10BD4 to download GLOBAL BIT GROUP k to each "A-sized" DataPAC SATELLITE in the network, with each 10BD4 scan cycle; the command must be applied <i>to the HOST</i> (each "A-sized" SATELLITE should first be set to "hear" all or part of the GLOBAL LOGIC BITS which have <i>not</i> been dedicated to that SATELLITE via the SATELLITE SYSTEM BITS (SSB) command; this may be done by assigning to each such bit a local LOGIC SOURCE of " SAT ," via one or more LOGIC SOURCE (SRC) commands applied <i>to the SATELLITE</i> —see Section 3.B.3(b.6)).			
	E			Causes the Model 10BD4 to download all GLOBAL BIT GROUPS from k through I to each "A-sized" DataPAC SATELLITE in the network, with each 10BD4 scan cycle; k < I.			
	E			Cancels the downloading of GLOBAL BIT GROUPS to every "A-sized" SATELLITE with each 10BD4 scan cycle.			
				Reads the GLOBAL BIT GROUP(S) to be downloaded to every "A-sized" SATELLITE with each 10BD4 scan cycle; returns k ; k,I ; or N/A .			
DLC DOWNLOAD CHANNELS DLC = x [CR] DLC = x, y [CR] DLC = N/A [CR]				Satellite Network Setup	3.B.3(b.5)	10BD4	3.0
	E			Causes the Model 10BD4 to download GLOBAL DATA CHANNEL x to each "A-sized" DataPAC SATELLITE in the network, with each 10BD4 scan cycle; the command must be applied <i>to the HOST</i> (each "A-sized" SATELLITE should be set to "hear" all or part of the GLOBAL DATA CHANNELS which have not been dedicated to that SATELLITE via the SATELLITE (SAT) command; this may be done by assigning to each such channel a local "type" code of "D4," via one or more TYPE (TYP) commands—see Section 3.B.3(b.5)).			
	E			Causes the Model 10BD4 to download all GLOBAL DATA CHANNELS from x through y to each "A-sized" DataPAC SATELLITE in the network, with each 10BD4 scan cycle; 1 < x < y < 998.			
	E			Cancels the downloading of GLOBAL DATA CHANNELS to every "A-sized" SATELLITE with each 10BD4 scan cycle.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
DLC [CR]				Reads the GLOBAL DATA CHANNEL(S) to be downloaded to every "A-sized" SATELLITE with each 10BD4 scan cycle; returns x ; x,y ; or N/A .			
DLY DELAY				Data	1.H.4;	10ACP100	1.0
				Trans- mission	3.B.5(c.5); 3.B.5(d.1)	10BCP100 10KU	1.0 1.0
				Setup		10BACI	1.0
DLY = s [CR]	E			Sets time delay between successive channel data transmissions from COMPUTER INTERFACE PORT in response to a DUMP (DMP) , STREAM (STR) , HARD COPY (HCY) , SNAPSHOT (SNP) , or LIMIT ZONE (LZN) command to s milliseconds (0 s 100).			
DLY [CR]				Reads current intertransmission time delay setting; returns s.			
DMP DUMP				Data	1.H.1;	10ACP100	1.0
				Trans- mission	1.H.2(b); 3.B.5(d.1)	10BCP100 10KU	1.0 1.0
						10BACI	1.0
DMP [CR]				Transmits current data for all scanned DATA CHANNELS, including Chns. 998 (TIME) and 999 (DATE), from COMPUTER INTERFACE PORT, only once; outputs x,w,z per channel, where x = Channel No. (optional—see ECHO (ECO) command); w = data value; z = LIMIT-ZONE Indicator No. (optional—see LIMIT (LIM) command).			
DMP x TO y [CR]				Transmits current data, once only, for Chns. x through y only (y x).			
DPT DEPTH				History Card	2.Q.2(e);	10BDR64	1.0
				Setup; LCD	3.B.4(b.4);	10ACP100G	4.0
				Graphics	3.B.4(d.4)		
				Operation			
DPT n = d [CR]	E	R		Sets to d the DEPTH of Model 10BDR64 Recorder n (0 d 32767; DEPTH of "0" disables recorder).			
DPT n [CR]			R	Reads current DEPTH of Model 10BDR64 Recorder n; returns d .			
DPT [CR]				Reads both <i>maximum</i> and <i>current</i> DEPTH of the DataPAC's LCD STRIP-CHART RECORDER; returns m,c (m = maximum DEPTH; c = current DEPTH). To <i>update</i> the displayed answer to a DPT [CR] interrogation, press the keyboard's Step key. When current DEPTH (c) becomes equal to maximum DEPTH (m), an answer of m,m will be returned. There is no corresponding DPT "WRITE" COMMAND for the STRIP-CHART RECORDER.			
DSB DUMP SYSTEM BIT DATA				See Appendix L.1 ("Binary Transmission Mnemonics").			
DSD DUMP SYSTEM DATA				See Appendix L.1 ("Binary Transmission Mnemonics").			
DSF DUMP SYSTEM FIELD DATA				See Appendix L.1 ("Binary Transmission Mnemonics").			
DSM DUMP SYSTEM MESSAGE DATA				See Appendix L.1 ("Binary Transmission Mnemonics").			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
DTE DATE				General System Setup	1.F.3	10ACP100 10BCP100 10KU 10CON/CCON	1.0 1.0 1.0 1.0
DTE = d [CR]	E			Sets the DataPAC's internal date (d is a 5- or 6-digit number: month-day-year, to be displayed with separating slashes (/)).			
DTE [CR]				Reads current date value; returns d .			
ECO ECHO				Formatting of Data Transmissions	1.H.3(a); 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
ECO [CR]				Causes Channel Numbers to be included in all transmissions issued from COMPUTER INTERFACE PORT in response to a CHANNEL (CHN) , DUMP (DMP) , or SNAPSHOT (SNP) command; automatically in effect for all STREAM (STR) and HARD COPY (HCY) transmissions. Cancelled by NO CHANNEL (NCH) command for all CHN , DMP , and STR transmissions.			
EID EXTERNAL INPUT DISABLE				Counter/ Timer Card Operation	3.A.1(c.3)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
EID x [CR]				Disconnects from the Model 10ACT01 that uses Chn. x any and all external signals and logic commands received at its rear I/O CONNECTOR. Cancelled by EXTERNAL INPUT ENABLE (EIE) command.			
EIE EXTERNAL INPUT ENABLE				Counter/ Timer Card Operation	3.A.1(c.3)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
EIE x [CR]				Cancels EXTERNAL INPUT DISABLE (EID) command, reconnecting all external signals and logic commands received by the Model 10ACT01 that uses Chn. x; automatically in effect on application of a TYPE (TYP) or RANGE (RNG) command to Chn. x.			
EMM SCALING FACTOR ("m")				Analog Channel Setup	1.G.2; 1.G.3(b); 1.G.5; 2.G.1; 2.P.3; 3.A.5(c.3) 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
EMM x = m [CR]	E	R	I	Sets to m the SCALING FACTOR to be applied to Chn. x; may be used to reset the precision of a "REAL" ANALOG INPUT Chn. x.			
EMM x [CR]			R	Reads current SCALING FACTOR for Chn. x; returns m .			
EMP EMPTY				History Card Operation	3.B.4(e.3); 3.B.4(e.6)	10BDR64	1.0
EMP n [CR]				Outputs from the DataPAC COMPUTER INTERFACE PORT all FRAMES of Model 10BDR64 Recorder n, in sequence, that have been recorded since the EMP command was last applied to that recorder. See also the REACCESS HISTORY MEMORY (RHM) command.			
EMP n = f [CR]				Outputs in sequence a selected number of FRAMES that have been recorded by Model 10BDR64 Recorder n since the EMP command was last applied to that			

COMMAND	E E P R O M	R A N G E	I M P L E M E N T S	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
EOT [CR]				<p>Application of EOT must always <i>follow</i> application of OPT. Can be issued to the 10AFIFO <i>only</i> through the FIFO COMPUTER PORT; enabling of the 10AFIFO EEPROM must precede entry of the command (see SET BIT (BIT) command). Does not affect the current END-OF-TRANSMISSION TERMINATOR for the 10ACP100, which is <i>fixed</i> at CARRIAGE RETURN ("[0D]") as long as the 10ACP100 is connected to the 10AFIFO.</p> <p>1) If a Model 10AFIFO is <i>not</i> connected to the DataPAC's COMPUTER INTERFACE PORT, reads the currently effective END-OF-TRANSMISSION TERMINATOR for the COMPUTER INTERFACE PORT; returns \$.</p> <p>2) If a Model 10AFIFO is connected to the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100), reads the currently effective END-OF-TRANSMISSION TERMINATOR for the FIFO COMPUTER PORT; can be issued to the 10AFIFO <i>only</i> through the FIFO COMPUTER PORT; returns \$.</p>			
ESC ESCAPE				Data	1.H.1;	10ACP100	1.0
				Trans- mission	1.H.2(d); 3.B.5(d.1)	10BCP100 10KU 10BACI	1.0 1.0 1.0
ESC [CR]				<p>Halts any transmission from the COMPUTER INTERFACE PORT; clears any partial command that may have been previously entered. May be entered by pressing the keyboard's Esc key, or by transmitting the [ESC] character to the DataPAC via the COMPUTER INTERFACE PORT.</p>			
EXM EXECUTE MODE				Automatic Command Execution	2.K.2(e)	10BCP100	10.0
EXM = D [CR]	E			Prevents triggering of system EXECUTE (EXU) sequences during the first 15 seconds after powerup. AVAILABLE IN 10BCP100 SOFTWARE ONLY.			
EXM = E [CR]	E			Cancels EXECUTE powerup "delay"; triggering of EXU sequences can begin immediately upon powerup. Available in 10BCP100 and 10KU software only.			
EXM [CR]				Reads current EXECUTE MODE; returns DISABLED or ENABLED .			
EXU EXECUTE				Automatic Command Execution	2.H.3; 2.K.1; 2.K.2; 2.M.1; 3.B.3(b.8); 3.B.4(e.2)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
EXU r = \$ [CR]	E			Specifies one or more commands to be executed upon transition of LOGIC BIT r from <i>Logic 0 to Logic 1</i> (\$ is an ASCII string of up to 32 characters; command delimiter is colon (:)).			
EXU /r = \$ [CR]	E			Specifies one or more commands to be executed upon transition of LOGIC BIT r from <i>Logic 1 to Logic 0</i> .			
EXU r = N/A [CR]	E			Cancels existing EXU command applying to the <i>Logic 0 to Logic 1</i> transition of LOGIC BIT r.			
EXU /r = N/A [CR]	E			Cancels existing EXU command applying to the <i>Logic 1 to Logic 0</i> transition of LOGIC BIT r.			
EXU r [CR]		R		Reads the command(s) to be executed upon the <i>Logic 0 to Logic 1</i> transition of LOGIC BIT r; returns \$ or N/A .			
EXU /r [CR]		R		Reads the command(s) to be executed upon the <i>Logic 1 to Logic 0</i> transition of LOGIC BIT r; returns \$ or N/A .			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
FCH FRAME CHANNELS				10BACIA Setup	3.B.5 Suppl. 1	10BACIA 10BACI-422 10BACI-488	
FCH = x, y [CR]	E			Instructs the 10BACIA, 10BACI-422, or 10BACI-488 to load Channels x through y into an output buffer at the end of every complete scan cycle, thus allowing a time-coherent "frame" of data.			
FCH [CR]				Reads current "frame" range for the 10BACIA, 10BACI-422, or 10BACI-488 to which the command is directed; returns x, y.			
FCL FIFO CLEAR				FIFO Buffer Operation	3.A.8(c.5)	10AFIFO	1.0
FCL [CR]				Clears Model 10AFIFO memory; uses a physical overwrite technique to destroy all stored contents, which <i>cannot</i> be reaccessed via REACCESS FIFO MEMORY (RFM) command. Can be entered only through the FIFO COMPUTER PORT.			
FDM FLOATING POINT DUMP				"10BACI" Floating Point Option	3.B.5 Suppl. 4	10BACI-488	
FDM [CR]				Instructs a 10BACI-488 card equipped with the "FP" Option to output data for all scanned channels, once only and in the floating-point format specified by the last-entered FLOATING POINT FORMAT (FPF) command.			
FDM x TO y [CR]				Instructs a 10BACI-488 card equipped with the "FP" Option to output data for all channels from Chn. x through y, once only and in the floating-point format specified by the last-entered FLOATING POINT FORMAT (FPF) command.			
FIL FILTER				Analog Channel Setup	2.G.2; 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
FIL x = f [CR]	E	R	I	Sets digital filtering constant f for Chn. x (-1 f 9; -1 = no filtering; 0 = only enough filtering to mask intrinsic system noise; 9 = maximum filtering).			
FIL x [CR]		R	I	Reads current digital filtering constant for Chn. x; returns f.			
FPF FLOATING POINT FORMAT				"10BACI" Floating Point Option	3.B.5 Suppl. 4	10BACI-488	
FPF = IEEE [CR]	E			Specifies IEEE format for the floating-point output of a 10BACI-488 card equipped with the "FP" Option (see also FLOATING POINT DUMP (FDM) command).			
FPF = DEC [CR]	E			Specifies DEC format for the floating-point output of a 10BACI-488 card equipped with the "FP" Option (see also FLOATING POINT DUMP (FDM) command).			
FPF [CR]				Reads current IEEE format specification for the floating-point output of a 10BACI-488 card equipped with the "FP" Option; returns IEEE or DEC .			
FRC FORCE				Analog Channel Setup	1.G.5; 1.G.6; 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
FRC x = z [CR]	E	R	I	Scales Chn. x so that its data reading for the existing input equals the value z; calculates and stores in EEPROM the SCALING FACTOR m for Chn. x. Also sets desired precision (decimal-point location) for Chn. x. When used to calibrate Chn. x, must be preceded by ZERO (ZRO) command.			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
FRC x [CR]		R	I				
FRQ FREQUENCY CALIBRATION				Analog Channel Setup	1.G.4(a); 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
FRQ x = i, u [CR]	E	R	I				
FRQ x [CR]		R	I				
FRZ FREEZE				History Card Operation	3.B.4(e.8)	10BDR64	5.0
FRZ n = s STEP z [CR]		R					
FRZ n = N/A [CR]		R					
FRZ n [CR]		R					
GBL GLOBAL				Satellite Network Operation	3.B.3(c.4)	10BD4 10BD1	2.6 2.6
GBL = OFF [CR]							
GBL = ON [CR]							
GBL [CR]							
GCL GRAPH CLEAR				LCD Graphics Operation	2.Q.2(a)	10ACP100G	3.0
GCL [CR]							

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
GRX GRAPH RANGE X				LCD Graphics Setup	2.Q.1(b.2); 2.Q.1(c.3)	10ACP100G	3.0
GRX p = l, h [CR]	E	R		Sets full-scale display range for the "x" channel of "XY" or "STRIP-CHART" LCD VIDEO PAGE p, where 1 ≤ p ≤ 40; l = range minimum; h = range maximum; -32768 ≤ l < h ≤ 32768.			
GRX p [CR]			R	Reads current display range for the "x" channel of "XY" or "STRIP-CHART" LCD VIDEO PAGE p; returns l,h or N/A (the latter appears if Page p is a "DATA" LCD VIDEO PAGE—see PAGE TYPE (PGT) command).			
GRY GRAPH RANGE Y				LCD Graphics Setup	2.Q.1(b.2); 2.Q.1(c.3)	10ACP100G	3.0
GRY p = l, h [CR]	E	R		Sets full-scale display range for the "y" channel of "XY" or "STRIP-CHART" LCD VIDEO PAGE p, where 1 ≤ p ≤ 40; for l and h, see the GRX command, above.			
GRY p [CR]			R	Reads current display range for the "y" channel of "XY" or "STRIP-CHART" LCD VIDEO PAGE p; returns l,h or N/A (the latter appears if Page p is a "DATA" LCD VIDEO PAGE—see PAGE TYPE (PGT) command).			
GRZ GRAPH RANGE Z				LCD Graphics Setup	2.Q.1(c.3)	10ACP100G	4.0
GRZ p = l, h [CR]	E	R		Sets full-scale display range for the "z" channel of "STRIP-CHART" LCD VIDEO PAGE p, where 1 ≤ p ≤ 40; for l and h, see the GRX command, above.			
GRZ p [CR]			R	Reads current display range for the "z" channel of "STRIP-CHART" LCD VIDEO PAGE p; returns l,h or N/A (the latter appears if Page p is either a "DATA" or an "XY" LCD VIDEO PAGE—see PAGE TYPE (PGT) command).			
GZL GRAPH ZERO LEFT				LCD Graphics Operation	2.Q.1(c.6); 2.Q.2(f)	10ACP100G	4.0
GZL [CR]	Initiates "ZERO LEFT" MODE for all "STRIP-CHART" LCD VIDEO PAGES. Each displayed time scale—as defined by the INTERVAL (INT) command—will scroll continuously to the left with each new recording, the numbers on the scale indicating <i>elapsed time</i> since recording began (i.e., since the RECORDER START (RES) command was last applied or DataPAC power last recycled). For subsequent manual scrolling of the displayed page via keyboard "arrow" keys, see Section 2.Q.2(f). In GZL mode, the LCD STRIP-CHART RECORDER will <i>stop</i> when it reaches its maximum DEPTH, and can only be restarted by application of an REC command or by recycling power. This mode is in effect, by default, on DataPAC powerup (see also GZR command, below).						
GZR GRAPH ZERO RIGHT				LCD Graphics Operation	2.Q.1(c.6)	10ACP100G	4.0
GZR [CR]	Initiates "ZERO RIGHT" MODE for all "STRIP-CHART" LCD VIDEO PAGES. Each display will include a <i>nonscrolling time scale</i> from right to left—as defined by the INTERVAL (INT) command—where the initial right-hand extreme ("0") is "now" (the present time). Manual scrolling of the display is not possible in this mode. In GZR mode, the LCD STRIP-CHART RECORDER will <i>not</i> stop when its maximum DEPTH is reached, but will continue to record, overwriting the oldest recording in memory with each new recording. On DataPAC powerup, all "STRIP-CHART"						

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
				displays will revert to "ZERO LEFT" MODE, by default (see GZL command, above).			
HCL HISTORY CLEAR HCL n [CR]			R	History Card Operation	3.B.4(b.4)	10BDR64	6.0
				Clears the "history memory" of Model 10BDR64 Recorder No. n. For "true erasure" of history memory, see NONVOLATILE HISTORY (NVH) command.			
HCY HARD COPY HCY [CR] HCY x [CR] HCY x TO y [CR]				Data Trans- mission	1.H.1; 1.H.2(e) ; 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
				Transmits current data for all scanned DATA CHANNELS, including Chns. 998 (TIME) and 999 (DATE), from COMPUTER INTERFACE PORT, once only; outputs x,w,z per channel, where x = Channel No.; w = data value (see CHARACTERS PER CHANNEL (CPC) command); z = LIMIT-ZONE Indicator No. (optional—see LIMITS (LIM) command. Output also includes specified HEADER and/or TAILER (see HEADER (HDR) and TAILER (TLR) commands).			
				Transmits current data, once only, for Chn. x only, along with specified HEADER and/or TAILER.			
				Transmits current data, once only, for Chns. x through y, only, along with specified HEADER and/or TAILER (y x).			
HDP HALT DEPTH HDP n = q [CR] HDP n [CR]			E R R	History Card Setup	3.B.4(d.7)	10BDR64	1.0
				Sets HALT DEPTH of q for Model 10BDR64 Recorder n—i.e., delays halting of Recorder n until q FRAMES have been recorded following occurrence of halt-triggering condition (0 q 32767).			
				Reads current HALT DEPTH setting for Recorder n; returns q .			
HDR HEADER HDR = "\$" [CR] HDR = N/A [CR] HDR [CR]			E E	Formatting of Data Transmissions	1.H.3(c) ; 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
				Specifies character string \$ to be transmitted at the beginning of each data set transmitted from the COMPUTER INTERFACE PORT in response to a STREAM (STR) or HARD COPY (HCY) command (\$ is an ASCII string of up to 80 characters, enclosed in quotation marks (" "); every ASCII CONTROL CHARACTER must be entered as a hexadecimal word in brackets, within the quotation marks—see Table 1.H.2).			
				Cancels current HEADER string.			
				Reads current HEADER string; can only be entered via COMPUTER INTERFACE PORT, and outputs \$ or N/A .			
HDU HISTORY DUMP HDU n = f [CR]				History Card Operation	3.B.4(e.3); 3.B.4(e.7)	10BDR64	1.0
				Transmits from COMPUTER INTERFACE PORT a specific FRAME f of the Model 10BDR64 Recorder n; output format is determined by OUTPUT IMAGE (IMA) command.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
HDU n = f TO g [CR]				Transmits all FRAMES from f through g of Recorder n—or that portion of the "f TO g" range that exists (g - f).			
HEX HEXADECIMAL				System	2.H.2(c);	10ACP100	8.0
				Logic	3.B.2(e.1);	10BCP100	8.0
				Bits	3.B.2(e.2)	10KU	8.0
						10BACI	1.0
HEX k = h [CR]		R		Sets the 16 bits of BIT GROUP k such that their configuration represents the four-character hexadecimal word h (see Table 2.H.2); overrides any other bit-control sources for the bits of BIT GROUP k.			
HEX k [CR]		R		Reads the hexadecimal word represented by the existing configuration of BIT GROUP k; returns h .			
HIL HIGH LIMIT				Analog	2.F.1;	10ACP100	1.0
				Channel	2.F.2;	10BCP100	1.0
				Setup	3.B.3(c.1)	10KU	1.0
HIL x = h [CR]	E	R	I	Sets high-limit value for Chn. x equal to the fixed value h, where -32768 ≤ h ≤ 32768; precision (decimal-point location) of h should match that of Chn. x's data reading.			
HIL x = CHN z [CR]	E	R	I	Sets high-limit value for Chn. x equal to the current reading of DATA CHANNEL z; Channels x and z should be set to the same precision.			
HIL x [CR]		R	I	Returns h, the fixed high-limit value for Chn. x—unless a command of HIL x = CHN z [CR] has been entered, in which case it returns CHNz .			
HLT HALT				History Card	3.B.4(d.6)	10BDR64	1.0
				Setup			
HLT n = B [CR]	E			Specifies the logical combination of conditions that will cause the Model 10BDR64 Recorder n to halt the recording of data (B is a Boolean expression of up to 16 MNEMONIC terms and up to 15 OPERATORS—see STORE (STO) command, Section 3.B.4(d.5).			
HLT n = N/A [CR]	E			Cancels existing halt conditions for Recorder n.			
HLT n [CR]				Reads existing halt conditions for Recorder n; returns B or N/A .			
ICD INTERCHARACTER DELAY				Formatted	3.C.3(b.3)	10VFO132	1.0
				Output Card			
				Setup			
ICD = s [CR]	E			Sets time delay between successive character transmissions from Model 10VFO132 PRINTER INTERFACE PORT; for values of s, see Table 3.C.3.1.			
ICD [CR]				Reads current setting for 10VFO132 intercharacter delay; returns s .			
IMA OUTPUT IMAGE				History Card	3.B.4(d.10)	10BDR64	1.0
				Setup			
IMA n = v₁, v₂, . . . , v_n [CR]	E			Specifies variables to appear in each line of output for Model 10BDR64 Recorder n, and the order in which they are to be transmitted; for "v" mnemonics, see Section 3.B.3(d.10).			
IMA n [CR]				Reads current "output image" for 10BDR64 Recorder n; returns v₁, v₂, . . . , v_n .			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
INC INCREMENT				Internal Counter Functions; Counter/ Timer Card Operation	2.M.1; 3.A.1(c.1); 3.A.1(d.3); 3.B.3(c.1); 3.B.5(c.7)	10ACP100 10BCP100 10KU 10BACI	8.1 8.1 8.1 1.0
INC x [CR]		(R)	I	Increments by "1" the current data value of Chn. x, where Chn. x is <i>either</i> a DOWNLOAD PSEUDOCHANNEL or a "COUNTER" Channel of a Model 10ACT01 or 10ACC-4. The range form of the INC command does not apply to 10ACT01- or 10ACC-4-dedicated channels.			
INT INTERVAL				LCD Graphics Setup	2.Q.1(c.5)	10ACP100G	4.0
INT = t [CR]		E		Sets recording interval for the DataPAC's STRIP-CHART RECORDER and the time scale to be displayed on every "STRIP-CHART" LCD VIDEO PAGE; 1 t 16; for interval codes ("t") and corresponding full-scale time periods, see Table 2.Q.1.			
INT = S [CR]		E		Instructs the DataPAC's STRIP-CHART RECORDER to record at the current <i>scan rate</i> , with 200 recordings per "STRIP-CHART" LCD VIDEO PAGE.			
INT [CR]				Reads the recording time interval currently in effect for the DataPAC's STRIP-CHART RECORDER; returns t or S .			
ITR COMPUTER INTERRUPT				Communi- cations Setup	2.B.6(b); 3.B.5(c.6); 3.B.5(d.1)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
ITR = "\$" [CR]		E		Defines character string \$ to be transmitted from COMPUTER INTERFACE PORT upon receipt of a command of ITR [CR] (\$ is an ASCII string of up to 32 characters, enclosed in quotation marks (" "); every ASCII CONTROL CHARACTER must be entered as a hexadecimal word in brackets, within the quotation marks—see Table 1.H.2). Does not work with the "auxiliary" computer interface supplied by a Model 10BACI.			
ITR = N/A [CR]		E		Cancels existing "interrupt" designation.			
ITR [CR]				Causes predefined "interrupt" string to be transmitted from COMPUTER INTERFACE PORT at the first opportunity following completion of any transmission in progress; can only be entered via COMPUTER INTERFACE PORT, and outputs \$ or N/A .			
KEY				Keyboard Setup	2.I	10ACP100 10BCP100 10KU	8.1 8.1 8.1
KEY k = XXX [CR]		E		Programs plug-in Operator's Keyboard (or older Extended Keyboard version) such that the pressing of Prompt key, followed by numeral key k, is equivalent to the entry of the standard three-letter command MNEMONIC XXX (0 k 4).			
KEY k = N/A [CR]		E		Cancels current "prompting" assignment for keyboard numeral key k.			
KEY k [CR]				Reads command MNEMONIC currently assigned to the "prompting" function of keyboard numeral key k; returns XXX or N/A .			

COMMAND	E M	R A N G E	I M P L E M E N T S	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
LBT "BETWEEN" LOGIC				Analog Channel Setup	2.F.1; 2.F.4 ; 2.H.2(a); 3.B.3(c.1)	10ACP100 10BCP100 10KU1.0	1.0 1.0
LBT x = r [CR]	E	R	I	Sets LOGIC BIT <i>r</i> to <i>Logic 1</i> when the data for Chn. <i>x</i> is greater than or equal to that channel's preset low limit and less than or equal to its preset high limit (see LOW LIMIT (LOL) and HIGH LIMIT (HIL) commands).			
LBT x = N/A [CR]	E	R	I	Cancels existing "BETWEEN" LOGIC assignment for Chn. <i>x</i> .			
LBT x [CR]		R	I	Reads existing "BETWEEN" LOGIC assignment for Chn. <i>x</i> ; returns <i>r</i> or N/A .			
LCT LOCATE				Analog Channel Setup; Satellite Network Setup; Aux. Comp Interface	1.G.1 ; 3.A.2(b.2); 3.B.3(b.5); 3.B.3(c.2); 3.B.3(c.1); 3.B.5(c.7); Appendix C	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
LCT x = s [CR]	E	R	I	Sets the "location" of Chn. <i>x</i> ; <i>s</i> is a number from one to four digits that informs the DataPAC's CENTRAL PROCESSOR of the <i>local physical origin</i> of the channel. Chn. <i>x</i> may be an ANALOG INPUT, ANALOG OUTPUT, or VOLATILE DOWNLOAD PSEUDOCHANNEL. If Chn. <i>x</i> is an ANALOG INPUT or OUTPUT being "located" with respect to an A SLOT of an "A-sized" DataPAC, the number <i>s</i> consists of Chn. <i>x</i> 's SLOT No. and SUBCHANNEL No. (in that order); if the DataPAC is "B-sized," <i>s</i> consists of Chn. <i>x</i> 's DECK No., A SLOT No., and SUBCHANNEL No. (in that order). In either case the "typing" of Chn. <i>x</i> via the TYPE (TYP) command should <i>precede</i> the A-SLOT "locating" of that channel. If Chn. <i>x</i> is a VOLATILE DOWNLOAD PSEUDOCHANNEL being "located" with respect to a B SLOT occupied by a Model 10BACI Auxiliary Computer Interface Card, the corresponding one- or two-digit B SLOT No. should be entered for <i>s</i> . In this case, the LCT command also assigns a "type" code of "DA" to PSEUDOCHANNEL <i>x</i> ; this "typing" can be cancelled only by a RESET (RST) command applying to Chn. <i>x</i> .			
LCT x = s [CR]	E	R	I	When applied to a "B-sized" DataPAC SATELLITE, "locates" GLOBAL DATA CHANNEL <i>x</i> to the Model 10BD1 Satellite Slave Card occupying the SATELLITE'S B SLOT <i>s</i> . Does <i>not</i> specify the actual "local physical origin" of Chn. <i>x</i> within the SATELLITE NETWORK, but does allow the "B-sized" SATELLITE to which it is applied to "hear" Chn. <i>x</i> when that channel has not been dedicated to the SATELLITE via the SATELLITE (SAT) command; can be cancelled only by a RESET (RST) command applying to Chn. <i>x</i> . When a channel's 10BD1 "location" is returned in response to a LCT x [CR] interrogation, the 10BD1's B-SLOT No. (" <i>s</i> ") will be prefixed by "S" (see below).			
LCT x [CR]		R	I	Reads current "location" assignment for Chn. <i>x</i> : 1) If the interrogated DataPAC is <i>not</i> a member of a SATELLITE NETWORK, returns one of the following answers: s (a one-to-four-digit A- or B-SLOT "location" number, as described above); BINK (if Chn. <i>x</i> has been "typed" by a CHN x = BIN k [CR] command); BCDk (if Chn. <i>x</i> has been "typed" by a CHN x = BCD k [CR] command); or N/A (if Chn. <i>x</i> is either a "CONVERSION" CHANNEL or a PSEUDOCHANNEL <i>other than</i> a VOLATILE DOWNLOAD PSEUDOCHANNEL that has been "located" to B SLOT <i>s</i>). 2) If the interrogated DataPAC is a member ("NODE") of a SATELLITE NETWORK, four basic responses to the LCT x [CR] interrogation are possible: a) "LOCAL" LOCATION: s , BINK , BCDk , or N/A (as above). Returned by an "A-sized" or "B-sized" NODE when Chn. <i>x</i> is <i>dedicated to that NODE</i> via the SATELLITE (SAT) command, so that the NODE serves as the local "data origin" for Chn. <i>x</i> . Also possible, however, if the NODE is an "A-sized"			

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
				<p>SATELLITE or a "B-sized" NODE where the GBL = OFF [CR] command is in effect, and where Chn. x is neither dedicated to that NODE nor "located" to the NODE'S Model 10BD1 Satellite Slave Card (as in the case of an "A-sized" SATELLITE where a "local location" of N/A is returned for nonlocal channels that have been typed "D4" in order that they may be "heard" by the SATELLITE (see DOWNLOAD CHANNELS (DLC) command); in other cases, a "local" answer may be returned which in no way reflects the true <i>physical origin</i> of Chn. x within the network).</p> <p>b) "GLOBAL" LOCATION: n,s; n,BINK; n,BCDK; or n,N/A. Returned when Chn. x has not been dedicated to the interrogated NODE via the SATELLITE (SAT) command and when the LCT x [CR] interrogation has been communicated to that NODE as an "implicitly addressed" command from some other ("B-sized") NODE. The number "n" in the response is the SATELLITE No. of the NODE to which Chn. x has been dedicated.</p> <p>c) "10BD1" LOCATION: Ss. Returned by a "B-sized" NODE (only) when 1) the GBL = OFF [CR] command is in effect at that NODE; 2) Chn. x is a channel not dedicated to that NODE but which has been "located" to the Model 10BD1 occupying the NODE'S B SLOT s; and 3) the LCT x [CR] interrogation has been "explicitly" communicated to that NODE (i.e., via an OPEN (OPN) or NODE (NOD) command, or via the NODE's own keyboard, COMPUTER INTERFACE PORT, or AUXILIARY COMPUTER INTERFACE PORT).</p> <p>d) NO RESPONSE. Returned by a "B- sized" NODE (only) when 1) the GBL = ON [CR] command is in effect at that NODE; 2) Chn. x has been "located" to the NODE'S Model 10BD1; and 3) the LCT x [CR] interrogation has been communicated to that NODE via an OPEN (OPN) or NODE (NOD) command.</p>			
LEG LEGEND				LCD/VFD Display Setup	"On the Air" Book Sec. 5 2.Q.1(b.3); 2.Q.1(c.4)	10ACP100 10ACP100G	8.9 1.0
LEG x = L [CR]		E	R	Specifies unit legend L to appear with every display of Chn. x on the DataPAC's LCD/VFD display (L can be up to four alphanumeric characters, including spaces).			
LEG x [CR]			R	Reads current unit legend for LCD/VFD display of Chn. x; returns L .			
LGO LOGO				LCD/VFD and CRT Display Setup	"On the Air" Book Sec. 5 2.C.4(a)	10ACP100 10BCP100 10KU 10CON/CCON	1.0 1.0 1.0 1.0
LGO = \$ [CR]		E		Specifies "logo" heading \$ to be displayed in the LCD/VFD or CRT display BILLBOARD whenever the BILLBOARD is not called upon to display other material (\$ is a string of up to 27 characters, including spaces).			
LGO [CR]				Reads existing "logo" entry; returns \$.			
LGT "GREATER THAN" LOGIC				Analog Channel Setup	2.F.1; 2.F.4; 2.H.2(a); 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
LGT x = r [CR]		E	R	I	Sets LOGIC BIT r to Logic 1 when the data for Chn. x is greater than both of the channel's preset limit values (see LOW LIMIT (LOL) and HIGH LIMIT (HIL) commands).		
LGT x = N/A [CR]		E	R	I	Cancels existing "GREATER THAN" LOGIC assignment for Chn. x.		
LGT x [CR]			R	I	Reads existing "GREATER THAN" LOGIC assignment for Chn. x; returns r or N/A .		

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
LIM LIMITS				Formatting of Data	1.H.3(b); 2.F.3;	10ACP100 10BCP100	8.0 8.0
				Transmissions	3.B.5(c.5); 3.B.5(d.1)	10KU 10BACI	8.0 1.0
LIM [CR]				Includes LIMIT-ZONE Indicator No. z for every channel in all CHANNEL (CHN) , DUMP (DMP) , STREAM (STR) , HARD COPY (HCY) , and SNAPSHOT (SNP) transmissions from COMPUTER INTERFACE PORT (see LIMIT ZONE (LZN) command); does not affect the displayed answer to a keyboard-entered CHN x [CR] interrogation. Cancelled by NO LIMITS (NOL) command, which is in effect, by default, on powerup.			
LIN LINEARIZE				Analog Channel Setup	2.L.2	10ACP100 "L" 10BCP100 "L" 10KU "L"	8.1 8.1 8.1
LIN x = Fn(CHN x) [CR]	E			Sets up "REAL" LINEARIZATION CHANNEL No. x by applying prestored Linearization Table (or "Function") No. n <i>to that channel itself</i> (0 n 8); retypes Chn. x as "EA."			
LIN y = Fn(CHN x) [CR]	E			Sets up "PSEUDOCHANNEL" LINEARIZATION CHANNEL No. y by applying prestored Linearization Table (or "Function") No. n <i>to a different channel</i> (Chn. x) (0 n 8); retypes Chn. y as "EA."			
LIN z [CR]			R	Reads linearization function for Chn. z ("REAL" or "PSEUDOCHANNEL"); returns Fn(CHNx) —where z equals x (if "REAL") or is different from x (if "PSEUDOCHANNEL")—or N/A (the latter appears if a "WRITE" form of the LIN command has not been applied to Chn. z or if Chn. z has been reset via a RESET (RST) command).			
LLT "LESS THAN" LOGIC				Analog Channel Setup	2.F.1; 2.F.4; 2.H.2(a); 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
LLT x = r [CR]	E	R	I	Sets LOGIC BIT r to <i>Logic 1</i> when the data for Chn. x is less than both of the channel's preset limit values (see LOW LIMIT (LOL) and HIGH LIMIT (HIL) commands).			
LLT x = N/A [CR]	E	R	I	Cancels existing "LESS THAN" LOGIC assignment for Chn. x.			
LLT x [CR]			R	Reads existing "LESS THAN" LOGIC assignment for Chn. x; returns r or N/A .			
LNE LINE				CRT Video Operation	2.C.11(e)	10BVT60 10CON/CCON	7.0 1.0
				NOTE: Both "WRITE" ("Input") and "READ" ("Output") forms of LNE are present in 10BVT60 Versions 7.0 up to 9.0; the "READ" form was removed in Version 9.0, and restored in Version 10.0.			
LNE n = hw <c> \$ [CR]				Changes current format of Line No. n of the VIDEO PAGE on display (h = desired line height; w = desired line width; c = desired color or intensity code, entered in angle brackets (see Table 2.C.2); \$ = ASCII character string representing desired contents of Line n, including CHANNEL DISPLAY FIELDS, and color/intensity changes within the line—see Section 2.C.11(e) for details). Changes only the <i>display</i> of Line No. n. Cannot be entered via the keyboard; cannot be used to enter a BARGRAPH FIELD into a line.			
LNE n [CR]				Transmits from the COMPUTER INTERFACE PORT the format of Line No. n of the VIDEO PAGE on display, unless the page contains BARGRAPH FIELDS; outputs hw<c>\$ (unless n is a single-width line of more than 40 characters, in which case it outputs h1<c>\$1 followed by *1<c>\$2). If Line No. n is <i>any</i> line of a VIDEO PAGE containing one or more BARGRAPH FIELDS generated by a Model			

COMMAND	E P R O M	R A N G E	I M P L E M E N T	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
				10VGM500 (see Section 3.C.4), then the LNE n [CR] command will be answered by N/A . Cannot be entered via the keyboard.			
LOK LOCK				General System Operation	2.E.1 ; 3.A.5(c.4); 3.A.6(c.2); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
LOK [CR]				Inhibits automatic updating of the DATA RAM, instantly "locking" all DATA CHANNELS, including Nos. 998 (TIME) and 999 (DATE); cancelled by UNLOCK (UNL) command of the form UNL [CR] .			
LOK x [CR]				"Locks" Chn. x only; cancelled by UNL x [CR] command.			
LOK x TO y [CR]				"Locks" Chns. x through y only (y > x); cancelled by UNL x TO y [CR] command.			
LOL LOW LIMIT				Analog Channel Setup	2.F.1 ; 2.F.2 ; 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
LOL x = I [CR]		E	R	I	Sets low-limit value for Chn. x equal to the fixed value I, where -32768 ≤ I ≤ 32768; precision (decimal-point location) of I should match that of Chn. x's data reading.		
LOL x = CHN z [CR]		E	R	I	Sets low-limit value for Chn. x equal to the current reading of DATA CHANNEL z; Channels x and z should be set to the same precision.		
LOL x [CR]			R	I	Returns I , the fixed low-limit value for Chn. x—unless a command of LOL x = CHN z [CR] has been entered, in which case it returns CHNz .		
LST LIST				History Card and LCD Graphics Setup	2.Q.1(c.1) ; 3.B.4(b.4); 3.B.4(d.3)	10BDR64 10ACP100G	1.0 4.0
LST n = CHN x₁, x₂,..., SBG k₁, k₂,..., DTE [CR]		E			Enters "list" of variables for Model 10BDR64 Recorder n. The "list" expression can have up to 80 characters when entered via keyboard, or up to 126 characters when entered via COMPUTER INTERFACE PORT; x ₁ , x ₂ , etc., are Channel Numbers or Channel-Number ranges of the form "x TO y" (single numbers and ranges may be mixed as desired; Channel Nos. 998 (TIME) and 999 (DATE) may not be entered); k ₁ , k ₂ , etc., are BIT-GROUP Numbers or ranges of the form "k TO l" (numbers and ranges may again be mixed); the sequence of channels and/or channel ranges must be in ascending order, as must the sequence of BIT GROUPS and/or BIT-GROUP ranges; the mnemonic DTE (DATE) is optional—see Section 3.B.4(d.3). Also <i>clears</i> Recorder n and all higher-numbered recorders.		
LST n [CR]					Reads current "list" of variables for 10BDR64 Recorder n; returns CHNx₁,x₂,..., SBGk₁,k₂,... or CHNx₁,x₂,...,SBGk₁,k₂,...,DTE .		
LST = x₁, x₂,..., x_n [CR]		E			Enters "list" of DATA CHANNELS for the DataPAC's STRIP-CHART RECORDER. The "list" expression can have up to 78 characters; x ₁ , x ₂ , etc., are Channel Numbers or Channel-Number ranges of the form "x TO y" (single numbers and ranges may be mixed as desired; Channel Nos. 998 (TIME) and 999 (DATE) may not be entered); the sequence of channels and/or channel ranges must be in ascending order. Should be entered before all PAGE LIST (PGL) commands that refer to "STRIP-CHART" pages.		
LST [CR]					Reads current channel "list" for the DataPAC's STRIP-CHART RECORDER; returns x₁,x₂, ...,x_n or N/A (the latter appears if the "WRITE" form of the LST command has not yet been entered).		

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
LZN LIMIT ZONE				Data Trans- mission	1.H.1; 1.H.2(f) ; 2.F.3; 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	8.0 8.0 8.0 1.0
LZN x [CR]				When entered through COMPUTER INTERFACE PORT, outputs a number indicating the LIMIT ZONE in which the data for Chn. x currently lies (1 for LESS THAN zone, 2 for BETWEEN zone, or 3 for GREATER THAN zone). When entered through keyboard, displays "BELOW LIMIT," "BETWEEN LIMIT," or "ABOVE LIMIT."			
LZN x TO y [CR]				When entered through COMPUTER INTERFACE PORT, outputs current LIMIT-ZONE Indicator No. for each channel in the range from Chn. x through Chn. y (y x). When entered through keyboard, displays current limit status of Chn. x only.			
MEM MEMORY				History Card Operation	3.B.4(b.5)	10BDR64	4.6
MEM [CR]				Returns a hexadecimal number representing the total number of scaled data readings the history "system" is capable of storing; the answer also indicates whether the history memory is currently <i>volatile</i> or <i>non-volatile</i> (see Section 3.B.4(b.5) for details).			
MES MESSAGE				CRT Video Operation	2.C.12(d)	10BVT60 10CON/CCON	6.0 1.0
MES m = s, \$ [CR]				Defines alphanumeric text \$ to appear in the displayed MESSAGE FIELD of system MESSAGE No. m (1 m 16), and specifies the VISUAL EFFECTS for that display; s is a "STATUS" code—see Table 2.C.3; \$ is a string of up to 15 characters, including spaces). On powerup, every MESSAGE text reverts to "blank," and every MESSAGE "STATUS" to "green on black" ("GB") or "half intensity on black" ("10"), by default.			
MES m = s [CR]				Changes to s the "STATUS" code of an existing MESSAGE m.			
MES m [CR]				Reads current definition of MESSAGE m; returns s, "\$" (quotation marks are shown enclosing the text string in every response to the MES m [CR] interrogation; these are not part of the actual MESSAGE).			
MOD MODE				FIFO Buffer Operation	3.A.8(c.6)	10AFIFO	1.0
MOD [CR]				Reads current "INPUT" and "OUTPUT" MODES for the Model 10AFIFO; can be entered only through the FIFO COMPUTER PORT; returns i,o: i = DDI (DESTRUCTIVE DATA INPUT) or NDI (NONDESTRUCTIVE DATA INPUT); o = XEN ("OPEN" OUTPUT) or XDS ("GATED" OUTPUT). See the DDI , NDI , XEN , and XDS commands.			
MTC MASTER TIMING CLOCK				General System Setup	3.B.5 Suppl. 2	10BCP200; 10BACI-422	
MTC = ON [CR]	E			Effective only if directed to a Model 10BACI-422 in a DataPAC with a 10BCP200 Central Processor. Synchronizes the system time-of-day clock to the externally sourced timing pulse received from the 10BACI-422 to which the command is directed. Should be applied to one and only one 10BACI-422 in the system. In order for the command to be effective, the CLK = ON [CR] command must also be in effect, and <i>power must be cycled</i> .			
MTC = OFF [CR]	E			Cancels synchronization of time-of-day clock to the externally sourced timing pulse received from the 10BACI-422 to which the command is directed.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
MTC [CR]				Reads current MASTER TIMING CLOCK setting; returns ON or OFF .			
MVV MILLIVOLT/VOLT CALIBRATION				Analog	1.G.4(b);	10ACP100	1.0
				Channel	3.B.3(c.4)	10BCP100	1.0
				Setup		10KU	1.0
MVV x = i, u [CR]	E	R	I	Calibrates Strain Gage Conditioner Chn. x (i = transducer rating in "mV/V, full scale"; u = nominal full-scale rating in desired engineering units (factored as necessary, in some cases, for different excitation levels—see individual conditioner sheet in Section 1.E.2). The entered "u" value sets the precision for Chn. x.			
MVV x [CR]		R	I	Reads current calibration constants for Strain Gage Conditioner Chn. x; returns i,u or N/A (the latter appears if Chn. x has been improperly "typed").			
NCH NO CHANNEL				Formatting of Data	1.H.3(a); 3.B.5(c.5);	10ACP100 10BCP100	1.0 1.0
				Transmissions	3.B.5(d.1)	10KU 10BACI	1.0 1.0
NCH [CR]				Cancels ECHO (ECO) command, removing Channel Numbers from all transmissions issued from COMPUTER INTERFACE PORT in response to a CHANNEL (CHN) , DUMP (DMP) , or SNAPSHOT (SNP) command.			
NDI NONDESTRUCTIVE DATA INPUT				FIFO Buffer Setup	3.A.8(b.5)	10AFIFO	1.0
NDI [CR]	E			Places the Model 10AFIFO in "FILL" INPUT MODE; the 10AFIFO's main memory will receive and store consecutive DATA RECORDS from the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100) <i>until the memory is full</i> , after which it will receive and store a DATA RECORD from the 10ACP100 only when the required memory space becomes available. Requires the "FIFO bypass" to be OFF (see BYPASS (BYP) command). Enabling of the 10AFIFO EEPROM must precede entry of the command (see SET BIT (BIT) command). Can be entered only through the FIFO COMPUTER PORT; see also MODE (MOD) command.			
NDO NONDESTRUCTIVE DATA OUTPUT				FIFO Buffer Operation	3.A.8(c.1)	10AFIFO	1.0
NDO [CR]				Causes the Model 10AFIFO to output through the FIFO COMPUTER PORT the DATA RECORD currently in the 10AFIFO's <i>output buffer</i> , one time only; this DATA RECORD is retained in the output buffer and may be retransmitted by subsequent applications of the NDO command. Only effective when the 10AFIFO is in "GATED" OUTPUT MODE (see TRANSMISSION DISABLE (XDS) command) or when the "FIFO bypass" is ON (see BYPASS (BYP) command); can be entered only through the FIFO COMPUTER PORT.			
NOB NO BITS				System	2.H.5;	10ACP100	8.0
				Logic	2.K.2(f);	10BCP100	8.0
				Bits	3.B.3(b.6)	10KU	8.0
NOB [CR]				Disables the reading of system LOGIC BITS with each scan cycle; cancelled by BITS (BTS) command. May be used to disable system EXECUTE (EXU) functions (see Section 2.K.2(e)). Does not affect the reading of system CONDITIONAL BITS (Section 2.K.3), but may affect the <i>triggering</i> of such bits if they are dependent on system LOGIC-BIT states.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
NOD NODE				Satellite Network Operation	3.B.3(c.5)	10ACP100 10BD4 10BD1 10BACI 10CON/CCON	1.0 2.6 2.6 1.0 1.0
NOD n, \$ [CR]				Routes a single standard MNEMONIC COMMAND \$ to the network NODE (HOST or SATELLITE) of SATELLITE No. n, one time only (0 n 99; \$ can be up to 80 ASCII characters, literally stating the command to be routed). May be entered at any DataPAC NODE, via local keyboard, COMPUTER INTERFACE, or AUXILIARY COMPUTER INTERFACE PORT; will not work with OPERATOR CONSOLE SATELLITES. Requires OPN = LOC [CR] to be in effect at the NODE where the NOD command is entered.			
NOL NO LIMITS				Formatting of Data Transmissions	1.H.3(b); 2.F.3; 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	8.0 8.0 8.0 1.0
NOL [CR]				Cancels LIMITS (LIM) command, removing LIMIT-ZONE indication from all transmissions from COMPUTER INTERFACE PORT in response to a CHANNEL (CHN) , DUMP (DMP) , STREAM (STR) , HARD COPY (HCY) , or SNAPSHOT (SNP) command; in effect, by default, on powerup.			
NVH NONVOLATILE HISTORY				History Card Setup	3.B.4(b.3); 3.B.4(b.4)	10BDR64	3.0
NVH [CR]		E		Activates nonvolatile "history" memory of any and all installed History Memory Option Cards (including the Model 10BSPC), <i>physically erasing all current memory</i> and making inaccessible for storage of subsequent recordings the original 32K readings of the Model 10BDR64 History Card.			
NVH = N/A [CR]		E		Reverts to volatile "history" memory, including the Model 10BDR64's original 32K readings.			
OPN OPEN				Satellite Network Operation	3.B.3(c.5)	10ACP100 10BD4 10BD1 10BACI 10CON/CCON	10.0 2.6 2.6 1.0 1.0
OPN = n [CR]				"Opens" an "explicit" command route between a local command source (keyboard, COMPUTER INTERFACE PORT, or AUXILIARY COMPUTER INTERFACE PORT) of a given network NODE and any other NODE in the network. Designates the network NODE (HOST or SATELLITE) of SATELLITE No. n to be the only member of the network to receive any and all commands subsequently entered at the NODE to which the OPN command was applied <i>via the local command source by which this command was applied</i> (0 n 99). Cancels any previous OPN command applied to that command source.			
OPN = LOC [CR]				Returns to "local" operation the NODE command source (keyboard, COMPUTER INTERFACE PORT, or AUXILIARY COMPUTER INTERFACE PORT) through which this command is entered; cancels the "explicit" routing of commands from the NODE in question to another NODE, as specified by a previous OPN = n [CR] command.			
OPN [CR]				Returns n , the SATELLITE No. of the network NODE currently "opened" to the command source (keyboard, COMPUTER INTERFACE PORT, or AUXILIARY COMPUTER INTERFACE PORT) through which the OPN [CR] command is entered—unless this command source is currently in "local" operation, in which case LOC is returned.			

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
OPT OUTPUT TERMINATOR				Formatting of Data	1.H.3(f); 2.B.4(b);	10ACP100 10BCP100	8.0 8.0
OPT = \$ [CR]	E			Transmissions	3.A.8(b.3); 3.A.8(b.4); 3.B.5(c.5); 3.B.5(d.1)	10KU 10BACI 10AFIFO	8.0 1.0 1.0
OPT [CR]					1) If a Model 10AFIFO is <i>not</i> connected to the DataPAC's COMPUTER INTERFACE PORT, specifies one or two characters to be transmitted from the COMPUTER INTERFACE PORT at the end of every <i>line</i> of output from that port (\$ is a string of one or two ASCII CONTROL CHARACTERS entered as hexadecimal word(s) in brackets—see Table 1.H.2). Also sets to \$ the END-OF-TRANSMISSION TERMINATOR for the COMPUTER INTERFACE PORT (see END OF TRANSMISSION TERMINATOR (EOT) command). 2) If a Model 10AFIFO is connected to the DataPAC's COMPUTER INTERFACE PORT (Model 10ACP100), specifies an OUTPUT (END-OF- LINE) TERMINATOR for the FIFO COMPUTER PORT. Can be issued to the 10AFIFO <i>only</i> through the FIFO COMPUTER PORT; enabling of the 10AFIFO EEPROM must precede entry of the command (see SET BIT (BIT) command). Also sets to \$ the END-OF-TRANSMISSION TERMINATOR for the FIFO COMPUTER PORT (see END OF TRANSMISSION TERMINATOR (EOT) command). Does not affect the current OUTPUT TERMINATOR and END-OF-TRANSMISSION TERMINATOR for the 10ACP100, which are <i>fixed</i> at LINE FEED ("[0A]") and CARRIAGE RETURN ("[0D]"), respectively, as long as the 10ACP100 is connected to the 10AFIFO.		
PAG PAGE				LCD/VFD and CRT Display Operation	"On the Air" Book Sec. 5 2.C.3; 2.Q.1(a)	10ACP100 10ACP100G 10BVT60 10CON/CCON	8.9 1.0 1.0 1.0
PAG p [CR]							Calls any existing DATA DISPLAY PAGE No. p to display (1 p 100 for CRT VIDEO display; 1 p 40 for LCD/VFD display). The mnemonic PAG may also be entered by pressing the keyboard's Page key.
PAG [CR]							Reads the Page Number of the DATA DISPLAY PAGE currently being displayed; returns p .
PAG p? [CR]							Reads the number of "blocks" of video memory currently used by an existing CRT VIDEO PAGE No. p (1 p 100); can only be entered via COMPUTER INTERFACE PORT, and outputs an integral number from 0 through 32 (an answer of "0" indicates that Page p does not exist in EEPROM storage).
PBR PRINTER BAUD RATE				Formatted Output Card Setup	3.C.3(b.2)	10VFO132	1.0
PBR = b, d, s, p [CR]	E						Sets Baud rate and other RS-232-C protocols for Model 10VFO132 PRINTER INTERFACE PORT: b = Baud rate (see table in Section 3.C.3(b.2)); d = No. of Data Bits: 7 or 8; s = No. of Stop Bits: 1 or 2; p = Parity: 0 = NONE, 1 = ODD, 2 = EVEN
PBR [CR]							Reads current protocol values for 10VFO132 PRINTER INTERFACE PORT; returns b,d,s,p .

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
PEN				LCD Graphics Operation	2.Q.2(b)	10ACP100G	4.0
PEN = UP [CR]				If an "XY" LCD VIDEO PAGE is currently on display, "raises" the "pen" (i.e., discontinues plotting of x versus y data points). If a "STRIP-CHART" LCD VIDEO PAGE is on display, "raises" all three "pens" (i.e., discontinues plotting of data for all three channels ("x," "y," and "z"). Each form of the PEN command will work only when an "XY" or "STRIP-CHART" page is actually on display.			
PEN = DOWN [CR]				If an "XY" LCD VIDEO PAGE is currently on display, "lowers" the "pen" (i.e., resumes plotting of x versus y data points from current values). If a "STRIP-CHART" LCD VIDEO PAGE is on display, "lowers" all three "pens" (i.e., resumes plotting of data for all three channels—"x," "y," and "z"—from current values). In effect, by default, on powerup.			
PEN n = UP [CR]				"Raises" only <i>one</i> of the three "pens" of the "STRIP-CHART" LCD VIDEO PAGE currently on display (for "n," enter either X, Y, or Z, corresponding to the channel whose plot is to be discontinued).			
PEN n = DOWN [CR]				"Lowers" only <i>one</i> of the three "pens" of the "STRIP-CHART" LCD VIDEO PAGE currently on display (for "n," enter either X, Y, or Z, corresponding to the channel whose plot is to be resumed); in effect for all pens, by default, on powerup.			
PEN [CR]				Reads the "pen" status for the "XY" LCD VIDEO PAGE currently on display; returns UP or DOWN . If a "STRIP-CHART" page is on display, an interrogation of PEN [CR] will be interpreted as PEN X [CR] (see the following command form).			
PEN n [CR]				Reads the "pen" status for <i>one</i> of the three channels of the "STRIP-CHART" LCD VIDEO PAGE currently on display, where n = X, Y, or Z; returns UP or DOWN .			
PGL PAGE LIST				LCD/VFD Display Setup; LCD Graphics Setup	"On the Air" Book Sec. 5 2.Q.1(b.1); 2.Q.1(c.2)	10ACP100 10ACP100G	8.9 3.0
PGL p = x₁, x₂, . . . , x₁₂ [CR]	E	R		Specifies up to 12 DATA CHANNELS to be displayed on LCD/VFD DATA DISPLAY PAGE p (1 p 40); entered Channel Nos. (x ₁ , x ₂ , etc.) need not be in order, and may include, if applicable, Nos. 998 (TIME) and 999 (DATE). If fewer than 12 channels are entered, the remaining display fields will be dedicated to corresponding Channel Numbers "native" to Page p. All LCD pages are initially set to the "DATA" type (see PAGE TYPE (PGT) command).			
PGL p = x, y [CR]	E	R		Specifies the two DATA CHANNELS on which the plot displayed by "XY" LCD VIDEO PAGE p is to be based (1 p 40). Chn. x takes the horizontal axis; Chn. y, the vertical axis. Channel Nos. 998 (TIME) and 999 (DATE) may not be entered. Page p should be set to "XY" type via the PAGE TYPE (PGT) command, <i>before</i> the PGL command is applied.			
PGL p = x [CR] = x, y [CR] = x, y, z [CR]	E E E	R R R		Specifies the one, two or three DATA CHANNELS to be plotted versus time on "STRIP-CHART" LCD VIDEO PAGE p (1 p 40). Channel Nos. 998 (TIME) and 999 (DATE) may not be entered. Page p should be set to "STRIP" type via the PAGE TYPE (PGT) command, <i>before</i> the PGL command is applied. Also, the LIST (LST) command should be entered for the DataPAC's STRIP-CHART RECORDER, <i>before</i> the PGL command is applied to individual "STRIP-CHART" pages.			
PGL p [CR]			R	Reads current "page list" for LCD/VFD PAGE p; returns x₁,x₂,...,x₁₂; x,y; or x,y,z .			

COMMAND	E P R O M	R A N D O M	I M P L E M E N T A R Y	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
PGT PAGE TYPE				LCD Graphics Setup	2.Q.1(a)	10ACP100G	3.0
PGT p = v [CR]	E	R		Sets "page type" for LCD VIDEO PAGE p, where 1 ≤ p ≤ 40; v is "page type" code: v = DATA ("normal" DATA-CHANNEL format); XY ("x versus y" plotting); or STRIP (3-pen "strip-chart" plotting). When a page is <i>reset</i> to "DATA" type, its LIST will be reset to initial ("cold-boot") values (see PAGE LIST (PGL) command). All LCD pages are initially set to "DATA" type.			
PGT p [CR]		R		Reads "page type" for LCD VIDEO PAGE p; returns v.			
PLA PLAYBACK				History Card Setup	3.B.4(d.8); 3.B.4(d.9); 3.B.4(e.8)	10BDR64 10BSPC	6.0 1.0
PLA x = REC n, CHN y (-f) [CR]	E			Sets up "NORMAL" or VIDEO PLAYBACK PSEUDOCHANNEL x to represent the data value for Chn. y that was recorded by Model 10BDR64 Recorder n a specific number of FRAMES in the past (1 ≤ x ≤ 997 for "NORMAL" PLAYBACK; 1000 ≤ x ≤ 1299 for VIDEO PLAYBACK); f = SEARCH DEPTH, i.e., the no. of FRAMES "ago" at which the data for Chn. y is to be reviewed; 1 ≤ f ≤ 32767, provided that it does not exceed the total DEPTH of the recorder). The command types Chn. x as "D9." The SEARCH FRAME indicator "(-f)" may be omitted, in which case a default value of "(-1)" is assumed; the playback will in this case refer to the <i>last recording</i> made by Recorder n.			
PLA x = REC n, SER (-f) [CR]	E			Sets up VIDEO PLAYBACK PSEUDOCHANNEL x to represent the SERIAL NUMBER of the FRAME recorded by 10BDR64 Recorder n a specific number (f) of FRAMES in the past; 1000 ≤ x ≤ 1299; 1 ≤ f ≤ 32767. Types Chn. x as "D9." If "(-f)" is omitted, a value of (-1) is assumed (see above).			
PLA x = REC n, TME (-f) [CR]	E			Sets up VIDEO PLAYBACK PSEUDOCHANNEL x to represent the <i>integral time</i> of recording of the FRAME recorded by 10BDR64 Recorder n a specific number (f) of FRAMES in the past (Chn. x will read the time to the nearest second); 1000 ≤ x ≤ 1299; 1 ≤ f ≤ 32767. Types Chn. x as "D9." If "(-f)" is omitted, a value of (-1) is assumed (see above).			
PLA x = REC n, TMF (-f) [CR]	E			Sets up VIDEO PLAYBACK PSEUDOCHANNEL x to represent the <i>fractional time</i> of recording of the FRAME recorded by 10BDR64 Recorder n a specific number (f) of FRAMES in the past (Chn. x will read the time to the nearest hundredth of a second); 1000 ≤ x ≤ 1299; 1 ≤ f ≤ 32767. Types Chn. x as "D9." If "(-f)" is omitted, a value of (-1) is assumed (see above).			
PLA x = REC n, DTE (-f) [CR]	E			Sets up VIDEO PLAYBACK PSEUDOCHANNEL x to represent the date of recording of the FRAME recorded by 10BDR64 Recorder n a specific number (f) of FRAMES in the past; 1000 ≤ x ≤ 1299; 1 ≤ f ≤ 32767. Types Chn. x as "D9." If "(-f)" is omitted, a value of (-1) is assumed (see above). For the "DATE" PLAYBACK to be effective, the DTE mnemonic must be included in the LIST (LST) expression for Recorder n.			
PLA x = REC n, AV y (-f) [CR]	E			Sets up "NORMAL" or VIDEO STATISTICAL PLAYBACK PSEUDOCHANNEL No. x to report the <i>continuous average value</i> experienced by Chn. y over the last "f" recordings of Recorder n (1 ≤ x ≤ 997 for "NORMAL" PLAYBACK; 1000 ≤ x ≤ 1299 for VIDEO PLAYBACK; 1 ≤ f ≤ 10000). Types Chn. x as "D9." Requires installation of Model 10BSPC History SPC Option Card.			
PLA x = REC n, LO y (-f) [CR]	E			Sets up "NORMAL" or VIDEO STATISTICAL PLAYBACK PSEUDOCHANNEL No. x to report the <i>lowest value</i> experienced by Chn. y over the last "f" recordings of Recorder n (1 ≤ x ≤ 997 for "NORMAL" PLAYBACK; 1000 ≤ x ≤ 1299 for VIDEO PLAYBACK; 1 ≤ f ≤ 10000). Types Chn. x as "D9." Requires installation of Model 10BSPC History SPC Option Card.			
PLA x = REC n, HI y (-f) [CR]	E			Sets up "NORMAL" or VIDEO STATISTICAL PLAYBACK PSEUDOCHANNEL No. x to report the <i>highest value</i> experienced by Chn. y over the last "f" recordings of Recorder n (1 ≤ x ≤ 997 for "NORMAL" PLAYBACK; 1000 ≤ x ≤ 1299 for VIDEO			

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
PLA x = REC n, XBR y (-f) [CR]	E						
PLA x = REC n, R y (-f) [CR]	E						
PLA x = N/A [CR]	E	R					
PLA x [CR]			R				
PRI PRINT PAGE				Formatted Output Card Operation	3.C.3(c.2); 3.C.4(g)	10VFO132	1.0
PRI p [CR]			R				
PRI 0 [CR]							
PRI [CR]							
PRT PRINT CHANNEL DATA				Formatted Output Card Operation	3.C.3(e); 3.C.3(f)	10VFO132	7.0
PRT PAG h, x, PAG t [CR]							
PRT PAG h, x TO y, PAG t [CR]							
PRT [CR]							
PRT x [CR]							

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
PRT x TO y [CR]				Transmits from the 10VFO132 PRINTER INTERFACE PORT the data for Chns. x through y only, along with current <i>DEFAULT</i> HEADER and TAILER pages (see DEFAULT HEADER/TAILER (DHT) command).			
PSB PERIPHERAL STATUS BIT				Automatic Command Execution	2.H.2(d); 2.K.2(d)	10ACP100 10BCP100 10KU	8.1 8.1 8.1
PSB = r [CR]	E			Assigns "special bit" LOGIC SOURCE to LOGIC BIT r: r will be at Logic 1 only when the PERIPHERAL COMMAND QUEUE is empty.			
PSB = N/A [CR]	E			Cancels current PERIPHERAL STATUS BIT assignment.			
PSB [CR]				Reads current PERIPHERAL STATUS BIT assignment; returns r or N/A .			
PTY PRINTER TYPE				Formatted Output Card Setup	3.C.3(b.4); 3.C.4(d)	10VFO132	9.1
PTY = n [CR]	E			Sets Model 10VFO132 for "printer type" of n, where n = 0 indicates any conventional RS-232-C printer that is not <i>Epson</i> or <i>Epson-compatible</i> ; n = 1 indicates an <i>Epson</i> or <i>Epson-compatible</i> printer (recommended for printout of BARGRAPH PAGES).			
PTY [CR]				Reads current 10VFO132 "printer type" setting; returns n .			
RCL RECALL				CRT Video Operation	2.C.6	10BVT60 10CON/CCON	1.0 1.0
RCL [CR]				"Recalls" to display (from temporary buffer storage) the last VIDEO PAGE to have been composed or edited (on powerup, the buffer contains the SIGN-ON PAGE).			
REC RECORDER CLEAR				LCD Graphics Operation	2.Q.2(d)	10ACP100G	4.0
REC [CR]				Clears the DataPAC's LCD STRIP-CHART RECORDER; the next recording will have a DEPTH of "1" (i.e., will be the first recording to be entered in the recorder's "cleared" memory). In "ZERO LEFT" MODE, resets time-scale to "zero" (see GRAPH ZERO LEFT (GZL) command).			
REF REFRESH				CRT Video Setup	2.C.1(c)	10BVT60 10CON/CCON	1.0 1.0
REF = n [CR]	E			Selects desired refresh rate for the CRT display (1 n 60; the actual screen refresh rate, in Hz, is equal to 60/n).			
REF [CR]				Reads current "refresh constant" for CRT display; returns n .			
REH RECORDER HALT				LCD Graphics Operation	2.Q.2(d)	10ACP100G	4.0
REH [CR]				Halts the DataPAC's LCD STRIP-CHART RECORDER until application of a RECORDER START (RES) or recycling of power; freezes the displayed plot and time scale (if scrolling) for all "STRIP-CHART" LCD VIDEO PAGES.			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
RES RECORDER START RES [CR]				LCD Graphics Operation	2.Q.2(d)	10ACP100G	4.0
				Restarts an LCD STRIP-CHART RECORDER that has been halted by a RECORDER HALT (REH) command, <i>from the point where it was halted</i> .			
REL RESET ERROR LOG REL [CR] REL n [CR]				Satellite Network Operation	3.B.3(c.6)	10BD4	2.2
				Resets to zero all "ERROR-LOG" entries for all SATELLITES (see SATELLITE ERROR LOG (SEL) command).			
		R		Resets to zero all "ERROR-LOG" entries for SATELLITE No. n.			
RFM REACCESS FIFO MEMORY RFM [CR]				FIFO Buffer Operation	3.A.8(c.4)	10AFIFO	1.0
				Restores access to all data records currently contained in the Model 10AFIFO; can be entered only through the FIFO COMPUTER PORT.			
RHM REACCESS HISTORY MEMORY RHM n [CR] RHM n = r [CR]				History Card Operation	3.B.4(e.6)	10BDR64	5.2
		R		Restores access to all recorded FRAMES currently contained in the Model 10BDR64 Recorder n, regardless of any and all EMPTY (EMP) commands previously applied to this recorder.			
		R		Restores access only to the last "r" FRAMES recorded by 10BDR64 Recorder n prior to the last EMPTY (EMP) command to have been applied to this recorder.			
RLS RELEASE RLS r [CR]				System Logic Bits	2.H.4	10ACP100 10BCP100 10KU	1.0 1.0 1.0
		R		Releases the LATCH of system LOGIC BIT r.			
RMD RECORD MODE RMD [CR]				History Card Operation	3.B.4(e.2)	10BDR64	1.0
				Causes Model 10BDR64 History Card to exit SETUP MODE, making each of the four recorders ready to record data and inhibiting further entry or modification of setup values (see SETUP MODE (SMD) command). When history memory is in NONVOLATILE MODE, this command must be entered following every powerup, in order to activate the system's current playbacks (see PLAYBACK (PLA) command).			
RNG RANGE RNG x = n [CR] RNG x = 00h [CR]				Encoder Cond. Card Setup; Counter/Timer Card Setup	1.E.2.10A35(3.a); 3.A.1(b.2) ; 3.A.1(d.2)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
		E	R	Selects a specific combination of range and resolution for Model 10ACT01 or 10ACC-4 Chn. x; for values of n, see Tables 3.A.1.3 - 3.A.1.6 and Table 3.A.1.9).			
		R		Selects a count predivision by any integer from 1 through 256 for the Model 10A35 using Chn. x (the decimal value of the two-character hexadecimal number h is to be one less than the value of the integral divisor by which the 10A35 count is to be			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
RNG x = 80h [CR]		R					
		R					
RNG x [CR]		R					
		R					
RPL REPLAY				History Card Operation	3.B.4(e.9)	10BDR64	5.0
RPL n = INT t [CR]		R		Initiates a <i>single</i> "history replay" for all "NON-STATISTICAL" PLAYBACK PSEUDOCHANNELS set up for the Model 10BDR64 Recorder n, where t is a number from 0 through 15 indicating the clock-time <i>interval</i> at which the replay is to step "forward," starting with the "oldest" FRAME in memory (for time-interval coding, see Section 3.B.4(e.9)). For continuous monitoring of "replay" SEARCH DEPTH, the ZUM n [CR] interrogation may be used.			
RPL n = INT t, R [CR]		R		Initiates <i>repeated</i> "history replays" for all "NON-STATISTICAL" PLAYBACK PSEUDOCHANNELS set up for 10BDR64 Recorder n.			
RPL n = N/A [CR]		R		Terminates any "history replay" (single or repeated) currently in progress for 10BDR64 Recorder n.			
RSM RESUME				Analog Channel Setup	1.G.6	10ACP100 10BCP100 10KU	8.1 8.1 8.1
RSM [CR]				Resumes normal measurement by unlatching any and all latched calibration conditions that may exist on any measurement channels (see SHUNT CALIBRATE (SHP/SHN) commands).			
RSM x [CR]		R		Unlatches any latched calibration condition for Chn. x only.			
RSN RESET SERIAL NUMBER				History Card Operation	3.B.4(e.3)	10BDR64	1.0
RSN n [CR]		R		Resets to zero the SERIAL NUMBER of the FRAME to be next recorded by the Model 10BDR64 Recorder n.			
RSN n = s [CR]		R		Resets to s the SERIAL NUMBER of the FRAME to be next recorded by 10BDR64 Recorder n (0 s 99999999).			
RSP RESET STATISTICAL PLAYBACK				History Card Operation	3.B.4(d.8)	10BDR64 10BSPC	6.0 1.0
RSP n [CR]		R		Resets all "X-BAR" and "RANGE" PLAYBACK PSEUDOCHANNELS for Recorder n; returns each playback to its initial state ("NO RECORDINGS YET") with a data reading of zero.			

COMMAND	E P R O M	R A N G E	I M P L E M E N T S	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
RST RESET				Analog Channel Setup	2.D.2; 2.J.4; 2.L.3; 3.A.2(b.3); 3.B.2(e.1); 3.B.3(b.5); 3.B.3(c.1); 3.B.3(Appendix); 3.B.4(d.8); 3.B.5(c.7); Appendix C	10ACP100 10BCP100 10KU 10BACI	6.5 6.5 1.0 1.0
RST x [CR]	E	R					NOTE: In 10ACP100/10BCP100 versions prior to "6.5," the RST command retypes <i>all</i> channels, including PSEUDOCHANNELS, to "55." If Chn. x is a "REAL" ANALOG INPUT CHANNEL, retypes Chn. x as "55" (this is a direct millivolt reading of the DataPAC's internal "Called Signal Bus"); resets the SCALING FACTOR ("m") for Chn. x to 5000; resets the ZERO OFFSET ("b") for Chn. x to 0 (zero). If Chn. x is a "CONVERSION" CHANNEL, an ANALOG OUTPUT CHANNEL, or a PSEUDOCHANNEL of any kind, retypes the channel to "D0" (i.e., VOLATILE DOWNLOAD PSEUDOCHANNEL); if the PSEUDOCHANNEL has a "location" or "origin" on a COPROCESSOR CARD (Model 10BD1 Satellite Slave Card, Model 10BACI Auxiliary Computer Interface Card, Model 10BDR64 History Card, etc.), releases the COPROCESSOR from that channel. RST x [CR] is <i>not</i> an "implicitly addressed" command. See also the TYPE (TYP) command.
SAT SATELLITE				Satellite Network Setup	3.B.3(b.5)	10BD4	1.0
SAT n = x, y [CR]	E						Designates SATELLITE No. n to be the sole "data origin" for GLOBAL DATA CHANNELS x through y (1 < x < y < 998; Chn. 1 is always dedicated to the HOST; Chns. 998 (TIME) and 999 (DATE) are always "local"). Here, n > 0; all channels below the lowest-numbered channel dedicated to any SATELLITE will be automatically dedicated to the HOST. The command must be applied <i>to the HOST</i> ; both the HOST EEPROM Switch and that of SATELLITE No. n must be ON. The LCT x [CR] interrogation may be used to determine the SATELLITE to which a given channel has been dedicated (see Section 3.B.3(c.2)).
SAT n = x [CR]	E						Designates SATELLITE No. n to be the sole "data origin" for GLOBAL DATA CHANNEL x only (1 < x < 998; n > 0).
SAT n = CON [CR]	E						Tells the HOST that SATELLITE No. n is an OPERATOR CONSOLE SATELLITE.
SAT n = N/A [CR]	E						Cancels existing dedication of GLOBAL DATA CHANNEL(S) to SATELLITE No. n, thus causing the SATELLITE to stop communicating locally acquired analog data to the HOST'S 10BD4. Subsequent interrogation <i>from a NODE other than SATELLITE No. n</i> for the "type" or "location" of a channel whose dedication to SATELLITE No. n was cancelled by this command will yield D0 or N/A , respectively (see TYPE (TYP) and LOCATE (LCT) commands).
SAT n [CR]							Reads GLOBAL DATA CHANNEL(S) currently dedicated to SATELLITE No. n, where n > 0; returns x,y ; x ; CON ; or N/A . An interrogation of SAT 0 [CR] is not presently effective.
SAV SAVE				CRT Video Setup	2.C.7	10BVT60 10CON/CCON	1.0 1.0
SAV n [CR]	E						Stores in EEPROM the currently displayed VIDEO PAGE as Page No. n. This command may require special confirmation, and can only be entered through the keyboard.

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
SBC SYSTEM BASE CHANNEL				General System Setup	1.F.1		
SBC = x [CR]	E			Sets the current SYSTEM BASE CHANNEL to Channel No. x (where "x" is any Channel Number from "1" through the number that would result in a <i>highest</i> channel at the system limit of "997").			
SBC [CR]				Reads the current SYSTEM BASE CHANNEL; returns x .			
SBL SHOW BUTTON LOCATIONS				Touchscreen Video Operation	3.C.5(d.2)	10BVT65	1.0
SBL [CR]				Highlights all BUTTONS on the displayed VIDEO PAGE with the color/intensity specified by the last-entered BUTTON FIELD COLOR (BFC) command; overrides any and all other color-controlling factors; cancelled by pressing any keyboard key.			
SCN SCAN				General System Operaion	1.F.2(b)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
SCN = x, y [CR]	(E)			If the EEPROM Switch is OFF, specifies x and y to be the first and last channels, respectively, of the system's "temporary" SCAN RANGE (y x); on powerup, the SCAN RANGE will default to that defined by the last-entered TERMINATOR (TER) command. If the EEPROM Switch is ON, specifies a <i>default</i> (powerup) SCAN RANGE from Chn. x through Chn. y, regardless of the TER command currently in effect.			
SCN [CR]				Reads first and last channels of the currently effective SCAN RANGE; returns x,y .			
SEL SATELLITE ERROR LOG				Satellite Network Operation	3.B.3(c.6)	10BD4	2.2
SEL [CR]				Reads "ERROR LOG" for all SATELLITES; returns, for every SATELLITE, A,B,C,D,E : A = no. of TIMEOUT ERRORS detected since last RESET ERROR LOG (REL) command; B = no. of CHECKSUM ERRORS since last REL ; C = 0 (THIS COUNTER NOT USED AT PRESENT); D = "SLOW CYCLE COUNTER" (total no. of 10BD4 scan cycles that have taken place since last REL , divided by 30000); E = "CYCLE COUNTER" (total no. of 10BD4 scan cycles that have taken place since last REL , counted by "1's"). Cannot be entered via keyboard.			
SEL n [CR]		R		Reads "ERROR LOG" for SATELLITE No. n; returns A,B,C,D,E .			
SEN SENSITIVITY				Counter/ Timer Card Setup	3.A.1(b.2)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
SEN x = g [CR]	E			Sets input-amplifier sensitivity of Model 10ACT01 Chn. x, independent of the "type" designation of this channel; the selected gain factor g (1 g 5) sets the 10ACT01's analog-input voltage range, as given in Table 3.A.1.7).			
SEN x [CR]				Reads current gain setting for 10ACT01 Chn. x; returns g .			
SHN SHUNT CAL.–NEGATIVE				Analog Channel Setup	1.G.6; 3.B.3(c.4)	10ACP100 10BCP100 10KU	8.9 8.9 8.9
SHN x [CR]		R	I	Closes and latches Shunt Calibration Switch of Strain Gage Chn. x for a <i>negative</i> up-scale reading; switch is unlatched by RESUME (RSM) command.			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
SHO SHOW				Automatic Command Execution	2.C.2(c); 2.K.3(c)	10BVT60 10CON/CCON	7.0 1.0
SHO [CR]				Calls to display the CONDITIONAL DIRECTORY for CONDITIONAL BITS 1 through 5.			
SHO2 [CR]				Calls to display the CONDITIONAL DIRECTORY for CONDITIONAL BITS 6 through 10.			
SHP SHUNT CAL.-POSITIVE				Analog Channel Setup	1.G.6; 3.B.3(c.4)	10ACP100 10BCP100 10KU	8.9 8.9 8.9
SHP x [CR]		R	I	Closes and latches Shunt Calibration Switch of Strain Gage Chn. x for a <i>positive</i> up-scale reading; switch is unlatched by RESUME (RSM) command.			
SMD SETUP MODE				History Card Setup	3.B.4(d.2)	10BDR64	1.0
SMD [CR]				Causes Model 10BDR64 to enter SETUP MODE, stopping any recording in process, and allowing entry of recorder parameters and/or conditions (see also RECORD MODE (RMD) command).			
SND SEND				Communi- cations	2.B.6(c); 3.B.5(c.6); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	8.0 8.0 8.0 1.0
SND \$ [CR]				Causes ASCII character string \$ to be transmitted from COMPUTER INTERFACE PORT (\$ is a string of up to 32 characters; every ASCII CONTROL CHARACTER must be entered as a hexadecimal word in brackets—see Table 1.H.2).			
SND @ \$ [CR]				Sends the single MNEMONIC COMMAND \$ to the Daytronic Model PC-EGU Enhanced Graphics Card installed in an IBM or IBM-compatible computer connected to the DataPAC's COMPUTER INTERFACE PORT (if an "A-sized" DataPAC) or AUXILIARY COMPUTER INTERFACE PORT (if a "B-sized" DataPAC). In the former case, the SND command must be entered via the DataPAC's keyboard; in the latter case, it must be routed to the B SLOT occupied by the Model 10BACI Auxiliary Computer Interface Card in question, using an ATTACH (ATT) or VIA (VIA) command.			
SNP SNAPSHOT				Data Trans- mission	1.H.1; 1.H.2(c); 2.E.1; 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
SNP [CR]				Transmits time-coherent "snapshot" of all scanned DATA CHANNELS, including Chns. 998 (TIME) and 999 (DATE), from COMPUTER INTERFACE PORT, once only; outputs x,w,z per channel, where x = Channel No. (optional—see ECHO (ECO) command); w = data value; z = LIMIT-ZONE Indicator No. (optional—see LIMITS (LIM) command).			
SNP x TO y [CR]				Transmits time-coherent "snapshot" of data, once only, for Chns. x through y only (y \geq x).			
SOP SIGN-ON PAGE				CRT Video Setup	2.C.9	10BVT60	1.0
SOP = p [CR]	E			Specifies existing CRT VIDEO PAGE p to be displayed upon system powerup; does not apply to LCD/VFD displays.			

COMMAND	E P R O M	R A N G E	I M P L A D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
SOP [CR]				Reads current SIGN-ON PAGE assignment; returns p .			
SRC LOGIC SOURCE				Logic Bit	2.F.4;	10ACP100	1.0
				Setup;	2.H.1;	10BCP100	1.0
				Logic I/O	2.H.2;	10KU	1.0
				Setup;	2.H.3;	10BACI	1.0
				Satellite	3.A.3(c.2);		
				Network	3.B.2(c.2);		
				Setup;	3.B.3(b.6);		
				Aux. Comp	3.B.3(c.1);		
				Interface	3.B.3(c.3); 3.B.5(c.7)		
SRC r = s [CR]	E	R	I	<p>Specifies a local LOGIC SOURCE for LOGIC BIT r; s is one of the following LOGIC-SOURCE codes (for LOGIC SOURCES that permit either LATCHING or NONLATCHING MODE, see also RELEASE (RLS) command):</p> <ul style="list-style-type: none"> s = LIM, LAT (internal LIMITS, latching) = LIM, NON (internal LIMITS, nonlatching) = LIM (internal LIMITS; previously specified LATCH MODE remains in effect) = INP, LAT (LOGIC INPUT, latching) = INP, NON (LOGIC INPUT, nonlatching) = INP (LOGIC INPUT; previously specified LATCH MODE remains in effect) = Bs (designates as the local LOGIC SOURCE of LOGIC BIT r the Model 10BACI Auxiliary Computer Interface Card occupying the DataPAC's B SLOT s; a bit sourced to a 10BACI can only be set "externally," by means of a SET BIT (BIT), BINARY (BIN), BINARY CODED DECIMAL (BCD), or HEXADECIMAL (HEX) command directed to the 10BACI; cancelled by SRC r = EXT [CR] command (see below)) = SAT (for "A-sized" DataPAC SATELLITE ("S" Version) only—designates as the local LOGIC SOURCE of GLOBAL LOGIC BIT r the corresponding bit within the GLOBAL BIT GROUP(S) downloaded to all "A-sized" DataPAC SATELLITES with each 10BD4 scan cycle (see DOWNLOAD BITS (DLB) command); allows the SATELLITE to "hear" Bit r when that bit has <i>not</i> been dedicated to the SATELLITE via the SATELLITE SYSTEM BITS (SSB) command; cancelled by SRC r = EXT [CR] command (see below)) = EXT (cancels any previous "SRC=" command applying to Bit r; confers control of the bit solely to subsequent SET BIT (BIT), BINARY (BIN), BINARY CODED DECIMAL (BCD), and/or HEXADECIMAL (HEX) commands. If Bit r is a GLOBAL LOGIC BIT sourced either to a BIT GROUP downloaded by the 10BD4 or to a Model 10BD1 Satellite Slave Card (see below), discontinues the "hearing" of Bit r by the SATELLITE in question. If Bit r is sourced to a Model 10BACI, returns "external" control of the bit (via BIT, BIN, BCD, or HEX) to the DataPAC's CENTRAL PROCESSOR.) 			
SRC r = Bs [CR]	E	R	I	<p>When applied to a "B-sized" DataPAC SATELLITE, "sources" GLOBAL LOGIC BIT r to the Model 10BD1 Satellite Slave Card occupying the SATELLITE'S B SLOT s; does <i>not</i> specify an actual LOGIC SOURCE for the bit, but does allow the SATELLITE to "hear" Bit r when that bit has not been dedicated to the SATELLITE via the SATELLITE SYSTEM BITS (SSB) command; cancelled by SRC r = EXT [CR] command (see above).</p>			
SRC r [CR]			R	I	<p>Reads current local LOGIC-SOURCE assignment for Bit r:</p> <ol style="list-style-type: none"> 1) If the interrogated DataPAC is <i>not</i> a member of a SATELLITE NETWORK, returns one of the forms of the LOGIC-SOURCE code s given above, except for SAT (if Bit r is presently sourced to EXTERNAL control, an answer of EXT,NON will be returned). 2) If the interrogated DataPAC is a member ("NODE") of a SATELLITE NETWORK, four basic responses to the SRC r [CR] interrogation are possible: 		

COMMAND	E P R O M	R A N G E	I M P L O R D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
STO STORE				History Card Setup	3.B.4(d.5)	10BDR64	1.0
STO n = B [CR]	E			Specifies the logical combination of conditions that will cause the Model 10BDR64 Recorder n to record and store a FRAME of data for all DATA CHANNELS and SYSTEM BIT GROUPS in its predefined "list" (B is a Boolean expression of up to 15 MNEMONIC terms and up to 14 OPERATORS—see Section 3.B.4(d.5) for details).			
STO n = N/A [CR]	E			Cancels existing store conditions for Recorder n.			
STO n [CR]				Reads existing store conditions for Recorder n; returns B or N/A .			
STR STREAM				Data	1.H.1;	10ACP100	1.0
				Trans- mission	1.H.2(d); 3.B.5(d.1)	10BCP100 10KU 10BACI	1.0 1.0 1.0
STR [CR]				Continuously repeats transmission from COMPUTER INTERFACE PORT of current data for all scanned DATA CHANNELS, including Chns. 998 (TIME) and 999 (DATE), until terminated by ESCAPE (ESC) command or keyboard ESC key; outputs x,w,z per channel, where x = Channel No.; w = data value (see CHARACTERS PER CHANNEL (CPC) command); z = LIMIT-ZONE Indicator No. (optional—see LIMITS (LIM) command). Output also includes specified HEADER (HDR) and/or TAILER (TLR) commands).			
STR x [CR]				Continuously repeats transmission of current data for Chn. x only, along with specified HEADER and/or TAILER , until terminated by ESCAPE (ESC) command.			
STR x TO y [CR]				Continuously repeats transmission of current data for Chn. x through y only, along with specified HEADER and/or TAILER , until terminated by ESCAPE (ESC) command (y x).			
STS STATUS				CRT Video Operation	2.C.12(b); 2.C.12(e)	10BVT60 10CON/CCON	1.0 1.0
STS x = s [CR]	R			Specifies VISUAL EFFECTS to be exhibited by the DATA FIELD or VIDEO PLAYBACK FIELD assigned to Chn. x, and by any FIXED TEXT "associated" with that field; s is a "STATUS" code—see Table 2.C.3. Temporarily overrides "BIT CONTROL" STATUS (VBC) , "GREATER THAN" STATUS (VGT) , "BETWEEN" STATUS (VBT) , and "LESS THAN" STATUS (VLT) commands currently applying to Chn. x.			
STS x = INT [CR]	R			Returns control of VISUAL EFFECTS for display of Chn. x to the last-entered VBC , VGT , VBT , and VLT commands applying to that channel; automatically in effect on powerup.			
STS x [CR]	R			Reads STS entry in effect for Chn. x. If a command of STS x = s [CR] is currently in control of VISUAL EFFECTS for Chn. x, returns s ; if not, returns INT .			
TAR TARE				General System Operation	2.G.3; 3.B.3(c.4)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
TAR x [CR]	R	I		Zeros Chn. x and stores offset value in volatile RAM memory (see also ZERO (ZRO) command).			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE
TBT TIMER BIT				General System Setup	2.M.3	10ACP100 (11.1)	
TBT m = r [CR]	E	R		Assigns LOGIC BIT r to A-Sized DataPAC's TIMER No. m (0 m 23), so that Bit r is set to <i>Logic 1</i> for a period of one complete scan cycle when Timer m registers the time value to which it has been set by an appropriate TIMER (TMR) command.			
TBT m = N/A [CR]	E	R		Cancels current logic-bit assignment of TIMER No. m.			
TBT m [CR]				Reads current logic-bit assignment of TIMER No. m; returns m or N/A .			
TER TERMINATOR				General System Setup	1.F.2(a); 3.B.3(b.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
TER = x [CR]	E			Designates Chn. x as DataPAC TERMINATOR CHANNEL—i.e., the final channel of the default SCAN RANGE, which is Chn. 1 to and including Chn. x. Note that the TER command can be overridden by a SCAN (SCN) command that has been entered with the EEPROM Switch ON.			
TER [CR]				Reads current TERMINATOR CHANNEL; returns x .			
THC TRACK HOLD CONTROL				General System Setup	1.E.2.10A74-4	10BCP200	
THC = s [CR]	E			Informs the DataPAC of the slot location "s" of the particular Model 10A1 Control Signal Card that is to be synchronized to the DataPAC's scan cycle; s is a four-digit number consisting of the DECK No., SLOT No., and SUBCHANNEL No. of the selected 10A1 card.			
THC [CR]				Reads location of currently designated "master" 10A1 card; returns s .			
TLR TAILER				Formatting of Data Transmissions	1.H.3(c); 3.B.5(c.5); 3.B.5(d.1)	10ACP100 10BCP100 10KU 10BACI	1.0 1.0 1.0 1.0
TLR = "\$" [CR]	E			Specifies character string \$ to be transmitted at the end of each data set transmitted from the COMPUTER INTERFACE PORT in response to a STREAM (STR) or HARD COPY (HCY) command (\$ is an ASCII string of up to 80 characters, enclosed in quotation marks (" "); every ASCII CONTROL CHARACTER must be entered as a hexadecimal word in brackets, within the quotation marks—see Table 1.H.2).			
TLR = N/A [CR]	E			Cancels current TAILER string.			
TLR [CR]				Reads current TAILER string; can only be entered via COMPUTER INTERFACE PORT, and outputs \$ or N/A .			
TME TIME				General System Setup	1.F.3	10ACP100 10BCP100 10KU 10CON/CCON	1.0 1.0 1.0 1.0
TME = t [CR]	E			Sets DataPAC's internal clock-time (t is a 5- or 6-digit number: hour-minute-second, to be displayed with separating colons (:)).			
TME [CR]				Reads current time value; returns t .			

COMMAND	E P R O M	R A N G E	I M P L E M E N T A T I O N	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
TMO TIMEOUT				Communi- cations Setup	2.B.6(a); 2.H.2(d)	10ACP100 10BCP100 10KU	8.0 8.0 8.0
TMO = r, s [CR]	E			Assigns "special bit" LOGIC SOURCE to LOGIC BIT r: r will be set to Logic 1 if no recognizable character has been received at the COMPUTER INTERFACE PORT for a period of s seconds (1 ≤ s ≤ 60), and will be reset to <i>Logic 0</i> upon subsequent receipt of a recognizable character at that port.			
TMO = N/A [CR]	E			Cancels current TIMEOUT BIT assignment.			
TMO [CR]				Reads current TIMEOUT BIT assignment; returns r,s or N/A .			
TMP TEMPLATE				Formatted Output Card Setup	3.C.3(f.2)	10VFO132	7.0
TMP = T [CR]	E			Creates format "template" for channel data transmitted from Model 10VFO132 PRINTER INTERFACE PORT in response to a PRINT CHANNEL DATA (PRT) command; the template expression T is a combination, in any desired order, of FIXED TEXT and VARIABLE DATA FIELDS (for Channel No., data, and LIMIT-ZONE Indicator No.)—see Section 3.C.3(f.2) for details.			
TMP [CR]				Reads current template expression for Model 10VFO132 channel-data transmissions; returns T .			
TMR TIMER				General System Setup	2.M.3	10ACP100 (11.1)	
TMR m = T [CR]	E	R		Sets A-Sized DataPAC's TIMER No. m to the time value "T"; 0 ≤ m ≤ 23; T is a six-digit number expressing any legal time-of-day reading (hour/minute/second) from "000000" (= midnight) to "235959" (= one second until midnight).			
TMR m = N/A [CR]	E			Disables TIMER No. m <i>plus all timers of a number greater than m</i> .			
TMR m [CR]				Reads current time-value setting of TIMER No. m; returns T or N/A .			
TST TOUCHSCREEN TYPE				Touchscreen Video Setup	3.C.5(b.1)	10BVT65	1.0
TST = 1 [CR]	E			Informs the DataPAC of the "type" of touchscreen to be used; the only operative "type" is currently that employed by the Models 10VCM14T and 10VCM19TA Color Monitors (i.e., "Type 1").			
TST [CR]				Reads current touchscreen "type" setting; currently returns only 1 .			
TYP TYPE				System Channel Setup	1.G.1; 2.D.2; 2.M.2; 3.A.4(b.4); 3.B.3(b.5); 3.B.3(c.1); Appendix C	10ACP100 10BCP100 10KU	1.0 1.0 1.0
TYP x = v [CR]	E	R	I	Sets the local "type" designation for Chn. x, where v is a two-character hexadecimal code number specifying "special treatment" factors for the channel (see Appendix C for a complete list of channel "type" codes). Chn. x may be a "REAL" (ANALOG INPUT) CHANNEL, a "CONVERSION" CHANNEL, or a PSEUDO-CHANNEL that is not "autotyping" (e.g., a DOWNLOAD or TIMER PSEUDO-CHANNEL). "Autotyping" PSEUDOCHANNELS include CALCULATE, LINEARIZATION, and PLAYBACK PSEUDOCHANNELS; the "WRITE" form of the TYP			

COMMAND	E P R O M	R A N G E	I M P L E M E N T S	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
TYP x [CR]			R I				
				command will have no effect on such channels, or on ANALOG OUTPUT CHANNELS. See also RESET (RST) command.			
				Reads current local "type" designation for Chn. x, which may be a "REAL" (ANALOG INPUT) CHANNEL, a "CONVERSION" CHANNEL, a PSEUDO-CHANNEL of any kind, or an ANALOG OUTPUT CHANNEL; returns v.			
UNL UNLOCK				General	2.E.2;	10ACP100	1.0
				System	3.A.5(c.4);	10BCP100	1.0
				Operation	3.A.6(c.2);	10KU	1.0
					3.B.5(d.1)	10BACI	1.0
UNL [CR]				Cancels LOK [CR] command; "unlocks" the DATA RAM, resuming automatic updating of all scanned DATA CHANNELS, including Nos. 998 (TIME) and 999 (DATE).			
UNL x [CR]				Cancels LOK x [CR] command; "unlocks" Chn. x only.			
UNL x TO y [CR]				Cancels LOK x TO y [CR] command; "unlocks" Chns. x through y only (y x).			
VBC "BIT CONTROL" STATUS				CRT Video	2.C.12(b)	10BVT65	1.0
				Setup		10CON/CCON	1.0
				NOTE: The VBC command will not work for any version of the Model 10BVT60 Video Text Card. It will work, however, for any version of the Model 10BVT65 "Touchscreen" Video Text Card (see Section 3.C.5).			
VBC x = s ON BIT q [CR]			E R	Specifies VISUAL EFFECTS to be exhibited by the DATA FIELD assigned to Chn. x, and by any FIXED TEXT "associated" with that field, when the state of LOGIC BIT q is Logic 1; s is a "STATUS" code—see Table 2.C.3. Can be temporarily overridden by a STATUS (STS) command applying to Chn. x.			
VBC x = N/A [CR]			E R	Cancels existing "BIT CONTROL" STATUS assignment for Chn. x.			
VBC x [CR]			R	Reads existing "BIT CONTROL" STATUS assignment for Chn. x; returns s ON BIT q or N/A .			
VBT "BETWEEN" STATUS				CRT Video	2.C.12(b);	10BVT60	1.0
				Setup	2.F.1	10CON/CCON	1.0
VBT x = s [CR]			E R	Specifies VISUAL EFFECTS to be exhibited by the DATA FIELD assigned to Chn. x, and by any FIXED TEXT "associated" with that field, when the data for Chn. x lies in the "BETWEEN" LIMIT ZONE; s is a "STATUS" code—see Table 2.C.3. Can be overridden by a "BIT CONTROL" STATUS (VBC) command, when Bit q is at <i>Logic 1</i> , or (temporarily) by a STATUS (STS) command applying to Chn. x.			
VBT 998 = s [CR]			E	Sets VISUAL EFFECTS for display of system TIME (Chn. 998)—for "STATUS" code s see Table 2.C.3.			
VBT 999 = s [CR]			E	Sets VISUAL EFFECTS for display of system DATE (Chn. 999)—for "STATUS" code s see Table 2.C.3.			
VBT x [CR]			R	Reads existing "BETWEEN" STATUS setting for Chn. x; returns s .			
VDL VIDEO DOWNLOAD				CRT Video	2.C.11(c);	10BVT60	9.0
				Operation	2.P.4	10CON/CCON	1.0
VDL n = \$_n [CR]	(E)			Downloads to DataPAC video memory, via the COMPUTER INTERFACE PORT, the contents (\$ _n) of SECTION No. n of the VIDEO PAGE being transmitted to the DataPAC (n 64); cannot be entered via keyboard. If you want the DataPAC only to display the page being transmitted, without storing it, the EEPROM Switch need not be on. See also VIDEO UPLOAD (VUL) and VIDEO ERROR LOG (VEL) commands.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
VDL 99 = p, c [CR]	(E)						Terminates the VIDEO DOWNLOAD (VDL) series for transmission to a DataPAC of the VIDEO PAGE to be stored as Page No. p (1 p 100); p = 0 indicates that the page is only to be displayed, not stored; c is a CHECKSUM number (positive or negative) for the page contents just transmitted. Overwrites any Page p already existing in EEPROM storage; cannot be entered via keyboard.
VDU VIDEO DISPLAY UNIT VDU = n, f [CR] VDU [CR]	E			CRT Video Setup	2.C.1(a); 2.N.2	10BVT60 10CON/CCON	6.0 1.0
							Specifies video format and frame rate for all system CRT's, internal and external; n = C (color) or M (monochrome); f = 50 or 60 (Hz). Reads current video format and frame rate; returns n,f .
VEL VIDEO ERROR LOG VEL [CR]				CRT Video Operation	2.C.11(d)	10BVT60 10CON/CCON	9.0 1.0
							Requests the last error to have occurred during transfer of a VIDEO PAGE initiated by either the VIDEO UPLOAD (VUL) or VIDEO DOWNLOAD (VDL) command; cannot be entered via keyboard. Four responses are presently possible, available only at COMPUTER INTERFACE PORT: ERROR 0 = no error detected; ERROR 3 = last error was a CHECKSUM error; ERROR 4 = EEPROM Switch was OFF; ERROR 5 = insufficient "free" video memory to save received page.
VGT "GREATER THAN" STATUS VGT x = s [CR] VGT x [CR]	E	R		CRT Video Setup	2.C.12(b); 2.F.1	10BVT60 10CON/CCON	1.0 1.0
							Specifies VISUAL EFFECTS to be exhibited by the DATA FIELD assigned to Chn. x, and by any FIXED TEXT "associated" with that field, when the data for Chn. x lies in the "GREATER THAN" LIMIT ZONE; s is a "STATUS" code—see Table 2.C.3. Can be overridden by a " BIT CONTROL " STATUS (VBC) command, when Bit q is at <i>Logic 1</i> , or (temporarily) by a STATUS (STS) command applying to Chn. x. Reads existing "GREATER THAN" STATUS setting for Chn. x; returns s .
VIA VIA s, \$ [CR]				General System Operation; Aux. Comp. Interface	3.B.1; 3.B.5(a); 3.B.5(d.2)	10BCP100	9.0
							Routes a single MNEMONIC COMMAND \$ to the B CARD occupying B SLOT s; the ATTACH (ATT) command need not be entered prior to VIA .
VID VIDEO MODE VID = v [CR] VID [CR]				CRT Video Setup	2.C.1(b); 2.N.2	10BVT60 10CON/CCON	7.0 1.0
							Selects desired video display mode; v = INT (internal) or EXT (external); at powerup, INTERNAL mode will always be in effect. The keyboard's Ctrl (CONTROL) and System Config (SYSTEM CONFIGURATION) keys can also be used to toggle back and forth between INTERNAL and EXTERNAL displays. Reads current video display mode; returns v .
VLT "LESS THAN" STATUS VLT x = s [CR]	E	R		CRT Video Setup	2.C.12(b); 2.F.1	10BVT60 10CON/CCON	1.0 1.0
							Specifies VISUAL EFFECTS to be exhibited by the DATA FIELD assigned to Chn. x, and by any FIXED TEXT "associated" with that field, when the data for Chn. x

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL	GUIDEBOOK	PRODUCT(S)	FIRST
				CATEGORY	SECTION(S)		SOFTWARE VERSION
VLT x [CR]			R	lies in the "LESS THAN" LIMIT ZONE; s is a "STATUS" code—see Table 2.C.3. Can be overridden by a " BIT CONTROL STATUS (VBC) " command, when Bit q is at <i>Logic 1</i> , or (temporarily) by a STATUS (STS) command applying to Chn. x.			
				Reads existing "LESS THAN" STATUS setting for Chn. x; returns s .			
VSS VIDEO SCAN SYMBOL				General System Setup; CRT Video Setup	1.F.2(c); 2.C.1(d)	10BVT60 10CON/CCON	8.1 1.0
VSS = 1 [CR]			E	Adds ampersand (&) flag to the display of any and all DATA CHANNELS outside the current SCAN RANGE.			
VSS = 0 [CR]			E	Cancels ampersand flagging of out-of-scan channels.			
VSS [CR]				Reads current "video scan symbol" status; returns 1 or 0 .			
VUL VIDEO UPLOAD				CRT Video Operation	2.C.11(b); 2.P.4	10BVT60 10CON/CCON	9.0 1.0
VUL = p [CR]				Transmits existing Page p from COMPUTER INTERFACE PORT (1 p 100); outputs VUL₁=\$1, VUL₂=\$2, . . . , VUL_n=\$n, VUL99=p,c ; cannot be entered via keyboard. Each line of transmission corresponds to a SECTION of Page p, starting with SECTION No. 1, up to SECTION No. n, where n ≤ 64. \$ ₁ is an ASCII string for the contents of SECTION No. 1; \$ ₂ for the contents of SECTION No. 2, etc. Terminating line ("SECTION No. 99") contains Page No. (p) and CHECKSUM number (c) for the page contents just transmitted. See also VIDEO DOWNLOAD (VDL) and VIDEO ERROR LOG (VEL) commands.			
VUL = 0 [CR]				Transmits from COMPUTER INTERFACE PORT the VIDEO PAGE currently on display; if the page has not been stored in EEPROM, a Page No. of 0 will be transmitted in the terminating line; cannot be entered via keyboard.			
XBG EXECUTE BASE GROUP				Automatic Command Execution; Satellite Network Setup	2.K.2(c); 3.B.3(b.8)	10ACP100 10BCP100 10KU	8.9 8.9 8.9
XBG 1 = k₁ [CR]			E	Specifies SYSTEM BIT GROUP k ₁ as the first of any two BIT GROUPS to be used for EXECUTE (EXU) functions.			
XBG 2 = k₂ [CR]			E	Specifies SYSTEM BIT GROUP k ₂ as the second of any two BIT GROUPS to be used for EXECUTE (EXU) functions.			
XBG 1 [CR]				Reads the first EXECUTE (EXU) BIT GROUP; returns k₁ .			
XBG 2 [CR]				Reads the second EXECUTE (EXU) BIT GROUP; returns k₂ .			
XDS TRANSMISSION DISABLE				FIFO Buffer Operation	3.A.8(b.6)	10AFIFO	1.0
XDS [CR]				Places the Model 10AFIFO in "GATED" OUTPUT MODE; the 10AFIFO will subsequently transmit its oldest "main-memory" contents or the contents of its output buffer only when so instructed by a DESTRUCTIVE DATA OUTPUT (DDO) or NONDESTRUCTIVE DATA OUTPUT (NDO) command, respectively (if a DATA RECORD is being transmitted when the XDS command is entered, that DATA RECORD will be transmitted in full). In effect, by default, on powerup. Requires the "FIFO bypass" to be OFF (see BYPASS (BYP) command). Can be entered only through the FIFO COMPUTER PORT; see also MODE (MOD) command.			

COMMAND	E P R O M	R A N G E	I M P L A D D R	GENERAL CATEGORY	GUIDEBOOK SECTION(S)	PRODUCT(S)	FIRST SOFTWARE VERSION
XEN TRANSMISSION ENABLE XEN [CR]				FIFO Buffer Operation	3.A.8(b.6)	10AFIFO	1.0
Places the Model 10AFIFO in "OPEN" OUTPUT MODE; the 10AFIFO will continuously output the oldest contents of its main memory via the output buffer; the DESTRUCTIVE DATA OUTPUT (DDO) or NONDESTRUCTIVE DATA OUTPUT (NDO) command will have no effect. Requires the "FIFO bypass" to be OFF (see BYPASS (BYP) command). Can be entered only through the FIFO COMPUTER PORT; see also MODE (MOD) command.							
ZRO ZERO ZRO x [CR]	(E)	R	I	Analog Channel Setup	1.G.5(c); 1.G.6; 3.B.3(c.1)	10ACP100 10BCP100 10KU	1.0 1.0 1.0
ZRO x = z [CR]	E	R	I	Zeros Chn. x and stores in nonvolatile EEPROM the ZERO OFFSET ("b" term) for that channel. With EEPROM Switch OFF, this command is equivalent to the TAR x [CR] command.			
ZRO x [CR]		R	I	Sets the ZERO OFFSET ("b" term) for Chn. x to a value that causes the channel's existing (nonzero) input to yield a reading of "z."			
ZRO x [CR]				Returns a number used internally for channel offsetting, or N/A (the latter appears if Chn. x is not a "REAL" channel).			
ZUM ZOOM ZUM n = s STEP z [CR]			R	History Card Operation	3.B.4(e.8); 3.B.4(e.9)	10BDR64	5.0
ZUM n = N/A [CR]			R	Increases SEARCH DEPTH of every "NON-STATISTICAL" PLAYBACK PSEUDO-CHANNEL assigned to Model 10BDR64 Recorder n by s FRAMES, and specifies an INCREMENT of z for further keyboard-controlled alteration of the SEARCH DEPTH (see also FREEZE (FRZ) command; ZUM and FRZ are mutually exclusive). The " STEP z " term is optional; if not entered, the DEPTH INCREMENT defaults to "1."			
ZUM n [CR]			R	Cancels the SEARCH-DEPTH OFFSET and DEPTH INCREMENT specified by the last ZUM command applied to Recorder n.			
			R	Reads current SEARCH-DEPTH OFFSET and DEPTH INCREMENT for Recorder n; returns s, s(STEPz), or N/A . If a REPLAY (RPL) command is in effect, returns the current replay SEARCH DEPTH.			