



† Option Codes

**49, 50 MAX/MIN:**  
 0xxx Store spatial max or min at loc xxx  
 1xxx Store max or min at loc xxx & loc of max or min at xxx+1

**60 OPTION codes:**  
 0x Power spectra  
 1x Real and imaginary  
 2x Magnitude and phase  
 x = 0 No taper  
 x = 1 Taper

**63, 68 PARAMETERS 1-8:**  
 Following Inst. 97 RF IDs & Phone No.: 1 digit at a time  
 32 Between RF IDs (e.g., repeater & site)  
 32 & 84 Between Phone Modem No.  
 70 After last RF  
 13 To end

Following Inst. 98 (256 Character limit)  
 Base 10 value of ASCII Character (1-99)  
 00 to end

OUTPUT PROCESSING INSTRUCTIONS

Note: A Program Control instruction that sets the output flag high is required to obtain output data from these instructions.

INST.	01:	02:	03:	04:	05:	06:	07:	08:	09:	10:
69 WIND VECTOR	REPS	SMPL/SUBINT†	SEN/OUT†	WS/E	WD/N					
70 SAMPLE	REPS	LOC								
71 AVERAGE	REPS	LOC								
72 TOTALIZE	REPS	LOC								
73 MAXIMUM	REPS	TIME†	LOC							
74 MINIMUM	REPS	TIME†	LOC							
75 HISTOGRAM	REPS	BINS	FORM†	B SEL LOC	WV LOC†	LOW LIM	HIGH LIM			
77 REAL TIME	OPTION†									
78 RESOLUTION	OPTION†									
79 SMPL ON MAX/MIN	REPS	LOC	(must follow Inst. 73 or 74)							
80 STORE AREA	AREA†	LOC/ID								
82 STD DEV	REPS	LOC								

† Option Codes

**69 SaMPles/SUBINteRval (std dev):**  
 0 No subinterval  
 xxxx Number of scans per subinterval

**73,74 TIME of max or min:**  
 00 Max/min value only  
 01 With seconds  
 10 With Hour-Minute  
 11 With Hour-Minute, Second

**75 FORM codes:**  
 0 Open form (data beyond limits are included)  
 1 Closed form (data beyond limits are excluded)

**77 OPTION codes:**  
 xxx1 Seconds  
 xx1x Hour-Minute  
 xx2x Hour-Minute, 2400 at midnight  
 x1xx Day  
 x2xx Day, Previous day at midnight  
 1xxx Year  
 (0 - no output, e.g., 110 = Day, Hr-Min)

**78 OPTION codes:**  
 0 Low resolution  
 1 High resolution

**80 AREA codes:**  
 1 Final Storage 1  
 2 Final Storage 2  
 3 Input Storage

**SENSOR type/OUTput codes:**  
 x0 Avg WS,  $\Theta$ 1,  $\sigma(\Theta$ 1)  
 x1 Avg WS,  $\Theta$ 1  
 x2 Avg WS; resultant U,  $\Theta$ u,  $\sigma(\Theta$ u)  
 x = 0 (anemometers & vanes)  
 x = 1 (north- & east-facing propellers)

Where:  $\Theta$ 1 = Avg unit vector dir  
 $\sigma(\Theta$ 1) = Std dev dir (Yamartino)  
 $\Theta$ u = Avg resultant vector dir  
 $\sigma(\Theta$ u) = Std dev dir (CSI)

**WV LOcation:**  
 0 Frequency Distribution  
 xxxx Weighted Value Loc

PROGRAM CONTROL INSTRUCTIONS

(F is fixed data (constant); X, Y, & Z are input locations)

INST.	01:	02:	03:	04:	05:	06:	07:	08:
83 IF CASE < F	F	CMD†						
85 BEGIN SUBR	SUBR†							
86 DO	CMD†							
87 LOOP	DELAY	COUNT						
88 IF X <=> Y	X	COMP†	Y	CMD†				
89 IF X <=> F	X	COMP†	F	CMD†				
90 LOOP INDEX	STEP							
91 IF FLAG/PORT	COMP†	CMD†						
92 IF TIME IS	T†	INT†	CMD†					
93 BEGIN CASE	CASE LOC							
94 ELSE								
95 END								
96 SERIAL OUT	DEVICE†							
97 INITIATE TELE	MODEM†	FLAG	LIM (sec)	F DEL (sec)	NO RETRIES	S DEL (min)	FAIL LOC	ID (must be followed by Inst. 63 or 68)
98 SEND CHAR	DEVICE†	(must be followed by Inst. 63 or 68)						
111 RUN FLASH	F PROGRAM	(indexing compiles program as *6)						
120 TGT1 GOES	BUFFER†	FWD/REF LOC						
121 ARGOS	COMMAND	COMMAND	COMMAND					
123 AUTO PROG TGT1	1-8: ADDR, 9: ASSIGNED CH, 10: RANDOM CH, 11: TIMED DAYS, 12: TIMED HRS, 13: TIMED MIN, 14: TIMED SEC, 15: RANDOM HRS, 16: RANDOM MIN, 17: RANDOM SEC, 18: INITIAL HRS, 19: INITIAL MIN, 20: INITIAL SEC, 21: ASSIGNED WIN†, 22: PREAMBLE†, 23: BUFFER†							
124 FIRE TGT	FORMAT†	BUFFER†	FWD/REF LOC					
221 ALERT	SENSOR ID	PACKET ID	LOC					

† Option Codes

**FLAG DESCRIPTIONS:**  
 0 Output flag  
 1-8 User flags  
 9 Intermed. processing disable flag

**83-92 CoMmanD codes:**  
 0 Go to end of Pgm. Table  
 1-9, 79-99 Call Subroutine  
 10-19 Set flag 0-9 high  
 20-29 Set flag 0-9 low  
 30 Then Do  
 31 Exit Loop if true  
 32 Exit Loop if false  
 41 Set Port 1 high  
 51 Set Port 1 low  
 61 Toggle Port  
 71 Pulse Port

**85 SUBROUTINE:**  
 Subroutine number valid entries are 1-9, 79-99; 98 allows special interrupts on C2

**88,89 CoMParison codes:**  
 1 = 3 ≥  
 2 ≠ 4 <

**91 CoMParison codes:**  
 1x Do if flag x is high  
 2x Do if flag x is low  
 40 Do if modem is on  
 4X Do if port x is high  
 50 Do if modem is off  
 5X Do if port x is low  
 Ports can be indexed with C (--)

**92 Time into INteRval**  
 xxx T and INT in minutes  
 (T max is 1439, INT max is 1440)  
 xxx-- T and INT in seconds  
 (T max is 59, INT max is 60)

**96,\*8 DEVICE/baud codes (y = Baud Codes):**  
**Addressed Print Device**  
 1y Printable ASCII  
 2y Comma separated ASCII  
 3y Binary Final Storage format  
**Serial Printer or Computer**  
 4y Printable ASCII  
 5y Comma separated ASCII  
 6y Binary Final Storage format  
**Storage Module**  
 7N Storage Module, address N (1-8)  
 7N -- Filemark to Storage Module N (1-8)  
**Transfer Data to Other Final Storage Area**  
 80 New data only (Inst. 96 only)  
 81 All data (Inst. 96 only)

**97 MODEM/baud codes:**  
 0y RF modem  
 1y Short haul/Direct  
 2y Phone modem  
 31 Voice call-back, 1200 baud  
 40 Voice modem, data call-back, 300 baud  
 41 Voice modem, data call-back, 1200 baud  
 5y RF modem (SDC state)  
 y = Baud Rate Code; baud rate code 3 not valid for Inst. 97.

**98 DEVICE/baud codes (y = Baud Codes):**  
 1y Addressed Print Device  
 4y Pin-Enabled Print Device

**100 BUFFER:**  
**A B C**  
 A Mode  
 0 - binary  
 1 - ASCII  
 3 - 18-bit, high-resolution  
 B Buffer  
 0 - Self-timed  
 1 - Random  
 C New data  
 0 - Appends new data to old  
 1 - Writes over old data

**123 PREAMBLE**  
 0 - Short (0.98 seconds)  
 1 - Long (7.3 seconds)

**123 BUFFER**  
 1 - Self-timed  
 2 - Random  
 3 - Both

**124 Fire Weather FORMAT:**  
 0 RAWS 7 output  
 1 xxx.x ASCII output  
 2 xx.xx ASCII output  
 3 x.xxx ASCII output  
 4 xxx ASCII output

**124 BUFFER Control:**  
 0 Self-timed buffer, appends new data to old  
 1 Self-timed buffer, writes over old data  
 2 Random buffer, appends new data to old  
 3 Random buffer, writes over old data  
 9 Erases random buffer without writing any data

y=	0	300
	1	1200
	2	9600
	3	76800

**123 ASSIGNED transmission WINDOW**  
 0 - 1 minute  
 1 - 2 minute