

ATC-1400A/S-1403DL Remote Commands

Supported on the ATC-5000NG w/ Option ATCNGOPT5

Document Overview

The VIAVI NextGen ATC-5000NG ATC/DME Test Set is the replacement for the ATC-1400A/S-1403DL. The ATC-1400A/S-1403DL Remote Command Set Compatibility Option (ATCNGOPT5), provides the ATE programmer access to some of the legacy 1400/1403 GPIB commands. This provides some degree of backward compatibility with your legacy 1400/1403 ATE software (depending on which

1400/1403 GPIB commands were utilized). Below is a comprehensive list of commands that are supported.

Warning: The ATC-5000NG is not a drop-in replacement unit for the ATC-1400A/S-1403DL test set. Check your software source code to determine which 1400/1403 commands are used, and refer to the table below to see if those commands are supported.

ATC-1400A Commands Supported

A	IDD	V	AX3=P6?
C?	IDP	V.	AX3=P6=
C.	IP	V?	AX3=SPR=
D?	IP0	XA	AX3=SPR?
DCL.	NM0	XC	AX3=P2=
DF	NM1	XA1	AX3=P2?
DF0	P.	XA2	AX3=P4=
DF+	P?	XP	AX3=P4=CAL;; (-1.95 TO +1.95)
DF-	P0	XP0	AX3=P4=CAL; (0.20 TO 3.20)
DI	P1	XP1	AX3=SEQ
DMEX	R	XV	AX3=SQn?
DMEY	R.	XV20	AX3=SPR=
DV2	R?	XV2+	
DV20	RF	XV2-	
DV2-	RO	XV3+	
EQ0	RT0	XV3-	
EQ1	RT1	AX3=MODE?	
ES=	RT2	AX3=S1403C	
E0	S0	AX3=ANTB=	
E1	S1	AX3=ANTB?	
E%	SI0	AX3=PPMG?	
F	SI1	AX3=BURST=	
F.	SP0	AX3=BURST.	
F?	SP1	AX3=RFLV=	
FP1	SQ0	AX3=RFLV?	
FP2	SQ1	AX3=P3=CAL	
ID0	UF?	AX3=P3?	
ID1	UP?	AX3=P4=	
ID2	UW?	AX3=P4?	
ID3	U%?	AX3=P6=	

Note: For any command that has multiple parameters, all parameters must be present.

ATC-1400A Commands Partially Supported

Command	Notes
AXn	Some AX3 commands are supported. AX1, AX2 and AX4 commands are not supported.
CM0	Command accepted. No action is taken. This function is not available.
CM1	Command accepted. No action is taken. This function is not available.
DC	Command accepted. No action is taken. This function is not available.
D.	Command accepted. No action is taken. This function is not available.
PS=	In DME with squitter off this command will not set the self interrogation rate as the 1400 does. The self interrogation rate is fixed at 100 Hz.
T0	The command works but you must also set the SCOPE 1 or 2 to SYNC using command ":ATC:SET:SCO:CH2 25." NOTE: The ATC-1400A has a negative sync pulse. When self-interrogate is on a single positive sync pulse is available on Scope 2.
TD	The command works but you must also set the SCOPE 1 or 2 to SYNC using command ":ATC:SET:SCO:CH2 25." NOTE: The ATC-1400A has a negative sync pulse. It also provides a pulse for each reply pulse. The 5000 provides a single positive sync pulse aligned with P1.
WN	Command is accepted. No action is taken. Use :ATC:MEAS:PUL:POS? for spacing measurement.
WW	Command is accepted. No action is taken. Use :ATC:MEAS:PUL:POS? for spacing measurement.

ATC-1400A Commands Not Supported

!	XD	AX3=EXSYN=;;OFF
A?	XT	AX3=EXSYN=OFF
AX1	AX3=ON	RT1 SMR=101 SETS RF OFF THEN SRQ MASK FOR 101 SRQ
AX2	AX3=ANTB=	
AX4	AX3=ANTB=0.00	
SRM	AX3=PPMG=	
TC0	AX3=PPULSE=OFF	
TC1	AX3=DI=ATC	
TT	AX3=DI=;ATC	
X1	AX3=EXMOD=OFF	
X2	AX3=EXMOD=ON	
XB	AX3=EXSYN=;0.00	

S-1403DL Commands Supported

S1403C	SQTR:CAPTURE:CLEAR	P4?
SCPI	SQTR:CAPTURE:STATE	P6=
SYSTEM:LANGUAGE S1403c	SQTR:CAPTURE:STATE?	P2=
INTERROGATION:TRIGGER:BURST	SQTR:CAPTURE:FILTER	P2?
GENERATOR:STATE	SQTR:CAPTURE:FILTER?	P3=
GENERATOR:STATE?	SQTR:CAPTURE:MODE	P3?
GENERATOR:LEVEL:OFFSET	SQTR:CAPTURE:MODE?	SPR?
GENERATOR:LEVEL:OFFSET?	SQTR:GROUPING:DF17	RPDLY?
GENERATOR:TIME:OFFSET	INTERROGATION:TRIGGER:SOURCE?	SQTR?
GENERATOR:TIME:OFFSET?	INTERROGATION:TRIGGER:GENERATOR?	SQTR<type>?
GENERATOR:LEVEL	INTERROGATION:SCOPE?	PRPLY?
GENERATOR:LEVEL?	INTERROGATION:PPMG?	APER?
INTERROGATION:FUNCTION:ATCRBS	INTERROGATION:SMENU:FORMAT	SPER?
INTERROGATION:FUNCTION:ACS	INTERROGATION:SMENU:FORMAT?	BPER?
INTERROGATION:FUNCTION:ACL	INTERROGATION:SMENU:GLOBAL:ADDRESS?	SQADD?
INTERROGATION:FUNCTION:SEQUENCE	INTERROGATION:SMENU:GLOBAL:APXOR	PPMG?
INTERROGATION:FUNCTION:INTERLACE?	INTERROGATION:SMENU:GLOBAL:APXOR?	BRF=
INTERROGATION:FUNCTION:DI	ATC1400A:ATCRBS?	BRF?
INTERROGATION:FUNCTION:DI?	ATC1400A:RF	BRFLV?
INTERROGATION:FUNCTION:BURST	ATC1400A:RF?	DFSQF<nn>?
INTERROGATION:FUNCTION:BURST?	ATC1400A:SCOPE	DFSQA<nn>?
INTERROGATION:FUNCTION:BURST:CONDITION?	ATC1400A:SCOPE?	
INTERROGATION:FUNCTION:ATCMONITOR	ATC1400A:MODE?	
INTERROGATION:FUNCTION?	ATC1400A:P123:WIDTH	
INTERROGATION:P3	ATC1400A:P123:WIDTH?	
INTERROGATION:P3?	ATC1400A:P2:DEVIATION	
INTERROGATION:P2	ATC1400A:P2:DEVIATION?	
INTERROGATION:P2?	ATC1400A:P3:DEVIATION	
INTERROGATION:P4?	ATC1400A:P3:DEVIATION?	
INTERROGATION:P6	SYSTEM:COMMUNICATE:GPIB:RCI?	
INTERROGATION:P6:SPR	SYSTEM:COMMUNICATE:GPIB:ADDRESS	
REPLY:MODES?	SYSTEM:COMMUNICATE:GPIB:ADDRESS?	
REPLY:ATCRBS?	*IDN?	
REPLY:SPACING?	INTERROGATION:SMENU	
REPLY:PERCENT?	INTERROGATION:SMENU:BITS?	
REPLY:PERCENT:CLEAR	ATC.	
REPLY:TIMEOUT	ACS.	
REPLY:DELAY:CLEAR	ACL.	
REPLY:SMENU:BITS?	INTLCE=	
SQTR:ADDRESS?	BURST.	
SQTR:TAIL?	MODE?	
SQTR:COUNT:PERIOD	RFLV=	
SQTR:COUNT:PERIOD?	RFLV?	
SQTR:COUNT:CLEAR	P4=	

S-1403DL Commands Partially Supported

	Notes
AX3=DI=SEQ;SEQ	The sequence is one interrogation in length.
INTERROGATION:FUNCTION:BURST	Burst count limited to max of 1000.
INTERROGATION:P4	Allows input of width up to 3.55, but maximum transmitted P4 pulse width is 2.75.
INTERROGATION:P6	The pulse width range is limited to -0.5 and +1.45.
INTERROGATION:P6:SPR	ATC5000NG will not disable SPR.
REPLY:ATCRBS?	X pulse and Ident are not reported.
REPLY:SPACING?	Must select F2 to get the spacing measurement
REPLY:WIDTH?	REPLY:WIDTH? "ATC" functions properly. REPLY:WIDTH? "MODES" returns all zeros even with width displayed on unit.
REPLY:DELAY?	REPLY:DELAY? "ATC" returns all zero if replies are from Mode S, and REPLY:DELAY? "MODES" returns all zero if replies are ATCRBS.
REPLY:SMENU?	Reply:Smenu? 1,"A" returns proper data. Reply:Smenu? 1,"N" does not return data properly for long replies but work for short replies.
SQTR:CAPTURE:GET?	When setup to capture a specific squitter category the unit fails to return the data even if it is shown in the receiver summary
INTERROGATION:TRIGGER:SOURCE	Only supports TRIGGEN option
INTERROGATION:TRIGGER:GENERATOR	Sending a value in seconds is not supported it must be set in Hz
INTERROGATION:SCOPE	Scope out cannot be turned off. Scope out is set to interrogation for any interrogation. If the command state is on, the value is set in the scope interrogation offset. If the command is off the command is discarded. Also there is only one scope interrogation offset.
INTERROGATION:PPMG	Cannot set PPMG to off state. Sent INT:PPMG "MODES",1,4, Expected "1,4", Received "1,2".
INTERROGATION:SMENU:GLOBAL:ADDRESS	This command sets a global address that will be used for new interrogations added but will not update table entries already defined in the table.
INTERROGATION:SMENU:SET:ALL	INterrogation:SMENU:SET:ALL "ZERO" worked as expected with the exception that 1 interrogation will remain on.
ATC1400A:ATCRBS	Supports Mode A and C only.
ATC1400A:MODE	Works with the exception that Double interrogation power range is limited to -20 to -90 dBm.
INTERROGATION:SMENU?	When user address is specified, query returns actual address instead of "USER". For example: Sent: INT:SMEN 3,ON,"S",5,"#H2A345670123654","USER" Then INT:SMEN? 3,"N" Received 1,N,5,#H2971211,#H123456, Expected 1,S,5,#H2971211,USER Sent INT:SMEN? 3,"A" Received 1,A,#H2A971211123456, Expected 1,A,#H2A971211000000
INTERROGATION:SMENU:BITS	Sent "INterrogation:SMENU:BITS 0,1,16,"#HF581"" then "INterrogation:SMENU:BITS? 0,1,64"" Received "#HF581000012345600" expected "#HF581000000000000"
SEQ.	Will not turn off Burst mode.
DI=	"DI=ACL,ACS" reports "Bad parameter string". It can be sent with the AX3= prefix, "AX3=DI=ACL,ACS".
BURST=	Burst is limited to 1000
P6=	The pulse width range is limited to -0.5 and +1.45.
SPR=	ATC5000NG will not disable SPR
PPMG=	PPMG cannot be disabled.

S-1403DL Commands Partially Supported (cont.)

	Notes
BRFLV?	Minimal format differences For example: For a set value of -2.9 the unit returns -2.9 as expected. For a set value of -3 the unit returns -3.0, Expected -3
SQ<nn>=	This command currently takes approximately 1 minute to complete.
SQ<nn>?	Does not report the short long indication correctly
DFSQ<nn>?	The 1403 and 5000 do not return the same number of characters. For example: The 1403 returns 3:S;0;41441;26455132 The 5000 returns 3:S;0;000041441;26455132
DFSQT<nn>?	Does not report the short long indication correctly For example: DFSQT2? Returns "3:S" Expected "3:L".
DFSQD<nn>?	The 1403 does not return the complete data for a long. For example: The 1403 returns 3:004432126 The 5000 returns 3:22150530062503102625031020
INTERROGATION:SMENU:GLOBAL:ADDRESS	This command sets a global address that will be used for new interrogations added, but will not update table entries already defined in the table.

S-1403DL Commands Not Supported

FORMAT	SYSTEM:COMMUNICATE:SERIAL:PACE?	TEST:ELM:DOWN:START
HCOPY	SYSTEM:COMMUNICATE:SERIAL:CONTROL:RTS	TEST:ELM:DOWN:ELM:RECEIVED?
HCOPY:SDUMP	SYSTEM:COMMUNICATE:SERIAL:CONTROL:RTS?	TEST:ELM:DOWN?
PSCREEN	SYSTEM:COMMUNICATE:GPIB:RCI	TEST:RUNNING
INTERROGATION:FUNCTION:INTERLACE	SYSTEM:COMMUNICATION:ATC1400:CONTROL	TEST:STOP
SQTR:COUNT?	SYSTEM:COMMUNICATION:ATC1400:CONTROL?	MEMORY:STORE
SQTR:TIME?	SYSTEM:COMMUNICATION:ATC1400:S1403:ADDRESS	MEMORY:CATALOG?
SQTR:TIME:CLEAR	SYSTEM:COMMUNICATION:ATC1400:S1403:ADDRESS?	MEMORY:LOAD
SQTR:CAPTURE:CONDITION?	SYSTEM:KEY:REPEAT	MEMORY:NAME
SQTR:CAPTURE:COUNT?	SYSTEM:KEY:REPEAT?	MEMORY:CLEAR
SQTR:TIME:TIMEOUT	SYSTEM:DATE	MEMORY:CLEAR:ALL
SQTR:TIME:TIMEOUT:DEFAULT	SYSTEM:DATE?	DISPLAY:CMENU
INTERROGATION:SYNC:OUT	SYSTEM:TIME	DISPLAY:CURRENT?
INTERROGATION:SYNC:OUT?	SYSTEM:TIME?	DISPLAY:SMENU
INTERROGATION:SYNC:OUT:DEVIATION	*OPT?	DISPLAY:TMENU
INTERROGATION:SYNC:OUT:DEVIATION?	*RST	VER?
INTERROGATION:MODULATION	INTERROGATION:SCOPE:SMENU	NEWPB?
INTERROGATION:MODULATION?	INTERROGATION:SCOPE:SMENU?	MLDECL?
INTERROGATION:PPULS	TEST:MTL:ANTENNA	ANTB=
INTERROGATION:PPULS?	TEST:MTL:ANTENNA?	ANTB?
SYSTEM:COMMUNICATE:SERIAL:RCI	TEST:MTL:START	PPULSE=
SYSTEM:COMMUNICATE:SERIAL:RCI?	TEST:MTL:TIME?	PPULSE?
SYSTEM:COMMUNICATE:SERIAL:ECHO	TEST:MTL?	EXSYN=
SYSTEM:COMMUNICATE:SERIAL:ECHO?	TEST:MTL:LEVEL?	EXMOD=
SYSTEM:COMMUNICATE:SERIAL:DUMP	TEST:ELM:SETUP:RESERVATION:DELAY	EXMOD?
SYSTEM:COMMUNICATE:SERIAL:DUMP?	TEST:ELM:SETUP:RESERVATION:DELAY?	SAVE
SYSTEM:COMMUNICATE:SERIAL:BAUD	TEST:ELM:SETUP:CLOSEOUT:DELAY	RECALL
SYSTEM:COMMUNICATE:SERIAL:BAUD?	TEST:ELM:SETUP:CLOSEOUT:DELAY?	SEQN=
SYSTEM:COMMUNICATE:SERIAL:BITS	TEST:ELM:SETUP:UELM:SPACING	CMENU
SYSTEM:COMMUNICATE:SERIAL:BITS	TEST:ELM:SETUP:UELM:SPACING?	ERRM?
SYSTEM:COMMUNICATE:SERIAL:BITS?	TEST:ELM:UP:SMENU	MTL=
SYSTEM:COMMUNICATE:SERIAL:SBITS	TEST:ELM:UP:SMENU?	STATMTL?
SYSTEM:COMMUNICATE:SERIAL:SBITS?	TEST:ELM:UP:START	MTL?
SYSTEM:COMMUNICATE:SERIAL:PARITY	TEST:ELM:UP?	
SYSTEM:COMMUNICATE:SERIAL:PARITY?	TEST:ELM:DOWN:SMENU	
SYSTEM:COMMUNICATE:SERIAL:PACE	TEST:ELM:DOWN:SMENU?	