



Alpha Test Plan

USB BASIC v1.3

E1

Tester Name:

Date Completed:

Environment(s) Tested:

AquaLite S2 + Micro Expander Option

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.0.0	AL S2 + MX	Setup AquaLite v1.36						
E-1.0.1	AL S2 + MX		Download & install AquaLite v1.36 from https://aquarius.je/aqualite (unzip files)	AquaLite v1.36 is downloaded and installed on your system.				
E-1.0.2	AL S2 + MX		Launch AquaLite v1.36. (aqualite.exe)	System should boot into "BASIC Press RETURN key to start" flashing screen. Menubar should say AquaLite v1.36 .				
E-1.0.3	AL S2 + MX		Within AquaLite v1.36, go to menu option Tool > Options, select the Peripherals tab, and make sure Micro Expander is checked. Click Ok.	System should beep and reboot.				
E-1.0.4	AL S2 + MX		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-1.0.5	AL S2 + MX		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-1.0.6	AL S2 + MX		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				

DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.1.0	AL S2 + MX	Test legacy commands						
E-1.1.1.1	AL S2 + MX		From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-1.1.1.2	AL S2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.1.3	AL S2 + MX		From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-1.1.1.4	AL S2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.1.5	AL S2 + MX		From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-1.1.1.6	AL S2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.2	AL S2 + MX	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB folder within the AquaLite program folder, followed by Ok beneath. Note that the contents can vary from system to system.				
E-1.1.3.1	AL S2 + MX	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-1.1.3.2	AL S2 + MX		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-1.1.4	AL S2 + MX	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB > ROMS folder within the AquaLite program folder, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-1.1.5.1	AL S2 + MX	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-1.1.5.2	AL S2 + MX		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-1.1.5.3	AL S2 + MX		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-1.1.5.4	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.1.6.1	AL S2 + MX	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-1.1.6.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-1.1.6.3	AL S2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-1.1.6.4	AL S2 + MX		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB > ROMS folder within the AquaLite program folder, there should be a new file named TEST01.BAS.				
E-1.1.6.5	AL S2 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-1.1.7.1	AL S2 + MX	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-1.1.7.2	AL S2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-1.1.7.3	AL S2 + MX		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-1.1.7.4	AL S2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-1.1.6.2 and display Ok beneath.				
E-1.1.8.1	AL S2 + MX	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-1.1.8.2	AL S2 + MX		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-1.1.9.1	AL S2 + MX	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-1.1.9.2	AL S2 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-1.1.10.1	AL S2 + MX	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-1.1.10.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000, 97, 98, 99, 100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-1.1.10.3	AL S2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-1.1.10.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-1.1.10.5	AL S2 + MX		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-1.1.10.6	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-1.1.10.7	AL S2 + MX		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB folder within the AquaLite program folder, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-1.1.11.1	AL S2 + MX	Test LOAD a BIN file	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.11.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.1.12.1	AL S2 + MX	Test RUN a ROM file	From the Aqualite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.12.2	AL S2 + MX		From the USB BASIC command screen type CD"ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-1.1.12.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-1.1.12.4	AL S2 + MX		From the Aqualite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.13.1	AL S2 + MX	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-1.1.13.2	AL S2 + MX		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-1.1.14.1	AL S2 + MX	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-1.1.14.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(~123)	System should display FF85 on the next line with Ok beneath.				
E-1.1.14.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-1.1.15	AL S2 + MX	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-1.1.16	AL S2 + MX	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-1.1.17.1	AL S2 + MX	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-1.1.17.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-1.1.18.1	AL S2 + MX	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-1.1.18.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-1.1.19.1	AL S2 + MX	Test EDIT	From the Aqualite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.19.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-1.1.19.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-1.1.19.4	AL S2 + MX		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-1.1.19.5	AL S2 + MX		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-1.1.19.6	AL S2 + MX		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-1.1.19.7	AL S2 + MX		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-1.1.19.8	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.1.20.1	AL S2 + MX	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-1.1.20.2	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-1.1.20.3	AL S2 + MX		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-1.1.20.4	AL S2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.21.1	AL S2 + MX	Test CTRL + C	From the AquaLite menu, select File > Hard Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-1.1.21.2	AL S2 + MX		Hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.1.21.3	AL S2 + MX		From the AquaLite menu, select File > Soft Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-1.1.21.4	AL S2 + MX		Press CTRL + C .	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.2.0	AL S2 + MX	Test NEW commands						
E-1.2.1.1	AL S2 + MX	Test POKE auto-increment	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.2.1.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-1.2.2.1	AL S2 + MX	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-1.2.2.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-1.2.3.1	AL S2 + MX	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-1.2.3.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-1.2.4.1	AL S2 + MX	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-1.2.4.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-1.2.5.1	AL S2 + MX	Test COPY	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.2.5.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("Copyright © 1982 by Microsoft, Inc S2" & "USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-1.2.6.1	AL S2 + MX	Test ATN	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.2.6.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-1.2.7.1	AL S2 + MX	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-1.2.7.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("55FF")	System should display 22015 on the next line with Ok beneath.				
E-1.2.8.1	AL S2 + MX	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-1.2.8.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.2.9.1	AL S2 + MX	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.9.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display HI at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "I" character.)				
E-1.2.10.1	AL S2 + MX	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.10.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-1.2.10.3	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-1.2.10.4	AL S2 + MX		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-1.2.11.1	AL S2 + MX	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.11.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "230517010101"	System should display Ok beneath. (Note: On AquaLite, there is no way to actually SET the DateTime, so it will stay set to the hosting computer's system clock.)				
E-1.2.11.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "kkk"	System should display SN Error beneath.				
E-1.2.12.1	AL S2 + MX	Test DTM\$	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.12.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTM\$(0)	System should display a string with the current date and time, formatted YMMDDHHMMSSCC, with Ok beneath.				
E-1.2.12.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTM\$(1)	System should display a string with the current date and time, formatted YYYY-MM-DD HH:MM:SS, with Ok beneath. Note that the Century is assumed to be 20, and the hours are in 24 hour format.				
E-1.2.12.4	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT LEFT\$(DTM\$(1),10)	System should display a string with the current date, formatted YYYY-MM-DD, with Ok beneath. Note that the Century is assumed to be 20.				
E-1.2.12.5	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT RIGHT\$(DTM\$(1),8)	System should display a string with the current time, formatted HH:MM:SS, with Ok beneath. Note that the hours are in 24 hour format.				
E-1.2.13.1	AL S2 + MX	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.13.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER(0))	System should display 0103, with Ok beneath.				
E-1.2.13.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER(0)),2))	System should display 1, with Ok beneath.				
E-1.2.13.4	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER(0)),2))	System should display 3, with Ok beneath.				
E-1.2.14.1	AL S2 + MX	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-1.2.14.2	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.14.3	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X)= X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-1.2.14.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-1.2.14.5	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-1.2.15.1	AL S2 + MX	Test & Operator	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-1.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGF" 20 COPY DEEK (&A\$+2) , \$3291, PEEK (&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK (&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-1.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-1.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-1.2.16	AL S2 + MX	TESTING COMPLETE	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan
USB BASIC v1.3
E2

Tester Name:	
Date Completed:	
Environment(s) Tested:	AquaLite Aquarius II + Micro Expander Option

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.0.0	AL A2 + MX	Setup AquaLite v1.36						
E-2.0.1	AL A2 + MX		Download & install AquaLite v1.36 from https://aquarius.je/aqualite (unzip files)	AquaLite v1.36 is downloaded and installed on your system.				
E-2.0.2	AL A2 + MX		Launch AquaLite v1.36. (aqualite.exe)	System should boot into "BASIC Press RETURN key to start" flashing screen. Menubar should say AquaLite v1.36 .				
E-2.0.3	AL A2 + MX		Within AquaLite v1.36, go to menu option Tool > Options, select the Hardware tab, and make sure Aquarius II is selected in the Model section. Click Ok.	System should beep and reboot.				
E-2.0.4	AL A2 + MX		Within AquaLite v1.36, go to menu option Tool > Options, select the Peripherals tab, and make sure Micro Expander is checked. Click Ok.	System should beep and reboot.				
E-2.0.5	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.0.6	AL A2 + MX		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-2.0.7	AL A2 + MX		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-2.0.8	AL A2 + MX		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.								

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.1.0	AL A2 + MX	Test legacy commands						
E-2.1.1.1	AL A2 + MX	Test CALL xx	From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-2.1.1.2	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.1.3	AL A2 + MX		From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-2.1.1.4	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.1.5	AL A2 + MX		From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-2.1.1.6	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.2	AL A2 + MX	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB folder within the AquaLite program folder, followed by Ok beneath. Note that the contents can vary from system to system.				
E-2.1.3.1	AL A2 + MX	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-2.1.3.2	AL A2 + MX		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-2.1.4	AL A2 + MX	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB > ROMS folder within the AquaLite program folder, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.1.5.1	AL A2 + MX	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-2.1.5.2	AL A2 + MX		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-2.1.5.3	AL A2 + MX		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-2.1.5.4	AL A2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-2.1.6.1	AL A2 + MX	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-2.1.6.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-2.1.6.3	AL A2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-2.1.6.4	AL A2 + MX		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB > ROMS folder within the AquaLite program folder, there should be a new file named TEST01.BAS.				
E-2.1.6.5	AL A2 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-2.1.7.1	AL A2 + MX	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-2.1.7.2	AL A2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-2.1.7.3	AL A2 + MX		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-2.1.7.4	AL A2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-2.1.6.2 and display Ok beneath.				
E-2.1.8.1	AL A2 + MX	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-2.1.8.2	AL A2 + MX		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-2.1.9.1	AL A2 + MX	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-2.1.9.2	AL A2 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-2.1.10.1	AL A2 + MX	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-2.1.10.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-2.1.10.3	AL A2 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-2.1.10.4	AL A2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-2.1.10.5	AL A2 + MX		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-2.1.10.6	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-2.1.10.7	AL A2 + MX		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB folder within the AquaLite program folder, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-2.1.11.1	AL A2 + MX	Test LOAD a BIN file	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.11.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.1.12.1	AL A2 + MX	Test RUN a ROM file	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.12.2	AL A2 + MX		From the USB BASIC command screen type CD"ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-2.1.12.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-2.1.12.4	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.13.1	AL A2 + MX	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-2.1.13.2	AL A2 + MX		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-2.1.14.1	AL A2 + MX	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-2.1.14.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(-123)	System should display FF85 on the next line with Ok beneath.				
E-2.1.14.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-2.1.15	AL A2 + MX	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-2.1.16	AL A2 + MX	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-2.1.17.1	AL A2 + MX	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-2.1.17.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-2.1.18.1	AL A2 + MX	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-2.1.18.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-2.1.19.1	AL A2 + MX	Test EDIT	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.19.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-2.1.19.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-2.1.19.4	AL A2 + MX		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-2.1.19.5	AL A2 + MX		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-2.1.19.6	AL A2 + MX		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-2.1.19.7	AL A2 + MX		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-2.1.19.8	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with OK beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.1.20.1	AL A2 + MX	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-2.1.20.2	AL A2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-2.1.20.3	AL A2 + MX		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-2.1.20.4	AL A2 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.21.1	AL A2 + MX	Test CTRL + C	From the AquaLite menu, select File > Hard Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-2.1.21.2	AL A2 + MX		Hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.1.21.3	AL A2 + MX		From the AquaLite menu, select File > Soft Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-2.1.21.4	AL A2 + MX		Press CTRL + C.	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.2.0	AL A2 + MX	Test NEW commands						
E-2.2.1.1	AL A2 + MX	Test POKE auto-increment	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.2.1.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-2.2.2.1	AL A2 + MX	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-2.2.2.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-2.2.3.1	AL A2 + MX	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-2.2.3.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-2.2.4.1	AL A2 + MX	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-2.2.4.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-2.2.5.1	AL A2 + MX	Test COPY	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.2.5.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("Copyright © 1982 by Microsoft, Inc S2" & "USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-2.2.6.1	AL A2 + MX	Test ATN	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.2.6.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-2.2.7.1	AL A2 + MX	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-2.2.7.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("55FF")	System should display 22015 on the next line with Ok beneath.				
E-2.2.8.1	AL A2 + MX	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-2.2.8.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.2.9.1	AL A2 + MX	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.9.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display HI at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "I" character.)				
E-2.2.10.1	AL A2 + MX	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.10.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-2.2.10.3	AL A2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-2.2.10.4	AL A2 + MX		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-2.2.11.1	AL A2 + MX	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.11.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "230517010101"	System should display Ok beneath. (Note: On AquaLite, there is no way to actually SET the DateTime, so it will stay set to the hosting computer's system clock.)				
E-2.2.11.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "kkk"	System should display SN Error beneath.				
E-2.2.12.1	AL A2 + MX	Test DTM\$	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.12.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTM\$(0)	System should display a string with the current date and time, formatted YMMDDHHMMSSCC, with Ok beneath.				
E-2.2.12.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTM\$(1)	System should display a string with the current date and time, formatted YYYY-MM-DD HH:MM:SS, with Ok beneath. Note that the Century is assumed to be 20, and the hours are in 24 hour format.				
E-2.2.12.4	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT LEFT\$(DTM\$(1),10)	System should display a string with the current date, formatted YYYY-MM-DD, with Ok beneath. Note that the Century is assumed to be 20.				
E-2.2.12.5	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT RIGHT\$(DTM\$(1),8)	System should display a string with the current time, formatted HH:MM:SS, with Ok beneath. Note that the hours are in 24 hour format.				
E-2.2.13.1	AL A2 + MX	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.13.2	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER(0))	System should display 0103, with Ok beneath.				
E-2.2.13.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER(0)),2))	System should display 1, with Ok beneath.				
E-2.2.13.4	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER(0)),2))	System should display 3, with Ok beneath.				
E-2.2.14.1	AL A2 + MX	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-2.2.14.2	AL A2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.14.3	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X)= X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-2.2.14.4	AL A2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-2.2.14.5	AL A2 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-2.2.15.1	AL S2 + MX	Test & Operator	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-2.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGH" 20 COPY DEEK (&A\$+2) , \$3291, PEEK (&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK (&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-2.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-2.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-2.2.16	AL A2 + MX	TESTING COMPLETE	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan
USB BASIC v1.3
E3

Tester Name:	
Date Completed:	
Environment(s) Tested:	AquaLite S1 + Micro Expander Option

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.0.0	AL S1 + MX	Setup AquaLite v1.36						
E-3.0.1	AL S1 + MX		Download & install AquaLite v1.36 from https://aquarius.je/aqualite (unzip files)	AquaLite v1.36 is downloaded and installed on your system.				
E-3.0.2	AL S1 + MX		Launch AquaLite v1.36. (aqualite.exe)	System should boot into "BASIC Press RETURN key to start" flashing screen. Menubar should say AquaLite v1.36 .				
E-3.0.3	AL S1 + MX		Within AquaLite v1.36, go to menu option Tool > Options, select the Hardware tab, and make sure Aquarius I is selected in the Model section, and select Aquarius S1 ROM in the ROM section. Click Ok.	System should beep and reboot.				
E-3.0.4	AL S1 + MX		Within AquaLite v1.36, go to menu option Tool > Options, select the Peripherals tab, and make sure Micro Expander is checked. Click Ok.	System should beep and reboot.				
E-3.0.5	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.0.6	AL S1 + MX		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-3.0.7	AL S1 + MX		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-3.0.8	AL S1 + MX		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.								

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.1.0	AL S1 + MX	Test legacy commands						
E-3.1.1.1	AL S1 + MX	Test CALL xx	From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-3.1.1.2	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.1.3	AL S1 + MX		From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-3.1.1.4	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.1.5	AL S1 + MX		From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-3.1.1.6	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.2	AL S1 + MX	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB folder within the AquaLite program folder, followed by Ok beneath. Note that the contents can vary from system to system.				
E-3.1.3.1	AL S1 + MX	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-3.1.3.2	AL S1 + MX		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-3.1.4	AL S1 + MX	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB > ROMS folder within the AquaLite program folder, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.1.5.1	AL S1 + MX	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-3.1.5.2	AL S1 + MX		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-3.1.5.3	AL S1 + MX		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-3.1.5.4	AL S1 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-3.1.6.1	AL S1 + MX	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-3.1.6.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-3.1.6.3	AL S1 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-3.1.6.4	AL S1 + MX		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB > ROMS folder within the AquaLite program folder, there should be a new file named TEST01.BAS.				
E-3.1.6.5	AL S1 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-3.1.7.1	AL S1 + MX	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-3.1.7.2	AL S1 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-3.1.7.3	AL S1 + MX		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-3.1.7.4	AL S1 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-3.1.6.2 and display Ok beneath.				
E-3.1.8.1	AL S1 + MX	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-3.1.8.2	AL S1 + MX		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-3.1.9.1	AL S1 + MX	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-3.1.9.2	AL S1 + MX		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-3.1.10.1	AL S1 + MX	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-3.1.10.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-3.1.10.3	AL S1 + MX		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-3.1.10.4	AL S1 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-3.1.10.5	AL S1 + MX		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-3.1.10.6	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-3.1.10.7	AL S1 + MX		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB folder within the AquaLite program folder, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-3.1.11.1	AL S1 + MX	Test LOAD a BIN file	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.11.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.1.12.1	AL S1 + MX	Test RUN a ROM file	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.12.2	AL S1 + MX		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-3.1.12.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-3.1.12.4	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.13.1	AL S1 + MX	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-3.1.13.2	AL S1 + MX		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-3.1.14.1	AL S1 + MX	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-3.1.14.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(-123)	System should display FF85 on the next line with Ok beneath.				
E-3.1.14.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-3.1.15	AL S1 + MX	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-3.1.16	AL S1 + MX	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-3.1.17.1	AL S1 + MX	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-3.1.17.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-3.1.18.1	AL S1 + MX	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-3.1.18.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-3.1.19.1	AL S1 + MX	Test EDIT	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.19.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-3.1.19.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-3.1.19.4	AL S1 + MX		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-3.1.19.5	AL S1 + MX		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-3.1.19.6	AL S1 + MX		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-3.1.19.7	AL S1 + MX		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-3.1.19.8	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.1.20.1	AL S1 + MX	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-3.1.20.2	AL S1 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-3.1.20.3	AL S1 + MX		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-3.1.20.4	AL S1 + MX		From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.1.21.1	AL S1 + MX	Test CTRL + C	From the AquaLite menu, select File > Hard Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-3.1.21.2	AL S1 + MX		Hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" should be shown, followed by "Ok" on the next line with a cursor below.				
E-3.1.21.3	AL S1 + MX		From the AquaLite menu, select File > Soft Reset. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-3.1.21.4	AL S1 + MX		Press CTRL + C .	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.2.0	AL S1 + MX	Test NEW commands						
E-3.2.1.1	AL S1 + MX	Test POKE auto-increment	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.2.1.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-3.2.2.1	AL S1 + MX	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.2.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-3.2.3.1	AL S1 + MX	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.3.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-3.2.4.1	AL S1 + MX	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.4.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-3.2.5.1	AL S1 + MX	Test COPY	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.2.5.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-3.2.6.1	AL S1 + MX	Test ATN	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.2.6.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-3.2.7.1	AL S1 + MX	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.7.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("55FF")	System should display 22015 on the next line with Ok beneath.				
E-3.2.8.1	AL S1 + MX	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.8.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				
E-3.2.9.1	AL S1 + MX	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-3.2.9.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display HI at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "I" character.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.2.10.1	AL S1 + MX	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.10.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY (0))	System should show each line typed, and move down to the empty line beneath.				
E-3.2.10.3	AL S1 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-3.2.10.4	AL S1 + MX		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-3.2.11.1	AL S1 + MX	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.11.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "230517010101"	System should display Ok beneath. (Note: On AquaLite, there is no way to actually SET the DateTime, so it will stay set to the hosting computer's system clock.)				
E-3.2.11.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: SDTM "kkk"	System should display SN Error beneath.				
E-3.2.12.1	AL S1 + MX	Test DTMS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.12.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS (0)	System should display a string with the current date and time, formatted YMMDDHHMMSSCC, with Ok beneath.				
E-3.2.12.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS (1)	System should display a string with the current date and time, formatted YYYY-MM-DD HH:MM:SS, with Ok beneath. Note that the Century is assumed to be 20, and the hours are in 24 hour format.				
E-3.2.12.4	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT LEFT\$(DTMS (1) , 10)	System should display a string with the current date, formatted YYYY-MM-DD, with Ok beneath. Note that the Century is assumed to be 20.				
E-3.2.12.5	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT RIGHT(DTMS (1) , 8)	System should display a string with the current time, formatted HH:MM:SS, with Ok beneath. Note that the hours are in 24 hour format.				
E-3.2.13.1	AL S1 + MX	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.13.2	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER (0))	System should display 0103, with Ok beneath.				
E-3.2.13.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER (0)) , 2))	System should display 1, with Ok beneath.				
E-3.2.13.4	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER (0)) , 2))	System should display 3, with Ok beneath.				
E-3.2.14.1	AL S1 + MX	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-3.2.14.2	AL S1 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.14.3	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X)= X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-3.2.14.4	AL S1 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-3.2.14.5	AL S1 + MX		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-3.2.15.1	AL S2 + MX	Test & Operator	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-3.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGH" 20 COPY DEEK (&A\$+2) , \$3291, PEEK (&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK (&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-3.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-3.2.15.4	AL S2 + MX		From the USB BASIC command screen type END and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-3.2.16	AL S1 + MX	TESTING COMPLETE	From the AquaLite menu, select File > Hard Reset, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan

USB BASIC v1.3

E4

Tester Name:

Date Completed:

Environment(s) Tested:

Hardware S2 + Aquarius MX with RTC

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.0.0	HW S2 + MX RTC	Setup Hardware MX + RTC						
E-4.0.1	HW S2 + MX RTC		Download & update MX EPROM to v1.3 (64k)	MX ROM is updated to v1.3				
E-4.0.2	HW S2 + MX RTC		Ensure hardware update to RTC socket has been completed.	MX board should be ready to use RTC unit.				
E-4.0.3	HW S2 + MX RTC		Remove 32k RAM and replace with Dallas DS1244Y DIP RTC unit.	MX board should have the RTC installed in place of RAM.				
E-4.0.4	HW S2 + MX RTC		Install MX unit and boot Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-4.0.5	HW S2 + MX RTC		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-4.0.6	HW S2 + MX RTC		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-4.0.7	HW S2 + MX RTC		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				

DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.1.0	HW S2 + MX RTC	Test legacy commands						
E-4.1.1.1	HW S2 + MX RTC		Test CALL xx	From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-4.1.1.2	HW S2 + MX RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-4.1.1.3	HW S2 + MX RTC			From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-4.1.1.4	HW S2 + MX RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-4.1.1.5	HW S2 + MX RTC			From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-4.1.1.6	HW S2 + MX RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-4.1.2	HW S2 + MX RTC	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB stick. Note that the contents can vary from system to system.				
E-4.1.3.1	HW S2 + MX RTC	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-4.1.3.2	HW S2 + MX RTC		From the USB BASIC command screen type CD"ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-4.1.4	HW S2 + MX RTC	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-4.1.5.1	HW S2 + MX RTC	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-4.1.5.2	HW S2 + MX RTC		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-4.1.5.3	HW S2 + MX RTC		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-4.1.5.4	HW S2 + MX RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.1.6.1	HW S2 + MX RTC	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-4.1.6.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-4.1.6.3	HW S2 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-4.1.6.4	HW S2 + MX RTC		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB drive, there should be a new file named TEST01.BAS.				
E-4.1.6.5	HW S2 + MX RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-4.1.7.1	HW S2 + MX RTC	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-4.1.7.2	HW S2 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-4.1.7.3	HW S2 + MX RTC		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-4.1.7.4	HW S2 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-4.1.6.2 and display Ok beneath.				
E-4.1.8.1	HW S2 + MX RTC	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-4.1.8.2	HW S2 + MX RTC		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-4.1.9.1	HW S2 + MX RTC	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-4.1.9.2	HW S2 + MX RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-4.1.10.1	HW S2 + MX RTC	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-4.1.10.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-4.1.10.3	HW S2 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-4.1.10.4	HW S2 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-4.1.10.5	HW S2 + MX RTC		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-4.1.10.6	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-4.1.10.7	HW S2 + MX RTC		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB drive, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-4.1.11.1	HW S2 + MX RTC	Test LOAD a BIN file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.1.11.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.1.12.1	HW S2 + MX RTC	Test RUN a ROM file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
E-4.1.12.2	HW S2 + MX RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-4.1.12.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-4.1.12.4	HW S2 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
E-4.1.13.1	HW S2 + MX RTC	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-4.1.13.2	HW S2 + MX RTC		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-4.1.14.1	HW S2 + MX RTC	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-4.1.14.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(~123)	System should display FF85 on the next line with Ok beneath.				
E-4.1.14.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-4.1.15	HW S2 + MX RTC	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-4.1.16	HW S2 + MX RTC	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-4.1.17.1	HW S2 + MX RTC	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-4.1.17.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-4.1.18.1	HW S2 + MX RTC	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-4.1.18.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-4.1.19.1	HW S2 + MX RTC	Test EDIT	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.1.19.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-4.1.19.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-4.1.19.4	HW S2 + MX RTC		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-4.1.19.5	HW S2 + MX RTC		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-4.1.19.6	HW S2 + MX RTC		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-4.1.19.7	HW S2 + MX RTC		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-4.1.19.8	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.1.20.1	HW S2 + MX RTC	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-4.1.20.2	HW S2 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-4.1.20.3	HW S2 + MX RTC		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-4.1.20.4	HW S2 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.1.21.1	HW S2 + MX RTC	Test CTRL + C	Power off and then back on the Aquarius, Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-4.1.21.2	HW S2 + MX RTC		Hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.1.21.3	HW S2 + MX RTC		Press the RST (reset) key on the Aquarius. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-4.1.21.4	HW S2 + MX RTC		Press CTRL + C .	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.2.0	HW S2 + MX RTC	Test NEW commands						
E-4.2.1.1	HW S2 + MX RTC	Test POKE auto-increment	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.2.1.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-4.2.2.1	HW S2 + MX RTC	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-4.2.2.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-4.2.3.1	HW S2 + MX RTC	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-4.2.3.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-4.2.4.1	HW S2 + MX RTC	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-4.2.4.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-4.2.5.1	HW S2 + MX RTC	Test COPY	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.2.5.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("Copyright © 1982 by Microsoft, Inc S2" & "USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-4.2.6.1	HW S2 + MX RTC	Test ATN	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.2.6.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-4.2.7.1	HW S2 + MX RTC	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-4.2.7.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("55FF")	System should display 22015 on the next line with Ok beneath.				
E-4.2.8.1	HW S2 + MX RTC	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-4.2.8.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.2.9.1	HW S2 + MX RTC	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.9.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display Hi at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "i" character.)				
E-4.2.10.1	HW S2 + MX RTC	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.10.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-4.2.10.3	HW S2 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-4.2.10.4	HW S2 + MX RTC		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-4.2.11.1	HW S2 + MX RTC	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.11.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN, replacing "YYMMDDHHMMSS" with the current DateTime settings: SDTM "YYMMDDHHMMSS"	System should display Ok beneath.				
E-4.2.11.3	HW S2 + MX RTC		Power off and then back on the Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed with the correct date and time shown at the bottom of the screen, with seconds ticking by.				
E-4.2.12.1	HW S2 + MX RTC	Test DTMS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.12.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(0)	System should display a string with the current date and time, formatted YYMMDDHHMMSSCC, with Ok beneath.				
E-4.2.12.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(1)	System should display a string with the current date and time, formatted YYYY-MM-DD HH:MM:SS, with Ok beneath. Note that the Century is assumed to be 20, and the hours are in 24 hour format.				
E-4.2.12.4	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT LEFT\$(DTMS(1),10)	System should display a string with the current date, formatted YYYY-MM-DD, with Ok beneath. Note that the Century is assumed to be 20.				
E-4.2.12.5	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT RIGHT\$(DTMS(1),8)	System should display a string with the current time, formatted HH:MM:SS, with Ok beneath. Note that the hours are in 24 hour format.				
E-4.2.13.1	HW S2 + MX RTC	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.13.2	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER(0))	System should display 0103, with Ok beneath.				
E-4.2.13.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER(0)),2))	System should display 1, with Ok beneath.				
E-4.2.13.4	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER(0)),2))	System should display 3, with Ok beneath.				
E-4.2.14.1	HW S2 + MX RTC	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-4.2.14.2	HW S2 + MX RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.14.3	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X)= X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-4.2.14.4	HW S2 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-4.2.14.5	HW S2 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-4.2.15.1	AL S2 + MX	Test & Operator	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-4.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGH" 20 COPY DEEK (&A\$+2) , \$3291 , PEEK (&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK (&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-4.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-4.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-4.2.16	HW S2 + MX RTC	TESTING COMPLETE	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan
USB BASIC v1.3
E5

Tester Name:

Date Completed:

Environment(s) Tested:

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.0.0	HW S2 + NO RTC	Setup Hardware MX + RTC						
E-5.0.1	HW S2 + NO RTC		Download & update MX EPROM to v1.3 (64k)	MX ROM is updated to v1.3				
E-5.0.2	HW S2 + NO RTC		Install MX unit and boot Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-5.0.3	HW S2 + NO RTC		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-5.0.4	HW S2 + NO RTC		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-5.0.5	HW S2 + NO RTC		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.								

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.1.0	HW S2 + NO RTC	Test legacy commands						
E-5.1.1.1	HW S2 + NO RTC	Test CALL xx	From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-5.1.1.2	HW S2 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.1.3	HW S2 + NO RTC		From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-5.1.1.4	HW S2 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.1.5	HW S2 + NO RTC		From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-5.1.1.6	HW S2 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.2	HW S2 + NO RTC	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB stick, followed by Ok beneath. Note that the contents can vary from system to system.				
E-5.1.3.1	HW S2 + NO RTC	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-5.1.3.2	HW S2 + NO RTC		From the USB BASIC command screen type CD"ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-5.1.4	HW S2 + NO RTC	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-5.1.5.1	HW S2 + NO RTC	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-5.1.5.2	HW S2 + NO RTC		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-5.1.5.3	HW S2 + NO RTC		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-5.1.5.4	HW S2 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.1.6.1	HW S2 + NO RTC	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-5.1.6.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-5.1.6.3	HW S2 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-5.1.6.4	HW S2 + NO RTC		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB stick, there should be a new file named TEST01.BAS.				
E-5.1.6.5	HW S2 + NO RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-5.1.7.1	HW S2 + NO RTC	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-5.1.7.2	HW S2 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-5.1.7.3	HW S2 + NO RTC		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-5.1.7.4	HW S2 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-5.1.6.2 and display Ok beneath.				
E-5.1.8.1	HW S2 + NO RTC	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-5.1.8.2	HW S2 + NO RTC		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-5.1.9.1	HW S2 + NO RTC	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-5.1.9.2	HW S2 + NO RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-5.1.10.1	HW S2 + NO RTC	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-5.1.10.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-5.1.10.3	HW S2 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-5.1.10.4	HW S2 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-5.1.10.5	HW S2 + NO RTC		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-5.1.10.6	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-5.1.10.7	HW S2 + NO RTC		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-5.1.11.1	HW S2 + NO RTC	Test LOAD a BIN file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.11.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.1.12.1	HW S2 + NO RTC	Test RUN a ROM file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
E-5.1.12.2	HW S2 + NO RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-5.1.12.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-5.1.12.4	HW S2 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
E-5.1.13.1	HW S2 + NO RTC	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-5.1.13.2	HW S2 + NO RTC		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-5.1.14.1	HW S2 + NO RTC	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-5.1.14.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(~123)	System should display FF85 on the next line with Ok beneath.				
E-5.1.14.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-5.1.15	HW S2 + NO RTC	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-5.1.16	HW S2 + NO RTC	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-5.1.17.1	HW S2 + NO RTC	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-5.1.17.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-5.1.18.1	HW S2 + NO RTC	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-5.1.18.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-5.1.19.1	HW S2 + NO RTC	Test EDIT	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.19.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-5.1.19.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-5.1.19.4	HW S2 + NO RTC		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-5.1.19.5	HW S2 + NO RTC		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-5.1.19.6	HW S2 + NO RTC		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-5.1.19.7	HW S2 + NO RTC		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-5.1.19.8	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.1.20.1	HW S2 + NO RTC	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-5.1.20.2	HW S2 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-5.1.20.3	HW S2 + NO RTC		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-5.1.20.4	HW S2 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.21.1	HW S2 + NO RTC	Test CTRL + C	Power off and then back on the Aquarius, Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-5.1.21.2	HW S2 + NO RTC		Hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.21.3	HW S2 + NO RTC		Press the RST (reset) key on the Aquarius. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-5.1.21.4	HW S2 + NO RTC		Press CTRL + C.	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
E-5.1.21.1	HW S2 + NO RTC	Test CTRL + C	Power off and then back on the Aquarius, Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-5.1.21.2	HW S2 + NO RTC		Hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.1.21.3	HW S2 + NO RTC		Press the RST (reset) key on the Aquarius. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-5.1.21.4	HW S2 + NO RTC		Press CTRL + C.	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.2.0	HW S2 + NO RTC	Test NEW commands						
E-5.2.1.1	HW S2 + NO RTC	Test POKE auto-increment	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.2.1.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-5.2.2.1	HW S2 + NO RTC	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-5.2.2.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-5.2.3.1	HW S2 + NO RTC	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-5.2.3.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-5.2.4.1	HW S2 + NO RTC	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-5.2.4.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-5.2.5.1	HW S2 + NO RTC	Test COPY	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.2.5.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("Copyright © 1982 by Microsoft, Inc S2" & "USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.2.6.1	HW S2 + NO RTC	Test ATN	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
E-5.2.6.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN (1)	System should display .785398 on the next line with Ok beneath.				
E-5.2.7.1	HW S2 + NO RTC	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.7.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC ("55FF")	System should display 22015 on the next line with Ok beneath.				
E-5.2.8.1	HW S2 + NO RTC	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.8.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$ (DEEK (12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				
E-5.2.9.1	HW S2 + NO RTC	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.9.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display HI at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "I" character.)				
E-5.2.10.1	HW S2 + NO RTC	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.10.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-5.2.10.3	HW S2 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-5.2.10.4	HW S2 + NO RTC		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-5.2.11.1	HW S2 + NO RTC	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.11.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN, replacing "YYMMDDHHMMSS" with the current DateTime settings: SDTM "YYMMDDHHMMSS"	System should display Ok beneath.				
E-5.2.11.3	HW S2 + NO RTC		Power off and then back on the Aquarius..	The "Aquarius MX USB BASIC v1.3" screen should be displayed with NO DATE AND TIME shown at the bottom of the screen.				
E-5.2.12.1	HW S2 + NO RTC	Test DTMS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.12.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS (0)	System should print a blank line with Ok beneath.				
E-5.2.12.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS (1)	System should print a blank line with Ok beneath.				
E-5.2.13.1	HW S2 + NO RTC	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.13.2	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$ (VER (0))	System should display 0103, with Ok beneath.				
E-5.2.13.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL (LEFT\$(HEX\$ (VER (0)) , 2))	System should display 1, with Ok beneath.				
E-5.2.13.4	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL (RIGHT\$(HEX\$ (VER (0)) , 2))	System should display 3, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-5.2.14.1	HW S2 + NO RTC	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-5.2.14.2	HW S2 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.14.3	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X) = X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-5.2.14.4	HW S2 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-5.2.14.5	HW S2 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				
E-5.2.15.1	AL S2 + MX	Test & Operator	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-5.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGH" 20 COPY DEEK(&A\$+2), \$3291, PEEK(&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK(&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-5.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-5.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-5.2.16	HW S2 + NO RTC	TESTING COMPLETE	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "Copyright © 1982 by Microsoft, Inc S2" screen should be displayed with "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan
USB BASIC v1.3
E6

Tester Name:

Date Completed:

Environment(s) Tested:

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.0.0	HW S1 + MX RTC	Setup Hardware MX + RTC						
E-6.0.1	HW S1 + MX RTC		Download & update MX EPROM to v1.3 (64k)	MX ROM is updated to v1.3				
E-6.0.2	HW S1 + MX RTC		Ensure hardware update to RTC socket has been completed.	MX board should be ready to use RTC unit.				
E-6.0.3	HW S1 + MX RTC		Remove 32k RAM and replace with Dallas DS1244Y DIP RTC unit.	MX board should have the RTC installed in place of RAM.				
E-6.0.4	HW S1 + MX RTC		Install MX unit and boot Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-6.0.5	HW S1 + MX RTC		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07".				
E-6.0.6	HW S1 + MX RTC		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-6.0.7	HW S1 + MX RTC		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "USB BASIC v1.3" on the next line, followed by "OK" on the next line with a cursor below.				
DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.								

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.1.0	HW S1 + MX RTC	Test legacy commands						
E-6.1.1.1	HW S1 + MX RTC		From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-6.1.1.2	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.1.3	HW S1 + MX RTC		From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-6.1.1.4	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.1.5	HW S1 + MX RTC		From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.				
E-6.1.1.6	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.2	HW S1 + MX RTC	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB stick, followed by Ok beneath. Note that the contents can vary from system to system.				
E-6.1.3.1	HW S1 + MX RTC	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-6.1.3.2	HW S1 + MX RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-6.1.4	HW S1 + MX RTC	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-6.1.5.1	HW S1 + MX RTC	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-6.1.5.2	HW S1 + MX RTC		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-6.1.5.3	HW S1 + MX RTC		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-6.1.5.4	HW S1 + MX RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.1.6.1	HW S1 + MX RTC	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-6.1.6.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-6.1.6.3	HW S1 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-6.1.6.4	HW S1 + MX RTC		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB stick, there should be a new file named TEST01.BAS.				
E-6.1.6.5	HW S1 + MX RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-6.1.7.1	HW S1 + MX RTC	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-6.1.7.2	HW S1 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-6.1.7.3	HW S1 + MX RTC		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-6.1.7.4	HW S1 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-6.1.6.2 and display Ok beneath.				
E-6.1.8.1	HW S1 + MX RTC	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-6.1.8.2	HW S1 + MX RTC		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-6.1.9.1	HW S1 + MX RTC	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-6.1.9.2	HW S1 + MX RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-6.1.10.1	HW S1 + MX RTC	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-6.1.10.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-6.1.10.3	HW S1 + MX RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-6.1.10.4	HW S1 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-6.1.10.5	HW S1 + MX RTC		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-6.1.10.6	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-6.1.10.7	HW S1 + MX RTC		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-6.1.11.1	HW S1 + MX RTC	Test LOAD a BIN file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.11.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.1.12.1	HW S1 + MX RTC	Test RUN a ROM file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.12.2	HW S1 + MX RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-6.1.12.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-6.1.12.4	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.13.1	HW S1 + MX RTC	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-6.1.13.2	HW S1 + MX RTC		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-6.1.14.1	HW S1 + MX RTC	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-6.1.14.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(~123)	System should display FF85 on the next line with Ok beneath.				
E-6.1.14.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-6.1.15	HW S1 + MX RTC		From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-6.1.16	HW S1 + MX RTC	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-6.1.17.1	HW S1 + MX RTC	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-6.1.17.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-6.1.18.1	HW S1 + MX RTC	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-6.1.18.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-6.1.19.1	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.19.2	HW S1 + MX RTC	Test EDIT	From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-6.1.19.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-6.1.19.4	HW S1 + MX RTC		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-6.1.19.5	HW S1 + MX RTC		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-6.1.19.6	HW S1 + MX RTC		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-6.1.19.7	HW S1 + MX RTC		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-6.1.19.8	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.1.20.1	HW S1 + MX RTC	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-6.1.20.2	HW S1 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-6.1.20.3	HW S1 + MX RTC		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-6.1.20.4	HW S1 + MX RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.1.21.1	HW S1 + MX RTC	Test CTRL + C	Power off and then back on the Aquarius, Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-6.1.21.2	HW S1 + MX RTC		Hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" should be shown, followed by "Ok" on the next line with a cursor below.				
E-6.1.21.3	HW S1 + MX RTC		Press the RST (reset) key on the Aquarius. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-6.1.21.4	HW S1 + MX RTC		Press CTRL + C.	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.2.0	HW S1 + MX RTC	Test NEW commands						
E-6.2.1.1	HW S1 + MX RTC	Test POKE auto-increment	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.2.1.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-6.2.2.1	HW S1 + MX RTC	Test POKE range	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.2.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-6.2.3.1	HW S1 + MX RTC	Test POKE step	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.3.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-6.2.4.1	HW S1 + MX RTC	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.4.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-6.2.5.1	HW S1 + MX RTC	Test COPY	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.2.5.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-6.2.6.1	HW S1 + MX RTC	Test ATN	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.2.6.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-6.2.7.1	HW S1 + MX RTC	Test DEC	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.7.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("\$55FF")	System should display 22015 on the next line with Ok beneath.				
E-6.2.8.1	HW S1 + MX RTC	Test DEEK	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.8.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				
E-6.2.9.1	HW S1 + MX RTC	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-6.2.9.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display Hi at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "i" character.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.2.10.1	HW S1 + MX RTC	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.10.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-6.2.10.3	HW S1 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-6.2.10.4	HW S1 + MX RTC		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-6.2.11.1	HW S1 + MX RTC	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.11.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN, replacing "YYMMDDHHMMSS" with the current DateTime settings: SDTM "YYMMDDHHMMSS"	System should display Ok beneath.				
E-6.2.11.3	HW S1 + MX RTC		Power off and then back on the Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed with the correct date and time shown at the bottom of the screen, with seconds ticking by.				
E-6.2.12.1	HW S1 + MX RTC	Test DTMS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.12.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(0)	System should display a string with the current date and time, formatted YYMMDDHHMMSSCC, with Ok beneath.				
E-6.2.12.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(1)	System should display a string with the current date and time, formatted YYYY-MM-DD HH:MM:SS, with Ok beneath. Note that the Century is assumed to be 20, and the hours are in 24 hour format.				
E-6.2.12.4	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT LEFT\$(DTMS(1),10)	System should display a string with the current date, formatted YYYY-MM-DD, with Ok beneath. Note that the Century is assumed to be 20.				
E-6.2.12.5	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT RIGHT\$(DTMS(1),8)	System should display a string with the current time, formatted HH:MM:SS, with Ok beneath. Note that the hours are in 24 hour format.				
E-6.2.13.1	HW S1 + MX RTC	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.13.2	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER(0))	System should display 0103, with Ok beneath.				
E-6.2.13.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER(0)),2))	System should display 1, with Ok beneath.				
E-6.2.13.4	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER(0)),2))	System should display 3, with Ok beneath.				
E-6.2.14.1	HW S1 + MX RTC	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-6.2.14.2	HW S1 + MX RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.14.3	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X) = X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-6.2.14.4	HW S1 + MX RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-6.2.14.5	HW S1 + MX RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-6.2.15.1	AL S2 + MX	Test & Operator	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-6.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 A\$="ABCDEFGH" 20 COPY DEEK (&A\$+2) , \$3291, PEEK (&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK (&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-6.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-6.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-6.2.16	HW S1 + MX RTC	TESTING COMPLETE	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								



Alpha Test Plan

USB BASIC v1.3

E7

Tester Name:	
Date Completed:	
Environment(s) Tested:	Hardware S1 + Aquarius MX NO RTC

Setup

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.0.0	HW S1 + NO RTC	Setup Hardware MX + RTC						
E-7.0.1	HW S1 + NO RTC		Download & update MX EPROM to v1.3 (64k)	MX ROM is updated to v1.3				
E-7.0.2	HW S1 + NO RTC		Install MX unit and boot Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-7.0.3	HW S1 + NO RTC		Press the A key within the emulator.	The "About USB BASIC" screen should be displayed. Release Date should show "Alpha 2023-05-07"				
E-7.0.4	HW S1 + NO RTC		Press any key to exit the About screen.	The "Aquarius MX USB BASIC v1.3" screen should be displayed.				
E-7.0.5	HW S1 + NO RTC		Press RETURN/ENTER key to go to the USB BASIC command screen . <i>Note: This screen is the starting point for most tests in this plan.</i>	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
DO NOT CONTINUE IF ANY TESTS IN THIS SECTION DID NOT PASS! CONTACT THE TESTING COORDINATOR, Sean Harrington sph@1stage.com.								

Legacy Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.1.0	HW S1 + NO RTC	Test legacy commands						
E-7.1.1.1	HW S1 + NO RTC		Test CALL xx	From the USB BASIC command screen type CALL \$8000 and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-7.1.1.2	HW S1 + NO RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-7.1.1.3	HW S1 + NO RTC			From the USB BASIC command screen type CALL -32768 and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-7.1.1.4	HW S1 + NO RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-7.1.1.5	HW S1 + NO RTC			From the USB BASIC command screen type CALL 32768 (NO minus sign!) and hit RETURN	The cursor should move down one row, and the system should freeze.			
E-7.1.1.6	HW S1 + NO RTC			Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.			
E-7.1.2	HW S1 + NO RTC	Test CAT	From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the USB stick, followed by Ok beneath. Note that the contents can vary from system to system.				
E-7.1.3.1	HW S1 + NO RTC	Test CD	From the USB BASIC command screen type CD and hit RETURN	The cursor should move down one row, and a / character should be displayed, followed by Ok beneath.				
E-7.1.3.2	HW S1 + NO RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-7.1.4	HW S1 + NO RTC	Test DIR	From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, followed by Ok beneath. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-7.1.5.1	HW S1 + NO RTC	Test CLS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				
E-7.1.5.2	HW S1 + NO RTC		From the USB BASIC command screen type CLS 8 and hit RETURN	System should clear the screen and show Ok in black letters on a grey background.				
E-7.1.5.3	HW S1 + NO RTC		From the USB BASIC command screen type CLS \$7D and hit RETURN	System should clear the screen and show Ok in white letters on a dark green background.				
E-7.1.5.4	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok in black letters on a cyan background.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.1.6.1	HW S1 + NO RTC	Test SAVE a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-7.1.6.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE 20 CLS 30 PRINT "Hello"	System should show each line typed, and move down to the empty line beneath.				
E-7.1.6.3	HW S1 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-7.1.6.4	HW S1 + NO RTC		From the USB BASIC command screen type SAVE "TEST01.BAS" and hit RETURN	The cursor should move down one row and display Ok beneath. In the USB stick, there should be a new file named TEST01.BAS.				
E-7.1.6.5	HW S1 + NO RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file should be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-7.1.7.1	HW S1 + NO RTC	Test LOAD a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-7.1.7.2	HW S1 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should display NO PROGRAM LINES with Ok beneath.				
E-7.1.7.3	HW S1 + NO RTC		From the USB BASIC command screen type LOAD "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-7.1.7.4	HW S1 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program listed in test E-7.1.6.2 and display Ok beneath.				
E-7.1.8.1	HW S1 + NO RTC	Test RUN a BASIC file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-7.1.8.2	HW S1 + NO RTC		From the USB BASIC command screen type RUN "TEST01.BAS" and hit RETURN	System should clear the screen, print Hello at the top, and display Ok beneath.				
E-7.1.9.1	HW S1 + NO RTC	Test DEL	From the USB BASIC command screen type DEL "TEST01.BAS" and hit RETURN	System should display Ok beneath.				
E-7.1.9.2	HW S1 + NO RTC		From the USB BASIC command screen type CAT and hit RETURN	System should display a brief listing of the contents of the folder, and the "TEST01.BAS" file SHOULD NOT be listed among those files. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll through the full list of contents.				
E-7.1.10.1	HW S1 + NO RTC	Test SAVE a BIN file	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-7.1.10.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 REM Testing SAVE BIN 20 POKE \$8000,97,98,99,100 30 PRINT "Done"	System should show each line typed, and move down to the empty line beneath.				
E-7.1.10.3	HW S1 + NO RTC		From the USB BASIC command screen type LIST and hit RETURN	System should show all three lines in the program and display Ok beneath.				
E-7.1.10.4	HW S1 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print Done and display Ok beneath the program listing.				
E-7.1.10.5	HW S1 + NO RTC		From the USB BASIC command screen type CD "/" and hit RETURN	System should display Ok beneath.				
E-7.1.10.6	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: SAVE "POKE.BIN", \$8000, 4	System should display Ok beneath.				
E-7.1.10.7	HW S1 + NO RTC		From the USB BASIC command screen type DIR and hit RETURN	System should display a detailed listing of the contents of the USB stick, and the file named "POKE.BIN" should be listed in the contents. Note that the RETURN/ENTER key may have to be pressed one or more times to scroll past the full list of contents.				
E-7.1.11.1	HW S1 + NO RTC	Test LOAD a BIN file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.1.11.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: LOAD "POKE.BIN", \$3242	System should display abcd in the middle of the screen, with Ok beneath the text you just typed.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.1.12.1	HW S1 + NO RTC	Test RUN a ROM file	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.1.12.2	HW S1 + NO RTC		From the USB BASIC command screen type CD "ROMS" and hit RETURN	The cursor should move down one row and display Ok beneath.				
E-7.1.12.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: RUN "SNAFU.ROM"	System should load the SNAFU game ROM and display the SNAFU title screen.				
E-7.1.12.4	HW S1 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.1.13.1	HW S1 + NO RTC	Test DEBUG	From the USB BASIC command screen type DEBUG and hit RETURN	The AQUBUG screen should pop up with white text on a blue background.				
E-7.1.13.2	HW S1 + NO RTC		On the AQUBUG screen type the letter Q	System should return to the USB BASIC command screen, showing the DEBUG command with Ok beneath.				
E-7.1.14.1	HW S1 + NO RTC	Test HEX\$	From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(12288)	System should display 3000 on the next line with Ok beneath.				
E-7.1.14.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(~123)	System should display FF85 on the next line with Ok beneath.				
E-7.1.14.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(65535)	System should display FFFF on the next line with Ok beneath.				
E-7.1.15	HW S1 + NO RTC	Test JOY	From the USB BASIC command screen type the code below and try to type RETURN and the 1 key at about the same time (maybe a slight delay before the 1 key): PRINT JOY(0)	System should display 64 on the next line with Ok beneath. If you weren't able to get it to work exactly right, a 0 might be displayed instead of the 64. Try a couple of times to get it to work, if you can.				
E-7.1.16	HW S1 + NO RTC	Test IN	From the USB BASIC command screen type the code below and hit RETURN: PRINT IN(\$FF)	System should display 247 on the next line with Ok beneath.				
E-7.1.17.1	HW S1 + NO RTC	Test PSG	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously.				
E-7.1.17.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PSG 8,0,7,0	System should stop playing the tone.				
E-7.1.18.1	HW S1 + NO RTC	Test OUT	From the USB BASIC command screen type the code below and hit RETURN: PSG 8,15,0,148,1,1,7,56	System should play a Db4 tone continuously and print Ok beneath.				
E-7.1.18.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: OUT 247,8 OUT \$F6,0	System should print Ok after each RETURN, and then should stop playing the tone after the second.				
E-7.1.19.1	HW S1 + NO RTC	Test EDIT	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.1.19.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: 10 REM Testing EDIT	System should show each line typed, and move down to the empty line beneath.				
E-7.1.19.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: EDIT 10	System should list the previously entered line 10 with a blue cursor and white text positioned over the R in the REM command.				
E-7.1.19.4	HW S1 + NO RTC		Within the line 10 edit with the cursor on the R of REM, press the SPACE bar to insert a space between the line number 10 and the REM statement.	System should display line 10 with a SPACE between the 10 and the REM command.				
E-7.1.19.5	HW S1 + NO RTC		Within the line 10 edit with the cursor on the R of REM, CTRL + / eleven times so the cursor is on top of the SPACE after the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE after the word Testing.				
E-7.1.19.6	HW S1 + NO RTC		Within the line 10 edit with the cursor on the SPACE between the word Testing and EDIT, press the DELETE/BACKSPACE key three times to delete the letters "ing" at the end of the word Testing.	System should list the previously entered line 10 with a blue cursor and white text positioned over the SPACE before the word EDIT.				
E-7.1.19.7	HW S1 + NO RTC		Within the line 10 edit with the cursor on the SPACE between the word Test and EDIT, press CTRL + P eight times so the cursor is over the letter R in REM, and then hit RETURN/ENTER.	The cursor should go to the line beneath line 10, and should NOT display Ok beneath.				
E-7.1.19.8	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: LIST 10	System should display a blank line, then list line 10 again, with Ok beneath.				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.1.20.1	HW S1 + NO RTC	Test LOCATE	From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-7.1.20.2	HW S1 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should move the cursor to the middle of the screen.				
E-7.1.20.3	HW S1 + NO RTC		With the cursor in the middle of the screen, press the G key.	System should display a "g" in the middle of the screen, then go to the next line and print Ok beneath.				
E-7.1.20.4	HW S1 + NO RTC		Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.1.21.1	HW S1 + NO RTC	Test CTRL + C	Power off and then back on the Aquarius, Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There should NOT be an option near the bottom that says "<CTRL+C> Warm Start"				
E-7.1.21.2	HW S1 + NO RTC		Hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" should be shown, followed by "Ok" on the next line with a cursor below.				
E-7.1.21.3	HW S1 + NO RTC		Press the RST (reset) key on the Aquarius. Do NOT hit RETURN. Stay on the AquaLite menu.	The "Aquarius MX USB BASIC v1.3" screen should be displayed. There SHOULD be an option near the bottom that says "<CTRL+C> Warm Start"				
E-7.1.21.4	HW S1 + NO RTC		Press CTRL + C.	A blank screen with "Break", followed by "Ok" on the next line with a cursor below.				
PLEASE CONTINUE EVEN IF ALL TESTS IN THIS SECTION DID NOT PASS.								

New Commands

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.2.0	HW S1 + NO RTC	Test NEW commands						
E-7.2.1.1	HW S1 + NO RTC	Test POKE auto-increment	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.2.1.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE 12945,97,98,99,100	The screen should print abcd in a row towards the middle bottom of the screen.				
E-7.2.2.1	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.2.2	HW S1 + NO RTC	Test POKE range	From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291 TO \$3299,97	The screen should print aaaaaaaa (nine letter a's) in a row towards the middle bottom of the screen.				
E-7.2.3.1	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.3.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,97,STEP 40,97,STEP 40,97	The screen should print aaa (three letter a's) in a downward line at the middle bottom of the screen.				
E-7.2.4.1	HW S1 + NO RTC	Test POKE strings	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.4.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: POKE \$3291,"Hubba",STEP 40,"Bubba"	The screen should print the words Hubba Bubba stacked on top of each other at the middle bottom of the screen.				
E-7.2.5.1	HW S1 + NO RTC	Test COPY	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.2.5.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: COPY \$3000,\$3000+440,120	The text at the top of the screen ("USB BASIC v1.3" should be duplicated in the middle of the screen, with the Ok beneath the COPY command near the top.				
E-7.2.6.1	HW S1 + NO RTC	Test ATN	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.2.6.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT ATN(1)	System should display .785398 on the next line with Ok beneath.				
E-7.2.7.1	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.7.2	HW S1 + NO RTC	Test DEC	From the USB BASIC command screen type the code below and hit RETURN: PRINT DEC("\$55FF")	System should display 22015 on the next line with Ok beneath.				
E-7.2.8.1	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.8.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(DEEK(12288+41))	System should display 6B4F on the next line with Ok beneath. (\$4F is the "O" character and \$6B is the "k" character from the top left of the screen.)				
E-7.2.9.1	HW S1 + NO RTC	Test DOKE	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok.				
E-7.2.9.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: DOKE 12288+41,\$6948	System should display Hi at the top left of the screen and show Ok beneath the DOKE command line. (\$48 is the "H" character and \$69 is the "i" character.)				

Test No	Environment	Description	Process	Expected Results	Actual Results ("As Expected" ok)	Pass/Fail	Initials	Date/Time
E-7.2.10.1	HW S1 + NO RTC	Test KEY	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.10.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 CLS 42 20 LOCATE 20,12 30 PRINT CHR\$(KEY(0))	System should show each line typed, and move down to the empty line beneath.				
E-7.2.10.3	HW S1 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should clear the screen to GREEN letters on a PURPLE background and move the GREEN cursor to the middle of the screen, waiting for input.				
E-7.2.10.4	HW S1 + NO RTC		With the cursor in the middle of the screen, press the M key (without the SHIFT key pressed).	System should display a "m" in the middle of the screen, then go to the next line and print Ok beneath.				
E-7.2.11.1	HW S1 + NO RTC	Test SDTM	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.11.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN, replacing "YYMMDDHHMMSS" with the current DateTime settings: SDTM "YYMMDDHHMMSS"	System should display Ok beneath.				
E-7.2.11.3	HW S1 + NO RTC		Power off and then back on the Aquarius.	The "Aquarius MX USB BASIC v1.3" screen should be displayed with NO DATE AND TIME shown at the bottom of the screen.				
E-7.2.12.1	HW S1 + NO RTC	Test DTMS	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.12.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(0)	System should print a blank line with Ok beneath.				
E-7.2.12.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT DTMS(1)	System should print a blank line with Ok beneath.				
E-7.2.13.1	HW S1 + NO RTC	Test VER	From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.13.2	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT HEX\$(VER(0))	System should display 0103, with Ok beneath.				
E-7.2.13.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(LEFT\$(HEX\$(VER(0)),2))	System should display 1, with Ok beneath.				
E-7.2.13.4	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT VAL(RIGHT\$(HEX\$(VER(0)),2))	System should display 3, with Ok beneath.				
E-7.2.14.1	HW S1 + NO RTC	Test DEF FN / FN	From the USB BASIC command screen type NEW and hit RETURN	System should display Ok beneath.				
E-7.2.14.2	HW S1 + NO RTC		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.14.3	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 DEF FN A(X) = X+7 20 PRINT FN A(9) 30 PRINT FN A(20)	System should show each line typed, and move down to the empty line beneath.				
E-7.2.14.4	HW S1 + NO RTC		From the USB BASIC command screen type RUN and hit RETURN	System should print 16 on one line, 27 beneath it, with Ok beneath the 27.				
E-7.2.14.5	HW S1 + NO RTC		From the USB BASIC command screen type the code below and hit RETURN: PRINT FN A(7)	System should print 14, with Ok beneath.				
E-7.2.15.1	AL S2 + MX	Test & Operator	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
E-7.2.15.2	AL S2 + MX		From the USB BASIC command screen type the code below and hit RETURN after each line: 10 AS="ABCDEFGH" 20 COPY DEEK(&A\$+2), \$3291, PEEK(&A\$) 30 PRINT "A\$ length =" + STR\$(PEEK(&A\$))	System should show each line typed, and move down to the empty line beneath.				
E-7.2.15.3	AL S2 + MX		From the USB BASIC command screen type CLS and hit RETURN	System should clear the screen and show Ok .				
E-7.2.15.4	AL S2 + MX		From the USB BASIC command screen type RUN and hit RETURN	System should print A\$ length = 7 with Ok beneath, and should print ABCDEFG near the middle bottom of the screen.				
E-7.2.16	HW S1 + NO RTC	TESTING COMPLETE	Power off and then back on the Aquarius, and then hit the RETURN/ENTER key to go to USB BASIC.	The "USB BASIC v1.3" on the next line, followed by "Ok" on the next line with a cursor below.				
TESTING IS COMPLETE								