

Step	Action	Reaction	Error	Remedies	
1	Connect to computer				
2	Push power button	White screen, green pulsing LED	No reaction	Push power button again. Check (+) and (-) to make sure they are not accidentally connected to each other. Replace cable to computer.	
3	Open Mu editor				
4	Open Serial dialogue in Mu				
5	Click in Serial, ctrl-c	<b>Adafruit CircuitPython 5.3.0 on 2020-04-29;</b> <b>Adafruit Feather M4 Express with samd51j19</b>			
6	Click in Serial, ctrl-d	<b>code.py output: Hello World!</b>			
7	Double click reset button	Drive listing on host computer becomes FEATHERBOOT:			
8	Copy file adafruit-circuitpython-feather_m4_express-en_US-7.2.5.uf2 to FEATHERBOOT drive	FEATHERBOOT drive self-ejects, becomes CIRCUITPY drive.			
9	Reopen Serial on Mu. ctrl-c	<b>Adafruit CircuitPython 7.2.5 on 2022-04-06;</b> <b>Adafruit Feather M4 Express with samd51j19</b>			
10	Copy folder lib to CIRCUITPY drive. If asked, replace existing folder.				
11	Copy test_codes, blink_indicator, code.py	No reaction	Serial in REPL mode.	ctrl-d to resume	
11	Serial, ctrl-d	<b>initialized indicator</b> , no other reaction	Wiring fault in LED circuit	Check A56-GND, A55-(+), LED case flat on underside of board, 100Ω resistor (+) to A60, LED - lead to B55,	
11	Serial, ctrl-d	<b>initialized indicator</b> , blinking LED	indicator OK		
12	Copy test_codes, display_screen, code.py	<b>initialized display</b> , STELLA splash screen showing	>>>, no display showing	ctrl-d to resume	
13	Copy test_codes, pushbutton, code.py	<b>Ready: push record/pause button to test it</b> , pushing the button toggles between modes 0 and 1	no change of mode showing.	Check pushbutton wiring, to (-) and to blue wire. Check capacitor installed with correct polarity.	
14	Copy test_codes, i2c_bus_scan, code.py	<b>I2C addresses found: ['0x18', '0x49', '0x5a', '0x68', '0x77']</b>	Fewer than 5 addresses showing.	Check wiring for the sensor whose address is not showing in the list.	0x18 -- AT Air Temperature - MCP9808x49 -- VIS 6 channel Spectrometer - AS7262 0x5a -- TIR Surface Temperature - Melexis MLX90614 0x68 -- clock: Real time clock - PCF85230x77 -- WX
15	Copy test_codes, WX_pressure_temperature_humidity, code.py	If successful: <b>Temperature: 24.7 C</b> <b>Humidity: 50.2 %</b> <b>Pressure: 1011.9 hPa</b> <b>Altitude = 11.02 meters</b>	If unsuccessful: <b>Traceback (most recent call last):</b> <b>File "code.py", line 14, in &lt;module&gt;</b> <b>File "adafruit_bme280/basic.py", line 250, in humidity</b> <b>File "adafruit_bme280/basic.py", line 118, in read_temperature</b> <b>File "adafruit_bme280/basic.py", line 150, in get_status</b> <b>File "adafruit_bme280/basic.py", line 301, in</b>	Check wiring of WX = BME280 sensor.	
16	Copy test_codes, AT_air_temperature, code.py	If successful: <b>Temperature: 25.6875 C 78.2375 F</b>	If unsuccessful:[test circuit does not induce error]	Check wiring of AT = MCP9808 sensor.	
17	Copy test_codes, VIS_spectrum, code.py	If successful:Bright white source LED will shine briefly. <b>V:450nm: 15.9</b> <b>B:500nm: 22.0</b> <b>G:550nm: 25.1</b> <b>Y:570nm: 23.9</b> <b>O:600nm: 21.5</b> <b>R:650nm: 18.7</b>	If unsuccessful: <b>Traceback (most recent call last):</b> <b>File "code.py", line 10, in &lt;module&gt;</b> <b>File "adafruit_as726x.py", line 443, in __init__</b> <b>File "adafruit_bus_device/i2c_device.py", line 61, in __init__</b> <b>File "adafruit_bus_device/i2c_device.py", line 183, in __probe_for_device</b> <b>ValueError: No I2C device at address: 0x49</b>	Check wiring of VIS = AS7262 sensor.	
18	Copy test_codes, TIR_remote_temperature, code.py	If successful: <b>Object Temp: 24.29</b>	If unsuccessful: <b>Traceback (most recent call last):</b> <b>File "code.py", line 15, in &lt;module&gt;</b> <b>File "adafruit_mlx90614.py", line 120, in object_temperature</b> <b>File "adafruit_mlx90614.py", line 123, in read_temp</b> <b>File "adafruit_mlx90614.py", line 133, in read_16</b> <b>OSError: [Errno 5] Input/output error</b>	Check wiring of TIR = MLX90614 sensor.	
19	Copy test_codes, NIR_spectrum, code.py	If successful:Bright white source LED will shine at a couple of different brightnesses. <b>uW/cm^2</b> <b>610nm: 12.8</b> <b>680nm: 10.6</b> <b>730nm: 19.5</b> <b>760nm: 21.7</b> <b>810nm: 18.0</b> <b>860nm: 16.0</b>	If unsuccessful:[test circuit does not induce error]	Check wiring of NIR = AS7263 sensor.	
20	Copy test_codes, real_time_clock, code.py	If successful: <b>Clock battery voltage is OK.</b> <b>The date is Tuesday 2085-5-19</b> <b>the day of the month is 19</b> <b>the month is 5</b> <b>The time is 22:36:09</b>	This reaction is the same whether or not there is a clock battery installed. If you haven't installed a clock battery already, please do so now. Then follow the instructions to set the clock to UTC. <a href="https://time.is/UTC">https://time.is/UTC</a>		
21	Copy test_codes, SD_card_write_read, code.py	If successful: <b>Printing lines in file:</b> <b>year month day batch checksum</b> <b>Program Completed</b>	If unsuccessful: <b>Traceback (most recent call last):</b> <b>File "code.py", line 19, in &lt;module&gt;</b> <b>File "adafruit_sdcard.py", line 100, in __init__</b> <b>File "adafruit_sdcard.py", line 121, in __init_card</b> <b>OSError: no SD card</b>	Two possible causes for this error: 1. No SD card installed. Install an SD card to correct this. 2. Adalogger has not been modified to connect the SD_CS chip select line to pin 11. If the SD_CS line is still connected to pin 10, the software won't find the card, even if	
22	Copy code-and-libraries, code.py to run the full STELLA code.	If successful: <b>Memory B: Used 136768 /Free 16640 begin infinite loop, mode == 0</b> , and display will show data table.			