

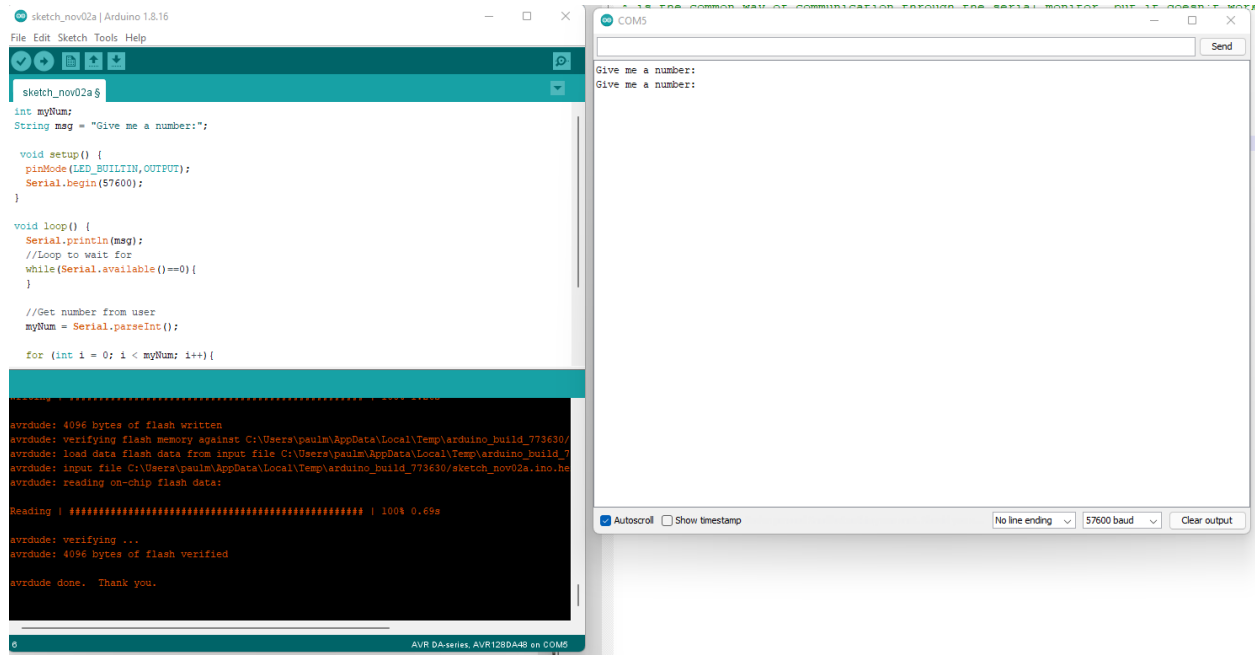
## Task #111 Serial Monitor functioning with “Serial” variable

### Key Findings:

1. The default “Serial” keyword in the IDE applies to the “Serial0” within the core file code. When using “Serial” in the IDE, that object will point to the “Serial0” variable in the core package.
2. Changing the “USART 0” section of pins\_arduino.h in the variants folder:

```
175 // USART 0
176 // No pinswap by default
177 #define HWSERIAL0 &USART1
178 #define HWSERIAL0_DRE_VECTOR USART1_DRE_vect
179 #define HWSERIAL0_DRE_VECTOR_NUM USART1_DRE_vect_num
180 #define HWSERIAL0_RXC_VECTOR USART1_RXC_vect
181 #define HWSERIAL0_MUX PORTMUX_USART1_DEFAULT_gc
182 #define HWSERIAL0_MUX_PINSWAP_1 PORTMUX_USART1_ALT1_gc
183 #define PIN_HWSERIAL0_TX PIN_PC0
184 #define PIN_HWSERIAL0_RX PIN_PC1
185 #define PIN_HWSERIAL0_XCK PIN_PC2
186 #define PIN_HWSERIAL0_XDIR PIN_PC3
187 #define PIN_HWSERIAL0_TX_PINSWAP_1 PIN_PC4
188 #define PIN_HWSERIAL0_RX_PINSWAP_1 PIN_PC5
189 #define PIN_HWSERIAL0_XCK_PINSWAP_1 PIN_PC6
190 #define PIN_HWSERIAL0_XDIR_PINSWAP_1 PIN_PC7
191
192
193 // USART1
194 // No pinswap by default
195 #define HWSERIAL1 &USART1
196 #define HWSERIAL1_DRE_VECTOR USART1_DRE_vect
197 #define HWSERIAL1_DRE_VECTOR_NUM USART1_DRE_vect_num
198 #define HWSERIAL1_RXC_VECTOR USART1_RXC_vect
199 #define HWSERIAL1_MUX PORTMUX_USART1_DEFAULT_gc
200 #define HWSERIAL1_MUX_PINSWAP_1 PORTMUX_USART1_ALT1_gc
201 #define PIN_HWSERIAL1_TX PIN_PC0
202 #define PIN_HWSERIAL1_RX PIN_PC1
203 #define PIN_HWSERIAL1_XCK PIN_PC2
204 #define PIN_HWSERIAL1_XDIR PIN_PC3
205 #define PIN_HWSERIAL1_TX_PINSWAP_1 PIN_PC4
206 #define PIN_HWSERIAL1_RX_PINSWAP_1 PIN_PC5
207 #define PIN_HWSERIAL1_XCK_PINSWAP_1 PIN_PC6
208 #define PIN_HWSERIAL1_XDIR_PINSWAP_1 PIN_PC7
209
```

The pins now point at USART1 instead of USART0. Doing this will allow the avr128DA48 to utilize the serial monitor properly.



Note: This solution is a workaround and should be discussed with our project sponsor. It is more of a proof of concept at this point. Our sponsor should clarify his desired setup moving forward with this serial monitor issue.