

Errata of
Embedded Systems with ARM Cortex-M Microcontrollers in Assembly Language and C
Second Edition
ISBN-10: 0982692633
Yifeng Zhu

April 13, 2016

Thank you all for providing me feedbacks and corrections!

Chapter 1. See a Program Running

Chapter 2. Data Representation

- Page 38, last figure, “Barrow” should be “Borrow”.

Chapter 3. ARM Instruction Set Architecture

- Page 52, in the C code of strlen, “while(pStr[i]){ i++ };” should be “while(pStr[i]){ i++; }”
- Page 56, last paragraph, “smart match” should be “smart watch”.
- Page 60, the paragraph under Figure 3-4, “to order to” should be “in order to”
- Page 64, bullet 3, “a register shifted to a constant amount of bits” should read as “a register shifted by a constant amount of bits”

Chapter 4. Arithmetic and Logic

- Page 75, Section 4.1, first paragraph, “overflow (O)” should be “overflow (V)”.
- Page 75, the bottom paragraph, “the process combines them” should be “the processor combines them”
- Page 92, in the middle, “MOV r1, #1, LSL #31” should be “MOV r1, #(1<<31)”.
- Page 92, above the table, “because the result of ~~exclusive-OR~~ is 0” should read as “because the result of AND is 0”.

Chapter 5. Load and Store

- Page 109, Question 5, we should add square brackets to register r0.
LDRSB r1, [r0]
LDRSH r1, [r0]
LDRB r1, [r0]
LDRH r1, [r0]

Chapter 6. Branch and Conditional Execution

- Page 111, Section 61. “Table 2-3 lists the conditional flags” should be “Table 6-1 lists the conditional flags”
- Page 116, “their equivalent implement” should be “their equivalent implementation”
- Page 128, in Example 6-17, “r6 is branch index” should be “r2 is branch index”

Chapter 7. Structured Programming

- Page 139, Figure 7-5, all three “DCW” should be “DCD”.
- Page 140, Figure 7-6, all “DCW” should be “DCD”.

Chapter 8. Subroutines

- Page 162, first paragraph of Section 8.1, “use the branch and link (BL) instruction call a subroutine.” Should be “use the branch and link (BL) instruction **to** call a subroutine”

Chapter 9. 64-bit Data Processing

Chapter 10. Mixing C and Assembly

- Page 228, First sentence of Section 10.3.1, “A C program can have inline assembly ~~can~~ by using the “__asm” keyword” should read as “A C program can have inline assembly by using the “__asm” keyword”
- Page 230, Example 10-14, “extern **void** strlen(char *s)” should be “extern **int** strlen(char *s)”

Chapter 11. Interrupt

- Page 251, under Figure 11-9, “processor might a different clocking scheme” should read as “processor might **use** a different clocking scheme”

Chapter 12. Fixed-point and Floating-point Arithmetic

- Page 238, section 11.2, “The processor serves stops” should read as “The processor stops the currently running interrupt handler”.
- Page 255, in Table 11-4, “mamanufacturer” should be “manufacturer”.

Chapter 13. Instruction Encoding and Decoding

Chapter 14. Generic-purpose I/O

- Page 338, title of Figure 14-3, “Non-inverting means V_{out} is connected to the non-inverting terminal (*i.e.*, the plus input lead)” should read as “Non-inverting means V_{in} is connected to the non-inverting terminal (*i.e.*, the plus input lead)”
- Page 354, last paragraph, “loop up” should be “look up”
- Page 355, in Figure 14-22 flowchart, the “Yes” and “No” to the question “Is key released” should be swapped. In the same figure, we need to add a “No” to the branch of the second question “Are all column inputs one?”
- Page 356, in the second bullet point, “should changes the mode” should be “should change the mode”

Chapter 15. General-purpose Timers

- Page 365, first paragraph, “should sets” should be “should set”.
- Page 372, in Figure 15-11, “Brighness” should be “Brightness”.
- Page 374, “MOV r1, =TIM_ARR_ARR” should be “MOV r1, #TIM_ARR_ARR”.

- Page 374, “STR r0, [r7, #TIM_PSC]” should be “STR r1, [r7, #TIM_PSC]”.
- Page 381, bottom of the page, the comment “// Detect only rising edges in this example” should be read as “// Detect both rising and falling edges in this example”.

Chapter 16. Stepper Motor Control

- Page 396, “Figure 16-11 shows the activation sequence of half-stepping: $A\bar{B}$, A , AB , B , \bar{A} , \bar{A} , $\bar{A}\bar{B}$, and \bar{B} .” should read as “Figure 16-11 shows the activation sequence of half-stepping: $A\bar{B}$, A , AB , B , \bar{A} , \bar{A} , $\bar{A}\bar{B}$, and \bar{B} .”
- Page 400, in the program, “CCR_MicroStepping” should be “CCR_MicroStepping”.

Chapter 17. Liquid-crystal Display (LCD)

- Page 415, “For example, the ASCII value of letter ‘A’ is 0x40” should read as “For example, the ASCII value of letter ‘A’ is 0x41”.

Chapter 18. Real-time Clock (RTC)

Chapter 19. Direct Memory Access (DMA)

- Page 442, in Example 19-1, “DMAChannel1_IRQHandler” should be “DMA1_Channel1_IRQHandler”.

Chapter 20. Analog-to-Digital Converter

Chapter 21. Digital-to-Analog Converter

Chapter 22. Serial Communication Protocols

Chapter 23. Multitasking

Chapter 24. Digital Signal Processing