

When does the interrupt trigger occur?

When NVIC_ST_CURRENT_R finishes counting down.

In which file is the interrupt vector?

In startup.s

List the steps that occur after the trigger and before the processor executes the handler.

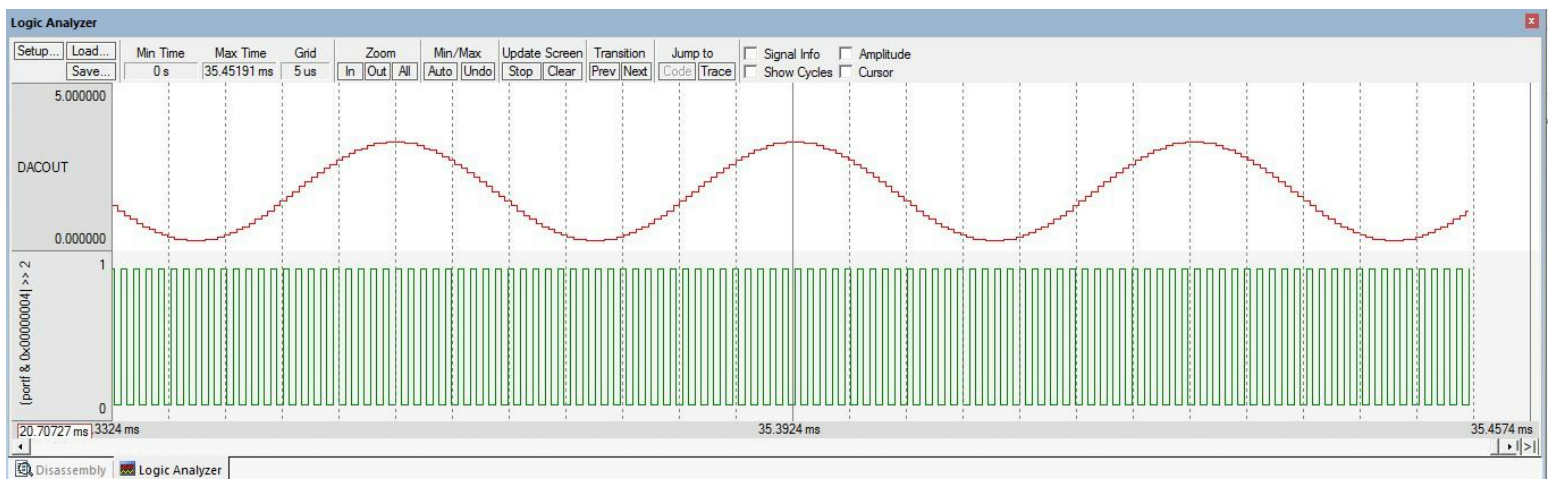
PC is saved in LR, interrupt vector is loaded in to PC

BX LR just moves LR in to PC, how does this actually return?

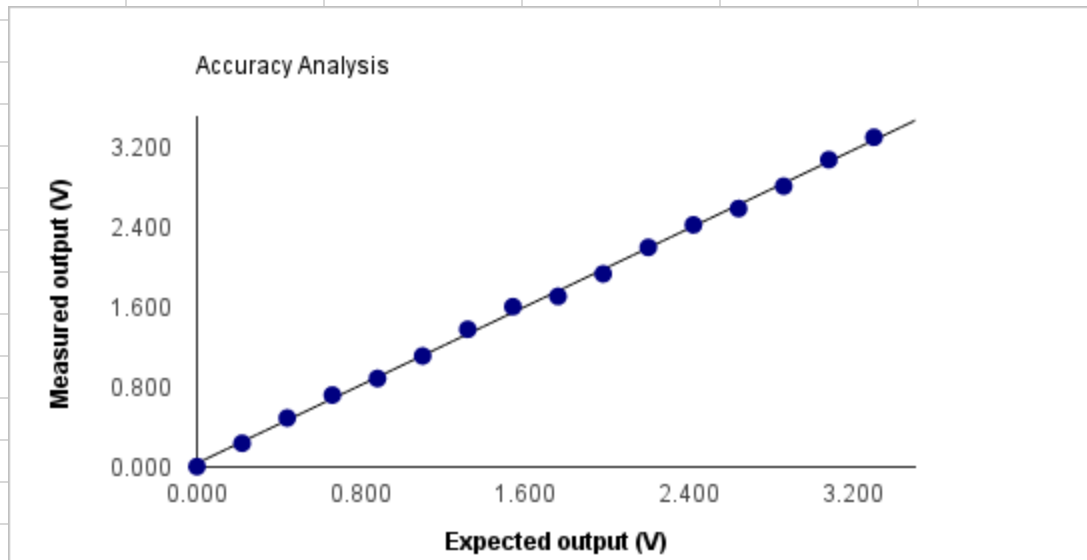
LR contains the PC before the interrupt occurred, so when it gets moved back in to PC the program jumps back to wherever it was before as if the interrupt had not occurred.

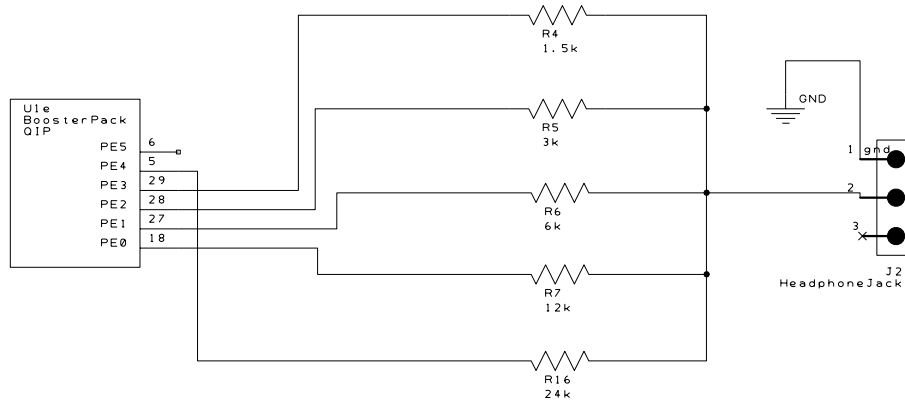
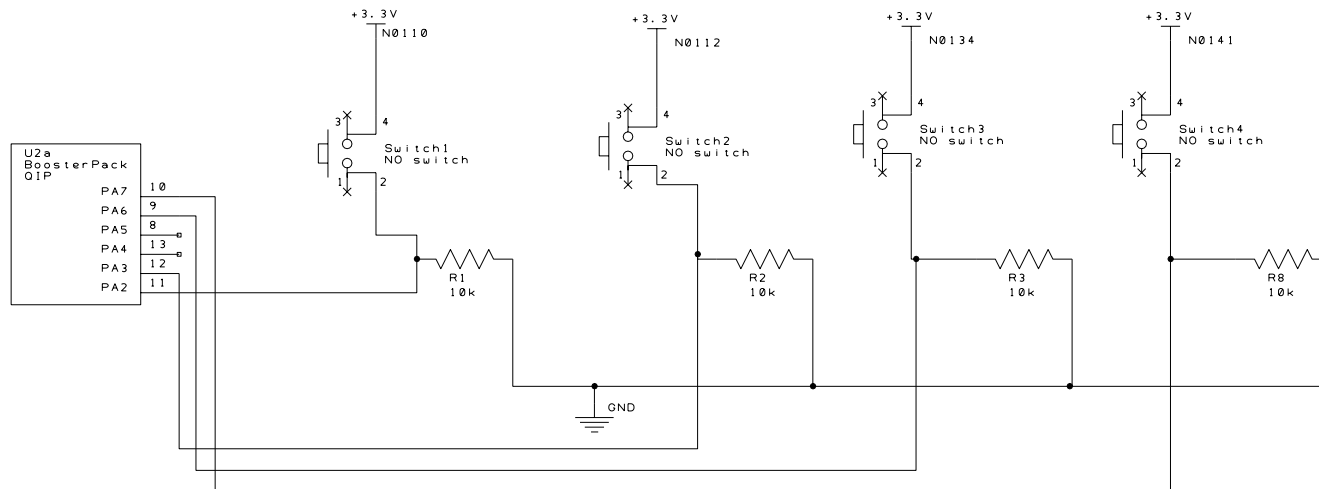
preciseWave[64]

x3174	32	x317C	54	x3184	63	x318C	5 4	x3194	32	x319C	10	x31A4	1	x31AC	10
x3175	35	x317D	56	x3185	63	x318D	5 2	x3195	29	x319D	9	x31A5	1	x31AD	12
x3176	38	x317E	58	x3186	62	x318E	4 9	x319	26	x319E	6	x31A6	2	x31AE	15
x3177	41	x317F	59	x3187	62	x318F	4 7	x3197	23	x319F	5	x31A7	2	x31AF	17
x3178	44	x3180	61	x3188	61	x3190	4 4	x3198	20	x31A0	3	x31A8	3	x31B0	20
x3179	47	x3181	62	x3189	59	x3191	4 1	x3199	17	x31A1	2	x31A9	5	x31B1	23
x317A	49	x3182	62	x318A	59	x3192	3 8	x319A	15	x31A2	2	x31AA	6	x31B2	26
x317B	52	x3183	63	x318B	56	x3193	3 5	x319B	12	x31A3	1	x31AB	8	x31B3	29



Fill in experimental data for Lab 6					
n	Actual (V)	Theory (V)	Error (V)	Error /3.3V	Resolution (V)
0	0.004	0.000	0.004	0.12%	
1	0.237	0.220	0.017	0.52%	0.233
2	0.490	0.440	0.050	1.52%	0.253
3	0.719	0.660	0.059	1.79%	0.229
4	0.885	0.880	0.005	0.15%	0.166
5	1.110	1.100	0.010	0.30%	0.225
6	1.377	1.320	0.057	1.73%	0.267
7	1.603	1.540	0.063	1.91%	0.226
8	1.706	1.760	0.054	1.64%	0.103
9	1.931	1.980	0.049	1.48%	0.225
10	2.196	2.200	0.004	0.12%	0.265
11	2.421	2.420	0.001	0.03%	0.225
12	2.584	2.640	0.056	1.70%	0.163
13	2.808	2.860	0.052	1.58%	0.224
14	3.073	3.080	0.007	0.21%	0.265
15	3.297	3.300	0.003	0.09%	0.224
Average accuracy of full scale(V)=			0.031	0.93%	
Average resolution (V)=			0.220		





All resistors are 1/4 watt 5% carbon composition
 C1 is ceramic Z5U
 Switches are www.BGMicro.com SWT1043
 Red LEDs: T1 3/4. 20mA Digikey 160-1087-ND
 Yellow LEDs: T1 3/4. 20mA Digikey 160-1088-ND
 Green LEDs: T1 3/4. 20mA Digikey 160-1089-ND
 Slide pot: Bourns SSHA20B20300 www.AllElectronics.com SP-20K

University Of Texas At Austin

Schematic Name: EK-LM4F120XL or EK-TM4C123GXL

Name(s): Don Ton, Domino Weir

Date: October 22, 2015

Semester: Fall 2015