

Spectra Command/Response Timings

D Protocol

Part 2

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¹\$Header: d:/Binder2/Timings/RCS/PPTime.tex,v 1.7 2008-07-08 11:50:51-07 Hamilton Exp Hamilton \$

²tocdepth = 2

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A Results from Data Captured Response Times

A.1 Results for run s3pp1

A.1.1 Test Details

This is a test run using a Spectra III. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.1, page 33.

There were this many reply times that were analyzed:

1 366 lines in S3PP1.TIM

A.1.2 Typical response times

The full set of response times are plotted in Figure 2, page 5.

```
s3pp1.typ
1 1, 0.001040
2 2, 0.001049
3 3, 0.001043
4 4, 0.001048
5 5, 0.001042
6 6, 0.001042
7 7, 0.001042
8 8, 0.001042
9 9, 0.001050
10 10, 0.001042
11 11, 0.001050
12 12, 0.001040
13 13, 0.001041
14 14, 0.000999
15 15, 0.001051
16 16, 0.001043
17 17, 0.001042
18 18, 0.001040
19 19, 0.001121
20 20, 0.001133
21 21, 0.001041
22 22, 0.001049
23 23, 0.001047
24 24, 0.001025
25 25, 0.001041
```

A.1.3 The minimum response times

All response times are plotted in Figure 1, page 4 by number of identical responses and their duration.

```
s3pp1.min
1 240, 0.000277
2 144, 0.000761
3 155, 0.000869
4 72, 0.000873
```

```
5 260, 0.000875
6 107, 0.000881
7 43, 0.000882
8 189, 0.000886
9 208, 0.000887
10 148, 0.000977
11 254, 0.000979
12 92, 0.000987
```

A.1.4 The maximum response times

All response times are plotted in Figure 1, page 4 by number of identical responses and their duration.

```
s3pp1.max
1 263, 1.372996
2 263, 1.376971
3 263, 1.379557
4 263, 1.381323
5 251, 1.383403
6 263, 1.384132
7 263, 1.386736
8 227, 1.387148
9 190, 1.389125
10 208, 1.398069
11 263, 1.399313
12 263, 1.434365
```

A.1.5 The most common response times

All response times are plotted in Figure 1, page 4 by number of identical responses and their duration.

```
s3pp1.mde
1 6, 0.001039
2 6, 0.001050
3 9, 0.001034
4 10, 0.001036
5 13, 0.001040
6 20, 0.001047
7 22, 0.001048
8 23, 0.001035
9 24, 0.001049
10 27, 0.001043
11 52, 0.001041
12 70, 0.001042
```

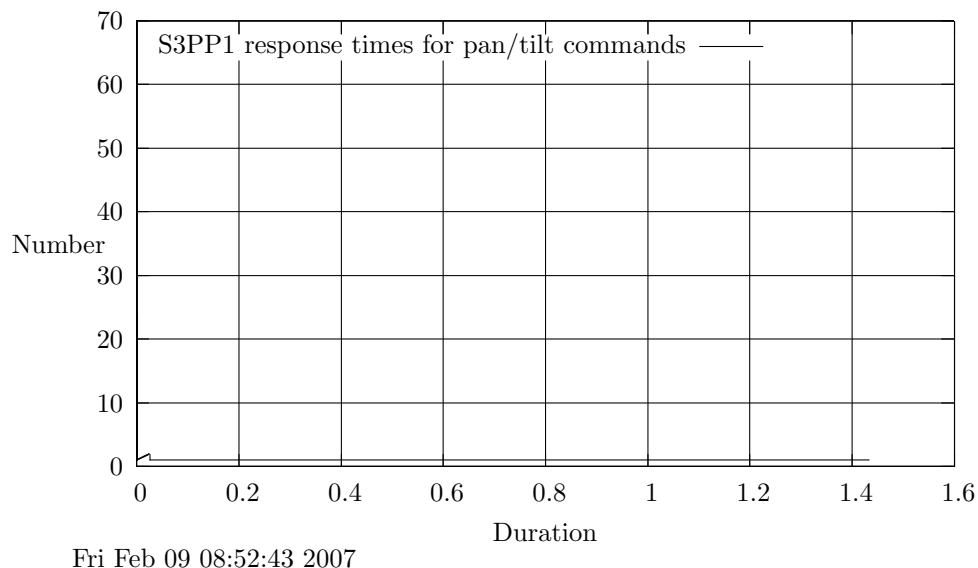


Figure 1: Durations of Responses from Run s3pp1

A.1.6 Test Run Data

- 1 Event 1 (2/8/2007 1:05:17.362093 PM) through
- 2 Event 5,470 (2/8/2007 1:08:41.929367 PM)

- 1 There were a total of 3591 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 192.705225 seconds from the start of data collection
- 4
- 5 There were a total of 1879 DTE bytes transferred
- 6 The first DTE byte came in at 0.008266 seconds from the start of data collection
- 7 The last DTE byte was at 204.567274 seconds from the start of data collection

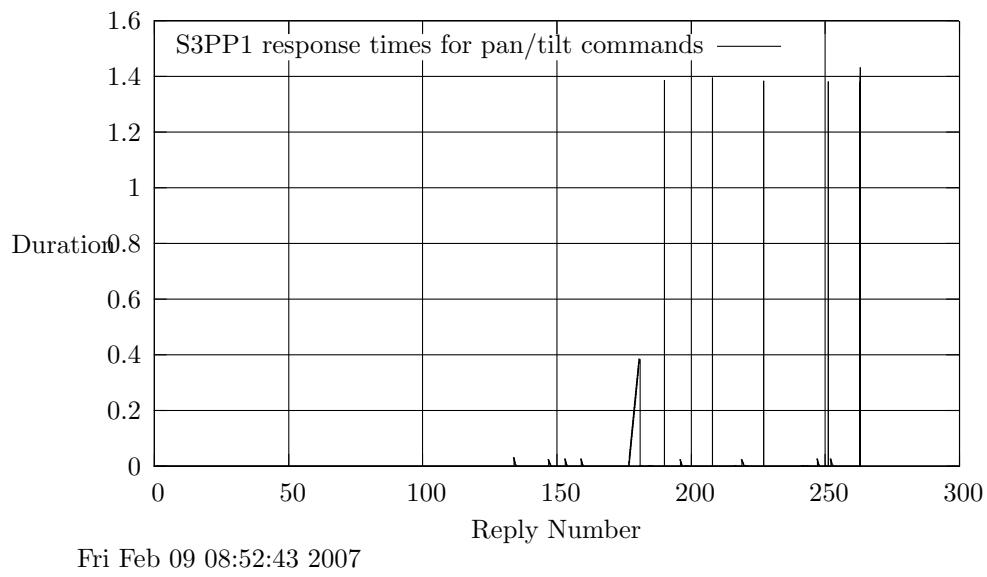


Figure 2: Response Timings for Commands from Run s3pp1

A.2 Results for run s3pp2

A.2.1 Test Details

This is a test run using a Spectra III. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.1, page 33.

There were this many reply times that were analyzed:

```
1      386 lines in S3PP2.TIM
```

A.2.2 Typical response times

The full set of response times are plotted in Figure 4, page 8.

```
s3pp2.typ
1      1,  0.001041
2      2,  0.001042
3      3,  0.001036
4      4,  0.001048
5      5,  0.001034
6      6,  0.001040
7      7,  0.001048
8      8,  0.001037
9      9,  0.001048
10     10, 0.001047
11     11, 0.001034
12     12, 0.001042
13     13, 0.001048
14     14, 0.001035
15     15, 0.001042
16     16, 0.001041
17     17, 0.001049
18     18, 0.001042
19     19, 0.001042
20     20, 0.001048
21     21, 0.001042
22     22, 0.001043
23     23, 0.001040
24     24, 0.001036
25     25, 0.001047
```

A.2.3 The minimum response times

All response times are plotted in Figure 3, page 7 by number of identical responses and their duration.

```
s3pp2.min
1      232, 0.000867
2      236, 0.000868
3      237, 0.000868
4      148, 0.000869
5       83, 0.000875
6      129, 0.000875
7      236, 0.000875
8      128, 0.000878
```

```
9      39,  0.000881
10     225, 0.000881
11     150, 0.000884
12      37, 0.000886
```

A.2.4 The maximum response times

All response times are plotted in Figure 3, page 7 by number of identical responses and their duration.

```
s3pp2.max
1      218, 1.375392
2      180, 1.377789
3      236, 1.377900
4      218, 1.377998
5      199, 1.379135
6      236, 1.379872
7      218, 1.380074
8      248, 1.385278
9      248, 1.385796
10     199, 1.399626
11     180, 1.410336
12     236, 1.426671
```

A.2.5 The most common response times

All response times are plotted in Figure 3, page 7 by number of identical responses and their duration.

```
s3pp2.mde
1       8,  0.001046
2       8,  0.001050
3      15,  0.001034
4      15,  0.001035
5      16,  0.001036
6      18,  0.001049
7      23,  0.001043
8      24,  0.001040
9      30,  0.001047
10     30,  0.001048
11     46,  0.001041
12     55,  0.001042
```

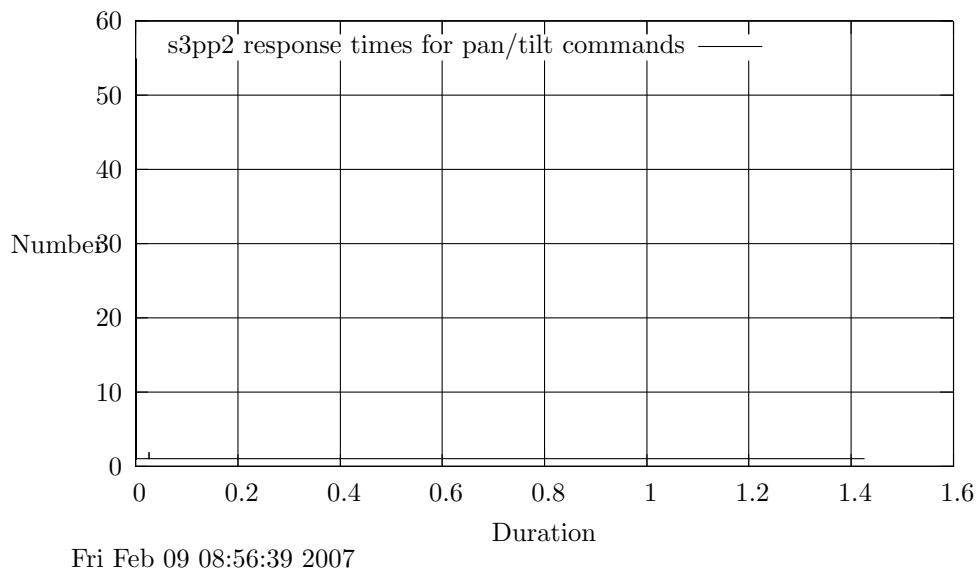


Figure 3: Durations of Responses from Run s3pp2

A.2.6 Test Run Data

- 1 Event 1 (2/8/2007 1:10:01.323705 PM) through
- 2 Event 5,576 (2/8/2007 1:14:13.851309 PM)

- 1 There were a total of 3591 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 249.089054 seconds from the start of data collection
- 4
- 5 There were a total of 1985 DTE bytes transferred
- 6 The first DTE byte came in at 0.007968 seconds from the start of data collection
- 7 The last DTE byte was at 252.527604 seconds from the start of data collection

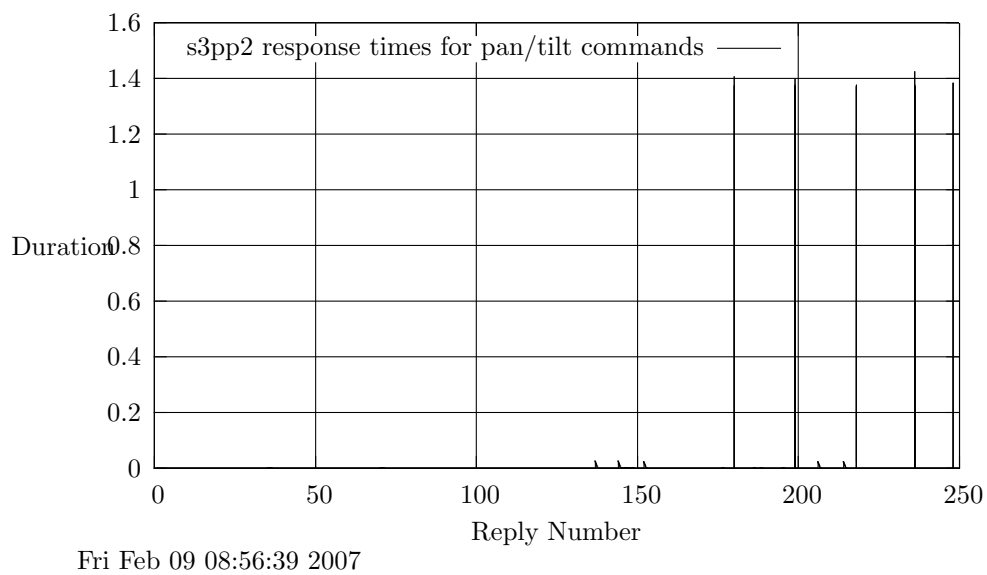


Figure 4: Response Timings for Commands from Run s3pp2

A.3 Results for run s3steps

A.3.1 Test Details

This is a test run using a Spectra III. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.2, page 39.

There were this many reply times that were analyzed:

```
1      729 lines in S3STEPS.TIM
```

A.3.2 Typical response times

The full set of response times are plotted in Figure 6, page 11.

```
s3steps.typ
1      1,  0.001052
2      2,  0.001038
3      3,  0.001049
4      4,  0.001041
5      5,  0.001041
6      6,  0.001048
7      7,  0.001043
8      8,  0.001219
9      9,  0.001042
10     10, 0.001043
11     11, 0.001040
12     12, 0.001048
13     13, 0.001043
14     14, 0.001048
15     15, 0.001047
16     16, 0.001057
17     17, 0.001039
18     18, 0.001035
19     19, 0.001047
20     20, 0.001042
21     21, 0.001042
22     22, 0.001042
23     23, 0.001042
24     24, 0.001040
25     25, 0.001035
```

A.3.3 The minimum response times

All response times are plotted in Figure 5, page 10 by number of identical responses and their duration.

```
s3steps.min
1      92,  0.000874
2     486,  0.000874
3     491,  0.000874
4      87,  0.000875
5     106,  0.000875
6     119,  0.000875
7     388,  0.000875
8     457,  0.000875
```

```
9     478,  0.000875
10     54,  0.000876
11    356,  0.000876
12    360,  0.000876
```

A.3.4 The maximum response times

All response times are plotted in Figure 5, page 10 by number of identical responses and their duration.

```
s3steps.max
1     253,  0.001202
2     296,  0.001203
3      37,  0.001208
4     401,  0.001208
5     613,  0.001209
6     682,  0.001210
7     661,  0.001213
8     380,  0.001214
9      99,  0.001215
10    111,  0.001215
11      8,  0.001219
12    616,  0.001226
```

A.3.5 The most common response times

All response times are plotted in Figure 5, page 10 by number of identical responses and their duration.

```
s3steps.mde
1      10,  0.001034
2      11,  0.001046
3      22,  0.001036
4      26,  0.001050
5      35,  0.001035
6      40,  0.001040
7      52,  0.001047
8      55,  0.001043
9      69,  0.001049
10     71,  0.001048
11     76,  0.001041
12    134,  0.001042
```

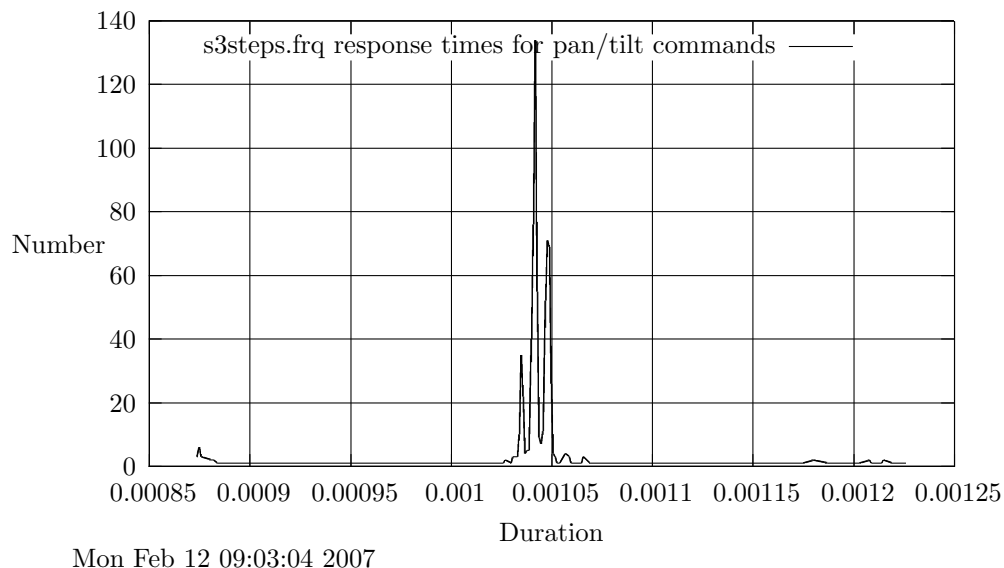


Figure 5: Durations of Responses from Run s3steps

A.3.6 Test Run Data

- 1 Event 1 (2/8/2007 11:38:34.871513 AM) through
- 2 Event 9,025 (2/8/2007 11:43:14.377122 AM)

- 1 There were a total of 5054 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 279.497405 seconds from the start of data collection
- 4
- 5 There were a total of 3971 DTE bytes transferred
- 6 The first DTE byte came in at 0.007873 seconds from the start of data collection
- 7 The last DTE byte was at 279.505609 seconds from the start of data collection

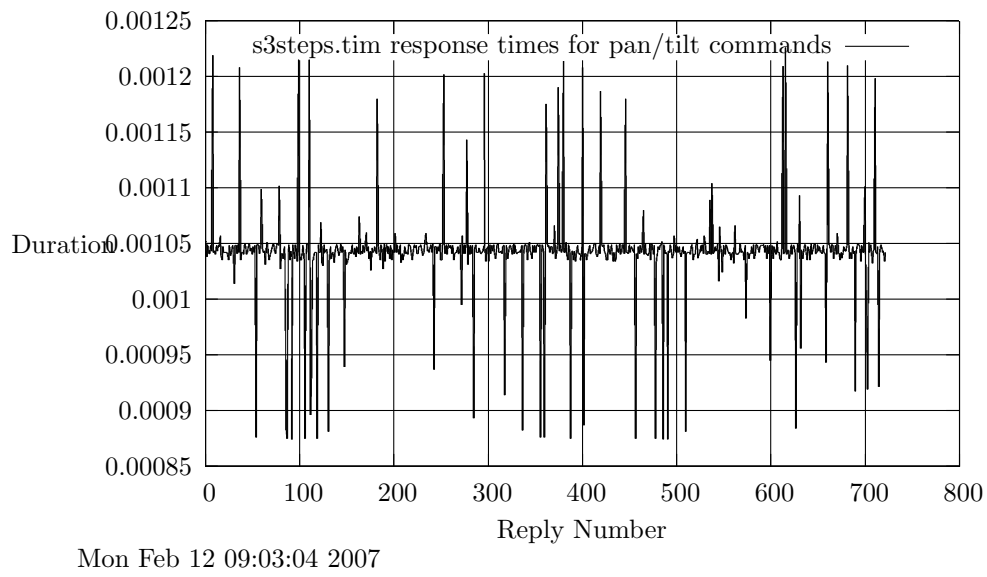


Figure 6: Response Timings for Commands from Run s3steps

A.4 Results for run s3steps1

A.4.1 Test Details

This is a test run using a Spectra III. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.2, page 39.

There were this many reply times that were analyzed:

```
1      729 lines in S3STEPS1.TIM
```

A.4.2 Typical response times

The full set of response times are plotted in Figure 8, page 14.

```
s3steps1.typ
1      1,  0.001042
2      2,  0.001048
3      3,  0.001042
4      4,  0.001142
5      5,  0.001047
6      6,  0.001126
7      7,  0.001041
8      8,  0.001046
9      9,  0.001043
10     10, 0.001049
11     11, 0.001034
12     12, 0.001041
13     13, 0.001035
14     14, 0.001047
15     15, 0.001047
16     16, 0.001047
17     17, 0.001136
18     18, 0.001047
19     19, 0.001041
20     20, 0.001040
21     21, 0.001040
22     22, 0.001042
23     23, 0.001040
24     24, 0.001040
25     25, 0.001043
```

A.4.3 The minimum response times

All response times are plotted in Figure 7, page 13 by number of identical responses and their duration.

```
s3steps1.min
1      88,  0.000875
2     296,  0.000875
3     397,  0.000875
4     532,  0.000876
5     603,  0.000876
6     679,  0.000878
7     217,  0.000880
8     500,  0.000880
```

```
9     531,  0.000881
10    359,  0.000882
11    423,  0.000883
12    442,  0.000897
```

A.4.4 The maximum response times

All response times are plotted in Figure 7, page 13 by number of identical responses and their duration.

```
s3steps1.max
1     646,  0.001209
2     711,  0.001209
3     608,  0.001210
4     705,  0.001211
5      59,  0.001212
6     567,  0.001214
7     607,  0.001215
8     381,  0.001216
9     486,  0.001216
10    153,  0.001218
11    172,  0.001218
12    498,  0.001228
```

A.4.5 The most common response times

All response times are plotted in Figure 7, page 13 by number of identical responses and their duration.

```
s3steps1.mde
1      12,  0.001044
2      14,  0.001046
3      20,  0.001036
4      23,  0.001034
5      32,  0.001035
6      35,  0.001040
7      52,  0.001049
8      56,  0.001043
9      61,  0.001047
10     72,  0.001048
11     88,  0.001041
12    133,  0.001042
```

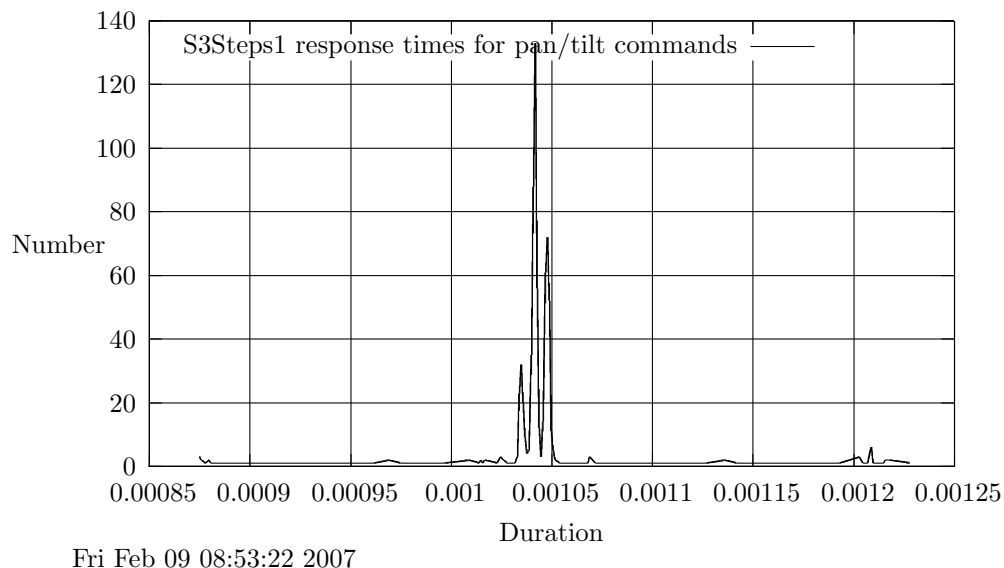
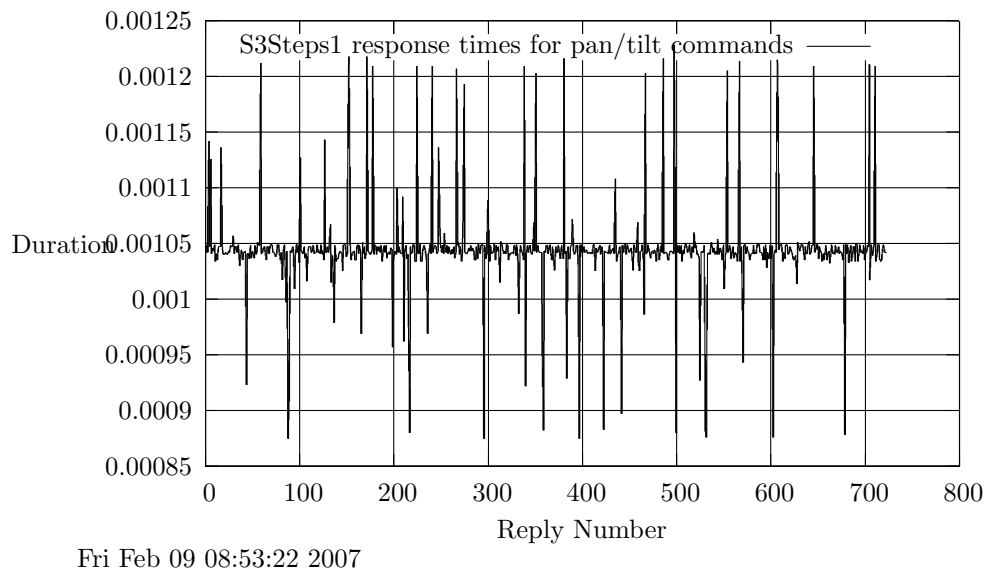


Figure 7: Durations of Responses from Run s3steps1

A.4.6 Test Run Data

- 1 Event 1 (2/8/2007 1:20:57.829566 PM) through
- 2 Event 9,025 (2/8/2007 1:25:37.385668 PM)
- 1 There were a total of 5054 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 279.548206 seconds from the start of data collection
- 4
- 5 There were a total of 3971 DTE bytes transferred
- 6 The first DTE byte came in at 0.008034 seconds from the start of data collection
- 7 The last DTE byte was at 279.556102 seconds from the start of data collection

Figure 8: Response Timings for Commands from Run `s3steps1`

A.5 Results for run s4pp1

A.5.1 Test Details

This is a test run using a Spectra IV. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.1, page 33.

There were this many reply times that were analyzed:

```
1      368 lines in S4PP1.TIM
```

A.5.2 Typical response times

The full set of response times are plotted in Figure 10, page 17.

```
s4pp1.typ
1      1,  0.001049
2      2,  0.001042
3      3,  0.001209
4      4,  0.001048
5      5,  0.001036
6      6,  0.001033
7      7,  0.121708
8     11,  0.001043
9     12,  0.001037
10    13,  0.001058
11    14,  0.001047
12    15,  0.001034
13    16,  0.001043
14    17,  0.001050
15    18,  0.001047
16    19,  0.001033
17    20,  0.001043
18    21,  0.001035
19    21,  0.411519
20    21,  0.418501
21    21,  0.433499
22    21,  0.497349
23    21,  0.472561
24    21,  0.489022
25    21,  0.543492
```

A.5.3 The minimum response times

All response times are plotted in Figure 9, page 16 by number of identical responses and their duration.

```
s4pp1.min
1     136,  0.000865
2      72,  0.000869
3      46,  0.000874
4      53,  0.000874
5      89,  0.000875
6      97,  0.000875
7      89,  0.000880
8     141,  0.000892
```

```
9     114,  0.000898
10    125,  0.000900
11     97,  0.000902
12     23,  0.000916
```

A.5.4 The maximum response times

All response times are plotted in Figure 9, page 16 by number of identical responses and their duration.

```
s4pp1.max
1      85,  2.376834
2     141,  2.378401
3     141,  2.378852
4     134,  2.380062
5     125,  2.380586
6     114,  2.387712
7     141,  2.424853
8     141,  2.426202
9     141,  2.427730
10    141,  2.433805
11    134,  2.440161
12    114,  2.449951
```

A.5.5 The most common response times

All response times are plotted in Figure 9, page 16 by number of identical responses and their duration.

```
s4pp1.mde
1       5,  0.001044
2       5,  0.001051
3       6,  0.001050
4       7,  0.001034
5       7,  0.001048
6       9,  0.001036
7       9,  0.001047
8       9,  0.001049
9      20,  0.001040
10      31,  0.001043
11      48,  0.001041
12      85,  0.001042
```

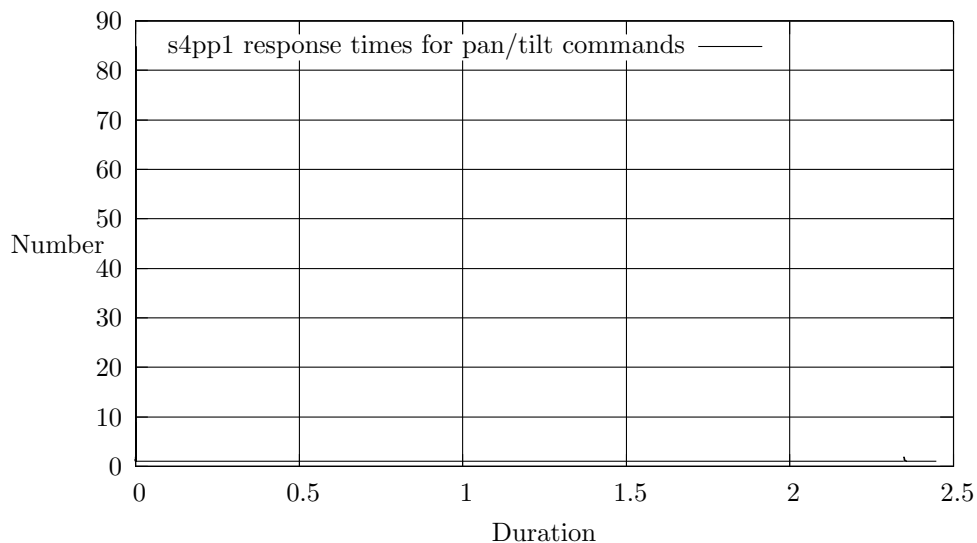


Figure 9: Durations of Responses from Run s4pp1

A.5.6 Test Run Data

- 1 Event 1 (2/8/2007 1:28:56.658336 PM) through
- 2 Event 5,512 (2/8/2007 1:33:58.155628 PM)
- 1 There were a total of 3591 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 259.849807 seconds from the start of data collection
- 4
- 5 There were a total of 1921 DTE bytes transferred
- 6 The first DTE byte came in at 0.020168 seconds from the start of data collection
- 7 The last DTE byte was at 301.497292 seconds from the start of data collection

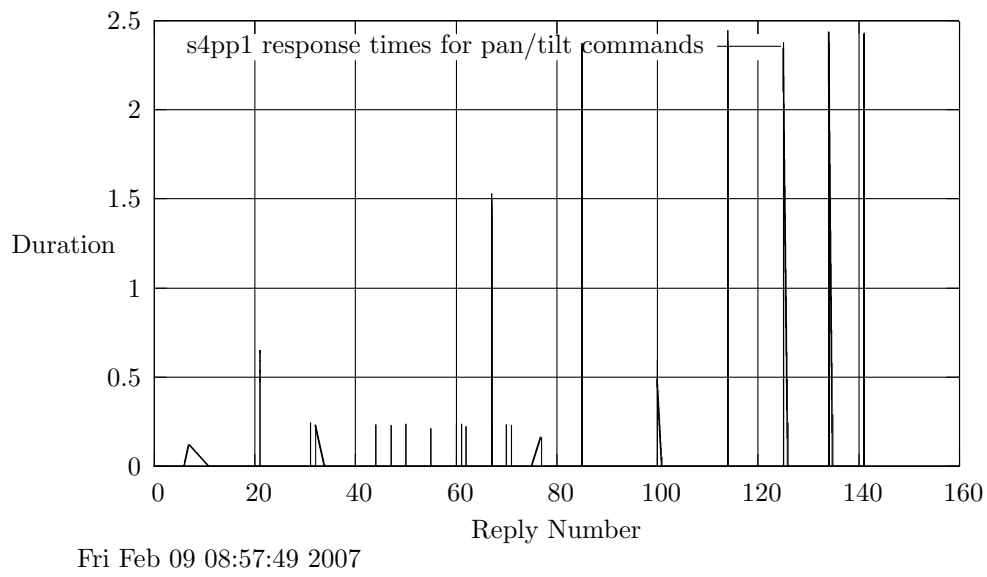


Figure 10: Response Timings for Commands from Run s4pp1

A.6 Results for run s4steps

A.6.1 Test Details

This is a test run using a Spectra IV. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.2, page 39.

There were this many reply times that were analyzed:

```
1      729 lines in S4STEPS.TIM
```

A.6.2 Typical response times

The full set of response times are plotted in Figure 12, page 20.

```
s4steps.typ
1      1,  0.001047
2      2,  0.001048
3      3,  0.001042
4      4,  0.001035
5      5,  0.001043
6      6,  0.001048
7      7,  0.001032
8      8,  0.001036
9      9,  0.001035
10     10, 0.001097
11     11, 0.001041
12     12, 0.001041
13     13, 0.001049
14     14, 0.001050
15     15, 0.001050
16     16, 0.001042
17     17, 0.001042
18     18, 0.001049
19     19, 0.001198
20     20, 0.001035
21     21, 0.001044
22     22, 0.001037
23     23, 0.001037
24     24, 0.001037
25     25, 0.001035
```

A.6.3 The minimum response times

All response times are plotted in Figure 11, page 19 by number of identical responses and their duration.

```
s4steps.min
1      611, 0.000011
2      574, 0.000868
3      642, 0.000868
4      311, 0.000874
5      465, 0.000875
6      604, 0.000875
7      157, 0.000876
8      446, 0.000879
```

```
9      464, 0.000880
10     118, 0.000881
11     401, 0.000881
12     600, 0.000881
```

A.6.4 The maximum response times

All response times are plotted in Figure 11, page 19 by number of identical responses and their duration.

```
s4steps.max
1      522, 0.001144
2      560, 0.001180
3       79, 0.001191
4      515, 0.001193
5       19, 0.001198
6      169, 0.001205
7      105, 0.001209
8      185, 0.001209
9      503, 0.001209
10     142, 0.001211
11     432, 0.001211
12     483, 0.001217
```

A.6.5 The most common response times

All response times are plotted in Figure 11, page 19 by number of identical responses and their duration.

```
s4steps.mde
1       13, 0.001037
2       19, 0.001034
3       19, 0.001046
4       21, 0.001050
5       30, 0.001040
6       32, 0.001035
7       48, 0.001047
8       50, 0.001043
9       68, 0.001048
10      74, 0.001041
11      81, 0.001049
12     137, 0.001042
```

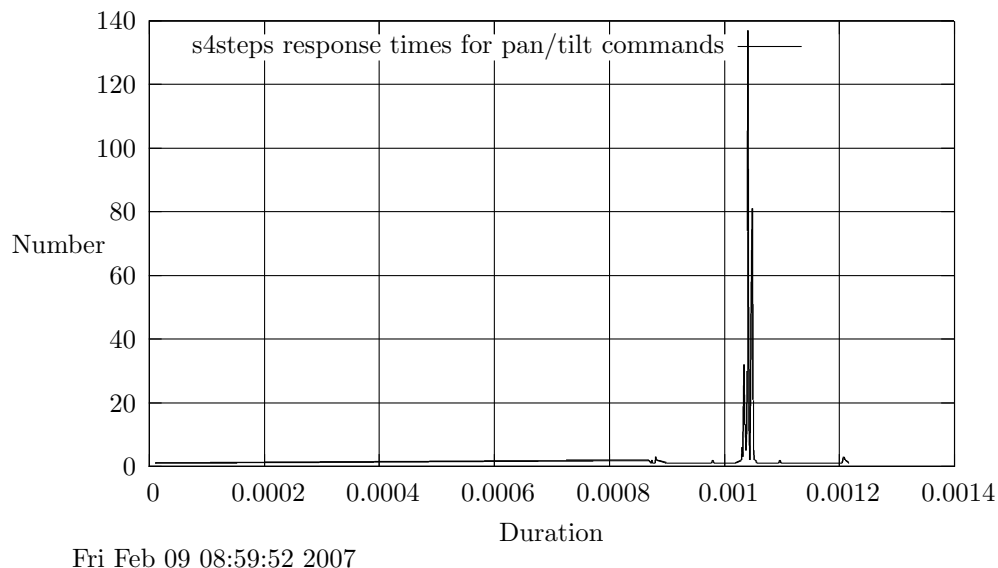
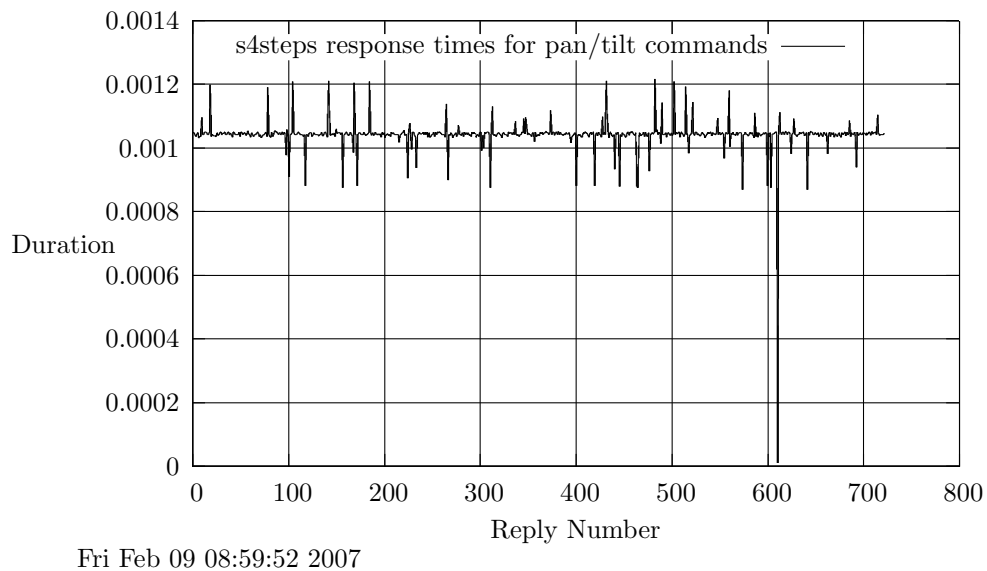


Figure 11: Durations of Responses from Run s4steps

A.6.6 Test Run Data

- 1 Event 1 (2/8/2007 11:24:09.969678 AM) through
- 2 Event 9,025 (2/8/2007 11:28:49.491856 AM)

- 1 There were a total of 5054 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 279.514622 seconds from the start of data collection
- 4
- 5 There were a total of 3971 DTE bytes transferred
- 6 The first DTE byte came in at 0.013071 seconds from the start of data collection
- 7 The last DTE byte was at 279.522178 seconds from the start of data collection

Figure 12: Response Timings for Commands from Run `s4steps`

A.7 Results for run epp1

A.7.1 Test Details

This is a test run using an Esprit TI. This test was run at 9600 baud.

The commands to the GlassKeyboard were generated by a script file shown in Appendix B.1, page 33.

There were this many reply times that were analyzed:

```
1      402 lines in EPP1.TIM
```

A.7.2 Typical response times

The full set of response times are plotted in Figure 14, page 23.

```
epp1.typ
1      1,    0.001049
2      2,    0.001042
3      3,    0.001145
4      4,    0.001154
5      5,    0.001043
6      6,    0.001041
7      7,    0.001036
8      8,    0.000881
9      9,    0.001050
10     10,   0.001041
11     11,   0.001041
12     12,   0.001200
13     13,   0.001043
14     14,   0.001043
15     15,   0.001048
16     16,   0.001042
17     17,   0.001035
18     18,   0.001041
19     19,   0.001041
20     20,   0.001036
21     21,   0.001050
22     22,   0.001041
23     23,   0.001041
24     24,   0.001042
25     25,   0.001042
```

A.7.3 The minimum response times

All response times are plotted in Figure 13, page 22 by number of identical responses and their duration.

```
epp1.min
1      195,   0.000010
2       98,   0.000011
3      103,   0.000874
4      226,   0.000875
5      141,   0.000876
6      287,   0.000876
7        8,   0.000881
8      257,   0.000881
```

```
9      364,   0.000881
10     264,   0.000883
11     347,   0.000883
12     349,   0.000889
```

A.7.4 The maximum response times

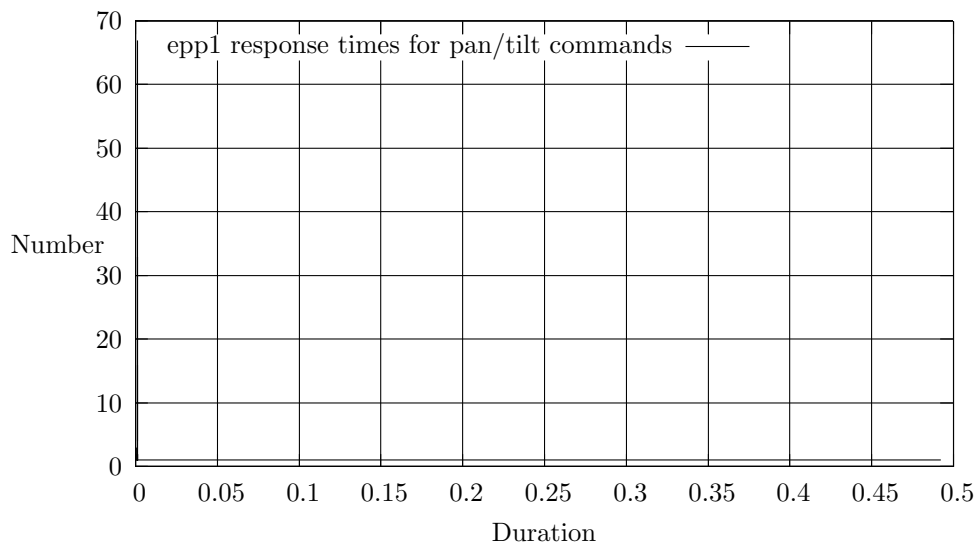
All response times are plotted in Figure 13, page 22 by number of identical responses and their duration.

```
epp1.max
1      62,    0.003021
2      62,    0.003961
3      63,    0.009791
4     213,    0.014062
5      62,    0.014375
6      63,    0.015941
7      61,    0.017188
8      62,    0.018647
9     324,    0.022083
10    213,    0.068962
11     52,    0.155634
12     62,    0.492615
```

A.7.5 The most common response times

All response times are plotted in Figure 13, page 22 by number of identical responses and their duration.

```
epp1.mde
1        7,    0.001034
2       12,    0.001046
3       12,    0.001050
4       13,    0.001036
5       16,    0.001035
6       21,    0.001040
7       24,    0.001043
8       25,    0.001049
9       32,    0.001048
10      33,    0.001047
11      46,    0.001041
12      67,    0.001042
```



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Figure 13: Durations of Responses from Run **epp1**

A.7.6 Test Run Data

- 1 Event 1 (2/9/2007 1:50:05.179955 PM) through
- 2 Event 5,733 (2/9/2007 1:53:50.367092 PM)

- 1 There were a total of 3591 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 225.158635 seconds from the start of data collection
- 4
- 5 There were a total of 2142 DTE bytes transferred
- 6 The first DTE byte came in at 0.010398 seconds from the start of data collection
- 7 The last DTE byte was at 225.187137 seconds from the start of data collection

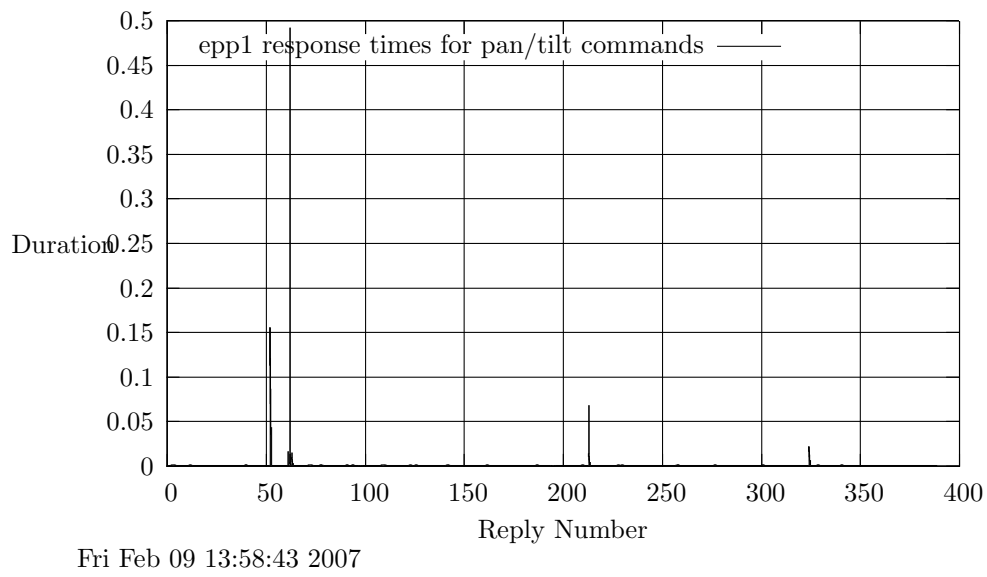


Figure 14: Response Timings for Commands from Run epp1

A.8 Results for run espp2

12 374, 0.000869

A.8.1 Test Details

This is a test run using an Esprit TI. This test was run at 9600 baud.

There were this many reply times that were analyzed:

1 3231 lines in ESPP2.TIM

A.8.2 Typical response times

The full set of response times are plotted in Figure 16, page 26.

```
espp2.typ
1 1, 0.001035
2 2, 0.001035
3 3, 0.001042
4 4, 0.001044
5 5, 0.001041
6 6, 0.001041
7 7, 0.001041
8 8, 0.001041
9 9, 0.001049
10 10, 0.001048
11 11, 0.001049
12 12, 0.001042
13 13, 0.001042
14 14, 0.001000
15 15, 0.001035
16 16, 0.001049
17 17, 0.001050
18 18, 0.001049
19 19, 0.001048
20 20, 0.001035
21 21, 0.001034
22 22, 0.001042
23 23, 0.001048
24 24, 0.001049
25 25, 0.001042
```

A.8.3 The minimum response times

All response times are plotted in Figure 15, page 25 by number of identical responses and their duration.

```
espp2.min
1 1402, 0.000011
2 3128, 0.000515
3 2566, 0.000840
4 413, 0.000858
5 453, 0.000864
6 547, 0.000867
7 2471, 0.000867
8 3132, 0.000867
9 1379, 0.000868
10 2831, 0.000868
11 45, 0.000869
```

A.8.4 The maximum response times

All response times are plotted in Figure 15, page 25 by number of identical responses and their duration.

```
espp2.max
1 1468, 0.016355
2 2762, 0.017186
3 2756, 0.018959
4 61, 0.020041
5 62, 0.022918
6 1465, 0.049167
7 2488, 0.063966
8 2756, 0.092503
9 2690, 0.114064
10 2220, 0.114110
11 2667, 0.121207
12 2756, 0.413968
```

A.8.5 The most common response times

All response times are plotted in Figure 15, page 25 by number of identical responses and their duration.

```
espp2.mde
1 74, 0.001046
2 92, 0.001034
3 102, 0.001036
4 109, 0.001050
5 141, 0.001040
6 178, 0.001035
7 230, 0.001043
8 248, 0.001047
9 261, 0.001049
10 280, 0.001048
11 362, 0.001041
12 555, 0.001042
```

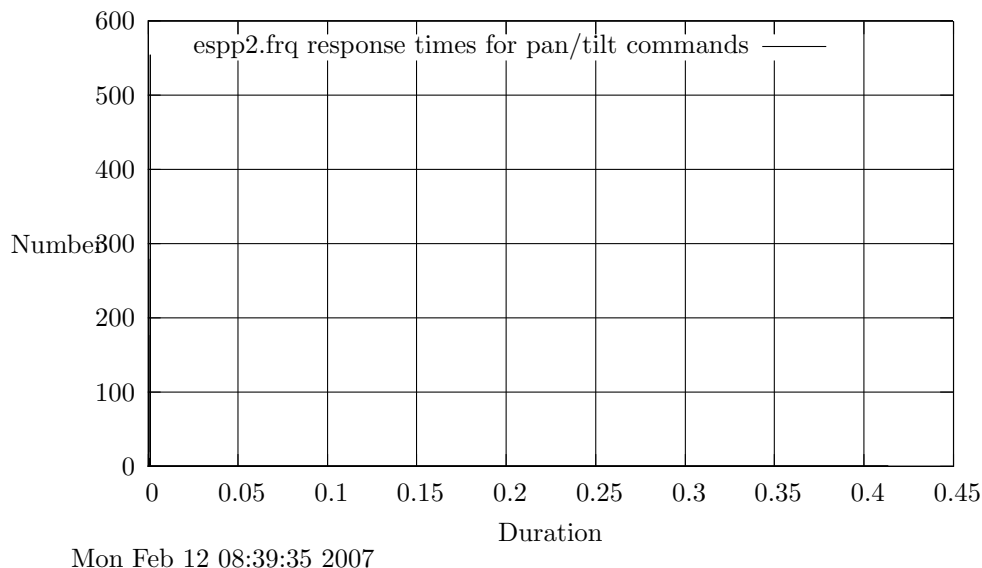
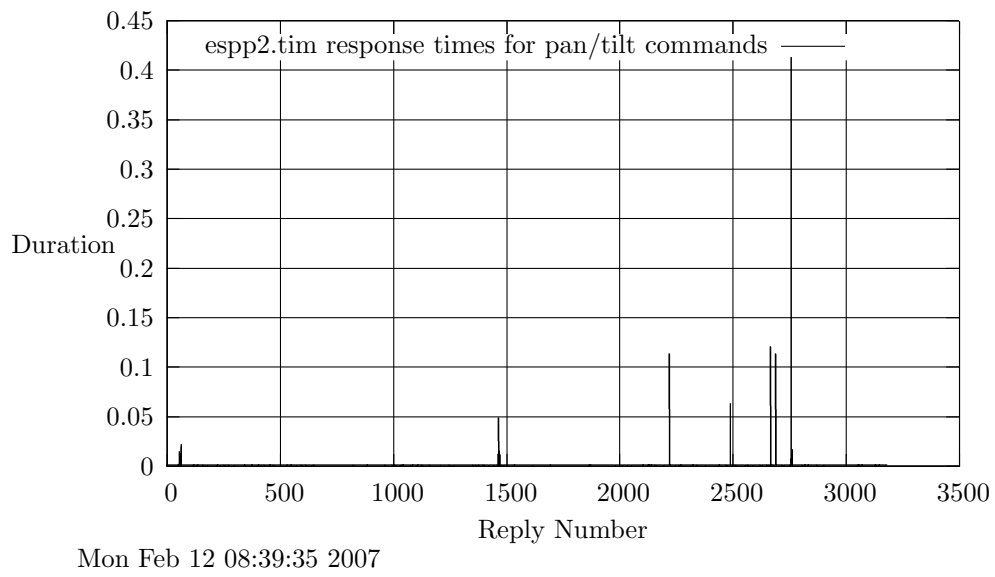



Figure 15: Durations of Responses from Run espp2

A.8.6 Test Run Data

- 1 Event 1 (2/12/2007 6:24:17.510999 AM) through
- 2 Event 42,372 (2/12/2007 6:52:05.907001 AM)

- 1 There were a total of 25186 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 1668.383182 seconds from the start of data collection
- 4
- 5 There were a total of 17186 DTE bytes transferred
- 6 The first DTE byte came in at 3.398897 seconds from the start of data collection
- 7 The last DTE byte was at 1668.396002 seconds from the start of data collection

Figure 16: Response Timings for Commands from Run `espp2`

A.9 Results for run s3pp3

12 444, 0.000766

A.9.1 Test Details

This is a test run using a Spectra III. This test was run at 9600 baud.

There were this many reply times that were analyzed:

1 3477 lines in S3PP3.TIM

A.9.2 Typical response times

The full set of response times are plotted in Figure 18, page 29.

```
s3pp3.typ
1 1, 0.001043
2 2, 0.001042
3 3, 0.001043
4 4, 0.001034
5 5, 0.001041
6 6, 0.001046
7 7, 0.001047
8 8, 0.001048
9 9, 0.001065
10 10, 0.001032
11 11, 0.001035
12 12, 0.001036
13 13, 0.001040
14 14, 0.001088
15 15, 0.001043
16 16, 0.001041
17 17, 0.001049
18 18, 0.001034
19 19, 0.001047
20 20, 0.001043
21 21, 0.001041
22 22, 0.001048
23 23, 0.001042
24 24, 0.001041
25 25, 0.001047
```

A.9.3 The minimum response times

All response times are plotted in Figure 17, page 28 by number of identical responses and their duration.

```
s3pp3.min
1 776, 0.000008
2 709, 0.000009
3 125, 0.000010
4 1440, 0.000011
5 696, 0.000276
6 959, 0.000276
7 443, 0.000277
8 175, 0.000342
9 421, 0.000433
10 1471, 0.000653
11 1791, 0.000715
```

A.9.4 The maximum response times

All response times are plotted in Figure 17, page 28 by number of identical responses and their duration.

```
s3pp3.max
1 214, 1.429052
2 521, 1.430304
3 1287, 1.430520
4 1782, 1.431866
5 2324, 1.432793
6 2055, 1.433636
7 1539, 1.433950
8 2019, 1.435608
9 1005, 1.436373
10 250, 1.436955
11 986, 1.439769
12 2311, 1.453395
```

A.9.5 The most common response times

All response times are plotted in Figure 17, page 28 by number of identical responses and their duration.

```
s3pp3.mde
1 53, 0.001046
2 80, 0.001050
3 90, 0.001036
4 115, 0.001034
5 136, 0.001040
6 163, 0.001047
7 190, 0.001035
8 199, 0.001049
9 210, 0.001048
10 246, 0.001043
11 436, 0.001041
12 624, 0.001042
```

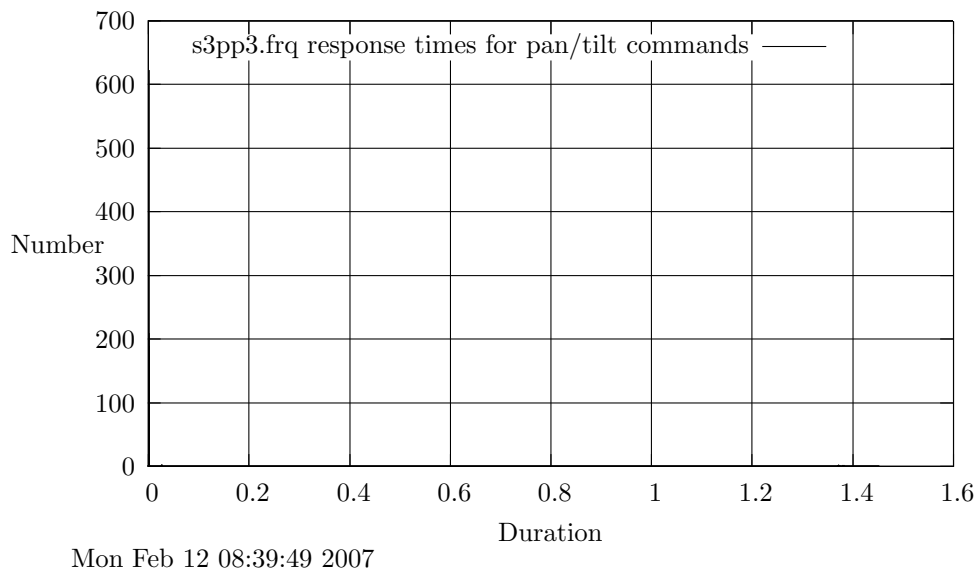


Figure 17: Durations of Responses from Run s3pp3

A.9.6 Test Run Data

- 1 Event 1 (2/12/2007 7:34:00.458876 AM) through
- 2 Event 50,409 (2/12/2007 8:14:34.157333 AM)

- 1 There were a total of 32382 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 2429.480801 seconds from the start of data collection
- 4
- 5 There were a total of 18027 DTE bytes transferred
- 6 The first DTE byte came in at 0.007894 seconds from the start of data collection
- 7 The last DTE byte was at 2433.698457 seconds from the start of data collection

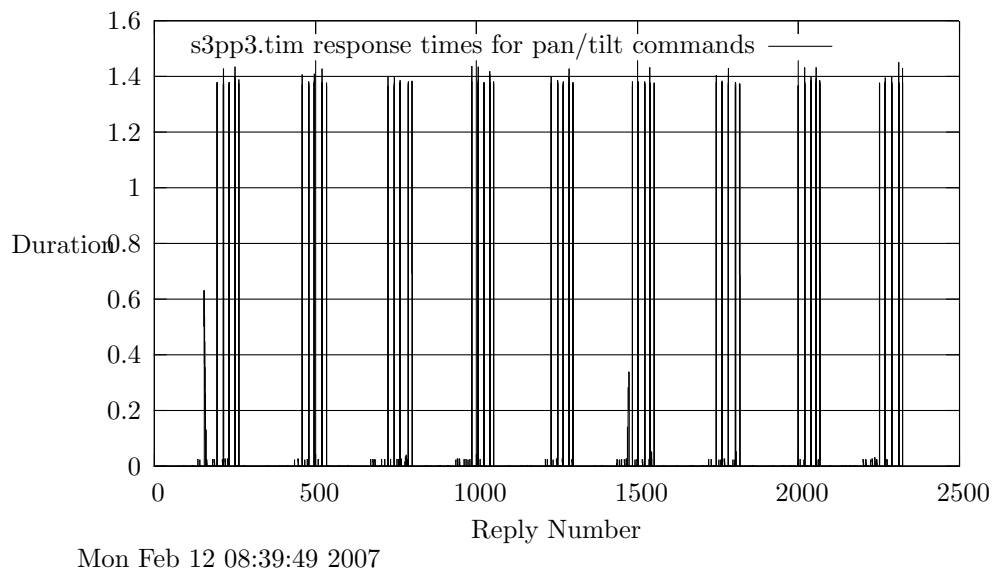


Figure 18: Response Timings for Commands from Run s3pp3

A.10 Results for run s4pp2

12 217, 0.000697

A.10.1 Test Details

This is a test run using a Spectra IV. This test was run at 9600 baud.

There were this many reply times that were analyzed:

1 3115 lines in S4PP2.TIM

A.10.2 Typical response times

The full set of response times are plotted in Figure 20, page 32.

```
s4pp2.typ
1 1, 0.001048
2 2, 0.001041
3 3, 0.001049
4 4, 0.001042
5 5, 0.001048
6 6, 0.001049
7 10, 0.001033
8 11, 0.001042
9 12, 0.001043
10 13, 0.001042
11 14, 0.001043
12 15, 0.001047
13 16, 0.001042
14 17, 0.000991
15 18, 0.001042
16 19, 0.001041
17 20, 0.001058
18 21, 0.001043
19 22, 0.001034
20 22, 0.418603
21 22, 0.418604
22 22, 0.442041
23 22, 0.488701
24 22, 0.472660
25 22, 0.488806
```

A.10.3 The minimum response times

All response times are plotted in Figure 19, page 31 by number of identical responses and their duration.

```
s4pp2.min
1 970, 0.000008
2 686, 0.000009
3 950, 0.000009
4 450, 0.000031
5 685, 0.000098
6 242, 0.000282
7 263, 0.000458
8 545, 0.000571
9 323, 0.000609
10 817, 0.000687
11 821, 0.000694
```

A.10.4 The maximum response times

All response times are plotted in Figure 19, page 31 by number of identical responses and their duration.

```
s4pp2.max
1 1142, 2.456618
2 151, 2.457974
3 1153, 2.458804
4 960, 2.460054
5 447, 2.463702
6 739, 2.473396
7 566, 2.510263
8 1107, 2.609313
9 607, 2.661291
10 147, 2.901572
11 1153, 3.058115
12 554, 3.097490
```

A.10.5 The most common response times

All response times are plotted in Figure 19, page 31 by number of identical responses and their duration.

```
s4pp2.mde
1 28, 0.001050
2 36, 0.001036
3 38, 0.001044
4 42, 0.001034
5 62, 0.001035
6 71, 0.001047
7 83, 0.001048
8 108, 0.001049
9 139, 0.001040
10 275, 0.001043
11 508, 0.001041
12 746, 0.001042
```

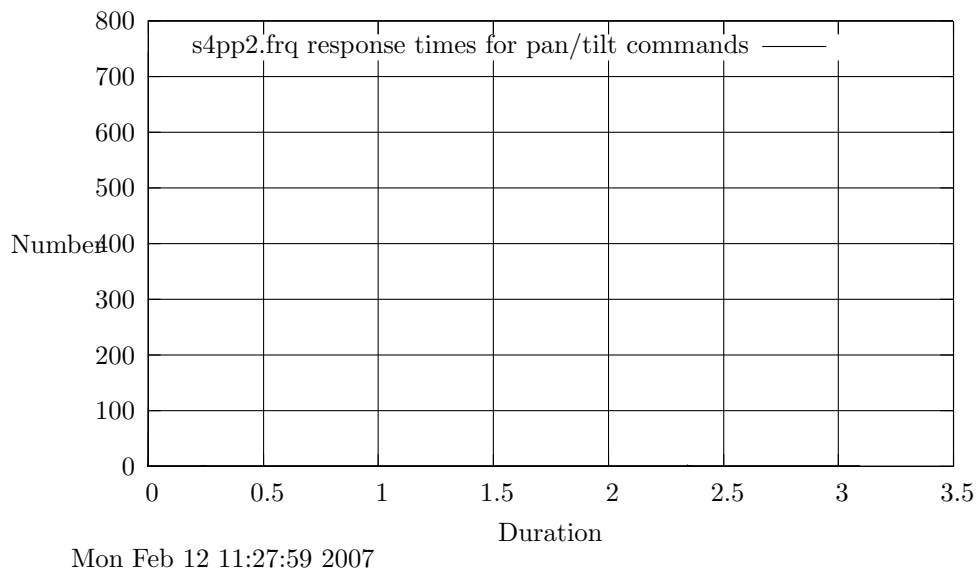
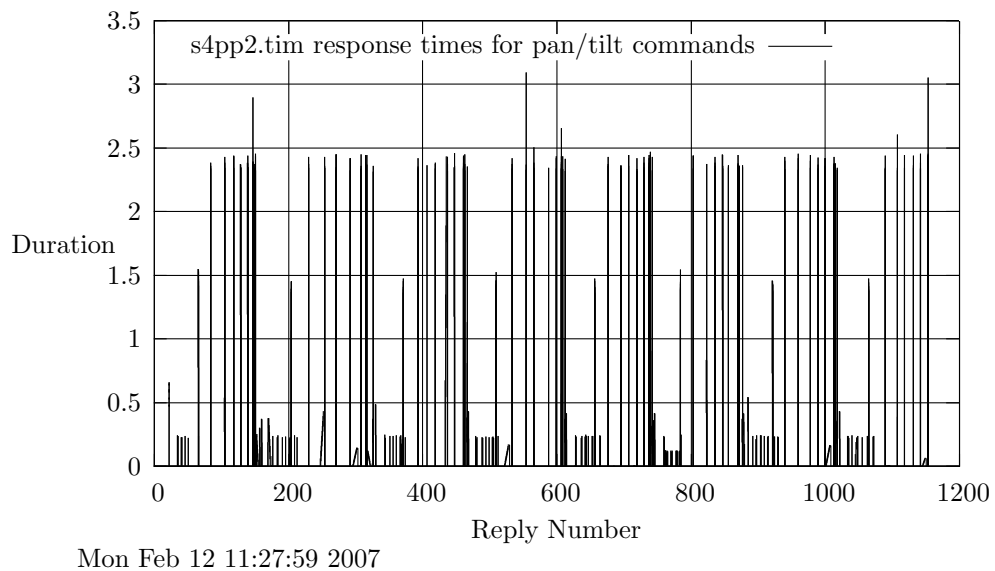


Figure 19: Durations of Responses from Run s4pp2

A.10.6 Test Run Data

- 1 Event 1 (2/12/2007 6:53:40.031599 AM) through
- 2 Event 45,210 (2/12/2007 7:32:03.770372 AM)

- 1 There were a total of 28784 DCE bytes transferred
- 2 The first DCE byte came in at 0.000000 seconds from the start of data collection
- 3 The last DCE byte was at 2258.588392 seconds from the start of data collection
- 4
- 5 There were a total of 16426 DTE bytes transferred
- 6 The first DTE byte came in at 0.007428 seconds from the start of data collection
- 7 The last DTE byte was at 2303.738773 seconds from the start of data collection

Figure 20: Response Timings for Commands from Run `s4pp2`

B GlassKeyboard Script files

B.1 The ptest script file

The unit was forced to cal_0

```
:go_to_zero_pan()
```

```
:delay(3000)
```

```
:query_pan_pos()
```

```
:delay(10)
```

Then presets from 1 $\rightarrow$ 32 were cleared

```
:clear_preset(1)
```

```
:delay(10)
```

```
:clear_preset(2)
```

```
:delay(10)
```

Next presets were set, usually, every 12 degrees apart and its location was read out.

```
:go_to_zero_pan()
```

```
:delay(3000)
```

```
:query_pan_pos()
```

```
:delay(10)
```

```
:set_pan_pos(12)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

```
:SET_PRESET( 1)
```

```
:delay(10)
```

```
:set_pan_pos(24)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

Next each preset was “gone to” and its location was read out.

```
:go_to_zero_pan()
```

```
:delay(3000)
```

```
:query_pan_pos()
```

```
:delay(10)
```

```
:go_to_preset( 1)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

```
:go_to_preset( 2)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

B.1.1 The full listing of ptest

```
1 :go_to_zero_pan()
2 :delay(3000)
```

```
3 :query_pan_pos()
4 :delay(10)
5
6 :clear_preset(1)
7 :delay(10)
8 :clear_preset(2)
9 :delay(10)
10 :clear_preset(3)
11 :delay(10)
12 :clear_preset(4)
13 :delay(10)
14 :clear_preset(5)
15 :delay(10)
16 :clear_preset(6)
17 :delay(10)
18 :clear_preset(7)
19 :delay(10)
20 :clear_preset(8)
21 :delay(10)
22 :clear_preset(9)
23 :delay(10)
24 :clear_preset(10)
25 :delay(10)
26 :clear_preset(11)
27 :delay(10)
28 :clear_preset(12)
29 :delay(10)
30 :clear_preset(13)
31 :delay(10)
32 :clear_preset(14)
33 :delay(10)
34 :clear_preset(15)
35 :delay(10)
36 :clear_preset(16)
37 :delay(10)
38 :clear_preset(17)
39 :delay(10)
40 :clear_preset(18)
41 :delay(10)
42 :clear_preset(19)
43 :delay(10)
44 :clear_preset(20)
45 :delay(10)
46 :clear_preset(21)
47 :delay(10)
48 :clear_preset(22)
49 :delay(10)
50 :clear_preset(23)
51 :delay(10)
52 :clear_preset(24)
53 :delay(10)
54 :clear_preset(25)
55 :delay(10)
56 :clear_preset(26)
57 :delay(10)
58 :clear_preset(27)
59 :delay(10)
60 :clear_preset(28)
61 :delay(10)
62 :clear_preset(29)
63 :delay(10)
64 :clear_preset(30)
65 :delay(10)
66 :clear_preset(31)
67 :delay(10)
68 :clear_preset(32)
69 :delay(10)
70
71 :go_to_zero_pan()
72 :delay(3000)
73 :query_pan_pos()
74 :delay(10)
75 :set_pan_pos(12)
76 :delay(500)
77 :query_pan_pos()
78 :delay(10)
79 :SET_PRESET( 1)
80 :delay(10)
81 :set_pan_pos(24)
82 :delay(500)
83 :query_pan_pos()
84 :delay(10)
85 :SET_PRESET( 2)
86 :delay(10)
87 :set_pan_pos(36)
88 :delay(500)
89 :query_pan_pos()
90 :delay(10)
91 :SET_PRESET( 3)
92 :delay(10)
93 :set_pan_pos(48)
94 :delay(500)
95 :query_pan_pos()
96 :delay(10)
97 :SET_PRESET( 4)
```

```

98 :delay(10)
99 :set_pan_pos(60)
100 :delay(500)
101 :query_pan_pos()
102 :delay(10)
103 :SET_PRESET( 5)
104 :delay(10)
105 :set_pan_pos(72)
106 :delay(500)
107 :query_pan_pos()
108 :delay(10)
109 :SET_PRESET( 6)
110 :delay(10)
111 :set_pan_pos(84)
112 :delay(500)
113 :query_pan_pos()
114 :delay(10)
115 :SET_PRESET( 7)
116 :delay(10)
117 :set_pan_pos(96)
118 :delay(500)
119 :query_pan_pos()
120 :delay(10)
121 :SET_PRESET( 8)
122 :delay(10)
123 :set_pan_pos(108)
124 :delay(500)
125 :query_pan_pos()
126 :delay(10)
127 :SET_PRESET( 9)
128 :delay(10)
129 :set_pan_pos(120)
130 :delay(500)
131 :query_pan_pos()
132 :delay(10)
133 :SET_PRESET(10)
134 :delay(10)
135 :set_pan_pos(124)
136 :delay(500)
137 :query_pan_pos()
138 :delay(10)
139 :SET_PRESET(11)
140 :delay(10)
141 :set_pan_pos(136)
142 :delay(500)
143 :query_pan_pos()
144 :delay(10)
145 :SET_PRESET(12)
146 :delay(10)
147 :set_pan_pos(148)
148 :delay(500)
149 :query_pan_pos()
150 :delay(10)
151 :SET_PRESET(13)
152 :delay(10)
153 :set_pan_pos(160)
154 :delay(500)
155 :query_pan_pos()
156 :delay(10)
157 :SET_PRESET(14)
158 :delay(10)
159 :set_pan_pos(172)
160 :delay(500)
161 :query_pan_pos()
162 :delay(10)
163 :SET_PRESET(15)
164 :delay(10)
165 :set_pan_pos(184)
166 :delay(500)
167 :query_pan_pos()
168 :delay(10)
169 :SET_PRESET(16)
170 :delay(10)
171 :set_pan_pos(196)
172 :delay(500)
173 :query_pan_pos()
174 :delay(10)
175 :SET_PRESET(17)
176 :delay(10)
177 :set_pan_pos(208)
178 :delay(500)
179 :query_pan_pos()
180 :delay(10)
181 :SET_PRESET(18)
182 :delay(10)
183 :set_pan_pos(220)
184 :delay(500)
185 :query_pan_pos()
186 :delay(10)
187 :SET_PRESET(19)
188 :delay(10)
189 :set_pan_pos(224)
190 :delay(500)
191 :query_pan_pos()
192 :delay(10)
193 :SET_PRESET(20)
194 :delay(10)
195 :set_pan_pos(236)
196 :delay(500)
197 :query_pan_pos()
198 :delay(10)
199 :SET_PRESET(21)
200 :delay(10)
201 :set_pan_pos(248)
202 :delay(500)
203 :query_pan_pos()
204 :delay(10)
205 :SET_PRESET(22)
206 :delay(10)
207 :set_pan_pos(260)
208 :delay(500)
209 :query_pan_pos()
210 :delay(10)
211 :SET_PRESET(23)
212 :delay(10)
213 :set_pan_pos(272)
214 :delay(500)
215 :query_pan_pos()
216 :delay(10)
217 :SET_PRESET(24)
218 :delay(10)
219 :set_pan_pos(284)
220 :delay(500)
221 :query_pan_pos()
222 :delay(10)
223 :SET_PRESET(25)
224 :delay(10)
225 :set_pan_pos(296)
226 :delay(500)
227 :query_pan_pos()
228 :delay(10)
229 :SET_PRESET(26)
230 :delay(10)
231 :set_pan_pos(308)
232 :delay(500)
233 :query_pan_pos()
234 :delay(10)
235 :SET_PRESET(27)
236 :delay(10)
237 :set_pan_pos(320)
238 :delay(500)
239 :query_pan_pos()
240 :delay(10)
241 :SET_PRESET(28)
242 :delay(10)
243 :set_pan_pos(336)
244 :delay(500)
245 :query_pan_pos()
246 :delay(10)
247 :SET_PRESET(29)
248 :delay(10)
249 :set_pan_pos(348)
250 :delay(500)
251 :query_pan_pos()
252 :delay(10)
253 :SET_PRESET(30)
254 :delay(10)
255 :set_pan_pos(360)
256 :delay(500)
257 :query_pan_pos()
258 :delay(10)
259 :SET_PRESET(31)
260 :delay(10)
261 :go_to_zero_pan()
262 :delay(3000)
263 :query_pan_pos()
264 :delay(10)
265 :go_to_preset( 1)
266 :delay(500)
267 :query_pan_pos()
268 :delay(10)
269 :go_to_preset( 2)
270 :delay(500)
271 :query_pan_pos()
272 :delay(10)
273 :go_to_preset( 3)
274 :delay(500)
275 :query_pan_pos()
276 :delay(10)
277 :go_to_preset( 4)
278 :delay(500)
279 :query_pan_pos()
280 :delay(10)
281 :go_to_preset( 5)
282 :delay(500)
283 :query_pan_pos()
284 :delay(10)
285 :go_to_preset( 6)
286 :delay(500)

```

```

288 :query_pan_pos()
289 :delay(10)
290 :go_to_preset( 7)
291 :delay(500)
292 :query_pan_pos()
293 :delay(10)
294 :go_to_preset( 8)
295 :delay(500)
296 :query_pan_pos()
297 :delay(10)
298 :go_to_preset( 9)
299 :delay(500)
300 :query_pan_pos()
301 :delay(10)
302 :go_to_preset(10)
303 :delay(500)
304 :query_pan_pos()
305 :delay(10)
306 :go_to_preset(11)
307 :delay(500)
308 :query_pan_pos()
309 :delay(10)
310 :go_to_preset(12)
311 :delay(500)
312 :query_pan_pos()
313 :delay(10)
314 :go_to_preset(13)
315 :delay(500)
316 :query_pan_pos()
317 :delay(10)
318 :go_to_preset(14)
319 :delay(500)
320 :query_pan_pos()
321 :delay(10)
322 :go_to_preset(15)
323 :delay(500)
324 :query_pan_pos()
325 :delay(10)
326 :go_to_preset(16)
327 :delay(500)
328 :query_pan_pos()
329 :delay(10)
330 :go_to_preset(17)
331 :delay(500)
332 :query_pan_pos()
333 :delay(10)
334 :go_to_preset(18)
335 :delay(500)
336 :query_pan_pos()
337 :delay(10)
338 :go_to_preset(19)
339 :delay(500)
340 :query_pan_pos()
341 :delay(10)
342 :go_to_preset(20)
343 :delay(500)
344 :query_pan_pos()
345 :delay(10)
346 :go_to_preset(21)
347 :delay(500)
348 :query_pan_pos()
349 :delay(10)
350 :go_to_preset(22)
351 :delay(500)
352 :query_pan_pos()
353 :delay(10)
354 :go_to_preset(23)
355 :delay(500)
356 :query_pan_pos()
357 :delay(10)
358 :go_to_preset(24)
359 :delay(500)
360 :query_pan_pos()
361 :delay(10)
362 :go_to_preset(25)
363 :delay(500)
364 :query_pan_pos()
365 :delay(10)
366 :go_to_preset(26)
367 :delay(500)
368 :query_pan_pos()
369 :delay(10)
370 :go_to_preset(27)
371 :delay(500)
372 :query_pan_pos()
373 :delay(10)
374 :go_to_preset(28)
375 :delay(500)
376 :query_pan_pos()
377 :delay(10)
378 :go_to_preset(29)
379 :delay(500)
380 :query_pan_pos()
381 :delay(10)
382 :go_to_preset(30)

383 :delay(500)
384 :query_pan_pos()
385 :delay(10)
386 :go_to_preset(31)
387 :delay(500)
388 :query_pan_pos()
389 :delay(10)
390
391
392 :go_to_zero_pan()
393 :delay(3000)
394 :query_pan_pos()
395 :delay(10)
396 :go_to_preset( 1)
397 :delay(400)
398 :query_pan_pos()
399 :delay(10)
400 :go_to_preset( 2)
401 :delay(400)
402 :query_pan_pos()
403 :delay(10)
404 :go_to_preset( 3)
405 :delay(400)
406 :query_pan_pos()
407 :delay(10)
408 :go_to_preset( 4)
409 :delay(400)
410 :query_pan_pos()
411 :delay(10)
412 :go_to_preset( 5)
413 :delay(400)
414 :query_pan_pos()
415 :delay(10)
416 :go_to_preset( 6)
417 :delay(400)
418 :query_pan_pos()
419 :delay(10)
420 :go_to_preset( 7)
421 :delay(400)
422 :query_pan_pos()
423 :delay(10)
424 :go_to_preset( 8)
425 :delay(400)
426 :query_pan_pos()
427 :delay(10)
428 :go_to_preset( 9)
429 :delay(400)
430 :query_pan_pos()
431 :delay(10)
432 :go_to_preset(10)
433 :delay(400)
434 :query_pan_pos()
435 :delay(10)
436 :go_to_preset(11)
437 :delay(400)
438 :query_pan_pos()
439 :delay(10)
440 :go_to_preset(12)
441 :delay(400)
442 :query_pan_pos()
443 :delay(10)
444 :go_to_preset(13)
445 :delay(400)
446 :query_pan_pos()
447 :delay(10)
448 :go_to_preset(14)
449 :delay(400)
450 :query_pan_pos()
451 :delay(10)
452 :go_to_preset(15)
453 :delay(400)
454 :query_pan_pos()
455 :delay(10)
456 :go_to_preset(16)
457 :delay(400)
458 :query_pan_pos()
459 :delay(10)
460 :go_to_preset(17)
461 :delay(400)
462 :query_pan_pos()
463 :delay(10)
464 :go_to_preset(18)
465 :delay(400)
466 :query_pan_pos()
467 :delay(10)
468 :go_to_preset(19)
469 :delay(400)
470 :query_pan_pos()
471 :delay(10)
472 :go_to_preset(20)
473 :delay(400)
474 :query_pan_pos()
475 :delay(10)
476 :go_to_preset(21)
477 :delay(400)

```

```

478 :query_pan_pos()
479 :delay(10)
480 :go_to_preset(22)
481 :delay(400)
482 :query_pan_pos()
483 :delay(10)
484 :go_to_preset(23)
485 :delay(400)
486 :query_pan_pos()
487 :delay(10)
488 :go_to_preset(24)
489 :delay(400)
490 :query_pan_pos()
491 :delay(10)
492 :go_to_preset(25)
493 :delay(400)
494 :query_pan_pos()
495 :delay(10)
496 :go_to_preset(26)
497 :delay(400)
498 :query_pan_pos()
499 :delay(10)
500 :go_to_preset(27)
501 :delay(400)
502 :query_pan_pos()
503 :delay(10)
504 :go_to_preset(28)
505 :delay(400)
506 :query_pan_pos()
507 :delay(10)
508 :go_to_preset(29)
509 :delay(400)
510 :query_pan_pos()
511 :delay(10)
512 :go_to_preset(30)
513 :delay(400)
514 :query_pan_pos()
515 :delay(10)
516 :go_to_preset(31)
517 :delay(400)
518 :query_pan_pos()
519 :delay(10)
520
521
522 :go_to_zero_pan()
523 :delay(3000)
524 :query_pan_pos()
525 :delay(10)
526 :go_to_preset( 1)
527 :delay(300)
528 :query_pan_pos()
529 :delay(10)
530 :go_to_preset( 2)
531 :delay(300)
532 :query_pan_pos()
533 :delay(10)
534 :go_to_preset( 3)
535 :delay(300)
536 :query_pan_pos()
537 :delay(10)
538 :go_to_preset( 4)
539 :delay(300)
540 :query_pan_pos()
541 :delay(10)
542 :go_to_preset( 5)
543 :delay(300)
544 :query_pan_pos()
545 :delay(10)
546 :go_to_preset( 6)
547 :delay(300)
548 :query_pan_pos()
549 :delay(10)
550 :go_to_preset( 7)
551 :delay(300)
552 :query_pan_pos()
553 :delay(10)
554 :go_to_preset( 8)
555 :delay(300)
556 :query_pan_pos()
557 :delay(10)
558 :go_to_preset( 9)
559 :delay(300)
560 :query_pan_pos()
561 :delay(10)
562 :go_to_preset(10)
563 :delay(300)
564 :query_pan_pos()
565 :delay(10)
566 :go_to_preset(11)
567 :delay(300)
568 :query_pan_pos()
569 :delay(10)
570 :go_to_preset(12)
571 :delay(300)
572 :query_pan_pos()
573 :delay(10)
574 :go_to_preset(13)
575 :delay(300)
576 :query_pan_pos()
577 :delay(10)
578 :go_to_preset(14)
579 :delay(300)
580 :query_pan_pos()
581 :delay(10)
582 :go_to_preset(15)
583 :delay(300)
584 :query_pan_pos()
585 :delay(10)
586 :go_to_preset(16)
587 :delay(300)
588 :query_pan_pos()
589 :delay(10)
590 :go_to_preset(17)
591 :delay(300)
592 :query_pan_pos()
593 :delay(10)
594 :go_to_preset(18)
595 :delay(300)
596 :query_pan_pos()
597 :delay(10)
598 :go_to_preset(19)
599 :delay(300)
600 :query_pan_pos()
601 :delay(10)
602 :go_to_preset(20)
603 :delay(300)
604 :query_pan_pos()
605 :delay(10)
606 :go_to_preset(21)
607 :delay(300)
608 :query_pan_pos()
609 :delay(10)
610 :go_to_preset(22)
611 :delay(300)
612 :query_pan_pos()
613 :delay(10)
614 :go_to_preset(23)
615 :delay(300)
616 :query_pan_pos()
617 :delay(10)
618 :go_to_preset(24)
619 :delay(300)
620 :query_pan_pos()
621 :delay(10)
622 :go_to_preset(25)
623 :delay(300)
624 :query_pan_pos()
625 :delay(10)
626 :go_to_preset(26)
627 :delay(300)
628 :query_pan_pos()
629 :delay(10)
630 :go_to_preset(27)
631 :delay(300)
632 :query_pan_pos()
633 :delay(10)
634 :go_to_preset(28)
635 :delay(300)
636 :query_pan_pos()
637 :delay(10)
638 :go_to_preset(29)
639 :delay(300)
640 :query_pan_pos()
641 :delay(10)
642 :go_to_preset(30)
643 :delay(300)
644 :query_pan_pos()
645 :delay(10)
646 :go_to_preset(31)
647 :delay(300)
648 :query_pan_pos()
649 :delay(10)
650
651
652 :go_to_zero_pan()
653 :delay(3000)
654 :query_pan_pos()
655 :delay(10)
656 :go_to_preset( 1)
657 :delay(200)
658 :query_pan_pos()
659 :delay(10)
660 :go_to_preset( 2)
661 :delay(200)
662 :query_pan_pos()
663 :delay(10)
664 :go_to_preset( 3)
665 :delay(200)
666 :query_pan_pos()
667 :delay(10)

```

```

668 :go_to_preset( 4)
669 :delay(200)
670 :query_pan_pos()
671 :delay(10)
672 :go_to_preset( 5)
673 :delay(200)
674 :query_pan_pos()
675 :delay(10)
676 :go_to_preset( 6)
677 :delay(200)
678 :query_pan_pos()
679 :delay(10)
680 :go_to_preset( 7)
681 :delay(200)
682 :query_pan_pos()
683 :delay(10)
684 :go_to_preset( 8)
685 :delay(200)
686 :query_pan_pos()
687 :delay(10)
688 :go_to_preset( 9)
689 :delay(200)
690 :query_pan_pos()
691 :delay(10)
692 :go_to_preset(10)
693 :delay(200)
694 :query_pan_pos()
695 :delay(10)
696 :go_to_preset(11)
697 :delay(200)
698 :query_pan_pos()
699 :delay(10)
700 :go_to_preset(12)
701 :delay(200)
702 :query_pan_pos()
703 :delay(10)
704 :go_to_preset(13)
705 :delay(200)
706 :query_pan_pos()
707 :delay(10)
708 :go_to_preset(14)
709 :delay(200)
710 :query_pan_pos()
711 :delay(10)
712 :go_to_preset(15)
713 :delay(200)
714 :query_pan_pos()
715 :delay(10)
716 :go_to_preset(16)
717 :delay(200)
718 :query_pan_pos()
719 :delay(10)
720 :go_to_preset(17)
721 :delay(200)
722 :query_pan_pos()
723 :delay(10)
724 :go_to_preset(18)
725 :delay(200)
726 :query_pan_pos()
727 :delay(10)
728 :go_to_preset(19)
729 :delay(200)
730 :query_pan_pos()
731 :delay(10)
732 :go_to_preset(20)
733 :delay(200)
734 :query_pan_pos()
735 :delay(10)
736 :go_to_preset(21)
737 :delay(200)
738 :query_pan_pos()
739 :delay(10)
740 :go_to_preset(22)
741 :delay(200)
742 :query_pan_pos()
743 :delay(10)
744 :go_to_preset(23)
745 :delay(200)
746 :query_pan_pos()
747 :delay(10)
748 :go_to_preset(24)
749 :delay(200)
750 :query_pan_pos()
751 :delay(10)
752 :go_to_preset(25)
753 :delay(200)
754 :query_pan_pos()
755 :delay(10)
756 :go_to_preset(26)
757 :delay(200)
758 :query_pan_pos()
759 :delay(10)
760 :go_to_preset(27)
761 :delay(200)
762 :query_pan_pos()

763 :delay(10)
764 :go_to_preset(28)
765 :delay(200)
766 :query_pan_pos()
767 :delay(10)
768 :go_to_preset(29)
769 :delay(200)
770 :query_pan_pos()
771 :delay(10)
772 :go_to_preset(30)
773 :delay(200)
774 :query_pan_pos()
775 :delay(10)
776 :go_to_preset(31)
777 :delay(200)
778 :query_pan_pos()
779 :delay(10)
780
781
782 :go_to_zero_pan()
783 :delay(3000)
784 :query_pan_pos()
785 :delay(10)
786 :go_to_preset( 1)
787 :delay(100)
788 :query_pan_pos()
789 :delay(10)
790 :go_to_preset( 2)
791 :delay(100)
792 :query_pan_pos()
793 :delay(10)
794 :go_to_preset( 3)
795 :delay(100)
796 :query_pan_pos()
797 :delay(10)
798 :go_to_preset( 4)
799 :delay(100)
800 :query_pan_pos()
801 :delay(10)
802 :go_to_preset( 5)
803 :delay(100)
804 :query_pan_pos()
805 :delay(10)
806 :go_to_preset( 6)
807 :delay(100)
808 :query_pan_pos()
809 :delay(10)
810 :go_to_preset( 7)
811 :delay(100)
812 :query_pan_pos()
813 :delay(10)
814 :go_to_preset( 8)
815 :delay(100)
816 :query_pan_pos()
817 :delay(10)
818 :go_to_preset( 9)
819 :delay(100)
820 :query_pan_pos()
821 :delay(10)
822 :go_to_preset(10)
823 :delay(100)
824 :query_pan_pos()
825 :delay(10)
826 :go_to_preset(11)
827 :delay(100)
828 :query_pan_pos()
829 :delay(10)
830 :go_to_preset(12)
831 :delay(100)
832 :query_pan_pos()
833 :delay(10)
834 :go_to_preset(13)
835 :delay(100)
836 :query_pan_pos()
837 :delay(10)
838 :go_to_preset(14)
839 :delay(100)
840 :query_pan_pos()
841 :delay(10)
842 :go_to_preset(15)
843 :delay(100)
844 :query_pan_pos()
845 :delay(10)
846 :go_to_preset(16)
847 :delay(100)
848 :query_pan_pos()
849 :delay(10)
850 :go_to_preset(17)
851 :delay(100)
852 :query_pan_pos()
853 :delay(10)
854 :go_to_preset(18)
855 :delay(100)
856 :query_pan_pos()
857 :delay(10)

```

```

858 :go_to_preset(19)
859 :delay(100)
860 :query_pan_pos()
861 :delay(10)
862 :go_to_preset(20)
863 :delay(100)
864 :query_pan_pos()
865 :delay(10)
866 :go_to_preset(21)
867 :delay(100)
868 :query_pan_pos()
869 :delay(10)
870 :go_to_preset(22)
871 :delay(100)
872 :query_pan_pos()
873 :delay(10)
874 :go_to_preset(23)
875 :delay(100)
876 :query_pan_pos()
877 :delay(10)
878 :go_to_preset(24)
879 :delay(100)
880 :query_pan_pos()
881 :delay(10)
882 :go_to_preset(25)
883 :delay(100)
884 :query_pan_pos()
885 :delay(10)
886 :go_to_preset(26)
887 :delay(100)
888 :query_pan_pos()
889 :delay(10)
890 :go_to_preset(27)
891 :delay(100)
892 :query_pan_pos()
893 :delay(10)
894 :go_to_preset(28)
895 :delay(100)
896 :query_pan_pos()
897 :delay(10)
898 :go_to_preset(29)
899 :delay(100)
900 :query_pan_pos()
901 :delay(10)
902 :go_to_preset(30)
903 :delay(100)
904 :query_pan_pos()
905 :delay(10)
906 :go_to_preset(31)
907 :delay(100)
908 :query_pan_pos()
909 :delay(10)
910
911
912
913 :go_to_zero_pan()
914 :delay(3000)
915 :query_pan_pos()
916 :delay(10)
917 :go_to_preset( 1)
918 :delay(50)
919 :query_pan_pos()
920 :delay(10)
921 :go_to_preset( 2)
922 :delay(50)
923 :query_pan_pos()
924 :delay(10)
925 :go_to_preset( 3)
926 :delay(50)
927 :query_pan_pos()
928 :delay(10)
929 :go_to_preset( 4)
930 :delay(50)
931 :query_pan_pos()
932 :delay(10)
933 :go_to_preset( 5)
934 :delay(50)
935 :query_pan_pos()
936 :delay(10)
937 :go_to_preset( 6)
938 :delay(50)
939 :query_pan_pos()
940 :delay(10)
941 :go_to_preset( 7)
942 :delay(50)
943 :query_pan_pos()
944 :delay(10)
945 :go_to_preset( 8)
946 :delay(50)
947 :query_pan_pos()
948 :delay(10)
949 :go_to_preset( 9)
950 :delay(50)
951 :query_pan_pos()
952 :delay(10)
953 :go_to_preset(10)
954 :delay(50)
955 :query_pan_pos()
956 :delay(10)
957 :go_to_preset(11)
958 :delay(50)
959 :query_pan_pos()
960 :delay(10)
961 :go_to_preset(12)
962 :delay(50)
963 :query_pan_pos()
964 :delay(10)
965 :go_to_preset(13)
966 :delay(50)
967 :query_pan_pos()
968 :delay(10)
969 :go_to_preset(14)
970 :delay(50)
971 :query_pan_pos()
972 :delay(10)
973 :go_to_preset(15)
974 :delay(50)
975 :query_pan_pos()
976 :delay(10)
977 :go_to_preset(16)
978 :delay(50)
979 :query_pan_pos()
980 :delay(10)
981 :go_to_preset(17)
982 :delay(50)
983 :query_pan_pos()
984 :delay(10)
985 :go_to_preset(18)
986 :delay(50)
987 :query_pan_pos()
988 :delay(10)
989 :go_to_preset(19)
990 :delay(50)
991 :query_pan_pos()
992 :delay(10)
993 :go_to_preset(20)
994 :delay(50)
995 :query_pan_pos()
996 :delay(10)
997 :go_to_preset(21)
998 :delay(50)
999 :query_pan_pos()
1000 :delay(10)
1001 :go_to_preset(22)
1002 :delay(50)
1003 :query_pan_pos()
1004 :delay(10)
1005 :go_to_preset(23)
1006 :delay(50)
1007 :query_pan_pos()
1008 :delay(10)
1009 :go_to_preset(24)
1010 :delay(50)
1011 :query_pan_pos()
1012 :delay(10)
1013 :go_to_preset(25)
1014 :delay(50)
1015 :query_pan_pos()
1016 :delay(10)
1017 :go_to_preset(26)
1018 :delay(50)
1019 :query_pan_pos()
1020 :delay(10)
1021 :go_to_preset(27)
1022 :delay(50)
1023 :query_pan_pos()
1024 :delay(10)
1025 :go_to_preset(28)
1026 :delay(50)
1027 :query_pan_pos()
1028 :delay(10)
1029 :go_to_preset(29)
1030 :delay(50)
1031 :query_pan_pos()
1032 :delay(10)
1033 :go_to_preset(30)
1034 :delay(50)
1035 :query_pan_pos()
1036 :delay(10)
1037 :go_to_preset(31)
1038 :delay(50)
1039 :query_pan_pos()
1040 :delay(10)
1041
1042

```

B.2 The smr184a script file

The unit was forced to cal_0

```
:go_to_zero_pan()
```

```
:delay(3000)
```

The location was read out.

```
:query_pan_pos()
```

```
:delay(10)
```

Then the location was forced to every degree step, and the results read out, from 1 to 359 degrees.

```
:set_pan_pos( 1)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

```
:set_pan_pos( 2)
```

```
:delay(500)
```

```
:query_pan_pos()
```

```
:delay(10)
```

B.2.1 The full listing of smr184a

```
1 :go_to_zero_pan()
2 :delay(3000)
3 :query_pan_pos()
4 :delay(10)
5 :set_pan_pos( 1)
6 :delay(500)
7 :query_pan_pos()
8 :delay(10)
9 :set_pan_pos( 2)
10 :delay(500)
11 :query_pan_pos()
12 :delay(10)
13 :set_pan_pos( 3)
14 :delay(500)
15 :query_pan_pos()
16 :delay(10)
17 :set_pan_pos( 4)
18 :delay(500)
19 :query_pan_pos()
20 :delay(10)
21 :set_pan_pos( 5)
22 :delay(500)
23 :query_pan_pos()
24 :delay(10)
25 :set_pan_pos( 6)
26 :delay(500)
27 :query_pan_pos()
28 :delay(10)
29 :set_pan_pos( 7)
30 :delay(500)
31 :query_pan_pos()
32 :delay(10)
33 :set_pan_pos( 8)
34 :delay(500)
35 :query_pan_pos()
36 :delay(10)
37 :set_pan_pos( 9)
38 :delay(500)
39 :query_pan_pos()
40 :delay(10)
41 :set_pan_pos(10)
42 :delay(500)
43 :query_pan_pos()
44 :delay(10)
45 :set_pan_pos(11)
46 :delay(500)
47 :query_pan_pos()
48 :delay(10)
49 :set_pan_pos(12)
50 :delay(500)
51 :query_pan_pos()
52 :delay(10)
53 :set_pan_pos(13)
54 :delay(500)
```

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55 :query_pan_pos()
56 :delay(10)
57 :set_pan_pos(14)
58 :delay(500)
59 :query_pan_pos()
60 :delay(10)
61 :set_pan_pos(15)
62 :delay(500)
63 :query_pan_pos()
64 :delay(10)
65 :set_pan_pos(16)
66 :delay(500)
67 :query_pan_pos()
68 :delay(10)
69 :set_pan_pos(17)
70 :delay(500)
71 :query_pan_pos()
72 :delay(10)
73 :set_pan_pos(18)
74 :delay(500)
75 :query_pan_pos()
76 :delay(10)
77 :set_pan_pos(19)
78 :delay(500)
79 :query_pan_pos()
80 :delay(10)
81 :set_pan_pos(20)
82 :delay(500)
83 :query_pan_pos()
84 :delay(10)
85 :set_pan_pos(21)
86 :delay(500)
87 :query_pan_pos()
88 :delay(10)
89 :set_pan_pos(22)
90 :delay(500)
91 :query_pan_pos()
92 :delay(10)
93 :set_pan_pos(23)
94 :delay(500)
95 :query_pan_pos()
96 :delay(10)
97 :set_pan_pos(24)
98 :delay(500)
99 :query_pan_pos()
100 :delay(10)
101 :set_pan_pos(25)
102 :delay(500)
103 :query_pan_pos()
104 :delay(10)
105 :set_pan_pos(26)
106 :delay(500)
107 :query_pan_pos()
108 :delay(10)
109 :set_pan_pos(27)
110 :delay(500)
111 :query_pan_pos()
112 :delay(10)
113 :set_pan_pos(28)
114 :delay(500)
115 :query_pan_pos()
116 :delay(10)
117 :set_pan_pos(29)
118 :delay(500)
119 :query_pan_pos()
120 :delay(10)
121 :set_pan_pos(30)
122 :delay(500)
123 :query_pan_pos()
124 :delay(10)
125 :set_pan_pos(31)
126 :delay(500)
127 :query_pan_pos()
128 :delay(10)
129 :set_pan_pos(32)
130 :delay(500)
131 :query_pan_pos()
132 :delay(10)
133 :set_pan_pos(33)
134 :delay(500)
135 :query_pan_pos()
136 :delay(10)
137 :set_pan_pos(34)
138 :delay(500)
139 :query_pan_pos()
140 :delay(10)
141 :set_pan_pos(35)
142 :delay(500)
143 :query_pan_pos()
144 :delay(10)
145 :set_pan_pos(36)
146 :delay(500)
147 :query_pan_pos()
148 :delay(10)
149 :set_pan_pos(37)
```

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150 :delay(500)
151 :query_pan_pos()
152 :delay(10)
153 :set_pan_pos(38)
154 :delay(500)
155 :query_pan_pos()
156 :delay(10)
157 :set_pan_pos(39)
158 :delay(500)
159 :query_pan_pos()
160 :delay(10)
161 :set_pan_pos(40)
162 :delay(500)
163 :query_pan_pos()
164 :delay(10)
165 :set_pan_pos(41)
166 :delay(500)
167 :query_pan_pos()
168 :delay(10)
169 :set_pan_pos(42)
170 :delay(500)
171 :query_pan_pos()
172 :delay(10)
173 :set_pan_pos(43)
174 :delay(500)
175 :query_pan_pos()
176 :delay(10)
177 :set_pan_pos(44)
178 :delay(500)
179 :query_pan_pos()
180 :delay(10)
181 :set_pan_pos(45)
182 :delay(500)
183 :query_pan_pos()
184 :delay(10)
185 :set_pan_pos(46)
186 :delay(500)
187 :query_pan_pos()
188 :delay(10)
189 :set_pan_pos(47)
190 :delay(500)
191 :query_pan_pos()
192 :delay(10)
193 :set_pan_pos(48)
194 :delay(500)
195 :query_pan_pos()
196 :delay(10)
197 :set_pan_pos(49)
198 :delay(500)
199 :query_pan_pos()
200 :delay(10)
201 :set_pan_pos(50)
202 :delay(500)
203 :query_pan_pos()
204 :delay(10)
205 :set_pan_pos(51)
206 :delay(500)
207 :query_pan_pos()
208 :delay(10)
209 :set_pan_pos(52)
210 :delay(500)
211 :query_pan_pos()
212 :delay(10)
213 :set_pan_pos(53)
214 :delay(500)
215 :query_pan_pos()
216 :delay(10)
217 :set_pan_pos(54)
218 :delay(500)
219 :query_pan_pos()
220 :delay(10)
221 :set_pan_pos(55)
222 :delay(500)
223 :query_pan_pos()
224 :delay(10)
225 :set_pan_pos(56)
226 :delay(500)
227 :query_pan_pos()
228 :delay(10)
229 :set_pan_pos(57)
230 :delay(500)
231 :query_pan_pos()
232 :delay(10)
233 :set_pan_pos(58)
234 :delay(500)
235 :query_pan_pos()
236 :delay(10)
237 :set_pan_pos(59)
238 :delay(500)
239 :query_pan_pos()
240 :delay(10)
241 :set_pan_pos(60)
242 :delay(500)
243 :query_pan_pos()
244 :delay(10)
245 :set_pan_pos(61)
246 :delay(500)
247 :query_pan_pos()
248 :delay(10)
249 :set_pan_pos(62)
250 :delay(500)
251 :query_pan_pos()
252 :delay(10)
253 :set_pan_pos(63)
254 :delay(500)
255 :query_pan_pos()
256 :delay(10)
257 :set_pan_pos(64)
258 :delay(500)
259 :query_pan_pos()
260 :delay(10)
261 :set_pan_pos(65)
262 :delay(500)
263 :query_pan_pos()
264 :delay(10)
265 :set_pan_pos(66)
266 :delay(500)
267 :query_pan_pos()
268 :delay(10)
269 :set_pan_pos(67)
270 :delay(500)
271 :query_pan_pos()
272 :delay(10)
273 :set_pan_pos(68)
274 :delay(500)
275 :query_pan_pos()
276 :delay(10)
277 :set_pan_pos(69)
278 :delay(500)
279 :query_pan_pos()
280 :delay(10)
281 :set_pan_pos(70)
282 :delay(500)
283 :query_pan_pos()
284 :delay(10)
285 :set_pan_pos(71)
286 :delay(500)
287 :query_pan_pos()
288 :delay(10)
289 :set_pan_pos(72)
290 :delay(500)
291 :query_pan_pos()
292 :delay(10)
293 :set_pan_pos(73)
294 :delay(500)
295 :query_pan_pos()
296 :delay(10)
297 :set_pan_pos(74)
298 :delay(500)
299 :query_pan_pos()
300 :delay(10)
301 :set_pan_pos(75)
302 :delay(500)
303 :query_pan_pos()
304 :delay(10)
305 :set_pan_pos(76)
306 :delay(500)
307 :query_pan_pos()
308 :delay(10)
309 :set_pan_pos(77)
310 :delay(500)
311 :query_pan_pos()
312 :delay(10)
313 :set_pan_pos(78)
314 :delay(500)
315 :query_pan_pos()
316 :delay(10)
317 :set_pan_pos(79)
318 :delay(500)
319 :query_pan_pos()
320 :delay(10)
321 :set_pan_pos(80)
322 :delay(500)
323 :query_pan_pos()
324 :delay(10)
325 :set_pan_pos(81)
326 :delay(500)
327 :query_pan_pos()
328 :delay(10)
329 :set_pan_pos(82)
330 :delay(500)
331 :query_pan_pos()
332 :delay(10)
333 :set_pan_pos(83)
334 :delay(500)
335 :query_pan_pos()
336 :delay(10)
337 :set_pan_pos(84)
338 :delay(500)
339 :query_pan_pos()

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340 :delay(10)
341 :set_pan_pos(85)
342 :delay(500)
343 :query_pan_pos()
344 :delay(10)
345 :set_pan_pos(86)
346 :delay(500)
347 :query_pan_pos()
348 :delay(10)
349 :set_pan_pos(87)
350 :delay(500)
351 :query_pan_pos()
352 :delay(10)
353 :set_pan_pos(88)
354 :delay(500)
355 :query_pan_pos()
356 :delay(10)
357 :set_pan_pos(89)
358 :delay(500)
359 :query_pan_pos()
360 :delay(10)
361 :set_pan_pos(90)
362 :delay(500)
363 :query_pan_pos()
364 :delay(10)
365 :set_pan_pos(91)
366 :delay(500)
367 :query_pan_pos()
368 :delay(10)
369 :set_pan_pos(92)
370 :delay(500)
371 :query_pan_pos()
372 :delay(10)
373 :set_pan_pos(93)
374 :delay(500)
375 :query_pan_pos()
376 :delay(10)
377 :set_pan_pos(94)
378 :delay(500)
379 :query_pan_pos()
380 :delay(10)
381 :set_pan_pos(95)
382 :delay(500)
383 :query_pan_pos()
384 :delay(10)
385 :set_pan_pos(96)
386 :delay(500)
387 :query_pan_pos()
388 :delay(10)
389 :set_pan_pos(97)
390 :delay(500)
391 :query_pan_pos()
392 :delay(10)
393 :set_pan_pos(98)
394 :delay(500)
395 :query_pan_pos()
396 :delay(10)
397 :set_pan_pos(99)
398 :delay(500)
399 :query_pan_pos()
400 :delay(10)
401 :set_pan_pos(100)
402 :delay(500)
403 :query_pan_pos()
404 :delay(10)
405 :set_pan_pos(101)
406 :delay(500)
407 :query_pan_pos()
408 :delay(10)
409 :set_pan_pos(102)
410 :delay(500)
411 :query_pan_pos()
412 :delay(10)
413 :set_pan_pos(103)
414 :delay(500)
415 :query_pan_pos()
416 :delay(10)
417 :set_pan_pos(104)
418 :delay(500)
419 :query_pan_pos()
420 :delay(10)
421 :set_pan_pos(105)
422 :delay(500)
423 :query_pan_pos()
424 :delay(10)
425 :set_pan_pos(106)
426 :delay(500)
427 :query_pan_pos()
428 :delay(10)
429 :set_pan_pos(107)
430 :delay(500)
431 :query_pan_pos()
432 :delay(10)
433 :set_pan_pos(108)
434 :delay(500)
435 :query_pan_pos()
436 :delay(10)
437 :set_pan_pos(109)
438 :delay(500)
439 :query_pan_pos()
440 :delay(10)
441 :set_pan_pos(110)
442 :delay(500)
443 :query_pan_pos()
444 :delay(10)
445 :set_pan_pos(111)
446 :delay(500)
447 :query_pan_pos()
448 :delay(10)
449 :set_pan_pos(112)
450 :delay(500)
451 :query_pan_pos()
452 :delay(10)
453 :set_pan_pos(113)
454 :delay(500)
455 :query_pan_pos()
456 :delay(10)
457 :set_pan_pos(114)
458 :delay(500)
459 :query_pan_pos()
460 :delay(10)
461 :set_pan_pos(115)
462 :delay(500)
463 :query_pan_pos()
464 :delay(10)
465 :set_pan_pos(116)
466 :delay(500)
467 :query_pan_pos()
468 :delay(10)
469 :set_pan_pos(117)
470 :delay(500)
471 :query_pan_pos()
472 :delay(10)
473 :set_pan_pos(118)
474 :delay(500)
475 :query_pan_pos()
476 :delay(10)
477 :set_pan_pos(119)
478 :delay(500)
479 :query_pan_pos()
480 :delay(10)
481 :set_pan_pos(120)
482 :delay(500)
483 :query_pan_pos()
484 :delay(10)
485 :set_pan_pos(121)
486 :delay(500)
487 :query_pan_pos()
488 :delay(10)
489 :set_pan_pos(122)
490 :delay(500)
491 :query_pan_pos()
492 :delay(10)
493 :set_pan_pos(123)
494 :delay(500)
495 :query_pan_pos()
496 :delay(10)
497 :set_pan_pos(124)
498 :delay(500)
499 :query_pan_pos()
500 :delay(10)
501 :set_pan_pos(125)
502 :delay(500)
503 :query_pan_pos()
504 :delay(10)
505 :set_pan_pos(126)
506 :delay(500)
507 :query_pan_pos()
508 :delay(10)
509 :set_pan_pos(127)
510 :delay(500)
511 :query_pan_pos()
512 :delay(10)
513 :set_pan_pos(128)
514 :delay(500)
515 :query_pan_pos()
516 :delay(10)
517 :set_pan_pos(129)
518 :delay(500)
519 :query_pan_pos()
520 :delay(10)
521 :set_pan_pos(130)
522 :delay(500)
523 :query_pan_pos()
524 :delay(10)
525 :set_pan_pos(131)
526 :delay(500)
527 :query_pan_pos()
528 :delay(10)
529 :set_pan_pos(132)

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530 :delay(500)
531 :query_pan_pos()
532 :delay(10)
533 :set_pan_pos(133)
534 :delay(500)
535 :query_pan_pos()
536 :delay(10)
537 :set_pan_pos(134)
538 :delay(500)
539 :query_pan_pos()
540 :delay(10)
541 :set_pan_pos(135)
542 :delay(500)
543 :query_pan_pos()
544 :delay(10)
545 :set_pan_pos(136)
546 :delay(500)
547 :query_pan_pos()
548 :delay(10)
549 :set_pan_pos(137)
550 :delay(500)
551 :query_pan_pos()
552 :delay(10)
553 :set_pan_pos(138)
554 :delay(500)
555 :query_pan_pos()
556 :delay(10)
557 :set_pan_pos(139)
558 :delay(500)
559 :query_pan_pos()
560 :delay(10)
561 :set_pan_pos(140)
562 :delay(500)
563 :query_pan_pos()
564 :delay(10)
565 :set_pan_pos(141)
566 :delay(500)
567 :query_pan_pos()
568 :delay(10)
569 :set_pan_pos(142)
570 :delay(500)
571 :query_pan_pos()
572 :delay(10)
573 :set_pan_pos(143)
574 :delay(500)
575 :query_pan_pos()
576 :delay(10)
577 :set_pan_pos(144)
578 :delay(500)
579 :query_pan_pos()
580 :delay(10)
581 :set_pan_pos(145)
582 :delay(500)
583 :query_pan_pos()
584 :delay(10)
585 :set_pan_pos(146)
586 :delay(500)
587 :query_pan_pos()
588 :delay(10)
589 :set_pan_pos(147)
590 :delay(500)
591 :query_pan_pos()
592 :delay(10)
593 :set_pan_pos(148)
594 :delay(500)
595 :query_pan_pos()
596 :delay(10)
597 :set_pan_pos(149)
598 :delay(500)
599 :query_pan_pos()
600 :delay(10)
601 :set_pan_pos(150)
602 :delay(500)
603 :query_pan_pos()
604 :delay(10)
605 :set_pan_pos(151)
606 :delay(500)
607 :query_pan_pos()
608 :delay(10)
609 :set_pan_pos(152)
610 :delay(500)
611 :query_pan_pos()
612 :delay(10)
613 :set_pan_pos(153)
614 :delay(500)
615 :query_pan_pos()
616 :delay(10)
617 :set_pan_pos(154)
618 :delay(500)
619 :query_pan_pos()
620 :delay(10)
621 :set_pan_pos(155)
622 :delay(500)
623 :query_pan_pos()
624 :delay(10)
625 :set_pan_pos(156)
626 :delay(500)
627 :query_pan_pos()
628 :delay(10)
629 :set_pan_pos(157)
630 :delay(500)
631 :query_pan_pos()
632 :delay(10)
633 :set_pan_pos(158)
634 :delay(500)
635 :query_pan_pos()
636 :delay(10)
637 :set_pan_pos(159)
638 :delay(500)
639 :query_pan_pos()
640 :delay(10)
641 :set_pan_pos(160)
642 :delay(500)
643 :query_pan_pos()
644 :delay(10)
645 :set_pan_pos(161)
646 :delay(500)
647 :query_pan_pos()
648 :delay(10)
649 :set_pan_pos(162)
650 :delay(500)
651 :query_pan_pos()
652 :delay(10)
653 :set_pan_pos(163)
654 :delay(500)
655 :query_pan_pos()
656 :delay(10)
657 :set_pan_pos(164)
658 :delay(500)
659 :query_pan_pos()
660 :delay(10)
661 :set_pan_pos(165)
662 :delay(500)
663 :query_pan_pos()
664 :delay(10)
665 :set_pan_pos(166)
666 :delay(500)
667 :query_pan_pos()
668 :delay(10)
669 :set_pan_pos(167)
670 :delay(500)
671 :query_pan_pos()
672 :delay(10)
673 :set_pan_pos(168)
674 :delay(500)
675 :query_pan_pos()
676 :delay(10)
677 :set_pan_pos(169)
678 :delay(500)
679 :query_pan_pos()
680 :delay(10)
681 :set_pan_pos(170)
682 :delay(500)
683 :query_pan_pos()
684 :delay(10)
685 :set_pan_pos(171)
686 :delay(500)
687 :query_pan_pos()
688 :delay(10)
689 :set_pan_pos(172)
690 :delay(500)
691 :query_pan_pos()
692 :delay(10)
693 :set_pan_pos(173)
694 :delay(500)
695 :query_pan_pos()
696 :delay(10)
697 :set_pan_pos(174)
698 :delay(500)
699 :query_pan_pos()
700 :delay(10)
701 :set_pan_pos(175)
702 :delay(500)
703 :query_pan_pos()
704 :delay(10)
705 :set_pan_pos(176)
706 :delay(500)
707 :query_pan_pos()
708 :delay(10)
709 :set_pan_pos(177)
710 :delay(500)
711 :query_pan_pos()
712 :delay(10)
713 :set_pan_pos(178)
714 :delay(500)
715 :query_pan_pos()
716 :delay(10)
717 :set_pan_pos(179)
718 :delay(500)
719 :query_pan_pos()

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720 :delay(10)
721 :set_pan_pos(180)
722 :delay(500)
723 :query_pan_pos()
724 :delay(10)
725 :set_pan_pos(181)
726 :delay(500)
727 :query_pan_pos()
728 :delay(10)
729 :set_pan_pos(182)
730 :delay(500)
731 :query_pan_pos()
732 :delay(10)
733 :set_pan_pos(183)
734 :delay(500)
735 :query_pan_pos()
736 :delay(10)
737 :set_pan_pos(184)
738 :delay(500)
739 :query_pan_pos()
740 :delay(10)
741 :set_pan_pos(185)
742 :delay(500)
743 :query_pan_pos()
744 :delay(10)
745 :set_pan_pos(186)
746 :delay(500)
747 :query_pan_pos()
748 :delay(10)
749 :set_pan_pos(187)
750 :delay(500)
751 :query_pan_pos()
752 :delay(10)
753 :set_pan_pos(188)
754 :delay(500)
755 :query_pan_pos()
756 :delay(10)
757 :set_pan_pos(189)
758 :delay(500)
759 :query_pan_pos()
760 :delay(10)
761 :set_pan_pos(190)
762 :delay(500)
763 :query_pan_pos()
764 :delay(10)
765 :set_pan_pos(191)
766 :delay(500)
767 :query_pan_pos()
768 :delay(10)
769 :set_pan_pos(192)
770 :delay(500)
771 :query_pan_pos()
772 :delay(10)
773 :set_pan_pos(193)
774 :delay(500)
775 :query_pan_pos()
776 :delay(10)
777 :set_pan_pos(194)
778 :delay(500)
779 :query_pan_pos()
780 :delay(10)
781 :set_pan_pos(195)
782 :delay(500)
783 :query_pan_pos()
784 :delay(10)
785 :set_pan_pos(196)
786 :delay(500)
787 :query_pan_pos()
788 :delay(10)
789 :set_pan_pos(197)
790 :delay(500)
791 :query_pan_pos()
792 :delay(10)
793 :set_pan_pos(198)
794 :delay(500)
795 :query_pan_pos()
796 :delay(10)
797 :set_pan_pos(199)
798 :delay(500)
799 :query_pan_pos()
800 :delay(10)
801 :set_pan_pos(200)
802 :delay(500)
803 :query_pan_pos()
804 :delay(10)
805 :set_pan_pos(201)
806 :delay(500)
807 :query_pan_pos()
808 :delay(10)
809 :set_pan_pos(202)
810 :delay(500)
811 :query_pan_pos()
812 :delay(10)
813 :set_pan_pos(203)
814 :delay(500)
815 :query_pan_pos()
816 :delay(10)
817 :set_pan_pos(204)
818 :delay(500)
819 :query_pan_pos()
820 :delay(10)
821 :set_pan_pos(205)
822 :delay(500)
823 :query_pan_pos()
824 :delay(10)
825 :set_pan_pos(206)
826 :delay(500)
827 :query_pan_pos()
828 :delay(10)
829 :set_pan_pos(207)
830 :delay(500)
831 :query_pan_pos()
832 :delay(10)
833 :set_pan_pos(208)
834 :delay(500)
835 :query_pan_pos()
836 :delay(10)
837 :set_pan_pos(209)
838 :delay(500)
839 :query_pan_pos()
840 :delay(10)
841 :set_pan_pos(210)
842 :delay(500)
843 :query_pan_pos()
844 :delay(10)
845 :set_pan_pos(211)
846 :delay(500)
847 :query_pan_pos()
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849 :set_pan_pos(212)
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853 :set_pan_pos(213)
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877 :set_pan_pos(219)
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881 :set_pan_pos(220)
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903 :query_pan_pos()
904 :delay(10)
905 :set_pan_pos(226)
906 :delay(500)
907 :query_pan_pos()
908 :delay(10)
909 :set_pan_pos(227)

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912 :delay(10)
913 :set_pan_pos(228)
914 :delay(500)
915 :query_pan_pos()
916 :delay(10)
917 :set_pan_pos(229)
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919 :query_pan_pos()
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929 :set_pan_pos(232)
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1094 :delay(500)
1095 :query_pan_pos()
1096 :delay(10)
1097 :set_pan_pos(274)
1098 :delay(500)
1099 :query_pan_pos()

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1100 :delay(10)
1101 :set_pan_pos(275)
1102 :delay(500)
1103 :query_pan_pos()
1104 :delay(10)
1105 :set_pan_pos(276)
1106 :delay(500)
1107 :query_pan_pos()
1108 :delay(10)
1109 :set_pan_pos(277)
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1123 :query_pan_pos()
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1127 :query_pan_pos()
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1287 :query_pan_pos()
1288 :delay(10)
1289 :set_pan_pos(322)

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1293 :set_pan_pos(323)
1294 :delay(500)
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