

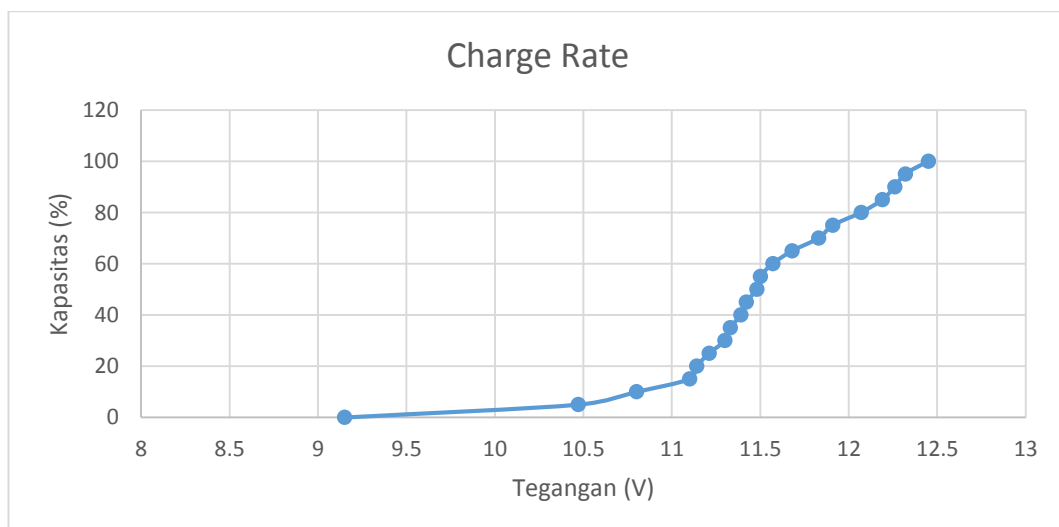
## LAMPIRAN

### a. Charging state

Tabel Charging state

| Kapasitas (%) | Tegangan (V) |
|---------------|--------------|
| 100           | 12.45        |
| 95            | 12.32        |
| 90            | 12.26        |
| 85            | 12.19        |
| 80            | 12.07        |
| 75            | 11.91        |
| 70            | 11.83        |
| 65            | 11.68        |
| 60            | 11.57        |
| 55            | 11.5         |
| 50            | 11.48        |
| 45            | 11.42        |
| 40            | 11.39        |
| 35            | 11.33        |
| 30            | 11.3         |
| 25            | 11.21        |
| 20            | 11.14        |
| 15            | 11.1         |
| 10            | 10.8         |
| 5             | 10.47        |
| 0             | 9.15         |

Gambar Grafik Charging State



**b. Pengujian Ketepatan Estimasi Waktu**

**Pengujian Ketepatan Estimasi Waktu Dengan input kecepatan 0.3**

| Nomor              | Gerak | Kapasitas Baterai | Waktu | web   | start | end | Waktu (s) | Error           |
|--------------------|-------|-------------------|-------|-------|-------|-----|-----------|-----------------|
| 1                  | Hover | 1500 mAh          | 11:15 | 11:00 | 96%   | 15% | 675       | 2.272727        |
| 2                  | Hover | 1500 mAh          | 11:11 | 11:00 | 96%   | 15% | 671       | 1.666667        |
| 3                  | Hover | 1500 mAh          | 11:02 | 11:00 | 96%   | 15% | 662       | 0.30303         |
| 4                  | Hover | 1500 mAh          | 11:05 | 11:00 | 96%   | 15% | 665       | 0.757576        |
| 5                  | Hover | 1500 mAh          | 10:51 | 11:00 | 96%   | 15% | 651       | 1.363636        |
| 6                  | Hover | 1500 mAh          | 10:49 | 11:00 | 96%   | 15% | 649       | 1.666667        |
| 7                  | Hover | 1500 mAh          | 10:58 | 11:00 | 96%   | 15% | 658       | 0.30303         |
| 8                  | Hover | 1500 mAh          | 11:12 | 11:00 | 96%   | 15% | 672       | 1.818182        |
| 9                  | Hover | 1500 mAh          | 10:59 | 11:00 | 96%   | 15% | 659       | 0.151515        |
| 10                 | Hover | 1500 mAh          | 11:00 | 11:00 | 96%   | 15% | 660       | 0               |
| <i>Total Error</i> |       |                   |       |       |       |     |           | <b>1.030303</b> |

| Nomor              | Gerak   | Kapasitas Baterai | Waktu | Web  | Start | End | Waktu (s) | Error           |
|--------------------|---------|-------------------|-------|------|-------|-----|-----------|-----------------|
| 1                  | Forward | 1500 mAh          | 6:13  | 6:00 | 53%   | 15% | 363       | 0.833333        |
| 2                  | Forward | 1500 mAh          | 6:19  | 6:00 | 53%   | 15% | 364       | 1.111111        |
| 3                  | Forward | 1500 mAh          | 6:01  | 6:00 | 53%   | 15% | 361       | 0.277778        |
| 4                  | Forward | 1500 mAh          | 6:10  | 6:00 | 53%   | 15% | 367       | 1.944444        |
| 5                  | Forward | 1500 mAh          | 5:58  | 6:00 | 53%   | 15% | 358       | 0.555556        |
| 6                  | Forward | 1500 mAh          | 5:57  | 6:00 | 53%   | 15% | 357       | 0.833333        |
| 7                  | Forward | 1500 mAh          | 5:54  | 6:00 | 53%   | 15% | 354       | 1.666667        |
| 8                  | Forward | 1500 mAh          | 6:07  | 6:00 | 53%   | 15% | 367       | 1.944444        |
| 9                  | Forward | 1500 mAh          | 6:09  | 6:00 | 53%   | 15% | 359       | 0.277778        |
| 10                 | Forward | 1500 mAh          | 5:51  | 6:00 | 53%   | 15% | 353       | 1.944444        |
| <i>Total Error</i> |         |                   |       |      |       |     |           | <b>1.138889</b> |

| Nomor | Gerak    | Kapasitas | Waktu | Web  | Start | End | Waktu | Error    |
|-------|----------|-----------|-------|------|-------|-----|-------|----------|
| 1     | Backward | 1500 mAh  | 5:55  | 6:00 | 50%   | 15% | 355 s | 1.388889 |
| 2     | Backward | 1500 mAh  | 5:51  | 6:00 | 50%   | 15% | 351 s | 2.5      |
| 3     | Backward | 1500 mAh  | 5:54  | 6:00 | 50%   | 15% | 354 s | 1.666667 |
| 4     | Backward | 1500 mAh  | 5:52  | 6:00 | 50%   | 15% | 352 s | 2.222222 |
| 5     | Backward | 1500 mAh  | 5:59  | 6:00 | 50%   | 15% | 359 s | 0.277778 |
| 6     | Backward | 1500 mAh  | 5:52  | 6:00 | 50%   | 15% | 352 s | 2.222222 |
| 7     | Backward | 1500 mAh  | 6:00  | 6:00 | 50%   | 15% | 360 s | 0        |
| 8     | Backward | 1500 mAh  | 6:05  | 6:00 | 50%   | 15% | 365 s | 1.388889 |
| 9     | Backward | 1500 mAh  | 5:53  | 6:00 | 50%   | 15% | 353 s | 1.944444 |
| 10    | Backward | 1500 mAh  | 5:52  | 6:00 | 50%   | 15% | 352 s | 2.222222 |

| Total Error |         |           |       |      |       |     |       | 1.583333 |
|-------------|---------|-----------|-------|------|-------|-----|-------|----------|
| Nomor       | Gerak   | Kapasitas | Waktu | Web  | Start | End | Waktu | Error    |
| 1           | Go Left | 1500 mAh  | 6:52  | 7:00 | 65%   | 15% | 412   | 1.904762 |
| 2           | Go Left | 1500 mAh  | 6:51  | 7:00 | 65%   | 15% | 411   | 2.142857 |
| 3           | Go Left | 1500 mAh  | 6:59  | 7:00 | 65%   | 15% | 419   | 0.238095 |
| 4           | Go Left | 1500 mAh  | 7:01  | 7:00 | 65%   | 15% | 421   | 0.238095 |
| 5           | Go Left | 1500 mAh  | 7:05  | 7:00 | 65%   | 15% | 425   | 1.190476 |
| 6           | Go Left | 1500 mAh  | 7:03  | 7:00 | 65%   | 15% | 423   | 0.714286 |
| 7           | Go Left | 1500 mAh  | 6:55  | 7:00 | 65%   | 15% | 415   | 1.190476 |
| 8           | Go Left | 1500 mAh  | 6:52  | 7:00 | 65%   | 15% | 412   | 1.904762 |
| 9           | Go Left | 1500 mAh  | 7:12  | 7:00 | 65%   | 15% | 420   | 0        |
| 10          | Go Left | 1500 mAh  | 7:09  | 7:00 | 65%   | 15% | 429   | 2.142857 |
| Total Error |         |           |       |      |       |     |       | 1.166667 |

| Nomor       | Gerak    | Kapasitas | Waktu | Web  | Start | End | Waktu | Error    |
|-------------|----------|-----------|-------|------|-------|-----|-------|----------|
| 1           | Go right | 1500 mAh  | 8:55  | 9:00 | 80%   | 15% | 535   | 0.925926 |
| 2           | Go right | 1500 mAh  | 9:12  | 9:00 | 80%   | 15% | 552   | 2.222222 |
| 3           | Go right | 1500 mAh  | 9:10  | 9:00 | 80%   | 15% | 550   | 1.851852 |
| 4           | Go right | 1500 mAh  | 9:05  | 9:00 | 80%   | 15% | 545   | 0.925926 |
| 5           | Go right | 1500 mAh  | 9:01  | 9:00 | 80%   | 15% | 541   | 0.185185 |
| 6           | Go right | 1500 mAh  | 9:05  | 9:00 | 80%   | 15% | 545   | 0.925926 |
| 7           | Go right | 1500 mAh  | 9:11  | 9:00 | 80%   | 15% | 551   | 2.037037 |
| 8           | Go right | 1500 mAh  | 8:57  | 9:00 | 80%   | 15% | 537   | 0.555556 |
| 9           | Go right | 1500 mAh  | 9:09  | 9:00 | 80%   | 15% | 549   | 1.666667 |
| 10          | Go right | 1500 mAh  | 8:52  | 9:00 | 80%   | 15% | 532   | 1.481481 |
| Total Error |          |           |       |      |       |     |       | 1.277778 |

#### Pengujian Ketepatan Estimasi Waktu Dengan input kecepatan 0.4

| Nomor       | Gerakan | Kapasitas | Waktu | Web   | Start | End | Waktu(S) | Error    |
|-------------|---------|-----------|-------|-------|-------|-----|----------|----------|
| 1           | Hover   | 1500 mAh  | 11:12 | 11:00 | 90%   | 15% | 672      | 1.818182 |
| 2           | Hover   | 1500 mAh  | 11:08 | 11:00 | 90%   | 15% | 668      | 1.212121 |
| 3           | Hover   | 1500 mAh  | 10:59 | 11:00 | 90%   | 15% | 659      | 0.151515 |
| 4           | Hover   | 1500 mAh  | 10:02 | 11:00 | 90%   | 15% | 662      | 0.30303  |
| 5           | Hover   | 1500 mAh  | 10:48 | 11:00 | 90%   | 15% | 648      | 1.818182 |
| 6           | Hover   | 1500 mAh  | 10:46 | 11:00 | 90%   | 15% | 646      | 2.121212 |
| 7           | Hover   | 1500 mAh  | 10:55 | 11:00 | 90%   | 15% | 655      | 0.757576 |
| 8           | Hover   | 1500 mAh  | 11:09 | 11:00 | 90%   | 15% | 669      | 1.363636 |
| 9           | Hover   | 1500 mAh  | 11:06 | 11:00 | 90%   | 15% | 666      | 0.909091 |
| 10          | Hover   | 1500 mAh  | 10:57 | 11:00 | 90%   | 15% | 657      | 0.454545 |
| Total Error |         |           |       |       |       |     |          | 1.090909 |

| Nomor              | Gerakan | Kapasitas | Waktu | Web  | Start | End | Waktu (S) | Error    |
|--------------------|---------|-----------|-------|------|-------|-----|-----------|----------|
| 1                  | Forward | 1500 mAh  | 6:02  | 6:00 | 48%   | 15% | 362       | 0.555556 |
| 2                  | Forward | 1500 mAh  | 6:02  | 6:00 | 48%   | 15% | 362       | 0.555556 |
| 3                  | Forward | 1500 mAh  | 5:59  | 6:00 | 48%   | 15% | 359       | 0.277778 |
| 4                  | Forward | 1500 mAh  | 6:05  | 6:00 | 48%   | 15% | 365       | 1.388889 |
| 5                  | Forward | 1500 mAh  | 5:56  | 6:00 | 48%   | 15% | 356       | 1.111111 |
| 6                  | Forward | 1500 mAh  | 5:55  | 6:00 | 48%   | 15% | 355       | 1.388889 |
| 7                  | Forward | 1500 mAh  | 5:52  | 6:00 | 48%   | 15% | 352       | 2.222222 |
| 8                  | Forward | 1500 mAh  | 6:02  | 6:00 | 48%   | 15% | 365       | 1.388889 |
| 9                  | Forward | 1500 mAh  | 5:57  | 6:00 | 48%   | 15% | 357       | 0.833333 |
| 10                 | Forward | 1500 mAh  | 5:51  | 6:00 | 48%   | 15% | 351       | 2.5      |
| <i>Total Error</i> |         |           |       |      |       |     |           | 1.222222 |

| Nomor              | Gerakan  | Kapasitas | Waktu | Web  | Start | End | Waktu (S) | Error  |
|--------------------|----------|-----------|-------|------|-------|-----|-----------|--------|
| 1                  | Backward | 1500 mAh  | 5:53  | 6:00 | 48%   | 15% | 353       | 1.9444 |
| 2                  | Backward | 1500 mAh  | 5:54  | 6:00 | 48%   | 15% | 354       | 1.6666 |
| 3                  | Backward | 1500 mAh  | 5:53  | 6:00 | 48%   | 15% | 353       | 1.9444 |
| 4                  | Backward | 1500 mAh  | 5:51  | 6:00 | 48%   | 15% | 351       | 2.5    |
| 5                  | Backward | 1500 mAh  | 5:58  | 6:00 | 48%   | 15% | 358       | 0.5555 |
| 6                  | Backward | 1500 mAh  | 5:01  | 6:00 | 48%   | 15% | 351       | 2.5    |
| 7                  | Backward | 1500 mAh  | 5:58  | 6:00 | 48%   | 15% | 358       | 0.5555 |
| 8                  | Backward | 1500 mAh  | 6:03  | 6:00 | 48%   | 15% | 363       | 0.8333 |
| 9                  | Backward | 1500 mAh  | 5:52  | 6:00 | 48%   | 15% | 352       | 2.2222 |
| 10                 | Backward | 1500 mAh  | 5:50  | 6:00 | 48%   | 15% | 350       | 2.7777 |
| <i>Total Error</i> |          |           |       |      |       |     |           | 1.75   |

| Nomor              | Gerakan | Kapasitas | Waktu | Web  | Start | End | Waktu(S) | Error  |
|--------------------|---------|-----------|-------|------|-------|-----|----------|--------|
| 1                  | Go left | 1500 mAh  | 6:50  | 7:00 | 60%   | 15% | 410      | 2.3809 |
| 2                  | Go left | 1500 mAh  | 6:49  | 7:00 | 60%   | 15% | 409      | 2.6190 |
| 3                  | Go left | 1500 mAh  | 6:57  | 7:00 | 60%   | 15% | 417      | 0.7142 |
| 4                  | Go left | 1500 mAh  | 6:59  | 7:00 | 60%   | 15% | 419      | 0.2380 |
| 5                  | Go left | 1500 mAh  | 7:03  | 7:00 | 60%   | 15% | 423      | 0.7142 |
| 6                  | Go left | 1500 mAh  | 7:01  | 7:00 | 60%   | 15% | 421      | 0.2380 |
| 7                  | Go left | 1500 mAh  | 6:53  | 7:00 | 60%   | 15% | 413      | 1.6666 |
| 8                  | Go left | 1500 mAh  | 6:50  | 7:00 | 60%   | 15% | 410      | 2.3809 |
| 9                  | Go left | 1500 mAh  | 6:58  | 7:00 | 60%   | 15% | 418      | 0.4761 |
| 10                 | Go left | 1500 mAh  | 7:07  | 7:00 | 60%   | 15% | 427      | 1.6666 |
| <i>Total Error</i> |         |           |       |      |       |     |          | 1.3095 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error  |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|--------|
| 1                  | <i>Go right</i> | 1500 mAh  | 8:53  | 9:00 | 78%   | 15% | 533 s | 1.2962 |
| 2                  | <i>Go right</i> | 1500 mAh  | 9:10  | 9:00 | 78%   | 15% | 550 s | 1.8518 |
| 3                  | <i>Go right</i> | 1500 mAh  | 9:08  | 9:00 | 78%   | 15% | 548 s | 1.4814 |
| 4                  | <i>Go right</i> | 1500 mAh  | 9:03  | 9:00 | 78%   | 15% | 543 s | 0.5555 |
| 5                  | <i>Go right</i> | 1500 mAh  | 8:59  | 9:00 | 78%   | 15% | 539 s | 0.1851 |
| 6                  | <i>Go right</i> | 1500 mAh  | 9:03  | 9:00 | 78%   | 15% | 543 s | 0.5555 |
| 7                  | <i>Go right</i> | 1500 mAh  | 9:03  | 9:00 | 78%   | 15% | 543 s | 0.5555 |
| 8                  | <i>Go right</i> | 1500 mAh  | 8:55  | 9:00 | 78%   | 15% | 535 s | 0.9259 |
| 9                  | <i>Go right</i> | 1500 mAh  | 9:07  | 9:00 | 78%   | 15% | 547 s | 1.2962 |
| 10                 | <i>Go right</i> | 1500 mAh  | 8:50  | 9:00 | 78%   | 15% | 530 s | 1.8518 |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 1.0555 |

### Pengujian Ketepatan Estimasi Waktu Dengan input kecepatan 0.5

| Nomor              | Gerakan      | Kapasitas | Waktu | Web   | Start | End | Waktu | Error  |
|--------------------|--------------|-----------|-------|-------|-------|-----|-------|--------|
| 1                  | <i>Hover</i> | 1500 mAh  | 10:01 | 10:00 | 85%   | 15% | 601 s | 0.1666 |
| 2                  | <i>Hover</i> | 1500 mAh  | 10:04 | 10:00 | 85%   | 15% | 604 s | 0.6666 |
| 3                  | <i>Hover</i> | 1500 mAh  | 10:09 | 10:00 | 85%   | 15% | 609 s | 1.5    |
| 4                  | <i>Hover</i> | 1500 mAh  | 9:57  | 10:00 | 85%   | 15% | 597 s | 0.5    |
| 5                  | <i>Hover</i> | 1500 mAh  | 9:59  | 10:00 | 85%   | 15% | 599 s | 0.1666 |
| 6                  | <i>Hover</i> | 1500 mAh  | 10:07 | 10:00 | 85%   | 15% | 607 s | 1.1666 |
| 7                  | <i>Hover</i> | 1500 mAh  | 10:03 | 10:00 | 85%   | 15% | 603 s | 0.5    |
| 8                  | <i>Hover</i> | 1500 mAh  | 9:53  | 10:00 | 85%   | 15% | 593 s | 1.1666 |
| 9                  | <i>Hover</i> | 1500 mAh  | 10:10 | 10:00 | 85%   | 15% | 610 s | 1.6666 |
| 10                 | <i>Hover</i> | 1500 mAh  | 9:58  | 10:00 | 85%   | 15% | 598 s | 0.3333 |
| <i>Total Error</i> |              |           |       |       |       |     |       | 0.7833 |

| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error  |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|--------|
| 1                  | <i>Forward</i> | 1500 mAh  | 6:59  | 7:00 | 62%   | 15% | 419 s | 0.2380 |
| 2                  | <i>Forward</i> | 1500 mAh  | 7:03  | 7:00 | 62%   | 15% | 423 s | 0.7142 |
| 3                  | <i>Forward</i> | 1500 mAh  | 7:09  | 7:00 | 62%   | 15% | 429 s | 2.1428 |
| 4                  | <i>Forward</i> | 1500 mAh  | 7:11  | 7:00 | 62%   | 15% | 431 s | 2.6190 |
| 5                  | <i>Forward</i> | 1500 mAh  | 7:07  | 7:00 | 62%   | 15% | 427 s | 1.6666 |
| 6                  | <i>Forward</i> | 1500 mAh  | 6:55  | 7:00 | 62%   | 15% | 415 s | 1.1904 |
| 7                  | <i>Forward</i> | 1500 mAh  | 7:05  | 7:00 | 62%   | 15% | 425 s | 1.1904 |
| 8                  | <i>Forward</i> | 1500 mAh  | 7:04  | 7:00 | 62%   | 15% | 424 s | 0.9523 |
| 9                  | <i>Forward</i> | 1500 mAh  | 6:56  | 7:00 | 62%   | 15% | 416 s | 0.9523 |
| 10                 | <i>Forward</i> | 1500 mAh  | 7:01  | 7:00 | 62%   | 15% | 421 s | 0.2380 |
| <i>Total Error</i> |                |           |       |      |       |     |       | 1.1904 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Backward</i> | 1500 mAh  | 7:07  | 7:00 | 62%   | 15% | 427 s | 1.666 |
| 2                  | <i>Backward</i> | 1500 mAh  | 7:01  | 7:00 | 62%   | 15% | 421 s | 0.238 |
| 3                  | <i>Backward</i> | 1500 mAh  | 7:03  | 7:00 | 62%   | 15% | 423 s | 0.714 |
| 4                  | <i>Backward</i> | 1500 mAh  | 7:04  | 7:00 | 62%   | 15% | 424 s | 0.952 |
| 5                  | <i>Backward</i> | 1500 mAh  | 6:56  | 7:00 | 62%   | 15% | 416 s | 0.952 |
| 6                  | <i>Backward</i> | 1500 mAh  | 6:59  | 7:00 | 62%   | 15% | 419 s | 0.238 |
| 7                  | <i>Backward</i> | 1500 mAh  | 7:06  | 7:00 | 62%   | 15% | 427 s | 1.666 |
| 8                  | <i>Backward</i> | 1500 mAh  | 7:02  | 7:00 | 62%   | 15% | 422 s | 0.476 |
| 9                  | <i>Backward</i> | 1500 mAh  | 6:52  | 7:00 | 62%   | 15% | 412 s | 1.904 |
| 10                 | <i>Backward</i> | 1500 mAh  | 6:54  | 7:00 | 62%   | 15% | 414 s | 1.428 |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 1.023 |

| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Go Left</i> | 1500 mAh  | 7:03  | 7:00 | 62%   | 15% | 423 s | 0.714 |
| 2                  | <i>Go Left</i> | 1500 mAh  | 7:04  | 7:00 | 62%   | 15% | 424 s | 0.952 |
| 3                  | <i>Go Left</i> | 1500 mAh  | 7:02  | 7:00 | 62%   | 15% | 422 s | 0.476 |
| 4                  | <i>Go Left</i> | 1500 mAh  | 7:00  | 7:00 | 62%   | 15% | 420 s | 0     |
| 5                  | <i>Go Left</i> | 1500 mAh  | 6:55  | 7:00 | 62%   | 15% | 415 s | 1.190 |
| 6                  | <i>Go Left</i> | 1500 mAh  | 6:58  | 7:00 | 62%   | 15% | 418 s | 0.476 |
| 7                  | <i>Go Left</i> | 1500 mAh  | 6:57  | 7:00 | 62%   | 15% | 417 s | 0.714 |
| 8                  | <i>Go Left</i> | 1500 mAh  | 6:59  | 7:00 | 62%   | 15% | 419 s | 0.238 |
| 9                  | <i>Go Left</i> | 1500 mAh  | 7:04  | 7:00 | 62%   | 15% | 424 s | 0.952 |
| 10                 | <i>Go Left</i> | 1500 mAh  | 7:09  | 7:00 | 62%   | 15% | 429 s | 2.142 |
| <i>Total Error</i> |                |           |       |      |       |     |       | 0.785 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Go Right</i> | 1500 mAh  | 9:11  | 9:00 | 73%   | 15% | 551 s | 2.037 |
| 2                  | <i>Go Right</i> | 1500 mAh  | 9:09  | 9:00 | 73%   | 15% | 549 s | 1.666 |
| 3                  | <i>Go Right</i> | 1500 mAh  | 9:03  | 9:00 | 73%   | 15% | 543 s | 0.555 |
| 4                  | <i>Go Right</i> | 1500 mAh  | 9:04  | 9:00 | 73%   | 15% | 544 s | 0.740 |
| 5                  | <i>Go Right</i> | 1500 mAh  | 9:07  | 9:00 | 73%   | 15% | 547 s | 1.296 |
| 6                  | <i>Go Right</i> | 1500 mAh  | 8:53  | 9:00 | 73%   | 15% | 533 s | 1.296 |
| 7                  | <i>Go Right</i> | 1500 mAh  | 8:59  | 9:00 | 73%   | 15% | 539 s | 0.185 |
| 8                  | <i>Go Right</i> | 1500 mAh  | 9:02  | 9:00 | 73%   | 15% | 542 s | 0.370 |
| 9                  | <i>Go Right</i> | 1500 mAh  | 8:55  | 9:00 | 73%   | 15% | 535 s | 0.925 |
| 10                 | <i>Go Right</i> | 1500 mAh  | 8:57  | 9:00 | 73%   | 15% | 537 s | 0.555 |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 0.962 |

**Pengujian Ketepatan Estimasi Waktu Dengan input kecepatan 0.6**

| Nomor              | Gerakan      | Kapasitas | Waktu | Web  | Start | End | Waktu | Error  |
|--------------------|--------------|-----------|-------|------|-------|-----|-------|--------|
| 1                  | <i>Hover</i> | 1500 mAh  | 9:11  | 9:00 | 80%   | 15% | 551 s | 2.0370 |
| 2                  | <i>Hover</i> | 1500 mAh  | 9:02  | 9:00 | 80%   | 15% | 542 s | 0.3703 |
| 3                  | <i>Hover</i> | 1500 mAh  | 9:01  | 9:00 | 80%   | 15% | 541 s | 0.1851 |
| 4                  | <i>Hover</i> | 1500 mAh  | 9:05  | 9:00 | 80%   | 15% | 545 s | 0.9259 |
| 5                  | <i>Hover</i> | 1500 mAh  | 9:02  | 9:00 | 80%   | 15% | 542 s | 0.3703 |
| 6                  | <i>Hover</i> | 1500 mAh  | 9:07  | 9:00 | 80%   | 15% | 547 s | 1.2962 |
| 7                  | <i>Hover</i> | 1500 mAh  | 8:55  | 9:00 | 80%   | 15% | 535 s | 0.9259 |
| 8                  | <i>Hover</i> | 1500 mAh  | 8:57  | 9:00 | 80%   | 15% | 537 s | 0.5555 |
| 9                  | <i>Hover</i> | 1500 mAh  | 9:03  | 9:00 | 80%   | 15% | 543 s | 0.5555 |
| 10                 | <i>Hover</i> | 1500 mAh  | 9:05  | 9:00 | 80%   | 15% | 545 s | 0.9259 |
| <i>Total Error</i> |              |           |       |      |       |     |       | 0.8148 |

| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Forward</i> | 1500 mAh  | 6:03  | 6:00 | 58%   | 15% | 363 s | 0.833 |
| 2                  | <i>Forward</i> | 1500 mAh  | 6:08  | 6:00 | 58%   | 15% | 368 s | 2.222 |
| 3                  | <i>Forward</i> | 1500 mAh  | 6:02  | 6:00 | 58%   | 15% | 362 s | 0.555 |
| 4                  | <i>Forward</i> | 1500 mAh  | 6:11  | 6:00 | 58%   | 15% | 371 s | 3.055 |
| 5                  | <i>Forward</i> | 1500 mAh  | 6:05  | 6:00 | 58%   | 15% | 365 s | 1.388 |
| 6                  | <i>Forward</i> | 1500 mAh  | 6:07  | 6:00 | 58%   | 15% | 367 s | 1.944 |
| 7                  | <i>Forward</i> | 1500 mAh  | 5:55  | 6:00 | 58%   | 15% | 355 s | 1.388 |
| 8                  | <i>Forward</i> | 1500 mAh  | 5:57  | 6:00 | 58%   | 15% | 357 s | 0.833 |
| 9                  | <i>Forward</i> | 1500 mAh  | 6:01  | 6:00 | 58%   | 15% | 361 s | 0.277 |
| 10                 | <i>Forward</i> | 1500 mAh  | 6:10  | 6:00 | 58%   | 15% | 370 s | 2.777 |
| <i>Total Error</i> |                |           |       |      |       |     |       | 1.527 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Backward</i> | 1500 mAh  | 5:57  | 6:00 | 58%   | 15% | 357 s | 0.833 |
| 2                  | <i>Backward</i> | 1500 mAh  | 6:05  | 6:00 | 58%   | 15% | 365 s | 1.388 |
| 3                  | <i>Backward</i> | 1500 mAh  | 6:06  | 6:00 | 58%   | 15% | 363 s | 0.833 |
| 4                  | <i>Backward</i> | 1500 mAh  | 6:00  | 6:00 | 58%   | 15% | 360 s | 0     |
| 5                  | <i>Backward</i> | 1500 mAh  | 6:05  | 6:00 | 58%   | 15% | 365 s | 1.388 |
| 6                  | <i>Backward</i> | 1500 mAh  | 5:56  | 6:00 | 58%   | 15% | 356 s | 1.111 |
| 7                  | <i>Backward</i> | 1500 mAh  | 5:53  | 6:00 | 58%   | 15% | 353 s | 1.944 |
| 8                  | <i>Backward</i> | 1500 mAh  | 6:12  | 6:00 | 58%   | 15% | 372 s | 3.333 |
| 9                  | <i>Backward</i> | 1500 mAh  | 5:59  | 6:00 | 58%   | 15% | 359 s | 0.277 |
| 10                 | <i>Backward</i> | 1500 mAh  | 6:04  | 6:00 | 58%   | 15% | 364 s | 1.111 |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 1.222 |

| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Go Left</i> | 1500 mAh  | 8:02  | 8:00 | 65%   | 15% | 482 s | 0.416 |
| 2                  | <i>Go Left</i> | 1500 mAh  | 7:53  | 8:00 | 65%   | 15% | 473 s | 1.458 |
| 3                  | <i>Go Left</i> | 1500 mAh  | 8:03  | 8:00 | 65%   | 15% | 483 s | 0.625 |
| 4                  | <i>Go Left</i> | 1500 mAh  | 8:02  | 8:00 | 65%   | 15% | 482 s | 0.416 |
| 5                  | <i>Go Left</i> | 1500 mAh  | 8:10  | 8:00 | 65%   | 15% | 490 s | 2.083 |
| 6                  | <i>Go Left</i> | 1500 mAh  | 8:04  | 8:00 | 65%   | 15% | 484 s | 0.833 |
| 7                  | <i>Go Left</i> | 1500 mAh  | 8:07  | 8:00 | 65%   | 15% | 487 s | 1.458 |
| 8                  | <i>Go Left</i> | 1500 mAh  | 7:56  | 8:00 | 65%   | 15% | 476 s | 0.833 |
| 9                  | <i>Go Left</i> | 1500 mAh  | 7:55  | 8:00 | 65%   | 15% | 475 s | 1.041 |
| 10                 | <i>Go Left</i> | 1500 mAh  | 7:50  | 8:00 | 65%   | 15% | 470 s | 2.083 |
| <i>Total Error</i> |                |           |       |      |       |     |       | 1.125 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Go right</i> | 1500 mAh  | 6:55  | 7:00 | 60%   | 15% | 415 s | 1.190 |
| 2                  | <i>Go right</i> | 1500 mAh  | 7:02  | 7:00 | 60%   | 15% | 422 s | 0.476 |
| 3                  | <i>Go right</i> | 1500 mAh  | 6:59  | 7:00 | 60%   | 15% | 419 s | 0.238 |
| 4                  | <i>Go right</i> | 1500 mAh  | 7:04  | 7:00 | 60%   | 15% | 424 s | 0.952 |
| 5                  | <i>Go right</i> | 1500 mAh  | 7:06  | 7:00 | 60%   | 15% | 426 s | 1.428 |
| 6                  | <i>Go right</i> | 1500 mAh  | 7:09  | 7:00 | 60%   | 15% | 429 s | 2.142 |
| 7                  | <i>Go right</i> | 1500 mAh  | 7:13  | 7:00 | 60%   | 15% | 433 s | 3.095 |
| 8                  | <i>Go right</i> | 1500 mAh  | 7:02  | 7:00 | 60%   | 15% | 422 s | 0.476 |
| 9                  | <i>Go right</i> | 1500 mAh  | 6:54  | 7:00 | 60%   | 15% | 414 s | 1.428 |
| 10                 | <i>Go right</i> | 1500 mAh  | 7:07  | 7:00 | 60%   | 15% | 427 s | 1.666 |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 1.309 |

### Pengujian Ketepatan Estimasi Waktu Dengan input kecepatan 0.7

| Nomor              | Gerakan      | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|--------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Hover</i> | 1500 mAh  | 5:02  | 5:00 | 53%   | 15% | 302 s | 0.666 |
| 2                  | <i>Hover</i> | 1500 mAh  | 4:59  | 5:00 | 53%   | 15% | 299 s | 0.333 |
| 3                  | <i>Hover</i> | 1500 mAh  | 4:54  | 5:00 | 53%   | 15% | 294 s | 2     |
| 4                  | <i>Hover</i> | 1500 mAh  | 4:55  | 5:00 | 53%   | 15% | 295 s | 1.666 |
| 5                  | <i>Hover</i> | 1500 mAh  | 4:54  | 5:00 | 53%   | 15% | 294 s | 2     |
| 6                  | <i>Hover</i> | 1500 mAh  | 4:56  | 5:00 | 53%   | 15% | 296 s | 1.333 |
| 7                  | <i>Hover</i> | 1500 mAh  | 4:52  | 5:00 | 53%   | 15% | 292 s | 2.666 |
| 8                  | <i>Hover</i> | 1500 mAh  | 5:02  | 5:00 | 53%   | 15% | 302 s | 0.666 |
| 9                  | <i>Hover</i> | 1500 mAh  | 5:03  | 5:00 | 53%   | 15% | 303 s | 1     |
| 10                 | <i>Hover</i> | 1500 mAh  | 5:01  | 5:00 | 53%   | 15% | 301 s | 0.333 |
| <i>Total Error</i> |              |           |       |      |       |     |       | 1.266 |



| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Forward</i> | 1500 mAh  | 7:02  | 7:00 | 58%   | 15% | 422   | 0.476 |
| 2                  | <i>Forward</i> | 1500 mAh  | 6:55  | 7:00 | 58%   | 15% | 415   | 1.190 |
| 3                  | <i>Forward</i> | 1500 mAh  | 6:58  | 7:00 | 58%   | 15% | 418   | 0.476 |
| 4                  | <i>Forward</i> | 1500 mAh  | 7:12  | 7:00 | 58%   | 15% | 432   | 2.857 |
| 5                  | <i>Forward</i> | 1500 mAh  | 7:07  | 7:00 | 58%   | 15% | 427   | 1.666 |
| 6                  | <i>Forward</i> | 1500 mAh  | 7:03  | 7:00 | 58%   | 15% | 423   | 0.714 |
| 7                  | <i>Forward</i> | 1500 mAh  | 7:02  | 7:00 | 58%   | 15% | 422   | 0.476 |
| 8                  | <i>Forward</i> | 1500 mAh  | 7:08  | 7:00 | 58%   | 15% | 428   | 1.904 |
| 9                  | <i>Forward</i> | 1500 mAh  | 7:01  | 7:00 | 58%   | 15% | 421   | 0.238 |
| 10                 | <i>Forward</i> | 1500 mAh  | 7:05  | 7:00 | 58%   | 15% | 425   | 1.190 |
| <i>Total Error</i> |                |           |       |      |       |     |       | 1.119 |

| Nomor              | Gerakan         | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|-----------------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | <i>Backward</i> | 1500 mAh  | 5:02  | 5:00 | 53%   | 15% | 302   | 0.666 |
| 2                  | <i>Backward</i> | 1500 mAh  | 4:51  | 5:00 | 53%   | 15% | 291   | 3     |
| 3                  | <i>Backward</i> | 1500 mAh  | 4:52  | 5:00 | 53%   | 15% | 292   | 2.666 |
| 4                  | <i>Backward</i> | 1500 mAh  | 4:59  | 5:00 | 53%   | 15% | 299   | 0.333 |
| 5                  | <i>Backward</i> | 1500 mAh  | 4:57  | 5:00 | 53%   | 15% | 297   | 1     |
| 6                  | <i>Backward</i> | 1500 mAh  | 4:55  | 5:00 | 53%   | 15% | 295   | 1.666 |
| 7                  | <i>Backward</i> | 1500 mAh  | 4:58  | 5:00 | 53%   | 15% | 298   | 0.666 |
| 8                  | <i>Backward</i> | 1500 mAh  | 4:59  | 5:00 | 53%   | 15% | 299   | 0.333 |
| 9                  | <i>Backward</i> | 1500 mAh  | 5:07  | 5:00 | 53%   | 15% | 307   | 2.333 |
| 10                 | <i>Backward</i> | 1500 mAh  | 5:09  | 5:00 | 53%   | 15% | 309   | 3     |
| <i>Total Error</i> |                 |           |       |      |       |     |       | 1.566 |

| Nomor              | Gerakan        | Kapasitas | Waktu | Web  | Start | End | Waktu | Error  |
|--------------------|----------------|-----------|-------|------|-------|-----|-------|--------|
| 1                  | <i>Go Left</i> | 1500 mAh  | 6:02  | 6:00 | 55%   | 15% | 362   | 0.555  |
| 2                  | <i>Go Left</i> | 1500 mAh  | 6:07  | 6:00 | 55%   | 15% | 367   | 1.944  |
| 3                  | <i>Go Left</i> | 1500 mAh  | 6:09  | 6:00 | 55%   | 15% | 369   | 2.5    |
| 4                  | <i>Go Left</i> | 1500 mAh  | 5:56  | 6:00 | 55%   | 15% | 356   | 1.111  |
| 5                  | <i>Go Left</i> | 1500 mAh  | 5:58  | 6:00 | 55%   | 15% | 358   | 0.555  |
| 6                  | <i>Go Left</i> | 1500 mAh  | 5:59  | 6:00 | 55%   | 15% | 359   | 0.277  |
| 7                  | <i>Go Left</i> | 1500 mAh  | 6:09  | 6:00 | 55%   | 15% | 369   | 2.5    |
| 8                  | <i>Go Left</i> | 1500 mAh  | 6:03  | 6:00 | 55%   | 15% | 363   | 0.833  |
| 9                  | <i>Go Left</i> | 1500 mAh  | 6:06  | 6:00 | 55%   | 15% | 366   | 1.666  |
| 10                 | <i>Go Left</i> | 1500 mAh  | 6:13  | 6:00 | 55%   | 15% | 373   | 3.611  |
| <i>Total Error</i> |                |           |       |      |       |     |       | 1.5555 |

| Nomor              | Gerakan  | Kapasitas | Waktu | Web  | Start | End | Waktu | Error |
|--------------------|----------|-----------|-------|------|-------|-----|-------|-------|
| 1                  | Go Right | 1500 mAh  | 8:02  | 8:00 | 63%   | 15% | 482   | 0.416 |
| 2                  | Go Right | 1500 mAh  | 8:05  | 8:00 | 63%   | 15% | 485   | 1.041 |
| 3                  | Go Right | 1500 mAh  | 8:07  | 8:00 | 63%   | 15% | 487   | 1.458 |
| 4                  | Go Right | 1500 mAh  | 7:56  | 8:00 | 63%   | 15% | 476   | 0.833 |
| 5                  | Go Right | 1500 mAh  | 7:55  | 8:00 | 63%   | 15% | 475   | 1.041 |
| 6                  | Go Right | 1500 mAh  | 7:59  | 8:00 | 63%   | 15% | 479   | 0.208 |
| 7                  | Go Right | 1500 mAh  | 8:12  | 8:00 | 63%   | 15% | 492   | 2.5   |
| 8                  | Go Right | 1500 mAh  | 8:04  | 8:00 | 63%   | 15% | 484   | 0.833 |
| 9                  | Go Right | 1500 mAh  | 8:09  | 8:00 | 63%   | 15% | 489   | 1.875 |
| 10                 | Go Right | 1500 mAh  | 8:03  | 8:00 | 63%   | 15% | 483   | 0.625 |
| <i>Total Error</i> |          |           |       |      |       |     |       | 1.083 |

### c. Pengujian Ketepatan Estimasi Perpindahan

#### Percobaan Perpindahan Dengan Input kecepatan 0.3

##### Gerak maju

| Percobaan ke-        | Perpindahan (m) | waktu (s) |
|----------------------|-----------------|-----------|
| 1                    | 28              | 60        |
| 2                    | 17              | 60        |
| 3                    | 16              | 60        |
| 4                    | 22              | 60        |
| 5                    | 19              | 60        |
| 6                    | 22              | 60        |
| 7                    | 21              | 60        |
| 8                    | 25              | 60        |
| 9                    | 27              | 60        |
| 10                   | 26              | 60        |
| Rata-rata 22.3 meter |                 |           |

##### Gerak mundur

| Percobaan ke-        | Perpindahan (m) | waktu (s) |
|----------------------|-----------------|-----------|
| 1                    | 24              | 60        |
| 2                    | 36              | 60        |
| 3                    | 21              | 60        |
| 4                    | 40              | 60        |
| 5                    | 21              | 60        |
| 6                    | 44              | 60        |
| 7                    | 48              | 60        |
| 8                    | 21              | 60        |
| 9                    | 22              | 60        |
| 10                   | 27              | 60        |
| Rata-rata 30.4 meter |                 |           |

##### Gerak kiri

| Percobaan ke- | Perpindahan (m) | waktu (s) |
|---------------|-----------------|-----------|
| 1             | 27              | 60        |
| 2             | 27              | 60        |
| 3             | 21              | 60        |
| 4             | 20              | 60        |
| 5             | 27              | 60        |
| 6             | 27              | 60        |

##### Gerak kanan

| Percobaan ke- | Perpindahan (m) | waktu (s) |
|---------------|-----------------|-----------|
| 1             | 23              | 60        |
| 2             | 23              | 60        |
| 3             | 29              | 60        |
| 4             | 31              | 60        |
| 5             | 19              | 60        |
| 6             | 25              | 60        |

|                       |                 |           |
|-----------------------|-----------------|-----------|
| 7                     | 29              | 60        |
| Percobaan ke-         | Perpindahan (m) | waktu (s) |
| 8                     | 24              | 60        |
| 9                     | 31              | 60        |
| 10                    | 30              | 60        |
| Rata –rata 26.3 meter |                 |           |

|                      |                 |           |
|----------------------|-----------------|-----------|
| 7                    | 29              | 60        |
| Percobaan ke-        | Perpindahan (m) | waktu (s) |
| 8                    | 22              | 60        |
| 9                    | 29              | 60        |
| 10                   | 24              | 60        |
| Rata-rata 25.4 meter |                 |           |

#### Percobaan Perpindahan Dengan Input kecepatan 0.4

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 42              | 60        |
| 2                     | 57              | 60        |
| 3                     | 55              | 60        |
| 4                     | 56              | 60        |
| 5                     | 59              | 60        |
| 6                     | 41              | 60        |
| 7                     | 42              | 60        |
| 8                     | 52              | 60        |
| 9                     | 54              | 60        |
| 10                    | 54              | 60        |
| Rata –rata 51.2 meter |                 |           |

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 29              | 60        |
| 2                     | 47              | 60        |
| 3                     | 39              | 60        |
| 4                     | 46              | 60        |
| 5                     | 59              | 60        |
| 6                     | 41              | 60        |
| 7                     | 42              | 60        |
| 8                     | 42              | 60        |
| 9                     | 42              | 60        |
| 10                    | 44              | 60        |
| Rata –rata 43.1 meter |                 |           |

| Gerak kiri    |                 |           |
|---------------|-----------------|-----------|
| Percobaan Ke- | Perpindahan (m) | Waktu (s) |
| 1             | 22              | 60        |
| 2             | 25              | 60        |
| 3             | 27              | 60        |
| 4             | 29              | 60        |
| 5             | 17              | 60        |
| 6             | 15              | 60        |
| 7             | 23              | 60        |
| 8             | 20              | 60        |
| 9             | 21              | 60        |
| 10            | 31              | 60        |
| Rata –rata 23 |                 |           |

| Gerak kanan     |                 |           |
|-----------------|-----------------|-----------|
| Percobaan Ke-   | Perpindahan (m) | Waktu (s) |
| 1               | 20              | 60        |
| 2               | 29              | 60        |
| 3               | 23              | 60        |
| 4               | 25              | 60        |
| 5               | 17              | 60        |
| 6               | 15              | 60        |
| 7               | 20              | 60        |
| 8               | 18              | 60        |
| 9               | 19              | 60        |
| 10              | 27              | 60        |
| Rata –rata 21.3 |                 |           |

**Percobaan Perpindahan Dengan Input kecepatan 0.5**

| Gerak maju           |                 |           |
|----------------------|-----------------|-----------|
| Percobaan Ke-        | Perpindahan (m) | Waktu (s) |
| 1                    | 28              | 60        |
| 2                    | 42              | 60        |
| 3                    | 45              | 60        |
| 4                    | 33              | 60        |
| 5                    | 32              | 60        |
| 6                    | 30              | 60        |
| 7                    | 31              | 60        |
| 8                    | 37              | 60        |
| 9                    | 36              | 60        |
| 10                   | 41              | 60        |
| Rata-rata 35.5 meter |                 |           |

| Gerak maju           |                 |           |
|----------------------|-----------------|-----------|
| Percobaan Ke-        | Perpindahan (m) | Waktu (s) |
| 1                    | 21              | 60        |
| 2                    | 32              | 60        |
| 3                    | 41              | 60        |
| 4                    | 33              | 60        |
| 5                    | 32              | 60        |
| 6                    | 30              | 60        |
| 7                    | 31              | 60        |
| 8                    | 37              | 60        |
| 9                    | 25              | 60        |
| 10                   | 41              | 60        |
| Rata-rata 32.3 meter |                 |           |

| Gerak kiri           |                 |           |
|----------------------|-----------------|-----------|
| Percobaan Ke-        | Perpindahan (m) | Waktu (s) |
| 1                    | 25              | 60        |
| 2                    | 29              | 60        |
| 3                    | 18              | 60        |
| 4                    | 21              | 60        |
| 5                    | 30              | 60        |
| 6                    | 24              | 60        |
| 7                    | 31              | 60        |
| 8                    | 22              | 60        |
| 9                    | 35              | 60        |
| 10                   | 27              | 60        |
| Rata-rata 26.2 meter |                 |           |

| Gerak kanan          |                 |           |
|----------------------|-----------------|-----------|
| Percobaan Ke-        | Perpindahan (m) | Waktu (s) |
| 1                    | 28              | 60        |
| 2                    | 32              | 60        |
| 3                    | 25              | 60        |
| 4                    | 28              | 60        |
| 5                    | 34              | 60        |
| 6                    | 27              | 60        |
| 7                    | 29              | 60        |
| 8                    | 25              | 60        |
| 9                    | 28              | 60        |
| 10                   | 25              | 60        |
| Rata-rata 28.1 meter |                 |           |

**Percobaan Perpindahan Dengan Input kecepatan 0.6**

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 42              | 60        |
| 2                     | 57              | 60        |
| 3                     | 55              | 60        |
| 4                     | 56              | 60        |
| 5                     | 59              | 60        |
| 6                     | 41              | 60        |
| 7                     | 42              | 60        |
| 8                     | 52              | 60        |
| 9                     | 54              | 60        |
| 10                    | 54              | 60        |
| Rata –rata 51.2 meter |                 |           |

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 29              | 60        |
| 2                     | 47              | 60        |
| 3                     | 39              | 60        |
| 4                     | 46              | 60        |
| 5                     | 59              | 60        |
| 6                     | 41              | 60        |
| 7                     | 42              | 60        |
| 8                     | 42              | 60        |
| 9                     | 42              | 60        |
| 10                    | 44              | 60        |
| Rata –rata 43.1 meter |                 |           |

| Gerak Kiri            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 53              | 60        |
| 2                     | 62              | 60        |
| 3                     | 65              | 60        |
| 4                     | 56              | 60        |
| 5                     | 61              | 60        |
| 6                     | 44              | 60        |
| 7                     | 45              | 60        |
| 8                     | 49              | 60        |
| 9                     | 63              | 60        |
| 10                    | 65              | 60        |
| Rata –rata 56.3 meter |                 |           |

| Gerak Kanan           |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 31              | 60        |
| 2                     | 40              | 60        |
| 3                     | 41              | 60        |
| 4                     | 39              | 60        |
| 5                     | 51              | 60        |
| 6                     | 44              | 60        |
| 7                     | 38              | 60        |
| 8                     | 37              | 60        |
| 9                     | 40              | 60        |
| 10                    | 41              | 60        |
| Rata –rata 40.2 meter |                 |           |

**Percobaan Perpindahan Dengan Input kecepatan 0.7**

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 72              | 60        |
| 2                     | 65              | 60        |
| 3                     | 41              | 60        |
| 4                     | 43              | 60        |
| 5                     | 57              | 60        |
| 6                     | 41              | 60        |
| 7                     | 40              | 60        |
| 8                     | 47              | 60        |
| 9                     | 46              | 60        |
| 10                    | 40              | 60        |
| Rata –rata 49.2 meter |                 |           |

| Gerak maju            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 40              | 60        |
| 2                     | 63              | 60        |
| 3                     | 50              | 60        |
| 4                     | 52              | 60        |
| 5                     | 51              | 60        |
| 6                     | 49              | 60        |
| 7                     | 45              | 60        |
| 8                     | 52              | 60        |
| 9                     | 47              | 60        |
| 10                    | 65              | 60        |
| Rata –rata 51.4 meter |                 |           |

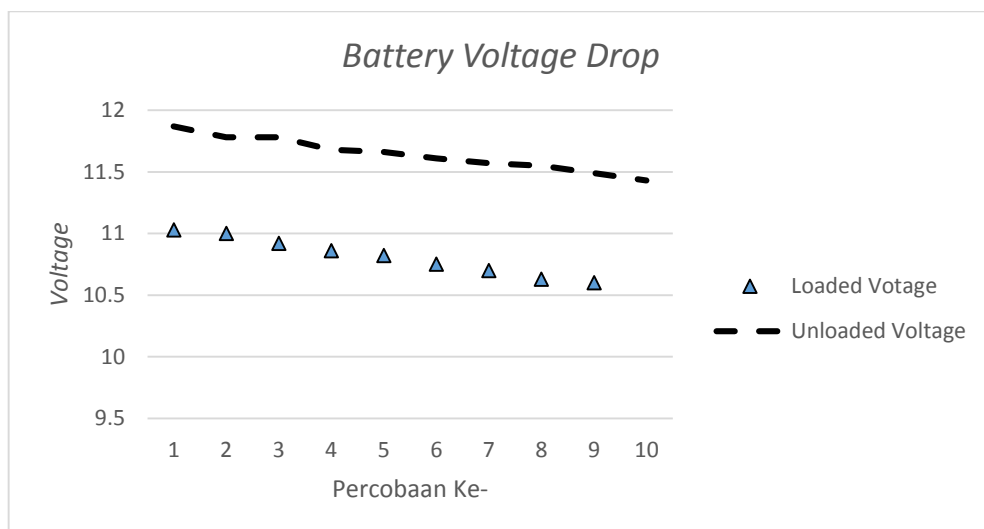
| Gerak kiri            |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 44              | 60        |
| 2                     | 57              | 60        |
| 3                     | 59              | 60        |
| 4                     | 58              | 60        |
| 5                     | 59              | 60        |
| 6                     | 44              | 60        |
| 7                     | 46              | 60        |
| 8                     | 49              | 60        |
| 9                     | 50              | 60        |
| 10                    | 47              | 60        |
| Rata –rata 51.3 meter |                 |           |

| Gerak kanan           |                 |           |
|-----------------------|-----------------|-----------|
| Percobaan Ke-         | Perpindahan (m) | Waktu (s) |
| 1                     | 87              | 60        |
| 2                     | 51              | 60        |
| 3                     | 47              | 60        |
| 4                     | 43              | 60        |
| 5                     | 53              | 60        |
| 6                     | 41              | 60        |
| 7                     | 40              | 60        |
| 8                     | 42              | 60        |
| 9                     | 43              | 60        |
| 10                    | 46              | 60        |
| Rata –rata 49.3 meter |                 |           |

**d. Percobaan Voltage Drop**

**Tabel Percobaan Internal Resistance pada Baterai AR.Drone 2.0**

| Capacity (mAh) | Cell | Run Time (s) | Unloaded Voltage (v) | Current (mA) | Loaded Voltage (v) | Voltage Drop (v) | Resistance (ohm) | Power (Wh) |
|----------------|------|--------------|----------------------|--------------|--------------------|------------------|------------------|------------|
| 1500           | 3    | 17           | 11.87                | 1.07         | 11.08              | 0.87             | 813              | 16.6       |
| 1500           | 3    | 17           | 11.78                | 1.07         | 11.03              | 0.75             | 701              | 16.6       |
| 1500           | 3    | 17           | 11.78                | 1.07         | 11                 | 0.86             | 804              | 16.6       |
| 1500           | 3    | 17           | 11.68                | 1.06         | 10.92              | 0.82             | 774              | 16.6       |
| 1500           | 3    | 17           | 11.66                | 1.1          | 10.86              | 0.58             | 527              | 16.6       |
| 1500           | 3    | 17           | 11.61                | 1.08         | 10.82              | 0.79             | 731              | 16.6       |
| 1500           | 3    | 17           | 11.57                | 1.07         | 10.75              | 0.82             | 766              | 16.6       |
| 1500           | 3    | 17           | 11.55                | 1.06         | 10.7               | 0.85             | 802              | 16.6       |
| 1500           | 3    | 17           | 11.49                | 1.05         | 10.63              | 0.86             | 819              | 16.6       |
| 1500           | 3    | 17           | 11.43                | 1.05         | 10.6               | 0.83             | 790              | 16.6       |



**Gambar Voltage Drop Pada Baterai AR.Drone 2.0**

e. Informasi komponen AR.Drone 2.0

Tabel Komponen AR.DRONE 2.0

| Number | Components          | Voltage Recommendation | Current (mA)   | Resistance Load (Ω) | Thevenin Resistance (Ω) | Power (Watt)          |
|--------|---------------------|------------------------|----------------|---------------------|-------------------------|-----------------------|
|        |                     |                        |                |                     |                         |                       |
| 1      | Atheros AR16310     |                        |                |                     |                         |                       |
|        | AVDD18              | 1.8                    | R(8.2)   T(58) | R(0.3 K)   T(53.44) | R(0.882 K)   T(0.135 K) | R(0.014)   T(0.104)   |
|        | PAREG_BASE          | 3.3                    | R(0)   T(175)  | R(0)   T(17.71)     | R(0)   T(0.135 K)       | R(0)   T(0.57)        |
|        | VAT_42              | 3                      | R(0)   T(175)  | R(0)   T(17.71)     | R(0)   T(0.135 K)       | R(0)   T(0.57)        |
|        | VDD33               | 3                      | R(0)   T(175)  | R(0)   T(17.71)     | R(0)   T(0.135 K)       | R(0)   T(0.57)        |
| 2      | TPS65921            | 4                      | 1200           | 2.25                | 7.0                     | 4.32                  |
| 3      | NAND Flash 128      | 3                      | 8              | 337.5               | 16.81                   | $2.4 \times 10^{-5}$  |
| 4      | MT46H64             | 2                      | 46             | 36.95               | 203.25                  | 0.082                 |
| 5      | BMP180              |                        |                |                     |                         |                       |
|        | VDD                 | 3                      | 0.005          | 360 K               | 1.83 M                  | $1.35 \times 10^{-8}$ |
|        | VDD IO              | 2.6                    | 0.005          | 324 K               | 1.87 M                  | $1.35 \times 10^{-8}$ |
| 6      | IMUU-3000           | 3                      | 65             | 32.30 K             | 0.135 K                 | 0.18                  |
| 7      | PIC24HJ             | 3.3                    | 250            | 12                  | 32.41                   | 0.82                  |
| 8      | BM150               |                        |                |                     |                         |                       |
|        | VDD                 | 3                      | 200            | 12                  | 43.24                   | 0.6                   |
|        | VDD IO              | 2                      | 200            | 8.1                 | 46.98                   | 0.44                  |
| 9      | MCP6L04             | 3.3                    | 2              | 900                 | 4.4 K                   | 0.0066                |
| 10     | AK8975C             |                        |                |                     |                         |                       |
|        | Analog Power Supply | 3                      | 0.35           | 6.8 K               | 24.685 K                | $1.05 \times 10^{-6}$ |
|        | Digital InterFace   | 2                      | 0.35           | 4.7 K               | 26.865 K                | $5.7 \times 10^{-7}$  |

Sumber: Teardown.com (2016)