



## Paradox 2 Dimensions



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### Paradox 2: Dimensions and measurements

This paper provides the critical dimensions and measurements of the Paradox 2 devices.

At this time, the dimensions of the original device are presented. As new versions and variations of the device are developed; their measurements will be included. Each version/variation of the device will be contained in its own chapter.

Paradox 2 Dimensions



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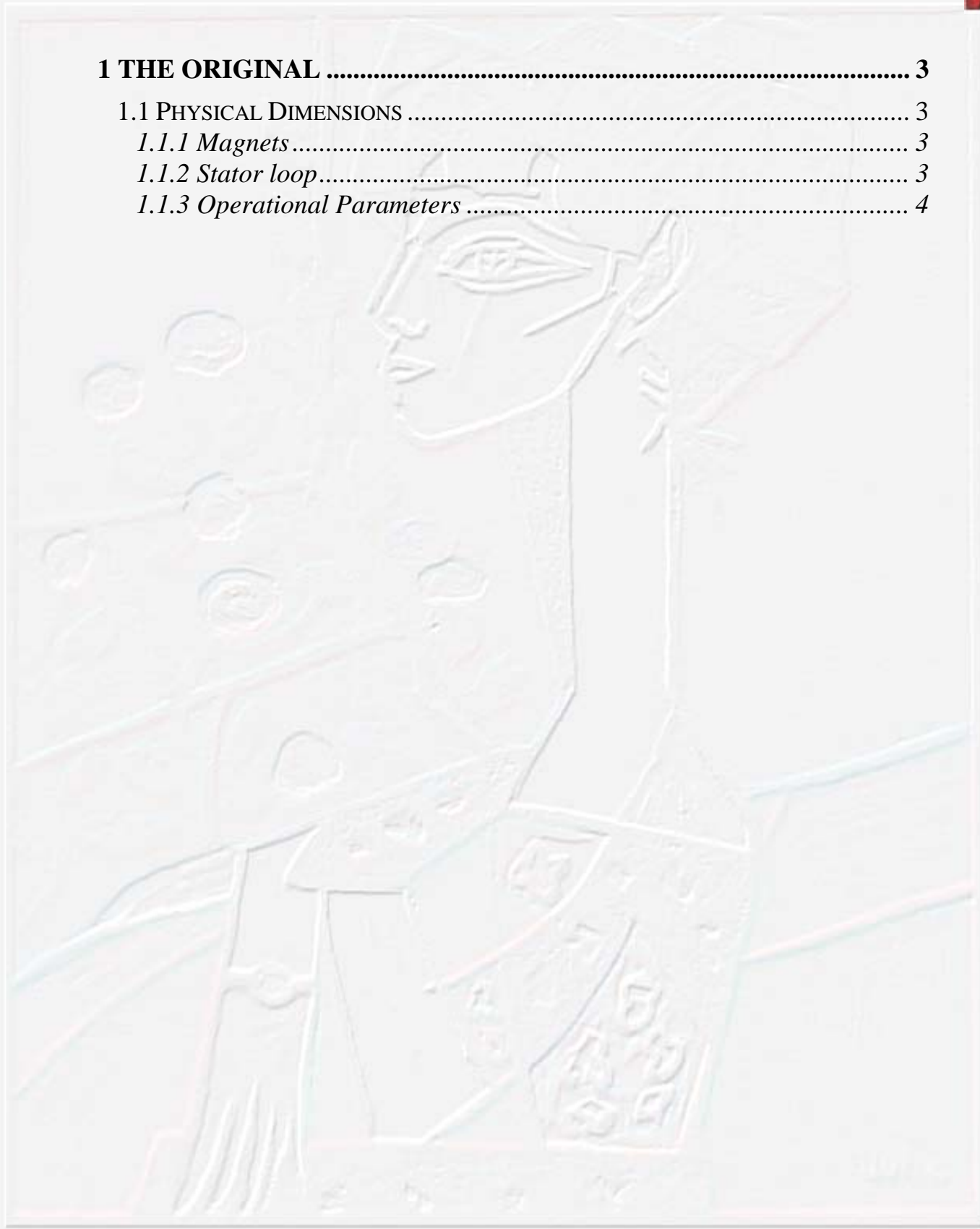
**1 THE ORIGINAL ..... 3**

1.1 PHYSICAL DIMENSIONS ..... 3

    1.1.1 Magnets ..... 3

    1.1.2 Stator loop..... 3

    1.1.3 Operational Parameters ..... 4





# 1 The Original

## 1.1 Physical Dimensions

### 1.1.1 Magnets

Item	Description	Value	note
1	Magnet diameter	1.125 inches	
2	Magnet hole diameter	0.375 inches	
3	Magnet Thickness	0.25 inches	
4	North Magnet Strength	831 Amps	Note 1
5	South Magnet Strength	838 Amps	Note 1
6	Magnet strength used in calculations (for both North and South)	835 Amps	Note 2
7a	Magnetic field 1/8 inch from magnet	0.035 Teslas	Note 3
7b	Magnetic field 3/16 inch from magnet	0.048 Teslas	Note 3
7c	Magnetic field 1/16 inch from magnet	0.080 Teslas	Note 3

Note 1: This specification uses the New Magnetism Specification for Magnets.

Note 2: Since magnets are substantially same, we use same field strength for both, in calculations.

Note 3: These values are the field strength at a distance from the magnet edge. These values are calculated from 6.

### 1.1.2 Stator loop

Item	Description	Value	note
8	Wire diameter	14 AWG	Approx 1/16 inch
9	Wire Loop diameter	4 inches	
10	Closest Distance between magnet edge and wire center	3/32 inch	



### 1.1.3 Operational Parameters

The speed is measured using a Hall Effect probe (our product 100GV Hall Effect Probe EM002) mounted near the rotor as shown in the following photo.



The Hall probe is connected to oscilloscope channel 1 on the scope which is configured to measure frequency.

The output of the generator is measured in the manner prescribed in the Paradox 2 paper (paradox2.pdf). The output of the microvolt amplifier (our product DVMx1000 SKU=EE001) is coupled to channel 4 of the scope which is configured to measure mV (which is actually micro-Volts; this is due to the x1000 gain of the preamplifier). The following picture is the screen capture from the scope.

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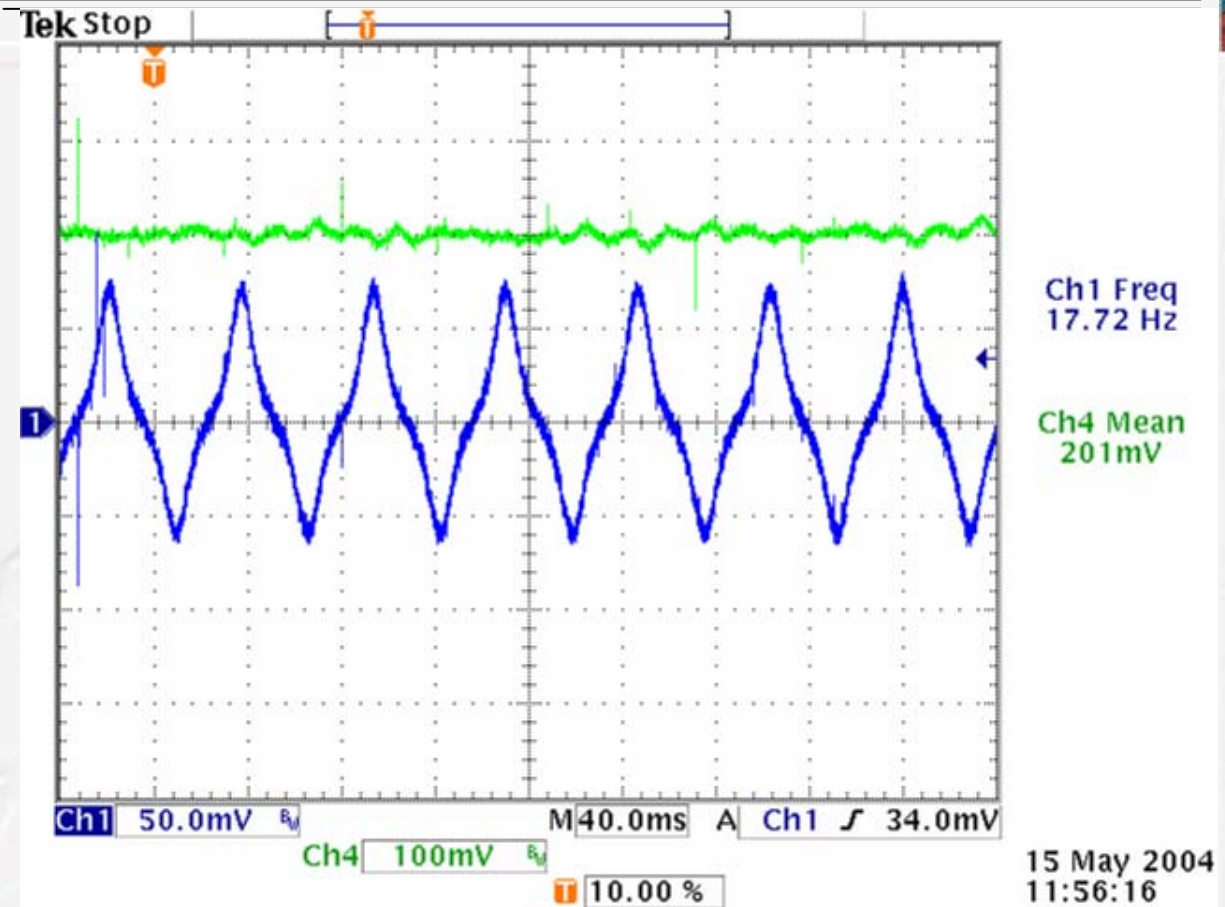


Figure 1: Scope Screen capture of test

Note: the large spikes are transients picked up by the scope leads.

Speed	Output
17.72 rps	200uV
or	
1063 rpm	

If there are any parameters or other measurements that you feel are necessary, please contact us. Use the contact information provided on the contact page at our site (located on the main index page).