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> DIY Reciprocating Cycle Linear Actuator with DC Gear Motor 24 Volt Stroke 70mm Adjustable 160rpm Speed Optional for DIY Design

Bemonoc CECOMINOD054991

DIY Reciprocating Cycle Linear Actuator Instruction Manual

Model: CECOMINOD054991 | Brand: Bemonoc

PRODUCT OVERVIEW

The Bemonoc DIY Reciprocating Cycle Linear Actuator is designed for various DIY projects requiring linear motion with adjustable stroke and speed. It features a robust DC gear motor, providing reliable performance for applications such as automatic shaking, spraying, or other reciprocating mechanisms.

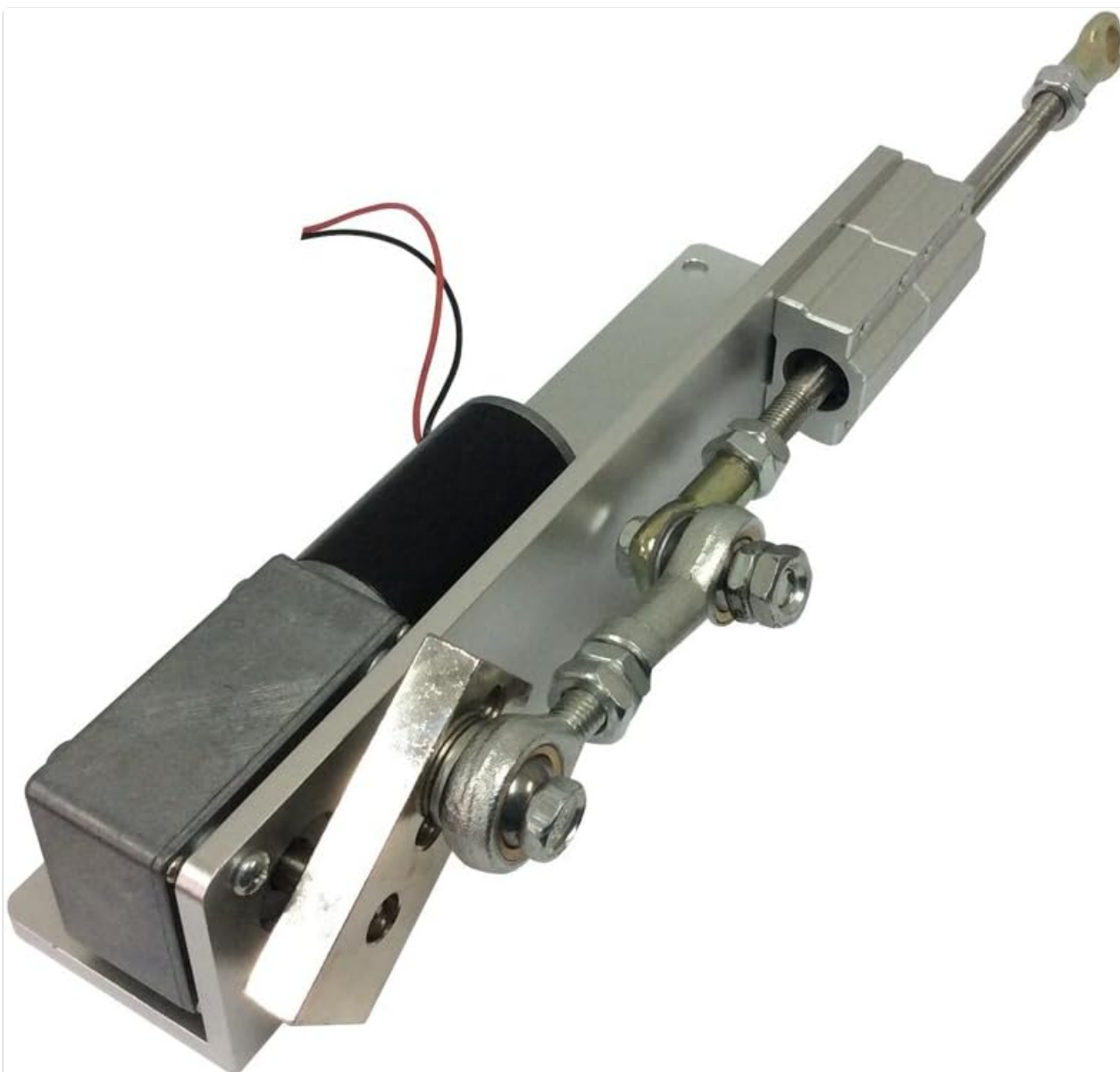


Figure 1: Front view of the Bemonoc DIY Reciprocating Cycle Linear Actuator.

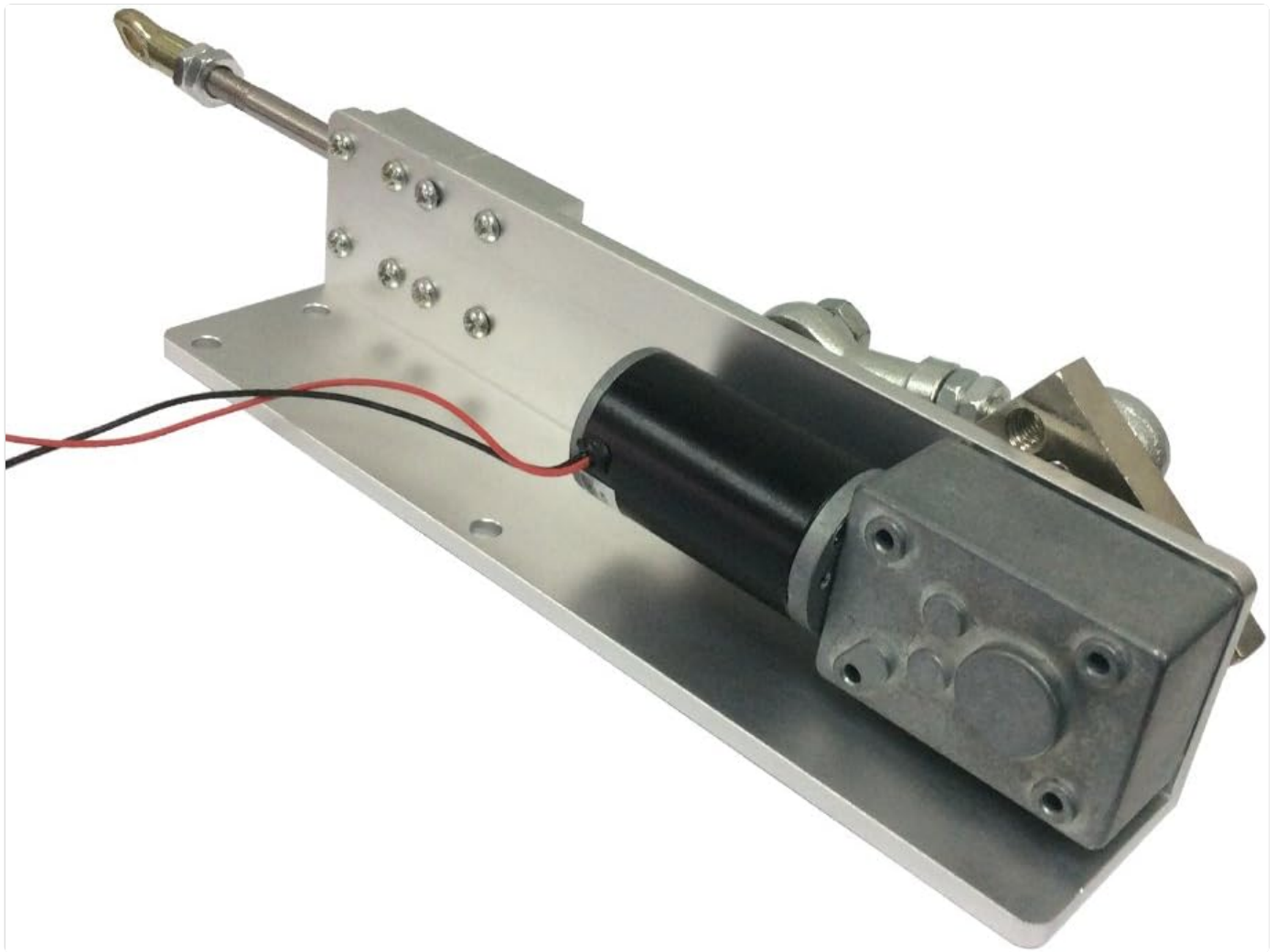


Figure 2: Side view of the Bemonoc Linear Actuator, showing the motor and linear rail.

SETUP INSTRUCTIONS

Proper setup is crucial for the safe and efficient operation of your linear actuator. Please follow these steps carefully.

1. **Unpack Components:** Carefully remove all components from the packaging. Ensure you have the linear actuator, power supply, speed controller, and connecting wires.
2. **Identify Components:** Familiarize yourself with each part. The linear actuator has a motor and a reciprocating shaft. The speed controller has input and output terminals, and a knob for adjustment. The switching power supply has terminals for AC input (L, N, GND) and DC output (+V, -V, ADJ).
3. **Connect Power Supply:** Connect the AC power cord to the "L" (Live) and "N" (Neutral) terminals on the switching power supply. Ensure the ground wire is connected to the "GND" terminal. *Caution: Ensure power is disconnected before making any connections.*
4. **Connect Speed Controller to Power Supply:** Connect the output of the switching power supply (+V and -V) to the input terminals of the speed controller. Observe polarity: positive to positive, negative to negative.
5. **Connect Actuator to Speed Controller:** Connect the two wires from the linear actuator motor to the output terminals of the speed controller. The motor's direction can be reversed by swapping these two wires.
6. **Secure Connections:** Ensure all wire connections are tight and secure to prevent loose contacts or short circuits.

Your browser does not support the video tag.

Video 1: This video demonstrates the assembly and wiring process for the Bemonoc DIY Reciprocating Cycle Linear Actuator, including connecting the power supply and speed controller.

OPERATING INSTRUCTIONS

Once the actuator is properly set up, you can begin operation.

- Power On:** Connect the switching power supply to a suitable AC power source. The power supply indicator light should illuminate.
- Adjust Speed:** Use the knob on the speed controller to adjust the reciprocating speed of the linear actuator. Turning the knob clockwise typically increases the speed, while turning it counter-clockwise decreases it.
- Observe Operation:** Monitor the linear actuator's movement. The shaft will move back and forth in a reciprocating motion.
- Adjust Stroke (if applicable):** The stroke length of this model is fixed at 70mm. For models with adjustable stroke, refer to specific instructions for adjusting the eccentric wheel or linkage mechanism.
- Power Off:** Disconnect the power supply from the AC source when not in use.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your linear actuator.

- Keep Clean:** Regularly wipe down the exterior of the actuator and power supply to prevent dust and debris buildup.
- Lubrication:** Periodically apply a small amount of appropriate lubricant to the moving parts of the linear shaft and bearings to ensure smooth operation and reduce wear.
- Check Connections:** Periodically inspect all electrical connections for tightness and signs of wear or corrosion. Re-tighten if necessary.
- Storage:** When not in use for extended periods, store the actuator in a dry, clean environment away from extreme temperatures and humidity.

TROUBLESHOOTING

If you encounter issues with your linear actuator, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Actuator does not move.	No power, loose connections, faulty power supply/controller.	Check power source, ensure all connections are secure. Test power supply output voltage.
Motor runs but shaft does not reciprocate.	Mechanical obstruction, damaged linkage, motor not properly engaged.	Inspect for obstructions. Check the linkage mechanism for damage or misalignment.
Unusual noise during operation.	Lack of lubrication, loose components, worn bearings.	Apply lubricant to moving parts. Check and tighten all screws. If noise persists, inspect bearings for wear.
Inconsistent speed.	Fluctuating power supply, faulty speed controller.	Ensure stable power input. Test or replace the speed controller.

SPECIFICATIONS

Detailed technical specifications for the Bemonoc DIY Reciprocating Cycle Linear Actuator.

- Brand:** Bemonoc
- Model Name:** gear
- Speed:** 160 RPM
- Voltage:** 12 Volts (Note: Product title mentions 24V, but specifications list 12V. Please verify your specific model.)
- Horsepower:** 0.5 hp

- **Material:** Copper
- **Manufacturer:** BBQ Driver
- **UPC:** 600984283859
- **Part Number:** DIY-24V160RPM
- **Item Weight:** 2.64 pounds
- **Package Dimensions:** 13.78 x 4.09 x 3.03 inches
- **Item Model Number:** CECOMINOD054991
- **Stroke:** 70mm

VOLT	NO-LOAD		ATMAXIMUM EFFICIENCY				DIFFERENT STROKE TORQUE		
RATED	SPEED	CURRENT	SPEED	CURRENT	TORQUE	POWER	30MM	50MM	70MM
Volt	r/min	A	r/min	A	Kg · cm	W	Kg	Kg	Kg
12V	8	0.2	5.2	0.76	25	9.12	5.83	3.25	2.14
	12	0.25	7.9	1.7	33	20.4	7.70	4.29	2.83
	16	0.35	10.6	1.39	21	16.68	4.90	2.73	1.80
	20	0.3	13.4	1.4	20	16.8	4.67	2.60	1.71
	27	0.4	19.3	1.4	15	16.8	3.50	1.95	1.29
	35	0.35	28	1.39	10.5	16.68	2.45	1.37	0.90
	60	0.25	41	1.4	7	16.8	1.63	0.91	0.60
	70	0.3	53	1.4	6	16.8	1.40	0.78	0.51
	110	0.35	88	1.4	4	16.8	0.93	0.52	0.34
	160	0.3	130	1.39	2.5	16.68	0.58	0.33	0.21
	180	0.35	138	1.4	2	16.8	0.47	0.26	0.17
	200	0.35	148	1.4	2.25	16.8	0.53	0.29	0.19
	260	0.4	198	1.4	2	16.8	0.47	0.26	0.17
	350	0.7	260	1.49	0.8	17.88	0.19	0.10	0.07
	470	0.5	360	1.42	0.55	17.04	0.13	0.07	0.05
VOLT	NO-LOAD		ATMAXIMUM EFFICIENCY				DIFFERENT STROKE TORQUE		
RATED	SPEED	CURRENT	SPEED	CURRENT	TORQUE	POWER	30MM	50MM	70MM
Volt	r/min	A	r/min	A	Kg · cm	W	Kg	Kg	Kg
24V	8	0.12	5.3	0.52	35	12.48	8.17	4.55	3.00
	10	0.12	6.8	0.55	30	13.2	7.00	3.90	2.57
	13	0.2	8.7	1.02	50	24.48	11.67	6.50	4.29
	20	0.15	14.7	1.39	18	33.36	4.20	2.34	1.54
	27	0.2	20	1.4	30	33.6	7.00	3.90	2.57
	36	0.2	26.6	1.39	22	33.36	5.13	2.86	1.89
	55	0.12	41	0.68	8	16.32	1.87	1.04	0.69
	60	0.15	46	0.75	14	18	3.27	1.82	1.20
	70	0.15	52	0.7	6	16.8	1.40	0.78	0.51
	80	0.15	56	0.69	5	16.56	1.17	0.65	0.43
	120	0.15	75	0.8	4	19.2	0.93	0.52	0.34
	160	0.25	110	1.4	6	33.6	1.40	0.78	0.51
	220	0.2	173	1.4	5	33.6	1.17	0.65	0.43
	250	0.2	168	1.4	3.5	33.6	0.82	0.46	0.30
	280	0.3	198	1.4	3	33.6	0.70	0.39	0.26

Figure 3: Detailed specifications table for the linear actuator, showing various voltage and stroke options.

WARRANTY AND SUPPORT

For warranty information or technical support, please contact the seller directly.

- **Seller:** BBQ Driver
- **Return Policy:** 30-day refund/replacement policy from the date of purchase.
- **Protection Plans:** Optional 3-Year and 4-Year protection plans may be available for purchase separately.

For further assistance, please visit the [Bemonoc Store on Amazon](#).

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