

# [E-BRU]Belt Reduction Unit Instruction Manual

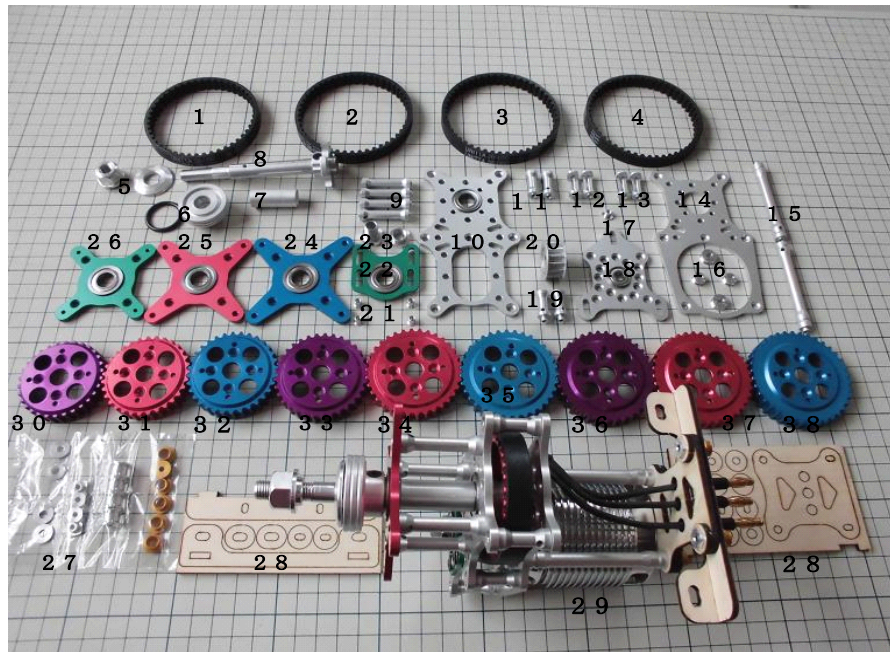
Thank you for purchasing this upgrade. Please read the following instructions carefully before assembly .

**BELL WOOD**  
Original Parts

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# 1 Ver.1.01

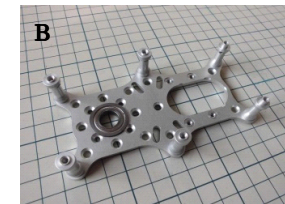
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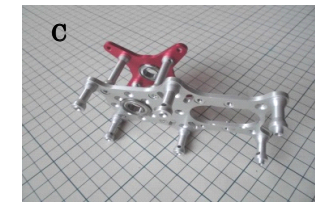
- 1 - 4: Timing belt various size (230, 240, 245, 250 mm)
- 5: propeller nut M8-P1      6: propeller mount      7: propeller shaft spacer
- 8: propeller shaft & pulley mount ass'y      9: cross member 30.5
- 10: main frame      11: cross member 18.5      12: cross member C 18.5
- 13: cross member CC 18.5      14: rear frame      15: cross member 62
- 16: motor mounting spacer      17: mount spacer      18: motor mount (w/BRG)
- 19: cross member AJ T=2      20: S pulley T14      21: flat head nut screw M3
- 22: motor shaft support housing      23: motor shaft stopper AB
- 24: cross mount  $\phi$  71      25: cross mount  $\phi$  68      26: cross mount  $\phi$  60
- 30: L pulley T30      31: L pulley T31      32: L pulley T32
- 33: L pulley T33      34: L pulley T34      35: L pulley T35
- 36: L pulley T36      37: L pulley T37      38: L pulley T38
- 27: mounting parts assorted      28: plywood      29: Finished unit



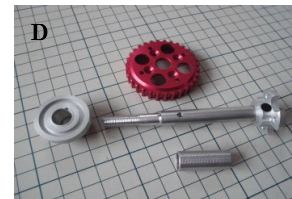
Install cross member standoff #9 on the cross mount #25.



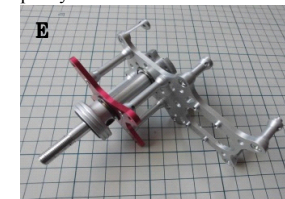
Install each cross member standoff on the main frame # 11,12,13. Note: it differs depending on L pulley size.



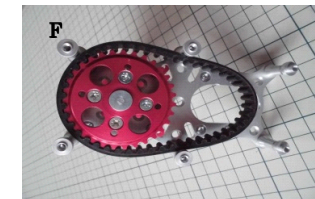
Assemble A and B Using Hardware #27



Check to see that parts 6, and 7 Fit onto the propeller shaft #8 before assembling.



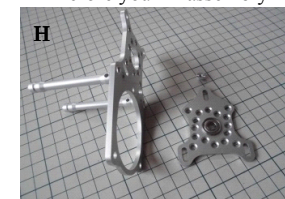
Assemble C and D. Note: adjust shaft clearance Before you fix assembly



Install a belt. Larger sized pulley should be mounted together with a belt.



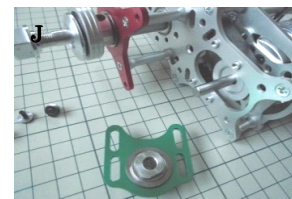
If Gear # 20 is too tight on the shaft, Use a reamer to enlarge hole slightly.



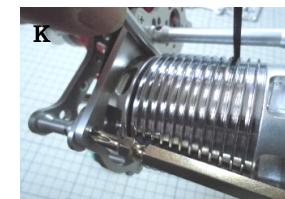
Install cross member # 15 on the rear frame # 14, pre-assemble the motor mount.



Install the motor on the motor mount and assemble the pulley with a screw.



Assemble F-I, adjust belt alignment Note: Be sure to install set screw on pulley



Squeeze the belt slightly to adjust belt tension to 3 - 4 mm. Do not over tighten as this will shorten belt life



After completing steps J-K assemble Rear Frame, Install the Motor Shaft Support # 22 NOTE Use set screw.

Thank you for purchasing this upgrade. Please read the following instructions before beginning assembly.

Check all items before flight

- Shift to reserve for Futaba radio
- Shift to default for ATV
- Check Start and Slow position
- Check Start and Slow position
- Check about motor rotation direction without propeller mounted.
- Mount a propeller (be sure not to tighten too much !!)
- Choose proper diameter or pitch of propeller to meet your airplane, or flight style.
- Choose your preferable throttle curve to meet your flight style.
- We recommend you natural braking. (idle 1, idle 2)
- Keep in mind to make very careful throttle operation. (to prevent quicker wear-out of the battery, and belt.)

### Specification of Airplane.

- Total weight must be less than 5 Kg.

### About current, voltage

- Checking about the current (refer to the attached data)
- Adjust overcurrent with ATV or throttle curve.
- Increase the throttle little by little to see final max. rpm (prop. 21x 14 etc., use this 5850 - 6000 rpm as a guideline.
- Reconsider about motor and gear ratio to meet your airplane and flight style just in case.

### Checking items before and after flight.

Check to be sure all parts are TIGHT

Re-check belt tension after each flight

- Check circumstance near motor, and pulley

Check any abnormal noise. (inspect and REPAIR AS NEEDED)

**\*\*\* Take EXTRA CARE when you test or fly. \*\*\***

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	Motor model		Weight 660-680 (gr.)	
RPM/V:	400rpm/V	430rpm/V	450rpm/V	480rpm/V
Rotor Gear	2.214	2.429	2.5	2.643
Voltage:	10-12S	10-12S	10-12S	10-12S
Motor Poles:	10	10	10	10
Internal resistance:	0.031ohm	0.028ohm	0.024ohm	0.021ohm
Max Loading:	60A	65A	70A	75A
Internal resistance:	2500W	2750W	3000W	3330W
Timing:	6-22°	22°	22°	22°
Internal resistance:	8KHz	8KHz	8KHz	8KHz

You can choose favorite Kv value from above four types of motor to meet your airplane and flight style. You are also able to change your preferred Flight Mode by changing the gear ratio.

You can use other motors of your choosing.

Please let us know the dimensions so we can assist you with the installation.

Finished unit is for 400Kv

