



BLADE[®] 3

MD 520N[®]



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Specifications

Length	16.4 in (415mm)
Height	7.2 in (180mm)
Main Rotor Diameter	13.6 in (345mm)
Weight RTF w/Battery	8.0 oz (227 g)
Main Motor	180 (2 installed)
Battery	2S 7.4V 800mAh Li-Po (included)
Transmitter	2.4GHz DSM2 5-channel (included)
On-Board Electronics	3-in-1/mixer/ESC/heading lock gyro (installed)
Servos	S60 Super Sub-Micro (2 installed)
Receiver	Spektrum™ 6100e (installed)

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Introduction

The Blade® CX3 MD 520N® takes the beginner-friendly flight stability of the Blade CX2 and combines it with Spektrum™ 2.4GHz DSM2™ technology that lets you fly anywhere, anytime without having to worry about interference. The CX3 combines the stability and Spektrum DSM2 technology of the CX2 with a stunning new scale body and ups the ante by including a heading lock gyro .

The Blade CX3 MD 520N is truly a Ready-for-Anyone-to-Fly micro class electric helicopter. Its coaxial counter-rotating blades cancel out the rotational torque that makes hovering a conventional helicopter so difficult, while providing unsurpassed stability in all other phases of flight. And whether you are a first-time or an experienced helicopter pilot, you'll enjoy many of the outstanding features that have the Blade CX3 MD 520N flying in no time. Some of these features include: factory installed main motors, 3-in-1 control unit with mixer, ESCs and heading lock gyro, and S60 Super Sub-Micro Servos. With the included 5-channel transmitter, 2-cell 800mAh Li-Po battery pack, DC charger and AC adapter, you'll have precise control for hovering, forward flight and more with flight times of up to 10–15 minutes per charge.

While the Blade CX3 MD 520N is ready-to-fly right from the box, please take the time to read through this manual completely for tips on battery safety and charging, control checks, flying and more. Please check out our website at www.e-fliterc.com for helpful tips and more information about our products.

Warning

An RC helicopter is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably at AMA (Academy of Model Aeronautics) approved flying sites, following all instructions. Keep loose items that can get entangled in the rotor blades away from the main and tail blades, including loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the rotor blades.

Note on Lithium Polymer Batteries



Lithium Polymer batteries are significantly more volatile than alkaline or Ni-Cd/Ni-MH batteries used in RC applications. All manufacturer's instructions and warnings must be followed closely. Mishandling of Li-Po batteries can result in fire. Always follow the manufacturer's instructions when disposing of Lithium Polymer batteries.

FCC Statement

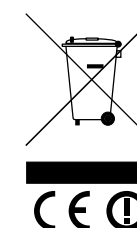
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400 GHz to 2.4835 GHz frequency range.

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use:

UK	DE	DK	NO	SE	FI	EE
LV	LT	PL	CZ	SK	HU	RO
SI	AT	IT	ES	PT	IE	NL
LU	MT	CY	GR			

Instructions for Disposal of WEEE by Users in the European Union



This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Additional Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

This model is controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help to avoid collisions or injury.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic, or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model out into the street or populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.
- Never lick or place any portion of your model in your mouth as it could cause serious injury or even death.

Blade CX3 MD 520N RTF Contents

Item	Description
Not Available Separately	Blade CX3 MD 520N RTF Airframe
EFLH1055	LP5DSM 5-Channel Transmitter, DSM 2.4GHz
EFLB0990	7.4V 800mAh 2-Cell Li-Po, JST/Balance
EFLC3110	2-3 Cell Li-Po Balancing Charger, 0.65A
EFLC4000	AC to 12VDC, 1.5-Amp Power Supply
EFLH1209	Mounting Accessories & Screwdriver
EFLH1022	Bind Plug
FUG4 (Optional)	4 AA batteries
EFLH2009 (Optional)	MD520N LED Navigation Light Upgrade Set



Additional Required Equipment

No additional equipment is required to complete your Blade CX3 MD 520N.

Preparing for the First Flight Checklist

Please note this checklist is not intended to be a replacement for the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

- Remove and inspect contents
- Charge the flight battery
- Install the 4 included AA batteries in the transmitter
- Install the flight battery in the helicopter (once it has been fully charged)
- Check the Center of Gravity of the helicopter
- Test the controls
- Install the optional Training Gear Set (EFLH1205; strongly recommended if this is your first helicopter model)
- Familiarize yourself with the controls
- Find a suitable area for flying

Flying Checklist

Please note this checklist is not intended to be a replacement for the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

- Always turn the transmitter on first
- Plug the flight battery into the 3-in-1 control unit
- Allow the 3-in-1 control unit to arm properly
- Fly the model
- Land the model
- Unplug the flight battery from the 3-in-1 control unit
- Always turn the transmitter off last

Battery Warnings and Guidelines



While the 7.4V 800mAh 2-cell Lithium Polymer Battery Pack (EFLB0990) included with your Blade CX3 MD 520N features Charge Protection Circuitry and Balance Charging via the included 2- to 3-Cell Lithium Polymer Balancing Charger (EFLC3110) to help ensure a safe charge every time, you **MUST** read the following safety instructions and warnings before handling, charging or using the Li-Po battery pack.

Note: Lithium Polymer batteries are significantly more volatile than the alkaline, Ni-Cd or Ni-MH batteries used in RC applications. All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in fire.

By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries. If you do not agree with these conditions, return your complete Blade CX3 MD 520N model in new, unused condition to the place of purchase immediately.

- You must charge the included 7.4V 800mAh 2-cell Li-Po battery pack in a safe area away from flammable materials.
- Do not charge the battery when installed in the helicopter.
- Never charge the battery unattended. When charging the battery you should always remain in constant observation to monitor the charging process and react to potential problems that may occur.
- After flight, the battery must be cooled to ambient temperature before charging.
- **You MUST use the included 2-3 Cell 7.4-11.1V Li-Po Balancing Charger ONLY.** Failure to do so may result in a fire causing personal injury and/or property damage. **DO NOT use a Ni-Cd or Ni-MH charger.**



- If at any time during the charge or discharge process the battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.
- In the event of a crash, you must quickly and safely disconnect and remove the battery from the model, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes.
- Store the battery at room temperature and approximately ½ charge (3.8V per cell; 7.6V for a 2-cell battery pack) for best results.
- When transporting or temporarily storing the battery, the temperature range should be from 40–120 degrees Fahrenheit. Do not store the battery or model in a car or direct sunlight whenever possible. If stored in a hot car, the battery can be damaged or even cause a fire.
- **Do not over-discharge the battery. Discharging the battery too low can cause damage to the pack resulting in reduced performance and duration.**

Li-Po cells should not be discharged to below 3V each under load. In the case of the 2-Cell Li-Po packs used for the Blade CX3 MD 520N, you will not want to allow the battery to fall below 6V during flight.

The Blade CX3 MD 520N 3-in-1 control unit does not feature a voltage cutoff of any type, so we suggest that you be extremely aware of the power level of the Li-Po battery pack during flight. If at any time the helicopter begins to require more throttle than typical to maintain hover or flight, or has lost significant power, you must land the helicopter and power the motors down **IMMEDIATELY** to prevent over-discharge of the Li-Po battery pack. If you continue to run the motors after noticing a loss in power, it is possible to discharge the Li-Po battery pack too far, causing permanent damage to the pack.

Over-discharge of the Li-Po battery pack can result in shortened flight times, loss of power output or failure of the pack entirely.

If you have any further questions or concerns regarding the handling, charging and/or use of the included Li-Po battery pack, please contact the Horizon Support Team at 877-504-0233.

Battery Charging

It is important that you only charge the included 7.4V 800mAh 2-cell Li-Po Battery Pack (EFLB0990) with the included 2-3 Cell 7.4-11.1V Li-Po Balancing Charger (EFLC3110). Your battery pack is equipped with special Charge Protection Circuitry and a Balance Charge Lead with connector that is only compatible with this charger. Attempting to charge the pack using another Li-Po charger or a charger that is not compatible with Li-Po batteries could result in serious damage. Please familiarize yourself thoroughly with the warnings and guidelines (pages 7–8) before continuing.

The included 2-3 Cell 7.4-11.1V Li-Po Balancing Charger will charge a near fully discharged (not over-discharged) 7.4V 800mAh 2-cell Li-Po Battery Pack in approximately 1.2–1.5 hours. In some cases the charge time may be shorter depending on the actual amount of capacity left in the pack after a flight. **NEVER charge the battery unattended.**

Note: The Li-Po battery pack included with your Blade CX3 MD 520N will arrive partially charged. For this reason the initial charge may only take approximately 30–50 minutes.

The charger requires up to 1.5-amps of 11.5- to 15-volt DC input power that can be supplied by the included AC to 12V DC, 1.5-Amp Power Supply (EFLC4000) for convenient charging anywhere an AC outlet is available.

NEVER attempt to power the charger from an AC outlet without the use of a proper AC to DC adapter/power supply.

Note: When using the AC to DC adapter/power supply, the charger is protected to prevent damage if the alligator clips touch. However, please take care to ensure that the alligator clips do not cause shorting of the battery, adapter/power supply, etc. by keeping them clear.



Input power for the charger can also be supplied from a small 12V gel cell or car battery.



The charger is equipped with two LED indicators marked RED and GREEN on the label. These LEDs indicate the following (also found on the label of the charger):

- **Red Flashing LED Only:** Input power with no battery connected
- **Red and Green Solid LED:** Battery connected and charging
- **Red Solid LED Only:** Charge complete
- **Red and Green Flashing LED:** Charge error

Once you have connected the charger to a power source (use care to ensure proper polarity when connecting the charger to the power source), its red LED will flash to indicate the charger has power and is ready to begin charging. Connect the Li-Po battery pack to the charger using the specially marked Balance Charge Lead exiting the battery pack and the connector labeled with 7.4V on the charger. The connector is keyed to prevent reverse polarity connection.

Note: Do not force the connector on the Balance Charge Lead into the connector labeled 11.1V on the charger. Doing so could result in damage to the battery pack and charger, and could result in a fire.



When the battery is properly connected and charging normally, the red and green LED indicators will glow solid. Once the battery has been fully charged, the green LED will go out, leaving just the red LED glowing solid. The battery can now be removed from the charger and installed into the Blade CX3 MD 520N for flight.

Charge Errors and Indications

In the event that both the red and green LEDs flash, a charge error has occurred. Some examples of charge errors and their indications include:

- Alternating flashing of the red and green LEDs will indicate that the charge process has been interrupted. If input power to the charger has been interrupted due to disconnection from the power source or a drop in voltage/current output from the power source, unplug the battery from the charger. Next, check to make sure that the input power plug from the AC to 12V DC adapter/power supply is connected or that the alligator clips are firmly and properly attached to the power source. Also be sure that the power source is providing the proper amount of voltage and current required to the charger.

After confirming the connections and that the power source is delivering the necessary voltage and current, restart the charge process by connecting the battery pack. Continue to monitor the charge process to ensure that no further charge errors occur.

- Simultaneous flashing of the red and green LEDs will indicate that the voltage of the Li-Po battery pack is too low to allow the charge process to begin. In this case the battery may have been over-discharged due to flying the model too long (For more information on preventing over-discharge of the Li-Po battery pack, see the guidelines section found on page 9), or that a single cell or even all cells in the battery pack may be damaged.

If after several charging attempts you continue to see this charge error indication, you should remove the battery pack from service and replace it with a new one.

If you have any further questions or concerns regarding charge error indications, please contact the Horizon Support Team at 877-504-0233.

Installing the Transmitter Batteries

Install the 4 included AA batteries in the transmitter. Check the power level of the batteries and operation of the transmitter by switching the power switch on (upward). The LCD screen at the top of the transmitter will indicate the power level of the batteries. If at any time the voltage indicated on the LCD screen falls to 4.0V or less, it will be necessary to replace the batteries with new ones.

Note: Because the LP5DSM transmitter included with the Blade CX3 MD 520N is equipped with Spektrum 2.4GHz DSM2 technology, it does not require the same input voltage or current consumption as a typical 72MHz transmitter for proper operation and optimum performance.



Installing the Flight Battery

Use the included hook and loop material for mounting the Li-Po battery pack. The “hook” material is already installed on the battery frame stop. The included “loop” material can be installed on the end of the battery without the wire leads, depending on how you choose to install the battery and route the wire leads.



The battery can be installed through the opening on the bottom of the MD 520N body. Be sure to install the end of the battery with the leads first, toward the front at an angle, then slide the battery toward the back until the “loop” material on the battery securely fastens to the “hook” material on the battery frame stop.

Step 1



Step 3



Step 2



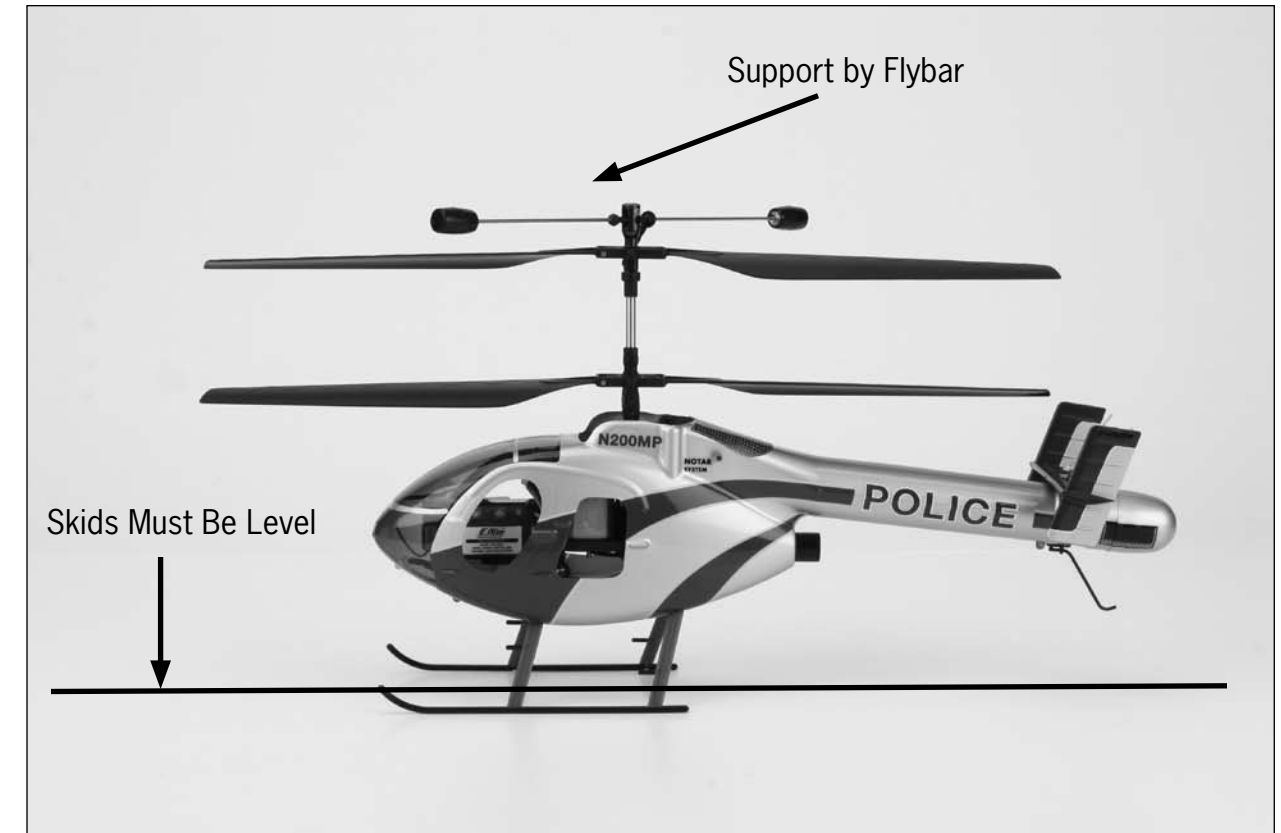
Step 4



Center of Gravity

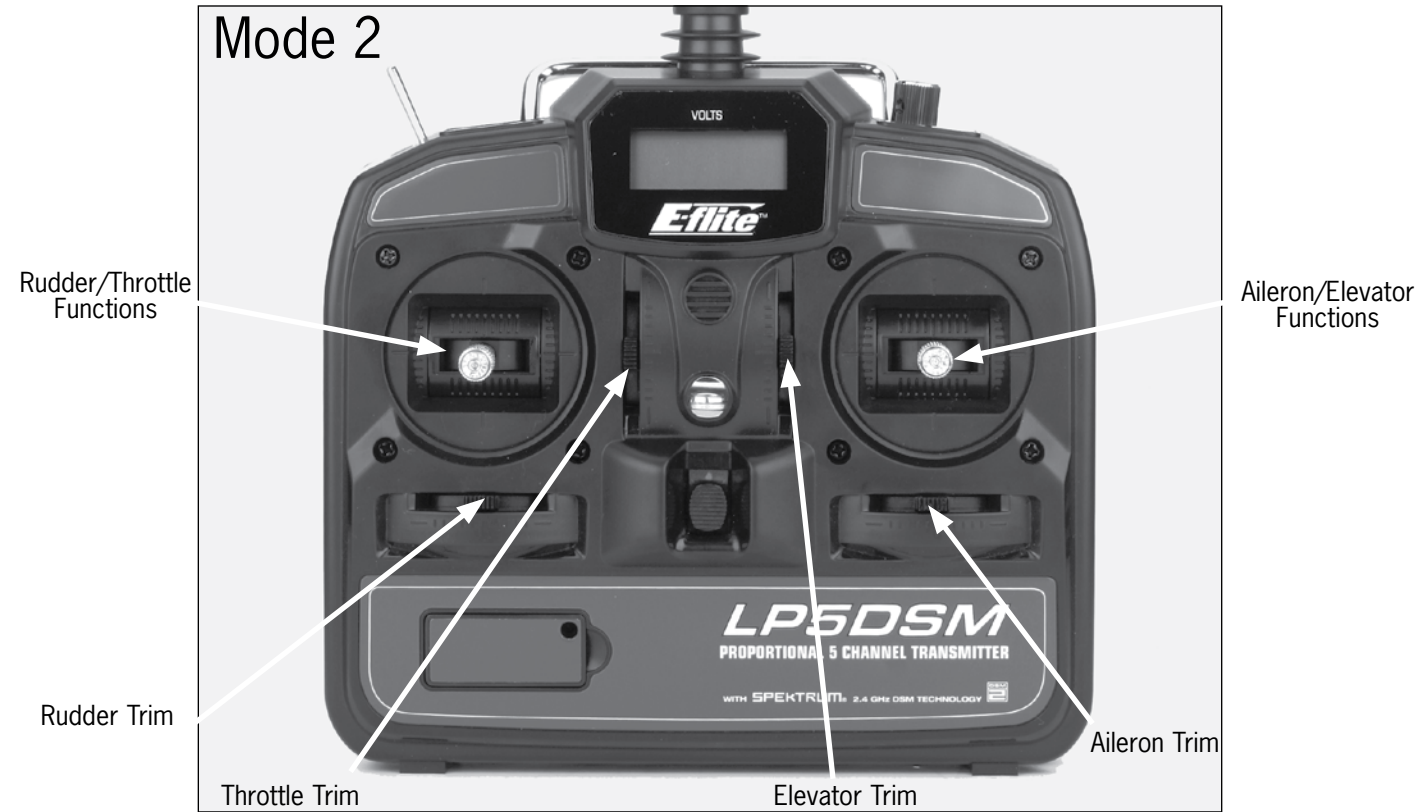
Once the battery has been properly installed and secured you will need to check the helicopter's center of gravity. If the helicopter is not properly balanced it can be difficult to control and constantly try to move forward or backward in hover.

To check the center of gravity, lift the helicopter by the stabilizer flybar with the flybar positioned perpendicular to the tail section of the body. Make sure that the helicopter balances level. If it does not, confirm that the battery has been properly installed and reposition it forward or aft if necessary.



Transmitter Control Identification

Note: Each time before you fly you should ALWAYS turn the transmitter on before connecting the flight battery to the unit. After each flight, be sure that you always disconnect the flight battery from the unit before powering the transmitter off.



Control Test

Although each Blade CX3 MD 520N model is test flown at the factory, it is a good idea to test the controls prior to the first flight to ensure none of the servos, linkages or other parts were damaged during shipping and handling. Before proceeding, ensure your throttle stick and trim are at the lowest possible position.

Turn the transmitter on first then plug the battery into the battery lead of the 3-in-1 unit.



Position the helicopter to view it from the FRONT

Move the elevator control stick on the transmitter forward and back to check elevator pitch control. When the stick is pushed forward, the servo on the right side should push the swashplate upward.

Mode 2



Mode 1



When the stick is pulled back, the servo on the right should pull the swashplate downward.

Mode 2



Mode 1



Move the right-hand control stick on the transmitter left and right to check aileron roll control. When the stick is pushed to the left, the servo on the left side should push the swashplate upward.

Mode 2



Mode 1



When the stick is pushed to the right, the servo on the left should pull the swashplate downward.

Mode 2

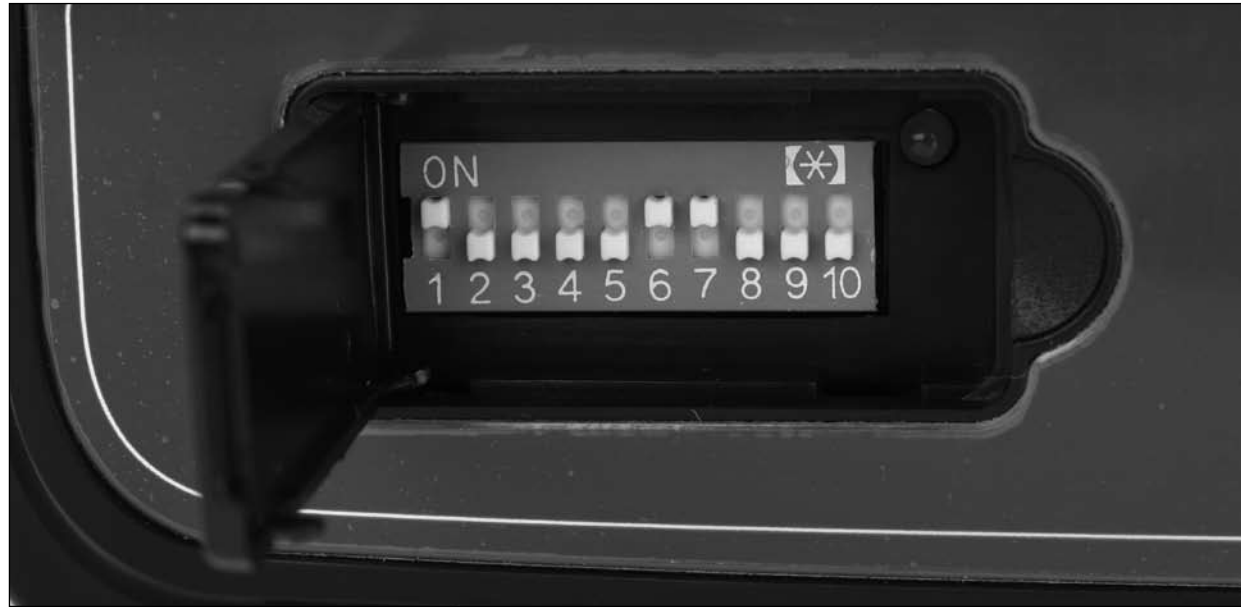


Mode 1



If at any time during the test the controls do not respond properly, double-check the servo reversing switches located under the door on the bottom left front of the transmitter. Dip switches 1, 6 and 7 should be positioned as shown to ensure proper servo reversing.

Note: All other dip switches should also be positioned as shown to ensure proper operation. DO NOT attempt to fly your Blade CX3 with any of the dip switches set in positions that are not shown.



If the controls still do not respond properly after ensuring that the servo reversing dip switch positions are correct, you may also check the servo connections on the receiver side of the 3-in-1 unit. These should be positioned as follows (when viewing the helicopter from behind):

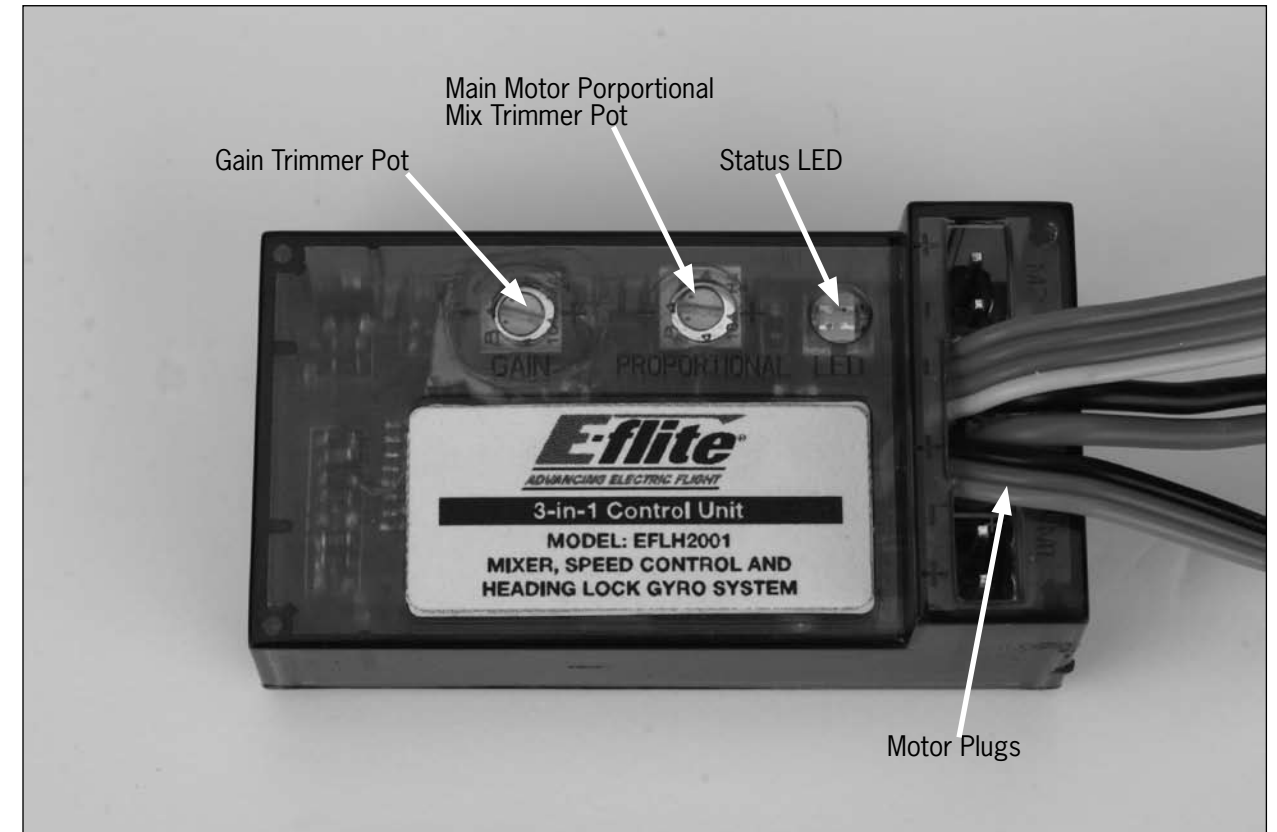
AIL Channel – Servo on the right side of the heli

ELE Channel – Servo on the left side of the heli

Once you have confirmed that the servo connection locations are correct, all controls should be functioning properly. If you do encounter any problems with your Blade CX3 MD 520N responding properly to the transmitter, do not fly. Contact the Horizon Support Team at 877-504-0233.

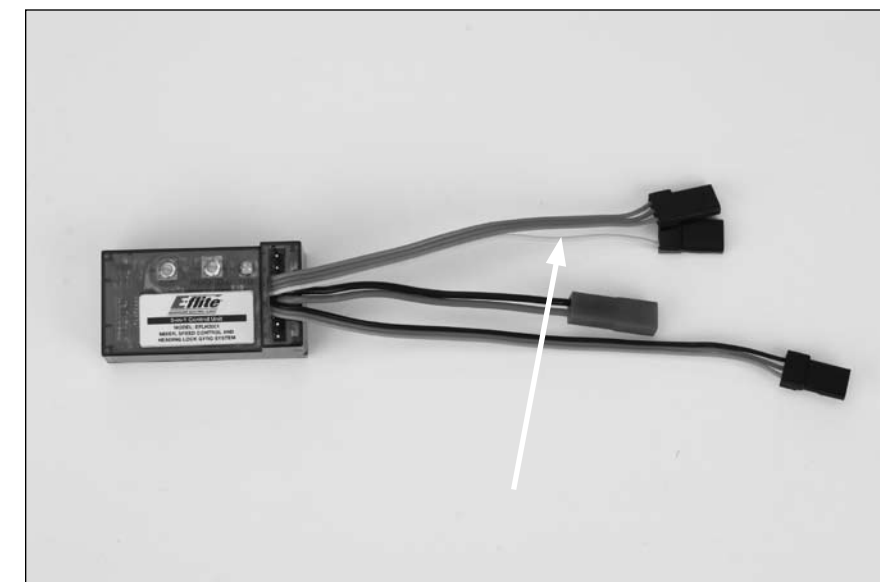
3-in-1 Control Unit Description, Arming and Motor Control Test

The unique 3-in-1 Control Unit installed on your Blade CX3 MD 520N is a lightweight combination of a main motor mixer, main motor electronic speed controls, and a heading lock gyro. The 3-in-1 unit also contains a gyro gain trimmer pot, main motor proportional mix trimmer pot and status LED.



If you should ever need to access the 3-in-1 unit (usually only required if making adjustments to the gyro gain or main motor proportional mix trimmer pots, as outlined on pages 34–35), you can do so by going through the front window of the MD 520N scale body.

Note: It will not be necessary to access the 3-in-1 unit for proper arming and usual operation.



Note: The 3-in-1 unit has an optional remote gyro gain plug.

The following checklist contains the steps you must follow to ensure proper arming and operation of the 3-in-1 unit as well as proper motor control response:

- ❑ **Each time before you fly you must ALWAYS turn on the transmitter power first before connecting the flight battery to the 3-in-1 unit. Never connect the flight battery to the 3-in-1 unit before first powering on the transmitter.**

Also, never turn off the transmitter before disconnecting the flight battery from the 3-in-1 unit first.

- ❑ **Both the throttle stick and throttle trim MUST be in their lowest possible position in order for the 3-in-1 unit to arm the electronic speed controls for the main motors.**

If this is the first test flight, or a test flight following repairs, you will also want to center the rudder, aileron and elevator trims (see photo found on page 15 for reference).

- ❑ After confirming that the transmitter has been turned on and has an adequate level of battery power as displayed by the LCD screen at the top of the transmitter, it is now safe to connect the flight battery to the 3-in-1 unit.

Note: Each time you power the transmitter on, it will enter “Bind Mode” (See pages 40-41 for more information regarding “Bind Mode”) for a few seconds, as indicated by the red blinking LED located under the door on the left bottom front of the transmitter. Once this LED becomes solid, the transmitter is no longer in bind mode. We recommend waiting to connect the flight battery to the 3-in-1 unit after the transmitter has exited bind mode, otherwise the 3-in-1 may not arm properly or as quickly.

- **With battery power applied, the 3-in-1 unit status LED will blink red, and then blink green. It is extremely important that you do not move or sway the helicopter once the status LED begins to blink green confirming that the initialization process and calibration of the gyro has begun.** It is OK to move the model when the status LED is blinking red (as in the time it takes to connect the flight battery to the 3-in-1 unit and place the model at rest), as long as the model remains motionless when the status LED begins to blink green.
- **When the status LED becomes solid green, the unit is armed and ready for flight.** Use caution as both main motors will now run with throttle stick or throttle trim input. Do not advance the throttle stick or trim until you are clear of the rotor blades and ready to fly.

Note: If the status LED does not become solid green, please review the following:

- If after blinking red the status LED becomes solid red, you have a positive Radio Frequency (RF) link between the transmitter and receiver of the 3-in-1 unit, but the throttle stick and throttle trim may not be in their lowest possible positions. Check to be sure that both the throttle stick and throttle trim are in their lowest possible position and the status LED should blink green then become solid green indicating the unit is armed and ready for flight. Proceed to the next step of the checklist once the unit is armed.
- If after blinking red the status LED turns off, you do not have a positive RF link between the transmitter and receiver of the 3-in-1 unit. First, check to be sure that the transmitter has been powered on and has an adequate level of battery power. If the transmitter was indeed powered on, power both the transmitter and 3-in-1 unit down, then follow the steps to bind the 3-in-1 unit's receiver to the transmitter (see pages 40–41 for more information). Once you have confirmed that the transmitter and receiver are properly bound, the 3-in-1 unit should now arm normally.

If your 3-in-1 unit will not arm after following the guidelines as listed above, contact the Horizon Support Team at 877-504-0233.

- ❑ **Once you have placed the helicopter in a safe area to test motor control, free from obstructions, and are clear of the rotor blades, you can safely begin to power up the model.**

- ❑ Advance the throttle stick slowly, just until the main rotor blades begin to spin. Be sure not to advance the throttle stick too far to keep the helicopter from lifting off the ground. Note the direction that each of the main rotor blades spins. When viewed from the top, the lower main rotor blade should spin clockwise and the upper main rotor blade should spin counterclockwise. If either rotor blade is operating in the wrong direction, unplug the battery, then simply reverse its motor plug polarity on the 3-in-1 unit. Note that the proper polarity is marked on the label of the 3-in-1 unit.

- ❑ After confirming that the direction of rotation for both rotor blades is correct, it is best to confirm that both rotor blades respond properly to rudder control inputs. With both main rotor blades spinning at a low level of power, move the rudder stick all the way to the right. This should cause the speed of the upper main rotor blade to increase, and the speed of the lower main rotor blade to decrease. Next, move the rudder stick all the way to the left. This should cause the speed of the lower main rotor blade to increase and the speed of the upper main rotor blade to decrease. If both rotor blades are not responding properly to rudder input, simply reverse the locations of their motor plugs on the 3-in-1 unit. Note that the proper motor plug locations are marked on the label of the 3-in-1 unit.

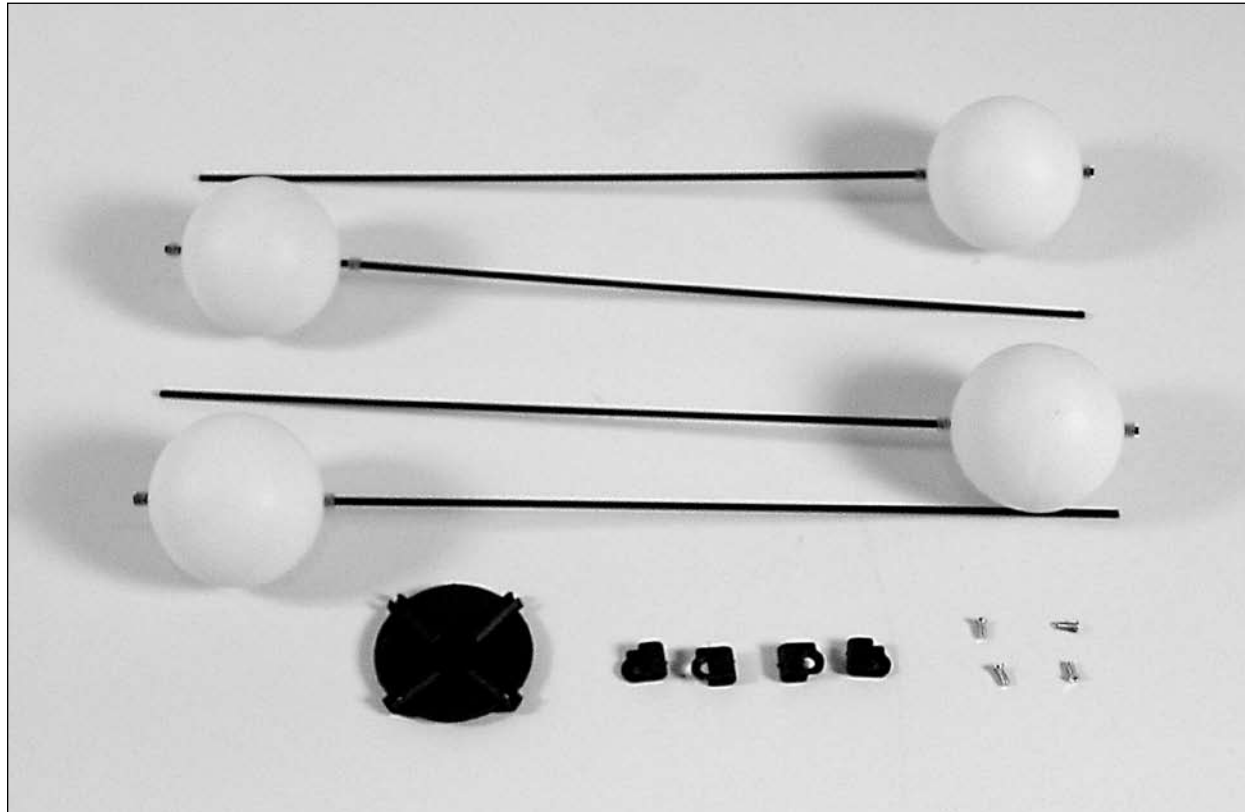
- ❑ After confirming both main rotor blades respond properly to rudder inputs, your Blade CX3 MD 520N is now ready for flight. However, please be sure to review the following sections of the manual before proceeding with the first flight.

Installing the Optional Training Gear

If the Blade CX3 MD 520N is your first helicopter model, we suggest that you install the optional Training Gear Set (EFLH1205) before making your first flight. The training gear helps to further increase the stability of the model while also providing added support and cushioning to prevent tip-overs and damage to the model from abrupt landings.

Installing the training gear takes only a few minutes following these steps:

- The Training Gear Set includes four training gear rods with plastic balls installed, four training gear rod to landing skid attachments, four screws and one training gear rod mounting base.



- Locate the four training gear rod to landing skid attachments and four screws. Note that there are two each of two types of attachments. Carefully snap two of the attachments onto the landing skids forward of the landing skid struts. The side of the attachment with the large hole should face outward, away from the helicopter, and forward to the front of the helicopter.
- Next, carefully snap the remaining two attachments onto the landing skids behind the landing skid struts. The side of the attachment with the large hole should face outward, away from the helicopter, and backward to the rear of the helicopter.

- Once you have installed all four attachments, install the four screws making sure that they thread properly into the back side of the attachment. It may be helpful to squeeze the attachment with a pair of pliers to make it easier to thread the screw into the backside of the attachment. Do not tighten the screws all the way at this time, as the attachments will need to be adjusted for proper alignment once the training gear rods are installed.



- Locate the four training gear rods and rod mounting base. Note that the rod mounting base has four channels into which the training gear rods will mount. The open side of these channels will face upward toward the bottom of the helicopter when properly installed.
- Carefully pass each of the rods through the attachments on the landing skids and into the channels on the base. Take care to not pull the landing skids out of their mounts in the battery supports.



- After ensuring that the rods are secure in the base, adjust the positions of the attachments on the landing skids so that the base is centered under the main shaft of the helicopter. Once confirming the base is centered under the main shaft, make sure that each of the landing skids is still firmly installed in the mounts of the battery supports. Note that the landing skids may be pulled slightly inward under pressure of the training gear rods.
- With the attachments, rods and base properly positioned, you can now tighten the attachment screws until they are just snug. Take care when tightening the screws to prevent stripping the backside of the attachments.
- Adjust the position of the tubing keepers and plastic balls on the training gear rods so that the balls are positioned approximately 1/8" from the end of each rod. Be sure that the tubing keepers are positioned so that the plastic ball can still spin freely on the rod.

Your Blade CX3 MD 520N is now ready for flight with the training gear installed.



Understanding the Controls

If you are not familiar with the controls of your Blade CX3 MD 520N, please take a few minutes to familiarize yourself with them before attempting your first flight.

The throttle stick on the transmitter controls climb/descend. When the throttle stick and throttle trim lever are in their lowest positions, the main rotor blades will not spin. Advancing the stick upward will increase the speed of the main rotor blades. Increasing the speed of the main rotor blades will cause the model to climb.

Mode 2



Mode 1



Decreasing the speed of the main rotor blades by lowering the throttle stick will cause the model to descend.

Mode 2



Mode 1



After lifting the model off the ground you can balance the throttle by carefully moving the throttle stick up and down so that the model will hold a stationary hover without climbing or descending.

You can also use the throttle trim to adjust the throttle value for a given stick position. For example, raising the throttle trim will allow the model to hover at a lower throttle stick position. However, if you do raise the throttle trim, you MUST remember to lower it (and the throttle stick) to the lowest possible position IMMEDIATELY in the event of a crash or rotor blade strike.

Failure to lower the throttle trim (and throttle stick) to its lowest possible position immediately in the event of a crash could result in damage to the main motor ESCs in the 3-in-1 unit, which may require replacement of the 3-in-1 unit.

Moving the rudder stick to the left will turn (yaw) the nose of the helicopter to the left about the axis of the main shaft. This is accomplished by increasing the speed of the lower main rotor blade while decreasing the speed of the upper main rotor blade.



Moving the stick to the right will turn (yaw) the nose of the helicopter to the to the right about the axis of the main shaft. This is accomplished by increasing the speed of the upper main rotor blade while decreasing the speed of the lower main rotor blade.



The rudder trim can be used to help keep the nose of the helicopter from rotating to the left or right when in hover with no rudder stick input. For example, if the nose of the helicopter drifts to the right when in hover, add left rudder trim until the nose stays as close to straight as possible. Also note that further adjustments to the rudder trim can be made using the Main Motor Proportional Mix Trimmer Pot as outlined on page 34–35.

The elevator stick controls both elevator fore and aft pitch. Pushing the stick forward will pitch the nose of the helicopter downward, causing the helicopter to fly forward.

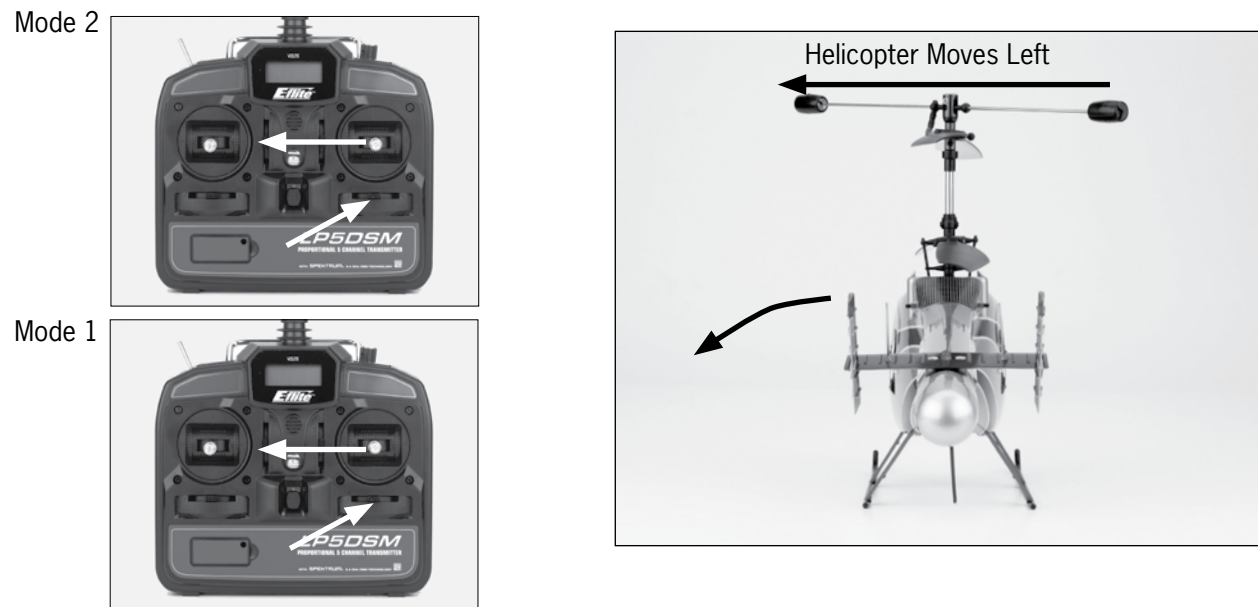


Pulling the stick backward will pitch the tail of the helicopter downward, causing the helicopter to fly backward.

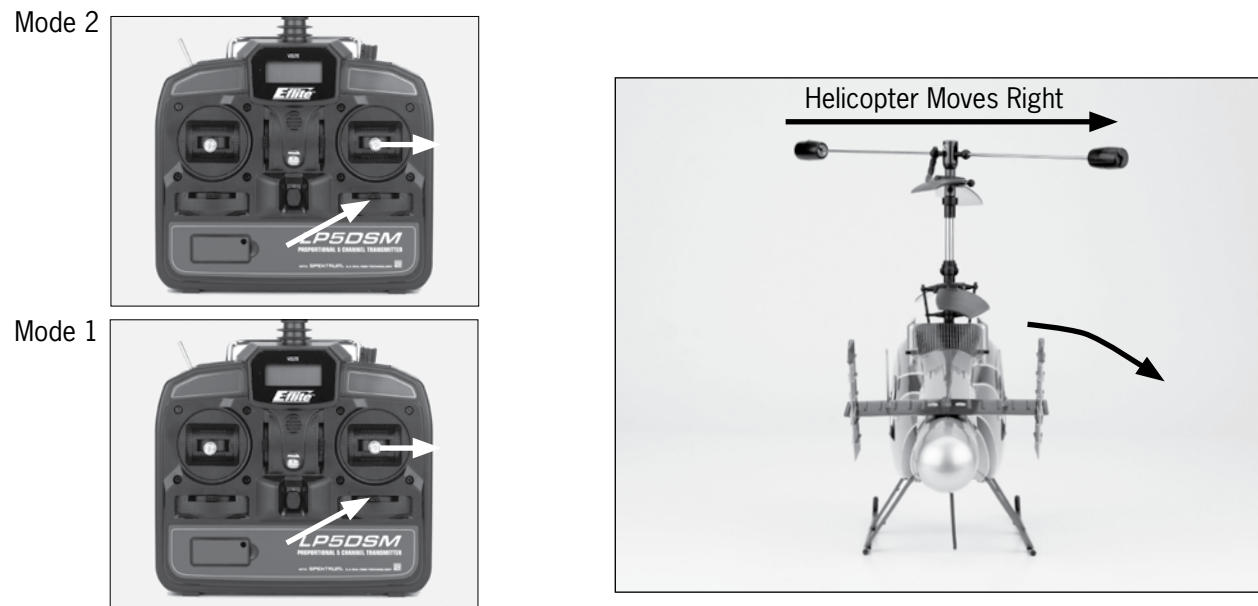


The elevator trim can be used to help keep the helicopter from drifting forward or backward when in hover with no elevator stick input. For example, if the helicopter drifts forward when in hover, pull the elevator trim downward until the helicopter hovers as level as possible with no forward drifting.

The aileron stick controls roll. Moving the stick left will roll the helicopter to the left, causing the helicopter to fly to the left.



Moving the stick to the right will roll the helicopter to the right, causing the helicopter to fly to the right.



The aileron trim can be used to help keep the helicopter from drifting left or right when in hover with no aileron stick input. For example, if the helicopter drifts to the right when in hover, add left aileron trim until the helicopter hovers as level as possible with no drifting to the right.

Once you have become familiar with the controls of the helicopter, you are almost ready to fly.

Choosing a Flying Area

When you are ready for your first flight, you will want to select a large, open area that is free of people and obstructions. **We strongly recommend an indoor area with at least 20-feet by 20-feet of floor space and no less than 8-foot ceilings.**

If you have to make your first flight outdoors, you MUST pick a time when wind conditions are COMPLETELY CALM. Due to the relatively small size and low weight of the Blade CX3 MD 520N, even the slightest amount of wind can cause you to lose control, or the rotor blades to strike in the air, resulting in a crash.

Flying the Blade CX3 MD 520N

Having followed the proper 3-in-1 control unit arming procedure, confirmed proper control of the servos and motors, and found a suitable flying area, your Blade CX3 MD 520N is ready for flight.

In addition to reviewing the flight maneuvers outlined below, we recommend that you watch the Instructional Video online at www.E-fliteRC.com to see many of these maneuvers and adjustments performed by the Blade CX3 MD 520N and pilot.

- Slowly raise the throttle stick, increasing the speed of the main rotor blades until the model begins to lift off. Do not raise the throttle stick too quickly as the model could climb too fast causing you to lose control or make contact with objects above.
- Lift the model off the ground just a few inches and concentrate on balancing the throttle stick position so that the model holds a steady hover altitude. In some cases it may be best to make a few short "hops" to an altitude of just a few inches until you become familiar with the control inputs and trim settings required to maintain a steady hover and altitude.

As you will find, the Blade CX3 MD 520N requires minor throttle adjustments to maintain its altitude in hover. Remember to keep these throttle adjustments as minimal as possible as large adjustments could result in a loss of control and/or a possible crash.

- While attempting to establish a low-level hover, you can also check to see if any trim adjustments are required to help keep the Blade CX3 from constantly drifting in various directions. If you find the helicopter constantly drifts without any directional control input, it will be best to land the model before making any adjustments to the trim levers.

If the nose of the helicopter does not stay pointed in one direction, but is drifting to the left or right, you will need to adjust the rudder trim. You can also adjust the Main Motor Proportional Mix if you experience any difficulties in trimming nose drift with the rudder trim lever only. Please see pages 34–35 for more information regarding Main Motor Proportional Mix Trimmer Pot adjustment.

If the helicopter is drifting forward or backward, you will need to adjust the elevator trim.

If the helicopter is drifting to the left or right, you will need to adjust the aileron trim.

Continue to make trim adjustments until the helicopter can hover at a low altitude with very little drifting and directional control input. If the Blade CX3 MD 520N is your first helicopter model, it may be best to have the help of an experienced helicopter pilot to trim the model for you before making your first flight.

- Once you have the Blade CX3 MD 520N properly trimmed and maintaining a stable low-level hover, practice using the rudder, elevator and aileron controls to get a feel for how the helicopter responds to control inputs. Remember to keep the control inputs as minimal as possible to prevent over-controlling the helicopter, especially when in hover.
- After becoming comfortable with hovering the Blade CX3 MD 520N at low-levels of altitude just a few inches off the ground, you can transition to hovering and flying the helicopter at higher altitudes of approximately three to four feet. At these higher altitudes you will be able to get a feel for the flight characteristics of the Blade CX3 when it is flying out of "ground effect."
- If at any time during flight you feel like the helicopter is drifting out of control, simply release all of the controls except for throttle. You will need to use the throttle to maintain altitude, but due to the inherent stability of the coaxial counter-rotating blades, the Blade CX3 will simply return to a stable hover on its own if space allows.
- Don't be afraid to set the helicopter down on the ground quickly by lowering the throttle when approaching walls

or other obstacles to help prevent main rotor blade strikes. Also, the optional Training Gear Set (EFLH1205) will help to further prevent damage to the helicopter in the event that you must make an abrupt landing to avoid walls or other obstacles.

- **IN THE UNFORTUNATE EVENT OF A CRASH OR ROTOR BLADE STRIKE, NO MATTER HOW MINOR OR MAJOR, YOU MUST LOWER BOTH THE THROTTLE STICK AND THROTTLE TRIM TO THEIR LOWEST POSSIBLE POSITION AS QUICKLY AS POSSIBLE TO PREVENT DAMAGE TO THE ESCS OF THE 3-IN-1 UNIT.**

Failure to lower both the throttle stick and throttle trim to their lowest possible positions in the event of a crash could result in damage to the main motor ESCs in the 3-in-1 unit, which may require replacement of the 3-in-1 unit.

Note: Crash damage is not covered under warranty.

- It is extremely important when hovering and flying the Blade CX3 MD 520N to be aware of the power level of the Li-Po battery pack. If at any time the helicopter begins to require more throttle than typical to maintain hover or flight, or has lost the ability to maintain hover or flight due to significant loss of power, you must land the helicopter and power the motors down IMMEDIATELY to prevent over-discharge of the Li-Po battery pack.

If you continue to run the motors after noticing a loss in power it is possible to discharge the Li-Po battery pack too far, causing permanent damage to the pack. Over-discharge of the Li-Po battery pack can result in shortened flight times, loss of power output or failure of the pack entirely.

- Once you have gained experience and confidence in hovering the Blade CX3 MD 520N, you can attempt more advanced maneuvers including:

Forward Flight

Backward Flight

Pirouettes

Skidding Takeoffs

Skidding Landings

Spot Landings

Main Motor Proportional Mix Trimmer Pot Description and Adjustment

The Main Motor Proportional Mix Trimmer Pot can be found on the left side of the 3-in-1 control unit. This “proportional” trimmer pot adjusts the amount of mixing between the main motors allowing you to “fine-tune” the rudder trim (sub-trim) to help prevent the nose from drifting to the left or right when in hover.



- In a stable hover, with the rudder trim centered and no rudder control input, note the direction the nose of the helicopter is drifting. If the nose of the helicopter is drifting to the left, you will want to increase power to the right-hand motor (spinning the upper main rotor blade). This is accomplished by turning the “proportional” trimmer pot clockwise (+).



- If the nose of the helicopter is drifting to the right in hover, you will want to increase the power to the left-hand motor (spinning the lower main rotor blade). This is accomplished by turning the “proportional” trimmer pot counterclockwise (-).



Note: You must always power down the 3-in-1 unit before making adjustments to the proportional mix trimmer pot. Any changes made to the trimmer pot will not take effect until the 3-in-1 unit is re-initialized and re-armed.

Also, you should always center the rudder trim lever on the transmitter after making adjustments to the proportional mix trimmer pot on the 3-in-1 unit.

Note: Be sure to use the proper size and type of screwdriver to carefully make adjustments to the trimmer pot. Use of the improper size and type of screwdriver or too much force can damage the trimmer pot. Also be sure to take your time when making adjustments to the proportional trimmer pot as it may only require very slight adjustment to achieve the desired level of performance (less than 1/8 of a turn).

As the battery output voltage decreases throughout the flight, it may be necessary to make small adjustments to the rudder trim or rudder control input in order to keep the nose of the helicopter straight. These small adjustments can be made using the rudder trim lever or rudder control stick and do not require additional adjustments of the proportional trimmer pot.

Gyro Gain Trimmer Pot Description and Adjustment

The “gain” trimmer pot adjusts the gain setting value of the piezo gyro used to aid in keeping the tail of the helicopter straight/on heading during flight.



- The gain value is set too high if the tail of the helicopter twitches/bounces quickly from side to side when in hover. If this is the case for your model, reduce the gyro gain in small increments until the tail of the helicopter no longer twitches/bounces from side to side in hover.

Turn the gyro gain trimmer pot counterclockwise (-) to decrease gyro gain.

- The gain value is set too low when the tail of the helicopter feels “loose” during flight, requiring constant left and right rudder inputs to maintain heading when in hover. If this is the case for your model, increase the gyro gain in small increments until few, if any, left and right rudder inputs are required to maintain heading.

Turn the gyro gain trimmer pot clockwise (+) to increase gyro gain.

Note: When adjusting the gyro gain trimmer pot, the changes will take effect without the need to power down and re-arm the 3-in-1 unit. Please exercise extreme caution when adjusting the gyro gain trimmer pot with the model armed to prevent personal injury or damage to the model.

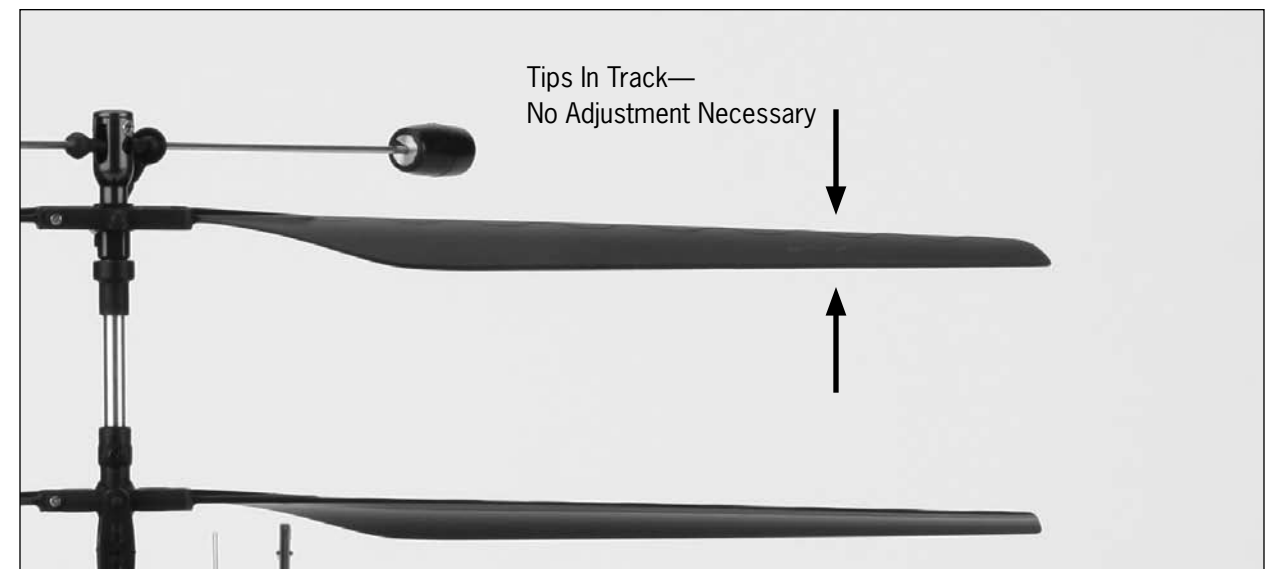
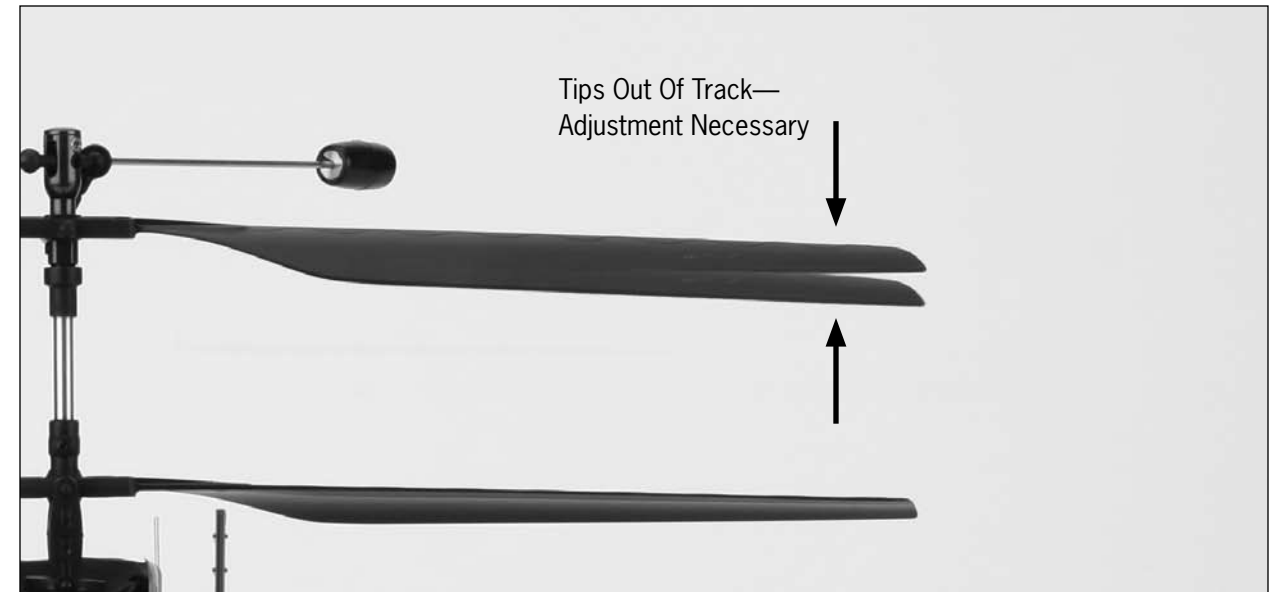
Upper Main Rotor Blade Tracking Adjustment

Caution: Be sure to maintain a safe distance from the helicopter (approximately 10–15 feet) when tracking the Upper Main Rotor Blade.

Your Blade CX3 MD 520N is equipped with an adjustable linkage between the Stabilizer Flybar and Upper Main Rotor Blade. This linkage allows you to adjust the tracking of the upper main rotor blade for smoother and more stable flight performance.



- You can check the upper main rotor blade tracking either on the ground or in the air at eye level. It might be a good idea to have an assistant on hand to help sight the blade tracking.
- Once the main rotor blades have been brought up to speed, note whether the tips of the upper main rotor blade are tracking in the same plane or not.



- If the tips are not tracking in the same plane, power the helicopter down to make adjustments to the adjustable linkage. You can start by turning the ends of the linkage in one-half to one-full turn at a time. Power the helicopter up again and re-check the blade tracking.

If the tracking has improved, continue to turn the ends of the linkage in one-half to one-full turn at a time until the tips are tracking in the same plane.

If the tracking has become worse after first turning the ends of the adjustable linkage in, turn the ends of the linkage back out one-half to one-full turn at a time. If the tracking then gets better, continue to turn the ends of the linkage out one-half to one-full turn at a time until the tips are tracking in the same plane.

Typically, not much adjustment should be necessary to properly track the tips of the upper main rotor blade. However, due to the small size of the linkage ends and threaded rods it may not always be possible to achieve absolutely perfect blade tracking. Don't worry as the helicopter will still perform well as long as the blade tracking is adjusted as closely as possible.

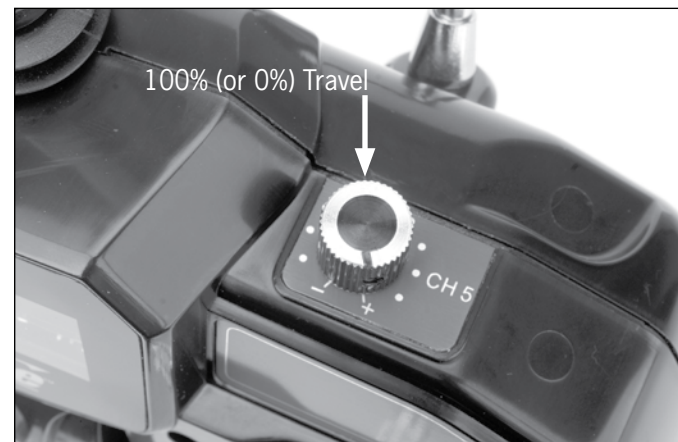
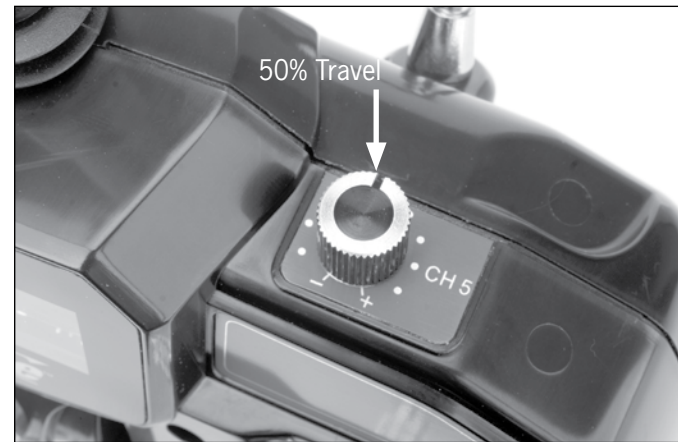
Note: It will not be necessary to adjust the Lower Main Rotor Blade tracking as fixed links are used between the rotor blade and swashplate.

Channel 5 Knob Description and Function

The transmitter included with your Blade CX3 MD 520N is equipped with an optional-use “Channel 5” knob (labeled as “CH 5”) on the top right panel.

This knob allows you to control function of the transmitter’s 5th channel. This channel remains un-used for flying the Blade CX3 MD 520N, however, it is available for use in controlling a variety of potential optional features including actuation of an additional servo or certain electronic components. It allows full proportional control of the 5th channel from approximately 0–100% travel.

Although no servo reversing is available for this channel, the knob can be operated in either direction for control. You can use either the most clockwise (+) or most counterclockwise (-) position for 0 or 100% travel, and you will achieve approximately 50% travel with the knob in the middle position, pointing directly to the rear of the transmitter.



Transmitter and Receiver Binding and Fail-Safe

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. If you ever find that it is necessary to replace your transmitter or the AR6100e in your model, it will be necessary for you to “Bind” the new transmitter AR6100e receiver to your existing transmitter or receiver for proper operation.

During the binding process, the smart fail-safe (SmartSafe™) positions of your system are also set. With SmartSafe, in case of loss of signal, the throttle will go to the preset position that was stored during the binding process and all other channels will hold their last position. And if the receiver (AR6100e) is powered on before the transmitter, all channels but throttle will go to the fail-safe positions that were stored during the binding process, while the throttle channel will not generate a pulse in order to prevent the ESC(s) from arming.

Note: Because the SmartSafe positions are set during the binding process, it is important to set all channels to the preferred fail-safe positions before proceeding. In the case of the Blade CX3 MD 520N, we strongly recommend setting the throttle stick and throttle trim to their lowest positions, and the rudder, aileron and elevator channels to their neutral positions. Channel 5 should be set to your preferred position if you have chosen to utilize it.

The following steps outline the binding process:

- Each time the transmitter is turned on, it enters “Bind Mode” for a few seconds. You can tell that the transmitter is in bind mode when you see the red LED located under the door on the bottom left front of the transmitter blink rapidly. Once the LED becomes solid, the transmitter is no longer in bind mode and will transmit normally.



- In order to bind the AR6100e receiver to the transmitter, you must first insert the Bind Plug (included with your Blade CX3 MD 520N) into the “BAT” opening on the receiver. Then you will need to power on the receiver by connecting the flight battery into the 3-in-1 control unit BEFORE powering the transmitter on.



- When you connect the flight battery to the 3-in-1 unit with the bind plug inserted into the “BAT” opening on the receiver, you will see an orange LED blink rapidly on the receiver itself.
- Once the orange LED on the receiver begins to blink, turn on the transmitter. The transmitter will immediately enter bind mode. Then, once the orange LED on the receiver and the red LED on the transmitter turn solid, the receiver is bound to the transmitter. Now you will need to power down the 3-in-1 control unit, receiver and transmitter, and remove the bind plug from the receiver.

Note: It is extremely important that you remove the bind plug from the receiver once it has been bound to the transmitter. If you do not remove the bind plug the receiver will enter bind mode every time the 3-in-1 unit is powered on.

Main Motor Care and Installing the Optional Main Motor Heat Sink

The 180 motors used to power your Blade CX3 MD 520N are of the closed end-bell variety and do not require any special maintenance. We do, however, suggest that you allow the motors to cool to near ambient temperature between flights/battery pack changes to prevent accelerated motor wear due to excess motor heat.

You will find the performance and life of the 180 main motors to be very good, however, installation of the optional Main Motor Heat Sink (EFLH1208) can help to further improve motor cooling during flight, resulting in improved motor performance and longer motor life.

Installing the main motor heat sink takes only a few minutes following these steps:

- Installation of the main motor heat sink will require that you temporarily remove the right-hand main motor from the main frame. This is easily accomplished by removing the two motor mounting screws found on the bottom of the main frame.
- With the right-hand main motor removed from the frame, you can press the main motor heat sink into place near the top/end of the left-hand main motor. We recommend that you use Heat Sink Compound (EFLM1913) on any surfaces of the heat sink that make contact with the motor case to further improve the effectiveness of the heat sink. The wider end of the heat sink (more fins) must be placed toward the front of the helicopter.
- You can now press the right-hand main motor into place in the heat sink and use the motor mounting screws to re-install the motor on the main frame. Again, we recommend that you use Heat Sink Compound (EFLM1913) on any surfaces of the heat sink that make contact with the motor case to further improve the effectiveness of the heat sink.

The main motor heat sink is now installed and ready for flight.

2008 Official AMA National Model Aircraft Safety Code

GENERAL

1. A model aircraft shall be defined as a non-human-carrying device capable of sustained flight in the atmosphere. It shall not exceed limitations established in this code and is intended to be used exclusively for recreational or competition activity.
2. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
3. I will abide by this Safety Code and all rules established for the flying site I use. I will not willfully fly my model aircraft in a reckless and/or dangerous manner.
4. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations until it has been proven airworthy.
5. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator. I will yield the right-of-way and avoid flying in the proximity of full-scale aircraft, utilizing a spotter when appropriate.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers or with gaseous boosts (other than air), nor will I operate model aircraft with fuels containing tetranitromethane or hydrazine.
8. I will not operate model aircraft carrying pyrotechnic devices which explode burn, or propel a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they may not be launched from model aircraft. Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Air Show Advisory Committee Document.
9. I will not operate my model aircraft while under the influence of alcohol or within eight (8) hours of having consumed alcohol.
10. I will not operate my model aircraft while using any drug which could adversely affect my ability to safely control my model aircraft.
11. Children under six (6) years old are only allowed on a flightline or in a flight area as a pilot or while under flight instruction.
12. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

RADIO CONTROL

1. All model flying shall be conducted in a manner to avoid flying or flight over unprotected people.
2. I will have completed a successful radio equipment ground-range check before the first flight of a new or repaired model aircraft.
3. I will not fly my model aircraft in the presence of spectators until I become a proficient flier, unless I am assisted by an experienced pilot.
4. At all flying sites a line must be established, in front of which all flying takes place. Only personnel associated with flying the model aircraft are allowed at or in front of the line. In the case of air shows, a straight line for demonstrations must be established. An area away from the line must be maintained for spectators. Intentional flying behind the line is prohibited.
5. I will operate my model aircraft using only radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
6. I will not knowingly operate my model aircraft within three (3) miles of any preexisting flying site without a frequency-management agreement. A frequency-management agreement may be an allocation of frequencies for each site, a day-use agreement between sites, or testing which determines that no interference exists. A frequency-management agreement may exist between two or more AMA chartered clubs, AMA clubs and individual AMA members, or individual AMA members. Frequency-management agreements, including an interference test report if the agreement indicates no interference exists, will be signed by all parties and copies provided to AMA Headquarters.
7. With the exception of events flown under official AMA rules, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and located at the flightline.
8. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual.
9. Radio-controlled night flying is limited to low-performance model aircraft (less than 100 mph). The model aircraft must be equipped with a lighting system which clearly defines the aircraft's attitude and direction at all times.
10. The operator of a radio-controlled model aircraft shall control it during the entire flight, maintaining visual contact without enhancement other than by corrective lenses that are prescribed for the pilot. No model aircraft shall be equipped with devices which allow it to be flown to a selected location which is beyond the visual range of the pilot.

FREE FLIGHT

1. I will not launch my model aircraft unless I am at least 100 feet downwind of spectators and automobile parking.
2. I will not fly my model aircraft unless the launch area is clear of all individuals except my mechanic, officials, and other fliers.
3. I will use an effective device to extinguish any fuse on the model aircraft after the fuse has completed its function.

CONTROL LINE

1. I will subject my complete control system (including the safety thong where applicable) to an inspection and pull test prior to flying. The pull test will be in accordance with the current for the applicable model aircraft category. Model aircraft not fitting a specific category shall use those pull test requirements as indicated for Control Line Precision Aerobatics.
2. I will ensure that my flying area is clear of all utility wires or poles and I will not fly a model aircraft closer than 50 feet to any above-ground electric utility lines.
3. I will ensure that my flying area is clear of all nonessential participants and spectators before permitting my engine to be started.

PARK FLYER SAFE OPERATING RECOMMENDATIONS

- Inspect your model before every flight to make certain it is airworthy.
- Be aware of any other radio frequency user who may present an interference problem.
- Always be courteous and respectful of other users of your selected flight area.
- Choose an area clear of obstacles and large enough to safely accommodate your flying activity.
- Make certain this area is clear of friends and spectators prior to launching your aircraft.
- Be aware of other activities in the vicinity of your flight path that could cause potential conflict.
- Carefully plan your flight path prior to launch.
- Abide by any and all established AMA National Model Aircraft Safety Code.

Replacement Parts List

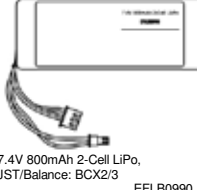
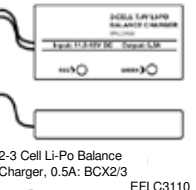
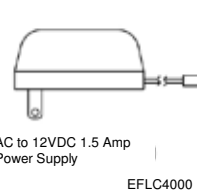
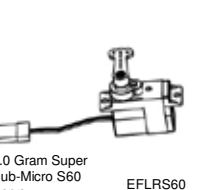

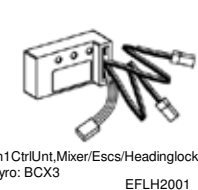

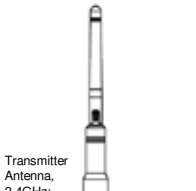

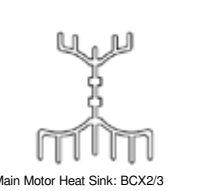

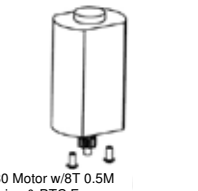
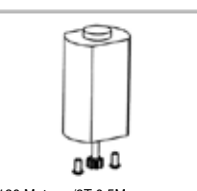

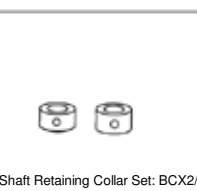


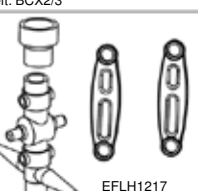
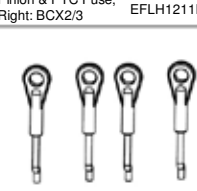
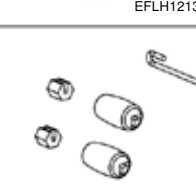

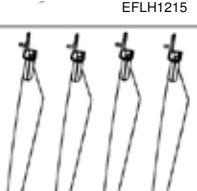
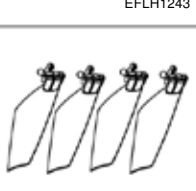
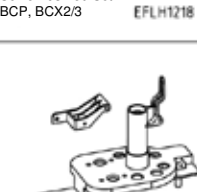
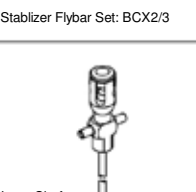

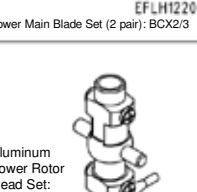
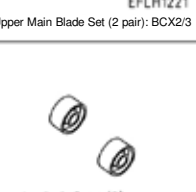

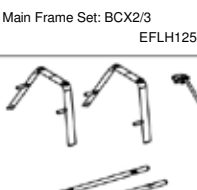
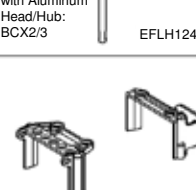
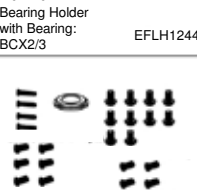


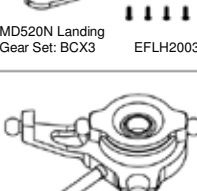
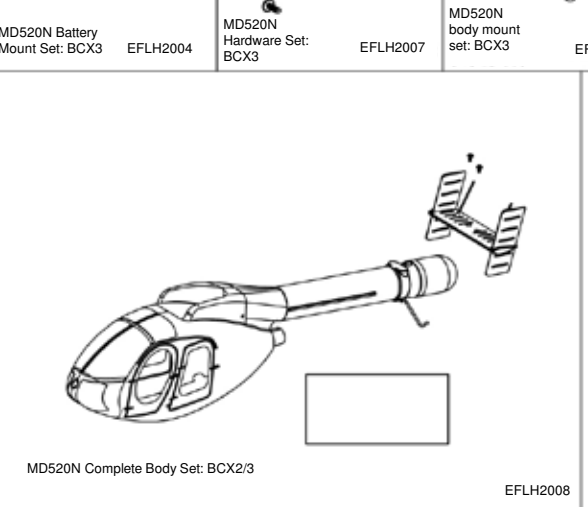
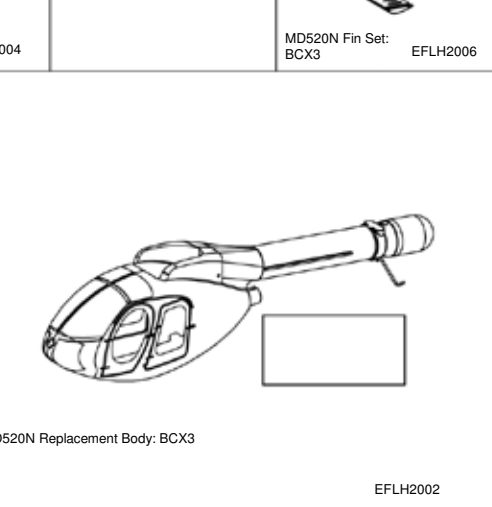
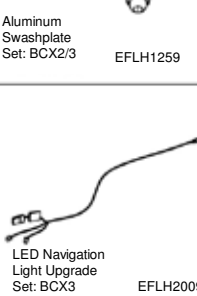
EFLH2000	Blade CX3 MD 520N RTF Electric Coaxial Heli
EFLB0990	7.4V 800mAh 2-Cell Li-Po, JST/Balance
EFLC3110	2-3 Cell Li-Po Balancing Charger, 0.65A
EFLC4000	AC to 12VDC, 1.5 Amp Power Supply
EFLH1022	Bind Plug
EFLH2001	3-in-1 Control Unit, Mixer/EsCs/Heading lock Gyro: BCX3
EFLH1055	LP5DSM 5-Channel Transmitter, 2.4GHz DSM: BCX2/3
EFLH1058	Transmitter Antenna, 2.4GHz: LP5DSM, HP6DSM
EFLRS60	6.0 Gram Super Sub-Micro S60 Servo
EFLRS601	Gear Set: S60
EFLRS602	Case Set: S60
EFLRSA100	Standard Arm Set, Fine Spline: S60
EFLH1121	Bearing 2x6x3mm (2): BCP, BCX2/3
EFLH1209	Mounting Accessories & Screwdriver: BCX2/3
EFLH1210B	180 Motor w/8T 0.5M Pinion Left: BCX2/3
EFLH1211B	180 Motor w/8T 0.5M Pinion Right: BCX2/3
EFLH1213	Outer Shaft & Main Gear Set: BCX2/3
EFLH1214	Shaft Retaining Collar Set: BCX2/3
EFLH1215	Bearing 4x6x3mm (2): BCX2/3
EFLH1216	Swashplate Set: BCX2/3
EFLH1217	Lower Rotor Head & Linkage Set: BCX2/3
EFLH1218	Servo Pushrod Set: BCX2/3
EFLH1219	Stabilizer Flybar Set: BCX2/3
EFLH1220	Lower Main Blade Set (2 pair): BCX2/3
EFLH1221	Upper Main Blade Set (2 pair): BCX2/3
EFLH1225	Hardware Set: BCX2/3
EFLH1240	Inner Shaft w/Aluminum Head/Hub: BCX2/3
EFLH1243	Inner Shaft Main Gear: BCX2/3
EFLH1254	Main Frame Set: BCX2/3
EFLH2002	MD520N Replacement Body with Decal Sheet: BCX3
EFLH2003	MD520N Landing Gear Set: BCX3
EFLH2004	MD520N Battery Mount Set: BCX3
EFLH2005	MD520N Body Mount Set: BCX3
EFLH2006	MD520N Fin Set: BCX3
EFLH2007	MD520N Hardware Set: BCX3
EFLH2008	MD520N Complete Body Set: BCX2/3
EFLH2010	MD520N Complete Decal Set: BCX3

Optional Parts List

EFLH1205	Training Gear Set: BCX2/3
EFLH1208	Main Motor Heat Sink: BCX2/3
EFLH1232	Complete Body Set, Police, Blue: BCX/2
EFLH1260	Complete Body Set, Marines, with Decals, Gun and Missile: BCX/2
EFLH1263	Jet Ranger Body Set, Blue/Red: BCX/2
EFLH1264	Jet Ranger Body Set, Blue/Silver: BCX/2
EFLH1270	SH-60 SEAHAWK Body Set, Black: BCX/2
EFLH1271	SH-60 SEAHAWK Body Set, Gray: BCX/2
EFLM1913	Heat Sink Compound, 5g
EFLH1241	Inner Shaft for Aluminum Head/Hub: BCX2/3
EFLH1244	Aluminum Bearing Holder w/Bearing: BCX2/3
EFLH1245	Aluminum Lower Rotor Head Set: BCX2/3
EFLH1246	Aluminum Swashplate Set: BCX2/3
EFLH2009	LED Navigation Light Upgrade Set: BCX3

Please see your favorite retailer or visit our web site (www.E-fliteRC.com) to find the latest in new replacement and optional parts releases for your Blade CX3 MD 520N.

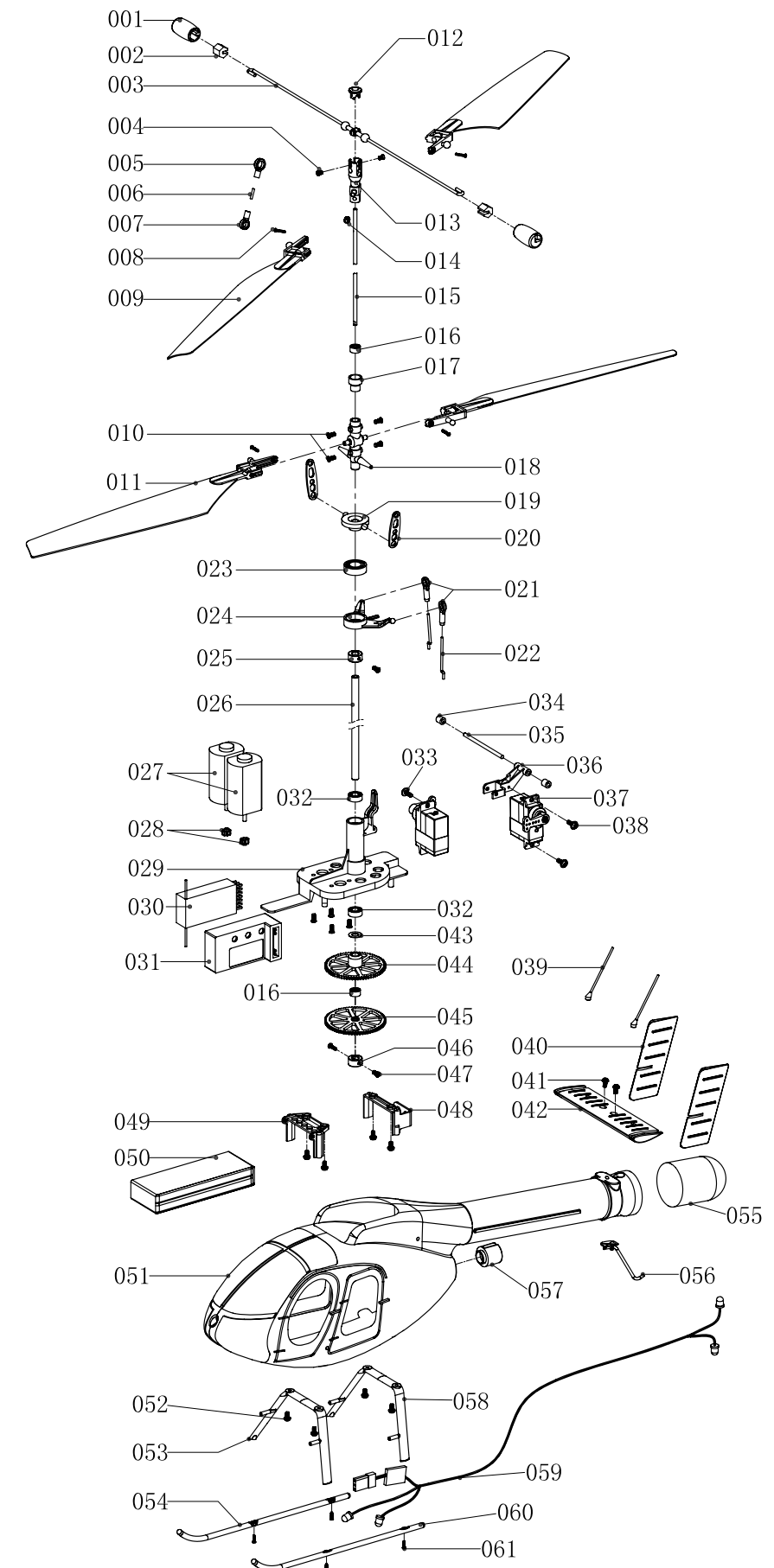
Replacement and Optional Parts

 7.4V 800mAh 2-Cell LiPo, JST/Balance: EFLB0990	 2-3 Cell Li-Po Balance Charger, 0.5A: EFLC3110	 AC to 12VDC 1.5 Amp Power Supply: EFLC4000	 6.0 Gram Super Sub-Micro S60 Servo: EFLRS60	 Bind Plug: EFLH1022	 3-in-1 Control Unit, Mixer/EsCs/Heading lock Gyro: BCX3: EFLH2001
 LP5DSM 5-Channel Transmitter, 2.4GHz: EFLH1055	 Transmitter Antenna, 2.4GHz: EFLH1055	 AR6100e Receiver, 2.4GHz: SPMAR6100E	 Main Motor Heat Sink: BCX2/3: EFLH1208	 Mounting Accessories & Screwdriver: BCX2/3: EFLH1209	 180 Motor w/8T 0.5M Pinion & PTC Fuse, Left: BCX2/3: EFLH1210B
 180 Motor w/8T 0.5M Pinion & PTC Fuse, Right: BCX2/3: EFLH1211B	 Outer Shaft & Main Gear Set: BCX2/3: EFLH1213	 Shaft Retaining Collar Set: BCX2/3: EFLH1214	 Bearing 4x6x3mm (2): BCX2/3: EFLH1215	 Inner Shaft Main Gear: BCX2/3: EFLH1243	 Lower Rotor Head and Linkage Set: BCX2/3: EFLH1217
 Servo Pushrod Set: BCP, BCX2/3: EFLH1218	 Stabilizer Flybar Set: BCX2/3: EFLH1219	 Lower Main Blade Set (2 pair): BCX2/3: EFLH1220	 Upper Main Blade Set (2 pair): BCX2/3: EFLH1221	 Training Gear Set: BCX2/3: EFLH1205	
 Main Frame Set: BCX2/3: EFLH1254	 Inner Shaft with Aluminum Head/Hub: BCX2/3: EFLH1240	 Aluminum Bearing Holder with Bearing: BCX2/3: EFLH1244	 Aluminum Lower Rotor Head Set: BCX2/3: EFLH1245	 Bearing 2x6x3mm (2): EFLH1121	 Swashplate Set: BCX2/3: EFLH1216
 MD520N Landing Gear Set: BCX3: EFLH2003	 MD520N Battery Mount Set: BCX3: EFLH2004	 MD520N Hardware Set: BCX3: EFLH2007	 MD520N body mount set: BCX3: EFLH2004	 MD520N Fin Set: BCX3: EFLH2006	
 Aluminum Swashplate Set: BCX2/3: EFLH1259	 MD520N Complete Body Set: BCX2/3: EFLH2008		 MD520N Replacement Body: BCX3: EFLH2002		
 LED Navigation Light Upgrade Set: BCX3: EFLH2009					

Exploded View Parts Listing

Exploded View Reference Number	Description (Quantity Required)	Included In Item Number	Exploded View Reference Number	Description (Quantity Required)	Included In Item Number
001	Stabilizer Flybar Rubber Tip (2)	EFLH1219	031	3in1CtrlUntMixer/ESC/Heading Lock Gyro	EFLH2001
002	Stabilizer Flybar Weight (2)	EFLH1219	032	Bearing 4mm x 8mm x 3mm (2)	EFLH1215
003	Stabilizer Flybar (1)	EFLH1219	033	1.7 x 4mm Screw (8)	EFLH2007
004	Screw (2) M2x3mm	EFLH1242	034	Silicon Tube Section	EFLH1158
005	Stabilizer Flybar Link (1)	EFLH1219	035	Body Mount Rod 2x38mm (1)	EFLH2005
006	Stabilizer Flybar Linkage Rod (1)	EFLH1219	036	Servo Mount (1)	EFLH1254
007	Stabilizer Flybar Link (1)	EFLH1219	037	Super Sub-Micro Servo (2)	EFLRS60
008	1.2 x 6mm Screw (4)	EFLH2007	038	1.7 x 4mm Screw (8)	EFLH2007
009	Upper Main Blade (2)	EFLH1221	039	Horizontal Fin Antenna (2)	EFLH2006
010	M2 x 2.5mm Screw (5)	EFLH2007	040	Vertical Fin (1)	EFLH2006
011	Lower Main Blade (2)	EFLH1220	041	Horizontal Fin Screw (2)	EFLH2007
012	Upper Rotor Head Cap (1)	EFLH1242	042	Horizontal Fin (1)	EFLH2006
013	Upper Rotor Head (1)	EFLH1242	043	Step Washer (1)	EFLH2007
014	Upper Rotor Head Set Screw (1)	EFLH1242	044	Outer Shaft Main Gear (1)	EFLH1213
015	Inner Shaft for Aluminum Head/Hub	EFLH1241	045	Inner Shaft Main Gear (1)	EFLH1212
016	Bearing 2mm x 6mm x 3mm (2)	EFLH1121	046	Inner Shaft Retaining Collar (1)	EFLH1214
017	Bearing Holder (1)	EFLH1217	047	M2 x 4mm Screw (6)	EFLH2007
018	Lower Rotor Head (1)	EFLH1217	048	MD520N Battery Support Rear (1)	EFLH2004
019	Upper Swashplate (1)	EFLH1216	049	MD520N Battery Support Front (1)	EFLH2004
020	Lower Rotor Head/Swash Linkage (2)	EFLH1217	050	Battery Pack (1)	EFLB0990
021	Servo Pushrod Control Link (2)	EFLH1218	051	MD520N Replacement Body	EFLH2002
022	Servo Pushrod Control Pushrod (2)	EFLH1218	052	MD520N Landing Gear Screws	EFLH2007
023	Bearing 7mm x 13mm x 4mm (1)	EFLH1216	053	MD520N Front Landing Gear (1)	EFLH2003
024	Lower Swashplate (1)	EFLH1216	054	MD520N Right Landing Skid (1)	EFLH2003
025	Outer Shaft Retaining Collar (1)	EFLH1214	055	MD520N Tail Cone (1)	EFLH2002
026	Outer Shaft (1)	EFLH1213	056	MD520N Rear Landing Skid (1)	EFLH2003
027	Main Motor Left (1)	EFLH1210	057	MD520N Exhaust Outlet/Nozzle	EFLH2002
	Main Motor Right (1)	EFLH1211	058	MD520N Rear Landing Gear (1)	EFLH2003
028	Pinion Gear Left (1)	EFLH1210	059	Optional MD520N Navigation Light Set	EFLH2009
	Pinion Gear Right (1)	EFLH1211	060	MD520N Left Landing Skid (1)	EFLH2003
029	Main Frame (1)	EFLH1254	061	MD520N Landing Skid Screw (4)	EFLH2007
030	AR6100e Receiver (1)	SPMAR6100E			

Exploded View



Warranty Period

Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. Please note: non-warranty repair is only available on electronics and model engines.

Product Registration

Please register your product at www.e-fliterc.com/register

United States

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

All other products requiring warranty inspection or repair should be shipped to the following address:

Horizon Support Team
4105 Fieldstone Road
Champaign, Illinois 61822

Please call 877.504.0233 or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

United Kingdom

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex
CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or e-mail us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

Germany

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
Germany

Please call +49 4121 46199 66 or email us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH20081014

Products: E-flite Blade CX3 RTF and BNF
Item Numbers: EFLH2000, EFLH2080

Equipment Class: 1

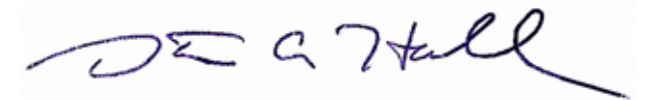
The objects of declaration described above are in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

EN 300-328 v1.7.1 ERM requirements for wideband transmission systems operating in the 2.4GHz ISM band

EN 301 489-1 v.1.6.1 General EMC requirements for Radio equipment

EN 301 489-17 v.1.2.1

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
10/14/2008



Steven A. Hall
Vice President
International Operations and Risk Management
Horizon Hobby, Inc.