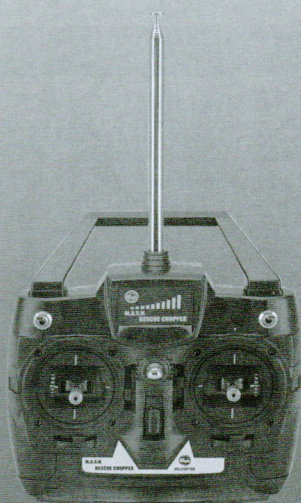


M.A.S.H.

RESCUE CHOPPER

- Main Rotor Diameter: 340mm
- Tail Rotor Diameter: 56mm
- Overall Length: 425mm
- Flying Weight: 235g (Including Li-Po Battery)
- Drive System: Two 180 Size Carbon-Brushed Motors
- Servos: Two 7.6g Micro Servos
- Battery: 7.4v 800mAH Li-Po
- Control System: 4 Channel Transmitter and 3-in-1 Receiver

Dual-Rotor Co-Axial Full-Function Radio Control Helicopter



READY-TO-FLY!



EF HELICOPTERS

ASSEMBLY MANUAL AND SETUP GUIDE

DISTRIBUTED IN NORTH AMERICA BY:

Global Hobby Distributors
18480 Bandler Circle
Fountain Valley, CA 92708



DISTRIBUTED IN EUROPE BY:

Ripmax Ltd.
241 Green Street
Enfield, U.K. EN3 7SJ



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EF Helicopters
Version 1 August 2006

M.A.S.H ARMY RESCUE CHOPPER FEATURES

- Perfect for beginners... Fun for experts, too!
- Completely built - only requires very basic final assembly
- Hover steadily under complete control
- Easier to fly than a 'traditional' R/C helicopter
- Fly forwards, backwards, up, down, right and left
- Includes a rechargeable Li-Po battery and AC charger
- Includes an extra set of rotor blades
- Full-size transmitter with adjustable trims & stick length
- Full replacement parts support



Before beginning assembly of your new EF Helicopters M.A.S.H. Army Rescue Chopper, please read and understand the warnings listed on the next two pages. Failure to do so could lead to bodily harm and/or injury.

The EF Helicopters M.A.S.H. Army Rescue Chopper is not intended for persons under 14 years of age, unless closely supervised by an adult.

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SAFETY WARNINGS

This R/C helicopter is not a toy! If misused or abused, it can cause serious bodily injury and/or damage to property. Fly only in open areas and preferably at a dedicated R/C flying site. We suggest having a qualified instructor carefully inspect your helicopter before its first flight. Please carefully read and follow all instructions included with this helicopter.

GENERAL WARNINGS

- Just because the M.A.S.H. Army Rescue Chopper is powered by electric motors doesn't mean that you shouldn't exercise caution when flying and operating it. You must use the same amount of caution during use as when flying and operating an engine powered helicopter.
- We strongly suggest that when you first begin flying the M.A.S.H. Army Rescue Chopper that you perform only basic manoeuvres, such as hovering, until you are more familiar with the setup and flight characteristics of the helicopter. This will give you time to feel comfortable with the way the helicopter reacts to control inputs and power.
- You must be cautious when plugging the Li-Po battery into the helicopter. Unlike glow-powered helicopters that use a clutch assembly to allow the engine to idle without the rotor blades spinning, an electric helicopter features no such clutch. You must be sure that your transmitter is turned on and the throttle control stick and throttle trim lever are pulled all the way back before plugging in the Li-Po battery. This will prevent any chance of the rotor blades spinning and harming you while plugging in the Li-Po battery.
- Do not fly your helicopter if another model is on the same frequency as you. The frequency number is printed on the transmitter and the receiver.
- Never fly your helicopter from the street or at night. Always fly in an open area free of obstructions.
- When flying, make sure any spectators are behind you.
- Always be conscious of the rotor blades. Be careful not to allow loose clothing to be drawn into the rotor blades.
- Because your helicopter is operated by radio control, it is important to make sure you are always using fresh and/or fully charged batteries. Never allow the batteries to run low or you could lose control of the helicopter.
- Do not allow any of the electrical components to get wet or electrical damage may occur.
- You should complete a successful range check of the radio control system prior to each new day of flying, or prior to the first flight of a new or repaired model.
- If your helicopter gets dirty, do not use any solvents to clean it. Solvents may damage the plastic and composite parts.

Li-Po BATTERY WARNINGS

- Please refer to Li-Po battery warnings on the next page.

RADIO SYSTEM WARNINGS

- Always turn on the transmitter before plugging in the Li-Po battery and always unplug the Li-Po battery before turning off the transmitter.
- Always unplug the Li-Po battery when not flying the helicopter.
- Never cut the receiver aerial shorter or you could lose control of the helicopter during flight.
- When flying the helicopter, make sure that the transmitter aerial is completely extended.
- Never attempt to disassemble or modify any of the radio control system components.

CUSTOMER SERVICE INFORMATION

In the USA

Global Services

18480 Bandilier Circle

Fountain Valley, CA 92708

Phone: (714) 963-0329 Fax: (714) 964-6236

Email: service@globalhobby.net

In Europe:

Ripmax Ltd.

241 Green Street

Enfield, U.K. EN3 7SJ

Phone: (0) 20 8282-7500

Fax: (0) 20 8282-7501

LITHIUM POLYMER BATTERY SAFETY WARNINGS

- Do Not leave the Li-Po battery unattended during the charging process.
- Always disconnect the Li-Po battery from the charger when not in use.
- Always place the Li-Po battery on a fire-resistant surface during the charging process.
- Never charge the Li-Po battery near any flammable material.
- All instructions, warnings and cautions must be followed at all times. Failure to do so can lead to serious injury or fire. Instructions about charging the Li-Po battery can be found in the Li-Po battery charging section.
- Do NOT use or charge the Li-Po battery if it's hot to the touch.
- Do NOT leave the Li-Po battery in direct sunlight or in a hot car or storage area.
- Do NOT get the Li-Po battery wet or expose it to moisture.
- Do NOT short-circuit the Li-Po battery.
- Do NOT leave the battery connected when not in use.
- Do NOT operate or charge unattended.
- Always let the Li-Po battery cool between uses and charging.
- Inspect the Li-Po battery before each use for swelling or other malformation. If the Li-Po battery is damaged, it should be discarded.
- When handling the battery, do not poke, bend or damage it. The Li-Po battery's outer casing is soft and can be easily damaged.

PLEASE READ THESE WARNINGS IF USING AN AFTER-MARKET Li-Po CHARGER

In addition to the warnings listed above, please read and understand these warnings if you will be charging the included Li-Po battery using an after-market Li-Po battery charger.

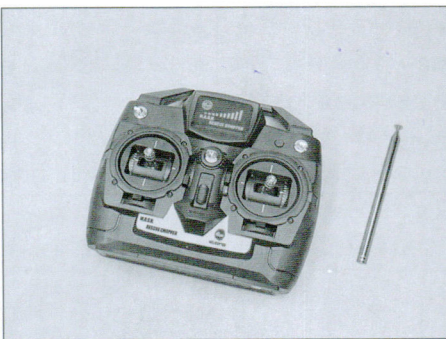
- ONLY use a charger made for Lithium Polymer batteries.
- Do NOT charge with reverse polarity.
- Do NOT overcharge. The maximum voltage for the Li-Po battery pack must be followed (8.4v).
- Do NOT over-discharge. NEVER discharge below minimum volts (6v).
- Do NOT discharge at a rate greater than the maximum continuous discharge.
- Do NOT charge at a rate higher than 1C. The Li-Po battery's capacity is 800mAH, so the charge rate must be set at 800mA (0.8A) or less.
- Charge the Li-Po battery at 1/2C (400mA) or less for the first 5 cycles.
- Check the polarity and then connect Li-Po battery to your charger.
- In use, do not over-discharge or exceed maximum discharge.
- The Li-Po battery must never exceed 160°F (70°C) for any reason.

PARTS IDENTIFICATION

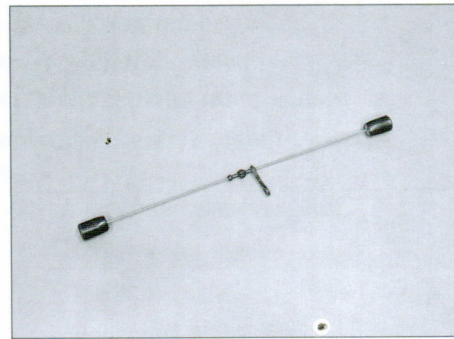
Before beginning final assembly, remove all of the parts from the box and use the photos below to verify that your kit contains all of the correct parts. If your kit is missing a part, please contact us immediately, using the Customer Service Information on page 3.



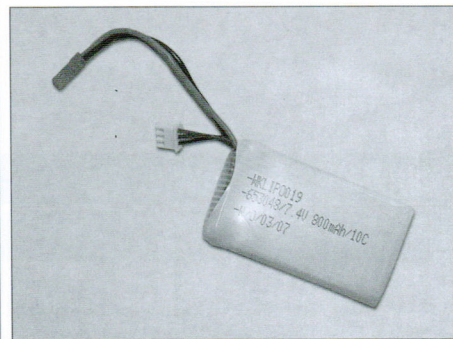
M.A.S.H. Army Rescue Chopper



Transmitter and Aerial



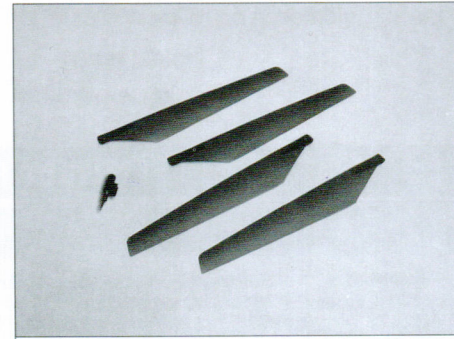
Flybar Assembly



7.4V 800mAh Li-Po Battery



AC Li-Po Charger



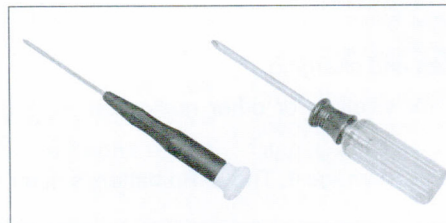
Spare Rotor Blades and Receiver Adjustment Tool

ITEMS NEEDED FOR FLIGHT AND MAINTENANCE

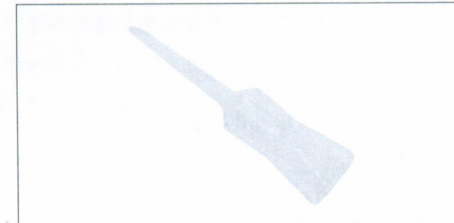
This section lists the items that are not included in your kit that you will need to fly and maintain your new M.A.S.H. Army Rescue Chopper. As you can see, there's not much to it!



8 Pack 'AA' Alkaline Batteries



0 and # 1 Phillips Head Screwdrivers



Lightweight Machine Oil

BECOMING FAMILIAR WITH YOUR M.A.S.H. ARMY RESCUE CHOPPER

TRANSMITTER SAFETY PRECAUTIONS AND FCC WARNINGS

- Always perform a range check before each first flight of the day, after a particularly hard landing or after your radio control system has been repaired.
- When the green battery status LED bars go out and only the red LED bars are illuminated, replace the transmitter batteries with a fresh set. If you're flying when this occurs, land immediately.
- If the radio control system begins to glitch or act unusual, land immediately.
- Before you fly, always check to make sure that your frequency is clear. Never turn on the transmitter if someone else on your frequency is flying at the time. No two radio control systems that are on the same frequency can operate nearby at the same time. If this occurs, both pilots will lose control of their models. **The frequency number is shown on the crystal mount on the back of the transmitter.**

Concerning Transmitter Crystal Replacement (U.S. Only):

The Federal Communications Commission (FCC) requires that changes made to the frequency of the transmitter (i.e., crystal) **MUST** be made only by an authorized service technician. Any transmitter frequency change made by a non-authorized person may result in a violation of FCC rules.

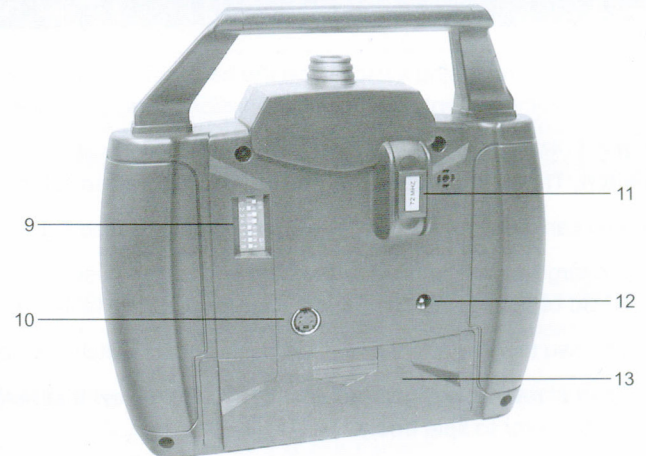
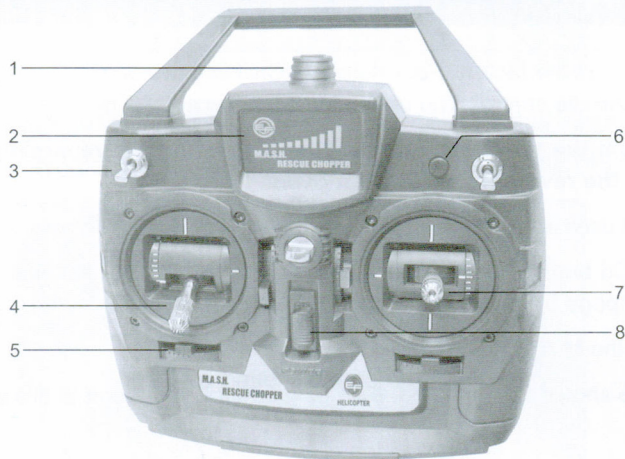
Per FCC rules, the transmitter crystal should only be changed by an authorized service technician.

Concerning Transmitter Repairs:

Any repairs that are deemed necessary should be done only by an authorized service technician. Any repairs made by a non-authorized person may result in a violation of FCC rules.

It is against FCC rules to modify this transmitter for any use other than that intended by the manufacturer.

TRANSMITTER FAMILIARISATION



- | | | |
|-------------------------------------|---------------------------------|---|
| 1 - Aerial Mount | 6 - Auxiliary Button - Not Used | 10 - DIN Connector for Simulator Adaptor |
| 2 - Battery Condition LEDs | 7 - Cyclic Control Stick | 11 - Crystal Mount |
| 3 - Auxiliary Switch (2) - Not Used | 8 - On/Off Switch | 12 - Charge Jack (for Optional Ni-Cd Batteries) |
| 4 - Throttle/Yaw Control Stick | 9 - Servo Reversing Switches | |
| 5 - Trim Tab (4) | | |

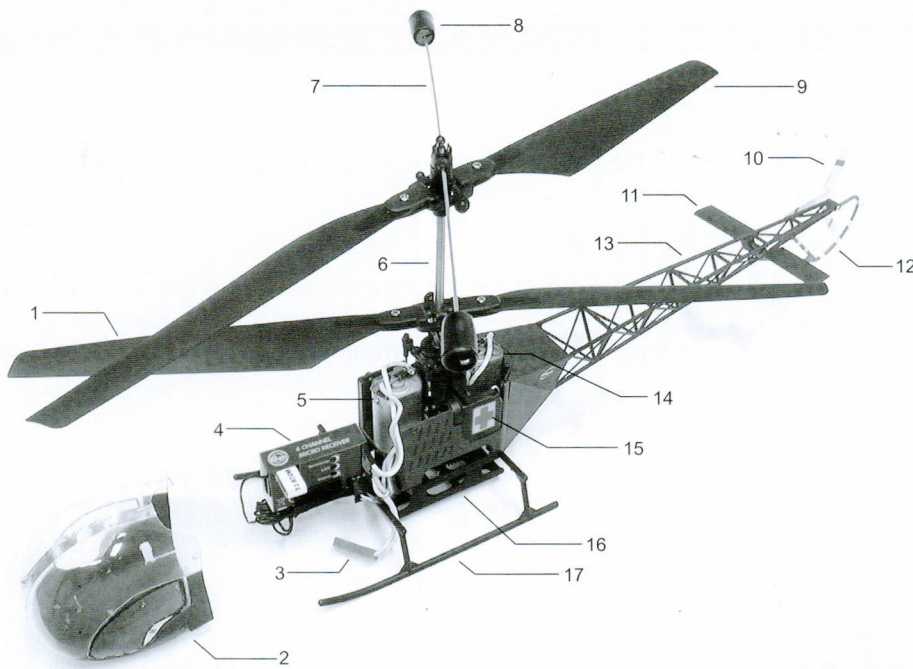
TRANSMITTER UPGRADE TIP

Upgrading your transmitter to use rechargeable Ni-Cd batteries is easy. All you need to do is purchase 8 'AA' rechargeable Ni-Cd batteries and a suitable AC overnight charger. This will allow you to recharge the batteries without removing the batteries from the transmitter and it will save you money in the long run, since you won't need to purchase Alkaline batteries when they run low. The transmitter even features a charging jack so that you don't need to remove the batteries to recharge them.

NEVER ATTEMPT TO CHARGE AND/OR RECHARGE ALKALINE BATTERIES!



M.A.S.H. ARMY RESCUE CHOPPER FAMILIARISATION



- 1 - Lower Rotor Blades
- 2 - Canopy
- 3 - Li-Po Battery Plug
- 4 - Receiver, Gyro and ESC Combo
- 5 - Forward Motor
- 6 - Main Shaft Assembly
- 7 - Flybar
- 8 - Flybar Stabiliser Weights
- 9 - Upper Rotor Blades
- 10 - Tail Rotor
- 11 - Horizontal Stabilisers
- 12 - Tail Skid
- 13 - Tail Boom Truss Assembly
- 14 - Rear Motor
- 15 - Servo (2)
- 16 - Battery Mount
- 17 - Landing Skid

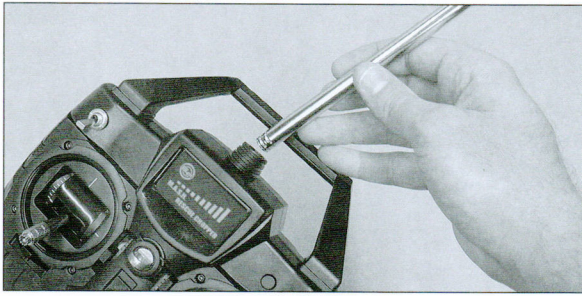
TIPS FROM THE PROS

- The servo reversing switches on the back of the transmitter are preset from the factory. For reference, Ch 1 is yaw control, Ch 2 is right/left cyclic control, Ch 3 is forward/back cyclic control and Ch 4 is throttle control. The remaining switches are not used.

If the Li-Po battery is plugged in, unplug the motor connectors from the receiver before adjusting the throttle reversing switch. This will prevent the motors from going to full throttle when the reversing switch is moved.

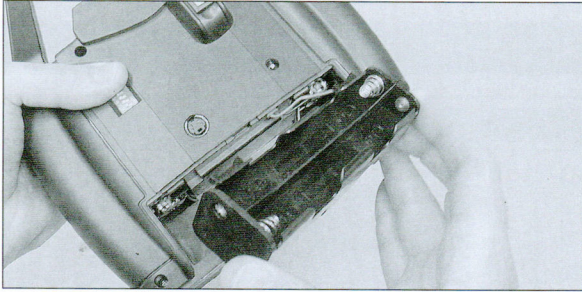
- You can use your transmitter with a computer-based flight simulator that uses a transmitter adapter with the same DIN-style plug.
- A charge socket is provided should you wish to use rechargeable Ni-Cd batteries in the transmitter instead of Alkaline batteries. Ni-Cd batteries and compatible chargers are available separately. See page 5 for more information.
- The two toggle switches and the push-button switch are not used with the M.A.S.H. Army Rescue Chopper.
- The tail rotor is designed to spin freely. The screw that holds it in place should be tightened, then backed off just enough to allow the tail rotor to spin freely.
- The rotor blades are designed to move during a mishap. This greatly reduces the chance of breaking them. Because of this, though, it's important that you periodically check that the rotor blade mounting screws are tight.
- The rotor blades are designed to spin in opposite directions. The upper rotor blades should spin anti-clockwise and the lower rotor blades should spin clockwise. When replacing the rotor blades, make sure that the leading edges are facing the correct direction.
- For smooth operation it's important that the rotor blades are straight. If they aren't, the helicopter will wobble severely when you apply throttle.
- During initial power-up and transition to hover, you will need to hold right cyclic to compensate for the torque of the rotor blades.
- Do not cut the receiver aerial shorter. If flying indoors, leave the aerial coiled up under the receiver. If flying outdoors, uncoil the receiver aerial, wrap it several times around one side of the landing gear legs (making sure that the aerial does not cross over itself), then tie the remaining length to the tail skid for added range. See page 12 for more information.
- Always make sure you turn on the transmitter first, before plugging in the Li-Po battery. After you have finished flying, unplug the Li-Po battery first, then turn off the transmitter. This will prevent unexpected radio signals from interfering with the radio control system.
- The helicopter does not have an on/off switch. When you plug in the Li-Po battery, the receiver and servos will be powered up and the motors will be armed.

INSTALLING THE TRANSMITTER AERIAL AND 'AA' BATTERIES

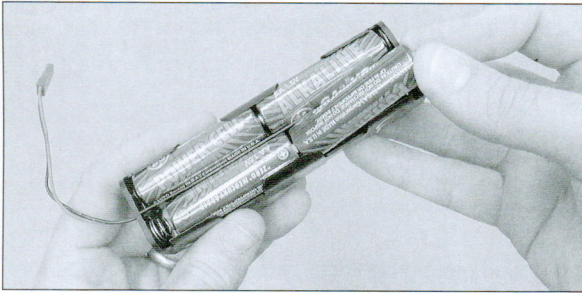


- ☐ Push the aerial down fully into the moulded hole in the top of the transmitter.
- ☐ Thread the aerial (clockwise) in place and tighten it **gently** until it stops.

IMPORTANT Do not force the aerial in place or tighten it too much. Doing so could cause damage to the aerial and/or transmitter.

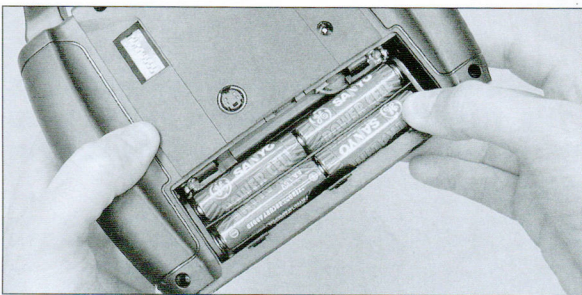


- ☐ Remove the battery cover from the back of the transmitter by pulling down on it with one hand while holding the transmitter with your other hand.
- ☐ Carefully remove the battery holder from the transmitter and unplug the red connector.



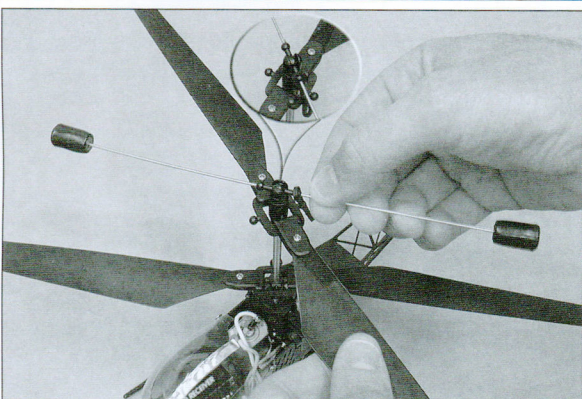
- ☐ Install 8 fresh 'AA' Alkaline batteries into the battery holder, being careful to make sure that the polarity is correct for each battery.

IMPORTANT If you choose to use rechargeable 'AA' Ni-Cd cells, they can be charged using a standard AC transmitter charger plugged into the back of the transmitter. **Never attempt to charge or recharge Alkaline batteries.**

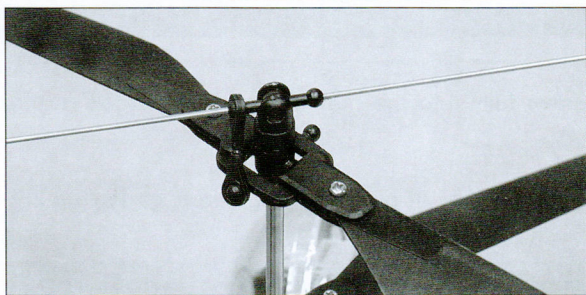


- ☐ Plug the red connector on the battery holder into the transmitter (the connector will fit only one way), then reinstall the battery holder.
- ☐ Reinstall the battery cover, making sure it's firmly seated into place.

INSTALLING THE FLYBAR ASSEMBLY



- ☐ Snap the two pins in the sides of the flybar pivot hub into the top of the flybar mounting bracket.

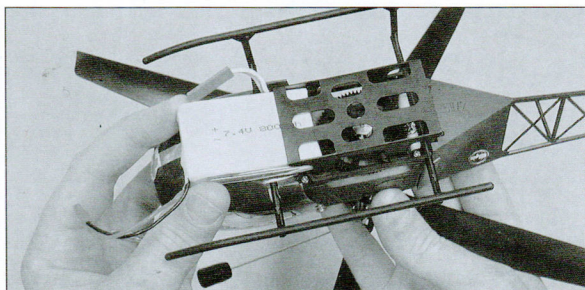


- ❑ Snap the flybar ball-end onto the ball on one side of the rotor pivot assembly.

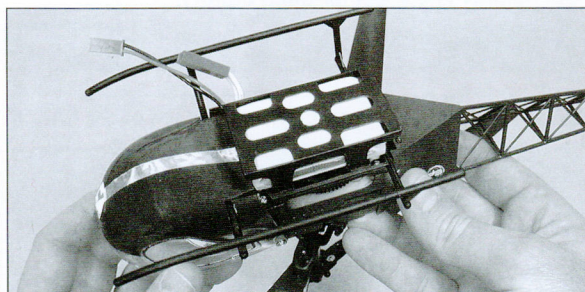
IMPORTANT There is only one ball-link assembly installed on one side. There is only supposed to be one by design.

INSTALLING THE LI-PO BATTERY

WARNING Do not charge the Li-Po battery before installing it. Charging will be done later.



- ❑ Slide the Li-Po battery into the battery mount on the bottom of the helicopter. Notice that the red plug should be towards the front of the helicopter.

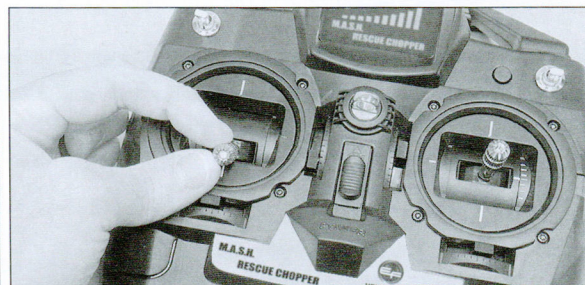


- ❑ Push the Li-Po battery completely into the battery mount, ensuring that it's seated firmly into position.

WARNING Do not plug the Li-Po battery in yet.

BEFORE PLUGGING THE LI-PO BATTERY IN, YOU'LL NEED TO MAKE SURE THAT THE TRANSMITTER IS TURNED ON AND THAT THE THROTTLE CONTROL STICK AND THE THROTTLE TRIM LEVER ARE PULLED ALL THE WAY DOWN. IF THEY AREN'T, THE MOTOR COULD TURN ON AND THE ROTOR BLADES WILL SPIN AT A HIGH RATE OF SPEED WHEN YOU PLUG THE LI-PO BATTERY IN.

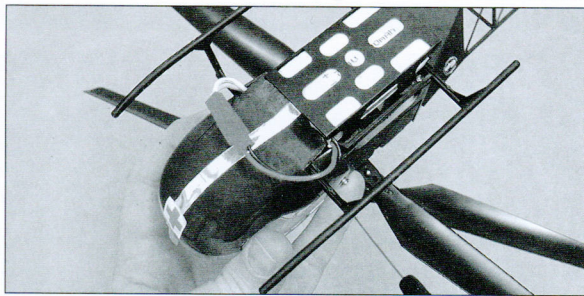
WARNING Before turning on the transmitter, always check to make sure that nobody else is flying on the same frequency as you. This is especially important if you're flying at a designated R/C flying site.



- ❑ Turn on the transmitter. The LEDs should light up in the green "safe" area. If they don't, replace the batteries with a fresh set.
- ❑ Make sure that the throttle control stick and the throttle trim lever are pulled all the way back. This will ensure that the motors won't turn on when you plug in the Li-Po battery.

PRO TIP Always make sure you turn on the transmitter first, before plugging in the Li-Po battery. After you're done flying, unplug the Li-Po battery first, then turn off the transmitter. This will prevent unexpected radio signals from interfering with the radio control system.

WARNING The helicopter does not have an on/off switch. When you plug in the Li-Po battery, the receiver and servos will be powered up and the motors will be armed. **Do not move the throttle control stick forward.**

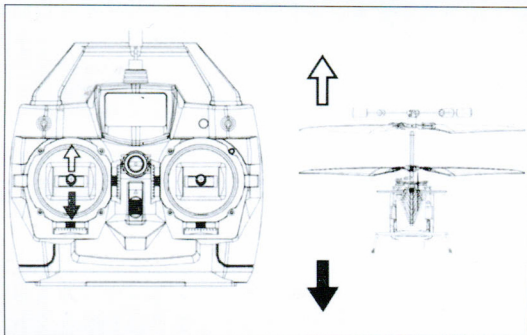


- ❑ Plug the red connector on the Li-Po battery into the matching red connector coming out of the receiver.

IMPORTANT As a safety feature, the connectors can only be plugged in one way.

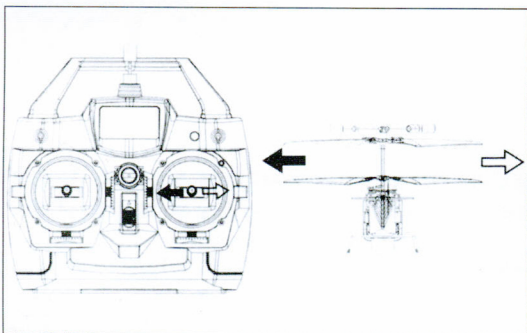
SETTING UP YOUR M.A.S.H. ARMY RESCUE CHOPPER

BASIC OPERATION

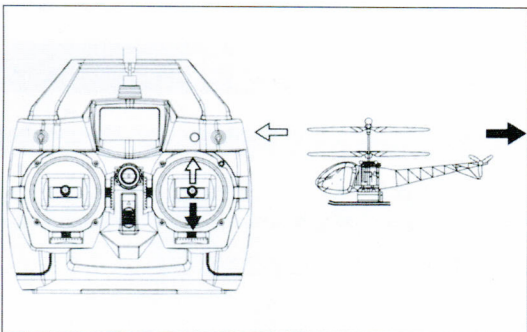


Climbing and Hovering: Climbing is controlled by pushing the throttle control stick on the transmitter (the left-hand stick) forward/up to turn on the motors. The throttle is proportional, so motor speed is directly related to control stick position. To lift off and hover, slowly move the throttle control stick forward until the helicopter lifts off into a stable hover. To continue climbing from hover, move the throttle control stick further forward to increase the speed of the motors.

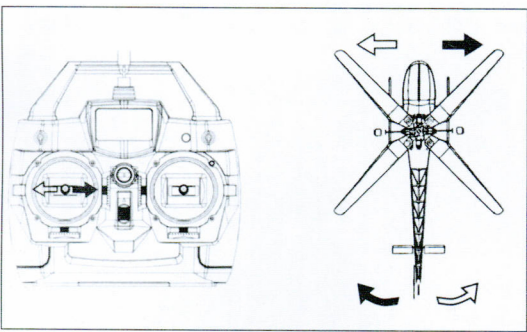
Descent: Descent is also controlled by the throttle control stick. When you pull the throttle control stick back, the motors slow down and the helicopter will descend. Adjust the speed of the motors using the throttle control stick to control the helicopter's speed of descent.



Right and Left Turns: Right and left turns are made by moving the cyclic control stick (the right-hand stick) on the transmitter. When you move the stick to the right, the right side of the swashplate tilts down, causing the helicopter to bank right. When you move the control stick to the left, the left side of the swashplate tilts down, causing the helicopter to bank left.



Forward and Backward Pitch: Moving the cyclic control stick (the right-hand stick) forward or backward will cause the helicopter to pitch forward or backwards. This allows the forward speed, climb and descent angle and hover stability of the helicopter to be maintained. When you move the control stick forward, the front of the swashplate tilts down. When you move the control stick backward, the back of the swashplate tilts down.



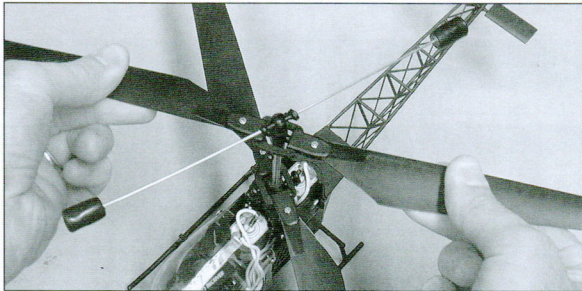
Yaw control: Yaw is controlled by moving the tail rotor control stick (left-hand control stick) right and left. When you move the control stick to the right, the nose of the helicopter moves to the right. When you move the control stick to the left, the nose of the helicopter moves to the left. Yaw control is used to stabilise the position of the helicopter's nose.

ROTOR BLADE, FLYBAR AND SWASHPLATE SETUP

- ❑ Unplug the Li-Po battery and turn off the transmitter.

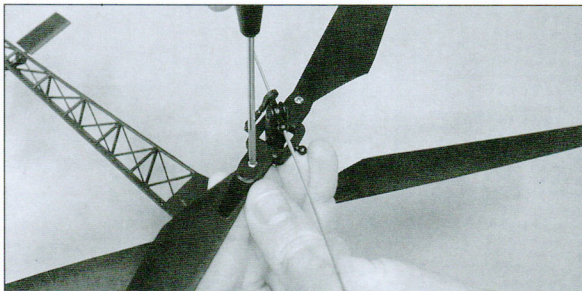
IMPORTANT For your safety, when adjusting the rotor blades, we suggest unplugging the Li-Po battery and turning off the transmitter.

THE ROTOR BLADES ARE DESIGNED TO BE ABLE TO PIVOT UNDER PRESSURE TO REDUCE STRESS AND THE CHANCE OF BREAKING THEM OR THE SWASHPLATE COMPONENTS DURING A CRASH OR IF THE HELICOPTER SIMPLY TIPS OVER DURING HOVER. BECAUSE OF THIS, IT'S IMPORTANT YOU MAKE SURE BEFORE EVERY FLIGHT THAT THE ROTOR BLADES ARE STRAIGHT AND THAT THE ROTOR BLADE MOUNTING SCREWS ARE TIGHT.



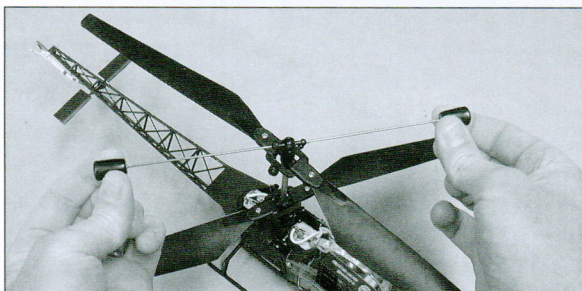
- ❑ Gently grab one rotor blade in each hand, then pull out on the rotor blades to make both of them straight to one another. Do this on both the upper and the lower set of rotor blades.

IMPORTANT If the rotor blades are not straight, the helicopter will vibrate and wobble excessively when throttle is applied.



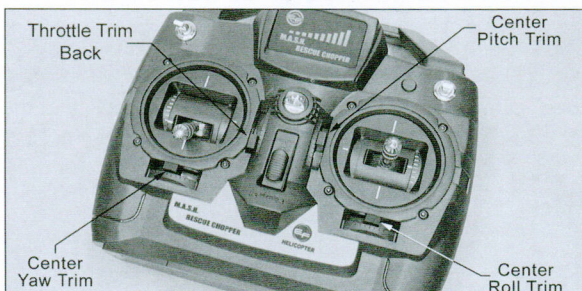
- ❑ Using a Phillips head screwdriver, firmly tighten the four screws that hold the rotor blades to the rotor blade mounting brackets.

IMPORTANT Even after tightening the bolts, the rotor blades will still be able to pivot under pressure. This is normal. You just don't want the rotor blades to be loose.



- ❑ Gently grab each flybar stabiliser weight and pull them out firmly. This will ensure that the stabiliser weights are out on the very ends of the flybar.

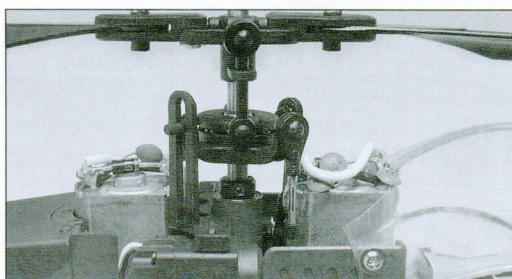
PRO TIP Pulling the stabiliser weights out will not pull them off the flybar.



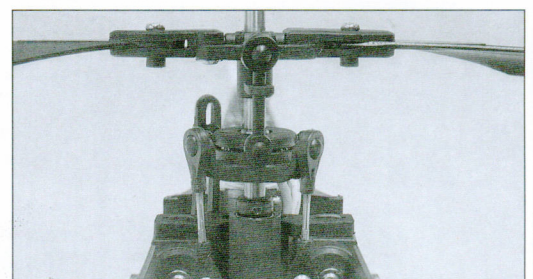
- ❑ Carefully adjust the three control trim tabs on the transmitter so that they are centred.

WARNING The throttle trim tab should be pulled back/down completely, so that the motor will not turn on.

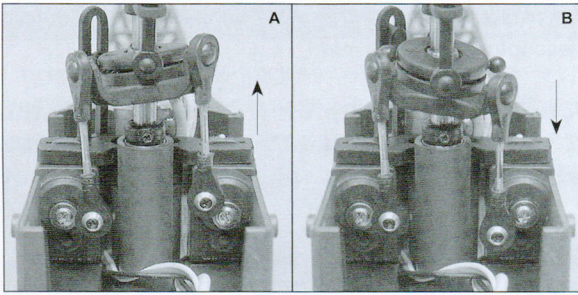
- ❑ Turn on the transmitter, make sure that the throttle control stick and trim lever are pulled all the way back, then plug in the Li-Po battery.



- ❑ Look carefully at the swashplate from both the front and from the side. The swashplate should be level in both axes. If the swashplate isn't level, move the roll and pitch trim tabs on the transmitter until the swashplate is level when viewed from both the front and the side.

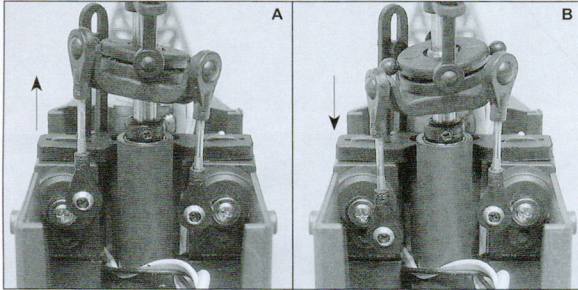


CONTROL OPERATION VERIFICATION



- ☐ Looking from the front of the helicopter, push the cyclic control stick to the right. The right side servo linkage should move up (A).
- ☐ Looking from the front of the helicopter, push the cyclic control stick to the left. The right side servo linkage should move down (B).

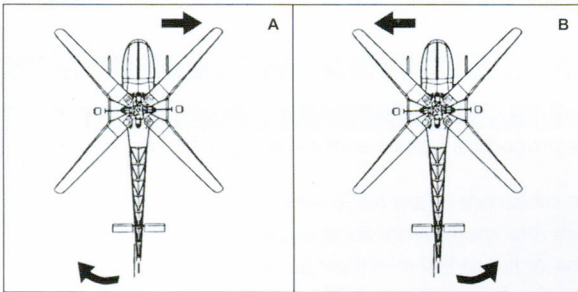
IMPORTANT If the servo linkage is not moving in the correct direction, flick the Ch 2 servo reversing switch on the back of the transmitter.



- ☐ Looking from the front of the helicopter, pull the cyclic control stick back. The left side servo linkage should move up (A).
- ☐ Looking from the front of the helicopter, push the cyclic control stick forward. The left side servo linkage should move down (B).

IMPORTANT If the servo linkage is not moving in the correct direction, flick the Ch 3 servo reversing switch on the back of the transmitter.

- ☐ With the helicopter sitting on the ground, push the throttle control stick forward only enough to turn on the motors. The rotor blades should begin to spin at a low rate of speed.



- ☐ Looking from the back of the helicopter, push the yaw control stick to the right. The nose of the helicopter should move right (A).
- ☐ Looking from the back of the helicopter, push the yaw control stick to the left. The nose of the helicopter should move left (B).

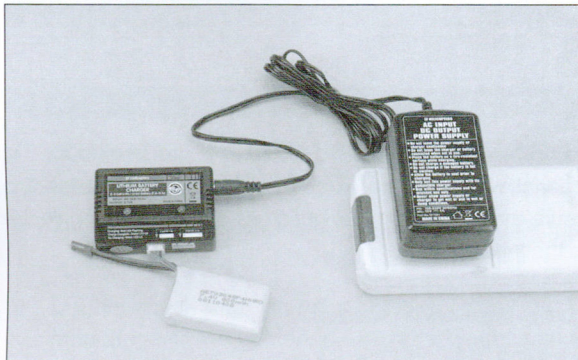
IMPORTANT If the helicopter's nose doesn't move in the correct direction, flick the Ch 1 servo reversing switch on the back of the transmitter.

- ☐ After you're satisfied that the controls are lined up correctly and operating in the correct direction, unplug the Li-Po battery and turn off the transmitter.

GETTING READY TO FLY YOUR M.A.S.H. ARMY RESCUE CHOPPER

CHARGING THE LI-PO BATTERY

BEFORE CHARGING THE LI-PO BATTERY, PLEASE READ AND UNDERSTAND THE LITHIUM POLYMER BATTERY WARNINGS ON PAGE 3.



- ☐ Plug the Li-Po battery charger into the AC Input DC Output Power Supply.
- ☐ Now plug the Power Supply into an AC wall outlet. The charger LED will turn GREEN.
- ☐ Plug the white battery connector on the Li-Po battery into the battery connector on the charger. The charger LED will turn RED, indicating the Li-Po battery is charging.

IMPORTANT As a safety feature, the connectors can only be plugged in one way.

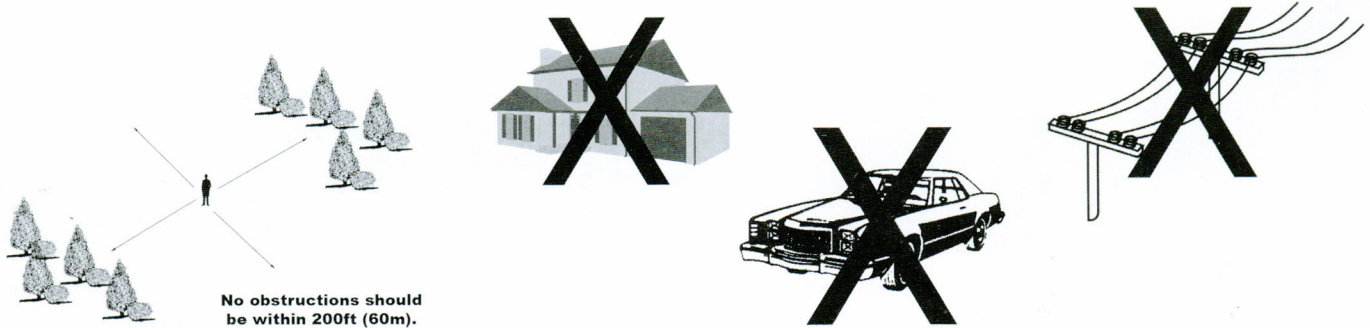
- ☐ Allow the Li-Po battery to charge. When the charging process is complete, the charger LED will turn GREEN. Once the charging process is complete, remove the Li-Po battery from the charger and reinstall it into the helicopter.

CHOOSING YOUR FLYING FIELD

The flying field you choose should be a large, open field with grass and a hard surface to take off from. There should not be any vehicles, buildings, power lines, trees, large rocks or anything else that your helicopter can crash into.

Each transmitter comes with a sticker on the crystal mount showing which frequency that the radio control system operates on. It's important to check the frequency if others are in the area before turning on the radio control system. No two models can operate near each other if they are on the same frequency. If you turn on the transmitter and someone else is flying on the same frequency, their model will lose control and crash.

If you go to fly at a dedicated R/C flying site, make sure you become familiar with the frequency control system that's in place.



RANGE TEST THE RADIO CONTROL SYSTEM

After getting out to your flying field, but before you fly for the first time, you must range test the radio control system. This will ensure that the transmitter is "talking" correctly to the helicopter. You should follow this procedure before every first flight of the day and after you have a hard landing, crash, or after a repair.

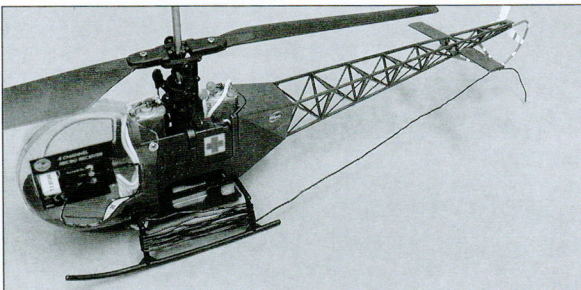
- ☐ Turn on the transmitter, then plug in the Li-Po battery.
- ☐ Set the helicopter on the ground and double-check that the transmitter's aerial is fully collapsed. Move the right-hand control stick on the transmitter several times to check the controls. They should operate smoothly.
- ☐ Walk approximately 75 feet (25m) from the helicopter and move the right-hand control stick on the transmitter once more. Check to make sure that the controls are operating smoothly at this distance.

WARNING If the helicopter does not pass the range check, don't fly! Please refer to the troubleshooting guide on page 15.

CHOOSING A DAY TO FLY

The M.A.S.H. Army Rescue Chopper is designed to be able to fly both indoors and outside. If flying outside, we strongly suggest flying when there is little to no wind. Winds above 5 - 10 miles per hour will make the helicopter difficult to control.

If flying indoors, keep the receiver aerial coiled up underneath the receiver. If you're going to fly outdoors, though, the aerial should be extended and tied to the tail skid. This will ensure adequate reception range between the transmitter and receiver.



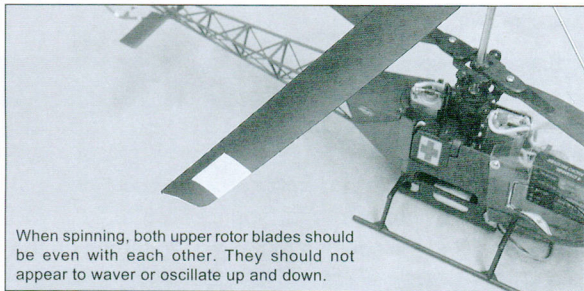
- ☐ Remove the body by first removing the body retaining screw located on each side of the body.
- ☐ Uncoil the receiver aerial, wrap it several times around one side of the landing gear legs (making sure that the aerial does not cross over itself), then tie the remaining length to the tail skid.
- ☐ Reinstall the body, using the screws provided.

WARNING Do not cut the aerial shorter. Allow the excess to hang down below the tail skid. If you cut the aerial shorter the radio reception range of the radio control system will be greatly reduced.

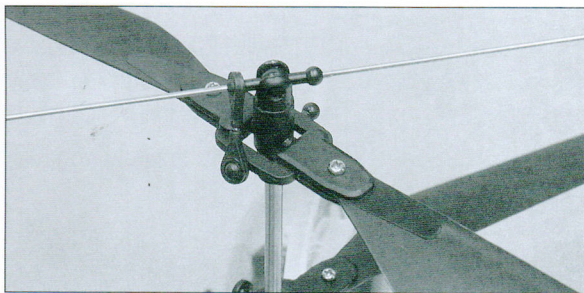
PRE-FLIGHT SETUP AND RECOMMENDATIONS

ADJUSTING UPPER ROTOR BLADE TRACKING

The upper rotor blade tracking on your helicopter is preset from the factory, but you should double-check it before flying for the first time and anytime after a crash. The lower rotor blade tracking is fixed and therefore is not adjustable.



- ☐ Place a 1/2" (12mm) square piece of masking tape over the leading edge of one upper rotor blade, near the tip of the rotor blade.
- ☐ Firmly hold the helicopter at eye level, making sure that the rotor blades are free of any obstructions. Smoothly open the throttle until the rotor blades begin to spin at a high rate of speed. You will notice that the flybar will be level once the correct rotor speed is reached. Watch the rotational plane of the upper rotor blades. The rotational plane of both blades should be the same (i.e., level). If they are not, adjustments need to be made.
- ☐ To adjust the rotational plane, disconnect the ball-link from the rotor head. If the blade with the masking tape was higher when rotating, turn the ball-link 1/2 a turn anticlockwise to lengthen the linkage assembly. If the blade with the masking tape was lower when rotating, turn the ball-link 1/2 a turn clockwise to shorten the linkage assembly.
- ☐ Reconnect the ball-link and test the rotational plane of the rotor blades again. Repeat the procedure until satisfied with the alignment.



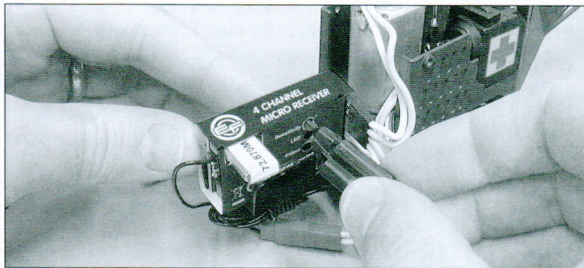
ADJUSTING SERVO TRAVEL AND GYRO SENSITIVITY

Servo Travel:

Turning the screw anticlockwise will make the servo arms move less with the same amount of control stick input. Turning the screw clockwise will make the servo arms move more with the same amount of control stick input. By default, servo travel is set to maximum. Decreasing the amount of servo travel will result in smoother control inputs, but will also result in reduced control response.

Gyro Sensitivity:

Turning the screw clockwise will increase the gyro sensitivity and turning the screw counterclockwise will decrease the gyro sensitivity. If when you increase power, the tail of the helicopter moves back and forth or moves quickly in one direction, increase the sensitivity of the gyro by turning the screw clockwise 1/8th of a turn. Continue to increase the sensitivity until you're satisfied with the result. It's not suggested that the sensitivity be set below 50% or the helicopter will be more difficult to control.



- ☐ Servo travel and gyro sensitivity can both be adjusted using the adjustment tool included with your M.A.S.H. Army Rescue Chopper. By default, servo travel is set to maximum and gyro sensitivity is set to 50%. **We suggest that you leave these settings exactly as they are.**

PRE-FLIGHT CHECKS

- Double-check that the Li-Po battery is fully charged and that the transmitter batteries are fresh. When the transmitter is turned on the green LEDs should light up.
- The Li-Po battery should be charged and/or "topped up" shortly before flight. The battery will lose some of its charge over time, so don't charge the Li-Po battery the day before, then expect it to produce full power when you're ready to fly.
- Double-check that the rotor blades are straight and that the rotor blade mounting screws are tight. Even with the rotor blade mounting screws tightened, the rotor blades can still pivot under pressure. This is normal.
- Double-check that the flybar stabiliser weights are pulled out to the ends of the flybar.
- Double-check that the trim levers are adjusted so that the swashplate is level and that all of the fasteners are tight.