

## • Launching the MAKO Jet

1. Make sure that the aircraft battery is fully charged and the hatch cover is securely fastened. [PIC 6](#)
2. Be certain the throttle [1](#) is in the **OFF** position before turning on the transmitter.
3. Turn on the transmitter and check the dual-mode toggle switch. [6](#)

**REMINER:** When first learning to fly, you should select the **NOVICE** position, with the switch pointing to the back of the transmitter. The **EXPERT** setting, with the switch pointed to the front, should only be used by experienced RC pilots.

4. Grasp the bottom of the fuselage between the lower ducted fan intakes and the leading edge of the lower wing while ensuring that no part of your body is near the ducted fan intakes and propeller blades. Be sure the plane feels balanced in a firm grasp. [PIC 8](#)

5. Be sure the throttle position is set to **OFF**. [PIC 3](#) but continue to maintain finger contact with the throttle slider during launch.

6. Hold the plane above your head. [PIC 8](#) Aim the airplane directly into the wind with wings level, while making sure that all parts of your body are clear of the airplane during launch and release. [PIC 9](#)

7. Advance to full throttle and lightly toss aircraft into headwind.

8. Continue to steer directly into the wind, giving small up elevator (back on the stick) inputs to the transmitter until you have reached an altitude of approximately 100 feet.

9. At or above 100 feet, it is safe to steer in the desired direction and to make throttle adjustments to maintain altitude and speed. You may also make trim adjustments.

## • Flying the MAKO Jet

1. Once flying at safe altitude, it is important to quickly check and adjust trim settings to maintain level flight with the elevator stick. [8](#) in the neutral position and the throttle [1](#) set for normal cruise speed at slightly above the half-way mark on the throttle slider. It is easier to make trim adjustments while the plane is facing into the wind.

2. Do not let the plane get too far away from you. Remember, the safe range is 900 feet. The farther away the plane is from your ground position, the harder it is to determine its altitude.

3. Keep the plane upwind of your ground position to prevent it from being carried away by the wind. Should you begin to lose power unexpectedly, the plane will be much easier to recover if it is blown toward your position rather than away.

PIC 8



PIC 9



4. Flying in too much wind is the greatest cause of crashes, as well as accidentally flying out of transmitter range. Keep your attention focused on the plane at all times. Remain constantly aware of its range from your ground position. Again, avoid flying on windy days to help prevent mishaps.

5. Try to fly smoothly when adjusting all transmitter flight controls. Avoid jerky control inputs. Climbing too quickly with up elevator and insufficient power may cause the wings to stall and force the airplane into a nosedive. Give small inputs to the elevons to maintain controlled flight, particularly when correcting problems with the airplane's pitch. Overcorrections may cause pilot confusion, loss of plane orientation, and may possibly lead to loss of control or crashes.

## • Making Sharp Turns and Throttle Input

Steer or roll the airplane in the desired direction (left or right on elevator stick) while pulling back on the stick to give the airplane more up elevator. This will turn the airplane more rapidly and allow for sharper turns to be made. The airplane is also more responsive in sharper turns if you give it additional throttle. [PIC 10](#) [PIC 11](#) Remember, when gliding without power, your control inputs will have less effect on aircraft steering. Practice maintaining balance between throttle settings and stick movements during various steering maneuvers.

## • Throttle, Altitude and Stall Recovery

1. The throttle control is proportional, which allows you to finely adjust power settings to the desired level.

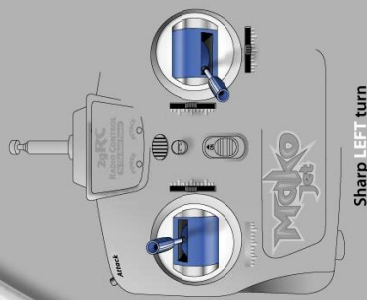
2. Apply more power to climb.

3. Reduce power to descend.

4. Always give yourself and your **MAKO Jet** plenty of time and distance from the ground to recover from a possible stall by maintaining enough altitude for a safe recovery. To properly recover from a stall, it is necessary that you build enough airspeed in a nose-down, dive attitude before applying small increments of up elevator to regain level flight. Giving too much up elevator input before gathering enough speed can induce another stall and shorten the time and distance for safe recovery, possibly resulting in a crash.

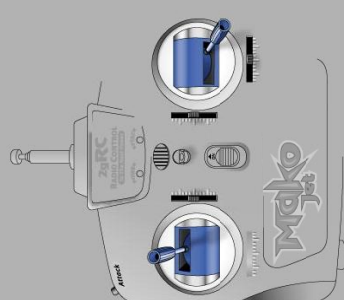
5. As you gain more flight experience, it is good to practice recovering from stalls only at altitudes above 200 feet so that you will become more familiar with the amount of time and distance required to properly recover from possible stall emergencies occurring at lower altitudes. Get to know the limits of your aircraft, as well as the limits of your flying skills.

PIC 10



Sharp LEFT turn

PIC 11



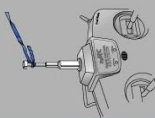
Sharp RIGHT turn

## Landing Your MAKO Jet

After approximately 8-10 minutes of flying, you may begin to notice that your **MAKO Jet** is not climbing well when full throttle is applied. This is the **LOW VOLTAGE CUTOFF FEATURE** – the circuit board automatically reduces power setting to 30% to remind you to land while you still have enough battery power to maneuver.

1. Aim the **MAKO Jet** directly into the wind as you steer it toward your desired landing zone. **PIC 12**
2. Reduce the throttle gradually to 30% and descend to about 10 feet above the ground with the nose still aimed straight into the wind. **PIC 13**
3. Reduce throttle to 15% until the airplane descends on a gradual glide slope angled slightly toward the ground while keeping the wings level with the horizon. **PIC 14**
4. Just before the airplane makes contact with the ground, shut **OFF** the throttle **PIC 3** and allow your plane to settle smoothly to a soft landing.
5. As you gain more experience with landing, you may want to try “flaring” your **MAKO Jet** by giving the stick a little up elevator input just before contact with the ground. Flaring will rapidly slow the craft and help soften landings. **PIC 15**

PIC 12



**NOTE:** Turning the motor **OFF** before landings will prevent debris from being sucked into the intakes and help keep the blades free of damage. Carefully examine the intakes and propeller blades after every landing to ensure that they are free of debris and that no damage such as chips or cracks in the blades has occurred.

### WARNING

**NEVER** attempt to turn the motor on if your post- or pre-flight inspections detect missing pieces, chips or cracks in the ducted fan blades, as doing so may expose you to bodily injury. The ducted fan blades are carefully balanced for smooth operation and if you detect unusual vibrations coming from the aircraft, land it immediately and perform an inspection, paying particular attention to the ducted fan propeller blades. Always stay clear of the blades. **DO NOT** attempt to catch the **MAKO Jet** in flight, as this may lead to possible injury.

**REMEMBER:** Safety should always remain your first consideration and primary focus at all times.

PIC 13



PIC 14



10 feet

## Aerobatic Maneuvers and the Dual-Rate Settings

Your **MAKO Jet** aircraft is fully capable of performing spectacular aerobatic stunts without requiring physical modifications or adjustments to the control linkages.

All linkages are pre-set at the factory and should not be altered. The dual-mode control switch **6** located on the back of the transmitter can be set on **NOVICE** or **EXPERT** during flight to increase or decrease the amount of deflection or “throw” of the control surfaces, commonly known as **elevons**. **PIC 15**

As discussed in the “Launch” section, we recommend that the **EXPERT** control rate setting be used **only** by experienced pilots because the speed of roll and pitch movements are significantly accelerated, making it much easier to crash the airplane. You will have less time to determine the attitude of the aircraft, as well as less time to recover from emergencies when using the **EXPERT** rate setting.

**NOTE:** As mentioned, it is best to seek the guidance of an experienced RC pilot during your first few flights, and this is even more important when learning to perform aerobatic stunts with your **MAKO Jet**.

## Aerobatic Tips

1. Climb to approximately 200 feet altitude before attempting aerobatic maneuvers. **PIC 15**
2. Before attempting a loop, apply full power or in a steep climb engage the “**Afterburner Attack Button**” **2** to ensure that you have enough speed to complete the loop.
3. Before attempting a roll, position the nose of the aircraft slightly upwards to overcome the loss of altitude that will normally occur during a roll maneuver. **PIC 16**
4. Be sure you apply power both into and out of turns, to keep airspeed up and air flowing over the wings to maintain control.
5. If you decide to try inverted flight (upside down), be sure the power is near or at full throttle, and apply down elevator to achieve level flight.
6. Be sure you have the dual-mode switch set to **EXPERT** mode when attempting aerobatic maneuvers. This will allow you to over-control the airplane to achieve aerobatic flight. **PIC 17**
7. Before aerobatic flight, be sure you understand and know the color difference between the top and bottom of the jet; this is crucial to recovering stable flight.

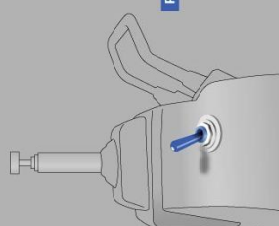
PIC 15



PIC 16



PIC 17



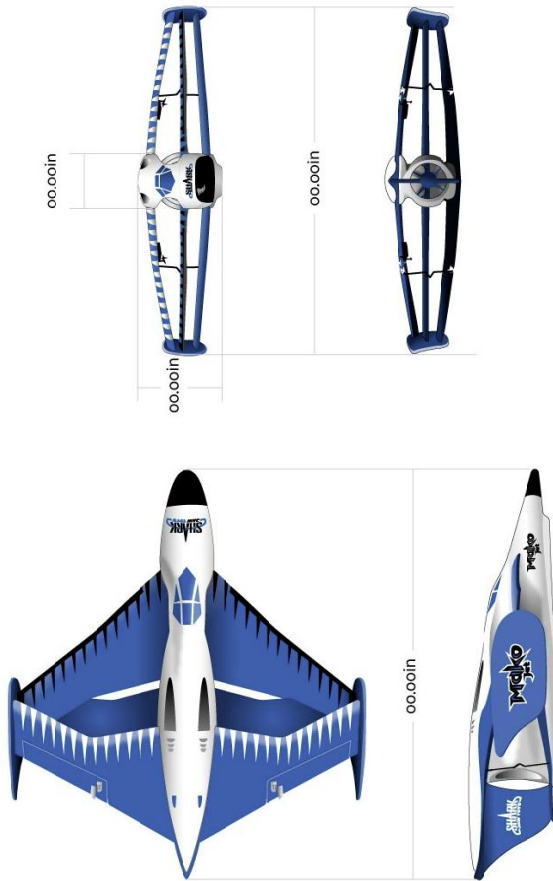
## Troubleshooting

| Problem                                                                      | Solution                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Your <b>MAKO Jet</b> is turning toward one direction or another.           | Check your trim tabs and be sure that the control surface is neutral to the wing.                                                                                                                                                                             |
| 2 Your <b>MAKO Jet</b> is "chattering" when you turn it on.                  | Ensure you are in a designated flying area and that nobody else nearby is on the same frequency. It is very easy to crash other craft if they are within range of you and on the same frequency.                                                              |
| 3 Your <b>MAKO Jet</b> is pitching up or down rapidly.                       | Be sure that the balance of the aircraft has not changed. All <b>MAKO Jets</b> are pre-balanced from the factory to ensure proper center of gravity.                                                                                                          |
| 4 Your <b>MAKO Jet</b> is not flying for as long as it once was.             | Your <b>MAKO Jet</b> is supplied with a lithium polymer battery that can develop a "memory." Be sure the battery is close to fully discharged before attempting to recharge it. This is called "cycling the battery" and is done to help extend battery life. |
| 5 Your <b>MAKO Jet</b> is getting interference toward the end of the flight. | Make sure your transmitter batteries are charged at all times. Dead batteries can cause you to crash your airplane or possibly hurt somebody who may be nearby. Change the batteries after every five (5) flights.                                            |
| 6 Your <b>MAKO Jet</b> motor will not turn.                                  | Visually check to ensure that all wires are connected to the correct spots. If you see a loose wire, contact <b>Shark Jaw Toys</b> for further details.                                                                                                       |
| 7 The servo is not working.                                                  | Contact <b>Shark Jaw Toys</b> for further details.                                                                                                                                                                                                            |

## Damage Repair

In the event your **MAKO Jet** suffers crash damage, "Foam-Safe" CA or epoxy can be used to make minor repairs.

Fractured or sheared foam parts will bond together nicely if the two parts to be joined are not badly distorted by excessive stretching or buckling of the foam near or on the damaged area.



## Warranty and Follow-Up Procedures

**WARRANTY:** **Shark Jaw Toys** guarantees this product to be free of defects in material and workmanship. If you detect defects during the very first preflight testing (see Range Test, p. 4), please call our Product Support staff toll-free at 888-492-8697.

If you are directed by our staff to return the airplane, you will be provided with an RA (Return Authorization) number and an address to ship it to. Please follow these steps:

1. Unplug the battery from the airplane.
2. Pack the complete **MAKO Jet** (all components in the original box) and place in a sturdy shipping carton for protection.
3. Include your complete name and address information inside the carton, as well as clearly writing it on the outer label/return address area. Include detailed information explaining the nature of the problem(s) encountered.
4. Please date your correspondence and be sure your complete name, address and daytime phone number appear on this enclosure. Please include your original dated sales receipt.

If, after inspecting the product, we determine it to be defective, we will repair or replace it at our discretion.

## **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **WARNING**

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.