# Table Of Contents

- Introduction ........................................................................................................... 2
- Mechanics Assembly .............................................................................................. 3-13
- Installing Motor And Main Drive Belt ................................................................. 14
- Installing Electronics ............................................................................................. 15
- Installing Canopy .................................................................................................. 16-17
- Installing Rotor Drive Belts ................................................................................... 18-20
- Replacement Parts Listing ..................................................................................... 21-24
- TG-Multi Setup Instructions .................................................................................. 25-47

For questions, comments or concerns you may contact us directly at:

CJ Youngblood Enterprises Inc.
903 S. Main Street
Bryan, Texas 77803

Phone: (979)779-2172
Email: tech@curtisyoungblood.com
Introduction

Congratulations on your purchase of the Stingray 3D Quad Copter from Next D (a division of CJ Youngblood Enterprises Inc.). The Stingray 3D Quad is an excellent choice for beginners new to the hobby, as well as the intermediate and expert 3D pilots. A 6 channel radio system, with Helicopter programming functions, is recommended as a minimum system to be used with the Stingray. You may wish to check with your local or online dealer for compatible components.

Warning

This radio controlled model is not a toy! It is a precision machine requiring proper assembly and setup to avoid accidents. It is the responsibility of the owner to operate this product in a safe manner, as it can inflict serious injury and or death. It is recommended that if you are in any doubt of your abilities, seek assistance from experienced radio control helicopter modelers and associations. As the manufacturer, we assume no liability for the use of this product.

Pre-assembly Information

Upon opening the kit, you will notice all the major components are packaged in numbered bags to correspond with specific steps in the manual, making assembly much easier. Various assemblies have been pre-assembled, only requiring the final assembly and installation of the various sub-assemblies. It is highly recommended all screws in pre-assembled components be checked for proper use of threadlock compound, as well as tightness. The screws and nuts required for each step are packaged in the same bag as the parts required for that step. Be careful not to lose any of the hardware when opening each bag.

Warranty

Your new equipment is warranted to the purchaser against manufacturer defects in material and workmanship for 30 days from the date of the original purchase. During this period, Next D will repair or replace, at our discretion, any component that is found to be factory defective, at no cost to the purchaser. This warranty is limited to the original purchaser and is not transferable. This warranty does not apply to any unit that has been repaired or altered by any unauthorized agencies. Under no circumstances will the buyer be entitled to consequential or incidental damages. This limited warranty gives you specific legal rights. You also have other rights which may vary from state to state.

There are several warning boxes and attention signs throughout the manual. These were put in place to help assist you in properly assembling your model helicopter. Failure to follow these steps may lead to parts failure and or damage to the model. We suggest you read very carefully through every step to get a clear understanding of the assembly procedure. Please pay close attention to these tips and warnings.

⚠️ Attention! ⚠️
Do Not Use Threadlock On Any Screws Going Into Plastic

⚠️ Attention! ⚠️
Use Blue Threadlock On All Screws Going Into Metal

⚠️ Attention! ⚠️
No Adhesives Are Used In This Part Of This Step

⚠️ Attention! ⚠️
Do Not Over Tighten Screws Going Into Plastic Parts

Next-D Copyright 2013 ©
Remove the hardware from the end plate assembly.

Set the front plate assembly to the side.

Remove the screws from the end plates on both leg boom assemblies. Pay close attention to the length of the hardware in each assembly.

Set the motor mount plate assembly to the side.

No adhesives are used in this part of this step.
**Attention!**

No Adhesives Are Used In This Part Of This Step

- Remove The Shown Hardware From The Center Supports On Both Ends
- Line The Hole In The Boom Up With The Cut In The Center Support
- Insert The Boom Fully Into The Center Support On Both Ends
- Remove Hardware
- Line Up The Boom Hole And The Clamp Cut
- Insert The Boom Fully Into The Center Support
- 2x8mm Cap Screw
- Long End: Observe The Center Frame Boom Assembly Direction
- Short End: Front Of The Model, Rear Of The Model

Front Boom Leg Assembly

Rear Boom Leg Assembly
**Step One:** Place the model on a flat level surface. Thread a 3x4mm set screw in the rear clamp hole. Do **NOT** tighten the screw at this time. Using a bubble level to check both directions as shown, level the radio tray with the level surface.

**Step Two:** Securely tighten the clamp screw in the center support of the front boom leg assembly.

**Step Three:** Using blue threadlock, install the 2x8mm screw as shown. Tighten the screw completely. This will dent the boom, securing it in place.

**Step Four:** Securely tighten the clamp screw in the center support of the rear boom leg assembly.

**Step Five:** Using blue threadlock, install the 2x8mm screw as shown. Tighten the screw completely. This will dent the boom, securing it in place.

**Attention!**

Use blue threadlock on all screws going into metal.
Canopy Bottom (x1)

Landing Gear (x2)

2x8mm Cap Screw (x4)

---

Attention!

Do Not Use Threadlock On The Landing Gear Screws

---

Front Of The Model

Landing Gear

Canopy Bottom (Remove Clear Film)

2x8mm Cap Screw

---

Be Sure To Remove The Protective Film From The Canopy Bottom BEFORE Adding Decals

---

The Landing Gear Sweep Towards The Rear

---

Tighten All Screws Securely At This Time

---

Next-D Copyright 2013 ©
With the two flat spots on the center drive shaft facing the **Rear Of The Model**, slide the center drive shaft through both of the center bearing blocks.

---

**Attention!**
No adhesives are used in this part of this step.
Reinstall the end plates in their correct locations as shown. Tighten all hardware securely.

Attention! Use blue threadlock on all screws going into metal.

2x6mm Cap Screw

Front Of The Model

2x8mm Cap Screw

Rear Of The Model
With the Servo Output Shaft pointing towards the Rotor Base, place the Servo Mount Tabs on top of the mounting hardware that has been factory installed in the mounts on one side. Next, slide the other servo mount onto the other side of the servo mount tabs using the same method. Push the servos all the way to the center support as shown. Square the servos level with the center support, and tighten all hardware securely.

Place the Servo Mount Tabs on top of the hardware in the Servo Mount

The Servo Output Shafts should point towards the Rotor Bases

Slide the other servo mount onto the opposite side of the servo

Square the top of the servo with the center brace

Attention! No adhesives are used in this part of this step

Tighten all hardware securely

Repeat this step for all four servos
Repeat This Process Four Times

Thread The Ball Links On Evenly On Either End

Pushrod 2x110mm

The Dot On The Link Indicates Direction. The Dot Goes Towards The

Ball Link

Completed Step View

Attention!
Do Not Use Threading On Any Screws Going Into Plastic

Remove The Servo Horn Portion Marked In Red

Steel Control Ball

2x8mm Phillips Head Screw

Servo Horn

Completed Step View
Install The Servo Horn Assembly Onto The Servo As Shown. Pop The Ball Links Onto The Control Balls In The Indicated Locations.

The Dot On The Link Indicates Direction. The Dot Goes Towards The

Repeat This Process Four Times

With The Servo In Its Neutral Position, The Servo Horn Should Be Lined Up 90 Degrees To The Pushrod As Shown. The Blades Should Be At Zero Degrees Pitch At This Servo Horn Location.
First: Install the Motor Onto the Motor Mount Plate

Second: Place the Drive Pulleys Inside the Drive Belt

Third: Install the Drive Pulleys Onto the Drive Shafts As Shown

- Tighten All Screws Securely At This Time
If You Purchased An Airframe Only Kit, There Will Be No Electronics Included In The Kit. Place Your Electronics In The Shown Locations Using The Provided Materials.

Secure Radio Gear With The Included Velcro Straps
Be Sure To Remove The Protective Film From The Canopy Top BEFORE Adding Decals.

Place The Front Canopy Mount Through The Hole In The Front Of The Canopy. Secure Using A Small Section Of Fuel Tubing.


To Open Canopy Tilt To The Rear.
Optional Canopy Mounting Method

Cut Two 2 Inch Sections Of Adhesive Back Velcro, And Stick Them To The Inside Of The Canopy Top On Either Side.

Cut One Velcro Mounting Strap In Half.

Stick The Velcro Strap Halves To The Adhesive Back Velcro Sections.

To Secure The Canopy, First Rotate It Down Into Its Flight Position.

Next Wrap The Two Velcro Straps Around The Bottom Of The Canopy To Secure For Flight.
**Stop!**

This Section is **ONLY** to show you how to mount the belts. Each one is twisted a certain direction, and they are **NOT** the same. On the next page, you will see the directions that each individual belt twists. Be sure the belt directions are correct before attempting to fly your model! If they are not correct, the model will crash!

---

**Step 1:**

Remove the drive pulley from the rotor base shaft.

**Step 2:**

Place the drive pulley inside the drive belt.

**Step 3:**

Twist the belt in its specified direction. Slide the drive pulley back onto the shaft. Be sure to engage the tensioner pulley. Reinstall the set screw and tighten it securely at this time.

---

Be sure that the teeth on the belts face the inside.
In this section we will show the direction that the belts should be twisted when installed correctly. Pay close attention to where the belts are located after this step is completed. It is very important that the belt are put on in the correct orientation. If they are installed incorrectly the model will crash!

Some parts have been hidden to show detail

Front end of the model

Outside of the drive pulley - Bottom of the center pulley - Top of the center pulley - Outside of the drive pulley

Rear end of the model

Outside of the drive pulley - Top of the center pulley - Bottom of the center pulley - Outside of the drive pulley
After the drive belts have been installed it will be necessary to check the rotation direction of each rotor. Start by turning any one of the rotors towards the inside of the model as shown. All of the other rotors should rotate towards the inside of the model as well. If any one of them does not, the belt for that rotor is not installed correctly. This must be corrected before flying the model!
Order Number: ND-YS5-AS4025
- Digital Servo (1)
- Servo Horn (1)
- Servo Screw (1)

Order Number: ND-YS5-AS4026
- Brushless ESC (1)

Order Number: ND-YS5-AS4027
- Brushless Motor (1)

Order Number: ND-YS5-AS4028
- Canopy Set - Clear (SS) (1)

Order Number: ND-YS5-AS4029
- Rotor Box Half 1 (1)
- Rotor Box Half 2 (1)

Order Number: ND-YS5-AS4030
- Canopy Set - Clear With Graphics (SS) (1)

Order Number: ND-YS5-AS4031
- Rotor Blade - Yellow (2)

Order Number: ND-YE-TGMULTI
- Flight Control System (1)
TG-Multi Update Instructions

Thank You For Your Purchase Of The Stingray. The First Thing You MUST Do Is Update The Program In Your TG-Multi. Follow These Instructions To Update Your Unit.

**Step 1:** Proceed To [http://curtisyoungblood.com/V2/content/stingray-500](http://curtisyoungblood.com/V2/content/stingray-500) And Locate The TG-Multi Update File. The Stingray Assembly Instructions Are Also Located On This Page.

**Step 2:**
- g7qc03d.zip
- Install With SAMI
- MediaInfo
- Take Ownership
- Extract files...
- Extract Here
- Extract to word...
- Scan with Microsoft Security Essentials...
- Edit with Notepad+
- Open with

Create A New Folder On Your Computer For The Update File. Download The Update File To This Folder.

**Step 3:**
- g7QC03d.hex
- setting parameters with LEDs.doc
- settings.xml
- ds30LoaderGui.exe

Several Files Will Download Into The Folder When Extracted. The File Names Will Change As Updates Are Made To The Program Over Time.

**Step 4:**
- Using A USB To Mini USB Cable (Not Provided) Plug The Mini USB End Into Your TG-Multi.
- Plug The USB End Into Your Computer

**Step 5:**
- Power On The TG-Multi. Be Sure That The Ground Wire Faces The Front Of The Unit As Shown.

**Step 6:**
- Double Click The Gui.exe File

**Step 7:**
- Port: Communications Port (COM1)
- Communications Port (COM1)
- USB Serial Port (COM4)

Click On The "Port" Drop Down Menu. Select The COM Port That Your Unit Is Communicating On.

Update Instructions Continued On reverse Side

[Next-D Copyright 2013]
TG-Multi Update Continued

Step 8:
Power Off The TG-Multi

Step 9:
Hover Your Mouse Over The “Write” Icon. Do NOT Click It At This Time.

Step 10:
Power On The TG-Multi

Step 11:
After Powering On The TG-Multi, Click The “Write” Icon Within Three Seconds

Step 12:
After Clicking “Write”, A Green Progress Bar Will Appear At The Top Of The Screen, Showing You Are Updating The Program. Do Not Unplug The Unit While The Program Is Loading. If The Green Progress Bar Does Not Appear, Go Back To Step 9 And Repeat The Process.

Step 13:
When Completed The Progress Bar Will Disappear. You Should See “Write Successfully Completed” On The Screen As Shown.

Step 14:
Remove The Mini USB Cable

Update Is Now Complete

TG-Multi Instruction Manual

You Are Now Ready To Proceed With The Online TG-Multi Setup Instructions

Trouble Shooting
If Your Computer Does Not Automatically Download The Driver For The USB Cable, You Will Need To Manually Load The Driver. In Your Computer Go To Control Panel/System/Hardware/Device Manager. With The USB Cable Plugged In, The COM Port Will Show Up In The Device Manager Tree. Find The Yellow Icon Next To The COM Port. Click This Icon And Follow The Instructions To Install The USB Cable Driver.

For questions, comments or concerns you may contact us directly at:
CJ Youngblood Enterprises Inc.
11253 E OSR, Hearne TX 77859
Phone: (979)382-4269 Email: tech@curtisyoungblood.com
## TG-Multi Quick Setup Chart

<table>
<thead>
<tr>
<th>Menu Type</th>
<th>What You Are Setting</th>
<th>How To Access</th>
<th>Status LED Response</th>
<th>How To Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Menu</td>
<td>Enter</td>
<td>Hold Down &quot;P&quot; And Power On TG-Multi, Let Go Of &quot;P&quot;</td>
<td>LED Flashes Red One Time, Let Go Of &quot;P&quot;</td>
<td></td>
</tr>
<tr>
<td>Page 32</td>
<td>Radio Type</td>
<td>Only Item In Initial Menu</td>
<td>Status LED Off</td>
<td>Push &quot;P&quot; To Switch Between LED/Radio Options</td>
</tr>
<tr>
<td>Exit</td>
<td></td>
<td>Push And Hold &quot;P&quot; Until The Status LED And Your Selected Radio Type Comes On Solid Green. Release &quot;P&quot;. The Status LED Will Turn On Solid Red. Power Off Unit.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Main Menu | Enter | Radio On, Hold "P" Until Red And Yellow On, Let Go Of "P" | | |
|-----------|-------|--------------------------------------------------------|-----------------------------|
| Page 34 | Control Neutrals | First Item In Main Menu | Solid Green | Mechanically Adjust Servo Horn Location And Pushrod Length To Set Servo Neutral, Toggle Rudder To Next Rotor |
| Page 35 | Control Limits | From Neutrals - Push "P" | Slow Flashing Green | Hold Aileron R/L To Set Limits, Toggle Rudder To Next Rotor |
| Pages 39-41 | Transmitter Pitch Curves | From Limits - Push "P" | Fast Flashing Green | Adjust Transmitter Curves To Activate Lights |
| Pages 42-44 | Transmitter Throttle Curves | From Pitch - Push "P" | Solid Red | Adjust Transmitter Curves To Activate Lights |
| Pages 44-45 | Set Gain Channel | From Throttle - Push "P" | Slow Flashing Red | Internal - Toggle Ail, Aux - Flip The Channel Switch Of Choice |
| Exit | Push "P" To Exit | | | |

| Tuning Menu | Enter | Radio On, Hold "P" Until Red And Yellow Flash, Let Go Of "P" | | |
|-----------|-------|--------------------------------------------------------|-----------------------------|
| Page 46 | View Gain Level | First Item In Tuning Menu | Solid Green | Internal - Toggle Aileron, Aux - Adjust Relative To Lights |
| Pages 47-49 | Auto Trim | From Gain View - Push "P" | Slow Flashing Green | Toggle Aileron To Select Type |
| Exit | Push "P" To Exit | | | |

Step One: Radio Type Selection

Hold Down The "P" Button And Power On The TG Multi Only. Do Not Turn On The Transmitter.

The Status LED Will Flash Red One Time. The Status LED Will Then Turn Off.

Press And Hold The "P" Button For 2 Seconds. The Status LED And The Radio Type LED You Have Chosen Will Come On.

Powering On Your Unit

When you power on your radio and unit, the status LED will flash red for approximately 6 seconds. While this LED is flashing, the unit is initializing. It is very important to not disturb the model during this time period. This will happen every time you power on your unit.

Step Two: Rotor Base Setup

In the next section, we will be setting up the control neutrals and control limits. Each rotor base will need to be adjusted individually. Four LEDs match the individual rotor bases during neutral and limit adjustments. When the matching LED is on, you are adjusting that specific rotor.

Red: Left/Forward
Yellow: Left/Backward
Green: Right/Backward
Green: Right/Forward

After initialization is complete, the blades on all four rotors will then move a small amount back and forth, indicating that initialization is complete. This will happen every time you power on your unit.

Next-D Copyright 2013
Control Neutrals

With the unit and the radio powered on, press and hold the "P" button until the red and yellow lights come on. Release "P". The red and yellow LED's will turn off.

The status LED will shine solid green.

This LED will indicate the first rotor base you are adjusting.

Remove the servo horn from the servo that controls the rotor base you are setting. Line the servo horn up 90 degrees to the pushrod, with the pushrod installed on the control balls. The servo horn will not be at 90 degrees to the servo when at the control neutral position. Be sure to perform this step on each rotor base servo before you set the control neutrals for each rotor base.

Fold blades back.

Slide the pitch card onto one blade.

Pitch card.

Adjust the pushrod length until the right blades trailing edge points directly at the 0 line on the pitch card.

To make fine tune adjustments to the neutral point, hold full left or full right aileron on the transmitter.

After adjustments to one rotor base are completed, toggle the rudder stick on the transmitter to advance to the next rotor base. Be sure to complete each step on each rotor.
Control Limits

After You Have Completed Adjusting The Control Neutrals, Press The "P" Button To Advance To The Control Limits.

The Status LED Will Be Slowly Flashing Green

The Same Four Lights Used To Adjust The Neutrals Will Be Used To Set The Control Limits

Solid
Place The Pitch Card On The Blade You Will Be Adjusting. Straighten One Blade In It's Blade Grip, And Leave The Other Blade Facing 90 Degrees To The Blade Grip As Shown.

Solid For Positive Pitch

To Make Adjustments To The Control Limits, Hold Full Left Or Full Right Aileron On The Transmitter

Positive Control Limits

Adjust The Positive Control Limit Until The Blade In The Background Lines Up With The Line Marked 52

Perform This Step On All Four Rotors

After You Have Completed Making Adjustments To One Rotor Base, Toggle The Rudder Stick On The Transmitter To Advance To The Next Rotor Base. Be Sure To Complete Each Step On Each Rotor Base.

After The Limits Have Been Set For Positive Pitch, Toggle The Rudder On The Transmitter. The Sequence Will Repeat Itself For Negative Pitch. The LED's That Indicate Each Rotor Base Will Be Flashing. Verify That The Blades Are Giving Negative Pitch. Use The Exact Same Method Used To Set The Positive Control Limits, To Set The Negative Control Limits.
Check Your Control Directions

Positive Collective Input
- High Stick
- Positive Pitch
- All Pitch Sliders Move Up

Reverse Collective Pitch Direction
- In Your Transmitter If Needed

Negative Collective Input
- Low Stick
- Negative Pitch
- All Pitch Sliders Move Down
Check Your Control Directions

Forward Elevator Input
- Rear Pitch Sliders Move Up
- Positive Pitch
- Negative Pitch
- Front Pitch Sliders Move Down

Right Aileron Input
- Left Pitch Sliders Move Up
- Positive Pitch
- Negative Pitch
- Right Pitch Sliders Move Down

Reverse The Elevator Channel In Your Transmitter If Needed

Reverse The Aileron Channel In Your Transmitter If Needed

Next-D Copyright 2013®
Check Your Control Directions

To Check The Rudder Direction, Pay Close Attention To The Front Left Rotor Base. Place The Collective/Throttle Stick At The 3/4 Stick Position. The Blades Will Move In The Positive Pitch Direction.

Pitch Slider Will Move Up

Positive Pitch

With The Collective At The 3/4 Stick Position, Place The Rudder Stick At Full Right Rudder Input. The Positive Pitch On The Blades Should Increase.

Positive Pitch

Pitch Slider Should Move Higher

Reverse The Rudder Channel In Your Transmitter If Needed

Next-D Copyright 2013 ©
Transmitter Collective Pitch

After you have completed adjusting the control limits, press the "P" button to advance to the transmitter collective pitch.

The status LED will be flashing fast green.

Set the pitch travel in your transmitter to its maximum travel setting in both travel directions.

Set the pitch curves for both hold and norm to the exact same values.

Set the low stick position pitch curve setting to 52.

Set the half stick position pitch curve setting to 52.

The remainder of the pitch curve stays linear up to 100%.

Stunt one and stunt two collective pitch transmitter settings.

The pitch curves for both stunt one and stunt two should be linear from low stick to high stick.

Transmitter Collective Pitch continued on the next page -37-
Transmitter Collective Pitch Continued

Place Your Transmitter In Stunt Mode

Put The Throttle/Collective Stick In The Low Throttle Position

With The Throttle In The Low Stick Position, LED Number 3 Should Come On Solid Green. If It Does Not, See The Bottom Of The Page For The Solution.

Put The Throttle/Collective Stick In The High Throttle Position

With The Throttle In The High Stick Position, LED Number 7 Should Come On Solid Green. If It Does Not, See The Bottom Of The Page For The Solution.

If LED Number 7 Does Not Come On With The Throttle Stick At The High Stick Position In Stunt Mode, Reduce The Travel Adjust Percentage In The Transmitter For High Pitch Until LED Number 7 Does Come On

If LED Number 3 Does Not Come On With The Throttle Stick At The Low Stick Position In Stunt Mode, Reduce The Travel Adjust Percentage In The Transmitter For Low Pitch Until LED Number 3 Does Come On
Transmitter Collective Pitch Continued

Place Your Transmitter In Normal Mode
Put The Throttle/Collective Stick In The Low Throttle Position

With The Throttle In The Low Stick Position, LED's Number 3 And Number 7 Should Come On Solid Green. If They Do Not, See Below For The Solution.

If LED's Number 3 And 7 Do Not Come On Solid Green Raise The Low Stick Collective Pitch Setting One Point At A Time Until They Do Come On Solid

Be Sure To Set The Half Stick Collective Pitch Setting To The Same Value As The Low Stick Collective Pitch Setting

If Changes Are Made To The Normal Mode Collective Pitch Settings, Be Sure To Make The Exact Same Changes To The Throttle Hold Collective Pitch Settings.

Throttle Hold

Next-D Copyright 2013 © Next
**Transmitter Throttle Settings**

1. **Set The Throttle Travel In Your Transmitter To It's Maximum Travel Setting In Both Directions**
2. **Set The Throttle Hold Throttle Setting To The Lowest Possible Setting**
3. **Access The Transmitter's Throttle Curve Setting And Place The Transmitter In Normal Flight Mode**
4. **Set The Low Stick Throttle Curve Setting To Thirty Percent Throttle**
5. **Set The Half Stick Throttle Curve Setting To Sixty Seven Percent**
6. **Set The High Stick Throttle Curve Setting To Sixty Seven Percent**
7. **Set The Stunt One Throttle Setting To A Flat Line Value Of Seventy Percent In All Throttle Positions**
8. **Set The Stunt Two Throttle Setting To A Flat Line Value Of Seventy Percent In All Throttle Positions**
Transmitter Throttle Settings Continued

After you have completed setting the transmitter collective pitch curves, press the "P" button to advance to the transmitter throttle settings.

The status LED will shine solid red.

Solid

LED number 4 will shine solid green, indicating you are checking the off throttle setting.

Place throttle hold in the on position.

With the transmitter in throttle hold LED number 2 will come on solid green indicating the off throttle setting is correct.

Solid

Toggle the rudder stick on your transmitter to move to the next throttle setting.

LED number 8 will shine solid green, indicating you are checking the high throttle setting.

Solid

With the transmitter at high stick in normal mode LED number 2 will come on solid green indicating the high throttle setting is correct.

Solid

Place your transmitter in normal mode. Place the throttle stick in the high stick position. LED number 2 should come on solid green if the high stick throttle setting is correct. If LED number 2 does not come on adjust the high stick throttle percentage a small amount until it does come on.

Transmitter Throttle Settings Continued on the next
Transmitter Throttle Settings Continued

Toggle the Rudder Stick On Your Transmitter To Move To The Next Throttle Setting

Both LED Number 4 And 8 Will Come On Solid Green, Indicating You Are Checking The Idle Throttle Setting

With Your Transmitter In Normal Mode, Place The Throttle Stick In The Low Stick Position. LED Number 2 Should Come On Solid Green If The Idle Throttle Setting Is Correct. If LED Number 2 Does Not Come On Adjust The Low Stick Throttle Percentage A Small Amount Until It Does Come On.

Set Gain Channel

After You Have Completed Setting The Transmitter Throttle Settings, Press The “P” Button To Advance To The Gain Channel Selection

The Status LED Will Be Slowly Flashing Red

LED Number 6 Will Be Flashing Green. This Indicates That The Unit Is Set To Internal Gain Adjustment. This Is The Recommended Setting. Press “P” To Exit Menus. You Are Now Ready To Fly.

If You Wish To Adjust The Gyro Gain In Your Unit With Your Transmitter, See The Following Page For Detailed Instructions On Assigning The Channel That Will Be Used To Adjust The Gyro Gain.
Set Transmitter Gain Channel

After you have completed setting the transmitter throttle settings, press the "P" button to advance to the gain channel selection. To set a channel in your transmitter that sets the gyro gain, first make sure that channel is plugged in and is active.

The status LED will be slowly flashing red. LED number 6 will be flashing green. This indicates that the unit is set to internal gain adjustment.

The switch you toggle on your transmitter will automatically be selected as the channel in the transmitter that you will use to adjust the gyro gain in the unit. This gain setting can now be adjusted the exact same way a traditional gyro system is adjusted.

To reset the unit to internal gain adjustment, toggle the aileron stick one time.

Press "P" to exit main menu.

Other aux channels can also be used if needed.
Tuning Menu: Viewing Gain Setting

With the unit and the radio powered on, press and hold the "P" button until the red and yellow lights come on. Continue holding the "P" button until the red and yellow LED's begin flashing. Release "P".

The Status LED will shine solid green.

These LED's will be used to view the current gain setting in your unit. The lights will change one at a time as the gain is changed. Below is a chart of the gain setting for each light.

LED Number One will be slowly flashing yellow if the gain setting is equal to or below 44%.

All LED's will turn solid:
- LED Number Five will be flashing fast red at any gain setting equal to or above 60%.
- LED Number Four will be flashing slow yellow at any gain setting equal to or below 44%.

LED Number Four will be flashing fast red at any gain setting equal to or above 60%.

If two LED's come on at the same time you are between values:
- 59%
- 57-58%
- 55-56%
- 53-54%

Suggested Setting:

If you are using the internal gain adjustment setting, toggle the aileron stick left or right to move through the gain settings until the desired gain setting is reached.

If you are using a channel in your transmitter to adjust your gyro gain, adjust the transmitter value until the desired gain LED comes on solid on your unit.
After viewing the Gyro Gain, press "P" to advance to the Auto Trim setting.

Flash
Flash
The Status LED will begin flashing green.

Toggle aileron to move through the selections.

Auto Trim Type
Number One:
LED Number 4 will be flashing. Stationary hover in calm air for 30 seconds.

Auto Trim Type
Number Two:
Both LED’s 3 and 7 will be flashing. Four point hover in light wind. 25 seconds in first position, 15 seconds in all other positions.

No Auto Trim:
No LED's will come on. This will indicate you do not wish to perform an Auto Trim flight. After exiting the system, the unit will be ready to fly normally.

Press "P" to activate the Auto Trim setting you have selected.

After you press the "P" button both LED's number 2 and 6 will come on solid for two seconds. This confirms that you have made a selection, and are ready to proceed.

After LED's number 2 and 6 turn off, the selection you have made will begin flashing. This indicates you are ready for your trim flight. You are now ready to fly.

If the system has accepted the results from your trim flight, the LED(s) will turn off. If the LED(s) are still flashing, you will need to repeat the trim flight. The model can be flown as normal while in this mode.
TG-Multi Pre-Flight Procedure

To Power The Model On To Fly, First Place The Transmitter In Throttle Hold Mode. Next Power On The Model. After The TG-Multi Has Finished Initializing, Place The Model In A Safe Take Off Location And Take The Transmitter Out Of Throttle Hold. The Rotors Will Spool Up To Your Idle Setting. The Model Will NOT Fly At This Throttle Position. Before Flying Your Model, You Will Need To Verify The Rotors Rotational Direction. They MUST Rotate In The Directions Shown. If They All Rotate In The Incorrect Direction, Reverse The Motor By Switching Any Two Motor Wires. If Any Individual Rotor Rotates In The Incorrect Direction, There Is A Belt Issue With That Rotor. This Must Be Correct, Or The Model WILL crash!

Place Your Transmitter In Throttle Hold Mode

Power On Your Model, And Wait Until The TG-Multi Has Initialized

Place Your Transmitter In Normal Mode. The Rotors Will Spool Up To Idle Speed. Observe The Rotors Directions. If They Are ALL Correct, You Are Ready To Fly.

All Rotors Should Rotate Towards The Inside Of The Model

Place Your Transmitter In Throttle Hold Mode

Low Stick

Leading Edge Of The Blade

Leading Edge Of The Blade

All Rotors Should Rotate Towards The Inside Of The Model

Top View
Tuning Menu: Auto Trim Type One (No Wind)

With No Wind Blowing, Take Off And Hover Stationary For 30 Seconds. Give As Few Control Inputs As Possible. After Hovering Stationary For 30 Seconds, Your Trim Flight Is Now Complete. If Your Flight Was Successful The LED’s On Your Unit Will Be Off.

Tuning Menu: Auto Trim Type Two (Light Wind)

Take Off And Hover Stationary For 25 Seconds. Keep The Model Stationary With As Few Control Inputs As Possible.

After 25 Seconds, Rotate The Model 90 Degrees And Continue To Hover For 15 Seconds.

After 15 Seconds, Rotate The Model 90 Degrees And Continue To Hover.

After Hovering For 15 Seconds In The Fourth Location, You Are Ready To Land. Your Trim Flight Is Now Complete. If The Flight Was Successful, The LED’s On Your Unit Will Be Off.