

**lynx**

PISTOL TYPE 2CH RADIO CONTROL SYSTEM

**FM**



PISTOL TYPE 2CH RADIO CONTROL SYSTEM

**hitec**

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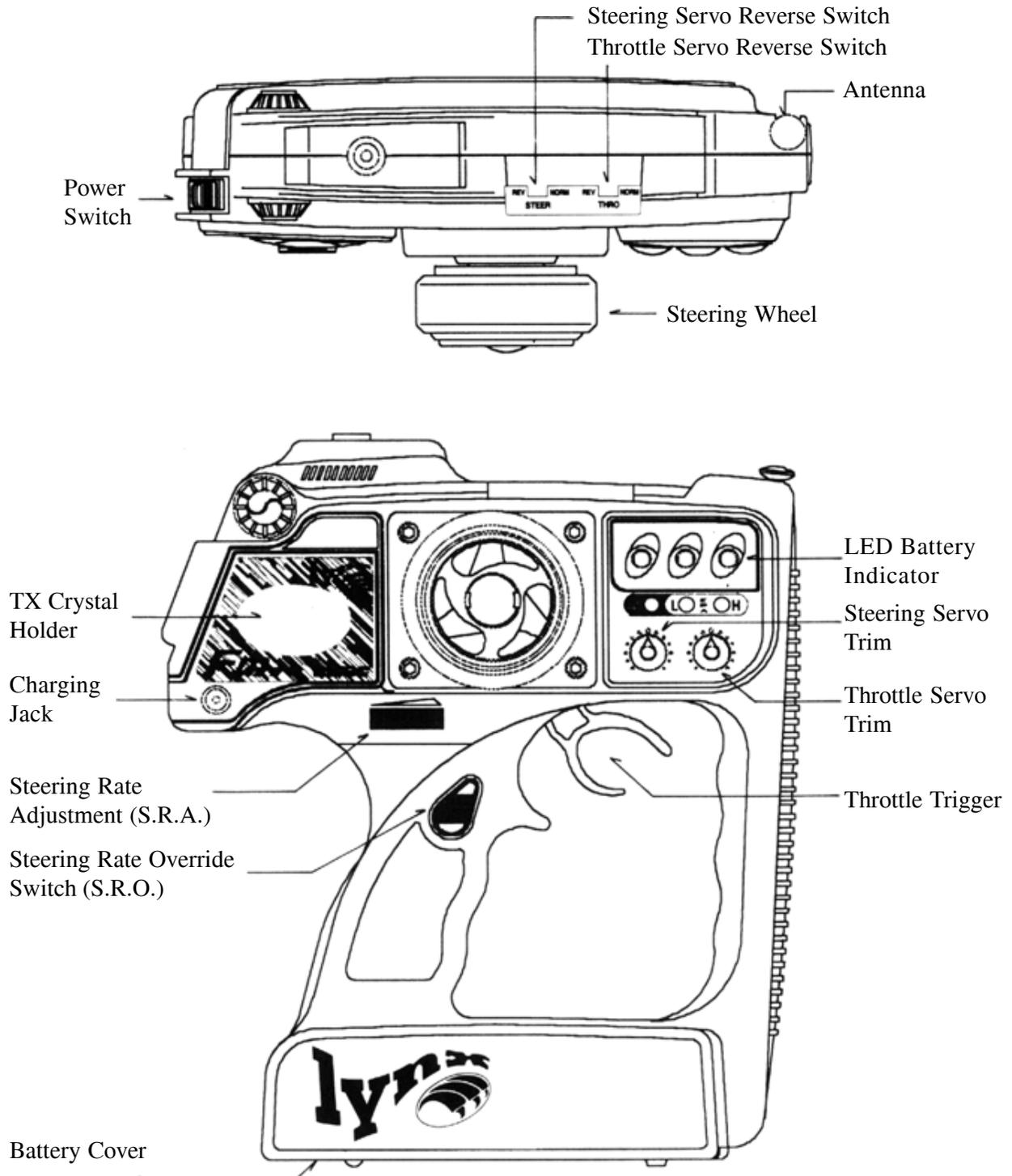
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## INTRODUCTION

Thank you for purchasing the LYNX 2 Channel FM Radio System. The LYNX 2 FM Radio is made of high quality, technically advanced components designed to achieve top performance from you RC Vehicle. Team up with Hitec Racing and see that quality and performance doesn't have to cost a fortune!

## LAYOUT DIAGRAM



## FEATURES AND SPECS

Pistol Grip 2 Channel FM Proportional System  
Servo Reversing Switches (Both Channels)  
Steering Rate Adjustment. Thumb Controlled (40% - 100%)  
Adjustable Steering Rate Override button (40% - 100%)  
End Point adjustment (E.P.A.) Throttle and Brake  
3 LED Battery Status Indicators  
Power Output: 500mW  
Current Drain: 180mA

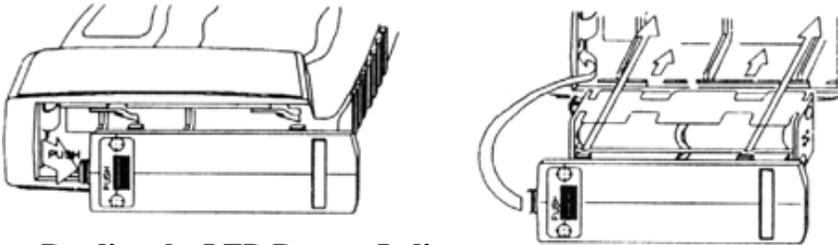
## SETTINGS AND OPERATION

### 1. TRANSMITTER

#### ■ Loading batteries:

You may use either NiCad batteries or Alkaline “AA” size batteries (NiCad recommended)

- \* Push the bottom battery cover in the direction of the arrow then lift up the cover.
- \* Load 8 “AA” batteries (be sure the polarity is correct).
- \* Reinstall battery case with installed “AA” batteries with connections to the top left.
- \* NiCads should be charge before use.



#### ■ Reading the LED Battery Indicators



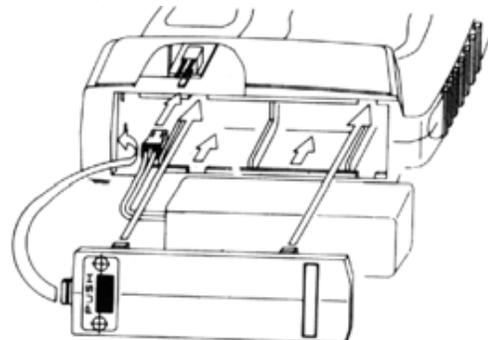
Full Power: **Green**    Normal: **Amber**    Warning: **Flashing Red**

With new alkaline or freshly charged NiCads the **Green** light should be lit. With use the **Green** light will turn to **Amber**. If the **Red** light begins to flash, operation should be stopped and the batteries should be recharged or replaced immediately.

#### ■ Optional NiCad Battery Installation (part # 58207).

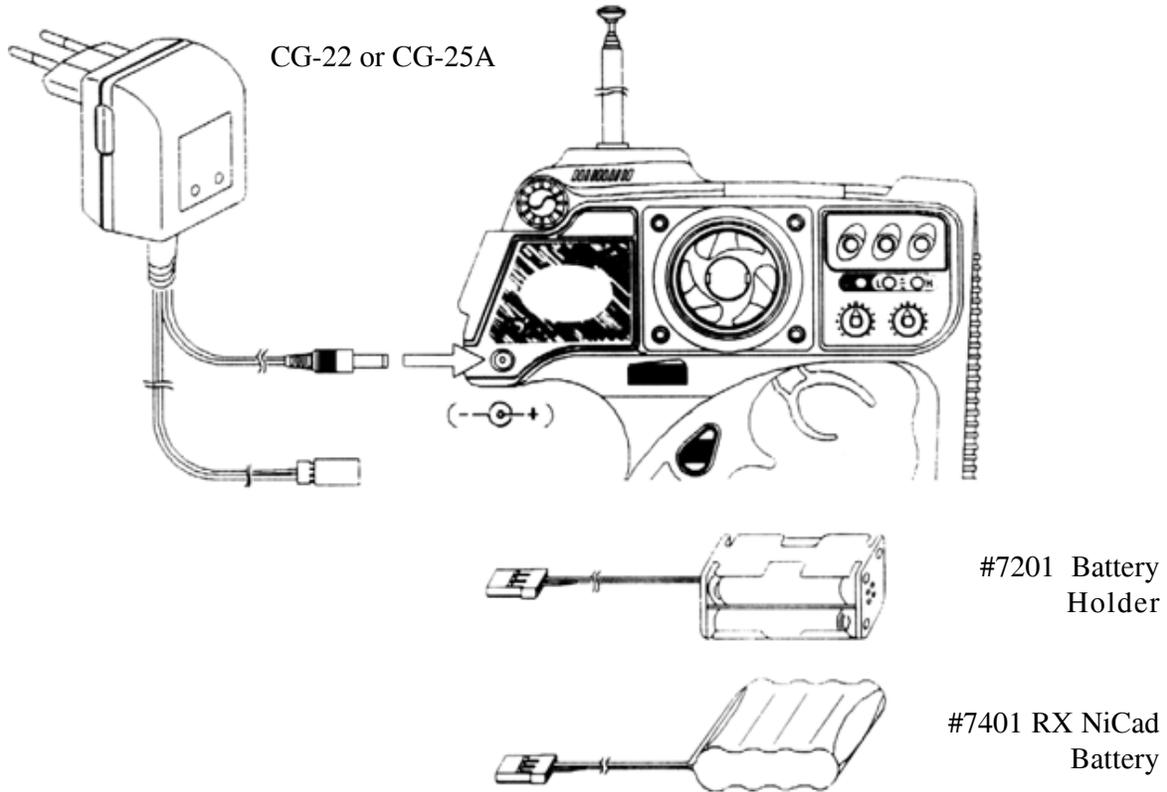
1. Plug the white battery plug into the receptacle in the bottom of the pistol grip handle. (Refer to Illustration)
2. Push the pack up into the battery bay.
3. Replace the cover.
4. Check the power level.
5. Charge if needed. (Refer to illustration below)

Illustration:



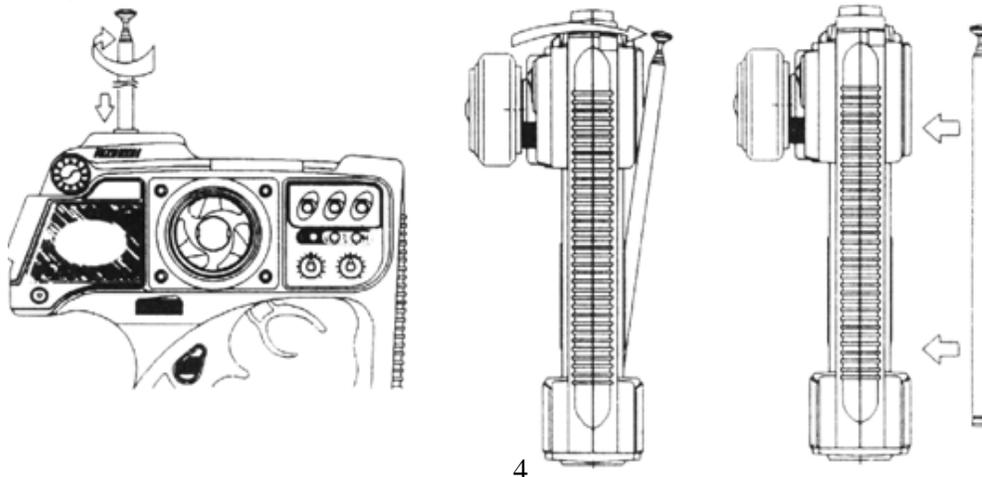
### ■ Recharging NiCad Batteries

The LYNX is equipped with an external charging jack so there is no need to remove the battery pack from the transmitter. The Hitec *CG-22* or *25A* are made to charge these types of batteries overnight or the approximately 12-15 hours. Please refer to the following diagram, check to see that the charge light lights up after the connection is complete.



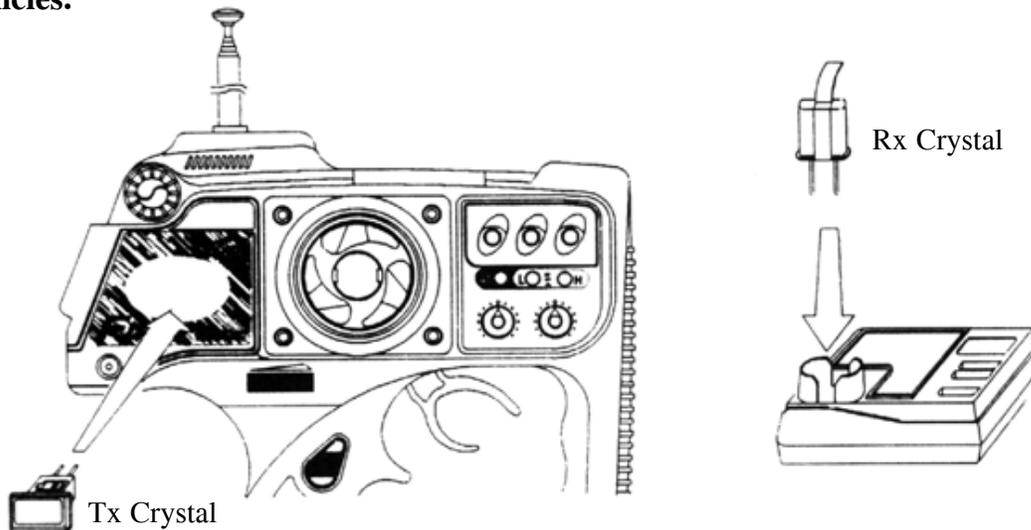
### ■ Transmitter Antenna

You must attach the transmitter antenna by screwing it into the hole located at the top left/center of the transmitter. You may take the antenna out to store it. This storage area is located on the backside of the transmitter. Always attach your antenna before use or you will experience sever shortage of operating range that could result in damage to your vehicle and or injuries to yourself and others.



## ■ Changing X-tals

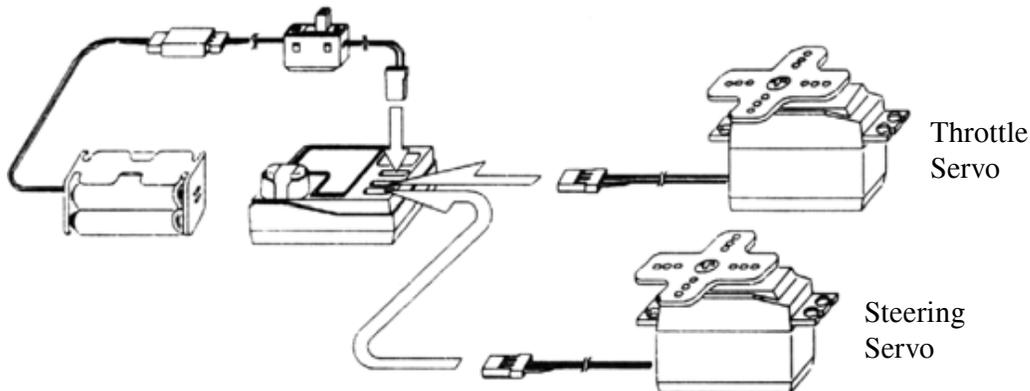
Changing the x-tal to void conflicts with other vehicles is possible where permitted. (You must check your local rules before doing so. For example, in the US, the FCC prohibits the changing of transmitter x-tals on 72 and 75MHz). If you are eligible to change the x-tals, both the transmitter and receiver x-tals must be changed together. You must change within the same band, i.e. 75MHz to 75MHz, 27MHz to 27MHz, different bands can not be intermixed if your radio is on 75MHz then 27MHz x-tals cannot be used. **Use only Hitec x-tals when changing frequencies.**



## 2. Installation of Receiver and Servos

### ■ Using separate power source for the receiver

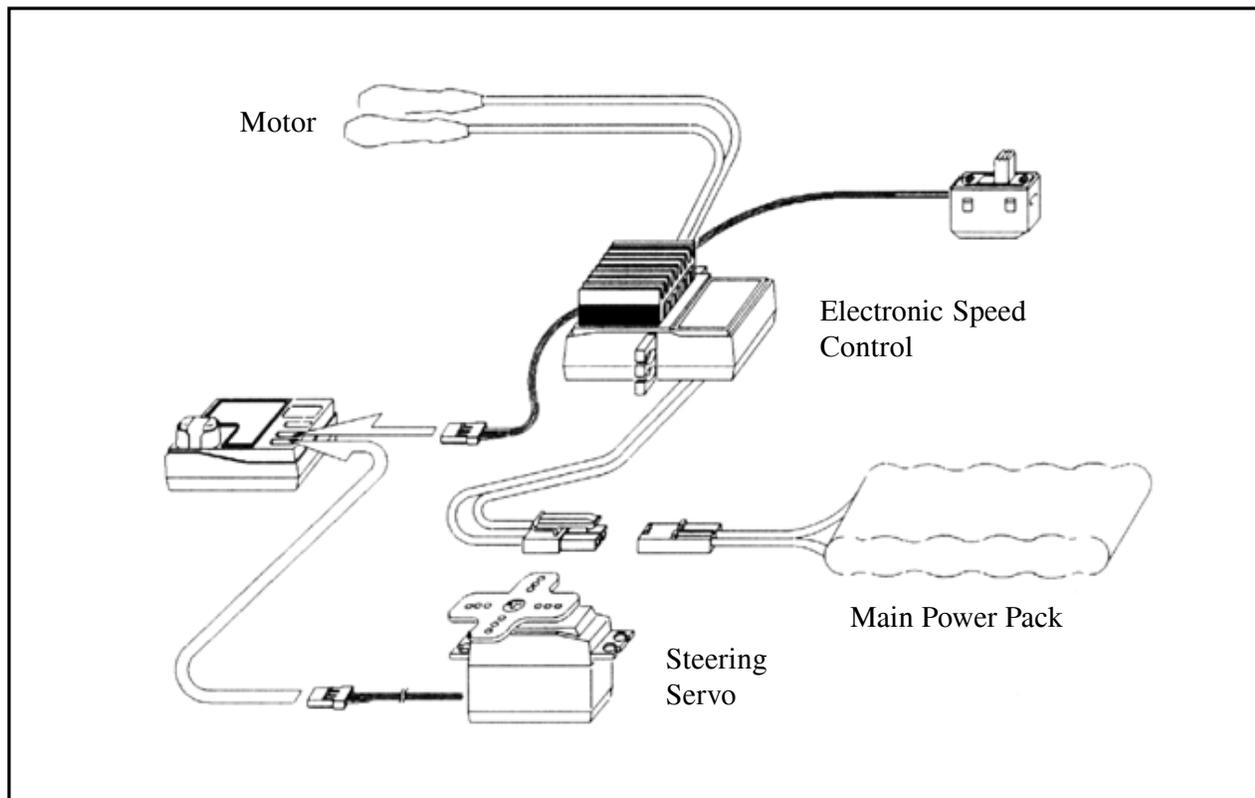
When using a separate power pack for the receiver instead of sharing the main power source, please refer to the following diagram. After installation, turn on the power to the transmitter first then turn the receiver on. (Always turn the transmitter ON first and OFF last.) This will prevent the receiver from picking up stray signals and going out of control. Now, move the controls to see if the servos are moving properly. If not, Check your wiring, battery charge or x-tals if the servos do not move at all.



### ■ Battery Eliminator Circuitry (B.E.C.) Included in AM Model Only.

### ■ Connection with Electronic Speed Control

Electronic Speed Controls such as the Hitec HFX have a built in B.E.C. system inside the speed control circuit. (Please verify whether your ESC has a built in B.E.C. circuit.) Plug the receiver connector from the speed control into the “THROTTLE” or #2 channel on the receiver, and the steering servo into the “STEERING” or #1 channel on the receiver. Now you can connect the main power to the speed control and when the power switch is turned on the speed control will regulate the power that the receivers can use.



### 3. Transmitter, Receiver and Servo Settings

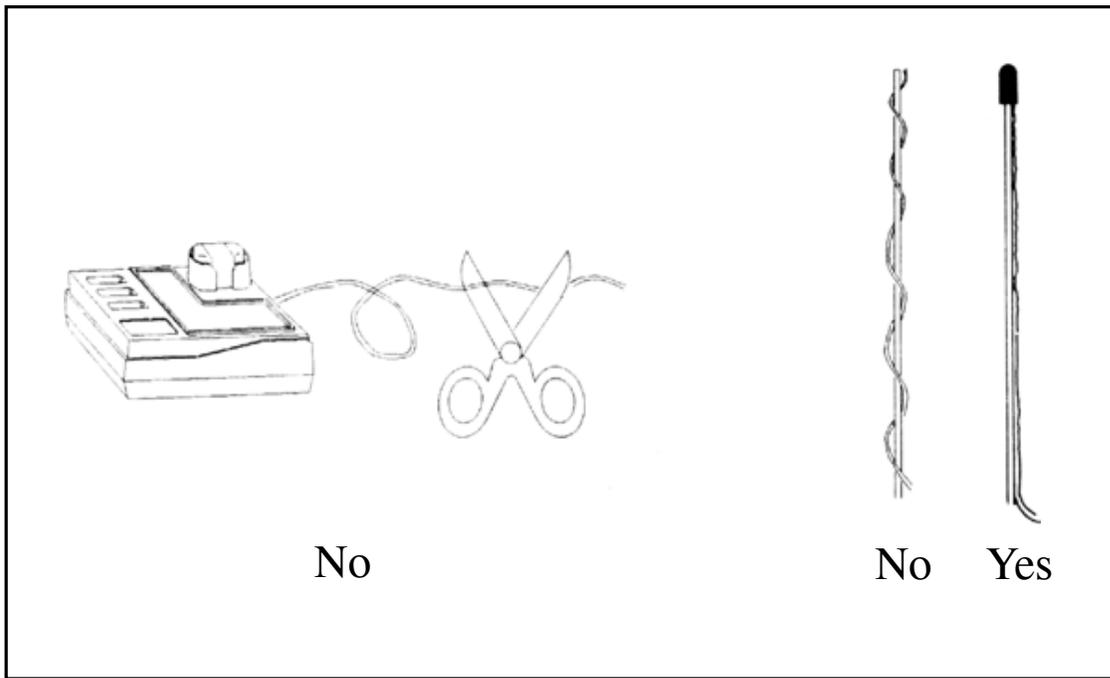
Now we come to the critical part, as proper installation of these three main components is essential.

#### ■ Checking operation of the servo

- \* After the installing of the servo and receiver into your model, turn the transmitter power “ON” and fully extend the antenna, now turn on the receiver. (It is advisable to remove the pinion gear from your car so that the wheels do not engage for this test).
- \* Check to see if either servos or speed control are working properly. If not check the connections and make sure the main battery pack is charged.

- \* Check to see if the servos are moving in the correct direction. If not, change the position of the servo-reversing switch located on the top of the transmitter to achieve the correct direction.
- \* If everything checks out then turn the receiver “OFF” first then the transmitter. (Always remember; never have the receiver “ON” without the transmitter also being “ON”).

**Warning!!!: Do not shorten the length of the receiver antenna by cutting off any excess wire. This will severely affect the operating range and could result in injury to yourself and others.**



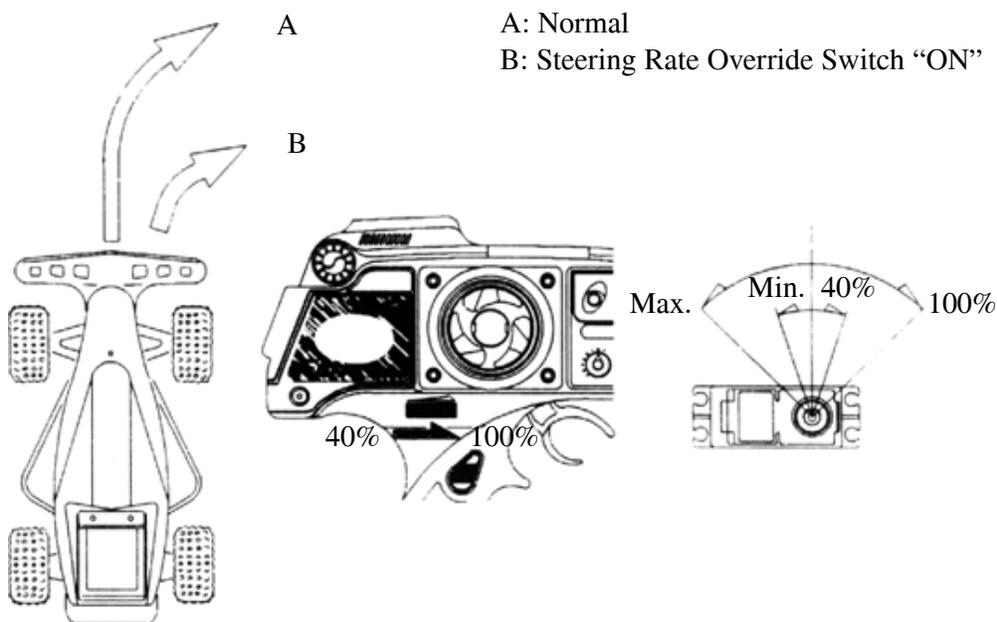
## ■ Steering Servo Settings

### **-Steering Rate Override Switch (S.R.O.)**

The most notable feature in the LYNX is the “Steering Rate Override (SRO) Switch”. This feature allows you to override the dual rate and use from 40% - 100% steering travel with one touch. Selectable via the screw adjustment on the face of the transmitter, this can be used in situations where your dual rates are set so the car does not “Oversteer” on the majority of the track but is set low to get around the hairpin. By pushing the “SRO” switch as you approach the hairpin turn, you will get the preprogram amount of throw immediately and be able to get around the turn faster. If you are stuck against the hose/board/wall/etc. and don’t have enough steering throw to get you out, the “SRO” button on the LYNX can get you out when other radios can’t. Experiment with this feature you will find it very beneficial.

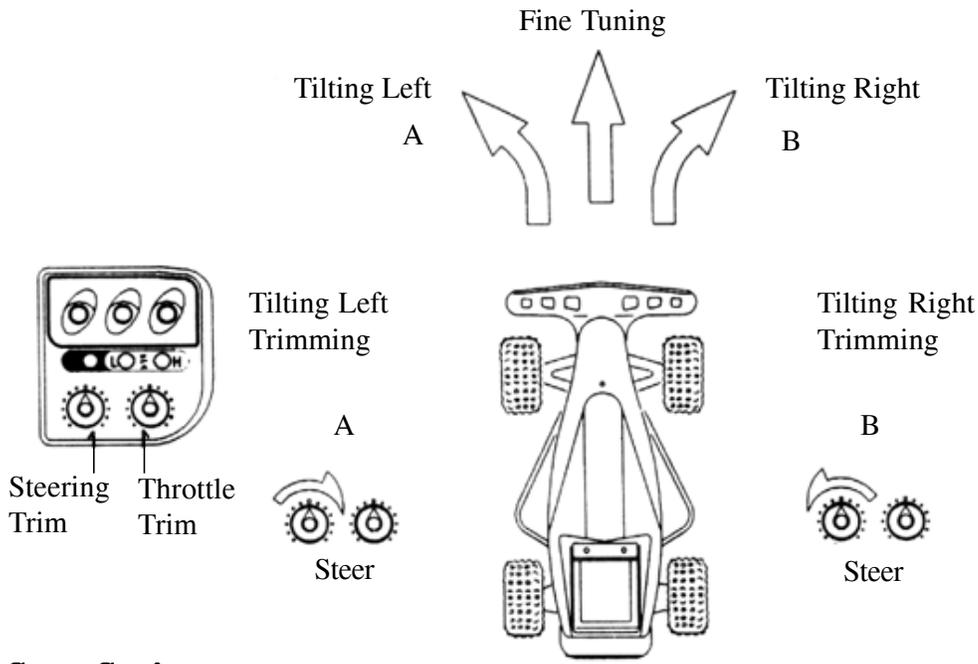
### - Steering Rate Adjustment (S.R.A.)

Dual rates for the steering servo can be adjusted via the thumbscrew on the pistol grip. This adjustment is critical for racers fine-tuning their cars handling “On the Fly”. The rate can be selected from 40% - 100%. If your car is loose or “Oversteering”, dial the adjustment back. If your car is pushing or “Understeering”, then dial the adjustment forward. This adjustment is a must for setting up your car to perform at its best. Adjust the servo so at 100% of travel (the dial will be all the way forward), the servo does not bind. If the servo binds, adjust the linkage to compensate. (Consult your vehicle’s instruction manual for proper instructions on the linkage setup)

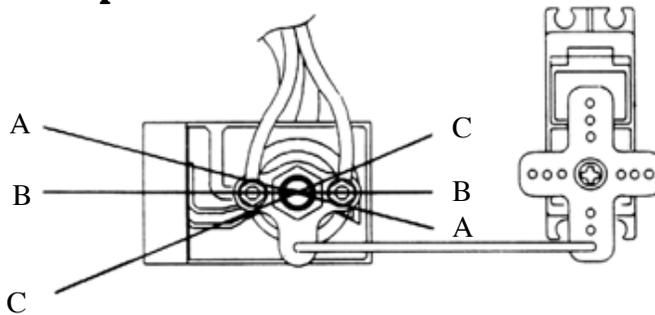


### - Steering Servo Trim Setting

After verifying that the steering direction is correct, set the knob to the center. The servo horn or arm should be a 90 degrees and the wheels should be straight. If not then make the horn or arm 90 degrees by removing it and replacing it correctly. If the arm is at 90 degrees and the wheels are not straight, adjust the linkage to compensate. Once you have these two settings correct, use the steering trim for fine-tuning. Note: Always trim your car before you run or race. This is a common mistake made by beginners. If you have to steer your car to go straight, you are fighting a losing battle. Make sure it tracks straight before you run it and driving will become much easier.



• **Throttle Servo Settings**  
**Using Mechanical Speed Control**

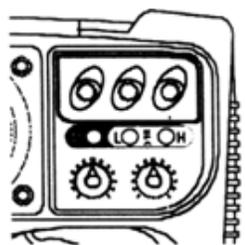


Adjust the servo link rod so that point “B” will arrive at the neutral position. When the trigger is pulled to the maximum point, “C” should be as illustrated and at point “A” when the trigger is pushed to the limit. Check to see if the vehicle moves forward when the trigger is pulled. If the vehicle moves backwards the “Throttle” reversing switch will need to be switched. If the model moves forward or reverse at the neutral position, use the throttle servo trim to fine tune. If the servo moves the speed control farther than is needed use the “EPA” adjustments to limit the travel to the proper distance.

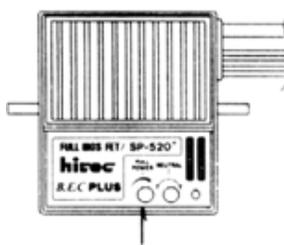
**- Using a Electronic Speed Control**

\* Set the throttle trim in the center then adjust the ESC neutral point. Use the trim for fine-tuning adjustments.

**Hint: Set a little drag brake in cars that are Understeering into the corners and set no drag brake or a little “creep” for cars that oversteer into the corners. This means the car will crawl forward when the throttle is in neutral, so you must push the trigger forward to keep the car from moving when stopped. (This can only be done with forward only ESCs). This feature is used with 4-wheel drive sedan cars quite frequently to allow them to carry more speed into and through the corner.**

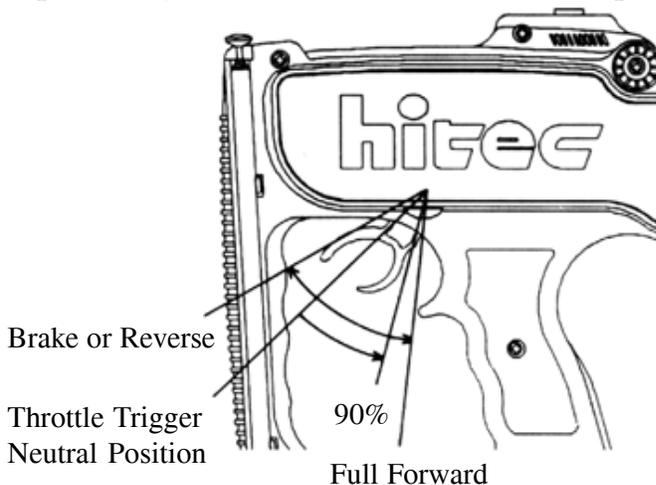


**\* Set the throttle trim in the center**



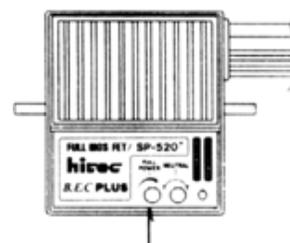
Adjust Neutral Point

- \* Adjust the full power position of the ESC (forward only) when the trigger is pulled approximately 90% of the way. If the vehicle does not move forward when the trigger is pulled and does when the trigger is pushed, check the motor connection first. If that is correct then switch the throttle reversing switch to the opposite direction.
- \* Adjusting the full power position of the ESC (reversible version) is the same as the forward only, except you must make sure you are adjusting the forward not the reverse. If the trigger is pulled and the full power adjustment does not affect the speed but does when the trigger is pushed, the servo reversing switch for the throttle needs to be changed to the opposite direction. After this is determined, use the same 90% as discussed previously for forward. Reverse on most speed controls is not adjustable.



Brake or Reverse  
Throttle Trigger  
Neutral Position

90%  
Full Forward



Adjust Full Power Position

**- Using throttle servo for gas powered vehicle**

Gas powered vehicles require the throttle servo to be set up to operate the carburetor and brakes together. The EPAs are used in these cars to set the proper throw for the throttle and brakes. Setups are different for individual applications so consult the manufactures manual for the proper setup procedure.

**- Using throttle End Point Adjustments (E.P.A.)**

Throttle (EPA) can be used in conjunction with electronic and mechanical speed controls as well as gas powered cars. Use the EPA to select the proper amount of travel for the throttle and brake.

**FCC INFORMATION**

TRANSMITTER FREQUENCIES CAN ONLY BE CHANGED BY AN AUTHORIZED HITEC RCD SERVICE CENTER. CHANGING FREQUENCIES BY THE CONSUMER WILL VOID THE WARRANTY AND IS A VIOLATION OF FCC REGULATIONS.

# FM



PISTOL TYPE 2 CHANNEL AM RADIO  
CONTROL SYSTEM

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