

CONTENTS

INTRODUCTION

LAY-OUT DIAGRAM

FEATURES AND SPECS

SETTING AND OPERATION

1. TRANSMITTER

- a. Loading batteries:**
- b. Reading the LED Battery Indicators**
- c. Recharging NiCad Batteries**
- d. Transmitter Antenna**
- e. Changing X-Tals**

2. Installation of Receiver and Servos

- a. Using separate power source for the receiver**
- b. Battery Eliminator Circuitry (B.E.C.) with Mechanical Speed Control**
- c. Connection with Electronic Speed Control**

3. Transmitter, Receiver and servo settings

- a. Checking operation of the servo**
 - Steering Servo Settings**
 - Steering servo trim setting**
- b. Throttle Servo Settings**
 - Using Mechanical Speed Control**
 - Using electronic speed control**
 - Using throttle servo for Gas powered vehicles**

INTRODUCTION

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

LAY-OUT DIAGRAM

(Illustration)

FEATURES AND SPECS

- * Pistol Grip 2 Channel AM Proportional System
- * Servo Reversing Switches (Both Channels)
- * 2 L.E.D. Battery Status Indicator
- * NiCad Battery Charging Jack
- * Power Output : 500mW
- * Current Drain : 180 mA

SETTING AND OPERATION

1. TRANSMITTER

a. Loading batteries:

You may use either Alkaline or NiCad “AA” size batteries.

- * 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 cover
 - * NiCads should be charged with CG-25 charger for approximately 12 hours before use

b. Reading the LED Battery Indicators

- * Normal: *Green*
- * Warning: *Flashing Red*

With new alkaline or freshly charged nicads the *Green* light should be brightly lit; as the green light starts to fade the *Red* begin illuminate and eventually light completely as the *green* light goes out. Once this occurs, operation should be stopped immediately, and the batteries should be recharged or replaced. (**Warning: Recharge nicads batteries only. Alkaline batteries can not be recharged**)

c. Recharging NiCad Batteries

The LYNX Sport is equipped with an external charging jack so there is no need to remove the batteries from the transmitter to charge them. The Hitec *CG-22* or *25A* can be used to charge the batteries overnight, or for approximately 12-15 hours. Please refer to the following diagram, check to see that the charge lights lit after the connection is complete.

d. Transmitter Antenna

Always make sure your antenna is attached before use or your operating range will be greatly reduced and could result in damage to your vehicle and or injuries to yourself and others.

e. Changing X-Tals

Changing X-Tal to avoid 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 X-tals both the transmitter and receiver X-tals must be changed together. You must change within the same band, i.e. 75 MHz to 75 MHz , 27 MHz to 27 MHz, different bands can not be intermixed if your radio is on 75 MHz then 27 MHz X-tals cannot be used. *Use only Hitec X-tal when changing frequencies.*

2. Installation of Receiver and Servos

a. Using separate power source for the receiver

When using a separate power pack for the receiver instead of sharing the main power source for running , please refer to the following diagram. After installation, turn on the power to the transmitter first then turn the receiver on (***Warning: Always turn the transmitter ON first and OFF last to prevent your vehical from running away.***) 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 or X-tals if the servos do not move at all.

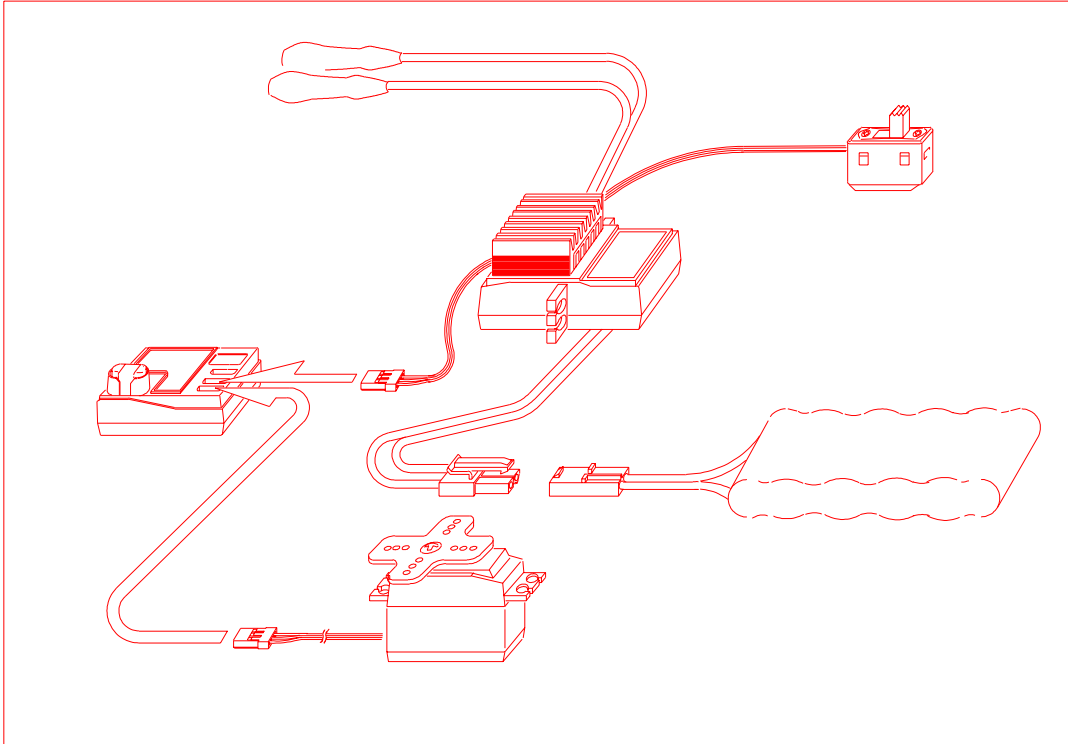
(Illustration)

3. Battery Eliminator Circuitry (B.E.C.)

The Battery Eliminator Circuit allows the user to power the receiver from the main power source for the motor. Most cars that use B.E.C. will have a plug coming off the mechanical speed control. This plug is connected to the switch harness and then plugged directly in to the receiver Batt/BEC slot. (***Warning control may be lossed as the battery dies and the voltage drops below the operating voltage of the reciever but still has enough power to sun the motor***) To be safe do not run the motor battery completely dead, stop it as it starts to slow.

4. Connection with Electronic Speed Control

Electronic Speed Control such as the Hitec HFX has a built in B.E.C. system inside the speed control 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.



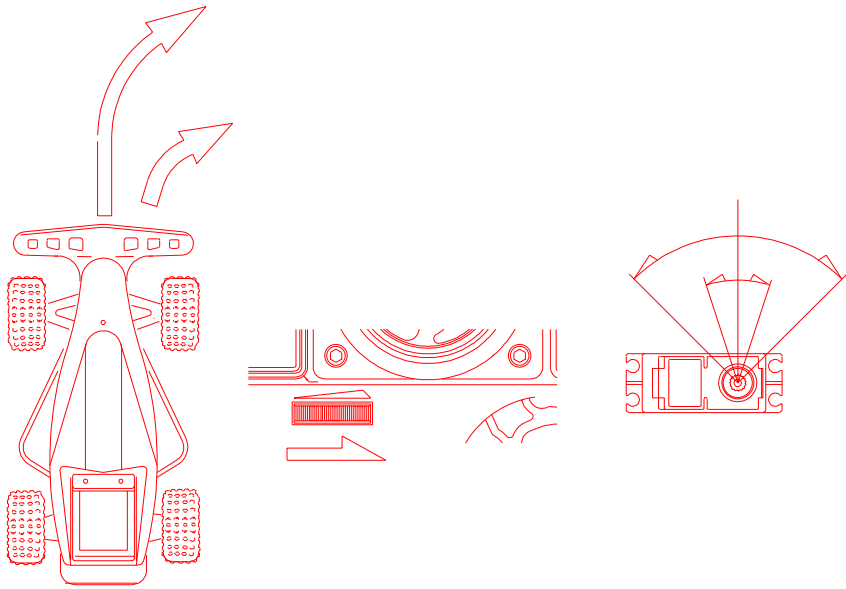
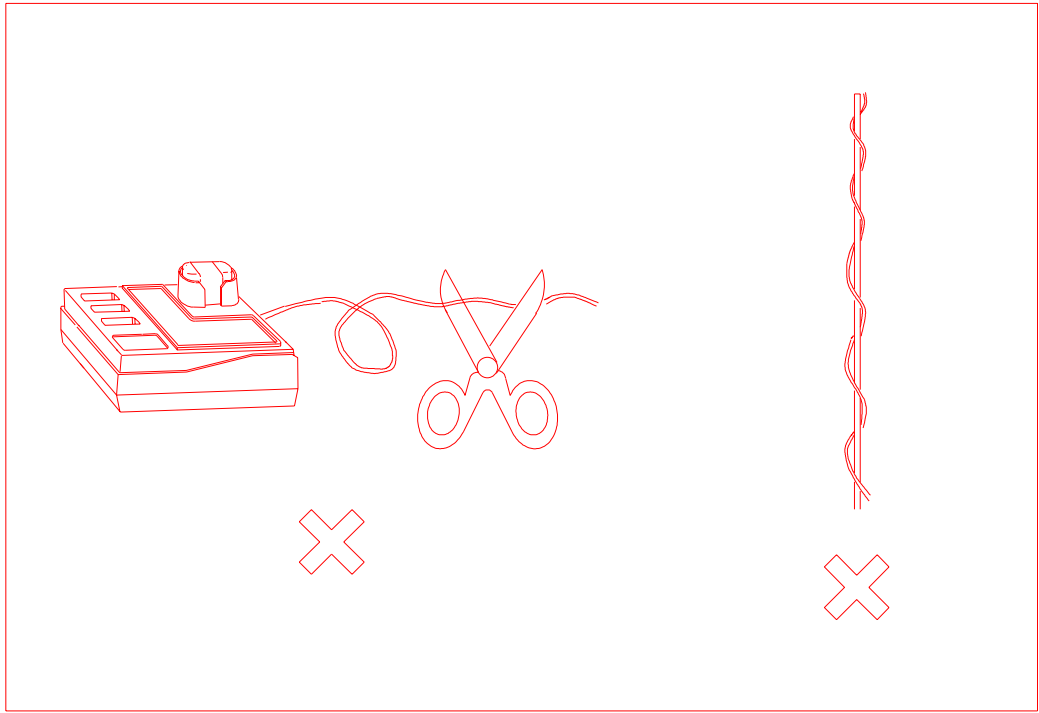
5. Transmitter, Receiver and servo settings

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

a. Checking operation of the servo

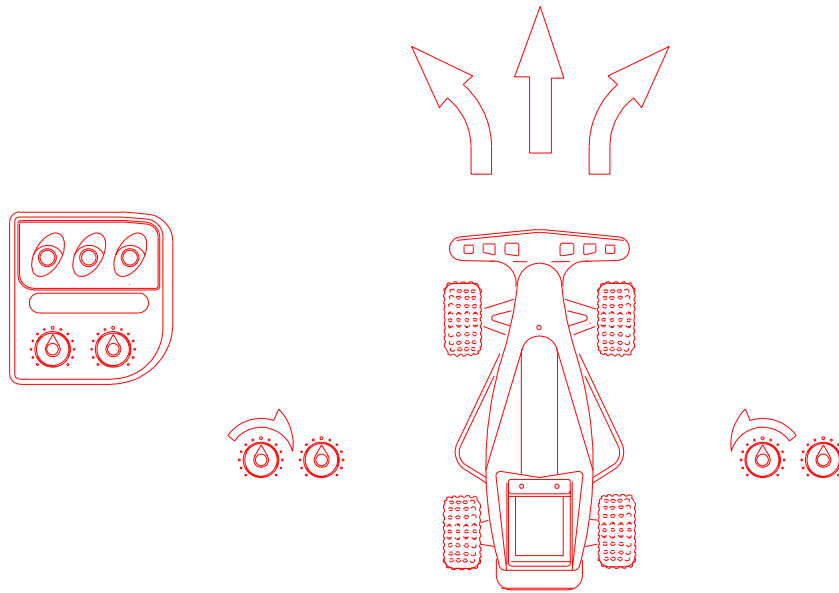
- * After installation of the servo and receiver into your model is complete, turn the power “ON” the transmitter (*fully extend the antenna*) now turn on the receiver. (It is advisable to remove the pinion gear from your car so that the wheels do not engage for this test)
- * Check to see if both servos and/or speed control are working properly. If not check the connections and/or make sure the main battery pack is charged.
- * Check to see if the servos are moving in the correct direction. If not, change 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” with out the transmitter being “ON” this means when turning you model “ON” ***always*** turn the transmitter “ON” first and “OFF” last)

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.



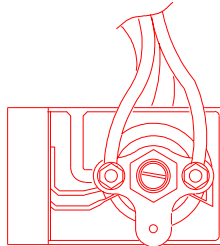
b. Steering servo trim setting

After verifying that the steering direction is correct, then set the steering trim knob to the center if the servo horn or arm should be at 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've got 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 goes straight before you run and driving will become much easier.



c. Throttle Servo Settings

- Using Mechanical Speed Control



Adjust the servo link rod so that point "B" will come to the neutral position. Also 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 then the "Throttle" reversing switch will need to be switched. If the model moves forward or reverse at the neutral position then use the throttle servo trim to fine tune. If the servo moves the speed control farther than is needed you will need limit the travel by moving the linkage into a different mounting hole on the horn, closer to center will give less travel and further from center will give more travel.

- Using electronic speed control

* Set the throttle trim in the center then adjust the ESC neutral point then the trim can be used for fine tune adjustments.

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

(Illustration)

* 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 correct.

* Adjusting the full power position of the ESC (*Reversible version*) is the same as the forward only version, 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 effect the speed but does when the trigger is pushed, the servo reversing switch for the “throttle” needs to be switched. After this is determined, use the same 90% as discussed previously for forward. Reverse on most speed controls is not adjustable.

(Illustration)

- Using throttle servo for Gas powered vehicles

Gas powered vehicles require the throttle servo to be set up to operate the carburetor and the brakes together. The position of the control horn in the horn will determan the amount of travel, this must be set up properly to get the proper throw for the throttle and brakes. Setups are different for individual applications so consult the manufactures manual for the proper set up procedure.