



AIRTRONICS[®] INC

CX2P

INSTRUCTION MANUAL

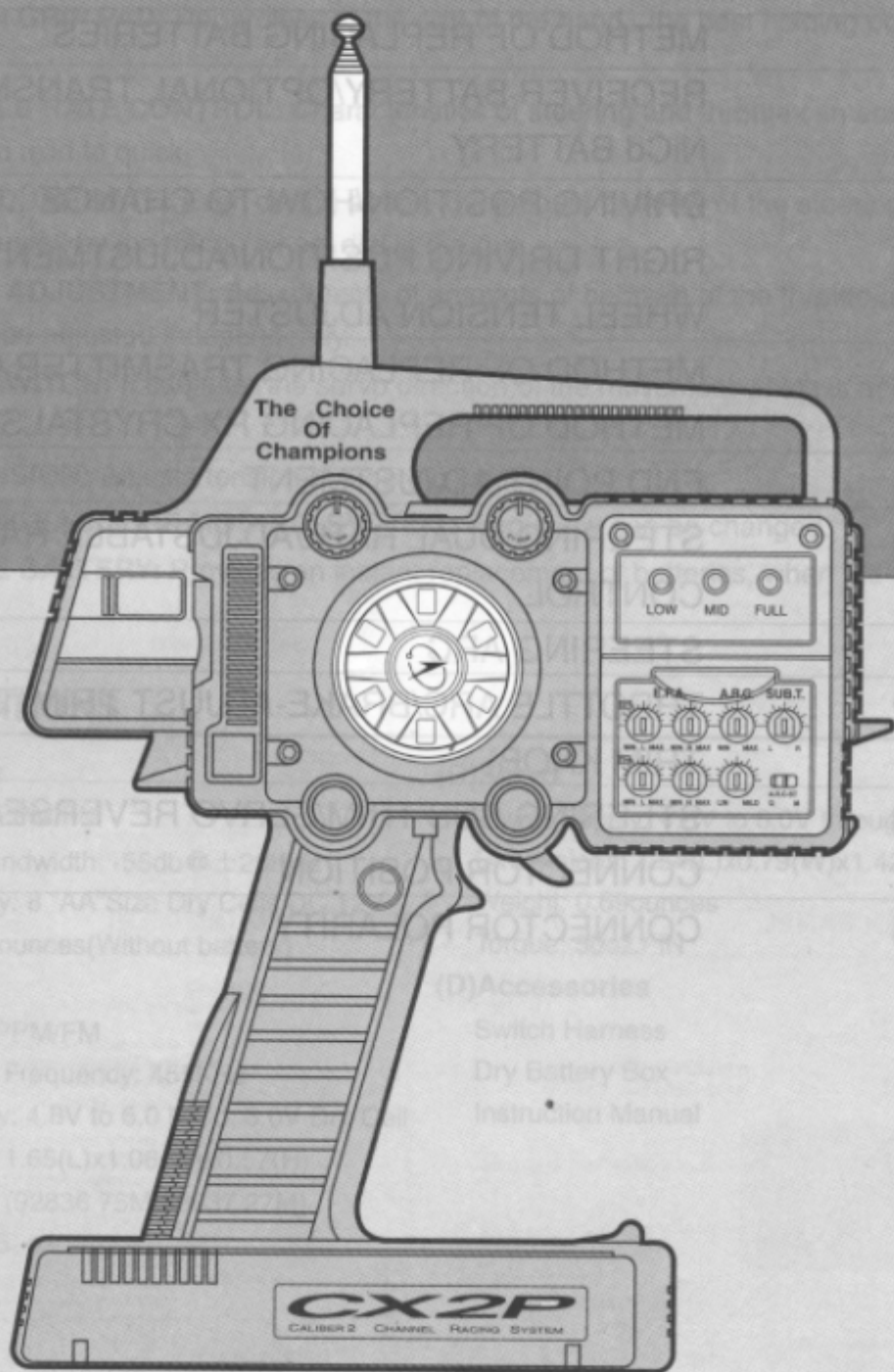


TABLE OF CONTENTS

PAGE	
1	TABLE OF CONTENTS
2	FEATURES AND SPECIFICATIONS
3-4	TRANSMITTER
5	METHOD OF REPLACING BATTERIES
6	RECEIVER BATTERY/OPTIONAL TRANSMITTER NiCd BATTERY
7	DRIVING POSITION/HOW TO CHANGE LEFT AND RIGHT DRIVING POSITION/ADJUSTMENT OF WHEEL TENSION ADJUSTER
8	METHOD OF REPLACING TRANSMITTER CRYSTALS METHOD OF REPLACING RX CRYSTALS
9	END POINT ADJUSTMENT
10	STEERING DUAL RATE/ADJUSTABLE RATE CONTROL
11	STEERING ARC
12	THROTTLE ARC/BRAKE-ADJUST TRIM(THROTTLE TRIM KNOB)
13	STEERING SUB TRIM/SERVO REVERSE/RECEIVER CONNECTOR POSITION
14	CONNECTOR POLARITY

FEATURES

TRANSMITTER

- **FM PPM SYSTEM:** Real time Servo-response with no delay.
- **INTERCHANGEABLE DRIVING POSITION:** Transmitter can be changed so it can be operated by either the left or the right hand.
- **EXTENSION GRIP PAD:** Regardless of the size of the hand, the best holding position can be secured.
- **ADJUSTABLE RATE CONTROL:** Characteristics of steering and throttle can easily be adjusted from mild to quick.
- **STEERING DUAL RATE:** Even during a race, the amount of throw of the steering servo can be easily adjusted by the thumb wheel dial in the grip.
- **END POINT ADJUSTMENT:** Adjustments of amounts of hi-brake of the throttle and left/right steering can be adjusted independently.
- **REVERSE SWITCH:** It can alter the servo direction of the movement which is needed for linkage.
- **WHEEL TENSION:** Adjusts tension of steering wheel.
- **INTERCHANGEABLE RF MODULE SYSTEM:** Frequency can be changed.
- **CARTRIDGE BATTERY:** Provides an instant replacement of batteries, when the optional TX NiCd is used.

SPECIFICATIONS

(A)Transmitter

Modulation: PPM/FM
Occupied Bandwidth: -55db@ ± 20 KHz
Power Supply: 8 "AA"Size Dry Cells DC 12V
Weight: 21.6ounces(Without battery)

(B)Receiver

Modulation: PPM/FM
Intermediate Frequency: 455KHz
Power Supply: 4.8V to 6.0 NiCd, 6.0V Dry Cell
Dimensions: 1.65(L)x1.06(W)x0.57(H)
(92836 75M,92837 27M)
Weight: 1.125 oz

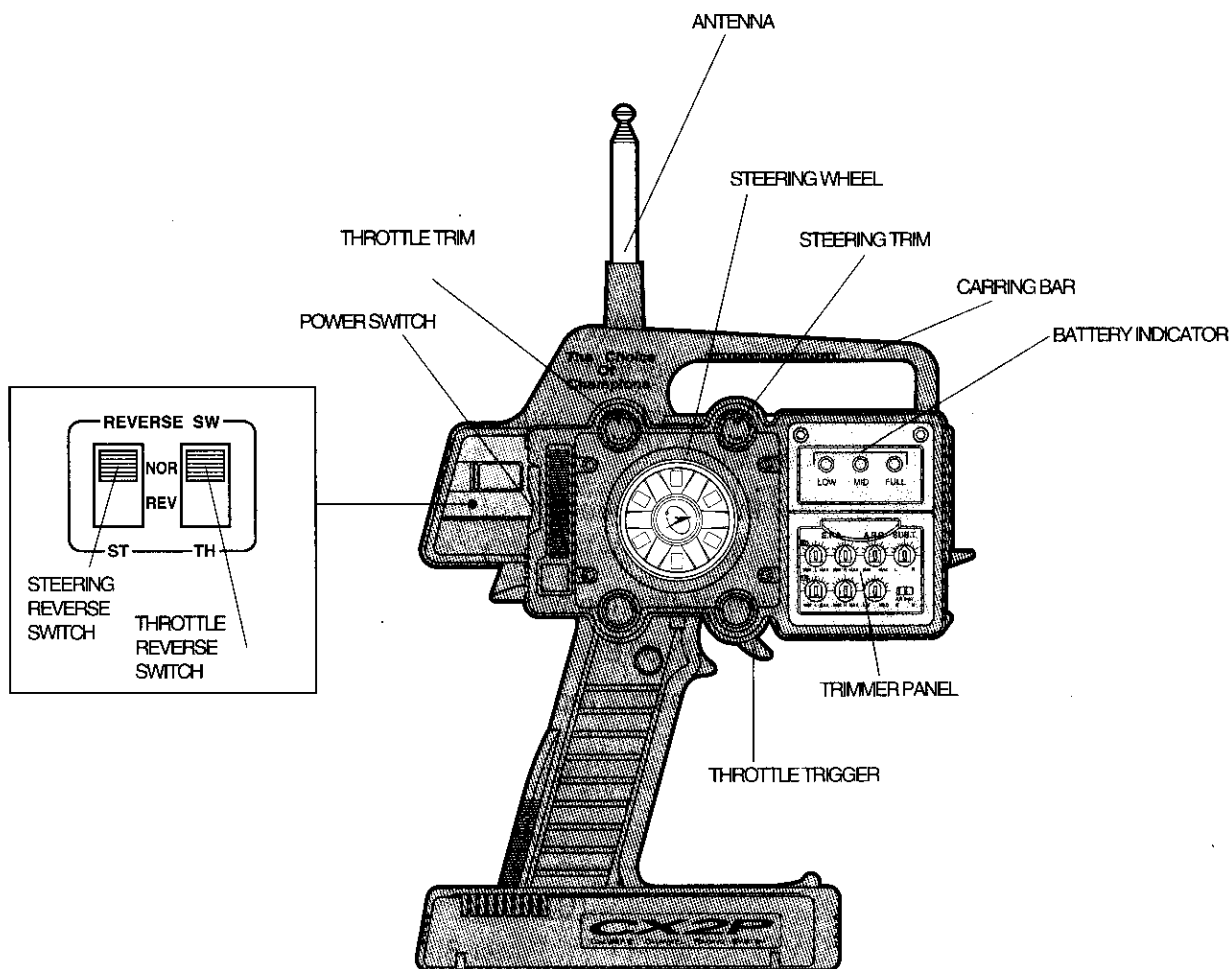
(C)Servo

Power Supply: 4.8V to 6.0V through Receiver
Dimensions: 1.54(L)x0.79(W)x1.42(H)
Weight: 0.69ounces
Torque: 50oz./ IN

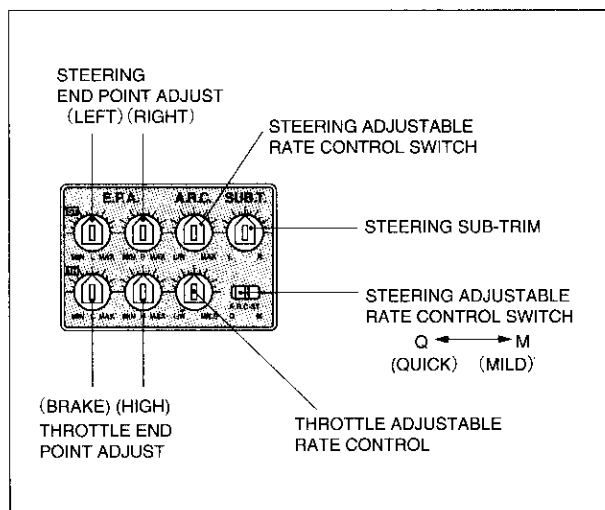
(D)Accessories

Switch Harness
Dry Battery Box
Instruction Manual

TRANSMITTER



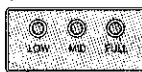
TRIMMER PANEL



BATTERY INDICATOR

LED Power Indicator

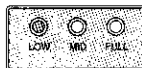
This indicator will give you a reference for the condition of the transmitter batteries.



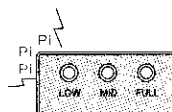
- All three LED indicators (2 green and 1 red) will be lit when the batteries are in their best condition. This is the normal operating condition.



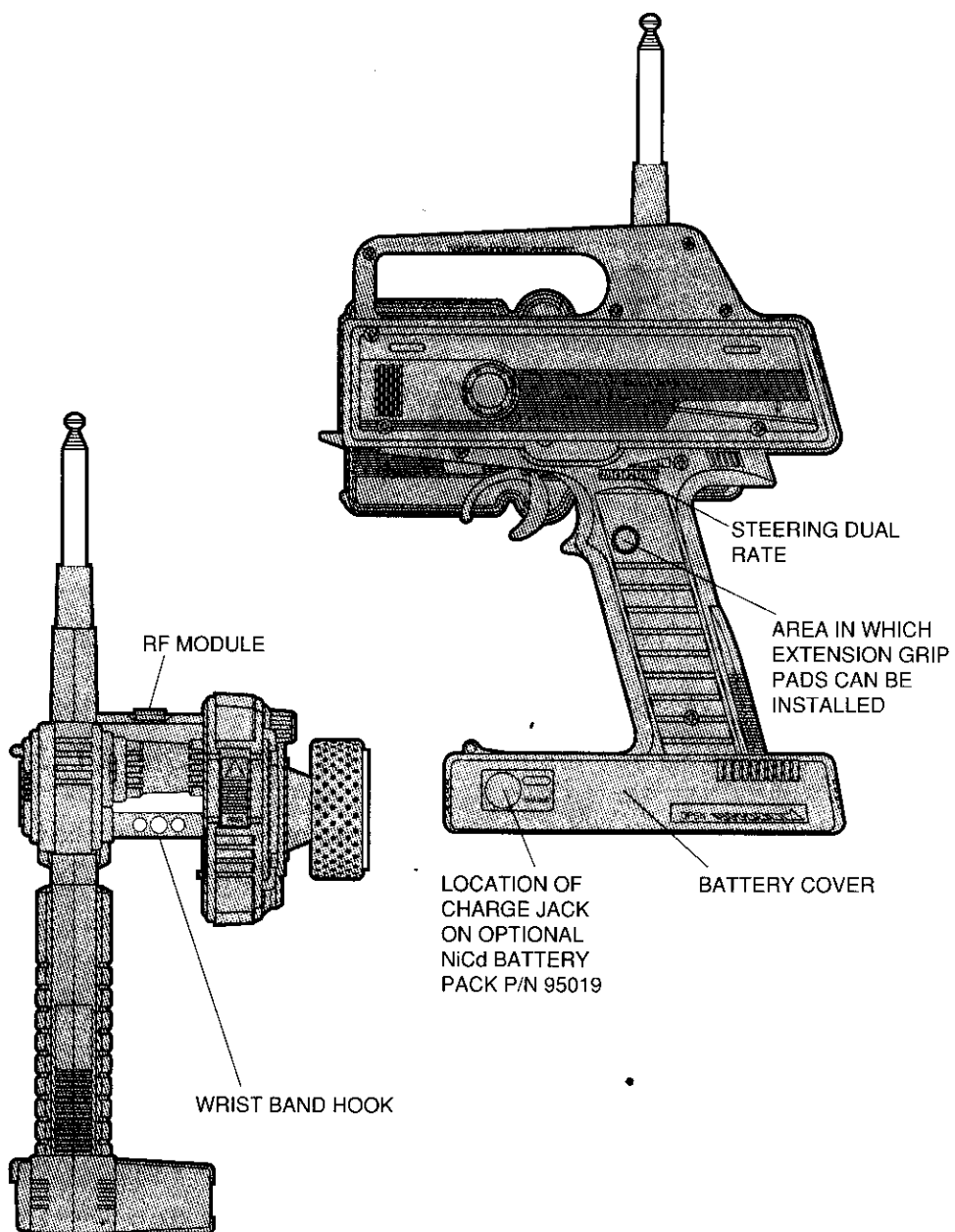
- Two LED Indicators (1 green and 1 red) the batteries are beginning to wear out. Use caution when operating your model.



- One LED (red) will be lit when the batteries are dead or do not have sufficient energy to power the transmitter. Do NOT operate your model under this condition. If the batteries are improperly installed, the LED Indicators will not light. Check your battery installation.

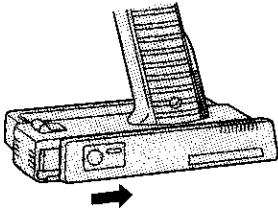


- Audio Low Power Alarm
When the batteries are low, an alarm will sound to warn you. Replace the batteries immediately.

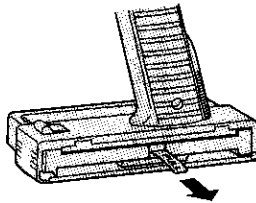


METHOD OF REPLACING BATTERIES

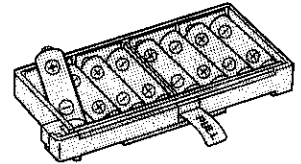
- 1** Remove the battery cover by sliding to the direction as shown, and then pull forward you.



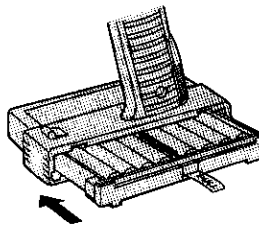
- 2** Pull the ribbon to take the dry battery cartridge out.



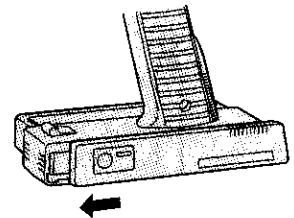
- 3** Install batteries on mounting plate as shown. Observe polarity.



- 4** Insert the dry battery cartridge into the transmitter body.



- 5** Replace the battery cover.



CAUTION: A low battery voltage audio alarm is incorporated into the CX2P transmitter which will sound when the transmitter voltage drops to a predetermined level (9.1 volts.). If the alarm sounds operation should be discontinued and the battery pack exchanged or recharged.

- Pay attention to the polarity (+, -) When installing dry batteries.
- Charge NiCd battery with AIRTRONICS genuine charger P/N95033. Charging with other chargers may be the cause of shorter battery life and ineffective charging.
- When charging be sure to switch OFF the transmitter, receiver, and electronic speed control.
- Never use individual NiCd cells in the dry battery cartridge because it can cause a malfunction due to bad contacts.

RX BATTERY

- Use eight AA ALKALINES cells or optional NiCd pack to power the transmitter.
- The receiver can be powered by an electronic speed control, by 4 AA ALKALINES cells or by a NiCd pack.

1 Charge the NiCd battery packs using AIRTRONICS P/N95033 charger.

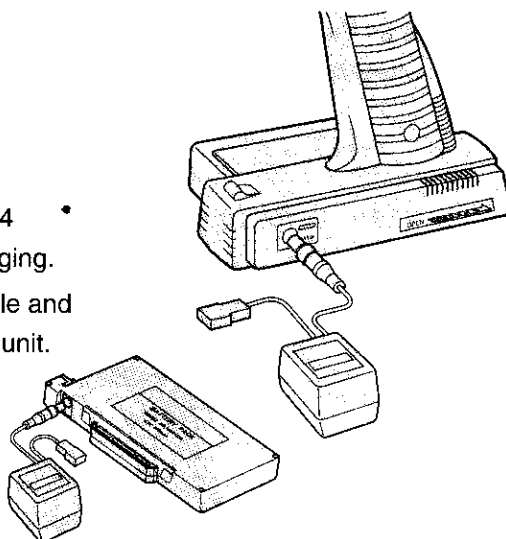
2 The initial charging requires 24 hours. Subsequent charge time should be 10-12 hours.

	CHARGING AFTER LONG INTERVAL AND INITIAL CHARGING	SECOND CHARGING
OPTIONAL TX NiCd P/N95019	24 HOURS	12 HOURS
RECEIVER NiCd PACKS P/N95003(SQUARE) or 95004(FLAT)	24 HOURS	10 HOURS

OPTIONAL TX NiCd BATTERY

Follow the instructions below when using the optional TX NiCd battery P/N95019.

- 1** Take the dry battery out and insert the optional TX NiCd battery in its place.
- 2** Be sure to charge the battery with AIRTRONICS P/N95033 charger. The initial charging requires 24 hours. 12 hours are required for subsequent charging.
- 3** The Separate transmitter Nicd package is available and can be recharged separately from the transmitter unit.



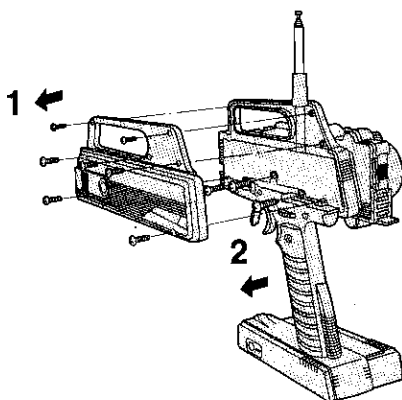
DRIVING POSITION

The transmitter features an all new transmitter case design, ergonomically configured for proper balance and comfort with ease of data input. It has a changeover mechanism for right or left hand driving position regardless of one's dominant hand.

HOW TO CHANGE LEFT AND RIGHT DRIVING POSITION

- 1** First remove the transmitter battery. Then remove the 7 screws from the back lid of the transmitter and take the lid off.

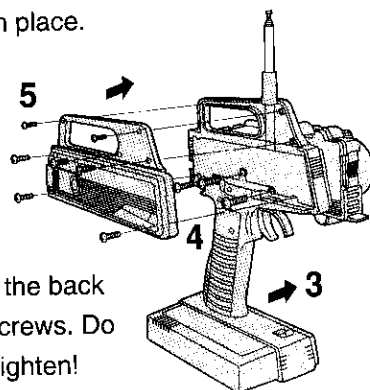
- 2** Remove the 3 screws that attach the handle and take it off. Be careful not to put excessive pressure on the wires.



- 3** Rotate and install the handle as illustrated. Be careful!

- 4** Reinstall the two screws to hold the handle in place.

- 5** Reinstall the back lid with screws. Do not overtighten!

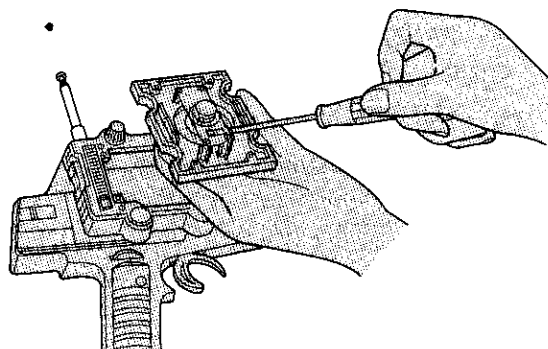
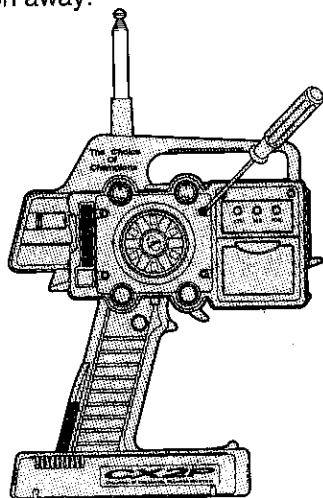


ADJUSTMENT OF WHEEL TENSION ADJUSTER

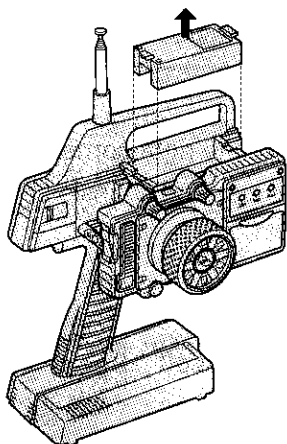
- 1** First remove the transmitter battery, then remove the 4 screws with a hexagonal driver as illustrated and take the wheel section away.

- 2** Adjust the degree of tension screw with a phillips screw driver.

- 3** Install the wheel section in place, being careful not to overtighten the screws.



METHOD OF REPLACING TX CRYSTALS



- 1** Remove RF module from the TX assembly.
- 2** Remove the crystal from the RF module and insert the one desired.
- 3** Insert the RF module into the transmitter body, being careful to align the pins into the RF socket.

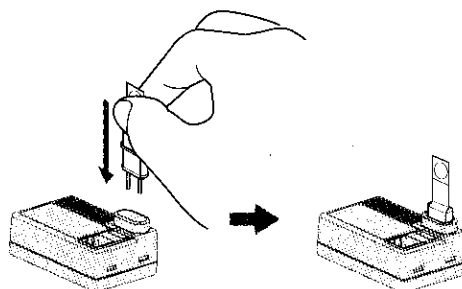


CAUTION: RF module is interchangeable with CALIBER CL3PS RF modules.

- RF module should be installed firmly. Improper attachment may cause malfunction. See that it is stable.
- Change the channel indicator on the transmitter every time the channel is exchanged.
- Match the crystals of both the transmitter and the receiver by checking their channel number or frequency.

METHOD OF REPLACING RX CRYSTALS

- 1** Remove the installed crystal and replace it with the new one.
- 2** Receiver frequency changes are possible only within the respective band.
To change bands you must replace the receiver.
Use Airtronics receiver No.92837 for 27MHz, No.92836 for 75MHz.
- 3** Be sure to install the silicone ring to protect the crystal from vibration and damage.



END POINT ADJUSTMENT (EPA)

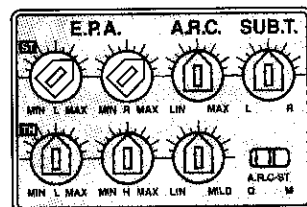
EPA enables you to adjust the steering left/right servo throw and throttle high/brake servo throw.

STEERING EPA

This function should be used when the cornering radius differs for the right cornering and the left one due to the differences in the rolling characteristics of the linkage and chassis or the diameter of tires on a specific car.

- 1) When you want to reduce the right corner steering angles, turn the Right ST-EPA trimmer counter-clockwise.
- 2) When you want to reduce the left corner steering angles, turn the Left ST-EPA trimmer counter-clockwise.

Note: If you set the trimmer at 3/4 of Max as you see in the drawings to the right, you can adjust the left-right angles while you are driving and you can vary the settings.

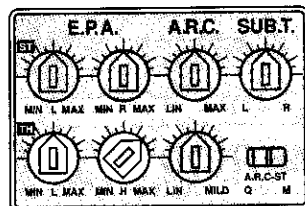


THROTTLE EPA

Throttle EPA will adjust the carburetor opening of an engine powered car, high point of an electronic speed control, and the maximum braking.

- 1) For adjusting the high side throw, if you turn the High side TH-EPA trimmer counter-clockwise, you will get less throttle throw angles at the high side.
- 2) For braking side throw, if you turn the Low side TH-EPA trimmer counter-clockwise, you will get less throttle throw angles at the braking side.

Note: For electric motor powered cars with an electronic speed control, set it to 100% at the high position and to 50-70% if you need the low speed power response.



CAUTION:

On an engine powered car, if the throw of the throttle servos' high or low side are set too high a value, you can cause the servo to lock-up and stall the servo motor, which will cause servo damage! Also, if you set the steering dual rate at 150% and the end point adjustment at maximum, it may cause the servo to stop before reaching the maximum of steering wheel throw, which will damage the servo.

STEERING DUAL RATE(ST D/R)

This function should be used when there is a condition of either under steering with insufficient steering throw or over steering with an excessive servo throw..

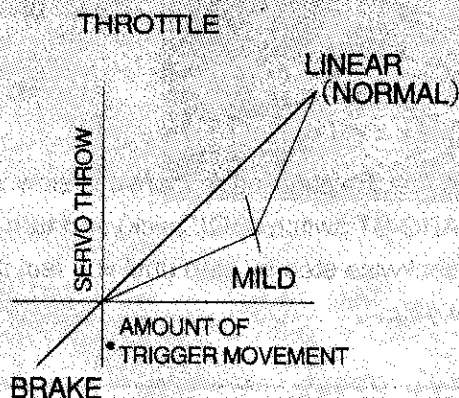
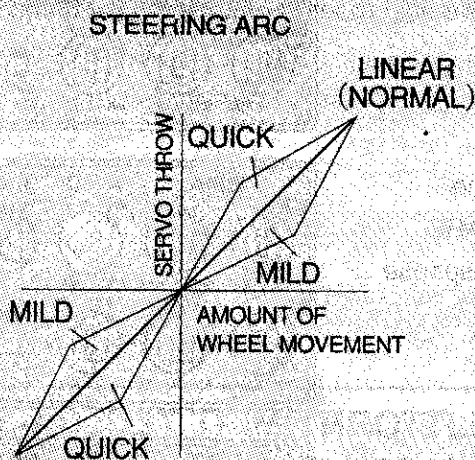
- 1) Turn the dual rate dial in the grip section towards the trigger until it gets to the maximum position.
- 2) Set up the R/C car after you turn the disk back approximately 5 clicks. You will then be able to adjust steering wheel throw while you are driving.
- 3) If you need more steering travel, turn the steering Dual-Rate dial clockwise, and if you need less travel, turn it counter-clockwise. Therefore, when you feel your car is under steering at the corner, turn the dial clockwise, and otherwise, turn it counter clockwise.



CAUTION: You must set up the car, so you will not lock up the steering servo when you turn the steering wheel.

ADJUSTABLE RATE CONTROL(ARC)

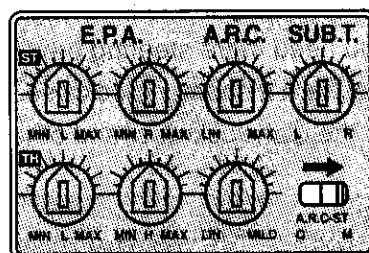
This function allows the proportional system to freely control various factors that a driver should deal with, such as the steering characteristics, road conditions and power-response of an R/C car.



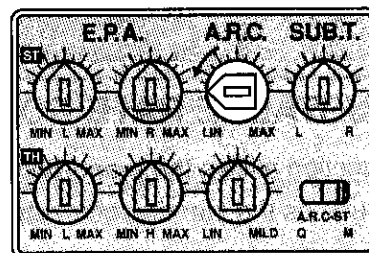
STEERING ARC

You can select the steering characteristics from Mild, Linear(Normal), and Quick response. If you determine that your R/C car has over steering during your driving, set the ARC switch to the M position and adjust it by ARC trimmer.

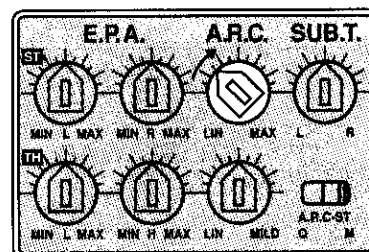
- 1) Set the ARC switch(ARC-ST) to M(mild) side.



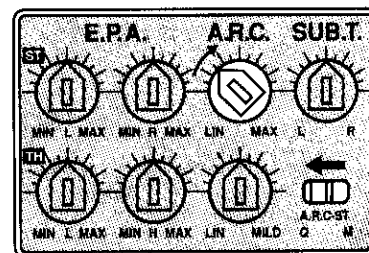
- 2) Set the steering ARC trimmer to Linear(LIN) position and test drive your car.



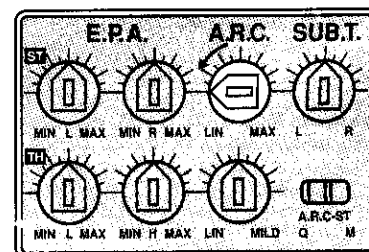
- 3) If you determine the steering response is too sensitive, turn the ARC trimmer clockwise step by step until you feel the response is best for you.



- 4) When you feel the steering response is slow, set the steering ARC-ST switch to Q(Quick) and turn the ARC trimmer clockwise step by step until you feel the response is best for you.



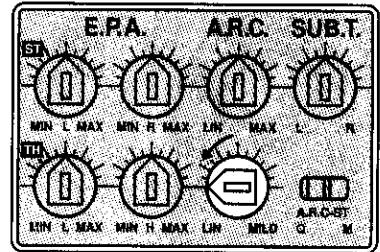
- 5) If you do not use the steering ARC or if you have not set a specific point, you should leave the ARC trimmer at Linear(LIN) and drive the car under the normal condition.



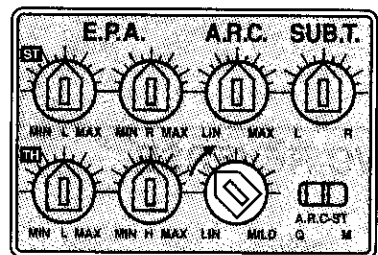
THROTTLE ARC

You can adjust the throttle response from Linear(normal) to Mild. It enables you to adjust the throttle response for specific road conditions and the power response of an R/C car.

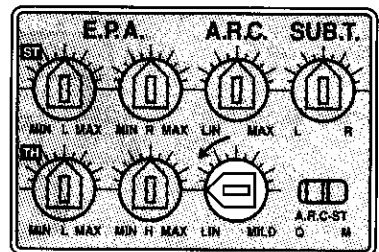
- 1) Set the throttle ARC trimmer at Linear(LIN) position and try a test drive.



- 2) If the power response is too sensitive, turn the throttle ARC trimmer toward mild until feel it is best for you.

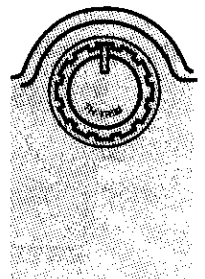


- 3) If you do not use the throttle ARC or have not set a specific point, set the ARC trimmer at Linear(LIN) and try a test drive.



BRAKE-ADJUST TRIM(THROTTLE TRIM KNOB)

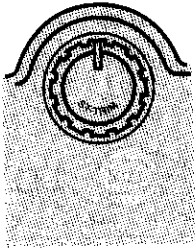
It is very useful when you use the neutral brake setting. Your throttle high position is not affected when you adjust the throttle trim.



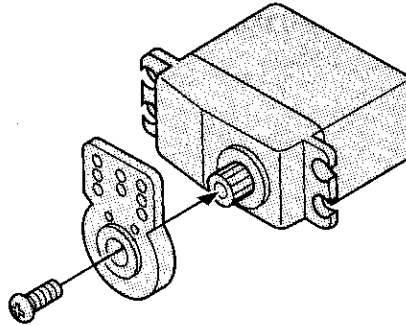
STEERING SUB TRIM

It is used to set the steering servo's neutral position.

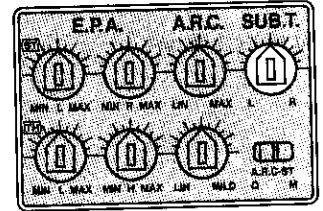
- 1) Set the steering trim and steering sub-trim at their center position.



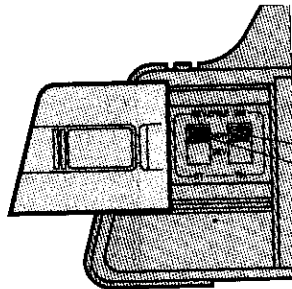
- 2) Set the servo saver horn closest to the neutral position.



- 3) Set the steering servo neutral by adjusting steering sub-trim trimmer.

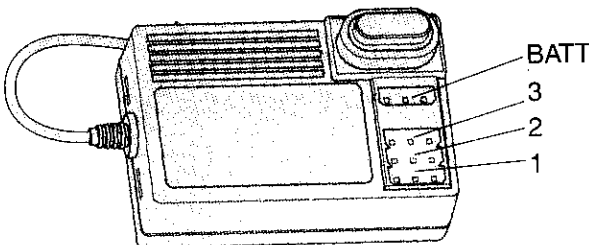


SERVO REVERSE



THROTTLE REVERSE SWITCH
STEERING REVERSE SWITCH

RECEIVER CONNECTOR POSITION



RECEIVER	POSITION
BATT	BATTERY / DSC
3	AUXILIARY
2	THROTTLE
1	STEERING

CONNECTORS CAUTION!

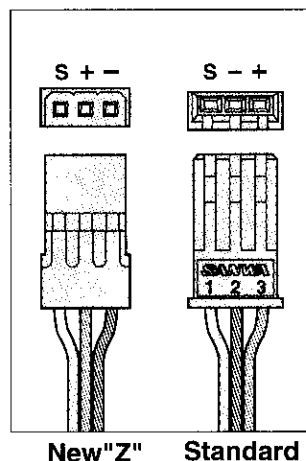
●Your CX2P system uses Airtronics New "Z" Connectors.

The receiver is blue in color and should be used only with "Z" connector equipped servos, speed control, switch harness or batteries.

●The receiver and all "Z" configured components use a different pin polarity than previous servos, speed controllers, switch harnesses and batteries and should not be used together.

To use your "Z" connector receiver with previous servos, etc. Conversion Cable No.99400Z must be used or new "Z" connectors installed by our service department.

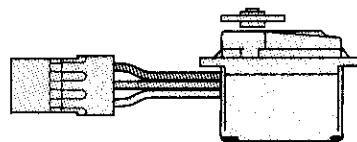
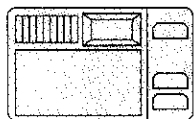
To use previous receivers with "Z" connector servos, etc. Conversion cable No.99399Z must be used.



Airtronics Receiver to Airtronics "Z" Servo

Standard Airtronics Receiver

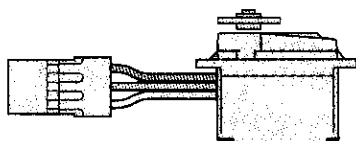
Adapter Cable/Part#99399Z



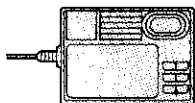
Use Your "Z" Connector with existing Airtronics Receivers

New "Z" Connector Servo

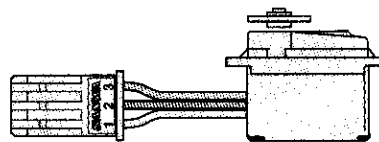
New "Z" Receiver
or other brands



New "Z" Connector Servo



Adapter Cable/Part#99400 Z



Use Your Standard Airtronics Servo with the New "Z" Connector Receiver Airtronics Standard Servo