



# 1/24 Mini 4WD Scale Crawler

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Some models shown are prototypes which may vary slightly from what is inside.

Einige dargestellte Produkte sind Prototypen und können leicht von dem Inhalt unterscheiden.

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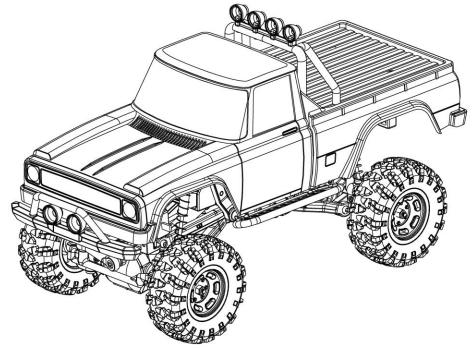












### Trail Start



Welcome to the ever-growing world of Carisma Scale Adventure.

Have you ever wanted to run a Scale Rig but the weather, or your location stopped you? Well, Carisma Scale Adventure now bring you two new models that will allow you to run anywhere a larger rig can't. The 1/24th MSA-1E Coyote Pup, and the MSA-1E Subaru Brat. Both have been designed from the ground up to not only look the part, but also perform way beyond their stature.

The sofa in the lounge becomes a range of mountains, floor cushions become giant boulders, your desk the great indoors, the backyard a never-ending wilderness. The only limits these rigs have is your own imagination (and possibly how predatory the local cats are!). Test both your driving ability and your course building ingenuity. Drive from point A. to point B. via point Z!

With their highly detailed bodyshells, 2.4GHz radio gear, locked axles, High torque steering servo and motor, a sturdy shaft driven driveline, 4-link suspension, optimised weight bias and high-grip, all-terrain tyres. Add to that our new Karma Drive Technology and bespoke electronics, and exciting things start to happen. They contain the essence of our full sized SCA-1E, just distilled.

Remember, the MSA-1E may be small in stature, but you can personalise it just like you would its bigger brother the SCA-1E. The limit is your own imagination.

These tiny trucks are designed for big #CarismaScaleAdventure, enjoy every millisecond of yours...

Life is short, so truly live it, one #CarismaScaleAdventure at a time!











#### SAFETY PRECAUTIONS

Thank you for your purchase of the Carisma MSA-1E Rig. With proper use and regular, basic maintenance, this rig will provide you and all those who drive it hours of reliable RC fun! Please read this manual to fully understand its features, capabilities, and the best operation of the product. Should you have a technical question or need replacement parts, please contact your local Carisma RC dealer, original place of purchase or our dedicated web Shop: http://www.carisma-shop.com. You may also contact us direct via e-mail at: webmaster@carisma-shop.com.

#### WARNING

Read the ENTIRE instruction manual to become familiar with the features of this product before operating. This is a sophisticated hobby grade product. It must be operated with caution and common sense. It will require some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product, persons, or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Carisma RC. This manual contains instructions for safe operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup, or use. If you are not prepared to accept these condition, please return this product immediately to place of purchase.

#### CAUTION:

This product is intended for ages 14+ Users under 18 years of age require parental supervision. Do not expose any battery or component to open flame or other source of high temperature. You must read the enclosed instruction manual completely prior to using this product.

Do not use any charger except the one included to charge the battery. Never leave a battery unattended during charging.

Do not expose any components to moisture.

Always avoid water exposure to all equipment that's not specifically designed and protected for this purpose. As the end user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others, or result in damage to the product, or property of others.

Always carefully follow the directions and warnings for this, and any optional equipment (chargers, etc.). This model is controlled by a radio signal subject to interference from many sources outside your control. Never place any portion of the vehicle in your mouth as it could cause serious injury or even death. Always operate your vehicle in open space away from full-size vehicles, traffic, people, and animals. Always keep a safe distance in all directions around your model to avoid collisions or injury. Always keep all chemicals, small parts, and anything electrical out of the reach of children. Always keep transmitter powered on while your vehicle is power on.

AA Cells

Always remove batteries after use or before disassembly.

Never operate your vehicle with low transmitter batteries.

Always keep your vehicle in sight and under control.

Never operate your vehicle with damaged wiring. Always let parts cool after use before touching.

Always let parts cool after use before touchin Always keep moving parts clean and dry.

Always use fully charged batteries.

USB Charger





7.2V NIMH 130MAH

**Battery Pack** 





Long Nosed Pliers



Micro Screwdrive

# CTX-2000 2.4GHz FHSS Technology System The following is an overview of the various functions and adjustments found on CTX-2000 radio system. It is important to read and

The following is an overview of the various functions and adjustments found on CTX-2000 radio system. It is important to read and understand about all of these functions and adjustments before driving.

#### **FUNCTIONS**

TRANSMITTER CTX-2000

Steering Wheel: Control direction (Left/Right) of the RC model.

Throttle Trigger: Control speed and direction (Forward/Brake/Backward)
of the driving model

ON / OFF Switch : Power ON / OFF the transmitter.

SW1 Button: Is used to synchronize the connection between the transmitter and the receiver. It also serves as additional function on different model.

LED Indicator: For indicating battery low, pairing in progess and normal

ATV: Adjust the maximum steering angle on both sides when model turns

ST. Trim Dial: Adjust the neutral position of steering servo when model wheels are straight ahead.

TH. Trim Dial : To adjust the throttle position

Steering Reverse: Reverse the response direction when operating Steering Wheel.

Throttle Reverse: Reverse the response direction when operating Throttle Trigger.

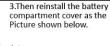
Throttle Limit Switch: Set the max Forward Speed of the model.

\* In general, user will experience under steer when making a wide turn at high speed or over steer when making sharp turn at high speed (easy to spin out). User should practice the Throttle and steering approach for different cornering at different speed or road surface.

#### **Battery Installation**

1. Supplied with 4 x 1.5V AA Batteries, radio can be operated a few hours. Installation: Remove the battery compartment cover as shown below.





Steering Reverse

ON/OFF

ATV

SW1 Button

Switch

TH. Trim Dial

ST. Trim Dial

LED Indicator

#### Warning:

Never disassemble batteries or put the batteries in fire, chemical agents, otherwise they may cause personal injuries or property damages.

Throttle Reverse Throttle Limit Switch

Throttle

Trigger

#### Battery Disposal:

Observe corresponding regulations about wasted battery treatment regulations.

- After running out of power, dispose of wasted batteries in designated areas far away from water supply, household areas and planted areas.
- Submit the wasted batteries to specific recycling stations.

#### **Battery LED Indicator**

The LED solid on indicating that the batteries have sufficient power. When batteries voltage drops below 4 volts, LED will Flash, indicating batteries power is low and should be replaced.

ATV enables to adjust the maximum steering angle of servo on both

sides (Left and Right) when model makes steering. The ATV affects

sensitivity of servo and reduce the same maximum steering angle

the sensitivity of servo. Reducing dual rate value can lower the

ATV



on both sides. Remember to

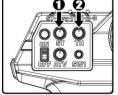
adjust the ATV within the

adjustment range.



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# Pre-Run Check



- 1. Steering: Adjust the steering trim to keep the front wheels in straight line when steering wheel remains in NEUTRAL position.
- 2. Throttle: Adjust the throttle trim to make the motor stop while throttle trigger at NEUTRAL position.
- \* Always turn on the transmitter first. If the LED is not solid on, you need to check whether the batteries are good or incorrectly installed.

#### Reversing

Steering Reverse: Reverse the response direction when operating steering wheel. Turning left steering wheel, the model turns right

while turning right the model turns left. Throttle Reverse: Reverse the response direction when operating throttle trigger. Pushing forward throttle trigger the model moves backward while pulling back, the model moves forward. If necessary you can just use a small screwdriver to adjust the responding switches.



#### Throttle Limit Switch

The slide switch to select the max forward speed:

- 1: Slowest
- 2: Intermediate
- 3: Fastest

#### MSA-1F Flectrics



#### MBC-24JST USB Charger

This charger is designed to charge the included 7.2V NIMH packs only. DO NOT charge any other type of battery. It is NOT intended for LiPo or Li-ion packs; or packs of a lower or higher voltage rating. When connected to a standard USB power source (500 mA or above is recommended), a red LED will light up indicating that the power is ON. During charging the maximum charging current is approx 100mA, and when the pack is fully charged, the charging current will drop. A typical time to fully charge a completed drained battery is 2 hours. After charging, disconnect the USB charger, and the pack. It is normal for the pack itself to feel slightly warm after charging.

NOTE: A partly discharged pack will take shorter time to be fully charged. BUT, due to the physiology of the NiMH packs, and their tenancy for memory effect, it is always best to fully discharge and cycle NiMH packs. It may take a few cycles for your pack to reach its full potential.

REMEMBER: younger RC fans must always charge the pack under adult supervision, and never leave the charging pack unattended. The red LED will NOT turn off, it only indicates that USB power is present. It is advised that you set a timer to independently notify you when the 2 hour charge cycle is complete. Failure to adhere to the correct charging procedure can lead to permanent damage to the pack, and in extreme cases, fire or personal injury. Charge smart, charge safe, follow guidelines.

# Motor port ARC-2000 LED Port (LED is not included) LED SV Output, [+-] ready for powering FPV

ON/OFF switch

Antenna wire

#### ARC-2000: RX/ESC Module Instructions

#### BINDING PROCESS

1. Power off the TX

- Press and hold the Bind key of the ARC-2000 combined RX/ESC on the vehicle itself, and then turn it on. the ARC's LED will start to flash slowly.
- Next hold the Bind button of CTX-2000 transmitter and then
  power it on. Again an LED will flash on the CTX when the binding
  process is initiated.
- 4.When the ARC shows a solidly lit LED, this indicates both TX and RX units have successfully paired and bound.
- 5. In the event the ARC LED stops flashing, this indicates the RX is not found by the TX. Move the position of the TX closer, and then start the procedure at step 1.

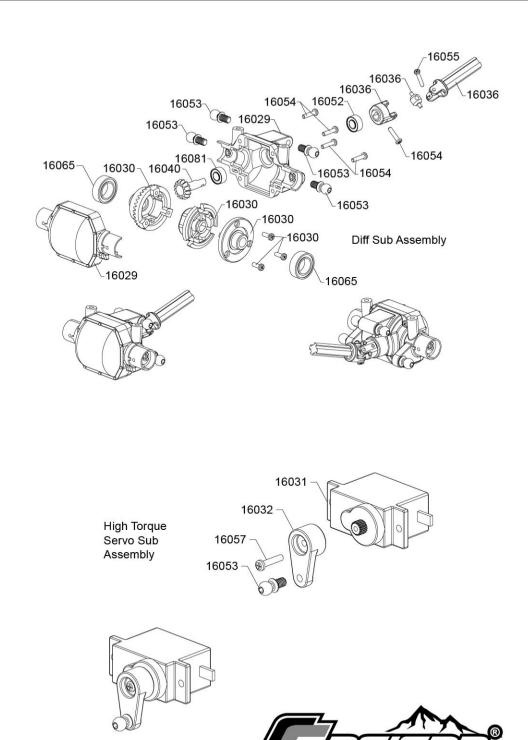
#### LED INDICATOR STATUS

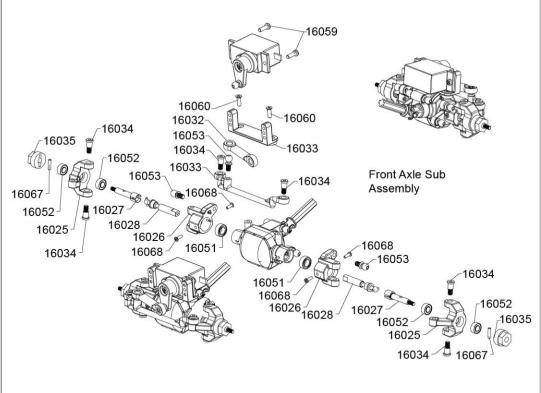
- 1.When a TX signal is received, the ARC LED will be either solidly on (indicating a NiMH pack) or will be Flashing (indicating a LiPo pack). NOTE: to set battery type, see section 4: 'Setting Battery Type'.
- 2.When the TX signal is lost for over 5 second, the ARC LED will flash twice repeatedly, and the steering servo will move once. This is a visual cue to remind you to power off the vehicle.
- 3.If you drive the vehicle at full throttle for long periods of time, the motor may become too hot. This will eventually damage the motor. The ARC will sense this and automatically stop the motor (Thermal Shutdown) for a while, allowing it to cool. The ARC LED will flash 6 times very quickly, and repeat this until the motor has cooled sufficiently. NOTE: If this happen again within a short space of time, the Thermal Shutdown time will be longer.
- 4.Setting Battery Type: During normal operation with TX, RX power on and throttle at stop position. Hold the Bind Key of ARC-2000 for over 5 seconds, the battery type will be changed to the next battery type. And the LED will immediately reflect

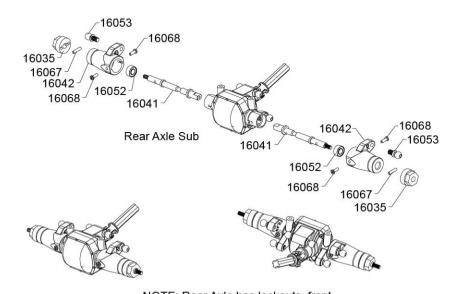
the battery type that has been selected. LED: Solid = NiMH Flashing = LiPo



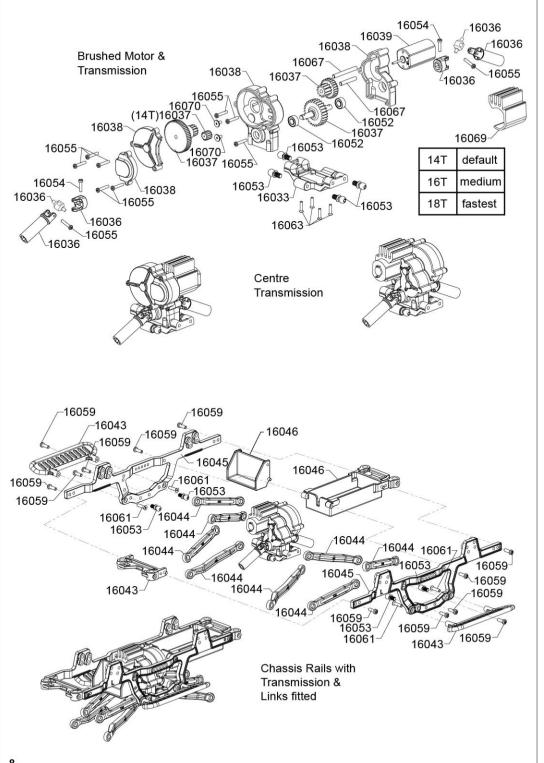
ATV

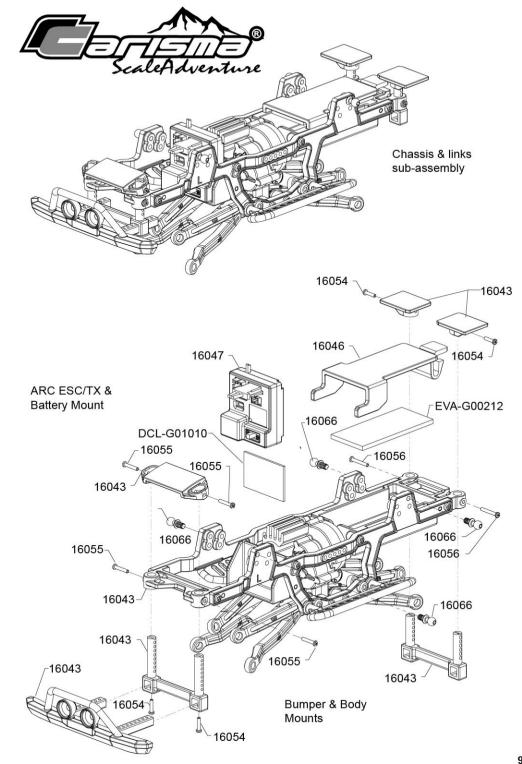




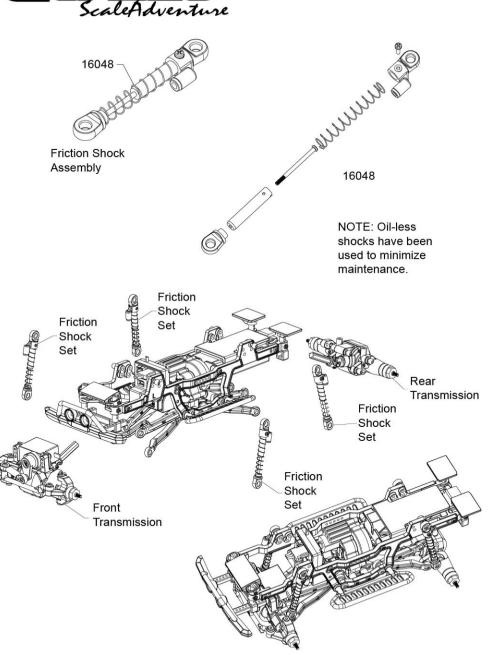


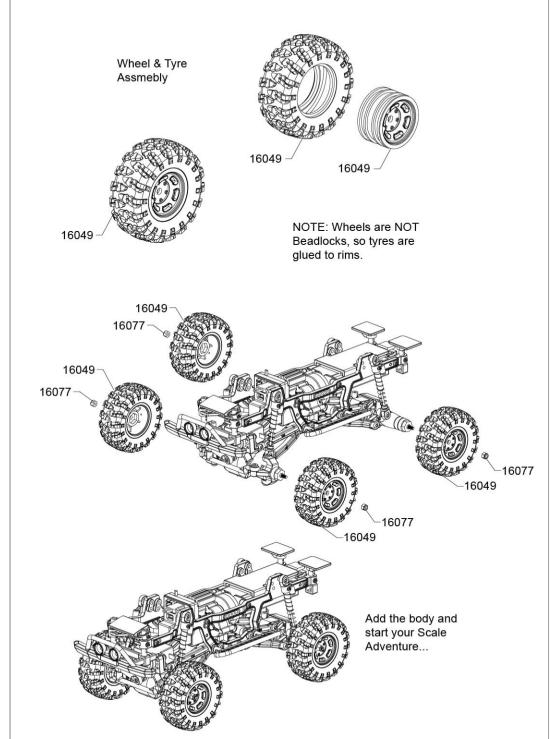
NOTE: Rear Axle has lockouts, front section with steering Knuckles and UJ's

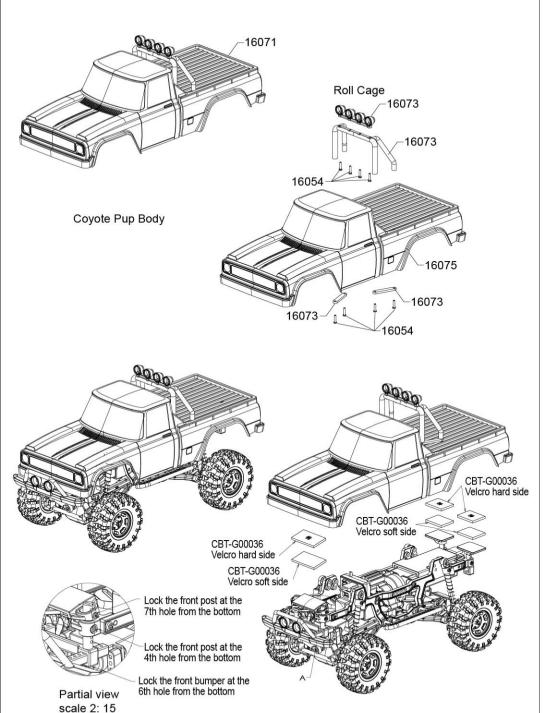






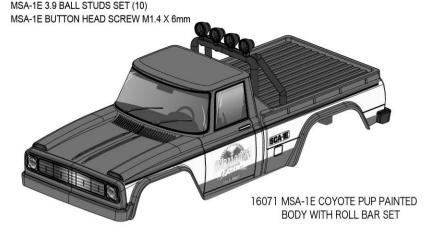






NOTE: The Body is held in position with Velcro for ease of removal and a cleaner 'Scale Adventure' look.

PART DESCRIPTION PART DESCRIPTION MSA-1E BUTTON HEAD SCREW M1.4 X 8mm 16025 MSA-1F STEFRING KNUCKLE SET MSA-1F FRONT STEERING C HUB SET MSA-1F BUTTON HEAD SCREW M1.4 X 10mm 16026 MSA-1F FRONT WHEFI SHAFT SET (PR) 16057 MSA-1F BUTTON HEAD SCREW M1.7 X 8mm 16027 16058 MSA-1F BUTTON HEAD SCREW M2 X 4mm 16028 MSA-1E FRONT DRIVE SHAFT SET(PR) 16029 MSA-1E DIFFERENTIAL CASE SET 16059 MSA-1E BUTTON HEAD SCREW M2 X 6mm MSA-1E DIFFERENTIAL HOUSING SET MSA-1F FLAT HEAD SCREW M2 X 6mm 16030 16060 MSA-1E FLAT HEAD SCREW M2 X 8mm 16031 MSA-1F MINI SERVO 16061 16032 MSA-1E SERVO HORN & STEERING LINK SET 16063 MSA-1E FLAT HEAD SCREW M1.4 X 6mm MSA-1E SERVO MOUNT & GEAR BOX BRACE SET 16065 MSA-1F BEARING 6X10X3MM SET 16033 MSA-1E 3.9 X 3.95mm BALL STUDS SET (4) 16034 MSA-1E KING PIN SET (4) 16066 16035 MSA-1E WHEEL HEX SET (4) 16067 MSA-1F PINS SFT MSA-1F UNIVERSAL JOINT SET 16068 MSA-1E FLANGED HEAD SCREW M1.4 X 4mm 16036 16069 MSA-1F MOTOR HEAT SINK 16037 MSA-1E TRANSMISSION GEAR SET MSA-1E CENTER GEAR BOX HOUSING SET 16070 MSA-1F 1.4 X 3mm TAPPING SCREW 16038 16039 MSA-1E MINI HIGH TORQUE BRUSHED MOTOR 16071 MSA-1E COYOTE PUP PAINTED BODY WITH ROLL BAR SET MSA-1E SUBARU BRAT PAINTED BODY WITH ROLL BAR SET 16040 MSA-1E INPUT PINION GEAR (PR) 16072 16073 MSA-1E ROLL BAR & LIGHT CUPS SET 16041 MSA-1E REAR DRIVE SHAFT (PR) 16074 MSA-1E SUBARU BRAT STICKER SHEET 16042 MSA-1F REAR AXLE HUB SET MSA-1E COYOTE PUP CLEAR BODY SET MSA-1E BUMPERS & BODY MOUNTS SET 16075 16043 MSA-1E SUSPENSION LINKS SET 16076 MSA-1F SUBARU BRAT CLEAR BODY SET 16044 MSA-1E M2 PLASTIC NUT SET (8) 16045 MSA-1F CHASSIS RAIL SET 16077 KD-PROPO CTX2000 2.4GHZ RADIO 16078 16046 MSA-1E BATTERY BOX & BRACE SET KD-PROPO MBC-24JST USB CHARGER 16047 MSA-1E KD-PROPO ARC2000 2 4GHZ RX/ESC 16079 KD-PROPO BATTERY DOOR FOR CTX2000 16048 MSA-1E FRICTION DAMPER SET 16080 16049 MSA-1E WHEEL & TYRE SET (PAIR) 16081 MSA-1E BEARING 3X6X2.5MM SET MSA-1E MOTOR PINION GEAR SET 16050 MSA-1E COYOTE PUP STICKER SHEET 16082 (14T/16T/18T) 16051 MSA-1F BUSHING 4X7X2 5MM SET 16052 MSA-1E BUSHING 3X6X2.5MM SET





16053

16054

#### CE Compliance Information For The European Union

Carisma hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the RED Directive 2014/53/EU

EN 301 489-1 V2.1.1. EN 301 489-17 V3.1.1. ETSI EN 300 328 V2.1.1

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use.

-	UK	DE	DK	BG	SE	CZ	ES	NL	SK	HU	RO	FR	PT
Ī	FI	EE	LV	LT	PL	AT	CY	SI	GR	МТ	IT	IE	LU

Products: CTX-2000, ARC-2000 Fauinment Class: 2

FCC Information FCC ID YDTCTX-2000

Item Name : CTX-2000 2 4GHz Transmitter

The objects of declaration described above are in conformity with the requirements of the specifications listed below. Manufactured By : Mun Ah Plastic Electronic Toys Company. Ltd

Statement - 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Warning:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

And should be operated with minimum distance of 20 cm between the antenna & your body.

#### Instructions for Disposal of WEFF by Users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling. please contact your local city office, your household waste disposal service or where you purchased the product.

#### **NCC Warning Statement**

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristic and functions of the original design of the certified lower power frequency electric machinery.

The application of lower power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

#### **FCC Information**

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 residential 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 on and off, the user is encouraged to correct the interference by one or more of the following measures: Regrient or relocate the receiving antenna. Increase the separation between the equipment and the receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

The equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. Modifications not authorized by the manufacturer may void the user's authority to operate this device. 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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Warranty Period: Carisma R/C warrants that the CTX-2000 ("Product") will be free from original factory defects in materials and workmanship upon purchase ("Warranty Period"). What is Not Covered - This warranty is not transferable and does not cover (a) cosmetic damage, (b) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (c) modification to any part of the Product, (d) attempted service by anyone other than a Carisma R/C authorized service center, or (e) Product not purchased from an authorized Carisma RC dealer.

OTHER THAN THE EXPRESS WARRANTY ABOVE, Carisma RC MAKES NO OTHER WARRANTY OR REPRE-SENTATION, AND THREFORE DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND SUITABILITY FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETER-MINED THAT THE PRODUCT WILL MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Purchaser's Remedy - Carisma RC's sole obligation and purchaser's sole and exclusive remedy shall be that Carisma RC will, at its option, either (a) service, or (b) replace, any Product determined by Carisma RC to be defective. Carisma RC reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Carisma RC. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

CARISMA RC SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, EVEN IF CARISMA RC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Further, in no event shall the liability of Carisma RC exceed the individual price of the Product on which liability Is asserted. As Carisma RC has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you'se the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase. This warranty gives you specific legal rights, and you may also have other rights which vary from country to country, or state to state. Carisma RC reserves the right to change or modify this warranty at any time without notice.

MUN AH PLASTIC ELECTRONIC TOYS CO., LTD. Flat G, 21 Floor, Kingsway Industrial Building, Phase 2, 173 - 175 Wo Yi Hop Road, Kwai Chung, N.T., Hong Kong.

Note: For official Carisma RC spare parts, see your local hobby shop or place of purchase first. If unavailable, parts can be ordered direct at: http://www.carisma-shop.o

## **MSA-1E Setup Notes**



Shocks - Spring Rate & Preload:
FPV Add On Channel Used:
Battery Type & MAh Rating:
Motor Wind & Gearing:
Other Setup Options Used:

"Owning a MSA-1E is just the start, where it takes you Is the real adventure..."

Ivan Carisma