MRZ DWS KIT - 1:28 Rear Wheel Drive Competition Pan Car Chassis
**01 Chassis Center Pivot (open Bag 1 to 5)**

- 3.5mm Steel Ball
- Steel Washer 2*4*0.5mm
- Aluminium Pivot Cup
- Flat Head Machine Thread (KM 2*4)
- Motor Plate

Note the direction of the cup.

**02 Chassis Center Pivot**

- Main Chassis Plate
- 3.5mm Steel Ball
- Steel Washer 2*4*0.5mm
- Pivot Base
- 3.0mm Steel Ball

KM 2*4
03 Side Links System

04 Fixing Side Links

Number facing upward.
05 Side Body Mount (open Bag 06, 07)

Pay attention to the orientation of the mount. "Wave shape" is facing Upward.

06 Car Body Mount Plate

Carbon body mount
**Car Body Mount Plate**

Pay attention to the orientation of the mount. “Wave shape” is facing **Downward**.

**Motor Pod**

**Machine threaded Screw 2*4**
09 Ride Height Spacers

- Machine threaded Screw 2*6
- 0.3mm spacers x 3

10 Side Spring Trays (open Bag 08)

- Side Spring Cup
- Metal Lock Nut M2
- Machine threaded Screw 2*8
- Leave about 0.8 mm gap
Before install the springs, fully compress them few times. This makes spring shorter and softer. Fail to do this step, the rear grip of the car will be decreased a lot.

11 Side Springs (open Bag 09)

The side spring will be holding firmly by the screw thread once you fix them onto the screw, so you need to rotate the spring anti-clockwise if you want to take them out. (like removing a screw) Do not just pull the spring out, it will damage it.

12 Body Post Plate

3.5mm Steel Ball Head

Steel Washer 2*4*0.5mm

Machine threaded Screw M2*6
13 Middle Chassis Support

Steel Support Post

KM 2x4

14 Battery Mount

Plastic Mount

Apply Instant Glue to Fix

Carbon Plate

Plastic Mount

Apply Instant Glue to Fix
15 Battery Mount Door

- 3.5mm Steel Ball
- Steel Washer 2*4*0.5mm
- Button Head PM 2*4
- Rubber O-ring (3x1.5x0.75)
- Battery Mount Door (carbon fiber)
- M1.6 * 4 Button Head (please do not mixed up with M2 screws)

16 Battery Mount Installation

- KM 2*4
- KM 2*6
17 Lateral Shock Dampers

Steel Washer 2*4*0.5mm
Fine threaded Button
Head 2*4

3.5mm Steel Ball

Steel Washer 2*4*0.5mm
Fine threaded Button
Head 2*4

3.5mm Steel Ball

Fine threaded 2*6

Damper Tube

Fine threaded 2*6

3.5mm Ball Cap
1.0 mm Gap

Steel Damper Shaft

Apply #25000 or 35000 damper grease to the shaft.
18 Center Shock Damper

- Spring Tension Collar
- Shock Body
- 3.5mm Ball Cap
- Steel Shock Shaft
- Apply #25000 or 35000 damper grease to the shaft.
- Insert Small Mid Spring (3mm long)
- M2*2 set screw (Steel)
- Metal Collar
- Spring support (Plastic)
- Center Spring (may need some force to get it in place, no worry just push it, spring is flexible)
19 Center Shock Damper

20 Servo Horn

Servo (not included)

MRZ suitable servos:
size within 20.0(W) * 18.0(L) * 8.5 (H) mm

2.5mm Steel Ball Head, M1.4 thread
** The Second Top Hole is recommended.

Please use the screw and servo horn that come with the servo.
21 Servo Installation (open Bag 10)

- Servo Mount (plastic)
- Self Tapping 2*6
- Self Tapping 2*4

22 Lower Arms (open Bag 13)

- Screw Tip come out around 0.8mm
- Droop screw setup

- Right Arm
- Left Arm
- M1.2 * 3 Button Head
22 Lower Arms

- Alu. Arm Mount
- Steel Pin 1.5 * 12
- M1.6 * 3 (Flat Head)
- Self Tapping 2*4
- Front Bulkhead

23 Upper Arm Mount

- Aluminium Upper Arm Mount
- Steel Steering Post
- Carbon Plate
- KM 2*4
- KM 2*8 (Better to apply thread lock glue)
24 **Install the Servo Plate**

[Diagram showing the installation of the Servo Plate with annotations]

25 **Steering Knuckles**  
Build Left and Right Knuckle as picture shown.

- **2.5m Steel Long Neck Ball Head**
  - Second hole: Linear steering (Recommended)
  - Front hole: Aggressive steering

- **Steel Wheel Axle**:
  - Apply instant glue to secure the axle to the knuckle

- **Cup Head M2*8**
25 Steering Knuckles

- 2 x 4 x 0.5mm shim 3 pcs
- M2 x 12 set screw
- 3.5mm Ball Head
26 Upper Arms Preparation

- M1.4 * 8 Steel Screw
- Steel Washer 1.5*2.5*0.2mm
- M1.4 Brass Nut
- 3.5 Ball Cap

Do not over tighten the screw, it may damage the plastic arm.

27 Upper Arms Preparation

Leave around 0.3mm gap (its about 2 degree camber angle)
28 Upper Arms

- **0.05mm Steel Washer**: To eliminate wobble, if necessary.
- **1.5*10 Steel Pin**: For securing the pin to eliminate wobble.
- **M2 *2 Set Screw**: (to secure the pin, remove wobble)

29 Steering Crank

- **3*6*2 Bearing**
- **2.5mm Steel Ball Head**
- **2.5mm Steel Ball Head**
- **Steering Crank (Plastic)**
30 Installing Steering Crank

Tighten the Nylon nut slowly, adjust it and make sure the crank rotates smooth and no wobble.

31 Steering Linkages

Around 20.2mm

2.5 Ball Cap  2.5 Ball Cap

Reverse Thread  Normal Thread

YouTube Video: Scan this QR Code to see how to make the ball link Smooth and no wobble.
https://www.youtube.com/watch?feature=youtu.be&v=RMhkoIUS_og
32 Servo Linkage

Trim the 2.5 ball caps, shorten it around 0.5 to 0.8 and use M1.4 x 6 steel link to joint. Make a short linkage. (Better to apply CA glue to make strong bond.)

33 Gear Differential (open Bag 11)

Right Wheel Hub (plastic)

Diff Housing

8.5mm

5 x 8 x 2 Bearing
Apply Thrust Bearing Grease to each moving parts and gears. (Do Not add other kind of grease)
### 36 LSD Clutch

- LSD Clutch Shoe x 2
- LSD Clutch O-ring
- 3 x 6 x 2 Bearing
- E-Clip

### 37 Spur Gear

- Spur Gear
- O-Ring (Rubber)
- 14mm inner hole
38 Install the Differential

- 3 x 4.1 x 0.1mm White Shims
- 3 x 6 x 2.5 Bearing

39 Wheel Adaptor

- 3 x 4.1 x 0.1mm White Shims
- M2.5 set screw
- Wheel Adaptor (Aluminium)
Rear Diffuser – some of the car body might not be able to install diffuser.

Hex Flat Head M2*4

40 Side Spring Adjust

Adjust the side spring cup, to make the spring just barely touch the top plate.

Note:
- More Spring pre-load to the plate, the car will have more steering, rear spin faster in corners.
- Less pre-load, will make the car has more rear grip.
- Make sure the spring tension feeling is symmetrically left to right.
41 Prepare the Dampers.

Put some 35000 grease (or cleaning clay) to add friction between spring collar and tube body.

Put some 25000 grease for damping.

Cut the Tube about 0.5mm.

Cut the Piston about 0.5mm too.
Note:
To have a good performance and stable car, the key point is to make sure there is “No droop” no matter what ride height the front it is. That means, the front arm is not able to drop down if you lift the car. Adjust it thru the “droop screw” of the lower arm to achieve this. (If you sway Bar is installed, the situation is different. It needs some droop to work well)
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