MGX

RATED GYRO FOR RC CARS / BOATS

The **MST MGX** drifting gyro is an ultra-high-performance steering gyro for a wide range of needs and is very suitable for players of all levels. It provides dual sensitivity mode (normal / AVCS sensitivity) and supports EPA stroke setting & wireless sensitivity adjustment.
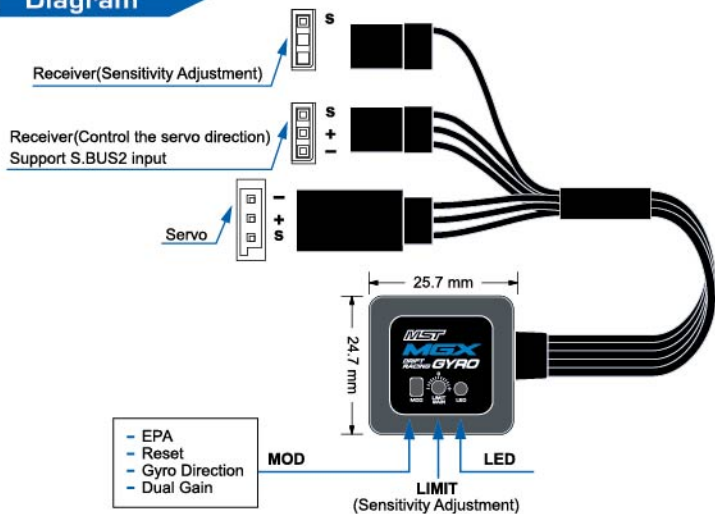
Feature

- Super light-weight plastic case and well-protection
- Reliable and high-performance gyroscope sensor
- Simple and quick installation with compact size
- High voltage 2s Lipo capable
- Compatible with latest Futaba S.BUS2 protocol
- EPA feature for matching different scale car
- Easy adjustment with dual gain modes of Normal / AVCS (Normal mode is recommended for RC drift purpose)
- Fits on RC Drift / Racing car
- Switchable for digital / analog servo

Specification

SHELL MATERIAL	ABS
WEIGHT	10g
DIMENSION	25.7×24.7×9.5mm
OPERATINH VOLTAGE	3.7~8.4V
CURRENT DRAIN	20mA / 6V
OPERARING TEMPERATURE	-10°C ~ +50°C
INPUT SIGNAL	PWM (50-333Hz) / SANWA SHR; SSR / FUTABA S.BUS2
OUTPUT SIGNAL	1520uS (50Hz / 333Hz) / SANWA SSR
CONTROL SYSTEM	PID Control System
DUAL MODE GAIN	Normal / AVCS Mode

Diagram

Receiver(Sensitivity Adjustment)

Receiver(Control the servo direction)
Support S.BUS2 input

Servo

25.7 mm
24.7 mm

- EPA
- Reset
- Gyro Direction
- Dual Gain

MOD   LED

LIMIT
(Sensitivity Adjustment)

LED Status

LED	STATUS
Red Fast Blink	Gyro Initialization
Yellow Fast Blink	Loss of Control Signal
Green Solid Light	Normal Mode / Gain Adjusted by Gain Channel(CH3)
Green Slow Blink	Normal Mode / Gain Adjusted by Potentiometer
Red Solid Light	AVCS Mode / Gain Adjusted by Gain Channel(CH3)
Red Slow Blink	AVCS Mode / Gain Adjusted by Potentiometer
Yellow On for 3 Seconds	Normal / AVCS Mode Setting
Yellow Slow Blink 3 times	Forward and Reverse Gian Setting
Yellow Slow Blink	Travel Setting Mode

Instruction of Function Switch

◆ EPA (Travel Setting)

Press the "MOD" switch to power on, yellow LED blinks slowly. Entering to the servo travel setting, rotate the remote control steering wheel to make servo stop at the desired position (turn left / turn right). Short press "MOD" switch, yellow LED blinks 2 times quickly, red LED becomes solid, and green LED blinks slowly, it means current travel has been saved. Then rotate the remote control steering wheel to make the servo stop at the other desired position, short press the switch, yellow LED blinks 2 times quickly, and then the yellow LED turns on, it means current travel has been saved as well. 2 seconds later, the gyro will automatically enter into initialization, once completed, gyro is ready for use.

◆ Reset (Travel Restore Default Setting)

Press the "MOD" switch to power on and enter into the travel setting mode. After pressing and holding the switch for 3 seconds, the yellow LED starts to blinks alternately. Restore to default after 2 seconds. Then it will enter into initialization, once initialization is completed, the gyro is ready for use.

◆ Gyro Direction (Forward and Reverse Gain Setting)

In normal working status, press and hold the "MOD" switch for 4 seconds, yellow LED blinks slowly 3 times, then switch the gain forward or reverse.

◆ Dual Gain Mode Setting (Normal / AVCS Mode)

In normal working conditions, fast press the "MOD" switch 2 times, yellow LED is on lasting for 3 seconds, then switch the mode to Normal or AVCS .
Normal side : Green LED, AVCS side : Red LED

◆ Digital / Analog Servo Mode Settings

Under the normal working conditions, quickly press the MOD switch 3 times to switch between digital and analog servo modes.
Blue light off : digital servo mode ; Blue solid light : analog servo mode

Receiver Connection (Input Signal Mode)

◆ PWM (50-333Hz)

Suitable for most of remote control systems, while plug in the gain wire, it can adjust the sensitivity by transmitter (as pic 1) ; While do not plug in the gain wire, the gyro's potentiometer can be used for gain adjustment. (as pic 2)
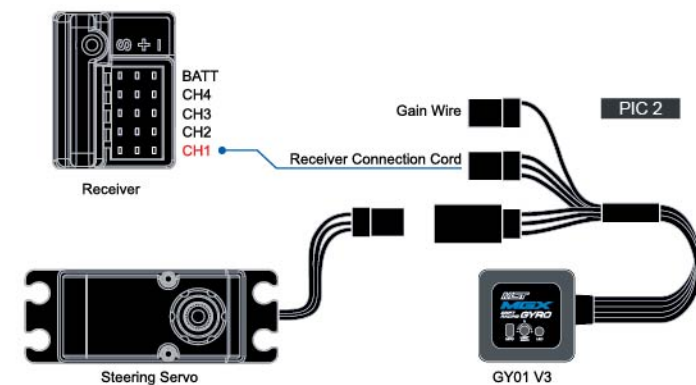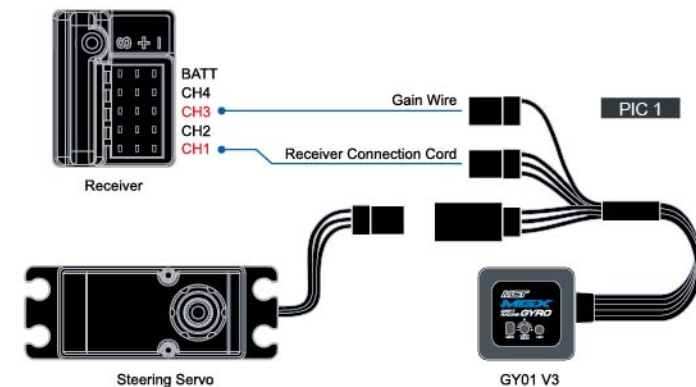
◆ FUTABA S.BUS2

Suitable for FUTABA latest S.BUS2 and S.BUS remote control system. When S.BUS2 signal input is used, default CH3 channel for sensitivity adjustment, and the gyro gain wire is not used.

◆ SANWA SSR / SANWA SHR

Suitable for SANWA remote control system. When using SSR / SHR signal input, the output signal is automatically adapted to SSR / SHR signal.

Note:

The SANWA SSR signal is only applicable to SSR servos. It may cause permanent damage if using regular servos.

BATT
CH4
CH3
CH2
CH1

Gain Wire

PIC 1

Receiver Connection Cord

Receiver

Steering Servo   GY01 V3

BATT
CH4
CH3
CH2
CH1

Gain Wire

PIC 2

Receiver Connection Cord

Receiver

Steering Servo   GY01 V3

Limit Gain (Gain Adjustment)

◆ Adjust the gain via gain channel of the transmitter (default for S.BUS2 input), the range is from -100% ~ 0 ~ +100%.
(a) 0 means sensitivity zero.
(b) -100% / +100% means maximum gain.

◆ While do not plug in the gain wire, the gyro's potentiometer can be used for gain adjustment.

MST

MGX

遙控車用

MST MGX是一款超高性能甩尾車轉向陀螺儀,可滿足廣泛的需求,非常適合各層級的玩家。提供雙感度模式(正常感度/AVCS感度)並具有EPA行程設置與支援無線感度調整。
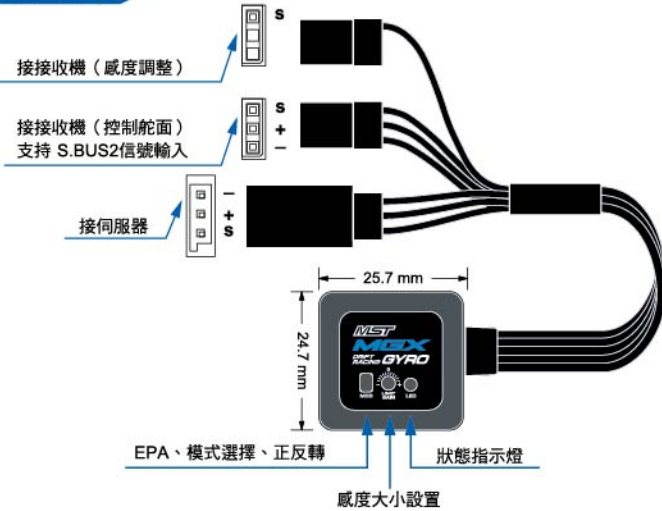
功能特點

- 輕量化塑膠外殼
- 採用高性能進口陀螺儀晶片
- 體積小,安裝簡便快捷
- 支援高壓2S LIPO
- 支持最新款FUTABA S.BUS2通訊協定
- 新增EPA功能(行程設置),更好的匹配不同的車型
- 雙模式感度選擇,正常感度/AVCS感度(甩尾車推薦正常感度)
- 適用於甩尾車/競速車
- 可切換 數位/類比模式設置

參數

外殼	ABS
重量	10g
尺寸	25.7 × 24.7 × 9.5mm
工作電壓	3.7~8.4V
耗電流	20mA / 6V
工作溫度	-10°C~+50°C
支援輸入信號	PWM (50-333Hz) / SANWA SHR;SSR/ FUTABA S.BUS2
輸出伺服機信號	1520uS (50Hz / 333Hz) / SANWA SSR
控制系統	PID控制系
雙模式感度增益	正常/AVCS模式

產品示意圖

接接收機(感度調整)

接接收機(控制舵面)
支持 S.BUS2信號輸入

接伺服器

25.7 mm
24.7 mm

EPA、模式選擇、正反轉　　狀態指示燈

感度大小設置

LED狀態指示燈

LED	狀態
紅色 快閃	陀螺儀初始化
黃色 快閃	遙控信號丟失
綠色 常亮	正常模式/感度通道調整感度(CH3)
綠色 慢閃	正常模式/電位器調整感度
紅色 常亮	AVCS模式/感度通道調整感度(CH3)
紅色 慢閃	AVCS模式/電位器調整感度
黃色 長亮3秒	正常/AVCS模式設置
黃色 慢閃3次	感度正反向設置
黃色 慢閃	行程設置模式

功能開關操作說明

◆ 行程設置

按著MOD按鈕開啟電源進入行程設置模式,黃燈慢閃,進入伺服機行程設置,旋轉遙控器方向舵,使伺服機轉到所需要的位置上(可向左/右邊),短按一下MOD按鈕,黃燈快閃2下,紅燈變成慢閃,綠燈常亮,表示這個行程已經保存,再旋轉遙控器方向舵,使伺服機轉到另一個方向所需要的位置,短按一下MOD按鈕,黃燈快閃2下,然後黃燈亮起,表示這個行程也已經保存。2秒後陀螺儀自動進入初始化,初始化完成後可以正常工作。

◆ 行程恢復默認設置

按著MOD按鈕開啟電源進入行程設置模式,長按開關3秒後,黃燈開始交替閃爍,2秒後恢復成默認設置。然後進入初始化,初始化完成後可以正常工作。

◆ 感度正反向設置

正常工作狀態下,長按MOD按鈕4秒後,黃色慢閃3次,切換感度正反向

◆ 正常/AVCS模式設置

在正常工作狀態下,快速按MOD按鈕2次,黃色長亮3S,切換正常/AVCS模式
正常模式:綠燈,AVCS模式:紅燈

◆ 數位/類比模式設置

在正常工作狀態下,快速按MOD按鈕3次,切換數位/類比模式
藍色燈不亮:數位模式;藍色燈常亮:類比模式

信號輸入模式

◆ PWM (50-333Hz)

適用於大部分遙控系統,當插入感度線時,通過遙控器調整感度大小(如圖一);當感度線不插入時,使用陀螺儀本身電位器來做調整感度大小(如圖二)。
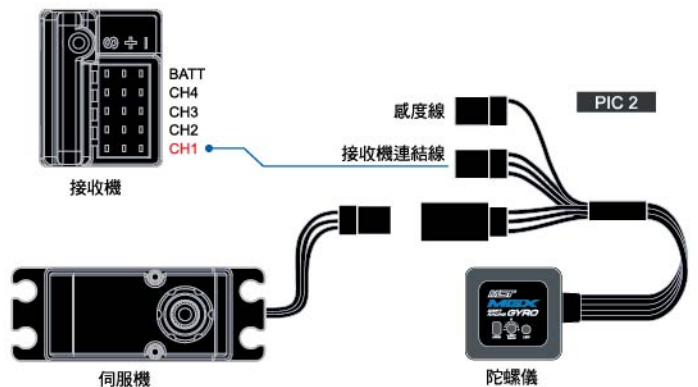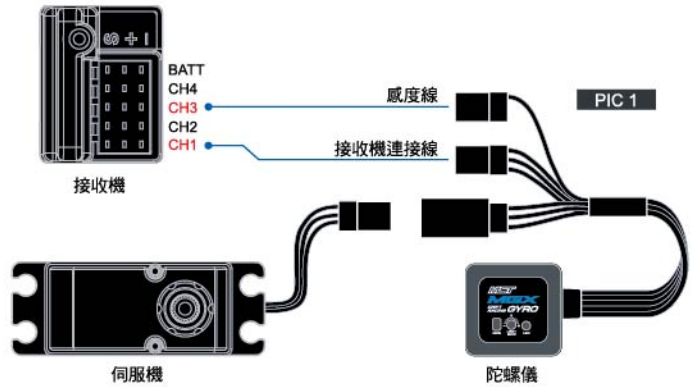
◆ FUTABA S.BUS2

適用於FUTABA S.BUS2遙控系統,當使用S.BUS2信號輸入,預設CH3通道做感度模式控制,陀螺儀感度線不用插。

◆ SANWA SSR / SANWA SHR

適用於SANWA遙控系統,當使用SSR/SHR信號輸入時,輸出信號自動適配為SSR/SHR信號。

注意提示:
SANWA SSR信號只適用於支援SSR的伺服機,用普通伺服機可能造成永久損壞。

BATT
CH4
CH3 — 感度線
CH2
CH1 — 接收機連接線
接收機
伺服機
陀螺儀
PIC 1

BATT
CH4
CH3
CH2　感度線
CH1 — 接收機連結線
接收機
伺服機
陀螺儀
PIC 2

感度大小調整

◆ 利用遙控感度通道進行感度調整(S.BUS2 輸入時默認),範圍從 -100% ~ 0 ~ +100%
(a) 0 為沒有感度
(b) -100% / +100%為感度最大

◆ 當沒有使用感度線輸入時,使用陀螺儀本身電位器來做感度大小調整