



**UAT MTP**



# Active day and night

Design and Produce by MTP(Manufactory)

**Yours Speed Radar Sign  
Without Face**



**MTP POLAND sp. z o.o**

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[www.UATmtp.com](http://www.UATmtp.com)

## Technical Specification

Dimension	Size : 60*75*5cm (without sign) 60*135*5cm (with sign)
Weight	15Kg
Body Material	Aluminum black color Electrostatic powder coated
Solar power	30 Watts, Life time more than 20 years
Battery	Internal 12-volt, 18 Ah, sealed lead acid
Display model	2 digits with 7 segment LED board
LED quantity	392pcs Super high bright
LED Color	196pcs Red 196pcs Green
LED Life	More than 100,000 Hours
Light luminous	8000mcd
Light Intensity	Automatic regulation light intensity in day and night (day intensity 5 times night)
Light Increment	Charge controller with microcontroller
Radar	CW Doppler device operating in the K-Band (24GHz)
Speed Detection Rang	1km/h –99km/h
Detection distance	≤100m
Response Time	≤5ms
Working time after full charge	4 days
Visible distance	More than 100m
Angle	100 Degree

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<b>Reflective sheet</b>	<b>3M</b>
<b>Operating Temperature</b>	<b>-20° C to 75° C</b>

## Features

Uses Solar Energy as source of electricity.

Display effects includes active flash & passive reflection

The light pattern delivers a synchronized or sequential visual effects which will not make drivers feel glare; instead, drivers can be informed his speed.

Inside key switch control, If turn on, all system will function (solar panel, LED light, charging) and opposite function for turn off.

## LED



LEDs are identified very well and amount of their desired life is 100.000 hours in lawful range for traffic light and traffic signals and its light intensity is 8000mcd. Total numbers of LEDs in one module are equal to 392pcs for Seven Segment.

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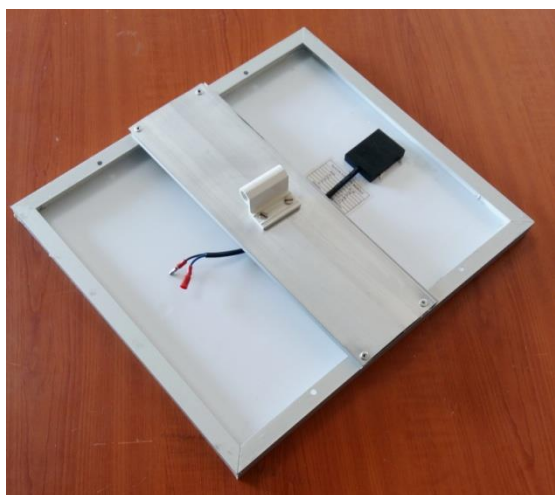
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## Battery



Sealed Lead Acid batteries of 1×12v (18Ah), having desired life of 5 years.

## Solar Panel



SILICON SOLAR PV MODULE	
Model	SA- 30P
Pm	30watt
Vmp	18V
Imp	1.5A
Voc	21. 24V
Isc	1.98A
Dimension	45*35*3cm
Max System Voltage	1000V
Test Condition	AM1.5 1000W/m <sup>2</sup> 25°C

Solar panel is 30W, 17v 1.98A, with the efficiency of %16

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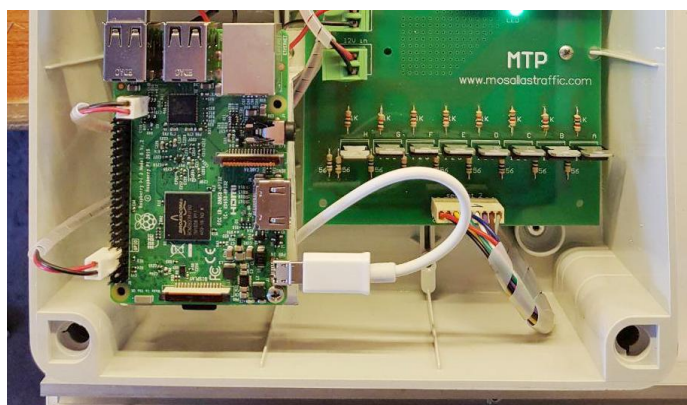
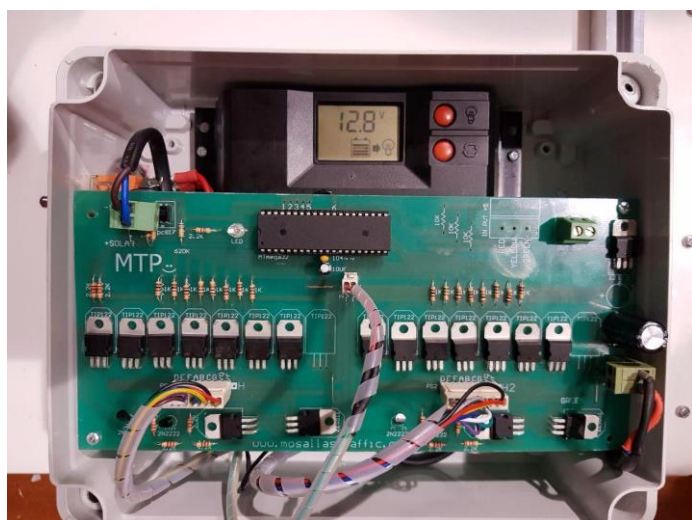
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# Intelligent Microcontroller System



- Processing data from Radar and Camera,
- Synchronizing Radar with Camera,
- Taking violator vehicle picture on specific area,
- Arranging Time, Date, Location of violation,
- Sending picture and data to Control Room Center through WIFI or Sim Card internet,
- Measuring voltage of battery, solar panel, charge current and related measuring,
- Light Regulation and optimization of consumption, according to charge current (environmental light) and battery voltage and solar panel,
- Neutralizing of change effects of battery voltage in light illumination of flashing light,
- Preventing of battery over charge and undesired de-charge of battery and neutralizing effect of heat,
- Using modulation of PWM for changing light illumination,
- Probability of performing all changes, according to orders of buyer, (Software changes),
- Working time, without any charge and with full battery is almost 4 days,
- Maximum exited rates (day) into its minimum (night) is 5 to 1 and (it is changeable, on the basis of order),

Controller circuit is considered in a separated package.

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## Radar



K2 Pico Flex (Kestrel)  
This is Radar which we are using now

CW Doppler device operating in the K-Band (24GHz)

## Other Spare Parts



5-inch hose clamp



3-inch Stainless Steel Clamp

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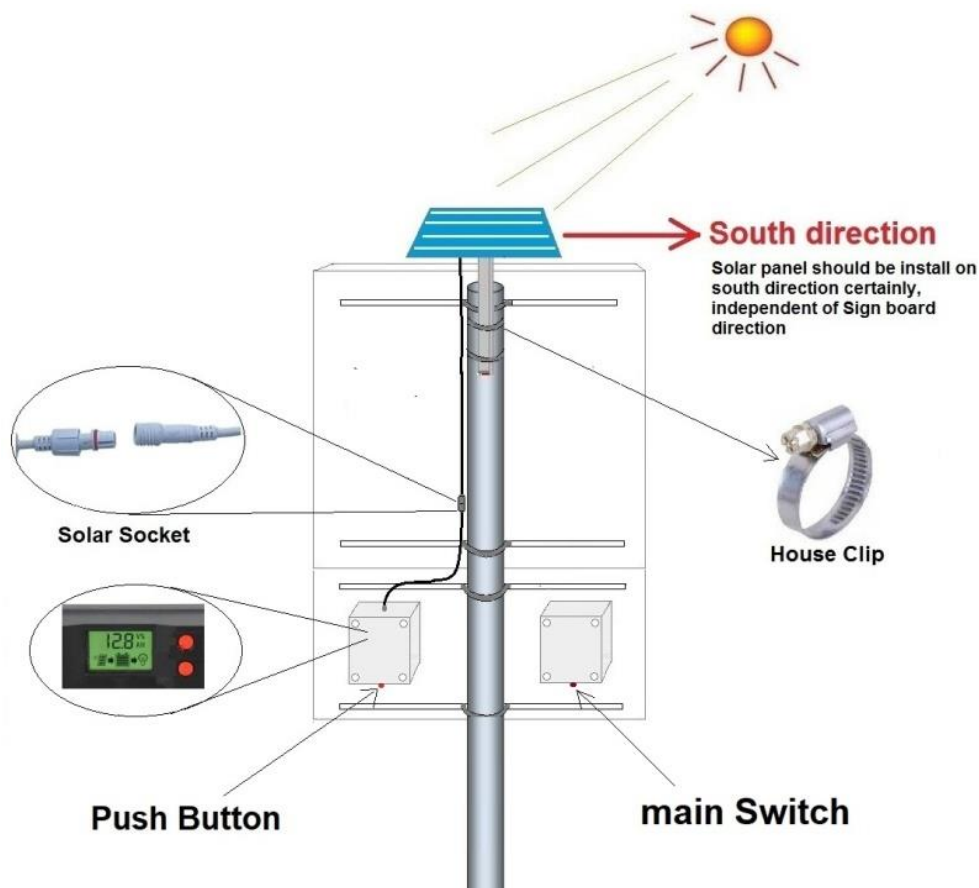
# Installation Guide

## Installation:

### Five Steps to Installation:

- 1- Fixing Sign Board on the Pole with Hose Clip,
- 2- Fixing Solar panel on top of pole in **South direction** with Round Clamp,
- 3- Connect solar cable Socket to control box Socket,
- 4- Turn ON main switch which is below controller box,
- 5- Adjust speed limit by push button which is below of control box, it will increase with 5km steps, green light shows speed limit after each push,

**Note:** If want keep sign on the store, please turn OFF main switch,



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## Solar Panel Connection

Each solar panel has a cable, having 1 socket. After installation sign board on the pole, Connect Solar cable Socket to control box Socket.



Solar panel is installed on pole by an aluminum tube. After orientation of solar panel into south, they are fastened by two house clips.

The solar panels work with the solar controller located in the system's battery compartment. The controller continually recharges the batteries up to full whenever sufficient sunlight generates a charging current. It prevents overcharging the batteries and draining the batteries during low-light periods. Appropriate panel size for solar assist depends on display sign model, traffic volume, geographic location, battery capacity and operating times. Actual performance depends on application and mounting location. Place panels in direct sunlight and tilt them toward true south to maximize their effectiveness. To calculate the best angle of tilt in the winter when there are the least sun hours, take your latitude, multiply by 0.89, and add 24 degrees. The result is the angle from the horizontal at which the panel should be tilted. Mount the Your Speed display unit so the display remains out of direct sunlight whenever possible for optimal viewing. MTP uses Sealed Lead Acid batteries for solar systems, as charging lithium batteries in extreme hot or cold temperatures can damage the battery.

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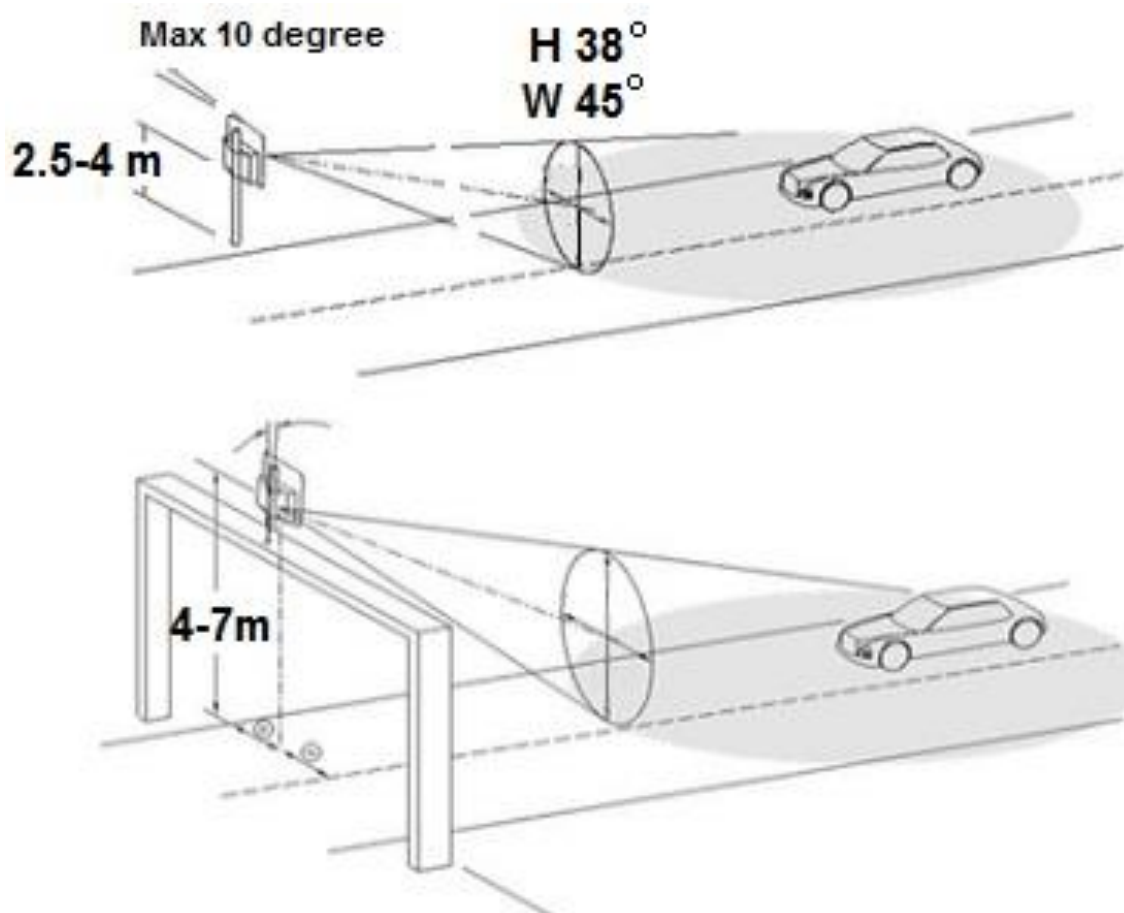
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**Note:**

The Your Speed Sign fixed on the road left or right, or just above the road, so that the direction of the radar port to the car, the tilt angle of not more than 10 degrees.

If it is fixed above the road, the radar fixed position should be radar Cavity oblique angle alignment to the car location. At the same time, the higher the distance between the radar and the ground, the farther away the radar works. Generally, the distance from the ground to radar in 2.5-7 m is better.

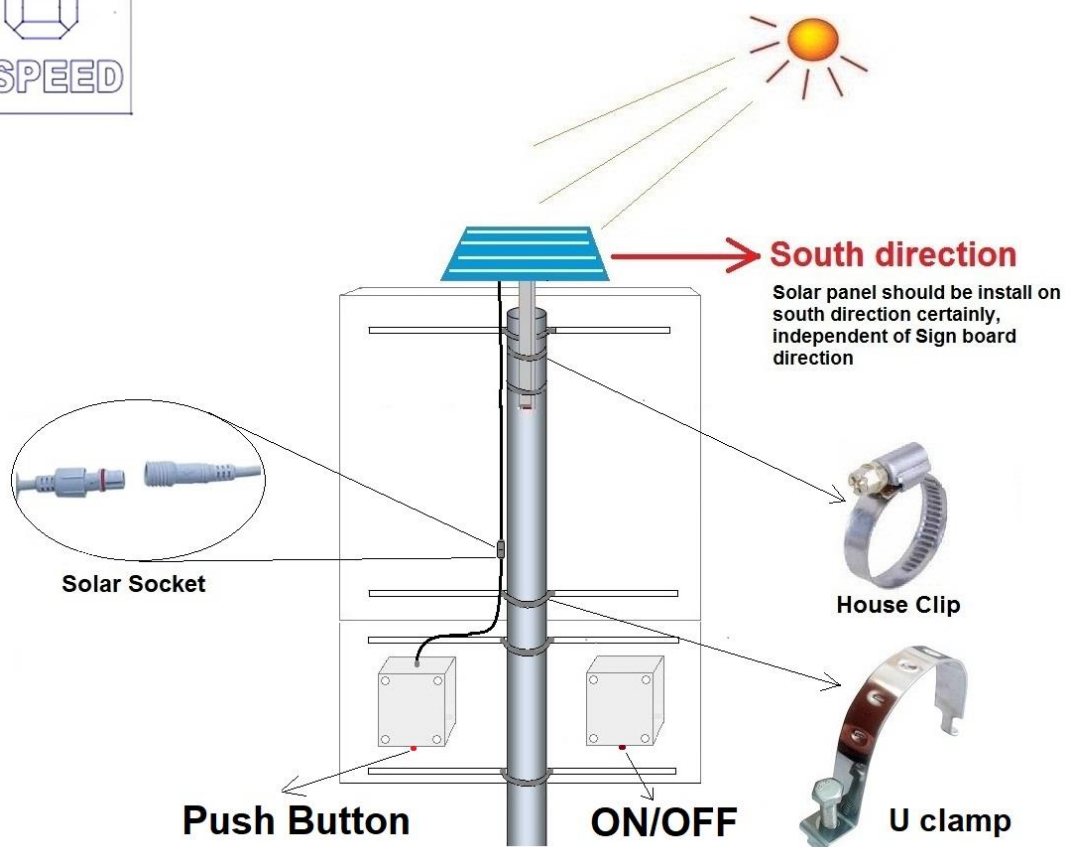
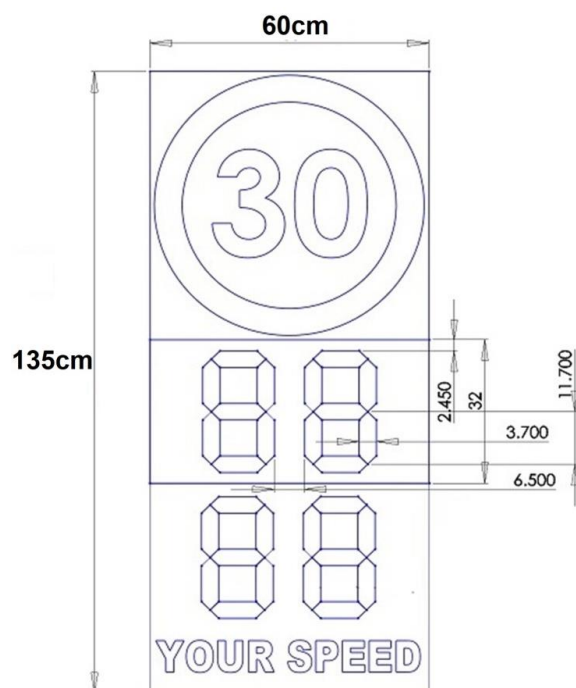


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