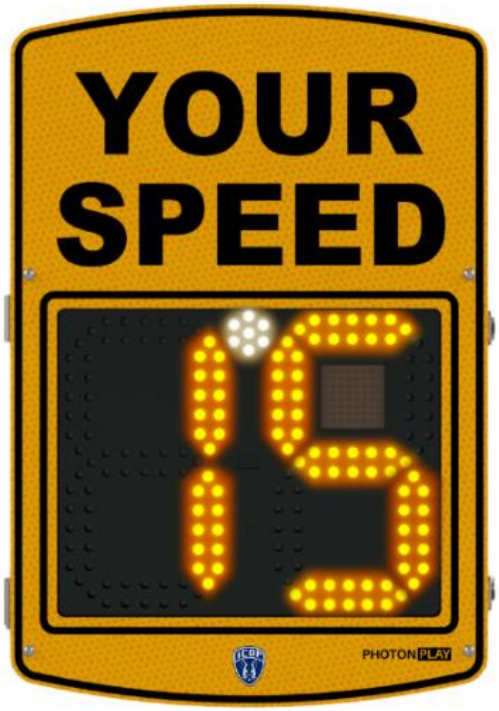
PHOTONPLAY SYSTEMS

iCop | Radar Speed Sign

No.1 In Traffic Calming Solutions

Hardware Installation Guide



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PREFACE

This document describes about the detailed hardware installation steps of radar speed sign. It includes the product components, its installation process, maintenance, safety measures and all the know bouts of the radar speed sign. We strongly recommend the user to follow the manual carefully before installing the product.

PHOTONPLAY SYSTEMS

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CHAPTER 1: INTRODUCTION

1.1: Warranty Disclaimer

This document will acquaint you with the characteristics, technical specifications, functioning paradigms, and installation procedure of Photonplay's radar speed sign **iCop**. Non-compliance of instructions stated in the document may void the warranty.

1.2: Safety Measures

Before powering the system, inspect the cabling for polarity.

Ensured no electricity is provided while the system is installed and cabled

RF energy is created, radiated and used by electronic devices , which can result in radio interference.

Batteries are supplied completely charged. When managing the batteries, use extra caution since it might get short circuit. Remove all the ornaments prior to battery handling.

Light exposure to solar panel results in generating DC power and can consequently cause an electrical shock. Shelter solar panels completely to make them inoperative.

Any kind of tempering to device not explicitly permitted, might invalidate both the warranty and user's jurisdiction to operate the device .

Do not wear any ornaments while handling the batteries as they are fully charged and can produce short circuit at any time.

CHAPTER 2: KNOW YOUR PRODUCT

About Radar Speed Sign

Photonplay greets you on your latest purchase of radar speed sign **iCop.** The radar speed sign is a benchmark for reducing speed infractions on highways, towns, suburban neighbourhoods, educational institutes, armed forces, business campuses etc. The extensively featured radar sign commits an exceptionally flexible solution at an incredibly low price. It is **solar powered** digital radar sign with a digit display size of **18, 15** and **12** inches respectively. A **YOUR SPEED** warning is shown in order to drop down the speeding vehicles. By the virtue of universal mounting brackets, the radar can be mounted at any spot. The radar sign provides the option to operate on variable speed limits depends on the respective dynamic time schedules that can vary by time, day or week. With its excellent design and features, **iCop** ensures better protection and safety on roads.

Fig.1

CHAPTER 3: INSTALLATION

3.1 Choose the site

The application in which the radar sign is used varies with respect to site selection. In general, however, the following guidelines should be followed-

1. Select a location in which the view from the radar sign to the vehicle is continuous.
2. The radar signal should be mounted right next to the lane of vehicles it targets, because a traffic interference lane may cause imprecise speed measurements.
3. There should be a stable and solid structure for the radar sign to be fitted. The structures suspected of being damaged by wind or rain must be avoided.
4. Do not install the display sign subsequent to a pointed curve, since the radar may not be able to operate on close traffic.
5. Install the radar to see incoming traffic that is not blocked by the trees, signage, constructions or any other obstacles.

3.2 Mount the Solar Panel (Skip This Step, in case of AC Model)

STEP 1: Find out the following items in the packaging-

a. Solar Panel
b. S-Plates(P4)
c. S-Plates(P5)
d. S-Clamp (P1)
e. S-Clamp (P2)
f. 10” Hose Clamps
g. M8 Allen Bolts (P6)
h. M8 washers (P6)
i. M6 Allen Bolts (P10)
j. M6 washers (P10)
k. M6 Lock Nuts (P10)
l. Allen Key (P11)

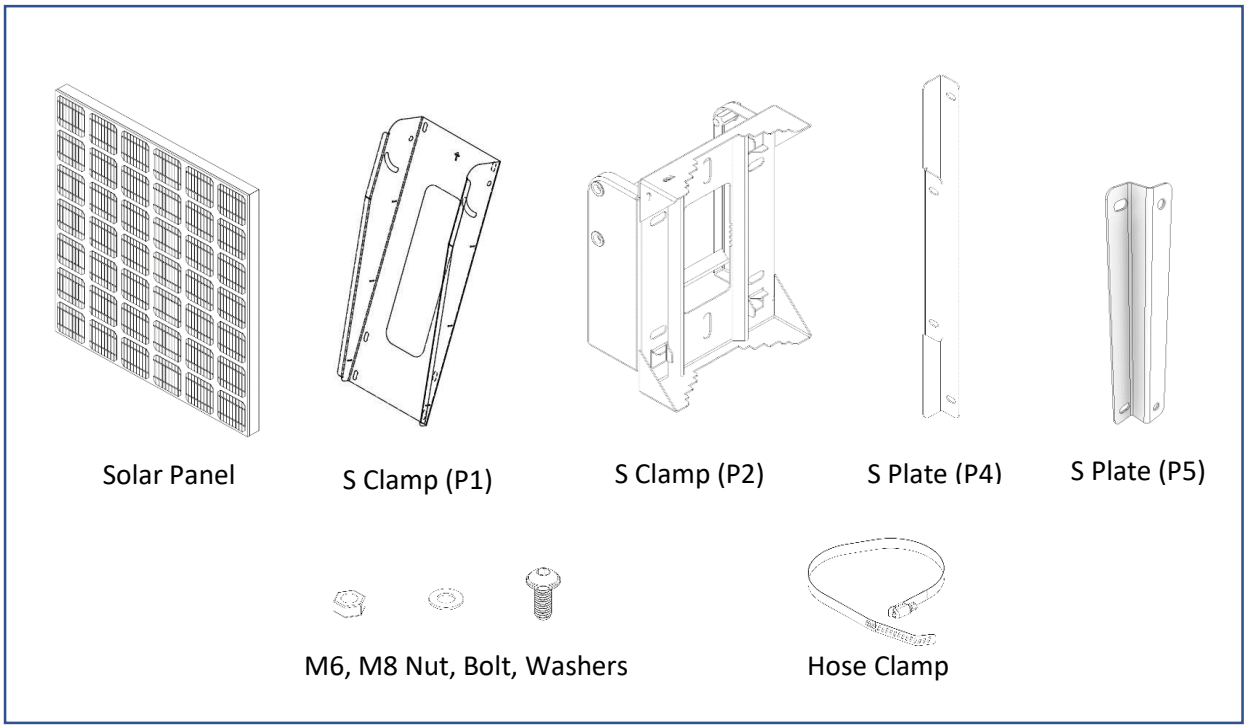

Fig. 2- Solar Panel Components

STEP 2: Join **S-plates(P4)** to **Solar panel** using **M6 Allen Bolts, M6 flat Washers** and **M6 Lock Nut** using **5 mm Allen Key.** **Fig .3**

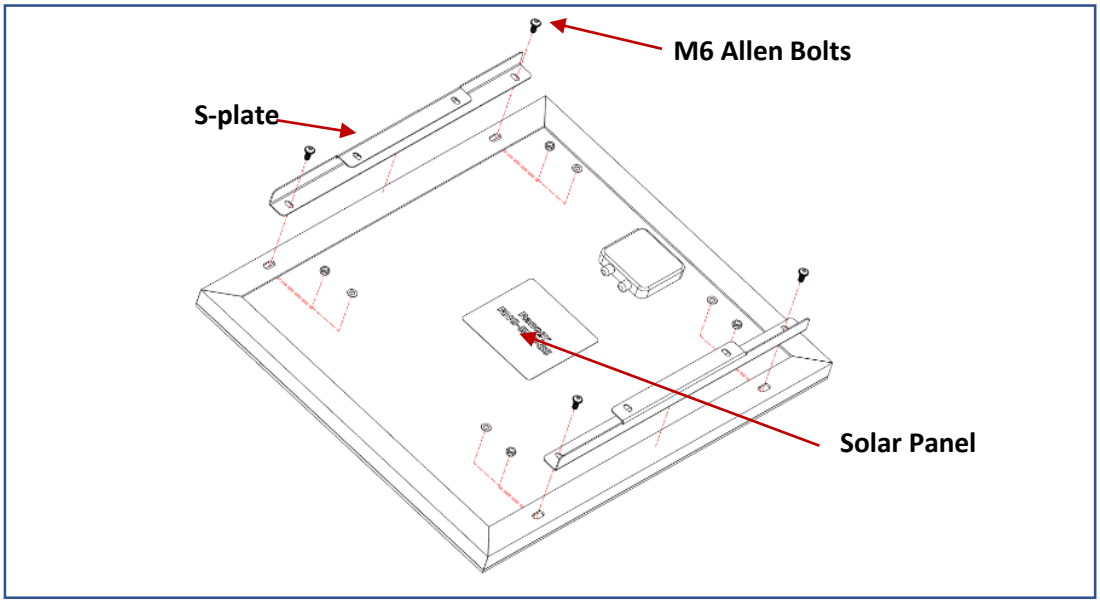

Fig. 3

STEP 3: Join **S- Clamp (P1)** and **S- plate (P5)** with **Sub-assembly** joined in **STEP 2** with **M6 Allen Bolts, M6 Washers and M6 Lock Nut.** Fig. 4

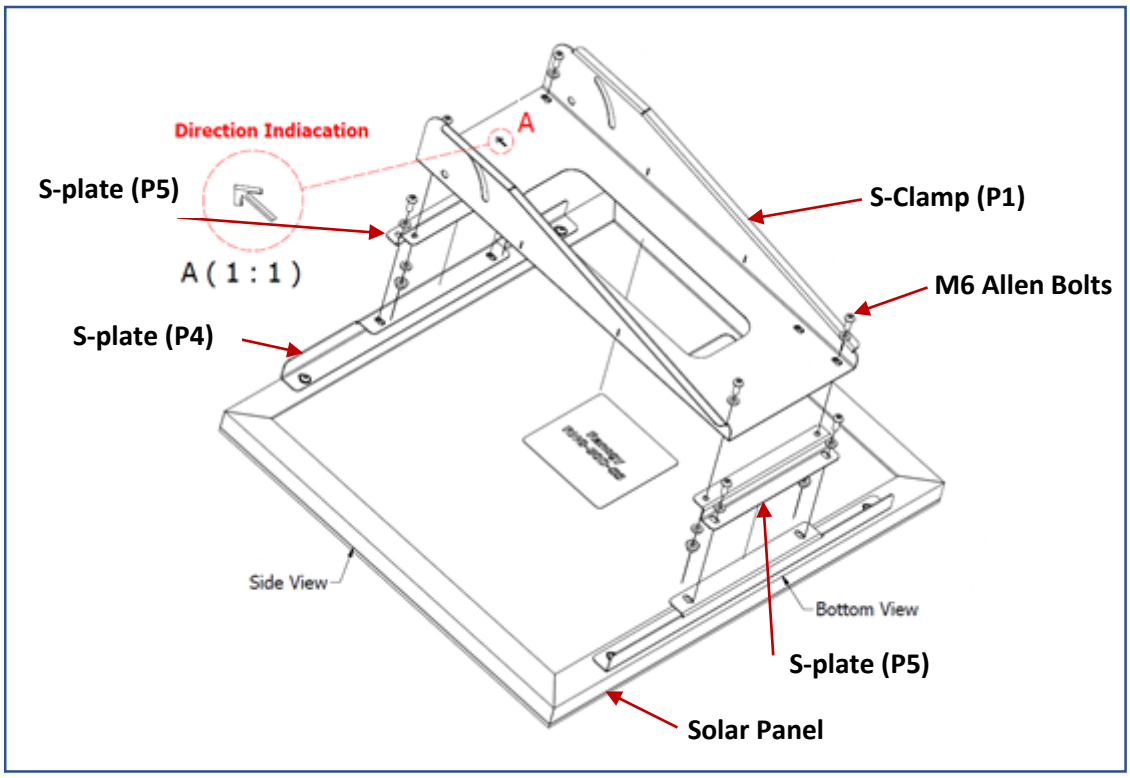

Fig.4

STEP 4: Place **S- Clamp (P2)** on the pole at desired location.

STEP 5: Insert **one hose clamp on top side** and **second on the bottom side** of the **S-Clamp (P2) rectangular slots** keeping the pole in loop. Keep the screw part of hose clamp inside the S-Clamp P2. Fig. 5

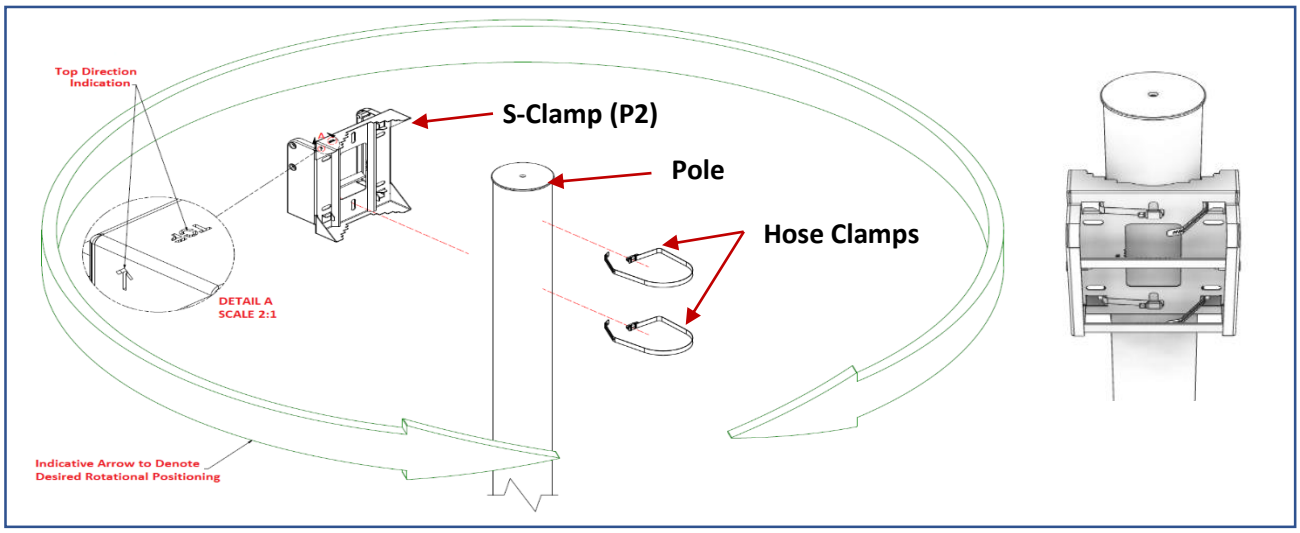

Fig. 5

STEP 6: Tighten **S-Clamp (P2)** with **Hose Clamp** Loosely. (Fully Tighten after position and angle confirmation)

Caution: Avoid overtightening the bolts and hose clamps.

STEP 7: Join **Solar Panel unit** (previously joined in STEP 3) with **S-Clamp (P2)** using **M8 Allen Bolts** and **M8 Washers.** **Fig.6**

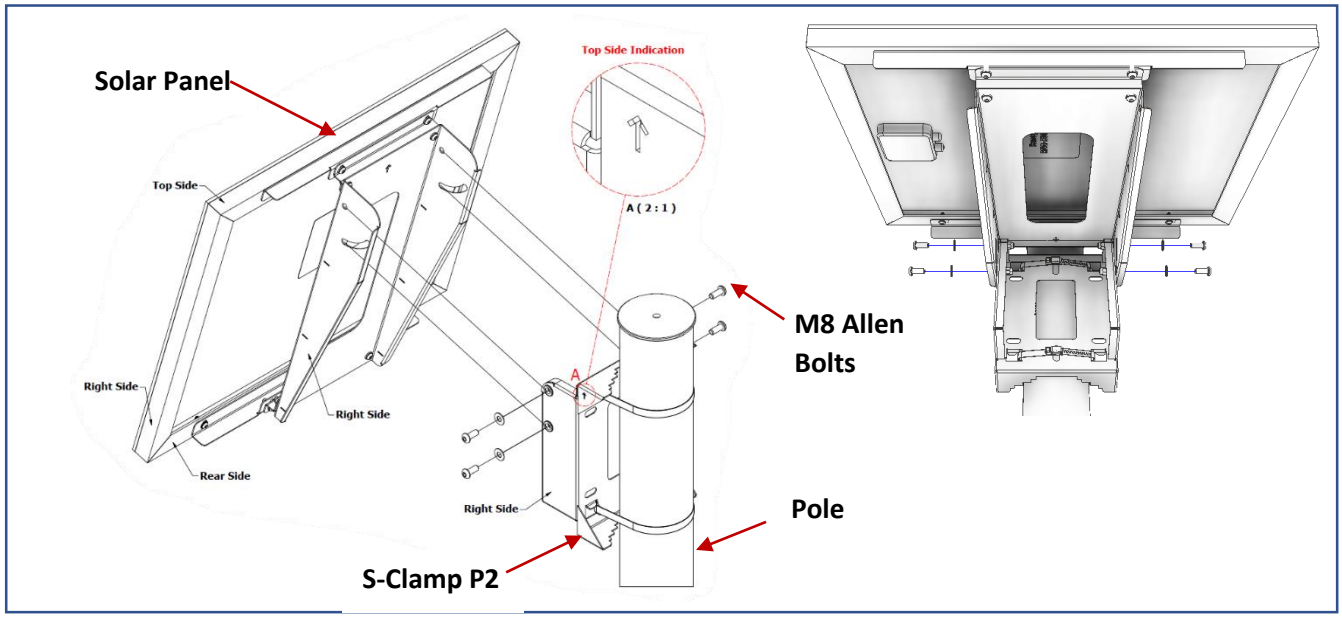

Fig.6

STEP 8: Rotate the entire unit in desired direction. Tilt the **Solar Panel** at desired angle of 15”, 40” or 60” respectively. **Fig.7**

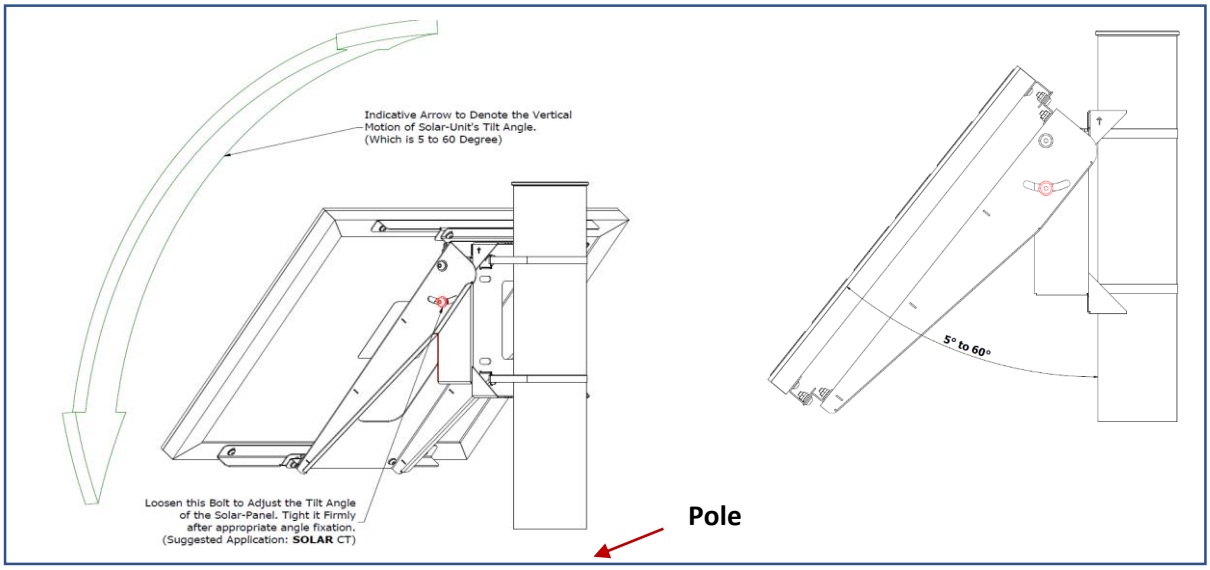

Fig.7

STEP 9: Fully tighten all the bolts after direction and angle confirmation.

Caution: Avoid overtightening the bolts and hose clamps.

3.3 Mount the Radar Speed Sign (For Both AC and Solar Model)

STEP 1: Find out the following items in the packaging-

a. Radar Speed Sign
b. Face Plate
c. C-Clamp(P3)
d. KMP-5 Plates (P7)
e. Hose Clamps
f. M6 Allen Bolts (P10)
g. M6 Ring Washer (P10)
h. M6 Flat Washer (P10)
i. M4 Round Head Allen Bolts (P8)
j. M4 Lock Nut (P8)
k. M4 Washers (P8)

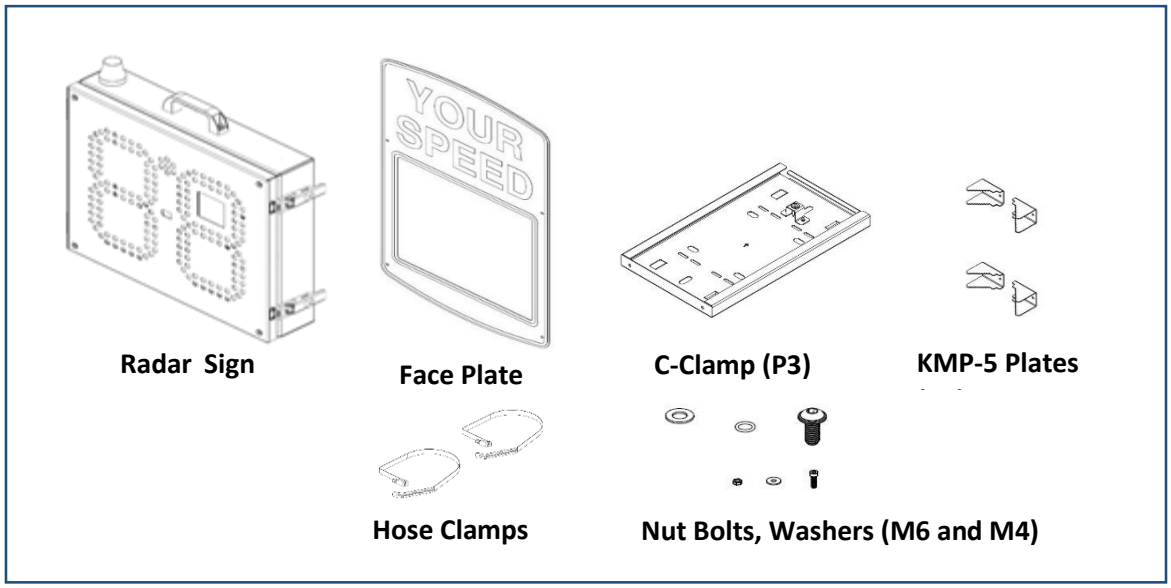

Fig.8- Radar Speed Sign Components

STEP 2: Join **KMP-5 plates (P7)** with **C-Clamp (P3)** using **M4 Allen Bolts, M4 Washers** and **M4 Lock Nut.** Fig.9

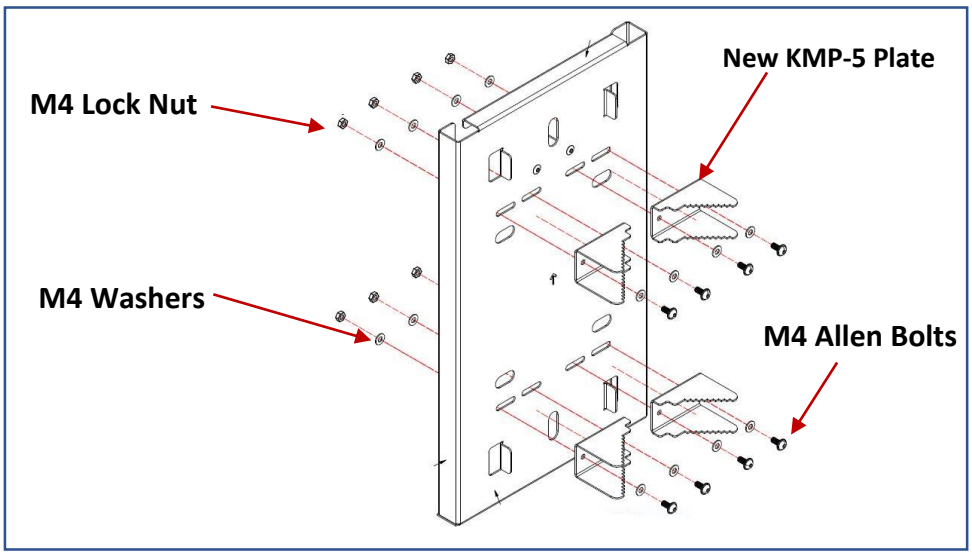

Fig.9

STEP 3: Insert **one hose clamp on top side** and **second on the bottom side** of the **C-Clamp(P3) rectangular slots** keeping the pole in loop. Fig.10

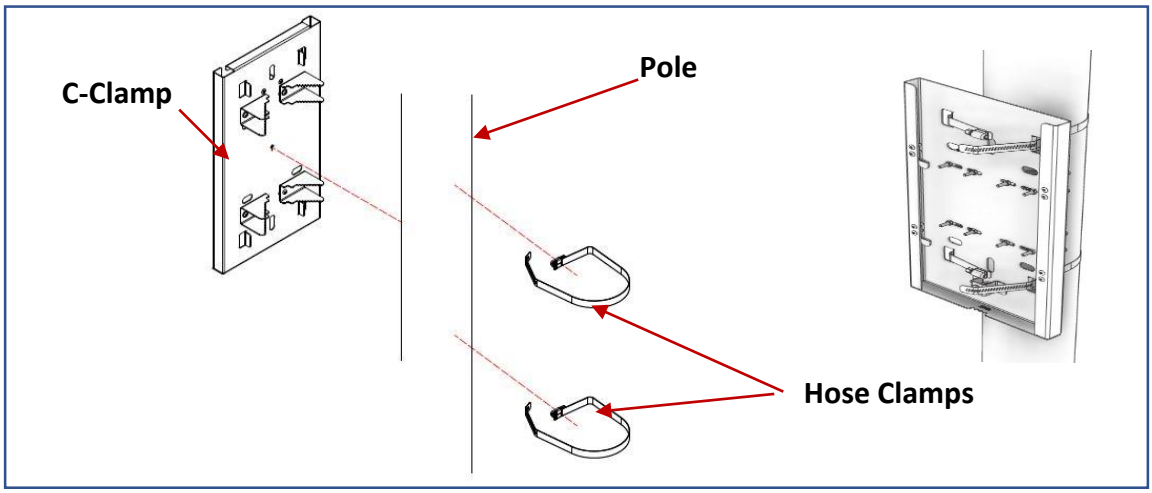

Fig. 10

STEP 4: Tighten **C-Clamp (P3)** with **Hose Clamp** Loosely from inside. (Fully Tighten after position and direction confirmation)

Caution: Avoid overtightening the bolts and hose clamps.

STEP 5: Slide in the **Radar Sign** into **C-Clamp(P3).** Fig.11

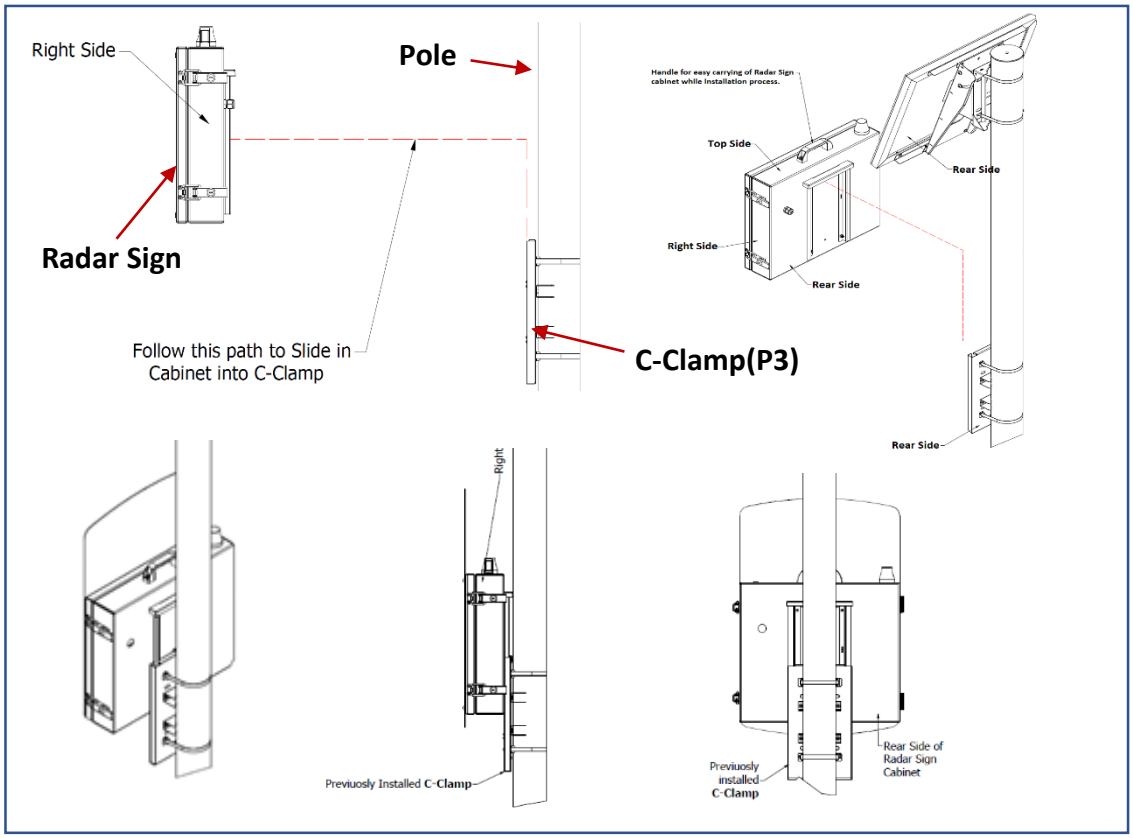

Fig.11

STEP 6: Open the **Radar Sign** by opening **two toggle latches.** Insert **M6 Ring and M6 flat washers and M6 Allen Bolt** at designated place just below the battery enclosures
As the format shown in **Fig.12.**

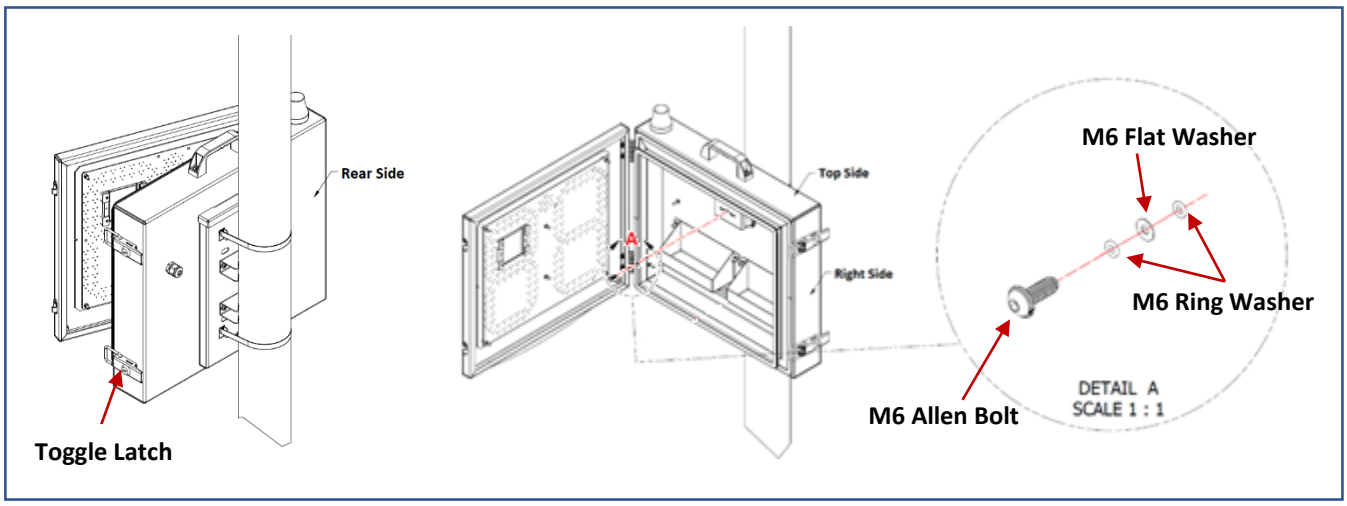

Fig.12

STEP 7: Install **Face Plate** on **Radar Sign** using **M6 Allen Bolt** and **M6 washers.** Fig.13

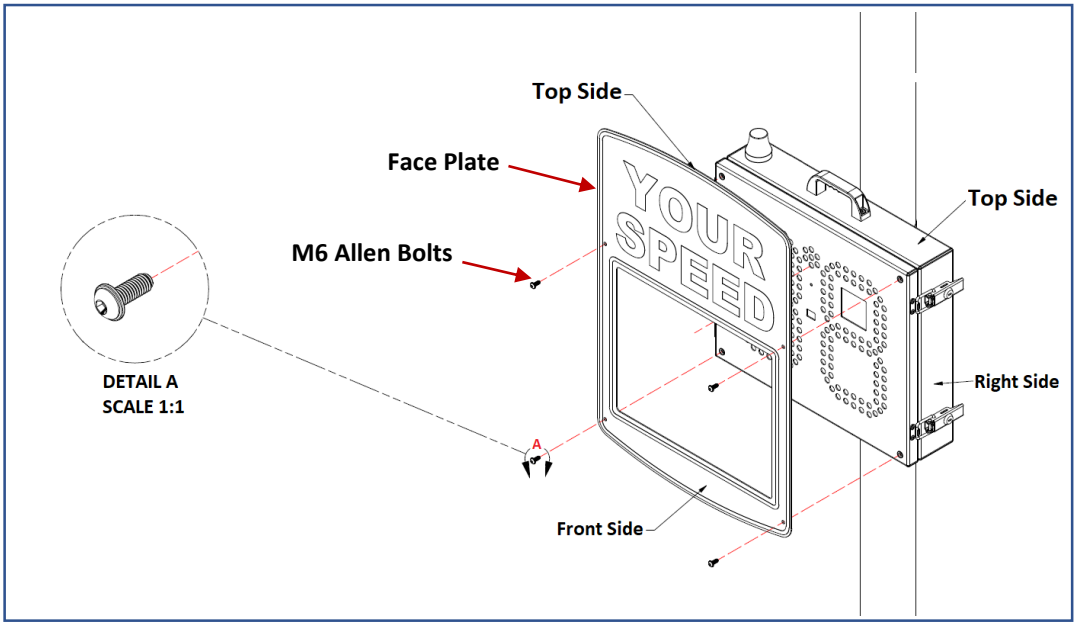

Fig.13

STEP 8: Place the **Batteries** at designated enclosures inside the **Radar Sign.** **(Skip this step, in case of AC Model)**

Important Note- Consider **Fig.14.1** in case of **Lead Acid Batteries**, and Consider **Fig.14.2** in case of **Lithium Ion Batteries.**

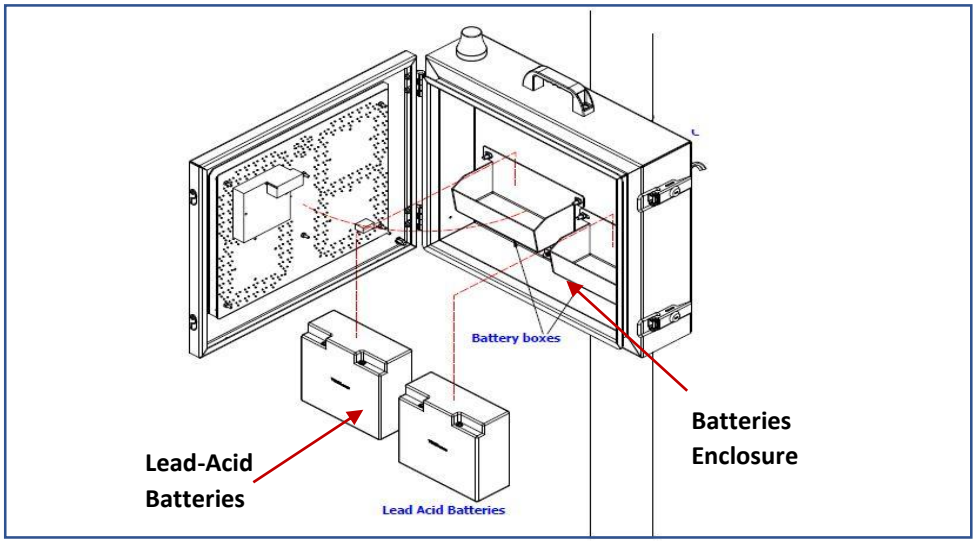

Fig.14.1

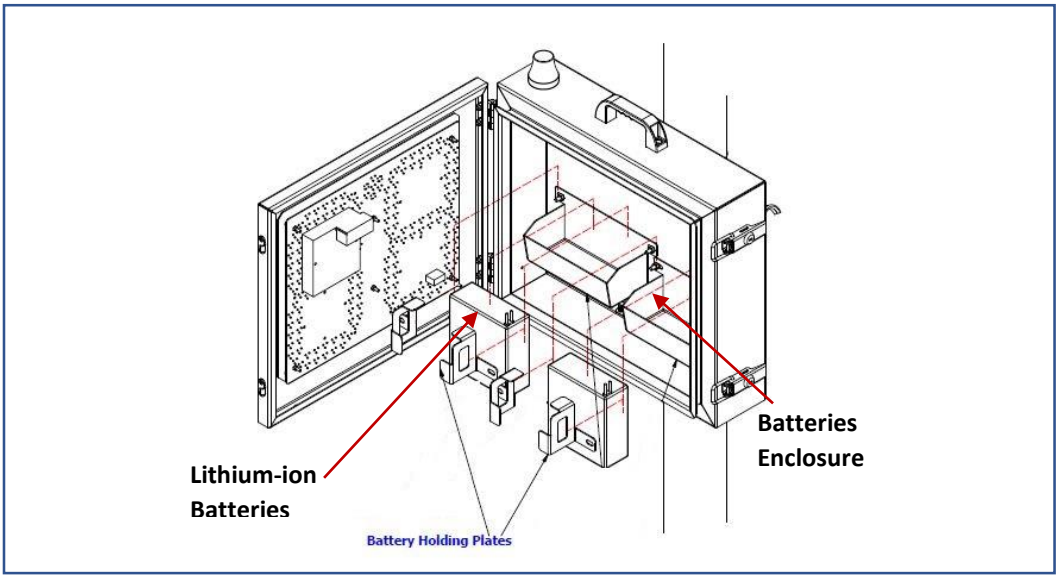

Fig.14.2

3.4 Power the Radar Speed Sign

3.4.1 SOLAR RADAR SPEED SIGN

STEP 1: Establish the connection between **Radar Sign** and **Solar Unit** for power supply by connecting **MC4 Connectors (P5)**. Fig.15

Note: Punch the MC4 Connectors male -female connectors in solar and radar sign wire accordingly.

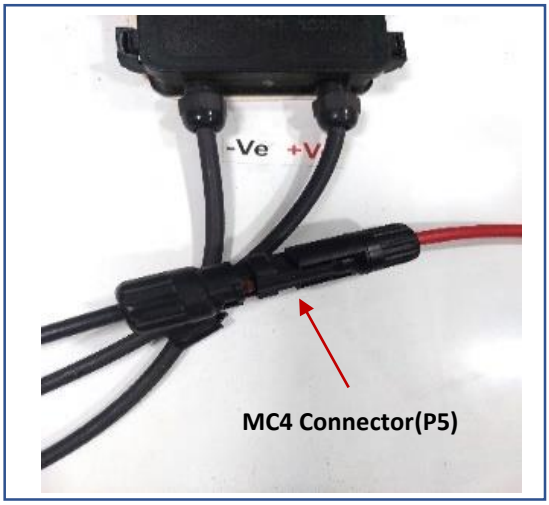

Fig.15

STEP 2: Establish the connection between **Radar Sign** and **Batteries.** Fig. 16

Lithium-ion Batteries **AGM Batteries**

Fig.16

3.4.2 AC RADAR SPEED SIGN

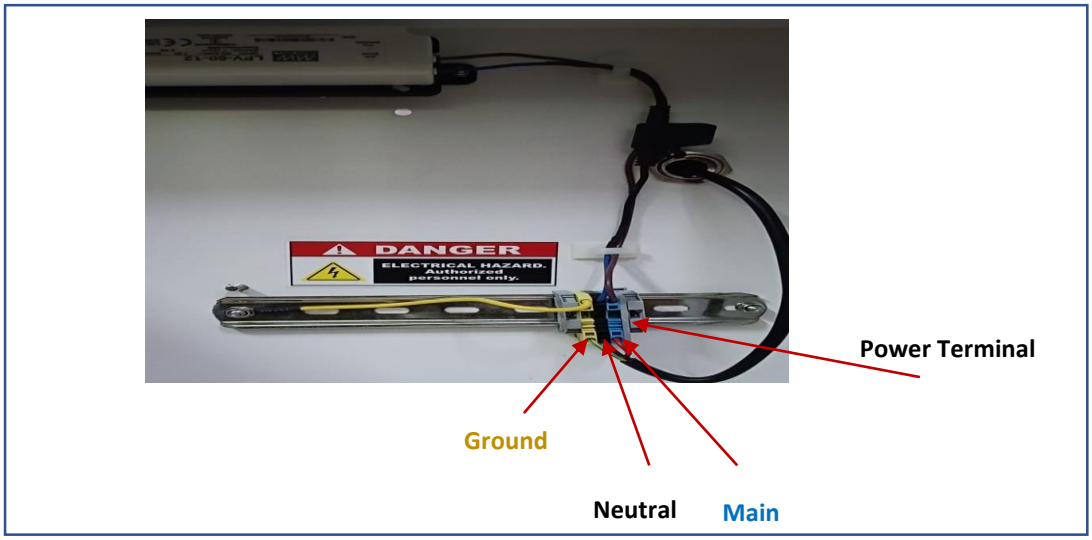

Fig.17

STEP 1: Locate the power terminal inside the sign as follows:

- **Blue** – Main Line
- **Black**- Neutral
- **Yellow** – Ground

STEP 2: Give main power connection to the sign as mentioned in Fig.17

- **Connection Main power wire to Blue terminal**
- **Connection Neutral to Black terminal**
- **Connection Ground wire to Yellow terminal**

CHAPTER 4: OPERATE THE RADAR SIGN

4.1 Pre-Operational Checks

- Check the direction of radar sign. It must be aligned towards the road.
- Check all the bolts and lock nuts they should not remain loose. Keeping them loose can cause damage to hardware and can cause human injury also.
- Check all the power connections. The solar and battery connectors must be tightly bind
- Lock both the Toggle Latches. **Fig.18**

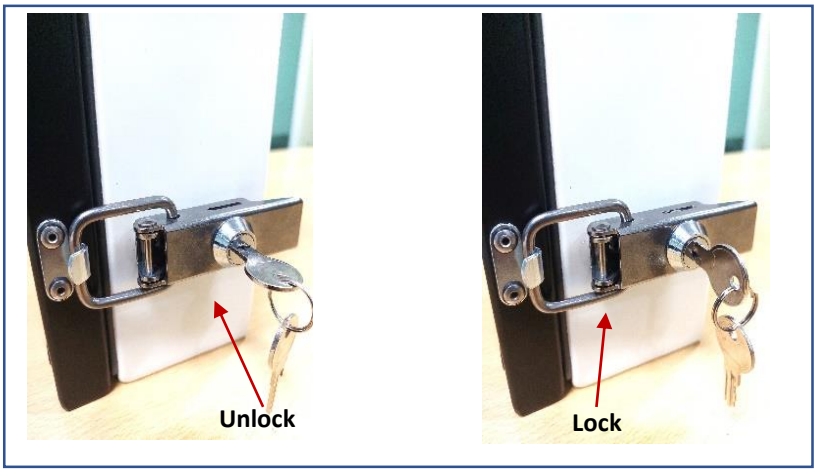

Fig.18

4.2 Installed Radar Sign

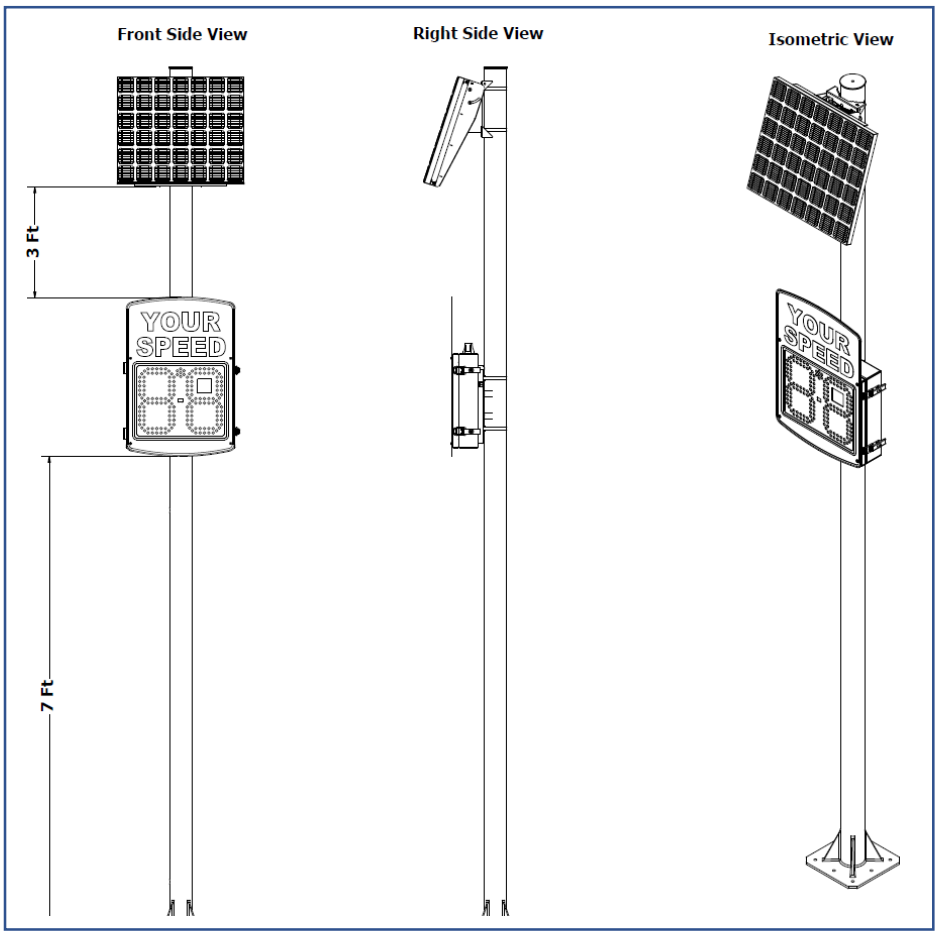

Fig.19

4.3 Operate the Radar Sign

Once your sign is mounted and powered, you can connect and manage it via **Bluetooth** with our easy-to-use **Android Application** (will be a part of delivery)**.** You can also operate the radar sign from dynamic **Web Portal** (Optional). For more information on operating your sign refer to the **Software User Manual.**

CHAPTER 5: RADAR SIGN MAINTANANCE

5.1 Clean – up and Lubrication

- To ensure optimal visibility, the sign and solar panel should be cleaned regularly.
- Use abundance of water to mitigate the abraded dust and scraping on the top of the sign and solar panels.
- To clear soil and detergent residues from the panels, rinse the surface of panels carefully.
- Do not use solid alkaline or oil-based solvents.
- As part of the normal maintenance programme, total cleaning of the whole device is advised to improve the efficiency and lifetime of the radar speed sign.

5.2 Batteries Preservations

- Routinely check the battery's charge status.
- Carefully monitor batteries that are approaching the end of their estimated life.
- Replace the battery if its run time drops below about 80% of the original run time.
- Replace the battery if its charge time increases significantly.
- Do not disassemble, crush, or puncture a battery.
- Do not short the external contacts on a battery.
- Do not dispose of a battery in fire or water.
- Do not expose a battery to temperatures above 60 °C (140 °F).
- Avoid exposing the battery to excessive shock or vibration.
- Do not use a damaged battery

PHOTONPLAY SYSTEMS

CHAPTER 6: TECHNICAL SUPPORT

For any queries, feel free to contact us on –

email id : support@photonplay.com
Contact: (800)966-9329
www.photonplay.com