AIVA PEDESTRIAN DETECTION
USER GUIDE

This brief introduction is designed to familiarise yourself with the functions of the AiVA system.

It is important to be aware that AiVA is a complimentary device designed to assist you in identifying pedestrians in the vicinity of the forklift.

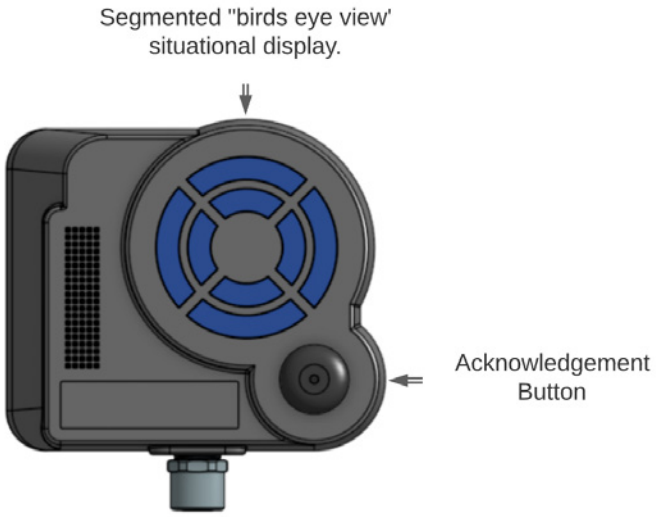
AiVA IS NOT designed to replace good operating practices such as keeping a continuous lookout, driving as slowly as practicable and driving to the conditions.

AiVA is a vision based system designed to 'see' pedestrians, using advanced machine vision and artificial intelligence. Its purpose it to increase the operator situational awareness, helping the operator to be aware of all pedestrians and to advise when pedestrians approach the forklift.

AiVA consists of a network of 4 camera devices and a single operator remote. The cameras are trained on a specific segment around the truck, that corresponds to a segment on the operator remote, a 'birds eye view' of the vehicle.

The operator remote also contains a single press button, which operates as an acknowledgement key for the operator. It also contains a loud speaker and will provide voice prompts to alert you to various items.

Operator Remote:



A: E15 Hallmarc Business Park Clayton, Cnr Westall and Centre Roads, Clayton, VIC Australia 3168
T: [04] 8585 9000 **F:** [03] 8585 9099 **W:** www.speedshield.com

Detection Modes and Behaviour:

Pedestrians at a distance greater than 5 meters:

AiVA will detect pedestrians at ranges out past 8 meters. It is programmed to present detected pedestrians with a Yellow LED on the segmented display when at distances greater then 5 meters, in the outer ring of the display.

Pedestrian Detection

Direction:	Right Front
Range:	Greater than 5 meters
Voice Prompt:	None
Speed Restriction:	None

Pedestrians at a distance greater than 3 meters but less than 5 meters:

When a pedestrian is within 5 meters of the forklift but no closer than 3 meters, the LED will change to RED, and remain in the outer ring.

Pedestrian Detection

Direction:	Right Front
Range:	Between 3 and 5 meters
Voice Prompt:	None
Speed Restriction:	None

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Pedstrians at a distance less than 3 meters:

When a pedestrian is detected within 3 meters of the forklift, the display will show a RED LED in the inner ring, in the direction of the pedestrian, a voice prompt will notify the operator that there is a “Pedestrian within 3 meters” and initiate a speed change to slow the vehicle to a minimum travel speed.

The Acknowledgment Button will also Flash Blue, indicating the speed restriction feature is enabled.

Pedestrian Detection

Direction:	Right Front
Range:	Less than 3 Meters
Voice Prompt:	"Pedestrian within 3 Meters"
Speed Restriction:	SLOW

Getting Started:

When the system initially powers up, the voice prompt will state “System Booting, Please Wait”. During this time the forklift will be restricted to the slow speed.

The system takes 25 seconds from cold start to operating, and will notify the operator by stating “System Ready”.

The forklift will remain in the slow speed mode until the operator presses the Blue Flashing acknowledge button for 1 second. The Blue Light in the button will then remain solid, indicating the forklift has normal operating speed enabled.

Pedestrian Detection:

When a pedestrian is detected within 3 meters, the system will lower the maximium speed of the forklift. This will remain in place until the pedestrian leaves the critical area AND the operator presses the acknlowedge button for 1 second. The system CAN NOT automatically remove the speed restriction without the operator actively acknowledging the change.

Mute Function:

In the event of a situation where the system incorrectly detects a pedestrian within 3 meters, knowns as a False Positive, and the detection persists, the system can be placed in MUTE mode for 60 seconds, where the speed restriction will be lifted. TO enable the Mute mode, the acknowledge button must be pressed for longer than 3 seconds. The screen will flash BLUE in all segments, but will continue to display detections during the Mute period.

During this time the vision is recorded for analysis to understand the circumstances of the detection and train the system to improve performance.

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