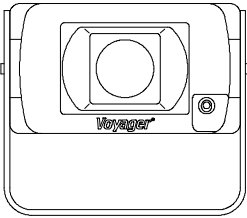


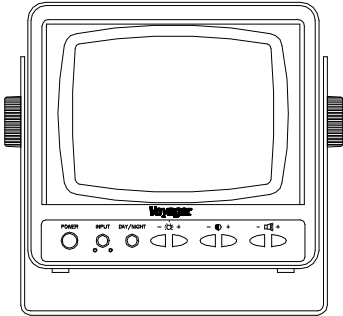
# Voyager<sup>®</sup>

## Observation System AOS58



### AOC-75 Features

- High resolution, 1/3" CCD Camera
- Compact/Lightweight Aluminum Die Cast Body
- Waterproof Housing
- Waterproof Microphone
- Waterproof Normal/Mirror Image Switch
- Optional Wind deflector



### AOM-58 Features

- 5" Monochrome Monitor
- Dual camera Input
- Brightness/Contrast/Day-Night Controls
- Volume Control for Internal/External Speaker
- Power/Stand By Button
- Back-lit Front Panel Controls

### OCA-80 Features

- 20 Meter Cable with Waterproof Connections
- Oil, Gas and Grease Resistant
- UV Stable



# ASA

AUDIOVOX SPECIALIZED APPLICATIONS, L.L.C.

## Operation Manual

## AOS-58

### IMPORTANT:

The Voyager Observation system (AOS58) has been designed to provide years of trouble free operation. Please read this manual thoroughly. This manual contains instructions to ease the installation of the camera and monitor. The Voyager Observation system is a supplement to the standard rear view mirror systems, and will provide additional rear view vision when installed and maintained properly. The Voyager observation System is not intended to in any way be a substitute for careful, cautious, defensive driving or for the consistent adherence to all applicable traffic laws and motor safety regulations. This product is not intended to be a substitute for rear view mirrors, or for any other motor vehicle, or boat equipment mandated by law.

### FEATURES:

#### AOC-75 CCD Camera

- 270,000 pixel image sensor
- 0.1 Lux sensitivity
- Automatic electronic iris provides a clearer, more consistent image in low and bright light
- Wide angle lens provides a broad viewing area
- Compact design and light weight simplify installation in most vehicles, including large boats
- Durable, waterproof construction
- Built-in Microphone for audio pick-up
- Normal /Mirror switch on back of camera
- Wind Deflector reduces build up of dirt on lens
- Waterproof cable connector

#### AOM-58 Monochrome 5" Monitor

- Day/Night switch
- Brightness and contrast controls
- Volume control
- Illuminated front panel
- Internal speaker with external speaker jack

Contents of one Complete Package:

#### AOC-75 Camera

##### Qty.

- |   |  |
|---|--|
| 1 | Camera                                   |
| 1 | Camera Bracket                           |
| 4 | Attachment Screws with Washers (M4 x 25) |
| 1 | Wind Deflector                           |

4 Use without Wind Deflector Screws (#8-32 UNC x 7.5)

4 Use with Wind Deflector Screws (#8-32 UNC x 9.0)

### **AOM-58 Monochrome Monitor**

#### **Qty.**

1 5" Monitor

1 Snap-On Sun Visor

1 Monitor Bracket

1 Power Harness with locking connector

1 Range marker

4 Thumb screws (M5 x 15) with plain washer and spring washers

4 Attachment screws with washers (M5 x 12)

### **OCA-80 Cable**

#### **Qty.**

1 20 meter cable with waterproof connector. Oil, gas, and grease resistant. UV stable

### **Documents**

1 Operators manual

### **BEFORE INSTALLATION:**

1. To prevent electrical shock, **DO NOT OPEN THE MONITOR CASE.** *There are potentially lethal voltages, inside the monitor. There are no user serviceable parts inside.* If evidence of tampering is detected, the Warranty will be considered void.
2. Keep the monitor away from leaking water, rain, moisture, etc. It is not waterproofed. Any moisture inside the monitor could cause extensive damage.
3. Use the thumbscrews to mount the monitor to the bracket.

### **\*\*CAUTION\*\***

1. **Do not open the camera case.** This will break the camera's waterproof seal. If evidence of tampering is detected, the warranty will be considered void.
2. Do not mount the camera near the lower area of the vehicle (e.g. bumper). This reduces the view of camera and may cause physical damage to the camera.

### **INSTALLATION INSTRUCTIONS**

#### **AOC-75 CAMERA**

1. Attach camera bracket (See Figure 1) to upper portion of vehicle. Attachment point must be sturdy enough to support camera and bracket.

2. Attach camera to bracket using 8-32 UNC screws provided. Adjust angle as indicated in Figure 2. Use rear or end of bumper as reference point.
3. Wind deflector may be installed. This deflector is designed to reduce the build-up of dust, dirt and moisture on the camera lens. (See Figure 3).

#### AOM-58 MONITOR

1. Attach monitor inside vehicle in a location convenient to the driver (e.g. center of dash, overhead, or in dash).
2. Use a compression plate to attach the monitor bracket to the dash or overhead. (See Figure 4)
3. Adjust mounting angle of the monitor to allow driver to easily view the screen from all seat positions. (See Figure 5)
4. If necessary, snap sun visor into groove on front face of monitor. Press all (4) sides of the visor to snap it into place

#### OCA-80 CABLE

1. The camera-to-cable connection is waterproof. The cable-to-monitor connection is not waterproof. Be sure to orient the cable properly. The cylindrical end attaches to the camera. The rectangular box end attaches to the monitor. (See Figure 6)
2. Do not run the OCA80 cable over sharp edges or camera. Do not kink the cable. Keep the cable away from hot or rotating parts.
3. Place all excess cable in convoluted tubing.
4. Wire tie the cable securely.

#### MAINTENANCE

Remove dust and dirt with a damp soft cloth. Heavier dirt should be removed with a soft cloth and mild detergent. Do not use strong cleaning agents containing gasoline, benzene, or alcohol. These substances may damage the exterior surface of the monitor.

#### \*\*CAUTION\*\*

1. Before drilling, be sure no cable or wiring is on the other side. Be sure to drill a 19mm/3/4" diameter hole only.
2. Feed as much cable as possible into the vehicle and clamp securely. This reduces the possibility of being hooked during operation of the vehicle.
3. Keep all cables away from HOT, ROTATING and ELECTRICALLY NOISY components.

4. To increase protection of cable, place all excess wire and extension cable in convoluted tubing.
5. Do not twist camera cable, do not cut pigtail, or cable.

#### WIRING CAMERA AND MONITOR

1. See wiring diagram for connections to ignition, ground, and backup circuit. (See Figure 6)
2. Wiring camera:
  - Drill a 19mm /3/4" diameter hole into the vehicle body near the camera and bracket.
  - Connect camera cable to extension cable in vehicle.
  - Push extra cable into hole (careful not to kink cable) and fit grommet into the hole.
  - Apply sealant around grommet to increase resistance to water penetration.
3. Wiring monitor:
  - Insert extension cable into the camera #1 position if (2) cameras are used, be sure to mark each extension cable properly and plug second camera into cable #2 position.
  - Bundle excess cable together using a cable tie or vinyl tape. This will avoid possible damage to cable during operation.
4. The red wire marked ACC is connected to an ignition power source, the black wire marked GND is connected to chassis ground, and the blue wire marked BACK is connected to the vehicle's back up circuit.

#### FUNCTIONS AND OPERATION

Monitor: See page 12.

1. Power Switch: STD. BY- Monitor operates when vehicle transmission is switched into "reverse".  
On- Monitor and system operate when ignition switch is "ON"
2. Input Switch: "A" used mainly for rear mounted camera or as specified by the installer.  
"B" used mainly for side mounted camera or as specified by the installer.
3. Day/Night Switch: Pre-set brightness and contrast levels optimized for day and night operation.
4. Contrast: Variable control or contrast. Should be adjusted if the

- desirable “Day/Night” switch does not achieve the most picture.
5. Brightness: Variable control of brightness. Should be adjusted if the “Day/Night” switch does not achieve the most desirable picture.
6. Volume: Variable control of internal speaker and external speaker volume.

REAR OF MONITOR: See page 12.

1. Power Connection: PIN 1 not used  
 PIN 2 Ground- Black wire  
 PIN 3 Reverse circuit- Blue wire  
 PIN 4 not used  
 PIN 5 battery back-up- Yellow wire  
 PIN 6 +12VDC ignition- Red wire
2. Camera A input: Connection to camera extension cable
3. Camera B input: Connection to additional camera extension 4
4. External speaker connection: Center pin is positive audio output, used to disable the internal speaker and remotely mount a speaker for driver convenience.

## **CAMERA CONTROLS AND COMPONENTS**

Camera: See page 13

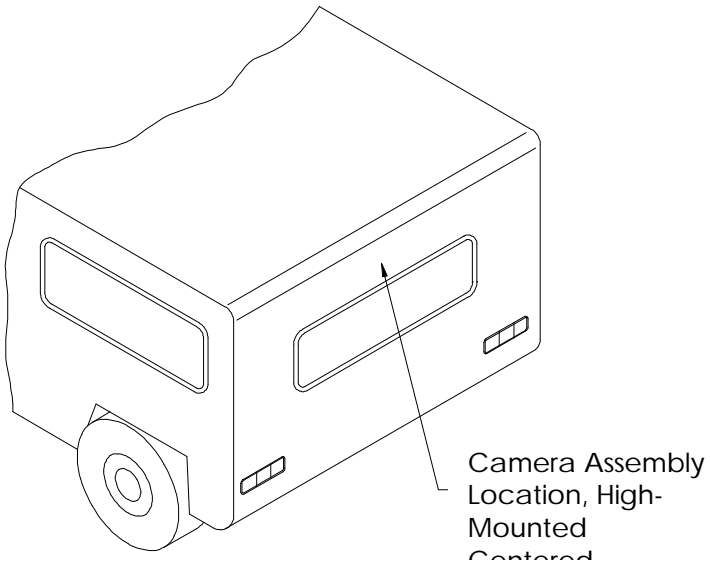
1. Microphone- Waterproof microphone for audio pick up
2. Mirror/Normal Switch- Waterproof switch, to change camera image from a mirror view (rear of vehicle mounted), to normal view (side or front mounted camera). See Figure 7.

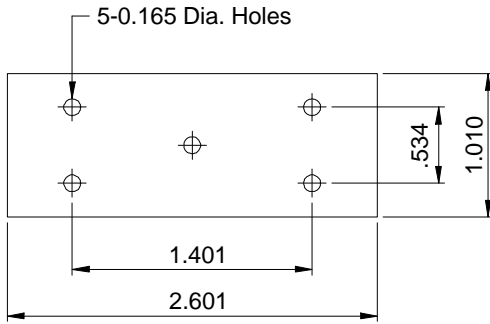
## **AFFIXING DISTANCE MARKERS TO THE MONITOR SCREEN**

1. Clean monitor screen surface of fingerprints. Set the camera into the “DOWN” position. Place the distance indicators behind the vehicle at 3 feet, 6 feet, and 9 feet from the back of the vehicle. (See Figure 8)
2. Attach the markers to the monitor screen over the images of the distance indicators. These markers represent a distance of 3 feet, 6 feet, and 9 feet from the back of the vehicle. (See Figure 8)

3. Affix the "STOP" marker on the monitor screen over the image of the rear view bumper to locate the rear bumper.
4. The monitor screen is now "calibrated" for distances behind the vehicle of 3 feet, 6 feet and 9 feet.

5

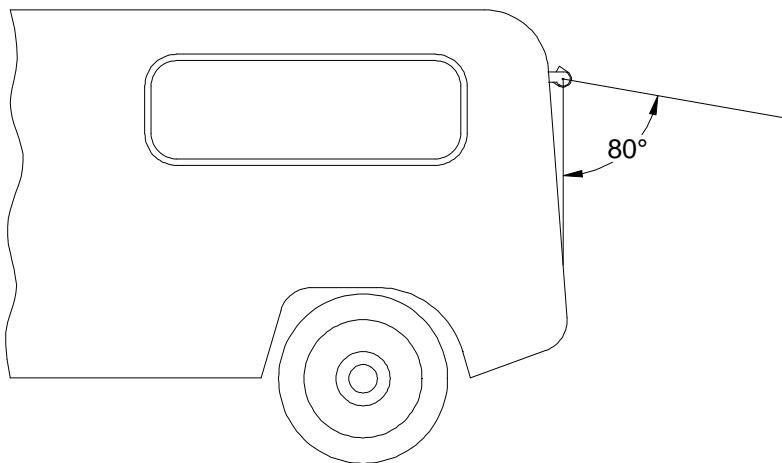




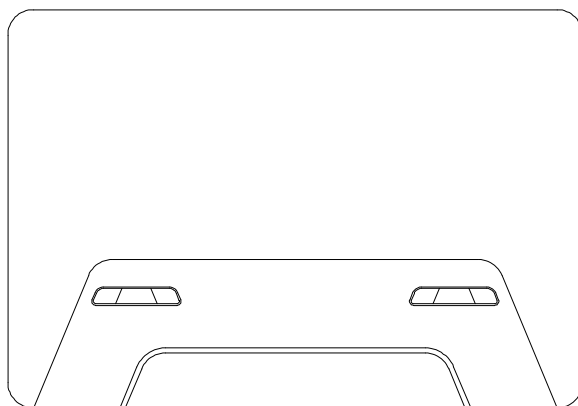
**Camera Mounting Hole Pattern**

**Figure 1**





Approximately 80° Field of View



Back of Vehicle, View at  
Monitor Screen

**Figure 2**

Included Wind Deflector- Optional Installation

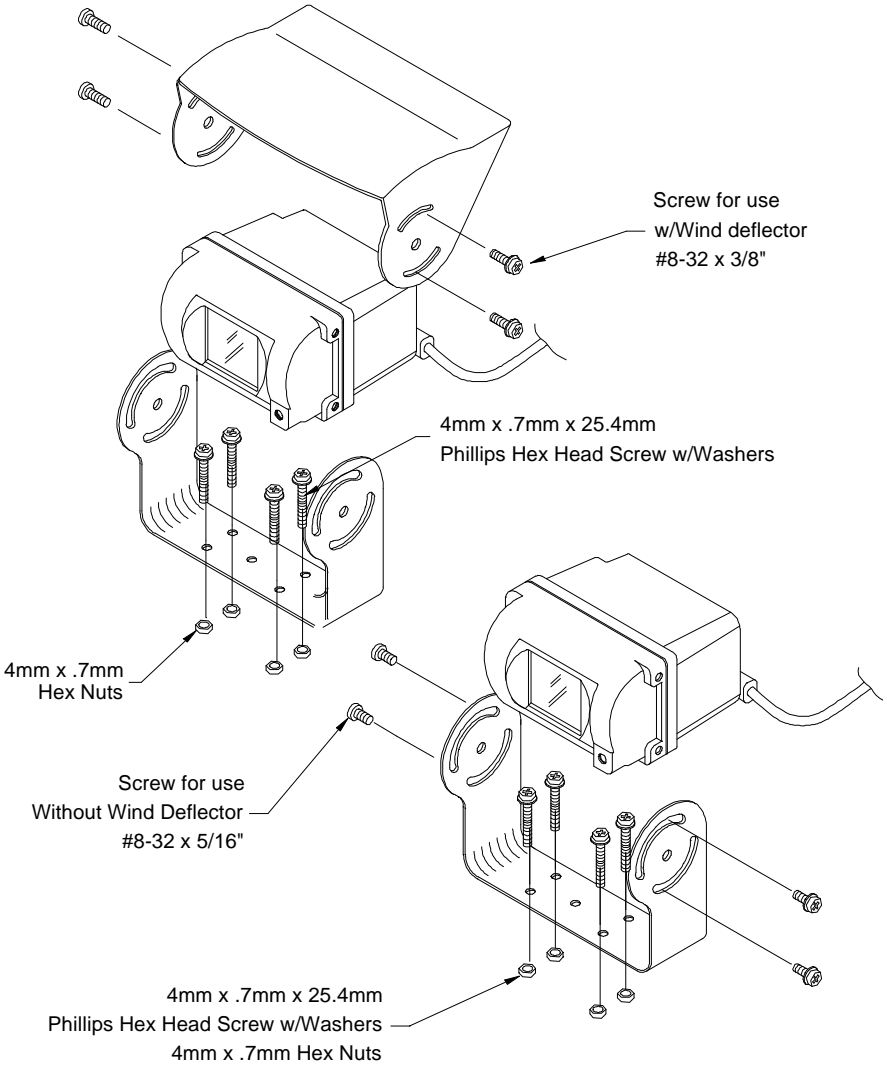
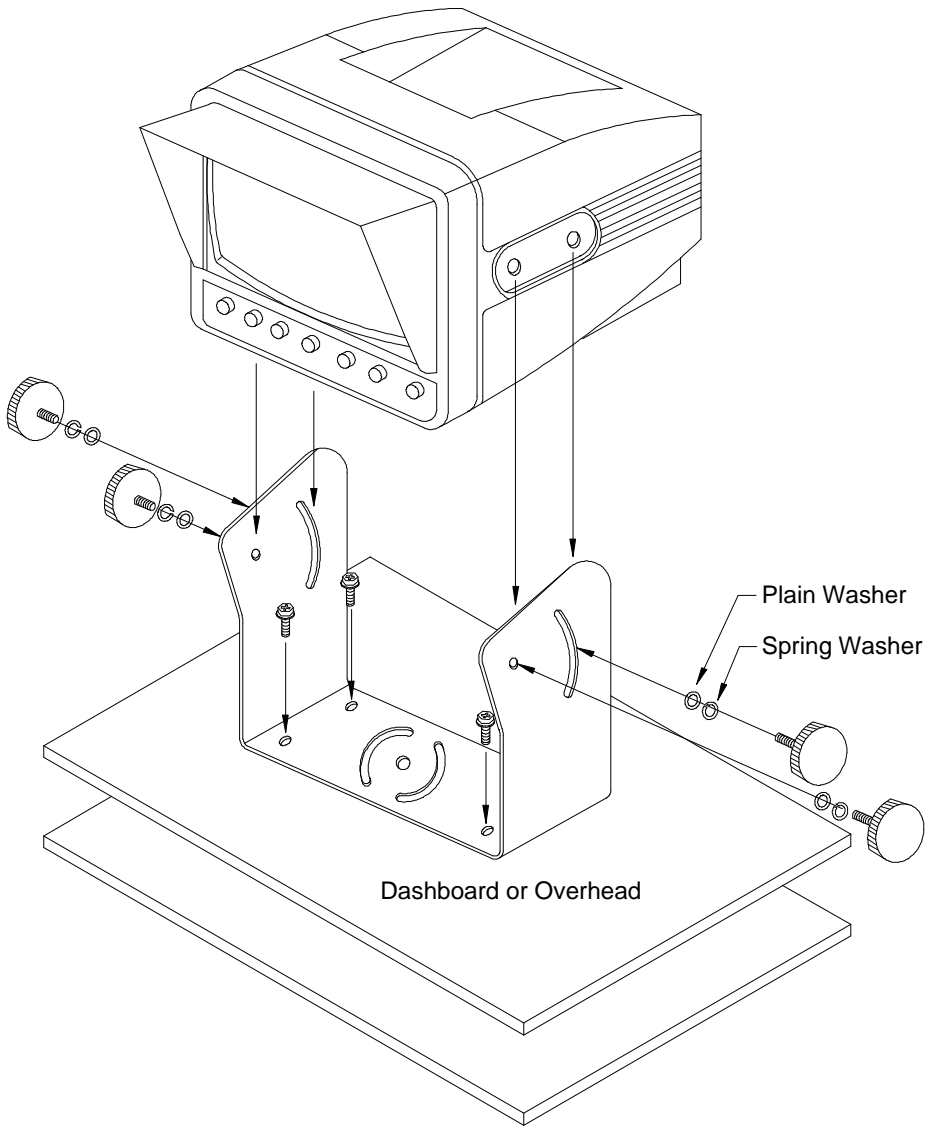
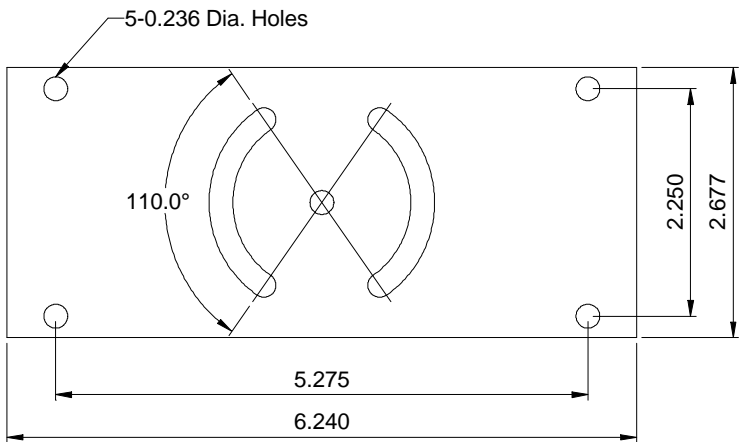
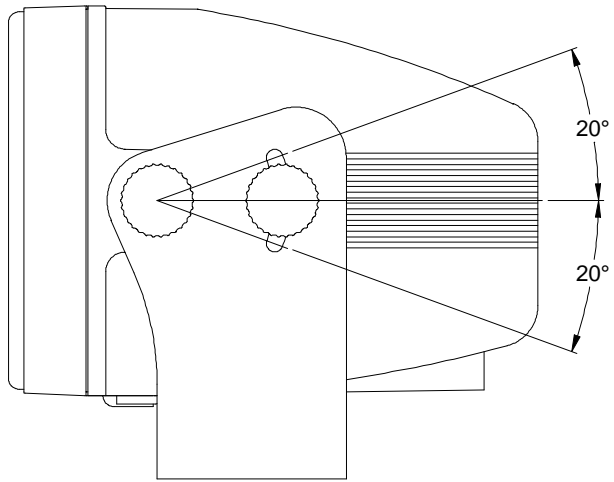


Figure 3



Steel Plate Reinforcement (Recommended for Secure Mounting)

**Figure 4**



Monitor Mounting Hole Pattern

Figure 5

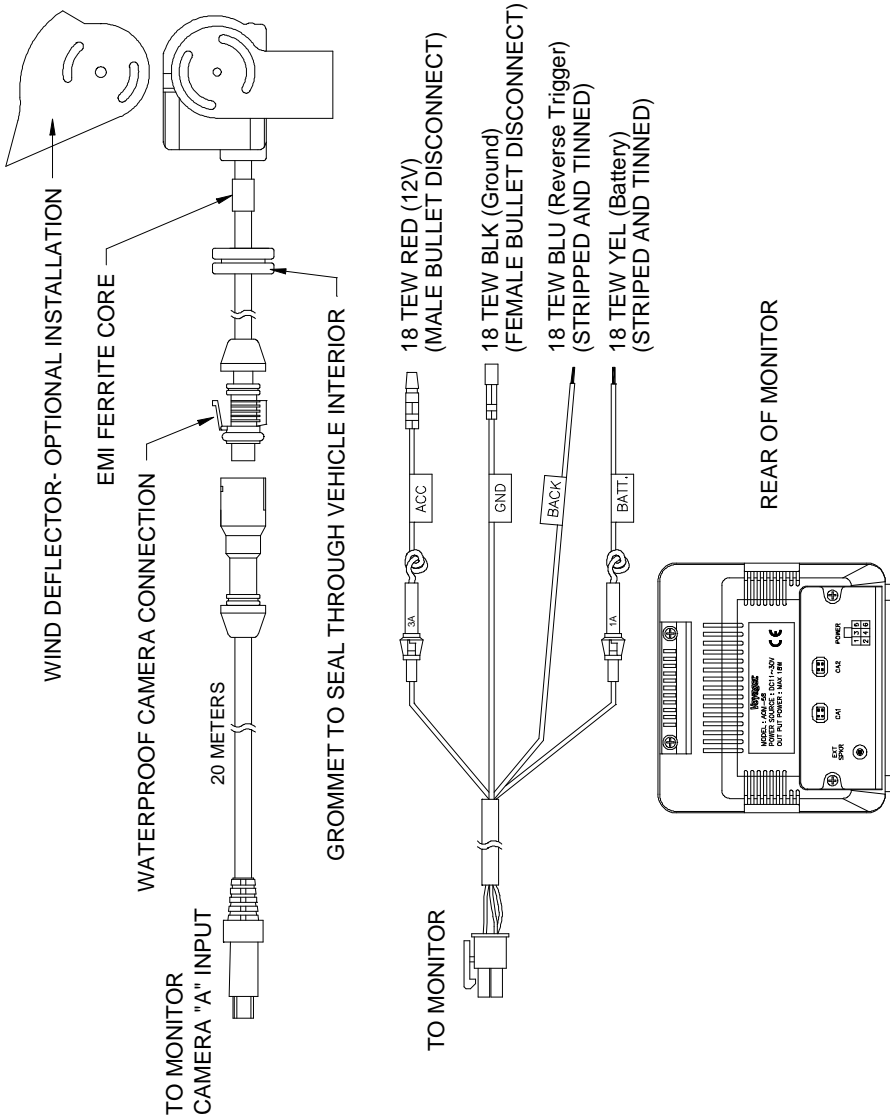
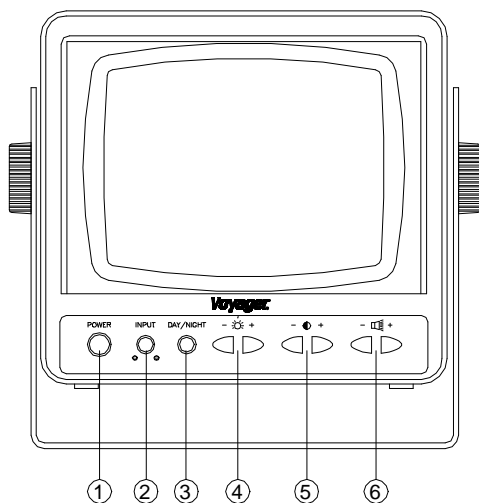
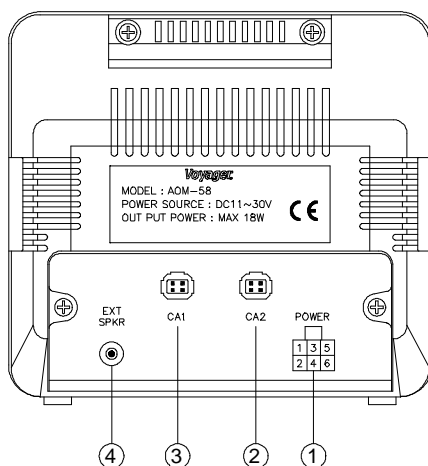


Figure 6

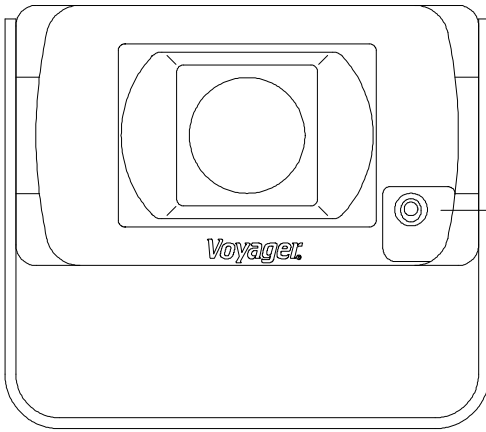
## MONITOR FRONT VIEW



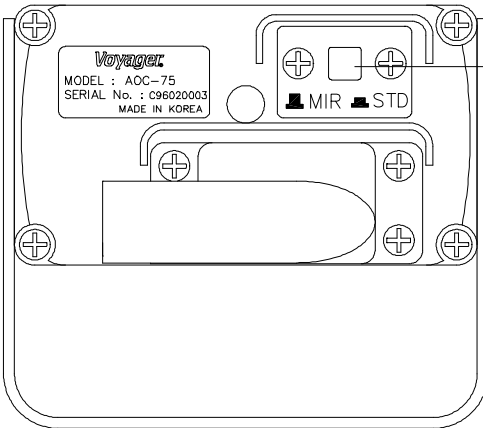
## MONITOR REAR VIEW



## Monitor Operating Controls and Connections

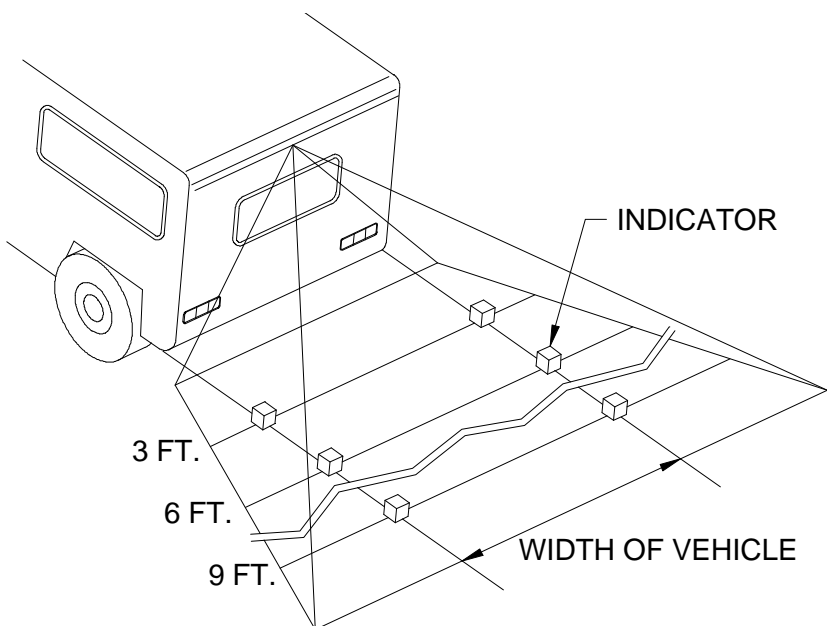


MICROPHONE

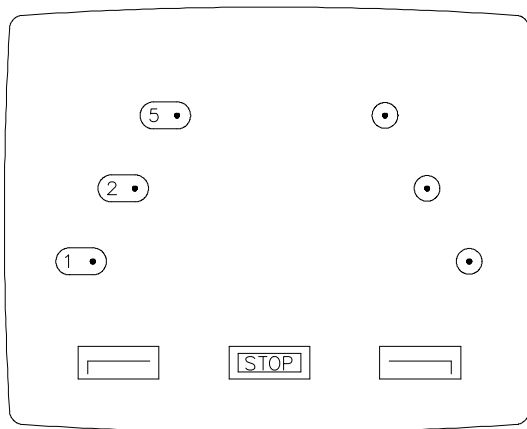


MIRROR/  
"NORMAL" SWITCH

## Camera Features



**MARKER'S EXAMPLE**



**Figure 8**



**SPECIFICATIONS:**

AOS58 System, 1 Camera	Rated Voltage Operating Voltage Current Consumption	12VDC, Negative Ground 11 to 30 VDC 1.5 Amperes
AOC75 Camera	Sensitivity Signal System Image sensor  Viewing Angle (approx.) Outer Dimensions  Weight	0.1Lux NTSC 1/3" B/W CCD w/electronic auto-iris 270K picture elements 110° (H), 80° (V) 2.44" (W) x 1.50" (H) x 1.96" (D) 6.20cm (W) x 3.81cm (H) x 4.98cm (D) 0.8 lbs. 0.36 Kg.

**DISCLAIMER:** The use of the VOYAGER observation does not guarantee or promise that the user will not be in an accident or otherwise not collide with an object. The VOYAGER Observation System is not intended in any way to be a substitute for careful and cautious driving, or for the consistent adherence to all applicable traffic laws and motor safety regulations. This product is not intended to be a substitute for rear view mirrors, or for any other motor vehicle or boat equipment mandated by law.



**Optional Product List:**

<b>Televisions</b>	
AVT-988 9" Color Television with Remote (12V)	AVT988
AVT-1498 13" Color Television with Remote (12V)	AVT1498
<b>VCP and DVD Player's For use with TV's and LCD</b>	
AVP-7000 Video Cassette Player (12V)	AVP7000
AVP-7285 Video Cassette Player (12V)	AVP7285
Single Disc DVD Player	DVD2101
<b>Headphones</b>	
Headphones with Pivoting Earcups	HP175
Headphones with Volume Control on Cord	HP275
Studio Quality Headphones	HP375
<b>Miscellaneous</b>	
Remote Controls	Please Call
Wallmount Family Radio Service with 4 Handsets	FRS4WM
Replacement Handsets	FRS100Y
12V Corded Vacuum	VAC21
Rechargeable Flashlight	AVF1
Window Mount TV Antenna	AN350
B4-Amp Adapter for use with AVT988 9" and AVT1498 13" TV's	0891412
2-Amp Adapter for use with AVP7000/7285 Video Cassette Players	0891436
<b>Wallmount Radios</b>	
AM/FM Wallmount Manual Tune w/Cassette Player	AWM710
AM/FM Wallmount Electronic Tune w/Cassette Player	AWM820
AM/FM Wallmount Stereo w/CD Player	AWM930
<b>Marine</b>	
AM/FM Stereo w/CD Player	MS1000
AM/FM Weatherband Stereo w/Cassette Player	MS407
AM/FM Stereo w/Cassette Player (analog tune)	MS306
AM/FM Stereo w/Cassette Player (analog tune)	MS220
Weatherproof Housing	MRH211
50 Watt 6 ½" Speakers (white/black)	AMS6
30 Watt 5" Speakers (white/black)	AMS5
30 Watt 4" Speakers	AMS4
Marine Radio Antenna	AN125

To order any of these products, please call 800-688-3135





AOS58 Manual  
Revision C  
Date: 3/2001

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