

# MINNICH

AV-CCII 24/48 - AUTO-VIBE  
OPERATOR/SERVICE MANUAL



## MINNICH MANUFACTURING

1444 ST RT 42  
Mansfield, OH 44903

## CONTACT

Phone: (419)-903-0010  
Email: [sales@minnich-mfg.com](mailto:sales@minnich-mfg.com)

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NOTICE

It is Minnich’s policy to constantly strive to improve our products. The information, specifications, and illustrations in this publication are based on the information in effect at the same time as approval for printing and publishing. Minnich therefore reserves the right to make changes in design and improvements whenever it is believed the efficiency of the machine which has been shipped or curring any obligation to incorporate such improvements in any machine which has been shipped or is in service. It is recommended that users contact Minnich or a Minnich Dealer for latest revisions.

NOTICE

See engine manual for information pertaining to the engine.

NOTICE

If there are any questions regarding the machine or its application which are not covered in this manual or in other literature accompanying this unit, please contact your Minnich Dealer or Minnich Manufacturing at 419-903-0010 or [sales@minnich-mfg.com](mailto:sales@minnich-mfg.com)

## ⚠ WARNING

### CALIFORNIA PROPOSITION 65

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

Lead from lead-based paints.  
Crystalline silica from bricks.  
Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: ALWAYS work in a well ventilated area, and work with improved safety equipment, such as dust masks that are specifically designed to filter out microscopic particles.

## ⚠ WARNING



### SILICOSIS WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mist containing crystalline silica.

Silica is a basic components of sand, quarts, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory disease, including silicosis. In addition, California and some authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.

## ⚠ WARNING

### RESPIRATORY HAZARDS



Grinding/cutting/drilling of masonry, concrete, metal and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproduction harm, if you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufactures of suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mist and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by OSHA/NIOSH for the materials being used.

## GENERAL SAFETY

Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.

This operation manual has been developed to provide complete instruction for the safe and efficient operation. Refer to the manufactures instructions for data relative to its safe operation. Before using, ensure that the operating individual has read and understood all instructions in the manual. The surrounding environment and you, could be damaged if you do not follow instructions.

### SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: DANGER, WARNING, CAUTION or NOTICE.

#### **DANGER**

Indicates a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY

#### **WARNING**

Indicates a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY

#### **CAUTION**




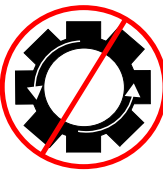
Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE INJURY

#### **NOTICE**

Addresses practices not related to personal injury

### SAFETY SYMBOLS

Potential hazards associated with the operation of this equipment will be referenced with hazards symbols which may appear throughout this manual in conjunction with safety messages.

SYMBOL	SAFETY HAZARD
	Lethal exhaust gas hazards
	Explosive fuel hazards
	Burn hazard
	Factory Settings

## GENERAL SAFETY

### ⚠ CAUTION

Δ NEVER operate this equipment without proper protective clothing, shatter proof glasses, respirator protection, hearing protection, steel-toes boots and other protective devices required by the job or city and state regulations.



Δ Never operate this equipment when not feeling well due to fatigue, illness or when under medication.



Δ NEVER operate this equipment under the influence of drugs or alcohol.



Δ ALWAYS check the equipment for loosened threads or bolts before starting.

Δ NEVER operate around corrosive chemicals or water containing toxic substances. These fluids could create serious health and environmental hazards. Contact local authorities for assistance.

Δ DO NOT use the equipment for any purpose other than its intended purpose or applications.

### NOTICE

Δ This equipment should only be operated by trained and qualified personnel 18 years of age and older.

Δ This equipment is for industrial use only. Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.

Δ Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modifications will void all warranties. Any modification which it could lead to change in the original characteristics of the machine should be

made only by the manufacturer who shall confirm that the machine is in comfortability with appropriate safety regulations.

Δ Never use accessories or attachments that are not recommended by Minnich for the equipment. Damage to the equipment and/or injury to user may result.

Δ Always know the location of the nearest fire extinguisher.



Δ ALWAYS know the location of the nearest first aid kit.



Δ ALWAYS know the location of the nearest phone or keep a phone on the job site. Also, know the phone numbers of the nearest ambulance, doctor and fire department. This information will be invaluable in the case of an emergency.



### ⚠ DANGER

Δ NEVER operate the equipment in an explosive atmosphere, near combustible materials, or near flammable or low flash point fluids. An explosion or fire could result causing severe bodily harm or even death.



### ⚠ WARNING

Δ NEVER disconnect any emergency or safety devices. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these will void all warranties.

Δ NEVER operate equipment with the covers or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury. Wear clothing that will not likely become caught in the equipment or snag on any moving parts.

### ⚠ CAUTION

Δ ALWAYS be sure the operator is familiar with the proper safety precautions and operating techniques before using.

Δ NEVER leave the machine unattended.  
Turn off when unattended

## GENERAL SAFETY

- Δ DO NOT expose vibrator to rain.
- Δ DO NOT use vibrator motor in damp or wet locations without proper electrical circuits.
- Δ DO NOT immerse the motor part in concrete.
- Δ ALWAYS keep clear of rotating or moving parts while operating.
- Δ NEVER leave the machine unattended while running
- Δ ALWAYS disconnect the motor from the power source when not in use, before servicing, and when changing flexible shafting and vibrator heads.

- Δ Allow the machine to cool before servicing. Contact with hot components can cause serious burns.



- Δ Before Each use, ALWAYS check the motor to make certain that there are no damaged parts and that all parts function properly. If any damage or malfunctioning parts are found, have them repaired or replaced by an authorized service facility.

### NOTICE

- Δ ALWAYS secure forms. Make sure the form work is well made and braced to withstand the stresses made by vibration.
- Δ ALWAYS keep vibrator motor clean for better and safer operation.
- Δ ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of reach of children and unauthorized personnel.
- Δ Use only factory authorized replacement parts.
- Δ Store idle vibrator motor. When not in use, motor should be stored in a dry, safe storage area.

## ENVIRONMENTAL SAFETY/DECOMMISSIONING

### NOTICE

- Δ DO NOT pour waste or oil directly into the ground, down a drain or into any water source.
- Δ Contact you country department of Public Works or recycling agency in your area and arrange for proper disposal of any electrical components, waste or oil associated with this equipment.



- Δ When the life cycle of this equipment is over, remove battery (if equip) and bring to appropriate facility for lead reclamation. Use safety precautions when handling batteries that contain sulfuric acid.
- Δ When the life cycle of this equipment is over, it is recommended that the unit frame and all other metal parts be sent to a recycling center.

Metal recycling involves the collection of metal from discarded products and its transformation into raw materials to use in many Manufacturing a new product.

Recyclers and manufactures alike promote the process of recycling center promotes energy cost savings.

### NOTICE

Decommissioning is a controlled process used to safely retire a piece of equipment that is no longer serviceable. If the equipment poses an unacceptable and unrepairable safety risk due to wear or damage or is no longer cost effective to maintain (beyond life-cycle reliability) and is to be decommissioned (demolition and dismantlement), be sure to follow rules below.

- Δ ALWAYS observe all applicable compulsory regulations relevant to environmental protection, especially fuel storage, the handling of hazardous substances, and the wearing of protective clothing and equipment. Instruct the user as a necessary, or, as the user, request this information and training.



## GENERAL SAFETY

- △ ALWAYS Dispose of hazardous waste properly. Examples of potentially hazardous waste include used motor oil, fuel, and fuel filters.
- △ DO NOT use food or plastic containers to dispose hazardous waste.
- △ DO NOT pour waste or oil directly onto the ground, down or drain or into any waste source.

### NOTICE

- △ ALWAYS keep the machine in proper running condition.
- △ ALWAYS become familiar with the components of the machine before operation.
- △ Fix damage to machine and replace any broken parts immediately.
- △ ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.
- △ NEVER lubricate components or attempt service on a running machine

### ⚠ CAUTION

- △ NEVER tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result in operation in speed ranges above the maximum allowability.



#### BEFORE CONNECTING THE AIR COMPRESSOR:

### ⚠ CAUTION

- △ Install the drill steel and bits into the drill motors and close the latch retainers and rod guides.
- △ Make sure that the air compressor is set at an operating pressure of not more than 120 PSIG (8Bar)
- △ Make sure air line is cleaned out and is of the proper size and pressure rating for the drill unit.
- △ Make sure the lubricator is filled with proper lubricant. See Minnich recommended lubricant below.

- △ Make sure all controls are in the "off" position and the lift lever (if so equipped) is in the "up" position.
- △ Make sure all lock pins are in their locked position.

### ⚠ WARNING

- △ NEVER attempt to loosen any compressed air hose that is pressurized.
- △ KEEP AWAY from all hot or spark generating objects, do not smoke when handling fuel.
- △ So as to facilitate shipment, new or repaired units are not lubricated before delivery to customers.
- △ DO NOT use hydrocarbons and especially do not use fuel oil for lubricating purposes.
- △ DO NOT OPERATE MACHINE WITHOUT GUARDS AND COVERS IN PLACE
- △ ALWAYS disconnect the air supply before changing steel or dismantling the tool for service or repair. For maximum safety we advise the installation of a shut-off valve at the end of the air line.
- △ NEVER operate the engine with heat shields or guards removed.
- △ DO NOT remove the engine oil drain plug while the engine is hot. Hot oil will gush out of the engine crankcase and severely scald any persons in the general area of the machine.

### NOTICE

- Δ CLEAR AIR SUPPLY LINE: Before connecting vibrator, clear the compressed air supply line of possible impurities, contaminants and water.
- Δ LUBRICATE: Every day or every four hours of continuous service, pour a ½ teaspoon of non-detergent oil into the quick release coupling. NOTE: An optional oiler/strainer is available.

### CONNECT/START

### NOTICE

If the vibration intensity drops, check that the filters are not clogged or that hoses are not kinked.

### STORAGE

### NOTICE

To properly store unit after use, hang the vibrator with the head up and set the handle (variable control assembly) in the open position to permit the discharge of possible impurities, contaminants and water.

### PLACEMENT AND CONSOLIDATION

### NOTICE

The force exerted by an internal concrete vibrator is controlled by the weight and the speed at which the eccentric rotates. The centrifugal force exerted can be arrived at by various combinations of weight (size of eccentric weight) and the speed at which the weight rotates. For years the most favorable working speed for a vibrator was considered to be around 10,200 RPM (VPM) and consequently this figure is used in many vibrator comparisons. More recently, the optimum speed for compaction has been accepted as being between 7500 and 9000 RPM.

### PERSONAL SAFETY

- Δ Stay alert, watch what you are doing, and use common sense when operating the machine.
- Δ DO NOT use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury or death.
- Δ Dress properly. DO NOT wear loose clothing or jewelry. Tie up long hair. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- Δ DO NOT overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control in unexpected situations.

### SERVICE

- Δ Tool service must be preformed only by qualified repair personnel. Service or maintained preformed by unqualified personnel could result in injury or death
- Δ When servicing a tool, use only identical replacement parts. Use of unauthorized parts may create a risk of injury or death.

### NOTICE

To find the latest revision of this publication, visit our website at: [www.minnich-mfg.com](http://www.minnich-mfg.com)

### NOTICE

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

### NOTICE

Specifications and part numbers are subject to change without notice.



## AV-CC II



Gain access to valuable real-time hydraulic vibrator data with the Minnich Auto Vibe CCII system. Auto Vibe CC II monitors up to 48 hydraulic vibrators during the paving process, recording and displaying live data that can be used to ensure proper vibrator operation. The Minnich system was designed to simplify hydraulic paving vibrator monitoring during heavy highway and airport paving processes. A new, high-visibility, all-weather touch screen monitor offers easy navigation. The IQAN system offers field diagnostics and remote access to Minnich Manufacturing field support.

- \*Touch screen controls
- \*IQAN Remote field diagnostic access to Minnich Manufacturing support
- \*Graphical interface
- \*Real time readout
- \*VPM readout of up to 48 vibrators
- \*Alarm range settings to maintain proper operation
- \*Optional monitoring of temperature and relative humidity
- \*Optional monitoring of ground speed and distance traveled
- \*Auto Vibe II can be installed on any new or existing hydraulic vibrator system.

## GENERAL SYSTEM SET-UP

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### System Installation

It is IMPORTANT to identify which vibrator you want to be #1, #2, #3 and so on. This is because the order that you learn the sensor adapters/valve controllers corresponds to their number on the monitor.

We recommend that you start at one end of the machine (right or left) and work your way to the other end.

1. Locate/hang the Control Box Hanger Assembly A13526-00010 (1 Hanger per 24 vibes) on a free/clear location on the Paver railing.
2. Locate/attach the Monitor Enclosure w/ Monitor A12440-00001 on a free/clear location near the operator control panel with the RAM Mount System included.
3. Locate the (2) Monitor Connection Harnesses (ORANGE) 012440-00007 or 5567 & 012440-00008 or 5568.
4. Plug MD4 Display Harness 012440-00008 or 5568 (2-plug, Black & Gray) into the back of the MD4 Display Module Assembly A12440-1.
5. Plug opposite end of MD4 Display Harness 012440-00008 or 5568 (ORANGE) into 012440-00007 Display/Master Harness or 5567 (ORANGE).
6. Plug Display/Master Harness 012440-00007 or 5567 (ORANGE) into C1 Master Harness 010280-00010 or 5572 (ORANGE).
7. Plug G11 Module (BROWN) 012440-00002 directly into C1 Master Harness 010280-00010 or 5572 (BROWN).
8. The (2) Power Cables 010280-00006 or 5562 (RED) need to be connected to POWER connectors on both 010280-00010 or 5572 and 010280-00017 or 5780, and the leads on the other end need to connect directly to Key Switch Solenoid (24V).
9. REAL TIME CLOCK Module 012440-00005 (RTC) is plugged directly to RTC Harness on C2 Master Harness (GREEN) 010280-00011 or 5573.



10. Plug RTC Power Harness 010280-00020 or 5836 (GREEN) to C2 Master Harness 010280-00011 or 5573 (GREEN), and other end directly to battery (24V).
11. Plug Master C1 10280-00010 or 5572 (WHITE) directly into Master C2 10280-00011 or 5573 (WHITE).
12. Plug Jumper Harness 010280-00019 or 5808 (BLUE) into Master C1 10280-00010 or 5572 (BLUE) and the opposite end into Driver C1 010280-00017 or 5780 (BLUE).

## GENERAL SYSTEM SET-UP

13. AV-CC48 Systems ONLY, plug 010280-00005 or 5561 (GREY) into Master C1 010280-00010 or 5572 (GREY) and opposite end into C1 Driver #2 Module on second Hanger Assembly on C1 010280-00017 or 5780 (BLUE).

14. (OPTIONAL) Plug Travel Speed Harness 010280-00008 or 5565 (PURPLE) into C1 Master Harness (PURPLE) 010280-000010 or 5572 and the other end to the Speed Wheel Assembly (PURPLE).

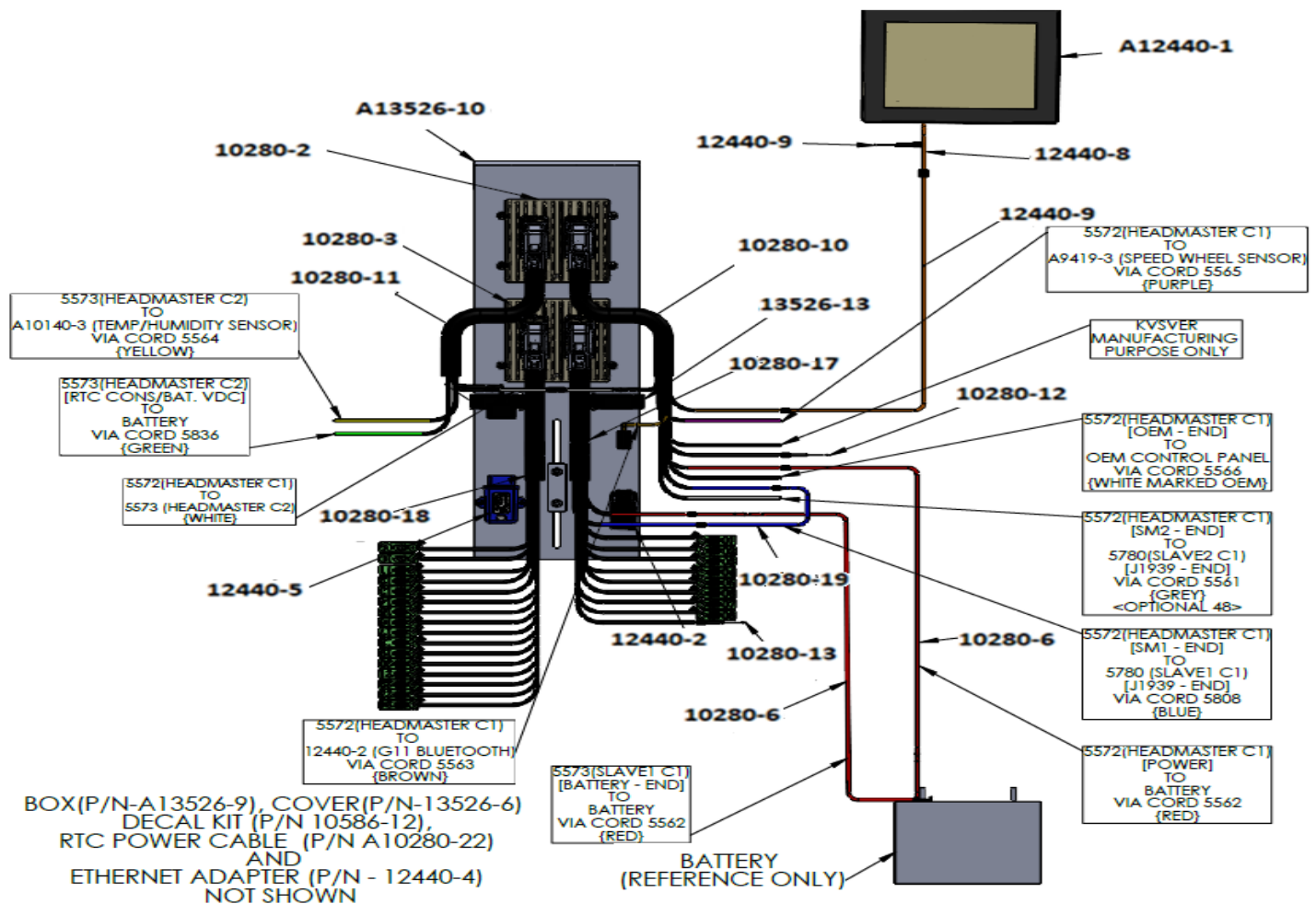
15. (OPTIONAL) The Speed Wheel Assembly should be mounted either over one of the tracks or where it can run in the track path. NOTE: It is advisable to place the wheel where it will be protected, as well as where there will be minimum build up of residue (mud, concrete, etc) on the tread. The lead for the speed wheel should be connected to the special sensor adapter for it.

\*Direction of rotation is labeled by an arrow.

16. (OPTIONAL) Plug Temp/Humidity Sensor (YELLOW) 0A9447-00003 into C2 Master Harness (YELLOW) on 010280-00011 or 5573 OR into optional A10140-00003 Mount Assembly (YELLOW).

\*Remove plastic protective cover during use. Sensor should be pointed in downward facing direction.

17. The KVASER Plug on 010280-00010 or 5572 is for manufacturing purposes ONLY.

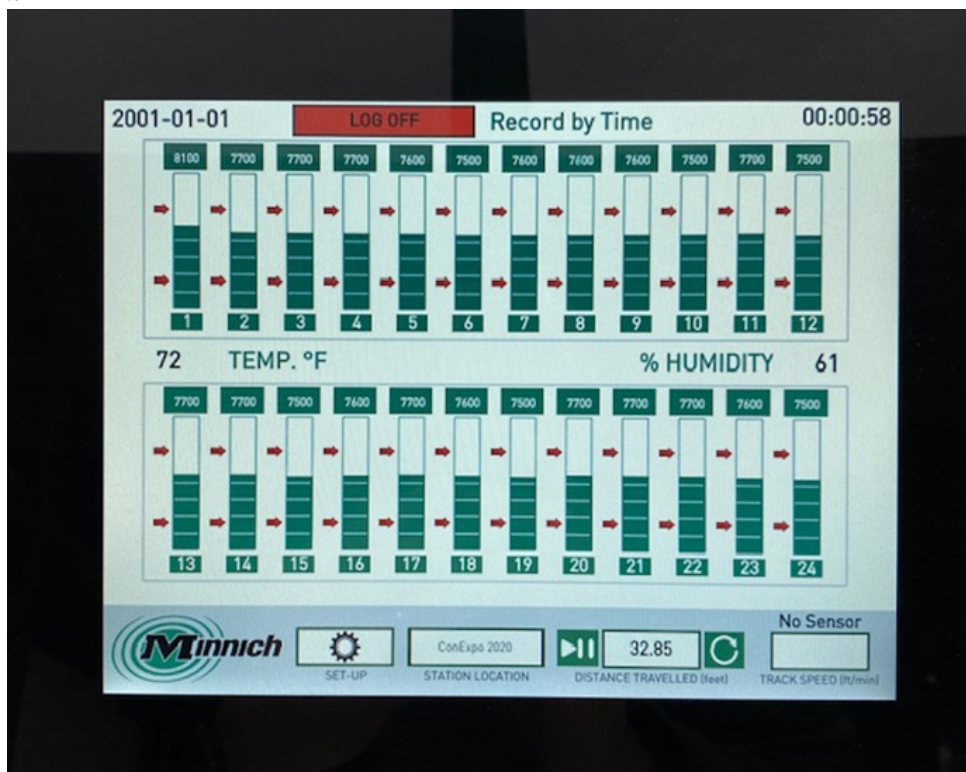


## SYSTEM SET-UP

### SCREEN INFORMATION

1. There is no power button. Once the system is connected to power, the monitor will power on.

### MAIN SCREEN:



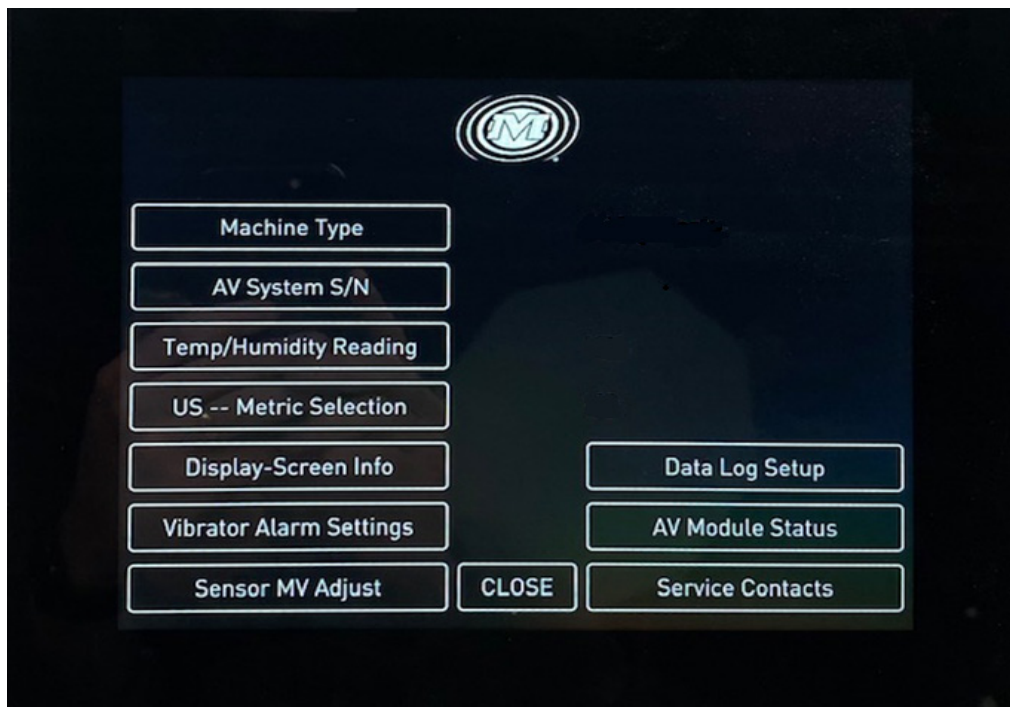
### OTHER MAIN SCREEN INFORMATION:

- Temperature: Once Temp/Humidity connected temp will be displayed.
- Humidity: Once Temp/Humidity connected temp will be displayed.
- Track Speed: Once speed wheel is installed; speed will be displayed.
- Station Location: Click to define your station location(s).
- 48 Vibe System: Once selected, will have button to navigate to page 2

2. Choose the SET-UP button located at the bottom of the screen.

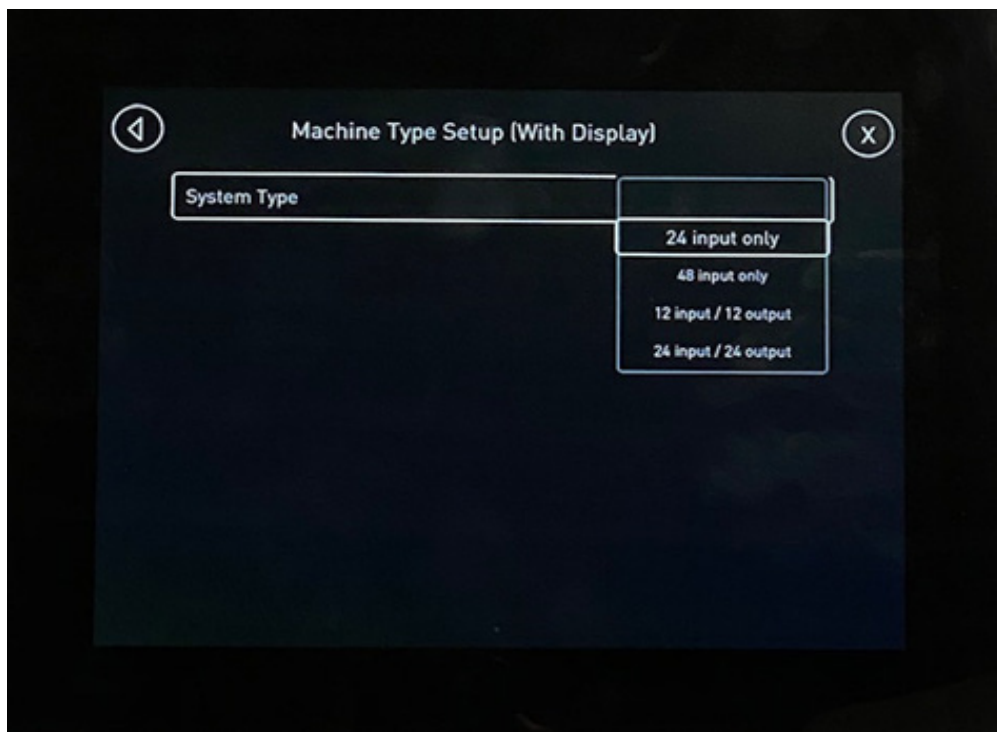
This will bring up the MENU SCREEN:





## 3. MACHINE TYPE:

- a. This is where the type of system being used is selected.
- b. 24 INPUT ONLY: AVII System for up to 24 Vibes.
- c. 48 INPUT ONLY: AVII System for up to 48 Vibes.
- d. 12 INPUT/12 OUTPUT: AVIII System for up to 12 Vibes.
- e. 24 INPUT/24 OUTPUT: AVIII System for up to 24 Vibes.



4. AV SYSTEM S/N: This is a manufacturer input and users are locked out of this, this is a factory issued serial number.



## SYSTEM SET-UP

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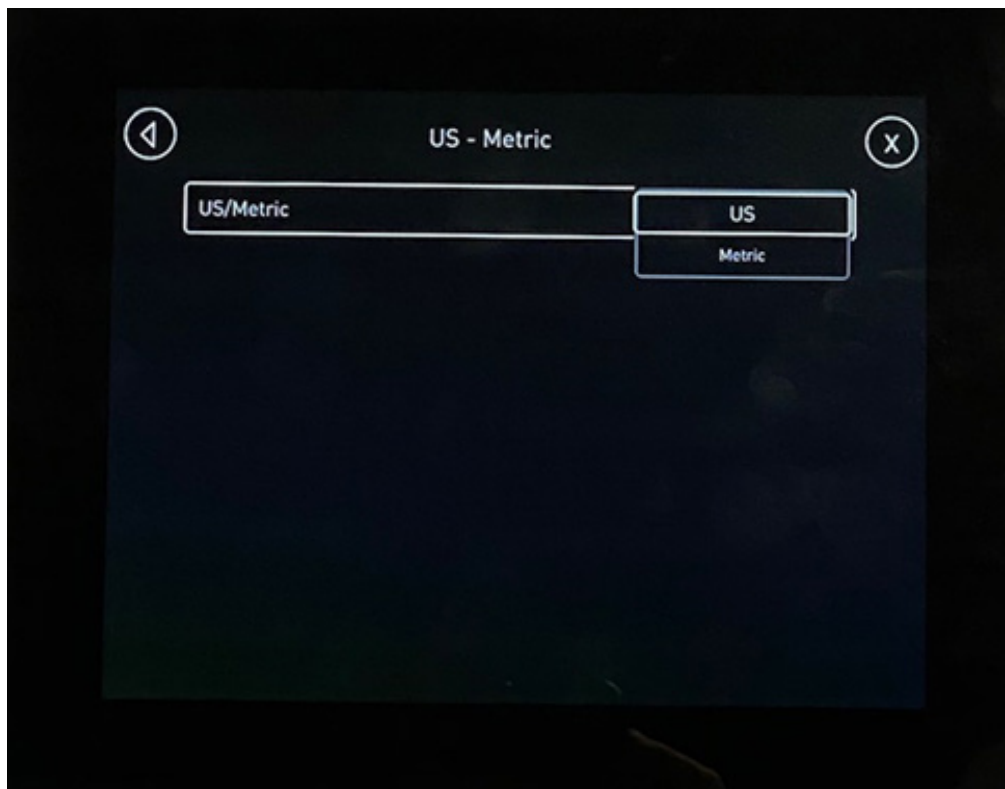
### 5. TEM/HUMIDITY READING:

- a. Turn on/off temperature/humidity sensor based on if the system is using that device.



### 6. US -- METRIC SYSTEM:

- a. Choose either a US standard or Metric version

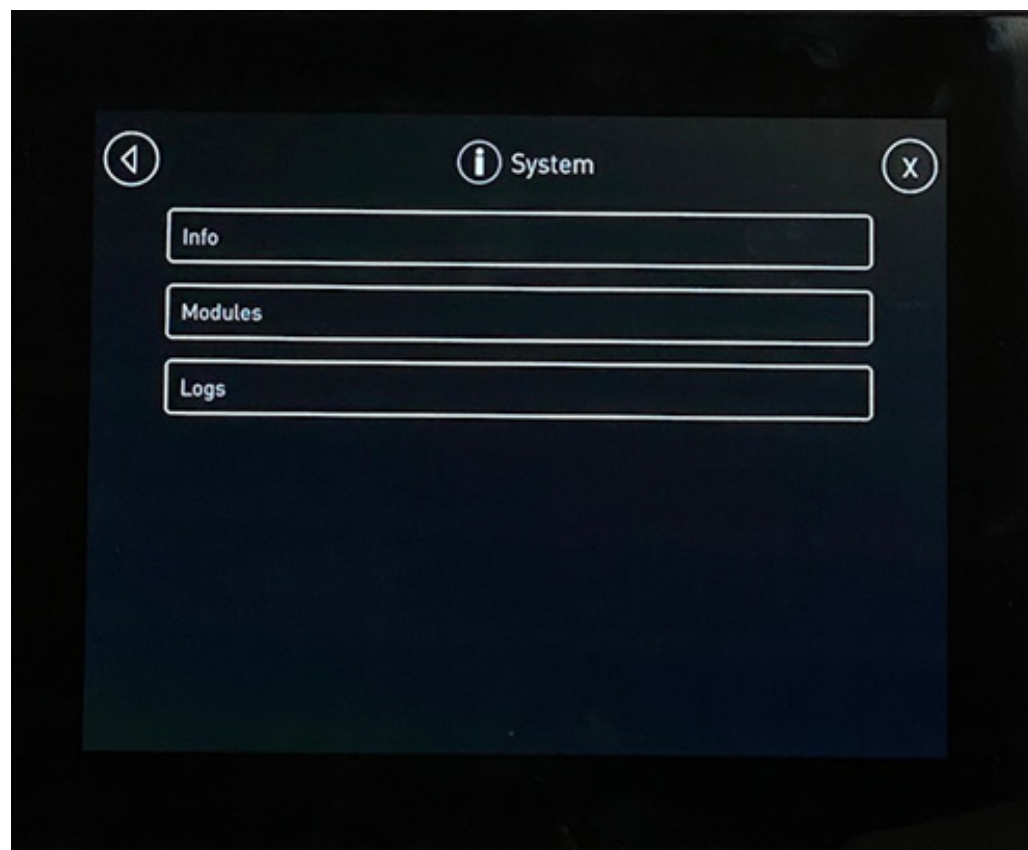




### 7. DISPLAY – SCREEN INFO:



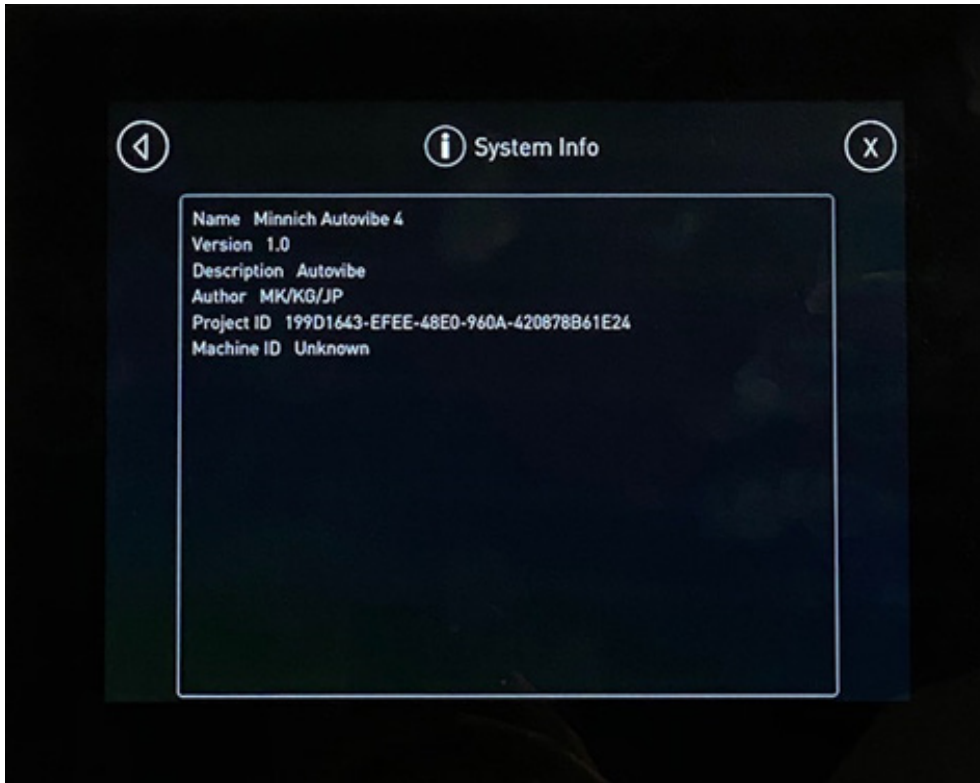
#### 7.1 SYSTEM:



## SYSTEM SET-UP

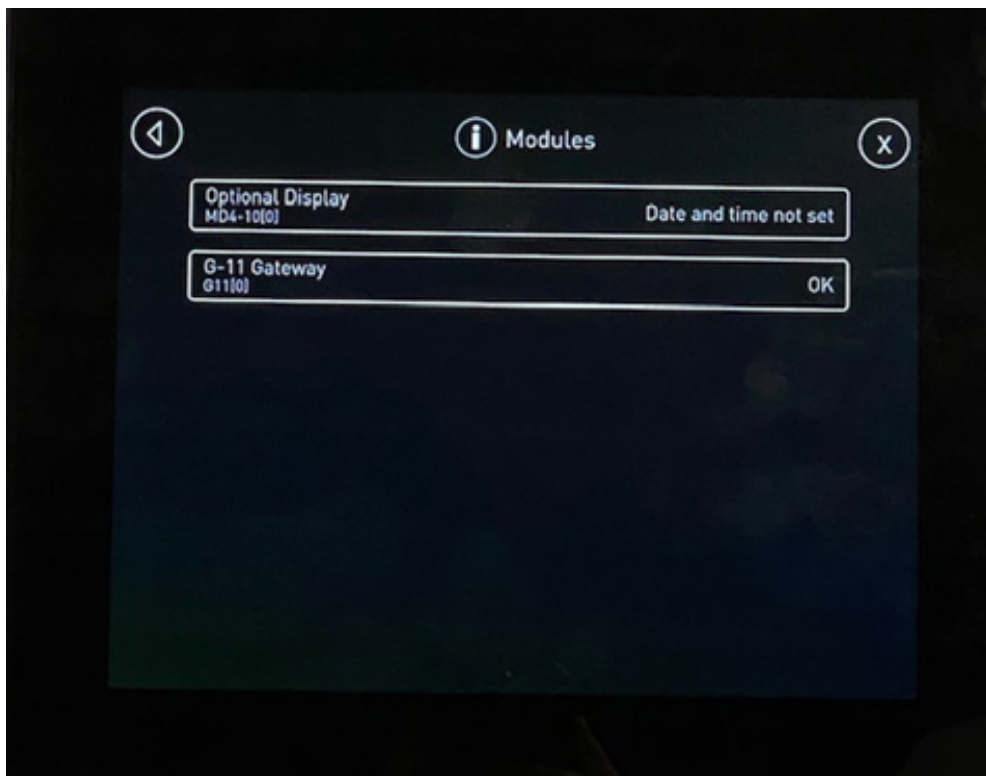
INFO:

1. This section lists all of the system information (Name, Software Version, Description, Software Author, Project ID, and Machine ID).



MODULES:

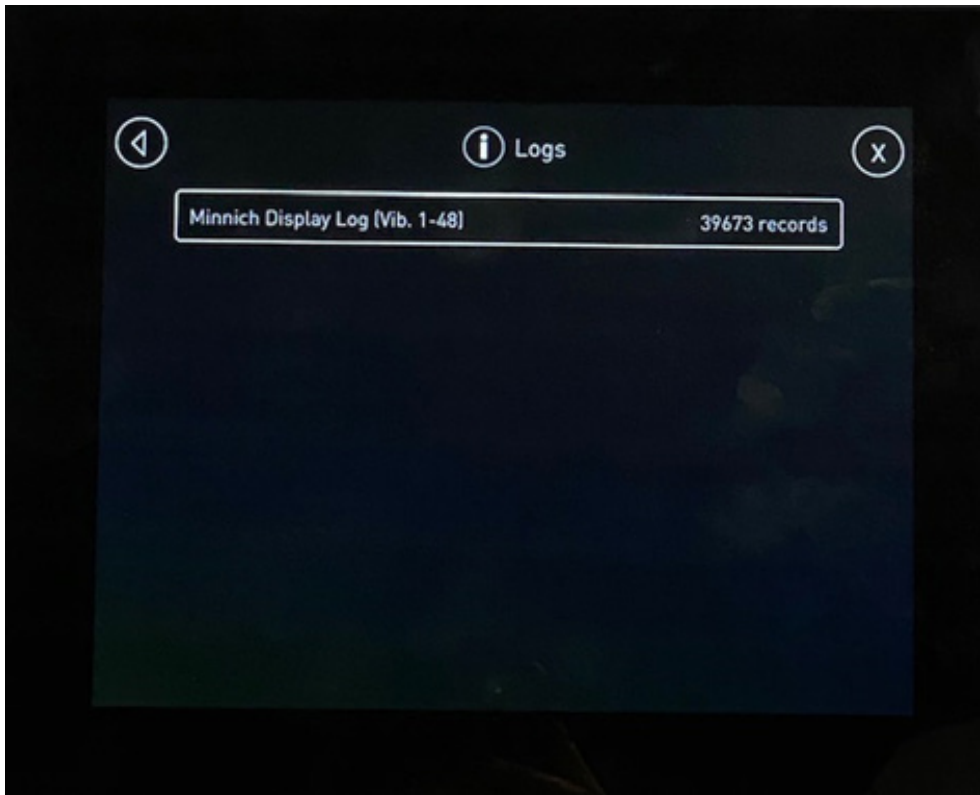
2. Displays a listing of what modules are connected to the system.



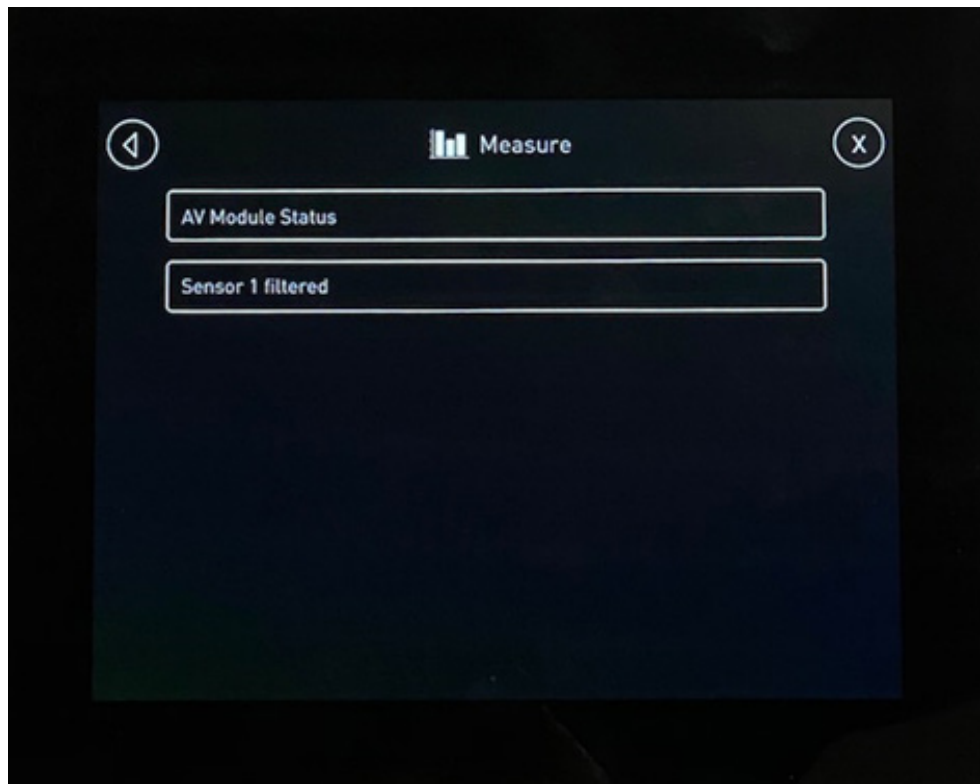
## SYSTEM SET-UP

### 7.1.3 LOGS:

- a. Displays the number of recorded logs in memory along with the date and the time of the recordings.



### 7.2 MEASURE:



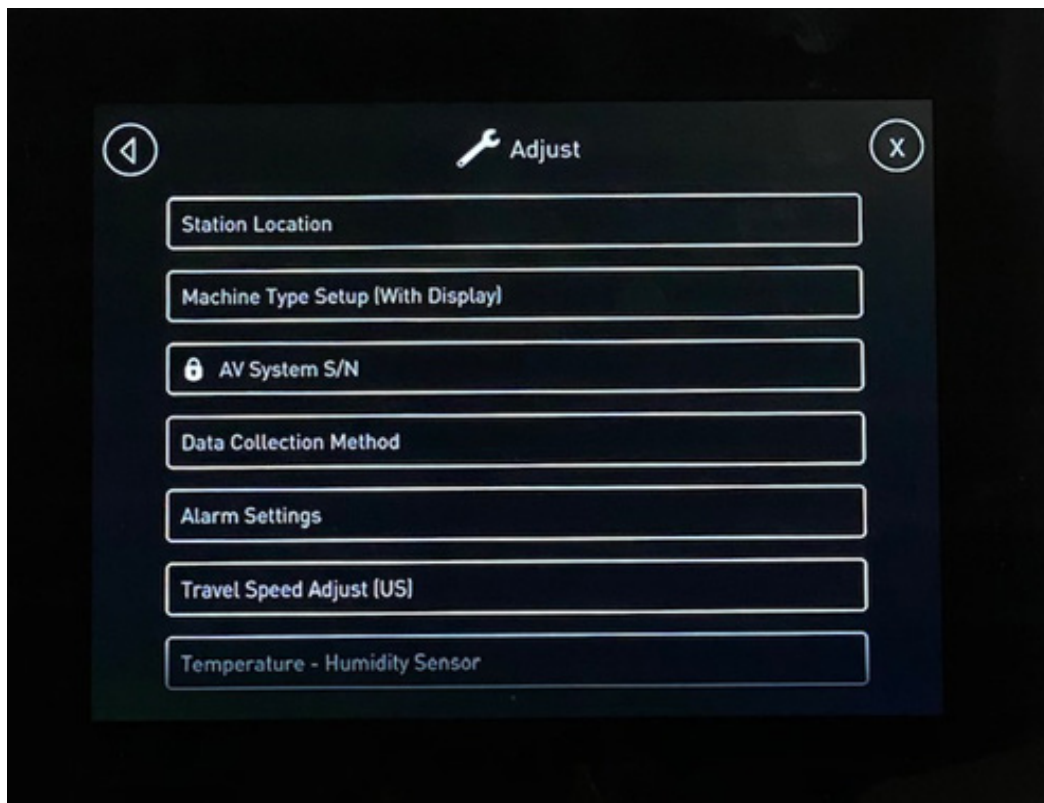
## SYSTEM SET-UP

### 7.2.1 AV MODULE STATUS:

- a. Informational screen showing status of online modules, along with software versions and serial numbers.



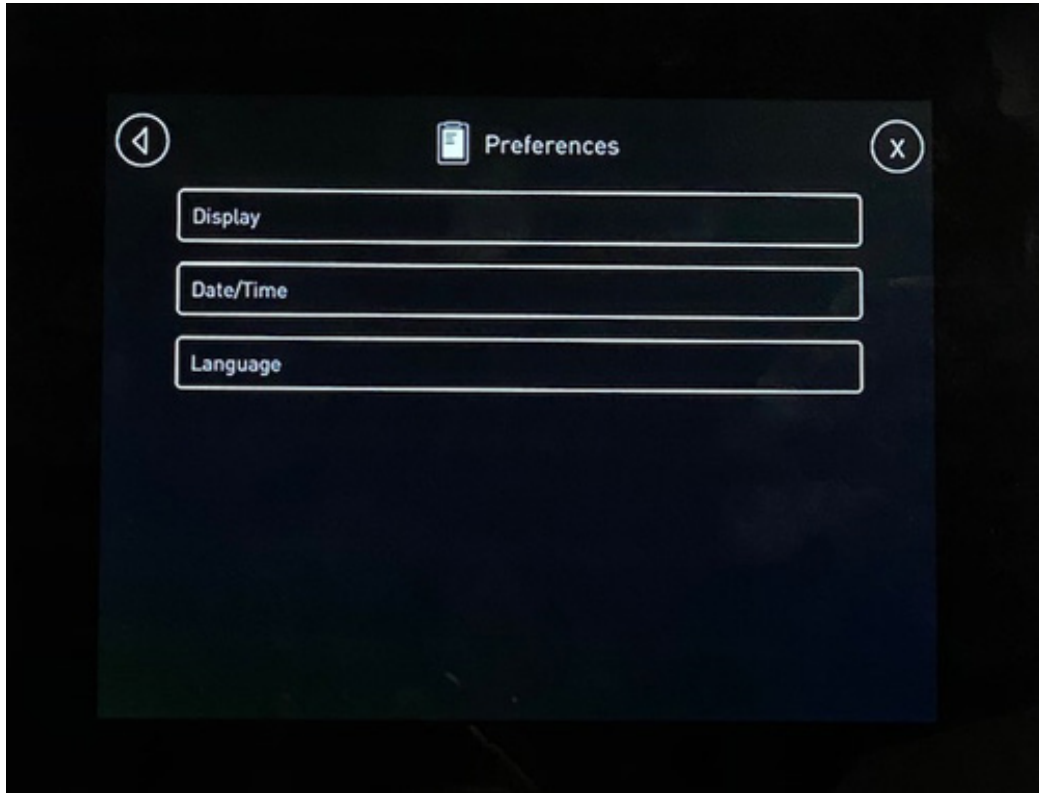
### 7.3 ADJUST:



\*\*In the ADJUST screen: There are all of the screen buttons in one location.

## SYSTEM SET-UP

### 7.4 PREFERENCES:



7.4.1 DISPLAY: Ability to adjust the brightness.

7.4.2 DATE/TIME: Ability to adjust the date and time of day.

7.4.3 LANGUAGE: Ability to select different languages.



8.1.1 ALARMS ON/OFF: Ability to turn on or off set vibration alarms across the paving system.


8.1.2 HIGH ALARM: Ability to set the high side vibration alarm.

8.1.3 LOW ALARM: Ability to set the low side vibration alarm.

9.0 SENSOR MV ADJUST: This is a manufacturer only designated area. NO ACCESS.

10.0 CLOSE: This closes the MENU SCREEN

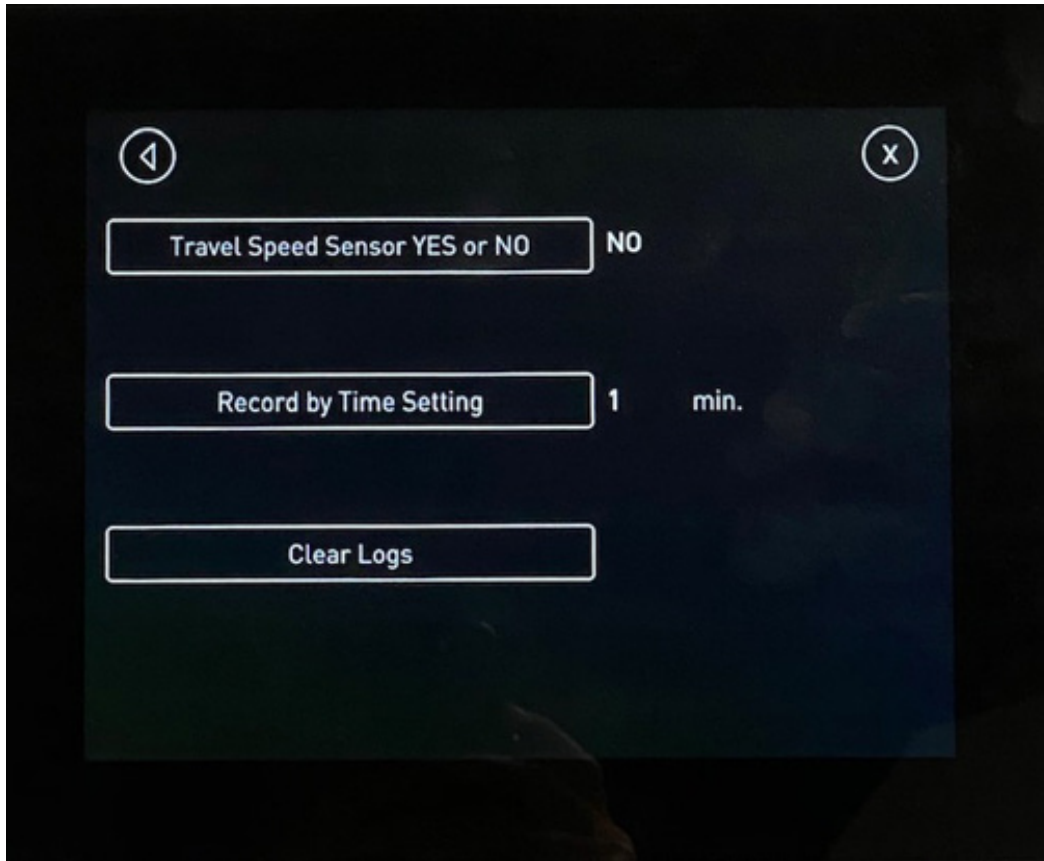
11.0 Back Button: Any time you see a  this will take you back one screen.

12.0 “X” or Close Button: Any time you see a  this will close the screen and take you back to the MENU SCREEN.



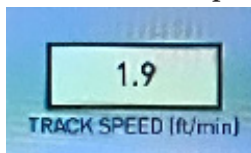
## SYSTEM SET-UP

### 13.0 DATA LOG SETUP:



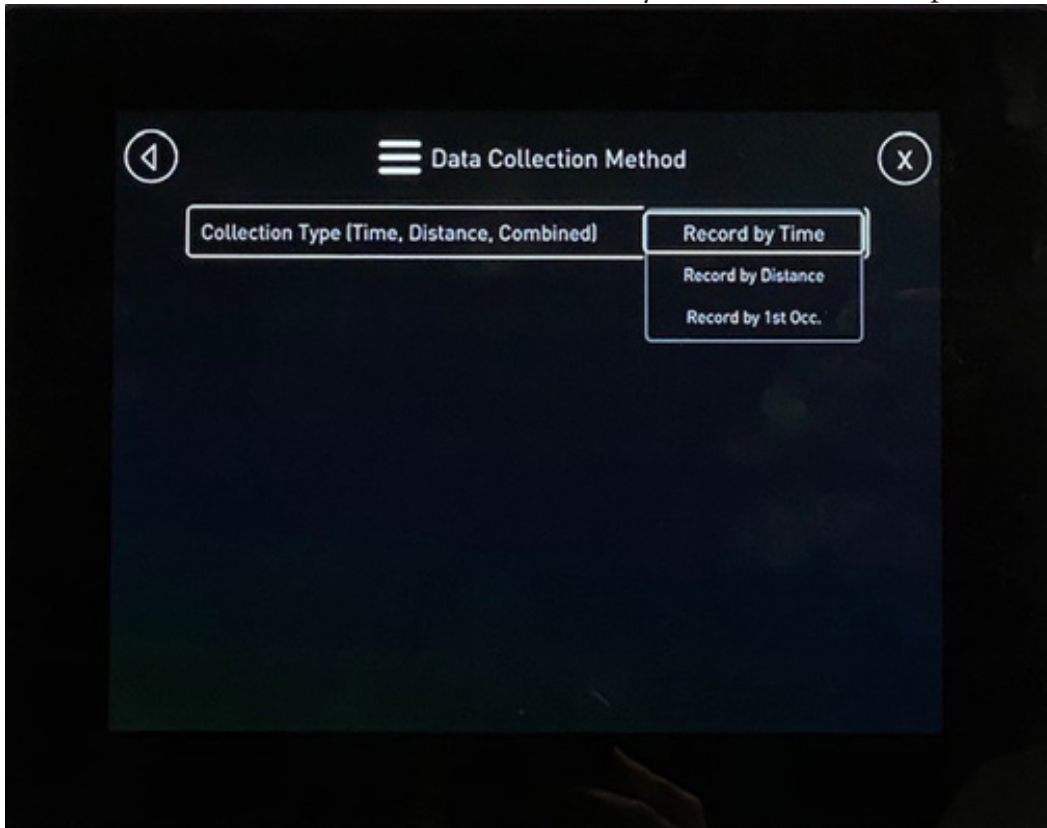
13.1 TRAVEL (SPEED WHEEL): If the system is equipped with a Travel Speed Wheel, this is where you turn that feature on.

- a. Once TRAVEL SPEED WHEEL is connected, on the MAIN SCREEN, you will notice in the bottom right corner the travel speed.

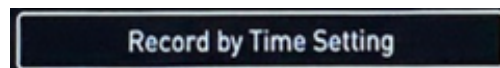


## SYSTEM SET-UP

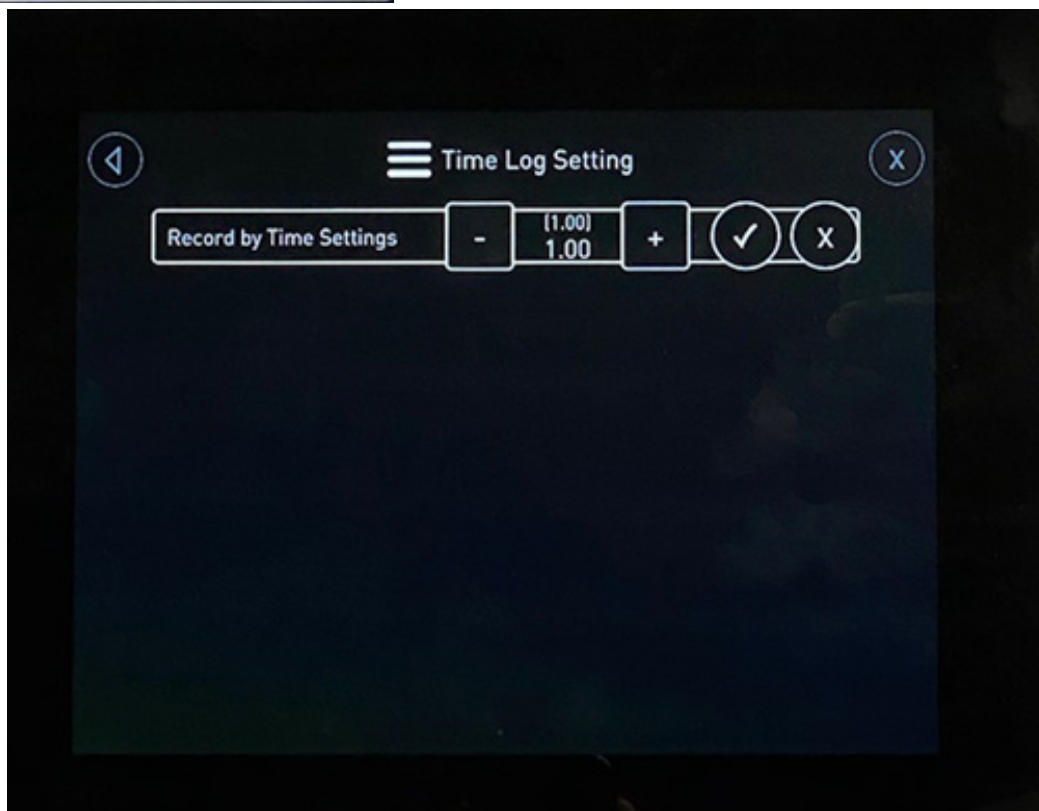
13.2 Click on the RECORD BY... middle button. This will allow you to choose record options:



13.2.1 RECORD BY TIME:



Click to choose time.

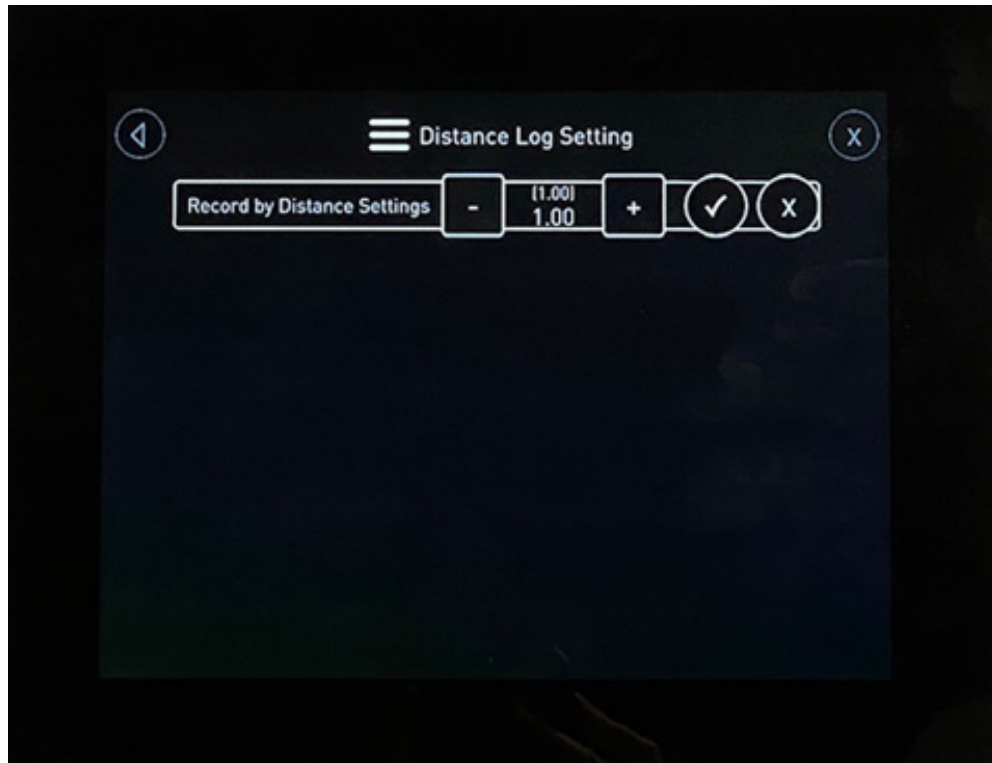


## SYSTEM SET-UP

### 13.2.2 RECORD BY DISTANCE

**Record by Distance Settings**

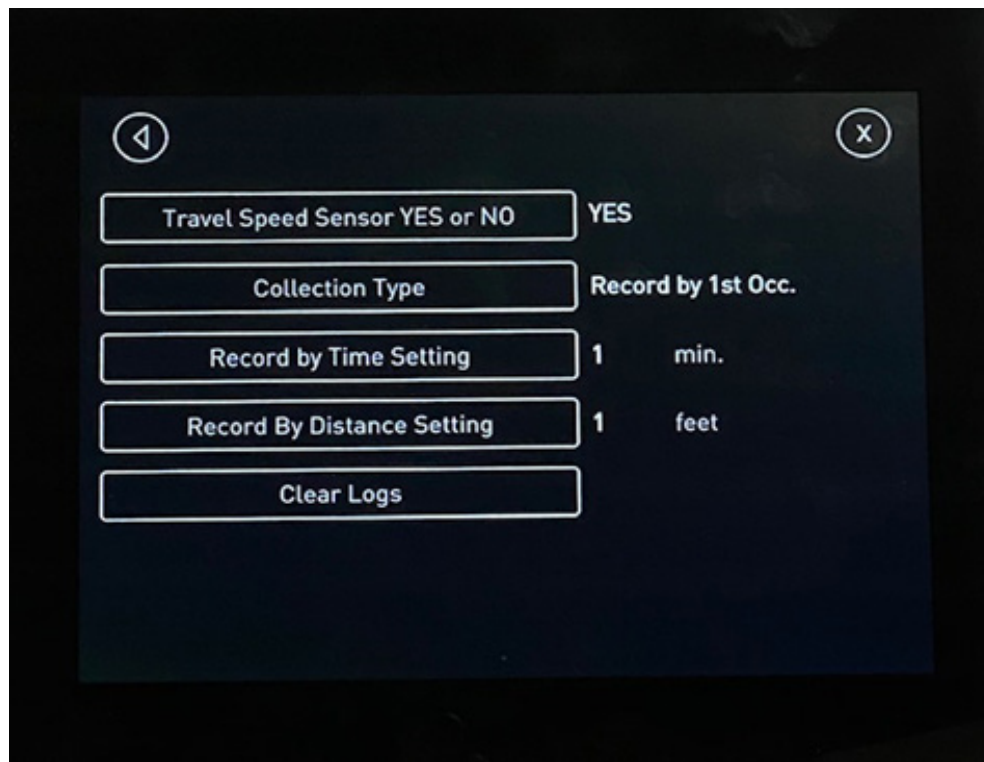
Click to choose distance.



### 13.2.3 RECORD BY 1st. OCC

**Record by 1st Occ.**

Click to choose 1st occurrence (distance or time). Once this is selected, these two options will be available.



## DATE LOGGING

Once all of the collection methods required are set up, the system will save it this way.  
Go back to the MAIN SCREEN.

\*Notice that the record method should match what was selected. In this screen shot below, it is set to  
RECORD BY TIME. **Record by Time**

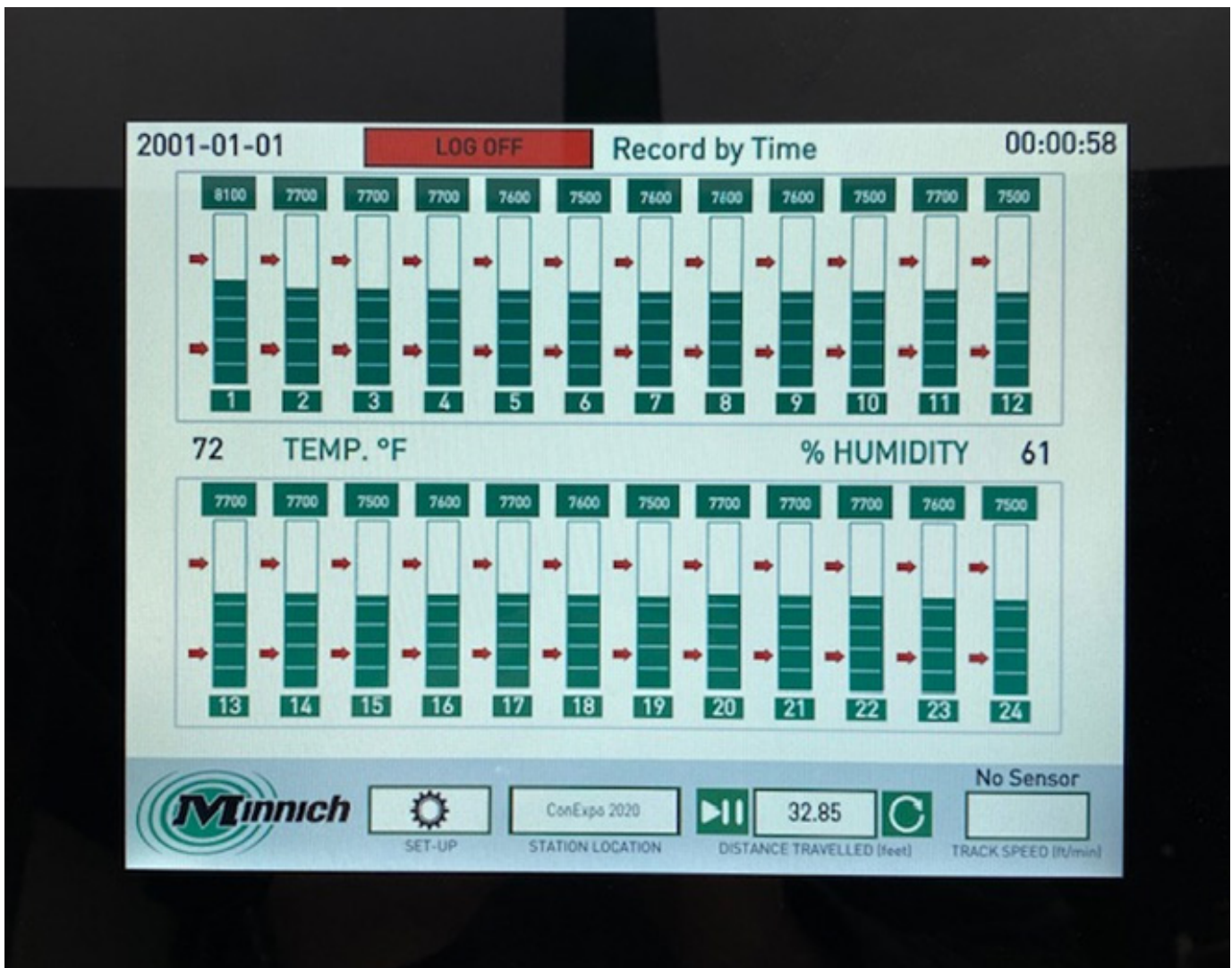
Click on the LOG OFF button in red.

**LOG OFF**

This will turn the button to LOG ON in green

**LOG ON**

ONCE IT IS "GREEN", THE LOGS ARE BEING RECORDED



\*In this example, it is "RED", so this is not recording.

## DATA LOGGING

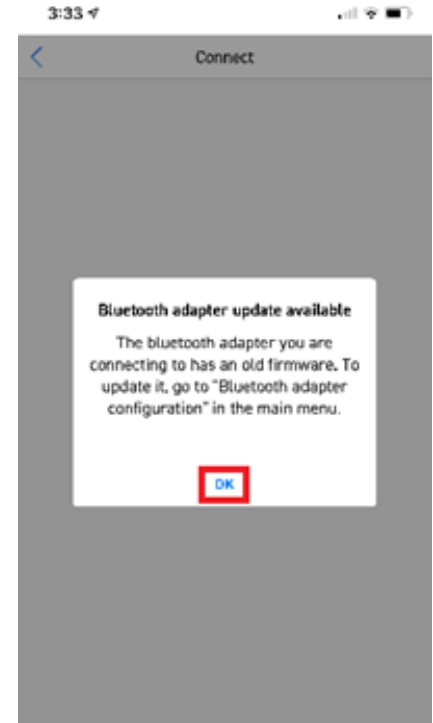
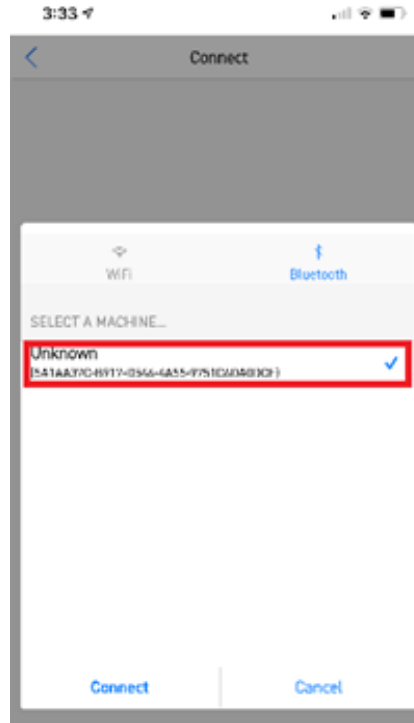
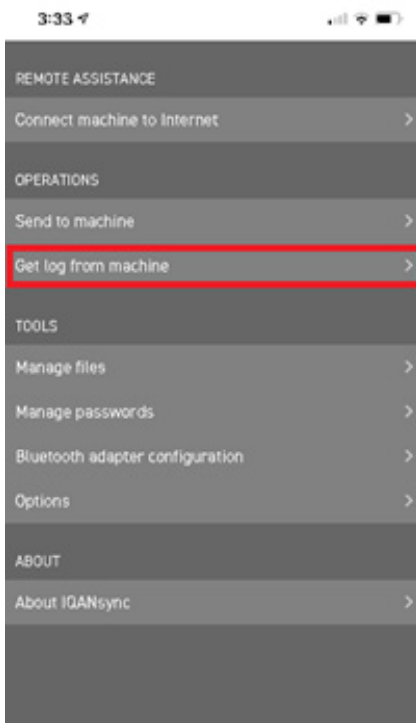
Retrieving Log Files:

1.0 Download the Parker IQANgo app from the iOS or Android store.

Open the IQANgo App and click GET LOG FROM MACHINE

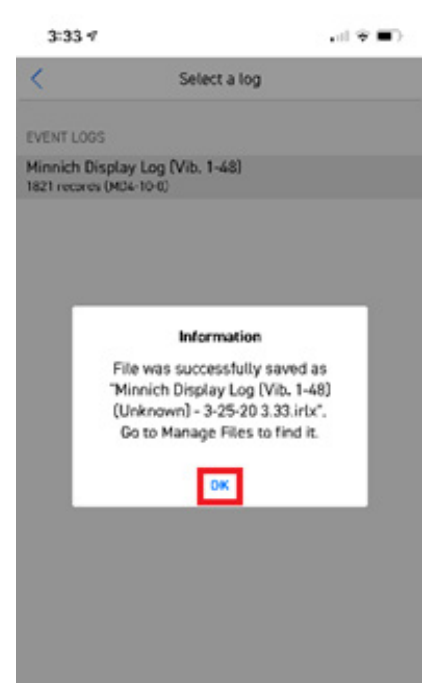
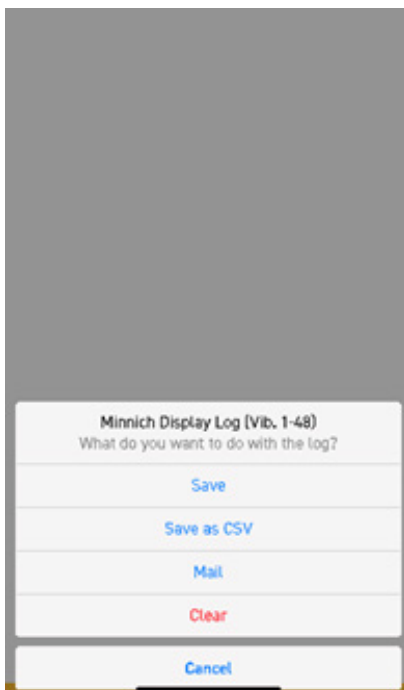
3.0 Select the machine from the listing

4.0 Click “OK” to the Bluetooth update available



5.0 Click on the log file from the listing

6.0 Click on the option on what you want to do with this log file and wait for the file to download. Should get successful download message, click OK.



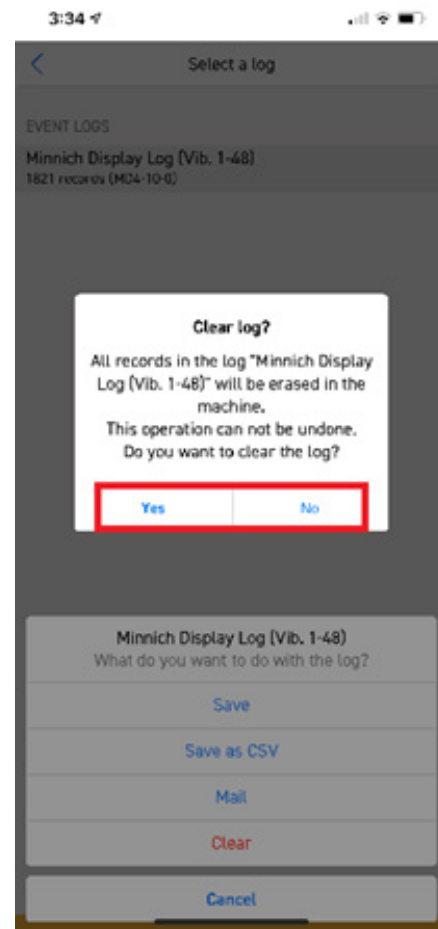
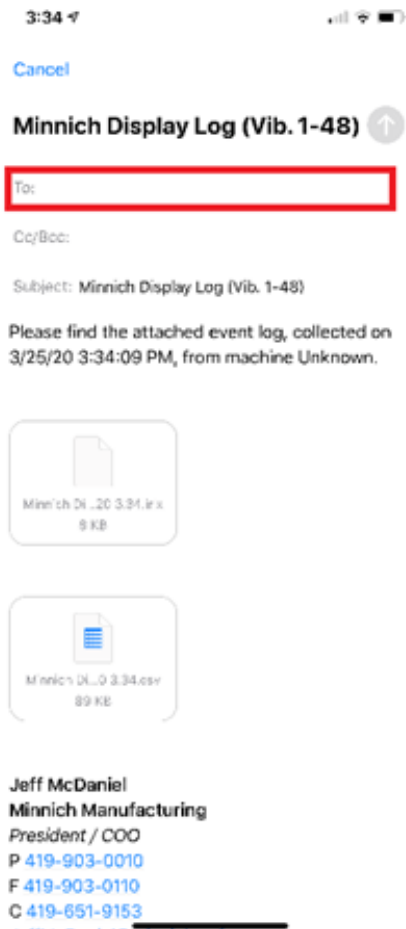


## DATA LOGGING

Once file is saved to phone, you can still choose to email it.

8.0 If the option of email is initially chosen, the App will automatically bring up the email screen with the attachment. Standard email procedure from this point.

9.0 The final option in red is to CLEAR the logs, you will get a warning confirming.



**⚠ WARNING** : Clicking YES will permanently delete the logs from the system entirely

10.0 To view the document that is now pulled from the machine. Email it to a laptop or a PC/Desktop. Save the file to a “AV-CC Log” location.

11.0 Go to [www.minnich-mfg.com](http://www.minnich-mfg.com) or scan the QR code below to take you to the converter.

12.0 Under VIBRATION > AV-CCII or AV-CCIII, you will see DOWNLOAD LOG CONVERTER



LINK TO CONVERTER



Products / Vibrators / Vibrator Monitoring / AV-CC II

## AV-CC II

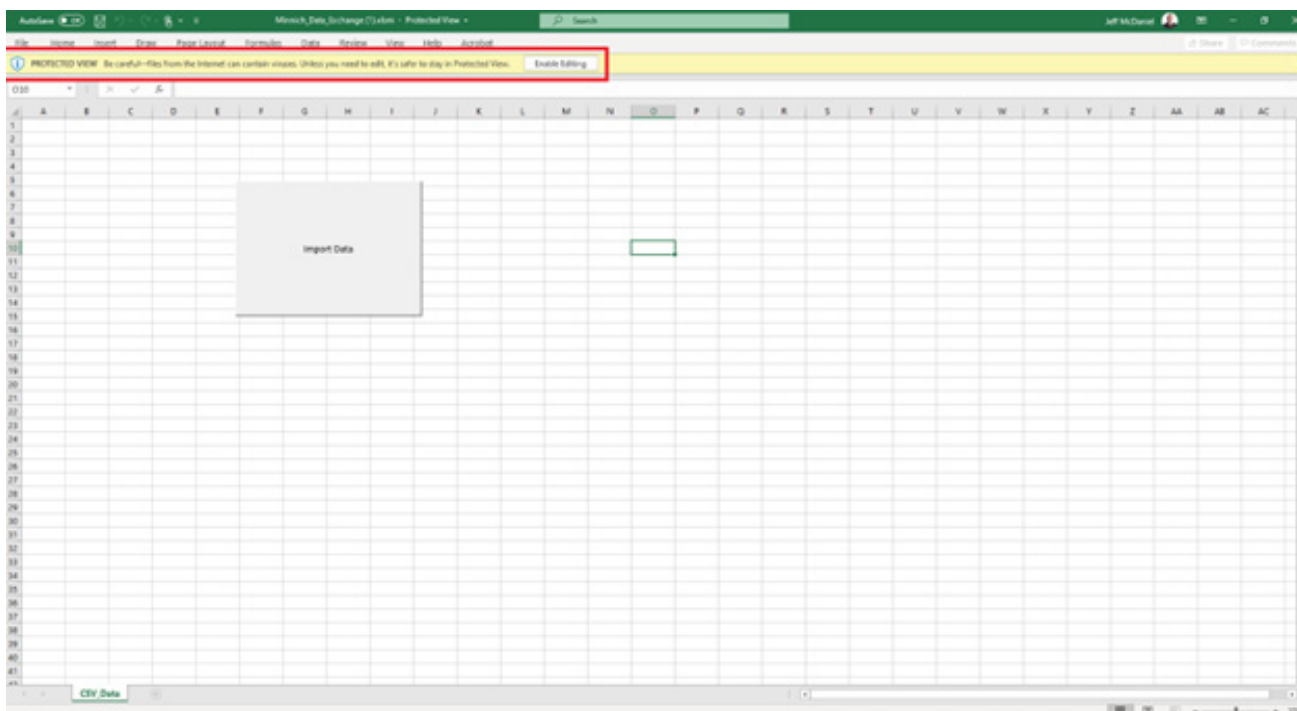
Gain access to valuable real-time hydraulic vibrator data with the Minnich Auto Vibe CC III system. Auto Vibe CC III monitors up to 48 hydraulic vibrators during the paving process, recording and displaying live data that can be used to ensure proper vibrator operation. The Minnich system was designed to simplify hydraulic paving vibrator monitoring during heavy highway and airport paving processes. A new, high-visibility, all-weather touch screen monitor offers easy navigation. The IQAN system offers field diagnostics and remote access to Minnich Manufacturing field support.

- Touch screen controls
- IQAN Remote field diagnostic access to Minnich Manufacturing support
- Graphical interface
- Real time readout
- VPM readout of up to 62 vibrators
- Alarm range settings to maintain proper operation
- Display centrifugal force
- Input slump and air entrainment for data log
- Optional monitoring of temperature and relative humidity
- Optional monitoring of ground speed and distance traveled
- Auto Vibe II can be installed on any new or existing hydraulic vibrator system.



[Download Log Converter](#)

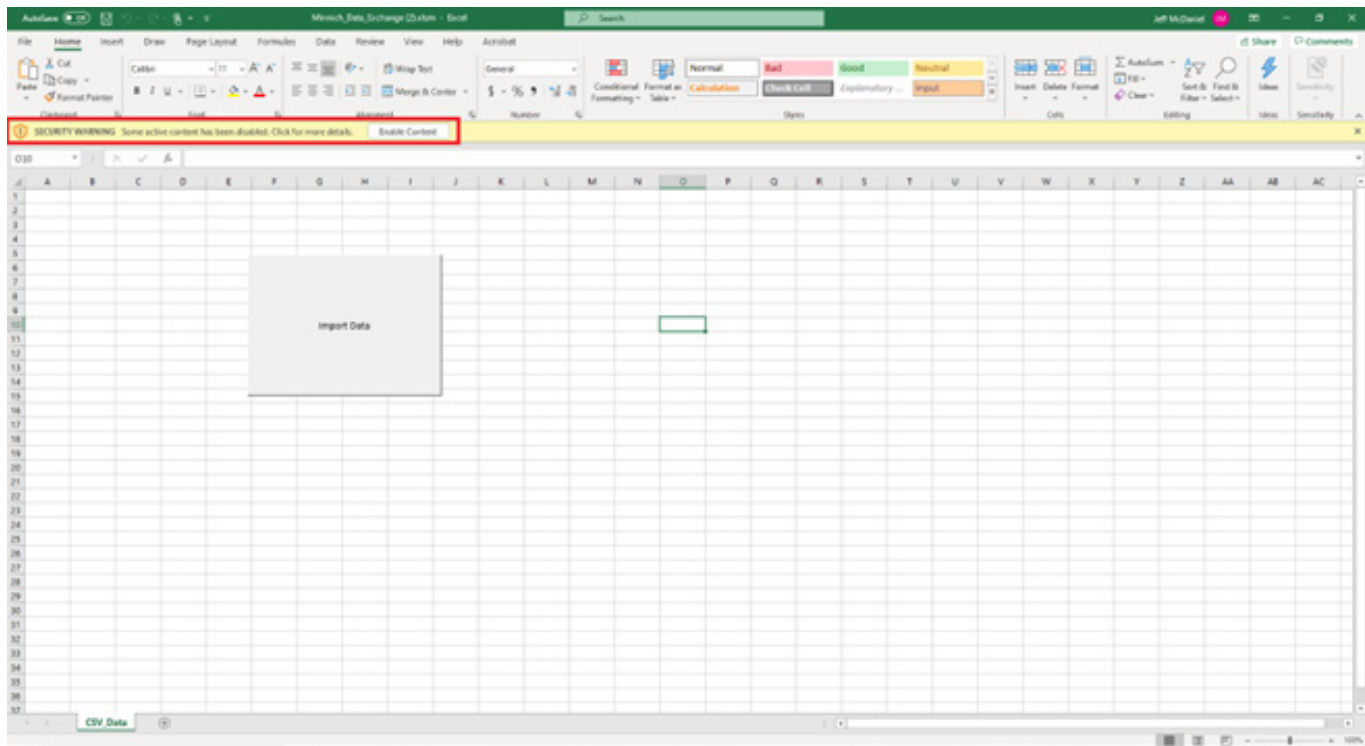
### 13.0 Open the downloaded Log Converter (PC ONLY)



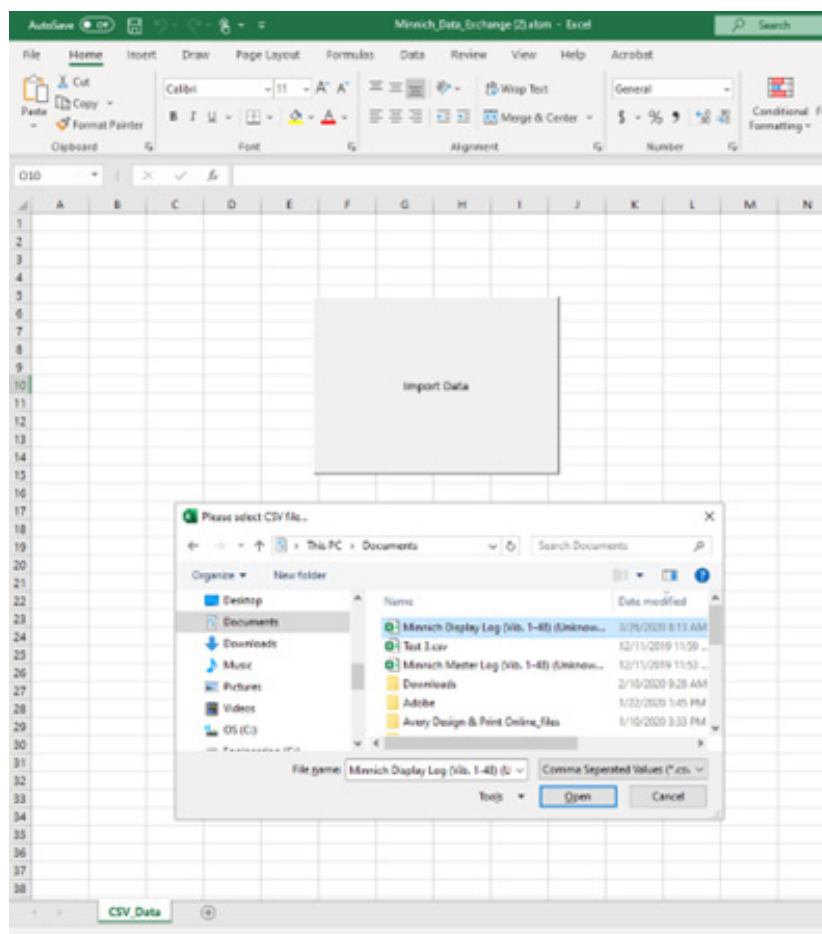
### 14.0 Click Enable Editing

# DATA LOGGING

## 15.0 Click Enable Content



## 16.0 Click Import Data and choose the file location



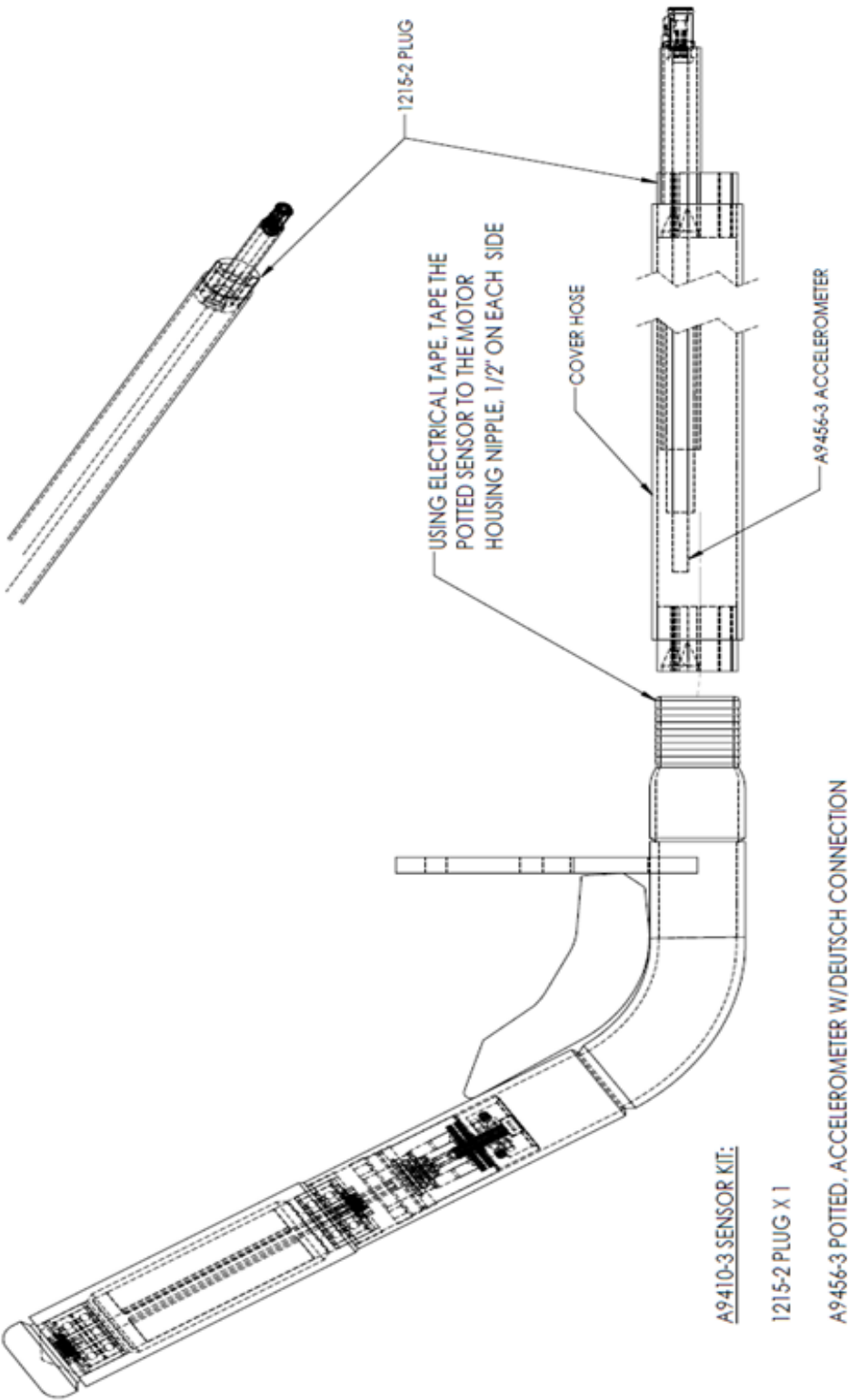
## 17.0 Highlight the file and click OPEN

	Distance Traveled [ft]	Humidity [%]	Temperature [Deg. F]	Vib 01 [VPM]	Vib 02 [VPM]	Vib 03 [VPM]	Vib 04 [VPM]	Vib 05 [VPM]	Vib 06 [VPM]	Vib 07 [VPM]	Vib 08 [VPM]	Vib 09 [VPM]	Vib 10 [VPM]	Vib 11 [VPM]	Vib 12 [VPM]	Vib 13 [VPM]	Vib 14 [VPM]	Vib 15 [VPM]	Vib 16 [VPM]
1	259.64	61	72	8500	7500	7700	7600	7600	7600	7500	7700	7500	7700	7700	7700	7500	7500	7600	7500
2	261.5	61	72	8400	7600	7700	7700	7700	7600	7700	7500	7700	7700	7700	7700	7500	7500	7600	7500
3	263.32	61	72	8400	7500	7700	7700	7700	7600	7500	7500	7500	7700	7500	7700	7500	7700	7600	7600
4	265.15	61	72	8400	7500	7700	7600	7500	7600	7700	7700	7700	7700	7700	7700	7500	7700	7600	7500
5	266.98	61	72	8400	7500	7500	7500	7500	7500	7700	7500	7600	7700	7600	7700	7500	7600	7500	7600
6	268.81	61	72	8300	7600	7700	7700	7600	7700	7600	7500	7700	7500	7500	7700	7500	7500	7500	7500
7	270.64	61	72	8300	7500	7600	7700	7500	7600	7500	7600	7700	7500	7700	7500	7600	7700	7600	7700
8	272.5	61	72	8300	7500	7600	7500	7500	7600	7700	7700	7600	7700	7500	7500	7500	7500	7500	7600
9	274.33	61	72	8300	7700	7600	7600	7500	7700	7600	7500	7600	7500	7700	7600	7500	7500	7500	7600
10	276.15	61	72	8200	7500	7500	7600	7600	7500	7700	7500	7600	7700	7700	7500	7600	7500	7500	7600
11	277.98	61	72	8200	7700	7700	7600	7700	7600	7700	7500	7600	7500	7700	7600	7500	7500	7500	7600
12	279.81	61	72	8200	7500	7500	7500	7500	7700	7600	7500	7600	7700	7700	7500	7600	7500	7500	7600
13	281.67	61	72	8200	7700	7600	7600	7700	7600	7700	7500	7600	7700	7700	7500	7600	7500	7500	7600
14	283.5	61	72	8100	7500	7700	7600	7700	7500	7700	7500	7600	7700	7700	7500	7600	7500	7500	7600
15	285.33	61	72	8100	7600	7600	7600	7500	7500	7500	7500	7600	7700	7600	7500	7700	7700	7700	7500
16	287.16	61	72	8100	7700	7500	7500	7500	7500	7700	7600	7700	7600	7600	7600	7600	7600	7700	7700
17	288.98	61	72	8100	7500	7600	7700	7700	7500	7700	7500	7600	7700	7500	7700	7600	7600	7600	7500
18	290.84	61	72	8000	7700	7700	7600	7600	7500	7700	7700	7500	7500	7700	7700	7600	7500	7500	7600
19	292.67	61	72	8000	7600	7700	7500	7700	7600	7700	7700	7700	7600	7700	7500	7600	7700	7700	7500
20	294.5	61	72	8000	7700	7500	7700	7600	7500	7700	7600	7500	7700	7600	7500	7600	7700	7600	7500
21	296.33	61	72	8000	7500	7700	7700	7500	7700	7500	7500	7700	7500	7600	7600	7600	7600	7600	7600
22	298.16	61	72	7900	7700	7500	7700	7700	7700	7500	7700	7700	7600	7600	7500	7700	7600	7500	7700
23	300.02	61	72	7900	7500	7600	7600	7700	7600	7700	7500	7600	7700	7500	7700	7600	7700	7700	7700
24	301.85	61	72	7900	7700	7700	7700	7600	7700	7600	7600	7500	7700	7600	7700	7500	7700	7500	7600
25	303.67	61	72	7900	7700	7500	7500	7700	7500	7700	7700	7600	7600	7500	7700	7600	7700	7600	7500
26	305.5	61	72	7800	7700	7600	7600	7600	7700	7700	7700	7700	7700	7700	7700	7600	7700	7700	7700
27	307.33	61	72	7800	7700	7700	7700	7700	7500	7600	7600	7700	7500	7700	7700	7600	7700	7700	7500
28	309.16	61	72	7800	7700	7500	7700	7500	7600	7600	7600	7600	7500	7600	7700	7700	7700	7600	7500
29	311.02	61	72	7800	7700	7500	7700	7600	7700	7600	7500	7500	7600	7700	7700	7700	7600	7600	7600
30	312.85	61	72	7700	7700	7500	7600	7700	7500	7600	7600	7500	7600	7700	7700	7700	7600	7600	7500
31	314.67	61	72	7700	7700	7500	7700	7700	7600	7700	7600	7500	7500	7500	7500	7600	7600	7500	7700
32	316.5	61	72	7700	7500	7600	7500	7500	7700	7600	7500	7600	7500	7500	7700	7500	7700	7700	7700
33	318.33	61	72	7700	7700	7600	7600	7500	7500	7700	7700	7600	7500	7700	7600	7600	7700	7700	7700
34	320.19	61	72	7600	7500	7600	7700	7600	7500	7500	7500	7700	7500	7500	7600	7600	7600	7600	7700
35	322.02	61	72	7600	7500	7700	7500	7500	7500	7700	7500	7600	7700	7500	7600	7600	7500	7700	7700

18.0 Here is an example of the log file.

## NOTICE

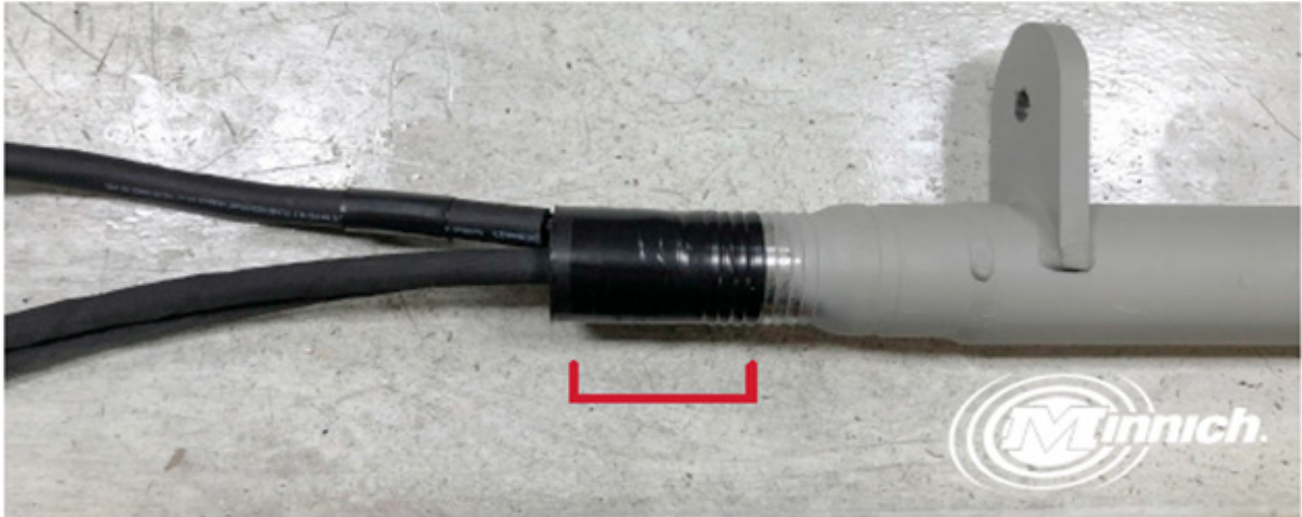
: Please visit [WWW.MINNICH-MFG.COM](http://WWW.MINNICH-MFG.COM) for instructional videos on the new AV-CC system, including videos on installation, monitor settings, and IQANsync log downloads





# POTTED SENSOR KIT INSTALLATION

0A9410-00003



## STEP ONE

Remove cover, protector hose, clamps, and stopper from vibrator. It should look like picture above when finished.

## STEP TWO

Place 0A9456-00001 potted accelerometer assembly on the hydraulic hoses, pushing it firmly up to the base of the barbed nipple of the vibrator motor housing.

## STEP THREE

To secure potted sensor, tape the potted sensor (0A9456-00001) to the motor housing nipple. Approximately 1½" on each side.

## STEP FOUR

Replace cover hose, protector hose, clamps, and stopper.

**Note:** Before replacing stopper, loop 8" of sensor cord into the cover hose. This will allow for some forgiveness.

**Note:** Be sure to use the proper sealant on all stoppers and motor housings.

**Note:** Use 3M Super 88 1½" electrical tape to attach the potted sensor to the motor housing nipple. ( See Photo )

PARTS MANUAL

SPEED WHEEL MOUNTING ASSEMBLY (STANDARD)

REV.

DESCRIPTION

DATE

APPROVED

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	4463	PLATE, MOUNTING	1
2	4650-1	BEARING	2
3	4675	AXLE WASHER	1
4	6038-1.00	HHCS, 3/8"-16 X 1.00 GR.5	2
5	6038-1.25	HHCS 3/8" X 1.25" G-5	2
6	6038-1.75	H.H.C.S. 3/8"-16 X 1.75	4
7	6072	HEX NUT 3/8-16 GR 5	8
8	6149	LOCK WASHER 3/8"	4
9	6377-5	RETAINING RING	1
10	6483-8	FITTING, LUB 1/4-28 TAPER STRAIGHT	1
11	A10095	ROTATION ARM WELDMENT	1
12	A11604	ARM WELDMENT	1

DO NOT SCALE DRAWING

ASSY, WHEEL MOUNTING ARM

DRAWING NUMBER: A9448

SPEED WHEEL MOUNTING ASSEMBLY (LONG ARM)

REV.

DESCRIPTION

DATE

APPROVED

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	4463	PLATE, MOUNTING	1
2	4650-1	BEARING	2
3	4675	AXLE WASHER	1
4	6038-1.00	HHCS, 3/8"-16 X 1.00 GR.5	2
5	6038-1.25	HHCS 3/8" X 1.25" G-5	2
6	6038-1.75	H.H.C.S. 3/8"-16 X 1.75	4
7	6072	HEX NUT 3/8-16 GR 5	8
8	6149	LOCK WASHER 3/8"	4
9	6377-5	RETAINING RING	1
10	6483-8	FITTING, LUB 1/4-28 TAPER STRAIGHT	1
11	A10095	ROTATION ARM WELDMENT	1
12	A11604-1	ARM WELDMENT	1

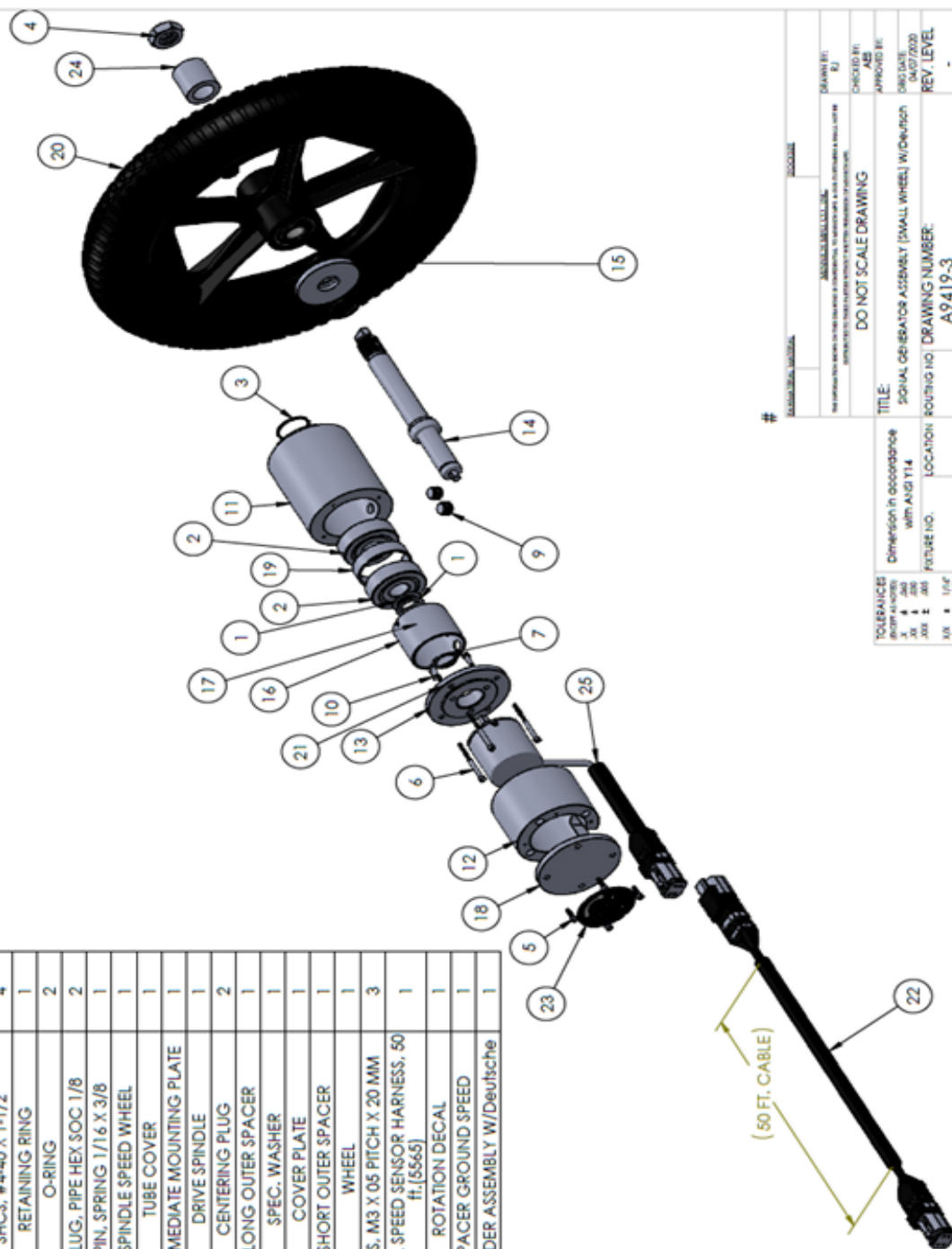
DO NOT SCALE DRAWING

ASSY, WHEEL MOUNTING ARM

DRAWING NUMBER: A9448-1

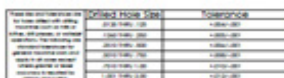


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	645	SHIM	25
2	653	BEARING, BALL	2
3	1840	O-RING	1
4	1960	9/16-18 LOCKNUT	1
5	6209-0.375	SHCS, #4-40 X 3/8	4
6	6209-1.50	SHCS, #4-40 X 1-1/2	4
7	6377-13	RETAINING RING	1
8	6412-208	O-RING	2
9	6471-1	PLUG, PIPE HEX SOC 1/8	2
10	6529-0.375	PIN, SPRING 1/16 X 3/8	1
11	9434	SPINDLE SPEED WHEEL	1
12	9435	TUBE COVER	1
13	9436	INTERMEDIATE MOUNTING PLATE	1
14	9437-1	DRIVE SPINDLE	1
15	9438-1	CENTERING PLUG	2
16	9439	LONG OUTER SPACER	1
17	9441	SPEC. WASHER	1
18	9442	COVER PLATE	1
19	9443	SHORT OUTER SPACER	1
20	9446-1	WHEEL	1
21	10101-20	SHCS, M3 X .05 PITCH X 20 MM	3
22	10280-8	TRAVEL SPEED SENSOR HARNESS, 50 ft./5565)	1
23	10303	ROTATION DECAL	1
24	11766	SPACER GROUND SPEED	1
25	A10136-2	ENCODER ASSEMBLY W/Deutsche	1



Temperature/Relative Humidity Assembly (Standard w/ System) – IP65 Rated

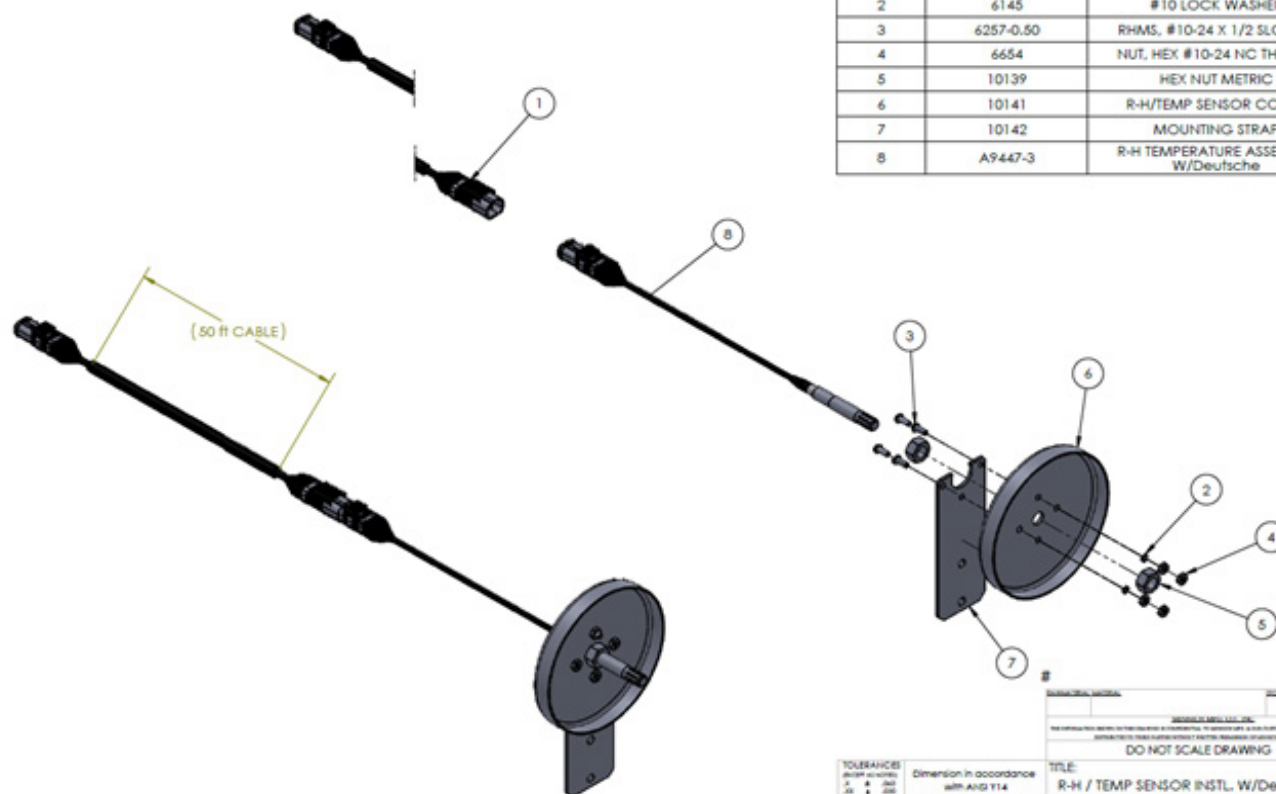
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	9427-2	R-H TEMPERATURE SENSOR	1
2	10974-8	HEAT SHRINK	1
3	12454-1	4 WAY PLUG	1
4	12455-1	4 PIN WEDGE	1
5	12457-1	FEMALE CONTACT	4



TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS DECIMALS .0005 .0002 .001 .0005 .005 .002 .010 .005 .015 .007 .020 .008 .030 .010 .040 .012 .050 .015 .060 .018 .070 .020 .080 .022 .090 .025 .100 .028 .125 .035 .150 .042 .175 .050 .200 .060 .250 .075 .300 .090 .375 .112 .450 .135 .500 .150 .625 .187 .750 .225 .875 .262 1.000 .300 1.250 .375 1.500 .450 1.750 .562 2.000 .675 2.500 .844 3.000 1.000 3.750 1.250 4.500 1.500 5.000 1.675 6.000 2.000 7.000 2.375 8.000 2.750 9.000 3.125 10.000 3.500 12.000 4.125 14.000 4.750 16.000 5.375 18.000 6.000 20.000 6.625 24.000 7.875 28.000 9.125 32.000 10.375 36.000 11.625 40.000 12.875 45.000 15.000 50.000 16.625 56.000 18.750 63.000 21.000 72.000 24.000 80.000 26.625 90.000 30.000 100.000 33.375 120.000 39.375 140.000 45.625 160.000 51.875 180.000 58.125 200.000 64.375 250.000 80.625 300.000 96.875 350.000 113.125 400.000 129.375 450.000 145.625 500.000 161.875 560.000 183.125 630.000 204.375 720.000 231.875 800.000 259.375 900.000 286.875 1000.000 314.375 1200.000 370.625 1400.000 426.875 1600.000 483.125 1800.000 539.375 2000.000 595.625 2500.000 726.875 3000.000 858.125 3500.000 989.375 4000.000 1120.625 4500.000 1251.875 5000.000 1383.125 5600.000 1570.625 6300.000 1758.125 7200.000 2000.625 8000.000 2243.125 9000.000 2485.625 10000.000 2728.125 12000.000 3250.625 14000.000 3773.125 16000.000 4295.625 18000.000 4818.125 20000.000 5340.625 25000.000 6426.875 30000.000 7513.125 35000.000 8599.375 40000.000 9685.625 45000.000 10771.875 50000.000 11858.125 56000.000 13300.625 63000.000 14743.125 72000.000 16685.625 80000.000 18628.125 90000.000 20570.625 100000.000 22513.125 120000.000 26426.875 140000.000 30340.625 160000.000 34254.375 180000.000 38168.125 200000.000 42081.875 250000.000 50909.375 300000.000 59736.875 350000.000 68564.375 400000.000 77391.875 450000.000 86219.375 500000.000 95046.875 560000.000 106264.375 630000.000 117481.875 720000.000 132299.375 800000.000 147116.875 900000.000 161934.375 1000000.000 176751.875 1200000.000 205884.375 1400000.000 235016.875 1600000.000 264149.375 1800000.000 293281.875 2000000.000 322414.375 2500000.000 375641.875 3000000.000 428869.375 3500000.000 482096.875 4000000.000 535324.375 4500000.000 588551.875 5000000.000 641779.375 5600000.000 708406.875 6300000.000 775034.375 7200000.000 866661.875 8000000.000 958289.375 9000000.000 1049916.875 10000000.000 1141544.375 12000000.000 1308171.875 14000000.000 1474799.375 16000000.000 1641426.875 18000000.000 1808054.375 20000000.000 1974681.875 25000000.000 2306959.375 30000000.000 2639236.875 35000000.000 2971514.375 40000000.000 3303791.875 45000000.000 3636069.375 50000000.000 3968346.875 56000000.000 4364974.375 63000000.000 4761601.875 72000000.000 5313929.375 80000000.000 5866256.875 90000000.000 6418584.375 100000000.000 6970911.875 120000000.000 8023239.375 140000000.000 9075566.875 160000000.000 10127894.375 180000000.000 11180221.875 200000000.000 12232549.375 250000000.000 14084876.875 300000000.000 15937204.375 350000000.000 17789531.875 400000000.000 19641859.375 450000000.000 21494186.875 500000000.000 23346514.375 560000000.000 25534791.875 630000000.000 27723069.375 720000000.000 30555346.875 800000000.000 33387624.375 900000000.000 36219901.875 1000000000.000 39052179.375 1200000000.000 44944456.875 1400000000.000 50836734.375 1600000000.000 56729011.875 1800000000.000 62621289.375 2000000000.000 68513566.875 2500000000.000	
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(OPTIONAL) Temperature/Relative Humidity Mounting Bracket w/ Extension

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	5564	TEMP/HUMIDITY SENSOR HARNESS, 50 ft.	1
2	6145	#10 LOCK WASHER	4
3	6257-0.50	RHMS, #10-24 X 1/2 SLOTTED	4
4	6654	NUT, HEX #10-24 NC THREAD	4
5	10139	HEX NUT METRIC	2
6	10141	R-H/TEMP SENSOR COVER	1
7	10142	MOUNTING STRAP	1
8	A9447-3	R-H TEMPERATURE ASSEMBLY W/Deutsche	1



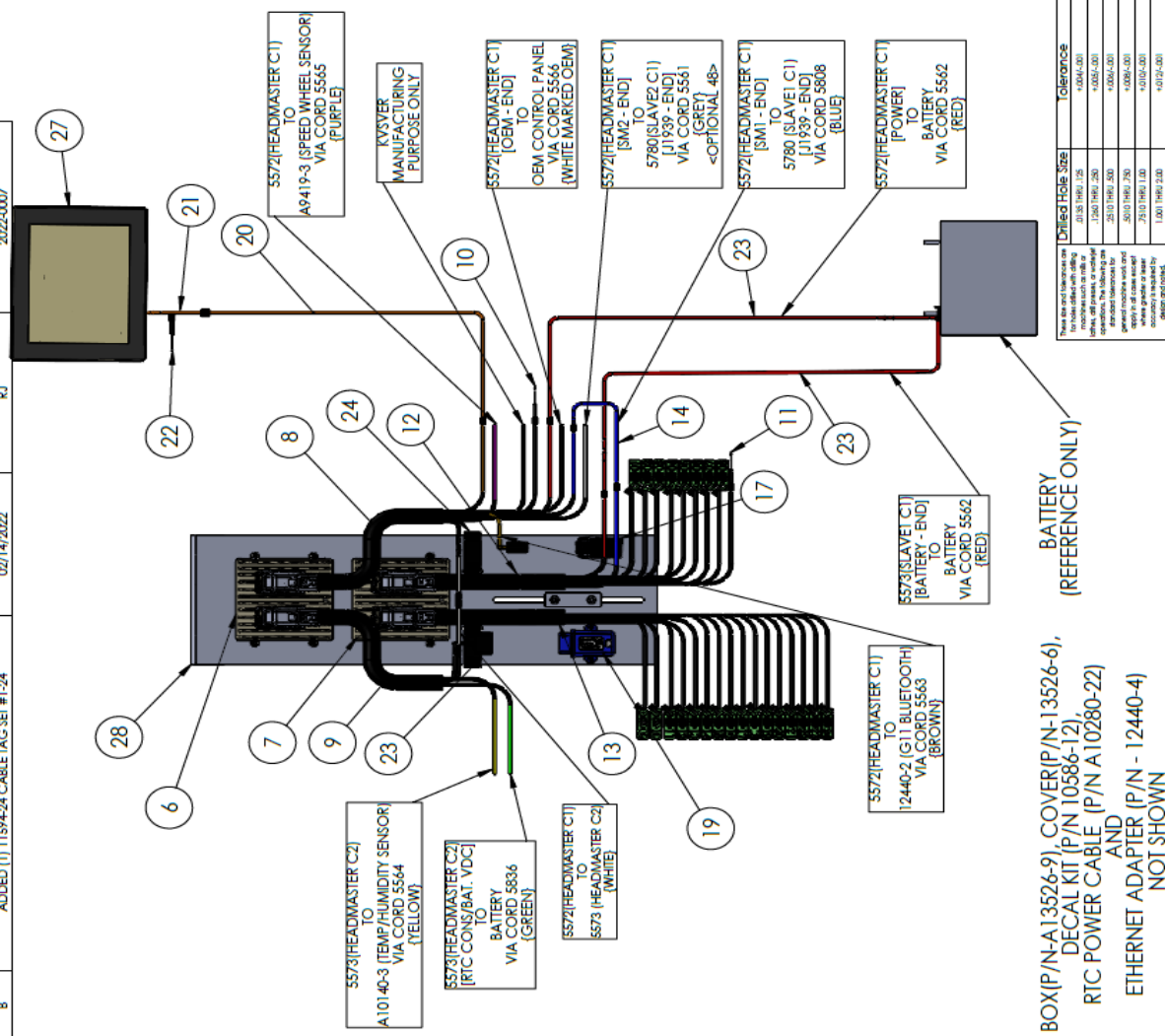
QUANTITIES (PRINT NUMBERS) A    1    100 B    1    100 C    1    100 D    1    100 E    1    100 F    1    100 G    1    100 H    1    100 I    1    100 J    1    100 K    1    100 L    1    100 M    1    100 N    1    100 O    1    100 P    1    100 Q    1    100 R    1    100 S    1    100 T    1    100 U    1    100 V    1    100 W    1    100 X    1    100 Y    1    100 Z    1    100 AA   1    100 AB   1    100 AC   1    100 AD   1    100 AE   1    100 AF   1    100 AG   1    100 AH   1    100 AI   1    100 AJ   1    100 AK   1    100 AL   1    100 AM   1    100 AN   1    100 AO   1    100 AP   1    100 AQ   1    100 AR   1    100 AS   1    100 AT   1    100 AU   1    100 AV   1    100 AW   1    100 AX   1    100 AY   1    100 AZ   1    100 BA   1    100 BB   1    100 BC   1    100 BD   1    100 BE   1    100 BF   1    100 BG   1    100 BH   1    100 BI   1    100 BJ   1    100 BK   1    100 BL   1    100 BM   1    100 BN   1    100 BO   1    100 BP   1    100 BQ   1    100 BR   1    100 BS   1    100 BT   1    100 BU   1    100 BV   1    100 BW   1    100 BX   1    100 BY   1    100 BZ   1    100 CA   1    100 CB   1    100 CC   1    100 CD   1    100 CE   1    100 CF   1    100 CG   1    100 CH   1    100 CI   1    100 CJ   1    100 CK   1    100 CL   1    100 CM   1    100 CN   1    100 CO   1    100 CP   1    100 CQ   1    100 CR   1    100 CS   1    100 CT   1    100 CU   1    100 CV   1    100 CW   1    100 CX   1    100 CY   1    100 CZ   1    100 DA   1    100 DB   1    100 DC   1    100 DD   1    100 DE   1    100 DF   1    100 DG   1    100 DH   1    100 DI   1    100 DJ   1    100 DK   1    100 DL   1    100 DM   1    100 DN   1    100 DO   1    100 DP   1    100 DQ   1    100 DR   1    100 DS   1    100 DT   1    100 DU   1    100 DV   1    100 DW   1    100 DX   1    100 DY   1    100 DZ   1    100 EA   1    100 EB   1    100 EC   1    100 ED   1    100 EE   1    100 EF   1    100 EG   1    100 EH   1    100 EI   1    100 EJ   1    100 EK   1    100 EL   1    100 EM   1    100 EN   1    100 EO   1    100 EP   1    100 EQ   1    100 ER   1    100 ES   1    100 ET   1    100 EU   1    100 EV   1    100 EW   1    100 EX   1    100 EY   1    100 EZ   1    100 FA   1    100 FB   1    100 FC   1    100 FD   1    100 FE   1    100 FF   1    100 FG   1    100 FH   1    100 FI   1    100 FJ   1    100 FK   1    100 FL   1    100 FM   1    100 FN   1    100 FO   1    100 FP   1    100 FQ   1    100 FR   1    100 FS   1    100 FT   1    100 FU   1    100 FV   1    100 FW   1    100 FX   1    100 FY   1    100 FZ   1    100 GA   1    100 GB   1    100 GC   1    100 GD   1    100 GE   1    100 GF   1    100 GG   1    100 GH   1    100 GI   1    100 GJ   1    100 GK   1    100 GL   1    100 GM   1    100 GN   1    100 GO   1    100 GP   1    100 GQ   1    100 GR   1    100 GS   1    100 GT   1    100 GU   1    100 GV   1    100 GW   1    100 GX   1    100 GY   1    100 GZ   1    100 HA   1    100 HB   1    100 HC   1    100 HD   1    100 HE   1    100 HF   1    100 HG   1    100 HH   1    100 HI   1    100 HJ   1    100 HK   1    100 HL   1    100 HM   1    100 HN   1    100 HO   1    100 HP   1    100 HQ   1    100 HR   1    100 HS   1    100 HT   1    100 HU   1    100 HV   1    100 HW   1    100 HX   1    100 HY   1    100 HZ   1    100 IA   1    100 IB   1    100 IC   1    100 ID   1    100 IE   1    100 IF   1    100 IG   1    100 IH   1    100 II   1    100 IJ   1    100 IK   1    100 IL   1    100 IM   1    100 IN   1    100 IO   1    100 IP   1    100 IQ   1    100 IR   1    100 IS   1    100 IT   1    100 IU   1    100 IV   1    100 IW   1    100 IX   1    100 IY   1    100 IZ   1    100 JA   1    100 JB   1    100 JC   1    100 JD   1    100 JE   1    100 JF   1    100 JG   1    100 JH   1    100 JI   1    100 JJ   1    100 JK   1    100 JL   1    100 JM   1    100 JN   1    100 JO   1    100 JP   1    100 JQ   1    100 JR   1    100 JS   1    100 JT   1    100 JU   1    100 JV   1    100 JW   1    100 JX   1    100 JY   1    100 JZ   1    100 KA   1	
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-4	1/4"-20 X 5/8" BUTTON CAP SCREW	4
2	1632-5	M4 X .7MM X 10MM SCS	10
3	6402	1/4"-20" LOCKNUT	4
4	6404	LOCKNUT 3/8"-16 NYLOCK	4
5	12255-1	CONTROLLER MONITOR	1
6	13526-11	AUTOVIBE BASE MOUNT	1
7	13526-12	AUTOVIBE MONITOR MOUNT	1
8	13622	3/8"-16 2-1/2" U-BOLT	2
9	13623	DOUBLE SOCKET ARM	1
10	13623-1	VESA PLATE W/BALL	1
11	13623-2	2" RAM-MOUNT BALL WITH 1/4"-20" THREADS	1

TOLERANCES:  
 DIMENSIONS:  
 .125 .1875 .25 .3125 .375 .4375 .5 .5625 .625 .6875 .75 .8125 .875 .9375 1.0  
 .1 .125 .15 .175 .2 .225 .25 .275 .3 .325 .35 .375 .4 .425 .45 .475 .5 .525 .55 .575 .6 .625 .65 .675 .7 .725 .75 .775 .8 .825 .85 .875 .9 .925 .95 .975 1.0  
 .1 .125 .15 .175 .2 .225 .25 .275 .3 .325 .35 .375 .4 .425 .45 .475 .5 .525 .55 .575 .6 .625 .65 .675 .7 .725 .75 .775 .8 .825 .85 .875 .9 .925 .95 .975 1.0  
 .1 .125 .15 .175 .2 .225 .25 .275 .3 .325 .35 .375 .4 .425 .45 .475 .5 .525 .55 .575 .6 .625 .65 .675 .7 .725 .75 .775 .8 .825 .85 .875 .9 .925 .95 .975 1.0

#  
 DO NOT SCALE DRAWING  
 TITLE: AUTOVIBE CONTROL SCREEN MOUNT  
 DRAWING NUMBER: A12440-1  
 REV. LEVEL: 1

REVISIONS				
REV.	DESCRIPTION	DATE	APPROVED	ECR#
A	WAS (2) 13526-4 STRAPS, NOW (1) 13526-4 AND (1) 13526-13 STRAP	8/24/2021	ABJ	
8	ADDED (1) 11594-24 CABLE TAG SET #1-24	02/14/2022	RJ	2022-0007

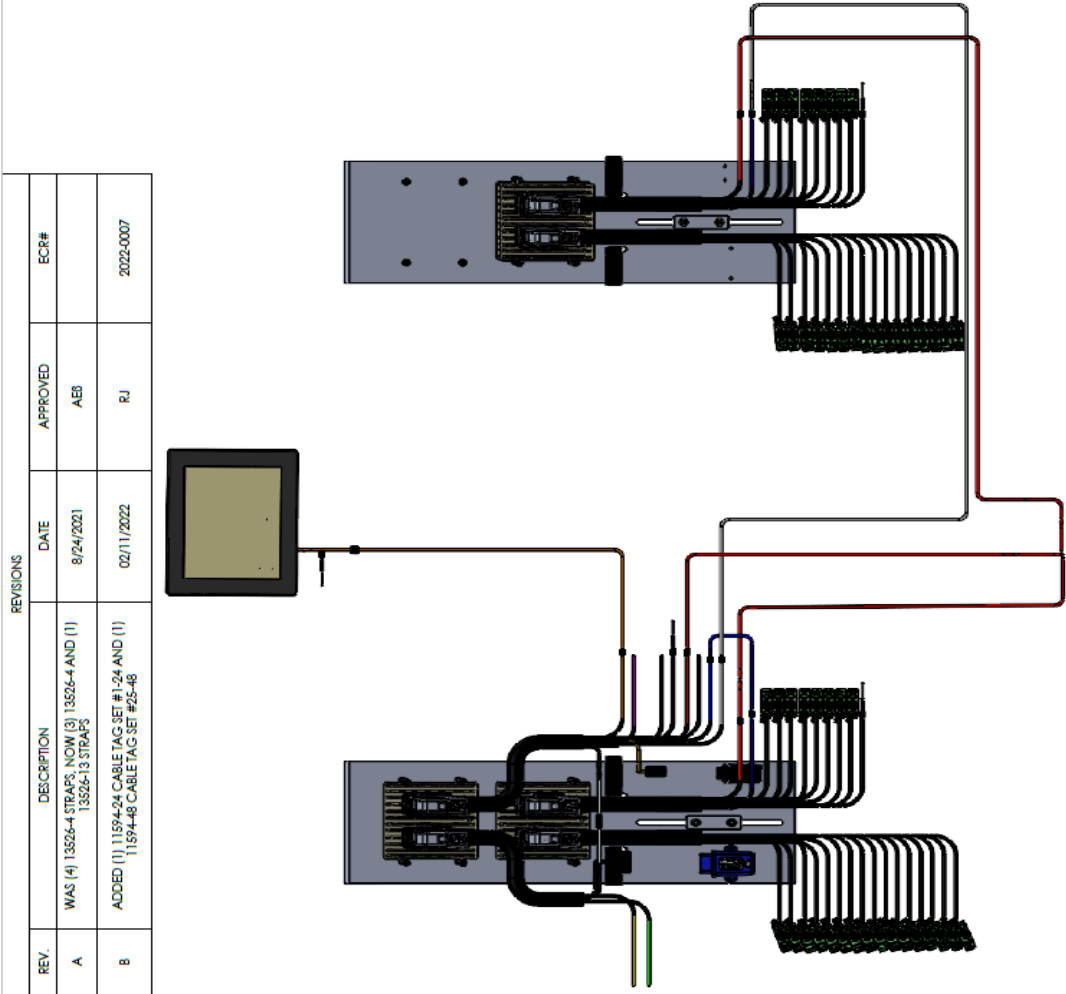


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	708-4	NAME PLATE, MODEL & SERIAL #	1
2	1632-7	#8-32 x 1/2 BUTTON HEAD BOLT	2
3	1632-8	#8-32 x 3/4 BUTTON HEAD BOLT	2
4	2023-1	#8-32 LOCKNUT	4
5	6262-1	SCREW, DRIVE HD RD. #4 X 1/4"	2
6	10280-2	MC43 - HEAD MASTER UNIT	1
7	10280-3	MC43 - SLAVE-1 UNIT	1
8	10280-10	(5572) HEAD MASTER C1	1
9	10280-11	(5573) HEAD MASTER C2	1
10	10280-12	I.D. TAG(0)	1
11	10280-13	I.D. TAG(1)	1
12	10280-17	(5780) SLAVE C1	1
13	10280-18	(5781) SLAVE C2	1
14	10280-19	(5808) CA/DIAG (SM1)	1
15	10586-12	AV-CC II - DECAL KIT	1
16	11594-24	CABLE TAG SET #1-24	1
17	12440-2	G11 BLUETOOTH ADAPTER	1
18	12440-4	ETHERNET CABLE TO MD4-10 (20077785)	1
19	12440-5	AX141100 RTC	1
20	12440-7	(5567) MONITOR CONNECTION CABLE(ORANGE)	1
21	12440-8	(5568) MONITOR CONNECTION CABLE(ORANGE)	1
22	12440-9	ID TAG(2)	1
23	13526-4	8" VELCRO STRAPS	1
24	13526-13	12" VELCRO STRAPS	1
25	A 10280-4	DRIVE MODULE POWER CABLE ASSEMBLY, W/ TERMINALS	2
26	A10280-22	25' - RTC POWER CABLE ASSEMBLY, W/ TERMINALS	1
27	A12440-1	AUTOVIBE CONTROL SCREEN MOUNT	1
28	A13526-10	CONTROL BOX HANGER ASSEMBLY	1

TOLERANCES:		Dimension in accordance with ANSI Y14	DRAWING NO. LOCATION		TITLE:
± .000	± .001		AV-CC II 24	DO NOT SCALE DRAWING	
± .002	± .003	ROUTING NO. LOCATION	ROUTING NO. DRAWING NUMBER:	REV. LEVEL	APPROVED BY:
± .004	± .005				
± .006	± .007	FEATURE NO.	ROUTING NO. DRAWING NUMBER:	REV. LEVEL	CHECKED BY:
± .008	± .009				
± .010	± .015	X/R ± 1/16"	A13635-24	B	DRAWN BY:
± .020	± .030				
± .030	± .040	MUSCHLER CO., INC.			
± .050	± .060	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± .070	± .080	DO NOT SCALE DRAWING			
± .090	± .100	APPROVED BY:			
± .125	± .150	CHECKED BY:			
± .175	± .200	DRAWN BY:			
± .250	± .300	MUSCHLER CO., INC.			
± .375	± .400	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± .500	± .600	DO NOT SCALE DRAWING			
± .750	± .875	APPROVED BY:			
± 1.000	± 1.250	CHECKED BY:			
± 1.500	± 2.000	DRAWN BY:			
± 2.500	± 3.000	MUSCHLER CO., INC.			
± 3.750	± 4.000	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± 5.000	± 6.000	DO NOT SCALE DRAWING			
± 7.500	± 8.000	APPROVED BY:			
± 10.000	± 12.000	CHECKED BY:			
± 15.000	± 20.000	DRAWN BY:			
± 25.000	± 30.000	MUSCHLER CO., INC.			
± 37.500	± 40.000	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± 50.000	± 60.000	DO NOT SCALE DRAWING			
± 75.000	± 80.000	APPROVED BY:			
± 100.000	± 120.000	CHECKED BY:			
± 150.000	± 200.000	DRAWN BY:			
± 250.000	± 300.000	MUSCHLER CO., INC.			
± 375.000	± 400.000	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± 500.000	± 600.000	DO NOT SCALE DRAWING			
± 750.000	± 800.000	APPROVED BY:			
± 1000.000	± 1200.000	CHECKED BY:			
± 1500.000	± 2000.000	DRAWN BY:			
± 2500.000	± 3000.000	MUSCHLER CO., INC.			
± 3750.000	± 4000.000	THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF MUSCHLER CO., INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION FROM MUSCHLER CO., INC.			
± 5000.000	± 6000.000	DO NOT SCALE DRAWING			
± 7500.000	± 8000.000	APPROVED BY:			
± 10000.000	± 12000.000	CHECKED BY:			
± 15000.000	± 20000.000	DRAWN BY:			
± 25000.000	± 30000.000	MUSCHLER CO., INC.			
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± 500000000000000000000000.000	± 600000000000000000000000.000	DO NOT SCALE DRAWING			
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± 10000000000000000000000000.000	± 12000000000000000000000000.000	CHECKED BY:			
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BOX(P/N A13526-9), COVER(P/N 13526-6),  
DECAL KIT (P/N 10586-12),  
RTC POWER CABLE (P/N A10280-22)  
AND  
ETHERNET ADAPTER (P/N - 12440-4)  
NOT SHOWN





REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	WAS (4) 13526-4 STRAPS, NOW (3) 13526-4 AND (1) 13526-13 STRAPS	8/24/2021	AEB
8	ADDED (1) 11594-24 CABLE TAG SET #1-24 AND (1) 11594-48 CABLE TAG SET #25-48	02/11/2022	RJ
2022-0007			

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	708-4	NAME PLATE, MODEL & SERIAL #	1
2	1632-7	#8-32 x 1/2 BUTTON HEAD BOLT	2
3	1632-8	#8-32 x 3/4 BUTTON HEAD BOLT	2
4	2023-1	#8-32 LOCKNUT	4
5	6262-1	SCREW, DRIVE HD RD. #4 X 1 1/4"	2
6	10280-2	MC43 - HEAD MASTER UNIT	1
7	10280-3	MC43 - SLAVE-1 UNIT	1
8	10280-5	(5561) J1939/CAN - CA/DIAG (SM2)	1
9	10280-10	(5572) HEAD MASTER C1	1
10	10280-11	(5573) HEAD MASTER C2	1
11	10280-12	I.D. TAG(0)	1
12	10280-13	I.D. TAG(1)	1
13	10280-14	ID TAG(3)	1
14	10280-17	(5780) SLAVE C1	2
15	10280-18	(5781) SLAVE C2	2
16	10280-19	(5808) CA/DIAG (SM1)	1
17	10280-21	SALVE2 MODULE (AV-CC II 48)	1
18	10586-12	AV-CC II - DECAL KIT	1
19	11594-24	CABLE TAG SET #1-24	1
20	11594-48	CABLE TAG SET #25-48	1
21	12440-2	G11 BLUETOOTH ADAPTER	1
22	12440-4	ETHERNET CABLE TO MD4-10 (20077785)	1
23	12440-5	AX141100 RTC	1
24	12440-7	(5567) MONITOR CONNECTION CABLE(ORANGE)	1
25	12440-8	(5568) MONITOR CONNECTION CABLE(ORANGE)	1
26	12440-9	ID TAG(2)	1
27	13526-4	8" VELCRO STRAPS	3
28	13526-13	12" VELCRO STRAPS	1
29	A10280-4	DRIVE MODULE POWER CABLE ASSEMBLY, W/ TERMINALS	3
30	A10280-22	25' - RTC POWER CABLE ASSEMBLY, W/ TERMINALS	1
31	A12440-1	AUTOVIBE CONTROL SCREEN MOUNT	1
32	A13526-10	CONTROL BOX HANGER ASSEMBLY	1
33	A13526-13	CONTROL BOX HANGER ASSEMBLY	1

BOX(P/N-A13526-9), COVER(P/N-13526-6),  
DECAL KIT (P/N 10586-12),  
RTC POWER CORD (P/N A10280-22),  
AND  
ETHERNET ADAPTER (P/N 12440-4)  
NOT SHOWN

Drilled Hole Size	Clearance
(0.015) (0.015) 1/8"	+0.004/-0.001
(0.015) (0.015) 1/4"	+0.004/-0.001
(0.015) (0.015) 3/8"	+0.004/-0.001
(0.015) (0.015) 1/2"	+0.004/-0.001
(0.015) (0.015) 3/4"	+0.004/-0.001
(0.015) (0.015) 1"	+0.004/-0.001
(0.015) (0.015) 1 1/4"	+0.004/-0.001
(0.015) (0.015) 1 1/2"	+0.004/-0.001

TOLERANCES
UNLESS OTHERWISE SPECIFIED
XX ± .005
XX ± .003
XX ± .002
XX ± .001

Dimension in accordance with ANSI Y14	LOCATION
PARTURE NO.	ROUTING NO.
AV-CC II 48	A13635-48

TITLE:	DO NOT SCALE DRAWING
APPROVED BY:	AEB
CHECKED BY:	
DATE:	1/17/20
REV. LEVEL	B

MANUFACTURER	LOCKHEED
MANUFACTURER'S PART NO.	MANUFACTURER'S PART NO.
MANUFACTURER'S PART NO.	MANUFACTURER'S PART NO.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-2	6-32 - 3/8" button head cap screw	4
2	1632-3	1/4"-20 X 1-1/8" SCS	8
3	6402	1/4-20" LOCKNUT, NYLOCK	8
4	10280-2[REFERENCE]	MC43 - HEAD MASTER UNIT	1
5	10280-3[REFERENCE]	MC43 - SLAVE-1 UNIT	1
6	10793-3	6-32 SPRING NUT	4
7	13526-1	BRACKET	1
8	13526-3	U-BOLT 5/16-18 W/MOUNTING HARDWARE	1
9	13526-5	BEAM HANGER	1
10	13526-6	CONTROL BOX COVER PANEL	1
11	A13526-9	CONTROL BOX WELDMENT	1

**EXPLANATION**

ASSEMBLY INSTRUCTIONS

DO NOT SCALE DRAWING

**TITLE:** CONTROL BOX HANGER ASSEMBLY

**ROUTING NO:** A13526-10

**REVISION:**

REV.	DATE	BY	CHKD.	APP'D.
1				

**APPROVED BY:** [Signature]

**DATE:** [Date]

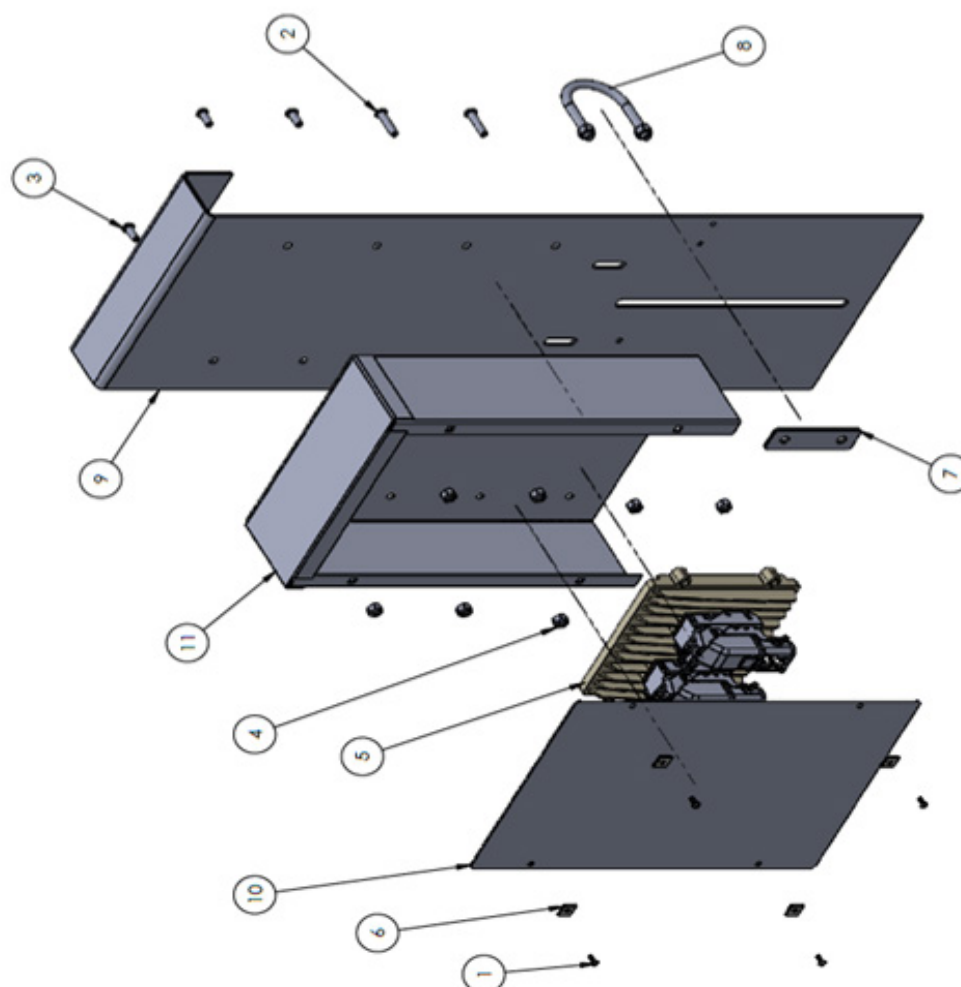
**SCALE:** 1" = 1'-0"

**UNIT:** INCHES

**TOLERANCES:**

XXX	± .005
XXX	± .010
XXX	± .015
XXX	± .020

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1632-2	6-32 - 3/8" button head cap screw	4
2	1632-3	1/4"-20 X 1-1/8" SCS	4
3	1632-4	1/4"-20 X 5/8" BUTTON CAP SCREW	4
4	6402	1/4-20" LOCKNUT, NYLOCK	8
5	10280-3(REFERENCE)	MC43 - SLAVE-1 UNIT	1
6	10793-3	6-32 SPRING NUT	4
7	13526-1	BRACKET	1
8	13526-3	U-BOLT 5/16-18 W/MOUNTING HARDWARE	1
9	13526-5	BEAM HANGER	1
10	13526-6	CONTROL BOX COVER PANEL	1
11	A13526-9	CONTROL BOX WELDMENT	1

[illegible]

Error codes, messages and actions

If one of the following error is detected, a message will be presented with an error code on the module. In some cases, the module will turn off or at least shut down the outputs, to increase safety.



**WARNING**

Don't use the machine if an error message or error code is activated.

LED indicator showing different MC4x modes

Status		Flash (yellow)	
Normal operation			
Application not loaded			
No application available			
Waiting for restart			
Settings overflow			
Version mismatch			

Error code	Error	Primary Flash (red) Error category	Secondary Flash (yellow) Error description
1:1	Output		
1:2	Input		
1:3	VREF		
1:4	Expansion unit error		
2:1	Power supply		
2:2	Temperature		
3:1	CAN, no contact		
3:2	IDtag error		
3:3	System mismatch		
3:4	CAN error (bus off)		
4:1 <sup>a</sup>	Stopped, critical		
4:2 <sup>b</sup>	Stopped, critical		
4:3 <sup>c</sup>	Stopped, critical		

- a. Followed by a longer sequence of flashes, contact Parker.
- b. Followed by a longer sequence of flashes. Possible causes include reverse feed on startup, critical under-voltage and critical temperature.
- c. Followed by a longer sequence of flashes, contact Parker.

Handwriting practice lines with the word MINNICH centered in the middle.

## LIMITED WARRANTY, DISCLAIMER AND REMEDIES

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Supplier warrants to Customer that the Services shall be provided in a workmanlike manner and that the Goods shall be free from defects in material and workmanship at the date of shipment from Supplier's facility. This warranty shall not run to any person other than Customer.

All claims under this warranty must be made in writing and delivered to Supplier prior to the expiration of one (1) year after the Goods have been delivered (or, if applicable, within one (1) year after the Services have been performed) or be forever barred. Supplier will repair or replace Goods or parts recognized and acknowledged by Supplier as being defective at the time of delivery without charge. However, Supplier will bill Customer for Goods and/or Services not covered by the warranty, including travel expenses incurred while performing warranty service calls. EQUIPMENT, COMPONENTS OR OTHER GOODS FURNISHED THAT ARE NOT MANUFACTURED BY SUPPLIER ARE ONLY COVERED TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY, WHICH MAY VARY FROM THE ABOVE. Further, the above warranty shall not apply to any hardware or software that has been repaired or altered without Supplier's written permission by anyone other than Supplier's personnel. The foregoing states the sole and exclusive remedy for any breach of warranty or for any other claim based on any defect in, or nonperformance of, the Goods or Services, whether based upon contract, warranty, negligence, tort (including strict liability) or otherwise.

NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR WEAR CAPACITY, OR OTHERWISE, SHALL APPLY TO THE GOODS AND SERVICES. SUPPLIER SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER EXPRESS AND IMPLIED WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING SHALL BE VALID UNLESS MADE IN WRITING AND SIGNED BY AN EXECUTIVE OFFICER OF SUPPLIER. IN NO EVENT WILL SUPPLIER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

### WHAT IS NOT COVERED

This Limited Warranty does not cover any damage, deterioration or malfunction resulting from normal wear or tear, or any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This Limited Warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Minnich to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.

### WHAT IS COVERED

This limited warranty ("Limited Warranty") covers manufacturing defects in materials and workmanship of a product.

### WHO IS COVERED:

Only the original purchaser of this product is covered under this Limited Warranty. This Limited Warranty is not transferable to subsequent purchasers or owners of this product. The product must have been purchased directly from Minnich or from an authorized Minnich reseller.



### ORDER VIA INTERNET!

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Order Online:  
<https://www.minnich-mfg.com/login>



- View parts
- Order Parts
- Print specific information
- If you don't have a login give us a call.

### ORDER VIA PHONE!

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Contact us at:  
419-903-0010

### SCAN FOR HELPFUL VIDEOS!

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### WE ACCEPT THE FOLLOWING CARDS!

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### NON-DEALER AND INTERNATIONAL CUSTOMERS:

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Contact Minnich Manufacturing through the following number  
to locate a dealer near you.  
(419-903-0010)

### NOTICE

All orders are treated as Standard Orders  
and will ship the same day if received prior to  
3PM EST