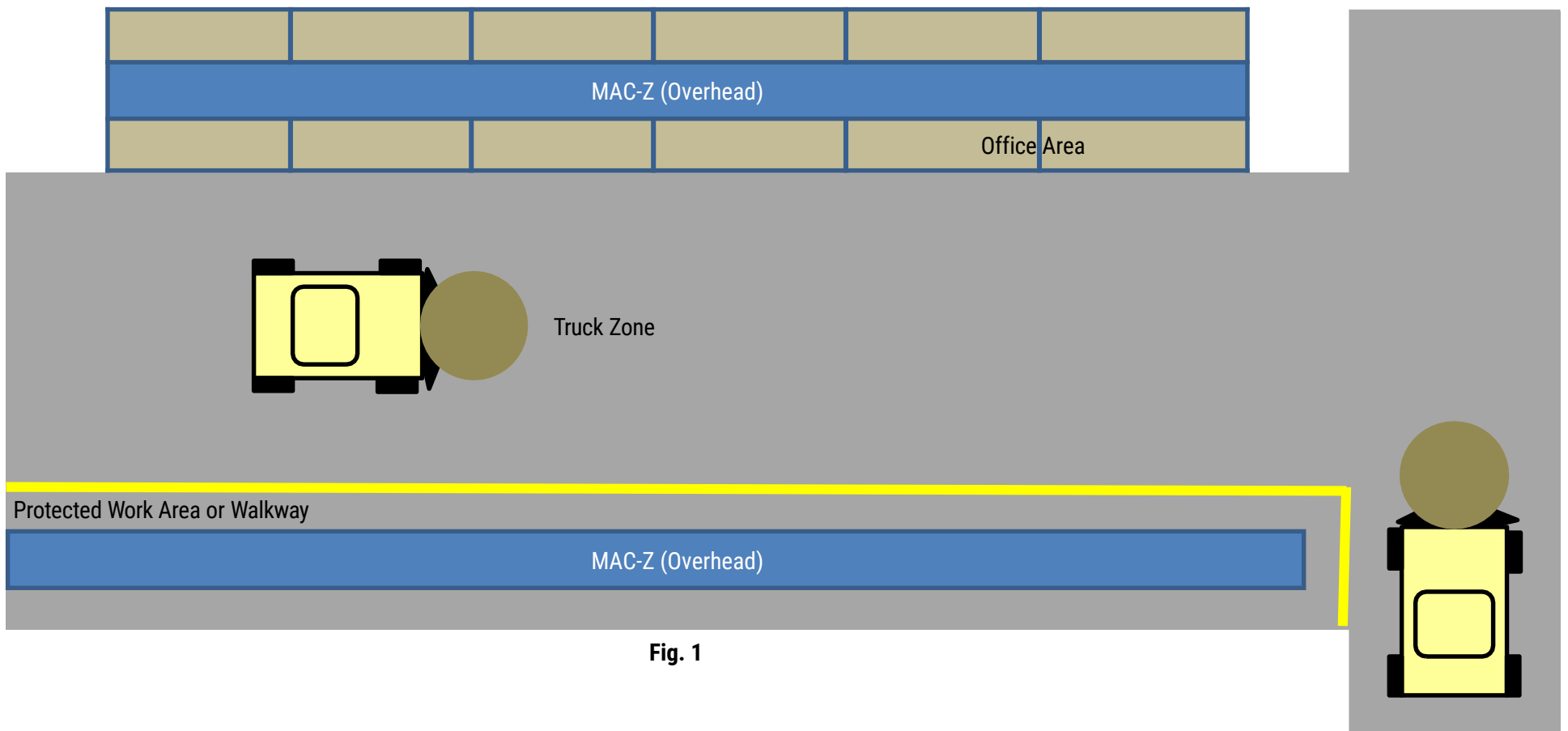


MAC-Z Installation Guide

MAC-Z SETUP (FIG. 1)



THE PURPOSE OF YOUR MAC-Z

- MAC-Z is a silent zone for an assembly line, protected walkway or a line of offices.
- The **length** ranges from 30-160 feet. Your MAC-Z was ordered and tuned at a specified length.
- ⚠ DO NOT CHANGE THE LENGTH WITHOUT CONSULTING **HIT-NOT®**!
- The PADs on workers will NOT activate under the area when a forklift is present.
- The workers in the protected area are free to do their assigned tasks and not be alerted every time a truck is nearby.
- Once the workers leave the MAC-Z area, their PADs will function normally, detect the presence of a truck and provide the necessary warning.
- If your truck is equipped with a CAM, it will still operate when in a MAC-Z field.
- The MAC-Z is capable of connecting to a network of MAC Systems. Call **HIT-NOT®** for details.

⚠ Make sure **switch position 1** is set for a MAC-Z as indicated in the picture (**Fig. 2**) in the ON position. All other switches need to be in the OFF position (nearest to the numbers 2 and 3) (**Fig. 2**). No relay boxes are needed or included in a MAC-Z.

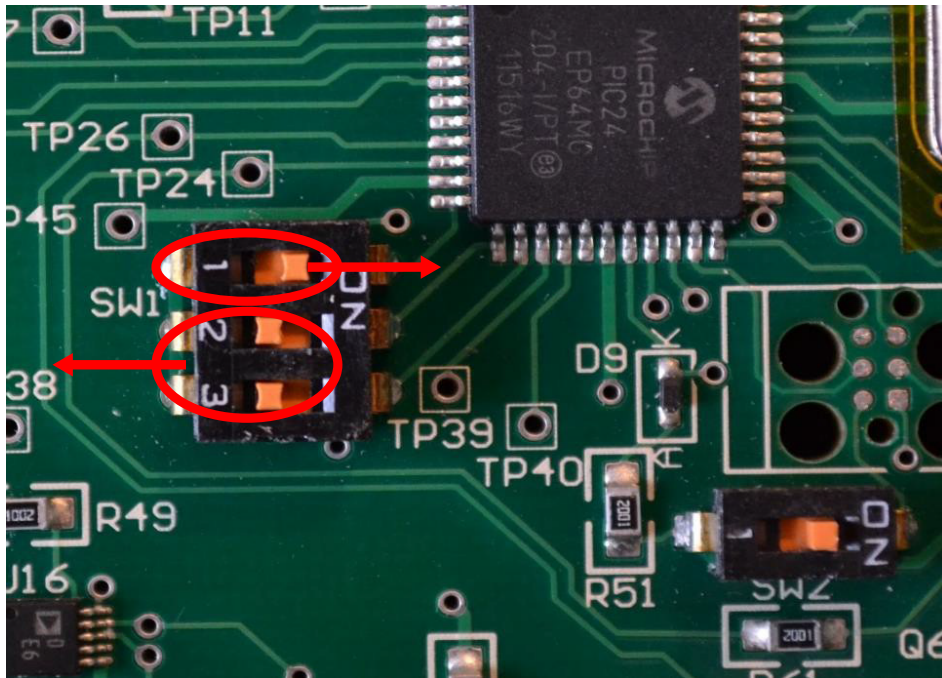


Fig. 2

EQUIPMENT/PERSONNEL NEEDED TO INSTALL YOUR MAC-Z

- Certified Electrician.
- **HIT-NOT®** Dealer with the MAC Adjustment Pad.
- Enough rope or light chain for each hanger on the MAC. Hangers are every 5 feet.
- 110V AC Power connection near the MAC Controller box.
- Tools: Wire cutters and Tape measure.
- PVC Cement and Cleaner.

HIT-NOT® EQUIPMENT PROVIDED (FIG. 3)

- MAC Controller Box.
- 10 AWG wire for the MAC Loops.
- 5 feet Sections of Pipe with Hangers (straight pieces)
- 2 Endpieces.
- Wire nuts **Red (3)**.



Fig. 3

MAC-Z PLACEMENT & FIELD

- Placement height of the MAC-Z is standardized for 11 feet from the bottom pipe to the floor. The resulting width can be set anywhere from 12 to 30 feet. The width will be set after the MAC is installed.
- The field produced by the MAC-Z is circular and runs the length of the MAC (like a tube).
- If the placement of the MAC-Z has to be higher than 11 feet, then the width on the floor will be reduced. If the placement is lower than 11 feet, then the width will be wider (Refer to the Cross-Section below) (**Fig. 4**).
- The field on either side of the MAC is equidistant. For example, it cannot be 12 feet on one side and 20 feet on the other (Refer to the Overhead View below) (**Fig. 5**). **The MAC must run down the center of the area to be controlled (in a straight line).**

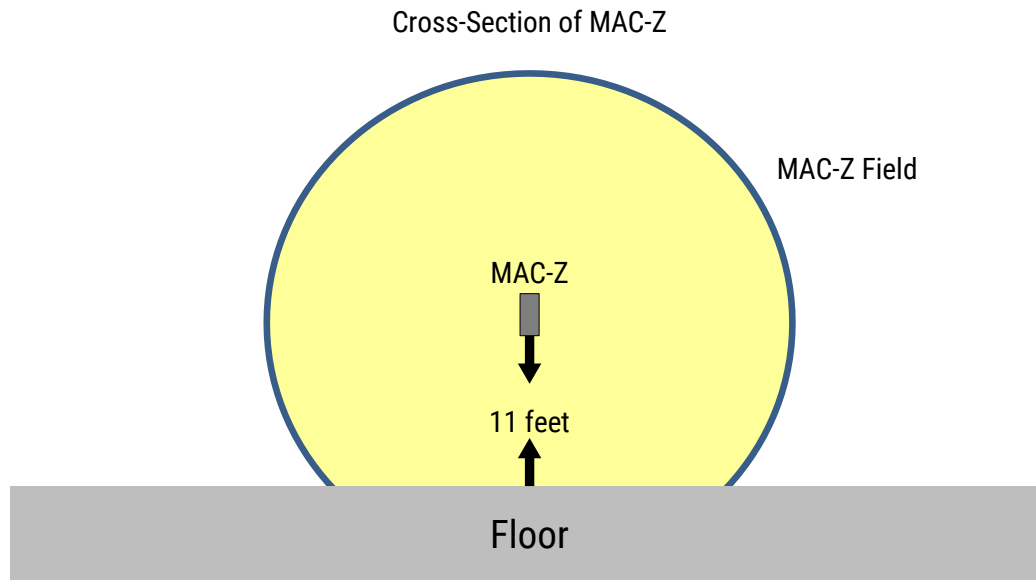


Fig. 4

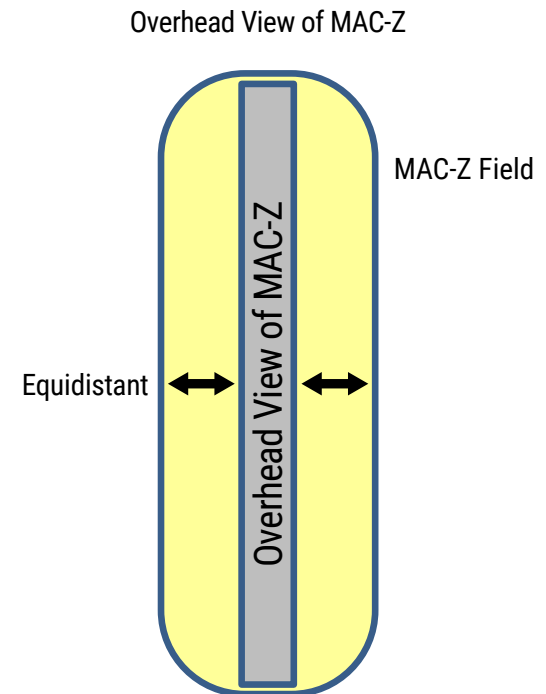


Fig. 5

HANGING THE MAC-Z

- Connect $\frac{3}{4}$ " PVC pipe 5 feet sections lying on the floor in 2 half-loops as shown below. An equal number of pipe sections will make up both halves. Use PVC Cement and Cleaner to connect the sections.
- Attach the end pieces on the hanger pieces (not the conduit).
- Run **10 AWG** through both conduit half-loops and leave wire hanging in the middle (as shown in **red**) (**Fig. 6**). The upper left should have 6" of wire extending out and the other 3 channels should have 10" extending out.
- Hang each half-loop, with items such as rope or light chain, leaving a **17" gap** in the middle. **The bottom pipe will be suspended 11 feet off the ground.**

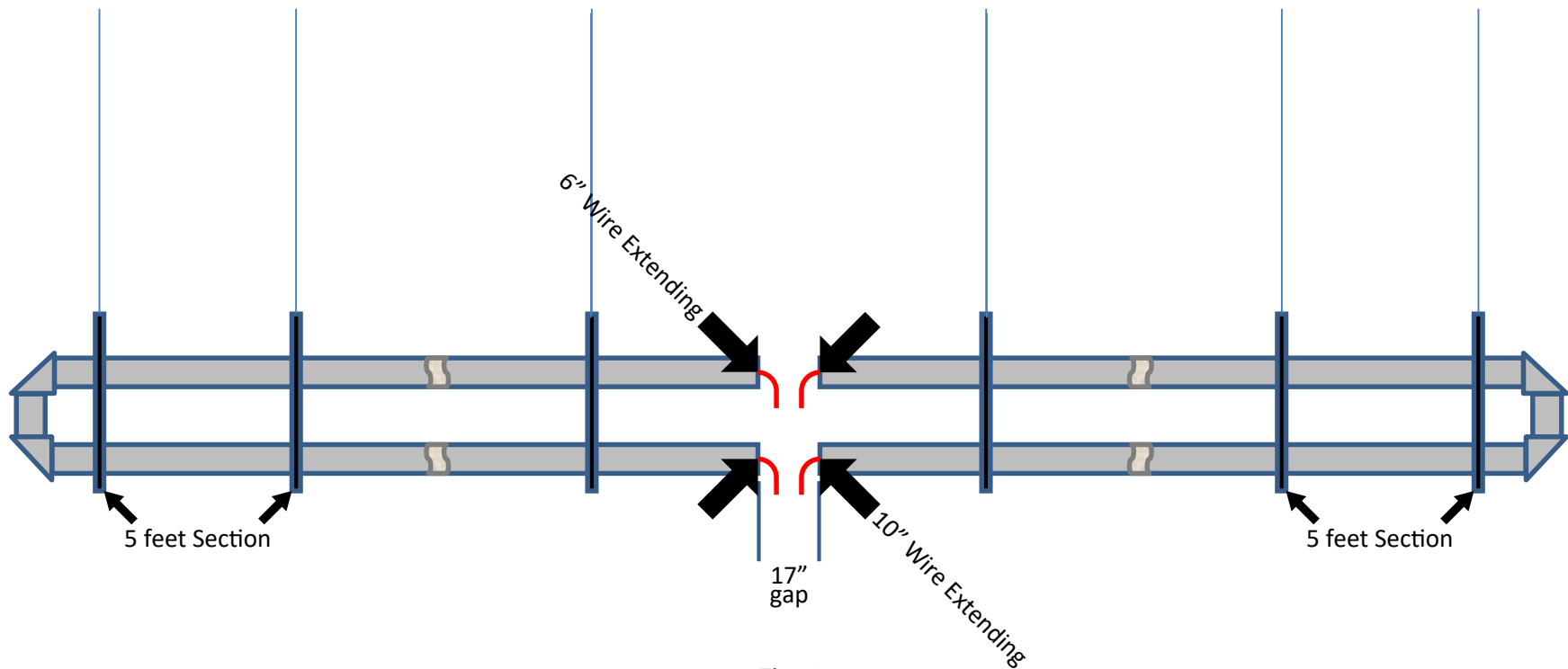
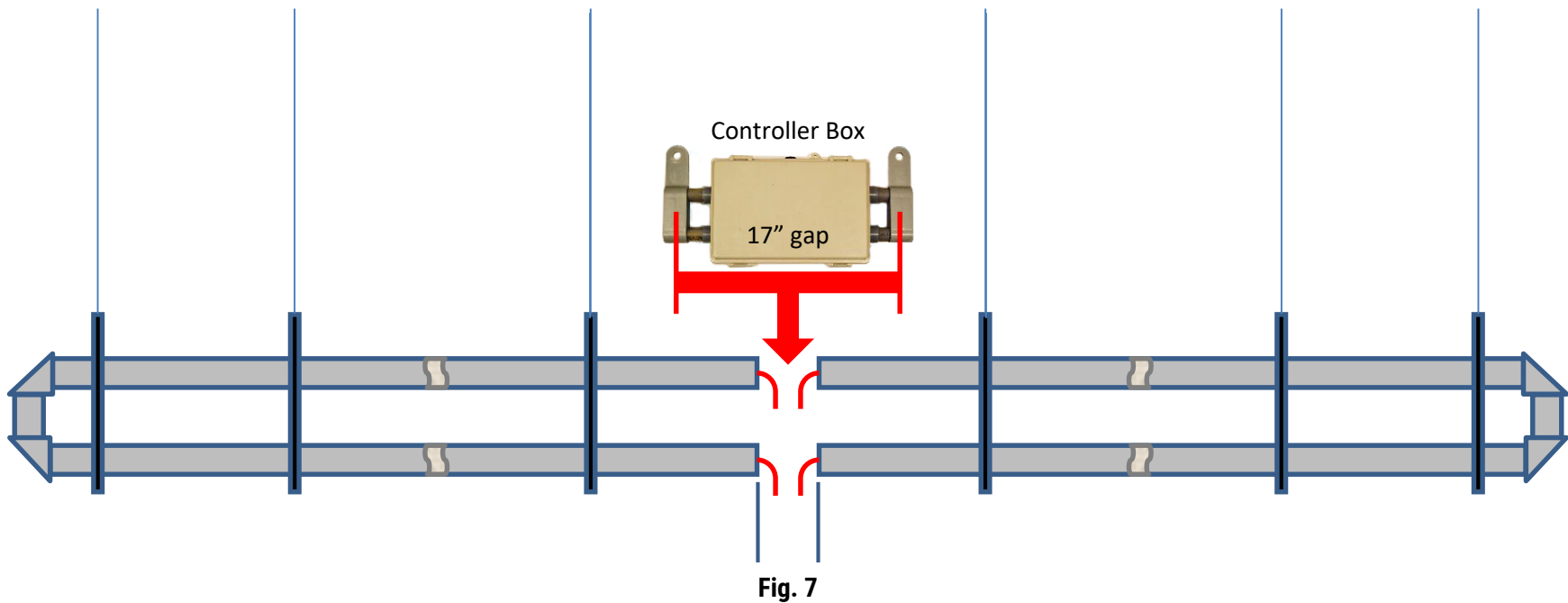
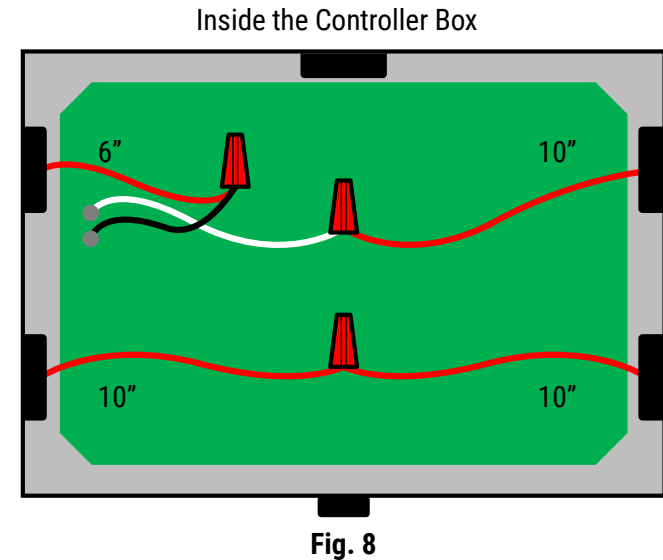


Fig. 6

INSTALLING THE CONTROLLER BOX (FIG. 7)

- Install Controller Box - hangers pointing up and the antenna pointing down.
- Run the 10 AWG wire through each connector pipe into the Controller Box.
- Secure the Controller Box with PVC Cement and Cleaner.
- Wire inside as shown by the inset (**Fig. 8**):
 - a. Bottom channel 10" wires together.
 - b. 6" channel wire with the Black Power wire
 - c. Top 10" channel wire to the White Power wire.



POWERING THE MAC-Z

- Run 110V AC outlet near to the Controller Box and plug in the Power Supply.
 - Check to see if the **Blue (Fig. 9)** power light on the Controller Box is ON.
 - The MAC-Z is operational, but requires adjusting.
 - If there are **additional MACs**, make sure they are turned **OFF** (no power to the units). The **Blue** power light will shine on the Controller Box of the MAC to be adjusted.
- ⚠ Caution: If other MACs are powered on, they will also be affected.
- The width of the MAC-Z is ready to be adjusted.



Fig. 9

ADJUSTING THE WIDTH OF THE MAC-Z FIELD (BY DEALER)

- If using multiple MACs, make sure this is the only MAC operating. Turn the other MACs off.
- To adjust the width of the MAC-Z, stand underneath the MAC holding the **Adjustment Pad** with the pin **IN**.
 - a. Hold the Pad on the **battery side** (long side with the back access cover) with the sounder up.
 - b. Hold the Pad at the **height** where PADS are normally worn in your facility (chest high, belt high, or hard hat).
 - c. Pull the pin (**Fig. 10**). You will hear an alarm for about 2 seconds.
 - d. Walk perpendicular from the MAC (from the side) and stand where you want the boundary for the MAC.
The boundary will be set to the exact position of the Adjustment Pad. Hold the Pad exactly on the boundary line you want to establish.
 - e. Look at the lights on the bottom of the Controller Box. There will be intervals where the lights will flash back and forth (red, yellow). Put the pin back in and wait for 2 seconds **when the MAC is in the light flashing mode**. The boundary is set automatically for both sides of the MAC-Z. The side distance is equidistant with the MAC-Z as the center.
- If the MAC-Z is for an office area AND the area outside the entrance door is active with trucks, make sure the **Adjustment Pad** is held within 1-2 feet of the door. This will allow the pedestrian PAD a chance to activate as they approach the door.
- Turn the other MACs back on (if needed).



Fig. 10

CHECKING THE BOUNDARY (FIG. 11)

- Bring a truck/lift equipped with a generator to the MAC-Z area.
- Check the MAC-Z boundary by holding a **Pedestrian PAD** outside of the MAC boundary AND near the truck. The PAD should be alarming.
- **SLOWLY** move the Pad crossing the boundary into the MAC-Z field (becoming silent).
- Repeat the procedure along both sides of the MAC-Z keeping the truck in the vicinity of the PAD.
- Remember, the boundary is equidistant on both sides of the MAC.
- If boundary is not set correctly, then repeat the procedure on page 9. If you have additional MACs, make sure they are off.
- Some boundaries may have to be set 1-2 feet away from the desired location. For example, an office area that opens directly into the truck path will need to have the boundary set 1-2 feet **within** the OFFICE, so that the Pad will be active by the time the pedestrian reaches the door. There is a slight delay in activating a PAD from a silent zone.

Outside the MAC-Z Boundary



Inside the MAC-Z Boundary



Fig. 11

HIT-NOT® WARRANTY TERMS AND CONDITIONS

HIT-NOT® WARRANTY TERMS AND CONDITIONS

IMPORTANT-READ CAREFULLY: BY AND INSTALLING AND USING THE HIT-NOT® SYSTEM, YOU ACKNOWLEDGE AND AGREE TO BE CONTRACTUALLY BOUND BY THESE WARRANTY TERMS AND CONDITIONS. IF ANY OF THE TERMS OF USE ARE NOT ACCEPTABLE TO YOU, DO NOT INSTALL OR USE THE HIT-NOT® SYSTEM.

THE HIT-NOT® SYSTEM IS SIMPLY A TOOL TO BE USED TO ASSIST YOU IN SAFELY OPERATING HEAVY EQUIPMENT. THE HIT-NOT® SYSTEM IS NOT INTENDED AS A SUBSTITUTE FOR, NOR DOES IT REPLACE, SAFE PRACTICES IN OPERATING HEAVY EQUIPMENT. YOUR USE OF THE HIT-NOT® SYSTEM IS SOLELY AT YOUR OWN INDEPENDENT DISCRETION AND RISK. THE HIT-NOT® SYSTEM IS NOT GUARANTEED TO PREVENT ACCIDENTS.

ACCEPTANCE AND DEFINITIONS.

(A) Acceptance of Terms. These Warranty Terms and Conditions (these "Terms") are a legal agreement between You, as a purchaser and end user of the System and Frederick Mobile Instrumentation, LLC. By installing the System or using the System in any way, You are (1) agreeing to be bound by these Terms. IF YOU DO NOT AGREE WITH ALL THESE TERMS, DO NOT USE OR INSTALL THE SYSTEM. YOU MUST RETURN THE SYSTEM TO THE DEALER FROM WHICH YOU PURCHASED THE SYSTEM, IN ACCORDANCE WITH THE DEALER'S POLICIES. This Agreement constitutes the entire and only agreement between FMI and You and supersedes all prior or contemporaneous agreements, representations, warranties and understandings with respect to the System, and the subject matter of this Agreement.

(B) Definitions. In this Agreement, "You" and "Your" refer to You as the user of the System. "FMI" "we," "us" and "our" refer to Frederick Mobile Instrumentation, LLC and our successors, partners, affiliates, subsidiaries and assigns. "System" refers to the Hit-Not® System purchased by You. "Terms" refers, collectively, to these Warranty Terms and Conditions.

LIMITED WARRANTIES; DISCLAIMER.

(A) Limited Warranty. FMI hereby warrants against: (1) defects in the System, either in workmanship or material, and (2) the failure of the System to conform to FMI's written specifications, for a period of one (1) year after date of delivery to You, in each case; provided that such System has been under proper and normal use at all times during such period. All warranty claims under these Terms must be submitted through the Dealer from which you purchased the System. FMI's liability is restricted to the replacement or repair of the defective or nonconforming parts alone and does not include any installation, labor, or expense involved, or other contingent liability. Liability for any components manufactured by third parties but incorporated into FMI Products to be furnished by FMI, shall be limited to the guarantee or liability to FMI of the manufacturer or supplier of such components. FMI is not liable for damages resulting from the use or misuse of the FMI Products.

(B) Disclaimers. EXCEPT AS EXPRESSLY SET FORTH ABOVE: (1) NO ADVICE OR INFORMATION, WHETHER ORAL OR WRITTEN, PROVIDED BY OR THROUGH FMI, ANY DEALER OR DISTRIBUTOR, OR ANY THIRD PARTY SHALL IMPLY THE CREATION OF ANY REPRESENTATION OR WARRANTY OF ANY KIND WHATSOEVER BY FMI; (2) THE SYSTEM IS PROVIDED "AS IS" AND WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS, STATUTORY OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE; (3) FMI DOES NOT REPRESENT OR WARRANT THAT THE SYSTEM WILL BE FUNCTIONAL OR DEFECT-FREE, OR THAT DEFECTS WILL BE CORRECTED; AND (4) FMI HEREBY DISCLAIMS ANY AND ALL LIABILITY OR RESPONSIBILITY FOR THE IMPROPER USE OF THE SYSTEM OR FOR THE INCORRECT OR IMPROPER INSTALLATION OF THE SYSTEM. SOME STATES OR OTHER JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU. UNDER NO CIRCUMSTANCES WILL FMI BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY YOUR USE OF THE SYSTEM. USE OF THE SYSTEM IS AT YOUR SOLE RISK.

INDEMNIFICATION; RELEASE; LIMITATION OF LIABILITY.

(A) Indemnification. You agree to indemnify and hold FMI, any and all parent, subsidiary, and affiliate organizations, and their respective officers, directors, agents, shareholders, members, managers, advisors, consultants, employees, successors and assigns (collectively, the "Protected Parties") harmless from and against all losses, costs, liabilities, expenses (including reasonable attorneys' fees and expenses), claims, demands, and damages, actual and consequential, of every kind and nature, known and unknown, suspected and unsuspected, disclosed and undisclosed (collectively, "Losses"), that are in any way due to or arising out of Your use of the System, unless caused by the gross negligence or willful misconduct of FMI. FMI reserves the right, at Your expense, to assume the exclusive defense and control of any matter for which You are required to indemnify any of the Protected Parties, and You agree to cooperate with FMI's defense of such claims. FMI will use reasonable efforts to notify You of any such claim, action, or proceeding which is subject to this indemnification upon FMI becoming aware of it.

(B) Limitation of Liabilities. IN NO EVENT SHALL FMI, ITS LICENSORS, SUPPLIERS, CONTENT PROVIDERS OR THEIR RESPECTIVE PARENTS, SUBSIDIARIES, AFFILIATES, OFFICERS, DIRECTORS, SHAREHOLDERS, ADVISORS, CONSULTANTS, EMPLOYEES, SUCCESSORS OR ASSIGNS, BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES (INCLUDING BUT NOT LIMITED TO LOSS OF BUSINESS, PROFITS, USE, REVENUE OR OTHER ECONOMIC ADVANTAGE), ARISING OUT OF OR IN CONNECTION WITH THE SYSTEM OR THESE TERMS BASED ON ANY THEORY, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE LIMITATION OF DAMAGES SET FORTH ABOVE IS A FUNDAMENTAL ELEMENT OF THE BASIS OF THE BARGAIN BETWEEN US AND YOU. THE SYSTEM WOULD NOT BE PROVIDED FOR SALE TO YOU WITHOUT SUCH LIMITATIONS. IN NO EVENT WILL OUR LIABILITY, OR THE LIABILITY OF OUR LICENSORS, AND OUR RESPECTIVE PARENTS, AFFILIATES, SUBSIDIARIES, OFFICERS, DIRECTORS, SHAREHOLDERS, EMPLOYEES, ADVISORS, CONSULTANTS, SUCCESSORS OR ASSIGNS, TO YOU OR ANY THIRD PARTIES IN ANY CIRCUMSTANCE EXCEED ONE HUNDRED DOLLARS (US \$100.00). SOME STATES OR OTHER JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU.

CHOICE OF LAW; DISPUTE RESOLUTION. The Agreement shall be governed by, and construed in accordance with the laws of the State of Alabama, without regard to its conflicts of law provisions. In the event of any dispute, claim, question or disagreement ("Claim") between You and FMI arising from or relating to Your use of the System, You and FMI will attempt, in good faith, to resolve any Claim within thirty (30) days after written notice of the Claim. Any Claim not so resolved shall be finally settled by binding arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules, using the Expedited Procedures. Judgment on the award rendered by the arbitrator(s) may be entered in any court of competent jurisdiction. The arbitrator shall be an individual generally skilled in the legal and business aspects of the subject matter of this Agreement. The arbitrator shall have no authority to impose penalties or award punitive damages. The arbitration shall take place in Madison County, Alabama, and the arbitrator shall apply the law of the State of Alabama and applicable rules of evidence. If all parties and the arbitrator agree, arbitration may take place by telephone or by written communication. Unless the arbitrator otherwise directs, the parties, their representatives, other participants, and the arbitrator shall hold the existence, content, and result of the arbitration in confidence. No action, regardless of form, related to the obligations of the parties under this Agreement may be brought by either party against the other more than one (1) year after the cause of action has accrued. In any proceeding to enforce this Agreement, the prevailing party will have the right, in addition to its other rights hereunder, to recover its reasonable litigation costs and reasonable attorneys' fees.

Nothing in this Section shall preclude any party from seeking equitable relief from a court of competent jurisdiction or exercising any self-help remedies, whether before, during or after the pendency of any arbitration proceeding. The parties agree that taking any such action does not waive any right that either party has to demand arbitration at any time with respect to subsequent or amended disputes claimed or filed against a party after commencement of litigation. BY AGREEING TO THESE TERMS AND CONDITIONS, ALL PARTIES AGREE TO WAIVE ANY RIGHTS TO A JURY OR COURT TRIAL. If any provision of this dispute resolution procedure is held invalid or unenforceable, the remaining provisions shall remain in full force and shall not be affected by the invalidity of any other provision. By tapping "Accept", you again agree and confirm that you have read and understood these Terms of Service and the

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V. ENTIRE AGREEMENT; ASSIGNMENT; MISCELLANEOUS. These Terms constitute the complete and exclusive statement of the agreement between You and us. It supersedes any and all prior or contemporaneous agreement, oral or written, and any other communications, representations, warranties and understanding relating to the subject matter hereof. If there is a conflict between an oral or written representation of any FMI employee or agent, or any Dealer or Distributor employee or agent, and these Terms, these Terms will prevail. These Terms will prevail over other rules and policies on the System. Our failure to enforce any provision of these terms shall not be deemed either a waiver of such provision or a waiver of the right to enforce such provision. If any provision of these Terms is held by an arbitrator or court of competent jurisdiction to be contrary to law, then such provision shall be construed, as nearly as possible, to reflect the intentions of the parties and the other provisions shall remain in full force and effect. The provision of these Terms which, by their terms should survive termination or expiration of these Terms, shall survive the termination or expiration hereof. FMI may assign this Agreement to any other entity of its choosing, with or without notice to You. You may not assign these Terms to any other party without the prior written consent of FMI. FMI shall not be deemed to have waived any of its rights or remedies unless such waiver is in writing and signed by FMI. No delay or omission on the part of FMI in exercising any rights or remedies shall operate as a waiver of such rights or remedies or any other rights or remedies on future occasions. The section titles in these Terms are solely used for the convenience of the parties and have no legal or contractual significance.

END OF HIT-NOT® WARRANTY TERMS AND CONDITIONS



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