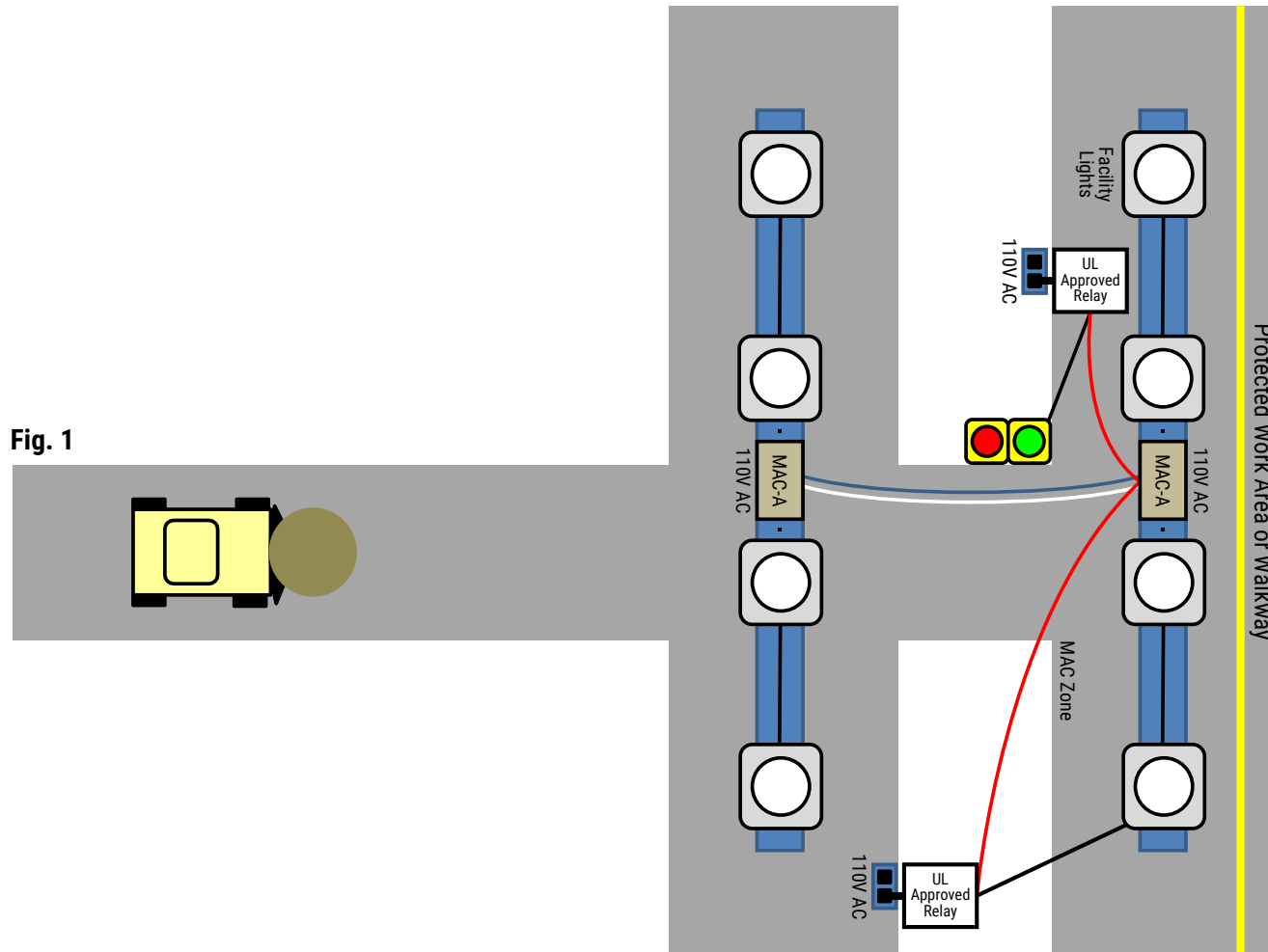


MAC-TO-MAC Installation Guide

MAC-TO-MAC INSTALLATION (FIG. 1)



PURPOSE OF MAC-TO-MAC (FIG. 2)

- It may be necessary to connect MACs together to obtain the **desired length or width**. To lengthen or widen the area controlled by the MAC, they can be placed beside one another, end-to-end, or intersecting. Each MAC is a specified length as noted on the lid of the Controller Box and tuned to that length.
- ⚠ DO NOT CHANGE THE LENGTH OF ANY MAC WITHOUT CONSULTING **HIT-NOT®**!
- Connecting similar type MACs in the same area is essential to **synchronize the signals** emanating from the MACs. The MACs will connect via a 24 AWG Control Wire in each Controller Box.

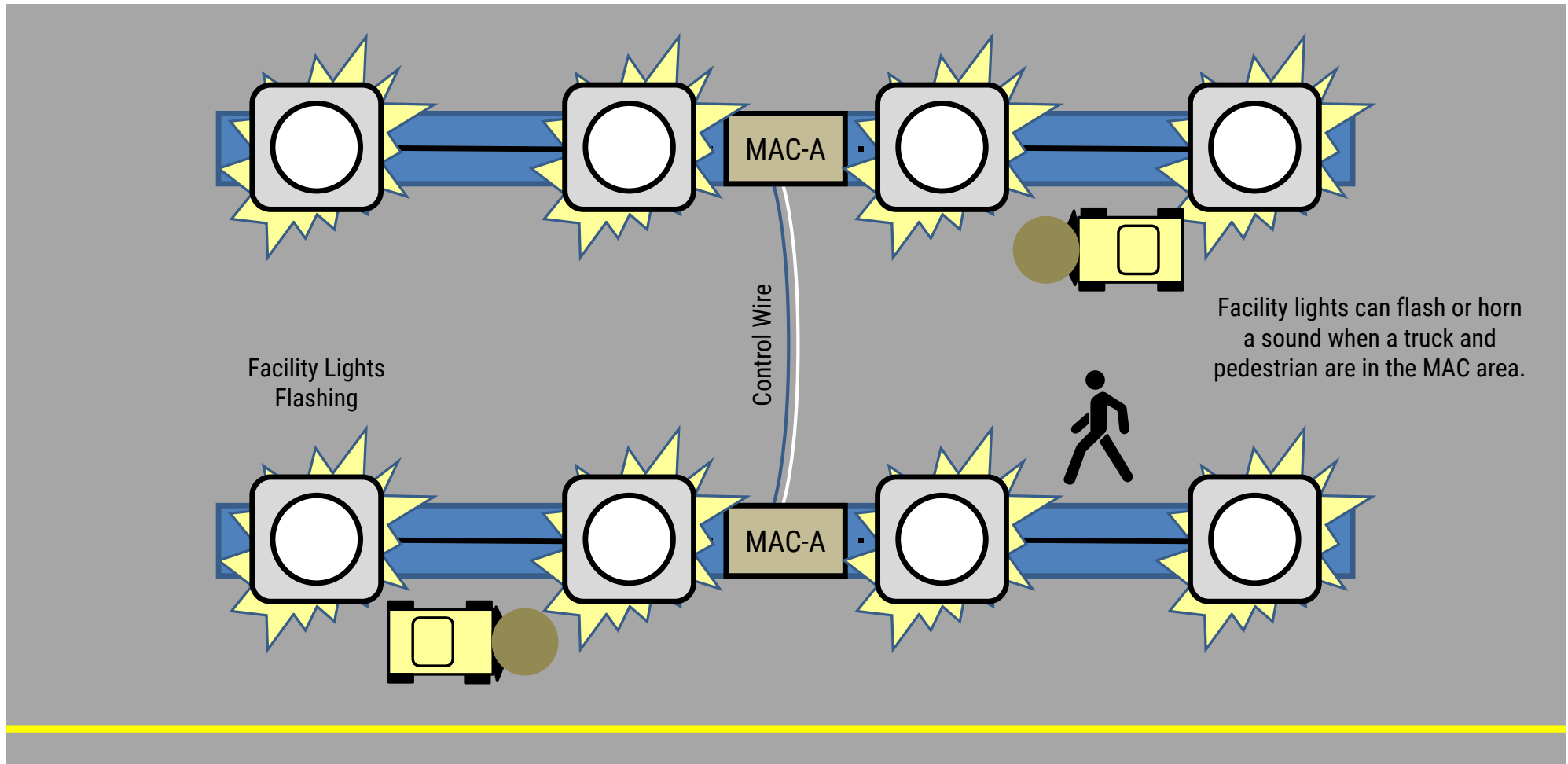


Fig. 2

EQUIPMENT/PERSONNEL NEEDED TO INSTALL YOUR MAC-TO-MAC

- Certified Electrician.
- **HIT-NOT®** Dealer with the MAC Adjustment Pad.
- Tools: Wire cutters and Tape measure.
- Scissor Lift or TALL Ladder.
- Zip-ties or equivalent to secure the control wire.

HIT-NOT® EQUIPMENT PROVIDED (FIG. 3)

- 24 AWG Control wire for the Controller Boxes.
- ⚠ **Find the location of the drain before cutting away the braided shield and the foil shield.**
Approved part numbers are: Automation Direct #L19827-500 Belden #9841.

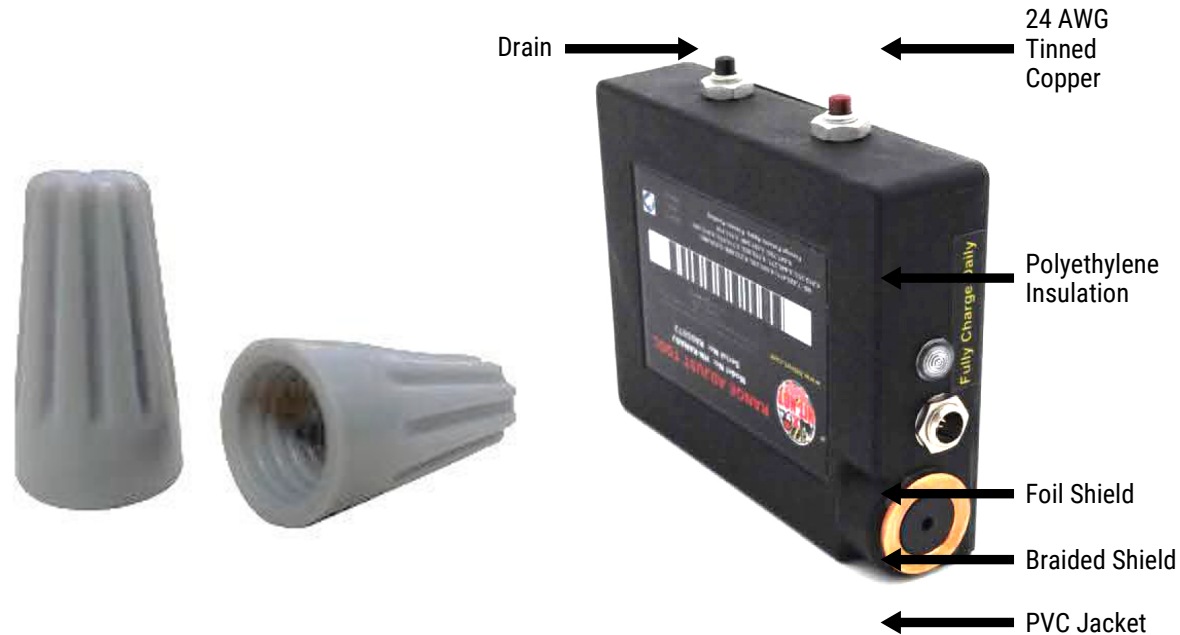
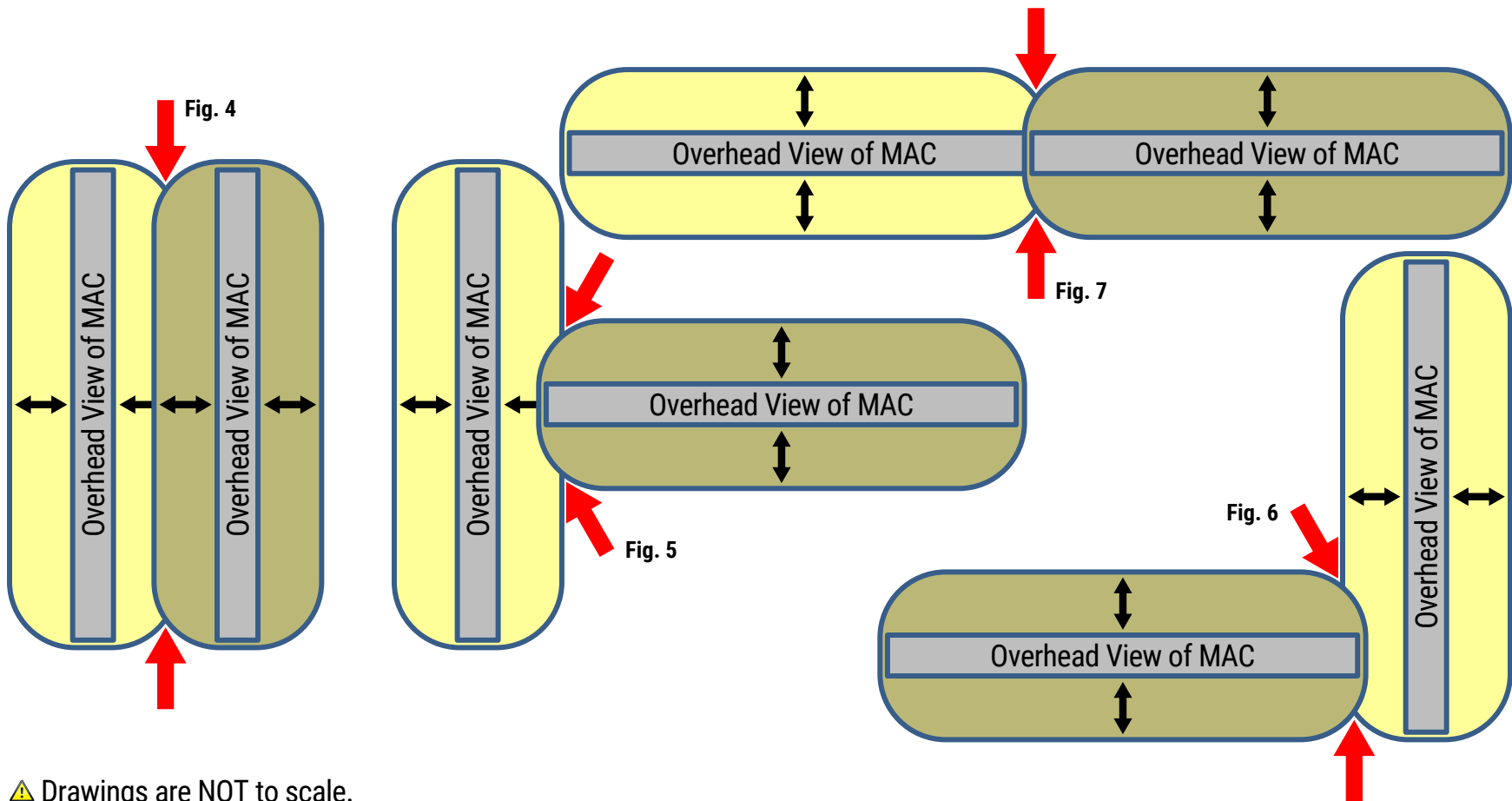


Fig. 3

MAC PLACEMENT & FIELD

- **Each** MAC must run down the center of it's area to be controlled (in a straight line).
- If 2 or more MACs are controlling an area side by side, the MACs will need to be placed accordingly to insure full coverage of the area. One MAC can be wider than the other and the fields can overlap. **(Fig. 4)**
- If 2 MACs have fields that are perpendicular, place the MAC end of one in proximity of the other. The curvature field of the intersecting MAC might be short of the other MAC thus creating gaps in coverage. **(Figs. 4-7)**
- If 2 MACs are placed end to end to create an area longer than 160 feet, make sure the end pieces overlap 10 feet to avoid gaps in the coverage **(Fig. 7)**.



MASTERMAC AND SLAVEMAC

- MAC-A shrink, MAC-A non-shrink, and MAC-Z **cannot be connected** together via Control Wire. They run independently (**Fig. 8**).
- When 2 or more MACs are of the same type in the same area, they **MUST be connected** by 24 AWG Control Wire. These MACs will need to synchronize signals.
 - a. The decision of which will be the MasterMAC does NOT have to be made at this time. Heads up info!
 - b. One MAC will be the MasterMAC and the other(s) will be the SlaveMAC(s) (**Fig. 9**).
 - c. The MAC deemed as the MasterMAC will be on one end of the daisy-chain.
 - d. There can be **up to 8 MACs** daisy-chained together: 1 MasterMAC and 7 SlaveMACs.

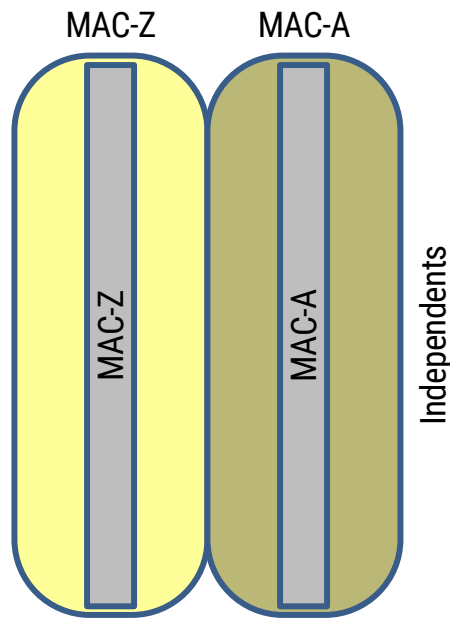


Fig. 8

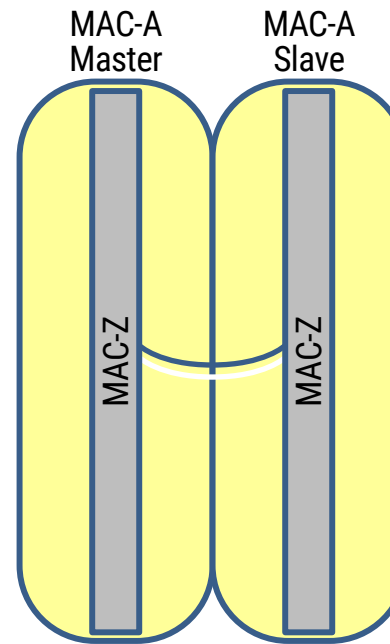


Fig. 9

RUNNING THE CONTROL WIRE (FIG. 10)

- The Control Wire runs from Mac Box to MAC Box and goes through the Cable Grip on the top part of each Box.
- The Control Wire from MAC to MAC needs to run perpendicularly up from the Box AND run at least 5 feet away from the MAC Conduit.
- Secure the wire to ensure it will not sag below the 5 feet parameter.
- It is easier to run the Control Wire(s) in the Cable Grip before the Relay Wire(s).
- Do not use the Control Wire to connect to the Relay Box.

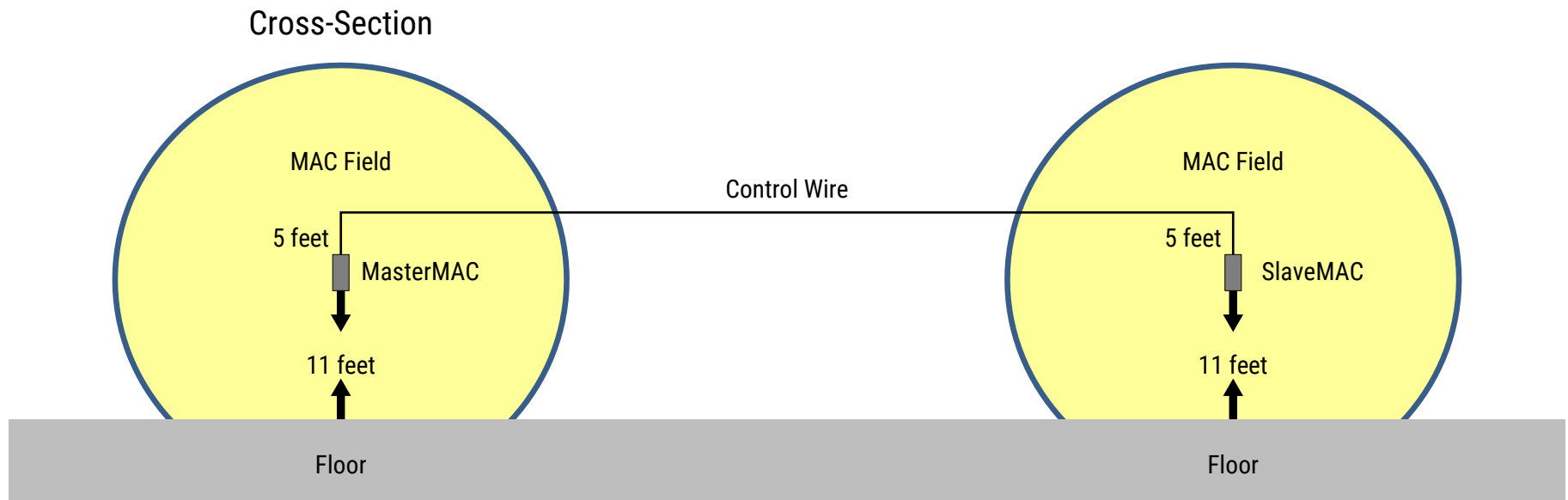


Fig. 10

CONNECTING THE CONTROL WIRES IN THE SLAVEMAC (FIG. 11)

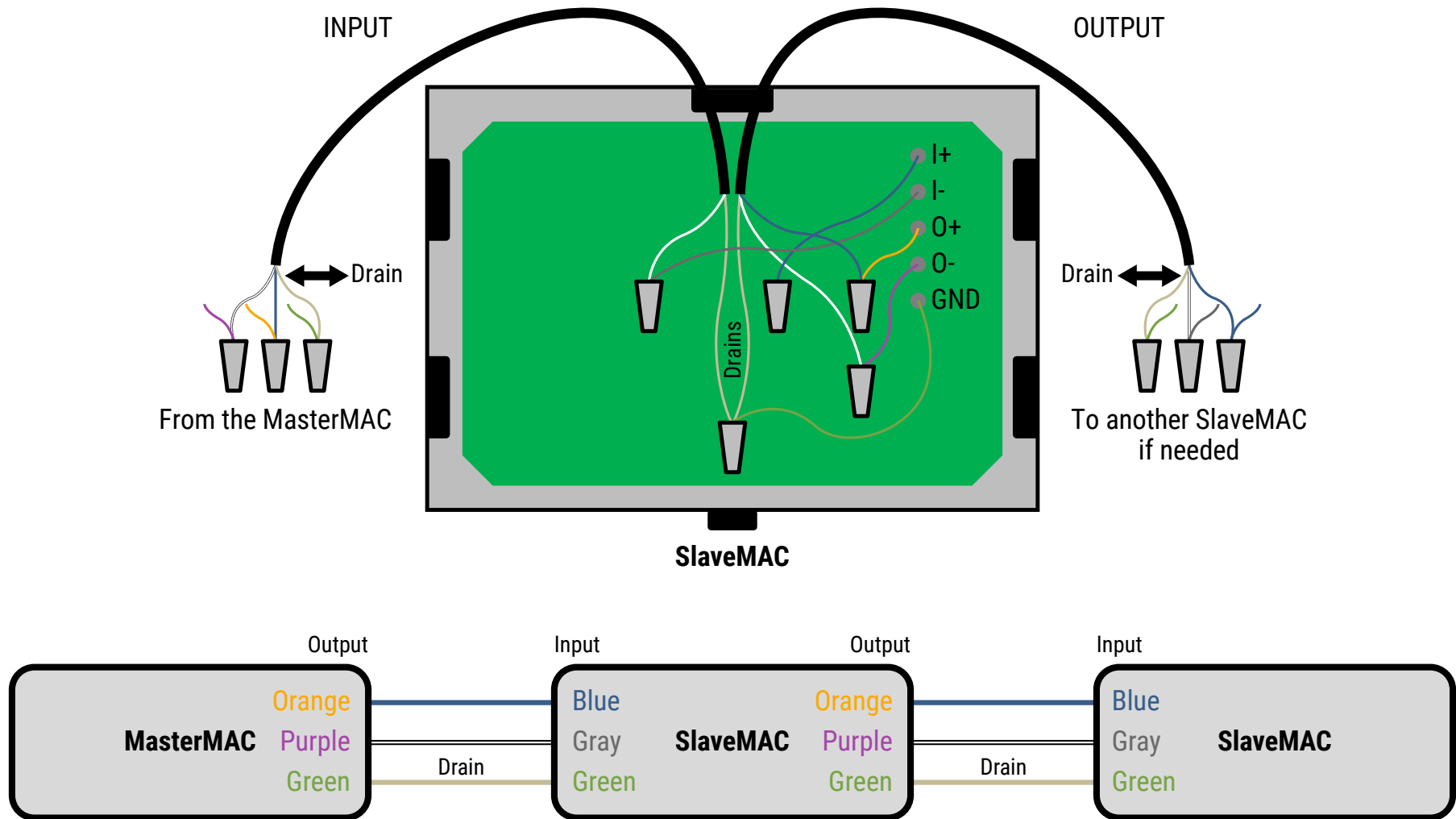


Fig. 11

CONNECTING THE CONTROL WIRES IN THE SLAVEMAC WITH TERMINAL BLOCKS (FIG. 12)

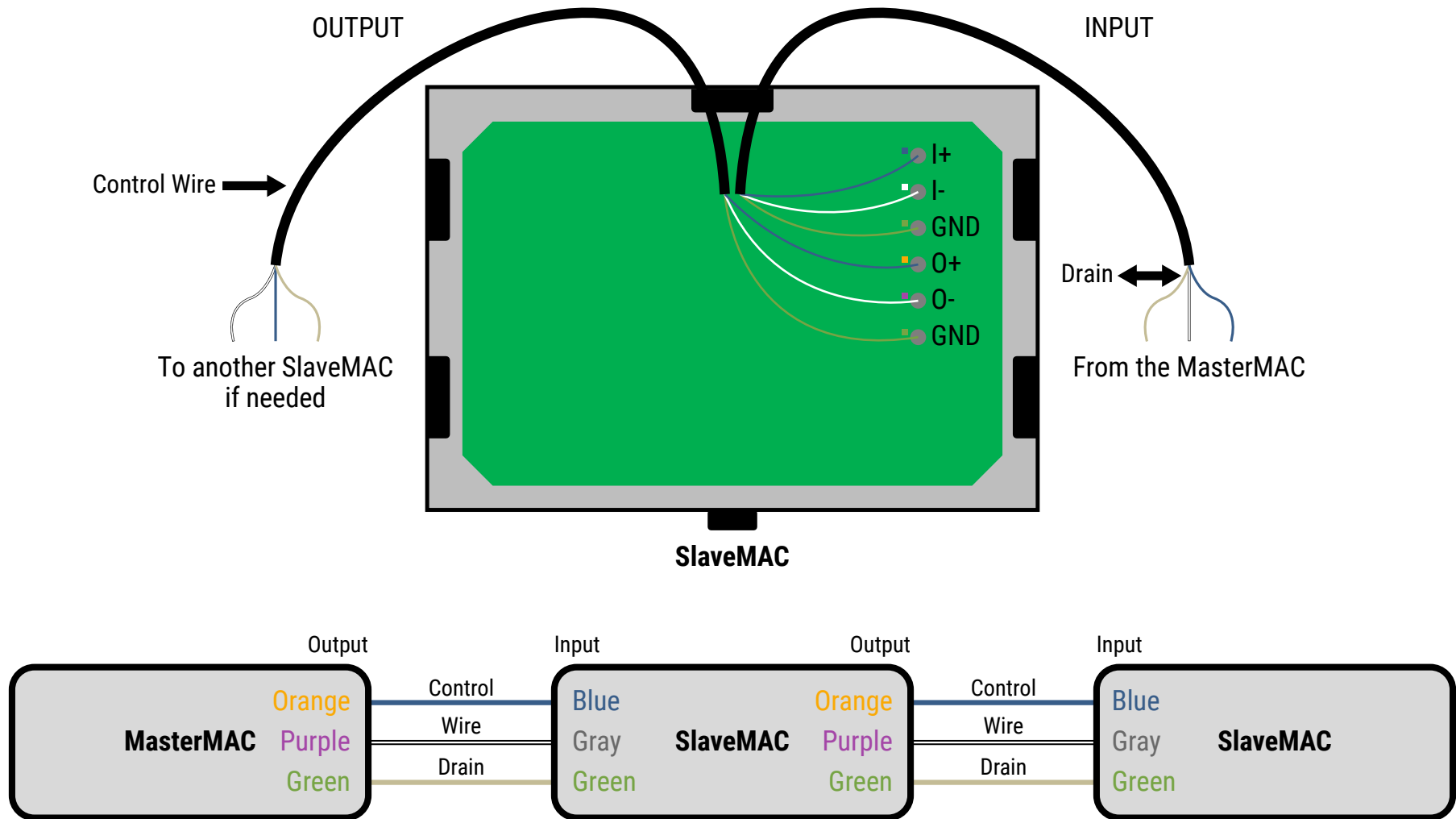


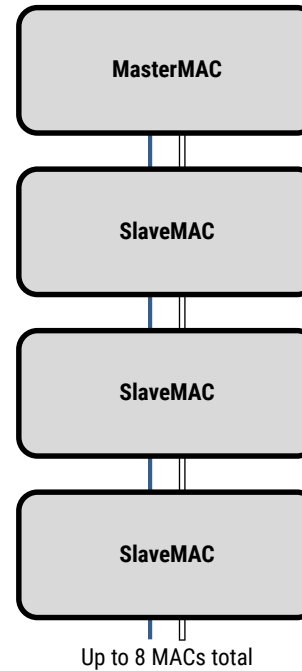
Fig. 12

SET THE SLAVEMAC CONTROLLER BOX

- Determine which MAC will be your MasterMAC (output wires only). It should be on either end of the daisy-chain. Leave the switches in MAC-A Shrink or MAC-A Non-Shrink mode. All other MAC(s) will be set in SlaveMAC(s) mode.
- Open the Controller Box on the SlaveMAC(s). Find the 3-Position Switch.
- All SlaveMAC Controller Boxes need to be configured as in the picture below (**Fig. 13**): Switches 1 & 2 in the ON position and Switch 3 doesn't matter.
- The boundary can be set in either MasterMAC or SlaveMAC mode.



Fig. 13



ADJUSTING THE WIDTH OF THE MAC FIELD (BY DEALER) (FIG. 14)

- Turn the power ON of the MAC you are adjusting. **Make sure all other MACs are turned OFF (no power).** Only one MAC can be adjusted at a time.
- After adjusting this MAC, turn OFF the power and turn ON another MAC. Repeat the adjustment process for each MAC.
- Check the boundary of the connecting MAC-A's for any gaps as referred to on page 4 of this document. Readjust the boundary if necessary.



Fig. 14

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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END OF HIT-NOT® WARRANTY TERMS AND CONDITIONS



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