

# AC1086 / AC1086-1 Shield - Assembly Instructions

The AC1086 shield is designed for Models F105, F305, and F505 test frames. AC1086-1 is designed for Model ESM303. When properly used, they can protect the operator against the dangers of airborne debris resulting from force testing. Follow these assembly and usage instructions:

## Installing the External Emergency Switch Connector - Models F105 / F305 / F505

This process is required only if the shield is ordered separately from the test frame. If ordered simultaneously, the connector is factory-installed.



This process involves the handling sensitive electronic components. We recommend proceeding only if you have experience working with electronics. Mark-10 offers a factory retrofit.

1. Remove the MDU. Refer to the test frame's user's guide for details.
2. Punch out the opening below the label, "EXTERNAL EMERGENCY SWITCH", as highlighted below:
3. Remove the back panel from the MDU housing with four screws, as highlighted below:



4. Route the two wires from the rear of the connector through the hole, as shown below:



5. Connect the two cables to the white mating plug, as shown below:



6. Install the connector to the housing by inserting the spacer over the body of the connector, then tightening the nut, as shown below:



7. Reassemble the MDU and reinstall.
8. Connect the cable from the remote emergency stop switch, shown below:



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## Installing the Shield - All Test Frame Models

1. The shield is shipped fully assembled. Remove it from the box and remove the protective packaging.
2. Position the mounting bracket on top of the column, aligning the thru holes with the corresponding threaded holes at the top of the column. Fasten the six provided socket head screws, as shown in Fig. 1.
3. Plug the interlock cable into the corresponding connector in the rear of the column, labeled “AUX. LIMITS”, as shown in Figs. 2 and 3.
4. Route all cables, such as the power cable and control panel cable, underneath the shield, as shown in Fig. 3. **Do not** route cables through the cutout in the sheet metal cover. Doing so can result in damage to the cables while the door is rotating past this area. This cutout is provided for hand access to the connector panel only.
5. The door may be opened in the clockwise or counter-clockwise direction. Magnetic detents are provided for the closed position. If the interlock cable is plugged in, the test stand’s control panel will indicate when the door is open and prohibit movement. However, the FollowMe® function may be used to adjust the crosshead position for sample loading.

Note for Model ESM303:

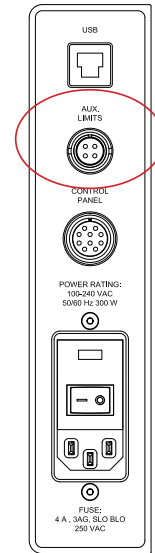
The following minimum test stand firmware versions are required:

Front: 2.02.08  
Main: 2.02.07

With prior firmware versions, the FollowMe® function will not operate while the door is open, however, the Auto Return function can still be used to return the crosshead to the home position automatically. Contact Mark-10 for upgrade instructions. For further instructions refer to the test frame’s user’s guide.



**Fig. 1**  
Attaching the shield assembly to the top of the column



**Fig. 2**  
Model ESM303 rear connectors



**Fig. 3**  
Proper cable routing. Shown above:  
Models F105 / F305 / F505



**Fig. 4**  
Adhesive-backed guide is included for cable management