FLUSH MOUNT SECURITY CONTROL

MPI-330

INSTALLATION MANUAL

moose

APPLICATION

The MPI-330 Is A Low Cost Versatile Semi-Flush Mount Security Control That Mounts In A Two Gang Electrical Box. Ideal For Installations In Apartments, Condominiums, Small Businesses And Homes.

SPECIFICATIONS

- Entrance Time Factory Set At 20 Seconds
- Exit Time Factory Set At 40 Seconds
- Cut-Off/Reset Time Factory Set At 6 Minutes
- High Voltage Transient Protection
- 8 - 15 Volts DC Operation
- Dimensions: 4.6" x 4.5" x 1.63" (Two Gang Electrical Plate)
- Optional Maintained Or Momentary Keying
- Burglar Alarm Output Switched Thru 6 Amp Dry Relay Contact
- 24-Hour Normally Open Panic
- Pushbutton Panic On Front Of Control
- Pre-Alarm Output
- Light Tan Plastic Injection Molded Case With Aluminum Front Plate
- Fits Two Gang Electrical Box
- Remote Arming
- Fail Safe — Control Cannot Be Armed Until Circuits Are Good And Status LED Is Lighted
- Delay Loop Switches To Instant Through Front Plate Slide Switch
- Panic Button Can Be Used For On/Off Switch
- Accepts N.O. And N.C. Instant Loops
- Accepts N.C. Delay Loops
- Maximum Protective Loop Resistance 1000 Ohms
- Operating Temperature Range: 0 Degrees C. To 70 Degrees C.

FEATURES

- Entrance And Exit Delay
- Automatic Alarm Cutoff And Reset
- Alarm Memory
- Provision For Remote Arming
- Fail Safe Arming
- Remote Status LED
- Remote Armed LED
- Remote Violation LED
- Home/Away Slide Switch
- Normally Open Instant Loop
- Normally Closed Instant Loop
- Normally Closed Delay Loop
- Delay Loop Switches To Instant Operation
- 12 Volt DC Operation
- Pre-Alarm (Piezo Resonator) Output
- Dry Relay Contact Output On Alarm
- Fits Two Gang Electrical Box
- Front Plate Panic Button
- Front Plate LED's — Color Coordinated
- Momentary Or Maintained Keying
- Will Accept Remote Stations
- Un-Plugable Wiring Connector

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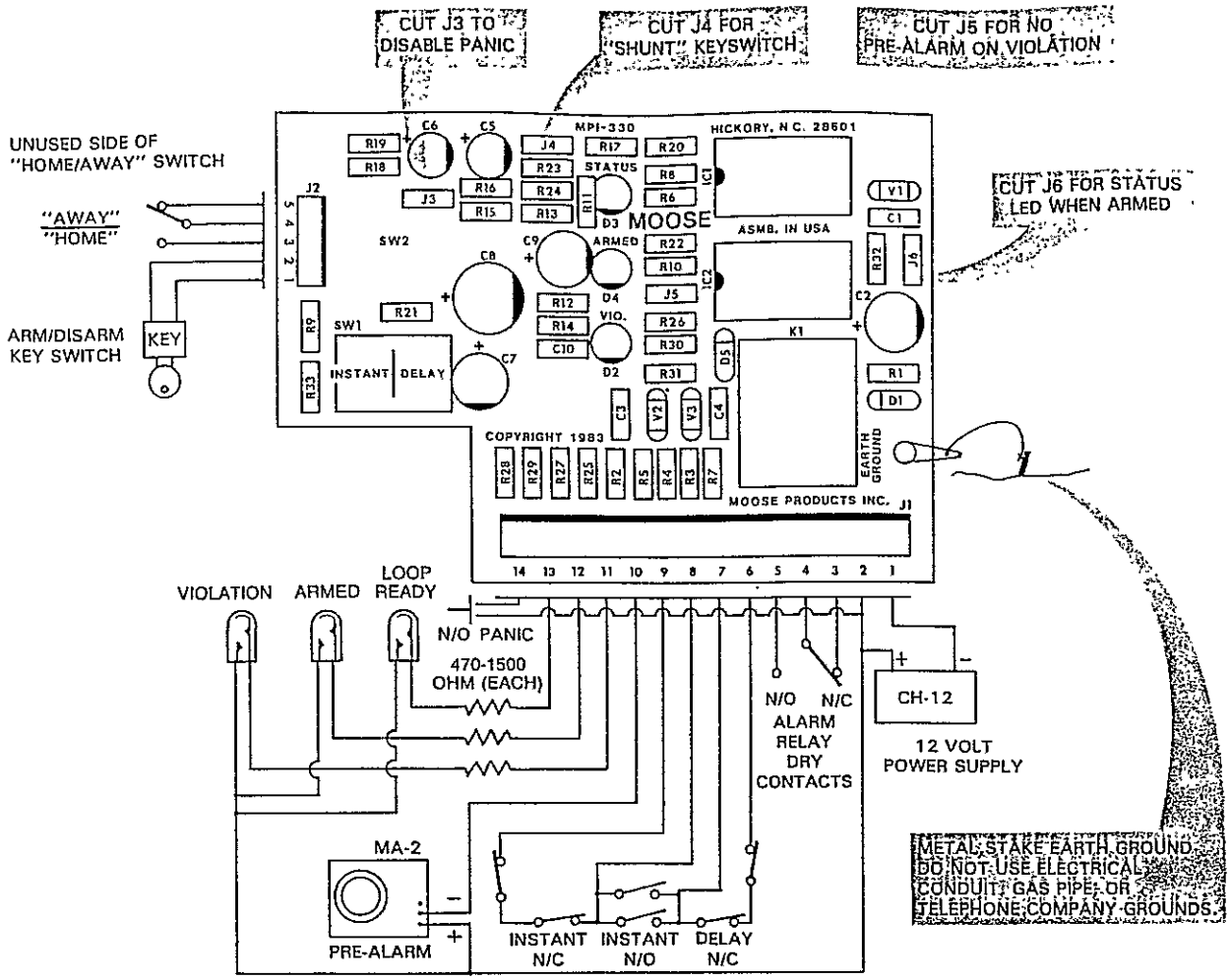


TYPICAL HOOKUP

J1-Pin 1	Black	(-) Negative Power Supply
J1-Pin 2	White	(+) Positive Power Supply +8 to +15 volts
J1-Pin 3	Red	Alarm Relay Normally Closed
J1-Pin 4	Green	Alarm Relay Common
J1-Pin 5	Brown	Alarm Relay Normally Open
J1-Pin 6 & 7	Blue and Orange	Normally Closed Delay Loop
J1-Pin 7 & 8	Orange and Yellow	Normally Open Instant Loop
J1-Pin 8 & 9	Yellow and Purple	Normally Closed Instant Loop
J1-Pin 10	Gray	(-) Pre-alarm Output
J1-Pin 11	Pink	(-) Violation LED Output
J1-Pin 12	Tan	(-) Armed LED Output
J1-Pin 13	Red/White	(-) Loop Ready LED Output
J1-Pin 14	Green/White	Normally Open Panic
J2-Pin 1	Black	(+) Arm/Disarm Key Circuit
J2-Pin 2	White	Arm/Disarm Key Circuit

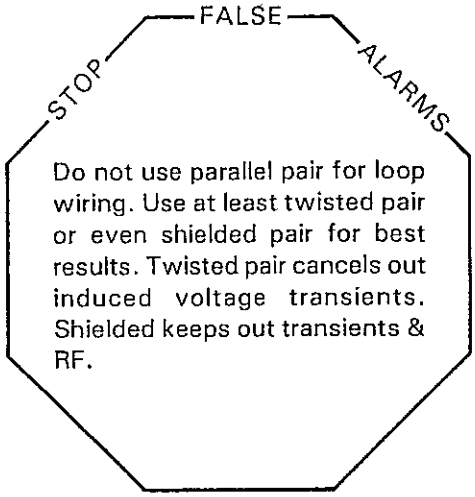
Pins 3, 4 and 5 connect to the unused side of the Home/Away switch and may be used for shunting

J2-Pin 3	Red	Normally Closed (Home Mode)
J2-Pin 4	Green	Common
J2-Pin 5	Brown	Normally Open (Home Mode)

Test Weekly

Note: Central monitoring station should be notified before beginning test of the control.

INSTALLATION INSTRUCTIONS

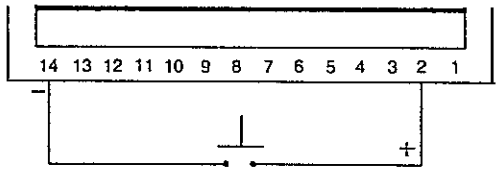


Step 1. Attach the mounting plate to the wall or to an electrical box. (Use mounting plate for template to cut hole in wall for mounting without an electrical box.)

Step 2. Unplug the 14 Pin, J1 wiring connector from the MPI-330 board.

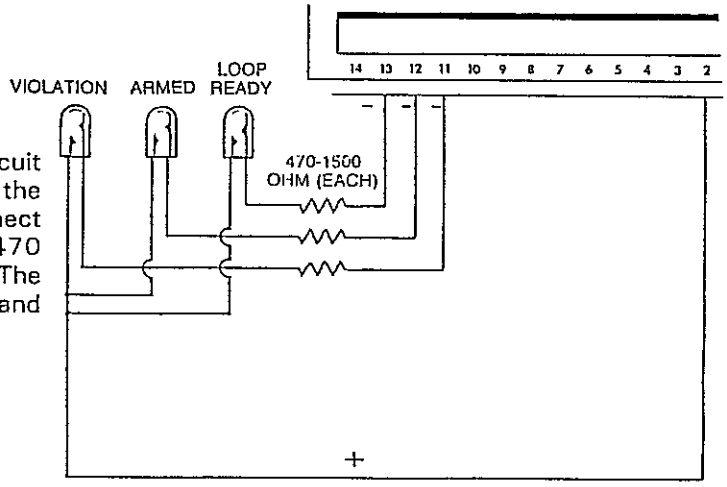
Step 3. J1-Pins 14 and 2.
Panic Circuit

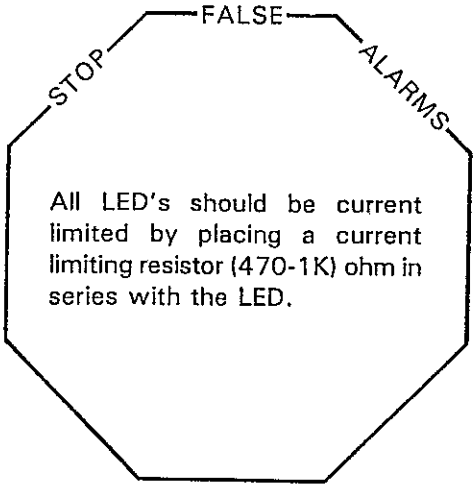
The panic circuit requires momentary, normally open panic devices wired in parallel between J1-Pin 14 and J1-Pin 2 (+ 12VDC)



Step 4. J1-Pins 13 and 2.
Status LED

Pin 13 is a negative output for a remote circuit status LED (light emitting diode). Connect the negative status LED lead to J1-Pin 13. Connect the positive status LED lead in series with a 470 to 1000 ohm resistor to J1-Pin 2 (+ 12VDC). The status LED will illuminate when the instant and delay circuits are in a non-violated state.





Step 5. J1-Pins 12 and 2.
Armed LED

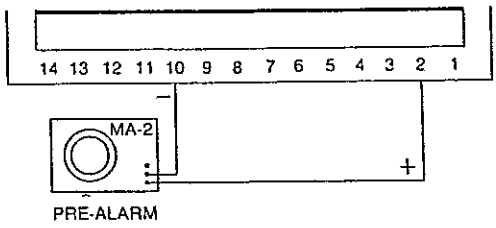
Pin 12 is a negative output for a remote armed LED. Connect the negative armed LED lead to J1-Pin 12. Connect the positive armed LED lead in series with a 470 to 1000 ohm resistor to J1-Pin 2 (+ 12VDC). The armed LED will be illuminated when the control is armed.

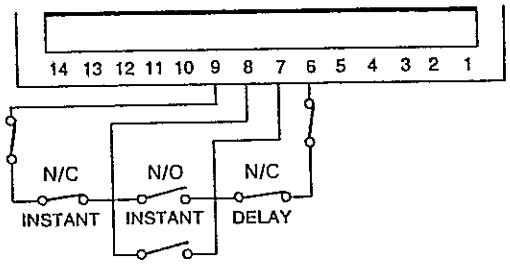
Step 6. J1-Pins 11 and 2.
Violation LED

Pin 11 is a negative output for a remote violation LED. Connect the negative violation LED lead to J1-Pin 11. Connect the positive violation LED lead in series with a 470 to 1000 ohm resistor to J1-Pin 2 (+ 12VDC). The violation LED will illuminate when the alarm output activates, and remains illuminated until disarmed.

Step 7. J1-Pins 10 and 2.
Pre-alarm Output

J1-Pin 10 is a negative output for a remote pre-alarm. A remote pre-alarm such as the MA-2 may be connected between J1-Pin 10 (negative) and J1-Pin 2 (+ 12VDC). The pre-alarm output will be active during the entrance time, cutoff/reset time, and will remain active until the control is disarmed.





Step 8. J1-Pins 8 and 9.
Instant Normally Closed Loop

The instant normally closed loop requires normally closed devices wired in series to J1-Pins 8 and 9. If the instant normally closed loop is not used, J1-Pins 8 and 9 must be jumpered together for the control to operate properly.

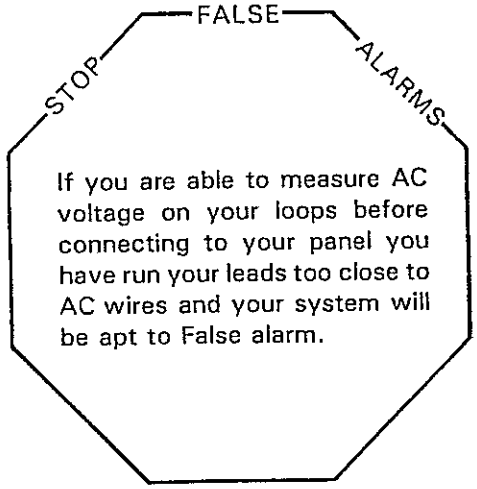
Step 9. J1-Pins 7 and 8.
Instant Normally Open Loop

The instant normally open loop requires normally open devices wired in parallel to J1-Pins 7 and 8.

Step 10. J1-Pins 6 and 7.
Delay Normally Closed Loop

The delay normally closed loop requires normally closed devices wired in series to J1-Pins 6 and 7. If the delay normally closed loop is not used, J1-Pins 6 and 7 must be jumpered together for the control to operate properly.

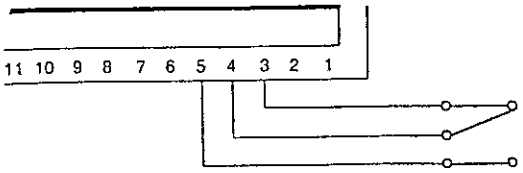
NOTE: The delay loop always has exit delay upon arming.



Installation Note

Do not exceed 1000 ohms resistance on the normally closed loops or 100 ohms resistance on the normally open loop. If these limits are exceeded the control will not function properly.

Step 11. J1-Pins 3, 4 and 5.
Alarm Output Dry Contacts

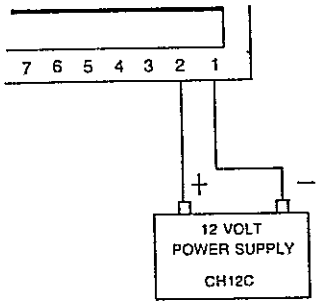


J1-Pins 3, 4, and 5 are connected to a form "C" relay with contacts rated at 6 amps. This relay is active during the cutoff/reset time after violation occurs. J1-Pin 4 is the common of the relay. J1-Pin 5 is the normally open. J1-Pin 3 is the normally closed.

Installation Hint

If a voltage output is desired on violation place a jumper between J1-Pins 4 and 2. When violation occurs J1-Pin 5 will have a + 12VDC output.

Step 12. J1-Pins 1 and 2.
(+) 12VDC Power Supply Input

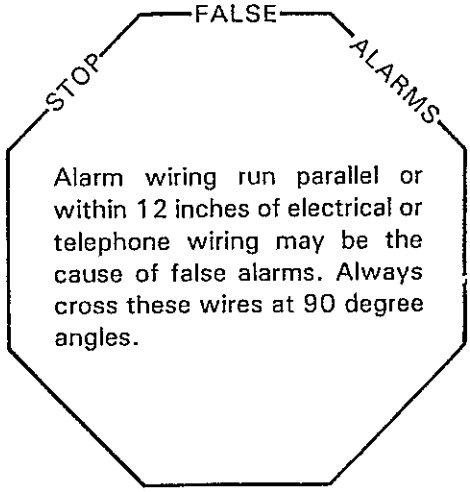


Connect a filtered and regulated DC power supply to Pins 1 (-) and 2 (+). The MPI-330 will operate on voltages between 8 and 15 volts with 12 volts being the recommended voltage. J1-Pin 1 is the NEGATIVE connection. J1-Pin 2 is the POSITIVE connection. J1-Pin 2 is used as the common positive for the pre-alarm, panic, and LED circuits. The CH-12 power supply is the recommended power supply for use with the MPI-330.

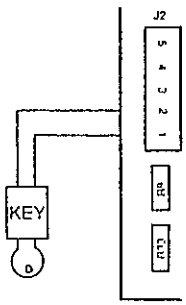
Step 13. Plug the 14 Pin, J1 wiring connector back into the MPI-330 board.

Installation Note

J2 Connector: Pull up on the black body of connector J2 to insert wires. After inserting wires push down on the black body of connector J2 to lock the wires into place.



Step 14. J2-Pins 1 and 2.
Key Switch

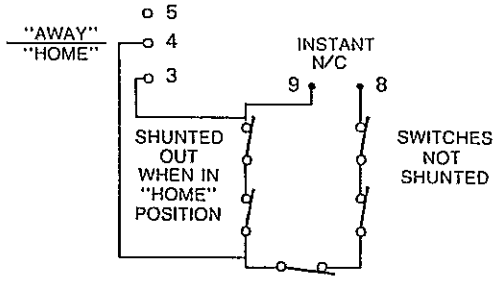


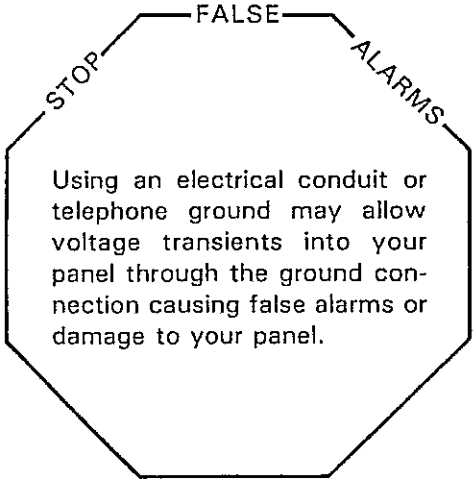
Connect a momentary key switch to J2-Pins 1 and 2. The Keyswitch may be remoted or mounted in the hole provided on the front panel of the control.

NOTE: If a maintained contact or shunt keyswitch is to be used, jumper J4 must be cut.

Step 15. J2-Pins 3, 4 and 5.
Shunting

J2-Pins 3, 4, and 5 are tied to the unused side of the "Home/Away" switch on the front panel. This may be used for shunting of interior zones when in the "Home" mode. J2-Pin 4 is common on this switch with a closure to J2-Pin 3 while in the "Home" mode and a closure to J2-Pin 5 while in the "Away" mode.





Step 16: Earth Ground

The earth ground connection is made to the mounting stud located just above connector J1-Pin 1. If the control is not grounded, the lightning/transient protection is greatly reduced. For best results, ground the control to a separate metal ground rod.

SYSTEM OPERATION

Status LED: The status light emitting diode (LED) is illuminated when all loops are secure. Fail safe arming requires that this LED be illuminated before the system will arm. The status LED will go out when the control is armed.

Armed LED: The armed light emitting diode (LED) is illuminated when the system is armed.

Violation LED: The violation light emitting diode (LED) is illuminated when the alarm is tripped and will stay illuminated until reset with the keyswitch.

Home/Away Switch: In the "Away" position the delay loop allows an entrance and exit delay time to enter and leave the premises. In the "Home" position all loops are switched to instant with no entrance time. The delay loop will always have an exit time in the "Home" or in the "Away" mode.

Panic Switch: When the twenty-four (24) hour panic switch is pushed the control activates the alarm relay, pre-alarm, and illuminates the violation LED.

NOTE: The panic switch may be used for other functions. These functions are covered in the section "Jumper Options".

Alarm Cutoff/Reset Time: This is the length of time that the alarm relay will remain in the alarm state before cutting off and resetting. NOTE: After alarm cut-off all loops must be in a non-violated state before the control will reset.

JUMPER OPTIONS

Jumper J3 — With jumper J3 cut, the panel mounted panic and remote panic switches are all disabled. To use the panel mounted panic switch to arm and disarm the control, connect J1-Pin 14 to J2-Pin 1 and cut jumper J3.

Jumper J4 — With jumper J4 cut, the control will accept maintained contact or shunt keyswitches. This may be desirable if the only keyswitch used, will be the one mounted on the front panel.

Jumper J5 — With jumper J5 cut, there will be no output to the pre-alarm on violation. The pre-alarm will function only during entry delay. If the jumper is left intact, the pre-alarm will sound during entry delay, alarm cutoff/reset time, and until the control is disarmed with the keyswitch.

Jumper J6 — With jumper J6 cut, the status LED will function when the system is armed or disarmed.

Jumper 6 —

TIME SETTINGS AND ADJUSTMENTS

Exit Time = Factory set at 40 seconds (+) or (-) 25%. For other time settings, capacitor C-7 may be replaced with the value suggested in Table 1.

Entrance Time = Factory set at 20 seconds (+) or (-) 25%. For other time settings, capacitor C-9 may be replaced with the value suggested in Table 1.

Cut-off/Reset Time = Factory set at 6 minutes (+) or (-) 25%. For other time settings, capacitor C-8 may be replaced with the value suggested in Table 1.

TABLE 1

Exit Time	Capacitor Value	Entrance Time	Capacitor Value	Cut-Off Time	Capacitor Value
5 sec	4.7 mfd	5 sec	4.7 mfd	3 min	100 mfd
15 sec	10 mfd	10 sec	10 mfd	6 min	220 mfd
25 sec	22 mfd	20 sec	33 mfd	11 min	470 mfd
40 sec	33 mfd	30 sec	47 mfd		
50 sec	47 mfd	60 sec	100 mfd		

All capacitors should be rated at least 25WVDC

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P.O. Box 2904
Customer Service Department
Hickory, N.C. 28603

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