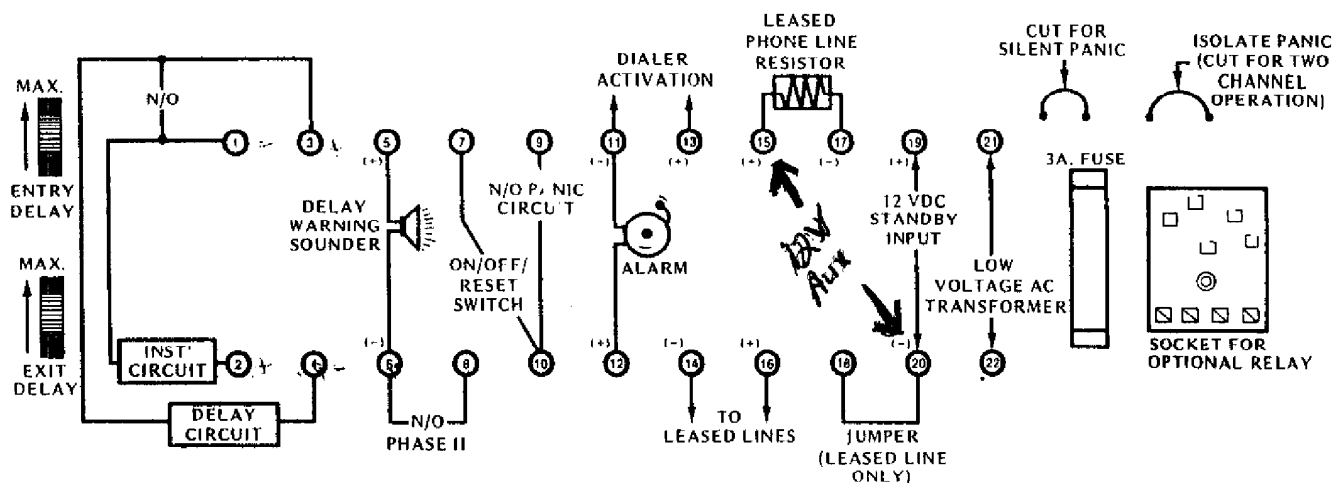


# **CCI-3 Alarm Control Center Installation Instructions**



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**TERMINALS 1 (-) & 2 (+) – PROTECTIVE CIRCUIT (Instant Circuit):** The circuit connected to these terminals immediately triggers an alarm when broken. Connect only normally closed switching devices (foil, traps, etc.) in series on this loop. Do not exceed a total circuit resistance of 350 ohms.

**TERMINALS 3 (+) & 4 (-) – PROTECTIVE CIRCUIT (Delay Circuit):** The circuit connected to these terminals provides a time delay between violation and alarm. Connect only normally closed switching devices in series to areas of entrance and exit (front doors, garage doors, etc.). Do not exceed a total circuit resistance of 400 ohms. See "Procedure for Setting Exit/Entry Delays", for more information.

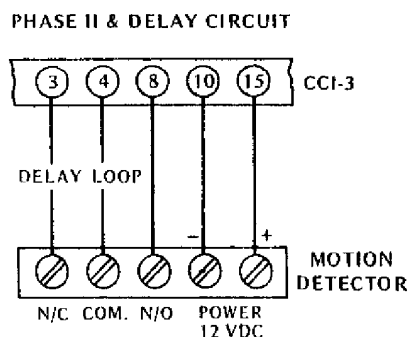
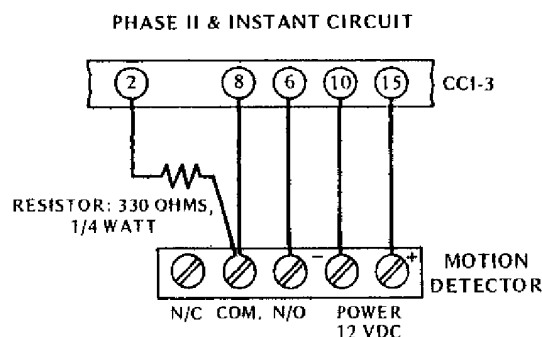
**NORMALLY OPEN INPUT:** A connection between the instant and delay protective circuits will trigger an instant alarm. This acts as a warning of a short between the two circuits, and can be used as a separate normally open protective circuit. Use only normally open switches, such as floor switch mats, wired in parallel.

**TERMINALS 5 (+) & 6 (-) – ENTRANCE DELAY WARNING:** These terminals provide power for a Sonalert (SNP-428) which will sound for the duration of the entry delay time until the control resets. The Sonalert warns the user that he must turn off or reset the control to avoid triggering an alarm. Using a Sonalert also makes the adjusting of the entry delay a lot easier. See instructions for setting delay times.

**TERMINALS 6 & 8 – PHASE II NORMALLY OPEN INPUTS:** Any normally open internal detection device, such as switch mats or ultrasonics, supplying a momentary closure can be wired across these terminals.

Phase II provides a secondary back-up circuit. When the protective circuit is closed, Phase II is inactive. But once the protective circuit has been violated and left open, and the bell or siren has automatically cut off, Phase II becomes active. A burglar now disturbing any of the Phase II devices reactivates the alarm for another 15 minutes. Phase II remains active until the CCI is turned off or the protective circuit is restored.

For added security, photoelectrics and ultrasonics can be connected into the protective circuit and Phase II circuit at the same time (see diagrams).

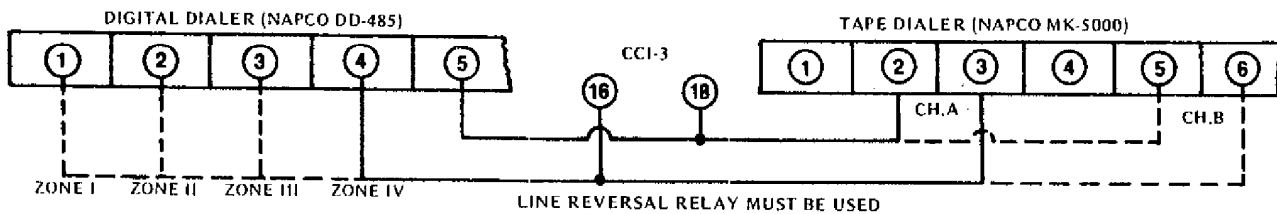


**TERMINALS 7 & 10 – KEY SWITCH:** Connect a single pole, single throw, maintained, on/off switch, to these terminals. (Do not use a spring loaded lock switch.) This key switch, when used to arm, disarm, and reset the CCI-3, may be either mounted on the door of the control by removing the plastic knockout, or at a remoted location. **WHEN THE KEY SWITCH IS CLOSED, THE CCI IS DISARMED. WHEN THE KEY SWITCH IS OPEN, THE CCI IS IN THE ARMED CONDITION.** In this way, the key switch "supervises" itself by automatically arming the control if the wires are cut.

**TERMINALS 9 & 10 – AUDIBLE PANIC CIRCUIT:** Normally open momentary switches are wired in parallel across these terminals. A momentary closure will trigger an alarm [terminals 11 (-) & 12 (+)] regardless of the position of the key switch. The dialer voltage activation [terminals 11 (-) & 13 (+)] will be tripped simultaneously. The panel will remain in the alarm condition until it is reset by the key switch, and will not be affected by the automatic bell cut-off feature.

**TERMINALS 9 & 10 – SILENT PANIC CIRCUIT:** If a silent panic alarm is desired instead of an audible alarm, the "silent panic" jumper, located above the fuse, must be cut, and an LRR-1 Line Reversing Relay must be plugged into the panel. All panic switches should be of a normally open, momentary type, and wired in parallel.

The output for the silent panic circuit is only at terminals 16 & 18. This provides a dry contact closure for the tripping of a digital or tape dialer.

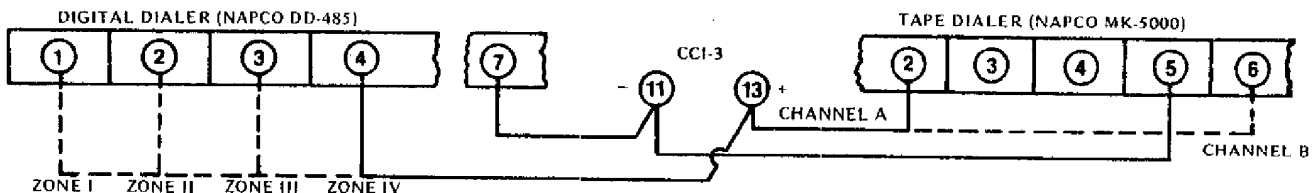


When wired as described above, both a break in the protective circuit and an activation of the panic circuit will trigger the dialer.

**TERMINALS 11 (-) & 12 (+) – ALARM OUTPUT:** A maximum of 2 amperes, 12 VDC, is available across these terminals for the purpose of powering a bell or siren.

The output is fused by a 3 ampere fuse which is located to the right of the terminal strip. An automatic timer is built into the panel which cuts off the output after approximately 15 minutes. The panel will reset automatically once the alarm has timed out, provided that the protective circuit has been restored. The cut-off can be bypassed by connecting a jumper wire across terminals 6 & 8. This will eliminate the Phase II feature, and make the panel resettable only by the key switch.

**TERMINALS 11 (-) & 13 (+) – DIALER ACTIVATION (Voltage):** A break in either of the protective circuits when the panel is armed, or a dry closure of the audible panic circuit, will cause a voltage to occur across these terminals. This will be sufficient to trigger a digital or tape dialer. The bell test does not effect dialer activation.



**TERMINALS 14-20 – CENTRAL STATION CONNECTION (Optional):** The CCI-3 can be wired directly to a central station by using a Napco LRR-1 Line Reversing Relay. This relay plugs into a socket at the right of the terminal strip and is held in place with a retaining clip. Upon alarm, the relay reverses the polarity of terminals 14 (which is normally negative) and 16 (which is normally positive). This reversing of polarity will activate a central station's console.

A wire jumper must be placed across terminals 18 & 20, along with a 1000 ohm, 1 watt resistor wired across terminals 15 & 17. The resistor's value will vary because of differences in receiving equipment and leased line length. To determine proper resistor value, with the 1000 ohm, 1 watt resistor in place:

1. Make power connection to the panel.
2. Attach the positive (+) leased line to terminal 16.
3. Attach the negative (-) probe of a meter capable of reading from 4-6 mA to terminal 14. Attach the positive (+) probe to the wire normally connected to terminal 14. If the meter reads:
  - a) Less than 4 mA – use a 470 ohm, 2 watt resistor
  - b) Between 4 and 6 mA – leave the 1000 ohm, 1 watt resistor
  - c) More than 6 mA – use a 2.7K ohm, 1/2 watt resistor

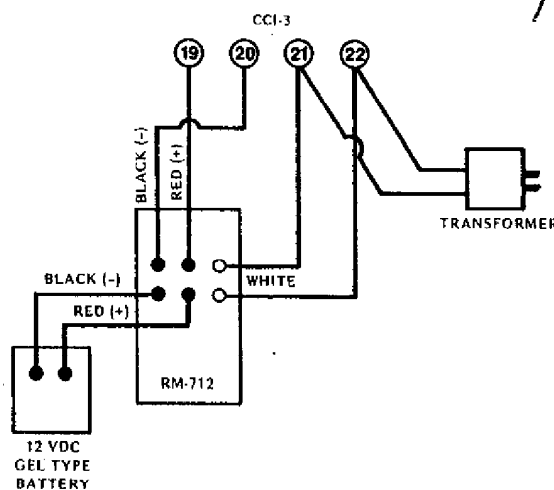
**TERMINALS 14 & 18 – NORMALLY CLOSED RELAY OUTPUT (Optional):** By plugging in a Napco LRR-1 Line Reversing Relay into the socket at the right of the terminal strip a normally closed contact, which opens upon alarm, can be had. This can be used to trigger additional equipment. IMPORTANT: Do not exceed 2 ampere contact rating.

There is no need for a resistor across terminals 15 & 17, or a jumper across terminals 18 & 20 when the relay is being used for this purpose. If the relay has been used to pass a current greater than 100 mA, it must be replaced before converting to a leased line system.

**TERMINALS 16 & 18 – NORMALLY OPEN RELAY OUTPUT (Optional):** By plugging in a Napco LRR-1 Line Reversing Relay into the socket at the right of the terminal strip a normally open contact, which closes upon alarm, can be had. This can be used to trigger additional equipment. IMPORTANT: Do not exceed 2 ampere contact rating.

There is no need for a resistor across terminals 15 & 17, or a jumper across terminals 18 & 20 when the relay is being used for this purpose. If the relay has been used to pass a current greater than 100 mA, it must be replaced before converting to a leased line system.

**TERMINALS 19 (+) & 20 (-) – STANDBY POWER:** In case of an AC power failure, the panel will operate by power supplied through these terminals. This can be from either a heavy duty 12 VDC dry cell lantern battery, or a Napco RBAT-1, 12 VDC gel type battery which can be kept charged with a Napco RM-712 Recharger Module.



**TERMINALS 21 & 22 – AC POWER INPUT:** The included Napco TRF-4, 12 volt transformer is wired to these terminals. The transformer should be plugged into an outlet that provides a 24 hour source of power that cannot be accidentally shut off.

## PROCEDURE FOR SETTING ENTRANCE & EXIT DELAYS

Delay times are adjusted separately by two small dials (potentiometers) to the left of the terminal strip. The rotation of the adjustment dials upwards increases delay time to a maximum of between 45 and 90 seconds. Rotation downward decreases delay time to a minimum of zero.

### ENTRY DELAY:

1. Complete all connections including power inputs.
2. Turn key switch 'Off'.
3. Set 'Exit' and 'Entry' pots (potentiometers) to ZERO.
4. Turn 'Entry' pot one-half turn (180 degrees).
5. Open delay circuit.
6. Turn key switch 'On' and determine the amount of time before alarm.
7. This is the entrance delay time. If more or less time is desired, repeat the above procedure adjusting the 'Entry' pot accordingly. When proper time has been set, do not make further adjustments with this pot.

### EXIT DELAY:

1. Close delay circuit.
2. Turn key switch 'Off'.
3. Turn 'Exit' pot one-half turn (180 degrees).
4. Turn key switch 'On'.
5. Open delay circuit.
6. After opening the delay circuit, determine the time before alarm in seconds. From this time, subtract the entrance delay time already set. The answer will be the exit delay. If more or less exit time is desired, repeat this 'Exit Delay' procedure adjusting the 'Exit' pot accordingly.

If an entry delay warning device (Sonalert SNP-428) is used, the exit delay time is figured as the period between the opening of the delay circuit and the sounding of the entry delay warning device.

## EXTERIOR FRONT PANEL

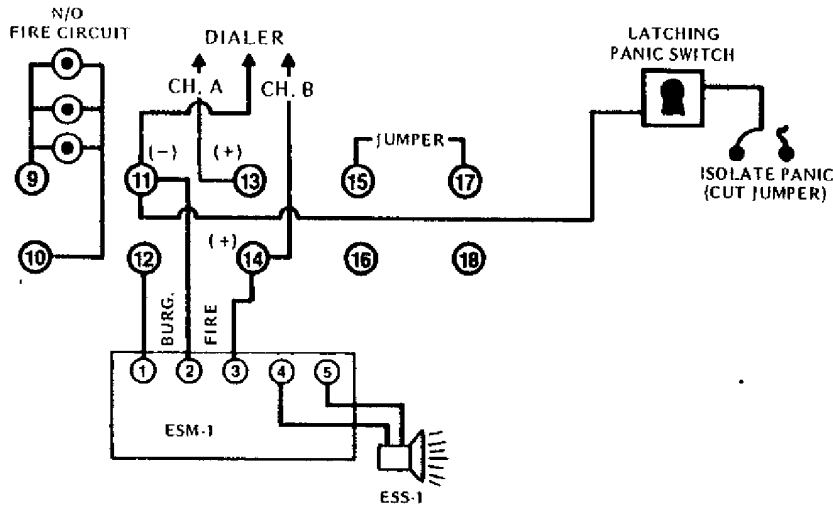


**CIRCUIT TEST METER:** Will read in the green when both protective circuits are closed whether the control is armed or not. The meter will read in the red when either circuit is open or if either has too much resistance. Excessive resistance can be from faulty connections, unusually long wire runs, or too many switches on one circuit.

**AC ON:** This red LED indicator will light when AC power from the included transformer is present at terminals 21 & 22.

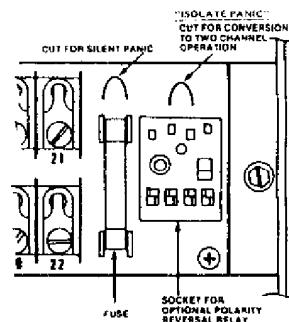
**BELL TEST:** Is a momentary rocker switch, which when pressed, sends current from the standby power source to the alarm. If the alarm sounds weak, or does not sound at all, either the standby power or alarm are suspect. This does not effect dialer activation.

## CONVERSION TO TWO CHANNEL OPERATION



### TO ADD A SEPARATE FIRE PROTECTION CIRCUIT TO THE STANDARD CCI-3 PANEL:

1. Disconnect all power.
2. Cut the "Silent Panic" jumper located above the reversal relay socket.
3. Cut the "Isolate Panic" as far to the right as possible.
4. Plug in the optional LRR-1 Line Reversing Relay.
5. If you are using the fire channel to activate an alarm, connect a jumper between terminals 15 & 17.



### BURGLARY CHANNEL

Because CCI-3 Panic Circuit terminals 9 & 10 will be used for the fire channel as explained below, 24 hour latching panic switches, used to activate the burglary channel are connected as follows:

1. Remove the insulation from the left side of the "Isolate Panic" jumper.
2. Connect one side of the LATCHING panic switches to this jumper wire and the other side to terminal 11. The CCI-3 will provide bell and dialer output for the duration of the closure of the panic switches.

Violating the protective circuit or Phase II, or triggering a panic switch will provide 12 volt output for bells or siren from terminals 11 (-) & 12 (+) and 12 volt output for telephone dialer Channel A activation from terminals 11 (-) & 13 (+).

### FIRE CHANNEL

The latching Panic Circuit is now isolated and may be used for 24-hour fire protection. Connect N/O fire thermostats or rate of rise detectors to terminals 9 & 10. A momentary closure across these terminals will supply 12 volts DC from terminals 11 (-) & 14 (+) only for siren, bell, or telephone dialer Channel B activation. No other outputs will be activated.

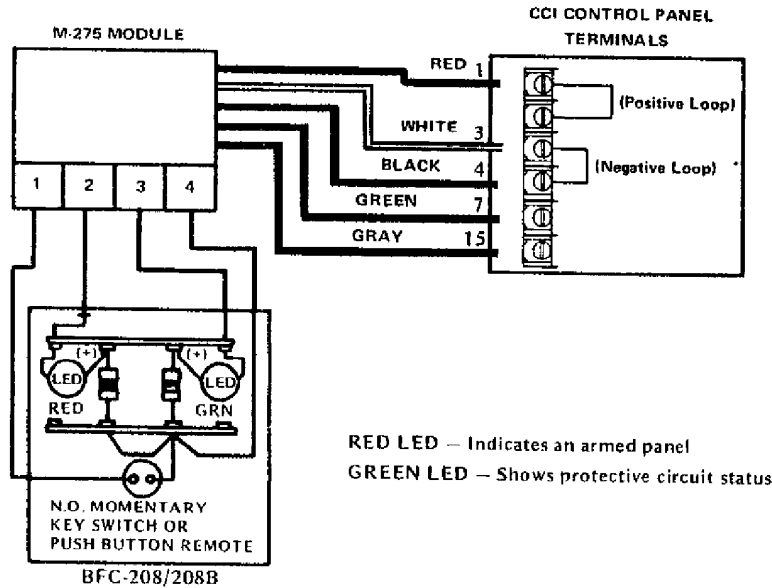
#### NOTE:

1. With this conversion, the plug-in polarity reversal relay is affected only by a closure across terminals 9 & 10 (fire) and cannot be used for monitoring the protective circuit.
2. If you are using the fire channel for leased line fire (or police) connect systems, connect a resistor across terminals 15 & 17. Determine the resistor value according to Central Station Connection procedure (terminals 14-20).
3. If you are using the fire channel to provide a relay contact open or closure, do not make any connections to terminals 15 & 17. Terminals 14 & 18 are normally closed and provide an open contact for the duration of fire activation. Terminals 16 & 18 are normally open and provide contact closure for the duration of fire activation. **DO NOT EXCEED 2 AMP CONTACT RATING.**

## REMOTE STATIONS

### MULTI-REMOTE STATIONS

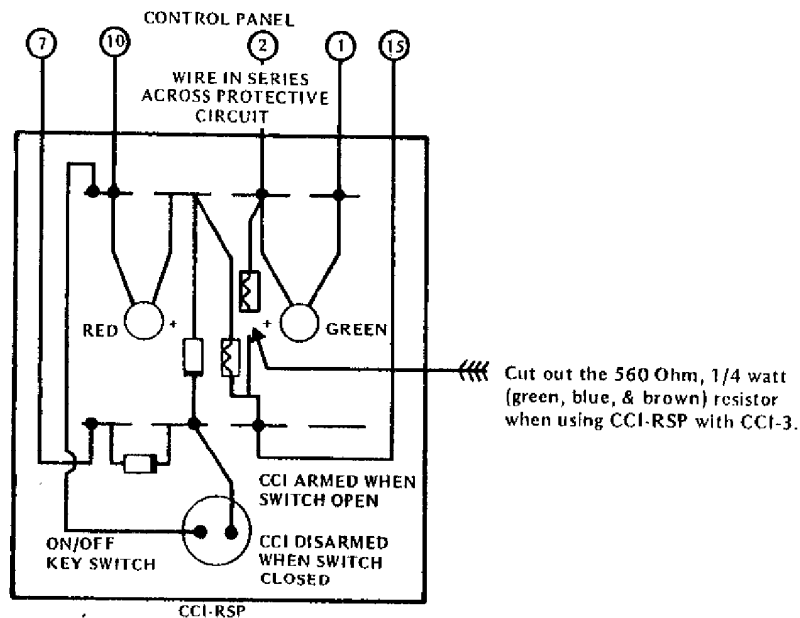
- 1) An M-275 Multi-Remote Module, which can be mounted within the CCI-3's cabinet, is wired to these terminals. The module accepts up to 5 BFC-208/208B Remote Station Plates. These remote stations should be wired in parallel using 22 gauge quad wire (for runs up to 500'). There is NO increase in protective circuit resistance when using the module.



### SINGLE REMOTE STATION

When only one remote station is needed, a CCI-RSP Remote Station is used. This provides a green LED which lights when both protective circuits are closed, a red LED which lights when the panel is armed, and a maintained key switch (switch is not included) which arms the panel when in the open position.

The 560 ohm resistor must be cut out of the CCI-RSP (as indicated in the diagram) to be compatible with the CCI-3.



**CAUTION:** Using the CCI-RSP will limit the maximum line resistance of the instant circuit to 50 ohms.