WESTEC SECURITY PRODUCTS, INC.

TECHNICAL MANUAL

MODEL NO. 900

See technical note U.L. 100 for U.L. Installations.

CAUTION

The information contained in this manual is proprietary and should be safeguarded at all times.

The security of your customers can be compromised if this information were to be made public.

It is suggested that the manual and all similar writings be controlled and access allowed on a need to know basis.

INDEX

CHAPTER 1 - 900 SYSTEM

1.1.1 950 Layout
1.1.2 950 Functional Description
1.1.3 950 Indicators and Switches
1.1.5 950 Fuses and Connectors
1.2.1 950 Programming Options
1.3.1 940 Wire Wrap Options
1.4.1 950 System Inputs
1.5.1 950 System Outputs
1.6.1 950 System Operation

CHAPTER 2 - 942 PUNCH BLOCK

2.1.1 942 Punch Block Silkscreen
2.2.1 942 Punch Block Layout
2.3.1 942 Punch Block Functional Description

CHAPTER 3 - 871 COMMUNICATOR

3.1.1 871 Layout
3.2.1 871 Description
3.3.1 871 Telephone Line Connections
3.4.1 871 Installation Procedure

CHAPTER 4 - PROGRAMMING

(Read all pages before going to set-up)

4.1.1 Programming Combinations
4.2.1 Option Programming
4.3.1 Zone Memorization
4.4.1 Set Up

CHAPTER 5 - HOOKUPS

5.1.1 997 Remote Terminal Description
5.1.2 997-RT Front View
5.1.3 997-RT Back View
5.1.4 997 Hook-up to 942
5.1.5 997 LIght Options
5.1.6 997BL/997WL Front View
5.2.1 989/992 Outside Push Buttons Description
5.2.2 989 Front View
5.2.3 992 Front View
5.2.4 989/992 Hook-up to 942
5.2.5 989/992 Hook-up to a 997
5.3.1 981 Master Status Terminal
5.3.2 981 MST Front View
5.3.3 981 MST Back View
5.3.5 981BL/981WL Front View
5.4.1 996 Emergency Module Description
5.4.2 996 EM Front View
5.4.3 996 EM Hook-up to 942

5.4.4 996BL/996WL Front View
5.5.1 Fire Hook-up
5.6.1 1055 Hook-up for Miscellaneous Inputs

CHAPTER 6 - BURGLARY HOOK-UPS

6.1.1 Supervised Sensors
6.1.2 1,2,3 Supervised Sensors on One Zone
6.1.3 3 Supervised Sensors From a Remote Location
6.1.4 N.O. Device Hook-up with a S.S. Adapter
6.1.5 N.C. Device Hook-up with a S.S. Adapter
6.1.6 Typical Eye, Motion Detector Hook-up
6.1.7 1060 Shunting On 900 System

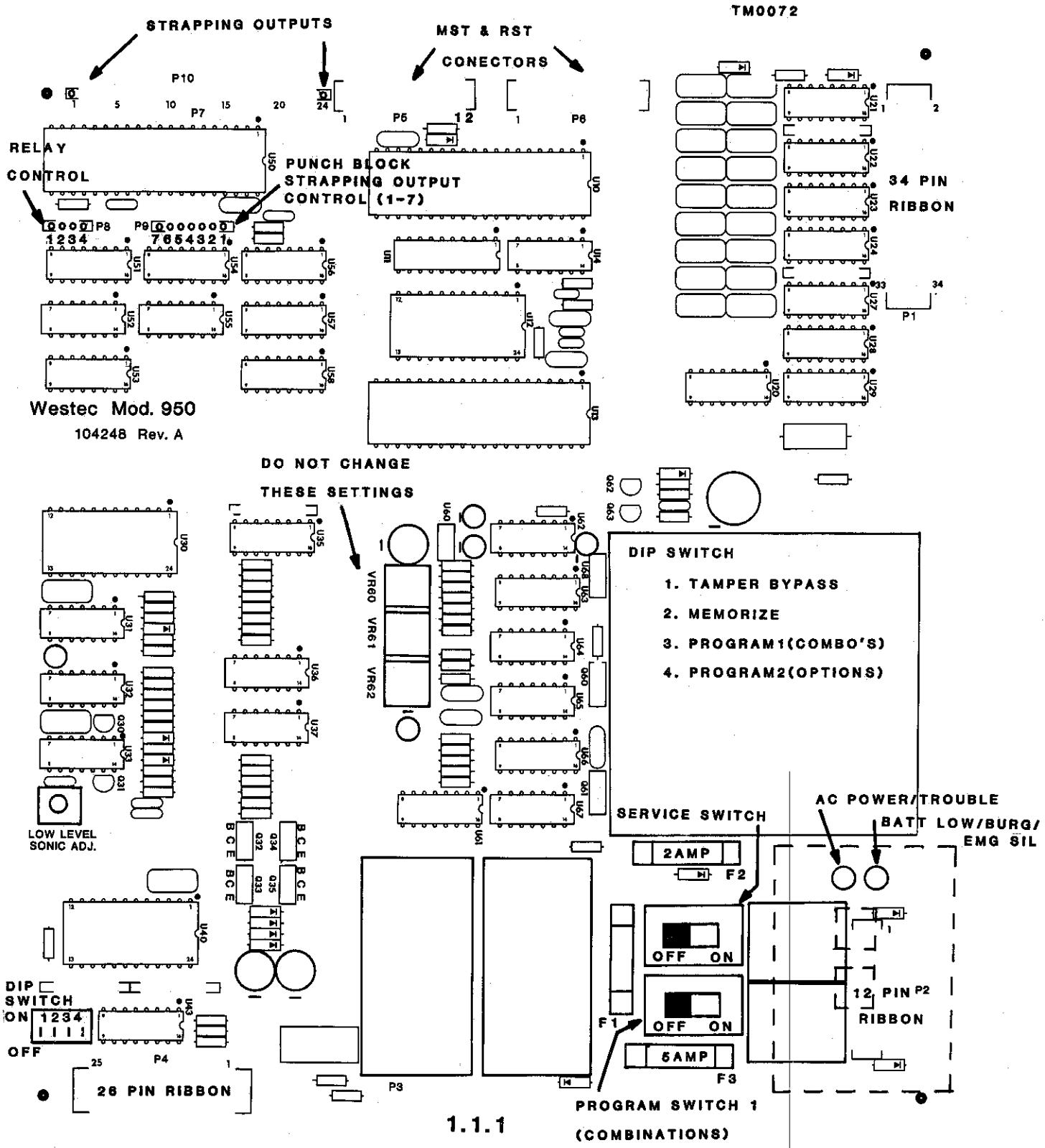
CHAPTER 7 - TOOLS

7.1.1 Cable Maker
7.2.1 3090-1 RPT Programmer

CHAPTER 8 - SENSORS

CHAPTER 9 - 970 COMMUNICATOR

9.1.1 970 Layout
9.2.1 970 Functional Description
9.3.1 970 Indicators, Switches, Connectors, Fuse
9.4.1 970 Telephone Line Connections
9.5.1 970 Installation Procedure
9.6.1 970 Programming Options
9.7.1 970 Programming Sheet
9.8.1 970 Operation


TM0072
STRAPPING OUTPUTS
MST & RST
CONECTORS
P10
P7
P5
P6
RELAY
CONTROL
PUNCH BLOCK
STRAPPING OUTPUT
CONTROL (1-7)
P8
P9
1234
7654321
34 PIN
RIBBON
P1
Westec Mod. 950
104248 Rev. A
DO NOT CHANGE
THESE SETTINGS
VR60 VR61 VR62
DIP SWITCH
1. TAMPER BYPASS
2. MEMORIZE
3. PROGRAM1(COMBO'S)
4. PROGRAM2(OPTIONS)
LOW LEVEL
SONIC ADJ.
SERVICE SWITCH
AC POWER/TROUBLE
BATT LOW/BURG/
EMG SIL
2AMP
F2
OFF ON
OFF ON
12 PIN P2
RIBBON
F1
5AMP
F3
DIP
SWITCH
ON 1234
OFF
P4
26 PIN RIBBON
P3
PROGRAM SWITCH 1
(COMBINATIONS)

1.1.1

MODEL 950

The model 950 is powered from a U.L. tested Class II, 16.5 VAC, 35 VA transformr that plugs directly into a 120 VAC, 60 Hz wall outlet.

Drawing 1.1.1 shows a layout of the model 950 board giving the location and description of the switches, fuses, indicators, and plugs used in the system.

The 4 jumper assemblies shown attached to the 950 board must not be removed. They are to remain as part of the 950 board.
NOTE: If 950 board is returned without the jumpers, it will be considered out of warranty.

Appropriate repair charges will apply including replacement cost of missing jumper assemblies.

INDICATORS AND SWITCHES

AC/TROUBLE LIGHT

This light is normally ON (AC power ON) and remains so unless one of the following occurs:

1. Light OFF

   A. AC power OFF.
   B. System Service switch in Service Position.

2. A trouble signal has been activated by the model 950 either in the fire or burglary circuits. The light will continue to blink until the trouble has cleared.

SONIC/SILENCE LIGHT/BATTERY LOW

This light is ON if burglary and or emergency has been selected for "silent operation". Also it will come on when there is an overlaod (such as a short) on the light outputs ARM and RDY. This light also will flash in a battery low condition.

TROUBLE SILENCE

When a trouble is triggered in the system, (AC light starts to blink) a pulsatng low level sound will emanate from the inside speakers until this button is pushed. When this button is pushed the sound will stop. When the trouble is cleared, the sound will start and continue until this button is punched again. (AC light stops blinking)

TEST SWITCH

This switch must be pushed twice to activate the test mode.

When activated, AC power is shut OFF and the model 950 cycles through each alarm (burglary, fire, etc.), ending in a low level sonic sound which continues until automatically reset at talk-in or by manually entering the reset combination. The various lights on the 981 MST will continue to cycle ON/OFF until reset occurs:

NOTE: The model 950 will not go into test under the following conditions:

1. System is armed.
2. There is no battery connected.
3. The battery fuse is blown.
4. System is in alarm.

SERVICE SWITCH - TOP SLIDE SWITCH

This switch shuts down the model 950 completely except for the battery charger and power to maintain the memory for combinations and options. This switch is used for service and by user to shut OFF the system for any problem.

NOTE: All program switches must be off before turning on service switch.

PROGRAM 1 SWITCH - BOTTOM SLIDE SWITCH

This switch is used to program combinations into the 950.

To use: Turn switch ON; when finished, turn switch OFF. (See section on programming.)

DIP SWITCHES

1. Communicator Tamper Bypass:

This switch bypasses the tamper circuit to the communicator and phone cord. To bypass: Turn switch ON. (See section on communicator).

2. Memorize:

This switch is used to set up the burglary zone. All devices must be in their normal mode before they can be memorized. To use: Turn switch ON, push the appropriate buttons to memorize each zone, then turn the switch OFF. (See section on zone memorization).

3. Same as program 1 switch.

4. Program 2:

This switch is used to program the options into the model 950.

To use: Turn switch ON, When finished, turn OFF. See section on options.

FUSES

F1-3 Amp: This fuse provided protection for all external devices.

F2-2 Amp: This fuse provides protection for the speaker drivers.

F3-5 Amp: This fuse provides protection for the battery lines.

CONNECTORS

P1 (34 Pin) Ribbon Cable:

This connector provides all the low power (such as zones) connections to the model 942 punch block.

P2 (12 Pin):

This connector provides all the high power (such as speaker) connections to the model 942 punch block.

P3 (4 Pin):

This connector provides AC and DC power to th 950.

P4 (26 Pin) Ribbon:

This connector provides all the connections to the model 871 communicator and the future model 970 communicator.

P5 (12 Pin):

This plug is for the connection to the visual model 981.

P6 (12 Pin):

Duplicate of P1 also used for programming the model 950.

P7 (24 Pin) Wire Wrap Posts:

These pins provide outputs from the various alarms and options to control the SPDT relay, and the 7 strapping outputs to the punch block.

P8 (4 Pin) Wire Wrap Posts:

These pins drive the SPDT relay by jumpering or wire wrapping to P7. These 4 pins are isolated by diodes.

P9 (7 Pin) Wire Wrap Posts:

These pins connect with jumpers or wire wraps to the various pins on P7. These pins when connected, provide outputs to model 942 punch block.

OPTIONS - (PROM WITH RED LABEL)

The model 950 has 28 programmable options available for individual use.

The following is a list of these options, including description, status and programming code used with the model 3090 programmer.

NOTE: All options come up in the OFF state on power up.

OPTION CODE

A,1 Entry/Exit Time Delay

OFF = 20 seconds
ON = 45 seconds

A,2 Entry/Exit Enabled

OFF = No delay
ON = Delay enabled

Burglary zone 3 is assigned for entry/exit.

A,3 Entry/Exit for Zone 4
OFF = Zone 3 only on delay
ON = Zone 3 and 4 on delay

A,4 No communicator - local operation

OFF = Communicator connected
ON = No communicator connected

A,5 Zone 2 Controlled by Interior combo (3)

Off = Zone 2 non-shunted
ON = Zone 2 shunted by combo 3

A,6 Zone 11 Controlled by Interior combo (3)

OFF = Zone 11 non-shunted
ON = Zone 11 shunted by combo 3

B,1 Zone 12 Controlled by Interior combo (3)

OFF = Zone 12 non-shunted
ON - Zone 12 shunted by combo 3

B,2 Burglary Silent

OFF = Sonic on burglary
ON = No sonic

B,3 Dialer Trouble

OFF = No dialer trouble sound on local panel
ON = Dialer trouble causes trouble condition on local panel

B,4 Door Guardian (Door Annunciator) enable

OFF = No door guardian
ON = Door guardian enabled (customer turns on/off with control)

B,5 Automatic reset time

OFF = Reset at 5 minutes
ON = Reset at 10 minutes

B,6 Zone 4 controlled by interior combo 3

OFF = E/E Zone 4 non shunted
ON = E/E Zone 4 shunted by combo 3

C,1 Special 1 Sonic

OFF = Special 2 silent
ON = Sonic on special 2

C,2 Special 1 Latching

OFF = Special 1 non-latching
ON = Special 1 latching

C,3 Special 2 Sonic

OFF = Special 2 silent
ON = Sonic on special 2

C,4 Special 2 Latching

OFF = Special 2 non-latching
ON = Special 2 latching

C,5 Special 3 Sonic

OFF = Special 3 silent
ON = Sonic on special 3

C,6 Special 3 Latching

OFF = Special 3 non-latching
ON = Special 3 latching

D,1 BCD 1,5 Reverse

OFF = BCD Combo 1 controls arm/disarm/resets
BCD Combo 5 disarms and sends duress

ON = BCD Combo 1 disarms and sends duress
BCD Combo 5 controls arm/disarm/resets

D,3 Selecta-code (maids) Enable

OFF = Selecta-code not used
ON = Selecta-code enabled(customer controls combo 4 by combo)

D,4 Secondary Combo Arm Only

OFF = Secondary combo not used
ON = Secondary combo (4) arm only (Can arm system but not disarm it)

D,5 Force Arm Enable

OFF = Force arm disabled
ON = Force arm enabled (Customer can arm system with comb 6 if any of the burglary zones are violated)

D,6 Zone 9, 10 Shunt Enabled

OFF = Zone 9, 10 shunt disabled
ON = Zone 9, 10 shunt enabled

(Customer can shunt zones 9 and 10 from models 997, 981 and 1055) (*)

E,1 Zone 9, 10 Shunt Control

OFF =Zone 9 shunted by combo 2 (*)
ON =Z one 9 and 10 shunted by combo 2 (*)

E,2 Not used

E,3 Keyboard Audio Annunciator Enabled

OFF = No keyboard audio
ON = Keyboard audio enabled

When any keyboard button is pushed an audible sound emanates from the speakers.

E,4 Silent Emergency

OFF = Sonic on emergency
ON = No sonic on emergency

E,5 Auto/Manual Reset

OFF = Automatic reset
ON = Manual reset

E,6 Zone Lockout Function

OFF = At auto reset, violated zone will be bypassed, even though zone has been restored

ON = At auto reset, violated zone will be restored if it has gone back to normal

F,1 Warning Indicator

OFF = Any alarm will cause arm/ready light to flash until auto reset

ON = Any alarm will cause arm/ready light to flash until manual reset

F,2 Not used

F,3 Not used

F,4 Not used

F,5 Not used

WIRE WRAP OPTIONS FOR OUTPUT RELAY AND STRAP OUTPUTS

RELAY

A single pole double throw relay with contact rating of 28V at 2 Amps DC is mounted on the local alarm. This relay can be controlled by one or more of 22 input signals supplied at a series of wire wrap posts (P7) on the 950 board.

The selected signal is jumpered or wire wrapped to a second series of four wire wrap posts (P8) for the relay to operate. These four posts are electrically separated from each other. The relay will follow the connected signals. When the relay is connected to the outside speaker signal the relay will shut off at talk-in.

STRAP OUTPUTS

A third series of 7 wire wrap posts (P9) are available that when connected, they supply outputs to the punch block for the installer to connect lights, relays or whatever to. Strap output 1 appears in the feed to 997 inside button controls for turning on the extra lights that are available.

INPUT SIGNALS - (Prom with Red Label)

The following input signals are available at P7.

1. Outside Speaker - Active anytime the outside speaker is on (any audible alarm).

2. Duress - Active when duress is triggered.

3. Force Arm - Active anytme the burglary signal has been manually or automatically force armed.

4. Tamper - Active when the tamper circuit has tripped.

5. Fire - Active when the fire circuit has tripped.

6. Burglary - Active when the burglary circuit has tripped.

7. Emergency - Active when the emergency circuit has tripped.

8. Spec 1 - Active when Special 1 has tripped.

9. Spec 2 - Active when Special 2 has tripped.

10. Spec 3 - Active when Special 3 has tripped.

11. Test - Active when test is triggered.

12. Trouble - Active on any of the following conditions:

    1. Trouble in fire circuit
    2. Trouble in burglary circuit
    3. Low or dead battery

13. Not used

14. AC power - Active when AC Power is on to the 950 board.

15. Ready - Active when all the zones are in the normal state, and also flashes for any alrm except duress or test.

16. Arm - Active when the burglary system is armed.

17. Interior - Active when the interior zones are in the burglary circuit (Controlled by combo 3).

18. Night - Active when the entry/exit zone is made instant with combo ,3.

19. - Active when the guardian circuit is turned on with combo .

20. 4 - Active when selecta-code is turned on - controlled by 4 combo.

21. 18 Hour Battery check - Active when 18 hour battery check is on (approximately 1 second).

22. * - Active when Zone 9 (10) is in the burglary circuit-controlled combo 2.

23. Ground

24. +12V

SYSTEM INPUTS

FIRE:

The fire circuit is a 24 hour input which can give early warning to the customer. The circuit accepts dry contact devices such as heat deectors and also the 2 wire smoke detectors. The circuit is fully supervised and will automatically sound a warning if a wire in the fire loop is cut, breaks or is shorted to the system ground. The circuit is latching and stays latched until reset with the reset combo (if smoke has reset).

The model 950 provides separate outputs to the communicator and the strapping pins for this circuit.

The fire circuit has a distinct sound (bell like) separate from the other sounds. The trouble sound is the same, but at a lower level.

In alarm, the word FIRE lights up flashing on the visual display 981.

NOTE: 1. There is no talk-in on fire.
2. There is no auto reset on fire.
3. Power to the smoke detectors will drop out only if the 950 is in a fire alarm and the reset combo is pushed.

EMERGENCY:

This circuit is a N.O. 24 hour input that is also latching. It is reset with the arm combo from the model 981 visual panel or the remote keypads, models: 989, 992 and 997. It is used by the customer for an emergency such as panic or medical problems.

The model 950 provides separate outputs to the communicator and the strapping pins for this output. Option E,4 will make emergency silent if desired.

In alarm the word EMERGENCY lights up flashing on the visual display.

TAMPER:

This circuit is a N.C. 24 hour input that is latching. It is reset with the arm combo from the visual panel or remote keypads. It sounds the burglary sound when tripped. The phone cord and box tampers are connected to this circuit, plus provisions are made to connect external devices such as outside controls at the model 942 punch block. Separate outputs to the communcator and the strapping pins are provided by the model 950.

In alarm the word BURGLARY lights up steady on the visual display.

DURESS:

This circuit provides for the duress function in the model 950. Duress can only be triggered one disarm action. There are no sounds or lights that come on, but separate outputs are provided to the communicator and strapping pins. Operating the duress combination will cause the system to disarm and simultaneously send a duress signal to the Communication Center. Duress resets automatically at talk-in. Option D, 1 determines the combination used to trigger duress (1 to 5). To enable this function, program a combination into 1 or 5 depending on option D1.

BURGLARY:

There are 12 separate burglary zones that are totally supervised against shorts, opens or grounds. They will accept either N.O. or N.C. sensors but not both. The sensors that connect to these zones have 2 resistors built in for the supervision. Special housings with resistors will also be available for applications such as: eyes, motion detectors, screens, etc. The zones have various options available that are listed on page 1.4.3 Each zone must be terminated with a resistor even though it is not being used. (Each model 942 shipped will have all the terminating resistors connected through dip switches). The maximum number of supervised sensors on each zone is 3.

The system will not arm if any of the zones are activated except when the force arm combination is used.

There is a built in 12 zone annunciator on the model 950 that displays at the MST (Model 981). The RPT also displays the zone status and alarm memory when servicing the model 950.

If a zone is violated (when disarmed), the zone light will come ON and then go OFF when restored. When armed, the light will go ON and stay ON until the system is reset.

The alarm memory section of the model 950 will store up to 3 zones in order of sequence of tripping, plus all others. When alarm memory recall is used, the zones will show in order of tripping for the first three, then the others.

If a trouble occurs (open, short, ground) the zone light will blink and burglary trouble will sound until the trouble has cleared. To silence the trouble sound: Push the TROUBLE/SILENCE once. When trouble has cleared, the light will stop blinking and the sound will start again until the TROUBLE/SILENCE button is pushed again. When a trouble occurs, it also sends a signal to the Communication Center via the low battery/trouble channel on the communicator.

ZONE OPTIONS:

Entry/Exit When entry/exit, option A,2 is selected, zone 3 is the zone used. If option A,3 is selected, zone 4 is also used for delay. Option A,1 selects timing: ON - 45 seconds, OFF - 20 seconds.

The entry/exit zone accepts either N.C. or N.O. (Not on the same zone) sensors. This zone is active only when the system is armed.

The entry/exit zone contains the built in delay that allows the customer a preset time to enter or exit the residence without tripping the alarm. There is no sound on exit, but upon entry, a low level tone will sound from the speakers, and the system arm LED flashes until the system is disarmed - or the system goes into alarm.

The entry/exit zones may be switched to instant by the customer from the model 981 (by pushing , 3) or model 1055 shunt switches (by pushing twice).

INTERIOR ZONES:

There are up to 5 zones (earlier models 4) that can be controlled by the interior combo 3 and another 2 zones that can be controlled by combo 2.

The interior zones accept either N.O. or N. C. sensors but not on the same zone. The interior zones are active only when the appropriate indicator lights are on (INT, *).

Zone 1 is always assigned to the interior circuit (combo 3). Option A,5 A,6, A,7 individuallly select zone 2, 11 and 12 to be controlled by the interior circuit also.

Zone 9 can be controlled separately or together with zone 10. Option D,6 selects if zone 9 alone is to be shunted, and option E,1 selects if zone 10 is to be shunted with zone 9.

The uses for zones 9 and 10 would be for extra zones of protection that need to be shunted separately from the interior circuit.

Combo 3 controls the interior zone (1,2,4,11,12) and combo 2 control zones 9 and 10 (earlier systems do not include zone 4).

Zone 5,6,7 and 8 are normal zones that have no shunting or entry/exit function.

SUMMARY OF ZONES:

Zone	
1	Shunted by combo 3.
2	Shunted by combo 3, if option A,5 is selected.
3	Entry/exit if option A,2 is selected.
4	Entry/exit with option A,2 and A,3 shunted by combo 3 with option B,6
5,6,7,&8	Normal
9	Shunted by combo 2 if option D,6 is selected.
10	Shunted by combo 2 if option D,6 and E,1 is selected.
11	Shunted by combo 3 if option A,6 is selected
12	Shunted by combo 3 if option B,1 is selected.

If any of the options are not selected for the individual zones they will operate normally.

KEYPAD INPUTS:

The keypad inputs control the armings/disarmings, resetting of alarms and all the customer controlled options.

MISCELLANEOUS INPUTS:

On row 35 of the model 942 punch block, there are 5 individual inputs for customer options that are listed below:

1. Door Guardian
2. Alarm Memory
3. Spare
4. Night
5. Selecta-code
6. Interior (combo 3)

A momentary short to one of the pins on row 35 to row 36 (row 36 common across) of the model 942 punch block will cause the selected option to operate. A typical switch would be the model 1055 momentary push-button.

SYSTEM OUTPUTS

INSIDE SPEAKERS:

The inside speaker output provides all the sounds for all alarms, all trouble signals and the tone used for entry alert, the touch pad annunciator and the door guardian option. All speakers that are to be used fr talk-in will connect here.

OUTSIDE SPEAKERS:

This outside speaker output is provided for the connection of the approved voice tone speaker for fire alarm signaling and all other alarm sounds. This output will will drive a 5 watt speaker. Talk-in is not connected to this output.

NOTE: Only alarm sounds are on this output. All of the low level sounds are only on the inside speaker outputs.

LIGHT OUTPUTS:

Arm light output: (This is used for 2 wire red/green leds)

The Arm light outputs shows the status of the burglary circuit. It is also used in conjunction with the Ready light to show system alarm status. The following is a list of operating conditions:

1. Arm light OFF - system is disarmed and is not in alarm.

2. Arm light ON (steady_) - system is armed and is not in alarm.

3. Arm 1 light BLINKING (Ready light OFF) - system is in entry/exit mode.

4. Arm and Ready lights BLINKING - system is in alarm (any). If option F,1 is ON, arm ready lights continue to blink until a manual reset. If there was an automatic reset of system, if option F,1 is off-arm and ready lights stops blinking at automatic reset.

This output provides a ppositive voltage when armed, and also simultaneously a negative voltage on the Ready light out.

Ready Light Output (Green):

The Ready light shows the status of the burglary zones and is used in conjunction with the Arm light to show the system alarm status. The following is a list of operating conditions:

1. Ready light ON - all burglary zones closed.

2. Ready lights OFF - one or more zones open.

3. Ready light BLINKING (also Arm light) - system in alarm, see condition 4 on arm light output.

This output provides a positive voltage when all the zones are normal and simultaneously a negative voltage on the Arm light output.

Interior Light Output

The interior light show the shunted status for zone 1 (and zones 2,11, 12 options A,5; A,6, B,1 are on). When the interior zone (s) are to be part of the burglary system, this output provides a negative voltage to the punch block. When the interior zones are shunted (bypassed) there is no output (light off).

This output is controlled by combo 3 or the interior input pin on Row 35F on the punch block.

STRAPPING OUTPUT 1:

Strap output 1 is controlled by any of the 22 strapping pins. This output supplies a negative voltage to the model 942 punch block, row 6. This output will sink up to 7 LEDS. Typical uses would be showing the status to the interior keypads of the various options available.

STRAPPING OUTPUTS 2-7:

These strap pins, when connected to any of the 22 strapping pins supply a negative voltage to the model 942 punch block, row 37. These may be used to drive relays or leds from the various options. Outputs 2-7 can sink up to 50 MA current each.

OPERATION

RESET:

The model 950 command board will automatically reset if the various options are selected at the time of installation. On all functions, except burglary, the model 950 will drop to the low level sonic sound if what ever has tripped the alarm is still not back to normal at the selected reset time (5 or 10 min.).

Reset will not occur unless an acknowledgement (if option A,4 is off) has been received from the Comm-Center. It will try to reset every (5/10) min. until it resets or if manually reset.

If the level 950 is selected for manual reset, the alarm sound will drop to low level sonic at the selected reset time and continue until a manual reset of the system.

NOTE: There is no auto reset on fire, only manual.

FIRE:

Fire is a 24 hour supervised circuit that can be triggered by smoke and heat detectors. Heat detectors are contact closure devices and the 2 wire smoke detectors are current devices. This circuit is supervised for opens in the fire loop. When an open (such as a wirebreak) occurs, a trouble warning sounds at the inside speaker locations. To silence, use the TRB/SIL SWITCH either at the 950 or 981 MST to silence the sound.

When the fire circuit is tripped, and the reset combo is pushed, power to the smoke detectors will shut off momenarily.

EMERGENCY:

Emergecny is a 24 hour circuit tripped either from the keypad circuit or the separate emergency circuit (N.O. devices) on the model 942 punch block. This function may be selected for silent operation by option E,4. If emergency is still tripped at reset time the sound will drop to a low level until manually reset and the short is removed.

Emergency is reset by entering the arm combination.

SPECIAL:

The 3 special channels are 24 hour circuits that many different options may be connected to. Each special may be selected for latching or nonlatching and audible or silent operation. When set for latching operation they will reset at the reset time if the input was cleared, the specials can also be reset with the reset combo. If selected for audible, the sounds will act the same as emergency.

Special 1 causes the word Special to flash at the MST. Special 2 causes the words Special and Test to light up steady. Special 3 causes the word Special to light up steady.

POWER FAILURE AND BATTERY TEST:

When a power failure occurs, the AC power light will go off. When the battery voltage reaches 11-7 V.D.C., the model 871 will send a low battery signal to the Com-Center. At 11 V.D.C , the model 950 turns itself off except for memory power. When AC power is reapplied the model 950 will come back on in the state it was in when it shut down.

Approximately every 18 hours the model 950 tests for the presence of a battery. If the battery is dead or the battery fuse is blown or missing it will send a low battery signal to the Comm-Center. This circuit is completely automatic:

TEST:

Test will not work in the following conditions:

1. System is armed.
2. System is in alarm.
3. Battery is dead, disconnected, fuse blown.

When test is triggered, the model 950 tests each function automatically, going through various high and low level sounds. The low level sound continues until it reaches the Comm-Center and goes to talk-in. When the low level sound stops the system is in talk-in.

If a model 981 MST is installed the lights will sequence through ON/OFF, until talk-in, which resets test. Test also can be terminated by entering the ARM/RESET combination.

BURGLARY:

The burglary portion of the model 950 is controlled by the ARM/DISARM/RESET COMBINATION #1 (#5 if option D,1 is on). If all the burglary zones are normal the Ready (RDY) light will be on, at which time the system can be armd (ARM) by entering the arm combination. The arm light will come on showing that the system is armed.

If the system ready light was not on, the system will not arm, unless the force arm combination was used.

The burglary system consists of 12 supervised zones with various controls and options controlling them. The following is a list of operating conditions.

ENTRY/EXIT

Zones 3 and 4 can be set for entry/exit operaton by options A,1; A,2 and A,3. If entry/exit is selected, zone (s) 3,(4) allows the customer time to enter or leave in a preselected time without tripping the system to the Comm-Center.

On exit the customer has the preset time to leave (20/45 sec.). On entry, the arm light will start to flash and the low level burglary sound will start to warn the customer to turn off the system. The entry time is the same as the exit time (20/45 sec.).

The entry/exit zones can be made instant by the customer entering combination ,3.

INTERIOR SHUNTING WITH COMBO 3:

Combination 3 (INT) controls the interior zones. Zone 1 is always controlled by combo 3, and zones 1,4,11 and 12 can be if options (A,5; A,6;B,1 and B,6) are selected. When combo 3 is entered it will bypass (shunt) or allow use (unshunted) of these zones. If the system is armed, and you try to bring in the zones in an abnormal state (open), they will not come on. Combo 3 will operate in the armed or unarmed state (condition).

There is available at the punch block provisions for connectng the model 1055 momentary shunt switches.

If interior shunting is not to be used do not program combo 3, and leave option (A,5; A,6 and B,1 and B,6) off.

ADDITIONAL SHUNTING - ZONES 9 and 10:

Zone 9 and 10 may also be shunted (bypassed). Option D,6 selects if zone 9 is to be controlled, and option E,1 selects if zone 10 is to be controlled together with zone 9.

Entering combo 2, simultaneously controls zone 9 and 10 (if option E,1 was selected) from the model 981 visual display, 997, or from the model 1055 mementary shunt switches from the model 942 punch block. If the zones are abnormal and the system is armed they cannot be brought in the system until they are returned to their normal state.

ZONE LOCKOUT: SWINGER ELIMINATOR

The zone lockout feature, when used, will automatically bypass the violated zone(s) when a burglary alarm is activated. The zone (s) will be bypassed even though the zone has restored to normal. The zone(s) will stay bypassed until a manual reset of the system. If zone lockout is not desired, turn option E,6 ON.

DOOR GUARDIAN:

The Door Guardian function is only operational when the system is:

1. Disarmed
2. Option B,4 is on.
3. The customer has turned the Door Guardian function on by either pushing the ▭ button twice or from model 1055 push-button connected to the model 942 punch block. The ▭ symbol on the display shows its status:

▭ = OFF - Door Guardian off
▭ = ON - Door Guardian on

When the Door Guardian function is on, if any zone is violated, two short beeps will sound from the speakers. The beeps only occur on an opening of the device, not the closing. The beeps will sound for every zone that is violated individually.

FORCE ARM:

The force arm function of the model 950 is controlled by combo 6 if option D,5 is on.

The force arm combination allows the burglary system to be armed with any of the zones in the abnormal state. Arm only.

KEYBOARD OPERATION

The various functions of the model 950 are controlled from the keyboards of 997's, 989's and the 981. Entering the proper combination will cause the various functions to operate.

If the wrong combination is entered or the customer waits more than 2 seconds between any of the digits, he must wait 2 seconds and start over.

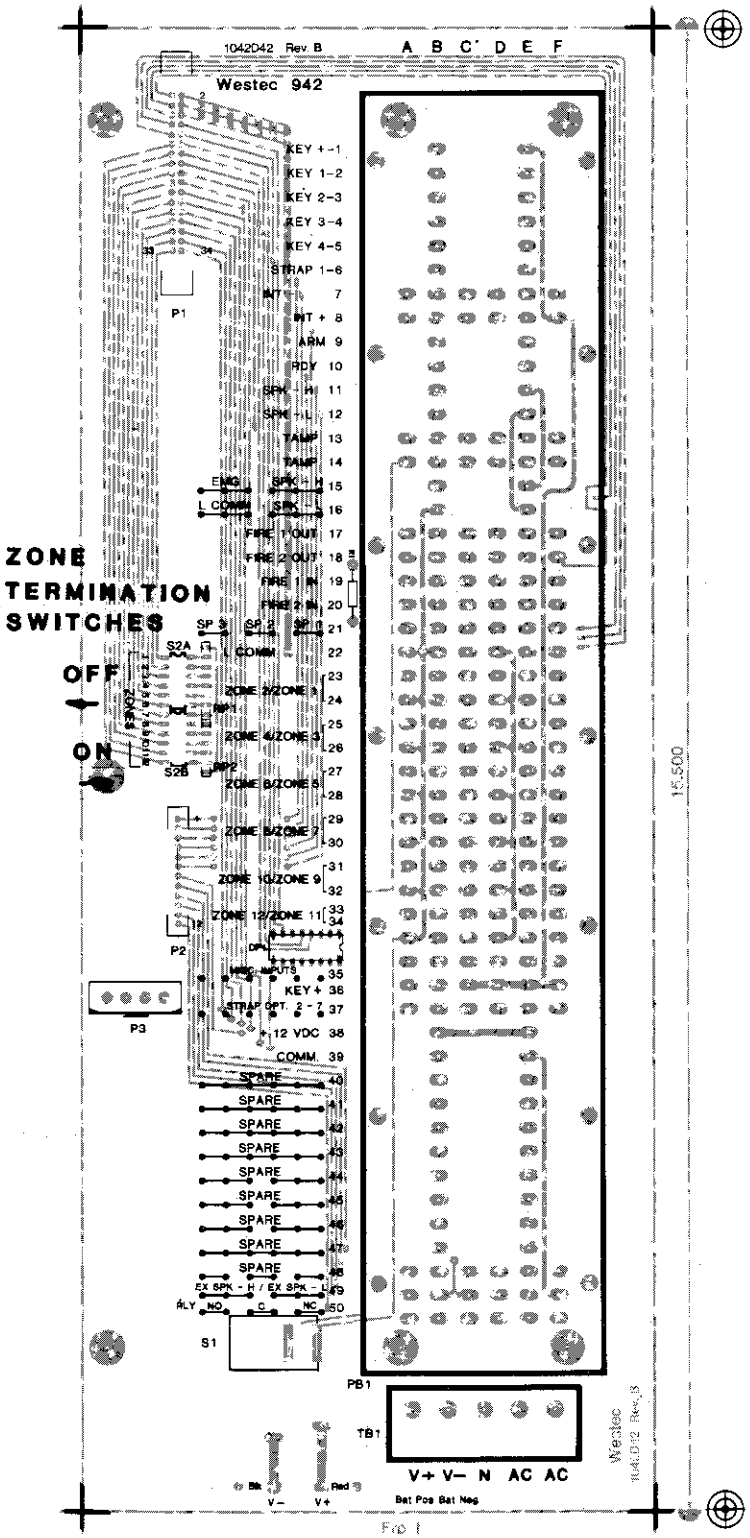

1042D42 Rev B
A B C D E F
Westec 942
KEY +-1
KEY 1-2
KEY 2-3
KEY 3-4
KEY 4-5
STRAP 1-6
INT -
INT +
ARM
RDY
SPK - H
SPK - L
TAMP
TAMP
EMG
L COMM
FIRE 1 OUT
FIRE 2 OUT
FIRE 1 IN
FIRE 2 IN
SP 3
SP 2
SP 1
L COMM
ZONE 2/ZONE 3
ZONE 4/ZONE 5
ZONE 6/ZONE 7
ZONE 10/ZONE 9
ZONE 12/ZONE 11
OPT
MISC INPUTS
KEY +
STRAP OPT. 2 - 7
12 VDC
COMM
SPARE
EX SPK - H / EX SPK - L
ALY
NO
C
NC
P1
P2
P3
S1
S2A
S2B
ZONES
ON
OFF
ZONE TERMINATION SWITCHES
PB1
TB1
V+ V- N AC AC
Bat Pos Bat Neg
Blk
Red
V-
V+
16.500
Westec
1042D42 Rev. B

Fig. 1

942 PUNCH BLOCK LAYOUT

1. Key +
2. Key 1
3. Key 2
4. Key 3
5. Key 4
6. Strap 1
7. Int -
8. Int +
9. Arm
10. Rdy
11. Spk-H
12. Spk-L
13. Tamper
14. Tamper
15. Emg — Spk-H
16. L Comn — Spk-L
17. Fire 1 Out
18. Fire 2 Out
19. Fire 1 In
20. Fire 2 In
21. SP3 — SP2 — SP1
22. L Comn
23. Zone 2 — Zone 1
24.
25. Zone 4 — Zone 3
26.
27. Zone 6 — Zone 5
28.
29. Zone 8 — Zone 7
30.
31. Zone 10 — Zone 9
32.
33. Zone 12 — Zone 11
34.
35. misc. Inputs
36. Key +
37. 2 3 4 5 6 7 - Strap Outputs
38. +12V D.C.
39. Comn
40. Spare
41. Spare
42. Spare
43. Spare
44. Spare
45. Spare
46. Spare
47. Spare
48. Spare
49. Ex-Spk-H — Ex-Spk-L
50. NO — N — NC — Relay

MODEL 942 PUNCH BLOCK

FUNCTIONAL DESCRIPTION

P1 - 34 Pin Ribbon Cable Connector:

This connector provides all the low level inputs and outputs frm the model 950 to the punch block.

P2 - 12 Pin Connector:

This connector provides all the power drives from the model 950 to the punch block.

P3 - 4 Pin Connector:

This connector provides AC and DC to the 950 board.

S1 - 12 Positon Dip Switch:

This dip switch switches the terminating resistors for the 12 zones.

DP - 1 Dip Header:

This device allows the misc input pins to work on the 942.

NOTE: Rows 1-12 are for interior keypad controls and outside keyboard controls.

Rows 1-5 Keyboard Inputs:

These rows provide connections for thekeyboard inputs that control the model 950.

Row 6 Strap Option 1 Output:

This row provides a connection for a 4th light on the model 997 from the mode 950 strapping options. This output has a negative voltage (-).

Row 7 Interior Light (-):

This row provides a negative voltage output (-) whenever the interior controlled zones (combo 3) are part of the burglary system (unshunted).

Row 8 Interior Light (+):

This row provides connections for the positive voltage (+) feeding the interior light.

Row 9 Arm Light:

This row provides a positive voltage output (+) when the burglary circuit is armed and a negative voltage output (-) when the zones are normal and the system is disarmed.

Row 10 Ready Light:

This row provides a positive voltage output (+) when the burglary zones are normal and a negative voltage output (-) when the system is armed.

Rows 11 and 12 Speaker:

Internal speakers are connected to these pins. This circuit provides the sonic when the control board goes into alarm or when any of the troubles sound. At talk-in the speakers are automatically connected to the communicator.

The above 12 rows are for connecting models 997, 989 and 992.

Row 13 and 14 N.C. Tamper:

This circuit is a 24 hour tamper input. Up to 6 N.C. devices may be connected on these pins. The loop starts at 13F and ends at 14A. The maximum loop resistance is 1K ohms.

Rows 15 and 16 Emergency and Speakers:

Pins 15 ABC and 16 ABC - Emergency

A momentary short across these pins will cause the emergency alarm to trigger.

Pins 15 DEF and 16 DEF - Speaker

These pins are the same as rows 11 and 12.

These rows are provided for connecting emergency button with speakers and RF receivers. Typical devices are models 996 and 1051.

Row 17, 18, 19 and 20 Fire:

These pins provide connections for heat detectors and 2 wire smoke detectors, and are fully supervised. The fire zone starts at 17, 18F and ends at 19, 20A.

Rows 21 and 22 Speial 1,2 and 3:

A short across these pins will cause the specials to trip. Special 1 is on pins EF, Special 2 is on CD, and Special 3 is on pins AB.

Rows 23 through 34 Burglary:

These rows provide connections for the burglary sensors. Open or closed devices may be connected to each zone but not both simultaneously. Each zone may have up to 3 supervised sensors in it or unlimited number of unsupervised sensors (maximum 200 ohms per groups of sensors). Listed is a summary of the zones:

23, 24 DEF - Zone 1

Starts at 23F ends at 24D - controlled by combo 3.

23, 24 ABC - Zone 2

Starts at 23C ends at 24A - controlled by combo 3 if option A,5 is on.

25, 26 DEF - Zone 3

Starts at 25F ends at 26D - entry/exit if option A,2 is on.

25, 26 ABC Zone 4

Starts at 25C ends at 26A - entry/exit if option A,2 and option A,3 is on. Also controlled by Combo 3, if option B,6 is on (only on later models)

27, 28 DEF - Zone 5

Starts at 27F ends at 28D.

27, 28 ABC - Zone 6

Starts at 27C ends at 28A.

29, 30 DEF - Zone 7

Starts at 29F ends at 30D

29, 30 ABC - Zone 8

Starts at 29C ends at 30A

31, 32 DEF - Zone 9

Starts at 31F ends at 32D - controlled by combo 2 if option D,6 is on.

31,32 ABC - Zone 10

Starts at 31C ends at 32A - controlled by combo 2 if option D,6 and E,1 are on.

33,34 DEF - Zone 11

Starts at 33F ends at 34D - controlled by combo 3 if option A,6 is on.

33, 34 ABC - Zone 12

Starts at 33C ends at 34A - controlled by combo 3 if option B,1 is on.

Row 35 Miscellaneous Key Inputs:

This row provides connections for model 1055 momentary switches to control some of the various options from locations other than the model 981 visual display.

35A This pin provides access to the DoorGuardian function.

35B Spare

35C Spare

35D Spare

35E Spare

35F Interior: This pin provides access for controlling the interior zones (works the same as combo 3).

Row 36 Miscellaneous Key Input/Strapping Output Common:

This row provides a positive feed for row 35 and row 37.

Row 37 Strapping Outputs 2-7:

37A - Strap 2, 37B - Strap 3, 37C - Strap 4, 37D - Strap 5,
37E - Strap 6, 37F - Strap 7.

This row provides connection for LEDS or relays controlled by the various strap options on the 950.

Row 38 and 39 12 Volt DC:

These pins provide 12 Volt DC for powering external devices such as models: 1103, 1062 and 1118, motion detectors and electric eyes. The maximum amount of current available is amp.

Rows 40 through 48 Spares:

These pins provide extra points of connection for whatever needs to be connected.

40, 41, 42, 43	are common across
44, 45, 46, 47	are split 3 and 3
48	is split 2,2 and 2

Row 49 External Speakers:

These pins provide connections for external speakers.

49 ABC - Speaker H
49 DEF - Speaker L

Row 50 Relay Output:

These pins provide connections to the built-in output relay on the model 950 board.

TB 1 - 5 Position Screw Terminal

Position 1 - +12V.D.C.
For extra Battery

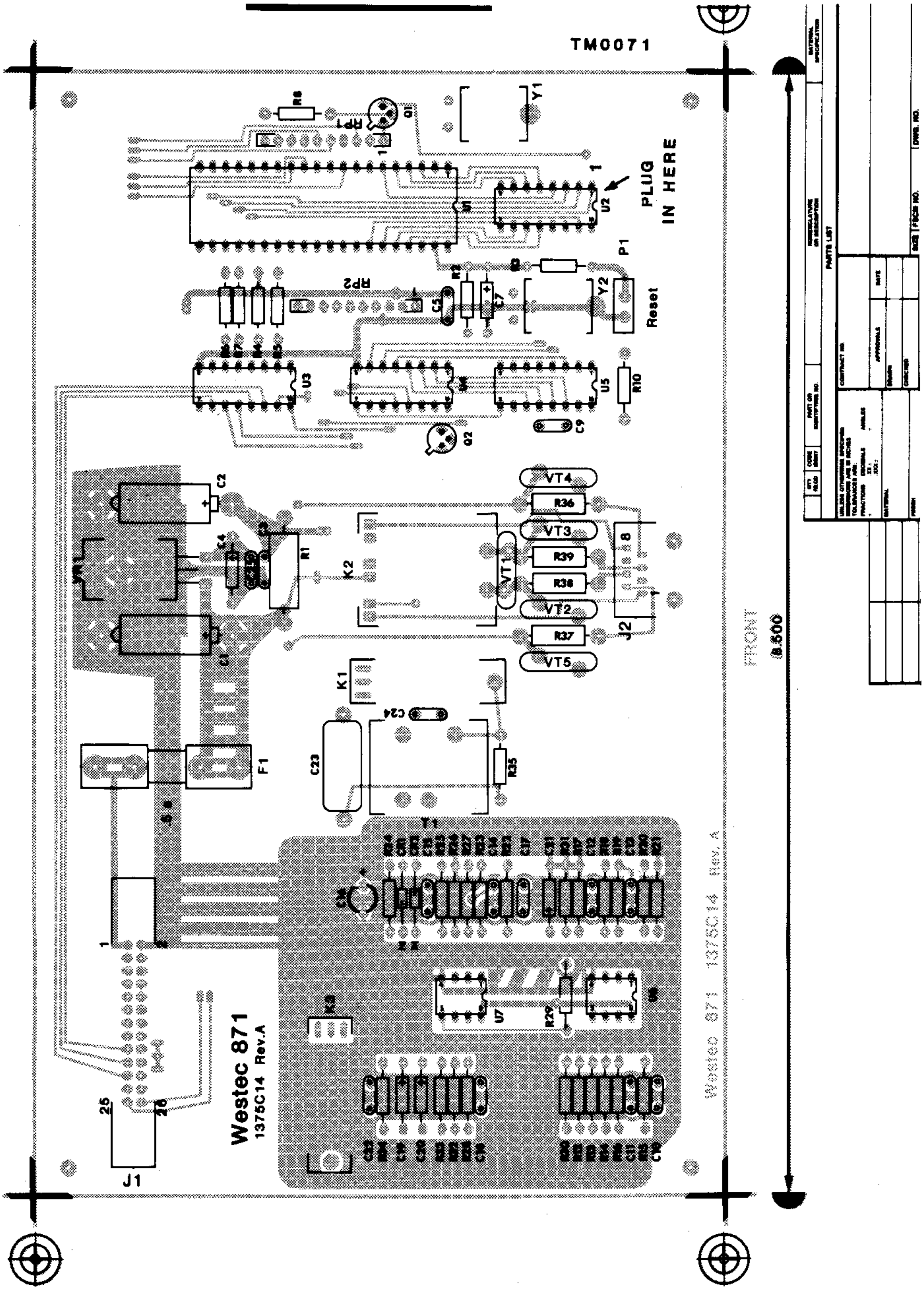
Position 2 - Common

Position 3 - Earth Ground

This position must be connected to the closest water pipe for a ground. A 14 gauge wire or larger must be used.

Positions 4 and 5 - 16 VAC Transformer Input

TM0071


Westec 871
1375C14 Rev.A
PLUG
IN HERE
Reset
FRONT
8.500
J1
J2
P1
Y1
Y2
U1
U2
U3
U4
U5
U6
U7
Q1
Q2
RP1
RP2
K1
K2
F1
T1
C1
C2
C4
C5
C7
C9
C23
C24
R1
R2
R3
R6
R10
R29
R35
R36
R37
R38
R39
VT1
VT2
VT3
VT4
VT5
Westec 871 1375C14 Rev.A

871 COMMUNICATOR

Themodel 871 is a multi-function communicator that can report into most of the alarm receiving equipment on the market today.

The model 871 is a 6 channel device that, when triggered by the 950 control board, reports to a central station, the event code that caused the alarm. The model 871 reports the information twice, then goes into the direct voice command (talk-in) mode for 20 seconds, then sends the alarm information again and then hangsup.

These are no switches or jumper options to work with.

All information needed for the communicator is contained in the model 875P prom that is ordered separately.

When ordering the model 875P prom you must supply Westec with the following information:

1. Comm-Center Equipment phone number
2. Touch tone or rotary dialing
3. Account number
4. Type of Comm-Center equipment (Silent Knight, Franklin, WSSI, 600, 800, etc.)

The proms can be customized for special delays and signaling tone. Contact the factory for these orders.

The model 871 reporting format is as follows:

Code 1	Fire-no talk-in
Code 2	Burglary, tamper
Code 3	Emergency
Code 4	Duress, Special 1
Code 5	Test, Special 2
Code 6	Low battery, special 3, all troubles
Code 0	Abort (Code 7 in Silent Knight format)

The drawing on page 3.1.1 shows the correct position of the 875P on the 871 communicator.

DIGITAL COMMUNICATOR - TELEPHONE LINE CONNECTION

Before connectng this device to the telephone line, the telephone company must be notified and provided with the following information:

A) Manufacturer: Westec
B) Model #: 871
C) FCC Registration #: AG-597K-67718-AL-E
D) Type of Telephone Jack (to be installed by telephone company): RJ38X
E) Ringer Equiv. 0.0B

NOTE 1: The RJ38X is the same as the RJ31X, except that the phone company is instructed to place a short across terminal 2 to 7 in the coupler for the tamper circuit.

NOTE 2: The telephone company must also be notified if this service is to be permanently disconnected.

This device may not be directly connected to a coin telephone or party line devices.

The telephone company, under certain circumstances, may temporarily discontinue service and/or make changes in its facilities and services which may affect the operation of this device; however, the telephone company is required to give adequate notice, in writing, of such changes of interruptions.

This device cannot be adjusted or repaired in the field; in case of trouble with the device, return to:

Westec Security Products, Inc.
11842 Monarch St.
Garden Grove, CA 92641

Model 871 Installation Procedure

1. Install the model 871 in the model 942 chassis.

2. Install prom, making sure pin 1 (notch on bottom or dot) is plugged correctly. See drawing on page 3.1.1.

3. Plug in connector between 950 and 871 (this cable will only plug in one direction.)

4. Plug RJ8X cord to model 871 and RJ38X coupler.

5. Turn off dip switch 1 on the 950. This puts the phone cord in the tamper circuit.

6. Notify Comm-Center that you will be testing.

7. Run complete tests for all alarm conditions.

8. Test is complete.

9. When the RJ38X cord is disconneted from the 871, but is still connected to the coupler, the house phones will be dead.

10. When servicing the 900 system and you want to disconnect the communicator, do so from the 26 pin plug on the 871.

PROGRAMMING COMBINATIONS

The following is a listof the combinations used on the model 950 board.

NOTE: Combos 1,2,3,4,5,6 can have combination lengths from 2 to 7 digits.

NOTE: For UL installation a minimum of 4 digits must be used.

Display Symbol	Combo #	
ARM/RDY	1.	Used for arming disarming and resettng the model 950 (see combo 5).
*	2.	Used for shunting Zone 9 (10).
INT	3.	Interior used for shunting zones 1 (2, 11, 12).
ARM	4.	Selecta - code customer controlled by Δ combo if option D,3 is on (arm, disarm, reset) or an arm only combo if option D,4 is on.
	5.	Used for triggering duress function.
		NOTE: Combos 1 and 5 change functions if option D,1 is on.
ARM	6.	Used to force arm the system. (Can only be used when system is disarmed.)
		NOTE: When programming in a combo it is recommended that you enter a totally different combo, so that the customer cannot easily force arm the system.
Δ	Δ	Used for turning on and off combo 4.
□	□, □	Door Guardian on/off - push twice to turn on, twice to turn off.
NITE	□, 3.	When pushed turn on/off the night function (bypass entry/exit function).
	(M)	Alarm Memory - When pushed twice causes zone annunciator to show sequence in order of activiation of last burglary alarm.

TO PROGRAM COMBINATIONS

1. Turn on switch for programming (program 1) combinations on the model 950.

2. The first digit entered selects the function you are to program.

3. After entering the function digit, enter from 1 to 6 additional digits (number 1-6)

4. At the end of programming each function, push the keyboard reset on the model 3090 programmer or push 5 and 6 simultaneously on models 997 and 981. Then start the next combo.

   Example: K.B. 1,2,2,5,,RST., K.B. 2,2,2,5,2,RST., TC.

5. When all functions that are to be used are programmed turn off program 1 switch.

The combinations may be changed at any time by following the above instructions.

SECONDARY COMBINATION PROGRAMMING:

Combo 4 can be programmed witht he above instructions or it can be reprogrammed by the customer by doing the following:

Example: Δ combo - 2.5.6.

New #: 4 combo - 4,1,6,2.

1. Push button 4 first.

2. Push the Δ combo.

3. Enter the new 4 combo.

   NOTE: THe first digit #4 is already programmed in.

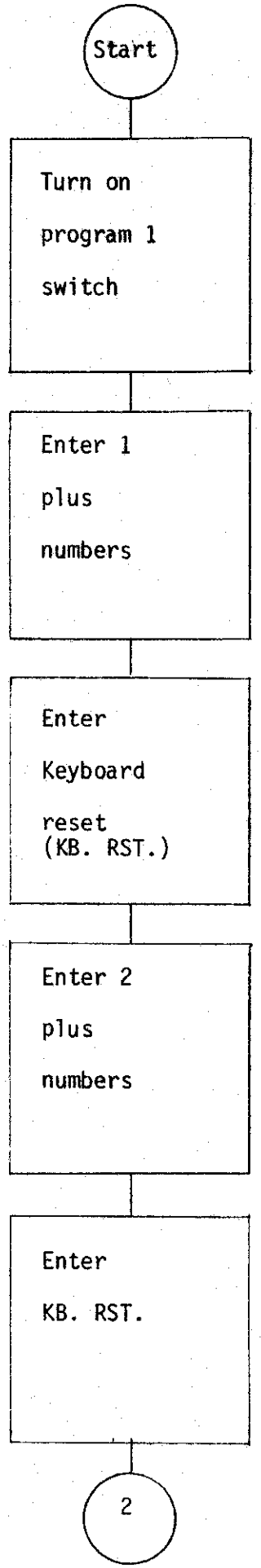
4. Push the Δ button

Example: 4, 2,5,6,1,1,6,2 .

THis procedure can be done at any time and as often as the customer wants.

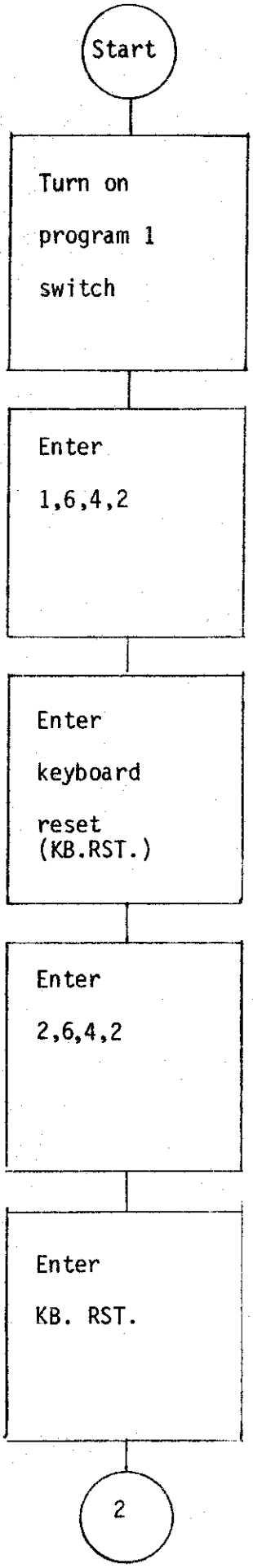
The combo 4 is the only combo that is customer programmable and can only be changed by someone with the Δ combination.

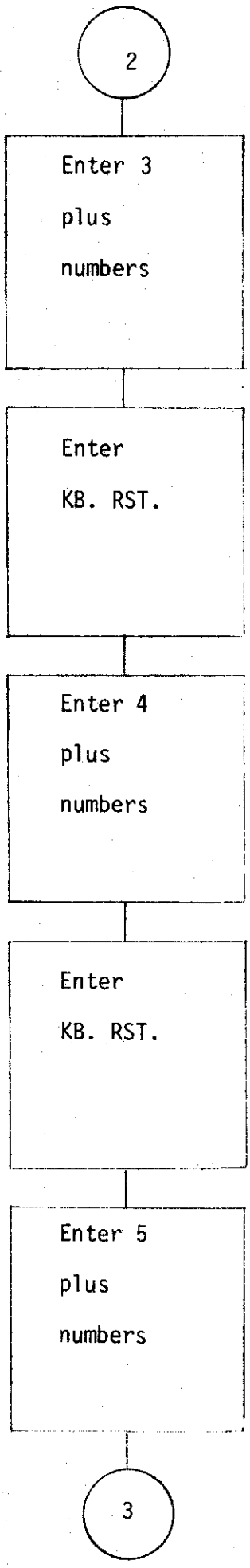
COMBO PROGRAMMING

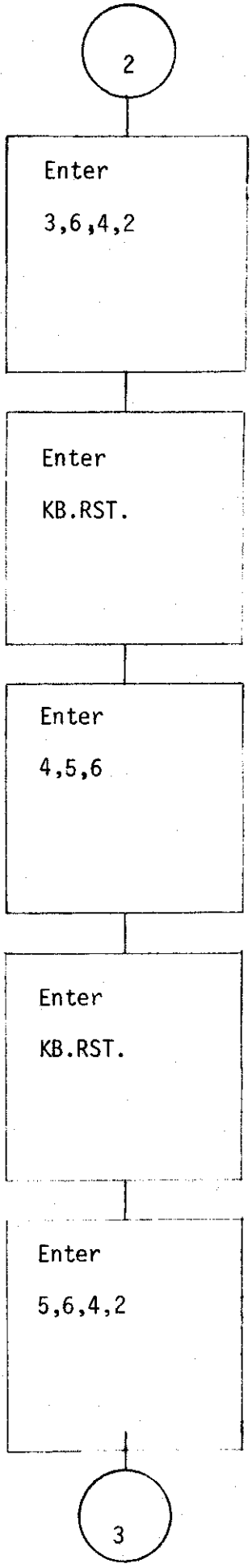


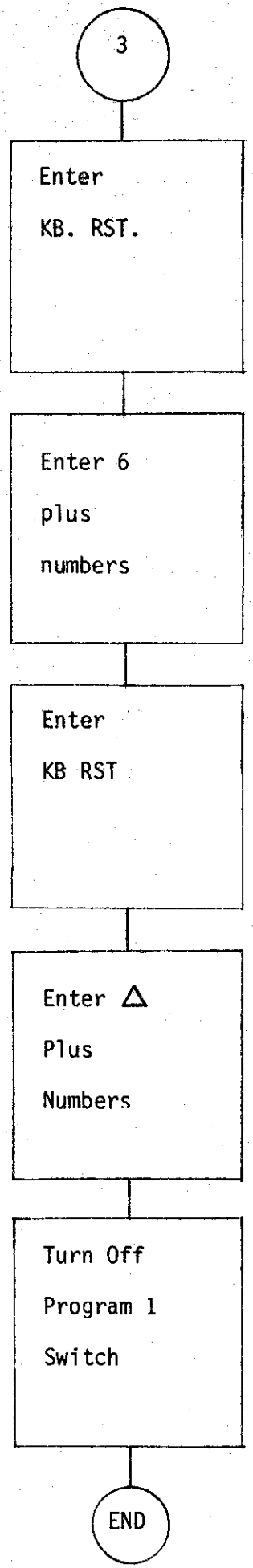
SAMPLE

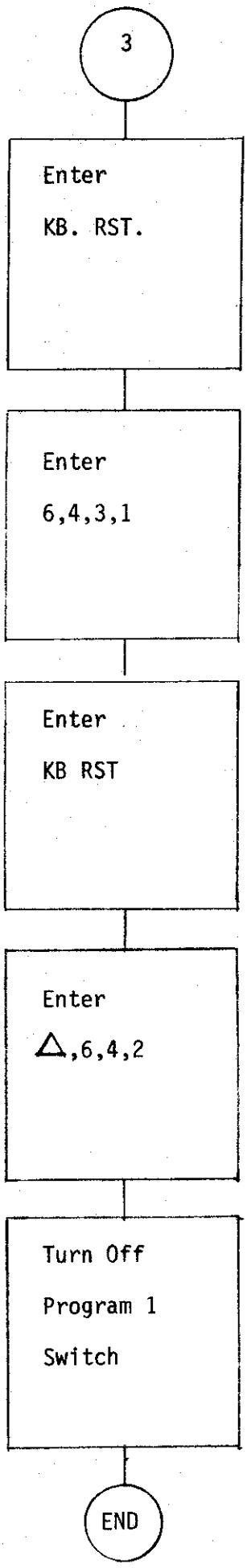
ARM	1-6-4-2
DURESS	5-6-4-2
INT	3-6-4-2
FORCE ARM	6-4-3-1
MAIDS CODE	4-5-6
* SHUNT	2-6-4-2
△	△-6-4-2




2
Enter 3
plus
numbers
Enter
KB. RST.
Enter 4
plus
numbers
Enter
KB. RST.
Enter 5
plus
numbers
3


2
Enter
3,6,4,2
Enter
KB.RST.
Enter
4,5,6
Enter
KB.RST.
Enter
5,6,4,2
3


3
Enter
KB. RST.
Enter 6
plus
numbers
Enter
KB RST
Enter △
Plus
Numbers
Turn Off
Program 1
Switch
END


3
Enter
KB. RST.
Enter
6,4,3,1
Enter
KB RST
Enter
△,6,4,2
Turn Off
Program 1
Switch
END

OPTION PROGRAMMING

All options are programmed into the model 950 at the time of installation.

There are 28 options available on the model 950 that select its functioning characteristics.

When the model 950 is first powered up all options come up in the OFF positon.

PROGRAMMING:

1. Plug in the model 3090 RPT tester in either visual connector on the mode 950.

2. On the model 950, turn on the program 2 switch (DIP SWITCH 4)

3. On an initial power up, all LEDs on the RPT should be OFF. If any of the options have been programmed in previously the RPT will show the status.

4. On the RPT, the options are listed to the right of the LEDs in RED lettering. Refer to the option list on page 1.2.1 to show their function when the LEDs are on or off.

   Example: Option A,1 - Entry Exit time.

   LED ON - time = 45 seconds
   LED OFF - time = 20 seconds

   Option A,2 - Entry/Exit

   LED ON - zone 3 on Entry/Exit
   LED OFF - No Entry/Exit

5. In section 2 (options), there is a programming code listed. To turn an option ON or OFF, that code must be entered.

   Example: Option A,1 Entry/Exit time.
   Pushing button A then 1 (on the RPT) will cause the first LED to go ON or OFF.

6. All selected options are then programmed by entering the proper programming codes.

7. When all options are programmed, turn off the program 2 switch on the model 950.

ZONE MEMORIZATION

When setting up the 900 system, each zone on the 950 must be memorized in its normal state for the supervision and normal operating state to work properly.

Each zone must be memorized individually. This feature makes setup and service on the zones easier so you can work on one zone at a time.

To memorize do the following:

1. Turn on the memorize switch on the 950 command board (DIP SWITCH 2).

2. On the RPT (3090) push the appropriate button for the zone be memorized.
   NOTE: The sensors in the zone must be in their normal state. If they are abnormal it will memorize it in that state.

3. Repeat step 2 for each zone to be memorized.

4. When all zones are memorized and in their normal state the RDY light will come on.

5. Turn off the memorize switch on the 950 command board.

NOTE: Normal state is Door Closed, Eye Not Blocked, Mat Clear, Etc.

SET-UP

1. Mount and ground 900 command center (on 950 power switch should be off).

2. On the 950 command board set the following switches:

   a. Communicator tamper bypass - on - DIP SWITCH 1
   b. Memorize - off - DIP SWITCH 2
   c. Program 1 - off - DIP SWITCH 3 or BOTTOM SLIDE SWITCH
   d. Program 2 - off - DIP SWITCH 4
   e. Power Switch - off - TOP SLIDE SWITCH

3. Rn AC to terminal strip anc connect.

4. Plug in battery.

5. Plug in the 3 plugs from the 950 command board to the 942 punch block - plug in communicator.

6. Connect jumpers on punch block.

   a. 13F to 14A - Tamper
   b. 17F to 19A - Fire
   C. 18F TO 20A - Fire

7, Turn on dip switches 1 through 12 on 942 punch block, do not turn on if sensors are punched down.

8. Plug in 3090 RPT programmer tester to either visual connector or the 950 command board (P5 or P6).

9. Turn the power switch on the 950 command board on.

10. Turn the memorize switch on, (DIP SWITCH 2), and memorize each zone, then turn off the switch.

11. Program in the combinations to be used. (DIP SWITCH 3 or BOTTOM SLIDE SWITCH).

12. Program in the options to be used (DIP SWITCH 4).

13. Test the 950 command board for the various combinations and options you have selected.

14. Plug in communicator and test to Comm-Center.

15. TEST IS COMPLETE.

16. Turn off the power switch on the 950 command board. Turning off the power switch will not lose the combinations or options you have programmed.

17. Punch down the various controls and sensors checking them as you connect them.

REMOTE TERMINAL 9 (R.T.) 997

This terminal contains a display panel with a switch panel containing six touch pads and an emergency touch pad.

Placed in one or more strategic locations in your home, the Remote Terminal provides the following important functions:

Arms/Disarms the System

Direct Voice Command

Emits Different and Distinct Audible Noises in the Event of:

a. Burglary
b. Fire
c. Emergency
d. Trouble in the System

It visually displays the following status of the system:

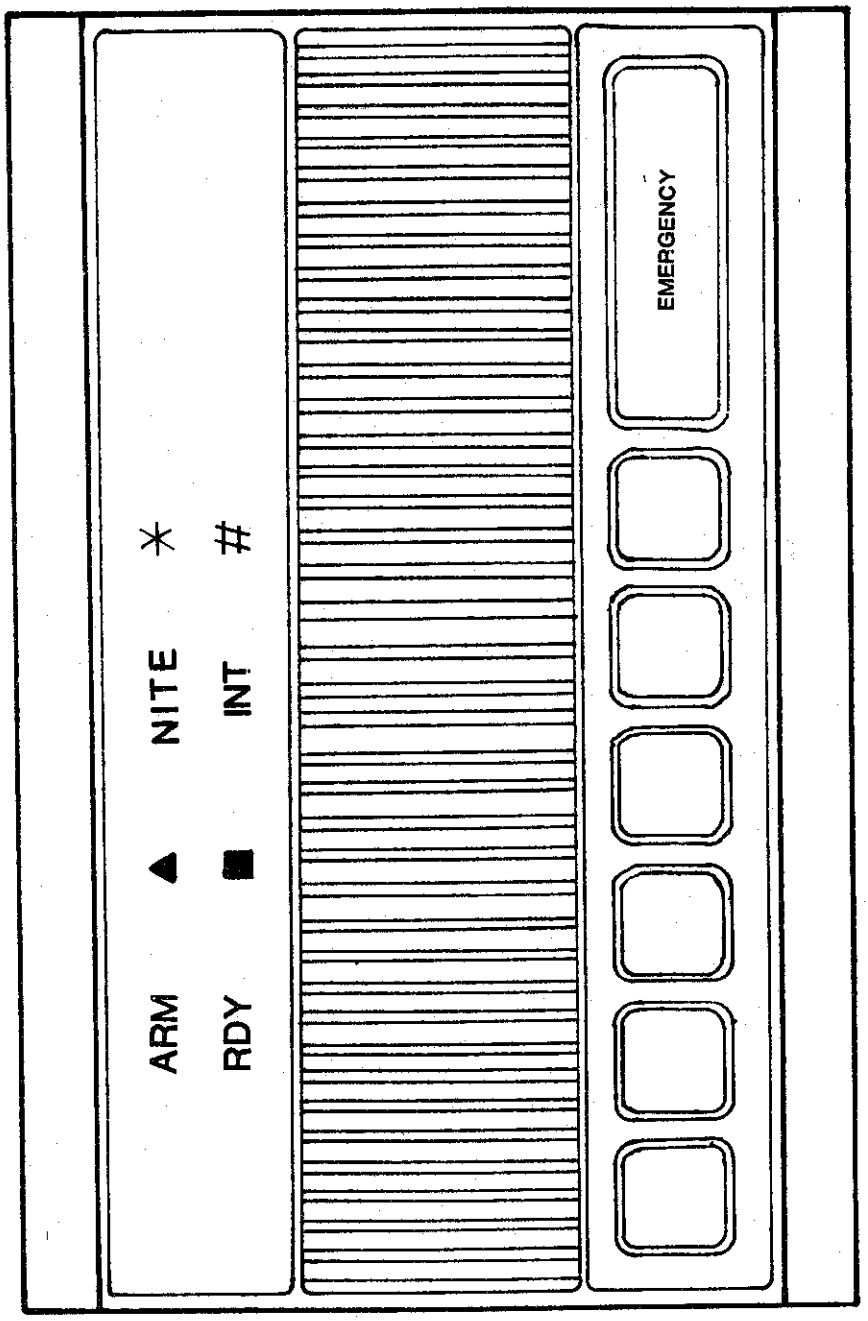
Ready to Arm (RDY LIGHT)

System Armed (ARM LIGHT)

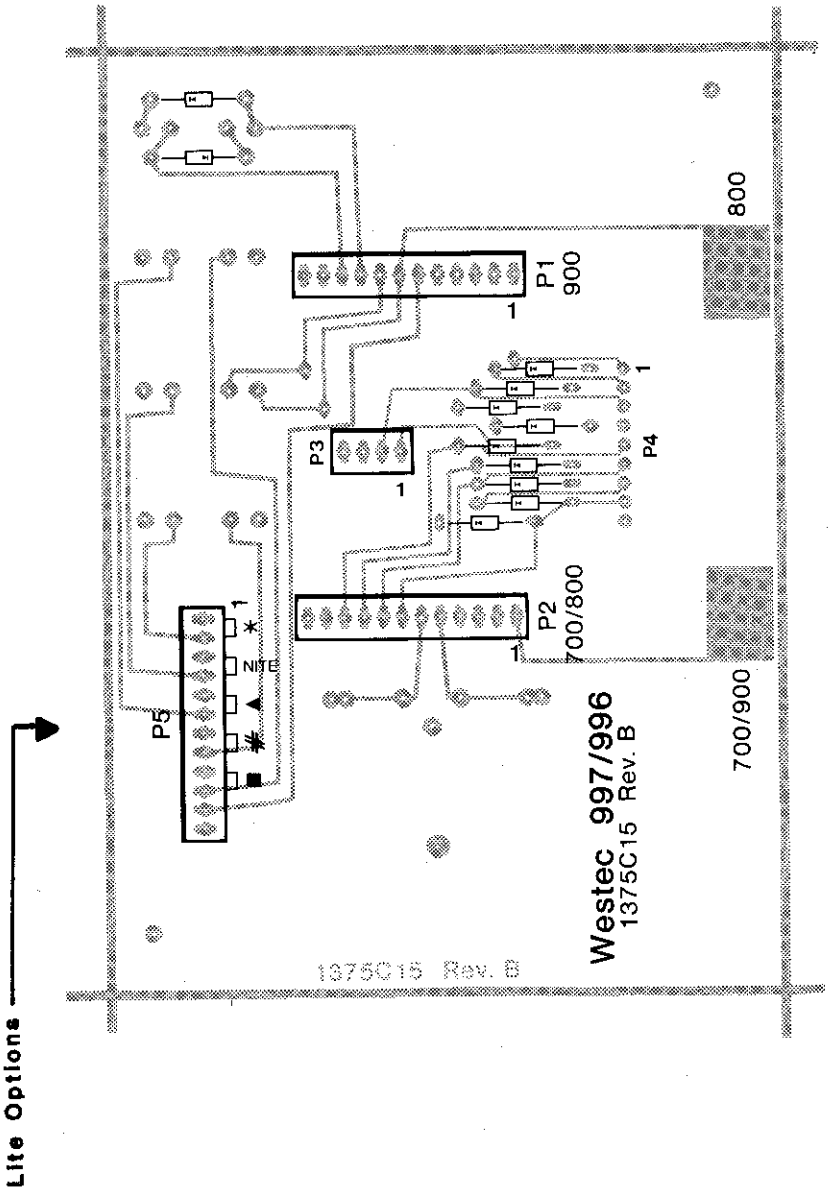
Interior Protection On or Engaged (INT LIGHT)

997

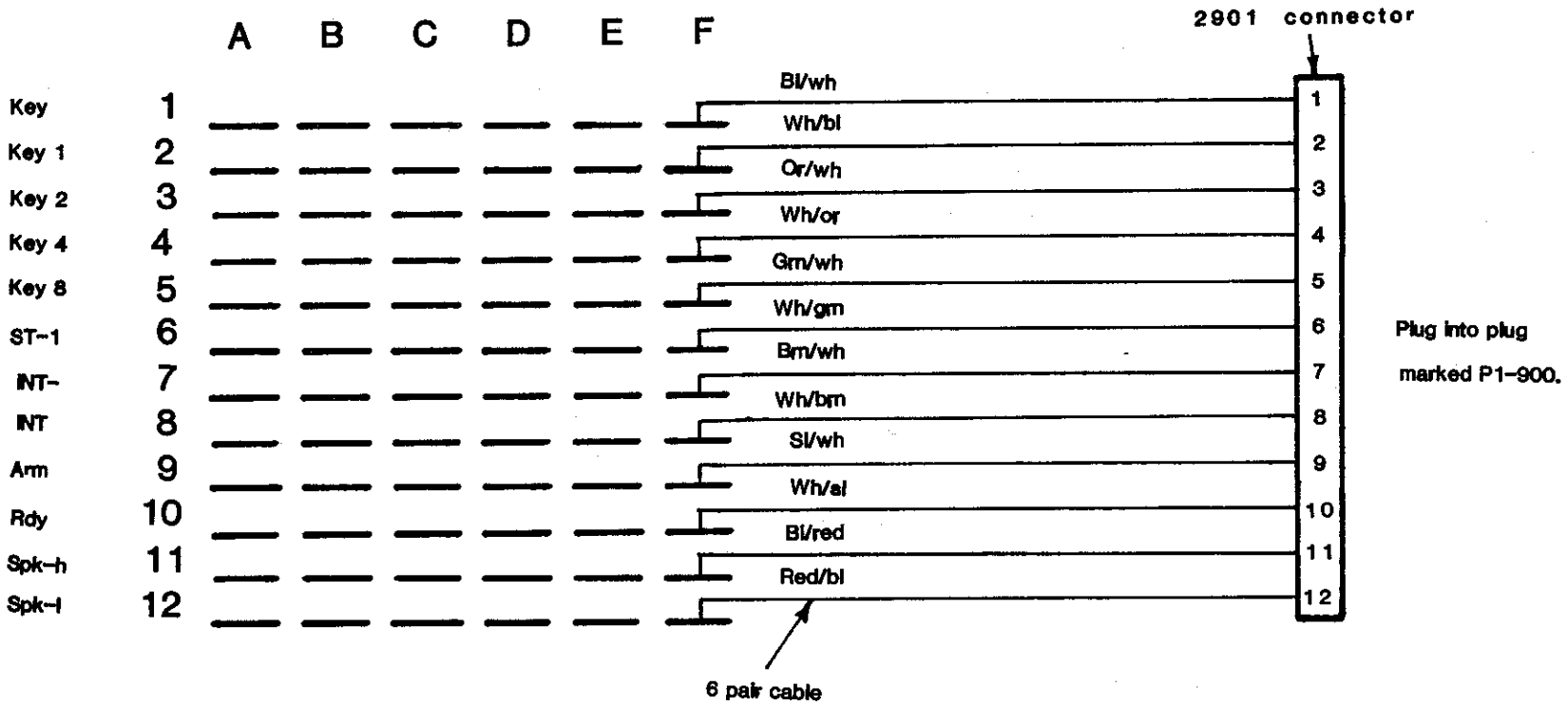
FRONT VIEW

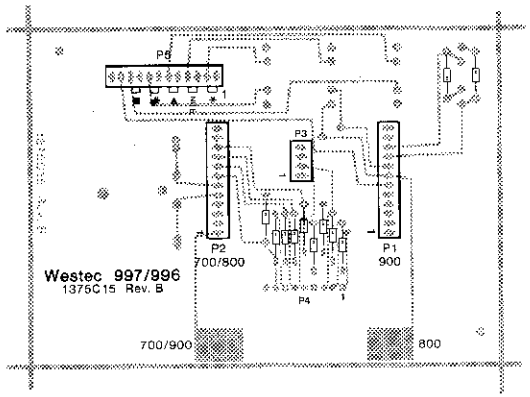


997 / 996 BACK VIEW

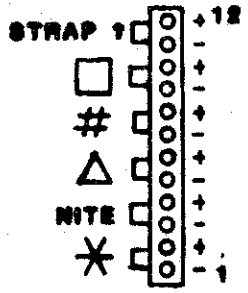


997 Hook-Up


A
B
C
D
E
F
2901 connector
Key 1
Key 1
Key 2
Key 4
Key 8
ST-1
INT-
INT
Arm
Rdy
Spk-h
Spk-l
Bl/wh
Wh/bl
Or/wh
Wh/or
Gn/wh
Wh/gn
Bn/wh
Wh/bn
Sl/wh
Wh/sl
Bl/red
Red/bl
Plug into plug
marked P1-900.
6 pair cable

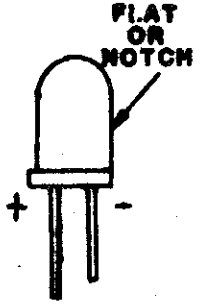

P6
P3
P2
700/800
P1
900
P4
Westec 997/996
1375C15 Rev. B
700/900
800

997 LITE OPTIONS JUMPER PLUG



FOR 997'S WITH LED'S WATCH POLARITY

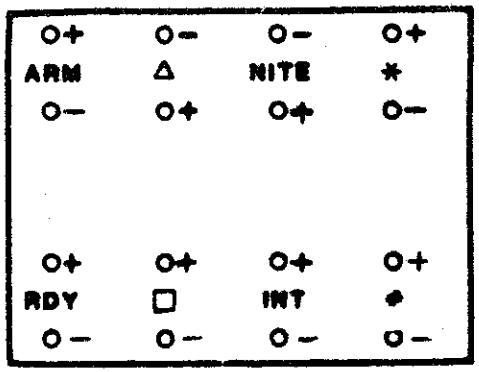
LED



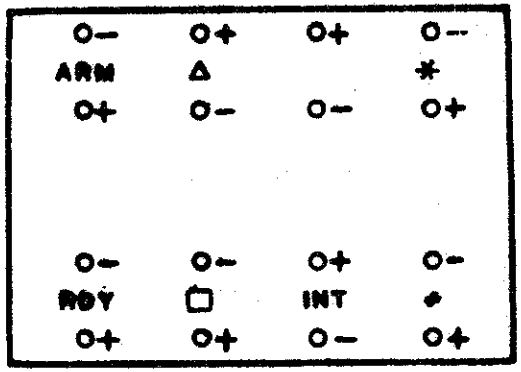
K0248 - RED
K0519 - YELLOW
K0529 - GREEN

997 LED PLACEMENT

997 REV A/B WITH UPDATE MOD BOARD



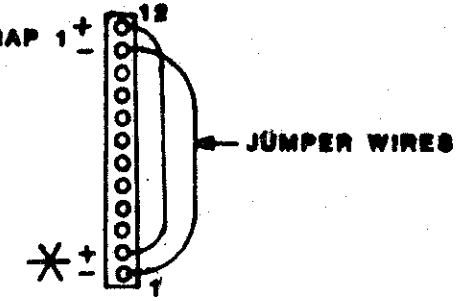
997 REV C NEW BOARDS



5.1.9

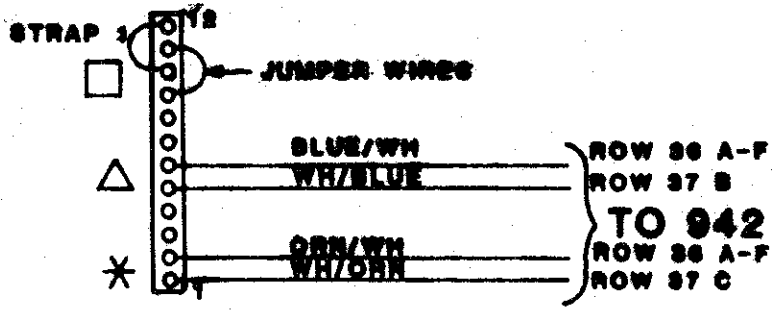
TYPICAL APPLICATIONS

#1



1. WIRED FOR * LAMP TO COME ON WHEN ACTIVATED.
2. A JUMPER MUST BE CONNECTED FROM PIN 22 OF STRAP PINS & STRAP OUTPUT PIN 1.
3. WATCH POLARITY WHEN MAKING CONNECTIONS.

#2



1. WATCH POLARITY WHEN MAKING CONNECTIONS.
2. WIRED FOR STRAP 1 TO TURN ON □ LAMP AND THRU A SEPERATE CABLE TO THE 942 THE △ & * LAMPS.
3. ON 950 PLACE THE FOLLOWING JUMPERS BETWEEN P7 AND P9:
   A. STRAP 1 (PIN 1) TO PIN 19.
   B. STRAP 2 (PIN 2) TO PIN 20.
   C. STRAP 3 (PIN 3) TO PIN 22.

TM0001

OUTSIDE TOUCH PAD (OTP)

This terminal is used to arm and disarm the system from outside the home. It is normally placed at the front entrance and contains 3 lights which show alarm status.

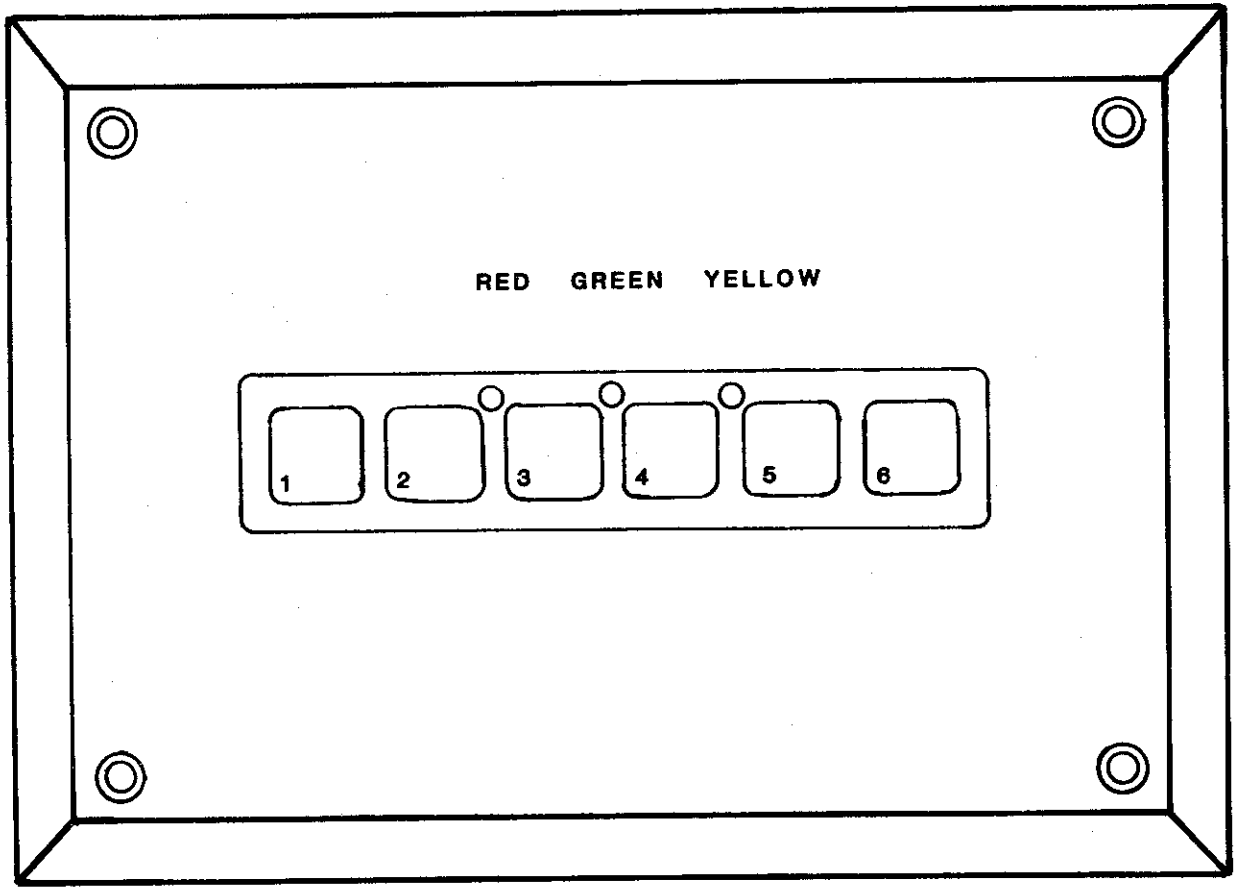
Green	System Ready to Arm
Red	System Armed
Yellow	Interior Engaged

As each digit of the arm code is entered on the touch pad, the yellow light will blink to indicate that the digit has been accepted properly. When the completed code has been entered the red light will be "ON".

If an error is made in entering the code, wait 2 seconds and then re-enter your correct Arm/Disarm Code.

There are two sizes of this terminal available. The narrow faceplate allows for installation in "hard to fit" areas.

FRONT VIEW

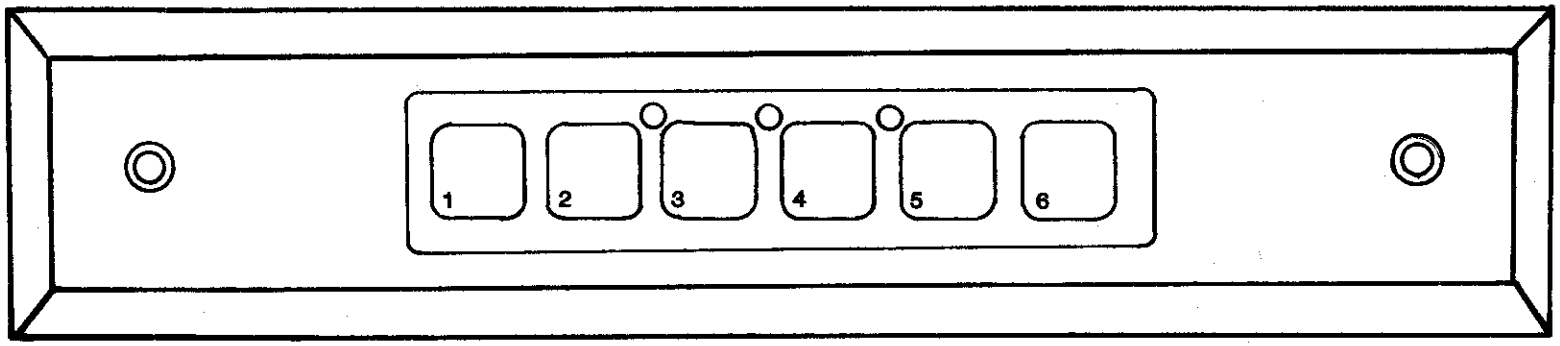


NOTE: NUMBERS AND LETTERING SHOWN ON PLATE ARE FOR REFERENCE ONLY.

992

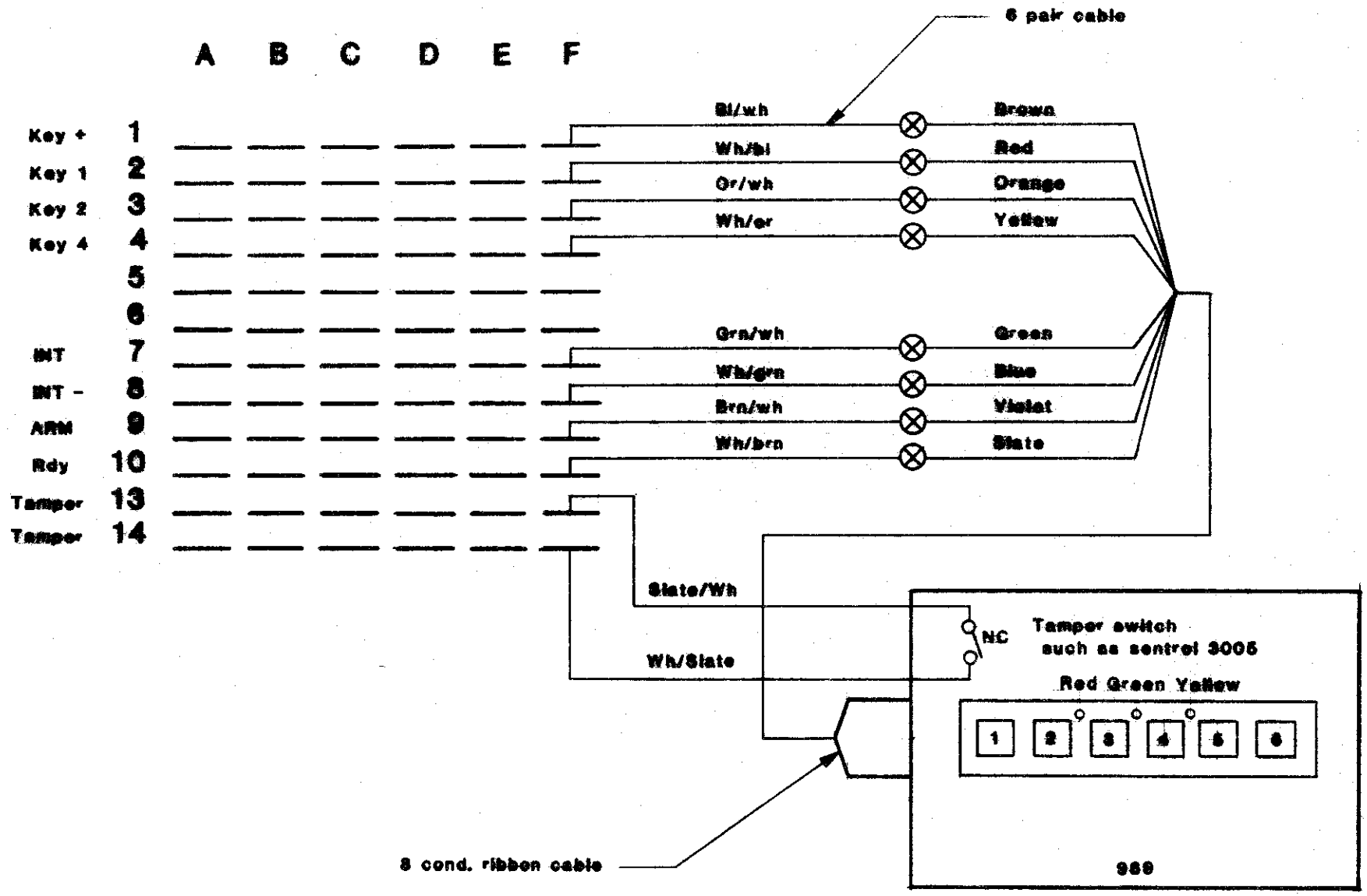
FRONT VIEW

RED GREEN YELLOW



NOTE: NUMBERS AND LETTERING SHOWN ON PLATE ARE FOR REFERENCE ONLY.

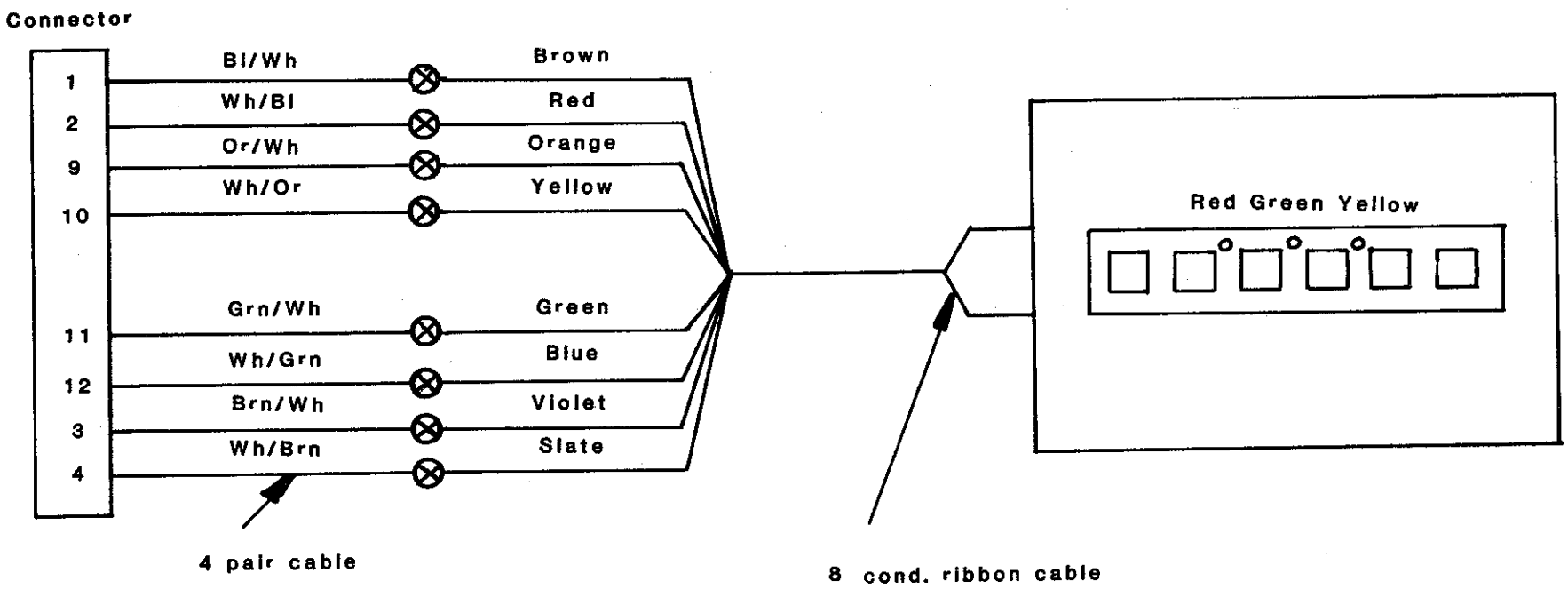
989/992 Hook-Up



S.3.4

NOTE : TAMPER REQUIRED FOR U.L. INSTALLATIONS

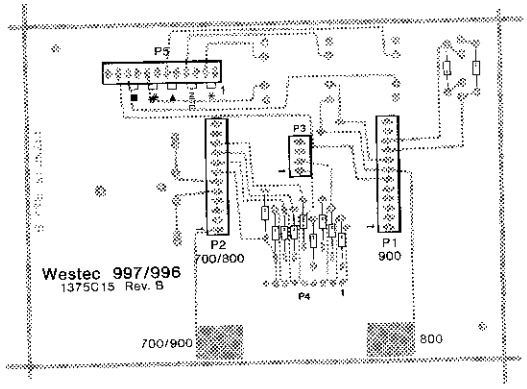
989/ 992 Hook-Up To A 997



5.2.5

Plug into P2 Plug

On 997



TM0057

MASTER STATUS TERMINAL (MST) 981

This visual display panel also contains a switch panel with six touch pads and an emergency touch pad.

The following features are exclusive to the Master Status Terminal:

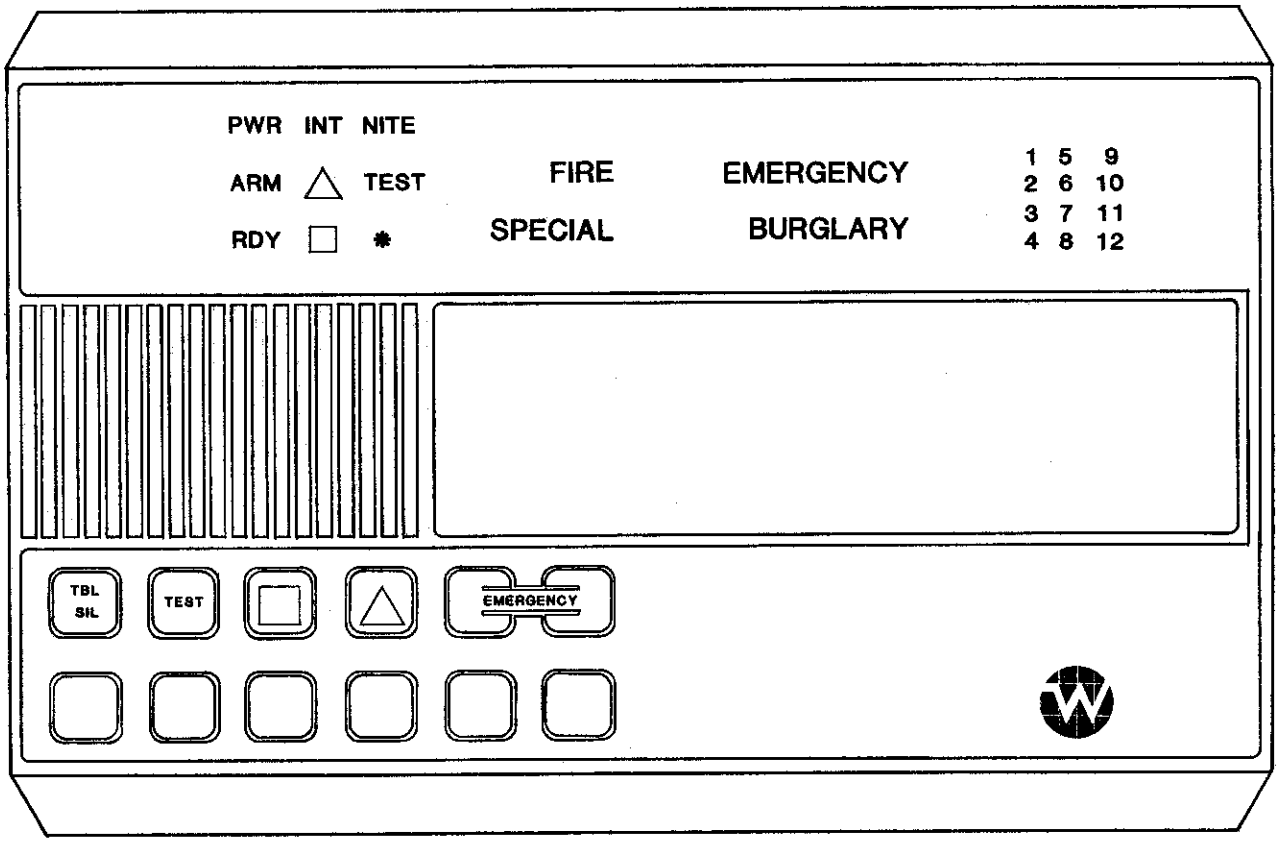
- Visual Alarm Status
- 12 Zone Display
- Alarm Memory
- Select-A-Code
- Entry/Exit - Delay to Instant
- Door Guardian

Additional features of the Master Status Terminal are:

- Arm/Disarm System
- Direct Voice Command
- Emergency Button
- Ready Light
- Interior Light
- Continuous State Circuit Analyzer

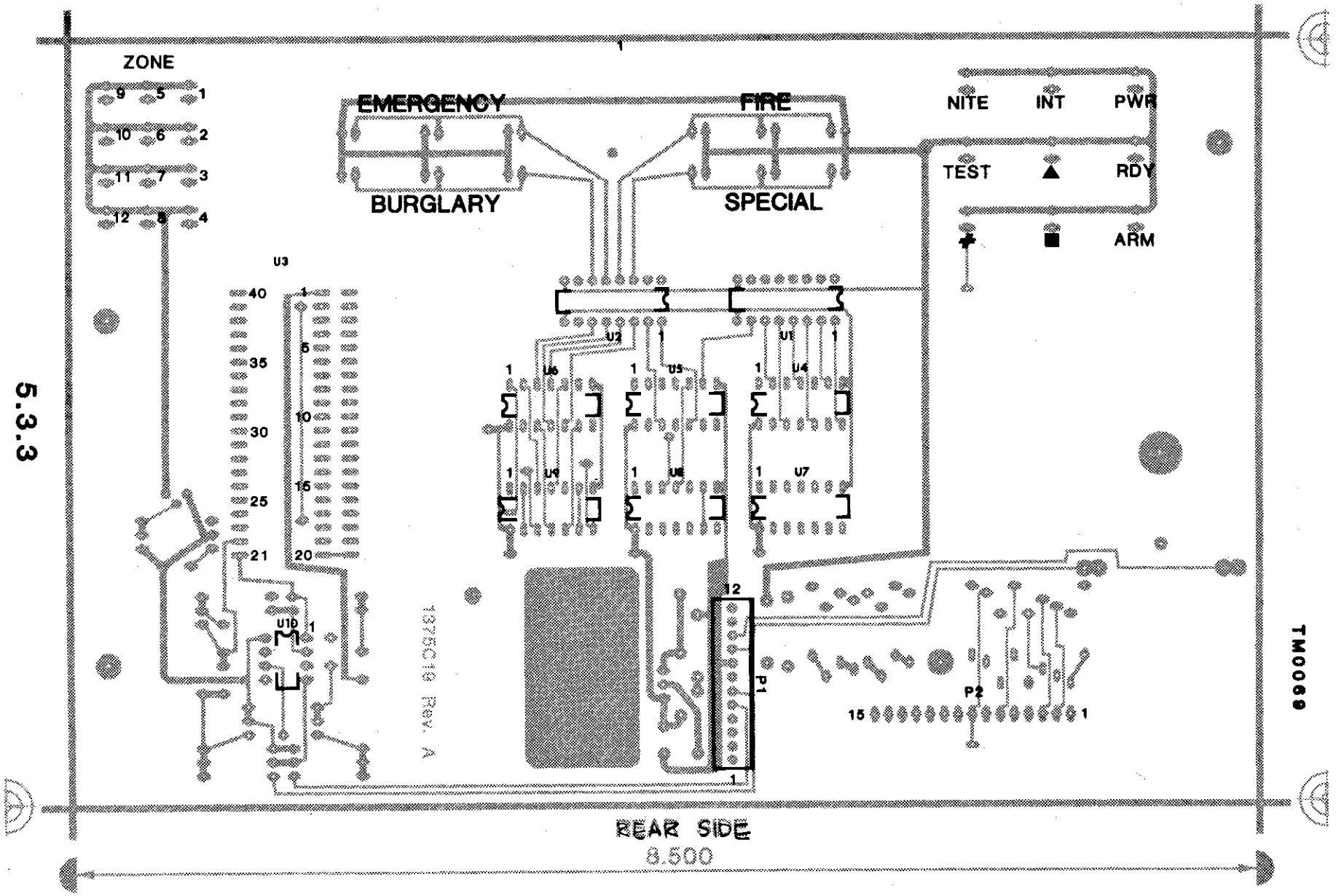
981 BL

981 WL

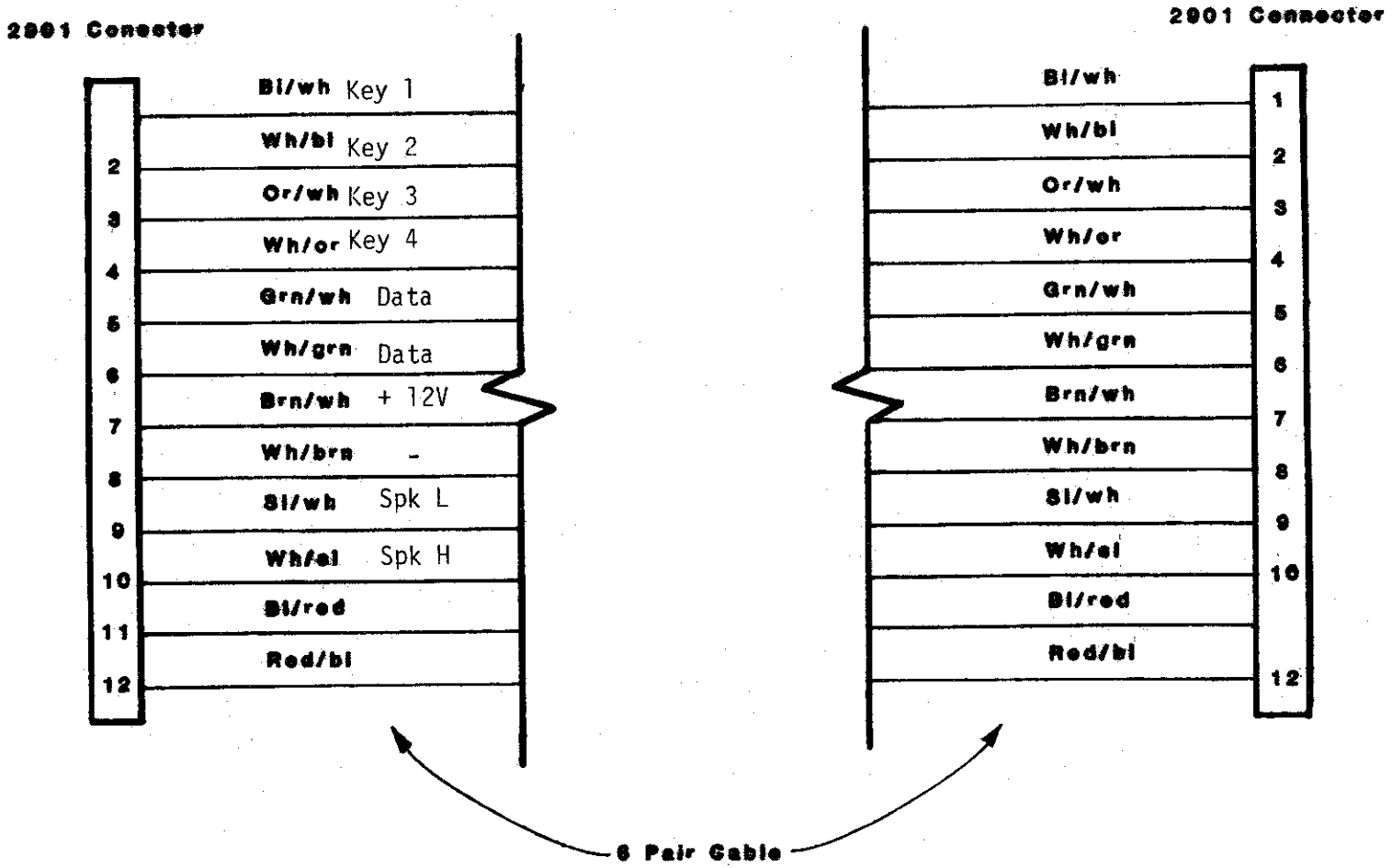


REQUIRED FOR U.L. INSTALLATIONS

981 MST


ZONE
9 5 1
10 6 2
11 7 3
12 8 4
EMERGENCY
BURGLARY
FIRE
SPECIAL
NITE
INT
PWR
TEST
RDY
ARM
U3
40
35
30
25
21
1
5
10
15
20
U2
U1
U6
U5
U4
U9
U8
U7
U10
P1
P2
15
1
12
1875C19 Rev. A
5.3.3
TM0089
REAR SIDE
8.500

981 MST Cable Hook-Up



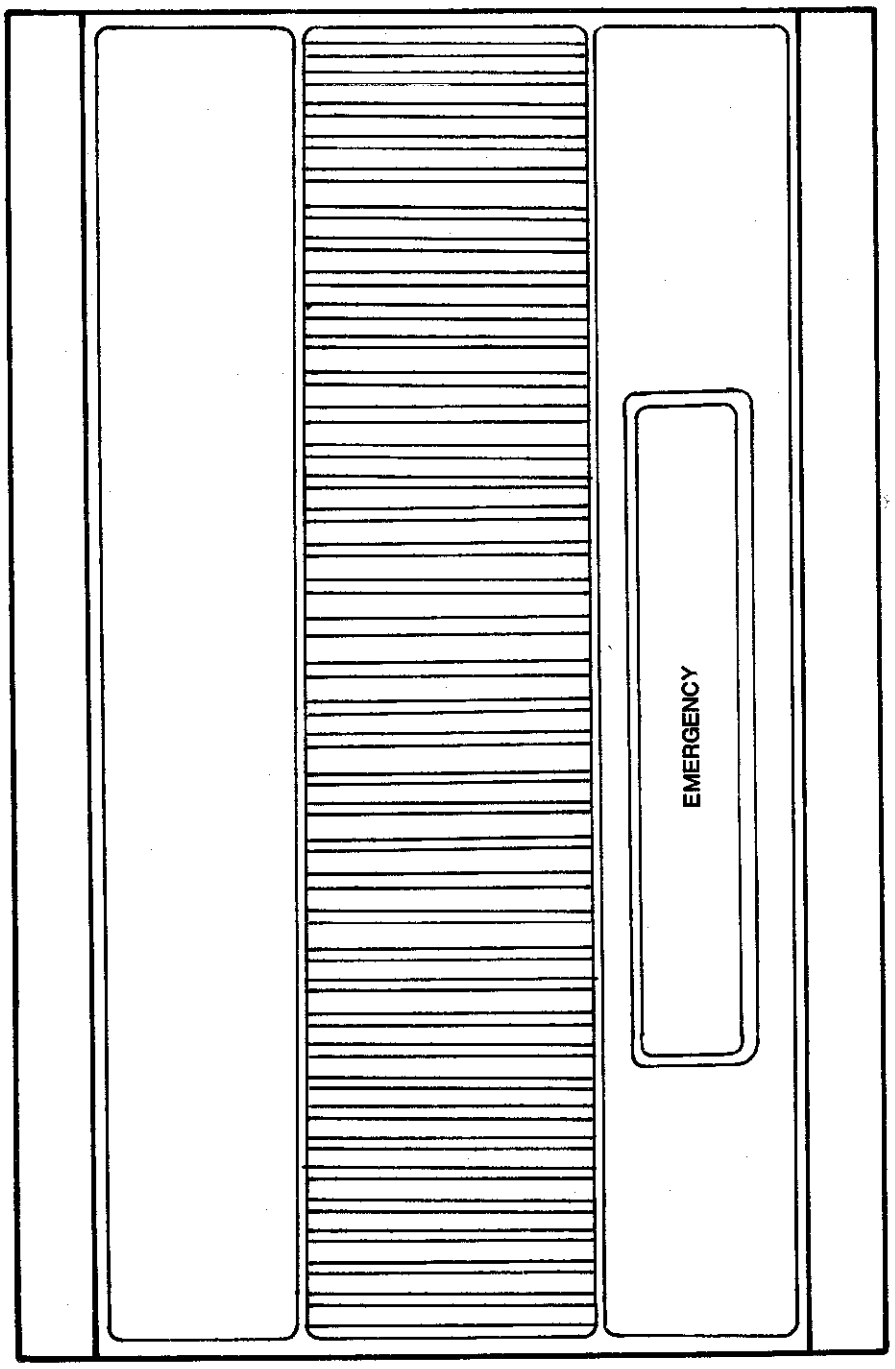
EMERGENCY MODULE 996

The emergency module is a remote unit that can be placed at various locations throughout the home. By depressing the touch pad within the red area, the emergency function is activated.

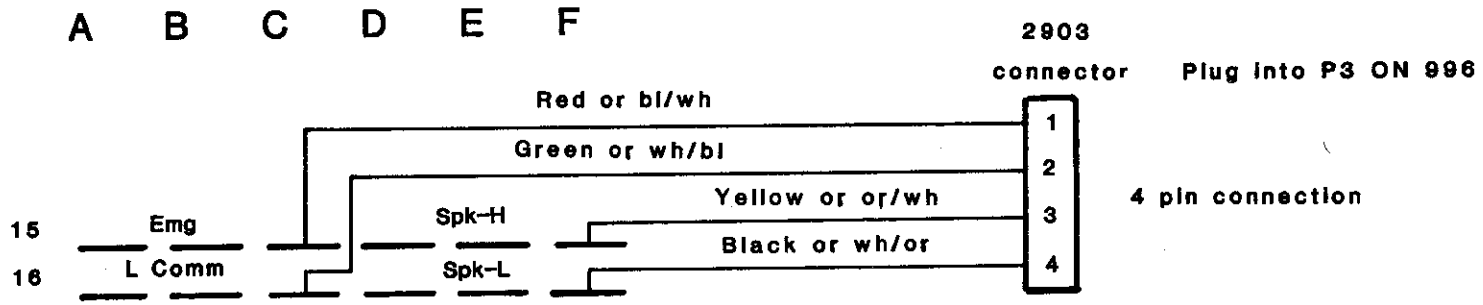
The module also includes the Direct Voice Command feature (listen in). In the event of any alarm, the system will emanate a distinct sound for the particular alarm.

996

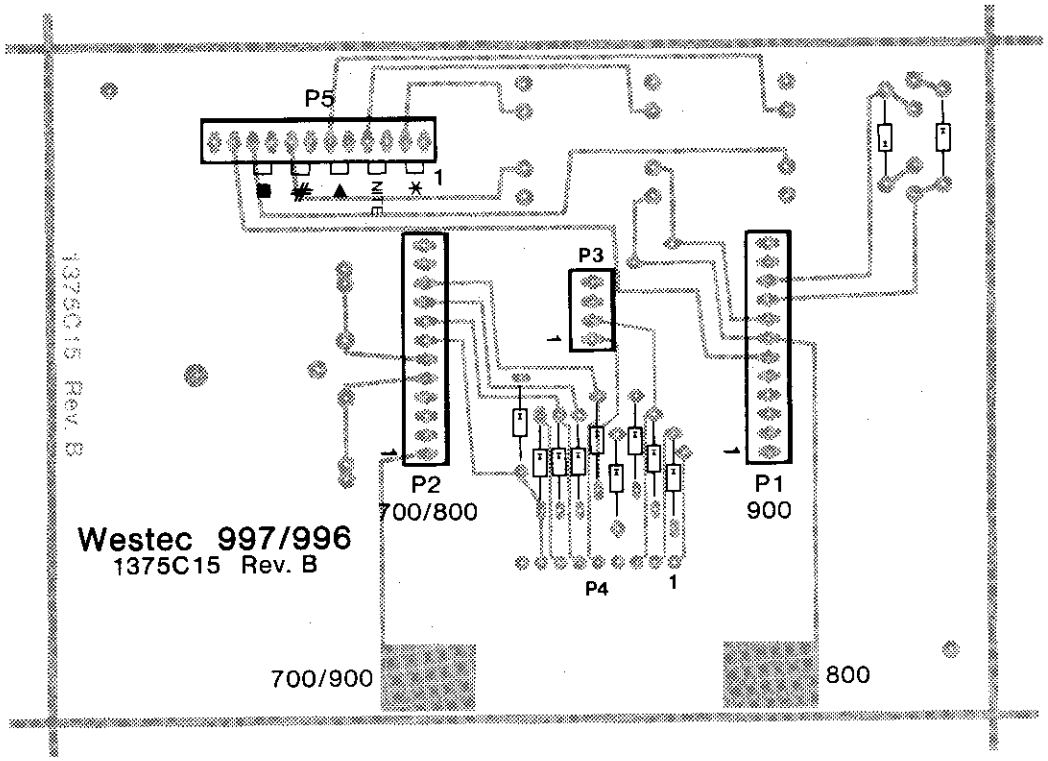
FRONT VIEW



996 Hook-Up

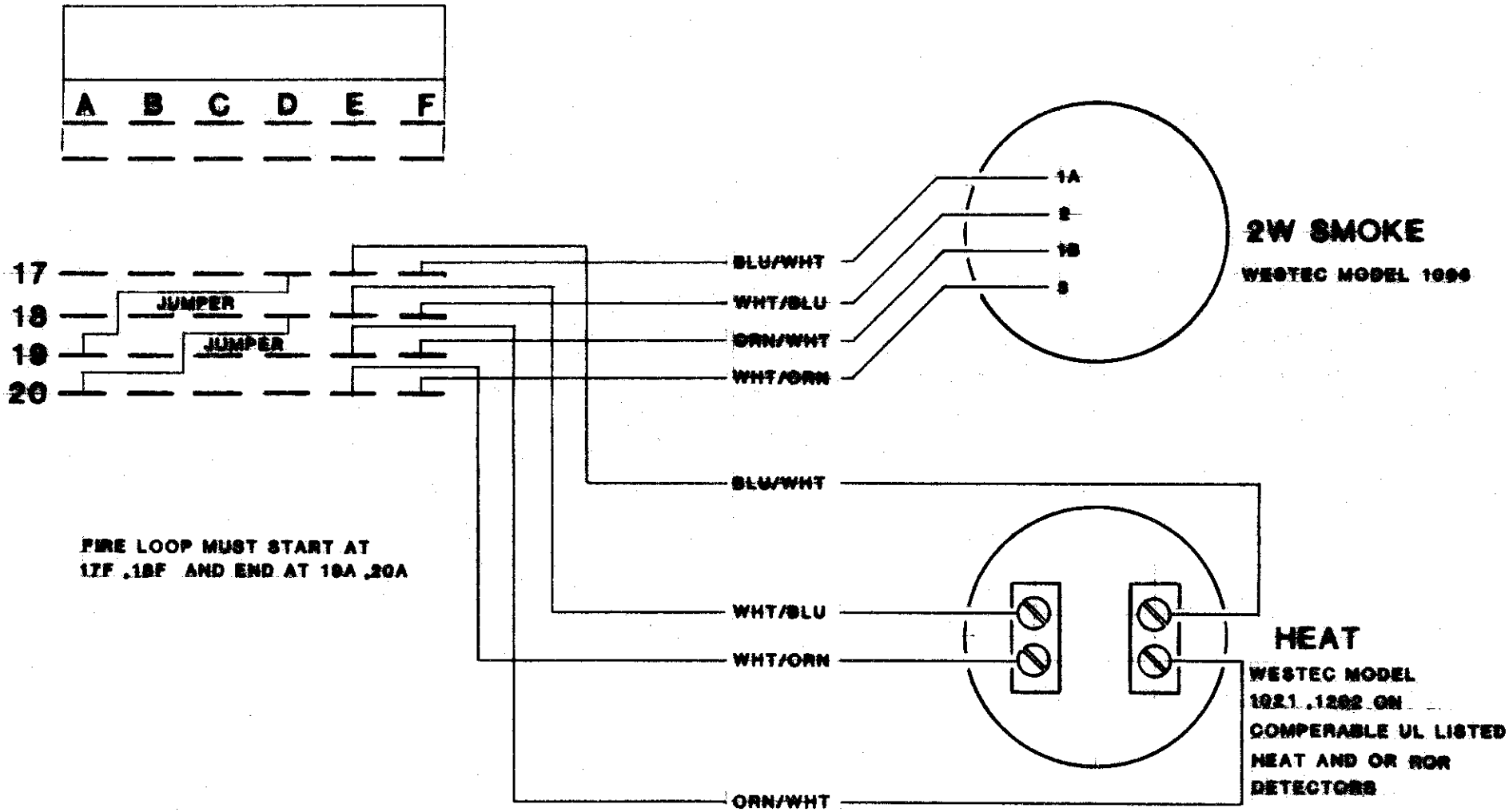


5.4.3

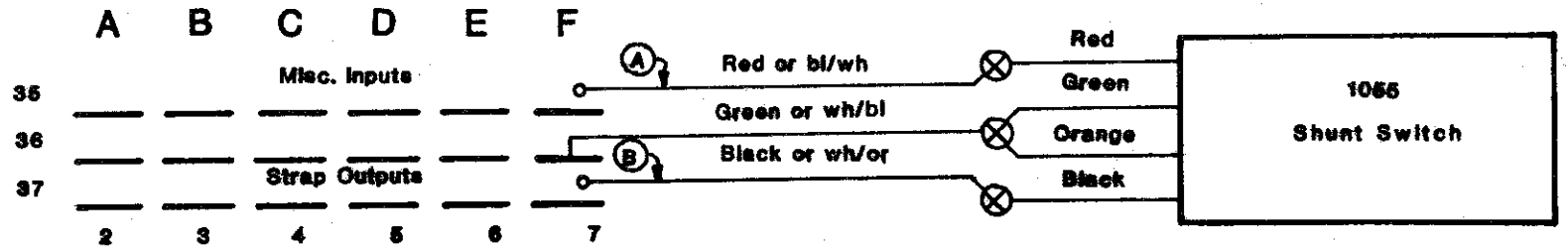


TM0059

2W FIRE HOOK - UP



1055 Hook-Up for Misc. Inputs



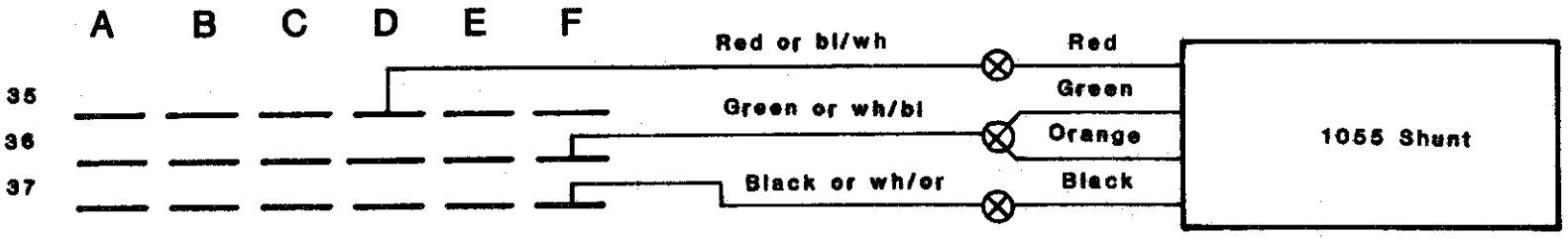
Note 1: The wire marked (A) can punch down on any pin on row 35 for the desired function.

Note 2: The wire marked (B) can punch down on any pin on row 37 for the desired function and a jumper has to be connected between the option wire wrap pins to one of the 7 strapping outputs on the 950.

5.6.1

Typical Application

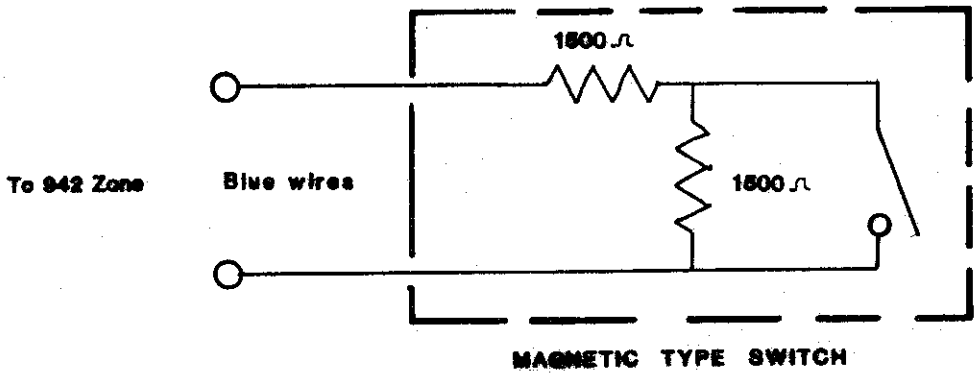
Remote Control of the Night Circuit



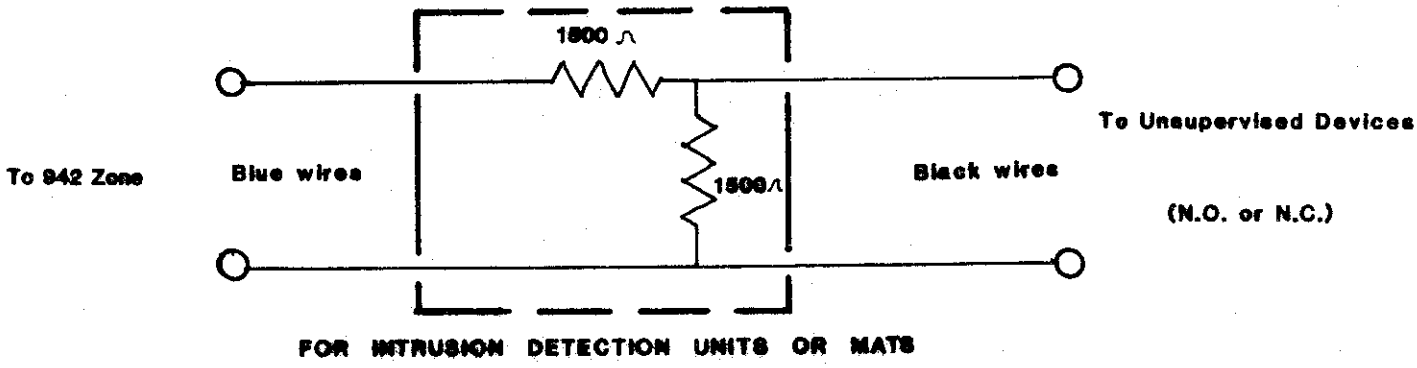
Note: A wire wrap jumper must be run between strap option #7 and pin 18 of the strapping output pins on the 950.

TM0060

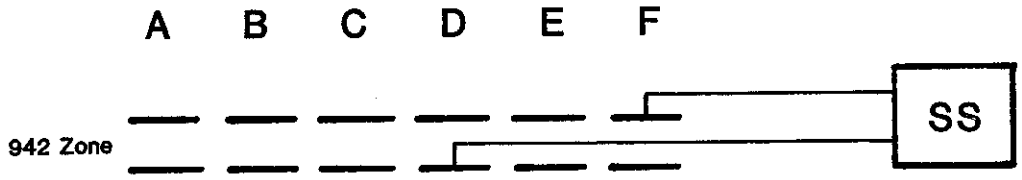
Supervised Sensors



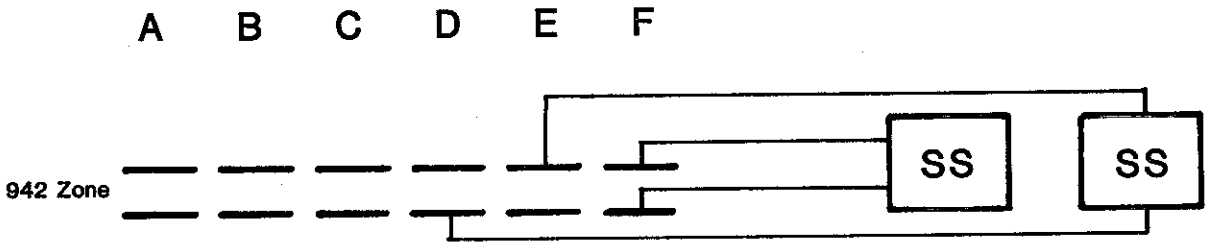
Supervised Adapter



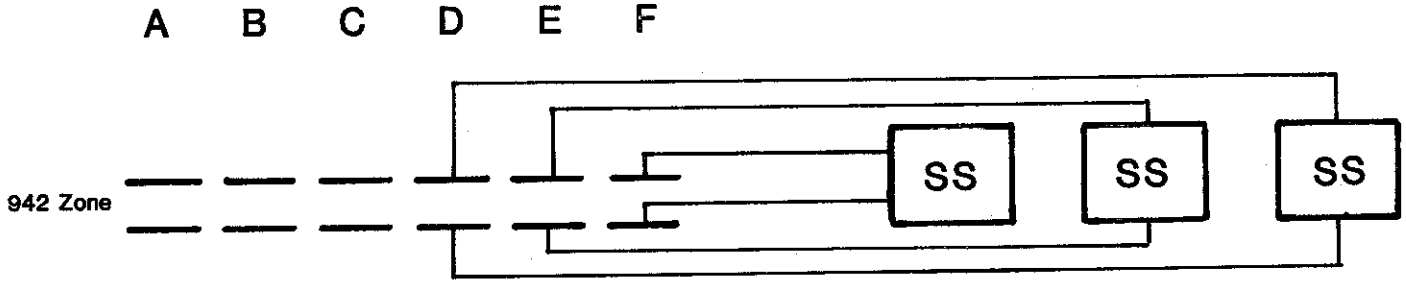
1, 2 and 3 Supervised Sensors (S.S) on a Zone at 942 P.B.



-A-



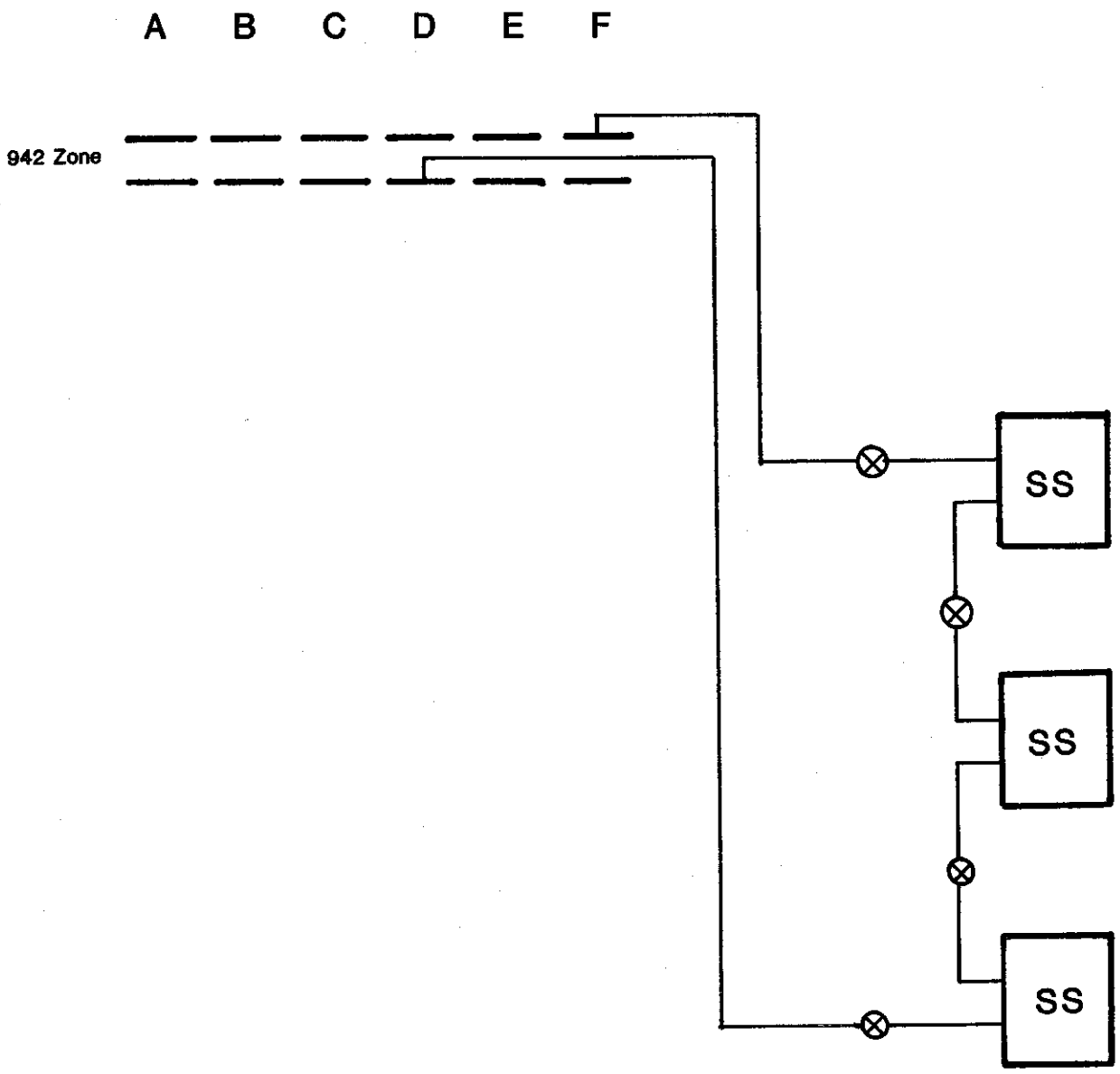
-B-



-C-

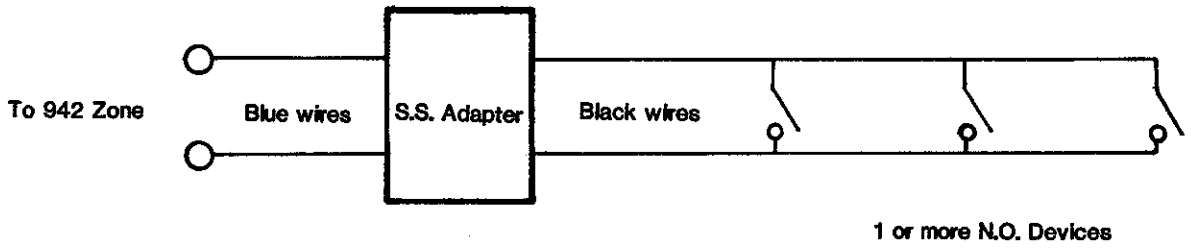
Note: There is a maximum of 3 supervised sensors on each zone.

3 Supervised Sensors From a Remote Location

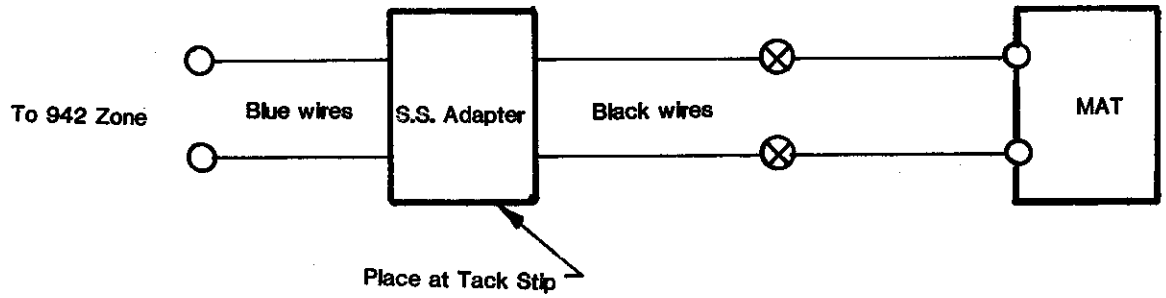


Note: There is a maximum of 3 supervised sensors on each zone.

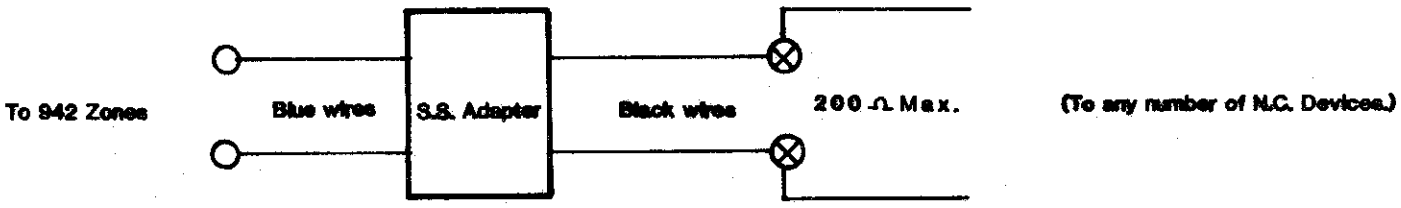
N.O. Device Hook-Up with a S.S Adapter



Typical Application



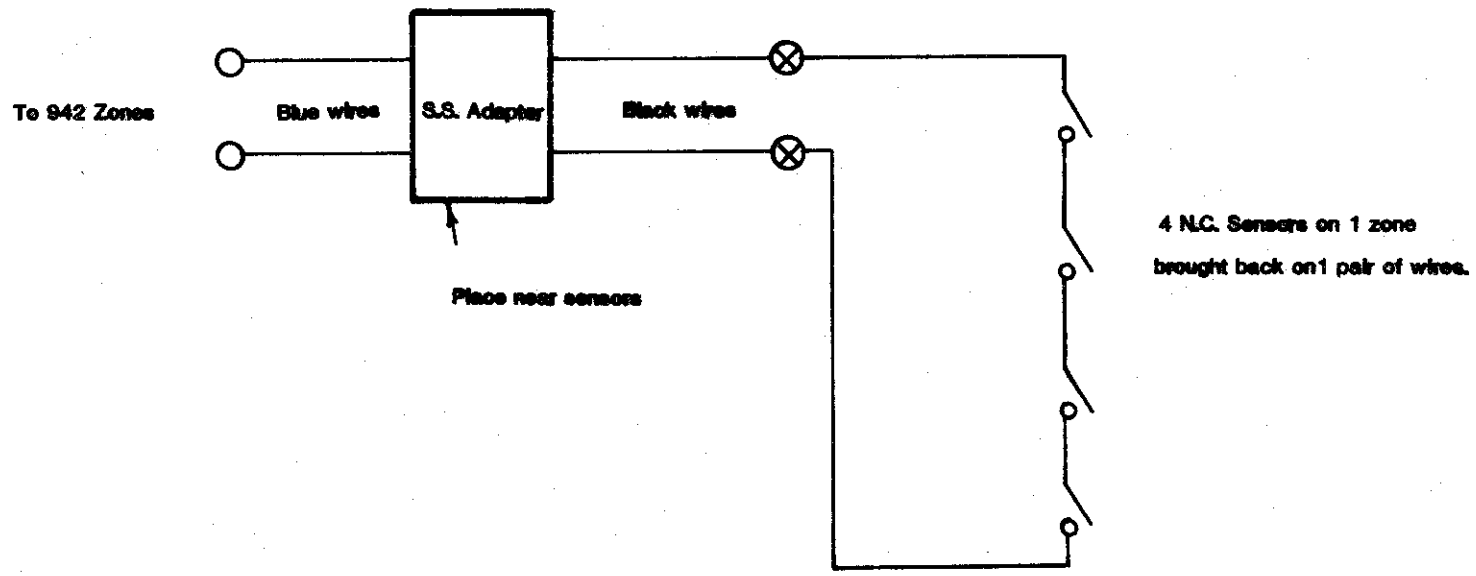
Typical Unsupervised N.C. Hook-Up On A Zone



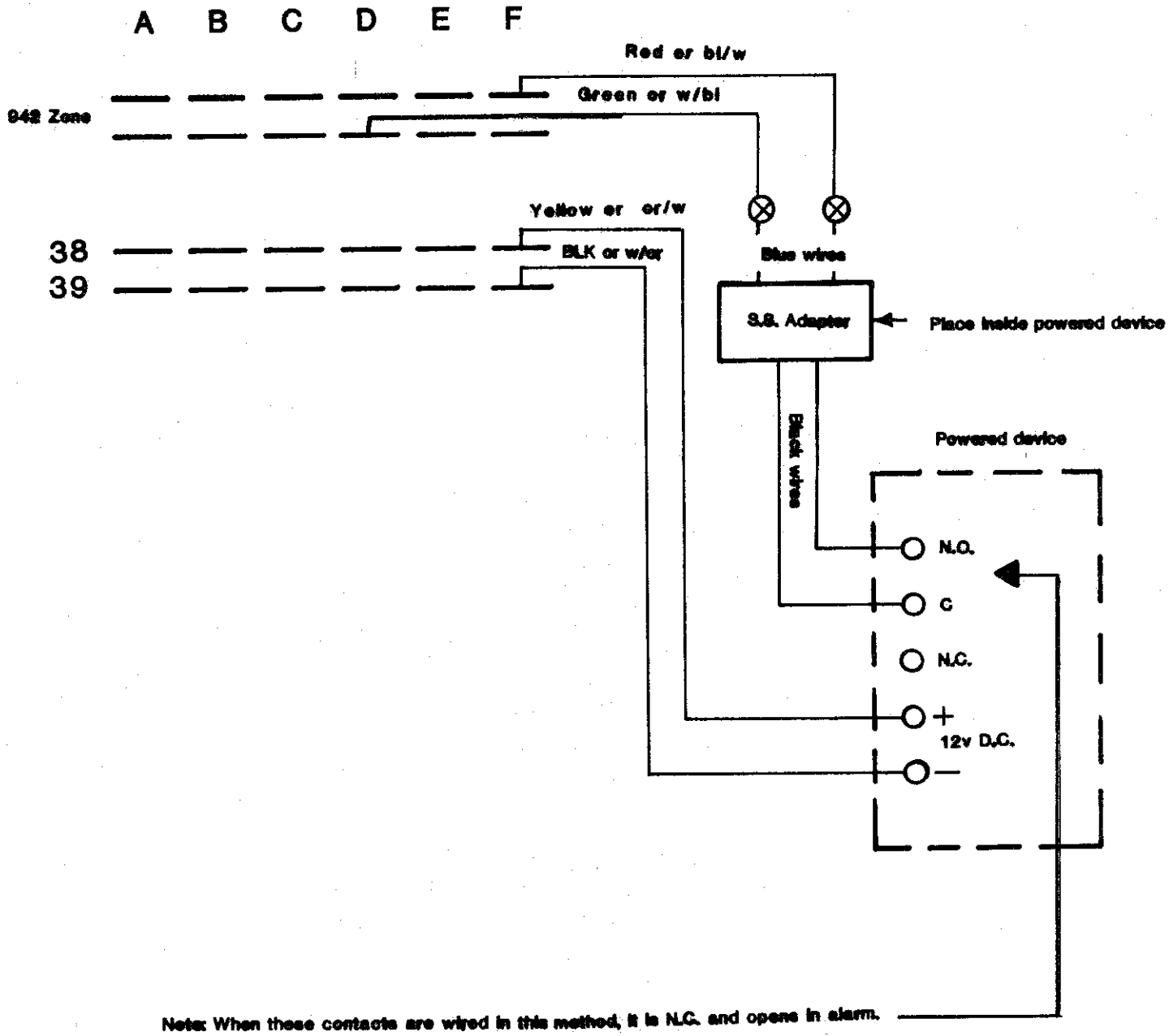
Note: The wires leading up to the SS Adapter will be supervised to that point only.

Note: 3 of this type hook-up may be used on each zone.

Typical Application

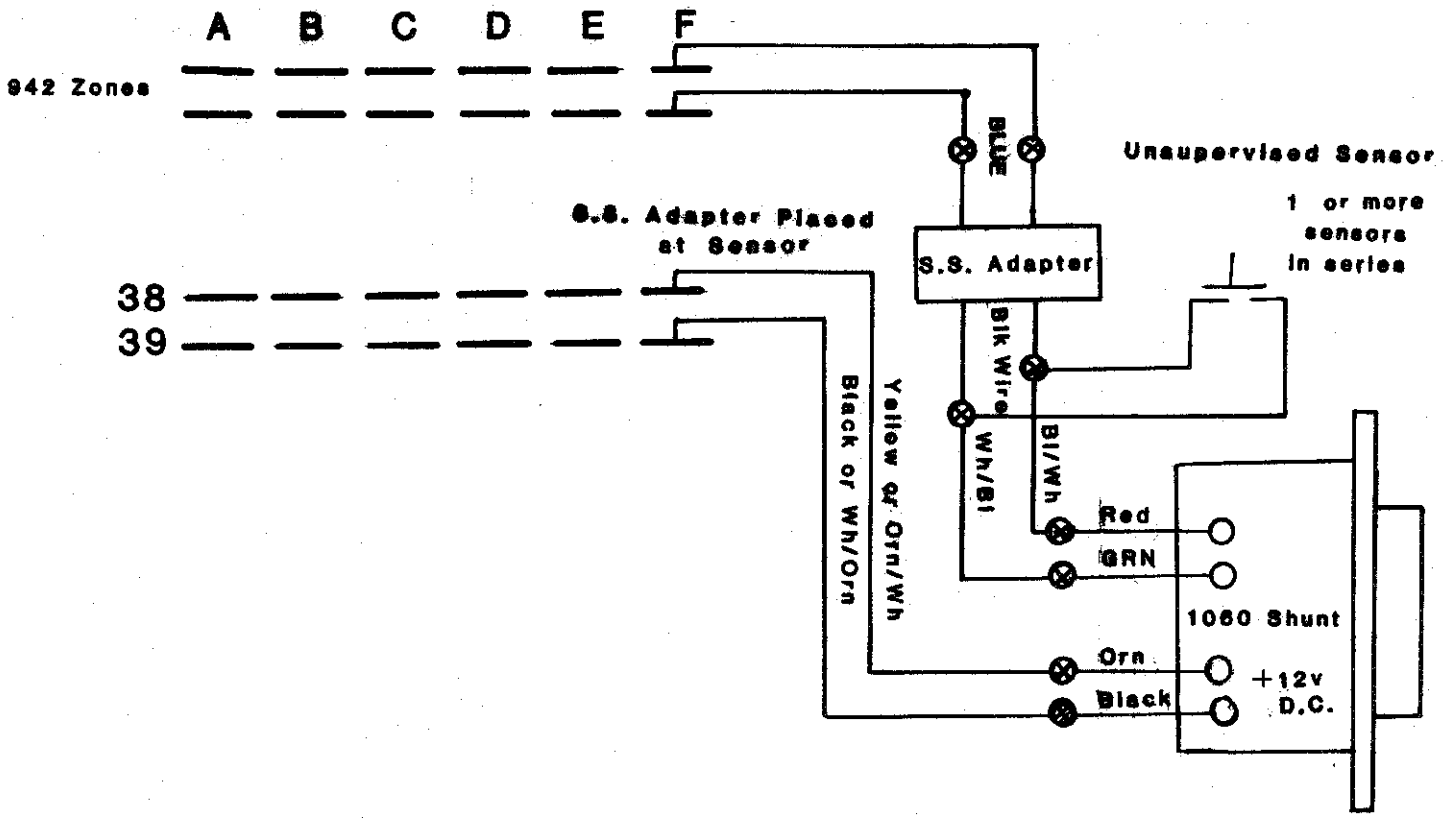


Typical Eye, Motion Detector Hook-Up

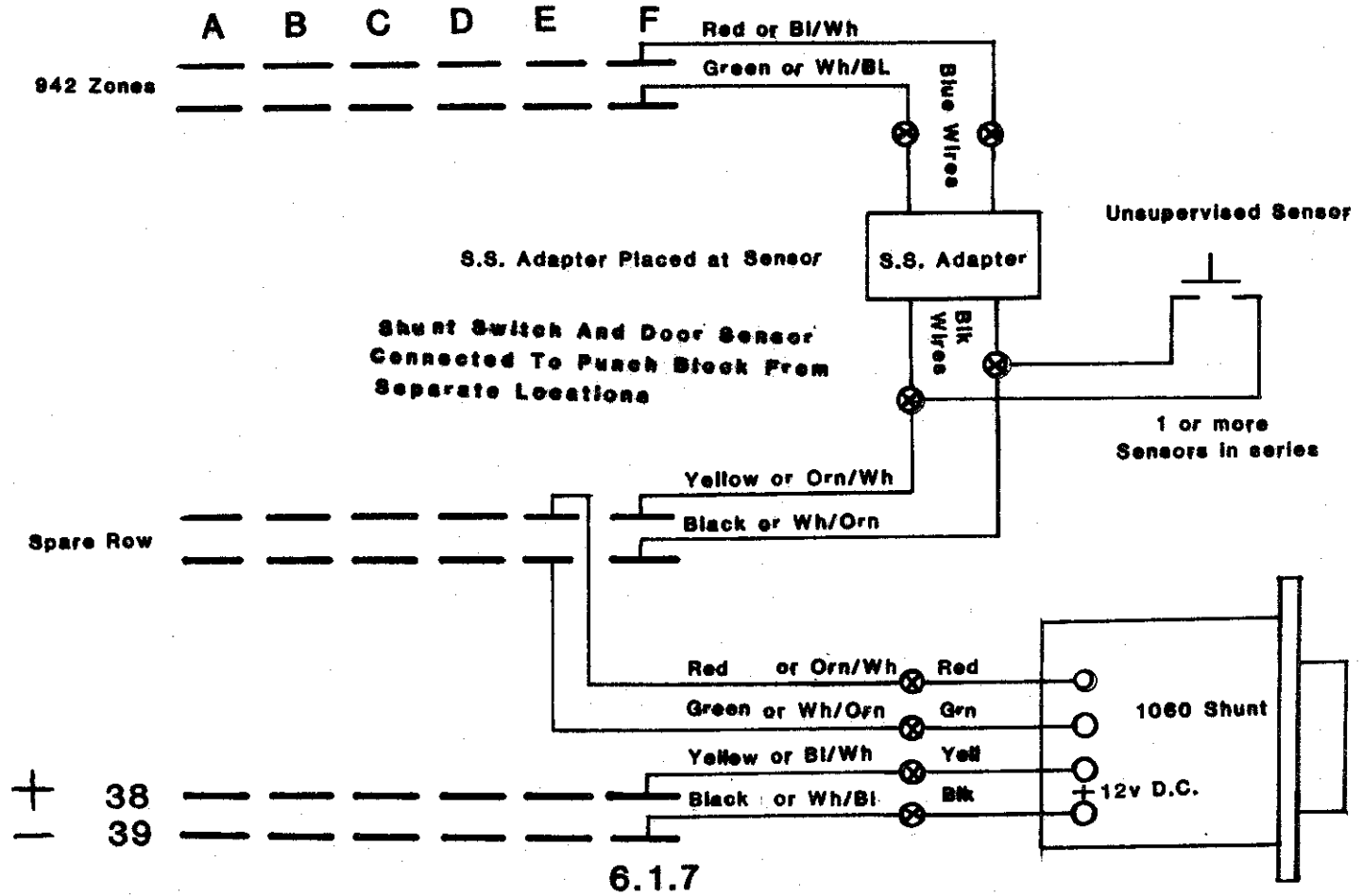


1060 Shunting On 900 #1

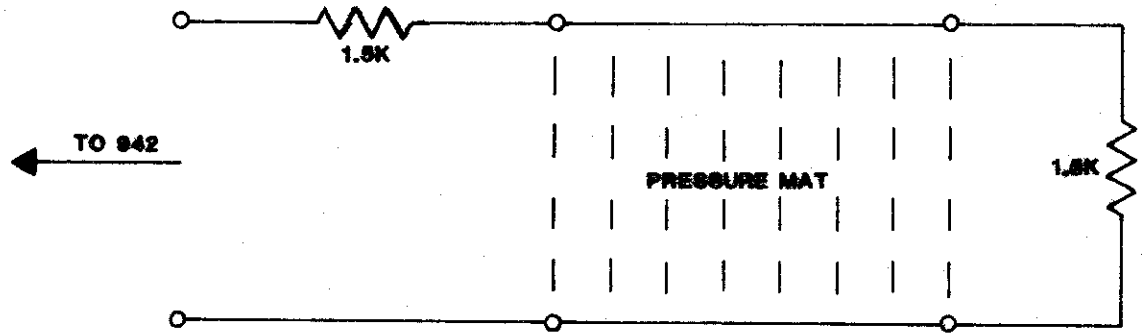
TM0067



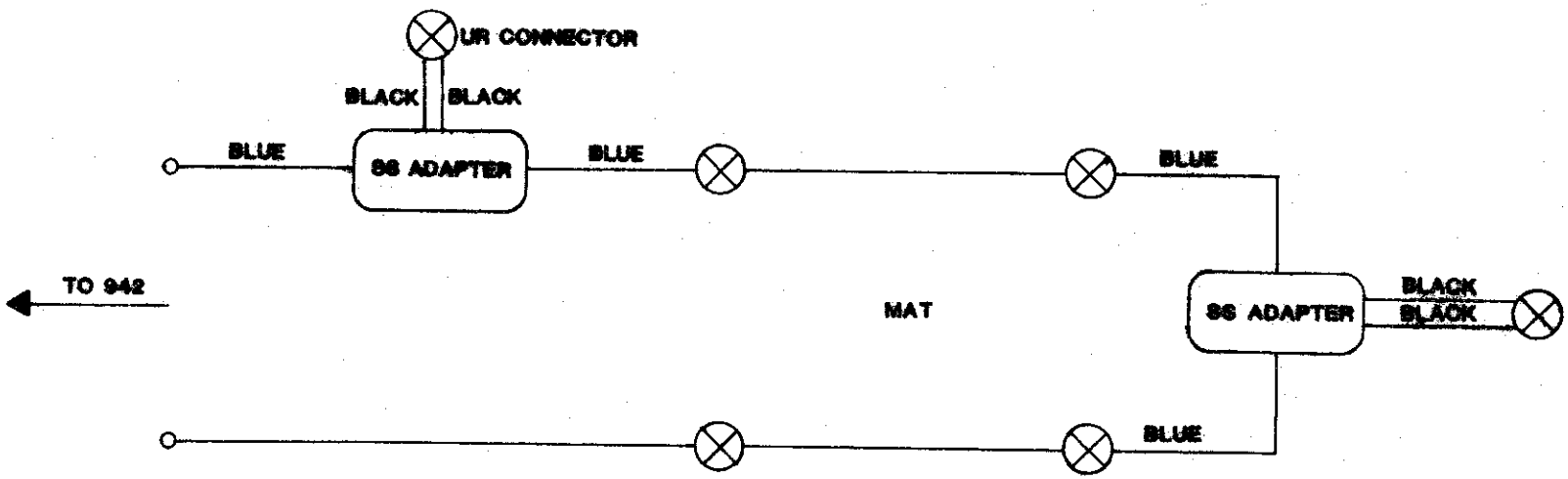
S.S. Adapter And Splice At 942 Punch Block # 2



SUPERVISING N.O. CIRCUITS ON THE 901CE
(REQUIRED FOR U.L. SYSTEMS)



SCHEMATIC



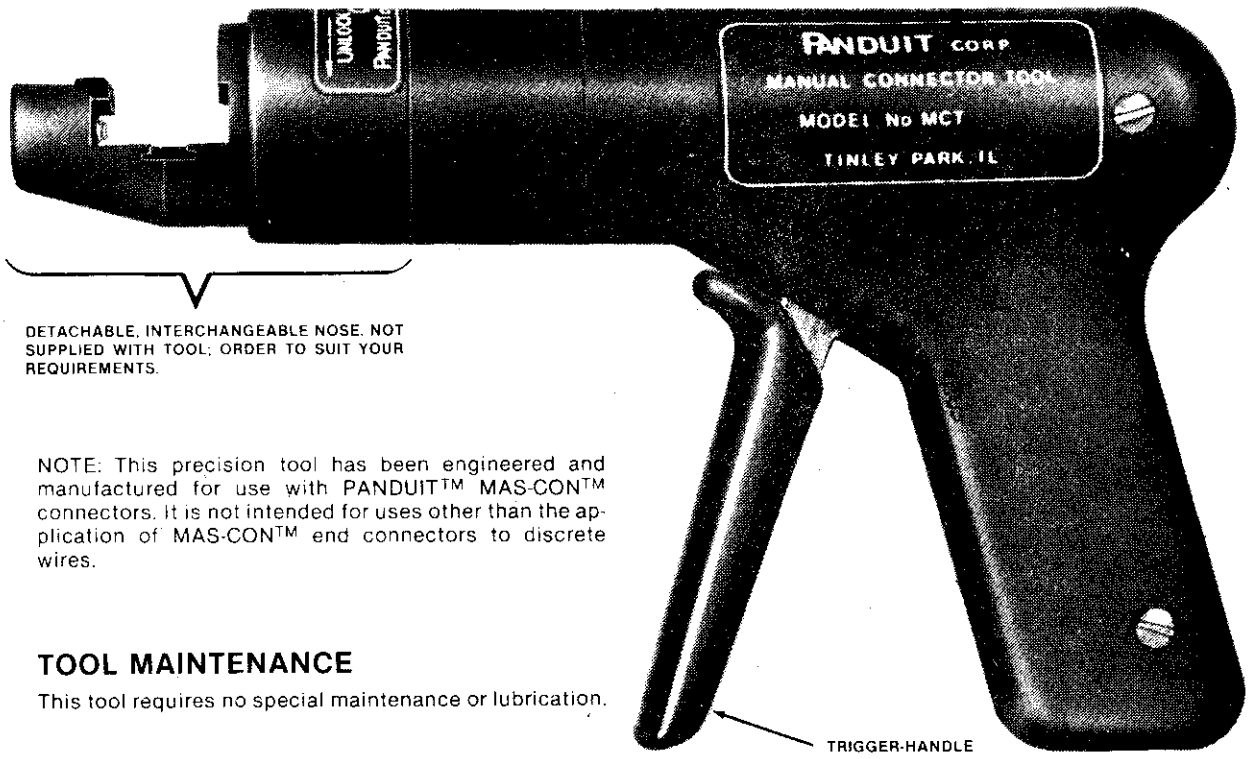
NOTE 1: IF SS ADAPTER'S ARE PLACED NEAR THE MAT, A 2 CONDUCTOR CABLE IS NEEDED FROM 942.

NOTE 2: IF SS ADAPTER'S ARE PLACED AT THE EQUIPEMENT, A 4 CONDUCTOR CABLE IS NEEDED FROM 942.

PANDUIT™ MCT MAS-CON™

MASS TERMINATION CONNECTOR APPLICATION TOOL

instruction sheet



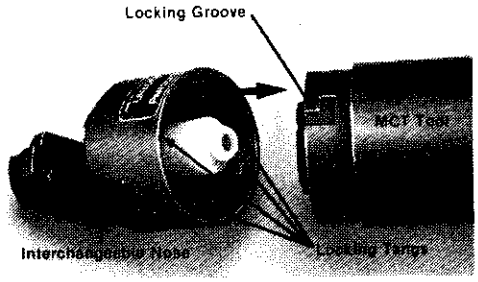
NOTE: This precision tool has been engineered and manufactured for use with PANDUIT™ MAS-CON™ connectors. It is not intended for uses other than the application of MAS-CON™ end connectors to discrete wires.

TOOL MAINTENANCE

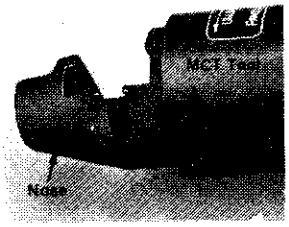
This tool requires no special maintenance or lubrication.

OPERATING INSTRUCTIONS

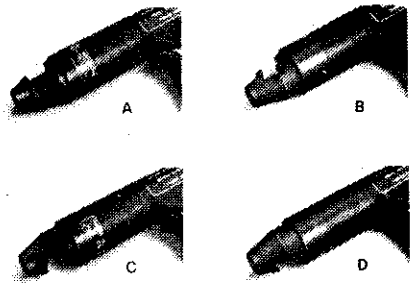
TO INSTALL NOSE...



1. Position NOSE and TOOL as shown. LOCKING TANG should align with LOCKING GROOVE. Push NOSE onto TOOL as far as it will go.

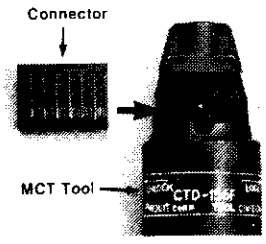


2. Rotate NOSE slightly in direction of arrow to engage tang in groove, locking NOSE in position. To remove, reverse twist and pull off.

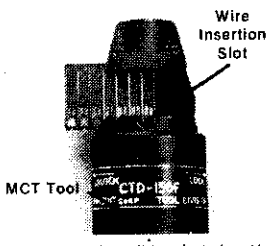


3. The four locking tangs in the nose permit installing it in any one of the four positions on the tool; see above. The nose-locking procedure is the same for each of the four positions. Note items 1 & 2.

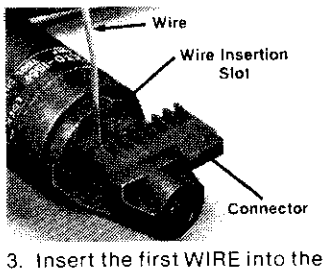
TO OPERATE TOOL...



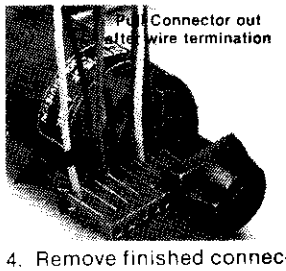
1. Position CONNECTOR as shown - numbers up. Move CONNECTOR into TOOL in direction of arrow.



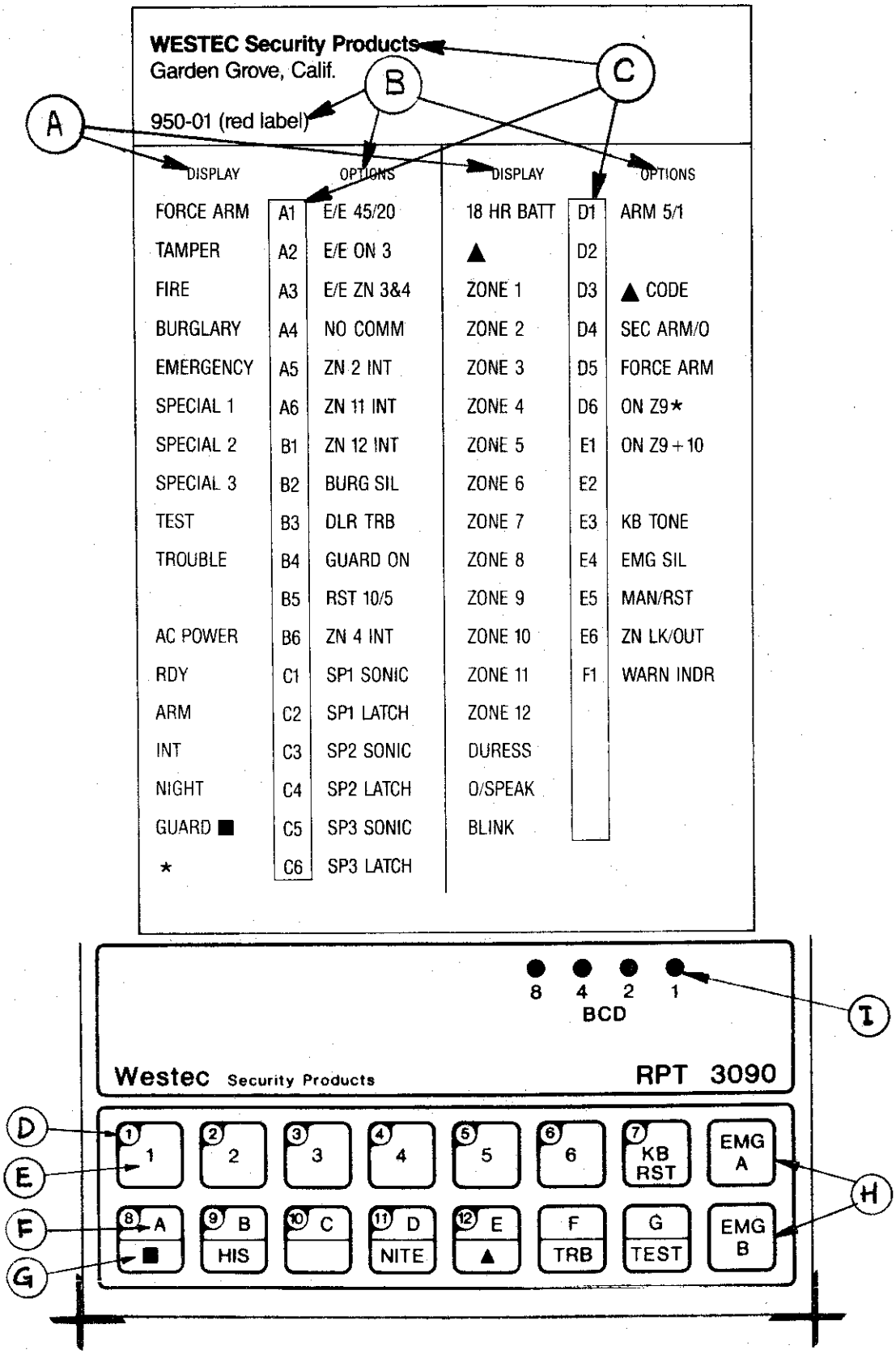
2. Align the #1 slot in the connector with the WIRE INSERTION SLOT on the tool. See above. Connector may be moved manually, left or right, to position the desired slot if some are to be skipped.



3. Insert the first WIRE into the INSERTION SLOT as far as possible. Squeeze handle fully to move WIRE into CONNECTOR. NOTE: *The handle must be fully squeezed* before it will return to its forward position. This ensures proper wire contact. CONNECTOR automatically indexes to next position.



4. Remove finished connector by manually pulling it from tool as shown. If plunger should jam in connector, remove the nose from the tool (Item #2 above). The connector may then be removed.


WESTEC Security Products
Garden Grove, Calif.
950-01 (red label)
A
B
C
DISPLAY
OPTIONS
DISPLAY
OPTIONS
FORCE ARM A1 E/E 45/20 18 HR BATT D1 ARM 5/1
TAMPER A2 E/E ON 3 ▲ D2
FIRE A3 E/E ZN 3&4 ZONE 1 D3 ▲ CODE
BURGLARY A4 NO COMM ZONE 2 D4 SEC ARM/O
EMERGENCY A5 ZN 2 INT ZONE 3 D5 FORCE ARM
SPECIAL 1 A6 ZN 11 INT ZONE 4 D6 ON Z9★
SPECIAL 2 B1 ZN 12 INT ZONE 5 E1 ON Z9+10
SPECIAL 3 B2 BURG SIL ZONE 6 E2
TEST B3 DLR TRB ZONE 7 E3 KB TONE
TROUBLE B4 GUARD ON ZONE 8 E4 EMG SIL
B5 RST 10/5 ZONE 9 E5 MAN/RST
AC POWER B6 ZN 4 INT ZONE 10 E6 ZN LK/OUT
RDY C1 SP1 SONIC ZONE 11 F1 WARN INDR
ARM C2 SP1 LATCH ZONE 12
INT C3 SP2 SONIC DURESS
NIGHT C4 SP2 LATCH O/SPEAK
GUARD ■ C5 SP3 SONIC BLINK
★ C6 SP3 LATCH
8 4 2 1
BCD
I
Westec Security Products
RPT 3090
D
E
F
G
H
1 1
2 2
3 3
4 4
5 5
6 6
7 KB RST
EMG A
8 A ■
9 B HIS
10 C
11 D NITE
12 E ▲
F TRB
G TEST
EMG B

3090 PROGRAMMER

The 3090 RPT is used in programming the 900 CE system. It shows full system status and options, allows programming of combinations, options, and zone memorization, and can be used to trouble shoot the BCD lines. (All keypads connect to the BCD lines.)

The following is a description of the features of the 3090 programmer.

A. DISPLAY

The two rows of blue lettering to the left of the LED indicators shows the status of the 900 system (DIP SWITCH 4 on 950 is off). When the LED is on, that function or feature is on or activated.

B. OPTIONS

The two rows of red lettering to the right of the LED indicators shows the options that have been programmed (DIP SWITCH 4 on 950 is ON) into the system. When the light is on the option is on, when off the option is off. Refer to 1.2.1 for the status of each option.

C. LED INDICATORS

The LED indicators correspond to the lettering to the left or right depending on the position of DIP SWITCH 4 on the 950. When the switch 4 is OFF the LEDS correspond to the blue lettering to the left and when the switch 4 is ON the LEDS correspond to the red lettering on the right.

The red two digit code next to the LED Indicators is the programming code for entering or deleting options when DIP SWITCH 4 on the 950 is ON.

D. ZONE MEMORIZATION BUTTONS

The small numbers (1-12) on the touch buttons at the bottom of the programmer are used to memorize the individual burglary zones. Button 1 memorizes zone 1, button 2 memorizes zone 2, etc. To memorize, turn on DIP SWITCH 2 on the 950, put the zone in its normal state (door closed, mat or eyes clear, etc), and then push the appropriate button (1-12). SEE 4.3.1 FOR INSTRUCTIONS.

E. COMBINATION BUTTONS

The large numbers on the touch buttons at the bottom of the programmer are used to program the customer combinations and to operate the system from the programmer. Follow the instructions 4.1.2 to program in combinations. The button marked KB/RST is used in programming combinations.

F. OPTION BUTTONS

The letter on the top half of the bottom row of touch buttons are used in conjunction with buttons (E) 1-6 to program in the options on the 900 system. SEE 4.2.1 FOR INSTRUCTIONS TO PROGRAM THE OPTIONS.

G. FUNCTION BUTTONS

The symbols and words on the bottom half of the bottom row of touch buttons are used to access the functions of the system.

The following is a list of the functions:

When pushed twice will turn ON or OFF Door Guardian.

HIS - When Pushed twice will recall the burglar zones that last tripped the system.

NITE- When pushed twice will turn ON or OFF the NITE function of the system.

When pushed with a proper combination will turn ON or OFF combination number 4 if option 18 is on.

TRB- When pushed once, will stop the trouble sound when it starts.

TEST- When pushed twice will trigger the test sequence.

H. EMG A - EMB B

These two buttons when pushed together will trip the Emergency Circuit.

I. BCD LED INDICATORS

These LED Indicators shows the status of the BCD Lines in the system All Keypads connect to the BCD Lines. These indicators can be used to Trouble Shoot the system when you are having problems with the keypads. The indicators are normally OFF, and come ON when a keypad is pushed.

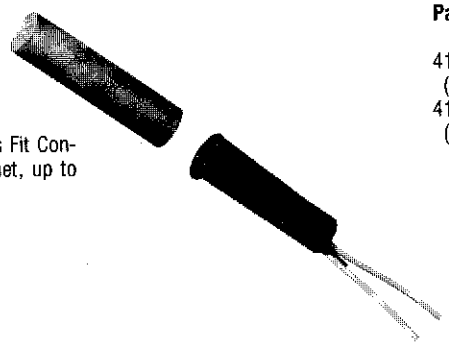
The following is a list of the Key-Pad Functions and the BCD Indicators:

FUNCTION	BCD INDICATOR
1	1
2	2
3	2,1
4	4
5	4,1
6	4,2
KB/RST	4,2,1
□	8
HIS	8,1
C	8,2
NITE	8,2,1
△	8,4
TRB (TBL SIL)	8,4,1
TEST	8,4,2
EMERGENCY	8,4,2,1

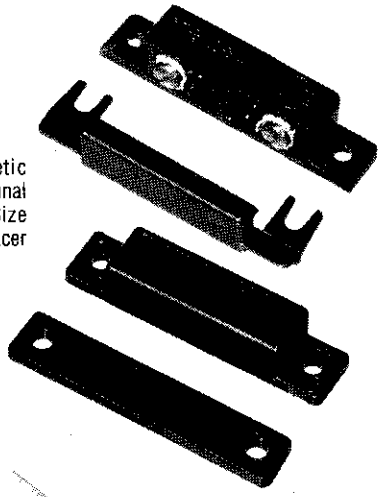
CONTACT SENSORS

For 900 type equipment. U.L. Listed. Manufactured with resistors for the Circuit Analyzer. All switches will be identified with blue leads or a blue dot to designate that they are for use with the 900 type panels **only.**

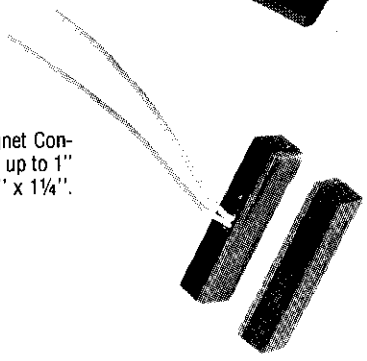
Part No.	Description
401 WR (white) 401 BR (brown)	⅜" Diameter Press Fit Contact with ⅜" Magnet, up to ⅞ inch gap.



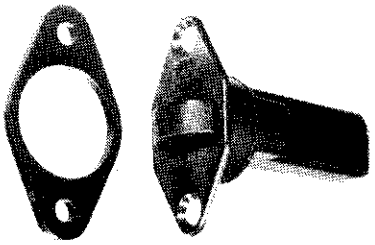
Part No.	Description
405 WR (white) 405 BR (brown)	Surface Mount Magnetic Contact with screw terminal up to 1½ inch gap. Size 2-9/16 long includes spacer and cover.



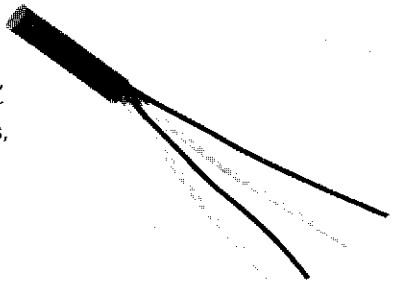
Part No.	Description
410 WR (white) 410 BR (brown)	Surface Mount Magnet Contact—self adhesive, up to 1" gap. Size 1½" x ⅜" x 1¼".



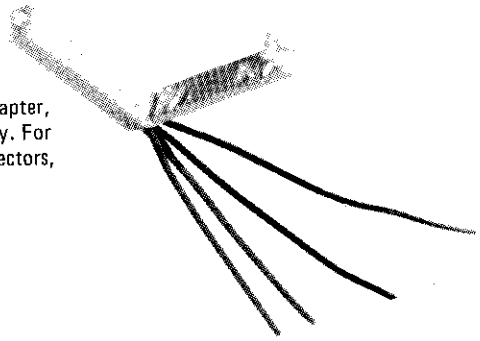
Part No.	Description
415 WR (white) 415 BR (brown)	Roller-type, Reed Plunge Switch with rhodium-plated contacts to eliminate sticking, long life expectancy, corrosion resistant, herimetically sealed to work well in moist or dusty areas. Requires hole ¾" diameter x 1½" deep. Spacer included for wide gap.



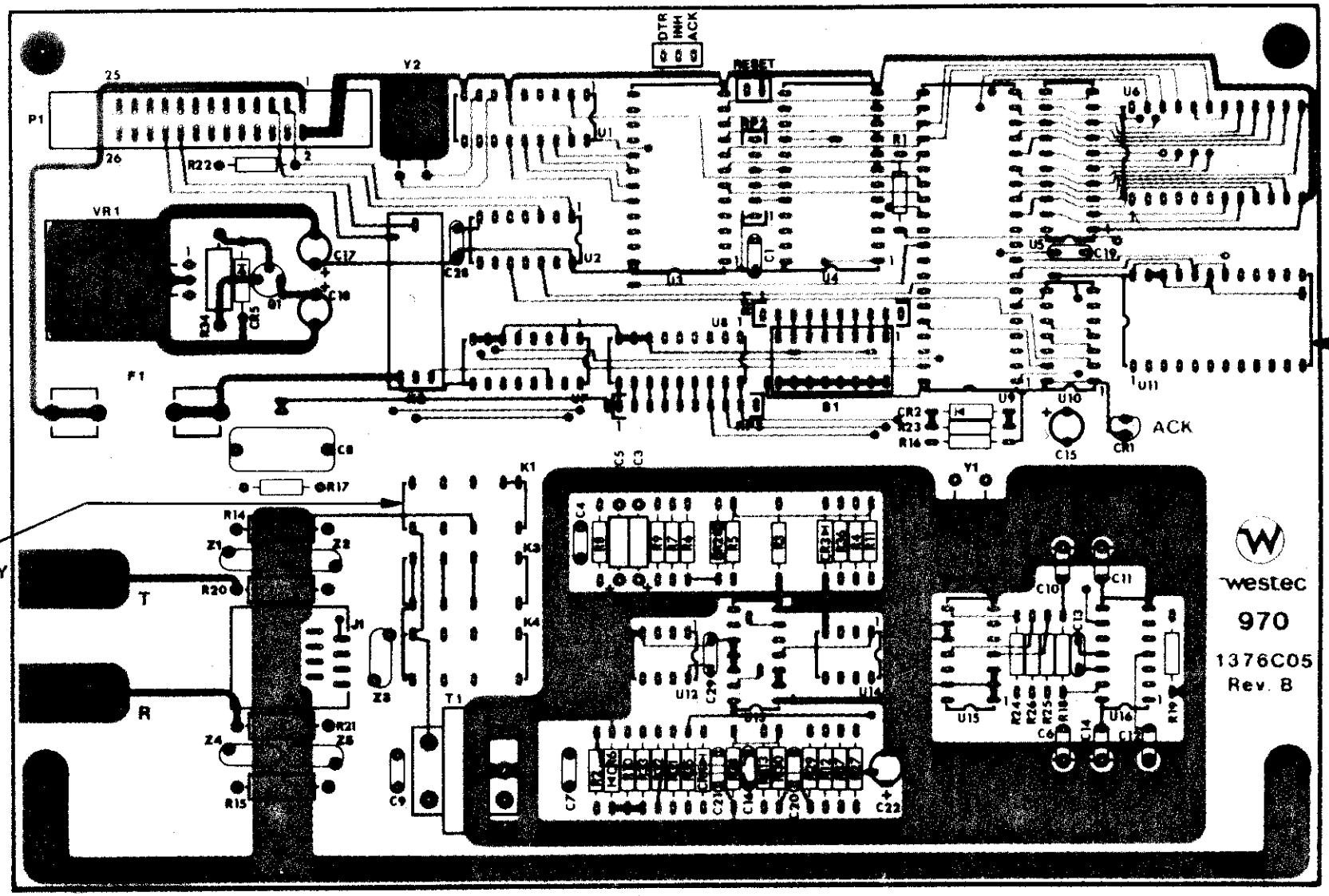
Part No.	Description
420 R	Supervised sensor adapter, housing in black only. For use with motion detectors, eyes, screens.



Part No.	Description
425 R	Supervised sensor adapter, housing in white only. For use with motion detectors, eyes, screens.



970 COMMUNICATOR



970 FUNCTIONAL DESCRIPTION

The 970 communicator is designed to connect to the 950 local board and send all the information of the 950 to the Central Station. It can dial 3 separate phone numbers in rotary or touch tone, report all 12 Burg zones, Fire or 950 trouble, opening, closing, AC power loss, low battery, force arm (shows zone), 18 hour and all alarm conditions. The 970 will send the last transmitted alarm along with the new alarm(s) on each transmission. The direct voice command can be extended to one minute at the Comm Center. Also, by soldering in a relay the 970 will work on ground start phone systems.

A complete status of the system is transmitted with any alarm.

NOTE: The 970 CPU only checks the position (on/off) of the dip switches or the alternate number dialing pins when the 970 is powered up or the reset pins are shorted momentarily.

INDICATORS, SWITCHES, CONNECTORS AND FUSES

LED 1 - ACKNOWLEDGE - comes on steady after the first row of data is verified by the Comm Center; flashes during talk-in.

DIP SWITCHES

1. Tone/Pulse Dialing - When ON the communicator will tone dial. When OFF it will pulse dial.

2. Force Arm - When this switch is ON and the prom was programmed for FORCE ARM, the communicator will report a FORCE ARM and the zones that have been bypassed.

   When OFF the communicator will not report a FORCE ARM.

3. 18 Hour Reporting - When this switch is ON and the prom was programmed for 18 HOUR REPORTING, the communicator will report a 18 HOUR signal every 18 hours.

   When OFF the communicator will not report a 18 HOUR signal.

4. Not used.

5. Arm/Disarm - When this switch is ON and the prom was programmed for ARM/DISARM, the communicator will report the arming and disarming of the 950.

   When OFF the communicator will not report ARM/DISARM.

6. Spec 3 - When this switch is on and the prom was programmed for SPEC 3, Spec 3 will not communicate.

   When OFF Spec 3 will communicate.

7. AC - When this switch is ON and the prom was programmed for AC REPORTING, the communicator will report loss of AC depending on the prom programming for length of time for AC to be off.

   When OFF AC will not communicate.

8. AUX - When this switch is on and the prom was programmed for AUX (INT, NGT, Guard, *, Delta, zone 5) the communicator will report a AUX when the selected input is activated.

   When OFF, AUX will not report.

CONNECTORS

P-1	26 pin connector to 950
J-1	RJ 31X jack

WIRE WRAP PINS

P3-1	Acknowledge - follows ACK LED - goes low - 10 MA max
P3-2	Inhibit - goes low at talk-in - 10 MA max
P3-3	Dial Trouble - goes low if communicator does not reach Comm Center on first try. 10 MA max
F-1	1/2 AMP fuse

PROMS

U6 - Prom 1	Main program for 970
U11 - Prom 2	Phone numbers and account numbers

RESET PINS

Momentarily shorting these pins will reset the dialing sequence and the 970 will re-read the switch settings.

RELAY

K4 - Line seize relay

K3 - Dial pulse relay

K1 - Ground start relay -- Optional

FOR THIRD NUMBER DIALING

The alternate dialing pins are to be shorted when the 901CE is powered up or when the reset pins are used as the 970 CPU only checks the position (on/off) of the dip switches or the alternate number dialing pins when the 970 is powered up or the reset pins are shorted momentarily. As before, the account number must be programmed for a third phone number.

To go back to the first number dialing, momentarily short the reset pins or power up the 901CE.

TELEPHONE LINE CONNECTION

Before connecting this device to the telephone line, the telephone company must be notified and provided with the following information.

A) Manufacturer: Westec
B) Model #: 970
C) FCC Registration #: AG-597K 67718-AL-E
D) Type of Telephone Jack (to be installed by telephone company): RJ38X
E) Ringer Equiv.: 0.0B

NOTE 1: The RJ38X is the same as the RJ31X, except that the phone company is instructed to place a short across terminal 2 to 7 in the coupler for the tamper circuit.

NOTE 2: The telephone company must also be notified if this service is to be permanently disconnected.

This device may not be directly connected to a coin telephone or party line devices.

The telephone company, under certain circumstances, may temporarily discontinue service and/or make changes in its facilities and services which may affect the operation of this device; however, the telephone company is required to give adequate notice, in writing, of such changes or interruptions.

This device cannot be adjusted or repaired in the field; in case of trouble with the device return to:

Westec Security Products, Inc.
11842 Monarch Street
Garden Grove, CA 92641

MODEL 970 INSTALLATION PROCEDURE

1. If the 970 is to be used on a ground start phone system, solder in the relay (Westec part number K0444, order separately) to position K1 on the 970.

2. Install the model 970 in the model 942 chassis.

3. Install prom, making sure pin 1 (notch on bottom or dot) is plugged correctly. See drawing on page 9.1.1.

4. Plug in connector between 950 and 970 (this cable will only plug in one direction).

5. Plug RJ38X cord to model 970 and RJ38X coupler.

6. Turn off dip switch 1 on the 950. This puts the phone cord in the tamper circuit.

7. Notify Comm Center that you will be testing.

8. Run complete tests for all alarm conditions.

9. Test is complete.

10. When the RJ38X cord is disconnected from the 970, but is still connected to the coupler, the house phones will be dead.

11. When servicing the 900 system and you want to disconnect the communicator, do so from the 26 pin plug on the 970.

PROGRAMMING OPTIONS

The following is a list of options and their description used on the 970 communicator.

1. Phone Number 1 - The first phone number to be dialed.

2. Phone Number 2 - The second phone number to be dialed if the first number cannot be reached.

3. Phone Number 3 - This number is dialed first if dip switch 4 and option 6 are on or test (if option 5) is triggered.

NOTE: Phone numbers can be up to 20 digits long with pauses and any special tone signaling required, such as the # symbol in tone converter central offices.

4. Account Number - 8 digits. The first four digits are selected by the distributor. The next 3 digits will be assigned by Westec to identify the different distributors. The last digit is a telephone rotary group number.

5. Test - With this option selected, a test from the 950 will cause the communicator to dial the third phone number.

6. Alternate Number Dialing - With this selected, all alarms will dial the third phone number first if the alternate number dialing pins are used.

7. AC - With this option selected and the dip switch #7 on, the 970 will report loss of AC power.

8. AC Timer - This option selects the amount of delay before reporting loss of AC power. Reporting can be delayed up to 8 hours in 10 minute increements.

9. Special 3 - With this option selected and dip switch #6 on, special 3 will not trigger the 970. Special 3 would be a local only.

10. Force Arm - With this option selected and dip switch #2 on, any time the 950 is force armed the 970 will report forced arm to the Com Center.

11. 18 Hour - With this option selected and dip switch #3 on, the 970 will report the 18 hour signal from the 950 every 18 hours.

12. Auxiliary - With this option selected and dip switch #8 on, the 970 will report the selected function to the Com Center every time that function is turned on or off.

Only one of the following functions can be selected for this option:

Interior
Night
Guard
*
Delta
Zone 5

13. Arm/Disarm - With this option selected and dip switch #5 on, every time the 950 is armed or disarmed the 970 will report to the Com Center.

14. 2nd Number - This option selects the number of attempts the 970 tries befores selecting the second phone number - minimum 1, maximum 4.

15. Number of Dial Attempts - This option selects the number of total dial attempts - minimum 8, maximum 15.

970 PROGRAMMING SHEET

TYPE ☐

1. Phone Number 1 ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Your Com Center

2. Phone Number 2 ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Back-up Com Center

3. Phone Number 3 ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Test and/or Service CC

NOTE: Enter phone number (20 digits maximum) and any pauses required. Use the letter "P" for each pause. Contact the factory for any other special programming requirements.

4. Account Number

Quantity _____ starting with ☐☐☐☐ number (4 digits)

Distributor I.D. ☐☐☐ Westec programmed ☐ rotary ID (0-9)

5. Test - Test to report to phone number 3 [ ] Yes [ ] No

6. Alternate Number Dialing

When dip swith #4 is on 970 will dial phone number 3 [ ] Yes [ ] No

7. AC - 970 to report loss of AC [ ] Yes [ ] No

8. AC Timer - Amount of time before loss of AC is reported _____ min/hr.
Minimum - 10 minutes, maximum 8 hours in 10 minute increments.

9. Special 3 - Special 3 to be local only [ ] Yes [ ] No

10. Force Arm - Force arm to report [ ] Yes [ ] No

11. 18 Hour - 18 hour to report [ ] Yes [ ] No

12. Auxiliary - Selected function to report

No [ ] Zone 5 [ ] * [ ] Delta [ ] Int [ ] Nit [ ] Guard [ ]

13. Arm/Disarm to report [ ] Yes [ ] No

14. Number of tries on phone number 1
Normally 2; minimum 1, maximum 4. ☐

15. Total number of Dial Attempts
Minimum 8 - Maximum 15 ☐

970 OPERATION

The Westec 970 communicator is an information transmitter from the Westec 950 to the Westec 900 Com Center Receiver. The following pages list the operation for each section of the 970.

Overall Operation

The 970, when it detects an alarm conditon, will report the alarm condition; the last alarm that was reported and the status of the 950 (status of 950 that would be on the 3090 programmer). The 970 will attempt to dial phone number 1 twice then try phone number 2 twice, then try phone number 1, switching between phone numbers 1 and 2 until it reaches the Com Center or reaches the maximum number of dial attempts. If the 970 does not reach the Com Center on the first attempt, the dial trouble pin will go low (could trigger outside siren) and stay low until the 970 reaches the Com Center, if it does. The following is a list of all the information that is reported to the Com Center.

Fire
Burlary (by zone)
Emergency
Duress
Tamper
Special 1
Special 2
Special 3
Test
Force Arm
AC Loss
Low Battery
18 Hour Reporting
Power Up
950 Trouble
Fire Trouble
Burg Trouble (by zone)
Auxiliary (1 of 6 conditions)
Arm/Disarm
The last alarm conditon reported to Com Center
950 Status

Phone Dialing

The 970 can dial 3 separate phone numbers. The first number would be your normal 800/900 format phone lines. The second number would be back-up 800/900 format lines, such as another Westec distributor with a 900 Com Center (see Account Number section). The third number has two uses, the first being test from a 950, dialing the third number and the second use would be the serviceman use the alternate number dialing pins and reporting all alarms to the third number. The third number dialing would be used in high traffic central stations, allowing all tests and any account that servicemen are at to communicate to the third number. If the third number is used, separate phone

lines and appropriate Com Center equipment must be ordered. Also, by soldering in a relay (Westec part number K0444, order separately) in position K1 (see page 9.1.1) will allow the 970 to work on ground start telephone systems. Nothing else need be done to the 970 as the ground start function is already built-in (except for the relay).

Account Number

The 970 sends an 8 digit identification number. 4 digits are used as the customer account number and are assigned by the distributor. The remaining 4 digits are used to identify the distributor and the telephone rotary group to the "home" comm center receiver.

In normal operation, the "home" central station strips off the distributor and rotary identification and displays only the account number to the operator.

If the alternate phone number is programmed to call a "foreign" central station the "foreign" central station will display all 8 digits which will show the customer account number, the distributor identification number and the central station rotary group identification. This will allow the "foreign" operator to contact the "home" distributor to act upon the alarm.

The distributor can now act as back-up to one another without the coordination of account numbers which was necessary in the past.

Dial Trouble

Dial trouble on the 970 is triggered if the 970 does not reach the Com Center on the first attempt. If the 970 reaches the Com Center before the maximum number of attempts, dial trouble will reset. If the 970 reaches the maximum number of attempts caused by Com Center operator redial (the Com Center can cause 800/900 dialers to redial any time the 970 is connected to the Com Center Receiver), dial trouble will also turn on. This ouput goes low (-) and can supply 10 M.A. max. If the maximum number of attempts is reached, the 18 hour reporting will automatically turn on.

18 Hour reporting

If option #11 and dip switch #3 have been set, every 18 hours, when the 950 checks the battery, a signal will be sent to the Com Center showing the 18 hour signal. If the maximum number of attempts is reached, this function will automatically turn on (even with option 11 off and dip switch 3 off) and every 18 hours try and send a signal to the Com Center. Once the 970 reaches the Com Center this function will turn off if the options were not selected.

Force Arming

If option 10 and dip switch 2 are selected, every time the 950 is force armed a signal will be sent to the Com Center showing a force arm condition. Also, the zones that were force armed will be reported.

Arm/Disarm

If option 13 and dip switch 5 are selected, every time the 950 is armed or disarmed a signal will be send to the Com Center showing an arm or disarm condition.

AC Reporting

If option 7 and dip switch 7 are selected, every time the 950 loses AC power for a selected time (option 8), from 10 minutes to 8 hours, a signal will be sent showing a loss of AC.

Special 3

When option 9 and dip switch 6 are selected, an activation on Special 3 will not trigger the 970. This option would be used when the customer would want local annunciation using the 950 without sending a signal to the Com Center.

Auxiliary

When option 12 and dip switch 8 are selected an activation on the selected function (1 of 6) will send a signal to the Com Center and report auxiliary. The functions that can be selected are

1.	Zone 5	4.	Int
2.	*	5.	Night
3.	Delta	6.	Guard

This option could be used on any sepcial applications such as using zone 5 (the 950 does not need to be armed) for a safe and sending a signal every time the safe is opened or closed.

Trouble

The 970 will report the following trouble signal to the Com Center.

1. Burg Trouble (by zone)
2. Fire Trouble
3. 950 Trouble (950 CPU stops)
4. Low Battery

950 Status

The 970 will report the status of the 950, at the time of the alarm along with every alarm signal. The status will be the same as what would be on the 3090 programmer (32 bits of information).

Direct Voice Command

The direct voice command of the 970 is normally 20 seconds. If the Com Center operator hears a problem, they can extend the direct voice up to 40 seconds more for a total of 1 minute. The Com Center operator can also cause the 970 to redial up to the maximum number of programmed attempts.

Power Up

When power is first applied to the 970 a power up signal will be sent to the Com Center.

When the 970 is triggered and reaches the Com Center, the first row of data (Data1) will be what caused the alarm originally. The second row of data (Data2) will display the condition of the alarm after it has sent the first row of data. The third row of data (Data3) will show the condition of the alarm after talk-in.

In addition to printing the above information, the printer will also show the beginning and ending status of the 950. Listed below is a chart showing what each bit of the status is.

FTFB	ESSS	TTAR	AING	*18	DD	
OAIU	MPPP	ERCD	RNIU	H	EU	
RMRR	GEEE	SB Y	MTGA	R	LR	
CPEG	CCC	T	HR		TE	
E	123		TD		AS	
					S	
						ZONES
						123456 789111
						012
0 0 0 0	0 0 0 0	0 0 1 0	1 0 0 0	0 0	1 0	(000001 000000)

0 = Inactive
1 = Active

Note: Only the 0 or 1 will appear on the CRT or printer.

On the next page is an example of a printout of the 970 at the 900 Com Center.