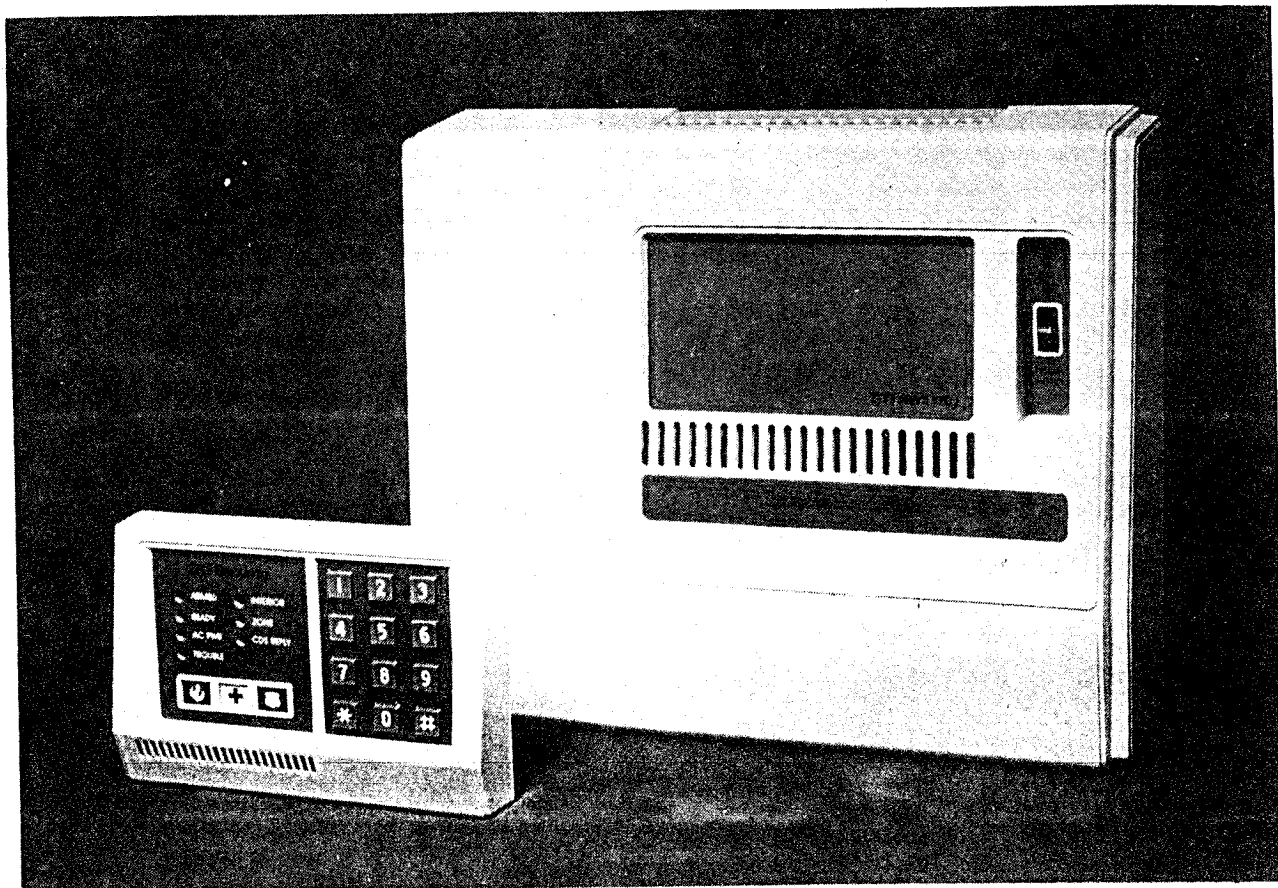


DTI Security

A DIVISION OF DATURA INTERNATIONAL, INC.

1034 Kiel Court, Sunnyvale, California 94086
Phone (408) 744-1200 • Outside California Phone (800) 538-8488
• Telex 172032 DTI SUVL

DSS-300 HOME ALARM TERMINAL & DCU-300 ARMING CONTROL STATION INSTALLATION & OPERATION INSTRUCTIONS



DESCRIPTION

The DSS-300 Home Alarm Terminal and the DCU-300 Arming Control Station were designed utilizing the latest technological advancements in order to meet the requirements of today's security industry.

The DSS-300 and DCU-300 provide central station monitoring of burglar and fire alarm systems via a two-way interactive cable system and/or a plug-compatible 8-channel communicator which will report alarms over the telephone lines.

Installation of the DSS-300 and DCU-300 is simplified due to its innovative modular design. The main functional components were designed to plug-in without requiring any change or reconnection of external wiring during installation or service of the system.

In the tradition of all DTI products, the DSS-300 and the DCU-300 were designed with priority given to reliability and user convenience.



INSTALLATION

MOUNTING THE HOME ALARM TERMINAL

The DSS-300 is typically mounted on a wall using screws, toggle or Molly bolts through the four holes in the panel back plate.

Several features are designed into the DSS-300 to enable quick and simple installation:

1. Keyhole-shaped mounting holes with break-away center punches are built into the back plate. With the main board removed, position the back plate on the wall, then gently tap the break-away punches with a hammer. The small dents left in the wall indicate the exact centers for drilling mounting holes. See Figure 2.
2. After securing Molly bolts in the top holes, back the screws out a quarter inch. Remove the back plate from the wall and bend the center punches until they break off; then hang the back plate on the Mollys. See Figure 3.
3. Use the back plate to mark wire-entry cutouts and bottom mounting holes on the wall. Remove the back plate. Drill and install the bottom Mollys; cut out the wire-entry holes. There are two "mouse holes" on the bottom of the main enclosure for surface-wired installations.
4. Replace the back plate, and fasten it securely with the 4 Mollys. Proceed to pull the wires through the wall and back plate, and connect them to the Transition Boards. Around the wire-entry holes and along the top of the battery are a number of plastic "loops". These are

Fig. #1

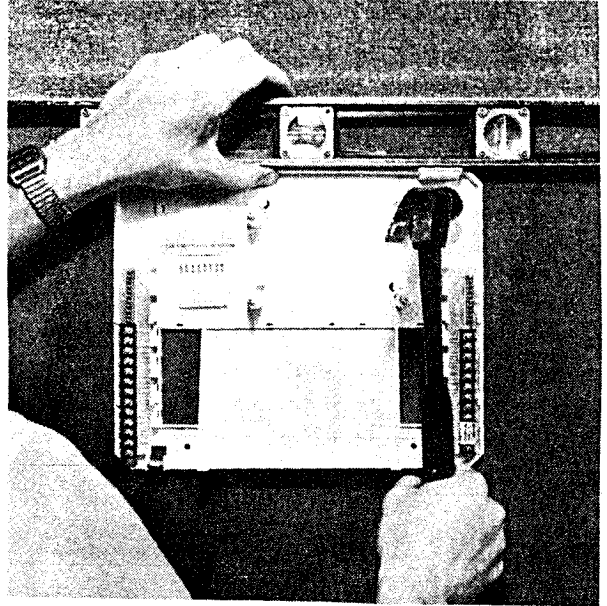


Fig. #2

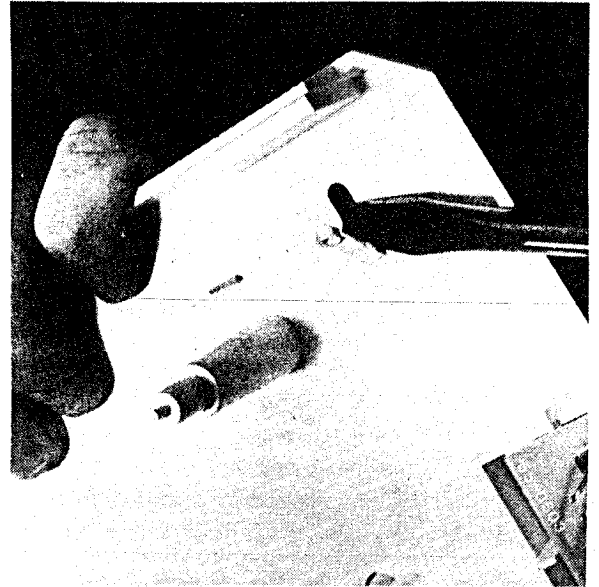


Fig. #3

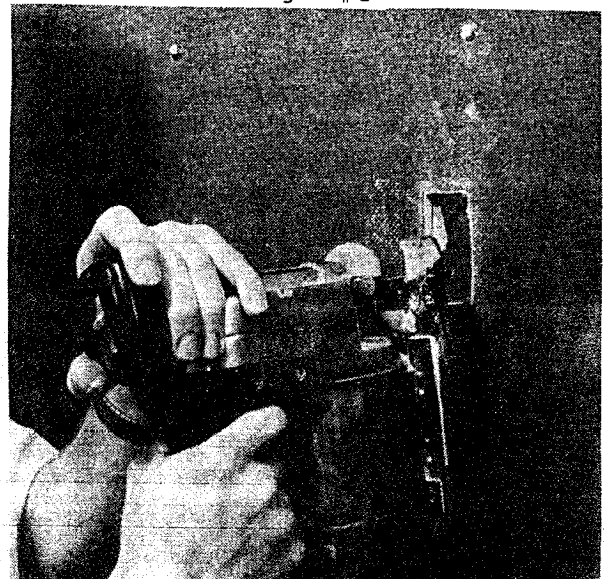


Fig. #4

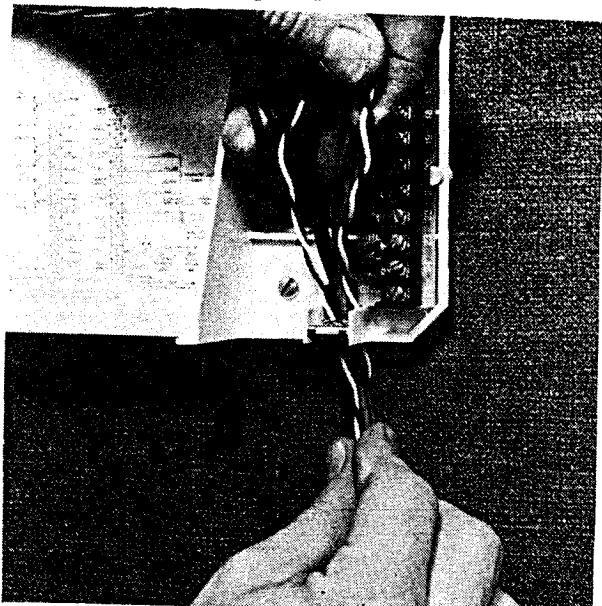


Fig. #7

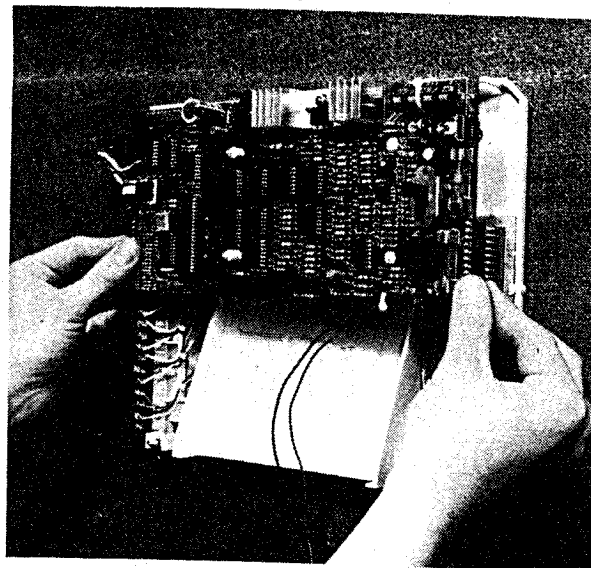


Fig. #5

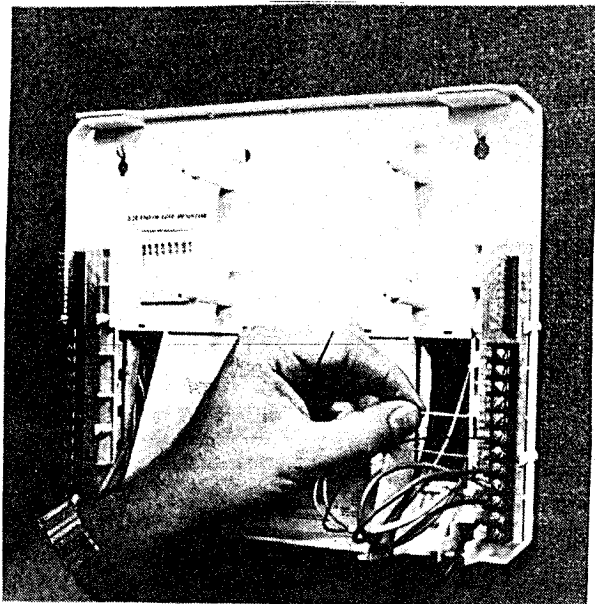


Fig. #8

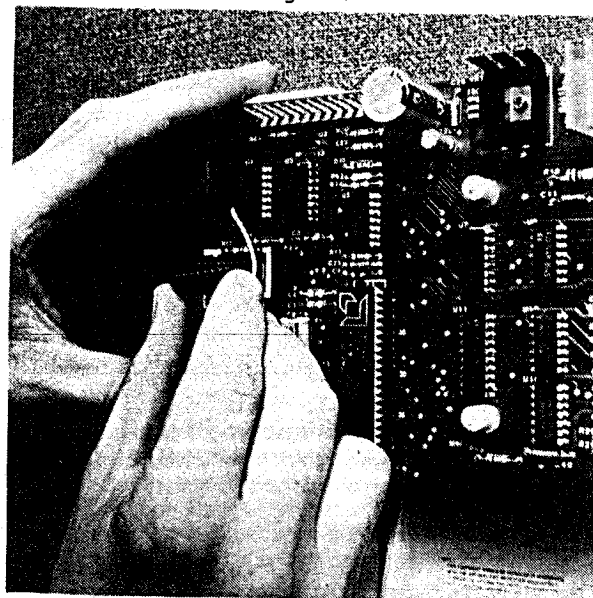


Fig. #6

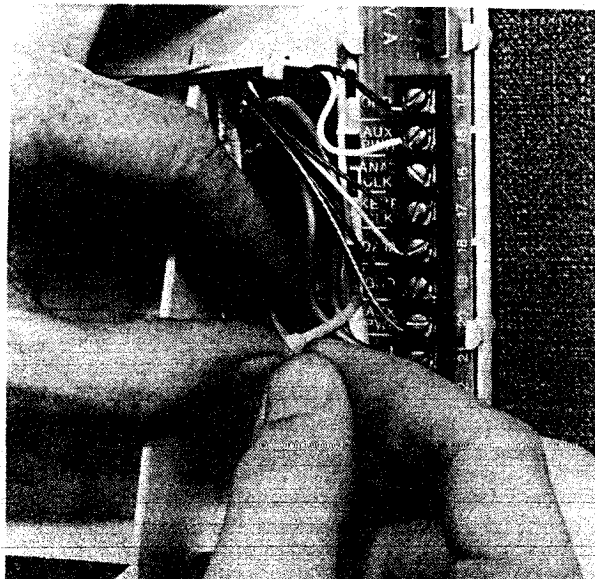
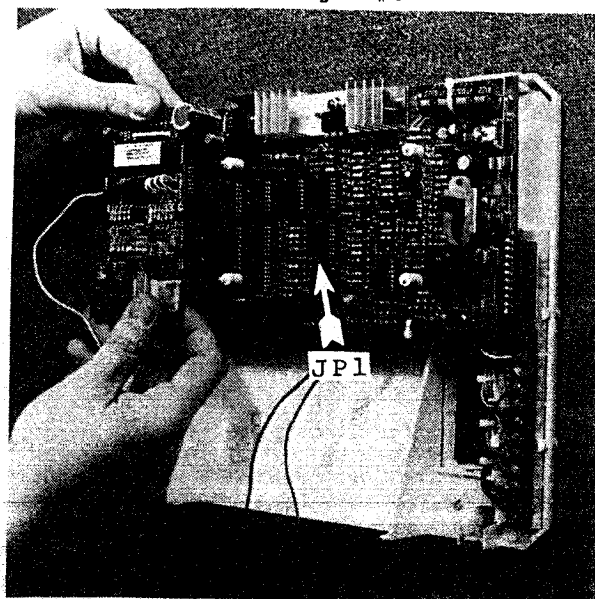


Fig. #9



intended to be used with tie-wraps to hold wires neatly against the back plate. See Figure 6.

5. Once the wiring is complete to the transition boards, the main board can be installed. Use the four guide posts to help guide the connectors into place. Be sure the connectors are completely engaged and are not misaligned. At this time, the PROM (which contains the master code and other information) may be plugged into its socket at the far left end of the main PCB. For instructions on programming the PROM, see the manual for the DPP-300 PROM Programmer.
6. Once the main PCB is in place, the DPD-311 eight-channel communicator can be plugged on. No additional wiring is required except to the RJ31X telephone jack. For more information, refer to the DPD-311 communicator instruction manual.
7. The DCU-300 Arming Control Station may be mounted either externally or inside the DSS-300 cabinet itself. If the DCU-300 is to be mounted internally, remove the back plate and fit it onto the four guide posts and wire it to TB2 as shown in figure 2. If the Arming Control Station is to be mounted externally, a false cover is provided which snaps onto the four guide posts in place of the keypad. Up to four DCU-300s can be used in an installation. The DCU-300 back plate is designed to mount on a wall using the same break-away center

Fig. #10

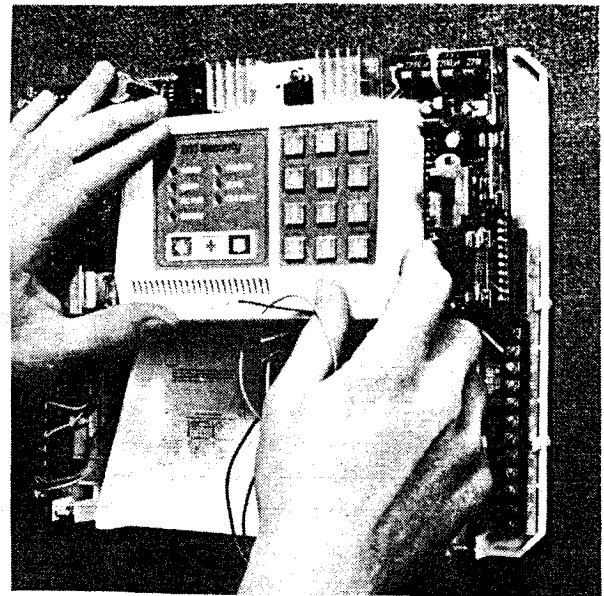


Fig. #11

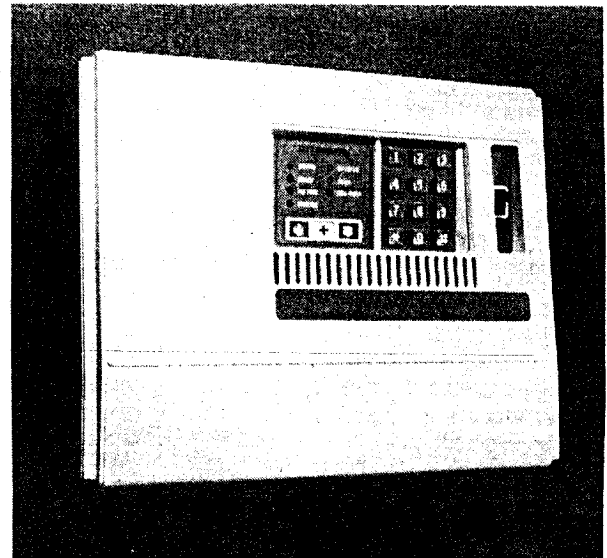
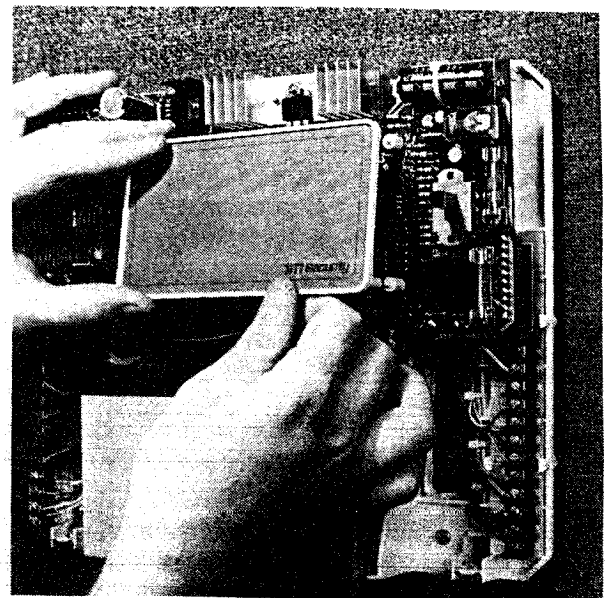


Fig. #12



punch concept as the DSS-300 back plate. The DCU-300 back plate is also designed to be mounted on a single- or double-ganged plaster ring box if desired. The keypad is secured to the back plate with a single screw.

8. The DSS-300 is powered by a 14VAC, 40VA, Class 2 plug-in transformer. It is suggested that the transformer be plugged into an out-of-the-way outlet near the mounting location. Never use an outlet controlled by a wall switch. We recommend that you use 16-18 ga. wire for the transformer run. Remember: Never short the transformer wires while it is plugged in, as the transformer will be destroyed.
9. None of the wires to the Home Alarm Terminal should be run next to 115 volt AC power lines, telephone wires, doorbell wires, etc. Try to keep a separation of at least eight inches.
10. One or two 8 ohm, 30 watt speakers can be used for the siren. WHEN USING SPEAKERS WITH THE DSS-300 YOU MUST CUT JPI ON THE MAIN PCB, OR YOU WILL DESTROY THE SPEAKER. We recommend using 18-20 ga. wire for the speaker run. For maximum volume, use speakers designed for alarms. Any speaker mounted outside must be weather-proof.
11. Battery leads are already attached to the PCB and have quick-connect slide connectors for attachment. See Figure #15.

For further information, please see the hook-up information on pages 16-18.

Fig. #13

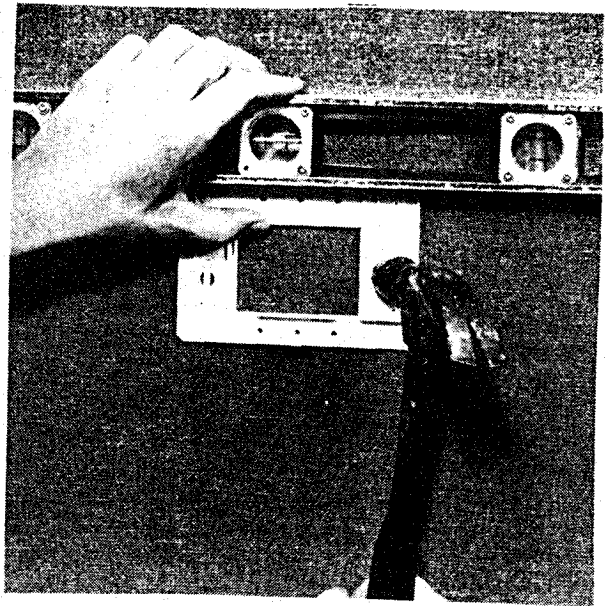


Fig. #14

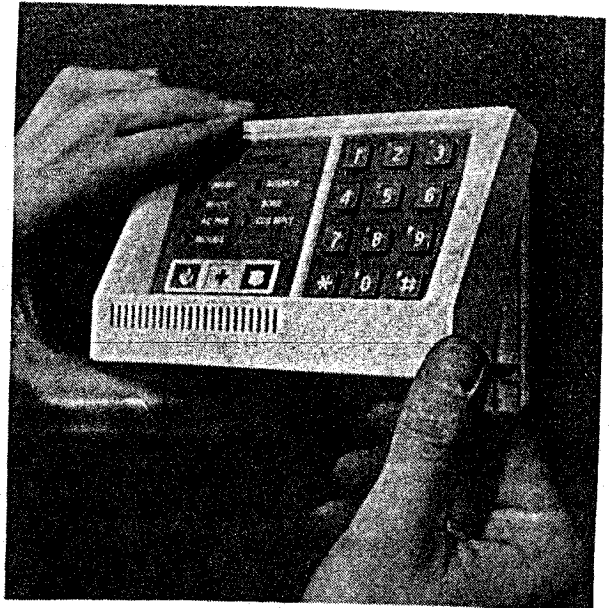


Fig. #15

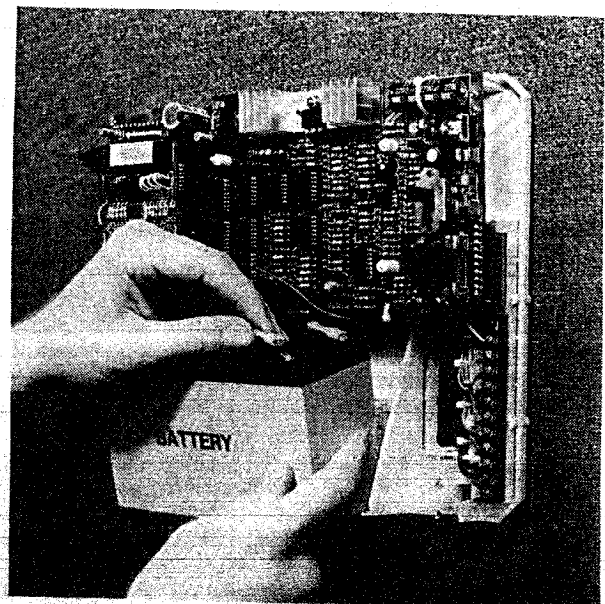


Fig. #16

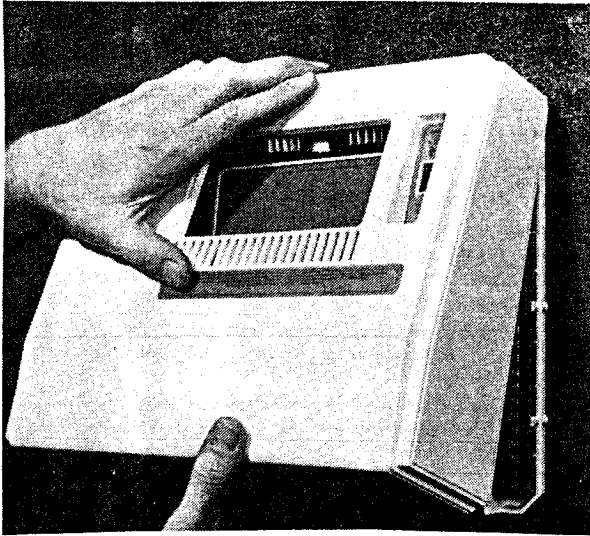
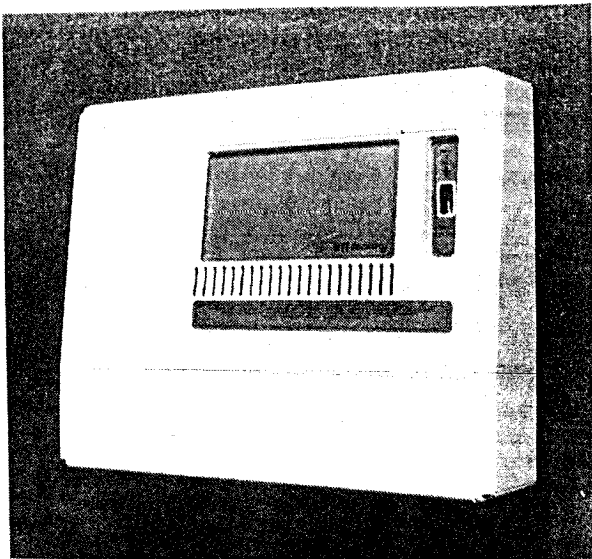


Fig. #17



OPERATION

The DSS-300 has four basic alarms. The FIRE alarm works with smoke detectors, heat sensors or, if desired, push buttons. The BURGLARY alarm uses door and window switches, mats under the carpeting, interior space protectors, etc. The ASSAULT and MEDICAL alarms are intended for use with pushbuttons.

The audible alarm at the customer's home is a siren sound from one or two speakers powered by an integral siren driver on the main control board. The alarm is a continuous whooping sound for burglary and ASSAULT, and an interrupted whooping sound for a fire alarm. The burglary section of the alarm system is turned on and off (armed and disarmed) by means of an Arming Control Station. The Arming Control Station consists of a keypad, seven lights (LEDs), a "beeper", and three dispatch keys. The keypad, similar to a telephone keypad, is used to arm and disarm via a four-digit code (See page 11 for more information). The LEDs and "beeper" are used to display the status of the alarm system. The dispatch keys may be used to trip three possible alarms:

FIRE , MEDICAL and ASSAULT.

THE FIRE ALARM

The fire alarm is a whooping siren that is interrupted every 2 seconds. It can be tripped by pressing the FIRE dispatch key on the Arming Control Station, or by a short circuit across the fire loop for 3 seconds. The fire siren will continue to sound until manually reset (there is no "time-out" for the fire alarm). The fire alarm can be reset two ways: By entering a correct code into the Arming Control Station or by depressing the Test Switch. Depressing the Test Switch is necessary to clear latching type smoke detectors (the Test Switch removes power from the detectors, and silences the alarm).

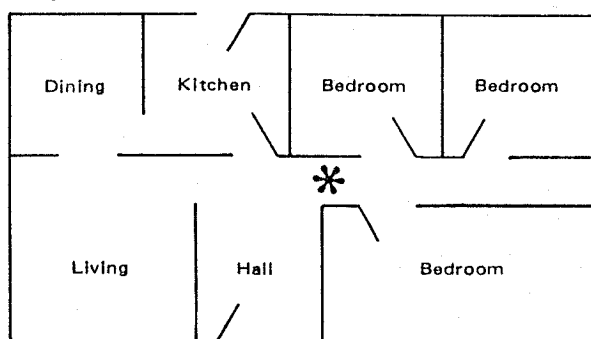
If there is an open circuit on the fire loop, (broken wire, etc.), or if the loop remains shorted after the Test Switch is pressed, the unit will report a trouble condition. During a trouble condition caused by a

broken wire, the trouble LED will light and the Arming Control Station will sound a "beep" every 15 seconds. This "beep" can be silenced by depressing the Test Switch. See the section on the Test Switch, page 13.

DETECTOR INSTALLATION & PLACEMENT

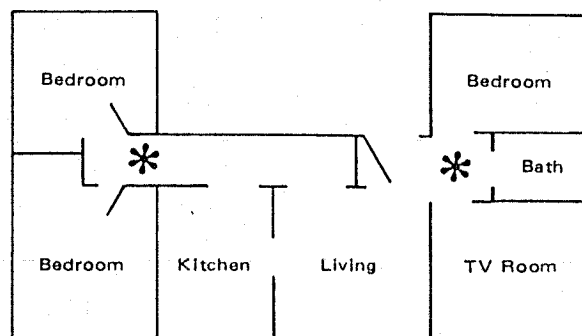
Since most fires in a home occur at night when everyone is asleep, the ideal location for a minimum of one smoke detector is between the bedroom area and the rest of the house. If the bedrooms are spread out or if they are located in different sections of the house, one smoke detector should be placed near each of these sleeping areas.

Fig. #18



Best Residential Detector Location Placement Between Bedrooms and Rest of House

In multi-level houses one smoke detector may be sufficient to protect an entire floor. Since smoke rises, a stairwell in a home tends to become a natural "chimney" for smoke rising from one level to the next. Therefore, by locating a smoke detector near the top of the stairs leading to a main sleeping area, all bedrooms can be successfully protected using a minimum of units.

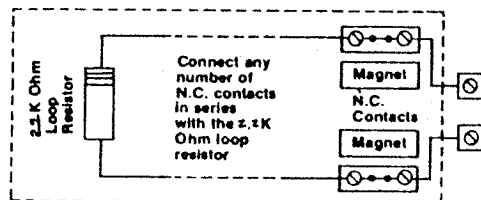


NOTE: Place Detector Near All Sleeping Areas

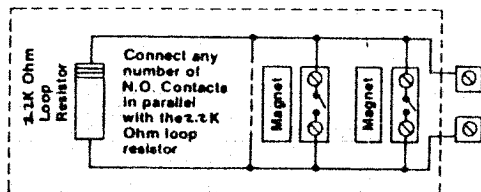
TYPICAL SENSOR LOOP HOOK-UP METHODS

Fig. #19.

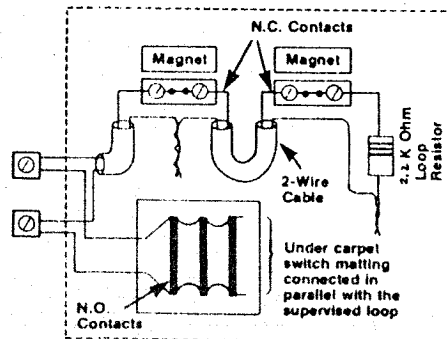
METHOD A



METHOD B



METHOD C



EMERGENCY EVACUATION PLAN

An emergency evacuation plan should be established for an actual fire alarm condition. For example, the following steps are recommended by the National Fire Protection Association and can be used as a guide in establishing this plan for homes. Similar plans may be made for commercial establishments.

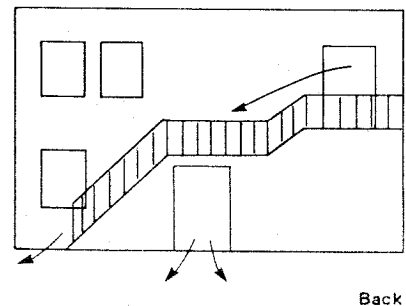
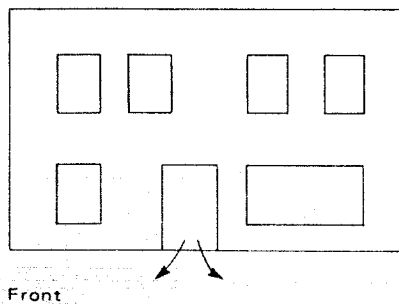
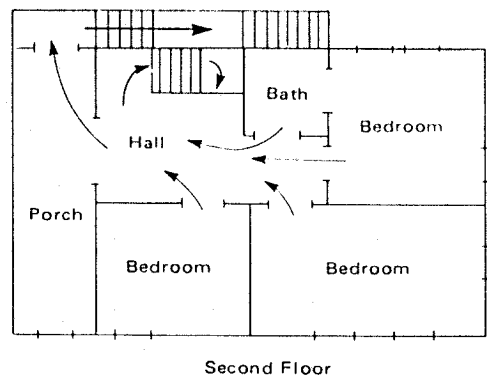
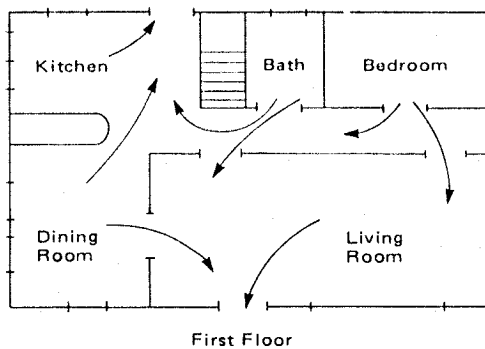
1. Draw up a floor plan of your home. Show windows, doors, stairs, and rooftops that can be used for escape. Indicate each family member's escape routes. Always keep these routes free from obstruction.
2. Determine two means of escape from each bedroom. One will be the door leading to the normal exit from the house. The other may be a window that opens easily. An escape ladder may have to be located near the window if there is a long drop to the ground below.

3. Set a meeting place outdoors for a head count of family members.
4. Practice escape procedures. Sleep with the bedroom door closed. It will increase your escape time. If you suspect fire, test the door. If it is hot, don't open it—the hall is already too hot to enter. If you think it's safe, brace your shoulder against the door and open it cautiously. Be ready to slam the door if smoke or heat rush in. Practice escaping to the outdoors and meeting at an assigned spot. Call the fire department from a neighbor's phone.

NOTE:

After the installation of your alarm system has been completed, notify your local Fire and Police Departments to give them your name and address for their records.

Fig. #20



THE ASSAULT ALARM

The assault alarm is active at all times, and can be triggered by the blue assault button on the Arming Control Station or by hard-wired switches on the assault loop. The alarm sound is a continuous whooping siren. The siren will sound until reset at the keypad or until the alarm timer times out (1-15 minutes). If desired the assault alarm can be selected as a silent alarm (no siren; central station reporting only) at the time of installation. If a short circuit remains on the ASSAULT loop after resetting, the Home Alarm Terminal will indicate a trouble condition. A trouble condition can also occur as a result of a broken wire on the ASSAULT loop.

THE MEDICAL ALARM

The medical alarm is active at all times, and can be triggered by the white medical button on the Arming Control Station or by hard-wired switches on the medical loop. The alarm sound is an on-off tone at the Arming Control Station. When the central station acknowledges the medical alarm, the on-off rate drops in half (slows down). The medical alarm sound remains on until the alarm is cleared by entering a valid disarm code into the Arming Control Station. The medical alarm can be selected as a silent alarm (no tone; central station reporting only) at the time of installation. If the medical loop remains short-circuited after being cleared, the panel will indicate a trouble condition. A trouble condition also occurs as a result of a broken wire on this loop.

THE BURGLARY ALARM

The burglary alarm is active whenever the system is armed. The alarm is tripped by violating an

enabled burglary loop. The Exit/Entry and Instant loops are always enabled. In addition there are two "zone" loops, explained below). The alarm sound is a continuous whooping siren. The siren can be silenced by the alarm time-out or by entering a valid disarm code into the Arming Control Station. The burglary alarm can be selected as a silent alarm (no siren; central station reporting only).

NOTE: All inputs have a built-in delay of between 375 milliseconds and 750 milliseconds. This may prevent some glass-break detectors from working without a pulse extender. The Fire loop has a three second delay built in.

HOW TO OPERATE INTERIOR & ZONE

Two of the burglary loops on the DSS-300 can be enabled or disabled from the Arming Control Station keypad. They are called Interior and Zone. When either is enabled, the corresponding LED will be turned on, and the loop can trip an alarm if the system is armed. If the loop is disabled, the security system will ignore it. The zones are switched in or out by pressing "CMD" and either "INT" or "ZONE" on the Arming Control Station during arming. Whenever the system is armed, the Interior loop is always enabled automatically. After arming there is a six-second period during which it can be disabled. This six-second period also applies to the Zone loop. Neither loop can be enabled after arming. If either loop is violated when it is enabled, the green Ready LED will go out, indicating the violation.

Reminder: If the green Ready LED is not on, the system will not arm.

THE TAMPER SWITCH

Whenever the cover of the DSS-300 is removed, a tamper switch is immediately activated. This switch can be wired to any alarm input (most likely the silent type 7, instant, or assault loops). The tamper alarm is cleared by entering a valid disarm code into the Arming Control Station (or by the alarm timeout, depending on which loop is used).

ARMING CONTROL STATION WARNING TONES

There are seven different reasons for the Arming Control Station to sound a "beep":

1. Every time a key is pressed the Arming Control Station will "beep" to indicate that the Home Alarm Terminal has received the information.
2. If an incorrect arm/disarm code is entered, the Arming control station will sound several short "beeps" to indicate the bad code. After the bad code indication, reenter the code.
3. During the Entry delay period, the Arming Control Station will sound constantly, warning the customer to disarm the system.
4. Whenever the system is successfully armed, the Arming Control Station sounds a one-second "beep".
5. During the Medical alarm the Arming Control Station sounds an on-off tone until cleared by entering a valid disarm code.
6. If the fire, medical, or assault loops are broken, the Arming Control Station will sound a "beep" every 15 seconds.
7. In the "Watch" mode, every time the green Ready LED changes, the Arming Control Station sounds a "beep".

ARMING CONTROL STATION LED INDICATORS

There are seven LED indicators on the Arming Control Station:

1. The ARMED LED (red) is lit whenever the system is armed (burglary section active).
2. The READY LED (green) is lit when all the burglary loops are secure. If a zone is disabled, it can be violated without affecting the Ready LED.
3. The AC POWER LED (amber) is lit when the unit is powered by the plug-in transformer. It will blink when AC power is lost, and the unit is being powered by the internal back-up battery. If this LED is blinking and the rest of the house power is OK, check for a tripped circuit breaker or a blown plug-in transformer. (A 12-volt, 6 ampere-hour battery will keep the system running for at least four hours, depending on auxiliary load). When the unit loses all power (AC and battery), it will also lose all auxiliary codes. The master code will operate the system once power is restored.

4. The TROUBLE LED (red) will light whenever the fire, medical, or assault loops are broken. It is accompanied by a "beep" every 15 seconds from the Arming Control Station. If the "beep" has been silenced by the Test Switch see "Test Switch", page 13), the trouble LED will blink. A trouble condition will also occur if a fire, medical, or assault alarm has been cleared and the loop remains short-circuited. The trouble condition clears when the loop is restored.

5. The INTERIOR LED (amber) is lit when the interior loop is activated. This is done whenever the system is armed, or when the customer enables the interior loop. When the interior LED is off, the interior loop can be violated without affecting the green ready LED.

6. The ZONE LED (amber) is lit when the zone loop is activated. This is done by the customer at the Arming Control Station. Like the interior LED, when the zone LED is off, the zone loop can be violated without affecting the green ready LED.

7. The CDS REPLY LED (red) will blink when the Central Data Station acknowledges receipt of an alarm or test code from the Home Alarm Terminal. The CDS Reply will not blink if the alarm was a silent alarm.

If there has been a burglary alarm, both the armed and ready LEDs will blink until the system is disarmed. This feature is called Alarm Memory, and indicates that a break-in (or sensor violation) has occurred. These LEDs will continue to blink after the alarm timer has expired, and will stop only when the system is disarmed.

Fig. 21



HOW TO ARM & DISARM THE SYSTEM

The DSS-300 security system can be armed three different ways:

1. Entering the four-digit Master Code (programmed into PROM, refer to page 12) at the Arming Control Station.
2. Entering one of the four digit Auxiliary codes (programmed by the customer) at the Arming Control Station.
3. Pressing "0" at the Arming Control Station (with the "Quick Arm" feature programmed in).

For more information on "Quick Arm" and Auxiliary codes please refer to the section on programming, page 12.

The system can be disarmed in two different ways:

1. Entering the four digit Master Code at the Arming Control Station.
2. Entering one of three possible four digit auxiliary codes at the Arming Control Station.

ARMING

When attempting to arm the system, first be sure that the green ready LED is on. Next enable the zone loop, if desired, by pressing :

"CMD" then "ZONE"

at the keypad. The zone LED should light. If the zone loop

is secure, the green ready LED will stay lit. If the ready LED goes out, the zone is not secure, and the system will not arm. To remedy this, either secure the zone or disable it by pressing :

"CMD" then "ZONE"

at the keypad. Now enter the arming code. The system will automatically enable the interior loop upon completion of the code. If the interior loop is secure, the system will arm and indicate this by sounding a one-second "beep". If the interior loop is not secure, the green ready LED will go out, and the system will not arm. To remedy this either secure the interior loop or disable it. To successfully arm and disable the interior loop, use the following sequence:

1. Enter the arming code.
2. Press "CMD" then "INT" on the Arming Control Station keypad. You must enter "CMD" and "INT" within six seconds after completing the arming code.

After completing this sequence, the red armed LED will light and the Arming Control Station will sound a one-second "beep".

DISARMING

To disarm the system, enter a valid disarm code (master code or auxiliary code) at the Arming Control Station. If the wrong code is entered, the Arming Control Station will sound several short "beeps" indicating an invalid code. If five invalid codes are entered in a row, the auxiliary codes are disabled for a period of five minutes after the last key is entered. This feature reduces the chance of the

system being disarmed by entering codes at random.

PROGRAMMING

PROGRAMMING THE PROM

The DSS-300 uses a Programmable Read Only Memory (PROM) chip which stores the following information:

MASTER CODE (Any four digits)

EXIT DELAY TIME (0 to 45 seconds)

ENTRY DELAY TIME (0 to 45 seconds)

ALARM TIME: (1 TO 15 minutes; minimum of 4 minutes required for UL approved installations.)

ALARM TIME (1 to 15 minutes)

OPTIONS (silent alarms & power-up armed status)

GROUP NUMBER (cable TV central station use)

ID NUMBER (cable TV central station use)

For more detailed information about programming the PROM, please refer to the DPP-300 PROM Programmer Instruction Manual.

HOW TO PROGRAM AUXILIARY CODES

The DSS-300 can be programmed to use up to three auxiliary codes in addition to the pre-programmed master code. The codes are four digits long and are programmed by using the Arming Control Station. To PROGRAM an auxiliary code, use the following sequence:

1. Press "PGM".
2. Enter the master code.
3. Press 1, 2, or 3 (to select which of the three auxiliary codes you wish to program).

4. Enter the four digits you wish to be the code.
5. Test the code by entering it two times. This should arm and disarm the system.

NOTE: If you wait longer than 5 seconds between keystrokes, you have to start over.

To CHANGE an auxiliary code, use the same sequence, entering the new code digits in step 4. To ERASE a code completely, do only steps 1 thru 3, and wait ten seconds. The code you selected in step 3 will no longer operate the system.

HOW TO PROGRAM THE QUICK-ARM FEATURE

The "Quick-Arm" feature enables the user to arm (but not disarm) the system by pressing only the "0" key. This feature is programmed at the Arming Control Station using the following sequence:

1. Press "PGM".
2. Enter the master code.
3. Press "4".
4. Test by pressing the "0" key. The system should arm. Disarm by using a valid disarm code.

To disable the "Quick-Arm" feature, use the following sequence:

1. Press "PGM".
2. Enter the master code.
3. Press "6".

Pressing "0" will have no effect on the system now.

HOW TO USE THE COMMUNICATION TEST

The DSS-300 has a feature whereby the user can test that the Home Alarm Terminal is able to communicate with the Central Data Station. To perform this test do the following:

Press "CMD" then "TEST" on the Arming Control Station. All the LEDs on the Arming Control Station will light up, except the CDS reply LED. When the Central Data Station acknowledges the test, the CDS reply LED will blink. This means the test was successful. The test will end after one minute or when another key is pressed. If the CDS reply LED does not blink before the test times out, there is a problem in the communications system.

HOW TO USE THE WALK TEST FEATURE

The "Walk Test" feature is typically used during installation while the Home Alarm Terminal is disarmed. It enables the installer to test all of the contacts and sensors in the house without needing to see the ready (loop status) LED. To enable the walk test, press "CMD", then "4" on the Arming Control Station. Now every time a loop changes status (violated to non-violated or non-violated to violated) the siren will sound a short whoop. To disable the walk test, press any key on the Arming Control Station.

HOW TO USE THE WATCH FEATURE

The "Watch" feature is also used while the Home Alarm Terminal is disarmed. It is useful to locally annunciate openings and closings of burglary loops. To enable this feature, press "CMD", then "Watch" on the Arming Control Station. Now every time

an enabled loop changes status (violated to non-violated or non-violated to violated) the Arming Control Station will sound a one-second "beep". To disable the "Watch" feature, press any key on the Arming Control Station.

HOW TO OPERATE INTERIOR & ZONE

Two of the burglary loops on the DSS-300 can be enabled or disabled from the Arming Control Station. They are called "interior" and "zone". When either is enabled, the corresponding LED will be turned on, and the loop can trip an alarm if the system is armed. If the loop is disabled, the security system will ignore it. The zones are switched in or out by pressing "CMD" and either "INT" or "ZONE" on the Arming Control Station. When the system is armed, the interior loop is forced in. After arming there is a six-second period in which it can be disabled. This six-second period also applies to the zone loop. Neither loop can be enabled after arming. If either loop is violated when it is enabled, the green ready LED will go out, indicating the violation.

SYSTEM TEST

The spring-return slide switch on the front of the DSS-300 is the System Test Switch. This switch has four functions. They are:

1. Under normal operating conditions, the Test Switch does the following:
 - A. Turns off AC power to the Home Alarm Terminal, thereby testing the battery condition.
 - B. Turns on the siren for about two seconds, with the unit still under

battery power. NOTE: You must hold the switch down until the siren stops to thoroughly test the unit. This test of the battery and siren should be performed weekly.

2. The Test Switch can also be used to clear a fire alarm. If there is a fire alarm in progress, pressing the Test Switch will clear the fire alarm. If the fire loop remains violated, the unit will go into a trouble condition. When the fire loop restores, the trouble condition will clear, and the fire loop will be restored. Pressing the Test Switch also temporarily cuts power to the smoke detectors.

3. The third function of the Test Switch is to silence the trouble "beep". If the fire, medical, or assault loop is broken, the Arming Control Station will light the trouble LED and sound a "beep" every 15 seconds. A trouble code is also reported to the Central Data Station. In order to silence the trouble "beep", press the Test Switch. The trouble "beep" will be silenced for 12 hours and the trouble LED will blink. After the 12-hour period, it returns to the normal trouble indication.

4. The Test Switch is also useful to reset the Home Alarm Terminal. If the Home Alarm Terminal is operating erratically due

to power interruption or other electrical causes, the Test Switch, when pressed, will reset the microcomputer. Example: if pressing a key on the Arming Control Station does not sound a "beep", try pressing the Test Switch to reset the panel.

NOTE: The Test Switch will not work without a battery installed.

INSTALLATION CHECKLIST

When the transformer is plugged in the system should start operating. The siren will probably sound for about a second. Go to an Arming Control Station and press a key. The Arming Control Station should sound a short beep. If it does not, unplug the transformer and recheck the wiring. If it does, press "CMD" then "TEST". All the LEDs on the Arming Control Station should turn on except the CDS Reply LED. To disable this, press any key or wait 60 seconds.

To check each of the burglary sensors, first ensure that the Home Alarm Terminal is disarmed. Next, put the Home Alarm Terminal into installer test by pressing "CMD" then "4" at the Arming Control Station. In the installer test mode, any change on an enabled burglary loop (violated to non-violated, or non-violated to violated) will cause a short whoop from the siren. In this mode one person can test the entire system by opening doors and windows, stepping on floor mats, moving around space protectors, etc. To discontinue the installer test, press any key on the Arming Control Station.

Test the master code by arming the system. Check the exit and entry times by arming the system and opening an exit door, and leaving it open. The time until the Arming Control Station starts its constant prealarm warning is the exit time. The time from the start of the prealarm until the siren starts is the entry time. Disarm the system.

Test the other alarm types by activating the sensors (smoke detectors, push buttons, etc.), making sure that the proper alarm sounds.

Check that the trouble LED is off. Test the battery and Test Switch by depressing the Test Switch and holding it down until the 2-second siren whoop stops. The AC LED should blink during the time that the switch is held down.

● TROUBLESHOOTING

SYMPTOM: Several or all of the loops are in violation all the time.

TEST: Make sure that no loop terminal or loop return is connected to a "common" terminal or the Fire Power terminal.

SYMPTOM: The Arming Control Station LEDs are all off and there is no "beep" when pressing the keypad.

TEST: Check the auxiliary power, including the fuse. Check the Arming Control Station wiring.

SYMPTOM: No siren or bell.

TEST: Check siren fuse, wiring and speaker.

SYMPTOM: Holding the Test Switch down does not make the siren whoop for 2 seconds.

TEST: Check that the Fire,

Medical, and Assault loops are good (no alarm, no trouble indication). Check that the battery is good and the siren fuse isn't blown.

SYMPTOM: READY LED will not light.

TEST: Make sure that the loop resistance on the intrusion loops is 1.5-2.6k.

SYMPTOM: The CDS REPLY LED will not blink on a communications test.

TEST: Check the phone wiring. Check that the line seize LED on the DPD-311 comes on when the communications test is started.

SYMPTOM: AC LED blinks all the time.

TEST: The Home Alarm Terminal is running on battery power. Check the outlet, transformer, and wiring.

SYMPTOM: The auxiliary codes won't work.

TEST: Arm or disarm the system once with the master code. The auxiliary codes are locked out for 5 minutes if five bad codes have been entered in a row. If all power (AC and battery) has been lost, the auxiliary codes will have been cleared. You must then reprogram them.

ELECTRICAL CONNECTIONS

TERMINAL	FUNCTION	DESCRIPTION
1 & 2	INTERIOR	Connect any number of N.C./N.O. contacts to terminals 1 and 2. This sensor loop is typically used for interior protection devices such as floor mats, space protection, etc. A violation of this loop causes an instant alarm when the system is armed; however, it is ignored during the exit and entry delay times. This loop must be terminated with a 2,200 ohm end-of-line resistor.
2 & 3	ZONE	Connect any number of N.C./N.O. contacts to terminals 2 and 3. This sensor loop is also meant for use with interior protection devices. A violation of this loop causes an instant alarm when the system is armed, but is ignored during the exit and entry delay times. This loop must be terminated with a 2,200 ohm end-of-line resistor.
4 & 5	ASSAULT	Connect any number of N.O. switches to terminals 4 and 5. A violation of this loop causes an immediate alarm whether or not the system is armed. This loop may be selected as a silent alarm at the time of installation. This loop must be terminated with a 2,200 ohm end-of-line resistor. If an open circuit condition occurs on this loop (broken wire), the Home Alarm Terminal will indicate a trouble condition.
5 & 6	INSTANT	Connect any number of N.C./N.O. contacts to terminals 5 and 6. This loop is typically used for perimeter protection (windows and seldom-used doors). A violation of this loop causes an immediate alarm when the system is armed. This loop must be terminated with a 2,200 ohm end-of-line resistor.
7 & 8	MEDICAL	Connect any number of N.O. switches to terminals 7 and 8. A violation of this loop causes an immediate alarm whether or not the system is armed. This loop may be selected as a silent alarm at the time of installation. This loop must be terminated with a 2,200 ohm end-of-line resistor. If an open circuit condition occurs on this loop (broken wire), the Home Alarm Terminal will indicate a trouble condition.

ELECTRICAL CONNECTIONS

TERMINAL	FUNCTION	DESCRIPTION
8 & 9	EXIT/ENTRY	Connect any number of N.C./N.O. contacts to terminals 8 and 9. A violation of this loop will cause an alarm after the exit and entry delays have expired. This loop is typically used on the front and rear doors, and other frequently-used entrances (garage, etc). The duration of the exit and entry times are independently programmable at the time of installation. This loop must be terminated with a 2,200 ohm end-of-line resistor.
10 & 12	FIRE	Connect any number of N.O. latching or non-latching smoke detectors, or thermostats to terminals 10 and 12. This loop must be terminated with a 2,200 ohm end of line resistor. If an open circuit condition occurs on this loop, the Home Alarm Terminal will indicate a trouble condition.
11 & 12 (-)	FIRE POWER	Terminals 11 and 12 supply 12 VDC @ 100 mA. for smoke detectors and should be used for that purpose only. WARNING: Never short circuit these terminals when the board is under power. This will cause permanent loss of power to these terminals, and must be repaired by an authorized service technician.
8 & 13	TYPE 7	This loop is typically used for the silent tamper alarm, and is always active. To use as a tamper input, connect the yellow wire from the PCB to terminal 13, and place a 2,200 ohm resistor from terminal 13 to terminal 8.
14 & 15 19 & 20 (-) (+)	AUXILIARY POWER	The auxiliary power terminals supply 12 VDC at 300 mA for the Arming Control Stations and other accessories such as space protection devices. The total current draw must not exceed 300 mA. NOTE: The DCU-300 Arming Control Stations draw about 60 mA each.

ELECTRICAL CONNECTIONS

TERMINAL	FUNCTION	DESCRIPTION
16	ANALYZER CLOCK	Not used at this time.
17	REMOTE CLOCK	Connect to the green wire of the Arming Control Station. Up to 4 Arming Control Stations may be connected in parallel up to 300 feet maximum, using telephone cable.
18	REMOTE DATA	Connect to the yellow wire of the Arming Control Station.
19	REMOTE COMMON	Connect to the black wire of the Arming Control Station.
20	REMOTE POWER(+)	Connect to the red wire of the Arming Control Station.
21 & 22	14 VAC	Connect these terminals to a 14 VAC, 40 VA, Class 2 transformer. Never plug the transformer into a receptacle controlled by a switch.
23 & 24 (-) (+)	SPEAKER	Connect a maximum of two 8 ohm, 30 watt speakers in parallel or 12 VDC bell(s) to these terminals. WARNING!!! WHEN USING SPEAKERS, YOU MUST CUT JP1 ON THE MAIN PCB, OTHERWISE YOUR SPEAKERS MAY BE DESTROYED. When using bells, do not cut this jumper, maximum bell current is 350 MA. (See Figure #9, page 2).

WARRANTY

DTI Security products are warranted to be free from defects in material and workmanship for a period of 12 months from date of shipment to the original purchaser. Defective units returned by the buyer at his own expense during this period will, at the seller's option, be repaired or replaced without charge provided that, after inspection, it is the seller's opinion that the unit has not been subject to electrical or

physical misuse. In no event shall the seller be liable for any loss or damage, consequential or otherwise, arising out of the use by buyer or failure of the product to operate. This warranty is exclusive and given in lieu of all other warranties, expressed or implied, and is void if the equipment has been visibly damaged by accident, misuse, or if the equipment has been modified by anyone other than DTI Security.

SPECIFICATIONS

OPERATING VOLTAGE:
STANDBY POWER:

14 VAC, 40 VA, Class 2 plug-in transformer
12 VDC, 6 Ampere Hour gel-cell battery (optional)
(e.g. Powersonic PS-125 or Yuasa MP6-12, ...)

ALARM OUTPUTS:

Local integral siren driver (fused)
Plug-in eight channel communicator with built-in line seize relay.

FIRE	MEDICAL	BURGLARY	ASSAULT
TRouble	LOW BATTERY	TAMPER	SYSTEM TEST

ALARM TIME-OUT:
DETECTION CIRCUITS:

1 to 15 minutes, programmable at time of installation

- 1.) Interior (supervised)
- 2.) Exit/Entry (supervised)
- 3.) Instant (supervised)
- 4.) Zone (supervised)
- 5.) 24 Hour Assault, self latching (supervised)
- 6.) 24 Hour Fire, self latching (supervised)
- 7.) 24 Hour Medical, self latching (supervised)
- 8.) Silent Tamper (supervised)

LOOP SPECIFICATIONS:

Supervised, 6 mA maximum loop current, RFI and transient suppression built-in. Loop resistance limits: 1,500 ohms to 2,600 ohms.

EXIT/ENTRY TIME DELAYS:

Independently programmable from 0 to 45 seconds in 3 second intervals. Programmed at time of installation.

ARM/DISARM OPERATION:

Armed and disarmed by means of a four digit master code, programmed at time of installation, user programmable four digit auxiliary codes (three), or can be armed using the "quick-arm" feature.
Built-in to Arming control station
12 VDC, @ 300mA max (fused)

PREALARM:

AUXILIARY POWER:

ARMING CONTROL STATION
INDICATORS:

Armed LED, Ready (loop status) LED, A.C Power LED, Trouble LED, Interior LED, Zone LED, CDS Reply LED
Three panic buttons are located on the Arming Control Station: FIRE, MEDICAL, and ASSAULT

PANIC BUTTONS:

SYSTEM TEST SWITCH:

Located on the front of the Home Alarm Terminal cover

ENCLOSURE:

High impact ABS plastic

OPERATING TEMPERATURE:

20 degrees F to 120 degrees F

DIMENSIONS:

DCU-300 - 6" wide, 4" high, 1.1" deep
DSS-300 - 12" wide, 9.9" high, 3.4" deep

COLOR:

Warm White

NOTICE

Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows:

A smoke detector installed in each separate sleeping area (the vicinity of, but outside of the bedrooms), and heat or smoke detectors in living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages.

This equipment should be installed in accordance with the National Fire Protection Association's Standard 74. For additional information write:

National Fire Protection Assoc.
470 Atlantic Ave.
Boston, Mass. 02210

Calif. State Fire Marshal
7171 Bowling Dr. Suite 600
Sacramento, Calif. 95823

The FCC requires the following information be provided for all microcomputing devices:

This product has been tested on a sample basis and found to comply with limits set by the FCC for this type of device. These rules are designed to provide reasonable protection against interference to television and radio reception in a residential installation. There is, however, no guarantee that interference will not occur in a particular installation.

If interference generated by this unit is suspected; turn the system on and off (do not forget to disconnect the battery also) several times and check if the interference is still present with the unit turned off. If the interference is still present with the power switched off, then the unit is not causing the problem. If it is found that this equipment does cause unacceptable interference to television reception, the following steps can be taken to reduce and/or eliminate the problem:

1. If using an indoor antenna, have a good outdoor antenna installed.
2. Rotate antenna until the interference is reduced or eliminated.
3. Move the television receiver away from the unit.
4. Plug the unit and the TV/radio receiver into different outlets; ie. not on the same circuit breaker.
5. Move the antenna lead away from any of the security system wire runs (in particular, the wire runs to any Arming Control Stations).
6. If necessary the user should contact the installer or an experienced TV/radio technician for additional suggestions.

The user may also refer to the following booklet prepared by the FCC and available from most public libraries or direct from the US Government Printing Office. "How to Identify and Resolve Radio-TV Interference Problems"

(Stock No. 004-000-00345-4).

DSS-300 HOOK-UP DIAGRAM

Fig. #22

NOTE :

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 74 (NATIONAL FIRE PROTECTION ASSOCIATION, 470 ATLANTIC AVE., BOSTON, MA 02210).

