DTI Security

Operation And Installation Manual

DCU-15 PROGRAMMABLE

DIGITAL REMOTE

DMK-15 MicroMaster™

DKB-15 Remote

Figure #1
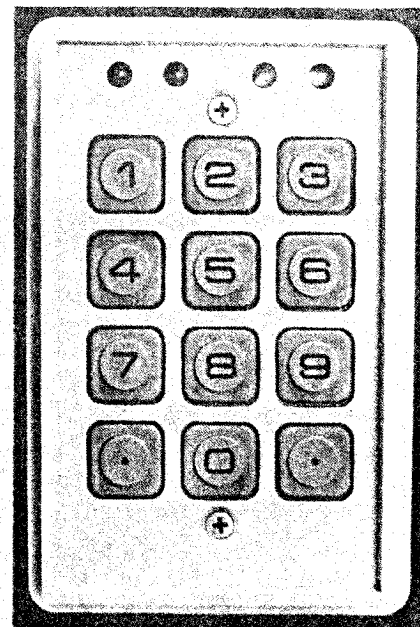
GENERAL DESCRIPTION

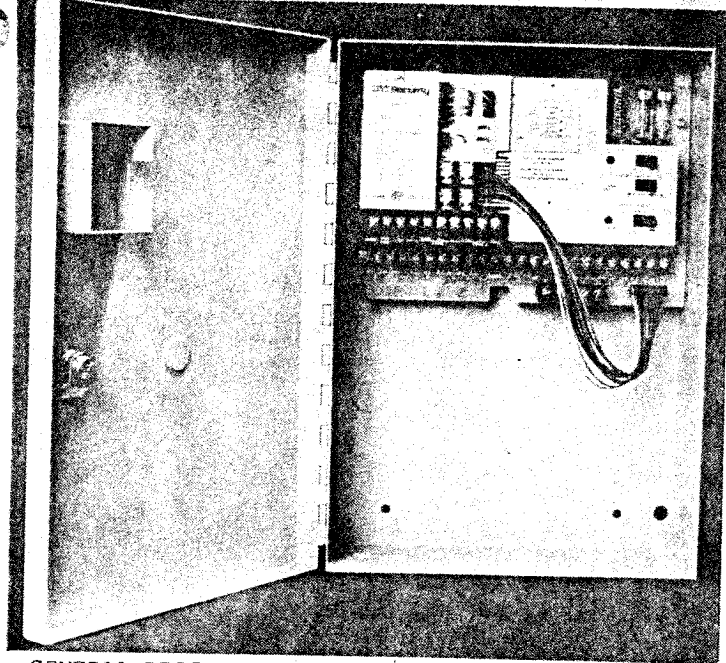The DCU-15 is a programmable digital remote control station for use in arming and disarming of alarm panels or for use as a sophisticated electronic switch. A DCU-15 package consists of one DMK-15 MicroMaster™ and one DKB-15 Remote Keypad. As many as 4 individual DKB-15 remote keypads can be used with each DMK-15 MicroMaster™ depending on the control panel utilized.

Utilizing the latest state-of-the-art microcomputer technology, the DCU-15 System offers user versatility with programmable master and auxiliary codes, selectable closure times, zone shunting, prealarm beeper, dual panic buttons and many more valuable features. In the tradition of all DTI Security products, priority has been given to reliability, appearance and user convenience.
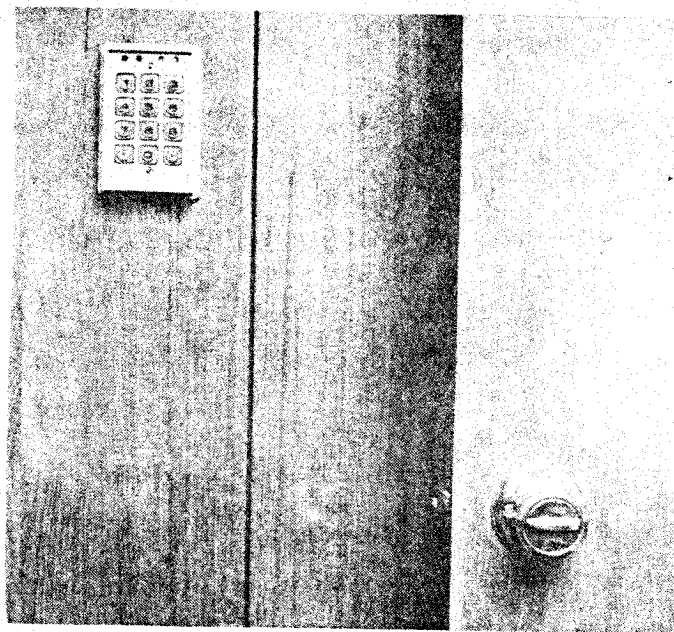
-1-

ELEMENTS OF THE SYSTEM

Figure #2
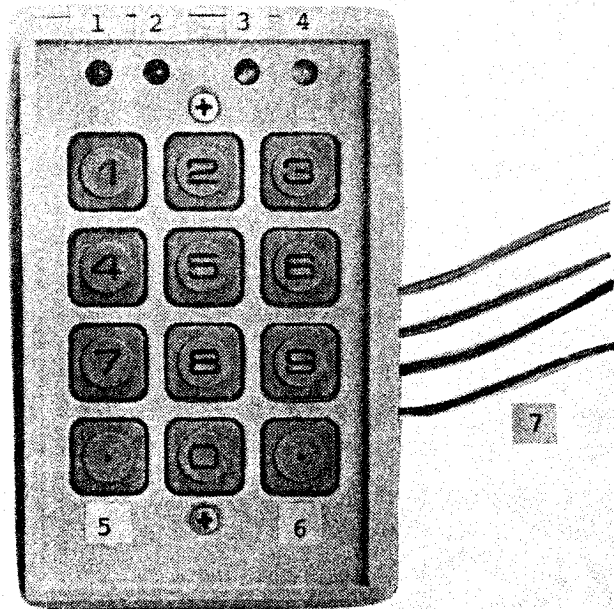
DKB-15 Remote

DKB-15 Remote

1. Arm/Disarm Indicator (Red LED)
   LED is lit when system is "ARMED".
2. Loop Status Indicator (Green LED)
   Depending on the control panel to which
   the DCU-15 is connected, the LED may
   either be "ON" or "OFF" when loops are
   in a safe condition.
3. Zone 1 Enabled Indicator (Amber LED)
   LED will be lit when zone is included in
   the armed mode.
4. Zone 2 Enabled Indicator (Amber LED)
   LED will be lit when zone is included in
   the armed mode.
5 & 6. Dual Panic Buttons
   Depressing both buttons simultaneously
   causes an instant alarm.
7. Four Wire Hook Up
   Eleven functions are available with only
   a four wire connection.

-2-

Figure #3

DMK-15 MicroMaster^{TM}

DMK-15 MicroMaster^{TM}

1. Code Digit Selection Sockets
2. Code Sequence Sockets
3. "Same As" Sockets
4. Adjustable Closure Time Jumper
5. Shunt Jumper
6. Sink Jumper (Active High/intact)
                 (Active Low/cut)
7. Relays
8. Terminal Block
9. Square post connector cable for quick hookup to DTI DSS-451/452 control panels.

INSTALLATION

It is important that before you install the DCU-15, you first REMOVE ALL POWER TO THE CONTROL PANEL. Connect the DCU-15 as described below. Do not plug in any of the programming jumpers until the "Self Test" cycle is complete. Each unit will perform a "Self Test" program immediately after power hookup is completed. (A mounting template is provided in the back of this manual to assist you in installation, Fig. #4) Care should be taken during installation so as not to damage the diodes and resistors located next to the programming selection jumpers.

DKB-15 Remote Keypad Wiring Connections

The DKB-15 remote keypad is connected to the DMK-15 MicroMaster™ using only 4 wires. The Black wire from the remote connects to terminal #1 (Ground) on the DMK-15. The Red wire connects to terminal #2 which is the positive power for the remotes. The Green wire connects to terminal #3. The White data stream wire connects to to terminal #4 to carry digital data to and from the remotes. Up to 4 keypads can be used with each master. If multi remotes are installed, they must be connected in parallel. (Please

refer to figure #5 for wiring example and figure #6 for suggested wire sizes for lengthy runs.) For running lines alongside AC power lines or electrically noisy lines, it may be necessary to use shielded four conductor wire.

Figure #4
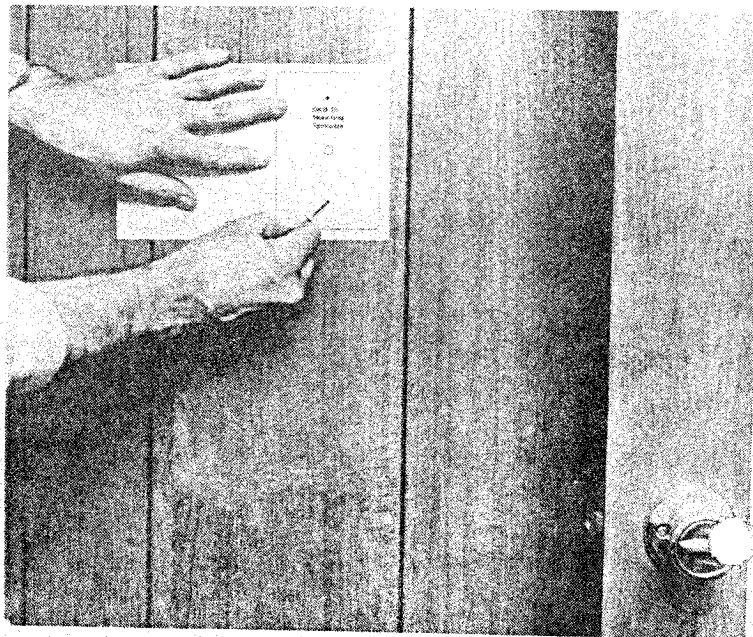
Figure #5
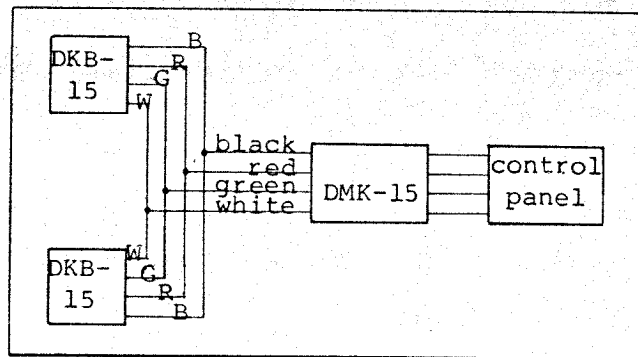
FIGURE #6

NUMBER OF REMOTES

		1 remote	2 remotes	3 remotes	4 remotes
LENGTH OF RUN IN FEET	50'	22 gauge	22 gauge	22 gauge	22 gauge
	100'	22 gauge	22 gauge	22 gauge	20 gauge
	200'	22 gauge	20 gauge	18 gauge	16 gauge
	300'	22 gauge	18 gauge	16 gauge	16 gauge

SUGGESTED WIRE SIZE

Figure #7

DMK-15 MicroMaster™ Wiring Connections

Each DMK-15 MicroMaster™ includes a color coded
interconnect cable for hookup to a control panel.
If the DTI panel, Model 451/452 is being used, the
cable directly plugs into the unit providing a very
quick method of connection. Plug one end of the
cable to the right of the relays. Ensure that the
violet wire connects to the top as indicated. For
control panels other than the DSS-451/452, cut the
the other end of the cable and then strip the
wires for hookup to the panel's own terminal system.
The Black wire connects to panel Ground or "-" point.
The Red wire connects to the panel Positive 12V power
supply (DC only). The Green wire connects to the
Prealarm output. The Yellow wire connects to the
Armed Status output. The Orange wire connects to the
Loop Status output. The two Brown wires connect to
the Arm/Disarm terminal input. The two Violet wires
go to the N.O. Panic input. (Figure #7 illustrates
DMK-15 installed in a DSS-451/452 DTI control panel.)

Please refer to Figures #8 through 19 for detailed
hookup information on specific control panels.

Figure #8

DTI DSS-51/52

DTI SECURITY
DMK-15*

DTI DSS-51/52

DMK-15	Wire	DSS-51/52
PANIC	VIOLET	1 PANIC LOOP (N.O.)
	VIOLET	
ARM/DISARM	BROWN	
	BROWN	12 KEYSWITCH
PREALARM	GREEN	7 PREALARM
12-VOLT POWER +	RED	16 + 12 VDC AUX. POWER
−	BLACK	15 (−) COMMON
LOOP LED	ORANGE	8 "SENSOR" OUTPUT
ARM LED	YELLOW	10 "ON" OUTPUT

Figure #9

DTI DSS-40C

DTI SECURITY
DMK-15*

DTI DSS-40C

DMK-15	Wire	DSS-40C
PANIC	VIOLET	6 PANIC CIRCUIT
	VIOLET	3 (−) COMMON
ARM/DISARM	BROWN	1 SHUNT KEY
	BROWN	
PREALARM	GREEN	7 PREALARM
12-VOLT POWER +	RED	8 AUX. POWER
−	BLACK	
LOOP LED	ORANGE	12 REMOTE LOOP LED
ARM LED	YELLOW	13 REMOTE ARM LED

Cut Sink Jumper
Cut SHUNT Jumper.
[1]Pull-up resistor; between 1K and 10K, ¼ W.

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Figure #10

DTI DSS-772

DTI SECURITY
DMK-15*

DTI DSS-772

PANIC	VIOLET	[24]	LOCAL EMGCY[1]
	VIOLET		
ARM/DISARM	BROWN	[26]	MOMENTARY KEYSWITCH
	BROWN		
PREALARM	GREEN	[4]	PREALARM
12-VOLT POWER	RED	[15] +	AUX.
	BLACK	[16] −	POWER
LOOP LED	ORANGE	[7]	REMOTE LOOP LED
ARM LED	YELLOW	[5]	REMOTE "ARMED" LED
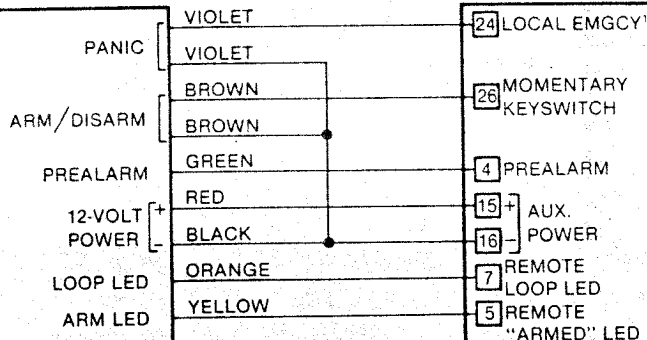
[1]Alternate: Connect to Terminal 23 for SILENT EMERGENCY.

Figure #11

ADEMCO 1023-12

DTI SECURITY
DMK-15*

ADEMCO 1023-12

PANIC	VIOLET RED	DLR 12 WT	[7] PANIC LOOP
	VIOLET BLK	WT	[8]
ARM/DISARM	BROWN	2N2907	[10] + KEYSWITCH
	BROWN		[11] −
PREALARM	GREEN	820K	[9] PREALARM
12-VOLT POWER	RED		[14] + 12 VDC AUX.
	BLACK	47K	[16] −
LOOP LED	ORANGE	4.7K	(1) POST 1 LOOP STATUS
ARM LED	YELLOW	2N2222	(3) POST 3 ARM LED
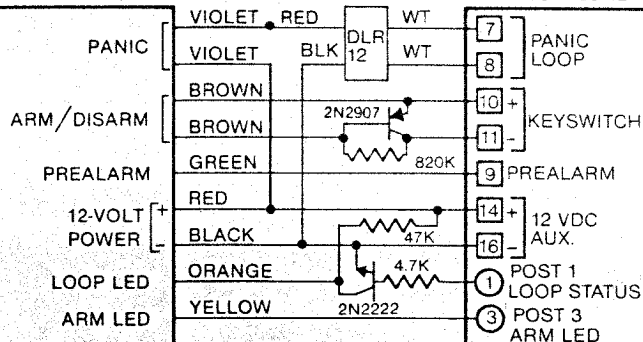
Cut SHUNT jumper
Note: This panel does not have fail-safe arming.

Figure #12

Figure #13

NAPCO CCI-4-12

DTI SECURITY
DMK-15*

NAPCO CCI-4-12

	VIOLET		15/9	SILENT/
PANIC	VIOLET		16	AUDIBLE
				PANIC
ARM/DISARM	BROWN			
	BROWN		8	KEYSWITCH
PREALARM	GREEN	1K 2N2222	7	ENTRY DELAY
		1K		WARNING
12-VOLT +	RED	1K	14	
POWER −	BLACK		10	DC OUTPUT
LOOP LED	ORANGE		6	REMOTE
ARM LED	YELLOW			PROTECTIVE
				INDICATOR
				CIRCUIT

Cut Sink Jumper
Cut SHUNT jumper.
Note: This panel does not have fail-safe arming.

NAPCO CCI-5-12

DTI SECURITY
DMK-15*

NAPCO CCI-5-12

	VIOLET		7	PANIC
PANIC	VIOLET			
ARM/DISARM	BROWN		12	KEY
	BROWN			
PREALARM	GREEN		14	"SONALERT"
12-VOLT +	RED	1	22 +	12 VDC
POWER −	BLACK		24 −	FUSED OUTPUT
LOOP LED	ORANGE	1	10	GREEN LED
ARM LED	YELLOW	1	11	RED LED

Cut Sink Jumper
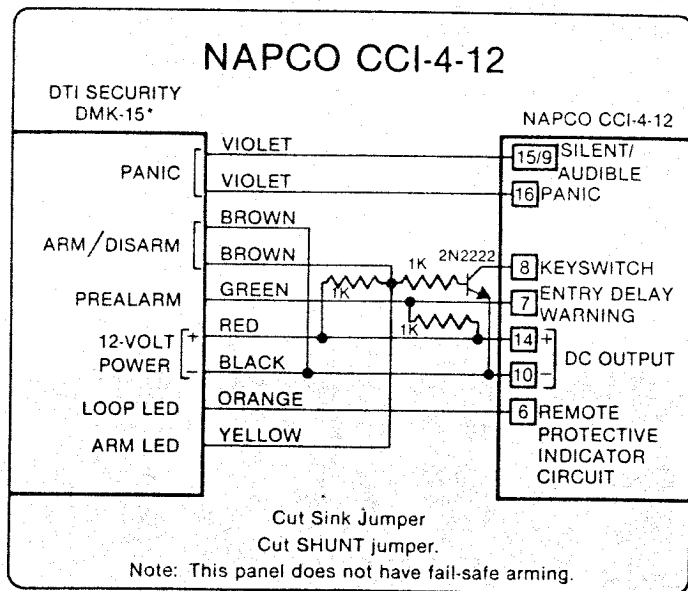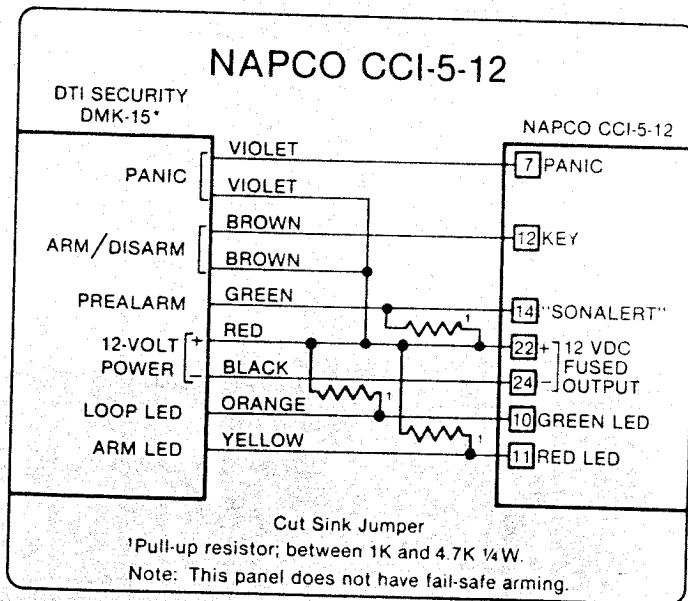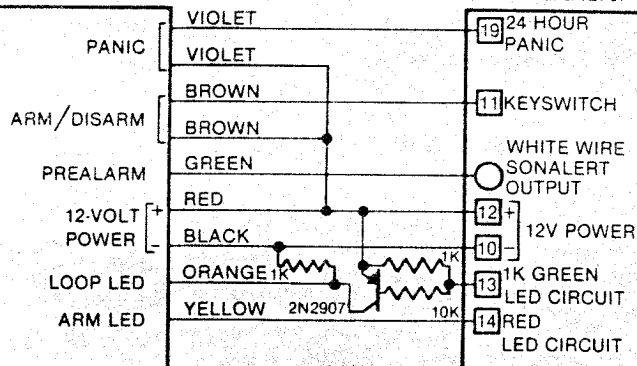1 Pull-up resistor; between 1K and 4.7K ¼ W.
Note: This panel does not have fail-safe arming.

Note: zones must be used on
delay circuit only.

Figure #14

FBI 1270/1270F

DTI SECURITY
DMK-15*

FBI 1270/1270F

PANIC
- VIOLET — [19] 24 HOUR PANIC
- VIOLET

ARM/DISARM
- BROWN — [11] KEYSWITCH
- BROWN

PREALARM
- GREEN — WHITE WIRE SONALERT OUTPUT

12-VOLT POWER
- RED [+] — [12] + 12V POWER
- BLACK — [10] —

LOOP LED
- ORANGE 1K — [13] 1K GREEN LED CIRCUIT

ARM LED
- YELLOW 2N2907 10K — [14] RED LED CIRCUIT

Note: This panel does not have fail-safe arming.

Figure #15

FBI 1290

DTI SECURITY
DMK-15*

FBI 1290

PANIC
- VIOLET — [8] SILENT PANIC
- VIOLET — [7]

ARM/DISARM
- BROWN — [6] KEYSWITCH
- BROWN — [20] SONALERT OUTPUT

PREALARM
- GREEN Z^1 2 — [19]

12-VOLT POWER
- RED [+] — [16] + 12V REGULATED SUPPLY
- BLACK 3 — [15] —

LOOP LED
- ORANGE Z^1 — [17] GREEN LED CIRCUIT

ARM LED
- YELLOW 3 Z^1 2 — [18] + 12 VDC
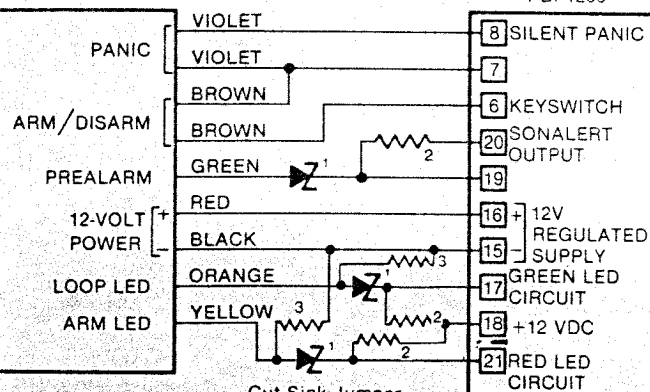- Z^1 2 — [21] RED LED CIRCUIT

Cut Sink Jumper

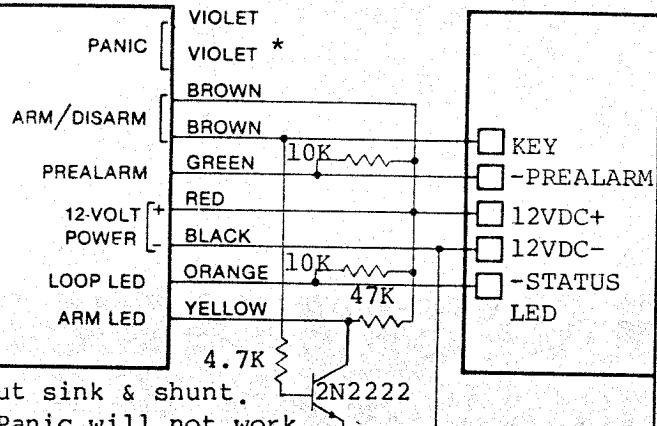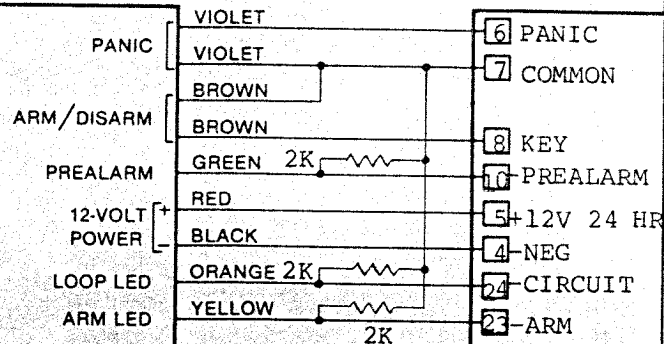[1] 5.6 V Zener Diodes   [2] 4.7K pull-up resistors   [3] 100K pull-down resistors

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Figure #16

NAPCO CCI-7

DTI SECURITY
DMK-15*

PANIC — VIOLET / VIOLET
ARM/DISARM — BROWN / BROWN
PREALARM — GREEN 2K
12-VOLT POWER — RED / BLACK
LOOP LED — ORANGE 2K
ARM LED — YELLOW 2K

16 —
17 + PANIC
4 KEYSWITCH
1 POWER +
5 SOUNDER-
26 +CONSTANT
27 -AUX PWR
2
3 REMOTE LEDs

Cut sink jumper

Figure #17

FBI-1215

DTI SECURITY
DMK-15*

PANIC — VIOLET / VIOLET
ARM/DISARM — BROWN / BROWN
PREALARM — GREEN 10K
12-VOLT POWER — RED / BLACK
LOOP LED — ORANGE 2K
ARM LED — YELLOW 2K

17 AUDIBLE
4 PANIC
8 KEYSWTCH
9 +
21 -SONALERT
7 +12V
20 -REGULAT-ED
22 -GREEN LED
23 -RED LED

Cut sink jumper

Figure #18 Figure #19

MOOSE MPI-23

DTI SECURITY
DMK-15*

PANIC	VIOLET	
	VIOLET *	
ARM/DISARM	BROWN	
	BROWN	
PREALARM	GREEN	10K
12-VOLT POWER	RED	+
	BLACK	
LOOP LED	ORANGE	10K
ARM LED	YELLOW	47K

☐ KEY
☐ -PREALARM
☐ 12VDC+
☐ 12VDC-
☐ -STATUS
LED

4.7K

2N2222

Cut sink & shunt.
*Panic will not work
on this panel. Can be used to activate a
dialer.

MOOSE MPI-25

DTI SECURITY
DMK-15*

PANIC	VIOLET	
	VIOLET	
ARM/DISARM	BROWN	
	BROWN	
PREALARM	GREEN	2K
12-VOLT POWER	RED	+
	BLACK	
LOOP LED	ORANGE	2K
ARM LED	YELLOW	2K

6 PANIC
7 COMMON
8 KEY
10 PREALARM
5 +12V 24 HR
4 NEG
24 CIRCUIT
23 ARM

Cut sink jumper

-12-

ZONING METHODS

To make a supervised loop into a zone supervised loop: (see Fig. #20)

Connect a 4.7K EOL resistor to terminal 7 (or 10) on the DMK-15 and the loop return terminal of the panel along with the loop return wire(s). Connect the panel's loop input terminal to terminal 5 (or 8) on the DMK-15. Lastly, connect the loop wire to terminal 6 (or 9) on the DMK-15.

NOTES:

1. Terminals 5, 6 & 7 are for the zone 1 relay.
2. Terminals 8, 9 and 10 are for the zone 2 relay.
3. Switches are shown non-violated.
4. DMK-15 relay is shown deenergized.
5. For other than DTI panels, consult manufacturer for correct EOL resistor value.

Figure #20

(Zone Shown Disabled)

-13-
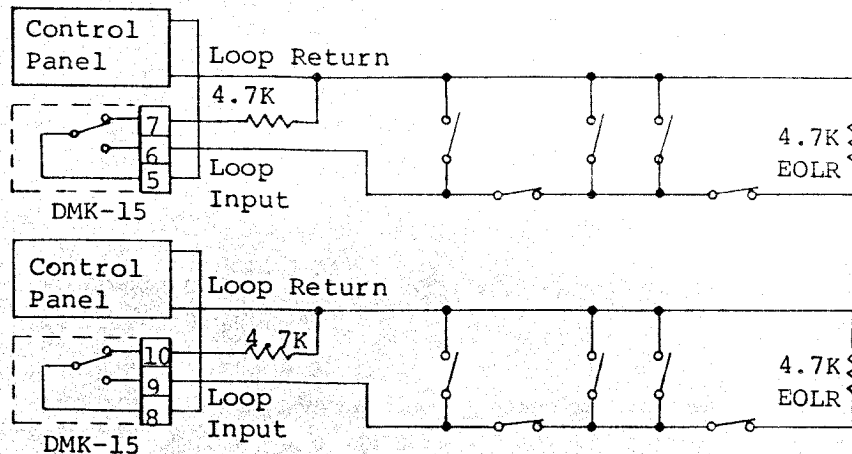
METHODS

make a normally open (N.O.)
nsor into a N.O. zoned sensor:

nect terminals 5 and 6 (or
and 9) in series with the sensor(s)
be zoned. When the zone is
nted, the DMK-15 will disconnect
sensor(s) from the loop.

e Figure #21)

ES:

Terminals 5, 6 and 7 are for
the zone 1 relay.
Terminals 8, 9 and 10 are for
the zone 2 relay.
Switches are shown non-violated.
DMK-15 relay shown deenergized.

Figure #21

(Zone Shown Disabled)

-14-
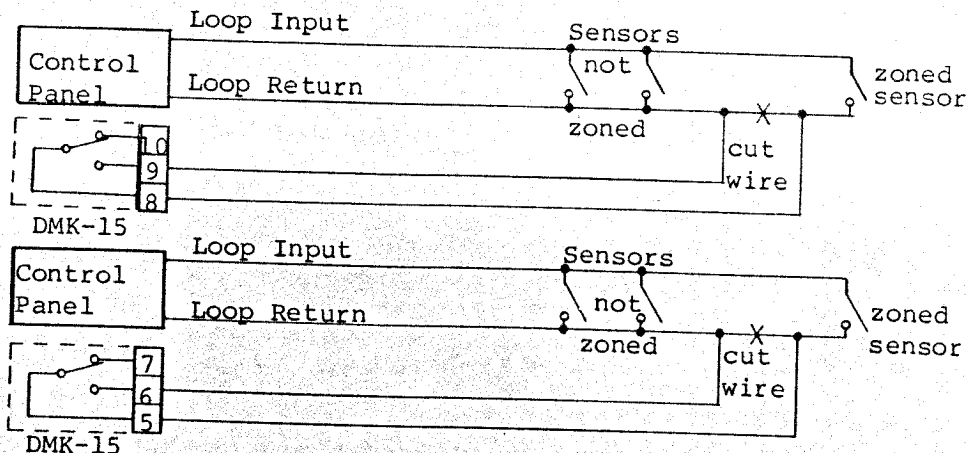
ZONING METHODS

To add a normally closed (N.C.)
zoned sensor to a N.C. loop:

(See Figure #22)

Connect terminals 5 and 7 (or
8 and 10) in parallel with the
sensor(s) to be zoned. When
the zone is shunted, the DMK-15
will shunt the sensor(s) from
the loop.

NOTES:

1. Terminals 5, 6 and 7 are
   for the zone 1 relay.
2. Terminals 8, 9 and 10 are
   for the zone 2 relay.
3. Switches are shown non-
   violated.
4. DMK-15 relay shown deenergized.

Figure #22
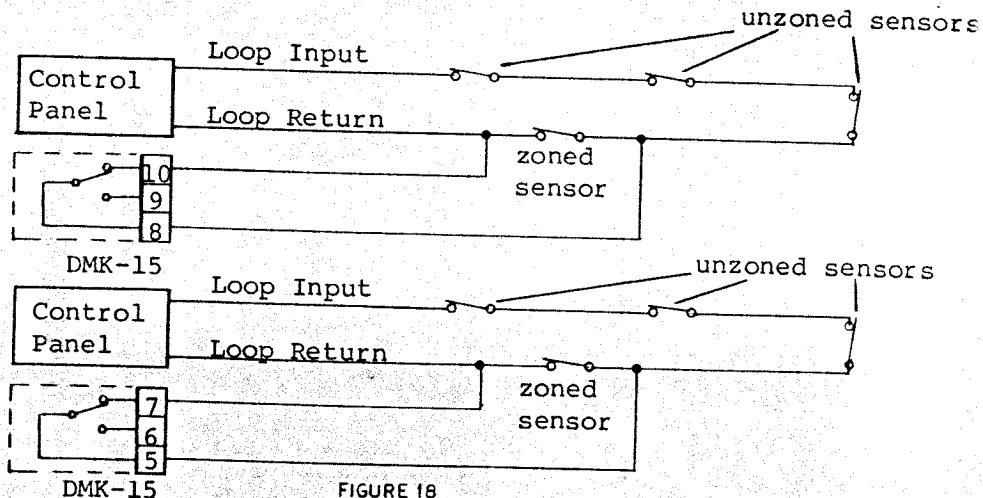
FIGURE 18

(Zone Shown Disabled)

PTIONS

oning Methods - please refer to previous diagrams (Figures 20, 21 & 22).

omentary or Shunt Output- Depending on the control panel being used, you will either require
momentary or shunt output. The momentary closure time can be ¼ second, 7 seconds, 15
econds or 30 seconds. If a ¼ second closure time is desired, DO NOT plug the timing jumper
nto any of the sockets. To achieve any of the other closure times, plug the timing jumper
nto the corresponding socket to the left. If a "latching" (shunt) closure is desired, cut
he jumper labeled SHUNT. Check to ensure that the timing jumper is not plugged into any
 the sockets. Please see photograph on page 3 for location of these jumpers.

tive High or Active Low- The DMK-15 may be programmed for either active high or active low
ealarm, loop status and armed status inputs from the alarm panel. For the system to operate
operly, all inputs must be either active high or active low. For instance, the buzzer or
D outputs have two wires. One wire will connect to the status output; the other wire will
nnect to either a positive or negative voltage. If the other wire of the buzzer or LED
es to ground, the outputs are "active high". You would then leave the jumper labeled SINK
tact. If the other wire of the buzzer or LED goes to a positive voltage, the outputs are
ctive low". You would then cut the jumper labeled SINK. Please refer to the photograph
 page 3 for location of the SINK jumper. When using the SINK option, pullup resistors must
 used (see pages 7 through 12).

SELF TEST FEATURE

When powering up the DMK-15, it has the ability to check its own internal circuitry for proper operation. Before initiating this test, disconnect the alarm sounding device to prevent the test from activating the panic relay. Apply power to the control panel. The self test feature is initiated when power is applied to the unit and none of the programming jumpers are inserted in the sockets. The DMK-15 self test checks the operation of the microcomputer. Each LED will light individually as the corresponding relay momentarily activates. The prealarm will then give one beep. The self test cycle will continue until the power is removed.

PROGRAMMING OPERATIONAL FEATURES

The DCU-15 achieves its versatility through its numerous keypad programmable system options. These options can be selected during installation through the jumpers on the MicroMaster™ or through the programmable features on the remote keypad. Programming is accomplished as follows:

The remote keypads contain an integral speaker which can be used for a prealarm warning provided the control panel being used has such an output. The prealarm in the remote also beeps each time a digit is pressed and beeps 6 times if an incorrect code is entered, independent of any control panel output. This is referred to as an Audio & Tactile Feedback Keyboard.

After 5 wrong tries to arm the system and recognized wrong number attempts, the unit will not accept any auxiliary codes for a security lockout period of 5 minutes. Entering the correct 4 or 6 digit master code operates the system and resets the 5 minute lockout period

DMK-15 offers the versatility of a 4 or 6 digit master code that is field programmable
jumpers on the MicroMaster^{TM}. 1,000,000 possible combinations are available utilizing
eating digits. To program the master code, plug the 1st code digit sequence jumper into
desired code number socket. For 2nd code digit, plug the 2nd code digit jumper into the
ired code number socket. Continue until all 4 or 6 digits have been selected. If only
igits are desired, do not plug in the remaining 2 jumpers.

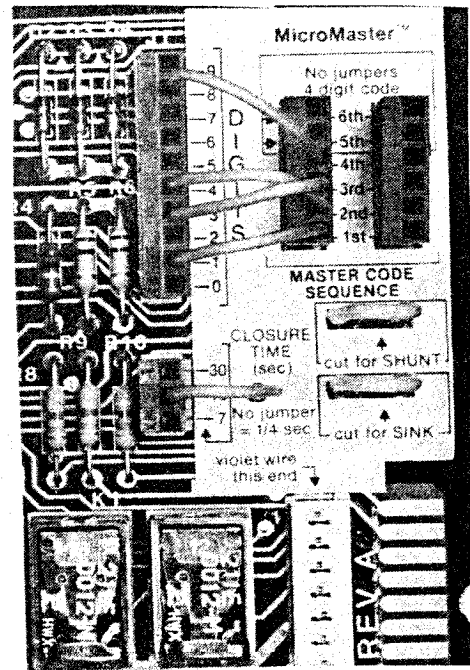gramming Example- Master Code "1438"

Place the first code digit jumper between "1st"
on the middle Master Code Sequence (MCS) socket
and 1 on the digits socket.
Place the second code digit jumper between "2nd"
on the middle MCS socket and 4 on the digits
socket.
Place the third code digit jumper between "3rd"
on the middle MCS socket and 3 on the digits
socket.
Place the fourth code digit jumper between "4th"
on the middle MCS socket and 8 on the digits
socket.

In order to program repeating digits, the "Same As" socket to
the right must be used. The "Same As" socket allows the
installer/customer to select a code number that is the
ame As" a previously used number in the code sequence.

Figure #23

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Programming Example Master Code "143111"

1. Place the first code digit jumper between "1st" on the Middle Master Code Sequence (MCS) socket and 1 on the digits socket.
2. Place the second code digit jumper between "2nd" on the middle MCS socket and 4 on the digit socket.
3. Place the third code digit jumper between 3rd on the middle MCS socket and 3 on the digit socket.
4. Place the fourth code digit jumper between 4th on the middle MCS socket and 1 on the right hand socket.
5. Place the fifth code digit jumper between 5th on the middle MCS socket and 4 on the right hand socket. This indicates that you desire the 5th digit to be the "same as" the 4th code number which is the same as the 1st code number, that is code digit 1.
6. Place the sixth code digit jumper between 6th on the middle MCS socket and 5 on the right hand socket. Again, this indicates that you desire 6th digit to be the "same as" the 5th digit, which is also the same as the 4th digit, which corresponds to code digit 1.
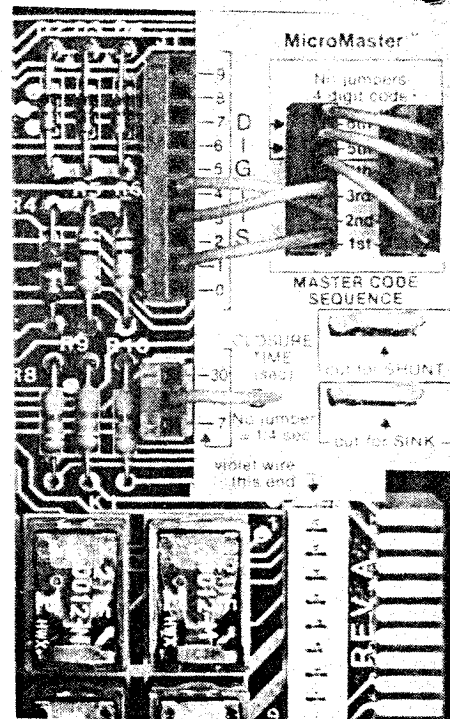

Figure #24

ling - Three separate keyboard programmable auxiliary codes are offered for user
les   convenience. This feature enables the owner to designate separate codes for
        particular individuals such as babysitters, maids, etc. Auxiliary codes are 4
        digits (using repeating digits thus allowing 14,641 possible combinations for
        each auxiliary code. Digits 0 through 9 and the right dot may be used as part
        of the code).

        Programming the auxiliary codes is accomplished from the keypad by first pressing
        the left dot, then the master code and digit #1 (indicating the programming of
        the first code) and then the desired auxiliary code. For additional codes, the
        same procedure is followed pressing either digit 2 or 3 after the master code
        (indicating the programming of the second or third auxiliary code respectively).

sing -To erase an auxiliary code, follow the same procedure as for programming except
les   after entering the master code, press 1, 2 or 3 (representing the auxiliary code
      to be erased) and wait 5 seconds. This feature allows for immediate deletion of
      the code.

nging-Authorized code changes can be made by simply following the steps in the above
les   paragraphs for adding a code. Entering a new code number over an existing auxiliary
      code will erase the old code and replace it with the newly programmed code. This
      process may be repeated as many times as desired.

DURESS FEATURE

The program for the DCU-15 was written to allow the addition of a duress feature. If you wish to use the duress feature, please order a DMK-15D. The DMK-15D uses the zone 2 relay for duress. There is only one zone on the DMK-15D.

To activate the duress, enter a code with the last digit $\pm$ 1 from an auxiliary code. For example, an auxiliary code may be 5, 7, 9, 3. Entering 5, 7, 9, 2 or 5, 7, 9, 4 will activate the duress. When the duress is activated, the panel will arm or disarm just as if a proper auxiliary code had been entered but the duress relay will also be energized for 4 seconds.

Because of the provision for the duress feature, the panel can be disarmed by as many as 10 different codes: 1 master code, 3 auxiliary codes and 6 "duress" codes. In order to prevent someone from disarming the system by entering random codes, a "wrong number Lockout" feature has been added.

If five incorrect codes are entered in a row, the auxiliary and duress codes are disabled for a security period of five minutes.

To disarm the system, a person must either enter the master code or wait 5 minutes and then enter a correct auxiliary or duress code.

A person trying to guess the codes can try an average of only one code per minute. Since there are 14,641 codes and only 10 codes can disarm the system, it will take an average of 1,464 minutes or more than 24 hours to defeat the system by entering random codes.

The odds of randomly selecting a proper code are 1,463 to 1.

ing Quick Arm: The DMK-15 can be
grammed to arm a security system by
ply pressing the digit "0". This is
erred to as the "Quick Arm" feature.
program the Quick Arm feature into
MicroMaster™ memory, first press
left dot on the remote, then the
ter code and the digit 4. Wait 5
onds. When the DCU-15 is programmed
Quick-Arm, only the digit 0 will arm
panel (master or auxiliary codes will
operate). The digit 0 will not disarm
panel. A full master or auxiliary code
till required to disarm the system.

: If a panic alarm is reset when the
l is disarmed, only Quick Arm will reset
panel.

ting Quick Arm: If you wish to delete
Quick Arm feature, you may erase it by
owing the same procedures as for adding
k Arm, except after entering the master
rese the digit "6".

Audio/Tactile Keyboard: The remote keyboards
provide a prealarm speaker. The prealarm in
the remote beeps each time a digit is pressed
and beeps 6 times if an incorrect code is
entered indendent of any control panel output.

Wrong Number Lockout: After 5 tries to arm
the system with a code in which any wrong
number or code sequence was used, the unit
will not accept auxiliary codes for a security
lockout period of 5 minutes. However, enter-
ing the correct 4 or 6 digit master code will
operate the system and reset the 5 minute
lockout time.

Arming/Disarming - To arm the system, you may either enter the 4 or 6 digit master code, auxiliary code #1, #2 or #3 or by entering "0" on the remote if the system has been programmed for Quick Arm. (Refer to Programming section for features). When the system is armed, the red LED will be lit.

If the Loop Status Indicator (green LED) was in the Safe mode when you attempted to arm the system, but went into the unsafe mode after you entered your code, one of your two zones is unsafe. (See below section for procedure on checking zone loop status). The system will not arm. If there is a problem with one of the two zones or both, you may still arm the system if necessary by shunting the zones. (See below section on shunting the zones).

To disarm the system, a full master code or one of the three auxiliary codes is required. The "0" for Quick Arm will not disarm the system; it is only for arming.

Dual Panic Buttons - By simultaneously pressing both the left and right dot pushbuttons on the DKB-15 remote keypad, the system will go into an alarm condition. This feature operates whether the system is armed or disarmed.

Checking the Zone Loop Status - The green LED is the Loop Status Indicator. Depending on the control panel in use, the LED may either be on or off when the loop is safe. (See control panel instruction manual for details).

To check the loop status of a zone, first check to see that the green LED is in the "Safe" condition. Press digit 1 (representating zone 1). The left amber LED will light for 4 seconds. If the loop is safe, the green LED will remain in the "Safe" mode. If the loop is unsafe, the green LED will change mode indicating an unsafe loop. Repeat for zone 2 by pushing digit 2. The right amber LED will then light and green LED will indicate status.

Zone Shunting Capability with LED Indication - The DMK-15 has two form C (SPDT) relays
te t .5 AMP maximum) to control the two different zones. When the panel is armed, both
ays are energized (opening one contact and closing the other) and the corresponding LEDs
the DKB-15 remote are lit. The user has 4 seconds to bypass zone 1 and/or 2 by pressing 1
/or 2 respectively on the keyboard. When the system is disarmed, the relays are automatically
nergized (zones bypassed).

time the panel is in its disarmed state, a zone relay can be energized for 4 seconds by
ssing 1 and/or 2 on the keypad. This allows the user to examine the status of the zones by
rgizing them and looking at the Loop Status Indicator. Depending on the control panel being
d, the Loop Indicator (green LED) may be lit or off in the safe mode.

the panel being used is made for a momentary key, each time a zone is bypassed, the DMK-15
l attempt to arm the system if it was not already armed. The system will arm once the
lated zones are bypassed. If the panel fails to arm within 4 seconds after the DMK-15
empts to arm, the zone relays and the arm/disarm relay will be deenergized.

rm Memory - The DMK-15 is also capable of "Alarm Memory". Depending on the control panel
d, this will be accomplished through either the prealarm output, armed or loop status LEDs.
ease refer to control panel instruction manual for details).

er Loss Indicator - If power to the DCU-15 is interrupted, the Loop Status Indicator (green
) will blink when power is restored. Power interruption to the system will also erase all
gramming from the memory such as the auxiliary codes and the quick arm feature. These options
t be reprogrammed into the MicroMaster memory anytime all power has been lost.

TROUBLESHOOTING HINTS

<u>SYMPTOM</u> - The relays click during the "Self Test" but the LEDs don't flash on the DKB-15.

<u>TEST</u> - Check for improper wiring to the DKB-15.

<u>SYMPTOM</u> - The relays won't click during the "Self Test".

<u>TEST</u> - Check to see if there is 10-14V between the GROUND and DKB power terminals. If not, either the terminals are shorted or there is no 12V power on the red and black wires.

<u>SYMPTOM</u> - The DMK-15 passes the "Self Test" but the system does not operate correctly.

<u>TEST</u> - Check the hook up diagrams and the DKB-15 to panel wiring. (NOTE: The zone relay contacts are labled in the deenergized (LED off) position. The PREALARM, LOOP and ARM inputs must go below 1V to be considered low. With a shunt panel, the ARM/DISARM relay closes to arm the system).

RECAP OF FEATURES

* 4 or 6 Digit Master Code (Page 18)

* 3 Additional 4 Digit Keyboard Programmable Auxiliary Codes (Page 20)

* Repeating Digits Allowing 1,000,000 Combinations for the Master Code and 14,641 Combinations for Each Auxiliary Code (Page 19)

* Two Zone Shunting Capability With LED Indication (Page 24)

* Dual Panic Buttons (Page 23)

* Audio and Tactile Feedback Keyboard (Page 22)

* Quick Arm (Page 22)

* Up to 4 Remotes (DKB-15) per MicroMaster^{TM} (DMK-15) (Page 5)

* Wrong Code Number Lockout (Page 22)

* Momentary or Shunt Output (Page 16)

* Built In Prealarm Speaker (Page 22)

* Self-Test Feature (Page 17)

* Adjustable Closure Times (Page 16)

* Power Loss Indication (Page 24)

* Four Wire Hookup for DKB-15 Remotes (Page 4)

SPECIFICATIONS

INPUT VOLTAGE: 10.5-14.2 VDC

POWER CONSUMPTION: DKB-15 - 75 mA maximum, 10 mA minimum
DMK-15 - 100 mA maximum, 30 mA minimum

OUTPUT: Arm/Disarm - dry contact relay, momentary, adjustable or shunt: contacts rated at 30V, $\frac{1}{2}$ Amp.

Panic - dry contact relay: contacts rated at 30V, $\frac{1}{2}$ Amp maximum.

Zones - 2 Form C dry contact relays: contacts rated at 30V, $\frac{1}{2}$ Amp. maximum.

INDICATORS: DKB-15 - Arm/Disarm LED   (Red)
        Loop Status LED   (Green)
        Zone 1 LED   (Amber)
        Zone 2 LED   (Amber)

KEYBOARD: 12 buttons, 0 through 9 with two pushbuttons

DUAL PANIC BUTTONS: Keyboard "Dot" pushbuttons simultaneously depressed can be used to trigger the panic circuit of a security system.

CODE COMBINATIONS: 1,000,000 for 6 digit master, 10,000 for a 4 digit master and 14,641 for each auxiliary code.

CODE CHANGE: Master code is field programmable with jumpers for 4 or 6 digit combination with or without repeating digits. Four digit auxiliary codes are keypad programmable.

SIZE & WEIGHT: DKB-15 - 4 7/8"H x 3$\frac{1}{2}$"W x 1 1/8" thick, 4$\frac{1}{2}$ oz.
        (12.4 cm x 8.9 cm x 2.9 cm) (127.5g)

DMK-15 - 4$\frac{1}{4}$"H x 3 5/8"W x 7/8" thick, 4$\frac{1}{2}$ oz.
        (11.42 cm x 9.2 cm x 2.7 cm) (127.5g)

CASE MATERIAL: DKB-15 - High impact ABS, beige color

TEMPERATURE LIMITS: $40^{\circ}F$ to $120^{\circ}F$ ($4.4^{\circ}C$ to $48.8^{\circ}C$)

USER OPERATION GUIDE

Quick Arm - To program this feature, press left dot, enter master code and press digit #4.
            "0" will then arm system. To erase Quick Arm, press left dot, enter master code
            and then press digit #6.

Panic -   Press left and right dot on remote simultaneously to cause alarm.

Master Code-refer to manual for programming, (keep this code secure).

Auxiliary- To program, press the left dot, enter master code and either digit #1, 2 or 3
Codes   (representing code #1, #2 or #3) and then enter the desired auxiliary code.
            To erase an auxiliary code, press the left dot, the master code and digit #1, 2
            or 3 (depending on code to be erased) and then wait 5 seconds.

Checking-   Check that green LED is in Safe condition. Press digit 1 (representing zone 1)
Zone Loop   and the left amber LED should light for 4 seconds. If the loop is safe, the
Status   green LED will remain in Safe condition. If the loop is unsafe, the green LED
            will change mode. Follow the same procedure for zone 2 by pressing digit #2,
            and the right amber LED will then light and the green LED will indicate status.

Deleting - To bypass a zone, arm the system and press either digit 1 and/or 2 for the
Zones   respective zones desired within 4 seconds.

Arming -   Check that green LED is in Safe mode. Enter either the master code, one of the
            three auxiliary codes or "0" if programmed for Quick Arm. If green LED was safe
            when arming process was entered, but then changed mode after you attempted to
            arm the system, there is a problem with one or both of the zones. Follow above
            procedure to check the zone loop status.

Disarming - Enter either the master code or one of the three auxiliary codes. The "0" for
            Quick Arm will not disarm the system, it is only for Arming.

tear here

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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 unit has been modified by anyone other than DTI Security.

DTI Security

A DIVISION OF DATURA INTERNATIONAL INC.

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Telex 172032

DATE: November 16, 1982

TO: Distribution

FROM: Bill Lutz
National Sales Manager

COPIES TO: Marketing
Customer Service
Representatives

SUBJECT: DTI Arming Controls: DMK-15 / DKB-15

In November 1981 the DCU-15 was modified and upgraded to allow for longer wire runs between the DMK-15 Micromaster™ and the DKB-15 digital remote.

The modification occured in manufacturing date code week 4581. On the DKB-15 remote control stations, the date code is printed on a white tag located on the inside of the plastic housing. On the DMK-15 Micromaster™, the tag is on the side of the plastic housing.

Some dealers have recently experienced compatability problems when installing modified and unmodified units together in the same system.

Dealers should be advised the system may not operate under the following conditions and it may be necessary to replace either the DKB-15 or DMK-15 to assure compatability.

1. DMK-15 Micromasters™ manufactured after date code 4581 may not operate with DKB-15 digital remote stations manufactured before date code week 4581.

2. When two or more DKB-15 digital remote stations are installed with a DMK-15, all the keyboards and the DMK-15 must either be manufactured earlier than 4581 or all after 4581.

Should a dealer return either a DMK-15 or DKB-15 for repair, it is extremely important to record the date code for all units in the system and relay this information to DTI when returning the units for repair.

Our records indicate there are only 500 units manufactured prior to the date code 4581.

December 23, 1982

Distributors and Representatives

William P. Lutz

Product Compatibility

DSS-451/452 used with a DCU-15

When using a DCU-15 Micromaster and a DSS-451/452 control panel manufactured before date code 3882 an operational problem may be experienced when attempting to arm the panel with a violated zone.

DSS-451/452 used with a DCU-12

DSS-451/452 control panels manufactured from date code 3982 through 4682 will not operate with a DCU-12 digital remote. If the 451/452 will be used with a DCU-12 the DSS-451/452 must be returned to DTI for modification.

DSS-51/52 used with a DCU-15

DSS-51/52 control panels manufactured prior to date code 5182 will not operate with a DCU-15 Micromaster digital remote. If the 51/52 will be used with a DCU-15 the DSS-51/52 must be returned to DTI for modification.

DSS-772 used with a DCU-15

The DSS-772 will not operate with a DCU-15 Micromaster digital remote.

WPL:drm