MODEL 750
2-CHANNEL DIGITAL DIALER

INSTALLATION MANUAL

Description

The 750 Digital Dialer is designed for application with any alarm system; it can be employed as a "slave" or add-on to a local alarm or a complete silent alarm system by itself.

Either channel on the 750 can be activated through normally-open or normally-closed circuits or by a voltage input.

When activated, the 750 dials the 850 Emergency Data Computer and transmits a three-digit location code (account number) and which of four alarms exists; Intrusion, Fire, Emergency or Auxiliary. (Note: Although the 750 is a 2-channel device, either channel can be programmed to report Intrusion, Fire, Emergency or Auxiliary.)

Dialing and data transmission occur in this sequence.

1. Power activation to the Dial Pulse Coupler (if used).
2. Telephone line seizure and check for dial tone.
3. Dialing (upon detection of dial tone).
4. Acknowledgment signal from Data Center. (If acknowledgment doesn't come within 35 seconds, hang-up occurs and steps 2 and 3 repeat.)
5. Code is transmitted rapidly 4 times.
6. Hang-up (and reset, depending on input connection).

Note:

a. If a system is reset before the 4th code transmission, an abort or "Cancel" code will be transmitted.(Channel 2)

b. If the dial tone is not detected, the 750 will hang-up for 18 seconds, and re-seize the line in an attempt to get the dial tone. It will then dial and wait for an acknowledgment. If it is not acknowledged, it will hang-up again and repeat steps 2 and 3. (A secondary turnoff is provided to stop dialing after 8 unsuccessful attempts to reach Data Center.)

c. Although the code group is transmitted 4 times, the 850 Computer displays the code immediately upon receipt of the first group. The subsequent 3 groups are transmitted to provide time for the "Cancel" option in the event of an accidental activation.

d. If the 750 is reset before dialing is completed, it will abort immediately without dialing out. This provides an automatic 12-second delay between activation and transmission, an important feature in all dialing systems.

Programming

The 750 is easily programmed as shown on a separate page. Because a program is required at the factory for "burn-in" and testing, it will be found that the programming screws are already inserted and will have to be re-arranged as required.

Application

Make special note of the differences between the Channel 1 input circuit options and those of Channel 2. (For example, if the "abort" option is desired on an "Intrusion" normally-closed circuit, Channel 2 will be used for "Intrusion" instead of Channel 1. Also, if an ABORT capability is desired on a normally-open latching mode, use Channel 2). NOTE THAT EITHER CHANNEL CAN BE PROGRAMMED TO REPORT ANY OF FOUR CODES.

Power Supply

The 750 has a well regulated 12 VDC power supply, requiring a 12VAC/20VA transformer.

Provisions are made for a dry-cell standby battery, as well as for a separate dry cell to power the Dial Pulse Coupler, if used. (See hook-up diagram.)

External Indicator

An external lamp or relay can be connected between terminals 6 and 10 to indicate that the 750 is activated. However, the current drain must not exceed 100 M.A. We recommend any low current 12 volt lamp or relay.

Inputs and Connections

Because of the versatility of the 750, it's important to read the following hook-up information very carefully!

I. CHANNEL 1   Channel 1 can be connected in any of four different methods:

1. Voltage Input =   This method is used when the 750 is to be used as
                      a "slave" to an existing local alarm. The 750 is
    (Non-Latching)   connected to the local alarm bell terminals through
                      a current-limiting resistor. The resistor value is
                      10 ohms 1/2 watt for a *6 volt system. (This resistor
                      should be located as near as possible to the local
                      alarm terminals.) Be sure to observe polarity. When
                      the bell stops ringing, the 750 resets automatically.
                      If the bell stops ringing while the 750 is still
                      transmitting, the code will change to "Cancel".

                   * 12 volt system requires a 47 ohms/2 watt resistor.

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Connections:

(1) Connect the positive bell terminal from local alarm, through a resistor (see below) to terminal 4.

(2) Connect the negative bell terminal to terminal 9.

47 OHM 1/2 Watt For 12V Bell
10 OHM 1/2 Watt For 6V Bell

+ o——————[IIII]——————o 4

Bell Terminals   750 Terminals

— o——————————————————o 9

2. <u>Normally-Open Input</u> = In this mode, Channel 1 will activate and report as long as the closure is maintained. If the closure is opened while the 750 is still reporting, the code will change to "Cancel".

(Non-Latching)

Connections:

(1) Connect the normally-open circuit to terminals 3 and 6.

o——————————o3   750 Terminals
—|
o——————————o6

Close For Alarm

3. <u>Normally-Open</u> = In this mode, Channel 1 will activate and report on a momentary closure. System resets automatically at the end of the cycle.
There is no abort capability in this mode.
(There is, however, on Channel 2).

(Latching)

Connections:

(1) Connect normally-open circuit to terminals 3 and 6.

(2) Jumper terminals 4 and 5 together using the provided 270 ohm/2 watt resistor.

o 3

—|
o 6   750 Terminals

o 4

[IIII]——o 5

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4. <u>Normally-Closed</u> = In this mode, the 750 will activate and report on a momentary break or "open" in the normally-closed circuit. (The loop resistance must not exceed 25 ohms.) The 750 automatically resets at the conclusion of the cycle.
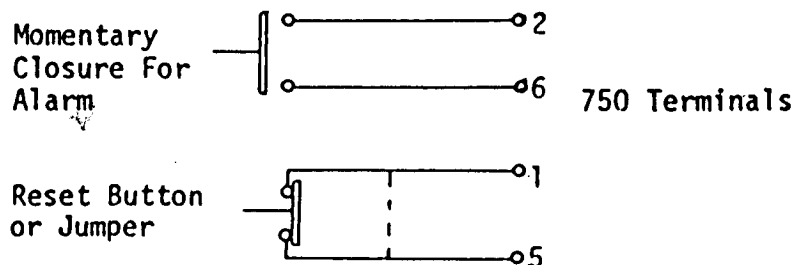
<u>Connections</u>:

(1) Connect a 270 ohm/2 watt resistor between terminals 6 and 4. (Caution this resistor will be hot.)

(2) Connect the normally-closed circuit between terminals 4 and 9.

(3) Connect a jumper between terminals 3 and 5.

```
270 OHM ──────▶    ┌──▭▭▭──────────o 6
2 Watt Resistor└──────────────o 4

Open For      ──┤├──                  750 Terminals
Alarm         ──┤├──
                              ────────o 9
                     ┌────────o 3

                     └────────o 5
```
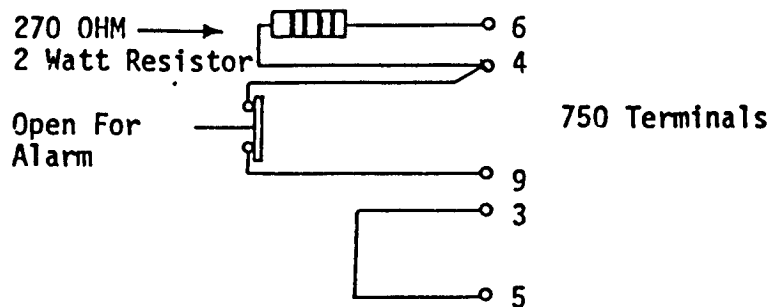
II. <u>CHANNEL 2</u>   Channel 2 can be connected in either of 2 different methods:

1. <u>Normally-Open</u> = In this mode, a momentary closure will activate Channel 2. Unit will reset automatically; additionally, a manual "Abort" or "Cancel" switch can be added. IMPORTANT: Review Installation Note 1 on page 5.
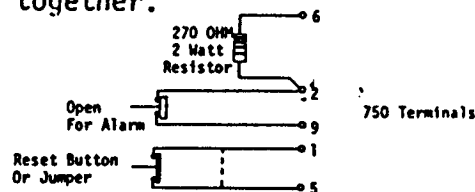<u>Connections</u>:

(1) Connect normally-open circuit to terminals 2 and 6.

(2) Connect a <u>normally-closed</u> (push-to-open) abort switch between terminals 1 and 5. If an abort switch is not used, connect these terminals together.

```
Momentary     ──┤ o──────────o 2
Closure For       │
Alarm             o──────────o 6   750 Terminals

Reset Button  ──┤ o──────────o 1
or Jumper         │
                  o──────────o 5
```

2. <u>Normally-Closed</u> = In this mode, the 750 will activate on a momentary break or "open" in the normally-closed circuit. (The circuit resistance must not exceed 25 ohms.) Reset occurs automatically. Additionally, a manual abort or "Cancel" switch can be added. The cancel feature requires the loop to be "closed" to abort.

<u>Connections:</u>

(1) Connect a 270 ohm/2 watt resistor between terminals 2 and 6.

(2) Connect the normally-closed circuit to terminals 2 and 9.

(3) Connect a <u>normally-closed</u> (push-to-open) abort switch between <u>terminals</u> 1 and 5. If an abort switch is not used, connect these terminals together.

<u>Installation</u>   (DO NOT CONNECT AC POWER OR BATTERY!)

1. An abort or reset switch should not be incorporated if both channels are utilized and channel one is using the following hook-up configurations: (A) Momentary closure, latching (hook-up #3 on page 3 of manual) <u>or</u> (B) Normally closed, open for alarm (hook-up #4 on page 4 of manual). The above conditions with reset switch, could cause an aborted channel two activation - - - reset during data center communication to report a channel one alarm instead of cancel message.
2. Program the telephone number, account number and channel designation. Refer to program sheet.
3. Mount cabinet on wall in convenient area.
4. Connect input circuits. (See previous instructions.)
5. Install stand-by batteries, if used.
6. If Dial Pulse Coupler is used, install a 9-volt battery (NEDA 1603) as shown. (A #780 Coupler Cord is also required.)
7. Connect the Dial Pulse Coupler Cord as follows (if used):
   a. Black wire to terminal 10.
   b. Yellow wire to terminal 11.
   c. White <u>and</u> orange wires to terminal 12.
   d. Blue wire to terminal 13.
   e. Red wire to positive terminal of 9-volt battery. (The negative battery terminal to terminal 6.
8. If a Dial Pulse Coupler is not used, the telephone line can be connected directly to terminals 11 and 13. However, it is recommended that the #714 Line Seizure be employed to (1) provide telephone isolation during an alarm transmission and (2) lightning protection.
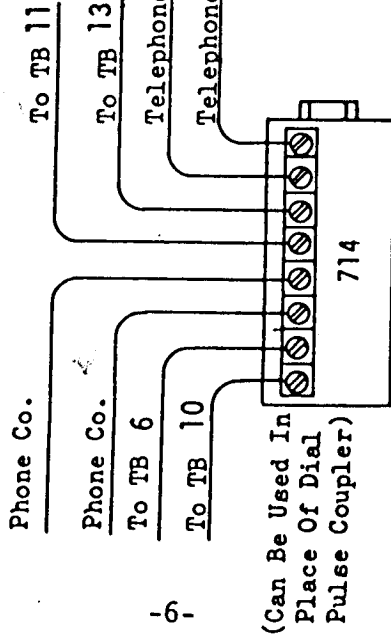
NOTE: If a rechargeable nicad battery is preferred for the Dial Pulse Coupler, specify a Silent Knight Model 685 battery.
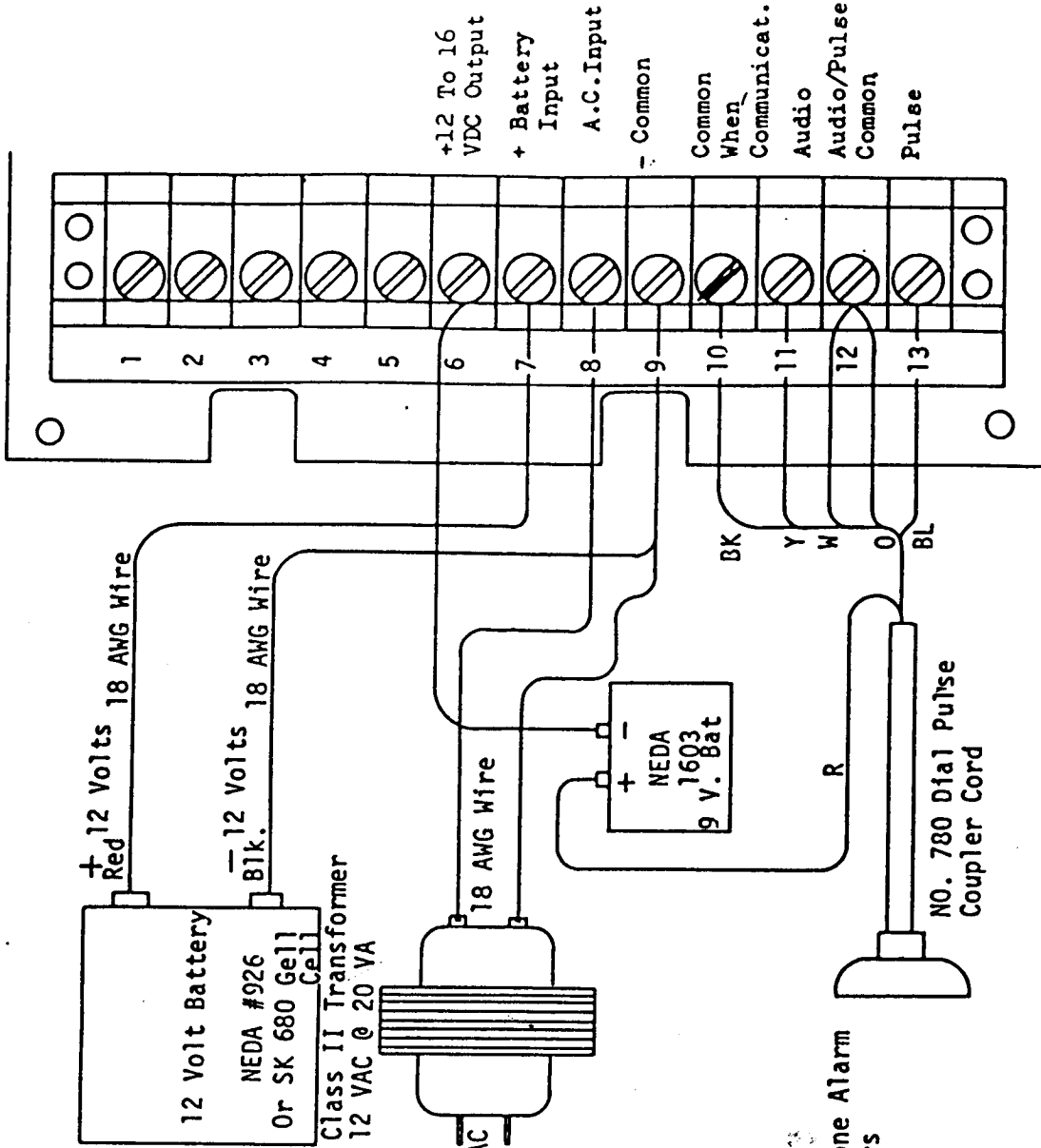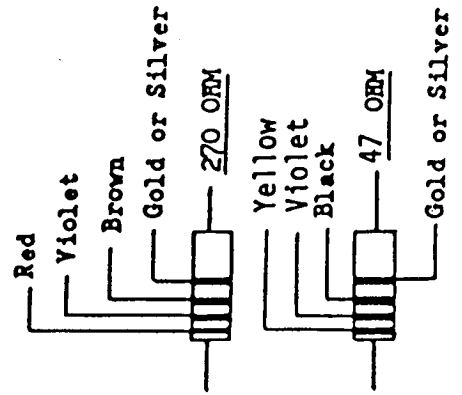
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SILENT KNIGHT TWO CHANNEL DIGITAL COMMUNICATOR

POWER AND TELEPHONE LINE HOOK-UP

Terminal block (terminals 1–13):

- +12 To 16 VDC Output
- + Battery Input
- A.C. Input
- − Common
- Common When Communicat.
- Audio
- Audio/Pulse Common
- Pulse

Wire color codes: BK, Y, W, O, BL, R

+12 Volts Red 18 AWG Wire
−12 Volts Blk. 18 AWG Wire
18 AWG Wire

12 Volt Battery
NEDA #926
Or SK 680 Gell Cell

Class II Transformer
12 VAC @ 20 VA
115 VAC

NEDA 1603 9 V. Bat

NO. 780 Dial Pulse Coupler Cord

Acceptable Telephone Alarm Couplers
KS20721 (SU6AQ)
KS20445L1-2W

Optional Telephone Line Hook-Up

1. Telephone Line Seizure Relay Hook-Up Shown Below
2. Telephone Company Alarm Coupler Connection Shown Below
3. Direct Hook-Up Connect Telephone Line Direct To TB 11 & TB 13

Phone Co.
Phone Co.
To TB 6
To TB 10
To TB 11
To TB 13
Telephone(s)
Telephone(s)

714

(Can Be Used In Place Of Dial Pulse Coupler)

Resistor Color Code

Red
Violet
Brown
Gold or Silver
270 OHM

Yellow
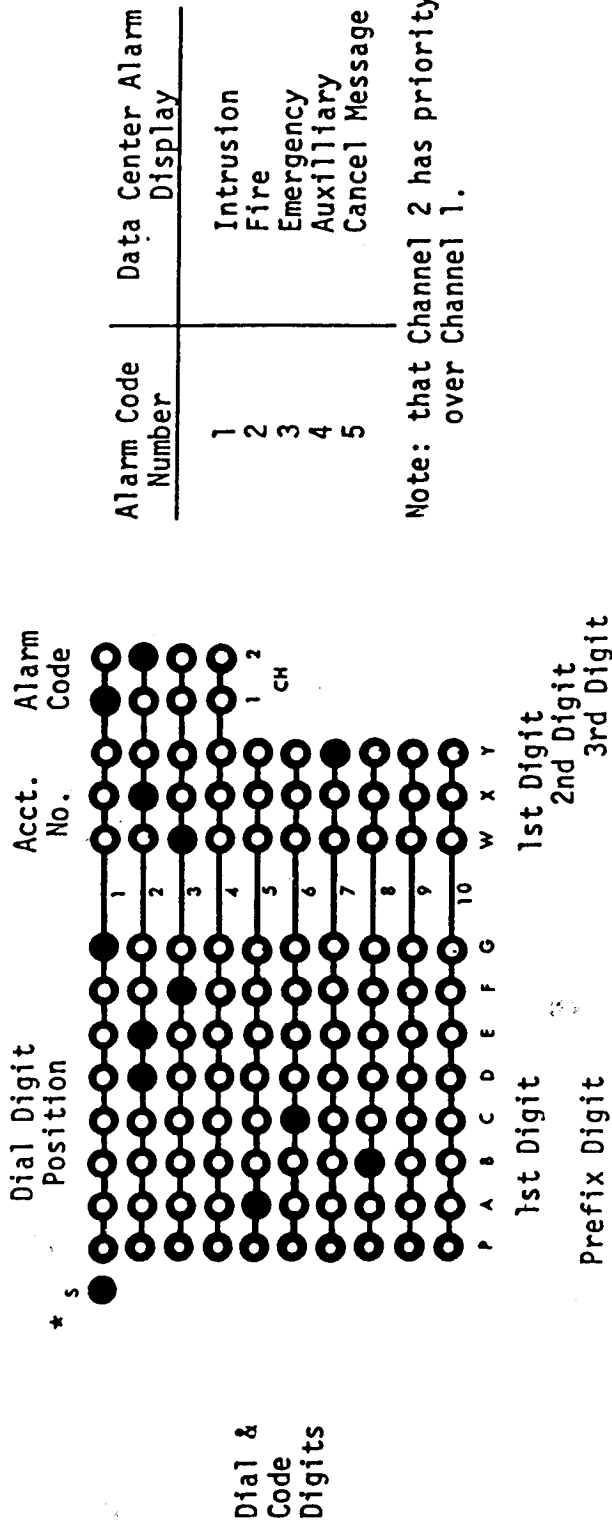Violet
Black
Gold or Silver
47 OHM

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SILENT KNIGHT TWO CHANNEL DIGITAL COMMUNICATOR

PROGRAMMING INSTRUCTIONS

TO PROGRAM:

A. Disconnect ALL power including standby battery.
B. Insert screws "nut side up" in the proper holes as shown in example below.
C. Verify ALL screws are TIGHT and only one screw is in each vertical row.
D. Observe that all loose hardware (extra nuts, etc.) are removed from card area.
E. Reconnect battery and power.

Alarm Code Number	Data Center Alarm Display
1	Intrusion
2	Fire
3	Emergency
4	Auxiliary
5	Cancel Message

Note: that Channel 2 has priority over Channel 1.

Dial & Code Digits

Dial Digit Position — Acct. No. — Alarm Code

Prefix Digit — 1st Digit

Prefix Digit — 7th Digit

1st Digit
2nd Digit
3rd Digit

Example of program shown above:

Data Center Telephone No.	Account Number	Channel 1	Channel 2
586-2231	327	Intrusion	Fire

* Note: 7 Digit Telephone Number - A screw should be inserted in the "S" hole and the "P" row should be left blank.

8 Digit Telephone Number - The prefix dial digit should be inserted in the "P" row and the "S" hole should be left blank.