

## KP-13 Keypad Wiring Instructions

The KP-13 Keypad is a 5-wire Wiegand output keypad suitable for outdoor use. It is wired to a control panel in the same manner as a card reader (see figure 1). The KP-13-ILL is the same keypad with illumination.

The KP-13 uses the 32-bit Wiegand format: `_F= pn_2_32_S_0_D_0_B1_B2_B3_B4` (required for N-1000 with 4.17 or older firmware).

This format can be entered in a text file or Terminal Mode (not required for N-500). Refer to panel installation and programming manuals for more information. As with all keypads, press the “#” key after code entry. To clear an entry, press the “\*” key. To toggle illumination off and on (KP-13-ILL only), press “\*” and “3” at the same time.

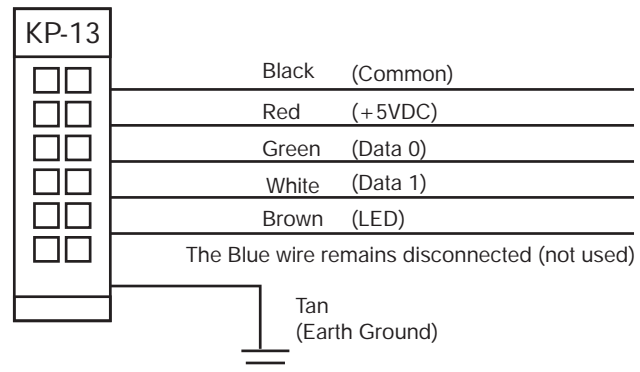
**LED Operation.** When the reader is first powered up, the green LED will remain on until after the first valid card read. When the “M” option is enabled in the panel programming the LEDs operate as follows:

- Normally, the red LED is on.
- Upon valid code entry, the green LED comes on and the red LED goes off.
- After the LED pulse time elapses, the green LED goes off and the red LED comes on.
- Upon invalid code entry, no LED change occurs.

**Grounding.** The tan wire is a chassis ground. If the keypad is mounted directly on grounded metal, tie the tan wire to the grounded metal. Tie the keypad cable shield to the control panel ground point and float shield at keypad. If the keypad is mounted on ungrounded metal or nonmetallic material, tie the tan wire to the keypad cable shield and connect the shield to the control panel ground point.

Wiring specifications	NCI Part #	Description	Maximum Distance
	NC1861/BL	6-wire 18 AWG shielded	500 feet

*Figure 1. Wiring for the KP-13.  
Power for the keypad can be supplied from the control panel.*



*Specifications subject to change*

TD2006

### Northern Computers, Inc.

#### Headquarters:

5007 S. Howell Ave.  
Milwaukee, WI 53207 USA  
Tel: +1 (414) 769-5980  
Fax: +1 (414) 769-5989  
or +1 (414) 769-5996 (Int'l)

#### Worldwide Locations:

- Crawley, Sussex, United Kingdom  
Tel: (44) 1293-592700 • Fax: (44) 1293-523061
- Sao Paulo, Brazil  
Tel: (55) (11) 826-4944 • Fax: (55) (11) 826-0649
- Australia  
Tel: (612) 9699-3700 Fax: (612) 9699-3101

- Hong Kong  
Tel: 852-2528-1897 • Fax: 852-2528 4599
- Montreal, Quebec, Canada  
Tel: 514-933-3363 • Fax: 514-933-3447
- Moscow, Russia  
Tel: (7) 095-723 2626 • Fax: (7) 095-956 5428

- France  
Tel: 33-1-30-13-03-93 Fax: 33-1-3- 13-03-90
- Mexico  
Tel: (52) (5) 280-7890 Fax: (52) (5) 280-8555
- Ecuador  
Tel: (593) (2) 265-588/91 Fax: (593) (2) 461-379

**Power Supply.** The KP-13 power can be supplied from the control panel. However, if more than one illuminated keypad is used, then a separate 5 VDC power supply may be required. (See figure 2.) Choose power source to match correct power consumption.

Power Consumption	5 VDC	mA	Panel	Reader Current Max.
not illuminated		80 mA	N-1000-II	250 mA
illuminated		150 mA	N-1000-III/IV	500 mA
			N-500	300 mA
			N-750	2.5 Amps

### KP-13 KEYPAD WIRE TERMINATIONS

Wire Color	Function	N-1000-II	N-1000-III	N-1000-IV
Brown	LED	TB5-1	TB5-1	4 reader board LED
White	Data 1	TB5-2	TB5-2	4 reader board Data 1
Green	Data 0	TB5-3	TB5-3	4 reader board Data 0
Red	+5VDC Power Source	TB5-4 or external Power Source	+5VDC Power Source	4 reader board +5VDC or Ext. Power Source
Black	Common Ground	TB5-5 & External Power Supply -	TB5-5 & Ext. Power Supply -	4 reader board Gnd & Ext. Power Supply -

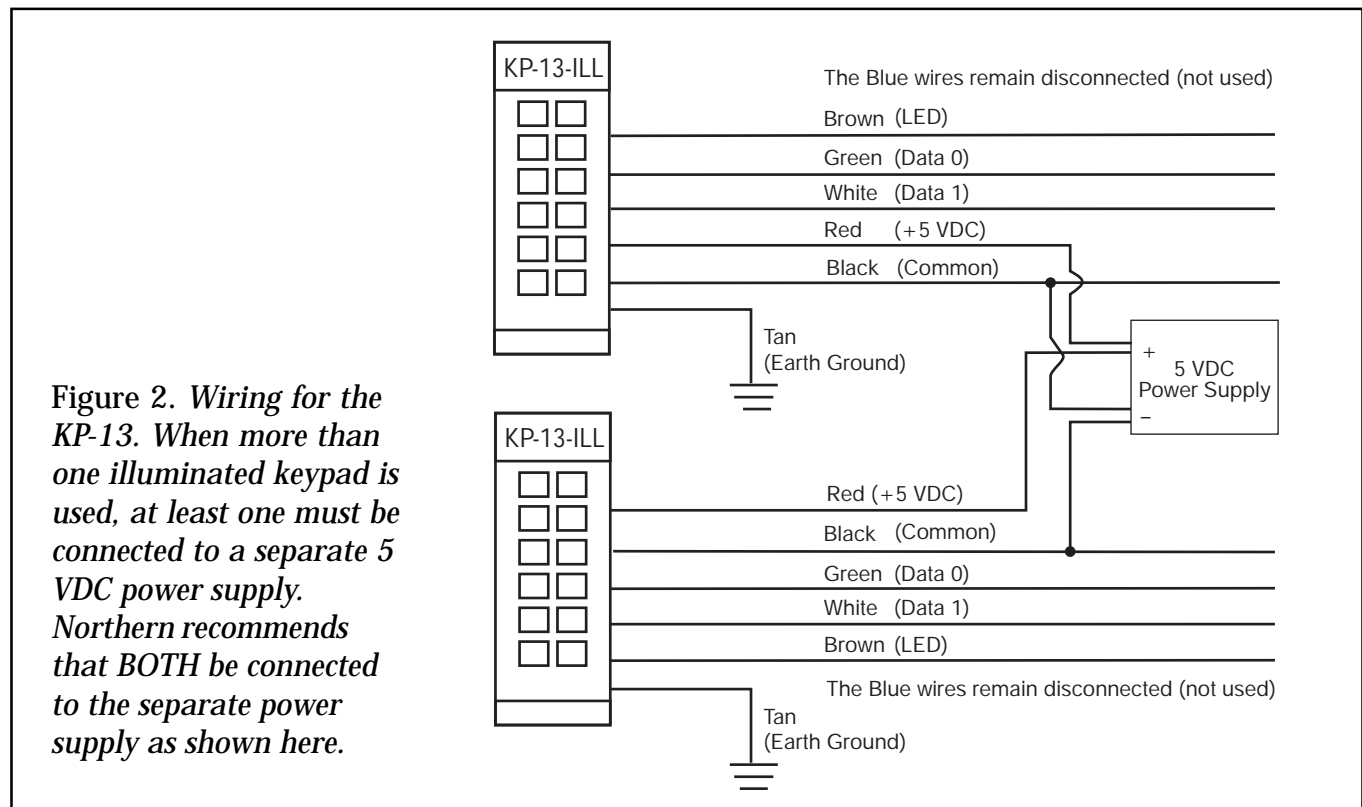


Figure 2. Wiring for the KP-13. When more than one illuminated keypad is used, at least one must be connected to a separate 5 VDC power supply. Northern recommends that BOTH be connected to the separate power supply as shown here.

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