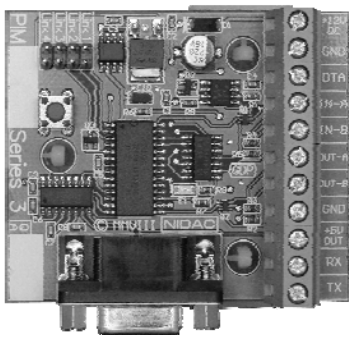
PIM

Presco™ Interface Module "Series 3"

Revision d

Installation Manual 1st Edition

N761



INTRODUCTION

The Presco™ Interface Module (PIM) can be used to convert commonly used data formats to Nidac Presco™, RS232, Clock & Data or Weigand format data.

FEATURES

- Converts from Weigand, RS232, Nidac Presco™, Clock & Data (Magnetic Card) or Dallas iButton™ (commonly referred to as Silicon Key) format.
- Converts to Nidac Presco™, RS232, Clock & Data (Magnetic Card) or Weigand format.
- Can convert to or from Weigand with up to 64 bits of data, including up to 32 bit site code plus optional start and end parity bits.
- User programmable site code when converting to Weigand.
- Reads up to 64 bits from Dallas iButton™ user memory or 56 bits from factory ID.
- Reads up to 32 characters or digits from Track 1, 2 or 3 Clock/Data (magnetic card) format input.
- User programmable options using standard Presco™ PRE keypad or via RS232 link (software for RS232 programming is available from Nidac's website www.nidac.com).
- Compatible with **all** current Nidac Presco™ encoders and decoders.

SPECIFICATIONS

Voltage:		10 to 15 Volts D.C.
Current:		30mA max (plus 5V output draw).
Dimensions:		66mm x 67mm x 23mm.
Weight:		45gms.
Weigand	Pulse Width:	50µs
	Pulse Separation:	2ms
RS232:	Baud Rate:	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200 bps.
	Data bits:	8
	Parity:	None, Odd or Even.
	Handshaking:	Hardware or None.

TERMINAL DESCRIPTIONS

+12V DC	The positive D.C. power input.
GND	The Ground (or Negative) power input. This is also a common reference connection for all devices connected to the PIM. i.e. all devices connected to the PIM require their GNDs to be connected together.
DTA	Presco™ data input/output.
IN-A	Input A (Weigand D0, Clock/Data RDP or iButton™).
IN-B	Input B (Weigand D1 or Clock/Data RCP).
OUT-A	Output A (Weigand D0 or Clock/Data RDP).
OUT-B	Output B (Weigand D1 or Clock/Data RCP).
+5V OUT	A 5 Volt D.C. power output for powering connected equipment (100mA. max.).
RX	The RS232 Receive input **(DO NOT USE THIS TERMINAL WHEN USING THE RS232 DB9 CONNECTOR!)**.
TX	The RS232 Transmit output.

CABLING DISTANCES TO PIM

Device	Cable type	Max length
RS232	7/020 shielded or CAT 5 UTP cable. 4 core (3 wires) required for no handshaking. 6 core (5 wires) required for hardware handshaking.	10m
iButton™	Telephone cable Must be unshielded twisted pair. 2 core for reader only. 4 core for reader + LED control.	10m
iButton™	CAT 5 cable. Use 1 **pair** for reader, any other wires for LED control.	100m
Clock/Data	7/020 shielded cable. 4 core for reader only. 6 core for reader + LED control. Ground the shield at PIM end only.	100m
Weigand	7/020 shielded cable. 4 core for reader only. 6 core for reader + LED control. Ground the shield at PIM end only.	100m
Presco™ PRE keypad	7/020 unshielded cable. 2 core (figure 8) for data only, no LED control. 4 core for PRE with LED control.	1000m
Presco™ PSE keypad without backlighting	2 core (figure 8) 7/020 unshielded cable.	1000m
Presco™ PSE keypad with backlighting	4 core 7/020 unshielded cable. **NOTE** decreased distance is due to extra current drawn by backlighting. 4 core 14/020 unshielded cable.	500m 1000m
Presco™ proximity reader	4 core 7/020 unshielded cable. 4 core 14/020 unshielded cable. **NOTE** decreased distance is due to extra current drawn by powering the reader.	350m 800m
Presco™ VR43 or VR62 keypad.	4 core 7/020 unshielded cable. 4 core 14/020 unshielded cable. **NOTE** decreased distance is due to extra current drawn by powering the keypad.	350m 800m

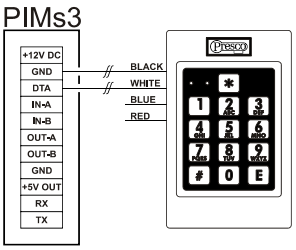
NOTE all distances are based on a supply voltage of 12.0V D.C. at the PIM.

LINK SETTINGS SUMMARY

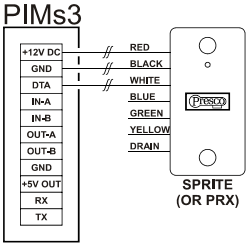
Links	Input	Output
Link 1 Off, Link 2 Off, Link 3 Off, Link 4 Off	Clock/Data	Presco™ (PAC1/PAC2), Weigand & RS232
Link 1 Off, Link 2 Off, Link 3 Off, Link 4 On	RS232	Clock/Data
Link 1 Off, Link 2 Off, Link 3 On, Link 4 Off	Clock/Data	Presco™ (KCx or PDA), Clock/Data & RS232
Link 1 Off, Link 2 Off, Link 3 On, Link 4 On	Presco™	Clock/Data
Link 1 Off, Link 2 On, Link 3 Off, Link 4 Off	RS232	Presco™
Link 1 Off, Link 2 On, Link 3 Off, Link 4 On	Presco™ DLOG (from PACDL)	RS232
Link 1 Off, Link 2 On, Link 3 On, Link 4 Off	RS232	Presco™ DLOG (to PAC1 or PAC2 for use with PIM-PAC software)
Link 1 Off, Link 2 On, Link 3 On, Link 4 On	Presco™	RS232
Link 1 On, Link 2 Off, Link 3 Off, Link 4 Off	Dallas iButton™	Presco™ (PAC1/PAC2), Weigand & RS232
Link 1 On, Link 2 Off, Link 3 Off, Link 4 On	Use this setting to reset the memories to defaults when unit is powered up with program button depressed.	
Link 1 On, Link 2 Off, Link 3 On, Link 4 Off	Dallas iButton™	Presco™ (KCx or PDA), Clock/Data & RS232
Link 1 On, Link 2 Off, Link 3 On, Link 4 On	DO NOT USE. Reserved for future use.	
Link 1 On, Link 2 On, Link 3 Off, Link 4 Off	Weigand	Presco™ (PAC1/PAC2), Weigand & RS232
Link 1 On, Link 2 On, Link 3 Off, Link 4 On	RS232	Weigand
Link 1 On, Link 2 On, Link 3 On, Link 4 Off	Weigand	Presco™ (KCx or PDA), Clock/Data & RS232
Link 1 On, Link 2 On, Link 3 On, Link 4 On	Presco™	Weigand

Wiring Diagrams

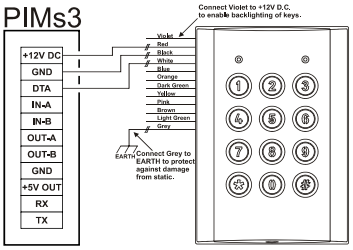
From Presco™ PRE



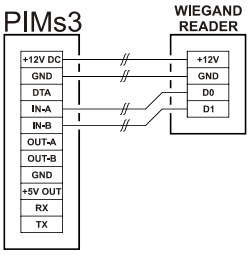
From Presco™ Sprite



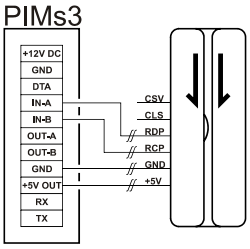
From Presco™ VR43 (shown) or VR62



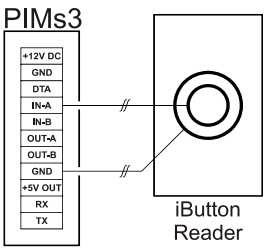
From Weigand Reader



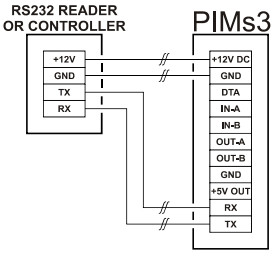
From Clock/Data Reader



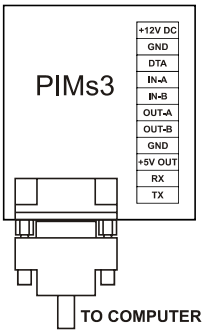
From Dallas iButton™ Reader



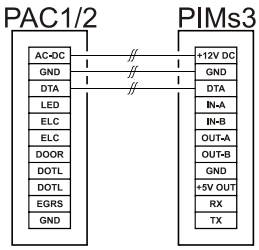
From RS232 reader or to RS232 input controller



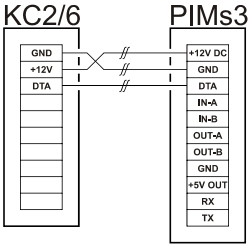
To or from RS232 computer port



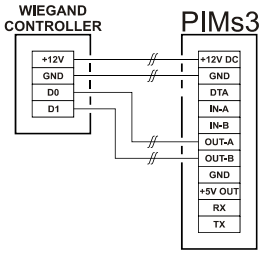
To Presco™ PAC1 or PAC2 Controller



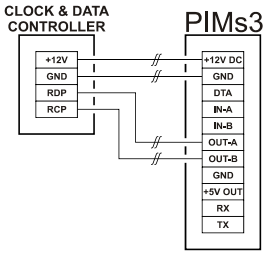
To Presco™ KC2, KC6 or PDA Controller



To Weigand Input Controller



To Clock/Data Input Controller



Converting from Presco™

The PIM can read information from any of the Presco™ encoders, including PRE, VR43, VR62 & PSE keypads and Sprite & PRX Proximity readers.

Note that no information is sent from a Presco™ keypad until the [E] key is pressed on a PRE or the [#] key on a VR43, VR62 or PSE.

It can then convert the information to Weigand, Clock/Data or RS232.

Presco™ to RS232

Links 2, 3 & 4 ON

Once the data has been entered at a Presco™ encoder (code then [E] or [#] pressed on keypad or card presented at reader) it will be sent to the RS232 port.

The PIM can then optionally make the encoder respond with a noise as set by the *good return character* in memory 021. The default setting is to make the encoder respond with a single beep.

Data sent to the RS232 port can be either filtered (only the code digits are sent) or unfiltered (preamble characters, code and enter character are sent). The default setting is to filter the data.

Further options are available for RS232 data. Please refer to the RS232 SETTINGS MEMORIES section.

Presco™ to Weigand

All Links ON

The Presco™ data can be converted to either standard weigand or burst mode weigand. There are several options for both these modes that can be set, please refer to the WEIGAND TRANSMIT SETTINGS MEMORIES section.

In standard mode the code entered from the keypad will become the user code of the weigand data and the site code will be taken from memories 125 to 128.

When converting to standard 26 bit weigand from a Presco™ Proximity the PIM will produce the same site and user codes as if the Weigand output from the reader had been used. This is useful if wanting to cable a Weigand system further than 100m from reader to controller. If converting to a Weigand format other than standard 26 bit, the result is undefined.

The PIM automatically makes the Presco™ device respond with the noise as set in memories 021 and 022 for good and bad inputs respectively (a bad input is when a number too large to convert to the user code is entered from a keypad).

Presco™ to Clock/Data

Links 3 & 4 ON

The Presco™ data can be converted to 1 to 32 digits of track 1, 2 or 3 format Clock/Data. Please refer to the CLOCK & DATA TRANSMIT SETTINGS MEMORIES section for these options.

Converting from Weigand

The PIM can read up to 64 bits of Weigand data with or without start and/or end parity bits. It also allows for a site code of up to 32 bits. The default settings are for the PIM to read standard 26 bit weigand.

Weigand to PRESCO™ for PAC1 or PAC2

Links 1 & 2 ON

The PIM creates an 8 digit number from the Weigand data. When receiving 26 bit weigand it converts the site code to a 3 digit decimal number, then it converts the user code to a 5 digit decimal number and combines these to create the 8 digit code.

eg. Site Code = 183, User Code = 02845
PIM code = 18302845
this is the number to program into the PAC1 or 2.

Optionally the site code portion can be discarded by setting memory 105 to 0 so that a 5 digit code is sent.

Weigand to PRESCO™ for PDA, KC2 or KC6

Links 1, 2 & 3 ON

The PIM creates a 7 digit number from the Weigand data. When receiving 26 bit weigand it converts the site code to a 3 digit decimal number and takes the lowest 2 digits then it converts the user code to a 5 digit decimal number and combines these to create the 7 digit code.

eg. Site Code = 183, User Code = 02845
PIM code = 8302845
this is the number to program into the PDA, KC2 or KC6.

Optionally the site code portion can be discarded by setting memory 105 to 0 so that a 5 digit code is sent.

Weigand to Weigand

Links 1 & 2 ON

The PIM can be used to convert from one format of weigand to another or, by setting memory 105 to 0, it can be used to replace the site of the received weigand and retransmit in the same format (or another) but with the site code that is stored in the PIM in memories 125 to 128.

Weigand to Clock/Data

Links 1, 2 & 3 ON

The PIM creates code from the Weigand data that consists of the site code (converted to decimal) then the user code (converted to decimal). It then combines these 2 together and transmits the last n digits of the code, where n is the value set in memory 080. When receiving 26 bit weigand it converts the site code to a 3 digit decimal number, then it converts the user code to a 5 digit decimal number and combines these to create an 8 digit code.

eg. Site Code = 183, User Code = 02845
Memory 080 = 8
Clock/Data code = 18302845

Optionally the site code portion can be discarded by setting memory 105 to 0 so that the clock/data code in the example above becomes 00002845.

If value set in memory 080 is more than the number of digits created by the code conversion leading 0s will be sent to make up the number.

Weigand to RS232

Links 1 & 2 ON

or

Links 1, 2 & 3 ON

The data can be sent to the RS232 port as either raw binary data, ASCII encoded decimal or ASCII encoded Hexadecimal (see memory 007). The site and user codes are converted and sent as separate numbers with the site code being sent first. The default setting is to send the data as ASCII encoded decimal.

Further options are available for RS232 data. Please refer to the RS232 SETTINGS MEMORIES section.

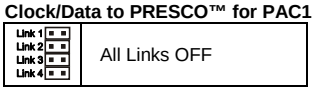
Converting from CLOCK/DATA

When reading from a Clock & Data device the PIM accepts Track 1, 2 or 3 format Clock/Data inputs using just the RDP and RCP signals.

The PIM reads up to a maximum of 32 characters from the data stream, though the actual maximum used is dependent upon the data conversion type.

The PIM can read characters from several different locations depending upon the settings of memories 062 & 063. The default it setting is to read characters directly before the first separator character (or end sentinel if no separator was found).

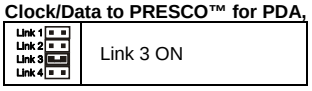
Clock/Data to PRESCO™ for PAC1 or PAC2



The PIM reads up to nine (9) digits from the data stream.

If reading from track 1 and a non numeric character is found in the data stream then the PIM will ignore the card.

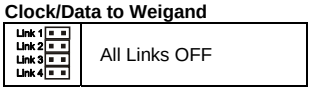
Clock/Data to PRESCO™ for PDA, KC2 or KC6



The PIM reads up to seven (7) digits from the data stream.

If reading from track 1 and a non numeric character is found in the data stream then the PIM will ignore the card.

Clock/Data to Weigand

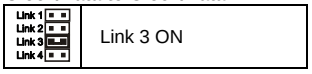


The PIM reads up to 32 characters from the data stream.

If reading from track 1 and a non numeric character is found in the data stream then the PIM will ignore the card.

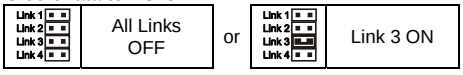
The data read from the Clock/Data source is converted to a binary number. The bits above the number of bits specified for the Weigand user code are then discarded.

Clock/Data to Clock/Data



The PIM can be used to convert between Track 1 & Track 2 or 3 data format and can be used to manipulate the received data and resend only the required part.

Clock/Data to RS232



The PIM reads up to 32 characters from the data stream and sends the data to the RS232 ports as ASCII characters.

Further options are available for RS232 data. Please refer to the RS232 SETTINGS MEMORIES section.

Converting from Dallas iButton™

Either the unique factory ID code or the user memory (selected iButton™s only) can be read.

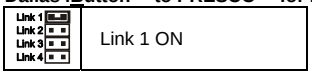
When reading the factory ID up to 56 bits can be read, 8 bit family code + 48 bit serial number.

Up to 64 bits of user memory can be read.

NOTE: The PIM will not read an iButton™'s memory that contains all 0s or all 1s for the number of bits being read.

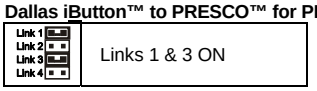
The default setting is to read 32 bits from the factory ID.

Dallas iButton™ to PRESCO™ for PAC1 or PAC2



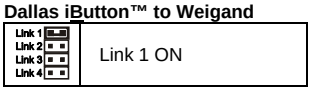
The PIM reads the number of bits specified and converts them to a either a decimal or base 12 number (refer to memory 044). The lowest 9 digits of this number are sent as the code. The default setting is to convert to base 12.

Dallas iButton™ to PRESCO™ for PDA, KC2 or KC6



The PIM reads the number of bits specified and converts them to a decimal number. The lowest 7 digits of this number are sent as the code.

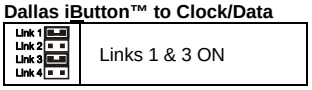
Dallas iButton™ to Weigand



If the number of bits read from the iButton™ is less than the number of bits specified for the Weigand user code then the user code will be padded with leading zeroes (0).

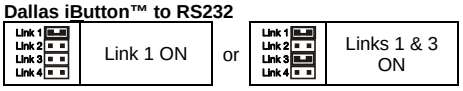
If the number of bits read from the iButton™ is more than the number of bits specified for the Weigand user code then the extra bits will be ignored and only the lower bits will be sent as the Weigand user code.

Dallas iButton™ to Clock/Data



The PIM reads the number of bits specified and converts them to a either a decimal number. The lowest n digits, where n is the value of memory 080, of this number are sent as the clock/data code.

Dallas iButton™ to RS232



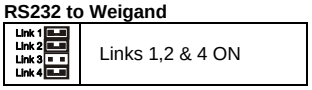
The data can be sent to the RS232 port as either raw binary data, ASCII encoded decimal or ASCII encoded Hexadecimal. The default setting is to send the data as ASCII encoded decimal.

Converting from RS232

The PIM can convert from RS232 to weigand, clock/data, Presco™ or Presco™ DLOG.

Only the weigand and clock/data conversions are described here as the Presco™ modes are provided for use with the Presco™ decoder programming software available from Nidac.

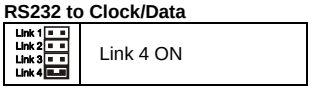
RS232 to Weigand



When the PIM is set to transmit standard format weigand the data sent via the RS232 input needs to be formatted correctly. First the PIM needs to receive the start char as specified in memory 004 then the data to be converted to weigand (as a decimal number represented by ASCII coded digits) followed by the end char as specified in memory 005. If the data contains a separator char as specified in memory 006 then the digits after the start but before the separator will be converted to the site code and the digits after the separator will be converted to the user code. When no separator if sent all digits will be converted to the user code and the site code stored in the PIM will be sent.

When the PIM is set to transmit burst mode weigand the PIM will convert each ASCII coded digit received on the RS232 and transmit it as burst mode.

RS232 to Clock/Data



The data sent via the RS232 input needs to be formatted correctly for the PIM to output Clock/Data. First the PIM needs to receive the start char as specified in memory 004 then the characters to be sent as clock/data followed by the end char as specified in memory 005. If the data contains any separator chars as specified in memory 006 then these will be converted to the appropriate separator char for the track type being transmitted and sent with the other characters. The PIM will automatically transmit the correct start & end sentinels for the track type being transmitted as well as the LRC.

PROGRAMMING

Several options are available through the use of memories to set the PIM to receive & transmit data in a specific manner.

Default values are shown in ***bold italics*** where a list is given and in square brackets [] plus ***bold italics*** for other settings.

Programming of all memories can be done via a Presco™ keypad connected to the DTA terminal or through the RS232 port.

NOTE that if you program a memory with a value outside those specified for it, or you program an unlisted memory, the functionality of the PIM cannot be guaranteed.

PROGRAMMING USING A PRESCO™ KEYPAD

1. Disconnect all wires from the DTA terminal (except the white wire from the Presco™ keypad).
2. Connect the Presco™ keypad's white wire to DTA and black wire to GND.
3. Ensure that LINK 4 is **ON**.
4. Press the program button on the PIM. When the red LED on the PIM starts flashing the unit is in program mode.
5. Press [*] <3 digit memory number> <memory value> [E] (press [#] instead of [E] if using a VR43, VR62 or PSE).
6. Repeat step 3 for each memory to be programmed.
7. Press the Program button again. When the red LED stops flashing all the new values are saved to memory.
8. Remember to set the LINK 4 back to how it was and reconnect all wires to the DTA terminal.
9. To reset all the memories back to factory default press [*] [9] [8] [7] [6] [5] [4] [E] (press [#] instead of [E] if using a VR43, VR62 or PSE).

PROGRAMMING USING THE RS232 PORT & PC

1. Disconnect all wires from the RX terminal.
2. Connect a straight through male to female DB9 cable from the PIM to PC's COM port. The cable requires the wires for RX, TX, GND, RTS and CTS, pins 2, 3, 5, 7 & 8.
3. Run the PIMs3 programming software on the PC.
4. Select the COM port the PIM is attached to.
5. Press the program button on the PIM. When the red LED on the PIM starts flashing the unit is in program mode.
6. Use the software to set or change the memory values.
7. Press the Program button again. When the red LED stops flashing all the new values are saved to memory.
8. Exit the software.
9. Disconnect the serial cable, if no longer required.

The software for programming the PIM via RS232 will be available from Nidac's website www.nidac.com in the Downloads->Software section.

RS232 SETTINGS MEMORIES

000 Baud rate: 0 = 300, 1 = 600, 2 = 1200, 3 = 2400, 4 = 4800, ***5 = 9600***, 6 = 19200, 7 = 38400, 8 = 57600, 9 = 115200.

001 Parity: 0 = Even, 1 = Odd, ***2 = None***.

002 Handshaking: ***0 = None***, 1 = Hardware (RTS/CTS).

003 Send data config: ***0 = code only***,
1 = code + start char,
2 = code + end char,
3 = code + start & end chars,
4 = code + start, separator & end chars.

If unfiltered data from Presco™ or binary data from Weigand or iButton™ is being sent, code only mode (0) is always used no matter what is set for this memory.

004 Start data character: Used to indicate the start of a data sequence ***[2 = STX]***.

005 End data character: Used to indicate the end of a data sequence ***[3 = ETX]***.

006 Separator character: Used to indicate the end of the site code and start of user code for Weigand conversion ***[23 = ETB]***.

007 RS232 conversion format (only affects iButton™ & Weigand reads):
0 = Raw,
1 = Decimal,
2 = Hex,
3 = ASCII encoded Binary.

PRESCO™ SETTINGS MEMORIES

020 To RS232 filter: 0 = No filtering, 1 = Filter off preamble & enter characters, ***2 = Filter + automatically send a good response char***.

021 Good response character ***[69 = 1 beep]***.

022 Bad response character ***[66 = blarp (long beep)]***.

Valid response characters are:
65 = 2 beeps, 66 = blarp, 67 = 5 beeps,
68 = silence, 69 = 1 beep, 70 = warble,
71 = 3x2 blips, 73 = 3 beeps, 74 = 4 beeps,
75 = 2 blips, 76 = 2x2 blips, 77 = ramp up,
78 = ramp down.

023 Weigand conversion mode:
0 = standard,
1 = Weigand extender mode.

The Weigand extender mode uses 2 PIMs between the Weigand reader and controller to allow for separation distances of up to 1km. The PIM closest to the reader reads up to 64 bits of weigand data (plus start & end parity), converts the data to a special Presco™ format and the second PIM converts it back to the original Weigand. There is no need to tell either PIM the format of the weigand data.

iButton™ SETTINGS MEMORIES

040 Data bits to read: ***0 = Factory ID***, 1 = User memory (LSB stored first).

041 Number of bits to read: 8 to 64 ***[32]***.

042 Memory read address high byte: 0 to 255 ***[0]***.

043 Memory read address low byte: 0 to 255 ***[0]***.

044 Presco™ PAC conversion format: 0 = Decimal, ***1 = Base 12***.

CLOCK/DATA RECEIVE SETTINGS MEMORIES

060 Number of characters to read: 1 to 32 *[8]*.

061 Data type: 0 = Track 1, ***1 = Track 2/Track 3***.

062 Read from start or end:
0 = Read from start,
1 = Read from end,
2 = Read from start after separator,
3 = Read from end after separator.

063 Number of characters to skip from start ***[0]***. When reading from the start or the start after separator the PIM will skip this number of characters before reading any data.

CLOCK/DATA TRANSMIT SETTINGS MEMORIES

080 Number of characters to transmit: 1 to 32 ***[8]***.

081 Data type: 0 = Track 1, ***1 = Track 2/Track 3***.

WEIGAND RECEIVE SETTINGS MEMORIES

The default memory settings are to receive standard 26 bit weigand.

100 Number of bits in site code: 0 to 32 ***[8]***.

101 Number of bits in user code: 8 to 64 ***[16]***.

102 Number of bits for start parity (0 = no start parity bit, 64 or greater = use half the total number of data bits) ***[255]***.

103 Number of bits for end parity (0 = no end parity bit, 64 or greater = use half the total number of data bits) ***[255]***.

104 Parity polarity:
0 = Start & End Even,
1 = Start Odd & End Even,
2 = Start Even & End Odd,
3 = Start & End Odd,
4 = Do not check parity.

105 Transmit received site code: ***[255]***
0 = Don't transmit the received site code,
All other vales = Do transmit.

Note that this memory has no effect when transmitting RS232 data.

110 Custom total number of receive bits ***[255]***.

When this memory is set to 0 the PIM will ignore all settings in memories 100 to 105 and 111 to 113 and will receive weigand data until either is has received 64 bits of data or 8 milliseconds has elapsed since it received its last data bit. All these bits will be treated as the user code with no site code data.

When this memory contains a value that specifies a total number of data bits of between 8 & 64 then the custom weigand receive mode is enabled (if start and/or end parity is specified in memories 102 & 103 then these bits need to be taken into account when specifying the total number of bits).

The number of bits for the site & user code are still as specified in memories 100 & 101 but the starting position of the site & user codes within the received bits can be specified via memories 112 & 113.

Note that using this option requires a high understanding of Weigand data. Nidac will only offer limited support for this feature.

111 Expect LSB first in custom mode: ***[255]***
1 = LSB is received first when in custom mode,
All other values = MSB received first.

112 The bit number within the received data that the site code data starts at (only used when in custom receive mode), note that the first bit received is bit 1. ***[255]***

113 The bit number within the received data that the user code data starts at (only used when in custom receive mode), note that the first bit received is bit 1. ***[255]***

WEIGAND TRANSMIT SETTINGS MEMORIES

The default memory settings are to transmit standard 26 bit weigand.

120 Number of bits in site code: 0 to 32 ***[8]***.

121 Number of bits in user code: 8 to 64 ***[16]***.

122 Number of bits for start parity (0 = no start parity bit, 64 or greater = use half the total number of data bits) ***[255]***.

123 Number of bits for end parity (0 = no end parity bit, 64 or greater = use half the total number of data bits) ***[255]***.

124 Parity polarity:
0 = Start & End Even,
1 = Start Odd & End Even,
2 = Start Even & End Odd,
3 = Start & End Odd.

125 Site code byte 3 (bits 24 to 31): 0 to 255 ***[0]***.

126 Site code byte 2 (bits 16 to 23): 0 to 255 ***[0]***.

127 Site code byte 1 (bits 8 to 15): 0 to 255 ***[0]***.

128 Site code byte 0 (bits 0 to 7): 0 to 255 ***[1]*** (used for standard 8 bit site code, when using 26 bit Weigand).

130 Weigand transmit mode:
0 = standard,
1 = 4 bit burst mode,
2 = 4 bit burst mode ignoring * and # keys,
3 = 8 bit burst mode,
4 = 8 bit burst mode ignoring * and # keys,
5 = 4 bit burst mode and a # at end of code,
6 = 8 bit burst mode and a # at end of code.

In 4 or 8 bit burst mode each digit received is sent as an individual Weigand burst character at a rate determined by memory 131.

Note that when using a Presco™ keypad no data is sent until the E key is pressed (# key on a VR43, VR62 or PSE).

Note: options 5 & 6 are only valid when converting from Presco™ and are only available with firmware revision 3d or greater.

131 Burst Mode Delay, the delay between sending burst mode characters in 0.1 second increments. ***[2]***

132 Custom total number of transmit bits ***[255]***.

When this memory contains a value that specifies a total number of data bits of between 8 & 64 then the custom weigand transmit mode is enabled (if start and/or end parity is specified in memories 122 & 123 then these bits need to be taken into account when specifying the total number of bits).

The number of bits for the site & user code are still as specified in memories 120 & 121 but the starting position of the site & user codes within the transmitted bits can be specified via memories 134 & 135.

Note that using this option requires a high understanding of Weigand data. Nidac will only offer limited support for this feature.

133 Send LSB first in custom mode: ***[255]***
1 = LSB is transmitted first when in custom mode,
All other values = MSB received first.

134 The bit number within the transmitted data that the site code data starts at (only used when in custom transmit mode), note that the first bit transmitted is bit 1. ***[255]***

135 The bit number within the transmitted data that the user code data starts at (only used when in custom transmit mode), note that the first bit transmitted is bit 1. ***[255]***

140 Default custom weigand pattern byte 7. ***[255]***

141 Default custom weigand pattern byte 6. ***[255]***

142 Default custom weigand pattern byte 5. ***[255]***

143 Default custom weigand pattern byte 4. ***[255]***

144 Default custom weigand pattern byte 3. ***[255]***

145 Default custom weigand pattern byte 2. ***[255]***

146 Default custom weigand pattern byte 1. ***[255]***

147 Default custom weigand pattern byte 0. ***[255]***

Memories 140 to 147 specify the default pattern to be used when transmitting in custom weigand mode (refer memory 132). These are the bits that will be transmitted when the data bits (including site, user & parity) are not being sent.

PAC1/2 Programming Software

Presco™ decoder programming software is also available to use with the PIM. This software will allow you to connect a PAC1 or PAC2 to a PIM that is connected to a PC and program all settings and users codes. It also allows the extraction of settings and user codes from existing programmed decoders.

The decoder programming software will be available from Nidac's website www.nidac.com in the Downloads->Software section.

NIDAC SECURITY PTY. LTD.
MANUFACTURERS OF SECURITY EQUIPMENT
A.B.N. 49 004 933 242

2 CROMWELL STREET
BURWOOD, VICTORIA
AUSTRALIA 3125

TEL: +61 3 9808 6244
FAX: +61 3 9808 9335
WEB: www.nidac.com
EMAIL: sales@nidac.com