

Veermount Technology Limited

TeleHawk2

Door entry system

INSTALLATION MANUAL

IMPORTANT NOTE.

Long term system reliability and low maintenance costs can only be realised if the panel is installed competently and as detailed in this manual. Veermount Technology Limited Ltd will not accept liability for any problems arising from non-compliance with the information as contained in this document.

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INSTALLATION MANUAL

Contents

1	Overview	2
2.	Installation & wiring	3
3.	Programming the TeleHawk2	6-7
4.	Telephone circuit requirements	8
5.	Simple guide to operation	9
6.	Methods of access control	10
7.	Statutory information	12-13

1. Overview

TeleHawk2 is a security door entry system that utilises a telephone line to connect the point of entry to the required person (via a telephone number – including mobiles). For convenience, within this document, the required person is called the SUBSCRIBER.

In effect it is a hands free telephone unit which allows a caller to connect to the required person via the public telephone network (or through an internal PABX system).

A keyboard provides the means of selecting the required SUBSCRIBER together with sound indications via the loudspeaker.

The TeleHawk2 has a data base capable of holding up to 30 SUBSCRIBER AND 60 PIN numbers. Each SUBSCRIBER has the facility for two numbers to be held in the data base. When the caller enters the required SUBSCRIBER flat number (or equivalent) the system calls the first telephone number and, if no reply is obtained, the call is cleared and the second number is then called.

TeleHawk2 consists of a solidly built, vandal resistant door entry and access control panel designed to IP55 and supplied either as a surface mounting unit or a laid in version (flush mounting).

Two individually programmable relays are fitted, for access control of a door and gate for example, each providing a set of volt free changeover contacts with a maximum rating of 24V ac/dc 2amp.

An external power supply to power the release mechanisms and optional camera is required. **This must be a regulated power unit having mains filtering for noise suppression. In case of doubt please ask VeerMount for more information. Use of an unregulated power supply will invalidate the warranty.**

An 'egress' feature allows for release switches to be wired into the unit to allow the user to open the controlled door and gate from internal locations.

Data entry and system programming uses either the panel keypad, with security codes, or else by dialling into the system and then using the telephone keypad - again including security codes. For larger systems VeerMount can provide a Windows XP program and associated programming module to allow complex data bases to be easily controlled and updated.

Summary of System Features

- ◆ Up to 30 SUBSCRIBERS.
- ◆ Up to 60 PIN numbers for SUBSCRIBERS' access
- ◆ Tone dialling.
- ◆ Automatic re-dial to a second number
- ◆ Control of two doors / gates
- ◆ Remotely programmable via a standard DTMF telephone, or via a PC for larger systems.
- ◆ Locally programmable via the panel's own keypad (if enabled).
- ◆ Programmed information retained in the event of line failure.
- ◆ Volume level adjustments via the line using a DTMF telephone.
- ◆ Egress switching as standard
- ◆ Camera options including timing and control
- ◆ Optional Concierge and Warden facilities

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2. Installation and wiring

The control panel is designed for setting into (Flush mount), or fixing onto (surface mount), a brick or stone type structure. If the Power and Termination Unit is used this needs to be set inside the building and within 100 metres (cable run distance) of the control panel.

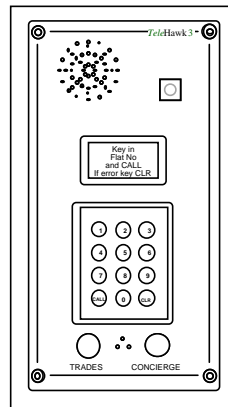
The control panel should be sited so that the keyboard is easily accessible, at a suitable level for talking into the Microphone (lower half) and listening through the Speaker (upper half). Also take into account the cabling to the associated internal wall box unit. (See wiring details, Section 5, below).

For typical pedestrian use the height from finished ground level to the top of the back box should be no more than 1700mm.

This level may need to be reduced further where (for example) wheelchair access is provided.

Where the installation is designed for operation via a vehicle window, a compromise may be necessary according to the range of sill heights likely to be encountered.

It is not necessary for users to speak directly into the microphone from close proximity; its sensitivity is such that adequate output can be generated when the mouth to microphone distance is a metre or more. In practice, the limiting factors are most likely to be the height at which the keyboard can be operated by a child or person in a wheelchair and the background sound when in a noisy environment.



DIMENSIONS (mm)

	Height	Width	Depth
Flush Mounting – Standard version	360.0	205.0	60.0*
Surface Mounting –Standard version	323.5	154.5	80.0 max
Flush Mounting – PAC version	400.0	191.0	58.0*
Surface Mounting- PAC version	363.5	154.5	80.0 max
Control Box (if required)	331.0	359.0	84.0

* Flush mounting models require a cavity behind the panel as follows:

Standard version:	325 h x 175 w x 58 d
PAC version:	410 h x 1725 w x 58 d

Note that flush and surface models are secured in similar way in that the back box itself is directly screwed to the wall.

CONTROL PANEL MOUNTING

The control panel should first be removed from its back box using the correct screw spinner for the security screws (available from Veermount if required).

The back box requires four plugged holes to be set into the wall (surface mount version) or a cavity cut into the wall (flush mount version) followed by the four plugged holes as for the surface version.

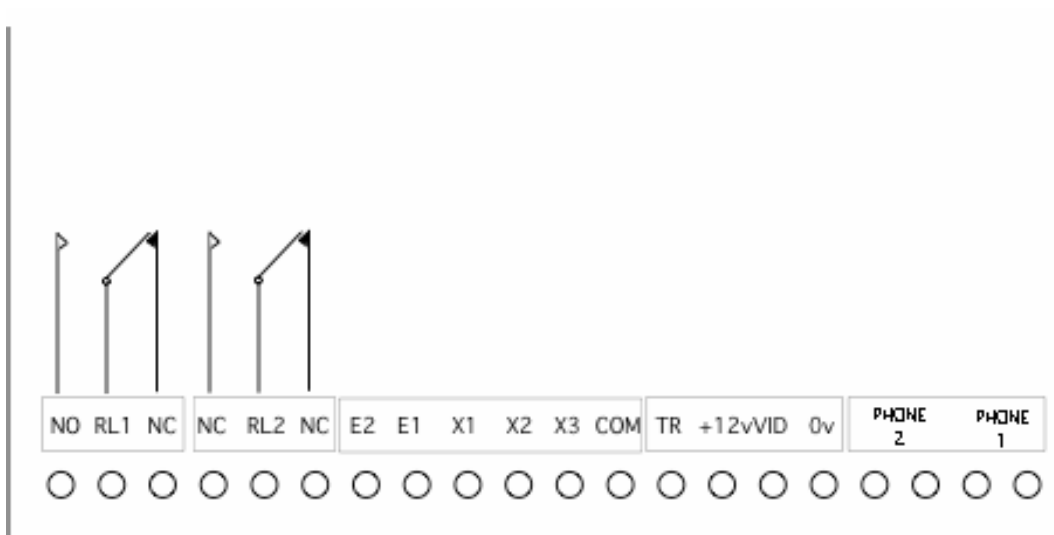
The mounting holes may most easily be drilled using the back box as a jig, taking care not to damage the box itself whilst doing so.

Remember to make provision for the interlinking CAT5 cables between the control panel and the PTU **and also an earth connection to the back box terminal.**

The distance between the panel and the associated Power & Termination Unit should not exceed 100 metres.

CONTROL PANEL CONNECTIONS

The connections are made along the bottom edge of the PCB in the control panel. Access is by removing the rear protection box lid (four screws). The PCB will then be seen inside.



The terminations are via the screw terminal block at the base of the board. Slots and grommets are provided to allow the cable(s) to pass safely through the protection box side.

CONNECTION DETAILS

PHONE LINE. (See detailed telephone line requirements in the next section).

Connect to the terminals marked LINE 1 and pins 2 and 5 at the telephone master socket. Note that line polarity is unimportant. (Line 2 is not available in this model of TeleHawk2).

VID, 0v.

If a video camera is fitted then the video signal is available between the terminals marked VID and 0v. but a source of external +12V / 0v must be provided and connected to the associated terminals. **See notes re type of power unit required at Section 1 above.**

Egress controls EG2, EG1 & COM.

By connecting a simple, normally open, push button between EG1 and COM, RL2 will operate when the button is pressed, permitting exit from the zone it controls. Similarly, by connecting a simple normally open push button between EG2 and COM, RL1 will operate, permitting exit from the second zone.

Door control NO, RL1, NC

This provides a clean changeover relay contact for operating the door release solenoid or equivalent. If power is required for lock release, then a separate power supply must be used and switched through this contact set.

Gate control NO, RL2, NC.

This provides a clean changeover relay contact for operating the gate release solenoid or equivalent. If power is required for lock release, then a separate power supply must be used and switched through this contact set.

COMPLETION OF INSTALLATION

The control panel wiring should be checked and then the protective lid replaced and the four screws tightened carefully.

Ensure that the earth is correctly connected to the front panel back box and the earth lead to the front panel is connected.

Ensure that the cable entry into the back box is protected against possible damage. Carefully dress the cables to allow the front panel to sit correctly into the back box.

Insert the panel in the back box and secure the panel using the vandal resistant screws provided.

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3. PROGRAMMING THE TELEHAWK2

General

The unit is programmed by using DTMF tones from an external telephone, or via the keypad if this feature is activated.

Note that a number of different sounds are generated by the TeleHawk to indicate various information. In the following text those sounds are described in a way in which they can be recognised by the programmer.

This text details programming a single flat and with minimum other programming changes. Please refer to the associated programming manual for full details

Factory default settings

The unit has a number of pre-settable parameters included in the design and these may be changed by the user. Detailed information on how to change these values is given in the separate programming handbook. The factory default settings are as follows:

Item	Preset to	Possible Values
Default security code	1244	Any four digit number
Door open time	10 seconds	1 to 255 seconds
Maximum call duration	240 seconds	1 to 255 seconds
Speaker volume	10	0 - 15 (0=min, 15 = max)
Microphone sensitivity	0	0 - 15 (0=min, 15 = max)
Door open code (at telephone)	1*	First digit 0-9, or * Second digit 0-9, * or nothing

Programming Sequence

Initial dial up mode.

The user must first dial into the panel from another fixed, or mobile, phone and, when the call is answered, check that the panel responds by transmitting two tones in quick succession indicating the TeleHawk has answered and is waiting for Program entry.

Key in

Security code entry

Once the TeleHawk has answered correctly and to protect the unit from unauthorized interference the first entry to be keyed in is the security code. This code is set to be 1234 at the factory but can be changed at any time to any other code sequence.

Therefore firstly key in the security code starting and finishing with *

1234

The panel should respond with a single 'beep' back to the calling handset.

Subsequent sequence

Once the panel has responded correctly to the security code the program update can begin. Note that the security code does not need to be entered again during this call.

Example: **1 # 12 # 444 # 488777 *** would enter a new flat number 12 Into the database, giving it a PIN of 444 and a telephone number of

488777.

Errors: If the flat number already exists, parameter 1 will be rejected.
If the PIN is already in use for a different function, eg to open the gate, then parameter 2 will be rejected.

Other examples: **1 # 12 # 444 # 48777 # 445 *** would enter a new flat number 12 as above but would specify further that it has a gate PIN of 445.

1 # 123 # 123 # 861864 # 456 # 861865 *
This sets a new flat number 123 with a door PIN of 123, phone number 861864, gate PIN of 456 and a second phone number 961965.

1 # 0123 # 456 # 886777 * would assign PIN 456 and telephone number 886777 to key sequence 'a23', which is only relevant if extra first-character keys a-f have been installed.

Change master security code

To change the master security code first dial into the TeleHawk and enter the current security code as above. Once the unit has responded with the confirming beep key in the new code required as follows. The code must be between 4 and 6 (four and six) digits long.

To ensure correct change of number the chosen code must be entered twice. Assume it is to be changed to 4321 then the sequence of programming would be to

- key in **3#0041#4321#4321***

Remember the new code - once entered it must be used for future programming.

To complete the programming

If no other programming required - key in **# ***

This is the same as cancelling a command, but as no command has been keyed in it terminates the whole programming process. It will also clear down the call in progress.

For more detailed program changes please refer to the Programming manual.

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4. Telephone circuit requirements

LINE REQUIREMENTS

TeleHawk2 is designed to be connected to a single **analogue** telephone line. This can be a dedicated, PSTN line (preferably ex directory) or a PABX extension line.

NOTE : The system will not work with digital exchanges unless connected to a specially provided analogue port, supplied by the PABX manufacturer.

EXCHANGE LINE CONNECTION - It is the responsibility of the customer to contact British Telecom or the chosen line provider to arrange for the installation of the ex - directory line. Do not use this exchange line for any other reason.

EXTENSION LINE CONNECTION - It is the responsibility of the customer to ensure that there is compatibility between TeleHawk2 and the PABX or other telephone system to which it is connected (see 'Required PABX Characteristics'). Do not use the chosen extension line for any other reason.

In either case it is the responsibility of the Installer to liaise with and assists the customer regarding provision of the line and to contact Veermount if in any doubt.

PSTN Line Connection

For PSTN line service, a standard BT line jack master socket will need to be provided and sited not far from the point of installation. The TeleHawk2 must be terminated at this socket. It is recommended also that the BT type master socket be fitted into a protected location and that the distance between the master socket and the TeleHawk2 panel is less than 20 metres.

It may be necessary to request the gain balance of the BT line to be set to 3. If so, Call BT on 151 (domestic line) or 154 (business line) to arrange for this to be done.

PABX line connection

For PABX service the TeleHawk2 can be connected via a suitable extension telephone socket.

The PABX specification must meet the following standards:

Ringling Voltage	>35v rms 25Hz or 50Hz
Current in the telephone (off hook)	25mA minimum
Dialling system	DTMF
Dialling Tone	Continuous Tone Frequency: 270 – 540Hz
Busy Tone Beep/Pause sequence for more than 10 secs	Frequency: 300 – 500 Hz Beep: 100 – 600 ms Pause: 100 – 600 ms
Distant Ringing Tone Beep/Pause sequence until far end off hook	Frequency: 350 – 500 Hz Beep: 0.2 sec – 1.6 sec Beep + Pause sequence < 6seconds
Call Voltage Transmitted by the Switch Ringling duration: Pause Duration:	Frequency: 50Hz or 25Hz 1.5s Plus or minus 0.5s 3s plus or minus 2s

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5. Simple guide to operation

Control panel

Basically enter the required SUBSCRIBER number followed by CALL.

Once the SUBSCRIBER is called the TeleHawk2 rings the programmed number for that SUBSCRIBER and waits for 30 seconds for an answer. Ringing tone will be heard at the panel.

If call is not answered within a preset time (default 30 seconds) the call is cleared. If a second number is available for the same SUBSCRIBER it then calls that number and again waits for 30 seconds before clearing the call. The time of waiting for answer is programmable.

When the call is answered a 'bing bong' is heard to indicate the fact.

To enter a PIN number, key in CALL, then the code, then CALL again. (PINs can be up to 6 digits). A 'pip-pip-pip-...' sound sequence will indicate that the door is open.

If trades button is fitted, pressing it will automatically open the door (or gate) at times set by the time switch in the Power & Termination Unit.

If a concierge button is fitted this will call the warden, security or other central point, associated with the telephone number programmed in.

To cancel a call at any time, press CLR.

SUBSCRIBER

At the SUBSCRIBER's phone the call is received and answered as normal. The 'bing bong' will also be heard indicating the call is from the panel.

The SUBSCRIBER may open the door by entering 1* or open the gate by entering 2* (or as otherwise programmed). Should he not wish to let the caller in he may press # to clear the call.

If a call is not cleared correctly the system has a default timeout of 4 minutes. This is a programmable time but should be set normally set to 90 secs after installation

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6. Methods of access control

TeleHawk2 provides a number of methods for controlling access:

The primary methods are:

Method 1: At the panel, a caller enters a SUBSCRIBER address number (e.g., a flat or apartment number) then presses the CALL key. The panel automatically rings the corresponding telephone number.

If the call is unanswered, after a predetermined period, the system automatically cancels the call and, if a second number for that SUBSCRIBER is available, it will then call the second number.

When the call is answered a 'BING BOING' sound is heard at both the panel and the SUBSCRIBER's telephone. This is used to indicate to the SUBSCRIBER that the call is from the door entry panel and used as a confidence tone at the panel to indicate that the call has been answered .

On answering, the caller and SUBSCRIBER are able to communicate and the SUBSCRIBER may then choose to permit access to the caller by entering a code on his telephone keypad. The panel recognises two different command codes and which may be preset. Each code activates a relay, providing remote control of two different entrances, typically a door and a gate.

Method 2: A SUBSCRIBER, or authorised person enters a PIN number at the panel. Each valid PIN controls either the 'door' or the 'gate' relay. Provided the PIN is recognised by the system, the appropriate relay operates and activates the associated access control equipment. A primary 'door' PIN and a secondary 'gate' PIN may be allocated to each SUBSCRIBER.

To affect entry by use of the PIN the user first presses CALL followed by the PIN number and then CALL again.

Method 3: Use of egress buttons on the insides of doors to operate the associated solenoid locks.

Options: As optional extras, TeleHawk2 can be provided with one or two additional buttons dedicated to Trades and Concierge (Warden) facilities respectively. Each of these buttons provides another distinct method for controlling access:

Method 3: A caller presses the Trades button. The system will only allow access from this key dependent on programmable daily and weekly time limits.

Method 4: A caller presses the Concierge button. This button is pre-programmed with the telephone numbers of the concierge (or security person). This person can then allow, or deny, access as necessary.

Electronic access may also be provided :

Method 5: TeleHawk2 may also be fitted with an integrated PAC reader, enabling access to be granted on presentation of an authorised electromagnetic 'key'. This facility is external to the TeleHawk 2 system, although it may be physically integrated into the panel.

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Statutory Information

The approved item consists of the TeleHawk2 panel assembly, which constitutes a hands free telephone call point to a series of pre-programmed telephone numbers together with the associated Power and Termination Unit.

The TeleHawk2 apparatus is approved for connection to analogue speech circuit equipment approved under section 16(1) of the British Telecommunications Act (1981) and as designated by the Secretary of State under section 22(6) of the Telecommunications Act of 1984.

The design meets the safety requirements of EN14003 and EN60950 with respect to TNV and as required by the European Low Voltage Directive (LVD 73/23/EEC) when it is correctly installed and maintained. (See Declaration of conformity on next page).

The apparatus has been approved for use of the following facilities;

1. Autocalling
2. Loudspeech

All other normal telephone facilities are provided as necessary from PSTN/PABX equipments.

The termination between the main panel and the PSTN master socket (NTP) is made via a standard BT603A (BS6312) type plug and socket.

The apparatus **MUST NOT** be used with other series connected apparatus and if any other apparatus is connected in parallel, due account must be taken of the REN loading.

The connection is a simple 2 wire (A-B) connection. There is no provision for a third, shunt, wire and as such the apparatus must not be connected to main apparatus requiring a shunt wire.

The REN equivalent of an individual TeleHawk2 panel is 1. The maximum REN that is allowed on any PSTN circuit is four. It is the responsibility of the Installer to ensure that if any equipments of other manufacture are connected in parallel with the TeleHawk2, they do not cause this REN to be exceeded, and that they do not interfere with the satisfactory operation of the TeleHawk2 panel.

Some of the above statements do not apply when the TeleHawk2 is used in conjunction with any approved PABX such as the BT106.

See also Declaration of Conformity on the last page :

FAULT DIAGNOSTIC SHEET

Problem	Check	Comments
Can't call into the panel to program it	The correct telephone line number is being used. (See also 'dead panel below)	The line must be capable of both way calling - i.e. both setting up and receiving calls.
Dead panel	Is the telephone line connected to the TeleHawk line 1 pair?	The second line pair is only used for specialised applications.
	Does panel 'bong' within a few seconds from when telephone line connected?	This confidence sound is generated when the panel becomes active after connecting to the telephone line
	Check line pair is an 'analogue' line (i.e. not from a digital exchange)	TeleHawk is designed to work on an analogue line only.
	Check voltage across telephone line pair?	Should be between 24V DC and 55V DC open circuit.
Call button doesn't call the subscriber	Does the panel LED light when the button is pressed?	This LED is in series with the unit and therefore indicates it has responded to the button push.
	Is the panel calling the correct number	If ring tone heard after the button press then its probably calling the wrong number
	Is the sound heard 'busy' tone	The called party is already on the line.
	Is the Hawk connected to a PABX rather than an exchange line	If dialling through the exchange to PSTN has the leading digit 9 been included?
	If working into a PABX has it been checked for compatibility	See requirement in previous section.
Any other problem		Call Veermount for advice.

Declaration of conformity

We : ***Veerount Technology Ltd***

of: 15, Ancaster Crescent,
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Declare under our sole responsibility that the product:

Name: TeleHawk Door Entry system

to which this declaration relates is in conformity with:

The following Common Technical Regulations
and/or normative documents

73/23/EEC Low Voltage Directive
89/336/EEC EMC Directive
91/263/EEC Telecommunications Terminal Equipment Directive

EN60950:1992 Electrical Safety
Including amendments A:1993, A2:1993, A3:1995,
A4:1997, A11:1997

EN50081:1992 EMC
EN55022:1998 EMC

February 19th, 2005

Signed... *R S Athill*

Position : Director

