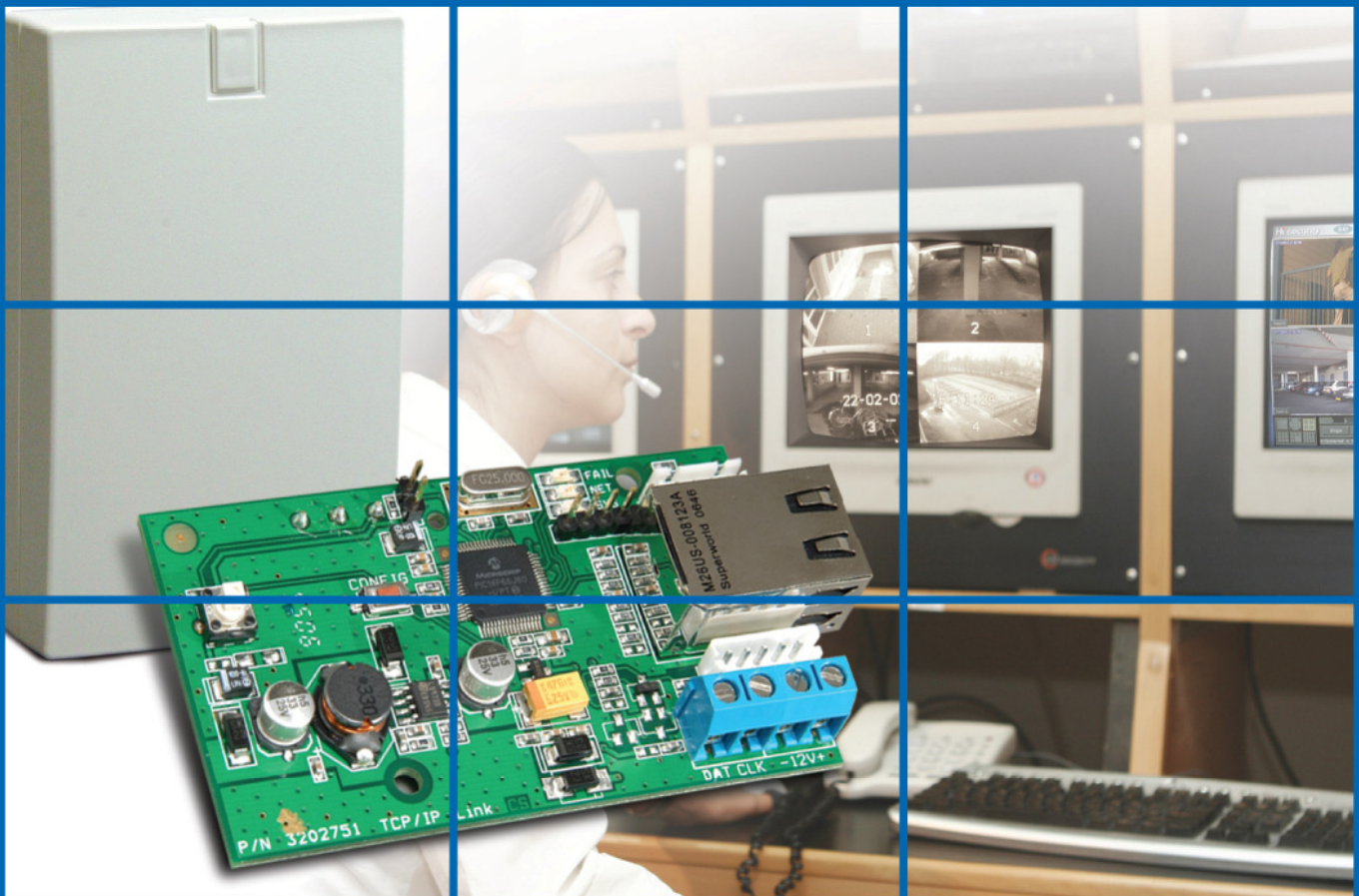# CROW
## Electronic Engineering Ltd

# RUNNER LINK TCP/IP *GATEWAY*

# Installation & Programming Guide

## Crow Limited Warranty

(Crow) warrants this product to be free from defects in materials and workmanship under normal use and service for a period of one year from the last day of the week and year whose numbers are printed on the printed circuit board inside his product.

Crow's obligation is limited to repairing or replacing this product, at its option, free of charge for materials or labor, if it is proved to be defective in materials or workmanship under normal use and service. Crow shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other then Crow.

There are no warranties, expressed or implied, of merchantability or fitness for a particular purpose or otherwise, which extend beyond the description on the face hereof. In no case shall Crow be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever, even if the loss or damage is caused by Crow's own negligence or fault.

Crow does not represent that this product can not be compromised or circumvented; that this product will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that this product will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product can only reduce the risk of burglary, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result. Consequently, Crow shall have no liability for any personal injury, property damage or any other loss based on claim that this product failed to give any warning. However, if Crow is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of this product, which shall be the complete and exclusive remedy against Crow.

Print Version 017

# Contents

# Introduction

The **RUNNER LINK** *Gateway* is a small external hardware addition to Crow's Runner Control Panel Series. It is connected to the Alarm System using a special cable supplied and also connected to the Internet or LAN using the standard
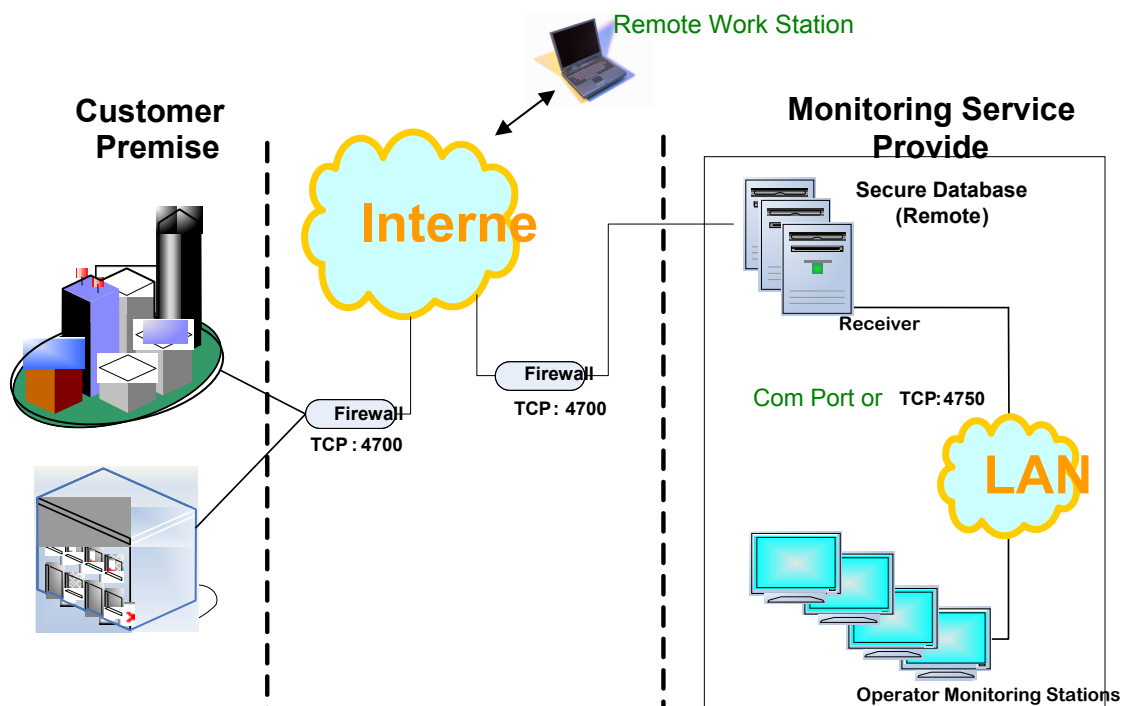RJ-45 connector.

Today the majority of businesses and domestic households that have an intruder alarm installed already have an open connection to the Internet. The **RUNNER LINK** *Gateway* connects itself to the LAN therefore establishing a very low cost communication link with any Monitoring Service of their choice.

When connected to a central monitoring station over the Internet the alarm system has the ability to ensure professional protection 24/7. This is because a watchdog timer ensures that the communication link from the control panel to the central monitoring station is always intact and if there is a break in communication an alarm is triggered immediately to cause an alarm.

When you are connected to a Monitoring Service you are able to get them to send commands and send you a status report of your Alarm System whenever you ask. For example, arm or disarm your Alarm System using the Internet connection.

RUNNER is accessible worldwide with RUNNER link interface via Internet Network from any PC workstation for programming and control the RUNNER panel.

## System Overview



Remote Work Station

**Customer Premise**

**Monitoring Service Provide**

**Interne**

Secure Database (Remote)

Receiver

Com Port or   TCP: 4750

Firewall
TCP : 4700

Firewall
TCP : 4700

**LAN**

Operator Monitoring Stations

# Benefits

- ❑ Connecting intruder alarm equipment to the Internet
- ❑ Supporting standard alarm protocols (SIA/CID)
- ❑ Dedicated servers for secure polling
- ❑ Real-time remote access to the system for the alarm owner (virtual keypad)
- ❑ Event log on demand
- ❑ Add-on Internet gateway from Runner Series control panels
- ❑ Continuous line supervision
- ❑ Alarm signals transmitted via the Internet to remote PCs or Central station
- ❑ Uploading and downloading software for showing status and sending commands over the Internet
- ❑ Distribution of messages triggered by alarms to cellular and emails

# How it Works

The events from your alarm system are automatically transferred via the **RUNNER LINK** *Gateway* to a remote dedicated server located on the secure and tamper proof premises of your Monitoring Service Provider.

When an alarm is triggered on your premises the signal is immediately received on one of the many monitoring stations. Depending on how you have configured the system the alarm can propagate the alarm via SMS messaging and voice messages to multiple recipients. At the same time the operator can intervene and escalate the alarm if required.

The **RUNNER LINK** *Gateway* is a true Plug & Play device and only has to be connected to the bus of an existing alarm controller.

## Customers Premises

Any Crow **Runner** Alarm System version 9.03 or later is able to install the **RUNNER LINK** *Gateway.* The installation is relatively minor as only two cables are connected to the Runner Link box.

### Bus cable

The bus cable is a special cable supplied with the Runner Link and connects the unit to the controller.

### Internet Connection Cable

Most domestic households and businesses today have an open connection to the Internet. To take advantage of this fact there is an RJ-45 plug on the Runner Link box that plugs directly into a router that is already connected to the Internet.

## Monitoring Service Provider

The Monitoring Service Provider is located in a tamper proof environment and uses multiple redundant secure receiver servers.

Redundancy means that the servers take over from one another if one fails. When the repaired server is put back online it automatically updates itself with any new information from the working servers until it is synchronized.

### Monitoring Software Tools

It is recommended that you choose a service provider that uses modern sophisticated software tools and able to monitor your alarm system events.

### An example of one of the basic A-Traq screens

# Shipping Contents

## Hardware

- ❑ **RUNNER LINK** *Gateway* module
- ❑ RJ-45 Ethernet cross Cable for local (PC/Laptop) configuration. Otherwise (Hub/Router/LAN …) use regular RJ-45.
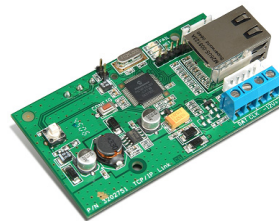- ❑ Fast Bus connection cable
- ❑ Software Installation CD

**Bus cable**



**RJ-45 Ethernet (LAN) cable**



**Runner Link board**



**Installation CD**



## Software

There are two software installation files on the CD:

### IP Link.exe

This file contains two programs and when installed places two icons on your **Desktop**.

- ❑ **IP Configuration** (Runner Link) – This program is used by the installer to setup the unit in the field
- ❑ **Upload Download** (Virtual Keypad) – enables someone to use it as a remote Internet keypad to access your Alarm System

### ReveiverServer.exe

This is a service that must be installed on the **Receiver Servers** at the premises of the Monitor Service Provider.
For details see **Installing the Receiver Server Configuration Program** on page22.

# Installing the Unit

## Installing the Software

### Installing the Installer Configuration Software

#### Installing the Runner Link™ On your PC

This software program enables the installer to configure the **Runner Link** unit in the field.

1. Place the installation CD in your CD reader.

2. Run the IP Link.exe from the Installation CD to install "Pconfig" and "Upload Download" on your PC.

3. Ensure that you now have both the ![P icon] (**Pconfig.exe**) and the ![icon] (**Upload Download.exe**) icons displayed on your Desktop.

## Installing the Hardware

The Runner Link unit is shipped inside a protective plastic box and is connected with two cables.

❑ The Bus cable connects unit to the Runner alarm system

❑ The RJ-45 cable connects the unit to the LAN or WAN
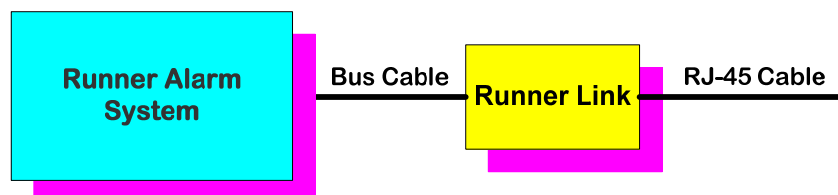


**Figure 1  Cable Connection Diagram**

## Connecting Cables

1. Connect one end of the bus cable to the bus on the control panel main board.

   You can also use the bus terminal block to connect the bus using discrete wires, see Figure 4 on page 7.
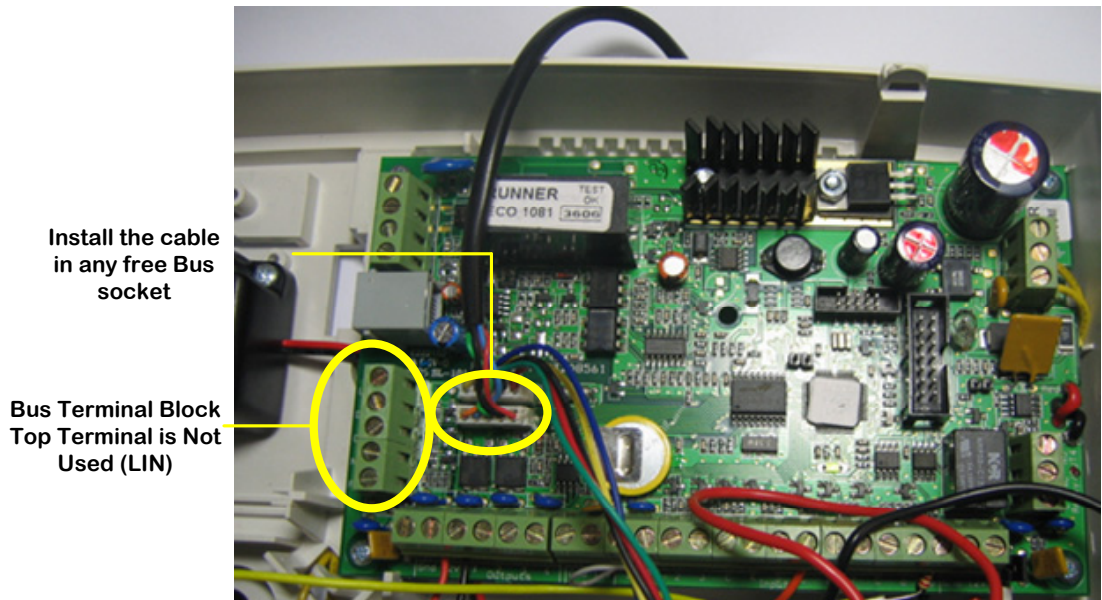


**Figure 2  Main Board Bus Connection**

2. Connect the RJ-45 LAN cable to the Runner Link board as shown in Figure 2 and Figure 3.
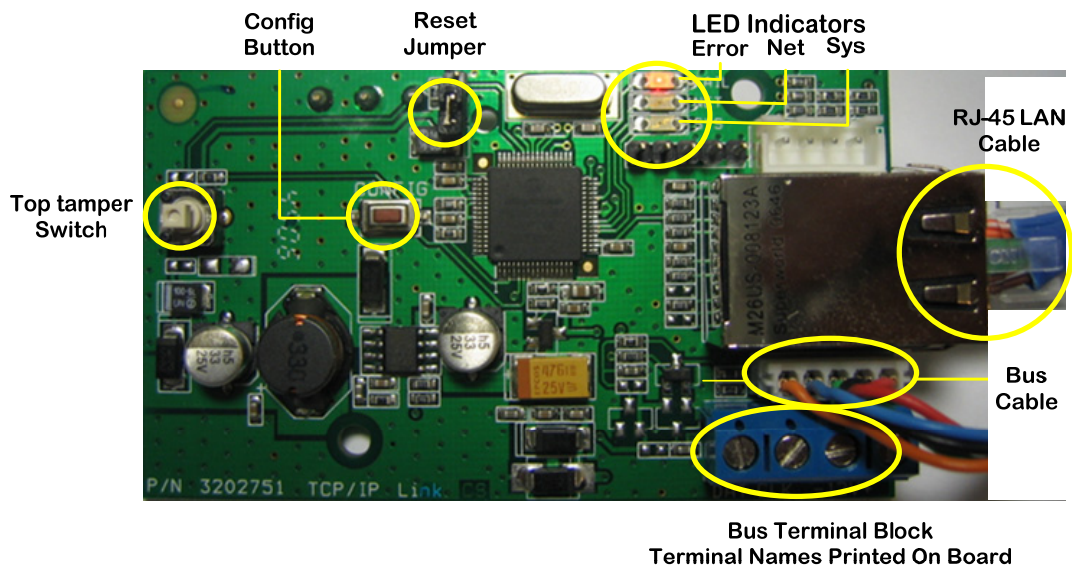


**Figure 3  Runner Link Board Connections and Locations**

**Table 1  LED Description Table**

| LED | Description |
| --- | --- |
| **FAIL** | Solid Red when pressing the **Config** button or when there is an error. |
| **NET** | Solid green when finding the network. |
| **SYS** | Blinks green when the bus is active. |

3. Connect the other end of the Bus cable onto the board as shown in Figure 3.

   Power is supplied to the board via the Bus cable and the red LED is lit.

## Using the Bus Terminal Block

You can also connect discrete wires as shown in the figure below. See also Figure 2 and Figure 3.

The **LIN** terminal is NOT used.
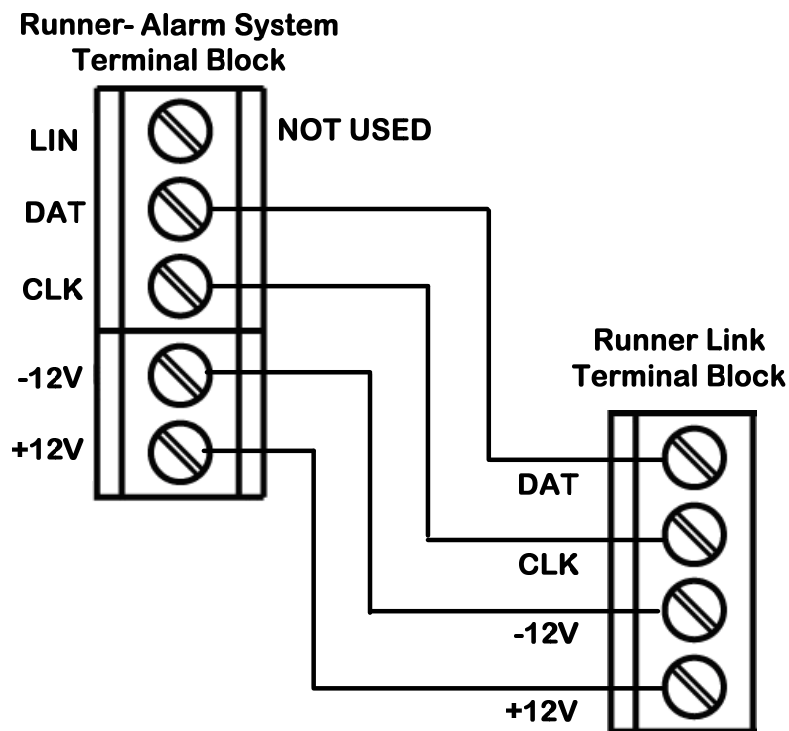


**Figure 4  Using the Bus Terminal Block**

# Configuring the Runner Link

In order to configure the **Runner Link** you must first communicate with it using the initial setup IP of **the Installer PC/Laptop 192.168.0.5** and a Subnet Mask of **255.255.255.0**. see next steps on how to change the PC's IP address.

. By default the RUNNER link's initial IP address (**192.168.0.130**)

## Changing the PC IP Address to the Initial Setting

To perform the initial communication with the Runner board connect the cables as shown in the diagram below.
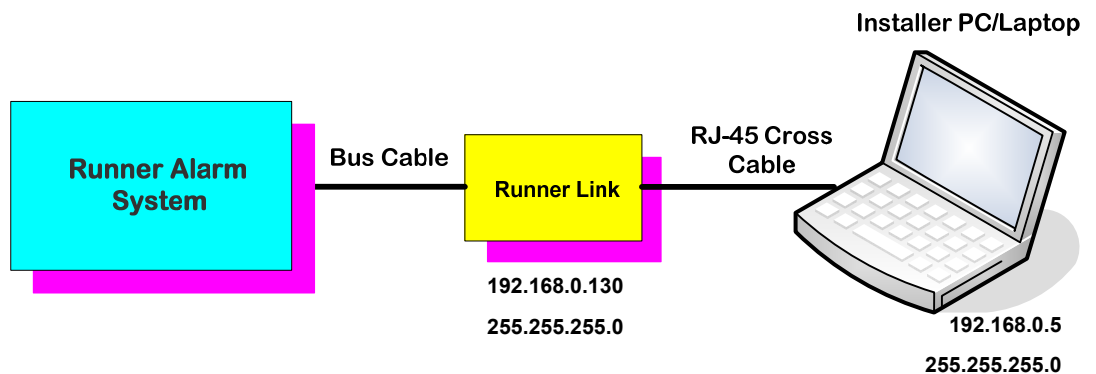


**Figure 5  Installer Cable Connections**

1.  Click the ![start button] button
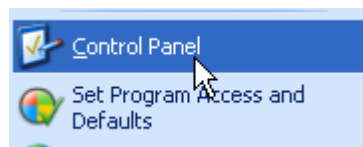


2.  Click **Control Panel**.

3.  Click the **Network Connections** ![globe icon] icon.

4. Right-click the active **Local Area Connection** icon
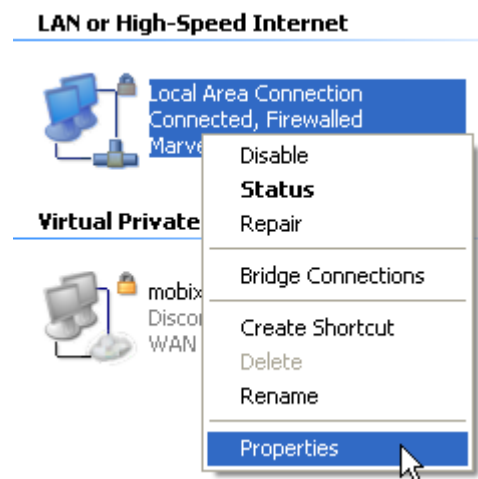


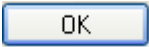5. Click **Properties**.
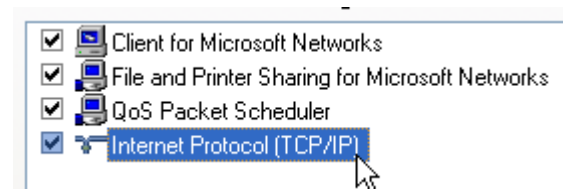


6. Double-click **Internet Protocol (TCP/IP)**.
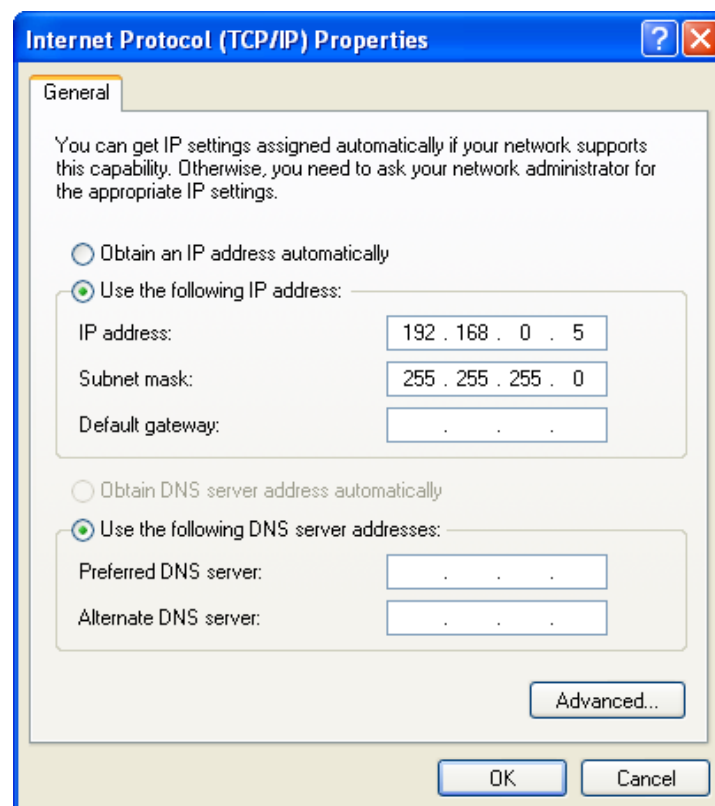


7. Select **Use the following IP addres**s radio button.
8. Enter an IP address of **192.168.0.5**.

9.  On the PC keyboard, press the **[Tab]** key, or click the **Subnet Mask** field (underneath the IP address).

    A value of **255.255.255.0** is inserted automatically.

10. Click the [ OK ] button twice and close the open screens.

# Changing to the Authorized PC IP Address

This section requires that you have already installed the Configuration software. See **Installing the Installer Configuration Software** on page 5.

The **Authorized Address** is the name given to the IP address of your computer that you use for configuring the alarm systems. It is a static address of your choosing and makes maintaining the equipment you have installed much easier.

1.  Ensure that the PC you are using to change the IP address has been set to **192.168.0.5** and a Subnet Mask of **255.255.255.0**.

2.  Double-click the **Configurator** [icon] icon.
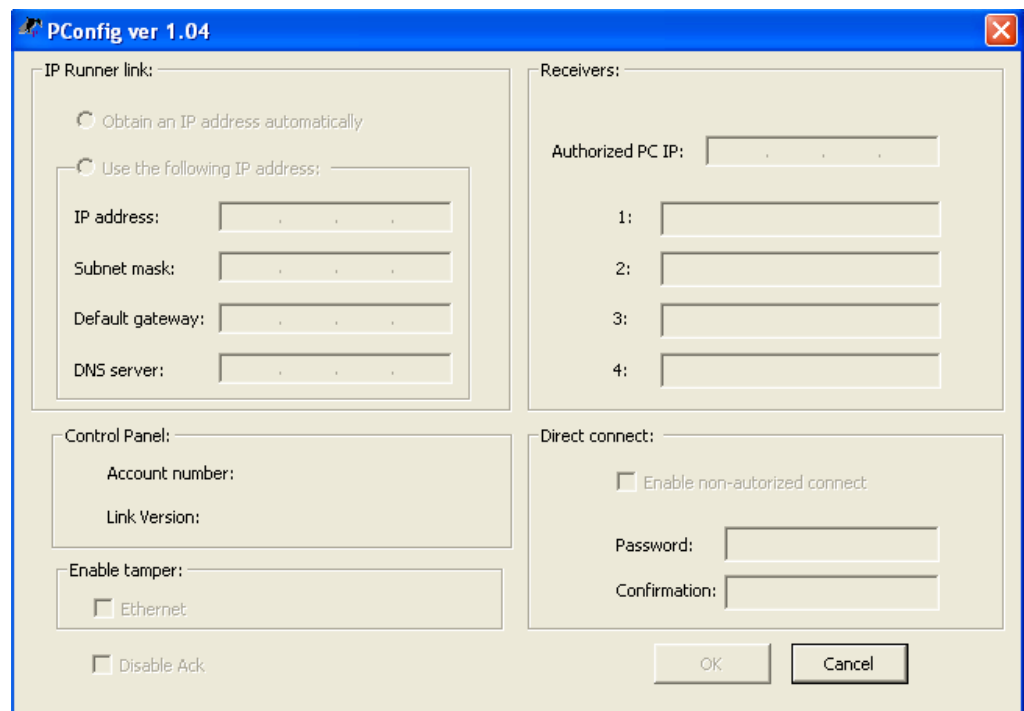


The **Pconfig** screen opens.

> ⚠ **NOTE**
> **For security concerns the screen and CONFIG button are disabled after approximately 45 seconds. To continue, close the screen and open the program again.**

3. On the **Runner Link** board, press the **Config** button for minimum of 5 seconds. (See figure 3)

   The red **FAIL** LED lights and then after 5 seconds the green **NET** LED lights as well and the green **SYSTEM** LED starts to blink. There is an audible beep from your PC (acknowledgment) and the **FAIL** and **NET** LEDS turn off. The screen then is populated with the default IP addresses from the board.
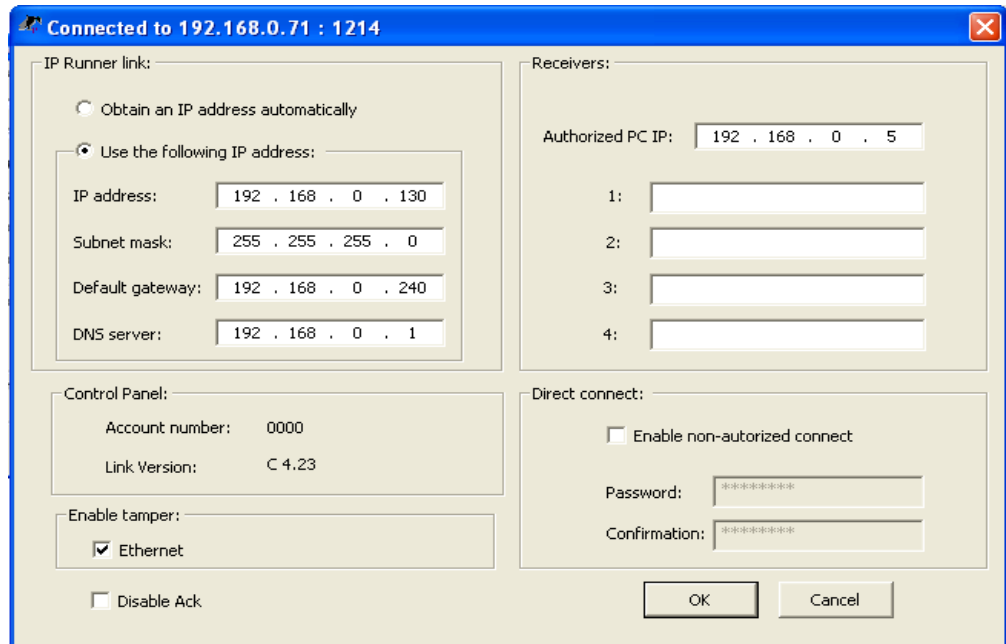


4. Change the **Authorized PC IP** address to the normal working IP of your PC.

⚠️ **NOTES**

- **This IP address MUST be used for maintaining the alarm system.**

- **For security concerns the screen and CONFIG button are disabled after approximately 45 seconds. To continue, close the screen and open the program again.**

5. In the **IP Runner link** pane, select the IP mode and check the correct box required for the network that the **Runner Link** is connected to.
   If a static address is needed all the required information must be entered manually. Or check the box to obtain an IP address automatically from DHCP

6. **Direct connect** – check the box to **Enable non-authorized connects** to RUNNER panel from any PC regardless the authorized PC (192.168.0.5) via the internet network, and provide Password for security access.

7. **Enable tamper** – check the box if alarm tamper message required on RUNNER's LCD display generated from RUNNER link module.

8. **Disable Ack** – check the box if both TCP/IP and PSTN transmission are simultaneously required, otherwise TCP/IP transmit only

9. **Receivers** –insert if required the receiver server's IP address (optional up to 4 receiver servers)

11

9.  Click the [ OK ] button.

> The screen closes and only the green **SYS** LED continues to blink. The other two LEDS are **OFF**.

10. Set the IP of your laptop back to your normal working IP.

11. Disconnect the cross cable from the Runner Link and connect the Runner Link to the LAN or WAN.

# Setting the Board to the Factory Default IP Address

1.  Using Figure 3 on page 6 as a guide, short the **Reset** jumper pins using the jumper installed on one of the pins.

2.  Press the **CONFIG** button.

> The board is now reset to the factory defaults.

| ⚠️ | **NOTE** |
|---|---|
| | **You can also reset the Runner Link by turning on power to the board when the pins are shorted using the jumper. You can then remove the jumper and plug it onto one of the pins for safe keeping.** |

## Setting the RUNNER panel with Account code and activate the dialer

The next steps are very essential in order to enable delivery of RUNNER panel events to the monitoring center station:

1.  Enter to the RUNNER panel Installer mode

2.  Define the account number**: P62EXXXXE**    (XXXX=Account Number)

3.  Activate/or verify  activation of the dialer : **P175E1E**

# Upload/Download Program (Virtual Keypad)

The Upload / Download program enables the Monitoring Service Provider or any authorized user/control panel owner to control the Alarm System in real time over the Internet.
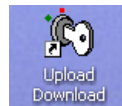
## Using the Virtual Keypad

> **NOTE**
>
> **This program can only be used after configuring the Runner Link.**
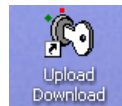
1. From the desktop, click the  icon.
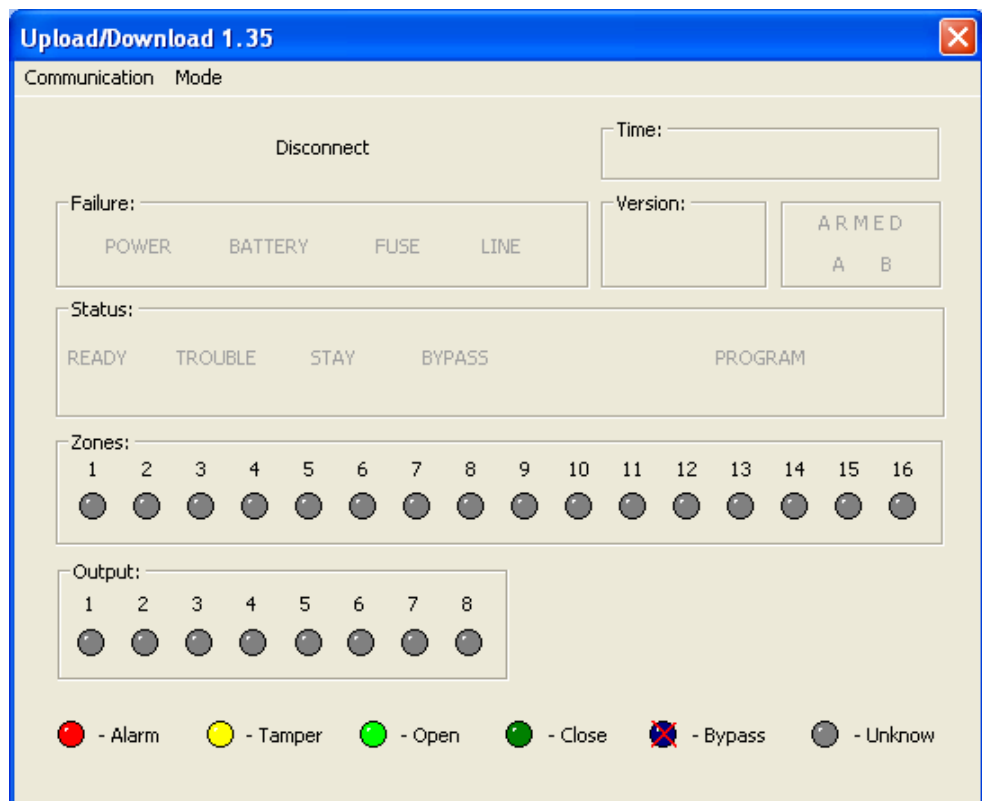
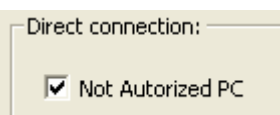2.  Click the **Communication** menu.
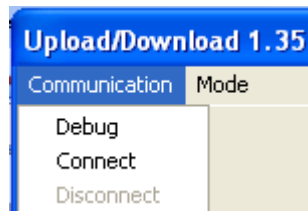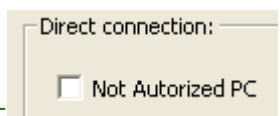


3.  Click **Connect**.
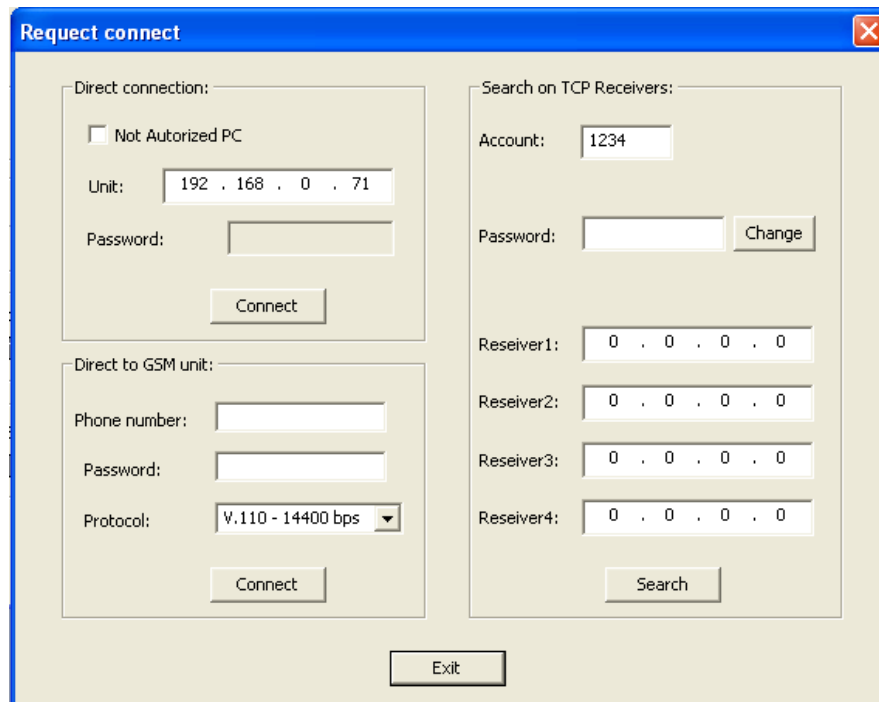


**There are 2 ways (Direct Connection or Search on TCP receivers) to communicate with the Control Panel (See Below)**

## 1. Direct Connection

There are 2 options of  **Direct connection** to the RUNNER link unit



**Option 1** –            fill in the following details: insert the unit's IP address, and set the pc's IP address according authorized PC IP



**Option 2**            fill in the following details : insert the unit's IP address, and insert the password that was defined in Configurator application (see page 11 , Direct connect )

## 2. Search on TCP Receivers – in this way the connection from PC to RUNNER link unit is

establish through receiver server ( see instructions on page 16 section 2  )

## Initiating Communication with the Unit

### 1. Using the Unit IP Address <u>without</u> Not authorized PC option

1.1  In the **Direct connection** pane, enter the unit IP, (pc's IP address should be 192.168.0.5)



### Using the Unit IP Address <u>with</u> Not authorized PC option

1.2   In the **Direct connection** pane, enter the unit IP, check the box of **Not authorized PC**, insert the password which defined in **Direct connect** pane

(Defined password See page 11, section 6) (Note: with this option pc's IP address can be any IP address)



1.3   Click the [ Connect ] button.

1.4   **ONLY** if the connection to the Alarm System is successfully established the following screen displayed.
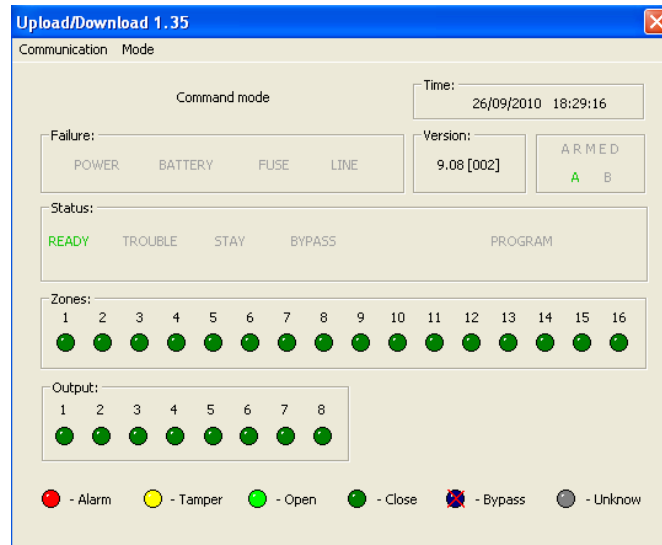
**You are now connected to the Alarm System**.

## 2.  Using the Account Number and Receiver Server IP Address

2.1 In the **Search on TCP Receivers** pane, enter the RUNNER panel account number, password (use the **change** button to define the password) and at least one  receiver IP address.
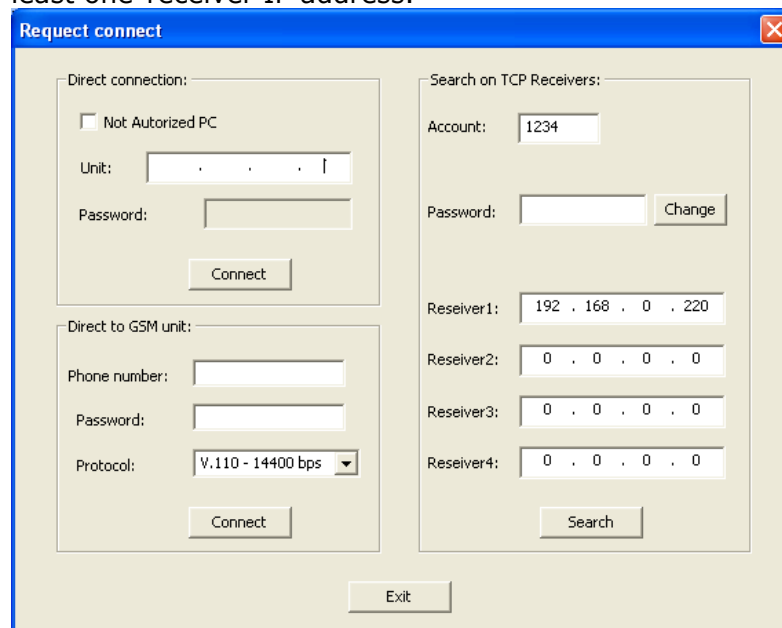


2.2  Click the [Search] button.

2.3    **ONLY** if the connection to the Alarm System is successful is the following      screen displayed.

**NOTE:  Direct to GSM unit option: this  used for CS47 link unit**
**Configuration and its not relevant for RUNNER link**

16
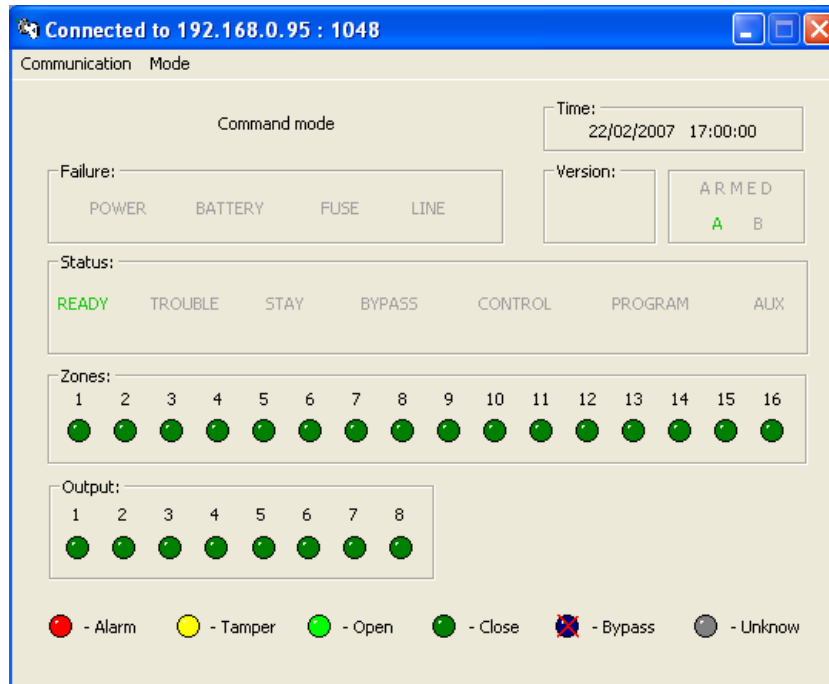
You are now connected to the Alarm System.

## Example 1 - Taking Control of the Unit (Alarm/Disarm)



**NOTE**

**Using this program you can perform the same functions as if you were using the keypad (local) connected to the Alarm System. Below you will find examples on how this is achieved...**

1. Click the **Mode menu→ Command mode** and then click **Arm/Disarm**.
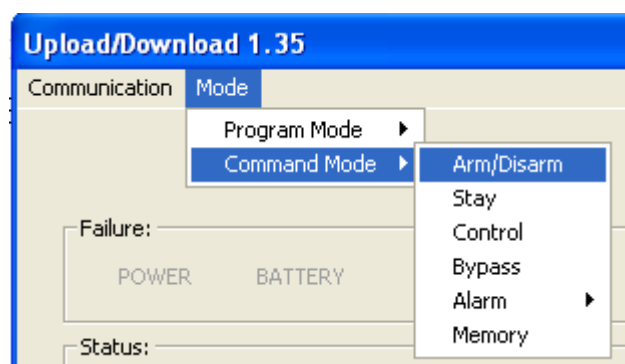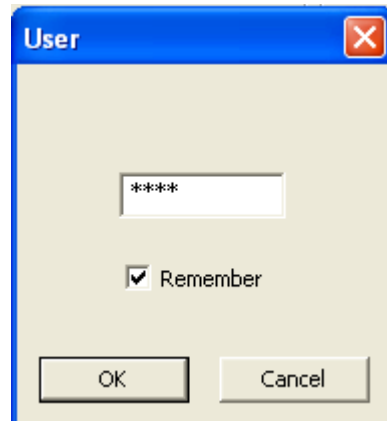
The **User** password window opens

2. Enter the password.

   The default **User** password is 1234.

   This password allows limited access only. If you need complete access, see installer password, **Example 2 - Changing the Password (Installer Mode)** on page 19.
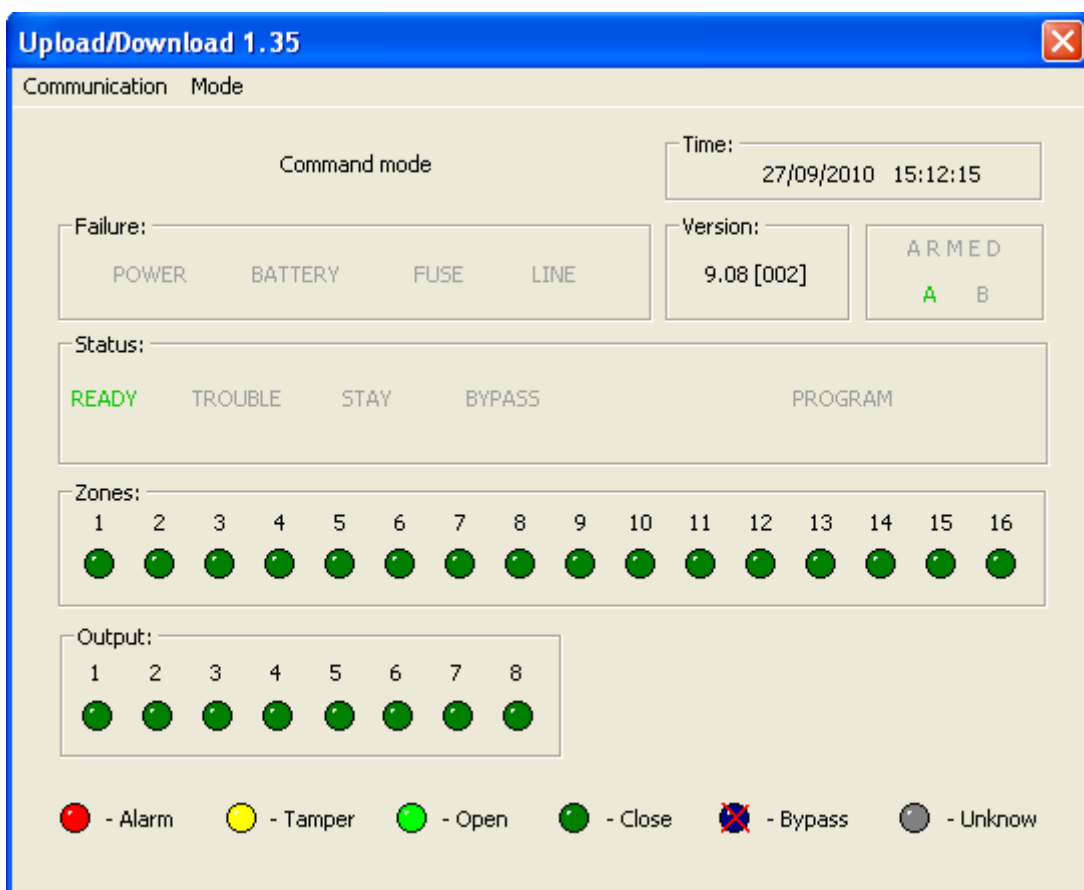


For information on how to configure the unit, see the **Upload/Download** manual via PSTN.

## Example 2 - Changing the Password (Installer Mode)

This section explains how to change the password.

1. Click the **Mode** menu→ **Program mode** and then click **Install code**.
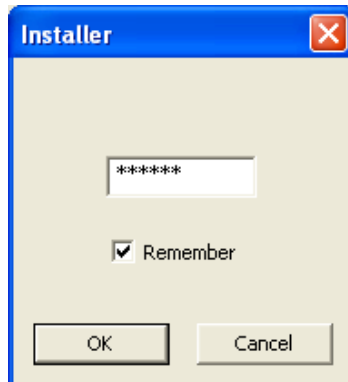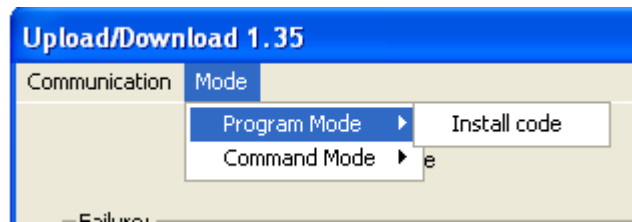




The **Installer** password window opens

2. Enter the installer password

The default installer password is **000000** (six zeros) and gives full access.
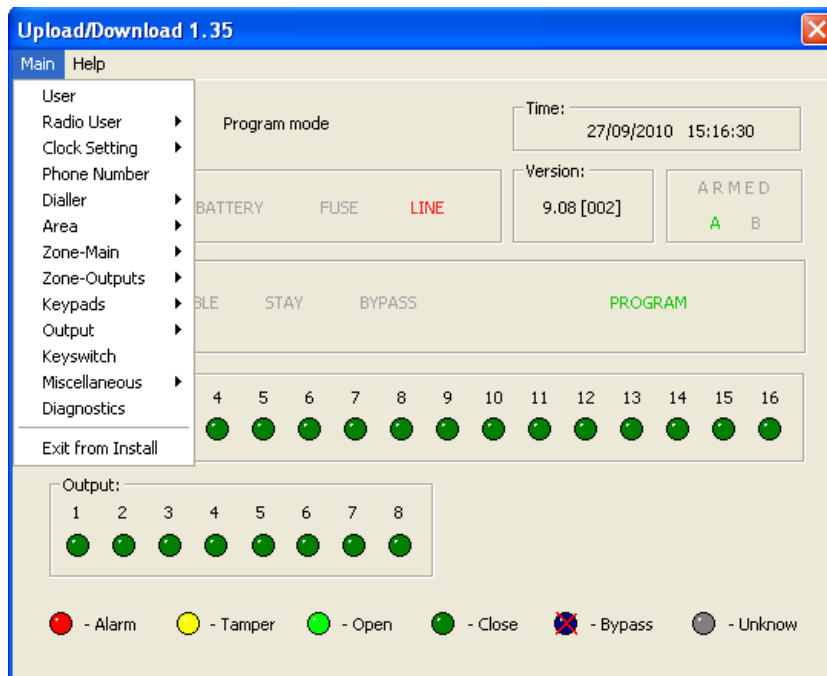


The User screen is shown above with the **Main** menu open.

3. Click the **Main** Menu .

4. Click **User**.



5. In the **Code** field (password), enter a new password.



6.    Click the [Set] button.

## Example 3 - Changing the Phone Number

This section explains how to change the phone number.

1. Click the **Main** menu.
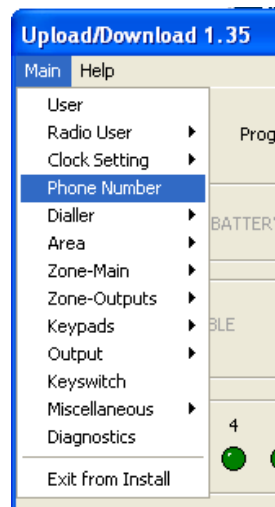


2. Select and click **Phone Number**.
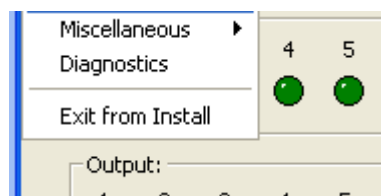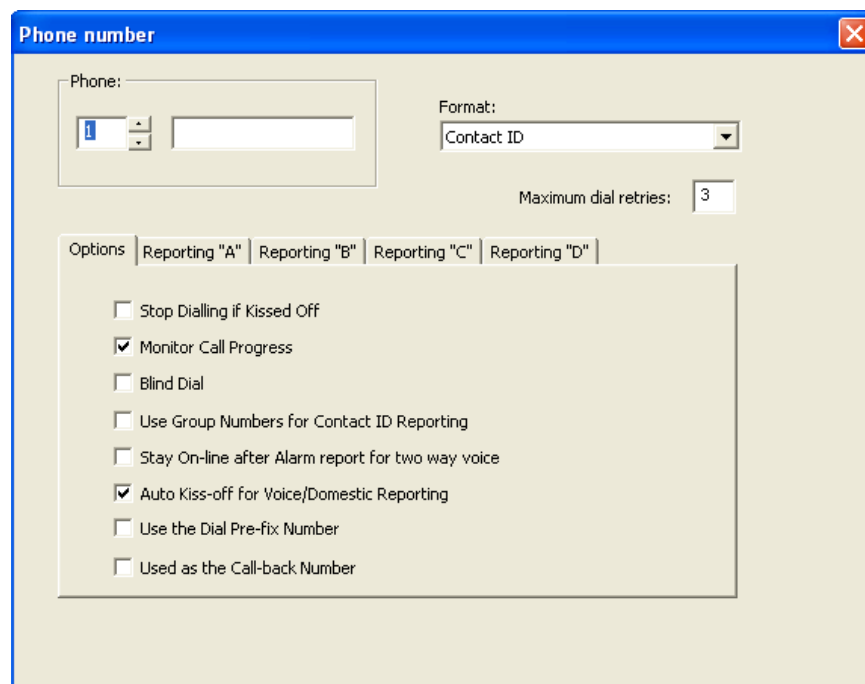




To exit from installer mode, click on **Exit from Install**

# Installing the Receiver Server Configuration Program

**⚠**

**NOTES**

**The Receiver servers are installed on the premises of the Monitor Service Provider.**

**This program must be installed once on each of the servers in order to maintain communication with the units in the field. This is the actual service and must run continuously whenever the server is powered on**

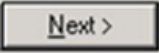1. On the installation CD, double-click the **ReceiverServer.exe** file.
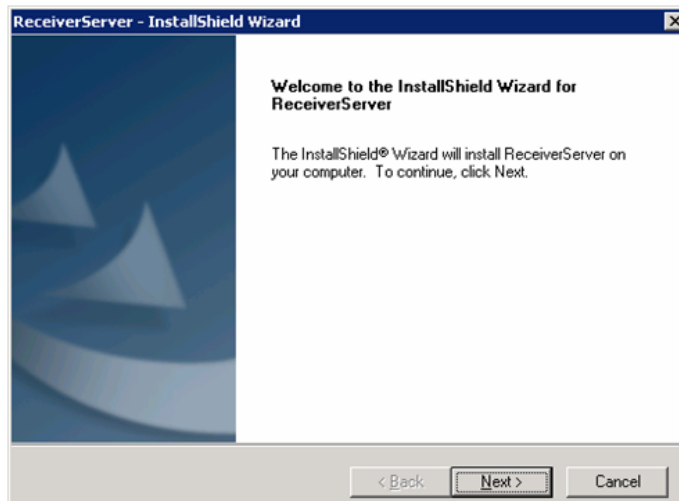
2. Click the [Next >] button.
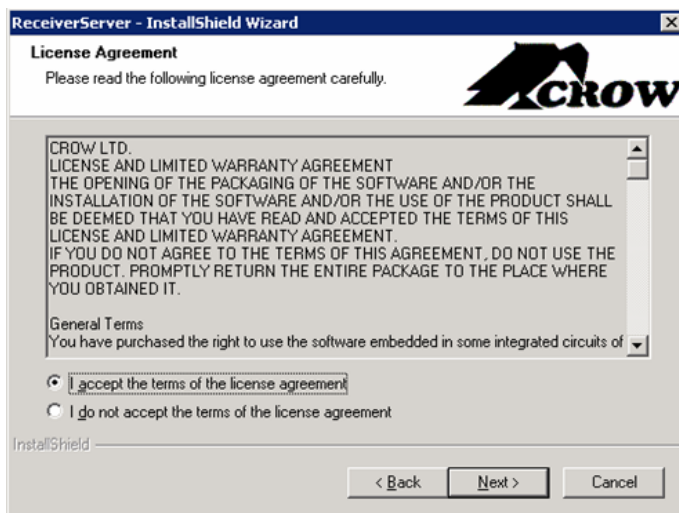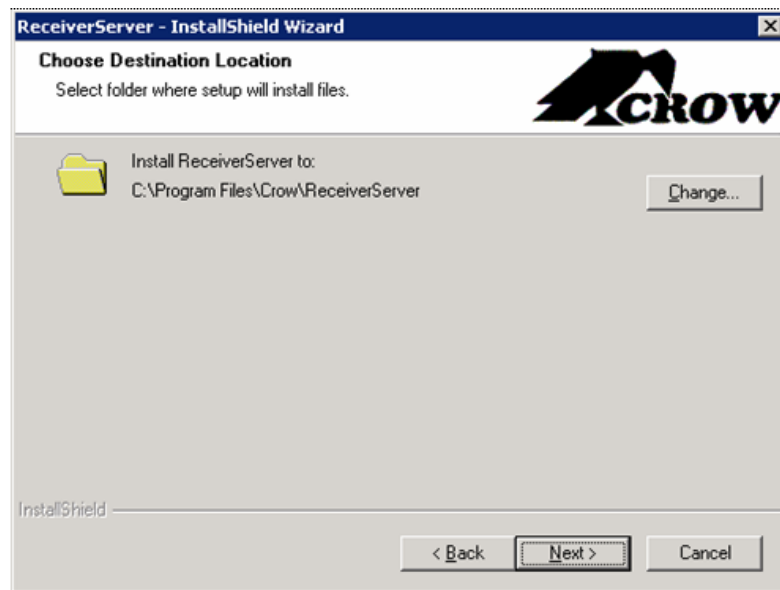
3. Select the **"I accept" the terms of the license agreement** radio button.
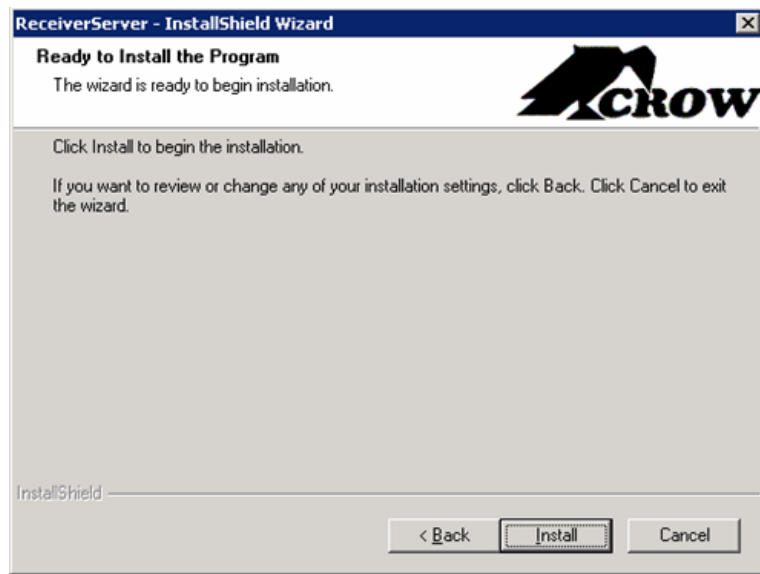
4.  Click the [Next >] button.



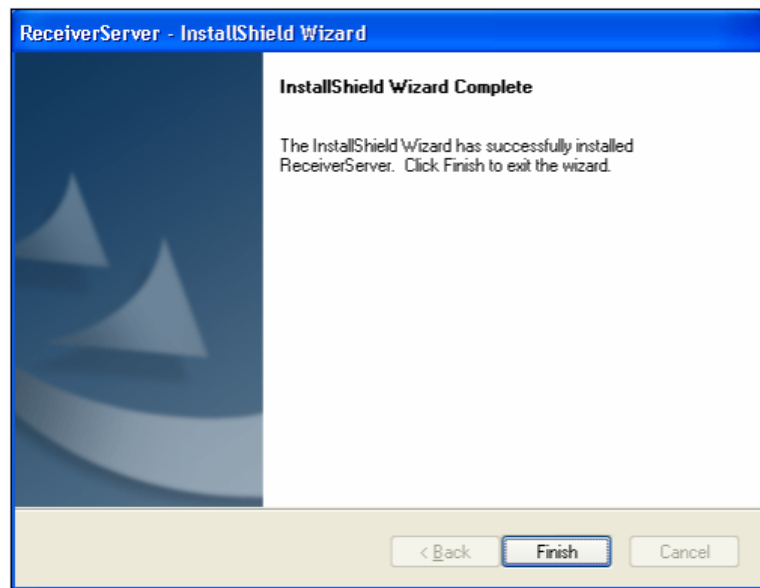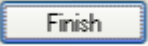5.  Enter a user name and the name of the company.

6.  Click the [Next >] button.



7.  If you want to change the default installation folder, click the [Change...] button and select another folder.

8.  Click the [Next >] button.
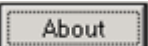


9.  Click the [Install] to install the program.
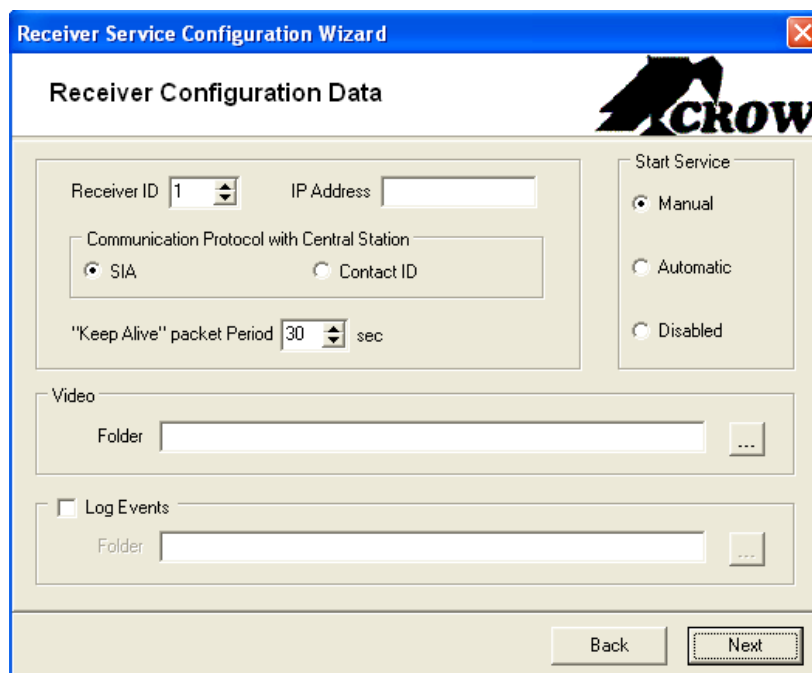
10. Click the [Finish] button to exit the wizard.
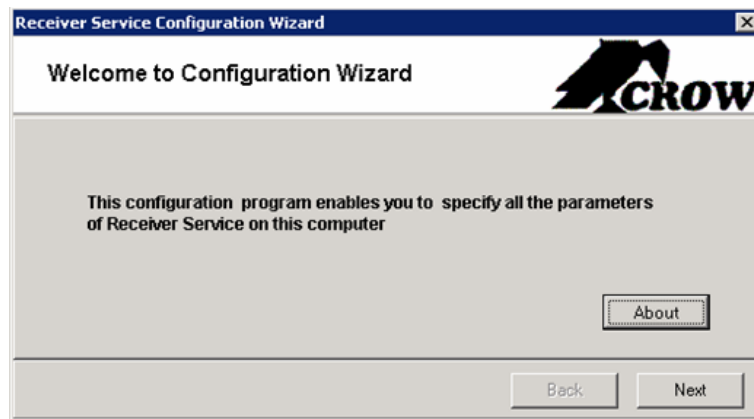


11. Click the [About] button to get a brief description on what this program does.

12. Click the [Next] button.



13. Enter the Receiver Server IP address and the ID number.

   Give the ID numbers in the same sequence as the IP addresses so that it is easier to remember them.
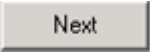
14. In the **Start Service** pane, select either **Manual**, **Automatic** or **Disable**.

   **Manual -** requires that you start the service manually.
   **Automatic –** the service is started automatically when the program opens.
   **Disable –** puts the server offline so that it cannot be accessed.

15. Select the type of **Communication Protocol with Central station**: SIA or CID

16. **Video** – for Video verification feature – currently not in used

17. **Log Events** – check the box to enable saving logs events operation, create the folder name
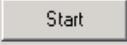
18. Click the [ Next ] button.
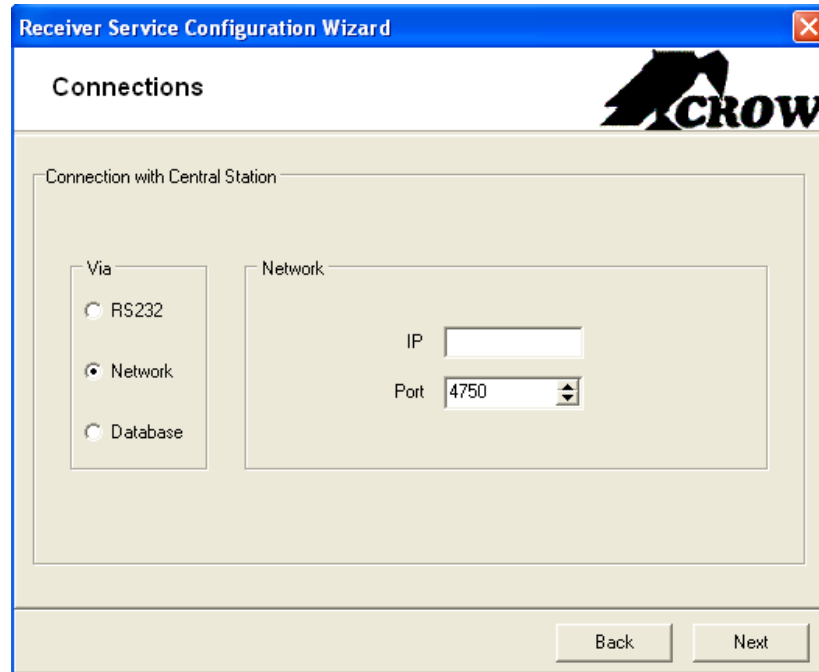


19. **Connection with Central Station** – select the communication media connection

 - If selected **RS232**, insert the correct COM port and the baud Rate

 - If selected **Network**, insert the receiver server's IP address

 - if selected **Database** , this is a JABLOTRON DB (MS-SQL) type , insert all details of the DB server

19. Click the [ Next ] button.

```
Remote
Work Station
```
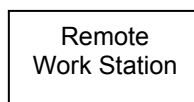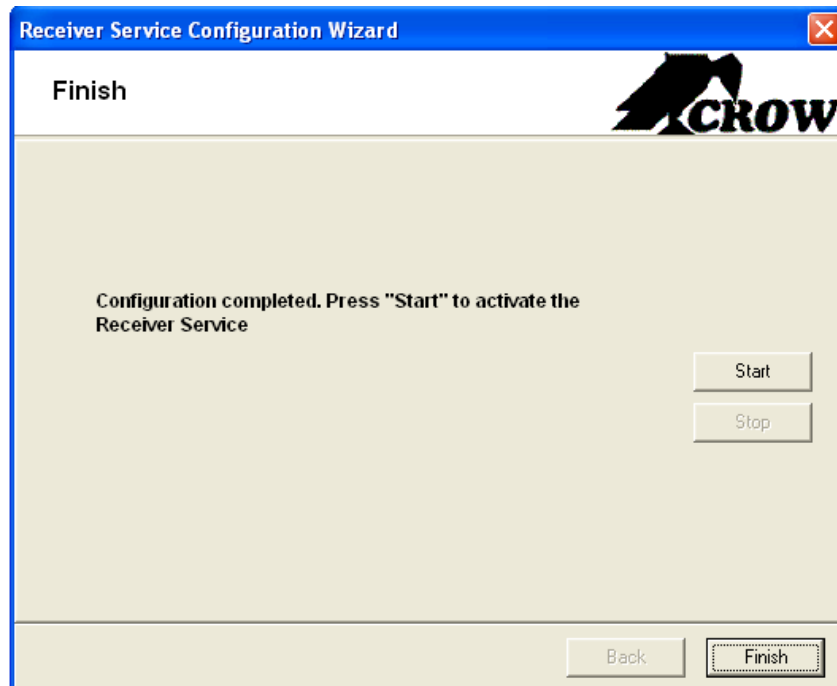
20. Click the [Start] button to start the service of receiver server service.

21. Click the [Stop] button to stop the service.

23. If you have stopped the server, you can click the [Finish] button to close the window and the program.

**Note:** to reopen and run the Receiver Service Configuration Wizard go to START→PROGRAMS→ CROW →and click on **Receiver Server Configuration.**

**CROW**
**The Crow Group**

## HEADQUARTERS:

**CROW ELECTRONIC ENGINEERING LTD.**
12 Kineret St.
Airport City, 70100 Israel
Tel. +972 3 9726000
Fax. +972 3 9726001
sales@crow.co.il
support@crow.co.il
www.thecrowgroup.com

## INTERNATIONAL OFFICES:

**CROW LATIN AMERICA USA INC.**
7200 NW 19 st.
Suite 307
Miami Fl 33126, USA
Tel.  +305 513 4001
Fax. +305 513 4005
rejane@crowlatinamerica.com
www.crowlatinamerica.com

**ARROWHEAD ALARM PRODUCTS**
344B, Rosedale Road
Park Farm Industrial Estate
Albany, Auckland
New Zealand
Tel. +64 9 414 0085
Fax. +64 9 414 0088
www.aap.co.nz

**CROW AUSTRALIA PTY. LTD.**
142 Keys Road Cheltenham
Vic 3192 Australia
Tel. +61 3 9553 2488
Fax. +61 3 9553 2688
crow@crowaust.com.au
www.crowaust.com.au