



DigiLink 4/8

TECHNICAL MANUAL



115Volt AC Model



12Volt DC Model

**AND
INSTALLATION INSTRUCTION**

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Important Installation Information

It is the purchasers' responsibility to determine the suitability of this equipment and its derivatives for any given application, Scope cannot give specific advice in this manual, as each use will require independent evaluation.

Scope has, wherever possible, employed extra safeguards or designed optional equipment to further monitor the system's performance. Certain system installations, operational requirements or budgets may, however, limit the effectiveness of these safeguards. Again, the suitability of the system for any given application must therefore be decided by the installer and their customer, relative to the application and risk.

Licence

This equipment is cleared for use within the USA under a license assigned to the exclusive importer, PIPS Holdings Inc. License No. 950415906. Certain restrictions apply in respect of power output and antenna installations.

Alternative frequencies are available by formal license application (Form 600) via the FCC. These will not be subject to the same restrictions as the standard assigned license. You should obtain the FCC Rules and Regulations, Title 47, Part 80 to End, including Parts 90 and 95, available from the US Gov. Printing Office, GPO Bookstore, FCC Office or www.fcc.gov/oet/info/rules/

Important Safety Information

Scope products are designed to operate safely when installed and used according to general safety practices. The following requirements should be observed at all times.

Do NOT subject this equipment to:

- Mechanical shock
- Excessive humidity or moisture
- Extremes of temperature
- Corrosive liquids

This equipment is designed for indoor use, unless expressly stated otherwise, and must not be used in classified Hazardous Areas, including areas containing explosive or flammable vapors, unless express authorization has been given in writing by the manufacturer. If in doubt, consult your local product dealer for further information.

Do not obstruct any slots or openings in the product. These are provided for ventilation to ensure reliable operation of the product and to protect it from overheating.

Only use a damp cloth for cleaning (not liquid or aerosol based cleaners), and ensure that any power is removed from the unit prior to beginning the cleaning operation.

Removal of covers from the equipment must only be undertaken by authorized service personnel, who must ensure that power is isolated prior to removal.

Equipment Applications

It is the user's responsibility to determine the suitability of the Scope products for any given application. Scope, including its subsidiaries and Distributors, cannot provide specific advice within this manual, as each application will require independent evaluation. Common sense dictates that certain applications may require back up systems to cover in the event of mains or equipment failure. All applications should be thoroughly assessed by the installer in conjunction with the customer so as to minimize risk. Scope has no control of the use and application of the frequencies issued by the FCC. Some equipment that is individually licensed may have a greater degree of protection than other equipment that is operated on a FCC License Assignment basis. The following information, however, may be of benefit.

Equipment Testing.

Range tests should be carried out at least once a week on portable radio equipment, more often when critical criteria apply. This should involve testing the unit past the limit of its required working range. Good working practice dictates that a suitable system installation log, covering both portable and fixed equipment must be generated, together with a record of the dates when the system has been manually checked and/or serviced, (with the aid of suitable test equipment etc.) enabling the system performance to be compared with the original installation data.

The frequency of the tests required will vary between applications. If portable equipment has been dropped or is worn by a person involved in an accident, the unit should be tested again before re-use. It must be stressed that the physical range tests are essential and that any construction work or movement of plant or equipment could alter the signaling capability of the unit. Radio equipment, like any other requires servicing from time to time to ensure that it is operating to its optimum performance. It is therefore essential that equipment is inspected and tested by authorized service centers at least once a year.

Literature

Scope Marketing (Communications UK) Ltd, the manufacturer, in conjunction with its distributors operates a policy of continual improvement, and therefore reserve the right to modify or change any specifications without prior notice.

While every possible care has been taken in the preparation of this manual, Scope does not accept any liability for technical or typographical errors or omissions contained herein, nor for incidental or consequential damage arising from the use of this material.

Installation

Installation must only be undertaken by an Approved contractor, who shall ensure that all work is carried out in compliance with the appropriate State and Federal Regulations. For mains powered equipment, a readily accessible isolating fuse or socket must be located within 1 meter of the equipment.

Liability

Scope does not accept liability for any damage or injury, howsoever caused as the result of misuse of this equipment. It is the responsibility of the user to ensure that the equipment is operated in the manner for which it was intended and that it is the correct item of equipment for the required task.

Warranty

This product is warranted as free from defects of workmanship and materials for a period of one year from the original purchase date. During this time, if there is a defect or malfunction of this product, Scope will, with proof of purchase, repair or replace at its discretion any defective parts, free of charge. This does not include where the adjustments, parts and repair are necessary due to circumstances beyond the control of Scope, including but not limited to fire or other casualty, accident, neglect, abuse, abnormal use or battery leakage damage.

There are no other expressed or implied warranties except as stated herein, and those excluded include those of merchantability and fitness for a particular purpose. In no event will Scope or any of its agents be liable for direct, indirect, special incidental or consequential damages resulting from any defect in the product, even if advised of the possibility of such damages.

The warranties and remedies set forth above are exclusive and in lieu of all others, oral or written, expressed or implied. No Scope distributor, dealer, agent or employee is authorized to make any modification, extension or addition to this warranty.

Some states do not allow limitations on how long an implied warranty may last and some states do not allow exclusions or limitation of incidental or consequential damages.

Warning ! No User Serviceable Parts

Alteration or modification to any part of this equipment, without the prior written consent of the manufacturer, will invalidate all manufacturer approvals and warranties. No adjustments can be undertaken except by qualified and licensed persons as defined by the FCC Rules and Regulations. Operation of altered equipment can result in fines, imprisonment, and/or confiscation of such equipment.

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I. OVERVIEW

SCOPE DIGILINK US AC/DC VERSION

The Digilink 4 and 8 Zone Serially Programmable security transmitters work around the PIC16C57 family micro-controller. The PIC micro-controller has a watchdog timer which operates separately from the main crystal oscillator clock. It is this timer which allows the device to use such a small amount of power, because it is possible to stop the main clock and put the processor to sleep for most of the time, until it is required to do some task. Since there are no interrupts on this device, the watchdog timer is used to wake up the processor independently of the main clock, and it is at this time that all inputs and running timers are serviced.

The watchdog timer has a prescaler assigned to it that allows us to wake up the processor at periods between 50mS and 2.5 seconds, and since this timer is very susceptible to temperature and voltage, it is necessary that the product is held in a relatively stable environment as far as temperature goes, and that the voltage is regulated.

The watchdog timer is set for 1.2 seconds, close enough for the non-critical timed functions we wish to monitor. What this means is that for an input change to be guaranteed to be captured, it must remain latched for at least this period. Since most alarm panels or passives latch for at least 2 seconds, this is perfectly acceptable in most cases. For those times which require fast wake-ups, the prescaler can be reduced to increase the rate at which the controller reads the inputs.

Each input has a block of data held in the Eeprom on the PCB, this block contains all the timer values, flag bits and messages for pagers or digital receivers. It is this data which determines how the Digilink behaves in response to a change of state on any input.

There are two steps to programming this system, setting up the data file using the Windows programming software, and actually getting the data file into the Eeprom. The data can be sent down the serial port to the on-board programming software, or it can be programmed with a separate Eeprom type programmer which has the necessary algorithms. Programming via the serial port is relatively slow, the Baud rate is fixed at 1200 to give the required write time for the Eeprom which is far longer than normal eeprom devices. The PIC has little internal ram to buffer this data and so the process is 'live' ie the data is written as it is received from the serial port.

The program SCPMON provides a Windows environment for selecting the various parameters for each input. Only those inputs which are to be used to generate events need to be programmed, the others will be disabled.

Software Installation

The SCPMON program uses a standard MS-Windows© setup program installation. To install the program you need to complete the following steps.

1. Place the SCPMON program disk one (1) in drive A or B.
2. Select [FILE], [RUN] and type [A or B:\SETUP].
3. Follow the prompts on the screen.

Program Operation

The program is Menu driven via a mouse or with the keyboard.

Mouse Operation.

Position the mouse cursor over the required menu option and press the left mouse button to select that option. A list of the available functions will drop down from the menu bar. Select one of these items or another menu option with the left mouse button. Pressing the left mouse button outside of the menu options, or outside of the drop down items list, will cancel the menu selection process. Once a function has been selected, the mouse can be used to turn options off and on, select items and perform various other command type functions. The right mouse button will activate the Event Configuration menu when pressed on the main SCPMON window.

Keyboard Operation.

Press and release the ALT key to activate the menu bar. Then select the required menu option by pressing the highlighted letter of that option. A list of available functions will then drop down from the menu bar. Select one of these items by pressing its highlighted letter, or move the option select bar with the cursor up and down keys. Select another menu option with the cursor left and right keys. Press ESC to cancel the menu selection process.

On Screen Help.

Press Shift + F1 to activate the windows help system Contents screen. Press Ctrl + F1 to activate the windows help Search screen. Context sensitive help is available by selecting the required control and pressing the F1 key.

Shortcut Key Assignment

Ctrl + N	Reset to default data
Ctrl + L	Load Disk Data File
Ctrl + S	Save Disk Data File
Ctrl + A	Save Disk Data File As
Ctrl + X	Exit SCPMON program
Ctrl + C	Set up Communications Port
Ctrl + R	Read Device Data File
Ctrl + W	Write Device Data File
Ctrl + V	Verify Device Data File
Ctrl + B	Set Low Battery
Ctrl + M	Transmission Mode
Ctrl + Z	Zone Allocation
Ctrl + E	Event Definition
Ctrl + P	Print Configuration
F1 to F8	Display zone configuration data
F9	Display zone configuration summary

Once a function has been selected, navigate the function options using the TAB and Shift TAB keys to scroll through the options. In some cases the cursor Left, Right, Up and Down keys may also be used to select an option. Once selected, options can be enabled/disabled by pressing the space bar.

Device Menu

The communication parameters are pre-set and cannot be changed by the user. The Communications port defaults to COM1, however, this can be changed by selecting the required Port on the

Communications Set Up screen. Ports 1 to 4 are tested for availability and will be greyed out when not available. Adding the name of the required communications port to the program command line will use the stated port as default. e.g. SCPMON COM3 will set communications port to COM3.

Device Read

Reads into memory the configuration data from the device connected to the serial communications port. Confirmation of data read is required.

Device Write

Writes the configuration data from memory into the device connected to the serial communications port. Confirmation of data write is required.

Device Verify

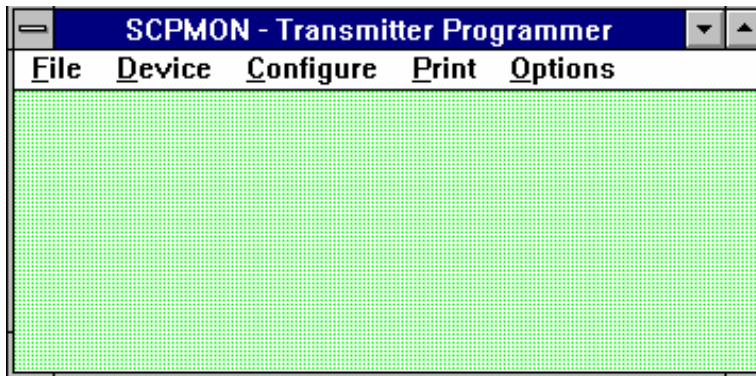
Reads the configuration data from the device connected to the serial communications port and verifies the data against the current memory configuration. Confirmation of data verify is required.

II. FUNCTIONAL DESCRIPTION

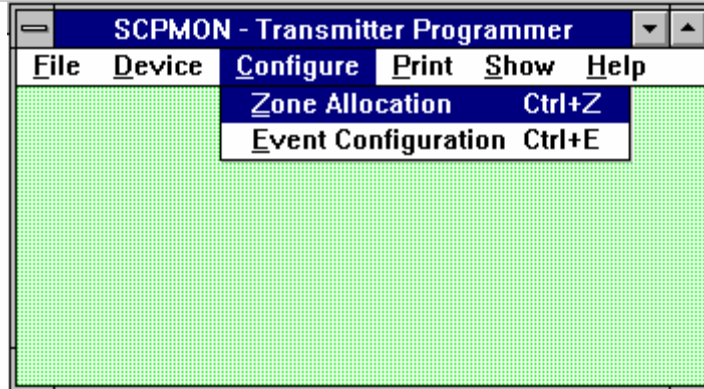
Once a number of choices exist in the form of data files, the closest match to that which is required should be loaded, this will cut down on the number of parameters requiring change. A record of these files would be useful to determine what values are set to in each instance. Once a file is loaded into the windows software its data is available for displaying or editing.

A. CONFIGURING THE DATA FILE

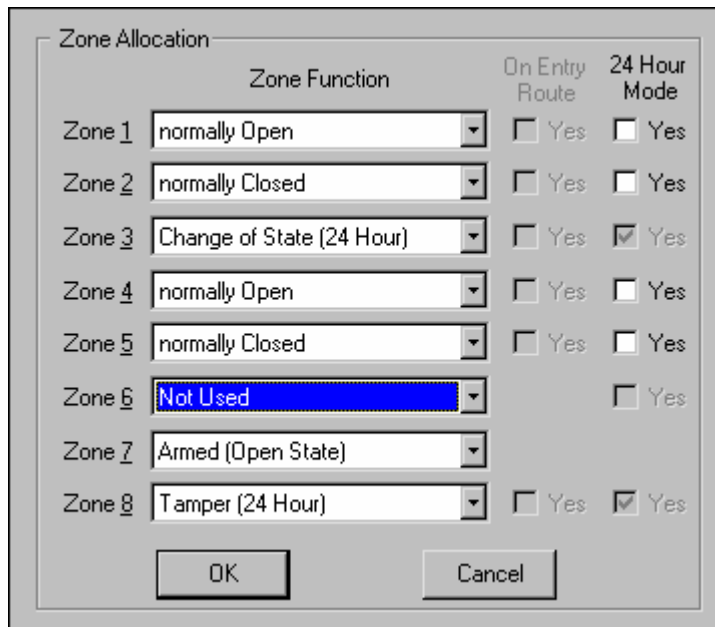
1. Activate the SCPMON Windows program by double clicking on the Icon.
The below screen will appear.



2. Select [CONFIGURE]



3. Select [ZONE ALLOCATION]

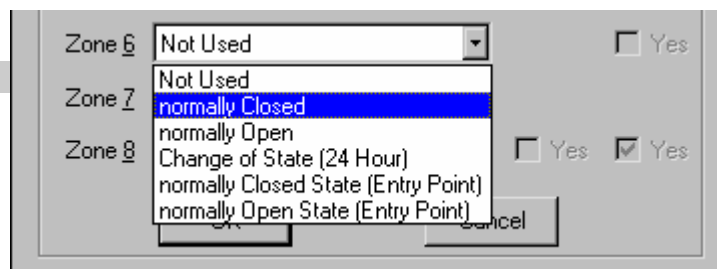


(a). The first FIVE zones have FOUR possible selections for each zone.

1. NOT USED
2. OPEN STATE
3. CLOSED STATE
4. CHANGE OF STATE

(b) Zone 6 & 7 are inter-related. This means that certain option selected on zone 7 will cause zone 6 to display additional options that are not present at other times. If the option [ARMED], open or closed, is selected on zone 7 the following options will appear on Zone 6.

ZONE 6



- (c). Zone 8 has an additional option.
1. Tamper
- (d) When programming the Digilink for **DRY CONTACT INPUT** the following must be observed.
1. [**NORMALLY OPEN STATE**] This will cause the unit to transmit an event alarm when the contact input is **CLOSED**.
 2. [**NORMALLY CLOSED STATE**] This will cause the unit to transmit an event alarm when the contact input is **OPEN**.
 3. If you require an event alarm to be transmitted each time the input change state use the [**CHANGE OF STATE**].
 4. For those installations not requiring all zone inputs, select [**NOT USED**]
 5. Select [**OK**]
 6. Voltage Input
 - a. [**NORMALLY OPEN**] – Voltage present – **NO PAGE**
Voltage Removed, **PAGE**.
 - b. [**NORMALLY CLOSED**] – Voltage present – **TRANSMIT A PAGE**.
Voltage Removed – **NO PAGE**.

The screenshot displays a software interface for configuring Pocsag Paging. At the top, there is a grid of buttons for zones 1 through 8, each with 'IN/C' and 'IN/O' options. 'Zone 1 (N/O)' is currently selected. Below this grid is a dialog box titled 'Pocsag Paging' with two tabs: 'Event Parameters' and 'Pocsag Paging'. The 'Pocsag Paging' tab is active, showing the following configuration:

- Type: AlphaNumeric Pager (dropdown menu)
- Identity: 100008 (dropdown menu)
- Beep: Radio buttons for A, B, C, and D. Option A is selected.
- Message: ZONE 1 (dropdown menu)

At the bottom of the dialog box are 'OK' and 'Cancel' buttons.

4. Select **[EVENT DEFINITION]**

- (a) Select the **[ZONE]** to be programmed

- (b) Enter the following Pager information
 - 1. Type - Numeric, Alphanumeric or Tone Only
 - 2. Identity - Seven (7) digit pager cap code. e.g. 0100008
 - 3. Beep type - A=1 beep, B=2 beeps, C=3 beeps, and D=4 beeps

- (c) Enter the message you want to transmit when this closure or opening occurs.
 - 1. 45 characters for an alphanumeric message
 - 2. 20 characters for a numeric message

- (d) Enter Event Details
 - 1. Trigger Period - Minimum to 126 Hours
 - 2. Trigger Delay – Disable to 126 Hours
 - 3. Siren (if used) - Same as above
 - 4. If Siren is not used it should be **DISABLED**
 - 5. Transmissions
 - (a) 1st Call No repeats
 - (b) 1st Call + 1 repeat
 - (c) 1st Call + 2 repeats
 - (d) Repeat until canceled
 - (e) Repeat until state change

Note: Repeat will occur on a random basis. Ranging for 1 to 75.6 seconds.

- 6. Rearm when completed
- 7. Complete all the above items for each **[ZONE]** to be utilized

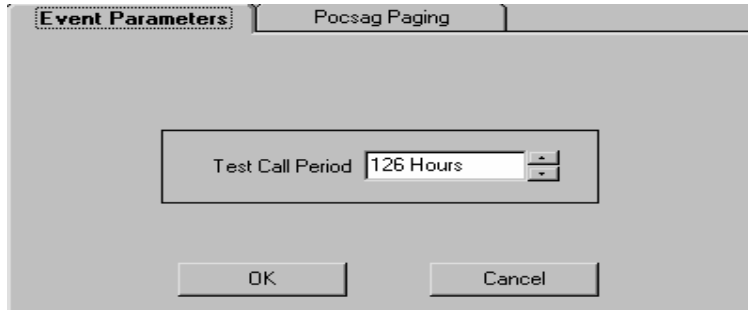
5. Select **[TEST CALL]**

The screenshot shows a software dialog box titled "Pocsag Paging" with a sub-tab "Event Parameters". The dialog contains the following fields and controls:

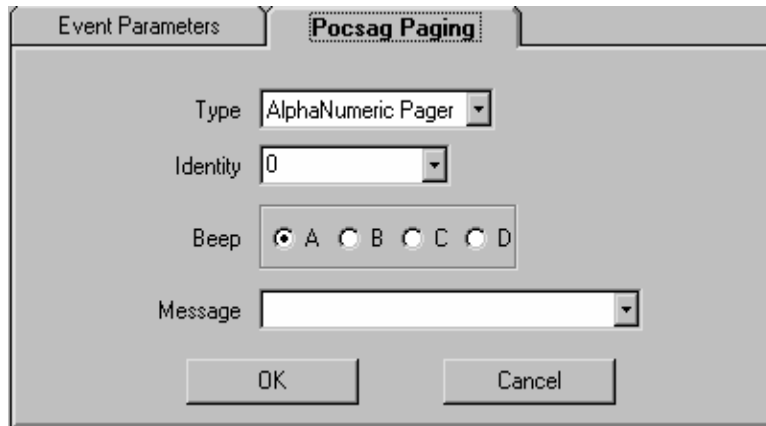
- Type:** A dropdown menu currently showing "AlphaNumeric Pager".
- Identity:** A text input field containing the number "0".
- Beep:** A group of four radio buttons labeled "A", "B", "C", and "D". The "A" radio button is selected.
- Message:** A text input field that is currently empty.
- Buttons:** "OK" and "Cancel" buttons are located at the bottom of the dialog.

- (a). Enter type of Pager to be called
- (b). Enter the Pager ID
- (c). Enter the Beep type. A, B, C, or D
- (d). Enter the Test Call Message up to 12 characters
- (e). Select Test Call Period - [4.8 Seconds to 126 Hours]
- (f). Select [OK]

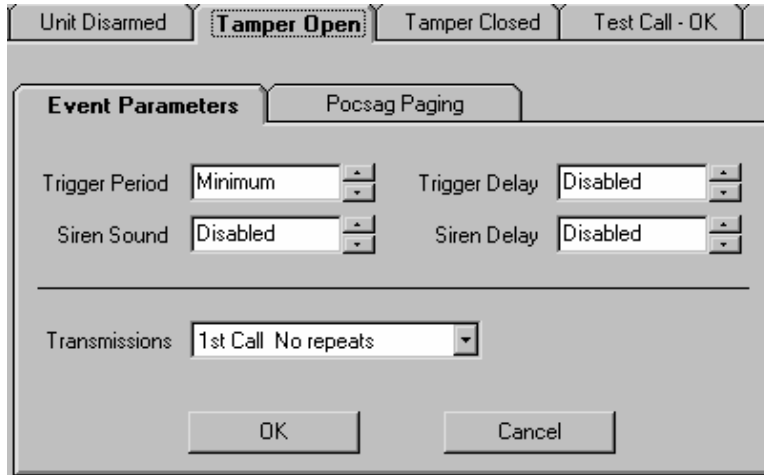
NOTE: If no pager Id is entered, the TEST CALL function will be inactive



6. Select **TAMPER]**

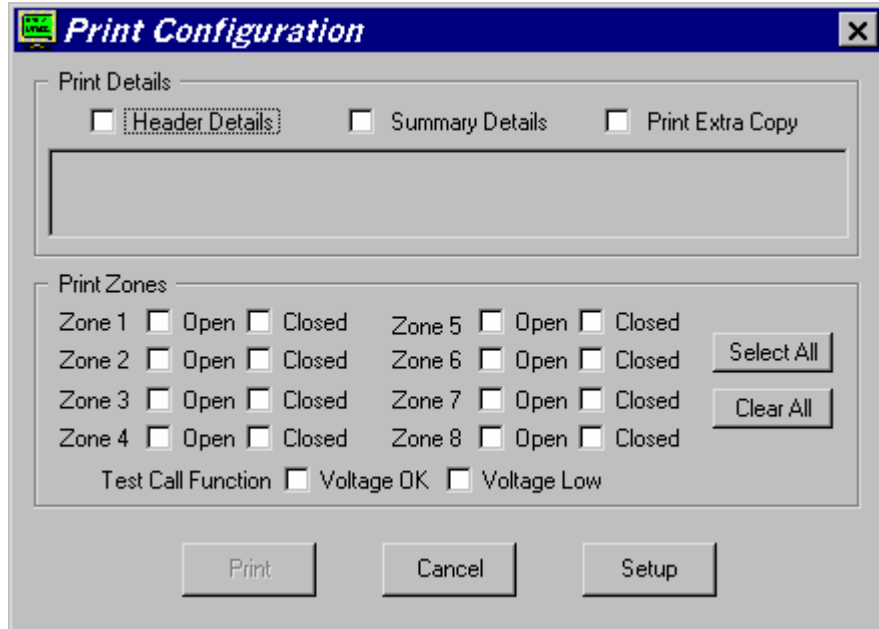


- (a). Enter type of Pager to be called
- (b). Enter the Pager ID
- (c). Enter the Beep type. A, B, C, or D
- (d). Enter the Tamper Alarm Message up to 45 characters
- (e). Enter Event details
- (f). Select **[OK]**



7. Print a copy of the CONFIGURATION for the current file.

- (a). Select **[PRINT]** from top menu bar.
- (b). Select **[PRINT CONFIGURATION]**.
- (c). Select **[ALL]** or using the left mouse button, select the correct configuration.
- (d). Select **HEADER DETAILS** to input information about the configuration.
- (e). Select to print **SUMMARY DETAILS**.
- (f). Select to print additional copies.
- (g), **[PRINT]**



III. FILE DEVELOPMENT & PROGRAMMING

A. File Development

1. Zone Allocation - Each zone can be set to one of the modes listed below.

Not Used	Neither State to be enabled.
Normally Open State	Open state only to be enabled (i.e. triggers on going Closed)
Normally Closed State	Closed State only to be enabled (i.e. triggers on going Open)
Change of State	Both States to be enabled (i.e. triggers when state is changed)
Open State (Entry Point)	Zone 6 Only, Open state only to be enabled.
Closed State (Entry Point)	Zone 6 Only, Closed State only to be enabled.
Change of State (Entry Point)	Zone 6 Only, Both States to be enabled.
Armed (Open State)	Zone 7 Only, Transmitter Armed on Closed State.
Armed (Closed State)	Zone 7 Only, Transmitter Armed on Open State.
Tamper	Zone 8 Only, Tamper Active on Open State, Tamper Inactive on Closed State.
OK	Exit Zone Allocation and accept the changes made.

Cancel

Exit Zone Allocation without making any changes.

Note: When zone 7 is set to be an Arm/Disarm input the 24 Hour Mode check boxes will be enabled and the Entry Point functions are available on zone 6. Change of State inputs must be 24 hour and their check boxes are set and locked. With zone 7 set as Arm/Disarm and zone 6 set as an Entry Point the On Entry Route check boxes will be enabled. Note also that the entry route and 24 hour modes are mutually exclusive.

2. **Event Configuration** - Each of the 16 tabs shows the configuration set-up for one State of one Zone. Select the Tab for the State of the Zone that you wish to edit. If the state is not enabled in the Zone Allocation table then the Tab will display a note to that Effect Edit each Tab as required and press OK or Cancel when finished.

OK Button - Press the OK button to accept all the changes made to the configuration data and close the Event Configuration window.

Cancel Button - Press Cancel to close Event Configuration without making any changes.

POCSAG Pager - Enter the details of the pocsag pager into this section. In the event that no pocsag transmission is required then leave the Identity set to and Message field empty.

Pager Type Select the type of pager from the available list.

Alphanumeric Full alphanumeric character set.

Numeric Numeric only character set.

Tone Tone only - no message.

Identity Enter the Identity of the pager. Maximum 7 digits <= 2,097,144. The identity number must be a multiple of 8.

Beep Type Select 1 of the 4 pager beep types A, B, C or D.

Message Enter the Message to be transmitted. Note that only characters to suit the pager type selected can be entered.

Message lengths depend on Pager type. For an Alphanumeric pager up to 45 characters may be entered, unless it is a Test Call message where the limit is 12 characters. Numeric pagers are limited to 20 characters, unless it is a Test Call message where the limit is 14 characters.

Event Details - Select the details to set-up the Input event.

Trigger Period Enter the time for which the input state must be present before that input is to be considered in that state.

Trigger Delay Enter the time period which is to pass before any further action is taken on that input.

Siren Sound Enter the time for which the Siren Output should be active.

Siren Delay Enter the time period for which the Siren Output activity should be delayed.

Timer Ranges - Transmissions Select, from the list, the number of transmissions for this event.

1st Call No Repeats.

1st Call + 1 Repeat.

1st Call + 2 Repeats.

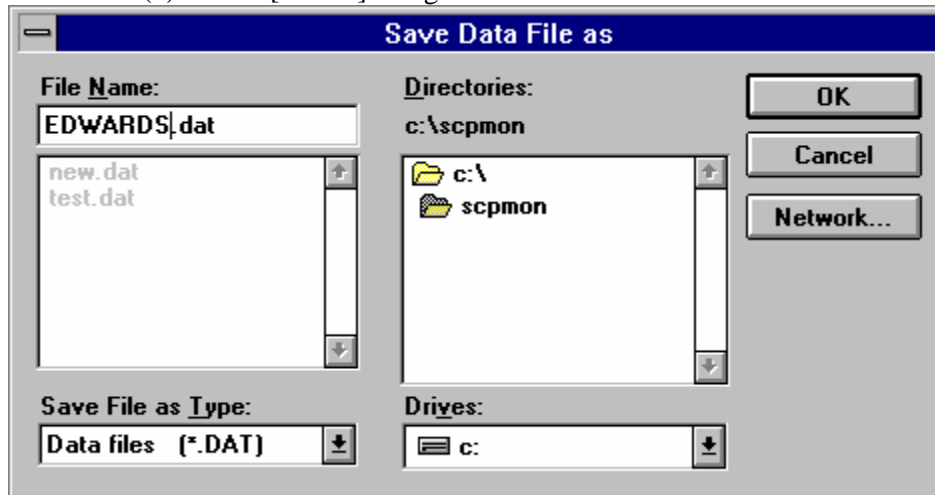
Repeat until cancelled. (See note 1)

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Re-arm Check the Re-arm Box to re-arm the input after the last transmission. (See note 2)
Repeat until Change of State

Test Call Details - Enter the time to elapse between Test Call transmissions.

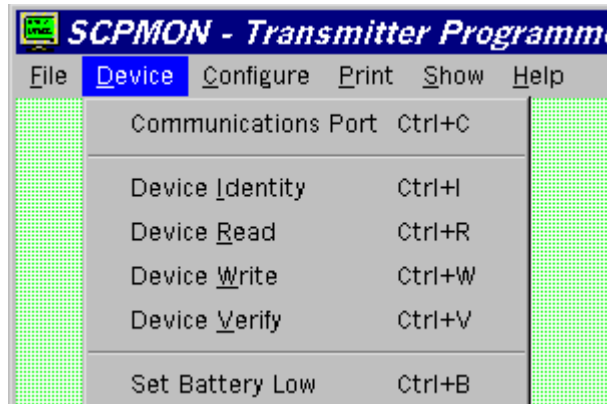
- Notes: 1) The Repeat until cancelled function is not available when a zone is configured as Change of State.
- 2) The Re-arm function is only available with zones that are set to a single state only. i.e. Zone function set to Open State only or Closed State only. The Re-arm function is disabled when the Transmission box is set to Repeat until cancelled.
3. Save newly created file.
- Select [**FILE**]
 - Select [**SAVE**] and give the file a name.



B. Programming The Digilink Unit

- Power off the Digilink transmitter.
- Connect the Programming Interface unit to the Digilink using the DIN to 9-Pin interconnect cable.
- Connect the Programming Interface unit to a desktop or laptop computer via the 9-Pin to 9-Pin cable.
- Select the [**SCPMON**] program on your computer.
- Power up the Digilink transmitter. The transmitter will recognize it is connected to a computer and go into a programming mode. This can be verified, if the power LED is on steady, the unit is ready. If the power LED is not on, the unit is not ready.
- Select [**FILE**] from the top menu bar.
- Select [**LOAD**]

8. Select the file to be installed in the Digilink.
9. Select [DEVICE] from the top menu bar.
10. Select [DEVICE WRITE]. The program will be downloaded into the Digilink.
The program will Verify the data after it has completed writing.



12. Select [FILE] and [EXIT].
13. Remove the power from the Digilink.
14. Remove the Programming Interface 9-Pin cable from the Digilink.

IV. INSTALLATION

Prior to final mounting of the Digilink, ensure all programming has been completed. See programming section of this manual.

A. DIGILINK 12 Volt DC Version

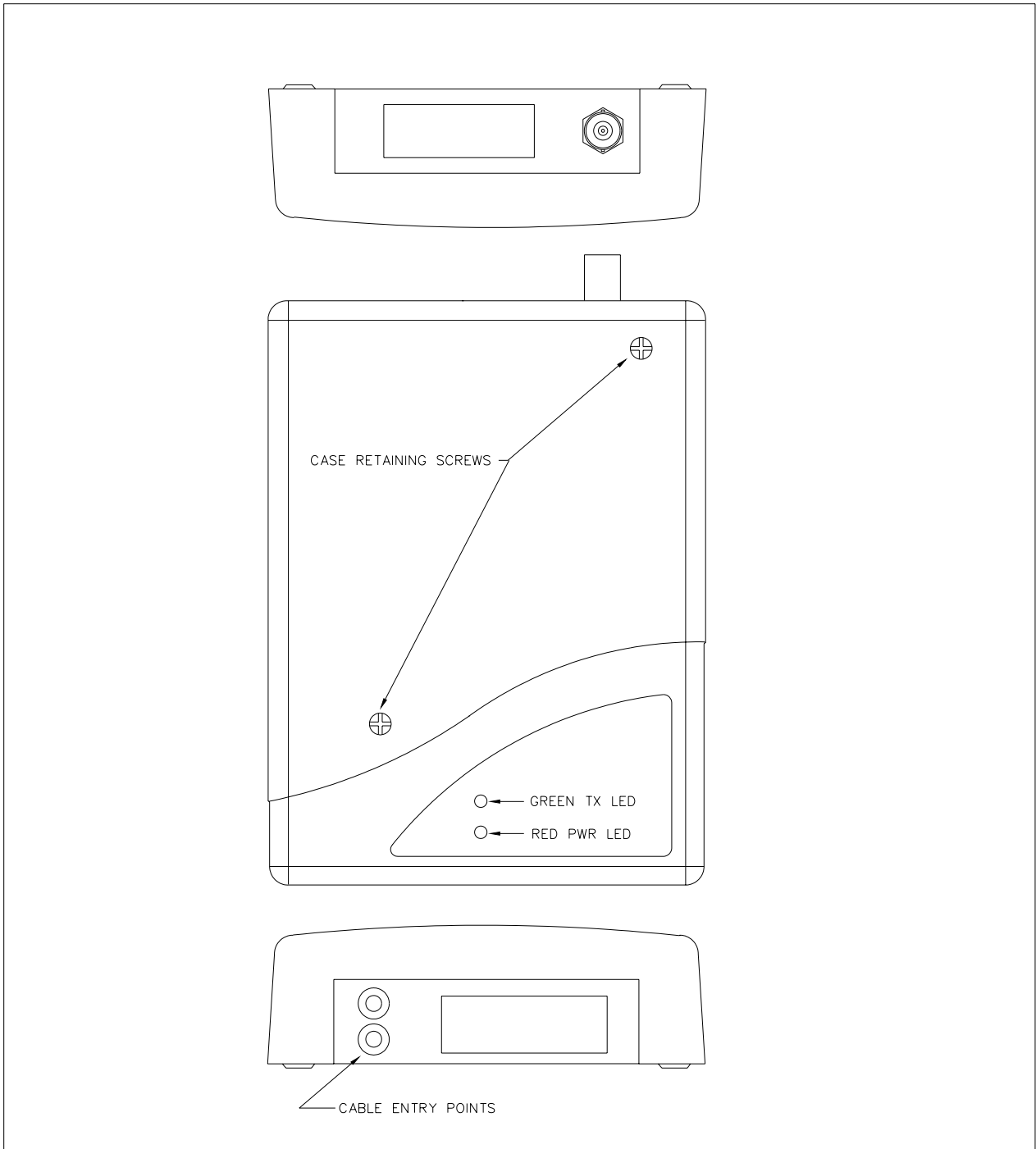
1. Remove the two phillips head screws from the top cover.
2. Lift the cover off and set aside.
(NOTE: Disconnect the Power LED and TX LED connector from the cover)
3. The Digilink is mounted to the wall by four (4) mounting screws fixed through the backplate. Hold the backplate up to the mounting surface and mark the location of the mounting holes.
4. Place the Digilink holes on the backplate over the mounting holes on the mounting surface and secure the unit to the mounting surface with the mounting screws.
6. Select contact input type. Voltage or Dry. Connect alarm input leads to terminal strip.
Voltage Present - INPUT OPEN / Voltage Removed or Grounded - INPUT CLOSED
BEFORE APPLYING ANY VOLTAGES (5-15V) TO THE INPUTS, THE JUMPER FOR THAT INPUT SHOULD BE PLACED IN THE 'V' POSITION ON THE 3-PIN HEADER NEXT TO THE APPROPRIATE INPUT. FAILURE TO COMPLY MAY DAMAGE THE PRODUCT.
7. Replace Digilink cover and secure it with the two (2) screws removed in step 1.
(NOTE: re-connect the Power LED and TX LED connector from the cover)

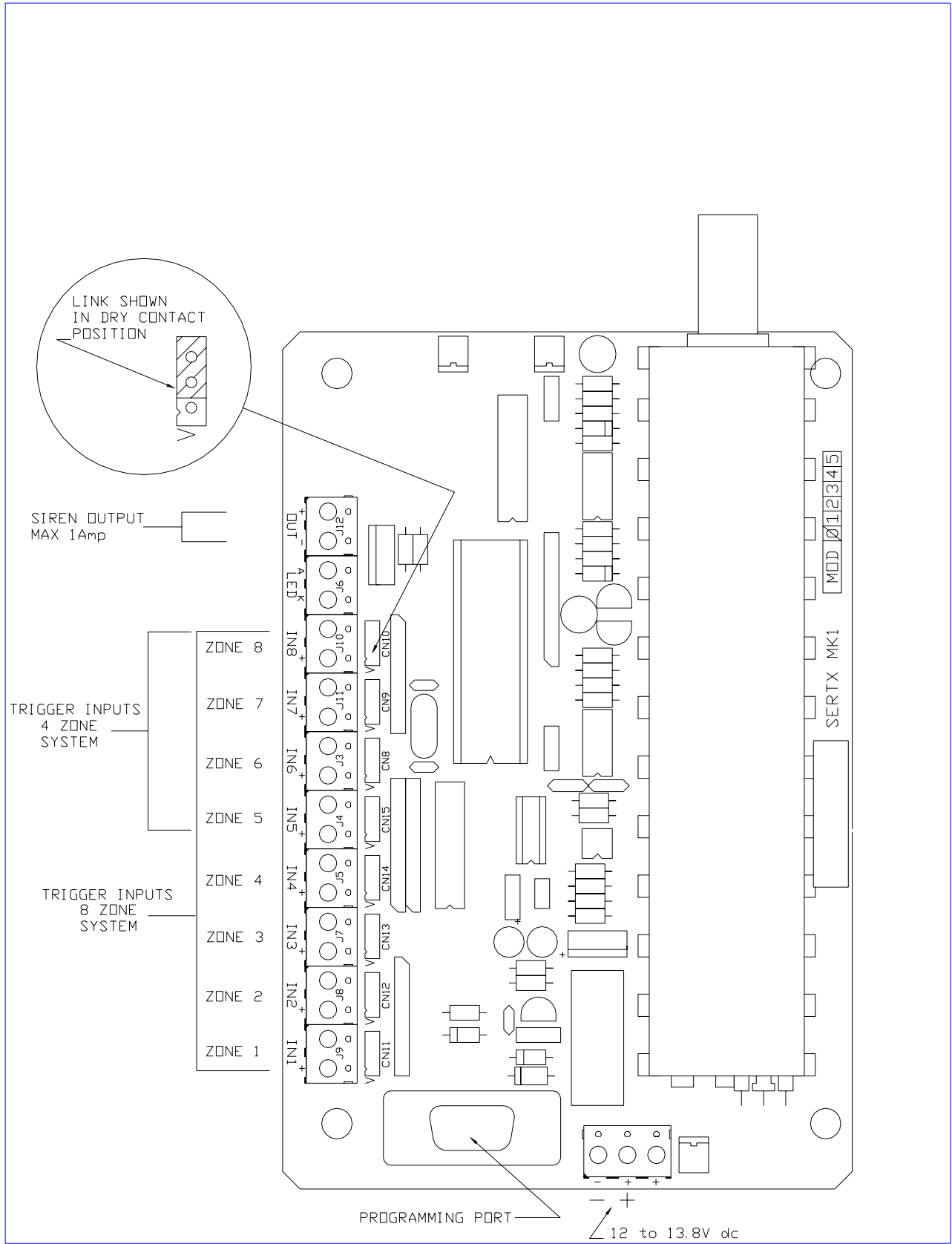
SCOPE DIGILINK US AC/DC VERSION

8. Connect the antenna to the top of the Digilink.
9. When power is applied to the Digilink the POWER LED will start flashing. This is normal.
(NOTE: Battery and Power leads are not supplied with the unit)

B. DIGILINK 115 Volt AC Version

1. Loosen the four phillips head screws at the top and bottom of the cover.
2. Lift the cover off and set aside.
3. The Digilink is mounted to the wall by three (3) mounting screws fixed through the backplate.
Hold the backplate up to the mounting surface and mark the location of the mounting holes.
4. Place the Digilink holes on the backplate over the mounting holes on the mounting surface and secure the unit to the mounting surface with the mounting screws.
6. Select contact input type. Voltage or Dry. Connect alarm input leads to terminal strip.
7. Replace Digilink cover and secure it with the four (4) screws loosen in step 1.
8. Connect the antenna to the top of the Digilink.
9. Connect AC power cord to bottom of Digilink and plug into 115VAC outlet.
10. When power is applied to the Digilink the POWER LED will start flashing. This is normal.





V. LOW BATTERY SETTING

This procedure is carried out during manufacture and normally should not need to be reset in the field. However, in the event that the type battery (Alkaline cells or Sealed Lead Acid) is changed then this **procedure should be carried out by qualified personnel.**

1. Use a variable output power supply set to the required low battery voltage (10.5Volts).
2. Turn VR2 fully anti-clockwise, setting battery sensing circuit to its lowest level.
3. Activate Set Low Battery Mode with the SPCMON program.
4. The Transmit LED will illuminate to indicate that the transmitter is in Low Battery Set mode.
5. Slowly turn VR2 clockwise until the power LED illuminates.
6. Very slowly turn VR2 anti-clockwise and then clockwise.
7. Repeat step 6 until both Tx LED and Pwr LED extinguish.
8. Reset the power supply voltage to 13.8 Volts.

Note: All Battery Low adjustments should be made to the Variable Resistor VR2, other pre-set components should not be altered under any circumstances.

VI. TERMS

TRIGGER PERIOD:

This is the number of seconds a state must be present before the state is accepted and action is taken. There is an immediate selection which, as it suggests, will generate the event as soon as it is seen. This value is used to filter out intermittent or short-term changes of state on the input due to noise or transients on the line. It also, with the next selection, can be used to produce an entry delay to allow time to stop an event by resetting the unit or returning the input to normal.

TRIGGER DELAY:

This is a period of time between the input state being accepted as having changed, and the subsequent transmission taking place. As described it can be used with the trigger period to provide an entry delay.

SIREN SOUND:

The open collector output on the PCB can be used to drive a small sounder or relay. This is the period of time for which it will activate for this event. If not to be used it should be disabled.

SIREN DELAY:

This is a period of time for which the siren will be delayed after the event transmission. It will be added to all other selected delays for this input event.

REARM WHEN COMPLETE:

This selection allows an input to reset itself if the alarm state is removed, and after the allotted number of transmissions have taken place. It also stops an input event being cleared when the input toggles back to the clear state. For instance, if an input opens, and this is the alarm state, if there are delays on the event it is possible that the input will close again before these delays are complete, in which case the event will never take place. With this option selected, once an input state has been accepted, the other state will be ignored until the event has run its course. Only then will a return to the clear state allow the input to 'rearm' itself ready for another trigger.

NUMBER OF TRANSMISSIONS:

This is simply the number of times an event should be transmitted to the receiver, either 1,2,3 or until reset.

Multiple transmissions on a simplex (one-way) system are implemented to deal with the possibility that more than one transmitter attempts to transmit at the same time, leading to loss of data. The repeats are randomly generated in time, so even if the first transmission is blocked, the chances of the same transmitters choosing the same random period is remote and reduces the odds of continued clashes. Having programmed the data for a zone state, selecting 'OK' will result in the amended data being added to the data file, but it must be saved if it is not to be lost when the program is shut down. It is suggested that the file is saved each time a zone state is defined, this will save you from inadvertent loss of data.

INPUT 7 - ARM/DISARM FUNCTION:

A security panel will normally have one input dedicated to a reset, or arm/disarm function. This is then used to clear any pending or active alarms, and also to place the system in either an 'Armed' or 'Disarmed' state. Input 7 has been assigned this option, and as well as the Close/Open/Change of state function, it can also be assigned the Arm function. Its purpose is to disable the other inputs when in the disarmed state, and to enable them when the condition changes.

As a disarm it will clear any current events and disable all other inputs except a Tamper input which is normally always armed. If a Tamper is present, and the unit is switched to disarm, the tamper will clear and then reoccur to warn that it is still present.

INPUT 8 - TAMPER FUNCTION:

Most security panels will have a 24-hour (Always armed) Tamper loop. This is always normally closed, which provides an alarm if the loop is broken such as when the wires are cut. Input 8 has been assigned this function since the Lid switch is connected to this input. As described previously, any change to the Arm or Disarm state will result in an immediate Tamper event if it is present.

Tamper would normally be cleared only by a reset, or a complete power-down/up of the system with the fault removed.

LED's

There are 2 LED's on the PCB, these would normally be installed into the front cover, where they are marked TX and POWER respectively. Obviously for battery applications it is undesirable to have a permanently illuminated LED, so the Power LED is blinked when all is normal. If the LED is not blinking there is either a transmission repeat cycle in progress OR the battery is low, at which time the blink is disabled. The LED is brought out to the terminal strip for auxiliary purposes. The terminals are marked LED.

OUTPUT:

The output is driven by the SIREN function, that is, any activity set up on the program for the siren will drive this output to ground. The drive device is a power transistor capable of some 5A, but we would **recommend not attempting to draw more than 1A from this output.** The transistor is connected as an open collector so an external voltage could be used to source the current providing the grounds of the two supplies are common. The fuse on the PCB is rated at 2A, and the unit itself, when transmitting will draw some 250mA momentarily from the supply. The normal current consumption in standby is less than 300uA.

For a normally closed input, an event would be generated only when the input goes open, therefore only the open data need be programmed. Conversely, a normally open input would require the 'closed' data to be programmed. An input set to Change of state will generate an event on both states of the input, that is, a message will be sent when the input changes from one state to another.

For security applications, the more common mode of use is normally closed, this will provide an alarm when a wire is cut and the loop is broken effectively 'opening' the loop.

System Specification

System Operating Voltage: 12 to 13.8V dc

System Power Consumption: less than 200uA (microAmp) standby, 300mA transmit.

Transmitter:

Frequency Range: 450-470 MHz
Channel Spacing: 25 KHz or 12.5KHz
TX Baud Rate: 512 or 1200
FCC Approval No. JRNUSASERILINK

General:

Ports: 4 or 8 dry contact/voltage inputs (configurable)
Open Collector (siren) output: 1A max
COM1: serial port for programming function only

Footprint (mm): ♦184 (L) x 138 (W) x 45 (D) max

♦excluding aerial

Scope's policy is one of continuous development and specifications are subject to change without prior notice

Service

SCOPE DIGILINK US AC/DC VERSION

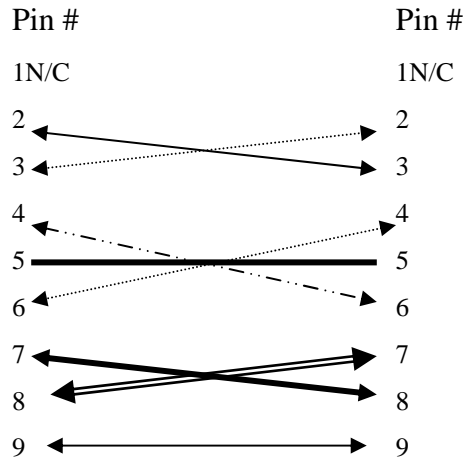
If your Digilink 4 and 8 Zone Security Transmitter or pagers require service, return them to the place of purchase. You must obtain an RA number (return authorization number). NO RETURNS WILL BE ACCEPTED WITHOUT A RA NUMBER.

PROBLEM HINTS

<u>PROBLEM</u>	<u>SOLUTION</u>
1. None of the pagers on the system will respond to a page.	1. (a) Check to be sure your Digilink 4/8 Tx unit has power. The power LED will pulse every 1.2 Seconds. (b) Check to be sure the antenna is connected to the Digilink 4/8 Tx. (c) All pagers are turned on.
2. Some of the pagers will not respond to a page.	2. (a) Using the wrong pager number (b) Pager is turned off (c) Pager battery is Flat (d) Pager is out of range
3. The Digilink 4/8 Tx Lite will not come on.	3. (a) Check to be sure the Digilink 4/8 Tx has power applied. (b) Check to be sure contact closures are occurring. (c) Check Programming information for Correctness.

APPENDIX A

Cabling Diagram for 10 Foot
9-Pin Female to 9-Pin Female



Pin #	Function
1	N/C
2	RX In
3	TX Out
4	DTR Out
5	Gnd
6	N/C
7	RTS Out
8	CTS In
9	9 Volts

INTER CONNECT CABLE DIAGRAM FOR
PC TO PROGRAMMER INTERFACE