



## Installation guide for Alarm Receiver Exprecium<sup>2</sup>

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### Introduction

EXPRECIMUM<sup>2</sup> is a full format PC-based alarm receiver card. With two phone line per board, **EXPRECIMUM<sup>2</sup>** gives you the power to turn your PC into a powerful alarm receiver. Starting with one board, you can add boards as your Central grows.

With large size memory, fast modem circuit, improved PC bus interface and Caller ID function, **EXPRECIMUM<sup>2</sup>** adds a new dimension to Alarm Receiving and PC Integrated Monitoring Station.

The **EXPRECIMUM<sup>2</sup>** receiver card carries a three year limited warranty.

### Main features

- PCI bus interface, 2/3 lenght card.
- Plug & Play compatible Windows 95, 98, Me, XP & 2000
- Flash memory for easy firmware update, realtime clock, storage of events and parameters.
- Auto-shuffle handshakes sequence based on Caller ID.
- Fully Programmable handshakes sequence.
- 2 phone lines per card, direct printer output, on-board buzzer.
- May share PC with TLR and TLR+ Receiver Card.
- Supports most popular formats including SIA and Contact ID.
- Up to 1800 event buffer kept in a non volatile memory.
- No logical account limitation.
- and much more ...

### System Requirements

Ensure that your IBM PC-compatible computer has the following :

1. An Intel 486, Pentium, Pentium Pro, Pentium II, or compatible processor with a Plug & Play Bios.
2. For Windows 95 , 98, Me, Xp or 2000 . with minimum requirements recommended by Microsoft.
3. An empty PCI expansion slot for each **EXPRECIMUM<sup>2</sup>** Receiver Card to be installed.

### Content of CDROM disk: Drivers & Utilities

Windows 95, 95, 98, ME drivers :

OXMEP.SYS	OXMF.SYS	OXMF.VXD	OXMFUF.SYS	OXPCI.INF	OCPCI2.INF
OXSER.INF	OXSER.SYS	OXSER.VXD	OXSERUI.DLL	OXPCI.CAT	OXPCI2.CAT
OXUI.DLL	OXMFCF.VXD				

File name	Description
WINCOM.EXE	Debugging utility. Use to check communication between EXPRECIMUM <sup>2</sup> and PC.
WINEXPRECIMUM II.EXE	Configuration program to configure your EXPRECIMUM <sup>2</sup> under Windows.
AXE Configurator	Configuration program to configure your EXPRECIMUM <sup>2</sup> and other <b>Error! Contact not defined.</b> receiver in JAVA. AXE can also be used to configure older MCDI receivers.

**Installing the EXPRECIMUM<sup>2</sup> Card**

1. Shut down the computer and remove the AC power cord.
2. Open the computer case to gain access to the inside. Touch the metal chassis of the computer to drain off any static electricity before touching a board. Static electricity can damage the components inside a computer or on a printed circuit board.
3. Locate an empty PCI expansion slot into which you will install the EXPRECIMUM<sup>2</sup> card. The selected slot must support PCI Plug & Play devices. In most recent computers, all PCI slots have this ability. If you are not sure that your PC does, check the specification manual or contact your PC vendor. Remove the slot cover from the selected PCI slot. Retain the screw from the slot cover, you will need it to secure the Exprecium Card to the computer chassis.
4. Remove the card from the anti-static bag. Record its serial number, you may be required to supply it in case of a support call. Holding the edge of the card, carefully align the edge connector with the expansion slot. Push the board into the slot firmly and evenly until it is fully seated inside the slot.
5. Visually inspect the connection. If it does not appear to be correct, remove and re-install the board. Secure the card to the computer's chassis using the screw removed in step 3.
6. You can close the computer case at this point or wait until everything is functioning properly.

**Installing drivers and utilities software****Installing Windows 95 drivers :**

1. Power up the computer and allow it to boot into Windows 95. Windows 95 detects that you have added new hardware (Exprecium receiver card). The New Hardware Found dialog displays : PC SERIAL CONTROLLER. The Add New Hardware Wizard will detect an : OXCB950 Cardbus UART.
2. Insert your Exprecium CDROM disk in your CDROM drive and **click NEXT** to continue.
3. When asked to : " Please insert the disk labeled 'High-performance ports driver disk' and then click OK ", **click OK** to continue.
4. The following message will be displayed : "The file 'oxmf.vxd' in high-performance ports driver disk could not be found", **click BROWSE**, in the Drive Section, **select your CDROM drive** then **click OK**.
5. The same dialog box will appear again. This time just **click OK**. Windows will complete the installation.

For each Exprecium card installed, Windows will create a new COM port starting at COM5 (COM1 to COM4 are reserved for your PC). The second card will be on COM6, the third one on COM7 and so on ...

**Installing Windows 98 or Me drivers :**

1. Power up the computer and allow it to boot into Windows 98. Windows 98 detects that you have added new hardware (Exprecium receiver card). The New Hardware Found dialog displays : PC SERIAL CONTROLLER. The Add New Hardware Wizard will detect an : OXCB950 Cardbus UART, **click NEXT** to continue.
2. When asked to specify how to install the driver, select SEARCH FOR THE BEST DRIVER FOR YOUR DEVICE, and then **click NEXT**.
3. Insert the CDROM DRIVERS & UTILITIES into the CDROM drive. In the Add New Hardware Wizard box, select CDROM DRIVES (as the location for the drivers) and **press NEXT**. The Install Disk dialog displays : ?\OXPCI.INF **press NEXT**.
4. Windows will copy and install the required drivers for your Exprecium card. **Click FINISH** to let Windows complete the process.

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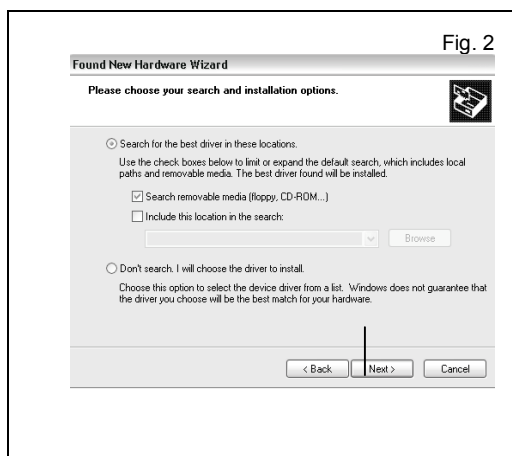
For each Exprecium card installed, Windows will create a new COM port starting at COM5 (COM1 to COM4 are reserved for your PC). The second card will be on COM6, the third one on COM7 and so on ... Under Windows XP or 2000 the created COM port will be the next available COM port in your system.

### Installing **EXPRECIUM<sup>2</sup>** drivers under Windows XP or Windows 2000. First time installation :

Follow the steps enumerated in this section to install Windows drivers for your **EXPRECIUM<sup>2</sup>** Alarm Receiver. This procedure is common to Windows XP and Windows 2000. The procedure demonstrates a first time installation.

#### 1. Specify the location of the directory containing drivers.

Windows takes care of bringing on screen a new hardware dialog box (fig. 1) upon first installation. At this point you should insert the **EXPRECIUM<sup>2</sup>** CD supplied with your unit. Select the Recommended option : 'Install the software automatically' and click on "Next".



Windows will display a new window (fig.2) to locate the directory containing **EXPRECIUM<sup>2</sup>** drivers. Make sure the selection Search removable media if you are installing drivers from the CD or write the direct path to a known location for drivers using the 'Browse' window. Click on Next.

Windows will then display a warning box ( Fig. 2a ) from Microsoft. You need to click on Continue Anyway to finish installation of your **EXPRECIUM<sup>2</sup>** receiver card.

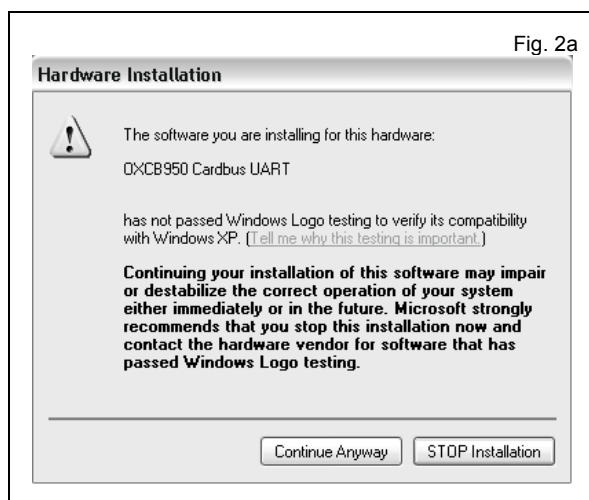


Fig .3 will be displayed to confirm the correct installation of the first part of the drivers for your **EXPRECIUM<sup>2</sup>** receiver card. If an error message is displayed contact MCDI support at [support@mcdi.com](mailto:support@mcdi.com)



Fig : 3

## 2. Installing thePCI Serial Port.

A last component, a Virtual Serial Port, is needed to make your **EXPRECIUM<sup>2</sup>** talk to the PC. Fig. 4 show a new installation window that will pop on screen at this point

Once again, a Microsoft warning box will be displayed on screen. You need to click on Continue Anyway in order to complete the installation of your **EXPRECIUM<sup>2</sup>** card.

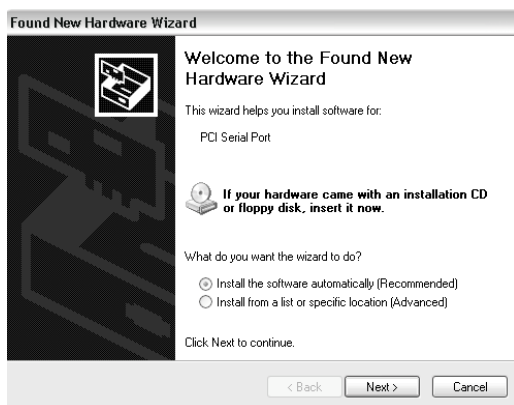


Fig : 4

Fig .5 will be displayed to confirm the correct installation of your PCI port for the **EXPRECIMUM<sup>2</sup>** receiver card. Click on FINISH to complete the installation. If an error message is displayed contact MCDI support at [support@mcdi.com](mailto:support@mcdi.com)



Fig : 5

### 3. Verification

You can verify the correct installation of **EXPRECIMUM<sup>2</sup>** by looking at Windows Device Manager (Fig. 6) or you can directly go to MCDI Configurator tool (section XXXXXX). Device Manager is located at Start>Control Panel>System>>Hardware tab>>Device Manager

Click on tab Hardware and then select Device manager.

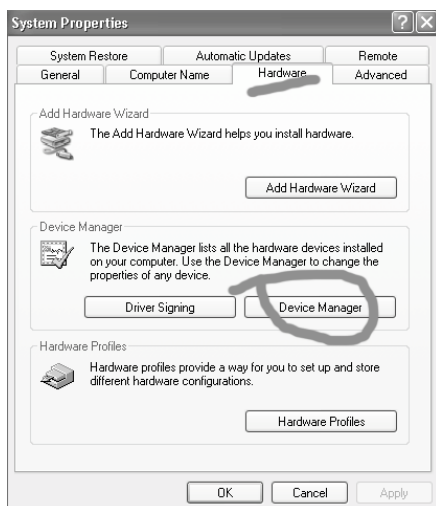
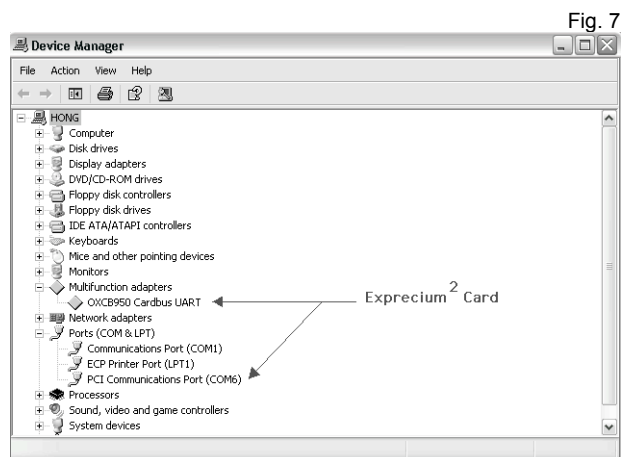


Fig : 6

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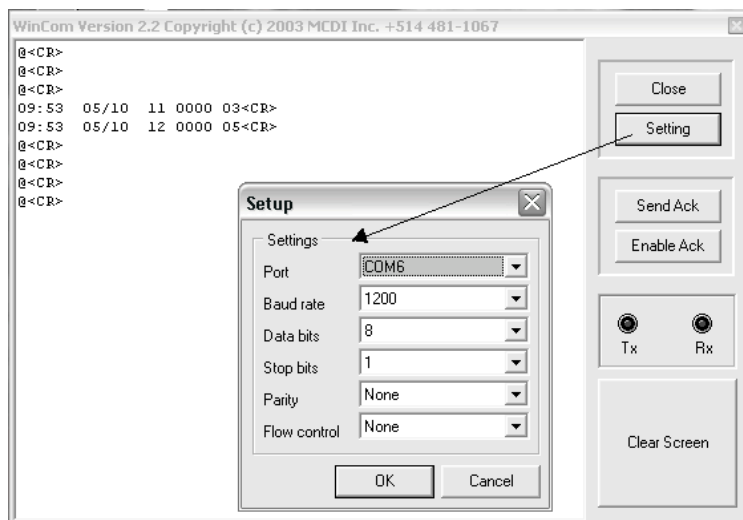
In Ports COM & LPT section (Fig. 7), PCI Communication Port ( COM n ) will be displayed for each **EXPRECIUM<sup>2</sup>** installed along with the OXC950 Card Bus UART in the Multifunction adapters section.

You can now change internal settings of EXPRECIUM<sup>2</sup> using the WinExprecium II or MCDI Configurator tool.



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### Software tool WINCOM (Windows 95SE, 98, ME, 2000, XP)



Use WINCOM utility to test communication between computer and **EXPRECIUM<sup>2</sup>**.

- Double click on WINCOM icon to start the application.
- Click on SETTINGS to choose COM port ( do not change other parameters ) that your **EXPRECIUM<sup>2</sup>** is connected to then click OK.
- Click on OPEN to start monitoring selected port. If **EXPRECIUM<sup>2</sup>** is properly installed and configured you will see some signals.
- Click on ENABLE ACK to acknowledge all incoming signals.

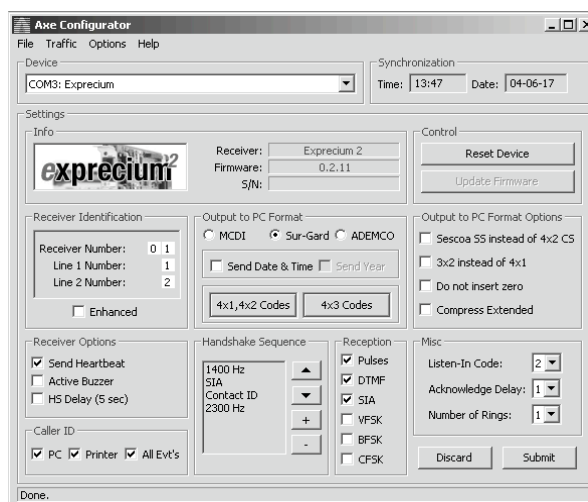
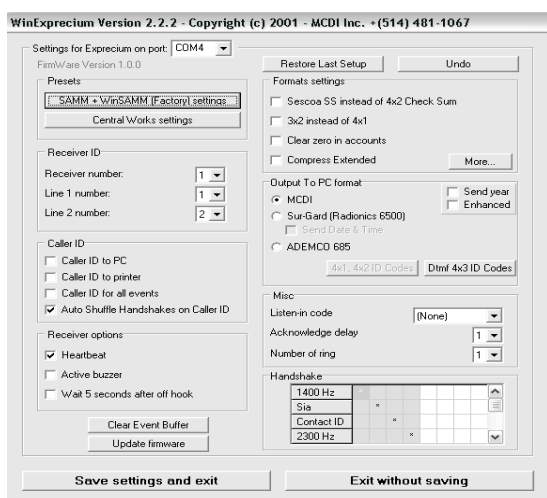
### Setting up your Exprecium using WinEXPRECIIUM<sup>2</sup> or AXE Configurator Tool.

There are no switches or jumpers to configure your card. All settings are done using the setup program called **WinExprecium2.exe** ( provided on the media coming with your card ) or using or advanced Java configurator tool called **AXE Configurator**.

WinExprecium works under Windows and can be executed from any disk drive.

To enter the configuration menu double click on the icon **WinEXPRECIIUM II.exe** or **AXE Configurator**

The following displays will appear :



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### Setup program display description and commands

Use the pull down menu to select the COM port of the **EXPRECIUM<sup>2</sup>** card to configure

**OPTIONS : ( default settings are indicated in bold )**

#### Receiver ID :

Receiver	Number sent to computer and printer 0 to F	<b>1</b>
Line 1	Number sent to computer and printer 0 to F	<b>1</b>
Line 2	Number sent to computer and printer 0 to F	<b>2</b>

#### Caller ID :

Caller ID PC	<b>No</b> $\sqrt{\quad}$ = <b>Do not send telephone ID data to PC</b> $\sqrt{\quad}$ = Send telephone ID data to PC
Caller ID PRN	<b>No</b> $\sqrt{\quad}$ = <b>Do not send telephone ID data to the Exprecium printer port</b> $\sqrt{\quad}$ = Send telephone ID data to the <b>EXPRECIUM<sup>2</sup></b> printer port
Caller ID ALL	<b>No</b> $\sqrt{\quad}$ = <b>Do not send telephone ID data except when bad transmission occurs</b> $\sqrt{\quad}$ = Send telephone ID data to PC and <b>EXPRECIUM<sup>2</sup></b> printer port unless PRN and PC select otherwise
Auto Shuffle Handshakes	<b>No</b> $\sqrt{\quad}$ = Handshake sequence as programmed in section Handshake $\sqrt{\quad}$ = Based on Caller ID, the <b>EXPRECIUM<sup>2</sup></b> card will send the last handshake used for the phone number received as the first handshake and then continue with the normal sequence. If no Caller ID information is available the card will revert back to the normal programmed sequence.

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### Receiver options :

Heartbeat	<p>✓ = enable      <b>No ✓ = disable</b></p> <p>Heartbeat signals are sent to computer every 30 seconds only in MCDI and Surgard mode.</p>
Printer/Buzzer	<p>✓ = Check printer on EXPRECIUM<sup>2</sup> port      <b>No ✓ Do not check for printer</b></p> <p>By default the Exprecium <u>does not verify printer status on parallel port</u> but sends data to be printed as if a printer was connected to this port.</p> <p>(✓) option tells the EXPRECIUM<sup>2</sup> receiver to verify and report on the status of the printer connected to its parallel port. A connector is supplied to daisy chain multiple receiver cards ( Exprecium, TLR+ or TLR ) in the same computer to send all output to one printer only.</p> <p>When Check printer option is enabled and the computer is absent, each event being sent to printer triggers a warning buzzer. This warning sound may be stopped by clicking twice the ON-LINE printer key. Buzzing resumes if printer is left Off-line.</p> <p>Do not enable this option if no printer is installed. Multiple error messages could be generated by taking this action.</p>

### Formats settings :

Sescoa SS	<p>✓ = enable      <b>No ✓ = disable</b></p> <p>Conflict with Pulse 4X2 Checksum format</p>
3x2 Instead 4x1	<p>✓ = enable      <b>No ✓ = disable</b></p> <p>Conflict with 4X1 in Compressed Expanded DO NOT select with Compressed Expanded = YES</p>
Clear Zero	<p>✓ = Zero removed in 3x1 and 4x1      <b>No ✓ = zero present</b></p> <p>Tells the receiver <u>not to insert</u> a zero in front of the account number and in front of the alarm code, for incoming 3 x 1 and 4 x 1.</p> <p>Example:      3 x 1      Extended compressed in 3 x 2 standard                  123 4                  444 5      After compression: 123 45</p> <p>Example:      3 x 1      Standard 3 x 1                  123 1</p> <p>Example:      4 x 1      Standard 4 x 1                  1234 1</p> <p>Example:      3 x 1 and 4 x 1      <u>without</u> the CLEAR ZERO option:                  0123 01 for 3 x 1                  1234 01 for 4 x 1</p>
Compressed/ Extended	<p>✓ = Compressed extended 3x1 or 4x1      <b>No ✓ = default</b></p> <p>Example:      3 x 1      Extended compressed in 4 x 2 standard                  123 4                  444 5      After compression: 0123 45</p> <p>Example:      4 x 1      Extended compressed in 4 x 2 standard</p>

**Output to PC format :**

MCDI	Output to PC will be in MCDI format. Year can be added to the basic string. Selecting <b>Enhanced</b> mode will allow to have 3 digits for Receiver and Line numbers. This Enhanced mode is for future use with MCDI software. See section <u>Transmission to computer and printer in EXPRECIUM MCDI mode</u> below for structure of transmitted information. DTMF 4x3 ID Codes give the possibility to change the default type character assigned.
Sur-Gard	Output to PC will be in Sur-Gard ( Radionics 6500 ) emulation. Date and Time can be added to the basic string. Selecting <b>Enhanced</b> mode will allow to have 2 digits for Receiver and Line numbers ( MLR2000 emulation ). 4x2 and 4x3 default character can also be modified.
Ademco 685	Output to PC will be emulation.
Misc :	
Listen-In (3x1,4x2)	Empty or 1 .. F <b>Empty</b> Define code to trigger Listen-In mode in 3x1 or 4x2 formats

**Handshake :**

Default Sequence	By default the Exprecium2 card will send the sequence of Handshakes in the following order : 1400Hz, SIA ( 2225Hz), Contac ID ( 1400Hz/2300Hz ) and 2300Hz. The order of handshake can be changed by clicking once to clear the selection and then clicking again on the desired handshake. An * will appear to show the new selection. Robofon, Telim or CESA formats required special adjustments, hardware and/or firmware.
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**Connectors, leds and Jumpers - Main board**

J1	External battery connector 6 - 12 volts
J2	Connector port for IBM compatible parallel printer type DB25. When more than one card is installed in the same computer, one printer can be used for all cards in the same computer, instead of one printer per receiver card. See TX1,RX1 below.
J3	PCI bus connector
JP1	Future use
JP2,7,9	Connectors to receive Communication Interface Module
JP3	Line 1 Phone connector type RJ11. Connect Green and Red only on each connector
JP4	Connector for external leds (future use)
JP5	Processor jumper pin 2-3 (do not remove)
JP6	Line 2 Phone connector type RJ11. Connect Green and Red only on each connector
JP8	Dry contacts relay normally open or close contacts activated for 1 second when an event is received. Can be used to trigger external devices. Pins : 1&2 Normally Open / 2&3 Normally Closed ( card in operation ) Maximum rating : 110V DC or 125 V AC / 1A      UL/CSA rating : 30V DC / 1A      110V DC or 125V AC / .3 A JP8 usage is supported from Firmware version 0.0.12 and up
JP10	Serial communication or MRD1000 Remote Display.

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- TX1, RX1 Connectors for chaining more than one EXPRECIUM<sup>2</sup> card. This allows only one external printer to serve all receiver cards. When more than one receiver card is installed, use a jumper to link all receiver cards. Connect TX1 of the first card to RX1 of the second card. Connect your printer on the last card having only a jumper on RX1.
- PWR1 For MRD1000 remote display power feed.
- S1 Reset switch for the receiver. Two options are available.
1. Soft Reset: Press once to reset the receiver to the user's configuration.
  2. Cold Reset: Press once and wait for beep. During the beep press once more.
- Soft and Cold Reset can also be software achieved by running XWinEXPRECIUM II or AXE setup program as shown in **Setting up your EXPRECIUM<sup>2</sup>**.
- D1 & D2 Both leds are ON to indicate power from the PC. Only Led D2 is ON when PC is OFF and the **EXPRECIUM<sup>2</sup>** is powered by an external source on J1.

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### Connectors - Communication Interface Module

JP1,2,3      Connectors to connect to the Main Board

### Physical characteristics of the EXPRECIMUM<sup>2</sup>

**Size :**                      Receiver has all out dimensions, including bracket of 20.3x12.7 cm or 5x8 inches.

**Buffer memory :**      Buffer holds up to 1800 events in a non volatile memory. Buffer is used only when computer is absent.

Card keeps printing during fail time if 6 volt external battery is connected and charged. When computer comes back on, buffer empties to the computer. If more than 1800 events are received in the buffer during fail time, card writes over the oldest event. Written records may be available on printer connected to parallel printer port.

#### External battery connectorr

A six (6) **volt** battery connector is designed to feed receiver if computer fails. A 3 foot wire is supplied. Connect the red wire to the positive side and the black wire to the negative side of the battery.

During normal operation, card takes its power from computer and maintains battery charge. When computer fails, card takes its power from battery and keeps on receiving alarms.

Battery size (power) is dependent on the period it must maintain the receiver operating while PC is off. As a rule of the thumb, define the number of hours a fully charged battery must support the system and divide by two (2) to get the A-H.

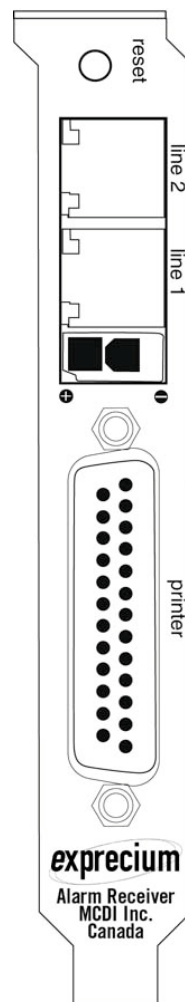
Example: To support the receiver for 8 hours requires a 4 A-H rechargeable battery.

Battery type recommended: Rechargeable sealed lead-acid for constant voltage.

**Buzzer**      Alert/Warning

On board buzzer is available for alert warning when Computer is absent. Enable if setup parameter Check printer is set to Yes. Is activated (start buzzing) by event to be printed on the Exprecium printer port.

Stop buzzing by pressing twice (2) ON-LINE printer key. Refer to printer connected to the Exprecium parallel printer port. Will resume buzzing if printer is left off-line.



### Formats and characters transmitted

#### Receiving

Formats	MCDI	DTMF	FSK
	Acron	Ademco Contact ID	Ademco L/S Standard
	Ademco L/S expanded	Ademco Fast / High Speed	Ademco Express

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	Ademco Old	DCI	FBI Super Fast
	Franklin Fast	Napco	Radionics Standard
	Radionics Expanded	Scantronic	Sescoa standard
	Sescoa SS	SIA I - II - ~III	Silent Knight Slow/Fast
	CFSK III	Varitech VFSK	Stratel
	SurGard	Robofon	Telim
Pulse	10,20,40 bps 3x1 - 4x1 - 4x2		Dual Round
	10,20,40 bps 4x2		Checksum
	10,20,40 bps 3x1 - 4x1 Extended		Dual Round
	Frequencies		1800 Hz / 1900 Hz
	Handshake and kiss-off:		1400hz / 2300hz
DTMF	10 char/sec.		
FSK	110 bauds or 300 bauds (SIA, CFSK, VFSK)		Bell 103

### Listen-in, Two way voice

#### Listen-in function

Some alarm panels offer the option for the Central station operator to listen for sound in the premises where the alarm signal originates.

Alarm panels supporting "Listen-in" keep the telephone line open after having sent a signal, to allow sound monitoring. The telephone line will be closed by the Central station subject to operator action or receiver setup.

#### Listen-in criteria

The Exprecium receiver is triggered into "Listen-in" mode for incoming events according to panel setup for specific formats.

SIA (Lxxx) and Contact ID (E606) formats have specific codes for Listen-in. See Panel setup.

DTMF 4x3 formats use the AEx signal where x can be 0 to F at the Installer's choice.

3x1 and 4x2 formats have no standard codes for Listen-in. **EXPRECIMUM<sup>2</sup>** allows own selection of Listen-in codes at Setup time.

#### Receiver action upon reception of "Listen-in" trigger

Upon reception of event in the Listen-in category, the receiver maintains the telephone line open for a period of up to 180 seconds or less than 180 seconds upon reception of any telephone tone from the keypad.

#### Operator control for "Listen-in"

Operator must be warned by Monitoring software of account "listen-in" capability. Operator has a maximum of 180 seconds from time of alarm reception to telephone pickup. Failure to pickup telephone in this delays will cause line hang-up by the receiver.

Once the line is seized by Central station local telephone, the hang-up action of the receiver will have no effect.

To close communication with alarm signal site in the first 180 seconds when the **EXPRECIMUM<sup>2</sup>** receiver is in action, operator must press any key on the telephone keypad before hanging up. The receiver will hang up before 180 seconds only upon reception of a tone from telephone keypad.

To close communication with alarm signal site after 180 seconds of event reception, simply hang-up the telephone. This is because the **EXPRECIMUM<sup>2</sup>** receiver is not in function anymore, its delay having expired.

### Transmission to computer and printer in EXPRECIMUM MCDI mode

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Pulse, DTMF, FSK

FORMAT 3x1, 4x1

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_ØA<CR>
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_A<CR>
HH:mm_ MM/DD[/YY] _ _ RL_CCC_A<CR>
HH:mm_ MM/DD[/YY] _ _ RL_ØCCC_AZ<CR>
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZ<CR>
```

Default  
 Option 4x1 set by INITLR  
 Option 3x1 set by INITLR  
 Option 3x1 extended compressed 4x2  
 Option 4x1 extended compressed 4x2  
 Option zero removed 3x1,4x1, extended

FORMAT 4x2

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZ<CR>
```

FORMAT 4x3 (SESCO SS)

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZZ[Z]<CR>
```

FORMAT 4x3 (SUR GARD)

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZZ<CR>
```

FORMAT ADEMCO HIGH SPEED

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AAAA_AAAA_A<CR>
```

FORMAT ACRON

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AAAAAAAAAA<CR>
HH:mm_ MM/DD[/YY] _ _ RL_ _CCC_AAAAAAAAAA<CR>
```

FORMAT FBI SUPER FAST

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_E ZZ<CR>
```

FORMAT CONTACT ID

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_18_TAAA_GG_ZZZ<CR>
```

FORMAT MODEM SIA

```
HH:mm_ MM/DD[/YY] _ _ RL _ [#CCCCCIEAAZZZ/AAZZZ/AAZZZ]<CR>
<LF>RL_ [#CCCCCIEAAZZZ/AAZZZ/AAZZZ]<CR>
```

Native mode  
 Ademco685 Emulation

FORMAT MODEM CFSK / VFSK (same as 4x2)

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZ<CR>
```

CALLER ID

Phone signal added to event code. Examples

```
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_AZ{t...t}<CR>
HH:mm_ MM/DD[/YY] _ _ RL_CCCC_18_TAAA_GG_ZZZ {t...t}<CR>
HH:mm_ MM/DD[/YY] _ _ RL _ [#CCCCCIEAAZZZ/AAZZZ/AAZZZ]{t...t}<CR>
```

Added to 4x2  
 Added to Contact ID  
 Added to SIA

Heartbeat

```
@<CR>
```

Signal sent to the computer every 30 seconds if option is enabled



## Installation guide for Alarm Receiver Exprecium<sup>2</sup>

### Code definitions

HH	:	Hour	
:	:	Character ":"	
mm	:	Minute	
DD	:	Day	
_	:	1 space	
--	:	2 spaces	
MM	:	Month	
[YY]	:	Year [Present/Absent]	Receiver Option)
/	:	Character "/"	
R	:	Receiver number	(Receiver Option)
L	:	Line number	(Receiver Option)
C	:	Account number	
A	:	Event code or modifier	
E	:	Zone type	FBI super Fast
Z	:	Zone	
G	:	Group (Partition)	
T	:	Type(E or R)	(Contact ID)
Ø	:	Zero	
<CR>	:	EOS	(Carriage Return)
<ACK>	:	Data retransmits to computer every 2 second	until ACK is received (ACK=06H or \$06).
@	:	Heartbeat signal	Receiver Option)
t...t	:	Telephone number from Caller ID	
[	:	Beginning data delimiter (SIA)	
]	:	Ending data delimiter (SIA)	
	:	Field separator (SIA)	
#	:	Account ID block code (SIA)	
E	:	Function block code (SIA)	
/	:	Data code packet separator (SIA)	
<LF>	:	Line Feed	

EXPRECIUM Error and Warning messages sent to Printer port and PC:

	<u>HH:MM</u>	<u>MM/DD[YY]</u>	<u>RL</u>	<u>Account</u>	<u>XYZ</u>	
Printer message	Time	Date	Receiver	account	01	Printer error
	Time	Date	Receiver	account	02	Printer reset
Telephone line monitoring	Time	Date	Receiver	account	03	Error Line 1
	Time	Date	Receiver	account	04	Reset Line 1
Telephone line monitoring	Time	Date	Receiver	account	05	Error Line2
	Time	Date	Receiver	account	06	Reset Line2
External battery backup	Time	Date	Receiver	account	07	Low external battery
	Time	Date	Receiver	account	08	Normal external battery
Transmission message	Time	Date	Receiver	0000	00	Bad transmission
	Time	Date	Receiver	[#0000IA BAD TRANSMISSION]		Format SIA
No Transmission	Time	Date	Receiver	0000	F1	No signal received Line 1
	Time	Date	Receiver	0000	F2	No signal received Line 2

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## Installation guide for Alarm Receiver Exprecium<sup>2</sup>

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### Transmission to computer and printer in ADEMCO 685 / Surgard emulation mode

User Manual : for information on transmission See ADEMCO 685 standards

User Manual : for information on transmission See Surgard MRL2 documentation

Surgard emulation applies to Dial up Alarm signals and Telephone ID

### Messages from **EXPRECIUM<sup>2</sup>** printer port:

When computer ceases to communicate, "Computer absent" message is sent to the **EXPRECIUM<sup>2</sup>** printer port

When computer resumes communication, "Computer restore" message is sent to to the **EXPRECIUM<sup>2</sup>** printer port

### Transmission rate

1200 bps, no parity, 8 bits, 1 stop bit

### Warranty

The Electronic products of MCDI Inc. are under a five year limited warranty. Material is repaired or exchanged, free of charge, when returned to MCDI service points, post paid. Abused or misused equipment is not covered by this warranty. Power surge damages are not covered by warranty.

### Legal compliance and Warning

#### United States Regulation FCC Warning

##### Radio/TV interference

This device is not equipped with dialing equipment.

Telephones equipped with electronic dialing keys generate and use radio frequency energy, and if not installed and used properly and in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception.

NOTE: This device has been tested and found to comply with Part 15 if the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesirable operation.

If your device causes interference, one of the following measure may correct the problem:

- . Reorient or relocate the receiving TV or radio antenna, when this may be done safely.
- . To the extent possible, move the device and the radio or television farther away from each other, or connect the computer with the device and the radio or television to outlets on separate circuits.
- . Consult the dealer or an experienced radio/television technician for additional suggestions.

NOTE: FCC registration does not constitute an expressed or implied guarantee of performance.

##### Right of the Telephone Company

If this device causes harm to the telephone network, the telephone company may stop your service temporarily or ask you to remove your equipment until the problem is resolved. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible and be given the opportunity to correct the situation. You will also be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper function of this device. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.



## Installation guide for Alarm Receiver Exprecium<sup>2</sup>

We:

MCDI Inc.  
70565 Jean-Bourdon Avenue  
Montreal, QC  
Canada H4K 1G7

Declare under our sole legal responsibility that the following products conform to the protection requirements of council directive 89/336/EEC on the approximation of the laws of member states relating to electromagnetic compatibility, as amended by directive 93/68/EEC:

MCDI-EXPRECIUM alarm receiver

The products to which this declaration relates are in conformity with the following relevant harmonised standards, the reference numbers of which have been published in the Official Journal of the European Communities:

EN50082-1:1992 --- EN55022 CLASS A --- EN 60555 PARTS 2 & 3 --- EN41003:1993 --- BAPT Note 48 revision 5  
EN60950/IEC Ed 2 Amendment No1 1992, Amendment No2 1993, Amendment No3 1996

MCDI Inc.

Europe EN41003 Warning Application Note 48, Issue 5

1) The power required by the host and the total of all adapter cards installed within the host environment, together with any auxiliary apparatus, shall not exceed the power specification of the host apparatus.

The power requirements for the EXPRECIUM receiver are:

From computer	12V	200 mA max.
From External Battery (standby)	6V	500 mA
Charging Voltage	6.7 Volts	500 mA (Current Limit)

2) It is essential that, when other option cards are introduced which use or generate a hazardous voltage, the minimum creepages and clearances specified in the table below are maintained. A hazardous voltage is one which exceeds 42.4V peak a.c. or 60V d.c. If you have any doubt, seek advice from a competent engineer before installing other adapters into the host equipment.

3) The equipment must be installed such that with the exception of the connections to the host, clearance and creepage distances shown in the table below are maintained between the card and any other assemblies which use or generate a voltage shown in the table below. The larger distance shown in brackets applies where the local environment within the host is subject to conductive pollution or dry non-conductive pollution which could become conductive due to condensation. Failure to maintain these minimum distances would invalidate the approval.

4) The analogue telecommunications interface is intended to be connected to telecommunication network voltage (TNV) circuits which may carry dangerous voltages. The telephone cord(s) must be disconnected from the telecommunications system until the card has been installed within a host which provides the necessary protection of the operator. If it is subsequently desired to open the host equipment for any reason, the telephone cord(s) must be disconnected prior to effecting access to any internal parts which may carry telecommunication network voltages.

## Installation guide for Alarm Receiver Exprecium<sup>2</sup>

### Technical data sheet for EXPRECIUM<sup>2</sup>

#### Description

"EXPRECIUM<sup>2</sup>" is a full format PC-based twin-line alarm receiver card.

EXPRECIUM<sup>2</sup> connects to PCI bus of a PC Computer. Its small size fits table top IBM PCs or compatible PC Pentium and up. EXPRECIUM<sup>2</sup> interfaces to two telephone lines, imposing no limit to the number of customers per line. It provides a parallel printer port for direct output without going through PC.

With large size memory, fast modem circuit, improved PC bus interface and Caller ID option, EXPRECIUM<sup>2</sup> adds a new dimension to Alarm Receiving and PC integrated Monitoring Station.

All MCDI's PCB receivers work even if PC is down. If external battery power is provided, naturally.

Option: Remote display / control unit. Packaged as stand alone device or fitted in PC's CD anchor slot.

#### Certification

FCC(USA), IC(Canada), CE Telecom /Security (Europe)

#### Specifications

##### Communications:

EXPRECIUM<sup>2</sup> provides 2 RJ11 telephone line jacks.

Type	:	Pulse, DTMF, FSK
Reception Speed	:	10, 20, 40 pps DR / CS
Handshake and Kiss-off	:	1400Hz / 2300Hz/2225Hz
Pulse Frequency	:	1800Hz / 1900Hz
Telim//Robofon	:	1180Hz / 1100Hz

##### Reception Formats supported:

Acron	Radionics 6500
Ademco:	Radionics extended
- Slow/Fast;	Sescoa Slow, Super Fast
- Contact ID;	Sescoa Standard
- Extended;	SIA
- Express;	Contact ID
- High Speed	- compressed & Extended
CFSK,BFSK,	Silent Knight Slow
VFSK	SurGard
FBI Super Fast	Napco Point ID
3x1	3x1 extended
4x1	3x1 extended compressed 4x2
4x1 extended	4x1 extended compressed 4x2
4x2	Zero removed 3x1, 4x1, extended.
Optex's Varitech	C&K: Bell 103A2 or CCIT ( option)
For Germany and Scandinavia (option):	
Telim	Robofon

##### Printer Output:

Standard DB25 connector for Parallel Interface.

#### Features

- Made for PCI bus connection.
- Easy to install: Plug & play and Hot swap.
- Supports SIA, CFSK, BFSK, VFSK, Etc.
- Caller Identification (FSK) where available.
- Autosuffle handshakes based on Caller ID.
- Internal buffer 1800 events.
- Non Volatile Memory.
- Dead line detection.
- Up to 12 receivers or more per PC.
- Alert/Warning buzzer.
- Supervision of chargeable back-up battery.
- Selectable Monitoring software interfaces.
- Listen-in, Two way voice.
- Remote control and display (option).

Card linking arrangement allowing one printer to serve all MCDI PCB receivers in one PC.

#### Event Logging when PC is absent:

EXPRECIUM<sup>2</sup> can store over 1800 events in standby operation when PC is down.

#### Power Requirements:

From computer +12V Supply:	200 mA max.
From 6V Battery (standby):	500 mA

#### Size and weight:

8" / 20.3 cm (L) x 5" / 12.7 cm(H); 0.484 lb / 220 gr

#### Station Requirements:

IBM™ or Compatible Pentium™ computer and up. Table top size enclosure. PCI bus. Windows 95, 98, Me, XP or 2000

Printer with Centronics parallel interface and cable with DB25 connector.

#### PC addressing:

PCI bus. Plug & Play. PC must have Plug & Play BIOS.

#### Battery Back-up:

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**Installation guide for Alarm Receiver Exprecium**

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**EXPRECIUM<sup>2</sup>** provides charging and supervision circuitry for an external 6-Volt battery (not supplied). 12v battery may be used but no charging will occur.

Charging Voltage	6.7 volts
Charging Current Limit	500 mA

**Monitoring Software:**

**EXPRECIUM<sup>2</sup>** interfaces with Monitoring software in Native mode, Ademco™ 685 emulation mode and SurGard™ MLR2 emulation mode.

**Optional remote control MRD1000:**

- Displays incoming signals or controls on 2 lines by 20 c.
- Configures / operates **EXPRECIUM, TLR+** or **SA-TLR+**.
- Alarm acknowledge key for easy operation.
- Power fed by **EXPRECIUM, TLR+** or **SA-TLR+**.
- External self contained unit or Mounted in PC's CD slot.