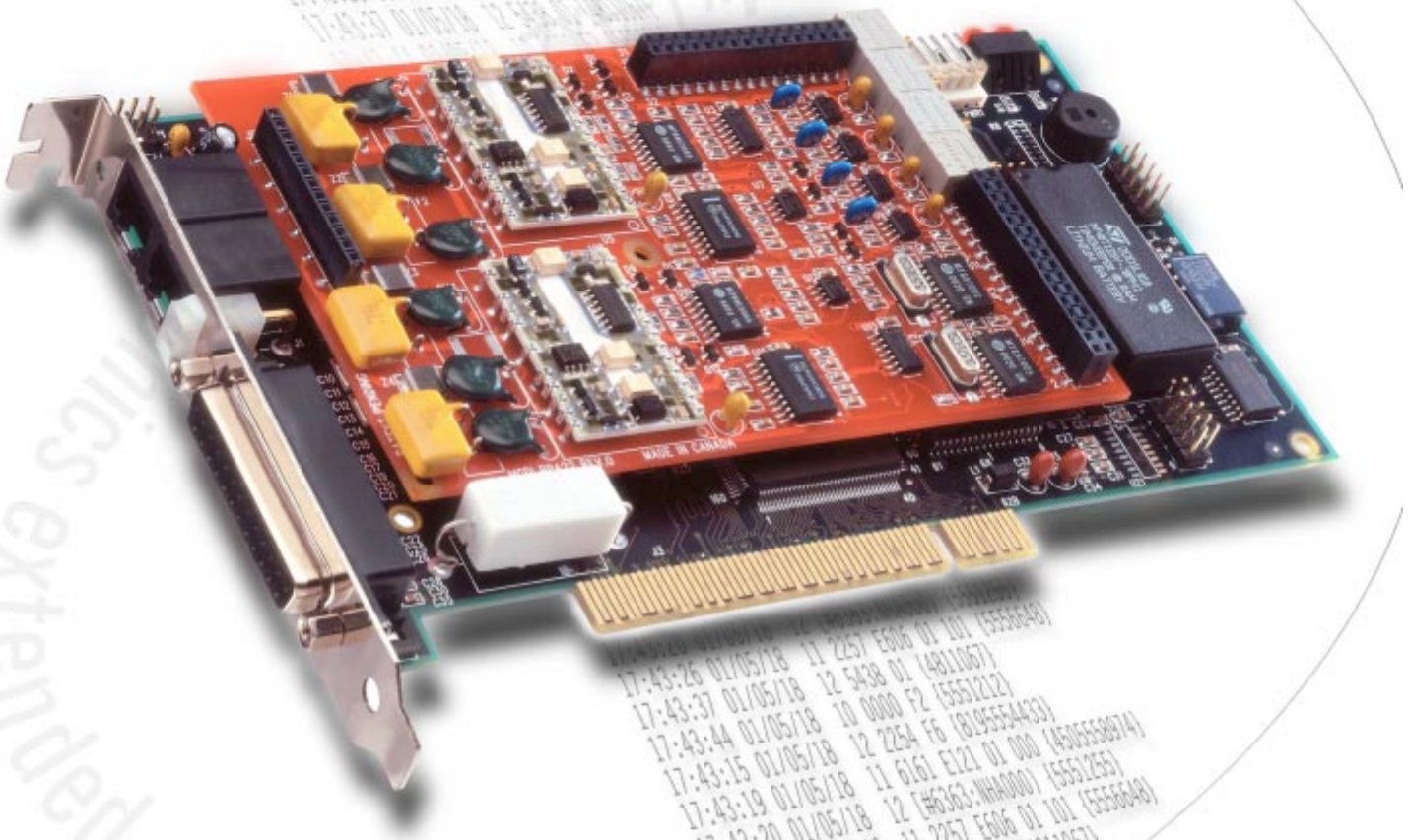
MCDI

exprecium

Alarm Receiver board **PCI** bus/ 2 lines



Installation Guide and user manual

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Introduction

EXPRECIUM is a full format PC-based alarm receiver card. With two phone line per board, Eprecium 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, Exprecium adds a new dimension to Alarm Receiving and PC Integrated Monitoring Station.

The Exprecium receiver card carries a five year limited warranty.

Main features

- PCI bus interface, 2/3 lenght card.
- Plug & Play compatible with Dos, Windows 95 and Windows 98.
- Flash memory for easy firmware update, realtime clock, storage of events and parameters.
- 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. 8Mb or more of system memory for DOS system. For Windows 95 or 98, minimum requirements recommended by Microsoft.
3. MSDOS 6.22, Windows 95 or Windows 98 operating systems.
4. An empty PCI expansion slot for each Exprecium Receiver Card to be installed.

Content of CDROM disk: Drivers & Utilities

Windows 95 & 95 drivers :

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

File name	Description
XPRECIUM.EXE	Configuration program to configure your Exprecium or upgrade itsfirmware. Can be used in DOS or Windows.
XPRECIUM.BIN	Binary file used to download firmware into the Exprecium card.
COMIRQ.EXE	Use to check specific Exprecium card in DOS environment. Allow you to see incoming raw signals received.
WINCOM.EXE	Same as COMIRQ but for Windows environment only.
WSCOM.EXE	Communication module to be used with SAMM10 and WINSAMM.

Installing the Exprecium 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 Exprecium 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.

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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

DOS users :

There is no need to install any specific DOS driver. Once you start your computer, the Bios will automatically detect the new installed PCI card and assign a COM address and an IRQ to each card. Most PC displays a list of PCI devices installed at the power on. It may be necessary to press the PAUSE key to have a chance to look at it.

Here is an example :

```
PCI device listing …

Bus No. Device No.  Func No.  Vendor ID  Device ID Device class          IRQ

  0         7          1        8086       7111    IDE Controller         14
  0         7          2        8086       7112    Serial Bus Controller  11
  0         9          0        6234       0001    Simple COMM Controller 15
  0         9          0        6234       0001    Simple COMM Controller  5
  0        11          0        1142       643D    Display Controller     NA
                                                    ACPI Controller         9
```

EXPRECIUM Vendor Number : 6234 Device ID : 0001

In above example, two Exprecium Receiver cards are installed. One with IRQ 15 and a second one with IRQ 5.

Notes : It is possible that your Bios assigns the same IRQ to more than one device. If your DOS application supports IRQ sharing this is not a problem. If your application does not have the ability to share IRQ's, try the following steps :

- Move the Exprecium card to another free PCI slot to get a different IRQ assignment.
- Free more IRQ's in your system by removing unused cards.
- Manually assign to the specific PCI slot a reserved IRQ in your Bios settings and install the Exprecium in that slot to avoid IRQ conflict. Refer to your PC manual or contact your service technician for more information on how to manually assign IRQ's.

The IRQ sharing issue is not a problem when using the Exprecium card under Windows 95 or 98 since Windows is managing IRQ's internally and has the ability to share them.

Use the configuration utility called XPRECIUM.EXE, located on the media coming with your Exprecium card, to set the specific options. See section SETTING UP YOUR EXPRECIUM CARD for more information.

Using COMIRQ utility :

Also a debugging tool is provided. It is called COMIRQ.EXE

To use it, type :

COMIRQ X1 look at incoming signals on the first Exprecium card or
COMIRQ X2 look at incoming signals on the second Exprecium card or
COMIRQ X3 look at incoming signals on the third Exprecium card
… etc. up to COMIRQ X9

Here is an example of display provided by the COMIRQ utility :

```
COM D400 IRQ 5 : ANY INCOMING SIGNAL          Hit "Space Bar" to send ACK
--------------------------------------------------------------------------------
@<CR>
@<CR>
@<CR>
11:09  02/08  12 1234 51<CR>
11:09  02/08  12 1234 51<CR>
11:09  02/08  12 1234 51<CR>
11:09  02/08  12 1234 51<CR>
@<CR>
11:09  02/08  12 4378 O66<CR>
11:10  02/08  12 4378 O66<CR>
11:10  02/08  12 1234 51<CR>
@<CR>
@<CR>
--------------------------------------------------------------------------------
IRQ Number might Be Available : 3 5 10 11
<ESC> To exit --- <DEL> Clear screen --- Press "A" to enable <ACK>
```

The top line of the display indicates your Base address and IRQ setting. Press the letter “A” to acknowledge all signals. In the above example, the COM port address is D400 and the IRQ is 5. This is the information required to configure your DOS 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 CDRON 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 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.

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 ...

Using WINCOM utility :

Within Windows, double click on the WINCOM icon.

Select SETTINGS and set the COM port to match the EXPRECIUM COM port. If you only have one Exprecium installed in your system, the COM port address should be COM5. Then click **OK.** Do not change other parameters since they are already set to match your Exprecium card.

Function of each button :

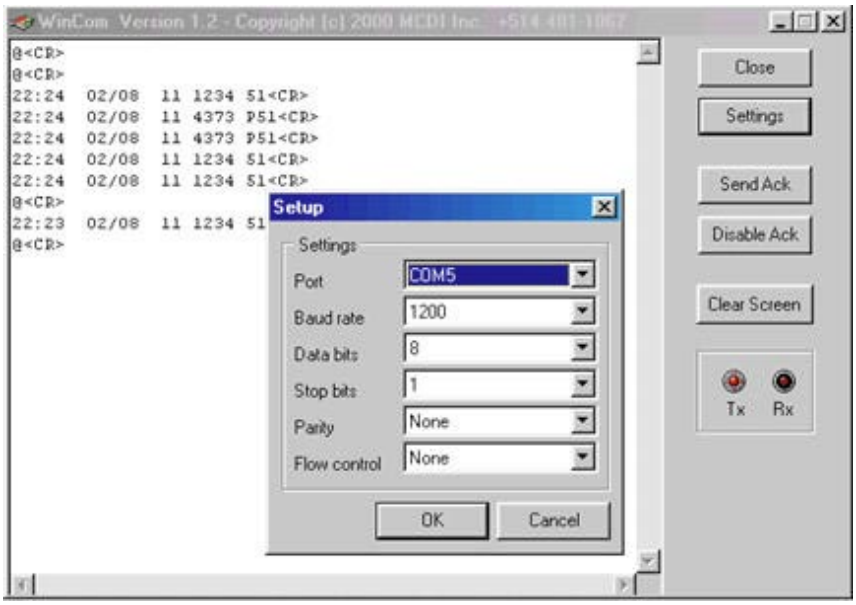
OPEN To start monitoring the selected port.

SETTINGS To select the proper COM port address to be viewed.

SEND ACK To acknowledge each signal one by one.

ENABLE ACK To acknowledge all signals

Use the CLEAR SCREEN button to clear the display.

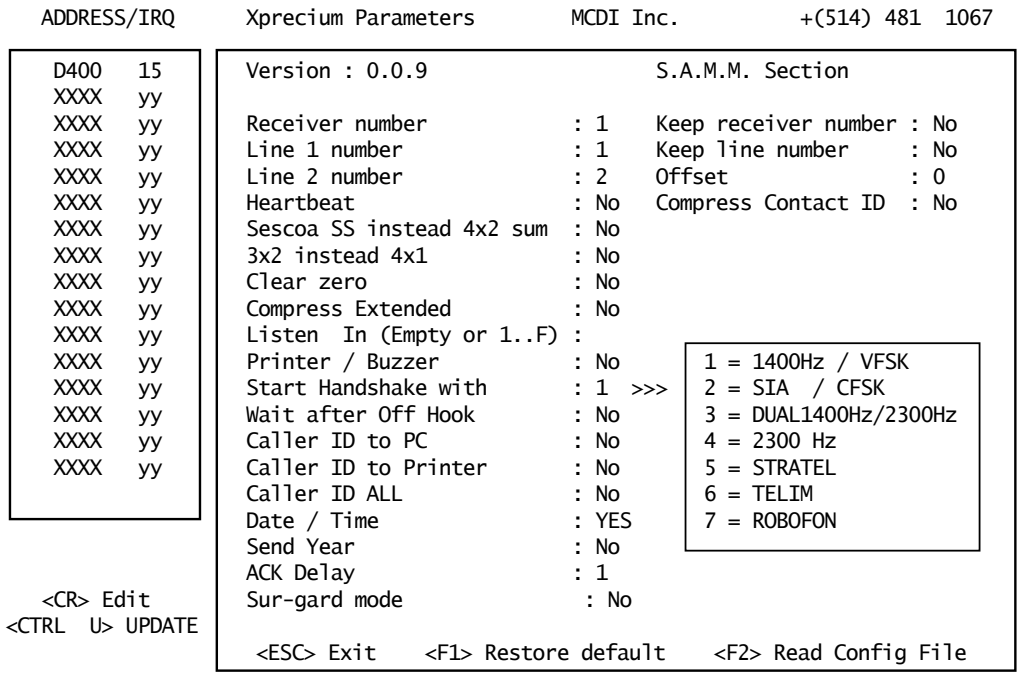


Setting up your Exprecium

There is no switches or jumpers to configure your card. All settings are done using the setup program called XPRECIUM.EXE (provided on the media coming with your card). This program works under DOS or Windows and can be executed from any disk drive. To use it under Windows, your Windows drivers must be installed first and properly configured.

To enter in the configuration menu, type XPRECIUM<enter> Under DOS or Windows, double click on the icon XPRECIUM.

The following display will appear :



Setup program display description and commands

Address / IRQ section

Address part of display shows address fields and IRQ's setting for all Exprecium receivers installed in PC.

Only the cards installed will appear in the list

Move cursor to desired Exprecium using Up/Down arrows.

Press <Enter> to move to Parameter section on right part of display.

Parameters displayed on the right are actual operating parameters.

Press F1 to restore Factory defined parameters. Press F2 to restore saved parameters.

Press CTRL-U to start the firmware update process. See section FIRMWARE UPGRADE.

Press <ESC> to Exit setup program XPRECIUM.

Before accepting Exit command, XPRECIUM utility request authorization to save new parameters.

Note : When exiting from XPRECIUM setup program, real time clock on ALL Exprecium will be reset to PC time.

Parameter section to the right of Address section

Move cursor to desired parameter using UP/DN arrow. Key in each new parameter .

After all changes have been entered press <ESC> to go back to Address Section.

ONLY in Address Section can changes be saved and sent to receiver.

Parameter definition

Emulation mode easy setting information:

MCDI Mode	Default setting
Ademco 685 Mode	Default setting + Date / Time = NO
Surgard Mode	Surgard = YES

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

Receiver — Number sent to computer and printer 0 to F **1**

Line 1 — Number sent to computer and printer 0 to F **1**

Line 2 — Number sent to computer and printer 0 to F **2**

Heartbeat — Yes = enable **No = disable**

Heartbeat signals are sent to computer every 30 seconds only in MCDI and Surgard mode.

Sescoa SS — Yes = enable **No = disable**
Conflict with Pulse 4X2 Checksum format

3x2 Instead 4x1 — Yes = enable **No = disable**
Conflict with 4X1 in Compressed Expanded
DO NOT select with Compressed Expanded = YES

Clear Zero — Yes = Zero removed in 3x1 and 4x1 **No = zero present**

Tells the receiver not to insert a zero in front of the account number and in front of the alarm code, for incoming 3 x 1 and 4 x 1.

Example: 3 x 1 Extended compressed in 3 x 2 standard
123 4
444 5 After compression: 123 45

Example: 3 x 1 Standard 3 x 1
123 1

Example: 4 x 1 Standard 4 x 1
1234 1

Example: 3 x 1 and 4 x 1 without the CLEAR ZERO option:
0123 01 for 3 x 1
1234 01 for 4 x 1

Compressed/ Extended — Yes = Compressed extended 3x1 or 4x1 **No = default**

Example: 3 x 1 Extended compressed in 4 x 2 standard
123 4
444 5 After compression: 0123 45

Example: 4 x 1 Extended compressed in 4 x 2 standard
1234 5
5555 6After compression: 1234 56

Listen-In (3x1,4x2) — Empty or 1 .. F **Empty**
Define code to trigger Listen-In mode in 3x1 or 4x2 formats

Printer/Buzzer — Yes = Check printer on Exprecium port **No= Do not check for printer**

By default the Exprecium does not verify printer status on parallel port but sends data to be printed as if a printer was connected to this port.

(Yes) option tells the Exprecium 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.

When Check printer option is enabled (Yes) 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.

Do not set the "Yes" parameter if no printer is installed. Multiple error messages could be generated by taking this action.

Start handshake with

1 1400hz / VFSK
2 SIA / CFSK
3 DUAL 1400hz / 2300hz
4 2300hz
5 STRATEL
6 TELIM
7 ROBOFON

Default sequence is as above. Option is to change first element with the one selected.
Extreme care must be exercised when changing Handshake sequence. It is a well known fact that many dialers do not respond well to all startup sequences.

Wait after O/H — Delay to start Handshake after Off Hook. **No = normal**, Yes=5 seconds

Caller ID PC — **No = Do not send telephone ID data to PC**
Yes = Send telephone ID data to PC

Caller ID PRN — **No = Do not send telephone ID data to the Exprecium printer port**
Yes = Send telephone ID data to the Exprecium printer port

Caller ID ALL — **No = Do not send telephone ID data except when bad transmission occurs**
Yes = Send telephone ID data to PC and Exprecium printer port unless PRN and PC select otherwise

Date / Time — **Yes = enable** No = disable

Send year — Yes = Date including the year **No = Date with out year**

Yes, tells the Exprecium to add the Year in date format: HH:mm _ _ MM/DD[/YY] ...

No,tells the Exprecium to use date and time format: MM/DD.

ACK delay — Wait time in seconds for ACK reception before resend. (Surgard/Native mode only)
1 to 9 **1= default**

Surgard Mode — Yes = enable **No = disable**

SAMM Automation software Section

Keep receiver number	**No = default**	YES = Insert receiver # in front of account #
Keep line number	**No = default**	YES = Inset line # in front of account #
Offset	**0 (zero) = default**	Insert digit 0 to 9 or letter A to F in front of account #
Compress Contact ID	**No = default**	YES = Use Compress Contact ID instead of standard one

Connectors, leds and Jumpers - Main board

J1 External battery connector 6 - 12 votls
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

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
JP10	Serial communication or MRD1000 Remote Display.
TX1, RX1	Connectors for chaining more than one Exprecium 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 XPRECIUM setup program as shown in **Setting up your Exprecium .**
D1 & D2	Both leds are ON to indicate power from the PC. Only Led D2 is ON when PC is OFF and the Expecium is powered by an external source on J1.

Connectors - Communication Interface Module

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

Physical characteristics of the Expecium Physical characteristics of Expecium

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

Buffer memory :Buffer memory ds up to 1800 events in a non volat

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 connectorrExternal battery connector

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

Formats and characters transmitted Formats and characters

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
	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 kissoff:	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 and Contact ID formats have specific codes for Listen-in. See Panel setup.

DTMF 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. Exprecium allows home 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 then 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 Exprecium 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 Exprecium receiver is not in function anymore, its delay having expired.

Transmission to computer and printer in EXPRECIUM MCDI mode

Pulse, DTMF, FSK

FORMAT 3x1, 4x1

HH:mm_ _MM/DD[/YY] _ _ RL_CCCC_ØA<CR>	Default
HH:mm_ _MM/DD[/YY] _ _ RL_CCCC_A<CR>	Option 4x1 set by INITLR

HH:mm_ _MM/DD[/YY] _ _ RL_CCC_A<CR>	Option 3x1 set by INITLR
HH:mm_ _MM/DD[/YY] _ _ RL_ØCCC_AZ<CR>	Option 3x1 extended compressed 4x2
HH:mm_ _MM/DD[/YY] _ _ RL_CCCC_AZ<CR>	Option 4x1 extended compressed 4x2
	Option zero removed 3x1,4x1, extended

FORMAT 4x2

HH:mm_ _MM/DD[/YY] _ _RL_CCCC_AZ<CR>

FORMAT 4x3 (SESCOA 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_AAAAAAAA<CR>
HH:mm_ _MM/DD[/YY] _ _RL_ _CCC_AAAAAAAA<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 _ [#CCCCCC|EAAZZZ/AAZZZ/AAZZZ]<CR>	Native mode
<LF>RL_ [#CCCCCC|EAAZZZ/AAZZZ/AAZZZ]<CR>	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>	Added to 4x2
HH:mm_ _MM/DD[/YY] _ _RL_CCCC_18_TAAA_GG_ZZZ {t...t}<CR>	Added to Contact ID
HH:mm_ _MM/DD{YY}] _ _RL _ [#CCCCCC|EAAZZZ/AAZZZ/AAZZZ]{t...t}<CR>	Added to SIA

Heartbeat

@<CR>	Signal sent to the computer every 30 seconds if option is enabled

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:

	HH:MM	MM/DD[YY]	RL	Account	XYY	
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	[#0000|A 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

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 printer port:

When computer ceases to communicate, "Computer absent" message is sent to the Exprecium printer port

When computer resumes communication, "Computer restore" message is sent to to the Exprecium printer port

Transmission rate

1200 bps, no parity, 8 bits, I 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.

Federal communication commission (FCC) Notice

FCC Registration Number: This device complies with Part 68, Rules and Regulations, of the FCC for direct connection to the Public Switched Telephone Network (the FCC registration number and REN number appear on a sticker). If requested, this information must be provided to the telephone company.

Your connection to the telephone line must comply with these FCC rules:

- Use only an FCC standard RJ11W/RJ14W or RJ11C/RJ14C network interface jack and FCC compliant line cord and plug to connect to the telephone line. (To connect the device press the small plastic tab on the plug at the end of the telephone's line cord. Insert into a jack until it clicks. To disconnect, press the tab and pull out.)

- If a network interface jack is not already installed in your location, you can order one from your telephone company. Order RJ11W/RJ14W for wall mounted telephones or RJ11C/RJ14C for desk/table use. In some states, customers are permitted to install their own jacks.

- This device may not be connected to a party line or coin telephone line. Connection to Party Line Service is subject to state tariffs (contact the state public utility commission, public service commission or corporation commission for information).

- It is no longer necessary to notify the telephone company of your device's Registration and REN number however, you must provide this information to the telephone company if they request it.

- If trouble is experienced with this equipment, for repair or warranty information please contact:

  Local dealer or
  MCDI
  86 Claude-Champagne Avenue., Montreal, QC, Canada H2V 2X1
  Telephone: +(514) 481-1067 Fax: +(514) 481-1487

. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect it until the problem is resolved.
. This device does not have any serviceable parts. Repair or exchange must be made by the manufacturer or its representatives.

Signaling method: This device does not dial out.

Ringer Equivalence Number: The FCC Registration label (on the device) includes a Ringer Equivalence Number (REN) which is used to determine the number of devices you may connect to your telephone line. A high total REN may prevent telephones from ringing in response to an incoming call and may make placing calls difficult. In most areas, a total REN of 5 should permit normal telephone operation. To determine the total REN allowed on your telephone line, consult your local telephone company.

Hearing aids This device does not convert the signal for human hearing.

Programming Emergency numbers: This device does not dial out.

Important safety instructions

When using the device, basic safety precautions should always be followed to reduce risk of fire, electrical shock and injury to persons including the following:

1. Read and understand all instructions.
2. Follow the warnings and instructions marked on the product.
3. This device is installed in a computer. This work should be done by a qualified computer technician.
4. Avoid using during electrical storm. There may be a remote risk of electrical shock from lightning.
5. CAUTION: Do no use sharp instruments during installation procedure to eliminate the possibility of accidental damage to the device, the computer or the cord.
6. Save these instructions.

Europe EC Declaration of Conformity

We:

MCDI Inc.
86 Claude-Champagne Avenue
Montreal, QC
Canada H2V 2X1

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-

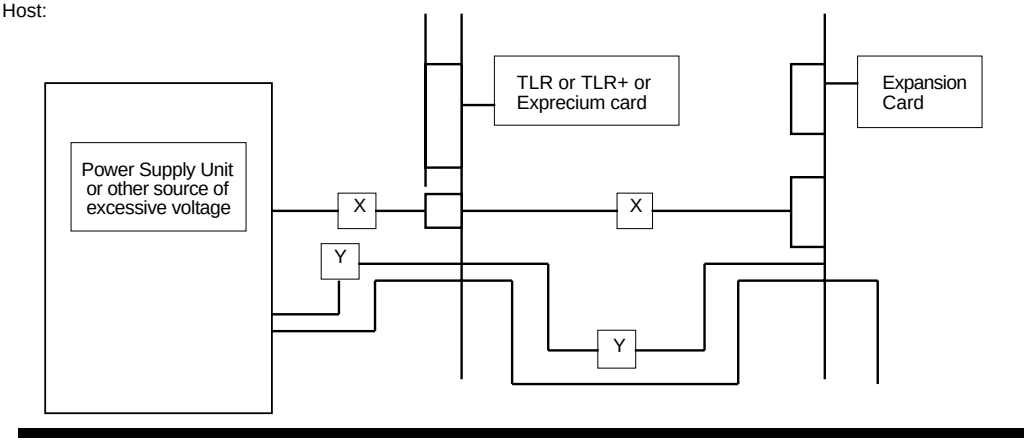
conductive pollution which could become conductive due to condensation. Failure to maintain these minimum distances would invalidate the approval.

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.

Table:

Clearance (mm) X	Creepage (mm) Y	Voltage Used or Generated by Host or Other Cards
2.0	2.4 (3.8)	Up To 50 Vrms or Vdc
2.6	3.0 (4.8)	Up To 125 Vrms or Vdc
4.0	5.0 (8.0)	Up To 250 Vrms or Vdc
4.0	6.4 (10.0)	Up To 300 Vrms or Vdc
For a host or other expansion card fitted in the host, using or generating voltages greater than 300V (rms or dc), advice from a competent telecommunication safety engineer must be obtained before installation or relevant equipment		Above 300 Vrms or Vdc

Host:



Technical data sheet for "EXPRECIUM" PCI Twin Line Receiver

Description

"EXPRECIUM" is a full format PC-based twin-line alarm receiver card.

EXPRECIUM connects to PCI bus of a PC Computer. Its small size fits table top IBM PCs or compatible PC Pentium and up. **EXPRECIUM** 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** 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-Security (Europe),
CE-0560 Telecom (Europe)

Features

- Made for PCI bus connection
- Easy to install:Plug & play and Hot swap.
- Supports SIA, CFSK, BFSK, VFSK, Etc.
- Caller Identification (Option)
- 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)

Specifications

Communications:

EXPRECIUM provides 2 RJ11 type jacks for telephone line connection.

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, VFSK	Silent Knight Slow
MCDI-Take-a-look	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 Centronics Parallel Interface.

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

Event Logging when PC is absent:

EXPRECIUM 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. DOS or Windows

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:

EXPRECIUM 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 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 characters.
- Configures and 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.

V000911

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