



## Gateway GW-21 Configurator

### User Manual

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## Table of contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	The aim of this manual	1
1.2	Who this manual is for	1
1.3	Document structure	2
1.4	Hardware overview	2
<b>2</b>	<b>User interface</b>	<b>4</b>
2.1	The screen layout	4
2.2	How to select an option	4
2.3	How to interact with the program	4
2.4	Error messages	6
<b>3</b>	<b>Configuration</b>	<b>7</b>
3.1	How to create a new configuration	8
3.2	How to save the current configuration	8
3.3	How to load an existing configuration	8
3.4	The About dialog box	9
<b>4</b>	<b>Interactions</b>	<b>10</b>
4.1	The reaction message	10
4.2	The source message	11
4.3	How to configure a reaction	11
4.4	Message length and limits	12
<b>5</b>	<b>Make file ABS</b>	<b>13</b>
5.1	How to use the GW21_CNF program	13
<b>6</b>	<b>Glossary</b>	<b>15</b>
<b>7</b>	<b>ANNEX A - EPROMs supported</b>	<b>16</b>
<b>8</b>	<b>ANNEX B - Subsystems messages</b>	<b>17</b>
8.1	Initiating messages	18
8.1.1	CERBAN CZ10	18
8.1.2	CERBAN CZ12/CS4	19
8.1.3	CC40/CF9020/40 family	21
8.1.4	CC60	22
8.1.5	CC11	23
8.2	Reaction programs	25
8.2.1	CERBAN CZ10	25
8.2.2	CERBAN CZ12/CS4	26
8.2.3	CMX/CF9000	26
8.2.4	CC40	26
8.2.5	CC60	27
8.2.6	CC11	28
<b>9</b>	<b>GW-21 Configurator trouble report</b>	<b>29</b>
<b>10</b>	<b>Index</b>	<b>30</b>



# 1 Introduction

## 1.1 The aim of this manual

This manual provides all of the information and instruction necessary to use the GW21 Configurator Program.

GW 21 Configurator is the software used to configure the EPROMs needed by the Gateway GW-21 to operate properly.

The manual explains in detail how to set the relevant parameters for each Pad inside the gateway, how to configure the interactions among subsystems and how to set the reaction programs. GW21 Configurator lets you define these parameters in a straightforward way, checks the configuration consistency and eventually generates the code needed by the EPROM programmer to set up the EPROM.

To fully understand the meaning of the terms used in this manual, please refer to the following documentation:

LMSmodular Installation manual	e1116
LMSmodular User manual	e1108
LMSmodular Configuration Guide	e1109
LMSmodular Configuration Reference	e1252
LMSmodular Guard Tour Configuration and Installation manual	e1310
LMSmodular Graphic Station Installation manual	e1266
LMSmodular Software Product description	e1428
LMSmodular System description	e1429
LMSmodular Application Examples	e1430
LMS Access Control Installation Manual	e1357
LMS Access Control User and Configuration Manual	e1358

## 1.2 Who this manual is for

This manual is addressed to Cerberus personnel who must prepare the Gateways to fit the specific customer requirements.

## 1.3 Document structure

This manual provides the information and procedures necessary to successfully configure the Gateway EPROMs.

It is structured in the following way:

- Chapter 1 is the chapter you are currently reading and it supplies an overview of manual and software performances.
- Chapter 2 deals with the user interface, i.e. keyboard and screen layout, option selection, software startup, help screens and access levels.
- Chapter 3 describes how to operate with the configuration files.
- Chapter 4 deals with the configuration of interactions among subsystems. In this chapter is described how to configure both the initiating messages, that start the interaction, and the reaction programs, that perform it.
- Chapter 5 describes how to generate the absolute file to be transmitted to the EPROM programmer.

The following five chapters are for reference and contain these information: Chapter 6 contains the glossary, to explain the meaning of some words specific to this manual; Chapter 7, named Annex A, lists the EPROMs to be used with the gateway. Chapter 8 (Annex B) shows the initiating messages and the messages to be used in the reaction programs for the various subsystems. Chapter 9 is the form to be submitted to Cerberus Dati in case of trouble using the software. Chapter 10 closes the document and contains the index to the manual.

## 1.4 Hardware overview

The GW-21 Gateway provides the following main functions:

1. interface between subsystems and operator workstations (LMS or a foreign system);
2. interactions among subsystems;
3. protocol conversions.

The GW-21 gateway is composed by one CPU board with serial communication capability to which can be connected an optional expansion board with additional serial lines in a piggyback configuration.

In a two level network architecture, the GW-21 can be used as communication layer that connect the subsystems to a higher level GW-20.

The GW-21 complies with the latest European Union standards for emission and immunity to electromagnetic disturbances. It is designed to replace the GW-01.

Two kinds of hardware configurations are foreseen:

### **GW-21.06**

This configuration has 6 serial lines; it requires CPU board and an additional expansion board with two more asynchronous serial lines. Using this configuration you can connect up to four subsystems to one or two workstations. To configure this version, you should enable explicitly a flag in the software front panel.

## **GW-21.04**

This configuration has 4 serial lines; it is composed by the CPU board that has on-board 4 communication lines. Up to three control panels can be connected to one workstation, or it can connect two workstations and two subsystems.

## 2 User interface

GW-21 Configurator is a Windows based software and it shares with the Windows environment a number of characteristics that makes the program easy to learn and to use.

The Windows environment for instance has a common interface to access functions, shortly described below for reference. You can freely jump from an application to an other while using GW-21 Configurator as long as your computer has memory enough to manage all the applications contemporarily active.

### 2.1 The screen layout

When GW-21 Configurator is loaded, the screen shown in the figure below appears.

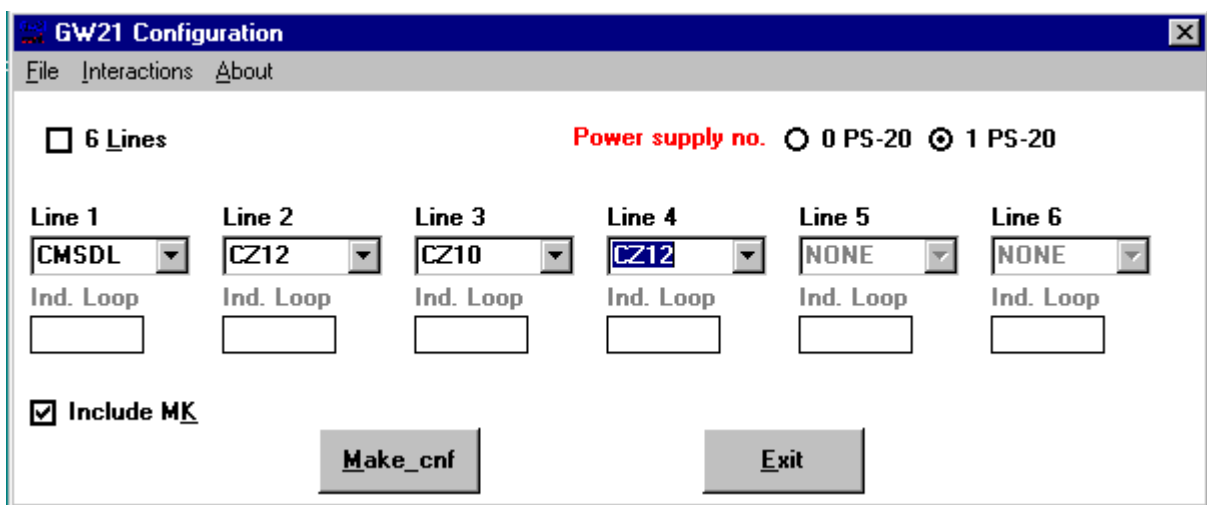


Fig. 2-1

### 2.2 How to select an option

As any other Windows application, GW-21 Configurator uses thoroughly the mouse.

The cursor is usually arrow-shaped.

To select an option, just point to it with the mouse and click once on the mouse left button. The software reaction depends on the type of object you selected:

- a drop-down menu opens, listing different options
- a dialog box appears, asking you to make some selections

### 2.3 How to interact with the program

Some GW-21 Configurator functions require data from the operator. Dialog boxes have been designed to supply these data in the most efficient and fastest way.

**Data entry fields** (Fig. 2-2). You are prompted for a specific information (e.g. the file name where the log data should be stored) that you must supply. Using the keyboard, key in the characters and then confirm by pressing Return.



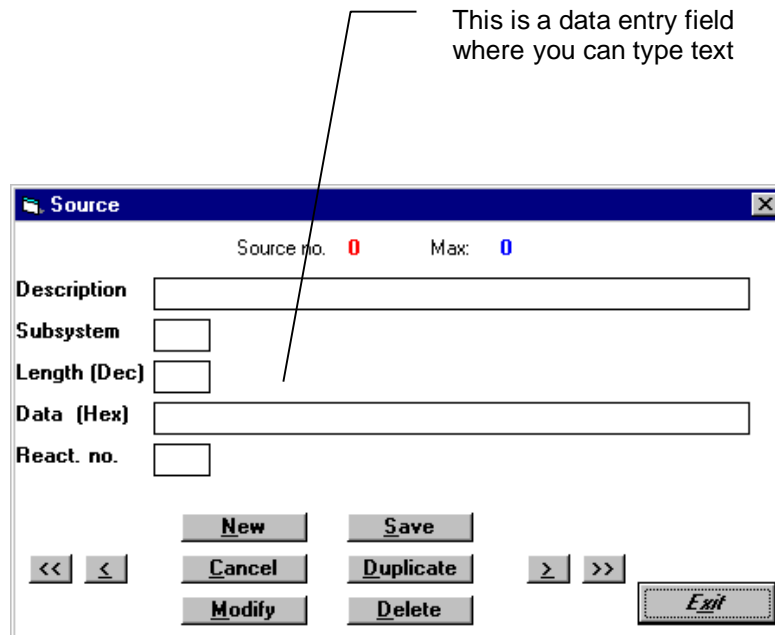


Fig. 2-2

**Option buttons** (Fig. 2-3) An option button represents the activation/de-activation of a single choice or of a set of choices. Option buttons are represented by squares. When an option button is selected, the square is filled by a check mark. When the choice is not selected, the box is empty.

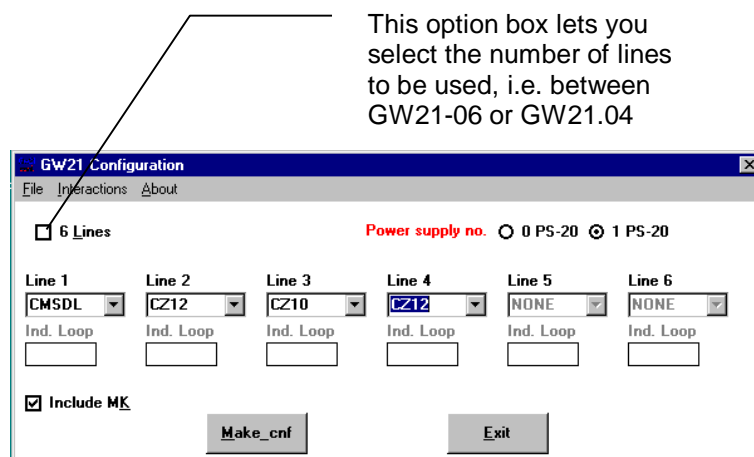


Fig. 2-3

**Drop-down single selection list** (Fig. 2-4). The drop down selection list acts as much as a single selection list. It has however two possible heights. When closed, a drop-down list is only tall enough to contain one item. When opened, a drop down list should be large enough to show five items, just like a standard list. A drop-down list can be toggled between the closed and open state by clicking on the drop-down arrow, or by clicking on the field at the top of the list. You can as well press the keys ALT+DOWN ARROW and ALT+UP ARROW.

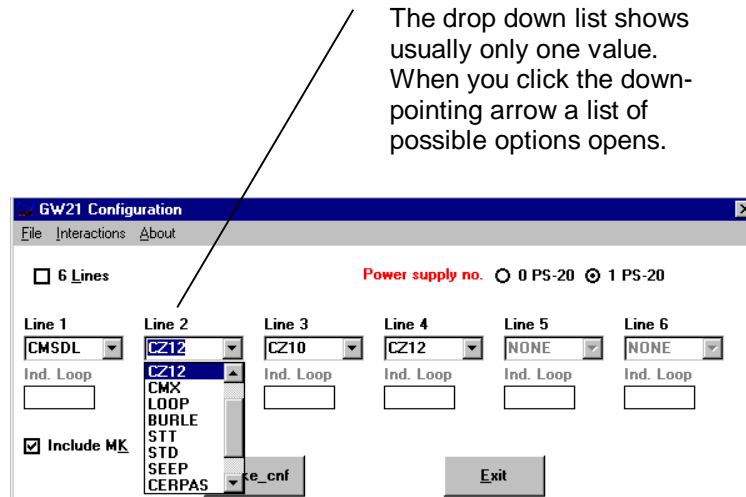


Fig. 2-4

Sometimes the controls or the menu options could appear dim: this means that they are not enabled. This happens usually when a related check box or menu option was previously selected, disabling the control. For instance, if you select in the File menu the option Start Log, the Log Option item is disabled, because you cannot change the Log Options while a log is running.

## 2.4 Error messages

Should an error condition arise, GW-21 Configurator displays a dialog box with a message.

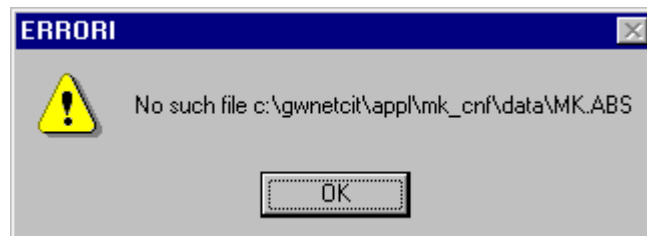


Fig. 2-5

### 3 Configuration

To configure the lines in the GW-21, you just have to follow the steps described below:

1. define the GW-21 model you are using. GW-21.04 has four lines (the default), GW-21.06 has 6 lines. Should you be using the GW-21.04, the two rightmost controls on the page are not used.

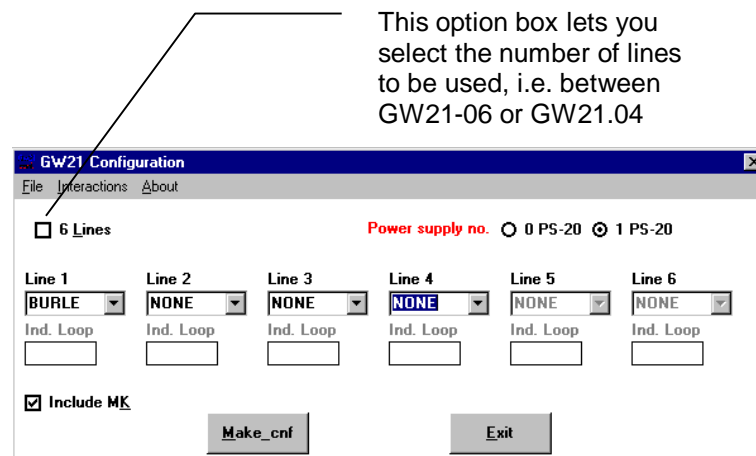


Fig. 3-1

2. Define if the GW-21 should be supplied by a PS-21 or it is powered by some other external source.

These mutually exclusive option box lets you define if the GW-21 must be powered by a PS-21 or not

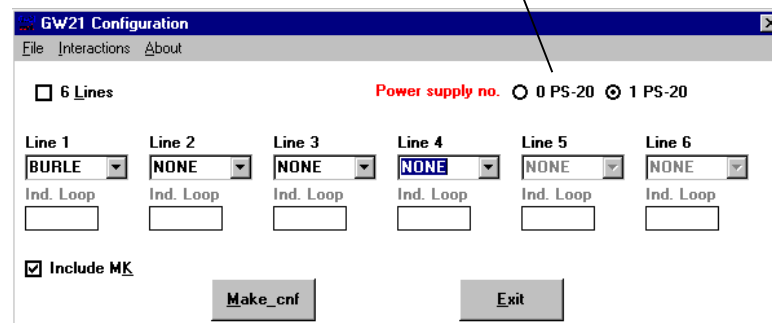


Fig. 3-2

3. Define the type of device connected to each GW-21 line.

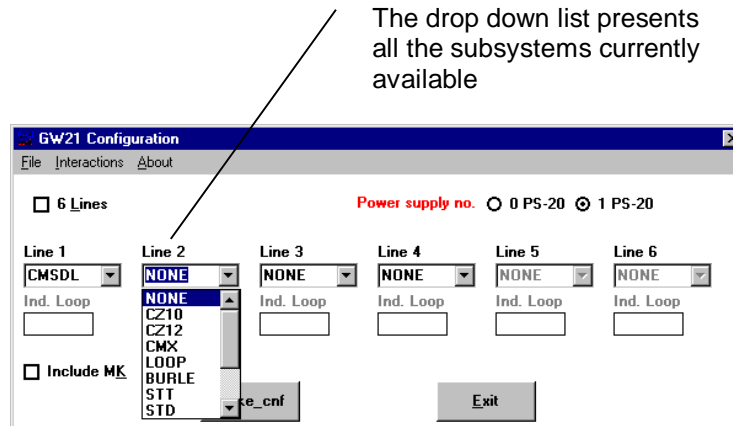


Fig. 3-3

If you choose LOOP on a line, a field appears that let you key in the MK7022 address that acts as an interface toward the loop.

### 3.1 How to create a new configuration

From the File menu, select New. The data currently configured will be cleared and a new configuration will be started.

### 3.2 How to save the current configuration

From the file menu, select Save. A file dialog box will be shown. Select the directory where you wish to save the data and key in the name of the file. The file suffix for configuration data file must be `cnf`.

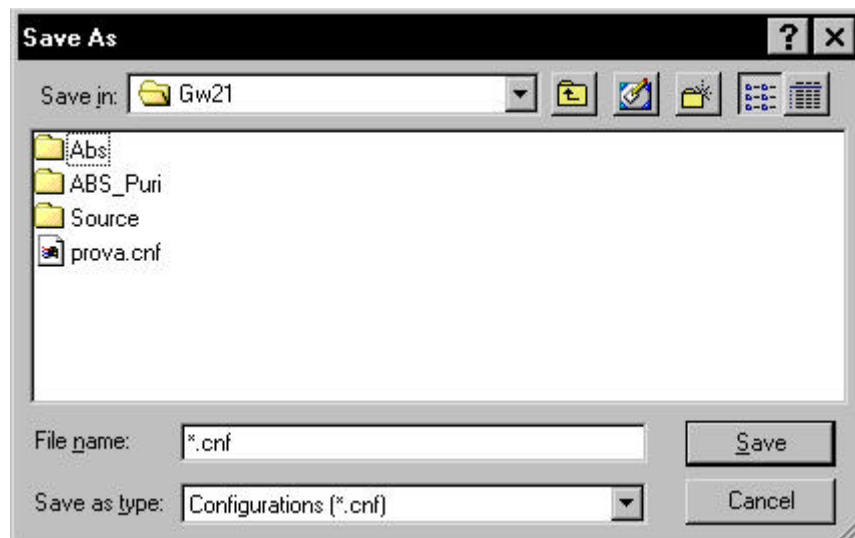


Fig. 3-4

### 3.3 How to load an existing configuration

From the File menu, select Load. A file dialog box will be shown. Select the directory where the file you wish to load is and click on OK. The file suffix must be `cnf`.

## 3.4 The About dialog box

You can display the current version of the software you are using clicking on the About menu option.



A dialog box that looks like the following is displayed:

**Fig. 3-5**

## 4 Interactions

GW-21 Configurator lets you define the interaction among subsystem. You can program the gateway in order to send a message to a subsystem when it receives a specific message from another subsystem.

### 4.1 The reaction message

The reaction message is triggered by the source message, and it is linked to it through the reaction program number. The figure that follows shows the configuration dialog box for the reaction message.

Fig. 4-1

The meaning of fields in the previous picture is as follows:

- |                      |  |
|----------------------|--|
| <b>Description</b>   | this is the text that describes the interaction on the reaction message side. It could be for instance "Fire alarm Zone 1 Building 10"                                     |
| <b>Prog. no</b>      | the sequential number used to identify the reaction  |
| <b>Len (Dec)</b>     | is the number of byte in the source message . The configurator checks that the number of bytes here specified equals the number of bytes written in the Data fields below. |
| <b>Long reaction</b> | this Boolean flag defines if the interaction is short or long. When the interaction is long, the flag must be set ON.  |
| <b>Data (Hex)</b>    | is the actual command as it is transferred on the line.  |
| <b>Subsystem #</b>   | this the Line number (as defined on the Line dialog box) on the GW21 connected to the subsystem you wish the reaction acts on  |

## 4.2 The source message

Fig. 4-2

The meaning of fields in the previous picture is as follows:

- Description** this is the text that describes the interaction on the source message side. It could be for instance "Fire alarm Zone 1 Building 10"
- Subsystem** this the Line number (as defined on the Line dialog box) on the GW21 connected to the subsystem for which you wish to define the interaction.
- Len (Dec)** is the number of byte in the source message . The configurator checks that the number of bytes here specified equals the number of bytes written in the Data fields below.
- Data (Hex)** is the actual message as it is transferred on the line.
- Reaction no.** is the number of the reaction triggered by the source message

## 4.3 How to configure a reaction

For this reason the interaction program configuration is a three step process:

1. identify the subsystem that will generate the message that triggers the interaction; to do so, highlight in the Line Dialog box the Line to which the subsystem is connected.
2. define the message (called the initiating message) that triggers the interaction; to do so, select **Interactions** and from the pull down menu select the **Source** menu option.
3. define the interaction program, i.e. write the messages that have to be sent to one or more of the gateway subsystems; to do so, select **Interactions** and from the pull down menu select the **Reactions** menu option.

Please note that the **Interactions** menu option deals only with the Line currently highlighted. To modify or add interactions to a Line, you must *first* select it from the Line list and then access the **Interactions** menu item.

On a Line you can configure up to four interactions, one for each line. The interactions you configure can deal with other lines of the same Pad, or one or more lines on a different Pad, or more lines on different Pads.

To know what you need to insert here in the Data field both of Source and Reactions, you can monitor the messages exchanged on the network using the Line Monitor on LMS that shows the messages generated on the field and the commands issued by the operator. You can for instance generate on purpose an event for which you wish to establish a reaction and look at the bytes send to LMS using Line Monitor. Then, on LMS you can issue manually a command in response to the message and again look at the bytes sent by LMS. The first string of bytes can be inserted into the Data field of the Source dialog box, the second string of byte represent the data in the reaction program.

With reference to the following figure, you can for instance configure interactions between the CZ10 and the CMX connected to the same Line 1, or interactions between the CZ10 connected to Line 1 and the CZ10 connected to Line 2 and the CZ10 connected to Line 3 in a two level network.

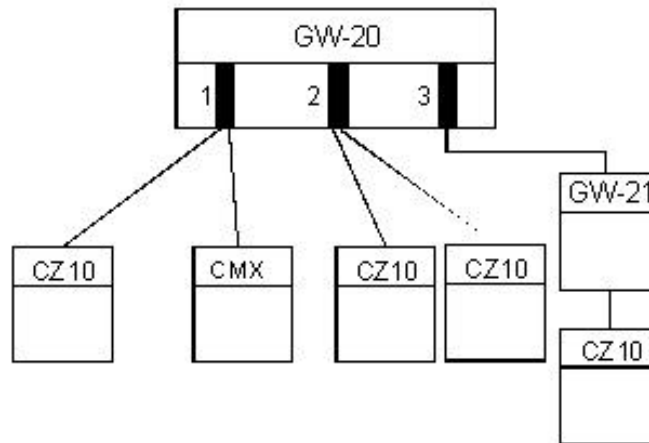


Fig. 4-3

## 4.4 Message length and limits

The initiating and reaction messages have the following lengths:

<b>CMX and CDSF</b>	<b>16 bytes</b>
<b>CERBAN</b>	<b>7 bytes</b>

The following limits apply to the number of messages:

<b>Subsystem type</b>	<b>Initiating messages</b>	<b>Reaction messages</b>
CMX and Standard - long	500	250
CERBAN	950	460



## 5 Make file ABS

In order to generate the ABS file that could be downloaded to the EPROM, you should :

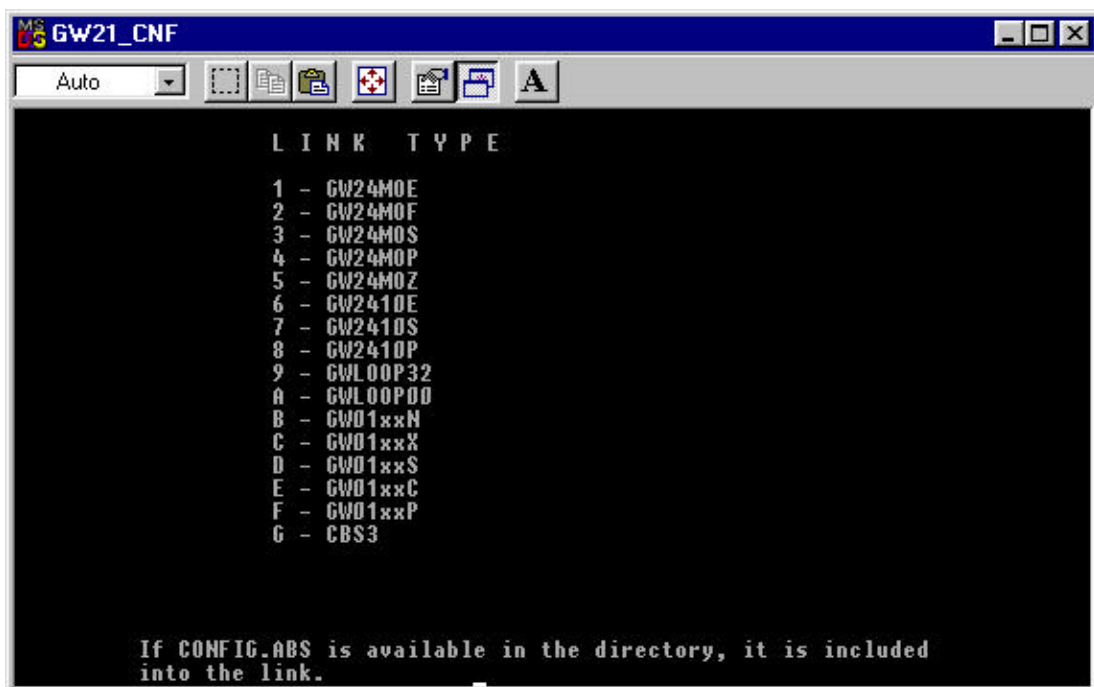
- save the CNF file created with the GW-21 Configuration program
- run the GW21\_CNF program. This is a DOS program described in the following section of this manual
- create the EPROM using the ABS file generated by the GW21\_CNF program

### 5.1 How to use the GW21\_CNF program

From the main menu you must choose first the "Make Eprom" option.

You are presented with a list of possible links and you can select one of them by typing the number or the letter listed on the left side of the link name.

The message in the lower part of the screen informs you that the file CONFIG.BAS is automatically included in the link if it is present in the directory.



After you chose the link, the software starts generating the ABS file. Some progress messages are shown and then you are returned to the main menu.

This process creates a text file with the suffix ABS that contains the EPROM code in hexadecimal format and a BIN file. Here there is an example of some lines of the ABS file

```

S01400000FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFfb
S214000003E1830C30001FFFFFFFFFFFFFFFFFFFFab
S214000010FFFFFFFFF052E242D02112E112E9747fe
S214000020574D4F46FFFFFFFFFFFFFFFFF3966CFFd6
S214000030FFFFFFFFFC3D94BFFC3400FFC3874BFF43
S2140000403E80D3B0C34400FFFFFFFFFFFFFFFF6c
S214000050FFFFFFFFFFFFFFFFFFFFFFFFFFFFab
. . . . .
    
```

You can use the ABS file with an EPROM programmer to generate the EPROM to be installed in the Gateway. Please refer to ANNEX A - EPROMs supported section for a detail about the EPROM chips to be used.

You can alternatively generate and download the file to the Gateway using the SLTA (LonWORKS) connection. To do so, access the option 2 of the main menu, labeled "Download". The process is basically identical to the one described above, but at the end of the generation of the ABS file the program runs a communication process toward the Gateway. If the communication fails you get the following message.

```
Connection to slta ...  
Wrong connection: Could not open network driver
```

The third option of the Main menu can be used to detect the EPROM version installed in the Gateway. It requires that the PC you are working on is connected through the SLTA to the Gateway.

## 6 Glossary

<b>CMS Pad</b>	This pad is in charge to manage communication to and from the CMS/LMS supervising system. Usually there is only one CMS Pad in a gw-20, but in redundant configuration up to two can be provided.
<b>CMSDL</b>	It is the protocol used to communicate between gateway and CMS/LMS supervising system.
<b>Initiating message</b>	A message that starts up a reaction program. It is a telegram sent to the supervising system by one of the subsystem. The gateway intercepts this message and, if it has been configured to do so, starts to send the messages contained in the reaction program to the subsystems connected to it.
<b>Interactions</b>	The interactions are activities that a subsystem connect to a gateway perform on the basis of a message issued by a different subsystem connected to the same gateway. The interactions are shortcuts to counteract in a fast and reliable way some event that requires immediate action.
<b>Reaction program</b>	The reaction program is a sequence of messages to be issued to one or more of the subsystems connected to the gateway after that the corresponding initiating message has been issued.
<b>SLTA</b>	Serial Lon Talk Adapter. A device used to let the PC communicate through the serial port to a LonTalk protocol device, such as the Gateway GW-21.
<b>Subsystem Pad</b>	This type of generic pad manages the communications to and from the subsystems. Depending on the model and configuration, a gateway GW-20 can have up to 5 subsystem pads, for up to 20 serial lines toward subsystems.
<b>Supervision Pad</b>	The Supervision Pad is a Pad that controls the gateway functioning and that is capable to drive a synoptic panel as well as to log on paper of messages received from the field. There is only one Supervision Pad inside a gateway.
<b>NETPAD</b>	A Pad designed for two level networks. It is used to connect a GW-21 to the GW-20 it is inserted into.

## **7 ANNEX A - EPROMs supported**

The gateway GW-21 can use only EPROMs of the following type:

- AM 29F010-120PC 128 KB with access time < 120 ns

The absolute file format is MOTOROLA.

The EPROM programmer to be used is any type able to download in the above mentioned EPROM type an ASCII file. Please refer to the EPROM programmer documentation for details about connection between it and the PC, software installation and file downloading.

Download can be performed using zero power RAM.

## **8 ANNEX B - Subsystems messages**

This annex lists for each subsystem the messages it can generate (Initiating messages) as well as the commands it can receive from the gateway.

To know the hexadecimal code you need to insert in the Data field both for Source and Reactions, you can monitor the messages exchanged on the network using the Line Monitor on LMS that shows the messages generated on the field and the commands issued by the operator. You can for instance generate on purpose an event for which you wish to establish a reaction and look at the bytes send to LMS using Line Monitor. Then, on LMS you can issue manually a command in response to the message and again look at the bytes sent by LMS. The first string of bytes can be inserted into the Data field of the Source dialog box, the second string of byte represent the data in the reaction program.

## 8.1 Initiating messages

### 8.1.1 CERBAN CZ10

Description	Message (in hexadecimal)							
LOCAL ALARM [short]	01	gg						
GENERAL ALARM [short]	02	gg						
ACKNOWLEDGED ALARM [short]	03	gg						
RESET ALARM [short]	04	gg						
DIGITAL INPUT OFF [short]	05	gg						
DIGITAL INPUT ON [short]	06	gg						
DIGITAL INPUT FAULT [short]	07	gg						
DIGITAL INPUT CALL [short]	08	gg						
NORMAL GROUP [short]	09	gg						
EXCLUDED GROUP [short]	0A	gg						
FAULT GROUP [short]	0B	gg						
DETECTOR FAULT GROUP [short]	0C	gg						
TEST GROUP [short]	0D	gg						
ALARM TEST GROUP [short]	0E	gg						
ORGANISATION NIGHT	FF	0L	LL	FF	00	55	60	
ORGANISATION DAY	FF	0L	LL	FF	00	55	61	
FAULT (ANY)	FF	0L	LL	FF	00	3A	3A	
END OF FAULT (ANY)	FF	0L	LL	FF	00	3A	3B	
CONTROL FAULT	5A	0L	LL	00	00	3A	3A	
END OF CONTROL FAULT	5A	0L	LL	00	00	3A	3B	
POWER SUPPLY FAULT	5A	0L	LL	00	00	3C	46	
BATTERY OPERATIONS	5A	0L	LL	00	00	3C	3D	
END OF POWER FAULT/BATTERY OPERATION	5A	0L	LL	00	00	3C	3C	
GROUP .. ON	FF	0L	LL	FF	gg	64	3C	
GROUP .. OFF	FF	0L	LL	FF	gg	64	56	
GROUP ..TEST	FF	0L	LL	FF	gg	64	57	
GROUP .. FAULT	FF	0L	LL	FF	gg	64	46	
FIRE ALARM - GROUP .. (DETECTORS)	57	0L	LL	A1	gg	FF	01	
FIRE ALARM - GROUP .. (PUSHBUTTONS)	57	0L	LL	A1	gg	FF	02	
FIRE ALARM - ANY GROUP (DETECTORS)	57	0L	LL	A1	FF	FF	01	
FIRE ALARM - ANY GROUP (PUSHBUTTONS)	57	0L	LL	A1	FF	FF	02	
FIRE ALARM ACKNOWLEDGMENT	57	0L	LL	A1	00	00	82	
FIRE ALARM RESET	57	0L	LL	A1	00	00	85	
FIRE ORGANISATION NIGHT	57	0L	LL	A1	00	55	60	
FIRE ORGANISATION DAY	57	0L	LL	A1	00	55	61	
PART OF FIRE SECTOR OFF	57	0L	LL	A1	00	63	3A	
END PART OF FIRE SECTOR OFF	57	0L	LL	A1	00	63	3B	
FIRE FAULT	57	0L	LL	A1	00	3A	3A	
END OF FIRE FAULT	57	0L	LL	A1	00	3A	3B	
PLANT ALARM - GROUP .. (DETECTORS)	50	0L	LL	E2	gg	FF	01	
PLANT ALARM - GROUP .. (PUSHBUTTONS)	50	0L	LL	E2	gg	FF	02	
PLANT ALARM - ANY GROUP ..(DETECTORS)	50	0L	LL	E2	FF	FF	01	
PLANT ALARM - ANY GROUP (PUSHBUTTONS)	50	0L	LL	E2	FF	FF	02	
PLANT ALARM ACKNOWLEDGEMENT	50	0L	LL	E2	00	00	82	
PLANT ALARM RESET	50	0L	LL	E2	00	00	85	
PLANT ORGANISATION NIGHT	50	0L	LL	E2	00	55	60	
PLANT ORGANISATION DAY	50	0L	LL	E2	00	55	61	
PART OF PLANT SECTOR OFF	50	0L	LL	E2	00	63	3A	
END PART OF PLANT SECTOR OFF	50	0L	LL	E2	00	63	3B	
PLANT FAULT	50	0L	LL	E2	00	3A	3A	
END OF PLANT FAULT	50	0L	LL	E2	00	3A	3B	

Description	Message (in hexadecimal)						
DIGITAL INPUT ... ON	FF	0L	LL	E1	ii	41	4F
DIGITAL INPUT ... OFF	FF	0L	LL	E1	ii	41	3C
DETECTOR ACTIVE (line-element)	FF	0L	LL	LL	ee	67	4F
DETECTOR INACTIVE (line-element)	FF	0L	LL	LL	ee	67	3C

LLL=local address

gg=group

ee=element

ii=input

## 8.1.2 CERBAN CZ12/CS4

Description	Message (in hexadecimal)						
ADDRESS ALARM [SHORT]	01	gg					
GROUP ALARM [SHORT]	02	gg					
ADDRESS SABOTAGE [SHORT]	03	gg					
GROUP SABOTAGE [SHORT]	04	gg					
ADDRESS ACKNOWLEDGED [SHORT]	05	gg					
GROUP ACKNOWLEDGED [SHORT]	06	gg					
ADDRESS RESET [SHORT]	07	gg					
GROUP RESET [SHORT]	08	gg					
GROUP NORMAL [SHORT]	09	gg					
GROUP OFF [SHORT]	0A	gg					
ADDRESS NORMAL [SHORT]	0B	gg					
ADDRESS NOT READY [SHORT]	0C	gg					
ORGANISATION NIGHT	53	4L	LL	00	EF	55	60
ORGANISATION DAY	53	4L	LL	00	EF	55	61
FAULT	5A	2L	LL	00	00	74	3A
END OF FAULT	5A	4L	LL	00	00	74	3B
INTRUSION ALARM AND/OR SABOTAGE ..	53	2L	LL	gg	ee	FF	05
HOLD-UP ALARM AND/OR SABOTAGE ..	53	2L	LL	gg	ee	FF	06
THEFT ALARM AND/OR SABOTAGE ..	53	2L	LL	gg	ee	FF	07
INTRUSION ALARM AND/OR SABOTAGE ACK	53	3L	LL	gg	ee	FF	05
HOLD-UP AND/OR SABOTAGE ACK	53	3L	LL	gg	ee	FF	06
THEFT ALARM AND/OR SABOTAGE ACK	53	3L	LL	gg	ee	FF	07
GROUP .. ON	53	4L	LL	gg	00	64	55
GROUP .. OFF	53	4L	LL	gg	00	64	69
GROUP ..TEST	53	4L	LL	gg	00	64	57
ALARM AND/OR SABOTAGE RESET	53	4L	LL	gg	ee	FF	85
DURESS ALARM	53	2L	LL	00	D8	FF	0C
DURESS ALARM ACK	53	3L	LL	00	D8	FF	0C
DURESS ALARM RESET	53	4L	LL	00	D8	FF	85
PASSWORD ERROR ALARM	53	2L	LL	00	D7	FF	08
PASSWORD ERROR ALARM ACK	53	3L	LL	00	D7	FF	08
PASSWORD ERROR ALARM RESET	53	4L	LL	00	D7	FF	85
TIME LOCK ALARM	53	2L	LL	00	D6	FF	09
TIME LOCK ALARM ACK	53	3L	LL	00	D6	FF	09
TIME LOCK ALARM RESET	53	4L	LL	00	D6	FF	85
GENERAL SABOTAGE	53	2L	LL	00	D5	FF	00
GENERAL SABOTAGE ACK	53	3L	LL	00	D5	FF	00
GENERAL SABOTAGE RESET	53	4L	LL	00	D5	FF	85
GENERAL PROTECTION ON	53	4L	LL	00	DC	5F	56
GENERAL PROTECTION OFF	53	4L	LL	00	DC	5F	3C
PANEL SABOTAGE	53	2L	LL	00	D4	FF	0A
PANEL SABOTAGE ACK	53	3L	LL	00	D4	FF	0A
PANEL SABOTAGE RESET	53	4L	LL	00	D4	FF	85

Description	Message (in hexadecimal)							
	53	4L	LL	00	D4	58	55	
PANEL PROTECTION ON	53	4L	LL	00	D4	58	55	
PANEL PROTECTION OFF	53	4L	LL	00	D4	58	56	
PANEL PROTECTION ERRONEOUSLY OFF	53	2L	LL	00	D4	58	66	
CODE ALARM	53	2L	LL	00	D3	FF	55	
CODE ALARM ACK	53	3L	LL	00	D3	FF	55	
CODE ALARM RESET	53	4L	LL	00	D3	FF	85	
DETECTOR ADDRESS ... NORMAL	53	4L	LL	gg	ee	69	3C	
DETECTOR ADDRESS ... OUT	53	4L	LL	gg	ee	69	5E	
DETECTOR ADDRESS .. TEST	53	4L	LL	gg	ee	69	57	
DETECTOR ADDRESS .. NOT READY	53	2L	LL	gg	ee	69	5F	
DETECTOR ADDRESS ..ERRONEOUSLY OFF	53	2L	LL	gg	ee	69	66	
DETECTOR ADDRESS .. TEST ALARM	53	4L	LL	gg	ee	69	0B	
CONTROL DEVICE .. ACTIVE	53	4L	LL	ED	ee	68	4F	
CONTROL DEVICE .. INACTIVE	53	4L	LL	ED	ee	68	4D	
PART OF INTRUSION SECTOR OFF	53	2L	LL	00	EC	75	3A	
END PART OF INTRUSION SECTOR OFF	53	4L	LL	00	EC	75	3B	
TIME PROGRAM ON	53	4L	LL	EB	0t	6B	55	
TIME PROGRAM OFF	53	4L	LL	EB	0t	6B	56	
TIME PROGRAM FORCED ON	53	4L	LL	EB	0t	6B	70	
TIME PROGRAM FORCED OFF	53	4L	LL	EB	0t	6B	71	
OPERATOR'S LOGIN	53	4L	LL	EE	LL	70	6B	
OPERATOR'S LOGOUT	53	4L	LL	EE	LL	70	6C	
DIGITAL INPUT .. ON	50	0L	LL	E1	0i	41	4F	
DIGITAL INPUT .. OFF	50	0L	LL	E1	0i	41	3C	

LLL=local address

t=program

gg=group

ee=element

i=input



## 8.1.3 CC40/CF9020/40 family

Description	Message (in hexadecimal)						
	53	2i	ii	ADF	01	00	
GENERAL ALARM	53	2i	ii	ADF	01	00	
GENERAL ALARM ACK.	53	3i	ii	ADF	01	00	
GENERAL ALARM RESET	53	4i	ii	ADF	01	00	
INTRUSION ALARM	53	2i	ii	ADF	01	05	
INTRUSIN ALARM ACK.	53	3i	ii	ADF	01	05	
INTRUSIN ALARM RESET	53	4i	ii	ADF	01	05	
HOLD-UP ALARM	53	2i	ii	ADF	01	06	
HOLD-UP ALARM ACK.	53	3i	ii	ADF	01	06	
HOLD-UP ALARM RESET	53	4i	ii	ADF	01	06	
THEFT ALARM	53	2i	ii	ADF	01	07	
THEFT ALARM ACK.	53	3i	ii	ADF	01	07	
THEFT ALARM RESET	53	4i	ii	ADF	01	07	
GENERAL SABOTAGE	53	2i	ii	ADF	0C	00	
GENERAL SABOTAGE ACK.	53	3i	ii	ADF	0C	00	
GENERAL SABOTAGE RESET	53	4i	ii	ADF	0C	00	
INTRUSION SABOTAGE	53	2i	ii	ADF	0C	05	
INTRUSION SABOTAGE ACK.	53	3i	ii	ADF	0C	05	
INTRUSION SABOTAGE RESET	53	4i	ii	ADF	0C	05	
HOLD-UP SABOTAGE	53	2i	ii	ADF	0C	06	
HOLD-UP SABOTAGE ACK.	53	3i	ii	ADF	0C	06	
HOLD-UP SABOTAGE RESET	53	4i	ii	ADF	0C	06	
THEFT SABOTAGE	53	2i	ii	ADF	0C	07	
THEFT SABOTAGE ACK.	53	3i	ii	ADF	0C	07	
THEFT SABOTAGE RESET	53	4i	ii	ADF	0C	07	
GENERAL SABOTAGE+ALARM	53	2i	ii	ADF	0D	00	
GENERAL SABOTAGE+ALARM ACK.	53	3i	ii	ADF	0D	00	
GENERAL SABOTAGE+ALARM RESET	53	4i	ii	ADF	0D	00	
INTRUSION SABOTAGE+ALARM	53	2i	ii	ADF	0D	05	
INTRUSION SABOTAGE+ALARM ACK.	53	3i	ii	ADF	0D	05	
INTRUSION SABOTAGE+ALARM RESET	53	4i	ii	ADF	0D	05	
HOLD-UP SABOTAGE+ALARM	53	2i	ii	ADF	0D	06	
HOLD-UP SABOTAGE+ALARM ACK.	53	3i	ii	ADF	0D	06	
HOLD-UP SABOTAGE+ALARM RESET	53	4i	ii	ADF	0D	06	
THEFT SABOTAGE+ALARM	53	2i	ii	ADF	0D	07	
THEFT SABOTAGE+ALARM ACK.	53	3i	ii	ADF	0D	07	
THEFT SABOTAGE+ALARM RESET	53	4i	ii	ADF	0D	07	
DURESS ALARM	53	2i	ii	00	D8	01	0C
PASSWORD ERROR ALARM	53	2i	ii	00	D7	01	08
TIME-LOCK ALARM	53	2i	ii	00	D6	01	09
CONTROL UNIT SABOTAGE	53	2i	ii	00	D4	0C	0A
DETECTOR ZONE NORMAL OPERATION	53	4i	ii	ADF	69	3C	
DETECTION ZONE TEST	53	4i	ii	ADF	69	57	
DETECTION ZONE EXCLUDED	53	4i	ii	ADF	69	5E	
DETECTION ZONE NOT READY	53	4i	ii	ADF	69	5F	
ZONES IN TEST ALARM	53	4i	ii	ADF	69	0B	
DETECTION SECTION NORMAL OPERATION	53	4i	ii	10	gg	64	55
DETECTION SECTION EXCUDED	53	4i	ii	10	gg	64	69
DETECTION SECTION TEST	53	4i	ii	10	gg	64	57
NIGHT ORGANIZATION	53	4i	ii	00	EF	55	60
DAY ORGANIZATION	53	4i	ii	00	EF	55	61
EXTERNAL HORN ON	53	4i	ii	00	E5	73	4F

Description	Message (in hexadecimal)						
	53	4i	ii	00	E5	73	4D
EXTERNAL HORN OFF	53	4i	ii	00	E5	73	4D
CONTROL UNIT PROTECTION ON	53	4i	ii	00	D4	58	55
CONTROL UNIT PROTECTION OFF	53	4i	ii	00	D4	58	56
TIME PROGRAM ON	53	4i	ii	1C	tt	6B	55
TIME PROGRAM OFF	53	4i	ii	1C	tt	6B	56
USER LOGIN	53	4i	ii	14	hh	70	6B
USER LOGOUT	53	4i	ii	14	hh	70	6C
ANTIMASKING ZONE NORMAL	53	4i	ii	18	aa	7C	3C
ANTIMASKING ZONE ACTIVE	53	4i	ii	18	aa	7C	67

tt=TIME PROGRAM

aa=ANTIMASKING ZONE

hh=USER

iii=LOCAL ADDRESS

ADF=ADF ADDRESS TO BE FOUND IN THE OBJECT LIST

gg= SECTION

#### 8.1.4 CC60

Description	Message (in hexadecimal)						
	47	0i	ii	00	EF	55	60
ORGANIZATION NIGHT	47	0i	ii	00	EF	55	60
ORGANIZATION DAY	47	0i	ii	00	EF	55	61
GENERAL FAULT GAS NORMAL	47	0i	ii	D1	ED	3A	3B
GENERAL FAULT GAS	47	0i	ii	D1	ED	3A	3A
GENERAL FAULT GAS ACK.	47	3i	ii	D1	ED	3A	3A
GEN. ALARM IMMINENT	47	2i	ii	D1	CD	00	81
GEN. ALARM	47	2i	ii	D1	CD	06	00
GEN. ALARM ACK.	47	3i	ii	D1	CD	06	00
GEN. ALARM RESET	47	0i	ii	D1	CD	FF	85
ZONE WARNING	47	2i	ii	D1	xx	03	00
ZONE WARNING ACK.	47	3i	ii	D1	xx	03	00
ZONE WARNING RESET	47	0i	ii	D1	xx	03	85
ZONE PRE ALARM	47	2i	ii	D1	xx	04	00
ZONE PRE ALARM ACK.	47	3i	ii	D1	xx	04	00
ZONE PRE ALARM RESET	47	0i	ii	D1	xx	04	85
ZONE GAS ALARM	47	2i	ii	D1	xx	07	00
ZONE GAS ALARM ACK.	47	3i	ii	D1	xx	07	00
ZONE GAS ALARM RESET	47	0i	ii	D1	xx	07	85
ZONE ALARM RESET	47	0i	ii	D1	xx	00	85
DETECTION OFF	47	3i	ii	xx	yy	67	56
DETECTION NORMAL	47	0i	ii	xx	yy	67	3C
DETECTION TEST	47	3i	ii	xx	yy	67	57
DETECTION TEST-WARNING	47	3i	ii	xx	yy	67	20
DETECTION TEST-ALARM	47	3i	ii	xx	yy	67	21
DETECTION TEST-GAS-ALARM	47	3i	ii	xx	yy	67	22
DETECTION FAULT	47	0i	ii	xx	yy	67	46
DETECTION FAULT ACK.	47	3i	ii	xx	yy	67	46
DETECTION REVISION FAULT ACK.	47	0i	ii	xx	yy	67	88
DETECTION REVISION	47	3i	ii	xx	yy	51	3A
DETECTION REVISION END	47	0i	ii	xx	yy	51	3B
DETECTION WARNING	47	2i	ii	xx	yy	03	01
DETECTION WARNING ACK.	47	3i	ii	xx	yy	03	01
DETECTION PRE ALARM RESET	47	0i	ii	xx	yy	03	85
DETECTION PRE ALARM	47	2i	ii	xx	yy	04	01

Description	Message (in hexadecimal)						
DETECTION PRE ALARM ACK.	47	3i	ii	xx	yy	04	01
DETECTION GAS ALARM RESET	47	0i	ii	xx	yy	04	85
DETECTION GAS ALARM	47	2i	ii	xx	yy	07	FF
DETECTION GAS ALARM ACK.	47	3i	ii	xx	yy	07	01
DETECTION ALARM RESET	47	0i	ii	xx	yy	07	85
DETECTION RESET	47	0i	ii	xx	yy	00	85
FAULT NORMAL	50	0i	ii	E1	ED	3A	3B
FAULT	50	0i	ii	E1	ED	3A	3A
FAULT ACK.	50	0i	ii	E1	ED	3A	88
CONTROL CONTACT NORMAL	50	0i	ii	xx	yy	61	3C
CONTROL CONTACT FAULTY	50	0i	ii	xx	yy	61	46
CONTROL CONTACT FAULT ACK.	50	3i	ii	xx	yy	61	46
CONTROL CONTACT ACTIVE	50	3i	ii	xx	yy	61	4F
CONTROL CONTACT INACTIVE	50	0i	ii	xx	yy	61	4D
CONTROL CONTACT FAULT ACK.	50	0i	ii	xx	yy	61	88

iii=LOCAL ADDRESS

CONTROL CONTACT

xx=12...19

yy=01...16

DETECTION

xx=01...04

yy=01...14

## 8.1.5 CC11

Description	Message (in hexadecimal)						
CONTROL UNIT FAULT END	5A	4i	ii	00	03	33	3C
CONTROL UNIT FAULT ACK.	5A	3i	ii	00	03	33	3C
CONTROL UNIT FAULT	5A	2i	ii	00	03	33	46
LOCAL ALARM AREA	57	3i	ii	Aa	CD	05	00
LOCAL ALARM AREA RESET	57	4i	ii	Aa	CD	05	85
GENERAL ALARM AREA	57	3i	ii	Aa	CD	06	00
GENERAL ALARM AREA RESET	57	4i	ii	Aa	CD	06	85
PART OF SYSTEM OFF	57	3i	ii	Aa	EC	75	3A
PART OF SYSTEM OFF END	57	4i	ii	Aa	EC	75	3B
GENERAL FAULT	57	3i	ii	Aa	ED	74	3A
GENERAL FAULT END	57	4i	ii	Aa	ED	74	3B
ORGANIZATION AREA NIGHT	57	4i	ii	Aa	EF	55	60
ORGANIZATION AREA DAY	57	4i	ii	Aa	EF	55	61
SECTION EXITINCTION ALARM	4C	3i	ii	ADF		08	00
SECTION EXITINCTION ALARM RESET	4C	4i	ii	ADF		08	85
SECTION FAULT	57	3i	ii	ADF		3A	3A
SECTION FAULT END	57	4i	ii	ADF		3A	3B
FIRE SECTION ALARM	57	3i	ii	ADF		01	00
FIRE SECTION ALARM RESET	57	4i	ii	ADF		01	85
ALARM AUTOMATIC DETECTOR	57	3i	ii	ADF		01	01
ALARM MANUAL CALL POINT	57	3i	ii	ADF		01	02
ALARM RESET	57	4i	ii	ADF		01	85
PRE-ALARM AUTOMATIC DETECTOR	4C	3i	ii	ADF		04	01
EXTERNAL HORN INACTIVE	57	4i	ii	ADF		73	4D
EXTERNAL HORN ACTIVE	57	3i	ii	ADF		73	4F

Description	Message (in hexadecimal)					
EXTERNAL HORN FAULTY	57	3i	ii	ADF	73	46
EXTERNAL HORN OFF	57	3i	ii	ADF	73	56
INTERNAL HORN INACTIVE	57	4i	ii	ADF	7A	4D
INTERNAL HORN ACTIVE	57	3i	ii	ADF	7A	4F
INTERNAL HORN FAULTY	57	3i	ii	ADF	7A	46
INTERNAL HORN OFF	57	3i	ii	ADF	7A	56

## 8.2 Reaction programs

A reaction program must always terminate with the END OF PROGRAM instruction.

### 8.2.1 CERBAN CZ10

In the following table, LL represents the local address and gg the group number or the digital input/output.

Description	Message (in hexadecimal)						
ACKNOWLEDGE FAULTS	5A	1L	LL	00	00	00	86
ACKNOWLEDGE FIRE ALARMS	57	1L	LL	A1	00	00	80
RESET FIRE ALARMS	57	1L	LL	A1	00	00	83
SET FIRE ORGANISATION NIGHT	57	1L	LL	A1	00	55	55
SET FIRE ORGANISATION DAY	57	1L	LL	A1	00	55	56
SET FIRE GROUP .. ON	57	1L	LL	A1	gg	64	55
SET FIRE GROUP .. OFF	57	1L	LL	A1	gg	64	56
SET FIRE GROUP .. TEST	57	1L	LL	A1	gg	64	57
ACKNOWLEDGE PLANT ALARMS	50	1L	LL	E2	00	00	80
RESET PLANT ALARMS	50	1L	LL	E2	00	00	83
SET PLANT ORGANISATION NIGHT	50	1L	LL	E2	00	55	55
SET PLANT ORGANISATION DAY	50	1L	LL	E2	00	55	56
SET PLANT GROUP .. ON	50	1L	LL	E2	gg	64	55
SET PLANT GROUP .. OFF	50	1L	LL	E2	gg	64	56
SET PLANT GROUP .. TEST	50	1L	LL	E2	gg	64	57
SET DIGITAL OUTPUT .. ON	50	1L	LL	E1	gg	61	4F
SET DIGITAL OUTPUT .. OFF	50	1L	LL	E1	gg	61	4D

LLL=local address  
gg=group

## 8.2.2 CERBAN CZ12/CS4

Description	Message (in hexadecimal)							
ACKNOWLEDGE FAULTS	FF	5A	1L	LL	00	00	74	86
ACKNOWLEDGE ALARMS	FF	53	1L	LL	00	00	00	80
ACKNOWLEDGE ANOMALY STATES	FF	53	1L	LL	00	EC	75	89
RESET ALARMS	FF	53	1L	LL	00	00	00	83
SET ORGANISATION NIGHT	FF	53	1L	LL	00	EF	55	55
SET ORGANISATION DAY	FF	53	1L	LL	00	EF	55	56
SET GROUP .. ON	FF	53	1L	LL	gg	00	64	55
SET GROUP ... OFF	FF	53	1L	LL	gg	00	64	69
SET GROUP ... TEST	FF	53	1L	LL	gg	00	64	57
SET ALL GROUP TEST	FF	53	1L	LL	00	00	64	57
SET DURESS ALARM	FF	53	1L	LL	00	D8	01	0C
SET PASSWORD ERROR ALARM	FF	53	1L	LL	00	D7	01	08
SET CODE ALARM	FF	53	1L	LL	00	D3	0B	55
SET ADDRESS ... OUT	FF	53	1L	LL	gg	ee	69	5E
SET CONTROL DEVICE ... ACTIVE	FF	53	1L	LL	ED	ee	68	4F
SET CONTROL DEVICE ... INACTIVE	FF	53	1L	LL	ED	ee	68	4D
ENABLE PANEL PROTECTION	FF	53	1L	LL	00	D4	58	55
DISABLE PANEL PROTECTION	FF	53	1L	LL	00	D4	58	56
FORCE PROGRAM ON	FF	53	1L	LL	EB	0t	6B	70
FORCE PROGRAM OFF	FF	53	1L	LL	EB	0t	6B	71
RESET PROGRAM FORCED STATE	FF	53	1L	LL	EB	0t	6B	3C

LLL=local address  
gg=group  
ee=element  
t=program

## 8.2.3 CMX/CF9000

Description	Message (in hexadecimal)							
DIGITAL OUT OFF [SHORT]	00	03	00	0L	00	XX	00	00
DIGITAL OUT ON [SHORT]	00	04	00	0L	00	XX	00	00
ALL DIGITAL OUT OFF [SHORT]	00	05	00	0L	00	00	00	00
ALL DIGITAL OUT ON [SHORT]	00	06	00	0L	00	00	00	00
SET TEMP. OUT OFF [SHORT]	00	09	00	0L	00	XX	00	0t
SET TEMP. OUT ON [SHORT]	00	0A	00	0L	00	XX	00	0t

XX=OUTPUT+3 IN ESADECIMALE  
t=TIME 0-15 L=L.A.

## 8.2.4 CC40

Description	Message (in hexadecimal)							
ACTIVATE DURESS ALARM	53	1i	ii	00	D8	01	0C	
ACTIVATE PASSWORD ERROR ALARM	53	1i	ii	00	D7	01	08	
ACTIVATE FALSE CODE ALARM	53	1i	ii	00	D3	0B	55	
ACTIVATE SABOTAGE ALARM	53	1i	ii	00	D5	0C	00	
EXCLUDE DETECTION ZONE	53	1i	ii		ADF	69	5E	
INCLUDE DETECTION ZONE	53	1i	ii		ADF	69	55	
INCLUDE SECTION DETECTOR	53	1i	ii	10	gg	64	55	
EXCLUDE SECTION DETECTOR	53	1i	ii	10	gg	64	69	
PUT IN TEST SECTION DETECTION	53	1i	ii	10	gg	64	57	

Description	Message (in hexadecimal)						
EXCLUDE ALL SECTION DETECTORS	53	1i	ii	ADF	64	69	
INCLUDE ALL SECTION DETECTORS	53	1i	ii	ADF	64	55	
TEST ALL SECTION DETECTORS	53	1i	ii	ADF	64	57	
CONTROL UNIT PROTECTION ON	53	1i	ii	00	D4	58	55
CONTROL UNIT PROTECTION OFF	53	1i	ii	00	D4	58	56
SET ORGANIZATION A NIGHT	53	1i	ii	00	EF	55	55
SET ORGANIZATION A DAY	53	1i	ii	00	EF	55	56
DISABLE USER PASSWORD	53	1i	ii	18	hh	72	EA
ENABLE USER PASSWORD	53	1i	ii	18	hh	72	EB
RESET USER PASSWORD	53	1i	ii	18	hh	72	E9
ACKNOWLEDGE ALL ALARMS	53	1i	ii	00	00	00	80
RESET ALL ALARM	53	1i	ii	00	00	00	83

iii=L.A.  
 gg=GRUPPO  
 hh=USER

## 8.2.5 CC60

Description	Message (in hexadecimal)						
ACKNOW. FAULT	FF	1i	ii	00	00	3A	86
ORGANIZATION NIGHT	FF	1i	ii	00	EF	55	55
ORGANIZATION DAY	FF	1i	ii	00	EF	55	56
GAS FAULT ACKNOW.	FF	1i	ii	D1	ED	3A	86
GENERAL ALARM ACK.	FF	1i	ii	D1	CD	FF	80
ZONE WARNING ACK.	FF	1i	ii	D1	xx	03	80
ZONE WARNING RESET	FF	1i	ii	D1	xx	03	83
ZONE PRE ALARM ACK.	FF	1i	ii	D1	xx	04	80
ZONE PRE ALARM RESET	FF	1i	ii	D1	xx	04	83
GAS ALARM ACK.	FF	1i	ii	D1	xx	07	80
GAS ALARM RESET	FF	1i	ii	D1	xx	07	83
DETECTOR EXCLUDE	FF	1i	ii	xx	yy	67	56
DETECTOR INCLUDE	FF	1i	ii	xx	yy	67	55
DETECTOR TEST	FF	1i	ii	xx	yy	67	57
DETECTOR ACKNOW	FF	1i	ii	xx	yy	67	86
DETECTOR WARNING ACK.	FF	1i	ii	xx	yy	03	80
DETECTOR WARNING RESET	FF	1i	ii	xx	yy	03	83
DETECTOR PRE ALARM ACK.	FF	1i	ii	xx	yy	04	80
DETECTOR PRE ALARM RESET	FF	1i	ii	xx	yy	04	83
DETECTOR GAS ALARM RESET	FF	1i	ii	xx	yy	07	83
CONTROL CONTACT ACTIVE	FF	1i	ii	xx	yy	61	4F
CONTROL CONTACT INACTIVE	FF	1i	ii	xx	yy	61	4D
CONTROL CONTACT ACK.	FF	1i	ii	xx	yy	61	86

iii=L.A.

CONTROL CONTACT  
 xx=ZONES 01...56  
 xx=12...19 yy=01...16

DETECTORS  
 xx=01...04 yy=01...14

## 8.2.6 CC11

Description	Message (in hexadecimal)						
GENERAL ALARM/LOCAL ALARM ACK	57	1i	ii	Aa	CD	FF	80
GENERAL ALARM/LOCAL ALARM RESET	57	1i	ii	Aa	CD	FF	83
ORGANIZATION AREA NIGHT	57	1i	ii	Aa	EF	55	55
ORGANIZATION AREA DAY	57	1i	ii	Aa	EF	55	56
EXTERNAL HORN FAULT ACK.	57	1i	ii	ADF		73	86
EXTERNAL HORN INACTIVE	57	1i	ii	ADF		73	4D
EXTERNAL HORN ACTIVE	57	1i	ii	ADF		73	4F
EXTERNAL HORN ON	57	1i	ii	ADF		73	55
INTERNAL HORN FAULT ACK.	57	1i	ii	ADF		7A	86

iii=local address

Aa= the involded area. Range is A0-AF, where A1=area 1, AF=area 15, A0=area 16

ADF= ADF address to be found in the object list.



# 9 GW-21 Configurator trouble report

From :

Company Name .....

Name .....

Address .....

City.....

State.....

Phone .....

Fax .....

TO CERBERUS DATI  
 Via Caldera 21/E  
 20100 MILANO (ITALY)  
 Fax +39-2-2541276  
 Phone +39-2-27303914  
 e-mail support@cdi.cerberus.ch

**MESSAGE**

**During GW-21 Configurator use the following error has been detected:**

**Error number** (please state the error number shown in the red box) : .....

**Menu level** (please state the menu level at which the error was detected;  
refer to the menu tree of Doggy User Manual - Chapter 9) : .....

**Describe the sequence of activities that led you to the error or the software anomalous BEHAVIOR:**

.....

.....

.....

.....

.....

.....

.....

**PC configuration:**

**Model and CPU type:** .....

**Hard disk free space :** .....

**RAM free space :** .....

**Notes and observations:**

.....

.....

.....

.....

Please enclose a screen hard copy and the printout of CONFIG.SYS and AUTOEXEC.BAT files.

## 10 Index

### A

Absolute file \_\_\_\_\_ 2, 16  
 Access levels \_\_\_\_\_ 2

### C

CC11 \_\_\_\_\_ 23, 28  
 CC40 \_\_\_\_\_ 21, 26  
 CC60 \_\_\_\_\_ 22, 27  
 Checks \_\_\_\_\_ 1  
 CMS Pad \_\_\_\_\_ 15  
 CMSDL \_\_\_\_\_ 15  
 CMX/CF9000 \_\_\_\_\_ 26  
 CPU board \_\_\_\_\_ 2, 3  
 CZ10 \_\_\_\_\_ 18, 25  
 CZ12 \_\_\_\_\_ 19

### D

Dimmed selection \_\_\_\_\_ 6

### E

EPROM programmer \_\_\_\_\_ 1, 2, 16

### G

Graphic Station Installation manual \_\_\_\_\_ 1  
 GW-21.04 \_\_\_\_\_ 3

GW-21.06 \_\_\_\_\_ 2

### I

Initiating message \_\_\_\_\_ 11, 15  
 Installation manual \_\_\_\_\_ 1  
 Interaction \_\_\_\_\_ 2, 10, 11

### L

LMS \_\_\_\_\_ 2

### O

Operator code \_\_\_\_\_ 4

### R

Reaction \_\_\_\_\_ 1, 2, 15, 25

### S

Subsystem Pad \_\_\_\_\_ 15  
 Supervision Pad \_\_\_\_\_ 15

### W

Windows \_\_\_\_\_ 4  
 Windows applications \_\_\_\_\_ 4  
 Workstation \_\_\_\_\_ 3