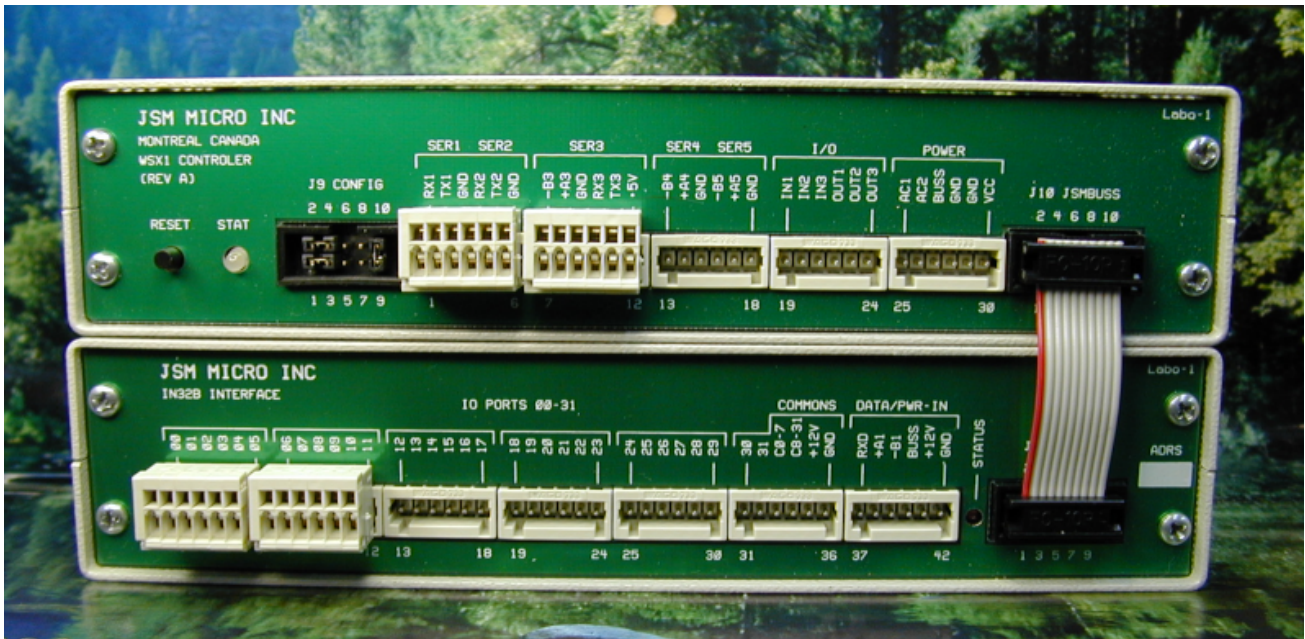


CTD 4.0x Programming Manual

rev 3



Will detect and generate alarms from IN32B modules, build and dispatch alarm messages to displays, pagers, wireless phones. Will also store call statistics for Jsm Report reporting software and manage presence data for Jsm Presence (software designed to monitor resident's presence in retirement homes and make sure everyone is safe).

Use in conjunction with Jsm Config and the CTD4.0x template

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1 Overview

To program the WSX1 CPU running the CTD 4.0x software you must use JSM Micro inc Jsm Config configuration program. Jsm Config is a universal template based programming tool developed to assist in all JSM Micro inc products programming.

Once opened, the main screen looks like this:

JsmConfig Software Overview (example shown using the SCP Messenger 3.0 template)

The screenshot shows the JsmConfig software interface for SCP Messenger 3.0. The interface is divided into several sections:

- Top Bar:** Contains menu items like 'New Configuration', 'Open', 'Save', 'Save As', 'Upload/Download', 'Unit Administration', 'Software Overview', 'Info', and 'About'. Below the menu is a 'Pages' section with icons for 'User comments', 'General config', 'Messages', 'Teams', 'Alpha mode', 'Schedules', 'Defaults', 'Nurse stations', 'Stations numb.', and 'Ext. msg translation'.
- Main Configuration Area:** Includes fields for 'Nurse stations' (Network address, Associated name: NS 00), 'Alpha mode' (Callback formula: 95525RFB), and 'Message' (Team: 33.CODE21, 49.WHITE). Below this is a 'Team scheduling' section with a grid for scheduling.
- Right Panel:** Contains 'Quick Help' and 'Documentation (click to open)' sections. The 'Quick Help' section provides instructions for entering the 'Associated name' and 'Alpha bloc mode'. The 'Documentation' section explains how to use built-in manual documentation.
- Bottom Panel:** Shows 'Template' information (SCP_Messenger_E_v3.0 rev 0a, 07-2009) and a list of configuration sections (User comments (F1), General config (F2), Messages (F3), Teams (F4), Alpha mode (F5), Schedules (F6), Defaults (F7), Nurse stations (F8), Stations numb. (F9), Ext. msg translation (F10)).

Callout boxes provide additional information:

- Top Left:** Select template to load. New (JsmConfig) and old ones (WSXConfig) are supported.
- Top Center:** Currently opened configuration file name
- Top Right:** Select COM port and unit type (for old templates only), and auto-reset (recommended)
- Far Top Right:** Used to install new software, bios, set time and date, show software version, serial number
- Left Side (Top):** New, open, save, save as functions
- Left Side (Middle):** Download configuration from or upload configuration to unit
- Left Side (Bottom):** Configuration zone: Click or press TAB to select fields to edit or select values from listboxes if an arrow appears. MIDDLE-CLICK on a field to restore default value. PageUP/PageDOWN on a field to change index if a counter appears (E 3). Background Colors: White: Field has default value (unmodified); Green: Field has a modified value (not default); Yellow: Field is currently active for editing and text is not selected – you can type or select a value; Blue: Field is currently active for editing and text is selected – you can type or select a value.
- Center:** View the overview document, view the welcome page and view program information (change license information).
- Bottom Center:** Important: spaces are used internally by our configuration files. Therefore, all spaces are replaced by underscore characters (unless a few exceptions), but they will appear as spaces when used by Jsm products.
- Bottom Left:** Quick search feature to search a string and jump to the appropriate index where it appears. Activated for some fields. When search becomes possible for a given field, simply enter the string to search (or click on the magnifying glass icon or type the Ctrl+F shortcut) and click the next (Ctrl+N) or previous (Ctrl+P) button.
- Right Side (Top):** Browse configuration pages. Click on a page title to open that page to edit its items. You can also open pages from the navigation pane.
- Right Side (Middle):** When you select a configuration item, this pane will display some quick help and advice on the possible values and the default value for that item.
- Right Side (Bottom):** If your template file includes built-in manual documentation (such as SCP Messenger 3.0 and CTD 3.0), it will automatically display in this pane and jump to the correct section when a configuration item is selected. If the documentation manual is not built-in, this pane will not appear.
- Bottom Right (Top):** Template title, version and program registration information.
- Bottom Right (Bottom):** Navigation pane used to browse configuration sections. Click on a section to open that section to edit its items or use one of the shortcut F-keys. You can also use the left and right buttons below.

2 User comments, passwords and pin codes sections

The screenshot shows three configuration sections:

- User comments:** A form with a 'Date' field set to '02-MAR-2011' and three 'Line' text input fields. Line 1 contains 'Author: Julien Gascon-Samson, Jsm Micro inc.', Line 2 is empty, and Line 3 contains 'ctd4.0x cfg file (rev 0, 05-2010)'.
- Passwords (not used yet):** A section titled 'Password (max 3)' with three input fields labeled 'Password 0', 'Password 1', and 'Password 2', each containing 'pwd-0', 'pwd-1', and 'pwd-2' respectively.
- Pin codes:** A section with a 'Serial number' field containing '1234-ABCD-5678-EF01' and five 'Pin code' fields labeled '#0' through '#4'. Pin code #0 contains 'FFFF-0096-C653-4269', while #1 through #4 are empty.

User comments are for your own usage. You can edit the date and have three lines of comments to store information like your customer's name, your name or other information. These information's will be saved to the WSX1.

The Passwords section allow you to enter up to three passwords for future use. Presently the CTD 4.0x software do not look at these passwords.

The Pin codes section allow you to unlock your CTD 4.0x WSX1 software. You must enter a valid serial number for your WSX1 unit, otherwise it will run in demo mode for 72 hours. You also have to enter the correct pin codes to unlock the additional features you need (for example, pagers, display panels, reporting, ...).

3 General configuration section

In this section you set several parameters like daylight saving time, input modules count, if you have displays,

if you have pagers and their protocols. Please note that the SpectraLink® Kirk protocol is always available on ser5 port. This allow you to send alarm messages to Kirk wireless handsets.

3.1 WSX1 ports assignment

ser1: Programming/Reporting software (RS-232)
 ser2: Paging output (RS-232 full duplex)
 ser3: IN32B network (set to RS-485)
 ser4: Displays output (RS-485)
 ser5: Kirk, SpectraLink to WSX1 (RS-485), Jsm Display

3.2 Miscellaneous parameters

The screenshot shows the 'General configuration' section with the following parameters:

- ds:** A dropdown menu set to '1'.
- ln:** A dropdown menu set to 'F'.
- wa:** A dropdown menu set to '00'.
- mc:** A dropdown menu set to '01'.
- sn:** A text input field containing 'CPU-1'.

- ds** Sets the daylight time saving hour correction function parameters. Values: 0= disable, 1= Canada
- ln** Sets the system language. Values : F= French, E= English
- wa** Reserved for future options. This will be used to assign an address to the WSX1 CPU module.
- mc** Enter how many INP32B modules are connected to the WSX1 buss. **Caution: If you have some INP32B modules that appears not working, check this parameter first.**
- sn** System name: Enter a name for your WSX1 module. It will be used by the reporting software.

3.3 Addressable displays parameters

pd Specify if you have displays (wall boards) and wich protocol to use to communicate with them. Choices are:

- nil:** No displays (only pagers/handsets)
- p12014a:** JSM Micro supplied displays
- prolite:** Prolite displays
- color_c:** ColorCell (discontinued product)

bd Specify if the displays will beep or not. Some of them have beeping functions to alert people.

ad Specify if the displays are addressable or not. **All displays are connected on the same RS485 buss (ser4)**. If they are addressable you can assign alarms to specific displays. Choices are:

- jsm:** Use JSM supplied addressing module.
- yes:** Use display built-in addressing method.
- no:** They are not addressable. Use “d00”

im Installer’s message: Enter your company name. It will be displayed on all displays for 30 seconds when WSX1 unit is powered-up.

d00 **This description applies for displays 00 to 15!** Enter the message you want to be displayed when there is no alarm. One message for each displays. **It is suggested to use “...”**. This will show three scrolling dots, indicating a powered display with no calls. You can also include dates and times in your message by starting it with **&T** to display the time in 12 hrs format, **&t** to display the time in 24 hrs format, **&D** to display the weekday followed by the date and **&d** to display the date only. Alternatively you can use messages like these:

- “East Wing, no calls”
- “Second floor”
- “Welcome to St-John’s Hospital”

3.4 General paging parameters

pp Paging protocol to be used. Choices are:

- csx5_enc:** JSM Micro inc CSX5-ENC system
- nil:** No paging (maybe displays or Kirk)
- mep:** Multitone Electronics protocol
- tap:** Telelocator Alphanumeric protocol
- mtap:** Modem Telelocator Alphanumeric..
- comp2:** People Finder entry protocol

The default is csx5-enc. This is the JSM Micro inc Pocsag encoder module input protocol. The CSX5-ENC encoder is made by JSM Micro inc. As a second choice, the tap or mtap is the most popular protocol. **If you chose tap or mtap, you must define at least one supplier.** Suppliers are wide area paging service providers like AT&T, Telus, Bell Mobility etc.. CTD 4.0x allow up to three suppliers. This is useful if your client have pagers from different suppliers. The ser2 port is used for tap or mtap. **Also note that tap use supplier 0 parameters, while mtap may use all three suppliers. Very important: The supplier number must precede the pager number.**

Ex: 0002 is supplier 0, pager number 002

Ex: 19055551212 is supplier 1, pager 905 5551212

pe Specify how many pages should be sent before doing an escalert. Choices are 1 to 10. As example, if you choose 3, the specified pagers will be paged three times, then on next time they will be paged again plus an escalert pager. You may escalert up to five levels. This is a very powerful feature.

pb Paging port settings (**not for tap or mtap**). Enter baud rate, parity, data bits, stop bits & port used. As example, if you choose mep as paging protocol you can enter “1200_E_7_2_com2”. If you choose csx5-enc you must enter “9600_N_8_1_com2” Always choose com2 unless instructed to select a different serial port. **Note: For tap or mtap, this parameter is not used.**

3.5 Supplier TAP paging parameters

Supplier 0 (tap and mtap protocols)

sb0 9600_N_8_1_com2

sd0

ss0 05

sc0 CONNECT

si0 ATSG=14H04R1

- sb0: supplier baud rate
- sd0: supplier dialing number
- ss0: supplier maximum pages per session
- sc0: supplier modem connect string
- si0: supplier modem initialization string

Supplier 1 (mtap protocol only)

sb1 9600_N_8_1_com2

sd1

ss1 05

sc1 CONNECT

si1 ATSG=14H04R1

Supplier 2 (mtap protocol only)

sb2 9600_N_8_1_com2

sd2

ss2 05

sc2 CONNECT

si2 ATSG=14H04R1

- sb0 Supplier 0 paging port settings. See pb for details. Supplier 0 is used for tap or mtap protocols.
- sd0 Supplier 0 modem phone number to dial. **This number is the supplier's modem number, not the pager number.**
- ss0 Maximum pages accepted per phone calls. Usually several pages can be accepted on the same phone call. Enter a value between 1 and 10.
- sc0 Modem connection string. Do not change please.
- si0 Modem initialization string. Do not change please.

Notes :

1. Suppliers parameters description is the same for all suppliers with the following exception: Supplier 0 must be used when paging protocol is "tap" (direct connection tap) while suppliers 0 to 3 can be used if protocol is "mtap".
2. If protocol is "tap", do not program a modem number for supplier 0 (sd0) otherwise the software will act like if protocol was "mtap".

4 Teams

Teams

Enter team members.

Team # 0 Description TROUBLES TEAM

Members D00 pager-0

In this section, you can define teams to be called when some alert occur. You can define a maximum of 100 teams (0 to 99) and each team can contain a mix of up to 20 pagers, Kirk users, Kirk extensions, SpectraLink users, SpectraLink extensions and displays. For each used team, use an appropriate description describing the team (for example TROUBLES_TEAM) and enter the members of the team.

Each team member can be a pager number, a kirk user number or extension number, a SpectraLink user or extension number or a display. Examples :

1. 1111001 (capcode)
2. KU000 (Kirk user 000)
3. K2401 (Kirk extension 2401)
4. S-001-U000 (SpectraLink user 000, page and use ring 1)
5. S-014-4120 (SpectraLink user 4120, page, callback and use ring 4)
6. D01 (Display 01)

Note concerning SpectraLink : the syntax for SpectraLink users is **S-par-U000** and the syntax for SpectraLink extensions is **S-par-4120**. The par parameters represent :

- p Represents the paging priority. Not used yet. Normally left to 0.
- a Represents the alert mode. For the moment, 0 means no callback (pager-like alert) and 1 means alert with callback.
- r Represents the ringing type. We have 10 different rings : 0 to 9. 0 is not recommended (no ring).

See the WSX1-SpectraLink software for more information.

In section 7, you will associate inputs for all schedules with teams. A team can be used as a regular alert team or as an escalart team.

5 Teams allocations schedule

Sample (fictional) schedules : week day shift, week day noon replacement shift, week night shift and weekend shift :

Schedule	Hrs:min	Days	Comment
0	08:00	12345	WEEKDAYS AM
1	23:00	12345	NIGHTS
2	08:00	06	WEEKENDS
0	13:00	12345	WEEKDAYS PM
3	11:00	12345	WEEKDAYS_LUNCH
-	00:00	0123456	
-	00:00	0123456	
-	00:00	0123456	
-	00:00	0123456	
-	00:00	0123456	

Schedule	Description
Schedule 0	WEEK
Schedule 1	NIGHT
Schedule 2	WEEKEND
Schedule 3	WEEK_LUNCH
Schedule 4	
Schedule 5	
Schedule 6	
Schedule 7	
Schedule 8	
Schedule 9	

Week days are :

- 0: Sunday
- 1: Monday
- 2: Tuesday
- 3: Wednesday
- 4: Thursday
- 5: Friday
- 6: Saturday

In this schedule, we have programmed four work shifts:

- 0: this schedule starts each week day (from monday to friday) at 08:00 and at 13:00, therefore representing a day shift for week days. That means that when those times are reached, the contacts programming defined for schedule 0 will be used.
- 1: this schedule starts each week day (from monday to friday) at 23:00, therefore representing a night shift for week days. That means that when that time is reached, the contacts programming defined for schedule 1 will be used.
- 2: this schedule starts each week-end day (saturday and sunday only) at 08:00, therefore representing a week-end shift. That means that when that time is reached, the contacts programming defined for schedule 2 will be used.
- 3: this schedule starts each week day (from monday to friday) at 11:00, therefore representing a noon replacement shift for week days. That means that when that time is reached, the contacts programming defined for schedule 3 will be used.

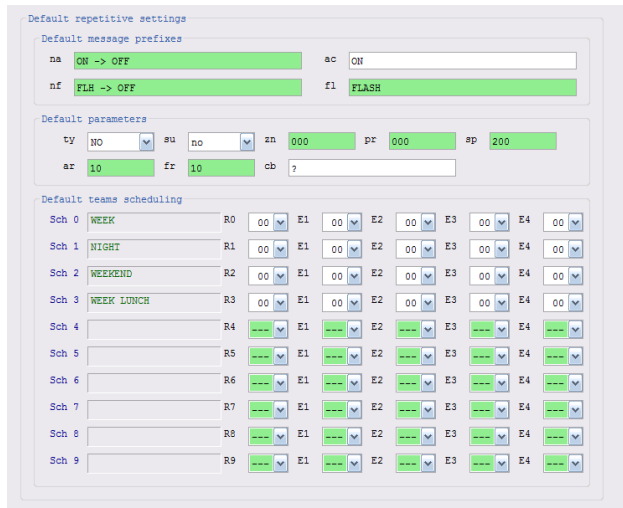
To describe a schedule, simply enter the schedule number (select a number from 0-9), the schedule start time, the days this schedule will apply and enter a quick description for your convenience. Please note that a schedule may be defined by multiple time periods. At the bottom of the screen, you may enter descriptions for each schedule which will be displayed on the contacts programming configuration page.

6 Default repetitive settings

This section is used to set default repetitive settings for inputs. In a system you may have up to 16 IN32B modules of 32 inputs each. This makes up to 512 inputs! Instead of programming each of them for common parameters like input type, sampling period, recall times and several other repetitive parameters, you can specify them in this section.

In other sections, each time a question mark will appear in a parameter field, it will be substituted by what you have programmed in this section. Let's see how to do it.

Here is a screenshot of that section:



na Not activated message prefix. This data will be added before the input name when an activated input will return to its idle state. This field is for pagers or Kirk handsets only. It is used to page restored alarms. Possible values are:

1. ? : CTD will use its built in default: "Not programmed" as **na** parameter.
2. x : Nothing will be paged when the input will return to its idle state.
3. You program this field with a prefix to be added in front of the input name when it will return from active to idle state.

ac Active input message prefix. When input goes from idle to active (in alarm) this field will be used. See **na** description. Like **na**, if you put a **x**, no page will be made. To have a display beep, start by :

- b0** display will not beep
- b1** display beep pattern 1
- b2** display beep pattern 2
- b3** display beep pattern 3

nf Not flashing. When the input will return from a flashing to idle state, this field will be used. See **na** description. Like **na**, if you put a **x**, no page will be made.

fl Flashing input. For idle to flashing transition. See **na** description. Like **na**, if you put a **x**, no page will be made. For values, refer to **ac**.

ty Input type: no (normally open), nc (normally closed). Normally open means the input will be activated only when a voltage will be applied to it.

su If the input is supervised, enter yes, otherwise no.

zn For the time being this parameter is not used, however it will be used later to activate special features.

pr For the time being this parameter is not used, however it will be used later to activate special features.

sp Inputs sampling period in 10 milliseconds units. This parameter is used to discriminate flashing inputs from activated inputs. When an input is activated, the software will sample it for this amount of time before taking a decision and assuming active or flashing state. If you have slow flashing signals you may need to increase this time to 300 or 400. **Recommended values are between 100 and 300.**

ar Active recall time in seconds. If an input is still active after the time you have programmed, an other page (and possibly an escalert) will be made. Ex: If you program 60, a page will be made every minute if the input is kept activated.

fr Flashing recall time in seconds. The same description as "ar" applies for still flashing inputs.

cb Call back number. This field is used for Kirk handsets. You can have a call back number displayed with the message on the Kirk handset. The handset will automatically dial this number if the user press on his handset button.

The next part details which teams should be called by default for all inputs when this input is triggered, for each schedule defined in section 5. That means that it allows you to define a scheduling *pattern* that will automatically repeat itself for each input whose values

have not been overridden. In the contacts programming section (section 7), you will see for each input an exact copy of the same grid initially set to default values. By default, for each input, if you do not change anything in the grid, it will simply use the settings you define in the *defaults* grid.

However, you may customize some values to alert different contacts for some inputs, but you are not obligated to modify all values. Jsm Config will color the values you customize for each input in green and the values that are left to defaults will be white. That means that values that appear with a white background will use the values defined in the *pattern* grid in the *defaults* section, but values that are green won't use the default ones and they will be specific to that input only. Don't forget that you may always middle-click (or clicking and holding Ctrl) to bring back the default value for any field (it should turn from green to white).

You can define a regular team (simply select it's number as defined in section 4) to alert when the input is triggered. You may also define four team numbers for each successive escalert that will be called if the call is not responded (E1 to E4). Simply select -- if you do not want anyone to be alerted by default for some schedules.

As an example, refer to the grid in the next section which details which fields have been customized for that particular input only (green background) and which fields will simply use values defined in the *defaults* section (white background).

7 Contacts programming

The screenshot shows the 'Message programming' section with the following values:

- in #: 0
- ac: bICALL
- f1: b2FLASH
- na: CANCELLED
- nf: FLASH CANCELLED

The 'Teams scheduling' grid shows the following values for Sch 0 to Sch 9:

Sch	R0	R1	R2	R3	R4	R5	R6	R7	R8	R9
Sch 0	WEEK									
Sch 1	NIGHT									
Sch 2	WEEKEND									
Sch 3	WEEK LUNCH									
Sch 4										
Sch 5										
Sch 6										
Sch 7										
Sch 8										
Sch 9										

The 'Parameters programming' section shows the following values:

- ty: ?(300)
- su: yes
- zn: ?(000)
- pr: ?(000)
- sp: ?(200)
- az: ?(10)
- fr: ?(10)
- cb: ?(?)

Enter here the settings for each programmable input.

msg Enter the message to be paged for this particular input (will appear after the appropriate message prefix). To disable paging, simply put x for the message.

ac Active input message prefix. When input goes from idle to active (in alarm) this field will be used. See **na** description. Like **na**, if you put a x, no page will be made. To have a display beep, refer to the **ac** description in section 6.

na Not activated message prefix. This data will be added before the input name when an activated input will return to its idle state. This field is for pagers for Kirk handsets only. It is used to page restored alarms. Possible values are:

1. ? : CTD will use the **na** parameter defined in defaults section (6).
2. x : Nothing will be paged when the input will return to its idle state.
3. You program this field with a prefix to be added in front of the input name when it will return from active to idle state.

f1 Flashing input. For idle to flashing transition. See **na** description. Like **na**, if you put a x, no page will be made. To have a display beep, refer to the **f1** description in section 6.

nf Not flashing. When the input will return from a flashing to idle state, this field will be used. See **na** description. Like **na**, if you put a x, no page will be made.

The next part details which teams should be called when this input is triggered, for each schedule defined in section 5. You can define a regular team (simply select it's number as defined in section 4) to alert when the input is triggered. You may also define four team numbers for each successive escalert that will be called if the call is not responded (E1 to E4). Simply select -- if you do not want anyone to be alerted for some schedules. Like mentionned previously, for contacts you do not define manually, the contact defined for that particular alert or escalert for the selected schedule from the *defaults* section will be used. Values that you customize will become green, otherwise they will have a white background and will be preceded with a question mark.

ty Input type: no (normally open), nc (normally closed). Normally open means the input will be

	activated only when a voltage will be applied to it.		signals you may need to increase this time to 300 or 400. Recommended values are between 100 and 300.
su	If the input is supervised, enter yes, otherwise no.		
zn	For the time being this parameter is not used, however it will be used later to activate special features.	ar	Active recall time in seconds. If an input is still active after the time you have programmed, an other page (and possibly an escalert) will be made. Ex: If you program 60, a page will be made every minute if the input is kept activated.
pr	For the time being this parameter is not used, however it will be used later to activate special features.	fr	Flashing recall time in seconds. The same description as “ar” applies for still flashing inputs.
sp	Inputs sampling period in 10 milliseconds units. This parameter is used to discriminate flashing inputs from activated inputs. When an input is activated, the software will sample it for this amount of time before taking a decision and assuming active or flashing state. If you have slow flashing	cb	Call back number. This field is used for Kirk handsets. You can have a call back number displayed with the message on the Kirk handset. The handset will automatically dial this number if the user press on his handset button.

8 Input supervision

The CTD 4.0x software can supervise inputs and detect eventual troubles. It currently allows detection of supervision troubles (TS) and timeout troubles (TT). Those mechanisms will send messages to all team members for team 00, so be certain to define members for this team; otherwise you won't be notified when such troubles occur. It is recommended to use display 00 (and put it in team 00) to display troubles that occur. You can program the Jsm Display software to receive messages from display 00, that way you'll be quickly notified if you have troubles. By connecting with HyperTerminal on port `ser1` (9600-N-8-1, no *handshake*), it is possible to display a list of all troubles by entering the LT command in command mode.

8.1 Supervision troubles (TS)

This kind of trouble occurs when one or multiple alarm circuits are opened : the alarm point is not connected to the supervision unit because the connexion is damaged or cut. The message that will appear for all members of team 00 is the following : TS followed by the number of troubles in parentheses followed by the input number of the first input in trouble.

Ex: **TS (004) 005**

8.2 Timeout troubles (TT)

Those troubles occur when some alarm points stay triggered for an overly long period of time because they haven't been answered in a 60 minutes time interval. The message that will appear for all members of team 00 is the following : TT followed by the number of troubles between parentheses, followed by the name (not the number) of the first input in trouble.

Ex: **TT (003) CH-404**