K3Iconfig - User's Manual

Sumário

Introduction

The **k3lconfig** utility enables the configuration of all parameters of the boards KHOMP, but only allowing the user to configure the necessary parameters for your environment. The software is only compatible with **Linux** SO. For more information on supported distributions, please consult our website at http://www.khomp.com.br in the downloads section.

The boards KHOMP different characteristics, so the configuration parameters may vary according to the features and specifications of each board. To simplify, we present the first settings of boards and K2E1 K2E1-SPX-600, and then demonstrate the distinctions between those sections of the program for different boards.

Configuration

Setup, when first initialized, the message says "Not Configured" for cards that are detected in the system and are not configured. After setting the boards, the system reports "Setup OK", which means that a valid configuration file was detected.

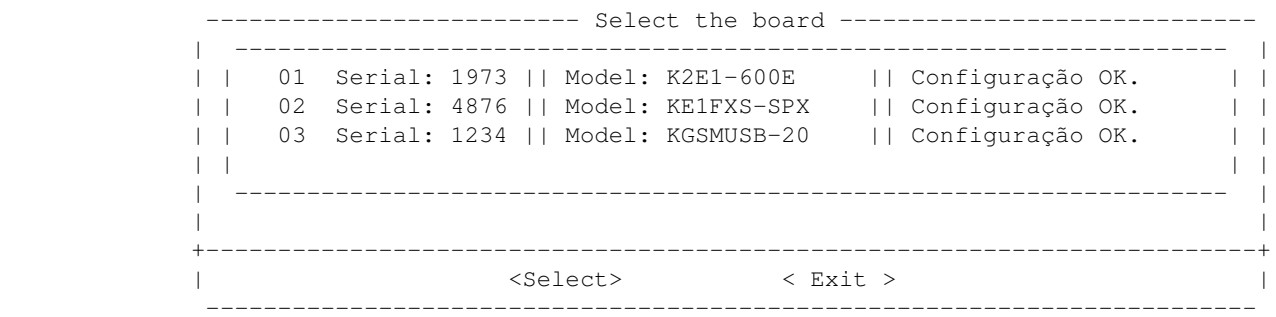
Since the setting is adjusted by serial number, a plaque removal system to maintain its configuration will be reloaded when you return to the system. This will occur if the configuration file has not been erased. For the system to work properly all the cards E1 installed must have a configuration file. If any board of E1 has not been configured, the system does not allow booting.

Parameters

The following parameters are accepted by the program:

- **--default**: It opens the dialogue, creating the configuration files for detected cards in the system with default values.
- **--help**: Display program information, listing disposíveis also the parameters for the command line.
- **--version**: Displays the program version.

Initial screen

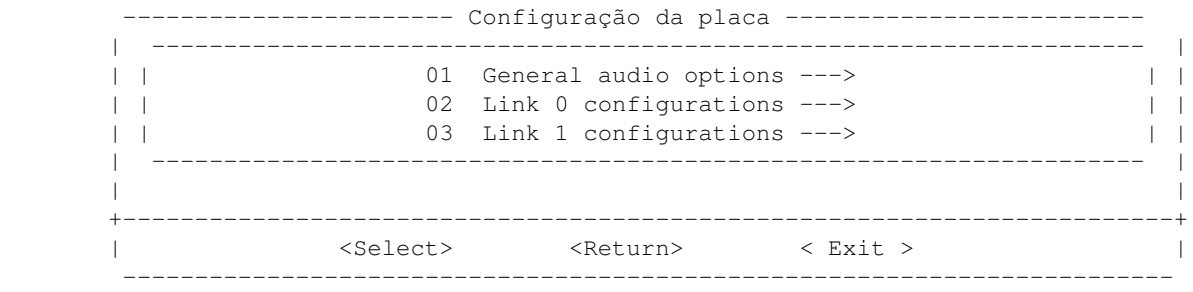


The columns indicate from left to right:

- Number of the connected borad, in order, starting at zero (in this example, boards **0** and **1**);
- Serial number board;
- Type and model of the board;
- State of card configuration ("Not Configured" or "Settings OK").

Board settings

Depending on the model of the board selected, different configuration screens can be shown. For example, for a board K2E1-600E, the screen configuration is as follows:



In this window you can select which item to configure the card.

The arrow (--->) indicates the selected option is a section that contains other sections/options. Otherwise it is a option for configuration of the board.

KnE1 boards

As shown in previous example, the boards KE1 have two initial sections in your configuration:

```
General audio options
Settings link 0
Settings link 1
...
```

In the General options for audio "you can set the range of values for recognition and generation of signals used in the API and other audio resources.

Under "Settings" link you can configure the options for signaling link, as well as the timing of initiation of general signs, MFC, tones, setting additional features such as AGC, DTMF suppression, among others.

General Audio Options

- **Maximum frequency for detecting Dialtone**

Sets the maximum frequency range of detection of Dial Tone (425 Hz).

- **Minimum frequency for detecting Dialtone**

Sets the maximum frequency range of detection of Dial Tone (425 Hz).

- **AGC Gain**

Sets the gain used for the AGC if this feature is enabled (default: 4, range: 2-32).

- **Interface echo cancellation**

Defines which interface to use for echo cancellation in the channels, according to the developed application.

- **Power to detect CallProgress**

Defines the minimum power to detect the Call Progress Tone (425Hz), voice and DTMF.

> **Note**: It is not advisable to modify the default settings of the powers of 425Hz tone detection, voice and DTMF, your changes may result in malfunction of equipment.

- **Power to detect DTMF**

Sets the power for detection of DTMF.

- **Power to detect Voice**

Sets the power to detect voice.

- **Features enabled**

Resources or AGC pulse detection are mutually exclusive, ie can not be enabled at the same time. For security reasons this option tells, among these two features, which will be available.

- '*Time*DTMF tone generation'

Sets the length of DTMF tone generation.

- **Generation time of silence after DTMF tone**

Defines the generation time of silence after DTMF tone.

- **Time for validation of detection of 425 Hz**

Minimum of 425Hz signal present to be considered a valid digit.

- **Time for validation of DTMF detection**

Minimum time of this DTMF signal to be considered a valid digit. Note: The shorter the time scheduled for a sign this is considered a valid digit is the most sensitive detector. If the sensor becomes very sensitive to the voice can easily simulate a DTMF digit, which is not desirable. Too high may cause the loss of a valid signal. In most cases 48ms is sufficient to avoid errors.

- **Time for validation of detection of silence**

Minimum time of this silence to be considered an absolute silence.

- **Time for validation of detection of voice**

Time of detection of voice to be considered that there is voice on the line.

Links settings

This section is composed of other sections shown in the following screen:

```
 ------------------------ Link 0 configurations --------------------------
|  ------------------------------------------------------------------------  |
| |                 01  Channel Options            --->                  | |
| |                 02  Failure configurations     --->                  | |
| |                 03  General link options       --->                  | |
| |                 04  LineSide configurations    --->                  | |
| |                 05  MFC signaling options      --->                  | |
| |                 06  Digital R2 configurations  --->                  | |
| |                 07  ISDN Parameters            --->                  | |
| |                 08  Additional board resources --->                  | |
| |                 09  Signaling options          --->                  | |
| |                 10  Tones configurations       --->                  | |
|  ------------------------------------------------------------------------  |
|                                                                            |
+----------------------------------------------------------------------------+
|               <Select>        <Return>        < Exit >                     |
 ----------------------------------------------------------------------------
```

Channel Options

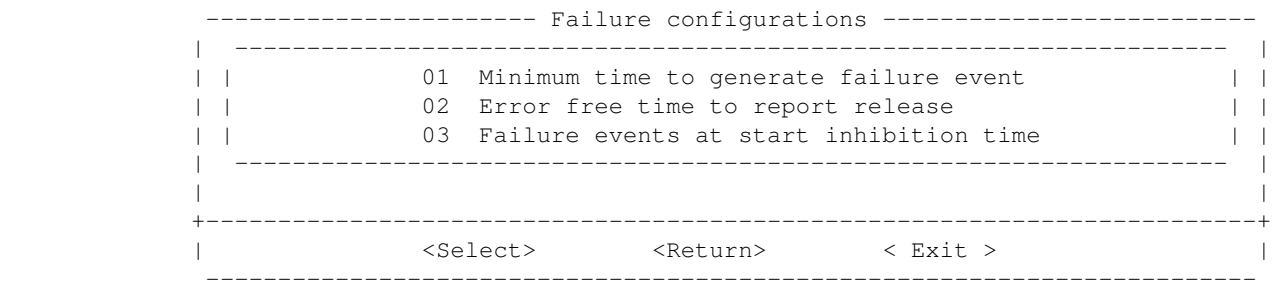
```
 --------------------------- Channel Options ----------------------------
|  ------------------------------------------------------------------------  |
| |                01  Direcionamento do canal 00                        | |
| |                02  Direcionamento do canal 01                        | |
| |                03  Direcionamento do canal 02                        | |
| |                04  Direcionamento do canal 03                        | |
| |                05  Direcionamento do canal 04                        | |
| |                06  Direcionamento do canal 05                        | |
| |                07  Direcionamento do canal 06                        | |
| |                08  Direcionamento do canal 07                        | |
| |                09  Direcionamento do canal 08                        | |
| |                10  Direcionamento do canal 09                        | |
|  ----------------v(+)-------------------------------------------------  |
|                                                                            |
+----------------------------------------------------------------------------+
|               <Select>        <Return>        < Exit >                     |
 ----------------------------------------------------------------------------
```

- **Direcionamento do canal 00 .. 29**
  - **Two-way:** Channel bidirectional, ie can receive or make calls.
  - **In:** Channel-only entry, namely that only receives calls.
  - **Output:** Channel for output only, ie, that only makes calls.

- **Starts with links channels blocked**

Option to start the links with the blocked channels. If this option is enabled channels will only be released manually (not available for ISDN signaling).

Failure configurations



- **Minimum error event of failure to generate**

This is the time that an error must be present to be considered valid by the board. An error valid causes blockade of all channels of the link (local failure).

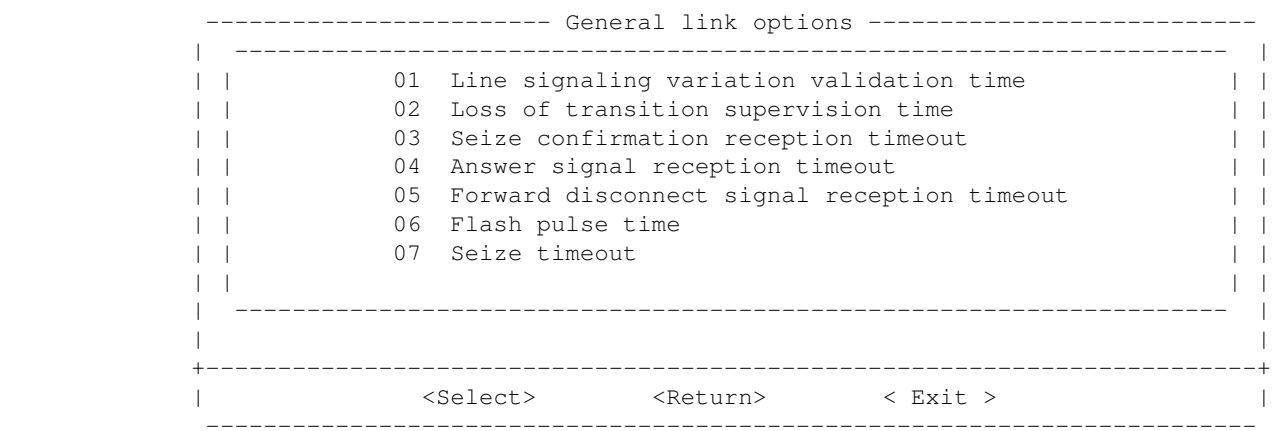
- **Time without notice to report error release**

In a fault situation the board blocks the channels of the E1 link. When the fault condition disappears this time the board waits to see if the situation does not fail back. Only after this time without error the board releases the link and view reports of error.

- **Time of the failure events inhibition of departure**

The board hopes this time before reporting failure to the host when the system is turned on. This prevents the card to the host reporting the errors inherent in starting the system.

General link options



- **Time Validation of the variation in signal line**

Occurred a transition in the signal line, this is the minimum time he must remain stable to be considered valid.

- **Supervisory time to loss of transition**

If the E1 transition in a losing binders entry after this time will simulate the transition lost. That is, will consider that the transition was expected and will sequence the events.

- **Time for receipt of confirmation of occupation**

It's time for the output binders receive confirmation of occupation of the central target

*__Home__ by sending the signal occupancy.
*__Finish__ to the signal receiving confirmation of occupation. Note: After the monitoring time, the signal is kept in the line of occupation, until receiving the confirmation signal of occupation, when the signal is sent off to the front and if necessary should be sent by the host a busy tone the caller terminal.

Note: The response time to signal occupancy (sending the signal of confirmation of occupation by an entry binders) shall be located between 100ms and 200ms, with a face value of 150ms. The timing is not programmable and got his start with the signal reception of occupation and its completion by sending the signal of confirmation of occupation.

- **Time to get call sign:**

It is time that the binders output waits until receiving the call sign Home :*'***with the receipt of information of order of selection (terminal free)***

◊ **Finish**to the receipt of information service, or with the detection of the event opening linkage caller terminal (central location), or the receipt of the signal off to the front (central transit). Note: Upon completion of the supervision time is sent off to the front and if necessary the host must send busy tone to the caller terminal.

- **Time to get sign off to the front:**

In binders exit, B is turned off, one should wait this long for a possible restart it. If there is the reclosure of B, sends to disconnect forward. If during this time the connection is closed off with disconnection to the front. Note that this schedule is observed only if E1 was scheduled to address shutdown back as such. See the setup type signaling and number of figures.

◊ **Top:**to the receipt of information off back
◊ **End:**to the receipt of new information service to the called terminal, or the receipt of the signal off to the front. 0Nota: After the time the information is sent off to the front to the destination if necessary and the host must send busy tone (or sign of forced disconnection) to the caller terminal.

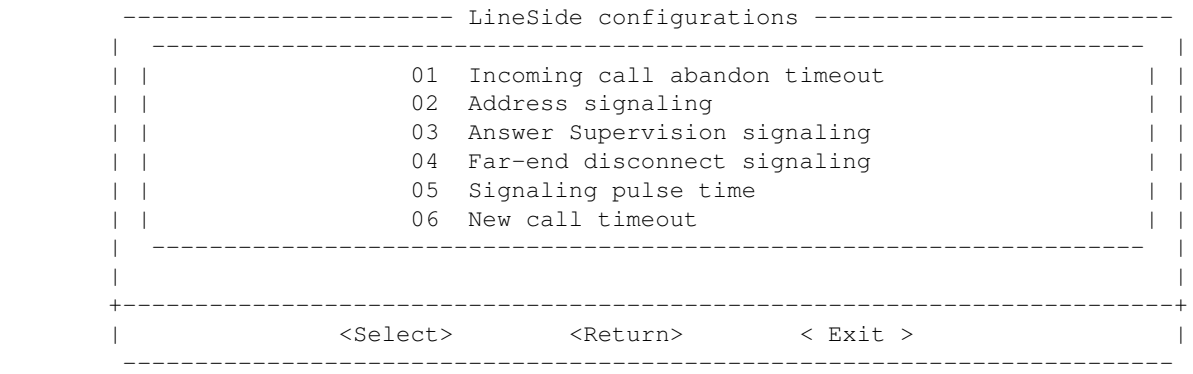
- **Time Pulse Flash**

Pulse duration of flash to be emitted.

- **Time limit for occupancy**

The time is expected to receive confirmation of occupation.

LineSide Configuration



- **Time for the abandonment of an incoming link**

In an incoming link PBX informs the ring through the arrival of a call, but there is no signage indicating that the other side gave up call (hang up before the CONNECT). So not getting ring this time, the API ranks as abandonment and releases the channel.

- **Signaling dial (Address Signaling)**

It is the tone on the line that is detected by Call progress (hopefully 425Hz constant), or can be expected for signaling.

- **Flagging attendance (Answer Supervision)**

Disabled works with Call Progress (voice waiting in line). When enabled by EV_CONNECT receives the event signals.

- **Signalling shutdown (Far-end disconnect Signaling)**

Disabled works with Call Progress (calibrated in KCPConfig busy). When enabled, the event receives EV_DISCONNECT the warning signs.

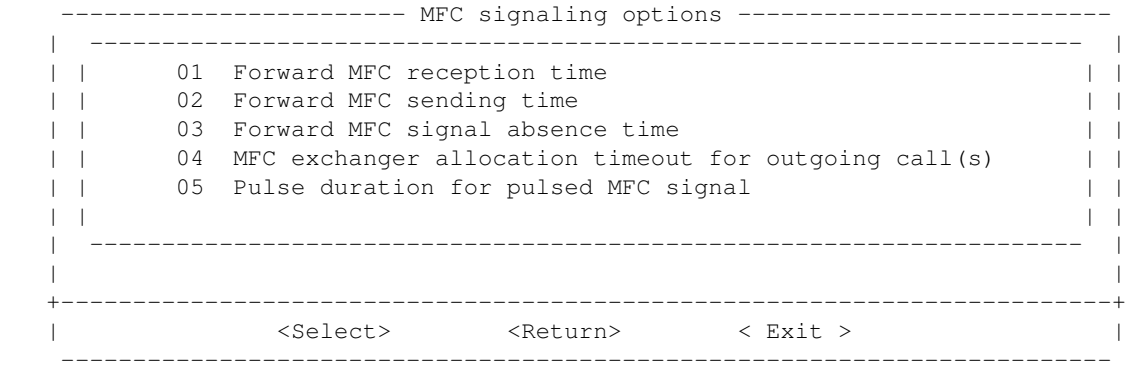
- **Time of the pulses signaling**

The signals are transmitted set up in the form of pulses of the PBX to the board, and this is the maximum duration of these pulses (default: 300 ms, range: 100-600 ms).

- **Time for new release called**

After the CONNECT, by standard PABX can have a time of 1.5 seconds to set up another call (incoming or outgoing), if the API EV_CHANNEL_FREE temporize the event with that time.

MFC signaling Options



- **Time signal reception MFC forward**

It is the maximum waiting time of MFC forward signal in binders entry.

*__Home__ with the occupation of the circuit or function "receptor"
*__End and restart__ with the reception of each signal multifrequency forward.
Note: After exhausted the supervision of time the signal is sent back to A4 or B4.

- **Time of sending signals MFC forward**

It is the maximum time that a signal is present MFC forward, awaiting placement of the signal back into an output binders.

*'*Home*and resume' with sending the signal multifrequency forward.
*__Finish__ to the interruption signal multifrequency forward.
Note: After the monitoring time, the signal is sent to a public A4. If necessary, the host must send busy tone to the caller (who created the link).

- **Time no signal MFC forward**

It is the maximum time of no signal MFC forward in an output binders, and which results in the time available to dial. One observation is that this time should be consistent with the timing of the binders of public input.

*'*Home*and resume' to the interruption of transmission of the signal multifrequency forward.
*__Finish__ by sending each multifrequency signal forward.
Note: After the monitoring time, the signal is sent to a public A4. If necessary, the host must send busy tone to the caller (who created the link).

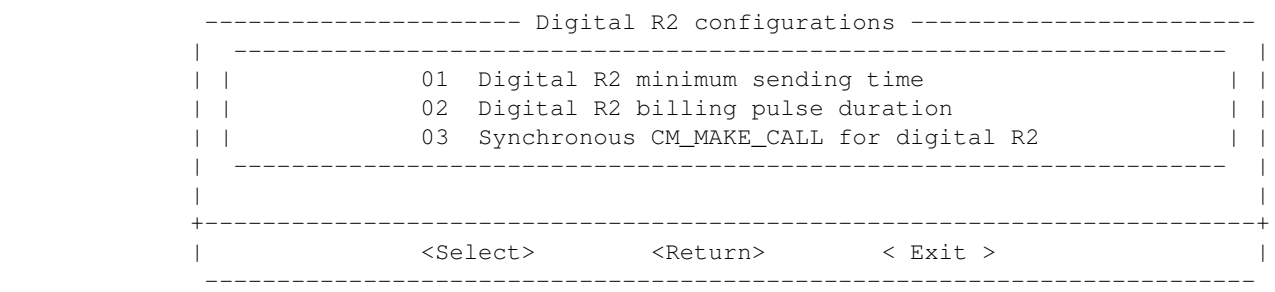
- **Time to allocate output binders MFC exchanger (s)**

In a departure binders, if there exchanger MFC to make a connection should wait at most this time by the release of an exchanger.

- **Duration of the pulse signal MFC pulsed**

During the exchange of signaling MFC, if an entry binders awaiting a signal to the front and does not receive, should send a pulse back to this period.

Digital R2 Configurations



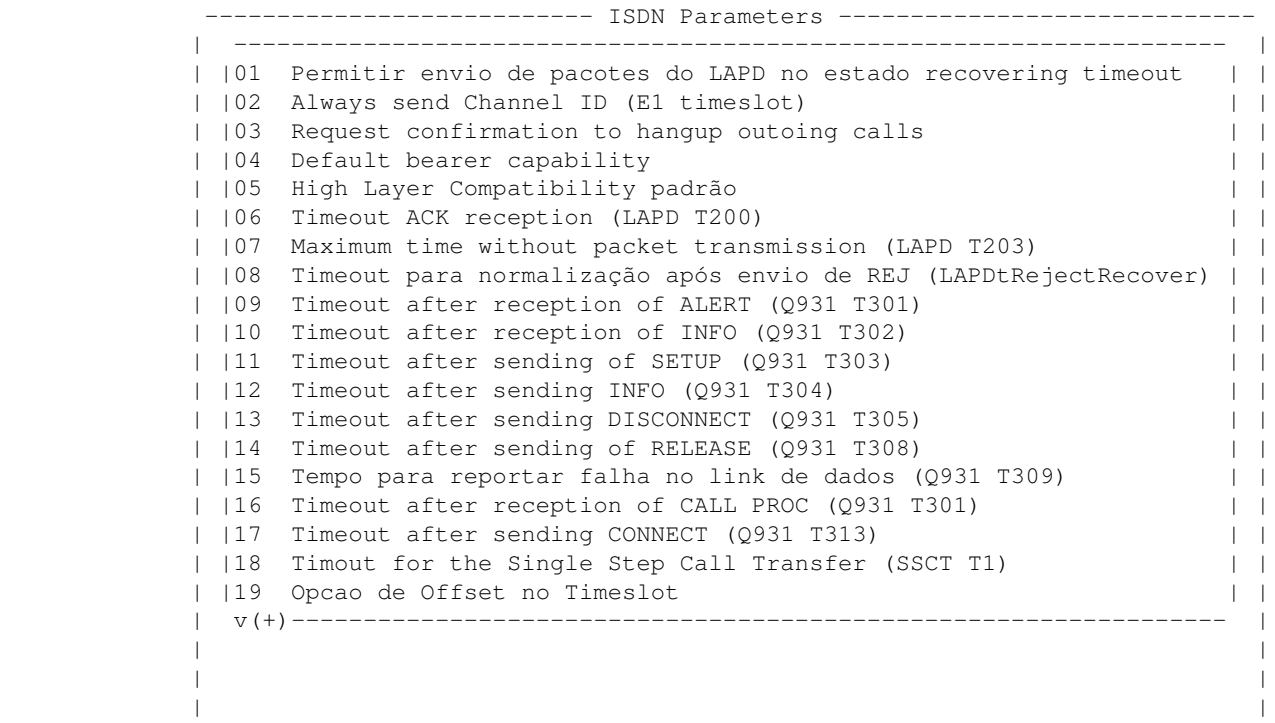
- **Minimum time to send R2 Digital**

Minimum duration of a signal R2 Digital. As a rule must be greater than or equal to 100 ms, we define 100-2550 ms

- **Time indicates that charging for Digital R2**

Digital R2 signaling, the difference between the signal off and sign back charging in your life. A sign below this value will indicate charging, and less than state back off.

ISDN Parameters



```
|                                                                          |
+--------------------------------------------------------------------------+
|               <Select>        <Return>        < Exit >                   |
 --------------------------------------------------------------------------
```

- **Always send Channel ID (E1 timeslot)**

Enable / Disable sending the Channel Id when configured as ISDN User. Some carriers do not complete the connection without the Channel Id

- **Prompts Shutdown of outgoing links**

ISDN signaling, when activated, it automatically disconnects the outbound links that receive remote shutdown. In this case, the line is only released after 30 seconds or when the command sent CM_DISCONNECT. This option is useful when a number of operators who send an audio explaining the cause of failure of an attempt to call after request shutdown. By default (off), the K3L sends a release request line after receiving a request to shutdown.

- **Standard Bearer capability**

Defines what will be the bearer capability used: 3,1 kHz Audio (0x10), 7 kHz Audio (0x11), Speech (0x00), Unrestricted Digital (0x08) or Video (0x18)

- **Timeout for receiving ACK (LAPD T200)**

Sets the response time for a message from the LAPD. If you exceed that time, the connection will be canceled.

- **Maximum time without packet transmission (LAPD T203)**

Sets the maximum time without packet transmission. If you exceed that time, the connection will be canceled.

- **Timeout after receiving ALERT (Q931 T301)**

Sets the response time after receiving ALERT. If you exceed that time, the connection will be canceled.

- **Timeout after receiving INFO (Q931 T302)**

Sets the response time after receiving INFO. If you exceed that time, the connection will be canceled.

- **Timeout after sending SETUP (Q931 T303)**

Sets the response time after sending SETUP. If you exceed that time, the connection will be canceled.

- **Timeout after sending INFO (Q931 T304)**

Sets the response time after sending INFO. If you exceed that time, the connection will be canceled.

- **Timeout after sending DISCONNECT (Q931 T305)**

Sets the response time after sending DISCONNECT. If you exceed that time, the connection will be canceled.

- **Timeout after sending RELEASE (Q931 T308)**

Sets the response time after sending RELEASE. If you exceed that time, the connection will be canceled.

- **Timeout after receiving CALL PROC (Q931 T310)**

Sets the response time after receiving CALL PROC. If you exceed that time, the connection will be canceled.

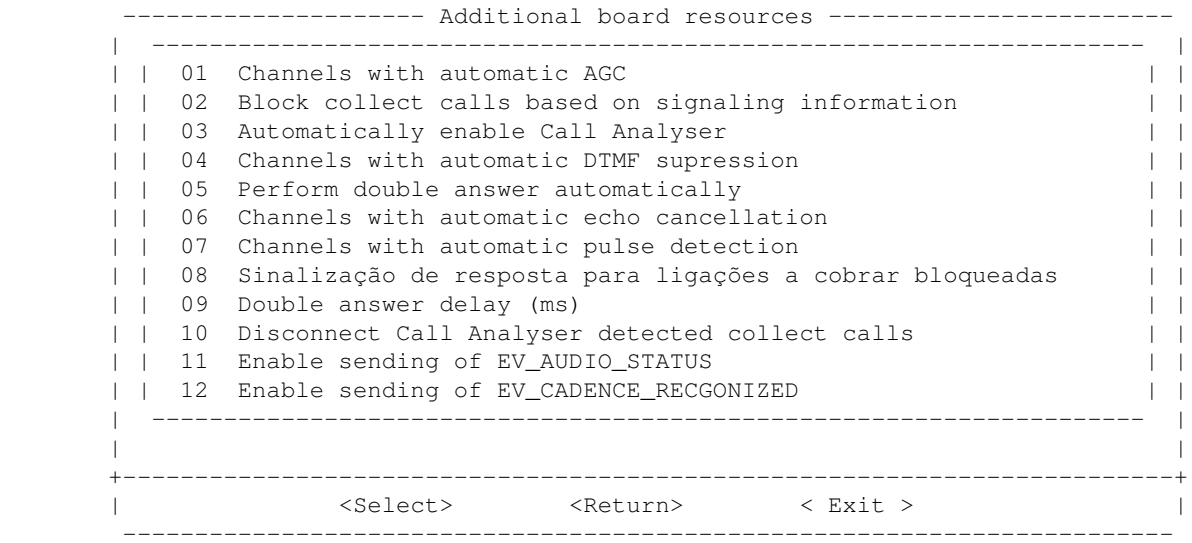
- **Timeout after sending CONNECT (Q931 T313)**

Sets the response time after sending CONNECT. Option valid only for ISDN User, not mandatory. If you exceed that time, the connection will be canceled.

- **Timeout for the Single Step Call Transfer (SSCT T1)**

Sets the response time for the for the Single Step Call Transfer. If you exceed that time, the connection will be canceled.

Additional Board Resources



- **Block collect calls based on signaling**

At the time of entry of a collect call (which will identified as such in signaling), notifies the application about the connection, but rejected it. The link will not be completed.
Note: Only available for R2 Digital and ISDN.

- **Enable Call Analyser automatically**

Call Analyzer enables the use of the canals of this link, this feature examines the audio before and after receiving calls and identifies the statistics based on attendance.

- **Disconnect connections charge detected by Call Analyzer**

Send to disconnect calls that the Call Analyser detects as the charge.
Note: The option "Enable Call Analyser automatically" must be enabled.

- **Make double attendance automatically**

Defines whether the channels of this link will automatically receive the command CM_DROP_COLLECT_CALL (double treatment) upon receipt of the connect event.
Note: In Digital R2 signaling, this setting should not be enabled with "force disconnect."

- **Channels with AGC automatic**

CM_ENABLE_AGC The command is sent to selected channels enabling the use of water during their connections.

- **Channels with suppression of DTMF automatic**

Configuration on the Suppression of DTMF in the channels. The commands and CM_ENABLE_DTMF_SUPPRESSION CM_DISABLE_DTMF_SUPPRESSION will be sent to selected channels on the panel Auto allowing the use of water for the links without having to send the command manually.

- **Channels with automatic echo cancellation**

Configuration relating to echo cancellation in the channels. The commands and CM_ENABLE_ECHO_CANCELLER CM_DISABLE_ECHO_CANCELLER will be sent to selected channels in the panel "Auto" allowing the use of water for the links without having to send the command manually.

- **Channels with automatic detection of pulses**

Configuration on the Pulse Detection of the channels. The commands and CM_ENABLE_PULSE_DETECTION CM_DISABLE_PULSE_DETECTION will be sent to selected channels in the panel "Auto" allowing the use of water for the links without having to send the command manually.

- **Time to Drop the reconnection Collect Call**

Sets the time between the disconnection and reconnection of the line.

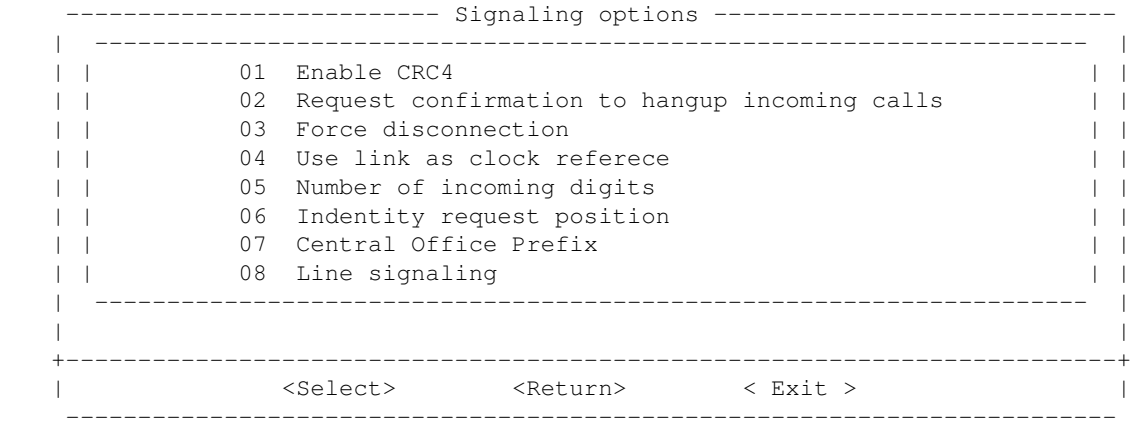
- **Enable sending EV_AUDIO_STATUS**

Sets the configuration of Events Audio. If selected channels receive a command that enables audio events when a link is initialized.

- **Enable sending EV_CADENCE_RECOGNIZED**

Option to report event cadences recognized.

Signaling Options



- **Enable CRC4**

Acronym of Cyclic Redundancy Check 4-bit, is an error checking the data received. In some ISDN signaling protocols (ISDN) this check is enabled while in others not. The important thing is that on both sides, connected to the link, this checking should be enabled or disabled, otherwise the Kserv indicate error in the link.

- **Prompts Shutdown of incoming links**

In R2 signaling, so that the card does not automatically disconnect incoming links they receive remote shutdown, this setting should be selected. In this case, the line is not released until the command is sent CM_DISCONNECT. This avoids the re-care links by B, allowing only serve when ready.

- **Force disconnect**

Sets whether forced disconnection occurs.

- **Use the link to reference**

Sets whether the timing will be provided to the board obtained via E1.

- **Number of input digits**

Sets the number of digits that the E1 board will ask for a public in an inbound connection. In some plants need only ask the DID extension, in others it is necessary to ask along the prefix. Used only in the channel associated signaling (CAS) as R2/MFC.

- **Order of application for identity**

Defines the point of exchanging signaling Registration will be sought where the identity of the caller, ie, after receiving which digit will be requested identity. If 2000 does not ask for the identity. Used only in the channel associated signaling (CAS) as R2/MFC.

- **Prefix central public**

The prefix is the number that identifies a public in which the card is connected. Required for Digital R2 signaling and ISDN. This number is concatenated to the number passed as the number of origin to make the call. In some plants need to add the prefix to the extension number that is generating the DDR connection. While it is not necessary to add the prefix to the extension in DDR output connections, this field may be blank.

- **Signs of the line**

Determines the type of signaling line to be used.

Tone Configurations

```
 ------------------------ Tones configurations --------------------------
|  ---------------------------------------------------------------------  |
| |               01  Time with silence in ringing tone                 | |
| |               02  Time with 425 Hz in ringing tone                  | |
| |               03  Beep duration                                     | |
| |               04  Beep generation frequency                         | |
| |               05  Beep generator volume (multiplieer)               | |
|  ---------------------------------------------------------------------  |
|                                                                         |
+-------------------------------------------------------------------------+
|               <Select>        <Return>        < Exit >                  |
 -------------------------------------------------------------------------
```

- **Time to silence the tone:** Time to pause in tone.
- **Time with the 425 Hz tone:** Time signal in tone.
- **Duration of beep generated:** Sets the duration of the beep generated.
- **Frequency for generating beep:** Sets the frequency for generating beep.
- **Volume of beep generated (multiplier):** Sets the beep volume generated.

KPR Boards

The card configuration KPR is quite similar to the configuration of the boards KE1 but with a reduced number of options, and with only passive signals.

FXO Boards

The boards KFXO distinguished by treating themselves to analog cards and by having a different number of channels. The configuration of these boards is divided into the following sections:

```
General audio options
Additional Resources Board
```

In the General options for audio "you can set the range of values for recognition and generation of signals used in the API and other audio resources.

In "Additional features of the card is possible to configure the AGC, DTMF suppression, detection of pulses, AGC player, among others.

General Audio Options

- **Duration of beep generated**

Amount of time the beep is generated.

- **Time Validation of Flash**

Time for a Flash pulse is recognized.

- **Maximum frequency for detecting Dialtone**

Sets the maximum frequency range of detection of Dial Tone (425 Hz).

- **Minimum frequency for detecting Dialtone**

Sets the maximum frequency range of detection of Dial Tone (425 Hz).

- **Pitch to generate beep**

The beep is generated by the API with this frequency.

- **Power to detect CallProgress**

Sets the power to detect CallProgress.

- **Power to detect DTMF**

Sets the power for detection of DTMF.

- **Power to detect Voice**

Sets the power to detect voice.

- **Timeout for occupation (s)**

The time is expected to receive confirmation of occupation.

- **Time limit of command Flash**

Pulse duration of flash to be emitted.

- '*Time*DTMF tone generation'

Sets the length of DTMF tone generation.

- **Generation time of silence after DTMF tone**

Defines the generation time of silence after DTMF tone.

- **Time for validation of detection of 425 Hz**

Minimum of 425Hz signal present to be considered a valid digit. NOTE: The smaller the time scheduled for a sign this is considered a valid digit is the most sensitive detector. If the sensor becomes very sensitive to the voice can easily simulate a DTMF digit, which is not desirable. Too high may cause the loss of a valid signal. In most cases 48ms is sufficient to avoid errors.

- **Time for validation of DTMF detection**

Minimum time of this DTMF signal to be considered a valid digit.

- **Time for validation of detection of silence**

Minimum time of this silence to be considered an absolute silence.

- **Time for validation of detection of voice**

Time of detection of voice to be considered that there is voice on the line.

- **Volume of beep generated (multiplier)**

Increases (values> 1) or decreases (values <1) the volume of the beep.

Additional Board Resources

- **Channels with AGC automatic**

CM_ENABLE_AGC The command is sent to selected channels enabling the use of water during their connections.

- **Channels with automatic suppression of DTMF**

CM_ENABLE_DTMF_SUPPRESSION The command will be sent to selected channels.

- **Disconnect automatically collect calls**

Defines the occurrence of toppling of collect calls through the command CM_DROP_COLLECT_CALL.

- **Channels with AGC in the automatic player**

Defines which channels the Player AGC, automatic gain in the player, must be manually enabled via command CM_ENABLE_PLAYER_AGC (manual) or automatically.

- **Channels with automatic detection of pulses**

CM_ENABLE_PULSE_DETECTION The command will be sent to selected channels.

- **Time to Drop the reconnection Collect Call**

Sets the time between the disconnection and reconnection of the line.

- **AGC Gain**

Sets the gain used for the AGC if this feature is enabled (default: 32, range: 2-32).

- **AGC Gain Player**

Sets the gain used for the AGC player if this feature is enabled (default: 4, range: 2-32).

- **Enable sending EV_AUDIO_STATUS**

Sets the configuration of Events Audio. If selected channels receive a command that enables audio events when a link is initialized.

- **Enable sending EV_CADENCE_RECOGNIZED**

Option to report event cadences recognized.

- **Report disconnection to detect polarity reversal (boards FX)**

If enabled ev_disconnect reports a case is detected a polarity reversal. In PABX where the disconnect is not reported by Cadence, select this option. In some PBX signaling of disconnection is done by reversing polarity.

KCONF Boards

General Audio Options

- **Sound High - Gain during the block**

Gain applied to the channel that should be blocked (default: 0.1, range: 0.1 to 1.0).

- **Sound High - Minimum power to block**

Minimum power of sound to it is blocked (default: 8, range: 1-32).

- **High Sound - Maximum power to restore**

Maximum power for the lock is canceled (p; ADRA: 6, range: 1-32).

- **High Sound - Time to restore (s)**

Time that a channel should remain locked below the maximum power to restore to the lock is cleared (default: 3.0 s, range: 0.5 to 5.0 s).

- **High Sound - Time to lock (s)**

Time that a channel of the conference should stay above the minimum power to lock the gain to start operating in this channel (default: 2.0 s, range: 0.5 to 5 s).

- **Low Sound - Time**

Time that the audio channel must remain below the threshold for your audio is canceled (muted) (default: 4000 ms, range: 100-4000 ms).

- **Low Sound - Threshold (amplitude)**

Maximum amplitude of the wave to be canceled (default: 40, range: 1-255).

- **Duration of beep generated:**

Amount of time the beep is generated.

- **Pitch to generate beep**

Frequency to generate Beep when requested.

- **Action for audio enabled**

Sets if the lock will be used loud music to reduce the volume of channels to keep a lot of time in high volume, or lock down the sound to reduce noise conference with many participants.

- **Volume of beep generated (multiplier)**

Increases (> 1) or decreases (<1) the volume of the beep.

KFXS Boards

The configuration of KFXS is quite similar to KFXO (Plates KFXO).

In the section "General Options audio" there is the setting for "Time-generation flash". However there are five new options:

- **First touch, ring OFF (ms)**

Sets the time that the phone will be silent after the first ring (default: 4000 ms, range: 50-5000 ms).

- **Second touch, ring OFF (ms)**

Sets the time that the phone will be silent after the second ring (default: 5000 ms, range: 50-5000 ms).

- **First touch, ring ON (ms)**

Sets the time the phone rings the first ring. (Default: 1000 ms, range: 50-1900 ms).

- **Second touch, ring ON (ms)**

Sets the time that the phone will ring on the second ring (default: 1000 ms, range: 50-1900 ms).

- **Time Validation of Flash (min)**

Minimum time required for the flash command is recognized (default: 0 ms, range: 0-2500 ms).

- **Time Validation of Flash (max)**

Maximum time required for the flash command is recognized (default: 500 ms, range: 100-2550 ms).

KGSM Boards

The configuration of KGSM is also quite similar to KFXO settings, but with the addition of the "GSM Settings" where you can configure the following options:

- **PIN modem 0 .. 3**

PIN for the SIM card connected to the modem.

- **Time interval for checking the network (sec)**

Interval between checks of the signal from the antenna. 00 is desabiilitado, no checks will be made by the antenna (default: 30, range: 0-120 s).

- **Time to answer modem (sec)**

Sets the timeout for communication with the modem before you accuse error (default: 30s, range: 10 to 120s).

Glossary

- **Plates KnE1**: K2E1-600E,-300E K1E1, K2E1-SPX, SPX-K1E1, K2E1-IP, KE1GW-640
- **Plates KFXO**: KFXO-40-80 KFXO, KFXO-40HI, 80HI-KFXO, KFXO-IP
- '*Places*KFXS': KFXS-300-150 KFXS, KFXS-300SPX, KFXS-150SPX
- **Plates KCONF**: KCONF-120-240 KCONF
- **Plates KPR**: KPR-300
- **Plates KGSM**: KGSM-40-KGSM 40SPX