User's manual

Prodys

PROCESAMIENTO DIGITAL Y SISTEMAS, S.L.

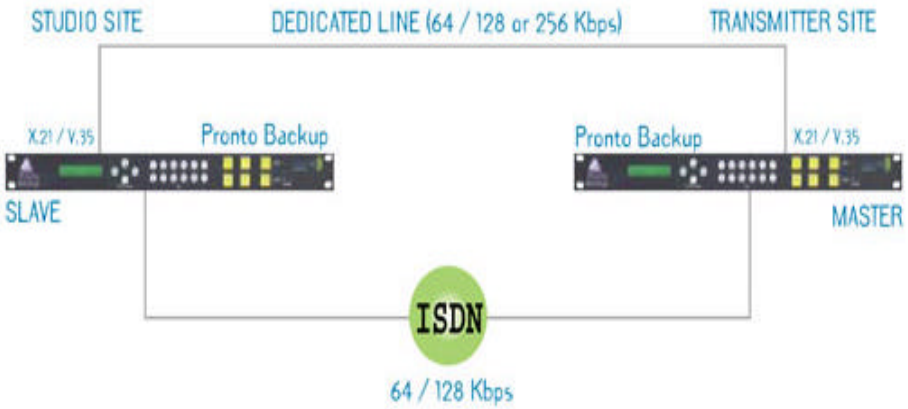
1.PRONTO BACKUP OPERATION

The Pronto Backup can be configured under two kinds of operations: MASTER or SLAVE. The selection of one or another working is established through programming the microswitch nº4 located on the rear panel of the unit. That programmation must be carried out before the unit were switched on in order to be effective. If the microswitch nº4 is in "UP" position, the Pronto Backup will work as MASTER. If it is in "DOWN" position, it will work as SLAVE. The display will indicate in which mode the unit is working:

	B	K	U	P		M	A	S	T	E	R				

	B	K	U	P		S	L	A	V	E					

Please, find below an example of Pronto Backup application to note the differences between both working modes.



As we can see, the Pronto Backup MASTER monitors the X21 line and it decides when the backup ISDN line must start to work. The Pronto Backup SLAVE only works in X21 or in ISDN depending on if there is communication by the last one.

✍✍1.1 PRONTO BACKUP MASTER

The Pronto Backup MASTER will be connected to a dedicated line through its X21 port and an ISDN basic access (backup line).

The X21 audio mode is selected from the menu. The unit allows selecting between MPEG Layer II or MPEG Layer III at 64, 128 or 256 Kbps.

Once the backup option has been validated in the menu (BACKUP-ENABLE-ON), the Pronto Backup will monitor the status of the X21 line continuously in order to decide if the X21 line is dropped or, in case the unit is working in backup mode (ISDN connection), if the X21 communication has been re-established. The Pronto Backup MASTER decides if the X21 line is dropped when the audio synchronism has been lost for the programmed time in TIMER-DOWN option of the menu (10 seconds minimum).

The user must be careful to disable the backup mode (BACKUP_ENABLE_OFF) to avoid that there was any interference in the installation and configuration operations of the unit.

When the audio synchronism has been lost during the programmed time by the user (TIMER-DOWN), the unit will be configured in backup mode according to the mode previously selected by the user (BACKUP-CODEC). Once it has been configured, the codec will proceed to call to the programmed numbers by the user (BACKUP-TA-LINE-DIAL). The number of calls (one or two B channels) will depend on the mode that the user has chosen (64 o 128 Kbps) when the unit starts working in backup mode.

The Pronto Backup will try the connection so many times as it will be necessary until the connection will be established or until it decides that the X21 line has been recovered. If the backup is disabled during the calling process or when the ISDN communication is connected, the unit will proceed to work at X21 mode independently if the X21 line is recovered or not.

While the unit is working in backup mode, the unit is monitoring the X21 line in order to decide if the line has been recovered or not. If the audio synchronism is detected in the received audio by the X21

port, the programmed countdown in the TIMER-UP starts. If the countdown finishes, the Pronto Backup goes to X21 mode again and therefore leaving the backup mode after ending the communication by the ISDN line.

In order to avoid the entry of unwanted calls, the Pronto Backup terminal adapter allows the programming of call filters (BACKUP-TA_CNUM), as well as the subaddressing through the option of local numbers (BACKUP-TA-LNUM).

✍✍1.2 PRONTO BACKUP SLAVE

If the Pronto Backup starts as SLAVE, the entry or exit to the backup mode will be guided by different criterions than the defined ones in the MASTER mode. First of all, it is necessary that the Backup option be enabled.

The unit will work by defect in X21 mode monitoring the state of the ISDN line continuously. If a incoming call is detected, the unit will decide to work in backup mode automatically. If the call hungs up, the unit will pass to work in X21 mode again.

During the backup phase the Pronto Backup goes on sending coded audio through the X21 line in order to the Pronto Backup MASTER can detect that the line has been recovered.

In the Pronto Backup SLAVE is also possible to program call filters and subaddressing in order to avoid the entry of unwanted calls.

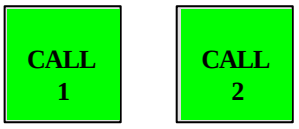
2.PRONTO BACKUP FRONT PANEL

The keypads provided are:

a) **Menu** keypad – comprising the ? , ? and ? keys for scrolling through the menu and the MENU/ENTER key for selecting the required action or parameter.

b) **Dialling** keypad – telephone keypad for introducing the timers.

c) **KEYS**

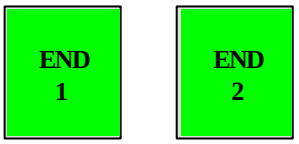


Each key has a LED to indicate the following situations:

- Light off: Line disconnected
- Light on: Line connected
- Flashing light: Call in progress or incoming call detected.

In Backup mode and once the line is connected, you can press the CALL key of the respective line to display the number called if the call was made from the unit, or the calling number in the case of an incoming call.

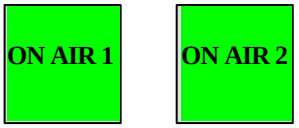
d) **KEYS**



These keys terminate the call on the line corresponding to each key. The key's LED goes out to show that its associated line is disconnected.

✍ **The key must be pressed on during at least 1 second.**

d) **KEYS**



These keys are not available in any mode. In X21 mode, the LED's will be always ON and, in Backup mode when the ISDN line is connected.

3.PRONTO BACKUP DISPLAY

The **Pronto Backup** display comprises the status panel, which continually shows the status of the unit and the menu display, showing different options in a tree structure.

1.- STATUS DISPLAY: Depending if the unit is working in X21 or backup mode, the display will show different information. In X21 mode, the display controller starts to show the status of the X21 line, switching between the line status and the Backup mode selected (MASTER or SLAVE) every 5 seconds. The information shown about the line status includes speed port selected (64, 128 or 256 kbps), compression mode, input audio and audio synchronisation state ("FRAMED" means synchronised). The following is an example of display message:

L	1		X	2	1		6	4	K	b			L	3	
J	O	I	N	T		F	R	A	M	E	D		-	A	-

If the unit is working in backup mode, the display will show information about the ISDN lines, switching between the status for line 1 and that for line 2 every 5 seconds. The information shown for each line includes the line concerned (L1 or L2), its status (connected or not), compression mode, input audio, telephone control and audio synchronisation state ("FRAMED" means synchronised). The following are two examples of display messages.

L	1			C	O	N	N	E	C	T	E	D			
1	2	8	K			F	R	A	M	E	D		-	A	-

L	2			C	O	N	N	E	C	T	E	D			
1	2	8	K			F	R	A	M	E	D		-	A	-

The meaning of each field that can be potentially displayed in the status display is briefly explained in Chapter 6 of this manual.

✍ **By pressing Key 1 or 2 on the front panel, the display will switch immediately.**

2.- MENU DISPLAY: When ENTER/MENU is pressed, the equipment's menu is displayed. If no other action takes place during the next 17 seconds, the display automatically switches back to the status display.
The different menu options are explained below in detail. You are recommended to follow these explanations along with the menu tree included at the end of this manual.

4.PRONTO BACKUP MENU

The user can use the menu of options on the display to control all the functions necessary for working with the **Pronto Backup**. The ? , ? and ? keys are used to move through the different options, and the MENU/ENTER key is used to select the required option.

? : Moves to the menu option to the right. When the last option is selected, this key returns the selection to the first one, i.e., the leftmost one. The selected option is shown on the display between braces ({}).

? : Moves to the menu option on the left. When the first option is selected, this key moves the selection to the last one, i.e., the rightmost one. The selected option is shown on the display between braces ({}).

? : Steps up one level in the menu. When at the topmost level, this exits the menu function and returns to the status display for each line.

MENU/ENTER : Enables the option between braces and passes program control to the subroutine associated with that option.

The menu is entered by pressing the **ENTER/MENU** key, causing the following to appear on the display:

<	-	-				M	E	N	U				-	-	>
{	X	2	1	}	B	A	C	K	U	P		C	O	N	F

The arrow keys? ? are used to move from one option to another; for example, if the right arrow key is pressed, the menu item L2 appears enclosed between braces ({}). The selected option will always appear between braces. If, at the end of the line, ? is pressed, the selection point will return to the start of the line. Likewise, if L1 is selected and ? is pressed, INF will be selected. This applies to all the menu screens.

When ENTER is pressed, the menu for the selected option, enclosed in braces, is displayed.

The meaning of the above options is:

- **X21**: Functions and parameters for configuring the operation in X21.

- **BACKUP**: Functions and parameters for configuring Backup.

- **CONF**: General equipment configuration parameters.

- **INF**: More information for each line, additional to the data shown on the status display.

The following gives details of each of these selections.

4.1.- {X21}

On selecting X21, the display shows:

X	2	1		M	E	N	U								
	{	C	O	D	E	C	}			S	P	E	E	D	

?? **CODEC**: Audio encoding/decoding mode configuration for X21 line.

?? **SPEED**: X21 speed configuration.

Selecting these leads to:

✍ {X21}-{CODEC}

This option allows the encoding/decoding mode for line 1 to be selected.

On pressing ENTER/MENU with the CODEC option selected, the display shows:

X	2	1		M	P	E	G		L	A	Y	E	R		
				I	I		{	I	I	I	}				

Once the Layer is selected, the menu goes to the audio mode selection:

X	2	1		M	P	E	G		M	O	D	E			
{	M	O	N	O	}		J	S			D	U	A	L	

When the speed selected is 64 Kbps, once the mode is selected, the menu goes to select the sampling frequency (48 , 32 or 24 KHz). The menu on the display will show:

L	1		M	P	E	G		F	S						
{	4	8	K	}		3	2	K		2	4	K			

✍ **If the speed selected is 128 or 256 Kbps, the sampling frequency will be always 48 KHz.**

✍ {X21}-{SPEED}

This option accesses the section for the speed port configuration . The display shows:

	B	I	T		R	A	T	E		K	B	P	S		
	{	6	4	}		1	2	8			2	5	6		

✍ **Pronto Backup with 2.00 version or later supports 384 kbps as well.**

✍ **MPEG Layer III doesn't support 384 Kbps. If the X21 audio mode selected is Layer III, 384 Kbps doesn´t appear on the speed menu option. If the X21 speed selected is 384 Kbps, it isn't possible to select Layer III as X21 mode transmission.**

If the speed port is either 128, 256 or 384, the display will be as above but with the line mode enclosed in braces.

4.2.- {BACKUP}

On selecting BACKUP, the display shows:

<	-	-			B	A	C	K	U	P			-	-	>
{	T	I	M	E	R	}	C	O	D	E	C		T	A	

The BACKUP option allows the configuration of the parameters related with the backup operation.

?? **TIMER**: Timers programming.

?? **CODEC**: Audio encoding-decoding mode configuration for backup line.

?? **TA**: Terminal adadptor configuration for ISDN backup communication.

?? **ENABLE**: To enable or disable the backup operation.

Selecting these leads to:

✍ {BACKUP}-{TIMER}

This option allows to programm the timers to decide when the unit goes to backup mode or when the unit goes to X21 mode again. The display will show:

B	A	C	K	U	P		T	I	M	E	R				
		{	D	O	W	N	}			U	P				

In the Down timer, the user programms the time the unit will need to decide that the X21 line is dropped. The Up timer is the X21 line recovering time . The minimum time can be programmed is 10 sc.

B	A	C	K	U	P		T	I	M	E		D	O	W	N

(	1	0	-	2	5	5	)	1	0	-		S	c		

B	A	C	K	U	P		T	I	M	E		U	P		
(	1	0	-	2	5	5	)	1	0	-		S	c		

The time is introduced by using the keypad of the frontal panel.

✍ **In Slave operation, this option is not available.**

✍ {BACKUP}-{CODEC}

This option allows the encoding-decoding mode for the backup line to be selected. The display will show:

B	K		M	P	E	G		L	A	Y	E	R			
			I	I			{	I	I	I	}				

The LAYER option allows the line to be configured for any MPEG Layer II or Layer III encoding mode.

Here it is possible the selection of the Layer. Once the Layer is selected, the menu goes to the bit rate selection menu:

B	K		C	O	D	E	C		M	P	E	G			
B	R	(	K	B	)	:	{	6	4	}		1	2	8	

Dependig on the selected bit rate, the user will have different options.

?? **64 Kbps**

Selecting the 64 Kbps option and pressing the ENTER/MENU key will allow the selection of the MONO, DUAL or JOINT STEREO mode. The menu on the display will show:

B	K		M	P	E	G		M	O	D	E				
{	M	O	N	O	}		J	S			D	U	A	L	

Once the mode is selected, press the ENTER/MENU key to select the sampling frequency (48 , 32 or 24 KHz). The menu on the display will show:

B	K		M	P	E	G		M	O	N	O			
{	4	8	K	}		3	2	K		2	4	K		

✍ **The MPEG Layer II MONO mode at a sampling frequency of 24 Khz is compatible with CDQPrima configured as follows:**

ENCODER:

Bit Rate= 64 Kbps; Algorithm MPEGL2; Sample rate 24 Khz;

ALG MODE Mono; LINE FMT 1 LN.

DECODER:

INDEP, that is, independent of encoder.

?? **128 Kbps**

Selecting the 128 Kbps option and pressing the ENTER/MENU key will allow the selection of the inverse multiplexing protocol. Depending on the Layer selected, these are the available options:

If we have selected Layer II, the display will show:

B	K		T	x		M	O	D	E					
		J	5	2		{	C	C	S	T	E	L	O	S	}

If we have selected Layer III, the display will show:

		L	1			T	X			M	O	D	E		
		-	-	-		{	C	C	S	T	E	L	O	S	}

✍✍**J52**

When J52 is selected the inverse multiplexing protocol used is the standard J52.

✍✍**CCSTELOS**

When CCSTELOS is selected (it is equivalent the TELOS option in PRONTO_ISDN 2) the transmision mode is compatible with CCS and TELOS codecs.

Once the transmision mode is selected, the menu goes to the audio mode selection menu (MONO, JOINT STEREO or DUAL). The display will show:

B	K		M	P	E	G		M	O	D	E				
{	M	O	N	O	}		J	S			D	U	A	L	

✍ **At 128 Kbps, the sampling frequency is always 48 KHz.**

✍ **The CCSTELOS mode permits the compatibility between the PRONTO BACKUP and the TELOS ZEPHYR configured as ISO/MPEG Layer II JOINT STEREO and two 64 Kbps channels. This mode is compatible as well with the following CCS units:**

CDQ2000-> The encoder configured in ISO/MPEG Layer II JOINT STEREO and sampling frequency of 48 Khz. The decoder can work independent or not. In previous version to the 4.0, the decoder must be configured independent of the encoder (configuration of swithc nº 6 in UPPER position).

CDQPrima->
ENCODER:
Bit Rate= 128 Kbps; Algorithm MPEGL2, CCN or CCS; Sample rate 48 Khz; ALG MODE Joint Stereo; LINE FMT CCS 2 LN.
DECODER:
Independent or not.

✍ **{BACKUP}-{TA}**

Used for selecting parameters to configure the terminal adaptor. The display shows:

M	E	N	U		B	A	C	K	U	P		T	A		
	{	L	I	N	E	}			C	O	N	F			

✍ {BACKUP}-{TA}-{LINE}

Used for selecting parameters to configure the terminal adaptor. Given the terminal adaptor is able to manage the two B channels the display shows:

M	E	N	U		B	A	C	K	U	P		T	A		
		{	L	1	}					L	2				

For each line will be possible to configure the following parameters:

L	1		T	E	R	M	I	N	A	L		A	D	A	P
{	L	N	U	M	}	C	N	U	M		D	I	A	L	

?? **LNUM**: Abbreviation for "LOCAL NUMBER". This option allows the local number associated with line 1 to be configured. Configuring the local number of a line means that the line will only respond to calls to that number. Thus, if multiple numbers are available on the same line, a different local number can be assigned to each line, providing automatic line selection (and selection of its associated audio) from the calling terminal, or if there are several devices on the same bus, select one of them (sub-addressing). The local number is recorded in the equipment's non-volatile memory.

?? **CNUM**: Abbreviation for "CALLING NUMBER". This option allows up to three calling numbers to be configured for each line. The calling number means that when the equipment receives a call, it will check that it has been made from one of the numbers programmed with this option. It will only answer calls from one of these three numbers if automatic answer mode has been selected. In manual answer mode, the calling number will be displayed on the screen and the user can decide whether or not to answer it. The programmed calling numbers are independent for each line. Thus, a call filter can be programmed to prevent the entry of unwanted calls. Calling numbers are recorded in the equipment's non-volatile memory.

?? **DIAL**: The dialling number for backup mode.

The following are further details of these options **(If L2 is selected, the same options will be available)**:

✍ {L1}-{TA}-{LNUM}

This option assigns a local number to line 1 or de-assigns it. When a local number has been assigned to a line, the terminal adaptor will only answer if that number is called. When ENTER/MENU is pressed, the display shows:

L	**1**					**L**	**N**	**U**	**M**						
	{	**N**	**O**	**N**	**E**	**}**		**N**	**U**	**M**	**B**	**E**	**R**		

If NONE is selected, no local number will be assigned to the line. If NUMBER is selected, the display changes to:

L	**1**			**L**	**O**	**C**	**A**	**L**		**N**	**U**	**M**	**B**	**E**	**R**
-															

As numbers are entered at the dialling keypad, they appear on the display as with the dialling processes. When ENTER/MENU is pressed, the number is assigned as the local number.

✍ **When a local number is associated to a line, the equipment will only answer calls made to that number and will not notify anything else even if the call is made to another number assigned to the same basic rate interface. Consequently, if the equipment does not answer a call, check the programmed local number.**

✍ {L1}-{TA}-{CNUM}

This option allows one or more telephone numbers (up to 3) to be assigned as the telephone numbers to which the equipment will answer when they call. This prevents the equipment from answering an unwanted call (for example, a caller who has dialled the wrong number). When a call is received, the caller's telephone number is stored in a variable which is accessible to the micro-controller. This will decide

whether or not to answer, depending on whether or not it matches one of the programmed numbers. When ENTER/MENU is pressed with the CNUM option selected, the display shows:

L	1					C	N	U	M						
		{	O	F	F	}			O	N					

If the OFF option is selected and the line is in auto answer mode, the call will be answered automatically regardless of the number making the call.

If the calling numbers are enabled, the display will show the same contents but "ON" will be enclosed in braces instead of "OFF". If they are enabled, and in addition, the line is in auto answer mode, any call on this line will be answered or rejected depending on whether the calling number matches one of the numbers stored in the table. Enabling the calling number table thus serves as a call selection filter. The equipment contains a non-volatile memory so that even when it is switched off, the numbers in the telephone book do not disappear. The book has a capacity for three numbers (for each line).

When L1-TA-LNUM-ON is selected, the following appears on display:

L	1		C	A	L	L	I	N	G		N	U	M		1
-															

The number at the top right of the display shows the index number in the book of the calling number; the ? and ? keys can be used to step through the book to higher or lower index numbers, respectively. At index 3, pressing the ? key will move to the first index and from the first index, pressing the ? key will move up a level in the menu tree. The user may change the numbers stored in the table using the keypad on the front panel.

As the user dials numbers, these appear on the display and a flashing cursor moves to the right. The ? key can be used to erase numbers and to move the flashing cursor to the left, up to the starting point. Up to 16 digits can be entered per number.

✍ **When the calling number is enabled and a call is received from a number that does not match any of those programmed, the following is displayed:**

R	E	J	E	C	T		C	A	L	L		L	1		
C	A	L	L	I	N	G		N	U	M	B	E	R	:	Y

✍ **When a call is received and the answer mode is manual, the calling number is displayed and the user can decide to answer or not (by pressing the CALL key of the line on which the call has been received).**

✍ {CONF}-{NET}

This option allows to configure the ISDN terminal adapter with diferent protocols.
There are two version of terminal adapters: EURO_ISDN terminal adapter and Universal terminal adapter. The Pronto Backup recognizes automatically the terminal adapter enabling the available options only when the universal adapter is detected.

When the NET option is selected, the display will show:

<	-	-		C	O	N	F		N	E	T		-	-	>
{	E	I	S	D	N	}		A	T	T	5	E	S	S	

The arrows at the sides show that the display can be moved sideways to show two more configuration options for the user. Thus, if the option between braces is EISDN and the ? key is pressed, the display shows:

<	-	-		C	O	N	F		N	E	T		-	-	>
{	D	M	S	1	0	0	}			N	A	T	1		

The ISDN protocolos are the following:

✍✍ **EISDN**: This is the type of ISDN available in Europe and in most countries except for North America. It hasn't SPID.

✍✍ **AT&T 5ESS.**
✍✍ **Northern Telecom DMS100.**
✍✍ **National ISDN 1 o NAT1:** This kind of switch is also provided by AT&T and Northen Telecom.

The AT&T 5ESS, DMS 100 and NAT1 request the **SPID** (Service Profile Identification) numbers to the ISDN network company. These numbers (one of each B channel) are provided by the telephone company and they must be introduced always that one of these kind of ISDN is selected.

The PRONTO BACKUP 3 will request them once one of these ISDN protocols are selected:

L	**1**		**S**	**P**	**I**	**D**		**N**	**U**	**M**	**B**	**E**	**R**		
-															

L	**2**		**S**	**P**	**I**	**D**		**N**	**U**	**M**	**B**	**E**	**R**		
-															

Once an ISDN type is selected, the terminal adapter will be loaded with the new software. The display will show the following:

L	**O**	**A**	**D**	**I**	**N**	**G**		**T**	**A**						

✍ **It isn't necessary to reset the unit or to disconnect the ISDN to perform this operation.**
✍ **If the terminal adapter version only admits EURO_ISDN, when the user selects the option NET, the display will show the following message:**

	I	**N**		**E**	**I**	**S**	**D**	**N**							
	N	**O**	**T**		**A**	**V**	**A**	**I**	**L**	**A**	**B**	**L**	**E**		

✍ {BACKUP}-{ENABLE}

With this option, the Backup opartion can be enabled (ON) or disabled (OFF).

B	A	C	K		U	P		E	N	A	B	L	E		
		O	F	F			{	O	N	}					

The display wil show if the backup is enabled or not:

	B	K	U	P		M	A	S	T	E	R		O	N	

✍ **This option is only available when the Pronto Backup is working as MASTER.**

4.3.- {CONF}

This main menu option accesses the section for the general configuration of the equipment - those parameters that affect both line 1 and line 2. The display shows:

	G	E	N	E	R	A	L		C	O	N	F	I	G
{	A	U	D	_	I	N	}		A	U	X	_	D	T

?? **AUD_IN:** Selection of analog or digital audio input.
?? **AUX_DT:** Configuration of the auxilary data.

✍ {CONF}-{AUD_IN}

These options allow the user to select between analog or digital audio input (AES/EBU format).

	C	O	N	F		A	U	D	I	O				
{	A	N	A	L	O	G	}	A	E	S	/	E	B	U

If the AES/EBU audio input is selected, the display will be the same except that the AES/EBU option will be enclosed in braces. If AES/EBU is selected, it will be necessary to select the synchronism:

	C	O	N	F		A	U	D	I	O		D	I	G
S	Y	N	C	:	{	A	U	D	I	O	}	E	X	T

The AUDIO option selects synchronism with the digital audio input, and The EXT option selects synchronism with a external clock

Information on the audio input is stored in the non-volatile memory so that it is retained even when the equipment is switched off.

The audio interface selected is shown on the bottom right of the status screen as follows.

With the analog input selected:

L	1		X	2	1		6	4	K	b			L	3

J	O	I	N	T		F	R	A	M	E	D		-	A	-

With the digital input selected:

L	1		X	2	1		6	4	K	b				L	3
J	O	I	N	T		F	R	A	M	E	D		-	D	-

✍ {CONF}-{AUX_DT}

When CONF-AUX_DT is selected, the display shows:

	C	O	N	F		A	U	X		D	A	T	A		
{	O	F	F	}	3	0	0		2	4	0	0		9	6

If the sending/receiving of auxiliary data in MPEG mode is enabled, 300, 2400 or 9600. The data format would be asynchronous, 8 data bits, 1 START/STOP bit, no parity.

✍ **Auxiliary data configuration is valid for X21 and ISDN communications.**

✍ **Auxiliary data are included in the MPEG audio frame, at the expense of replacing any audio bits. 300 bps is a good balance between audio quality and transmission rate.**

✍ **The format of auxiliary data included in the MPEG frame is compatible with that employed in the CDQ Prima audio codec family from CCS (GENERIC, MUXRATE=300, 2400 or 9600, DSPRATE = 300, 2400 or 9600, MUXMODE= NOMUX).**

4.4.- {INF}

When this option is selected, the following message is displayed:

		I	N	F	O	R	M	A	T	I	O	N		
	{	V	E	R	S	I	O	N	}		L	I	N	E

✍ {INF}-{VERSION}

This option gives information about the software version:

M	I	C	R	O	:	1	.	0	0				-	-	>
D	S	P	c	o	d	:	1	.	0	0					

[	T	A	:	2	.	2	0	]					-	-	>
D	S	P	d	e	C	:	1	.	0	1					

✍ {INF}-{LINE}

This option gives information about the current configuraton of the terminal adaptor:

L	I	N	E		I	N	F	O	R	M	A	T	I	O	N
	{	L	1	}								L	2		

The ? ,? and ENTER keys can be used to obtain the following additional information about the lines:

?? CN -> YES or NO, depending on whether the call filter (CALLING NUMBER) is enabled.
?? LN -> If a local number has been entered, it is shown at the bottom of the display.
?? Auxiliary data enabled/disabled and the data speed selected (300, 2400 or 9600 bps).

5.PRONTO BACKUP REMOTE MONITORING LINES

A DB 15 connector is provided on the rear panel of the **Pronto Backup** for status signalling. The following table shows the pinouts of this connector.

PIN	SEÑAL	PIN	SEÑAL
1	NC	9	L_REM_CALL 1
2	NC	10	L_REM_CALL 2
3	NC	11	BACKUP_STATUS
4	NC	12	FRAMED_1
5	NC	13	FRAMED_2
6	DGND	14	NC
7	DGND	15	AGND
8	+15VA		

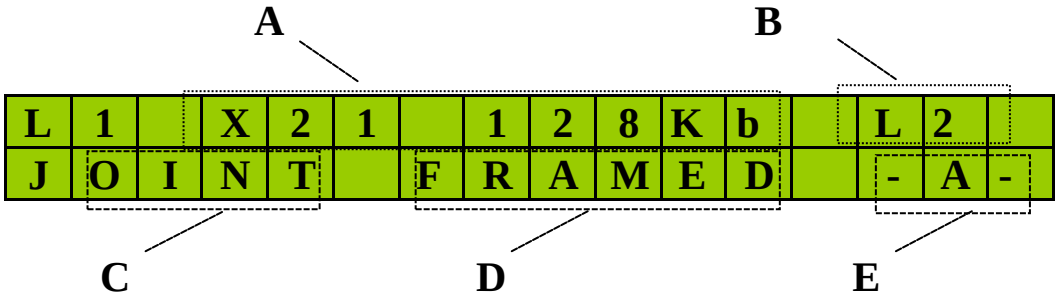
These are TTL-type signals with the following functions:

- L_REM_CALL 1: Indicates a call on line 1 when intermittent; line disconnected when at 0 and line connected when at 1.
- L_REM_CALL 2: Indicates a call on line 2 when intermittent; line disconnected when at 0 and line connected when at 1.
- BACKUP_STATUS: 1 when the unit is opererating in Backup mode.
- FRAMED_1: Line 1 audio synchronized when at 1.
- FRAMED_2: Line 2 audio synchronized when at 1.

6.PRONTO BACKUP DISPLAY INFORMATION FIELDS

X21 DISPLAY INFORMATIONS FIELDS

In X21, the display shows the current line status information. This information is arranged as follows:



A) Shows the port speed:

64 Kb, 128 Kbps or 256 Kbps

B) The MPEG Layer selected:

L2: layer III

L3: layer III

C) Encoding mode selected:

MONO, DUAL o JOINT STEREO for 64 Kbps.

MONO, DUAL o JOINT STEREO for 128 Kbps.

DUAL o JOINT STEREO for 256 Kbps.

D) This field shows whether the decoder is synchronised (FRAMED) or not (blank). Once a connection is established, audio is not available at the output until the decoder is synchronised.

When tha audio synchronism is lost, this field will show the countdown of the timer:

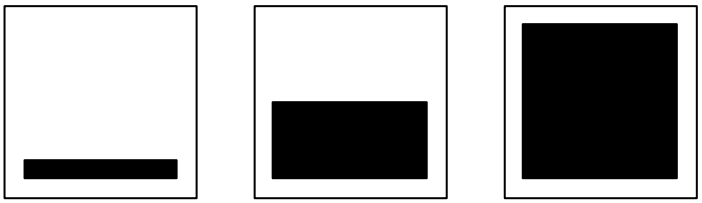
L	1		X	2	1		1	2	8	K	b		L	2	
F	A	I	L				0	0	8	S	c		-	A	-

E) Shows the audio input selected on the menu and the input audio level:

-A- : Analog audio input
-D- : AES/EBU digital audio input.

The audio level is indicated as follows:

The character located on the left side refers to the audio left channel and the character located on the right refers to the audio right channel. The icons used are:

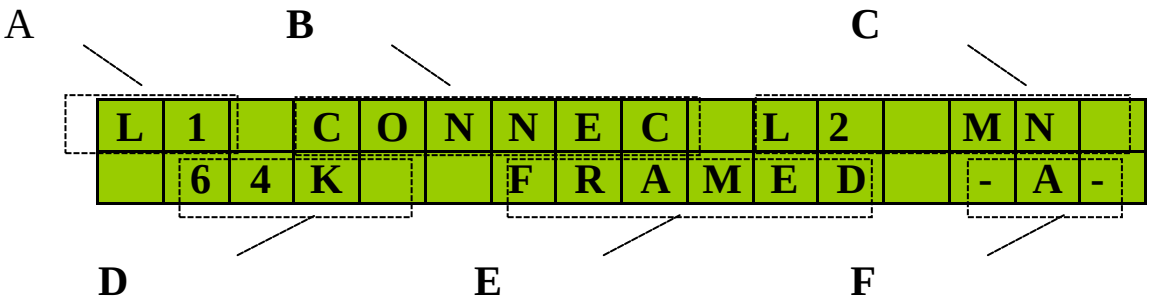


NO AUDIO AUDIO OVERLOAD

The information is polled only during the display rotations or during update of the information displayed.

BACKUP DISPLAY INFORMATIONS FIELDS

In Backup operation, the display shows the current line status information. This information is arranged as follows:



A) Shows the line to which the information refers, L1 or L2.

B) Shows the state of the communications line:

IDLE: DISCONNECTED
CONNECTED
RING: RECEIVING A CALL
CALLING

C) It shows two kind of information:

- The selected layer and audio mode:
  - L2: Layer II
  - L3: layer III
  - MN: Mono
  - JS: Joint Stereo
  - DU: Dual

D) Encoding mode selected:

64 Kbps, J52, CCSTE.

E) This field shows whether the decoder is synchronised (FRAMED) or not (blank).

When tha audio synchronism is detected in the X21 connection, this field will show the countdown of the timer:

L	1		C	O	N	N	E	C		L	2		M	N	
	6	4	K			0	0	8	S	c			-	A	

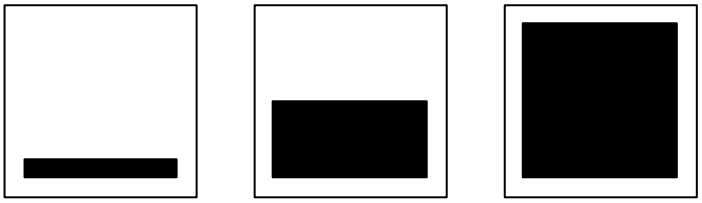
F) Shows the audio input selected on the menu and the input audio level:

-A- : Analog audio input

-D- : AES/EBU digital audio input.

The audio level is indicated as follows:

The character located on the left side refers to the audio left channel and the character located on the right refers to the audio right channel. The icons used are:



NO AUDIO AUDIO OVERLOAD

The information is polled only during the display rotations or during update of the information displayed.

The display shows another series of messages whose meaning is:

1)

L	1		C	A	L	L	I	N	G	.	.	.		
1	2	3	4	5	6	7	8	9						

A call has been made but has still not connected.
The bottom line shows the number called.

2)

L	1		R	I	N	G								
1	2	3	4	5	6	7	8	9						

A call has been received on the line shown (L1 or L2).
The bottom line shows the caller's number.

3)

R	E	J	E	C	T		C	A	L	L		L	1		
C	A	L	L	I	N	G		N	U	M	B	E	R	:	Y

A call has been received on the line shown (L1 or L2) but has been rejected since the call filter (caller number ON) is enabled and the caller's number does not match any of the numbers programmed.

4)

N	O		P	H	Y	S	I	C	A	L		I	S	D	N
					L	I	N	E							

There are ISDN connection problems. Very probably the equipment is not connected to the ISDN line (BRI) or the cable is faulty.

7.PRONTO BACKUP CONNECTORS

ANALOG AUDIO

PIN 1	**GND**
PIN 2	+
PIN 3	-

DIGITAL AUDIO

PIN	SIGNAL	PIN	SIGNAL
1	AES/EBU IN -	6	AES/EBU IN +
2	GND	7	SYNC IN +
3	SYNC IN -	8	GND
4	GND	9	AES/EBU OUT +
5	AES/EBU OUT -		

AUXILIARY DATA

PIN	SIGNAL	PIN	SIGNAL
1	NC	6	NC
2	Tx	7	NC
3	Rx	8	NC
4	NC	9	NC
5	GND		

REMOTE CONTROL

PIN	SEÑAL	PIN	SEÑAL
1	NC	9	L_REM_CALL 1
2	NC	10	L_REM_CALL 2
3	NC	11	BACKUP_STATUS
4	NC	12	FRAMED_1
5	NC	13	FRAMED_2
6	DGND	14	NC
7	DGND	15	AGND
8	+15VA		

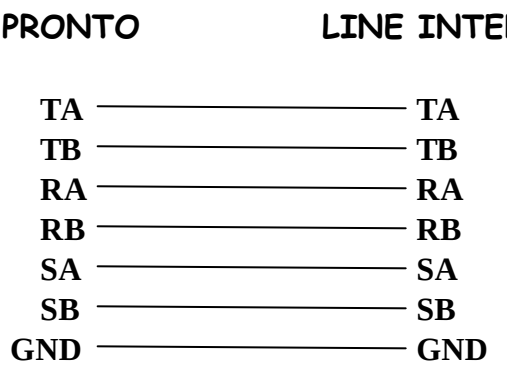
MICROSWITCHES

Nº	FUNCTION	UP	DOWN
1	BUZZER	OFF	ON
2	X	X	X
3	X	X	X
4	BACKUP MODE	MASTER	SLAVE

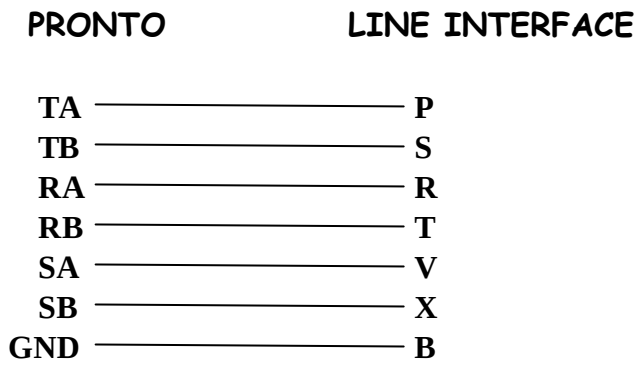
X21 PORT CONNECTORS

PIN	SIGNAL	PIN	SIGNAL
1	NC	9	**TB**
2	**TA**	10	NC
3	NC	11	**RB**
4	**RA**	12	NC
5	NC	13	**SB**
6	**SA**	14	NC
7	NC	15	NC
8	**GND**		

X21-X21 CONNECTION



X21-V35 CONNECTION

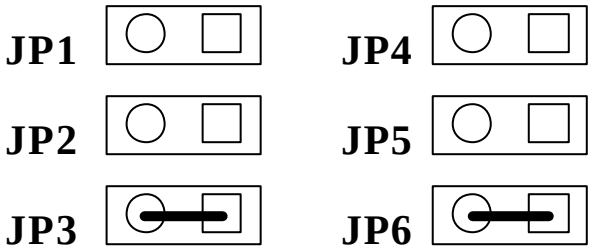


8.JUMPERS

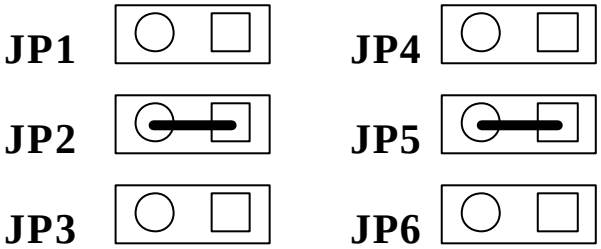
SELECTION OF AUDIO OUTPUT GAIN

The PRONTO BACKUP can be configured for output gains of +0 dB, +4 dB and +6 dB. This configuration only affects the analog audio output. The configuration is carried out using configuration jumpers inside the equipment, near to the XLR audio output connectors, as follows:

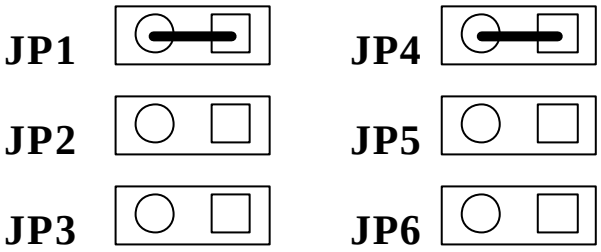
A) 0 dB GAIN



B) +4 dB GAIN



C) +6 dB GAIN



100 OHM RESISTORS IN THE TERMINAL ADAPTER

When the PRONTO BACKUP is connected to a basic access ISDN with a bus configuration and the equipment forms the bus termination, it is necessary to load it with 100 Ohm resistors. These may already be located in the network connector, but if not the PRONTO BACKUP contains internal programming jumpers that allow their insertion. They are easily located, near the RJ45 connectors.

100? RESISTORS CONNECTED

9.PRONTO BACKUP TECHNICAL SPECIFICATIONS

Stereo audio input:

Balanced analog input:

Maximum input level +20 dBu.

Input impedance 20 kOhm.

Balanced digital input:

AES/EBU format: EIAJ CP-340 type I/IEC-958 Pro

Sampling frequency converter: 1:3 to 3:1.

Stereo audio output:

Balanced analog output:

Maximum output level +20 dBu.

Output impedance 50 Ohm.

Balanced digital output:

AES/EBU format: EIAJ CP-340 type I/IEC-958 Pro

Sampling frequency converter: 1:3 to 3:1.

Audio properties:

Quantification: 24 bits A/D and D/A converter.

S/N ratio > 90 dB typical.

Crosstalk > 80 dB

Phase difference < 0.3º

Compression:

ISO/MPEG Layer II/III (ISO 11172-3) :

Modes: Mono, Dual & Joint Stereo.

Bit rates: 64, 128 kbps.

Fs: 48 KHz (32 KHz y 24 KHz available in 64 Kbps)

Frequency response:

MODO	BIT RATE	Fs	ANCHO DE BANDA
MPEG LII MONO	**64 Kbps**	**48**	20Hz,10.5 KHz. (+/- 0.5 dB)
MPEG LII MONO	**64 Kbps**	**24**	20Hz,10.5 KHz. (+/- 0.5 dB)
MPEG LII MONO	**64 Kbps**	**32**	20Hz,12 KHz. (+/- 0.5 dB)
MPEG LII DUAL	**64 Kbps**	**48**	20Hz, 4 KHz. (+/- 0.5 dB)
MPEG LII DUAL	**64 Kbps**	**24**	20Hz, 4.5 KHz. (+/- 0.5 dB)
MPEG LII DUAL	**64 Kbps**	**32**	20Hz, 5 KHz. (+/- 0.5 dB)
MPEG LII JS	**64 Kbps**	**48**	20Hz, 4.5 KHz. (+/- 0.5 dB)
MPEG LII JS	**64 Kbps**	**24**	20Hz, 6 KHz. (+/- 0.5 dB)
MPEG LII JS	**64 Kbps**	**32**	20Hz, 6 KHz. (+/- 0.5 dB)
MPEG LII MONO	**128 Kbps**	**48**	20Hz, 18-20 KHz. (+/- 0.5 dB)
MPEG LII DUAL	**128 Kbps**	**48**	20Hz,10.5 KHz. (+/- 0.5 dB)
MPEG LII JS	**128 Kbps**	**48**	20Hz, 15-20 KHz. (+/- 0.5 dB)
MPEG LIII MONO	**64 Kbps**	**48**	20Hz, 15 KHz. (+/- 0.5 dB)
MPEG LIII MONO	**64 Kbps**	**24**	20Hz, 11 KHz. (+/- 0.5 dB)
MPEG LIII MONO	**64 Kbps**	**32**	20Hz, 15 KHz. (+/- 0.5 dB)
MPEG LIII DUAL	**64 Kbps**	**48**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII DUAL	**64 Kbps**	**24**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII DUAL	**64 Kbps**	**32**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII JS	**64 Kbps**	**48**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII JS	**64 Kbps**	**24**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII JS	**64 Kbps**	**32**	20Hz, 8 KHz. (+/- 0.5 dB)
MPEG LIII MONO	**128 Kbps**	**48**	20Hz, 20 KHz. (+/- 0.5 dB)
MPEG LIII DUAL	**128 Kbps**	**48**	20Hz, 20 KHz. (+/- 0.5 dB)
MPEG LIII JS	**128 Kbps**	**48**	20Hz, 20 KHz. (+/- 0.5 dB)

Auxiliary data:

RS-232: Asynchronous, 8 bits, no parity, 1 start/stop bit, 300, 2400 or 9600 bps.

Communications:

Dependig on the version:

EURO_ISDN terminal adapter

or Universal terminal adapter (EISDN, AT&T 5ESS, DMS 100, NAT1).

Power supply:

94-250 V AC 50/60 Hz 30 W

Voltages: +5 V, -5 V, +15 V, -15 V

Dimensions:

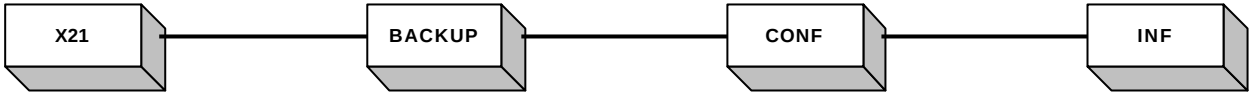
HEIGHT: 1U (4.44 cm)

WIDTH: 19" RACK (48.26 cm)

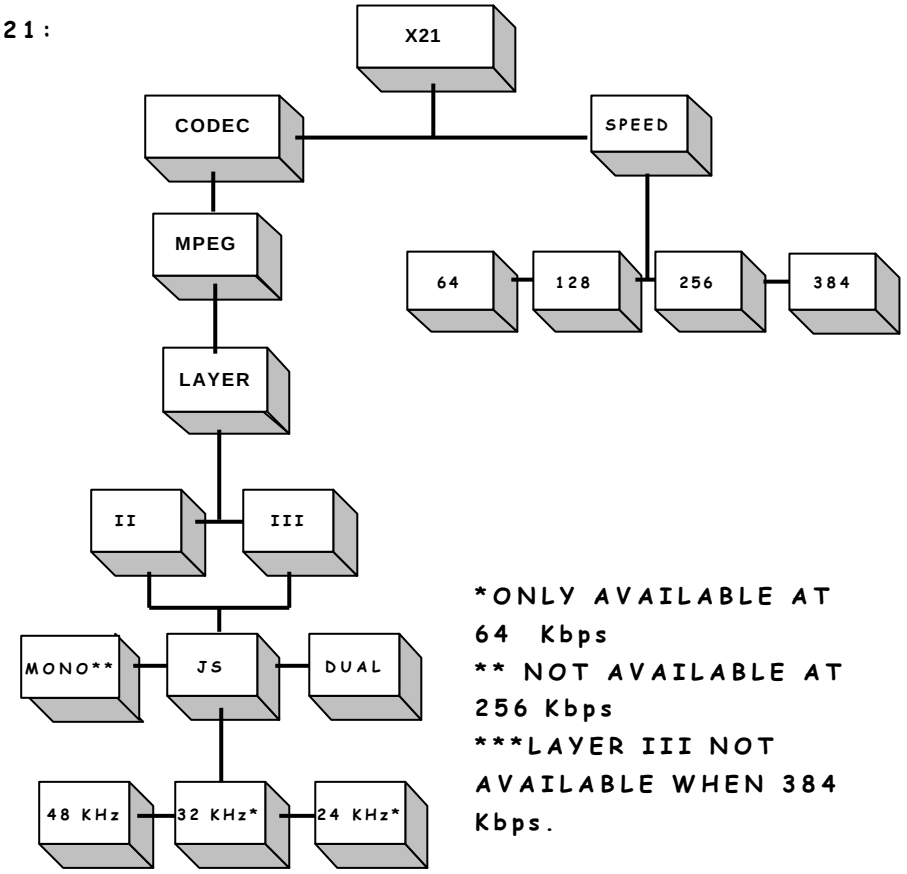
DEPTH: 30 cm.

Weight: Approximately 3 kg

PRONTO BACKUP MAIN MENU:

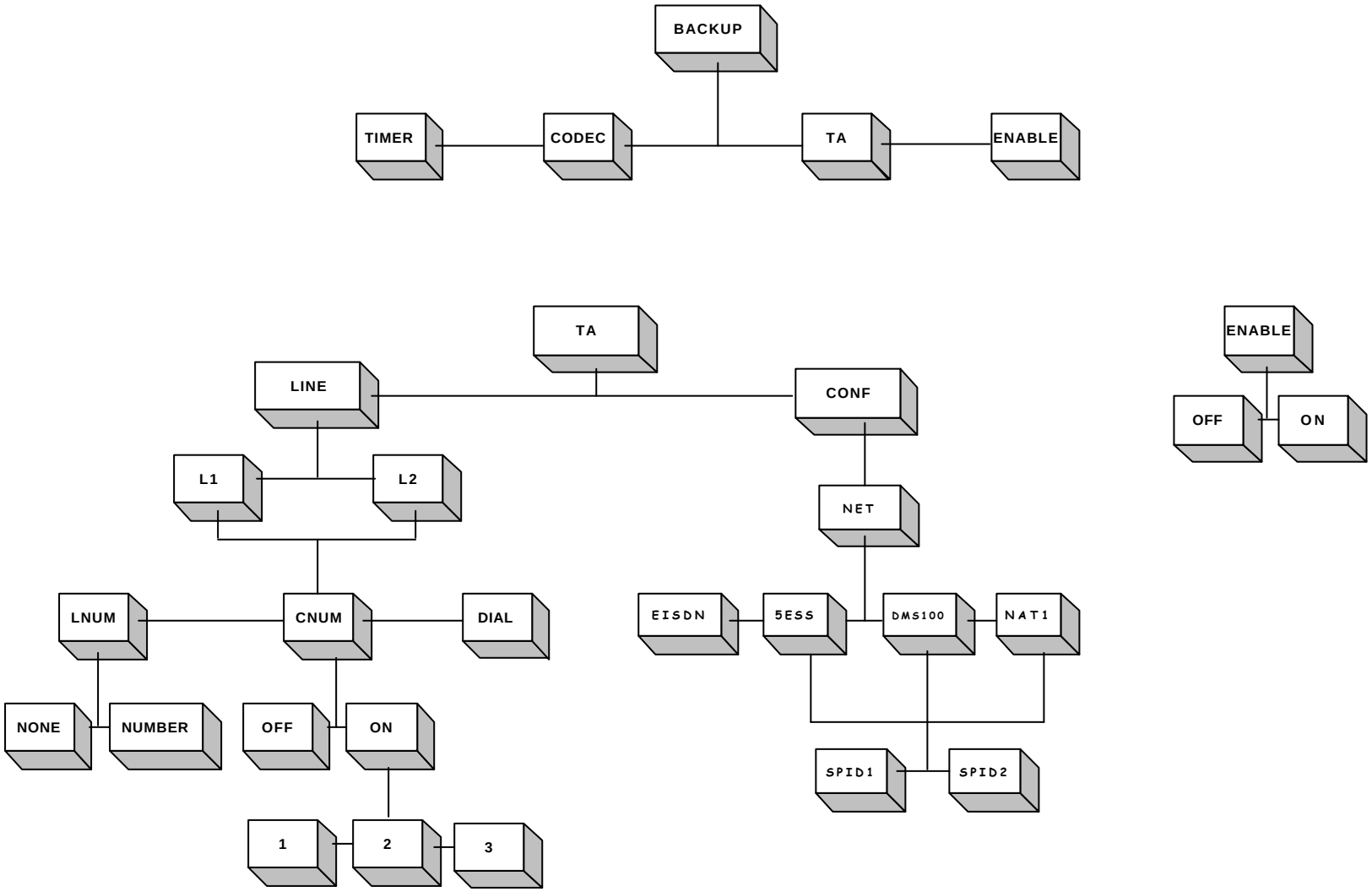


X21:

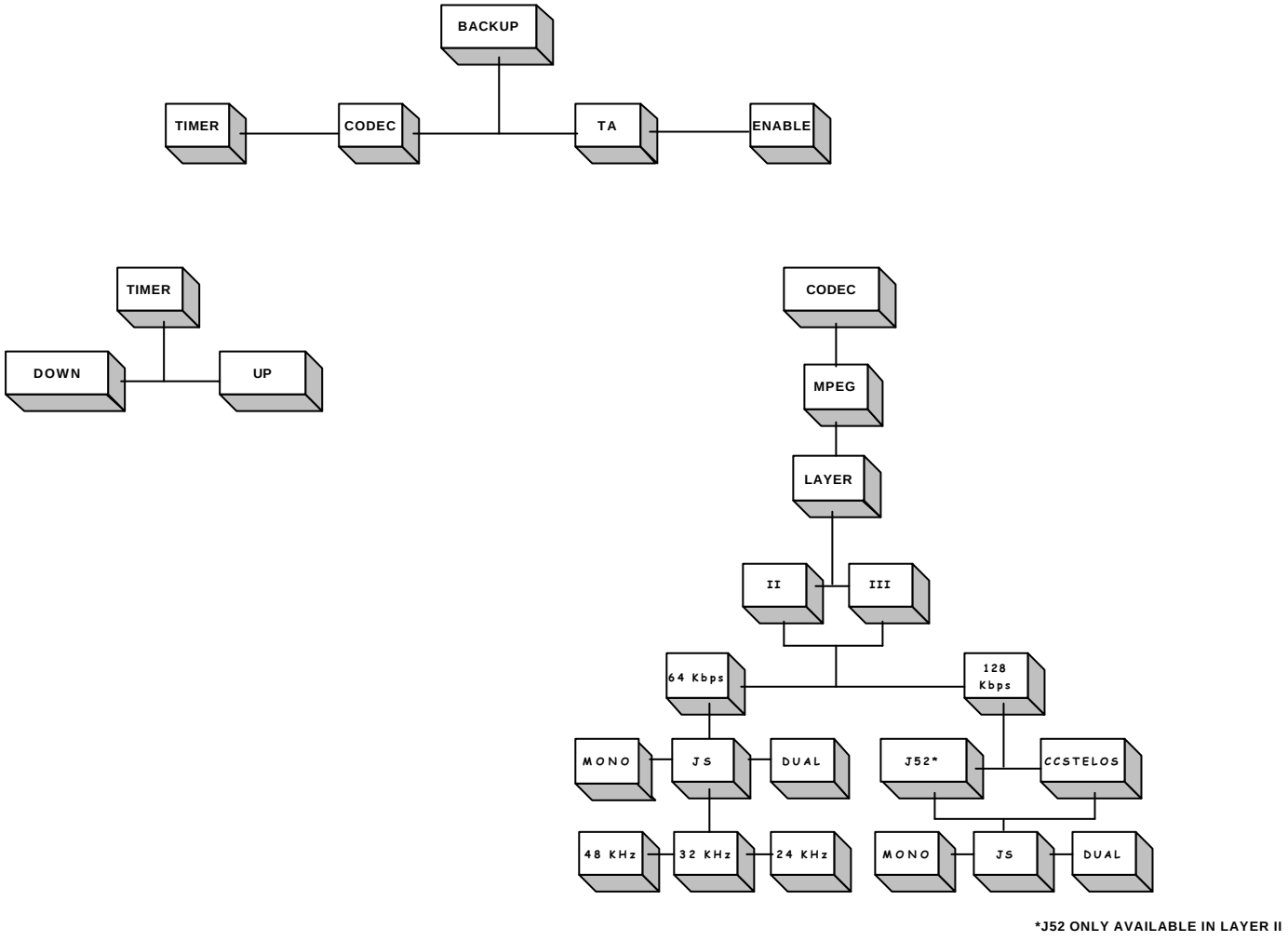


*ONLY AVAILABLE AT 64 Kbps
** NOT AVAILABLE AT 256 Kbps
***LAYER III NOT AVAILABLE WHEN 384 Kbps.

PRONTO BACKUP: BACKUP MENU



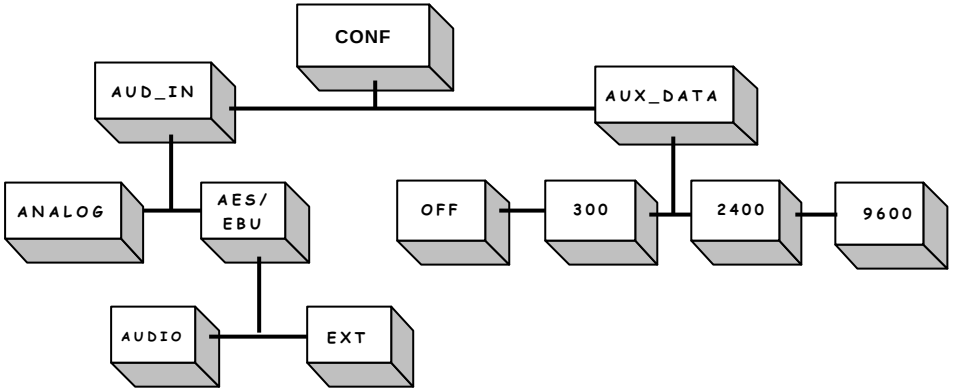
PRONTO BACKUP: BACKUP MENU



*J52 ONLY AVAILABLE IN LAYER II

PRONTO BACKUP: CONF & INF MENU

CONF:



INF: