



TLK300 & TLK2000 (/V9, /V10, /V11 & /V12)

USER MANUAL
VOLUME 1



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TLK300 & TLK2000 (/V9, /V10 , /V11 & /V12) - User Manual
Versione 1.0

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Declaration of Conformity

Hereby, R.V.R. Elettronica SpA, declares that this FM transmitter is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.





DECLARATION OF CONFORMITY

We, the undersigned,

Manufacturer's Name: **R.V.R. Elettronica SpA**

Manufacturer's Address: **Via del Fonditore 2/2c
Zona Ind. Roveri
40138 Bologna
Italy**

Certify and declare under our sole responsibility that the product:

Product Description: **Telemetry Unit**

Models: **TLK2000**

Variants: **TLK300**

when used for its intended purpose, is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/CE "R&TTE", and therefore carries the "CE" mark.

The conformity assessment procedure referred in Article 10 and detailed in Annex III of Directive 1999/5/EC has been followed.

The following harmonized standard have been applied:

ElectroMagnetic Compatibility (3.1b): EN 301 489-1 V1.9.2 (2011-09) +
EN 301 489-11 V1.3.1 (2006-05)

Safety (3.1a): EN 60215 (1997-10) +
EN 60065 (2011-01)

The technical documentation is held at the location above, as required by the conformity assessment procedure.

Bologna, Italia, 20/06/2013




Ravagnani Stefano
Direttore Tecnico
R.V.R. Elettronica S.p.A.

Technical Description

			TLK300	TLK2000	
Parameters	Conditions	U.M.	Value		Notes
GENERALS					
Ambient working temperature		°C	-10 to + 50	-10 to + 50	Whithout condensing
POWER REQUIREMENTS					
AC Power Input	AC Supply Voltage	VAC	80 - 260 (*)	80 - 260 (*)	(*) Full range (**) Internal switch
	Active Power Consumption	W	25	25	
	Connector		VDE IEC Standard	VDE IEC Standard	
DC Power Input	DC Supply Voltage	VDC	12	12	
	DC Current	ADC	< 3	< 3	(*)max 25W (**) max 140W
FUSES					
On Mains			1 External fuse F 1 A F - 5X20 mm	1 External fuse F 1 A F - 5X20 mm	
MECHANICAL DIMENSIONS					
Physical Dimensions	Front panel width	mm	483 (19")	483 (19")	19" EIA rack
	Front panel height	mm	44 1HE	44 1HE	
	Overall depth	mm	263	263	
	Chassis depth	mm	239	239	
Weight		kg	about 4,3	about 4,9	
INTERFACES					
Signalling LEDs			Yes	Yes	
Display	40x2 Alphanumerical		No	Yes	
Push buttons	4 (UP, DOWN , ENTER, ESC)		No	Yes	
USB	TELECON Protocol		Yes	Yes	
RS232	TELECON Protocol		Yes	Yes	
RS 485	PLUS-IN protocol		Yes (only on WEB+GSM versions)	Yes (only on WEB+GSM versions)	
i²C			Yes	Yes	
RJ45	LAN		Yes (only on WEB versions)	Yes (only on WEB versions)	
SIM slot & ANTENNA			Yes (only on GSM versions)	Yes (only on GSM versions)	
VARIOUS					
Cooling			Convection cooling	Convection cooling	
Acoustic Noise		dBa	0	0	

Sommario

1. Preliminary Instructions	1
2. Warranty	1
3. First Aid	2
3.1 Treatment of electrical shocks	2
3.2 Treatment of electrical Burns	2
4. General Description	3
4.1 Unpacking	3
4.2 Features	3
4.3 Frontal Panel Description	5
4.4 Rear Panel Description	7
4.5 Connectors Description	9
5. Quick guide for installation and use	11
5.1 Preparation	11
5.2 Management Firmware	14
6. Identification and Access to the Modules	21
6.1 Identification of the Modules	21
7. Working Principles	25
7.1 Panel card	25
7.2 Mainboard	25
7.3 16-bit CPU Card	25
7.4 USB Card	25
7.5 LAN Card	26
7.6 Alarm generation	26
8. Web User Interface (WUI)	28
8.1 Management Software	29
9. Versions with GSM	43
10. Configurations of Transmitter System	45
10.1 Configuration of Transmitter from V9 to V10 Versions	45
11. Connecting TLK to Internet network	75

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IMPORTANT



The symbol of lightning inside a triangle placed on the product, evidences the operations for which is necessary gave it full attention to avoid risk of electric shocks.



The symbol of exclamation mark inside a triangle placed on the product, informs the user about the presence of instructions inside the manual that accompanies the equipment, important for the efficacy and the maintenance (repairs).

1. Preliminary Instructions

• General foreword

The equipment in object is to considering for uses, installation and maintenance from "trained" or "qualified" staff, they conscious of the risks connected to operate on electronic and electrical circuits electrical.

The "trained" definition means staff with technical knowledge about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment.

The "qualified" definition means staff with instruction and experience about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment.

⚡ WARNING: The machine can be equipped with an ON/OFF switch which could not remove completely voltages inside the machine. It is necessary to have disconnected the feeding cord, or to have switched off the control panel, before to execute technical operations, making sure himself that the safety connection to ground is connected.

The technical interventions that expect the equipment inspection with circuits under voltage must be carry out from trained and qualified staff in presence of a second trained person that it is ready to intervene removing voltage in case of need.

R.V.R. Elettronica SpA doesn't assume responsibility for injury or damage resulting from improper procedures or practices by untrained/unqualified personnel in the handling of this unit.

⚡ WARNING: The equipment is not water resistant and an infiltration could seriously compromise its correct operation. In order to prevent fires or electric shocks, do not expose the equipment to rain, infiltrations or humidity.

Please observe all local codes and fire protection standards during installation and use of this unit.

⚡ WARNING: The equipment has to its inside exposed parts to risk of electric shock, always disconnect power before opening covers or removing any part of this unit.

Fissures and holes are supplied for the ventilation in order to assure a reliable efficacy of the product that for protect itself from excessive heating, these fissures do not have to be obstructed or to be covered. The fissures doesn't be obstructed in no case. The product must not be incorporated in a rack, unless it is supplied with a suitable ventilation or that the manufacturer's instructions are been followed.

⚠ WARNING: This equipment can irradiate radio frequency energy and if it's not installed following the instructions contained in the manual and local regulations it could generate interferences in radio communications.



WIRING: This device has a connection to ground on the power cord and on the chassis. Check that they are correctly connected.

Operate with this device in a residential ambient can cause radio disturbs; in this case, it can be demanded to the user to take adequate measures.

Specifications and informations contained in this manual are furnished for information only, and are subject to change at any time without notice, and should not be construed as a commitment by R.V.R. Elettronica SpA.

The R.V.R. Elettronica SpA assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including the products and software described in it; and it reserves the right to modify the design and/or the technical specifications of the product and this manual without notice.

• Warning regarding the use designated and the use limitations of the product.

This product is an transmitter radio indicated for the audio broadcasting service in frequency modulation. It uses working frequencies that are not harmonized in the states of designated user.

The user of this product must obtain from the Authority for spectrum management in the state of designated user the appropriate authorization to use the radio spectrum, before putting in exercise this equipment.

The working frequency, the transmitter power, let alone other specifications of the transmission system are subject to limitation and defined in the authorization obtained.

2. Warranty

R.V.R. Electronics S.P.A. guarantees absence of manufacturing defect and the good operation for the products, within the provided terms and conditions.

Please read the terms carefully, because the purchase of the product or acceptance of order confirmation, constitutes acceptance of the terms and conditions.

For the last legal terms and conditions, please visit our web site (WWW.RVR.IT) wich may also be changed, removed or updated for any reason without prior notice.

Warranty will be void in cases of opened products, physical damage, misuse, modification, repair by unauthorised persons, carelessness and using the product for other purpose than its intended use.

In case of defect, proceed like described in the following:

- 1 Contact the dealer or distributor where you purchased the unit. Describe the problem and, so that a possible easy solution can be detected.

Dealers and Distributors are supplied with all the information about problems that may occur and usually they can repair the unit quicker than what the manufacturer could do. Very often installing errors are discovered by dealers.

- 2 If your dealer cannot help you, contact R.V.R. Elettronica and explain the problem. If it is decided to return the unit to the factory, R.V.R. Elettronica will mail you a regular authorization with all the necessary instructions to send back the goods;

- 3 When you receive the authorization, you can return the unit. Pack it carefully for the shipment, preferably using the original packing and seal the package perfectly. The customer always assumes the risks of loss (i.e.,

R.V.R. is never responsible for damage or loss, until the package reaches R.V.R. premises. For this reason, we suggest you to insure the goods for the whole value. Shipment must be effected C.I.F. (PREPAID) to the address specified by R.V.R.'s service manager on the authorization



DO NOT RETURN UNITS WITHOUT OUR AUTHORIZATION AS THEY WILL BE REFUSED

- 4 Be sure to enclose a written technical report where mention all the problems found and a copy of your original invoice establishing the starting date of the warranty.

Replacement and warranty parts may be ordered from the following address. Be sure to include the equipment model and serial number as well as part description and part number.



R.V.R. Elettronica SpA
Via del Fonditore, 2/2c
40138 BOLOGNA ITALY
Tel. +39 051 6010506

3. First Aid

The personnel employed in the installation, use and maintenance of the device, shall be familiar with theory and practice of first aid.

3.1 Treatment of electrical shocks

3.1.1 If the victim is not responsive

Follow the A-B-C's of basic life support.

- Place victim flat on his back on a hard surface.
- Open airway: lift up neck, push forehead back (**Figure 1**).

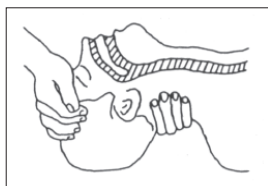


Figure 1

- clear out mouth if necessary and observe for breathing
- if not breathing, begin artificial breathing (**Figure 2**): tilt head, pinch nostrils, make airtight seal, four quick full breaths. Remember mouth to mouth resuscitation must be commenced as soon as possible.



Figure 2

- Check carotid pulse (**Figure 3**); if pulse is absent, begin artificial circulation (**Figure 4**) depressing sternum (**Figure 5**).

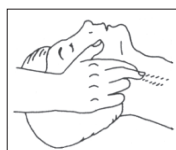


Figure 3



Figure 4

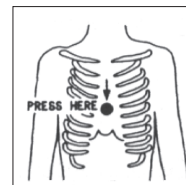


Figure 5

- In case of only one rescuer, 15 compressions alternated to two breaths.
- If there are two rescuers, the rhythm shall be of one breath each 5 compressions.
- Do not interrupt the rhythm of compressions when the second person is giving breath.
- Call for medical assistance as soon as possible.

3.1.2 If victim is responsive

- Keep them warm.
- Keep them as quiet as possible.
- Loosen their clothing (a reclining position is recommended).
- Call for medical help as soon as possible.

3.2 Treatment of electrical Burns

3.2.1 Extensive burned and broken skin

- Cover area with clean sheet or cloth.
- Do not break blisters, remove tissue, remove adhered particles of clothing, or apply any salve or ointment.
- Treat victim for shock as required.
- Arrange transportation to a hospital as quickly as possible.
- If arms or legs are affected keep them elevated.

If medical help will not be available within an hour and the victim is conscious and not vomiting, give him a weak solution of salt and soda: 1 level teaspoonful of salt and 1/2 level teaspoonful of baking soda to each quart of water (neither hot or cold).

Allow victim to sip slowly about 4 ounces (half a glass) over a period of 15 minutes.

Discontinue fluid if vomiting occurs.

DO NOT give alcohol.

3.2.2 Less severe burns

- Apply cool (not ice cold) compresses using the cleansed available cloth article.
- Do not break blisters, remove tissue, remove adhered particles of clothing, or apply salve or ointment.
- Apply clean dry dressing if necessary.
- Treat victim for shock as required.
- Arrange transportation to a hospital as quickly as possible.
- If arms or legs are affected keep them elevated.

4. General Description

The **TLK300** and the **TLK2000**, manufactured by R.V.R. Elettronica SpA, are telemetry systems that allows an immediate intervention in case of fault, thanks to the radio station remote control. Equipment great flexibility makes it possible to control a high number of devices or to modify the station layout. This operation does not involve any radical changes of the control system, it is simply a matter of adding expansion boards that will increase the number of operating parameters the system can manage.

TLK300 and **TLK2000** are designed to being contained into a 19" rack box of 1HE.

4.1 Unpacking

The package contains:

- 1 **TLK300** or **TLK2000**
- 1 User Manual
- 1 Mains power cable

The following accessories are also available from Your R.V.R. Dealer:

- **Accessories, spare parts and cables**

4.2 Features

The **TLK300**, and **TLK2000**, telemetry device manage and control the alarms, send/receive text messages (SMS), connect to external/internal GSM and PSTN modems, WEB interfaces, send EMAIL and use the telecon control software designed by RVR. The various function depend on product versions.

On the front panel there is also a set of LEDs, again depending on the preset configuration, which show system status at a glance.

In the case of the model **TLK2000** is also present on the front panel is a clear user interface which allows you to read and set the operating parameters; the entire system can be controlled using the keys.

On rear panel are present all connectors to be used for connections to various components of the station.

The **TLK300**, and **TLK2000**,telemetry system and relative management software were designed to solve all of those problems arising from the management of radio stations located in areas that are not easily reached or which would require a significant amount of time for the operator to reach.

The system has the following main functions (the functions depends on version used) :

- Management and control of alarms;
- Telemetrization of operating parameters of device present in each station;
- Sending and receiving of SMS;
- Connecting to modem External / Internal GSM and PSTN;
- WEB interfaces;
- Sending of MAIL;
- Use of TELECON management software developed by RVR;
- Storage of events that caused faults.

This system allows remote management of the radio station, allowing the operator to intervene immediately in the event of a fault.

On the rear panel are all of the connectors to be used for connecting the device to the various station components.

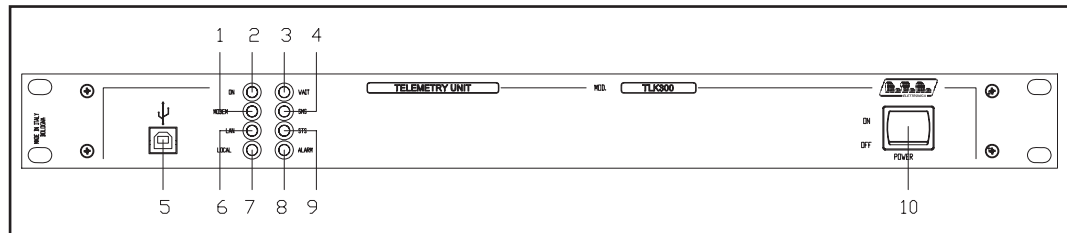
The TELECON management software is easy to understand, as well as the WEB interface used for remote management of the device it is fully compatible with all browsers.

The **TLK300**, and **TLK2000**, telemetry system comes in different configurations summarized below:

- Version **V9**: serial telemetry unit for 1+1 transmitter with SCML1+1SL changeover.
- Version **V10**: GSM telemetry unit for 1+1 transmitter with SCML1+1SL changeover.
- Version **V11**: WEB telemetry unit for 1+1 transmitter with SCML1+1SL changeover.
- Version **V12**: GSM e WEB telemetry unit for 1+1 transmitter with SCML1+1SL changeover.

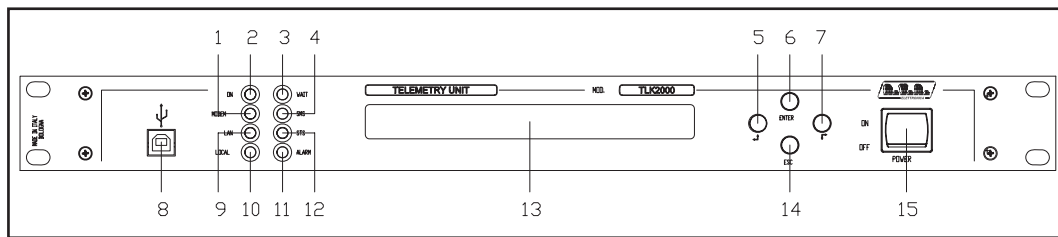
4.3 Frontal Panel Description

4.3.1 Frontal Panel Description of TLK300



[1] MODEM	Green LED, turns on when modem is connected and it is properly initialized.
[2] ON	Green LED, turns on when the equipment is connected to mains power supply.
[3] WAIT	Yellow LED, when flashing indicates the Start up of equipment. When on, indicates that Start time is active. No alarm messages will be sent until this LED turns off.
[4] SMS	Yellow LED, indicates that it is transmitting an alarm signal by SMS.
[5] USB	USB Type B connector for programming of firmware and local interfacing with TELECON software.
[6] LAN	The USB connection automatically puts the unit in local mode. Green LED, turns on when the LAN option is present and properly communicating.
[7] LOCAL	Yellow LED, turns on when the equipment is in local operating status. The operation is symmetric to SCML1 + 1SL, to which it is connected.
[8] ALARM	Red LED, turns on when an alarm is present in the alarm list.
[9] STS	Red LED, turns on when one of alarm condition is present.
[10] POWER	ON/OFF switch.

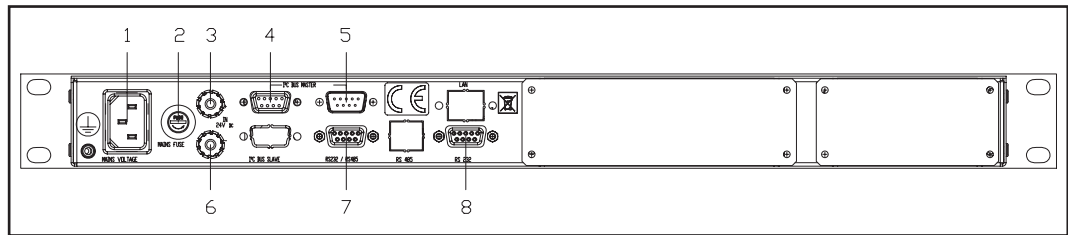
4.3.2 Frontal Panel Description of TLK2000



- | | |
|--------------|---|
| [1] MODEM | Green LED, turns on when modem is connected and it is properly initialized. |
| [2] ON | Green LED, turns on when the equipment is connected to mains power supply. |
| [3] WAIT | Yellow LED, when flashing indicates the Start up of equipment. When on, indicates that Start time is active. No alarm messages will be sent until this LED turns off. |
| [4] SMS | Yellow LED, indicates that it is transmitting an alarm signal by SMS. |
| [5] ↵ | Push button to move in the menu system and to modify the parameters. |
| [6] ENTER | Push button to confirm a parameter and to enter in a menu. |
| [7] → | Push button to move in the menu system and to modify the parameters. |
| [8] USB | USB Type B connector for programming of firmware and local interfacing with TELECON software. |
| [9] LAN | The USB connection automatically puts the unit in local mode. Green LED, turns on when the LAN option is present and properly communicating. |
| [10] LOCAL | Yellow LED, turns on when the equipment is in local operating status. The operation is symmetric to SCML1 + 1SL, to which it is connected. |
| [11] ALARM | Red LED, turns on when an alarm is present in the alarm list. |
| [12] STS | Red LED, turns on when one of alarm condition is present. |
| [13] DISPLAY | Liquid crystals display. |
| [14] ESC | Push button to exit from a menu. |
| [15] POWER | ON/OFF switch. |

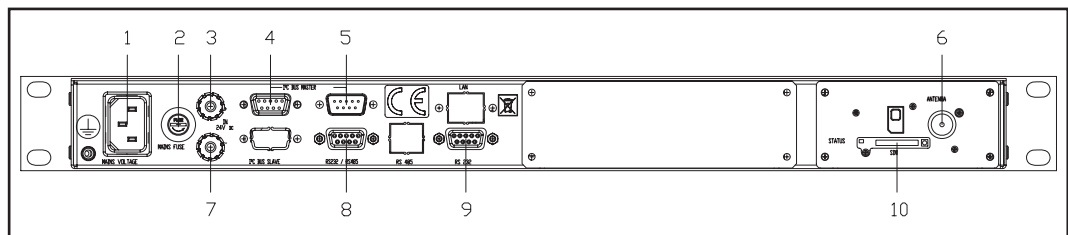
4.4 Rear Panel Description

4.4.1 Rear Panel Description of TLK300&2000 /V9



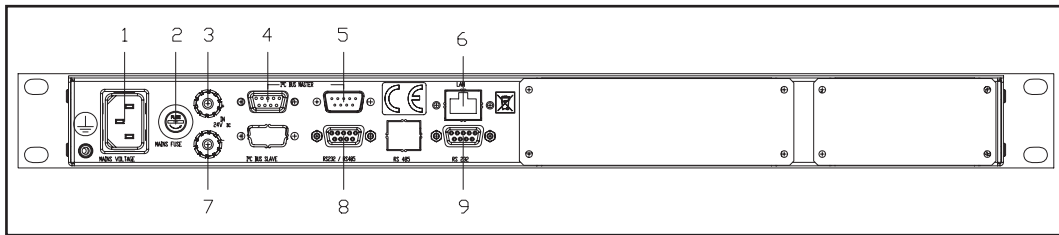
- | | |
|--------------------------|---|
| [1] PLUG | VDE mains power supply connector. |
| [2] MAINS FUSE | Fuse carrier. Use a screwdriver to access the fuse. |
| [3] 12 VDC IN + | External 12Vdc supply input. Positive (red). |
| [4] I ² C BUS | DB9 female connector, for I ² C sampling. |
| [5] I ² C BUS | DB9 male connector, for I ² C sampling. |
| [6] 12 VDC IN - | External 12Vdc supply input. Negative (black). |
| [7] RS232 / 485 | DB9 female connector for serial sampling. |
| [8] RS232 | DB9 connector for direct serial communication with the TELECON program and software update in exchange with frontal USB socket. |

4.4.2 Rear Panel Description TLK300&2000 /V10



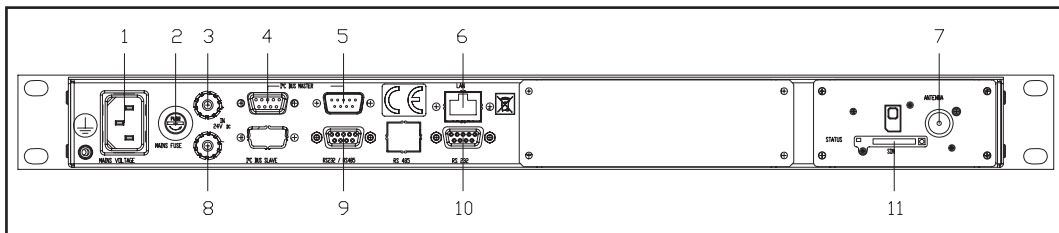
- | | |
|--------------------------|---|
| [1] PLUG | VDE mains power supply connector. |
| [2] MAINS FUSE | Fuse carrier. Use a screwdriver to access the fuse. |
| [3] 12 VDC IN + | External 12Vdc supply input. Positive (red). |
| [4] I ² C BUS | DB9 female connector, for I ² C sampling. |
| [5] I ² C BUS | DB9 male connector, for I ² C sampling. |
| [6] ANTENNA | SMA female connector for connection to a GSM antenna. |
| [7] 12 VDC IN - | External 12Vdc supply input. Negative (black). |
| [8] RS232 / 485 | DB9 female connector for serial sampling. |
| [9] RS232 | DB9 connector for direct serial communication with the TELECON program and software update in exchange with frontal USB socket. |
| [10] SIM | SIM card tray.
On the left side there is a status LED.
On the right side there is the eject button for SIM card tray. |

4.4.3 Rear Panel Description TLK300&2000 /V11



- | | |
|--------------------------|---|
| [1] PLUG | VDE mains power supply connector. |
| [2] MAINS FUSE | Fuse carrier. Use a screwdriver to access the fuse. |
| [3] 12 VDC IN + | External 12Vdc supply input. Positive (red). |
| [4] I ² C BUS | DB9 female connector, for I ² C sampling. |
| [5] I ² C BUS | DB9 male connector, for I ² C sampling. |
| [6] LAN | RJ45 connector for TCP/IP communication. |
| [7] 12 VDC IN - | External 12Vdc supply input. Negative (black). |
| [8] RS232 / 485 | DB9 female connector for serial sampling. |
| [9] RS232 | DB9 connector for direct serial communication with the TELECON program and software update in exchange with frontal USB socket. |

4.4.4 Rear Panel Description TLK300&2000 /V12

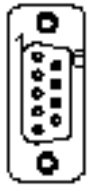


- | | |
|--------------------------|---|
| [1] PLUG | VDE mains power supply connector. |
| [2] MAINS FUSE | Fuse carrier. Use a screwdriver to access the fuse. |
| [3] 12 VDC IN + | External 12Vdc supply input. Positive (red). |
| [4] I ² C BUS | DB9 female connector, for I ² C sampling. |
| [5] I ² C BUS | DB9 male connector, for I ² C sampling. |
| [6] LAN | RJ45 connector for TCP/IP communication. |
| [7] ANTENNA | SMA female connector for connection to a GSM antenna. |
| [8] 12 VDC IN - | External 12Vdc supply input. Negative (black). |
| [9] RS232 / 485 | DB9 female connector for serial sampling. |
| [10] RS232 | DB9 connector for direct serial communication with the TELECON program and software update in exchange with frontal USB socket. |
| [11] SIM | SIM card tray.
On the left side there is a status LED.
On the right side there is the eject button for SIM card tray. |

4.5 Connectors Description

4.5.1 RS232

Type: Female DB9



1	NC
2	TX_D
3	RX_D
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

4.5.2 I²C Bus

Type: Male DB9



1	NC
2	SDA
3	SCL
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

4.5.3 I²C Bus

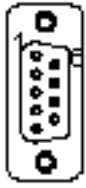
Type: Female DB9



1	NC
2	SDA
3	SCL
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

4.5.4 RS485

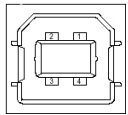
Type: Female DB9



- 1 RS485 +
- 2 IC internally connected. Do not use.
- 3 GND
- 4 NC
- 5 IC internally connected. Do not use.
- 6 RS485 -
- 7 NC
- 8 NC
- 9 NC

4.5.5 USB

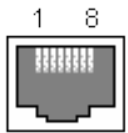
Type: Female type-B



- 1 +V In
- 2 D-
- 3 D+
- 4 GND

4.5.6 LAN

Type: female RJ45



- 1 TX+
- 2 TX-
- 3 RX+
- 4 NC
- 5 NC
- 6 RX-
- 7 NC
- 8 NC

5. Quick guide for installation and use

This section provides a step-by-step description of equipment installation and configuration procedure. Follow these procedures closely upon first power-on and each time any change is made to general configuration, such as when a new transmission station is added or the equipment is replaced.

Once the desired configuration has been set up, no more settings are required for normal operation; at each power-up (even after an accidental shutdown), the equipment defaults to the parameters set during the initial configuration procedure.

The topics covered in this section are discussed at greater length in the next sections, with detailed descriptions of all hardware and firmware features and capabilities. Please see the relevant sections for additional details.



IMPORTANT: When configuring and testing the transmitter in which the equipment is integrated, be sure to have the Final Test Table supplied with the equipment ready at hand throughout the whole procedure; the Final Test Table lists all operating parameters as set and tested at the factory.

5.1 Preparation

5.1.1 Preliminary checks

Unpack the transmitter and immediately inspect it for transport damage. Ensure that all connectors are in perfect condition.

The main fuse can be accessed from the outside on the rear panel. Extract the fuse carrier with a screwdriver to check its integrity or for replacement, if necessary. The fuse to be used is this type:

	@ 230 ±15% Vac
TLK300 & TLK2000 @ 230 Vac/115 Vac	(1x) 2A type 5x20

Table 5.1: Fuses

Provide for the following (applicable to operating tests and putting into service):

- ✓ Single-phase mains power supply, with adequate earth connection.
- ✓ Connection cable kit (**NOT INCLUDED**), including:
 - Cables for telemetry signals and sampling.
 - If a LAN output is present: Ethernet cable (with RJ45 connector) for connection to ADSL router or LAN.

5.1.2 Connections



Note: the mains must be equipped with adequate earth connection properly connected to the equipment. This is a pre-requisite for ensuring operator safety and correct operation.

Connect the sampling cables of **TLK300** or **TLK2000** sources to output connectors of system to telemetric data, such as the **REMOTE** connector of transmitters.

If LAN output is present, connect the **ETHERNET** output of **TLK300** or **TLK2000** to the appropriate input of your ADSL router or LAN network. If the connecting device was different, identify an equivalent.

Connect the mains cable to the corresponding connector MAINS on **TLK300** or **TLK2000**.

5.1.3 Dip Switch configuration

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Modem None																
Modem PSTN Option	x															
Modem GSM Option		x														
Lan Option			x													
Not used				x												
Config TX									x	x	x	x	x			
Not used					x	x	x	x						x	x	x

Table 5.2: Dip Switch

Below the different configurations, that CONFIG TX can assume, are listed.

Dip Switch, from position 1 to position 5, is to set as binary number based on the configuration number to which reference is made (for example the configuration 12 is equal to 00110, or the configuration 20 is equal to 00101).

5.1.3.1 Configuration of transmitter Version from V9 to V12

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 01	1	2	3			TEX + TEX
Config 02	1	2	3	4	5	(TEX + PJ) + (TEX + PJ)
Config 03	1	2	3	4	5	(TEX + HC) + (TEX + HC)
Config 04	1	2	3	4		(TEX + PJ) + TEX
Config 05	1	2	3	4		(TEX + HC) + TEX
adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 06	1	2	3			PTX + PTX
Config 07	1	2	3	4	5	(PTX + PJ) + (PTX + PJ)
Config 08	1	2	3	4	5	(PTX + HC) + (PTX + HC)
Config 09	1	2	3	4		(PTX + PJ) + PTX
Config 10	1	2	3	4		(PTX + HC) + PTX
adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 11	1	2	3			PTX + TEX
Config 12	1	2	3	4	5	(PTX + PJ) + (TEX + PJ)
Config 13	1	2	3	4	5	(PTX + HC) + (TEX + HC)
Config 14	1	2	3	4		(PTX + PJ) + TEX
Config 15	1	2	3	4		(PTX + HC) + TEX

Table 5.3: TX configurations in versions from V9 to V12

5.2 Management Firmware



Note: For better clarity, only the typical screens of **TLK2000** are reported below. The **TLK300** model is not equipped with LCD display.

The equipment features an LCD with two lines by 16 characters that displays a set of menus. The figure below provides an overview of equipment menus.

The symbols listed below appear in the left portion of the display as appropriate:

- (Cursor) - Highlights selected (i.e. accessible) menu.
- ▶ (Filled arrow) - Editable parameter marker. This symbol appears in menus that take up more than two lines to aid browsing.
- ▶▶▶ (Three empty arrows) - Parameter is being edited.
- ▶ (Empty arrow) - Current line marker; the parameter in this line cannot be edited. This symbol appears in menus that take up more than two lines to aid browsing.

Switch on the equipment and verify that the led ON is lit. The LCD will display an indication of the status of operation about modem and Lan.

```
Modem : Not in use
Lan   : Not in use
```

Menu 1

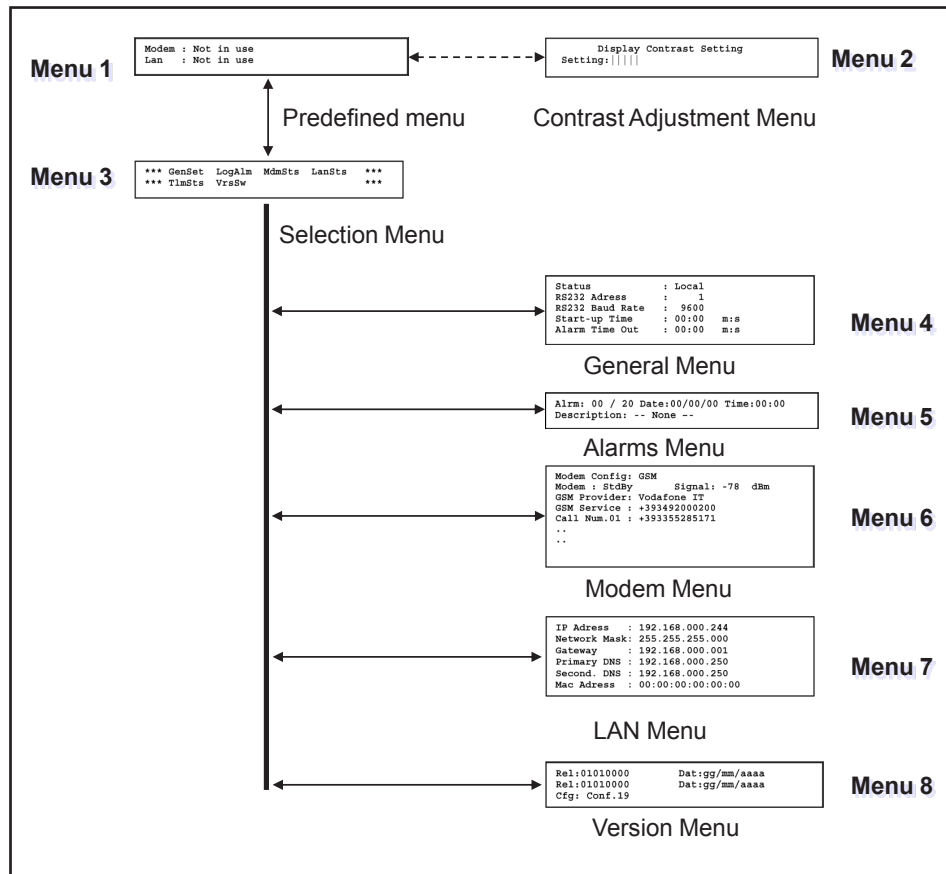


Figure 1

When the display is off, touching any key will turn on backlightin.

When the display is on, by pressing the **ENTER** button for about 3 seconds while you are in the **default menu** (menu 1), is used to call up the **contrast adjustment menu** (menu 4). Once you choose the setting, by press **ENTER** again and you will exit the present menu, confirming the change.

```

Display Contrast Setting
Setting:|||||
    
```

Menu 2

When the display is on, by pressing the **ESC** button from the **default menu** (menu 1), calls up the **selection screen** (menu 3), which gives access to all other menus:

```





*** GenSet LogAlm MdmSts LanSts ***
*** TlmSts VrsSw ***
    
```

Menu 3

If you want to return to the **default menu** (menu 1), simply press the **ESC** button.

5.2.1 General menu (GenSts)

In this menu, you can toggle **local control**, set the **address** and **speed** of **serial ports**, and set the time both of **Start-up** and of **alarms generation**.

To edit an item, highlight the appropriate line using the   and   buttons and then press and hold the **ENTER** button until the command is accepted. In this way, the setting is toggled between Local and Remote or viceversa. To edit the parameters, simply select item and edit its value using the UP and DOWN buttons; finally, press **ENTER** to confirm.

Status	:	Local	
RS232 Adress	:	1	
RS232 Baud Rate	:	9600	
Start-up Time	:	00:00	m:s
Alarm Time Out	:	00:00	m:s

Menu 4

Status The equipment can read and modify their own operating parameters in local mode (LOCAL) through the navigation keys and firmware management, excluding all other sources. The equipment can only read in remote mode (REMOTE), but not modify the operating parameters, except through commands provided by the LAN interfaces or GSM connected.

RS232 Adress
Selection of serial address or USB for TELECON. The serial address is relevant when the unit is connected to an RVR transmission system which provides for use of this protocol. It is recommended, however, to not change it for any reason. It is selectable from 1 to 200.

RS232 Baud Rate
Selection of the baud rate for the serial port data transfer selectable between 1200, 2400, 4800, 9600, 19200 and 38400.



Start-up Time
Setting of start-up time expressed in mm:ss.

Alarm Time Out
Setting of time for alarms generation expressed in mm:ss.

5.2.2 Alarms menu (LogAlm)

This menu provides general information on the last twenty alarms stored in a non volatile memory from the exciter.

In case the buffer is full, the previous alarms stored will have replaced with the new one, normally it visualized the last alarm saved in memory.

To change the alarm displayed press the  and  buttons, turn until the indicator is highlighted on the "Alarm" label and then press again to confirm. Select one of the twenty alarms choose itself from the list of alarms 1 ... 20 using the buttons.

If the user confirm or doesn't confirm the new value (i.e., the **ENTER** button is not pressed), the cursor stops blinking and remains on the first alarm stored.

```

Alrm: 00 / 20 Date:00/00/00 Time:00:00
Description: -- None --
    
```

Menu 5

- Alrm Visualization and selection of the stored alarm number.
- Date Visualization of the alarm record date expressed as dd/MM/yy.
- Time Visualization of the alarm record time expressed as HH:mm.
- Description Visualization of the of stored alarm name.

Note that these are readings, rather than settings, and cannot be edited (note the empty triangle).

5.2.3 Modem menu (MdmSts)



Note: this menu is present on **TLK2000** only in version **/V2, /V6, /V4 and /V8**.

This menu provides general information on the modem in case it is installed in the equipment:

```
Modem Config: GSM
Modem : StdBBy      Signal: -78  dBm
GSM Provider: Vodafone IT
GSM Service : +393492000200
Call Num.01 : +393355285171
..
..
```

Menu 6

- Modem Config
Visualization of modem type selected.
- Modem
Visualization of the modem status.
- Signal
Visualization of the GSM signal level received in antenna expressed in dBm.
- GSM Provider
Visualization of the customer number manager.
- GSM Service
Visualization of the Service Centre Number.
- Call Num.xx
Visualization of last 10 numbers for calls and SMS.

Note that these are readings, rather than settings, and cannot be edited (note the empty triangle).

5.2.4 Lan Menu (LanSts)

This page shows to the user the information about the presence of LAN interface on the machine.

IP Address	: 192.168.000.244
Network Mask	: 255.255.255.000
Gateway	: 192.168.000.001
Primary DNS	: 192.168.000.250
Second. DNS	: 192.168.000.250
Mac Address	: 00:00:00:00:00:00

Menu 5

IP Address

Shows the number that unequivocally identifies, within a single network, the devices connected to an IT network that uses the IP standard (Internet Protocol).

Network Mask

Shows the subnet mask, necessary for the computer that must communicate with another IP address to know if it should route packages toward the gateway of its local network or use the address of the receiver local network.

Gateway

Shows gateway address. In simpler networks, there is only one gateway that forwards to the internet network all the outbound traffic. In more complicated networks where many subnets are available, each of them refers to a gateway that will route data traffic towards the other subnets or forward it to other gateways.

Primary DNS

Shows the first DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

Second DNS

Shows the second DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

MAC Address

Shows the MAC (Media Access Control) address; this address is uniquely assigned to the ethernet network card present on exciter. It can be useful if you want to add in your router, or firewall, a list of MAC addresses of network cards authorized to connect to the network.

Note that these are readings, rather than settings, and cannot be edited (note the empty triangle).

5.2.5 Version menu (VrsSw)

This menu provides general information on the release installed:

Rel:01010000	Dat:gg/mm/aaaa
Rel:01010000	Dat:gg/mm/aaaa
Cfg: Conf.19	

Menu 6

Note that these are readings, rather than settings, and cannot be edited (note the empty triangle).

- Rel Visualization of firmware release (first row) or Bios information (second row).
- Dat Visualization of release date about firmware (first row) or Bios (second row).
- Cfg Visualization of table loaded set via dip-Swtiches.

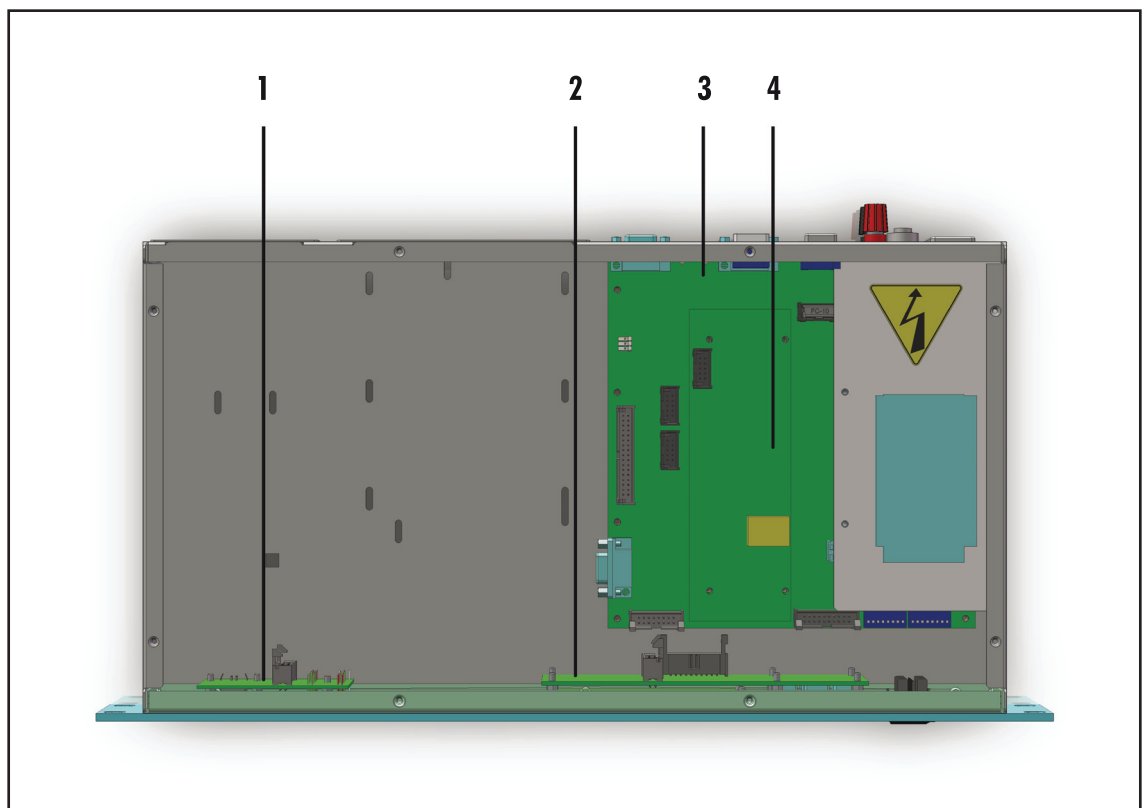
6. Identification and Access to the Modules

6.1 Identification of the Modules

The **TLK300** and **TLK2000** are made up of various modules linked to each other through connectors so as to make maintenance and any required module replacement easier.

6.1.1 TL300 and TLK2000 versions /V9 - Upper view

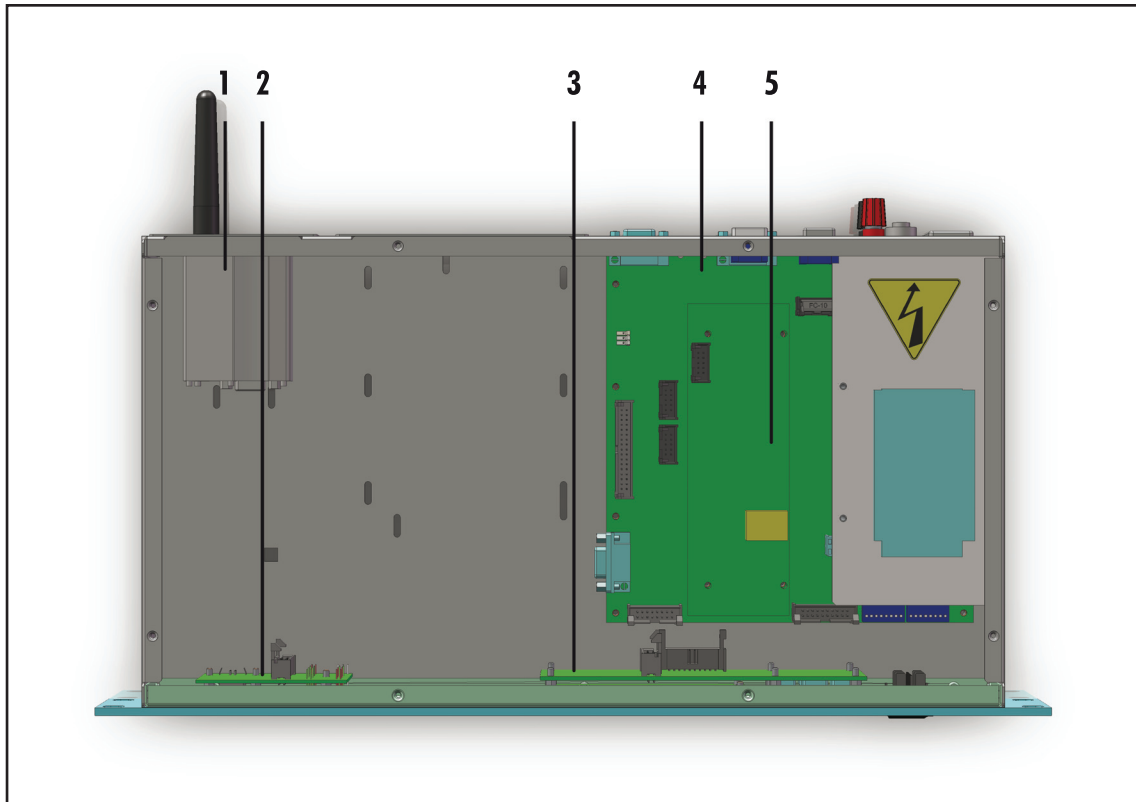
The figure below shows the equipment upper view with the various components pointed out.



- [1] USB & LED card
- [2] Panel card (**not present on TLK300**)
- [3] Mainboard & Power Supply card
- [4] 16-bit CPU card

6.1.2 TL300 and TLK2000 versions /V10 - Upper view

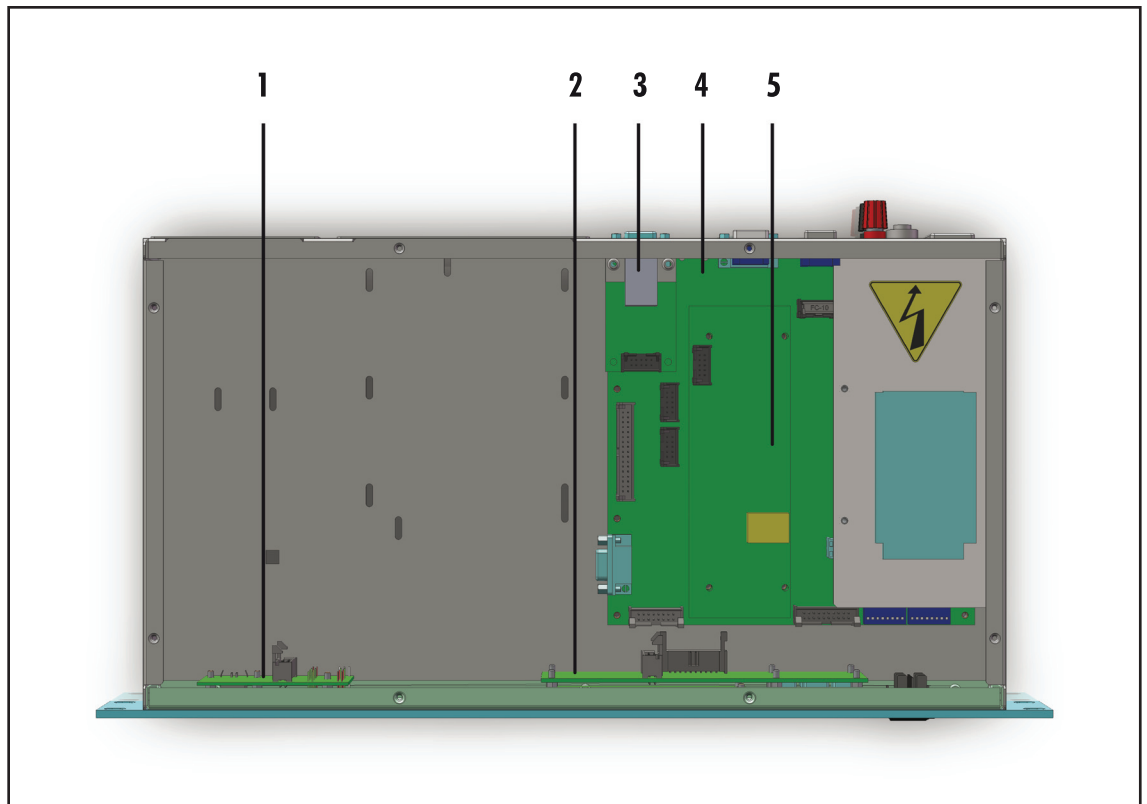
The figure below shows the equipment upper view with the various components pointed out.



- [1] GSM Modem & Antenna
- [2] USB & LED card
- [3] Panel card (**not present on TLK300**)
- [4] Mainboard & Power Supply card
- [5] 16-bit CPU card

6.1.3 TL300 and TLK2000 versions /V11 - Upper view

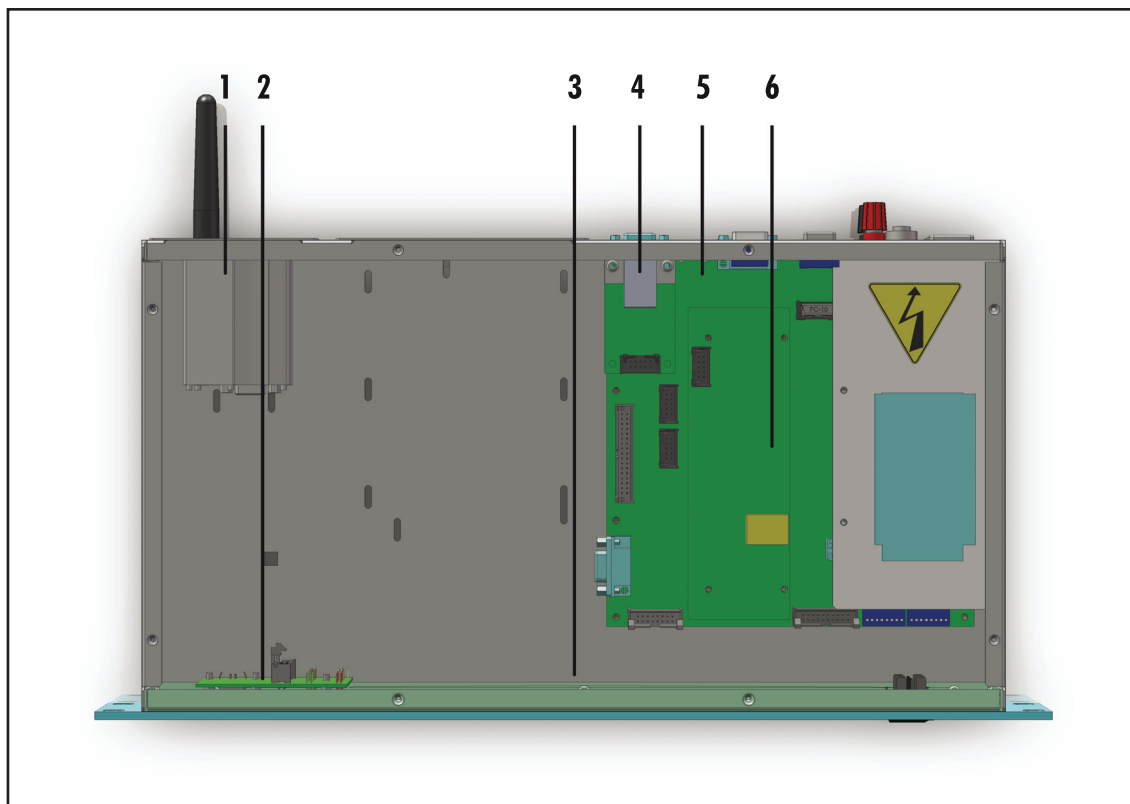
The figure below shows the equipment upper view with the various components pointed out.



- [1] USB & LED card
- [2] Panel card (**not present on TLK300**)
- [3] LAN card
- [4] Mainboard & Power Supply card
- [5] 16-bit CPU card

6.1.4 TL300 and TLK2000 versions /V12 - Upper view

The figure below shows the equipment upper view with the various components pointed out.



- [1] GSM Modem & Antenna
- [2] USB & LED card
- [3] Panel card (**not present on TLK300**)
- [4] LAN card
- [5] Mainboard & Power Supply card
- [6] 16-bit CPU card

7. Working Principles

7.1 Panel card

The panel card contains display and keys needed to interface with the user.

7.2 Mainboard

The main board carries out the following functions:

- RS232, RS485, USB and I²C input/output treatment;
- Signal Processing Control;
- Management measures;
- Distribution of power supplies

The power supply is a “direct from mains” type and it can be connected to any voltage between 90 and 260 V without any adjustments or manual settings.

7.3 16-bit CPU Card

The CPU card is located on the mainboard.

This card is the heart of the equipment as it handles and processes all information provided by the other cards and by other devices connected through the serial interface.

It is possible to perform firmware updates by directly connecting the RS232 output of **TLK300 & TLK2000** to serial or USB port of one PC.

The card has a diagnostic LEDs to verify it works.

7.4 USB card

This card adds an USB 2.0 port to allow connection to one PC by creating a virtual serial port.

The USB connector is used to program the firmware and to interface in local with TELECON software.

The USB connection automatically puts the equipment in local mode.

7.5 LAN card

This card adds a LAN port that allows you to connect itself to an equipment via TCP/IP. The visualization and modification of working parameters concern transmitter is so possible using an Internet browser in added Java and Ajax features.

7.5 Alarm generation

Alarm generation parameters are listed below:

- Alarm generation parameters are listed below:
- Exciter output power (forward power good “PgD”);
- Reflected power at the exciter (reflected power good “PgR”);
- Temperature state (OVER TEMPERATURE);
- Audio Signal presence;
- Mains voltage state (present or missing).

An inhibit time (start time) after power-on is provided to ensure false alarm prevention. When this inhibit time times out, the thresholds of alarm generation parameters are checked and remote alarms are sent if needed.

Alarm generation technique is outlined in the figure below; remote alarm delay, i.e. the amount of time the system waits before issuing a remote alarm after an alarm condition occurs is indicated in figure 7.1. When appropriate, a new line is added to the alarm log stored, up to twenty lines maximum.

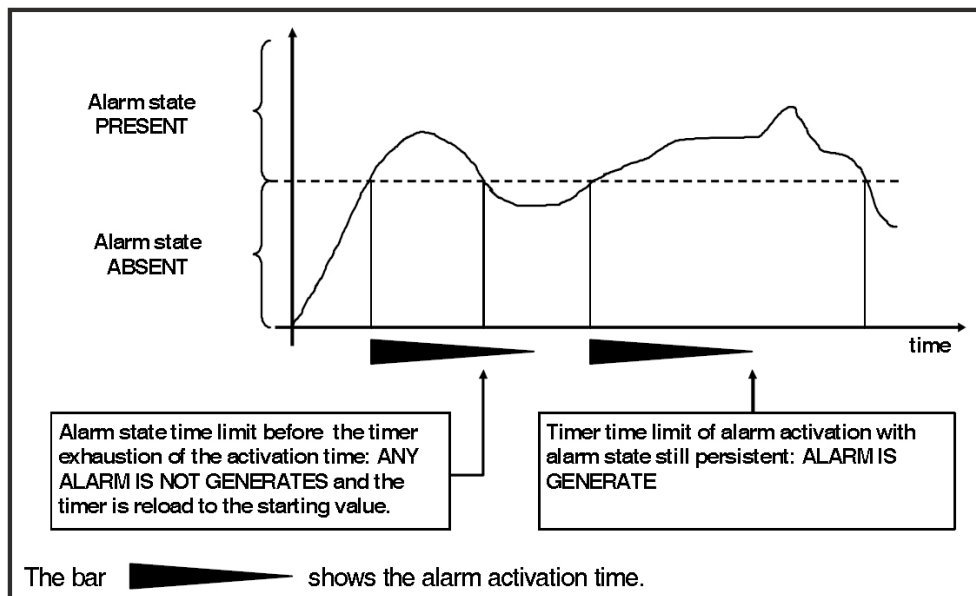


Figure 7.1

The alarm log may be reviewed using the “TELECON” software, or through SMS (see relevant section) only for GSM model when connected to an external modem, or through Trap viewable in a MIB browser only for WEB version with SNMP.



WARNING: The mains alarm is internally generated if the device is powered through appropriate terminals with an external $12V_{DC}$; instead, an SMS message indicating a normal condition is sent upon next start-up.

8. Web User Interface (WUI)

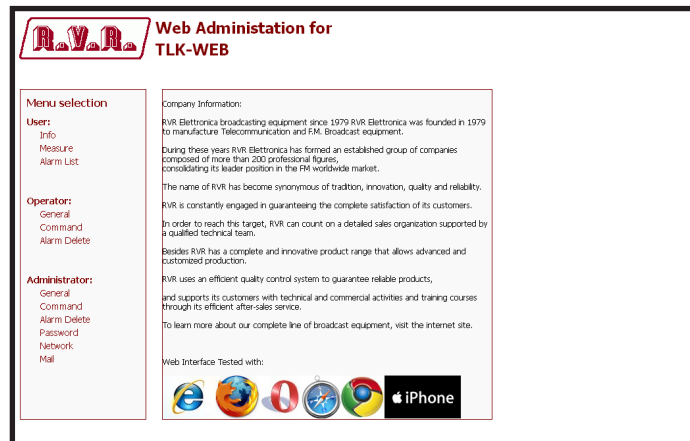
Once all connections previously described are performed, the equipment is ready for commissioning.

The **WUI** (Web User Interface) allows you to adjust, modify or display the configuration variables such as IP, netmask and gateway address. Follow the procedure below to open the **WUI**:

- 1) Open your web browser on your PC, and connect to **http://192.168.0.244** address to connect to the **WUI** (if LAN IP address was previously modified, it is necessary to use the new one). At this point the following page opens.

By factory the RVR uses the following adjustments:

- IP address: **192.168.0.244**
- Netmask address: **255.255.255.0**
- Gateway address: **192.168.0.1**



Menu 1

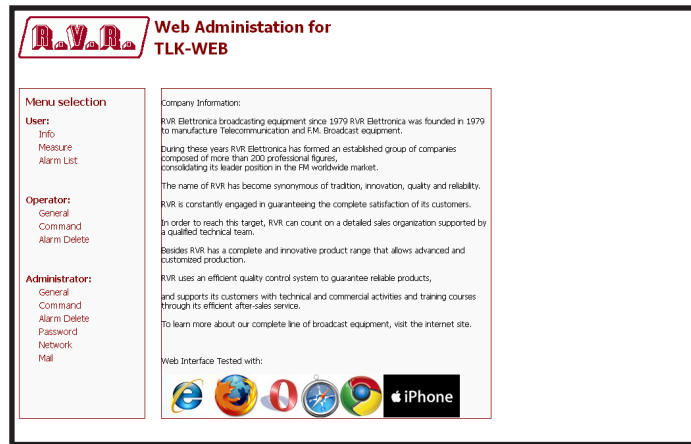


Nota : If address **http://192.168.0.244** does not work, check and set IP address as **192.168.0.XXX** (where **XXX** is a figure between 1 and 254, excluding 244 that is **TLK300&2000** interface default address). To change the IP address, follow the instructions in the manual or in the online guide and technical help, specific for the Operating System you use.

- 2) Modify the parameters in accordance with the own needs.
- 3) Now interface is ready to remotely read data and modify the various settings of the equipment.

8.1 Management Software

- 1) After access is made, the **Main menu** (main page) opens and shows possible viewing options. This picture shows the **Main menu** after access:



Menu 1

To enter in one of the sub-menus, select the name and then click on item to enter.

To go back to **MAIN menu**, just press the F5 key on your computer's keyboard to force the WEB page reload.

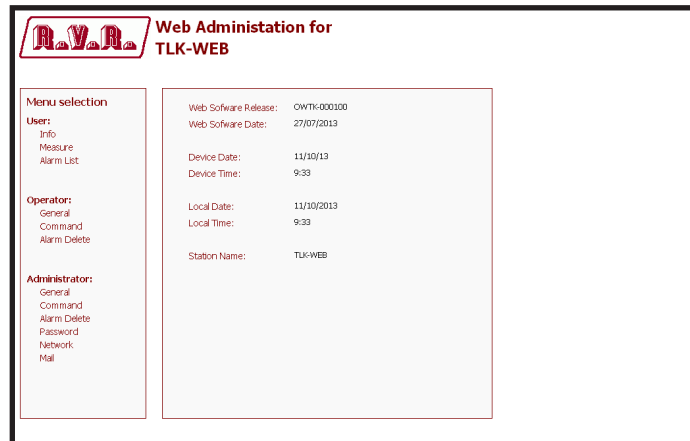
The page that appears is divided into three frames:

- 1) **Title**: it has the logo and an identification of the current page displayed. It is located on the top of the page.
- 2) **Navigation menu**: it allows you to select the page to display. To enter into a submenu, select the name and then click on the item to enter.
- 3) **Body**: area where the page displays information about the selected menu.

8.1.1 Info Menu - User

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator General** menu.

This page shows the user the data of **TLK300** or **TLK2000** interface:



Menu 2

Web Software Release

Shows the release of WEB firmware.

Web Software Date

Shows the issue date of WEB firmware.

Device Date

Shows the day stored on the equipment (dd/MM/yyyy).

Device Time

Shows the time stored on the equipment (hh:mm).

Local Date

Shows the day stored in your browser/PC (dd/MM/yyyy).

Local Time

Shows the time stored in your browser/PC (hh:mm).

Station Name

Shows the ID name of transmitting station.

8.1.2 Measure Menu - User

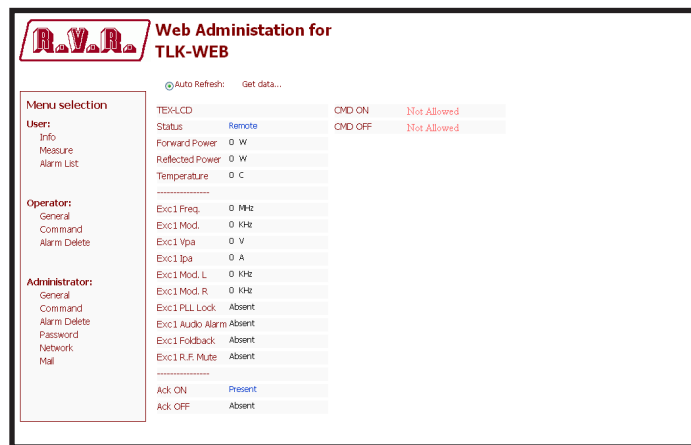
Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator Command Menu**.

The upper part allows you to enable or disable the Auto-refresh by clicking on the relevant box.

With Auto-refresh enabled the measures are taken every 3 seconds (“Get Data ..”) and gave available in a legible form by the current page (“Ready”).

With Auto-refresh disabled the measures are frozen (“Stopped”) at the time when you uncheck the box and gave available in a legible form by the current page.

This page shows the user the data of the exciter connected to the **TLK300** or **TLK2000** interface:



Menu 3



Nota: an example of **TLK300** or **TLK2000** connected to **TEX-LCD**, made by **RVR**, is in the case shown above. The **x** next to **EXC** words is refer to the number of exciter to which the measure makes reference.

Status

Shows the status of remote control.

Forward Power

Shows exciter forward power expressed in W.

Reflected Power

Shows exciter reflected power expressed in W.

Temperature

Shows equipment internal temperature reading expressed in °C.

Exc x Freq.

Shows operating frequency of exciter expressed in MHz.

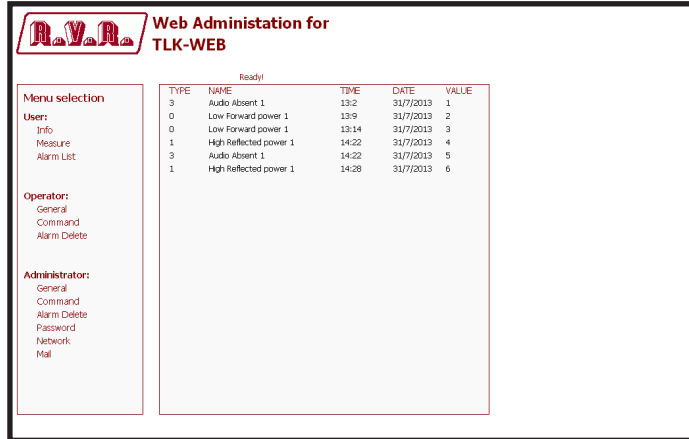
- Exc x Mod.
Shows exciter modulation expressed in kHz.
- Exc x Vpa
Shows exciter amplifier module voltage expressed in V.
- Exc x Ipa
Shows exciter amplifier module current expressed in A.
- Exc x Mod.L
Shows modulation on left channel of exciter expressed in kHz.
- Exc x Mod.R
Shows modulation on right channel of exciter expressed in kHz.
- Exc x PLL Lock
Shows the lock status at frequency set by PLL.
- Exc x Audio Alarm
Shows the status of an impasse due to excessive SWR.
- Exc x Foldback
Shows the triggered status of the foldback function (automatic reduction of output power).
- Exc x Ext R.F. Mute
Shows the status of power inhibition by an interlock signal.
- CMD ON
Not allowed through User credentials.
- CMD OFF
Not allowed through User credentials.

8.1.3 Alarm List menu - User

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator Alarm Delete** Menu.

Within this menu you can display all alarms saved by the system: any new event will automatically delete the older ones.

This page shows the user the alarms of the exciter connected to the **TLK300** or **TLK2000** interface:



The screenshot shows the 'Web Administration for TLK-WEB' interface. On the left, there is a 'Menu selection' sidebar with options for 'User', 'Operator', and 'Administrator'. The 'User' menu is expanded, showing 'Info', 'Measure', and 'Alarm List'. The 'Alarm List' option is selected. The main content area displays a table of alarm events with columns for TYPE, NAME, TIME, DATE, and VALUE. The table contains six rows of data.

TYPE	NAME	TIME	DATE	VALUE
3	Audio Absent 1	13:22	31/7/2013	1
0	Low Forward power 1	13:9	31/7/2013	2
0	Low Forward power 1	13:14	31/7/2013	3
1	High Reflected power 1	14:22	31/7/2013	4
3	Audio Absent 1	14:22	31/7/2013	5
1	High Reflected power 1	14:28	31/7/2013	6

Menu 4

Type

Shows the alarm code.

Name

Shows the description for the error that led to event recording.

Time

Shows event recording time (hh:mm).

Date

Shows the day event was recorded (dd/MM/yyyy).

Value

Shows progressive number for event recording.

8.1.4 General Menu - Operator & Administrator



Note : Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.

This page not only shows the user the information about the exciter connected to **TLK300** or **TLK2000** interface, but also allows setting various parameters.

Below will be described only items that allow the modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice; if you let timer to time out, the parameter setting will remain as previously set.

Menu 5

Web Software Release

Shows ID number of firmware release.

Web Software Date

Shows the date of firmware release.

Device Date

Allows you to align the date stored in the equipment with that of browser device, by pressing the **Synchronize Clock** button (dd/MM/yyyy).

Device Time

Allows you to align the time stored in the equipment with that of browser device, by pressing the **Synchronize Clock** button (hh:mm).

Local Date

Shows the current local Date stored relates on own browser/PC (dd/MM/yyyy).

Local Time

Shows the current local Time stored relates on own browser/PC (hh:mm).

Station Name

Shows ID (identifier) name of transmitting station.

New Station Name

Setting of the station name. Write the name in the box that you want to assign, then press the **Change Name** button to apply the choice.

8.1.5 Command Menu - Operator & Administrator



Note : Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.

This page not only shows the user the information about the exciter connected to the **TLK300** or **TLK2000** interface, but also allows setting various parameters.

The upper part allows you to enable or disable the Auto-refresh by clicking on the relevant box.

With Auto-refresh enabled the measures are taken every 3 seconds (“Get Data ..”) and gave available in a legible form by the current page (“Ready”).

With Auto-refresh disabled the measures are frozen (“Stopped”) at the time when you uncheck the box and gave available in a legible form by the current page.

Following is a description of the items that allow modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice; if you let timer to time out, the parameter setting will remain as previously set.



Menu selection	Parameter	Value	Action
User:	TEX-LCD	CMD ON	Set
Info	Status	Remote	CMD OFF
Measure	Forward Power	0 W	Set
Alarm List	Reflected Power	0 W	
	Temperature	0 C	
Operator:	Exc1 Freq	0 MHz	
General	Exc1 Mod.	0 kHz	
Command	Exc1 Wpa	0 Y	
Alarm Delete	Exc1 Ipa	0 A	
	Exc1 Mod. L	0 kHz	
Administrator:	Exc1 Mod. R	0 kHz	
General	Exc1 PLL Lock	Absent	
Command	Exc1 Audio Alarm	Absent	
Alarm Delete	Exc1 Foldback	Absent	
Password	Exc1 R.F. Mute	Absent	
Network	Ack ON	Present	
Mail	Ack OFF	Absent	

Menu 6



Nota: an example of **TLK300** or **TLK2000** connected to **TEX-LCD**, made by **RVR**, is in the case shown above. The **x** next to **EXC** words is refer to the number of exciter to which the measure makes reference.

- Status
Shows the status of remote control.
- Forward Power
Mostra la potenza diretta dell'eccitatore espressa in W.
- Reflected Power
Mostra la potenza riflessa dell'eccitatore espressa in W.
- Temperature
Mostra la lettura della temperatura interna dell'apparecchiatura espressa in °C.
- Exc x Freq.
Shows operating frequency of exciter expressed in MHz.
- Exc x Mod.
Shows exciter modulation expressed in kHz.
- Exc x Vpa
Shows exciter amplifier module voltage expressed in V.
- Exc x Ipa
Shows exciter amplifier module current expressed in A.
- Exc x Mod.L
Shows modulation on left channel of exciter expressed in kHz.
- Exc x Mod.R
Shows modulation on right channel of exciter expressed in kHz.
- Exc x PLL Lock
Shows the lock status at frequency set by PLL.
- Exc x Audio Alarm
Shows the status of an impasse due to excessive SWR.
- Exc x Foldback
Shows the triggered status of the foldback function (automatic reduction of output power).
- Exc x Ext R.F. Mute
Shows the status of power inhibition by an interlock signal.
- CMD ON
Press **Set** to change the logical state of the data.
- CMD OFF
Press **Set** to change the logical state of the data.

8.1.6 Alarm Delete Menu - Operator & Administrator

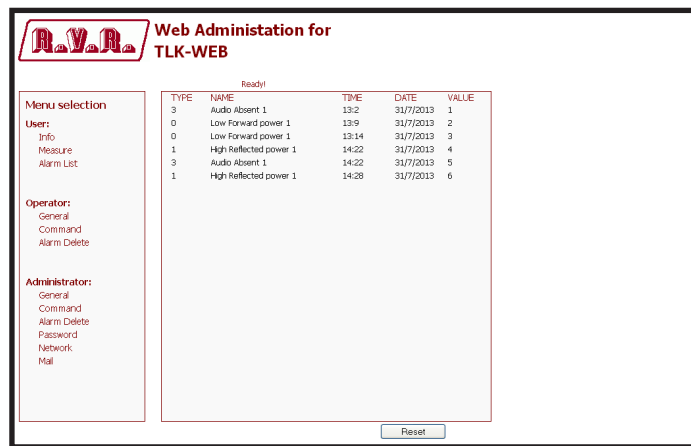


Note : Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.

Values found here are “live readings”, and as such they can not be modified.

Within this menu you can display the last 20 alarms saved by the system: any new event will automatically delete the older ones. Using **Reset** item at bottom right of the menu, you can delete all pending alarms.

This page shows the user the alarms of the exciter connected to the **TLK300** or **TLK2000** interface:



Ready!

TYPE	NAME	TIME	DATE	VALUE
3	Audio Absent 1	13:2	31/7/2013	1
0	Low Forward power 1	13:9	31/7/2013	2
0	Low Forward power 1	13:14	31/7/2013	3
1	High Reflected power 1	14:22	31/7/2013	4
3	Audio Absent 1	14:22	31/7/2013	5
1	High Reflected power 1	14:28	31/7/2013	6

Menu selection:
 User:
 Info
 Measure
 Alarm List

Operator:
 General
 Command
 Alarm Delete

Administrator:
 General
 Command
 Alarm Delete
 Password
 Network
 Mail

Reset

Menu 7

Type

Shows the alarm code.

Name

Shows the description for the error that led to event recording.

Time

Shows event recording time (hh:mm).

Date

Shows the day event was recorded (dd/MM/yyyy).

Value

Shows progressive number for event recording.

8.1.7 Password Menu - Administrator



Note : Access to this menu and modification of these parameters are only possible after login with administrator rights.

This page allows the configuration of login as an administrator and maintenance of **TLK300** or **TLK2000** interface via WUI:

Menu 8

User Password

Shows and set the password for user functions (parameter read-only enabling).

The **Erase** button allows you to delete the password set for maintenance.

Operator Password

Shows and set the password for operator functions (parameter reading and partial change enabling).

The **Erase** button allows you to delete the password set for maintenance.

Admin Password

Shows and set the password for administrator functions (parameter reading and full change enabling).

The **Erase All** button allows you to delete the password set both for the administrator and for the maintenance.

8.1.8 Network Menu - Administrator



Note : Access to this menu and modification of these parameters are only possible after login with administrator rights.

This page not only shows the user the information about **TLK300** or **TLK2000** interface network connection, but also allows setting various parameters.

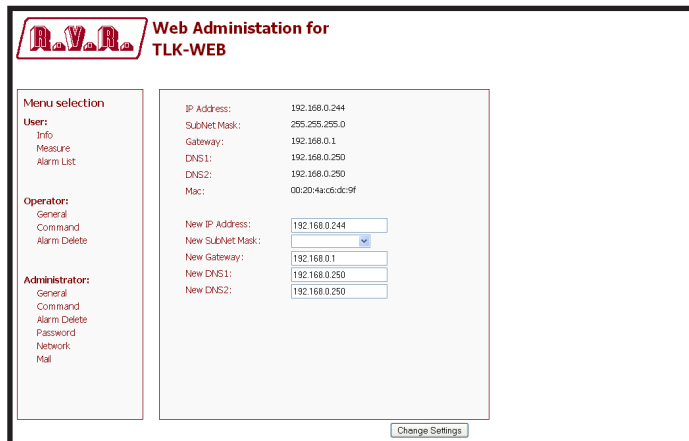
Press the **Change Settings** button to confirm selection; if you let timer to time out, the parameter setting will remain as previously set.



Nota : to make changes within these sub-menus you need to have through technical knowledge of network management. It is recommended to have changes performed by trained or qualified personnel.



Note: The IP address must be set to static and does not have the opportunity to acquire an address from DHCP server on network.



Web Administration for TLK-WEB	
Menu selection	IP Address: 192.168.0.244 SubNet Mask: 255.255.255.0 Gateway: 192.168.0.1 DNS1: 192.168.0.250 DNS2: 192.168.0.250 Mac: 00:20:4a:c6:d0:9f
User: Info Measure Alarm List	New IP Address: <input type="text" value="192.168.0.244"/> New SubNet Mask: <input type="text" value="255.255.255.0"/>
Operator: General Command Alarm Delete	New Gateway: <input type="text" value="192.168.0.1"/> New DNS1: <input type="text" value="192.168.0.250"/> New DNS2: <input type="text" value="192.168.0.250"/>
Administrator: General Command Alarm Delete Password Network Mail	<input type="button" value="Change Settings"/>

Menu 9

IP Address

Shows the number that unequivocally identifies, within a single network, the devices connected to an IT network that uses the IP standard (Internet Protocol).

Subnet Mask

Shows the subnet mask, necessary for the computer that must communicate with another IP address to know if it should route packages toward the gateway of its local network or use the address of the receiver local network.

Gateway

Shows gateway address. In simpler networks, there is only one gateway that forwards to the internet network all the outbound traffic. In more complicated networks where many subnets are available, each of them refers to a gateway that will route data traffic towards the other subnets or forward it to other gateways.

DNS1 server

Shows the first DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

DNS2 server

Shows the second DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

MAC Address

Shows the MAC (Media Access Control) address; this address is uniquely assigned to the ethernet network card present on exciter. It can be useful if you want to add in your router, or firewall, a list of MAC addresses of network cards authorized to connect to the network.

New IP address

Set the new IP (Internet Protocol) number.

New Subnet Mask

Set the new subnet mask.

New Gateway

Set the new gateway address.

DNS1 server

Set the new first DNS server address (Domain Name System).

DNS2 server

Set the new second DNS server address (Domain Name System).

8.1.9 Network Menu - Administrator



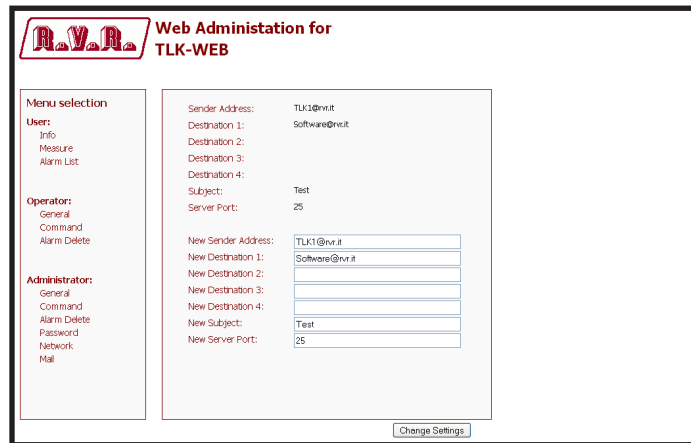
Note : Access to this menu and modification of these parameters are only possible after login with administrator rights.

This page not only shows the user the information about sending messages through **TLK300** or **TLK2000** interface network connection, but also allows setting various parameters.

Press the **Change Settings** button to confirm selection; if you let timer to time out, the parameter setting will remain as previously set.



Note : to make changes within these sub-menus you need to have through technical knowledge of network management. It is recommended to have changes performed by trained or qualified personnel.



Menu 14

Sender Address

Shows the transmission address used for sending messages.

Destination 1

Shows the first address to which alarm warning mail messages shall be sent.

Destination 2

Shows the second address to which alarm warning mail messages shall be sent.

Destination 3

Shows the third address to which alarm warning mail messages shall be sent.

Destination 4

Shows the fourth address to which alarm warning mail messages shall be sent.

Subject

Shows the description of the “subject” field of mail in case of sending alarm messages.

Server Port

Shows the port used by TCP transmission protocol.

New Sender Address

Set the new transmission address used for sending messages.

New Destination 1

Set the new first email address to which alarm warning mail messages shall be sent.

New Destination 2

Set the new second email address to which alarm warning mail messages shall be sent.

New Destination 3

Set the new third email address to which alarm warning mail messages shall be sent.

New Destination 4

Set the new fourth email address to which alarm warning mail messages shall be sent.

New Subject

Set the new description of the “subject” field of the mail in case of sending alarm messages.

New Server Port

Set the new port used by SMTP server for the transmission of email.

9. Versions with GSM

This section describes the features introduced with versions /V10 and /V12 (option with GSM telemetry) and the necessary steps for their proper configuration.

These versions are able to handle remote the alarm reporting by sending SMS messages through a internal GSM modem or through a dial-up external PSTN modem (option on demand) by sending an alarm message string to a connected PC.

Before querying the system using SMS messages, establish a connection using the “TELECON” software and set the provider service centre number and the telephone numbers authorised to send these commands to the devices.

When any one of the parameters listed above changes state, a text message with the following information is sent via modem (if fitted):

- Station Name.
- Station ID.
- State of measurements.

ES1.

Station Name: (string 16char max)

Station ID: (to 000 from 999)

FwdPwr1 OK-

RflPwr1 OK-

Temp1 OK-

Audio1 OK-

Mains OK-

SCM Fault OK-

Audio2 OK-

ES2.

~ Station Name ID:000 - FwdPwr1 OK,RflPwr1 OK,Temp1 OK, Audio1 OK,Mains OK,SCM Fault,Audio2 OK, △

The commands that can be sent are the following:

Command	Response	Description
INFO	Station Name: (string 16char max) Station ID: (from 000 to 999) FWD 1 Power: (Forward Power of TX1 expressed in W) RFL 1 Power: (Reflected Power of TX1 expressed in W) FWD 2 Power: (Forward Power of TX2 expressed in W) RFL 2 Power: (Reflected Power of TX2 expressed in W) Temp: (Temperature in °C) Tx ON (Tx state ON/OFF/STAND-BY) Local (Local, Remote) Alarm Present (Present/Absent)	Transmitter status information
TX1ONOFF	Station Name: (string 16char max) Station ID: (from 000 to 999) Command Execute	Power on or power off transmitter 1
TX2ONOFF	Station Name: (string 16char max) Station ID: (from 000 to 999) Command Execute	Power on or power off transmitter 2
TXCNG	Station Name: (string 16char max) Station ID: (from 000 to 999) Command Execute	Changeover between transmitters
ALARM	Station Name: (string 16char max) Station ID: (from 000 to 999) Record: (Last 4 alarm list store in memory)	Alarm log
RESET	Station Name: (string 16char max) Station ID: (from 000 to 999) RESET stored Record	Clear Alarm Log
STATUS	Station Name: (string 16char max) Station ID: (from 000 to 999) STATUS: Resend status alarm message	Resend the alarm status information
VERSION	Station Name: (string 16char max) Station ID: (from 000 to 999) Release App, Release Bios, Table Code	Software Version informations

Table 9.2 - V10 and V12 versions



Note: Response time to SMS commands may vary with different GSM network providers; as a general rule, response time should not exceed 7-10 minutes maximum.

10. Configurations of Transmitter System

Below are listed the several possible system configurations, the configuration that needs to assume on the dip switch and the screens obtainable via WEB.



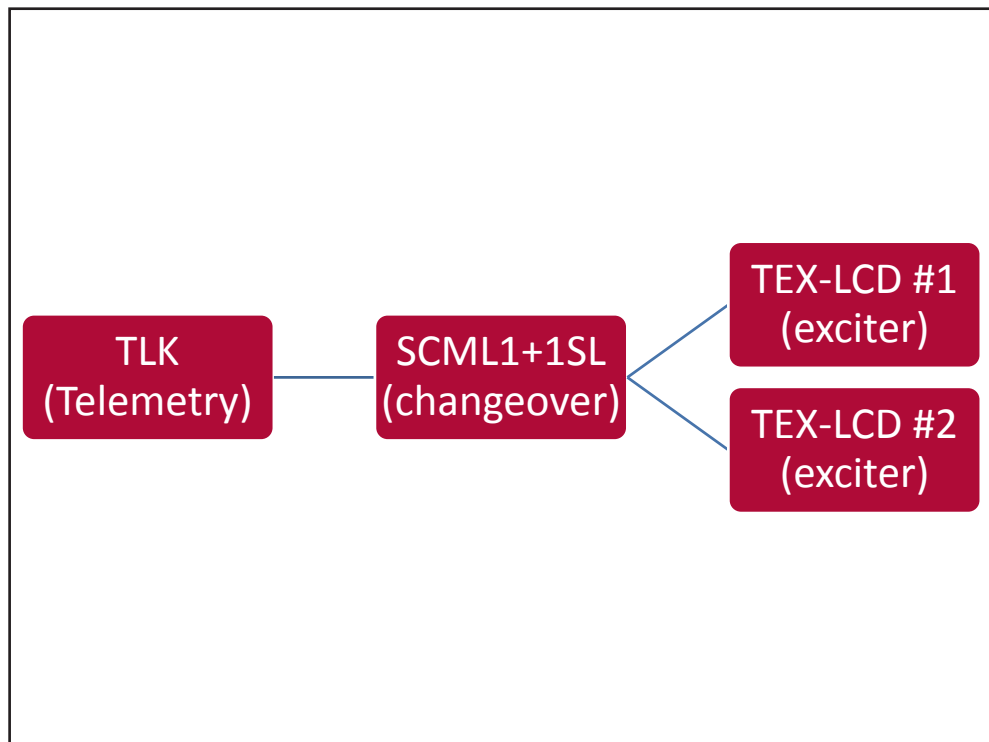
Note: for further information on the Dip Switch, please read the section on Dip Switch Configuration present in this manual.

10.1 Configuration of Transmitter from V9 to V10 Versions

10.1.1 Configuration of System 01

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x TEX-LCD (exciter)



Configuration #01: System

10.1.1.1 Configuration of Dip Switch for System 01

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 1									x							

Configuration #01: Dip Switch

10.1.1.2 I²C Address for System 01

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 01	1	2	3			TEX + TEX

Configuration #01: I²C Address

10.1.1.3 Command Menu - Operator & Administrator for System 01

Web Administration for TLK-WEB

Auto Refresh: Ready!

Menu selection

- User:**
 - Info
 - Measure
 - Alarm List
- Operator:**
 - General
 - Command
 - Alarm Delete
- Administrator:**
 - General
 - Command
 - Alarm Delete
 - Password
 - Network
 - Mail

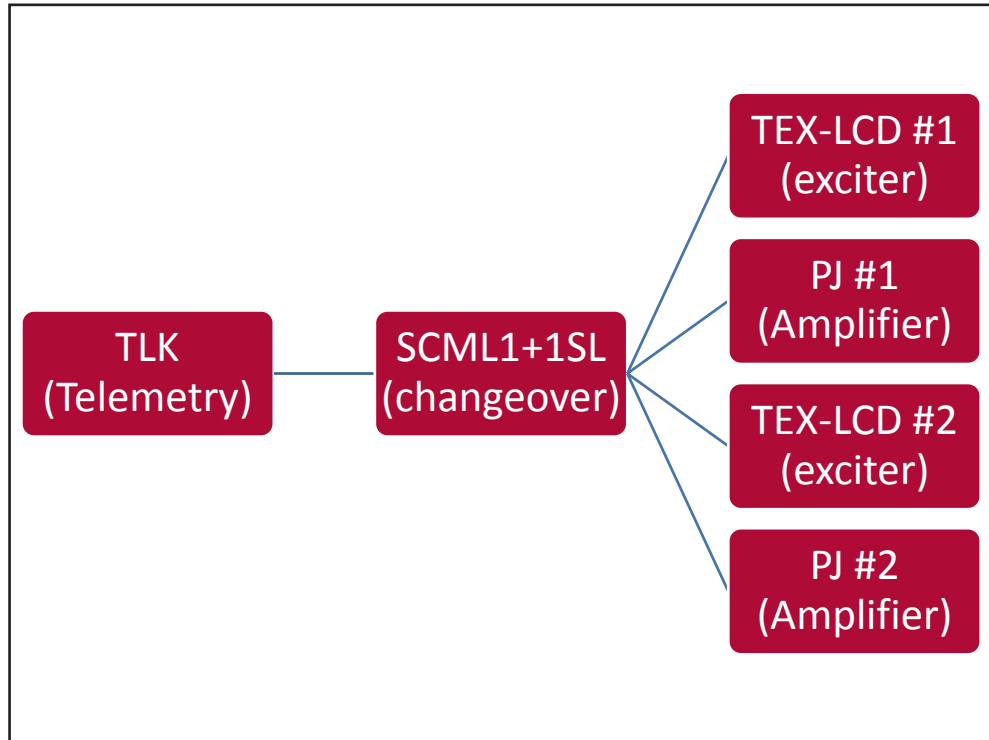
Config.	1	TX1 R.F. Mute	Absent	
Status	Remote			CMD RESET <input type="button" value="Set"/>
TX1 OnAIR	Absent	TX2 Fwd Power	0 W	CMD Auto/Man <input type="button" value="Set"/>
TX1 Good	Absent	TX2 Rfl Power	0 W	CMD Exchange <input type="button" value="Set"/>
TX2 OnAIR	Present	TX2 Freq.	0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>
TX2 Good	Absent	TX2 Mod.	0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>
SCM Status	Manual	TX2 Vpa	0 V	
		TX2 Ipa	0 A	
TX1 Fwd Power	0 W	TX2 Mod. L	0 KHz	
TX1 Rfl Power	0 W	TX2 Mod. R	0 KHz	
TX1 Freq.	0 MHz	TX2 PLL Lock	Absent	
TX1 Mod.	0 KHz	TX2 Audio Alarm	Absent	
TX1 Vpa	0 V	TX2 Foldback	Absent	
TX1 Ipa	0 A	TX2 R.F. Mute	Absent	
TX1 Mod. L	0 KHz			
TX1 Mod. R	0 KHz	SCM Tot Retry	10	
TX1 PLL Lock	Absent	SCM Retry	0	
TX1 Audio Alarm	Absent	SCM Switch	Absent	
TX1 Foldback	Absent	SCM Fault	Absent	

Configuration #01: Screen Command

10.1.2 Configuration of System 02

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x TEX-LCD (exciter)
- 2x PJ (amplifier)



Configuration #02: System

10.1.2.1 Configuration of Dip Switch for System 02

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 2										x						

Configuration #02: Dip Switch

10.1.2.2 I²C Address for System 02

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 02	1	2	3	4	5	(TEX + PJ) + (TEX + PJ)

Configuration #02: I²C Address

10.1.2.3 Command Menu - Operator & Administrator for System 02

Web Administration for TLK-WEB

Auto Refresh: Ready!

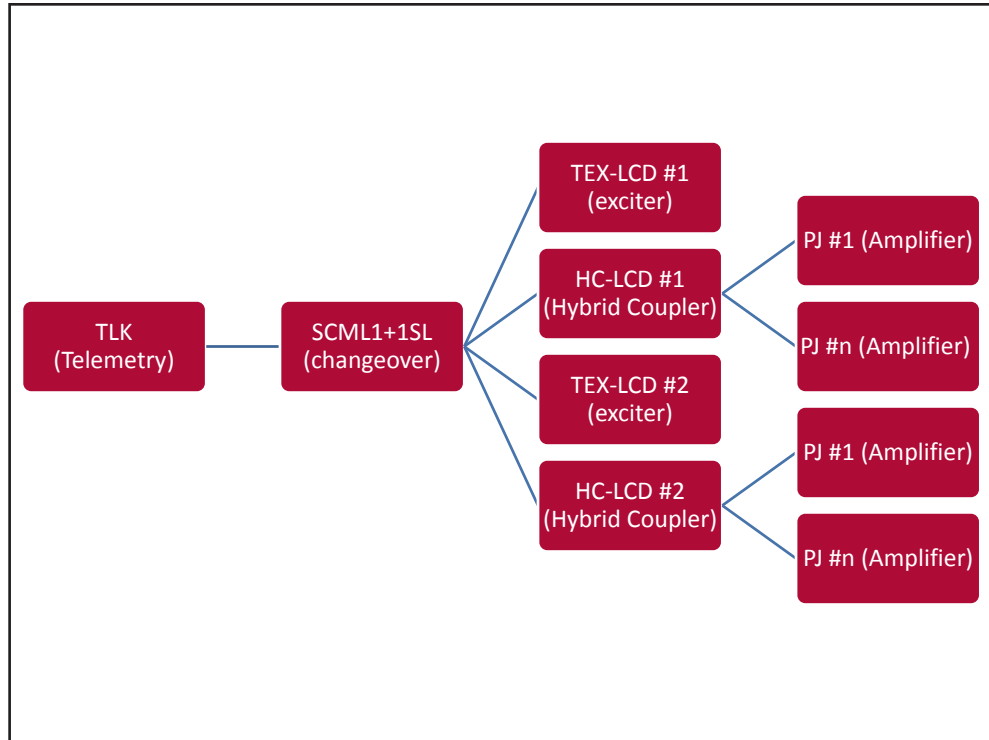
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail Snmp</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config.</td><td>2</td><td>TX1 E_PLL Lock</td><td>Absent</td><td>TX2 E_R.F.Mute</td><td>Absent</td></tr> <tr> <td>Status</td><td>Remote</td><td>TX1 E_Audio_Alm</td><td>Absent</td><td>-----</td><td>-----</td></tr> <tr> <td>Tx1 OnAIR</td><td>Absent</td><td>TX1 E_Foldback</td><td>Absent</td><td>SCM Tot Retry</td><td>10</td></tr> <tr> <td>Tx1 Good</td><td>Absent</td><td>TX1 E_R.F.Mute</td><td>Absent</td><td>SCM Retry</td><td>0</td></tr> <tr> <td>Tx2 OnAIR</td><td>Present</td><td>-----</td><td>-----</td><td>SCM Switch</td><td>Absent</td></tr> <tr> <td>Tx2 Good</td><td>Absent</td><td>TX2 Fwd Power</td><td>0 W</td><td>SCM Fault</td><td>Absent</td></tr> <tr> <td>SCM Status</td><td>Manual</td><td>TX2 Rfl Power</td><td>0 W</td><td>-----</td><td>-----</td></tr> <tr> <td>-----</td><td>-----</td><td>TX1 Fault</td><td>Absent</td><td>CMD RESET</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fwd Power</td><td>0 W</td><td>TX2 E_Freq.</td><td>0 MHz</td><td>CMD Auto/Man</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Rfl Power</td><td>0 W</td><td>TX2 E_Mod.</td><td>0 KHz</td><td>CMD Exchange</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fault</td><td>Absent</td><td>TX2 E_Fwd</td><td>0 W</td><td>CMD TX1 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Freq.</td><td>0 MHz</td><td>TX2 E_Rfl</td><td>0 W</td><td>CMD TX2 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Mod.</td><td>0 KHz</td><td>TX2 E_Vpa</td><td>0 V</td><td></td><td></td></tr> <tr> <td>TX1 E_Fwd</td><td>0 W</td><td>TX2 E_Ipa</td><td>0 A</td><td></td><td></td></tr> <tr> <td>TX1 E_Rfl</td><td>0 W</td><td>TX2 E_Mod. L</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Vpa</td><td>0 V</td><td>TX2 E_Mod. R</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Ipa</td><td>0 A</td><td>TX2 E_PLL Lock</td><td>Absent</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. L</td><td>0 KHz</td><td>TX2 E_Audio_Alm</td><td>Absent</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. R</td><td>0 KHz</td><td>TX2 E_Foldback</td><td>Absent</td><td></td><td></td></tr> </table>	Config.	2	TX1 E_PLL Lock	Absent	TX2 E_R.F.Mute	Absent	Status	Remote	TX1 E_Audio_Alm	Absent	-----	-----	Tx1 OnAIR	Absent	TX1 E_Foldback	Absent	SCM Tot Retry	10	Tx1 Good	Absent	TX1 E_R.F.Mute	Absent	SCM Retry	0	Tx2 OnAIR	Present	-----	-----	SCM Switch	Absent	Tx2 Good	Absent	TX2 Fwd Power	0 W	SCM Fault	Absent	SCM Status	Manual	TX2 Rfl Power	0 W	-----	-----	-----	-----	TX1 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Fwd Power	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Rfl Power	0 W	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Vpa	0 V			TX1 E_Fwd	0 W	TX2 E_Ipa	0 A			TX1 E_Rfl	0 W	TX2 E_Mod. L	0 KHz			TX1 E_Vpa	0 V	TX2 E_Mod. R	0 KHz			TX1 E_Ipa	0 A	TX2 E_PLL Lock	Absent			TX1 E_Mod. L	0 KHz	TX2 E_Audio_Alm	Absent			TX1 E_Mod. R	0 KHz	TX2 E_Foldback	Absent		
Config.	2	TX1 E_PLL Lock	Absent	TX2 E_R.F.Mute	Absent																																																																																																														
Status	Remote	TX1 E_Audio_Alm	Absent	-----	-----																																																																																																														
Tx1 OnAIR	Absent	TX1 E_Foldback	Absent	SCM Tot Retry	10																																																																																																														
Tx1 Good	Absent	TX1 E_R.F.Mute	Absent	SCM Retry	0																																																																																																														
Tx2 OnAIR	Present	-----	-----	SCM Switch	Absent																																																																																																														
Tx2 Good	Absent	TX2 Fwd Power	0 W	SCM Fault	Absent																																																																																																														
SCM Status	Manual	TX2 Rfl Power	0 W	-----	-----																																																																																																														
-----	-----	TX1 Fault	Absent	CMD RESET	<input type="button" value="Set"/>																																																																																																														
TX1 Fwd Power	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>																																																																																																														
TX1 Rfl Power	0 W	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>																																																																																																														
TX1 Fault	Absent	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Freq.	0 MHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Mod.	0 KHz	TX2 E_Vpa	0 V																																																																																																																
TX1 E_Fwd	0 W	TX2 E_Ipa	0 A																																																																																																																
TX1 E_Rfl	0 W	TX2 E_Mod. L	0 KHz																																																																																																																
TX1 E_Vpa	0 V	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Ipa	0 A	TX2 E_PLL Lock	Absent																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_Audio_Alm	Absent																																																																																																																
TX1 E_Mod. R	0 KHz	TX2 E_Foldback	Absent																																																																																																																

Configuration #02: Screen Command

10.1.3 Configuration of System 03

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x TEX-LCD (exciter)
- HC-LCD (hybrid coupler)
- nx PJ (amplifier)



Configuration #03: **System**

10.1.3.1 Configuration of Dip Switch for System 03

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 3									x	x						

Configuration #03: **Dip Switch**

10.1.3.2 I²C Address for System 03

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 03	1	2	3	4	5	(TEX + HC) + (TEX + HC)

Configuration #03: **I²C Address**

10.1.3.3 Command Menu - Operator & Administrator for System 03

Web Administration for TLK-WEB

Auto Refresh: Ready!

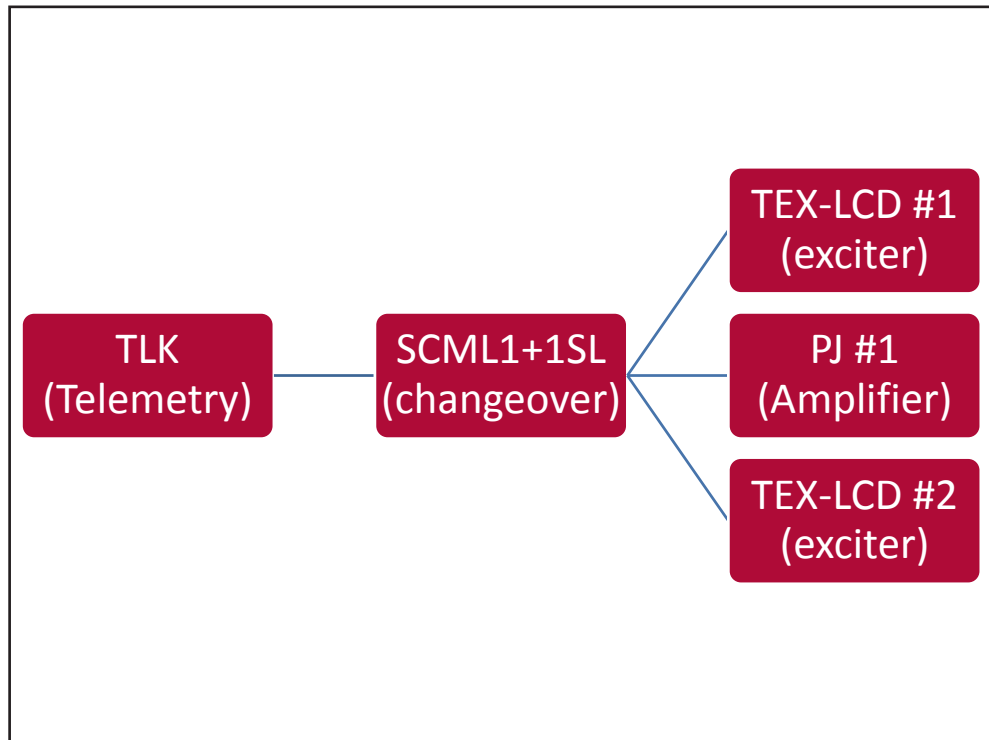
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Config.</td> <td style="width: 25%;">3</td> <td style="width: 25%;">TX1 E_Mod. R</td> <td style="width: 25%;">0 KHz</td> <td style="width: 25%;">TX2 E_Audio_Alm</td> <td style="width: 25%;">Absent</td> </tr> <tr> <td>Status</td> <td>Remote</td> <td>TX1 E_PLL Lock</td> <td>Absent</td> <td>TX2 E_Foldback</td> <td>Absent</td> </tr> <tr> <td>Tx1 OnAIR</td> <td>Absent</td> <td>TX1 E_Audio_Alm</td> <td>Absent</td> <td>TX2 E_R.F.Mute</td> <td>Absent</td> </tr> <tr> <td>Tx1 Good</td> <td>Absent</td> <td>TX1 E_Foldback</td> <td>Absent</td> <td colspan="2">-----</td> </tr> <tr> <td>Tx2 OnAIR</td> <td>Present</td> <td>TX1 E_R.F.Mute</td> <td>Absent</td> <td>SCM Tot Retry</td> <td>10</td> </tr> <tr> <td>Tx2 Good</td> <td>Absent</td> <td colspan="2">-----</td> <td>SCM Retry</td> <td>0</td> </tr> <tr> <td>SCM Status</td> <td>Manual</td> <td>TX2 Fwd Power</td> <td>0 W</td> <td>SCM Switch</td> <td>Absent</td> </tr> <tr> <td colspan="2">-----</td> <td>TX2 Rfl Power</td> <td>0 W</td> <td>SCM Fault</td> <td>Absent</td> </tr> <tr> <td>TX1 Fwd Power</td> <td>0 W</td> <td>TX2 Unbal. Pwr</td> <td>0 W</td> <td colspan="2">-----</td> </tr> <tr> <td>TX1 Rfl Power</td> <td>0 W</td> <td>TX1 Fault</td> <td>Absent</td> <td>CMD RESET</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Unbal. Pwr</td> <td>0 W</td> <td>TX2 E_Freq.</td> <td>0 MHz</td> <td>CMD Auto/Man</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Fault</td> <td>Absent</td> <td>TX2 E_Mod.</td> <td>0 KHz</td> <td>CMD Exchange</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Freq.</td> <td>0 MHz</td> <td>TX2 E_Fwd</td> <td>0 W</td> <td>CMD TX1 On/Off</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Mod.</td> <td>0 KHz</td> <td>TX2 E_Rfl</td> <td>0 W</td> <td>CMD TX2 On/Off</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Fwd</td> <td>0 W</td> <td>TX2 E_Vpa</td> <td>0 V</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Rfl</td> <td>0 W</td> <td>TX2 E_Ipa</td> <td>0 A</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Vpa</td> <td>0 V</td> <td>TX2 E_Mod. L</td> <td>0 KHz</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Ipa</td> <td>0 A</td> <td>TX2 E_Mod. R</td> <td>0 KHz</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Mod. L</td> <td>0 KHz</td> <td>TX2 E_PLL Lock</td> <td>Absent</td> <td colspan="2"></td> </tr> </table>	Config.	3	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----		Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----		SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent	-----		TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----		TX1 Rfl Power	0 W	TX1 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
Config.	3	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent																																																																																																														
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Tx1 Good	Absent	TX1 E_Foldback	Absent	-----																																																																																																															
Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10																																																																																																														
Tx2 Good	Absent	-----		SCM Retry	0																																																																																																														
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TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #03: Screen Command

10.1.4 Configuration of System 04

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x TEX-LCD (exciter)
- PJ (amplifier)



Configuration #04: System

10.1.4.1 Configuration of Dip Switch for System 04

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 4											x					

Configuration #04: Dip Switch

10.1.4.2 I²C Address for System 04

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 04	1	2	3	4		(TEX + PJ) + TEX

Configuration #04: I²C Address

10.1.4.2 Command Menu - Operator & Administrator for System 04

Web Administration for TLK-WEB

Auto Refresh: Ready!

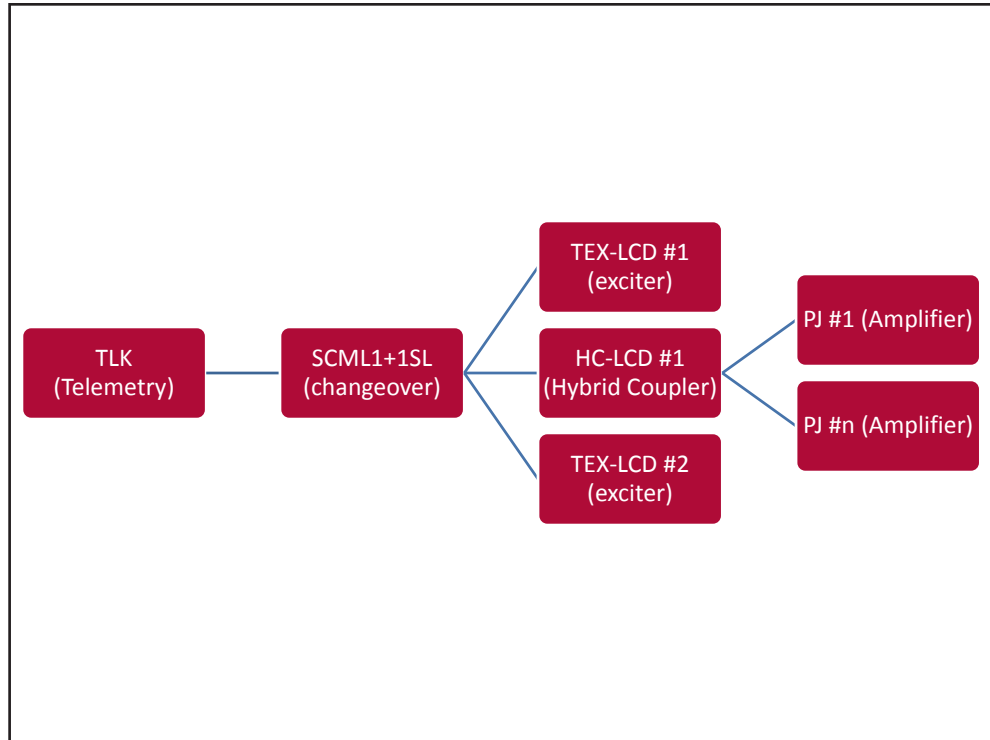
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Config. 4</td> <td style="width: 33%;">TX1 E_PLL Lock Absent</td> <td style="width: 33%;">SCM Retry 0</td> </tr> <tr> <td>Status Remote</td> <td>TX1 E_Audio_Alm Absent</td> <td>SCM Switch Absent</td> </tr> <tr> <td>Tx1 OnAIR Absent</td> <td>TX1 E_Foldback Absent</td> <td>SCM Fault Absent</td> </tr> <tr> <td>Tx1 Good Absent</td> <td>TX1 E_R,F,Mute Absent</td> <td>-----</td> </tr> <tr> <td>Tx2 OnAIR Present</td> <td>-----</td> <td>CMD RESET <input type="button" value="Set"/></td> </tr> <tr> <td>Tx2 Good Absent</td> <td>TX2 Fwd Power 0 W</td> <td>CMD Auto/Man <input type="button" value="Set"/></td> </tr> <tr> <td>SCM Status Manual</td> <td>TX2 Rfl Power 0 W</td> <td>CMD Exchange <input type="button" value="Set"/></td> </tr> <tr> <td>-----</td> <td>TX2 Freq. 0 MHz</td> <td>CMD TX1 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Fwd Power 0 W</td> <td>TX2 Mod. 0 KHz</td> <td>CMD TX2 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Rfl Power 0 W</td> <td>TX2 Vpa 0 V</td> <td></td> </tr> <tr> <td>TX1 Fault Absent</td> <td>TX2 Ipa 0 A</td> <td></td> </tr> <tr> <td>TX1 E_Freq. 0 MHz</td> <td>TX2 Mod. L 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_Mod. 0 KHz</td> <td>TX2 Mod. R 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_fwd 0 W</td> <td>TX2 PLL Lock Absent</td> <td></td> </tr> <tr> <td>TX1 E_Rfl 0 W</td> <td>TX2 Audio Alarm Absent</td> <td></td> </tr> <tr> <td>TX1 E_Vpa 0 V</td> <td>TX2 Foldback Absent</td> <td></td> </tr> <tr> <td>TX1 E_Ipa 0 A</td> <td>TX2 R,F, Mute Absent</td> <td></td> </tr> <tr> <td>TX1 E_Mod. L 0 KHz</td> <td>-----</td> <td></td> </tr> <tr> <td>TX1 E_Mod. R 0 KHz</td> <td>SCM Tot Retry 10</td> <td></td> </tr> </table>	Config. 4	TX1 E_PLL Lock Absent	SCM Retry 0	Status Remote	TX1 E_Audio_Alm Absent	SCM Switch Absent	Tx1 OnAIR Absent	TX1 E_Foldback Absent	SCM Fault Absent	Tx1 Good Absent	TX1 E_R,F,Mute Absent	-----	Tx2 OnAIR Present	-----	CMD RESET <input type="button" value="Set"/>	Tx2 Good Absent	TX2 Fwd Power 0 W	CMD Auto/Man <input type="button" value="Set"/>	SCM Status Manual	TX2 Rfl Power 0 W	CMD Exchange <input type="button" value="Set"/>	-----	TX2 Freq. 0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>	TX1 Fwd Power 0 W	TX2 Mod. 0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>	TX1 Rfl Power 0 W	TX2 Vpa 0 V		TX1 Fault Absent	TX2 Ipa 0 A		TX1 E_Freq. 0 MHz	TX2 Mod. L 0 KHz		TX1 E_Mod. 0 KHz	TX2 Mod. R 0 KHz		TX1 E_fwd 0 W	TX2 PLL Lock Absent		TX1 E_Rfl 0 W	TX2 Audio Alarm Absent		TX1 E_Vpa 0 V	TX2 Foldback Absent		TX1 E_Ipa 0 A	TX2 R,F, Mute Absent		TX1 E_Mod. L 0 KHz	-----		TX1 E_Mod. R 0 KHz	SCM Tot Retry 10	
Config. 4	TX1 E_PLL Lock Absent	SCM Retry 0																																																								
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TX1 E_Mod. L 0 KHz	-----																																																									
TX1 E_Mod. R 0 KHz	SCM Tot Retry 10																																																									

Configuration #04: Screen Command

10.1.5 Configuration of System 05

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x TEX-LCD (exciter)
- HC-LCD (hybrid coupler)
- nx PJ (amplifier)



Configuration #05: System

10.1.5.1 Configuration of Dip Switch for System 05

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 5									x		x					

Configuration #05: Dip Switch

10.1.5.2 I²C Address for System 05

adr	TEX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 05	1	2	3	4		(TEX + HC) + TEX

Configuration #05: I²C Address

10.1.5.3 Command Menu - Operator & Administrator for System 05

Web Administration for TLK-WEB

Auto Refresh: Ready!

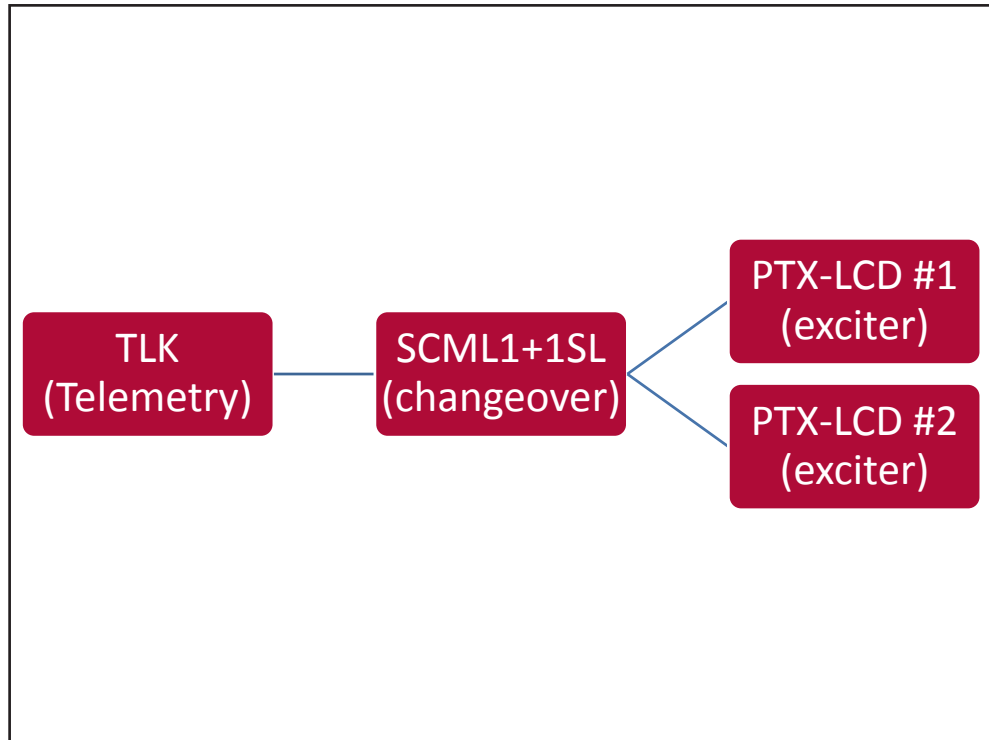
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Config. 5</td> <td style="width: 33%;">TX1 E_Mod. R 0 KHz</td> <td style="width: 33%;">SCM Tot Retry 10</td> </tr> <tr> <td>Status Remote</td> <td>TX1 E_PLL Lock Absent</td> <td>SCM Retry 0</td> </tr> <tr> <td>Tx1 OnAIR Absent</td> <td>TX1 E_Audio_Alm Absent</td> <td>SCM Switch Absent</td> </tr> <tr> <td>Tx1 Good Absent</td> <td>TX1 E_Foldback Absent</td> <td>SCM Fault Absent</td> </tr> <tr> <td>Tx2 OnAIR Present</td> <td>TX1 E_R.F.Mute Absent</td> <td>-----</td> </tr> <tr> <td>Tx2 Good Absent</td> <td>-----</td> <td>CMD RESET <input type="button" value="Set"/></td> </tr> <tr> <td>SCM Status Manual</td> <td>TX2 Fwd Power 0 W</td> <td>CMD Auto/Man <input type="button" value="Set"/></td> </tr> <tr> <td>-----</td> <td>TX2 Rfl Power 0 W</td> <td>CMD Exchange <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Fwd Power 0 W</td> <td>TX2 Freq. 0 MHz</td> <td>CMD TX1 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Rfl Power 0 W</td> <td>TX2 Mod. 0 KHz</td> <td>CMD TX2 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Unbal. Pwr 0 W</td> <td>TX2 Vpa 0 V</td> <td></td> </tr> <tr> <td>TX1 Fault Absent</td> <td>TX2 Ipa 0 A</td> <td></td> </tr> <tr> <td>TX1 E_Freq. 0 MHz</td> <td>TX2 Mod. L 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_Mod. 0 KHz</td> <td>TX2 Mod. R 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_Fwd 0 W</td> <td>TX2 PLL Lock Absent</td> <td></td> </tr> <tr> <td>TX1 E_Rfl 0 W</td> <td>TX2 Audio Alarm Absent</td> <td></td> </tr> <tr> <td>TX1 E_Vpa 0 V</td> <td>TX2 Foldback Absent</td> <td></td> </tr> <tr> <td>TX1 E_Ipa 0 A</td> <td>TX2 R.F. Mute Absent</td> <td></td> </tr> <tr> <td>TX1 E_Mod. L 0 KHz</td> <td>-----</td> <td></td> </tr> </table>	Config. 5	TX1 E_Mod. R 0 KHz	SCM Tot Retry 10	Status Remote	TX1 E_PLL Lock Absent	SCM Retry 0	Tx1 OnAIR Absent	TX1 E_Audio_Alm Absent	SCM Switch Absent	Tx1 Good Absent	TX1 E_Foldback Absent	SCM Fault Absent	Tx2 OnAIR Present	TX1 E_R.F.Mute Absent	-----	Tx2 Good Absent	-----	CMD RESET <input type="button" value="Set"/>	SCM Status Manual	TX2 Fwd Power 0 W	CMD Auto/Man <input type="button" value="Set"/>	-----	TX2 Rfl Power 0 W	CMD Exchange <input type="button" value="Set"/>	TX1 Fwd Power 0 W	TX2 Freq. 0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>	TX1 Rfl Power 0 W	TX2 Mod. 0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>	TX1 Unbal. Pwr 0 W	TX2 Vpa 0 V		TX1 Fault Absent	TX2 Ipa 0 A		TX1 E_Freq. 0 MHz	TX2 Mod. L 0 KHz		TX1 E_Mod. 0 KHz	TX2 Mod. R 0 KHz		TX1 E_Fwd 0 W	TX2 PLL Lock Absent		TX1 E_Rfl 0 W	TX2 Audio Alarm Absent		TX1 E_Vpa 0 V	TX2 Foldback Absent		TX1 E_Ipa 0 A	TX2 R.F. Mute Absent		TX1 E_Mod. L 0 KHz	-----	
Config. 5	TX1 E_Mod. R 0 KHz	SCM Tot Retry 10																																																								
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TX1 E_Ipa 0 A	TX2 R.F. Mute Absent																																																									
TX1 E_Mod. L 0 KHz	-----																																																									

Configuration #05: Screen Command

10.1.6 Configuration of System 06

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)



Configuration #06: **System**

10.1.6.1 Configuration of Dip Switch for System 06

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 6										x	x					

Configuration #06: **Dip Switch**

10.1.6.2 I²C Address for System 06

adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 06	1	2	3			PTX + PTX

Configuration #06: **I²C Address**

10.1.6.3 Command Menu - Operator & Administrator for System 06

Web Administration for TLK-WEB

Auto Refresh: Ready!

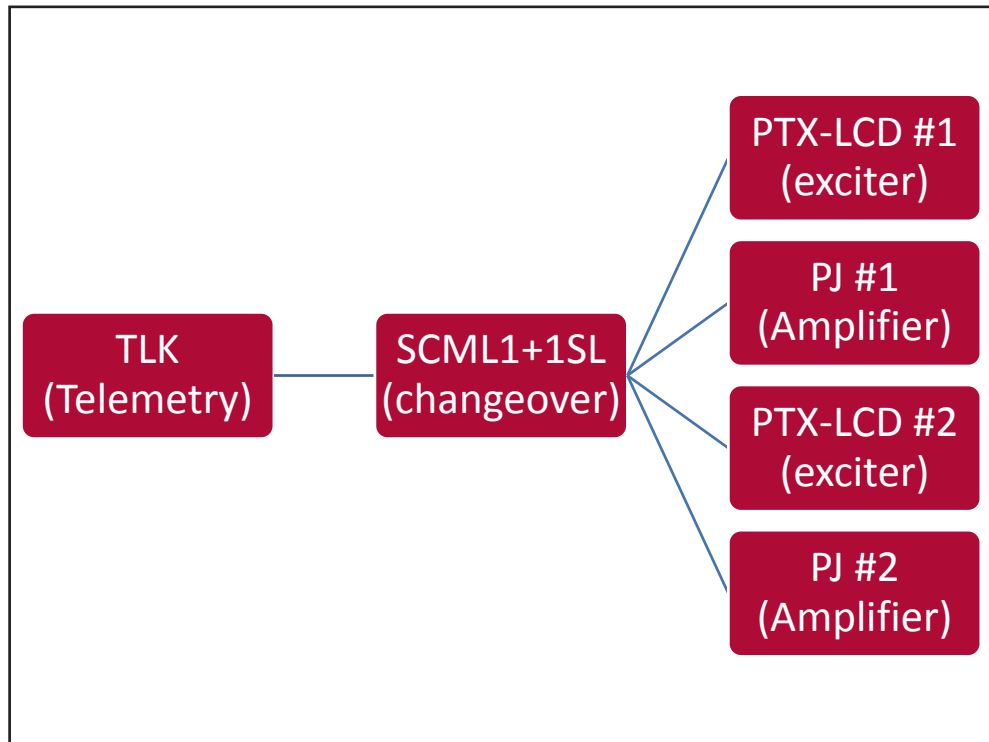
Config.	6	TX1 R.F. Mute	Absent	
Status	Remote	-----		CMD RESET <input type="button" value="Set"/>
Tx1 OnAIR	Absent	TX2 Fwd Power	0 W	CMD Auto/Man <input type="button" value="Set"/>
Tx1 Good	Absent	TX2 Rfl Power	0 W	CMD Exchange <input type="button" value="Set"/>
Tx2 OnAIR	Present	TX2 Freq.	0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>
Tx2 Good	Absent	TX2 Mod.	0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>
SCM Status	Manual	TX2 Vpa	0 V	
-----		TX2 Ipa	0 A	
TX1 Fwd Power	0 W	TX2 Mod. L	0 KHz	
TX1 Rfl Power	0 W	TX2 Mod. R	0 KHz	
TX1 Freq.	0 MHz	TX2 PLL Lock	Absent	
TX1 Mod.	0 KHz	TX2 Audio Alarm	Absent	
TX1 Vpa	0 V	TX2 Foldback	Absent	
TX1 Ipa	0 A	TX2 R.F. Mute	Absent	
TX1 Mod. L	0 KHz	-----		
TX1 Mod. R	0 KHz	SCM Tot Retry	10	
TX1 PLL Lock	Absent	SCM Retry	0	
TX1 Audio Alarm	Absent	SCM Switch	Absent	
TX1 Foldback	Absent	SCM Fault	Absent	

Configuration #06: Screen Command

10.1.7 Configuration of System 07

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x PTX-LCD (exciter)
- 2x PJ (amplifier)



Configuration #07: System

10.1.7.1 Configuration of Dip Switch for System 07

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 7									x	x	x					

Configuration #07: Dip Switch

10.1.7.2 I²C Address for System 07

adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 07	1	2	3	4	5	(PTX + PJ) + (PTX + PJ)

Configuration #07: I²C Address

10.1.7.3 Command Menu - Operator & Administrator for System 07

Web Administration for TLK-WEB

Auto Refresh: Ready!

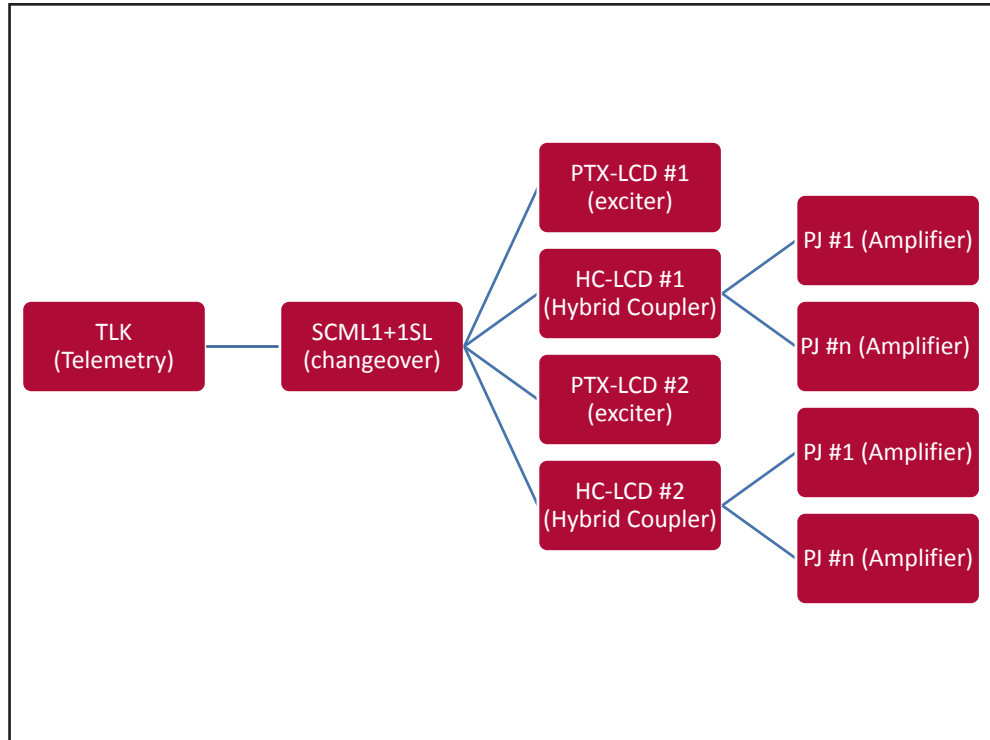
Menu selection	Config. 7	TX1 R.F. Mute	Absent	
User:	Status Remote	-----		CMD RESET <input type="button" value="Set"/>
Info	Tx1 OnAIR Absent	TX2 Fwd Power	0 W	CMD Auto/Man <input type="button" value="Set"/>
Measure	Tx1 Good Absent	TX2 Rfl Power	0 W	CMD Exchange <input type="button" value="Set"/>
Alarm List	Tx2 OnAIR Present	TX2 Freq.	0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>
	Tx2 Good Absent	TX2 Mod.	0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>
Operator:	SCM Status Manual	TX2 Vpa	0 V	
General	-----	TX2 Ipa	0 A	
Command	TX1 Fwd Power 0 W	TX2 Mod. L	0 KHz	
Alarm Delete	TX1 Rfl Power 0 W	TX2 Mod. R	0 KHz	
	TX1 Freq. 0 MHz	TX2 PLL Lock	Absent	
Administrator:	TX1 Mod. 0 KHz	TX2 Audio Alarm	Absent	
General	TX1 Vpa 0 V	TX2 Foldback	Absent	
Command	TX1 Ipa 0 A	TX2 R.F. Mute	Absent	
Alarm Delete	TX1 Mod. L 0 KHz	-----		
Password	TX1 Mod. R 0 KHz	SCM Tot Retry	10	
Network	TX1 PLL Lock Absent	SCM Retry	0	
Mall	TX1 Audio Alarm Absent	SCM Switch	Absent	
	TX1 Foldback Absent	SCM Fault	Absent	

Configuration #07: Screen Command

10.1.8 Configuration of System 08

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x HC-LCD (hybrid coupler)
- 2x PTX-LCD (exciter)
- nx PJ (amplifier)



Configuration #08: **System**

10.1.8.1 Configuration of Dip Switch for System 08

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 8												x				

Configuration #08: **Dip Switch**

10.1.8.2 I²C Address for System 08

adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 08	1	2	3	4	5	(PTX + HC) + (PTX + HC)

Configuration #08: **I²C Address**

10.1.8.2 Command Menu - Operator & Administrator for System 08

Web Administration for TLK-WEB

Auto Refresh: Ready!

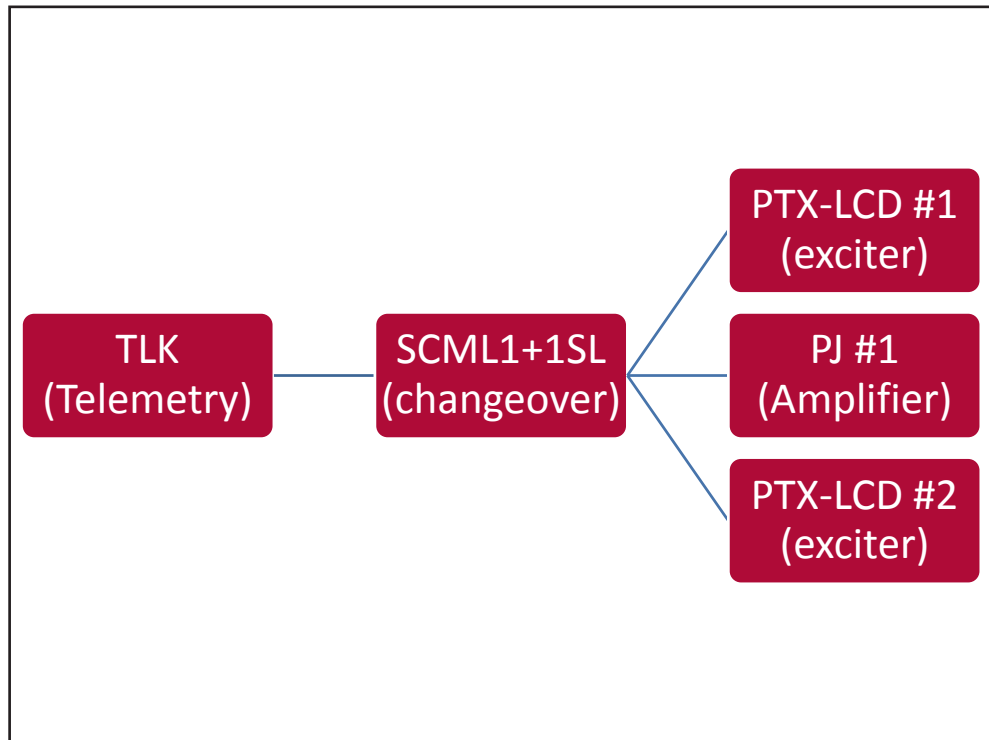
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config.</td><td>8</td><td>TX1 E_Mod. R</td><td>0 KHz</td><td>TX2 E_Audio_Alm</td><td>Absent</td></tr> <tr> <td>Status</td><td>Remote</td><td>TX1 E_PLL Lock</td><td>Absent</td><td>TX2 E_Foldback</td><td>Absent</td></tr> <tr> <td>Tx1 OnAIR</td><td>Absent</td><td>TX1 E_Audio_Alm</td><td>Absent</td><td>TX2 E_R.F.Mute</td><td>Absent</td></tr> <tr> <td>Tx1 Good</td><td>Absent</td><td>TX1 E_Foldback</td><td>Absent</td><td>-----</td><td>-----</td></tr> <tr> <td>Tx2 OnAIR</td><td>Present</td><td>TX1 E_R.F.Mute</td><td>Absent</td><td>SCM Tot Retry</td><td>10</td></tr> <tr> <td>Tx2 Good</td><td>Absent</td><td>-----</td><td>-----</td><td>SCM Retry</td><td>0</td></tr> <tr> <td>SCM Status</td><td>Manual</td><td>TX2 Fwd Power</td><td>0 W</td><td>SCM Switch</td><td>Absent</td></tr> <tr> <td>-----</td><td>-----</td><td>TX2 Rfl Power</td><td>0 W</td><td>SCM Fault</td><td>Absent</td></tr> <tr> <td>TX1 Fwd Power</td><td>0 W</td><td>TX2 Unbal. Pwr</td><td>0 W</td><td>-----</td><td>-----</td></tr> <tr> <td>TX1 Rfl Power</td><td>0 W</td><td>TX2 Fault</td><td>Absent</td><td>CMD RESET</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Unbal. Pwr</td><td>0 W</td><td>TX2 E_Freq.</td><td>0 MHz</td><td>CMD Auto/Man</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fault</td><td>Absent</td><td>TX2 E_Mod.</td><td>0 KHz</td><td>CMD Exchange</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Freq.</td><td>0 MHz</td><td>TX2 E_Fwd</td><td>0 W</td><td>CMD TX1 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Mod.</td><td>0 KHz</td><td>TX2 E_Rfl</td><td>0 W</td><td>CMD TX2 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Fwd</td><td>0 W</td><td>TX2 E_Vpa</td><td>0 V</td><td></td><td></td></tr> <tr> <td>TX1 E_Rfl</td><td>0 W</td><td>TX2 E_Ipa</td><td>0 A</td><td></td><td></td></tr> <tr> <td>TX1 E_Vpa</td><td>0 V</td><td>TX2 E_Mod. L</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Ipa</td><td>0 A</td><td>TX2 E_Mod. R</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. L</td><td>0 KHz</td><td>TX2 E_PLL Lock</td><td>Absent</td><td></td><td></td></tr> </table>	Config.	8	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----	-----	Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----	-----	SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent	-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----	-----	TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
Config.	8	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent																																																																																																														
Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent																																																																																																														
Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent																																																																																																														
Tx1 Good	Absent	TX1 E_Foldback	Absent	-----	-----																																																																																																														
Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10																																																																																																														
Tx2 Good	Absent	-----	-----	SCM Retry	0																																																																																																														
SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent																																																																																																														
-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent																																																																																																														
TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----	-----																																																																																																														
TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>																																																																																																														
TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>																																																																																																														
TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>																																																																																																														
TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Fwd	0 W	TX2 E_Vpa	0 V																																																																																																																
TX1 E_Rfl	0 W	TX2 E_Ipa	0 A																																																																																																																
TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz																																																																																																																
TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #08: Screen Command

10.1.9 Configuration of System 09

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x PTX-LCD (exciter)
- PJ (amplifier)



Configuration #09: System

10.1.9.1 Configuration of Dip Switch for System 09

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 9									x			x				

Configuration #09: Dip Switch

10.1.9.2 I²C Address for System 09

adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 09	1	2	3	4		(PTX + PJ) + PTX

Configuration #09: I²C Address

10.1.9.2 Command Menu - Operator & Administrator for System 09

Web Administration for TLK-WEB

Auto Refresh: Ready!

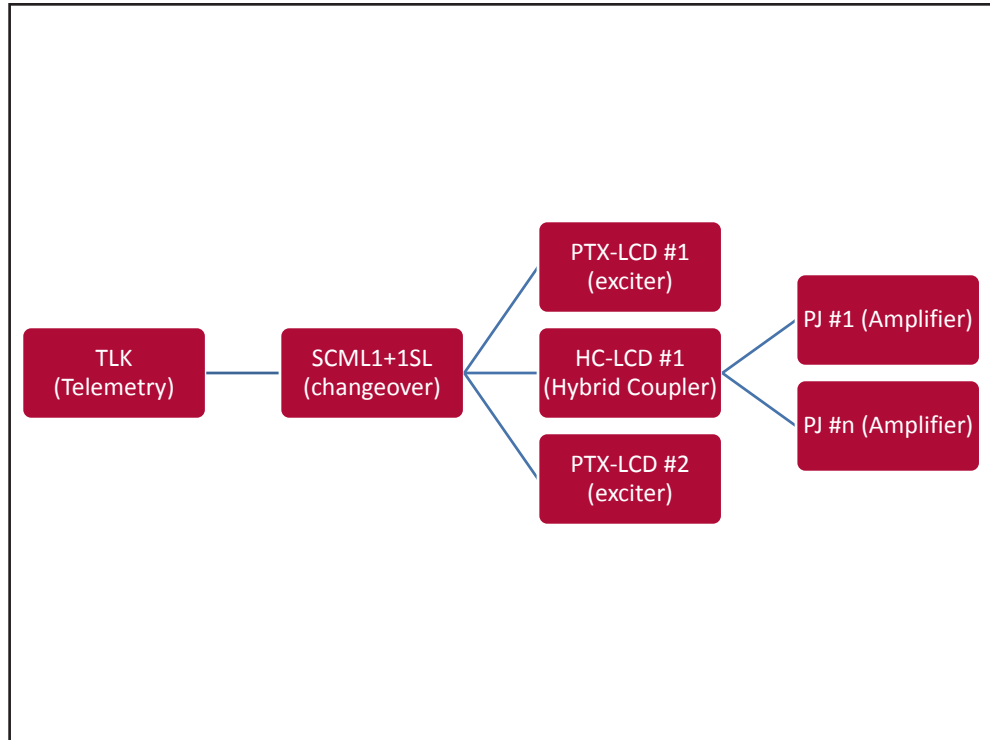
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Config.</td> <td style="width: 25%;">9</td> <td style="width: 25%;">TX1 E_Mod. R</td> <td style="width: 25%;">0 KHz</td> <td style="width: 25%;">TX2 E_Audio_Alm</td> <td style="width: 25%;">Absent</td> </tr> <tr> <td>Status</td> <td>Remote</td> <td>TX1 E_PLL Lock</td> <td>Absent</td> <td>TX2 E_Foldback</td> <td>Absent</td> </tr> <tr> <td>Tx1 OnAIR</td> <td>Absent</td> <td>TX1 E_Audio_Alm</td> <td>Absent</td> <td>TX2 E_R.F.Mute</td> <td>Absent</td> </tr> <tr> <td>Tx1 Good</td> <td>Absent</td> <td>TX1 E_Foldback</td> <td>Absent</td> <td colspan="2">-----</td> </tr> <tr> <td>Tx2 OnAIR</td> <td>Present</td> <td>TX1 E_R.F.Mute</td> <td>Absent</td> <td>SCM Tot Retry</td> <td>10</td> </tr> <tr> <td>Tx2 Good</td> <td>Absent</td> <td colspan="2">-----</td> <td>SCM Retry</td> <td>0</td> </tr> <tr> <td>SCM Status</td> <td>Manual</td> <td>TX2 Fwd Power</td> <td>0 W</td> <td>SCM Switch</td> <td>Absent</td> </tr> <tr> <td colspan="2">-----</td> <td>TX2 Rfl Power</td> <td>0 W</td> <td>SCM Fault</td> <td>Absent</td> </tr> <tr> <td>TX1 Fwd Power</td> <td>0 W</td> <td>TX2 Unbal. Pwr</td> <td>0 W</td> <td colspan="2">-----</td> </tr> <tr> <td>TX1 Rfl Power</td> <td>0 W</td> <td>TX2 Fault</td> <td>Absent</td> <td>CMD RESET</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Unbal. Pwr</td> <td>0 W</td> <td>TX2 E_Freq.</td> <td>0 MHz</td> <td>CMD Auto/Man</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Fault</td> <td>Absent</td> <td>TX2 E_Mod.</td> <td>0 KHz</td> <td>CMD Exchange</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Freq.</td> <td>0 MHz</td> <td>TX2 E_Fwd</td> <td>0 W</td> <td>CMD TX1 On/Off</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Mod.</td> <td>0 KHz</td> <td>TX2 E_Rfl</td> <td>0 W</td> <td>CMD TX2 On/Off</td> <td><input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Fwd</td> <td>0 W</td> <td>TX2 E_Vpa</td> <td>0 V</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Rfl</td> <td>0 W</td> <td>TX2 E_Ipa</td> <td>0 A</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Vpa</td> <td>0 V</td> <td>TX2 E_Mod. L</td> <td>0 KHz</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Ipa</td> <td>0 A</td> <td>TX2 E_Mod. R</td> <td>0 KHz</td> <td colspan="2"></td> </tr> <tr> <td>TX1 E_Mod. L</td> <td>0 KHz</td> <td>TX2 E_PLL Lock</td> <td>Absent</td> <td colspan="2"></td> </tr> </table>	Config.	9	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----		Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----		SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent	-----		TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----		TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
Config.	9	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent																																																																																																														
Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent																																																																																																														
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Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10																																																																																																														
Tx2 Good	Absent	-----		SCM Retry	0																																																																																																														
SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent																																																																																																														
-----		TX2 Rfl Power	0 W	SCM Fault	Absent																																																																																																														
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TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>																																																																																																														
TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>																																																																																																														
TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>																																																																																																														
TX1 E_Fwd	0 W	TX2 E_Vpa	0 V																																																																																																																
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TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz																																																																																																																
TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #09: Screen Command

10.1.10 Configuration of System 10

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- 2x PTX-LCD (exciter)
- HC-LCD (hybrid coupler)
- nx PJ (amplifier)



Configuration #10: System

10.1.10.1 Configuration of Dip Switch for System 10

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 10										x		x				

Configuration #10: Dip Switch

10.1.10.2 I²C Address for System 10

adr	PTX#1	PTX#2	SCM	HC o PA#1	HC o PA#2	
Config 10	1	2	3	4		(PTX + HC) + PTX

Configuration #10: I²C Address

10.1.10.2 Command Menu - Operator & Administrator for System 10

Web Administration for TLK-WEB

Auto Refresh: Ready!

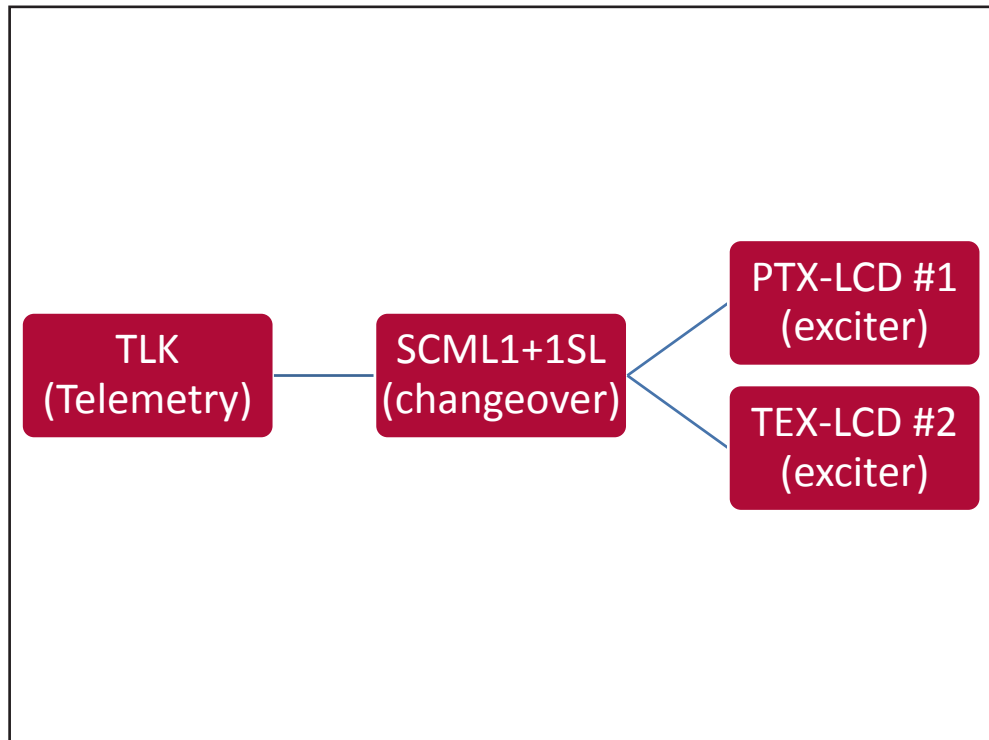
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config.</td><td>10</td><td>TX1 E_Mod. R</td><td>0 KHz</td><td>TX2 E_Audio_Alm</td><td>Absent</td></tr> <tr> <td>Status</td><td>Remote</td><td>TX1 E_PLL Lock</td><td>Absent</td><td>TX2 E_Foldback</td><td>Absent</td></tr> <tr> <td>Tx1 OnAIR</td><td>Absent</td><td>TX1 E_Audio_Alm</td><td>Absent</td><td>TX2 E_R.F.Mute</td><td>Absent</td></tr> <tr> <td>Tx1 Good</td><td>Absent</td><td>TX1 E_Foldback</td><td>Absent</td><td>-----</td><td>-----</td></tr> <tr> <td>Tx2 OnAIR</td><td>Present</td><td>TX1 E_R.F.Mute</td><td>Absent</td><td>SCM Tot Retry</td><td>10</td></tr> <tr> <td>Tx2 Good</td><td>Absent</td><td>-----</td><td>-----</td><td>SCM Retry</td><td>0</td></tr> <tr> <td>SCM Status</td><td>Manual</td><td>TX2 Fwd Power</td><td>0 W</td><td>SCM Switch</td><td>Absent</td></tr> <tr> <td>-----</td><td>-----</td><td>TX2 Rfl Power</td><td>0 W</td><td>SCM Fault</td><td>Absent</td></tr> <tr> <td>TX1 Fwd Power</td><td>0 W</td><td>TX2 Unbal. Pwr</td><td>0 W</td><td>-----</td><td>-----</td></tr> <tr> <td>TX1 Rfl Power</td><td>0 W</td><td>TX2 Fault</td><td>Absent</td><td>CMD RESET</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Unbal. Pwr</td><td>0 W</td><td>TX2 E_Freq.</td><td>0 MHz</td><td>CMD Auto/Man</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fault</td><td>Absent</td><td>TX2 E_Mod.</td><td>0 KHz</td><td>CMD Exchange</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Freq.</td><td>0 MHz</td><td>TX2 E_Fwd</td><td>0 W</td><td>CMD TX1 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Mod.</td><td>0 KHz</td><td>TX2 E_Rfl</td><td>0 W</td><td>CMD TX2 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Fwd</td><td>0 W</td><td>TX2 E_Vpa</td><td>0 V</td><td></td><td></td></tr> <tr> <td>TX1 E_Rfl</td><td>0 W</td><td>TX2 E_Ipa</td><td>0 A</td><td></td><td></td></tr> <tr> <td>TX1 E_Vpa</td><td>0 V</td><td>TX2 E_Mod. L</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Ipa</td><td>0 A</td><td>TX2 E_Mod. R</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. L</td><td>0 KHz</td><td>TX2 E_PLL Lock</td><td>Absent</td><td></td><td></td></tr> </table>	Config.	10	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----	-----	Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----	-----	SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent	-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----	-----	TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
Config.	10	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent																																																																																																														
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TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #10: Screen Command

10.1.11 Configuration of System 11

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)
- TEX-LCD (exciter)



Configuration #11: System

10.1.11.1 Configuration of Dip Switch for System 11

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 11									x	x		x				

Configuration #11: Dip Switch

10.1.11.2 I²C Address for System 11

adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 11	1	2	3			PTX + TEX

Configuration #11: I²C Address

10.1.11.2 Command Menu - Operator & Administrator for System 11

Web Administration for TLK-WEB

Auto Refresh: Ready!

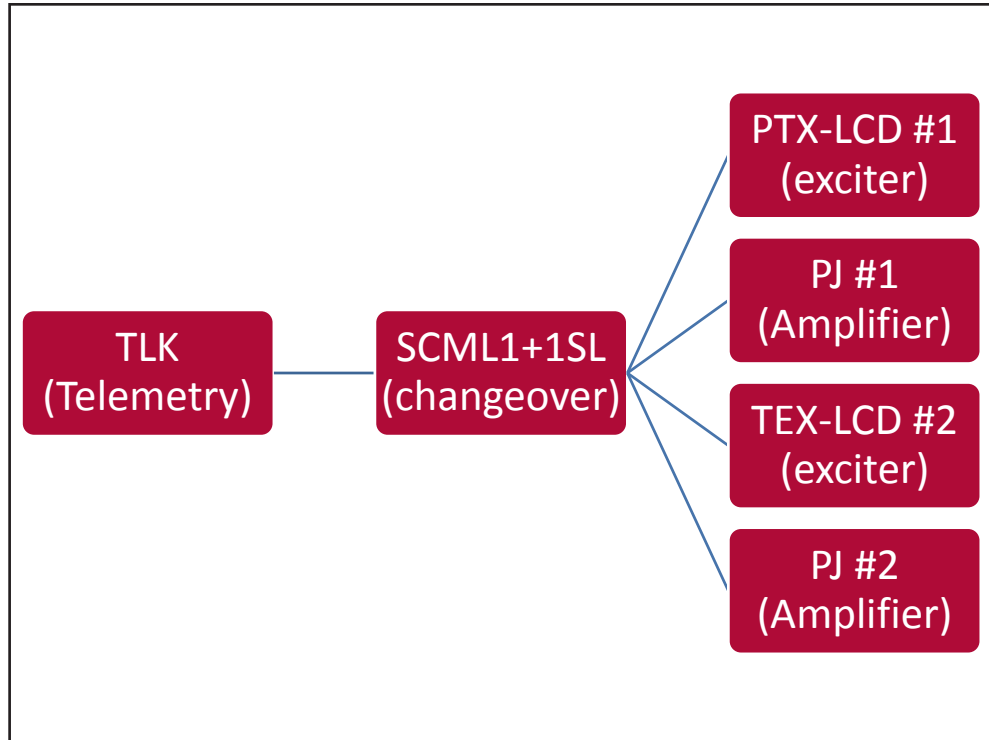
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Config. 11</td> <td style="width: 33%;">TX1 R.F. Mute Absent</td> <td style="width: 33%;"></td> </tr> <tr> <td>Status Remote</td> <td>-----</td> <td>CMD RESET <input type="button" value="Set"/></td> </tr> <tr> <td>Tx1 OnAIR Absent</td> <td>TX2 Fwd Power 0 W</td> <td>CMD Auto/Man <input type="button" value="Set"/></td> </tr> <tr> <td>Tx1 Good Absent</td> <td>TX2 Rfl Power 0 W</td> <td>CMD Exchange <input type="button" value="Set"/></td> </tr> <tr> <td>Tx2 OnAIR Present</td> <td>TX2 Freq. 0 MHz</td> <td>CMD TX1 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>Tx2 Good Absent</td> <td>TX2 Mod. 0 KHz</td> <td>CMD TX2 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>SCM Status Manual</td> <td>TX2 Vpa 0 V</td> <td></td> </tr> <tr> <td>-----</td> <td>TX2 Ipa 0 A</td> <td></td> </tr> <tr> <td>TX1 Fwd Power 0 W</td> <td>TX2 Mod. L 0 KHz</td> <td></td> </tr> <tr> <td>TX1 Rfl Power 0 W</td> <td>TX2 Mod. R 0 KHz</td> <td></td> </tr> <tr> <td>TX1 Freq. 0 MHz</td> <td>TX2 PLL Lock Absent</td> <td></td> </tr> <tr> <td>TX1 Mod. 0 KHz</td> <td>TX2 Audio Alarm Absent</td> <td></td> </tr> <tr> <td>TX1 Vpa 0 V</td> <td>TX2 Foldback Absent</td> <td></td> </tr> <tr> <td>TX1 Ipa 0 A</td> <td>TX2 R.F. Mute Absent</td> <td></td> </tr> <tr> <td>TX1 Mod. L 0 KHz</td> <td>-----</td> <td></td> </tr> <tr> <td>TX1 Mod. R 0 KHz</td> <td>SCM Tot Retry 10</td> <td></td> </tr> <tr> <td>TX1 PLL Lock Absent</td> <td>SCM Retry 0</td> <td></td> </tr> <tr> <td>TX1 Audio Alarm Absent</td> <td>SCM Switch Absent</td> <td></td> </tr> <tr> <td>TX1 Foldback Absent</td> <td>SCM Fault Absent</td> <td></td> </tr> </table>	Config. 11	TX1 R.F. Mute Absent		Status Remote	-----	CMD RESET <input type="button" value="Set"/>	Tx1 OnAIR Absent	TX2 Fwd Power 0 W	CMD Auto/Man <input type="button" value="Set"/>	Tx1 Good Absent	TX2 Rfl Power 0 W	CMD Exchange <input type="button" value="Set"/>	Tx2 OnAIR Present	TX2 Freq. 0 MHz	CMD TX1 On/Off <input type="button" value="Set"/>	Tx2 Good Absent	TX2 Mod. 0 KHz	CMD TX2 On/Off <input type="button" value="Set"/>	SCM Status Manual	TX2 Vpa 0 V		-----	TX2 Ipa 0 A		TX1 Fwd Power 0 W	TX2 Mod. L 0 KHz		TX1 Rfl Power 0 W	TX2 Mod. R 0 KHz		TX1 Freq. 0 MHz	TX2 PLL Lock Absent		TX1 Mod. 0 KHz	TX2 Audio Alarm Absent		TX1 Vpa 0 V	TX2 Foldback Absent		TX1 Ipa 0 A	TX2 R.F. Mute Absent		TX1 Mod. L 0 KHz	-----		TX1 Mod. R 0 KHz	SCM Tot Retry 10		TX1 PLL Lock Absent	SCM Retry 0		TX1 Audio Alarm Absent	SCM Switch Absent		TX1 Foldback Absent	SCM Fault Absent	
Config. 11	TX1 R.F. Mute Absent																																																									
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TX1 PLL Lock Absent	SCM Retry 0																																																									
TX1 Audio Alarm Absent	SCM Switch Absent																																																									
TX1 Foldback Absent	SCM Fault Absent																																																									

Configuration #11: Screen Command

10.1.12 Configuration of System 12

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)
- TEX-LCD (exciter)
- 2x PJ (amplifier)



Configuration #12: System

10.1.12.1 Configuration of Dip Switch for System 12

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 12											x	x				

Configuration #12: Dip Switch

10.1.12.2 I²C Address for System 12

adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 12	1	2	3	4	5	(PTX + PJ) + (TEX + PJ)

Configuration #12: I²C Address

10.1.12.3 Command Menu - Operator & Administrator for System 12

Web Administration for TLK-WEB

Auto Refresh: Ready!

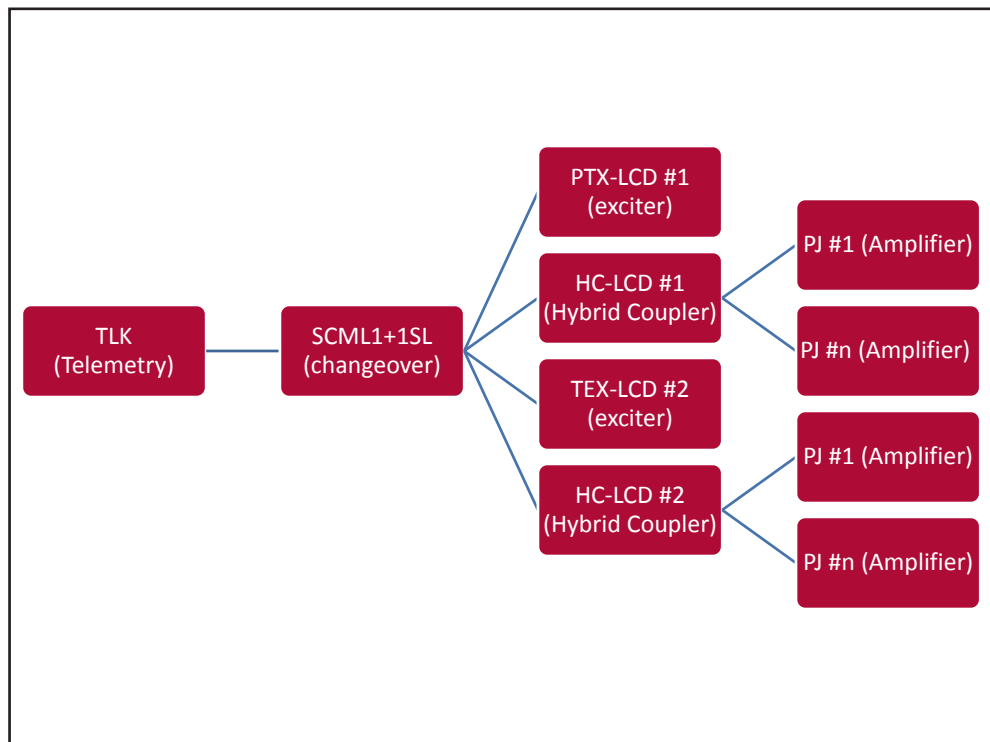
Menu selection		Config. 12		TX1 R.F. Mute	Absent		
User:		Status	Remote	-----		CMD RESET	<input type="button" value="Set"/>
Info		Tx1 OnAIR	Absent	TX2 Fwd Power	0 W	CMD Auto/Man	<input type="button" value="Set"/>
Measure		Tx1 Good	Absent	TX2 Rfl Power	0 W	CMD Exchange	<input type="button" value="Set"/>
Alarm List		Tx2 OnAIR	Present	TX2 Freq.	0 MHz	CMD TX1 On/Off	<input type="button" value="Set"/>
Operator:		Tx2 Good	Absent	TX2 Mod.	0 KHz	CMD TX2 On/Off	<input type="button" value="Set"/>
General		SCM Status	Manual	TX2 Vpa	0 V		
Command		-----		TX2 Ipa	0 A		
Alarm Delete		TX1 Fwd Power	0 W	TX2 Mod. L	0 KHz		
Administrator:		TX1 Rfl Power	0 W	TX2 Mod. R	0 KHz		
General		TX1 Freq.	0 MHz	TX2 PLL Lock	Absent		
Command		TX1 Mod.	0 KHz	TX2 Audio Alarm	Absent		
Alarm Delete		TX1 Vpa	0 V	TX2 Foldback	Absent		
Password		TX1 Ipa	0 A	TX2 R.F. Mute	Absent		
Network		TX1 Mod. L	0 KHz	-----			
Mail		TX1 Mod. R	0 KHz	SCM Tot Retry	10		
		TX1 PLL Lock	Absent	SCM Retry	0		
		TX1 Audio Alarm	Absent	SCM Switch	Absent		
		TX1 Foldback	Absent	SCM Fault	Absent		

Configuration #12: Screen Command

10.1.13 Configuration of System 13

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)
- TEX-LCD (exciter)
- 2x HC-LCD (hybrid coupler)
- nx PJ (amplifier)



Configuration #13: System

10.1.13.1 Configuration of Dip Switch for System 13

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 13									x		x	x				

Configuration #13: Dip Switch

10.1.13.2 I²C Address for System 13

adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 13	1	2	3	4	5	(PTX + HC) + (TEX + HC)

Configuration #13: I²C Address

10.1.13.3 Command Menu - Operator & Administrator for System 13

Web Administration for TLK-WEB

Auto Refresh: Ready!

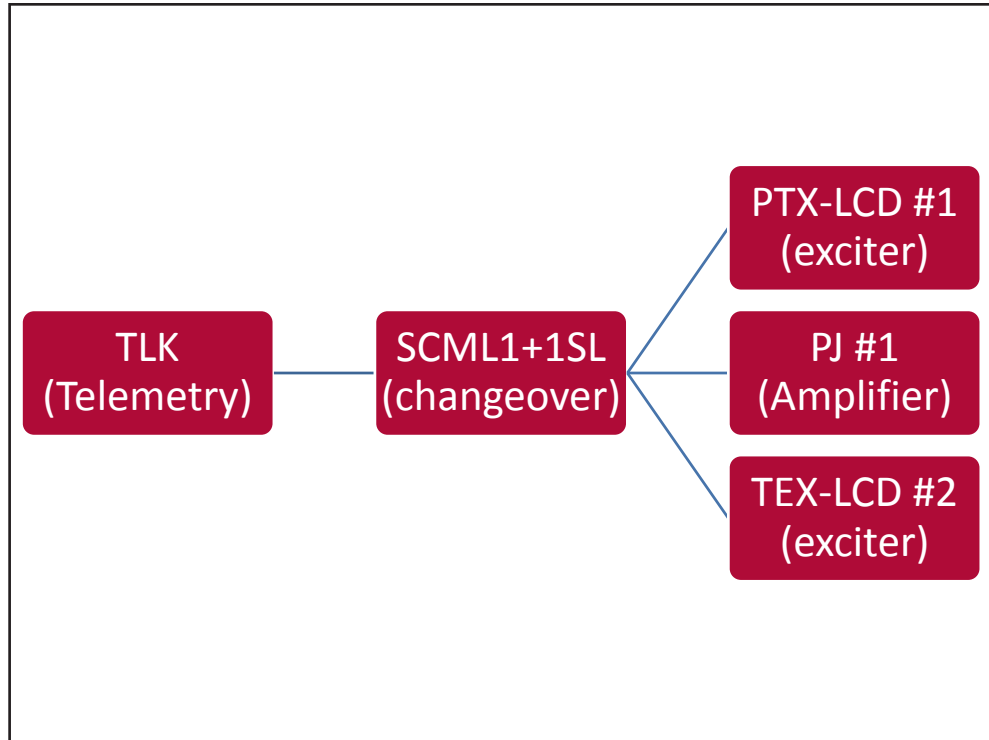
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config.</td><td>13</td><td>TX1 E_Mod. R</td><td>0 KHz</td><td>TX2 E_Audio_Alm</td><td>Absent</td></tr> <tr> <td>Status</td><td>Remote</td><td>TX1 E_PLL Lock</td><td>Absent</td><td>TX2 E_Foldback</td><td>Absent</td></tr> <tr> <td>Tx1 OnAIR</td><td>Absent</td><td>TX1 E_Audio_Alm</td><td>Absent</td><td>TX2 E_R.F.Mute</td><td>Absent</td></tr> <tr> <td>Tx1 Good</td><td>Absent</td><td>TX1 E_Foldback</td><td>Absent</td><td>-----</td><td>-----</td></tr> <tr> <td>Tx2 OnAIR</td><td>Present</td><td>TX1 E_R.F.Mute</td><td>Absent</td><td>SCM Tot Retry</td><td>10</td></tr> <tr> <td>Tx2 Good</td><td>Absent</td><td>-----</td><td>-----</td><td>SCM Retry</td><td>0</td></tr> <tr> <td>SCM Status</td><td>Manual</td><td>TX2 Fwd Power</td><td>0 W</td><td>SCM Switch</td><td>Absent</td></tr> <tr> <td>-----</td><td>-----</td><td>TX2 Rfl Power</td><td>0 W</td><td>SCM Fault</td><td>Absent</td></tr> <tr> <td>TX1 Fwd Power</td><td>0 W</td><td>TX2 Unbal. Pwr</td><td>0 W</td><td>-----</td><td>-----</td></tr> <tr> <td>TX1 Rfl Power</td><td>0 W</td><td>TX2 Fault</td><td>Absent</td><td>CMD RESET</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Unbal. Pwr</td><td>0 W</td><td>TX2 E_Freq.</td><td>0 MHz</td><td>CMD Auto/Man</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fault</td><td>Absent</td><td>TX2 E_Mod.</td><td>0 KHz</td><td>CMD Exchange</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Freq.</td><td>0 MHz</td><td>TX2 E_Exc Fwd</td><td>0 W</td><td>CMD TX1 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Mod.</td><td>0 KHz</td><td>TX2 E_Exc Rfl</td><td>0 W</td><td>CMD TX2 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Fwd</td><td>0 W</td><td>TX2 E_Vpa</td><td>0 V</td><td></td><td></td></tr> <tr> <td>TX1 E_Rfl</td><td>0 W</td><td>TX2 E_Ipa</td><td>0 A</td><td></td><td></td></tr> <tr> <td>TX1 E_Vpa</td><td>0 V</td><td>TX2 E_Mod. L</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Ipa</td><td>0 A</td><td>TX2 E_Mod. R</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. L</td><td>0 KHz</td><td>TX2 E_PLL Lock</td><td>Absent</td><td></td><td></td></tr> </table>	Config.	13	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----	-----	Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----	-----	SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Absent	-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----	-----	TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Exc Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Exc Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
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TX1 E_Fwd	0 W	TX2 E_Vpa	0 V																																																																																																																
TX1 E_Rfl	0 W	TX2 E_Ipa	0 A																																																																																																																
TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz																																																																																																																
TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #13: Screen Command

10.1.14 Configuration of System 14

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)
- TEX-LCD (exciter)
- PJ (amplifier)



Configuration #14: System

10.1.14.1 Configuration of Dip Switch for System 14

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 14										x	x	x				

Configuration #14: Dip Switch

10.1.14.2 I²C Address for System 14

adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 14	1	2	3	4		(PTX + PJ) + TEX

Configuration #14: I²C Address

10.1.14.3 Command Menu - Operator & Administrator for System 14

Web Administration for TLK-WEB

Auto Refresh: Ready!

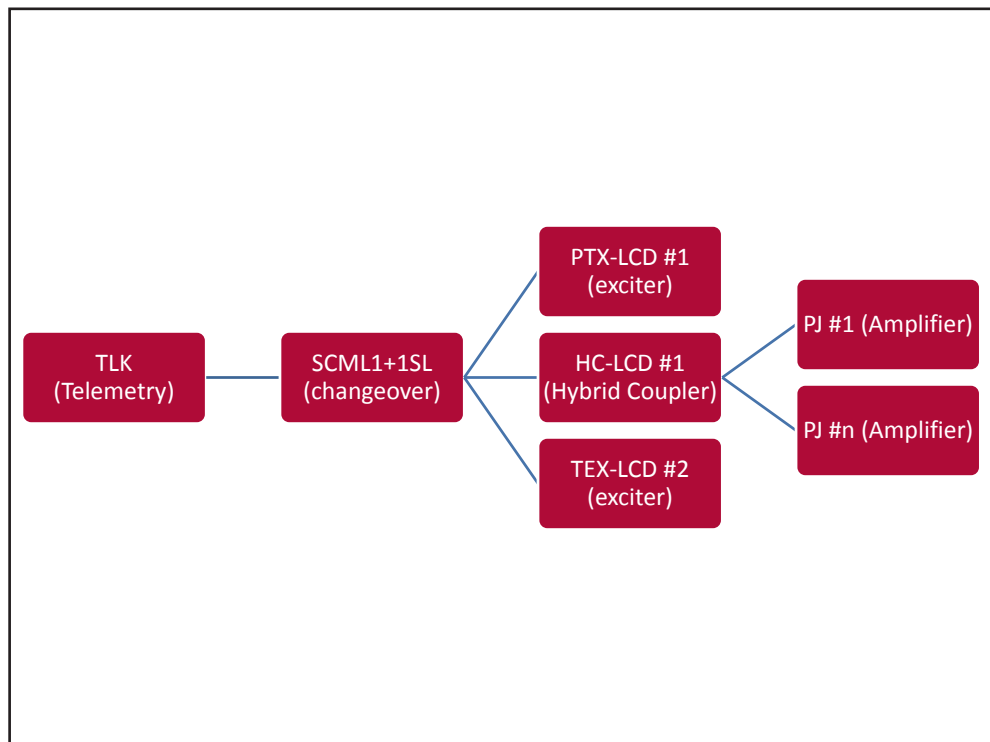
<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config.</td><td>14</td><td>TX1 E_Mod. R</td><td>0 KHz</td><td>TX2 E_Audio_Alm</td><td>Absent</td></tr> <tr> <td>Status</td><td>Remote</td><td>TX1 E_PLL Lock</td><td>Absent</td><td>TX2 E_Foldback</td><td>Absent</td></tr> <tr> <td>Tx1 OnAIR</td><td>Absent</td><td>TX1 E_Audio_Alm</td><td>Absent</td><td>TX2 E_R.F.Mute</td><td>Absent</td></tr> <tr> <td>Tx1 Good</td><td>Absent</td><td>TX1 E_Foldback</td><td>Absent</td><td>-----</td><td>-----</td></tr> <tr> <td>Tx2 OnAIR</td><td>Present</td><td>TX1 E_R.F.Mute</td><td>Absent</td><td>SCM Tot Retry</td><td>10</td></tr> <tr> <td>Tx2 Good</td><td>Absent</td><td>-----</td><td>-----</td><td>SCM Retry</td><td>0</td></tr> <tr> <td>SCM Status</td><td>Manual</td><td>TX2 Fwd Power</td><td>0 W</td><td>SCM Switch</td><td>Present</td></tr> <tr> <td>-----</td><td>-----</td><td>TX2 Rfl Power</td><td>0 W</td><td>SCM Fault</td><td>Absent</td></tr> <tr> <td>TX1 Fwd Power</td><td>0 W</td><td>TX2 Unbal. Pwr</td><td>0 W</td><td>-----</td><td>-----</td></tr> <tr> <td>TX1 Rfl Power</td><td>0 W</td><td>TX2 Fault</td><td>Absent</td><td>CMD RESET</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Unbal. Pwr</td><td>0 W</td><td>TX2 E_Freq.</td><td>0 MHz</td><td>CMD Auto/Man</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 Fault</td><td>Absent</td><td>TX2 E_Mod.</td><td>0 KHz</td><td>CMD Exchange</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Freq.</td><td>0 MHz</td><td>TX2 E_Exc Fwd</td><td>0 W</td><td>CMD TX1 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Mod.</td><td>0 KHz</td><td>TX2 E_Exc Rfl</td><td>0 W</td><td>CMD TX2 On/Off</td><td><input type="button" value="Set"/></td></tr> <tr> <td>TX1 E_Fwd</td><td>0 W</td><td>TX2 E_Vpa</td><td>0 V</td><td></td><td></td></tr> <tr> <td>TX1 E_Rfl</td><td>0 W</td><td>TX2 E_Ipa</td><td>0 A</td><td></td><td></td></tr> <tr> <td>TX1 E_Vpa</td><td>0 V</td><td>TX2 E_Mod. L</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Ipa</td><td>0 A</td><td>TX2 E_Mod. R</td><td>0 KHz</td><td></td><td></td></tr> <tr> <td>TX1 E_Mod. L</td><td>0 KHz</td><td>TX2 E_PLL Lock</td><td>Absent</td><td></td><td></td></tr> </table>	Config.	14	TX1 E_Mod. R	0 KHz	TX2 E_Audio_Alm	Absent	Status	Remote	TX1 E_PLL Lock	Absent	TX2 E_Foldback	Absent	Tx1 OnAIR	Absent	TX1 E_Audio_Alm	Absent	TX2 E_R.F.Mute	Absent	Tx1 Good	Absent	TX1 E_Foldback	Absent	-----	-----	Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10	Tx2 Good	Absent	-----	-----	SCM Retry	0	SCM Status	Manual	TX2 Fwd Power	0 W	SCM Switch	Present	-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent	TX1 Fwd Power	0 W	TX2 Unbal. Pwr	0 W	-----	-----	TX1 Rfl Power	0 W	TX2 Fault	Absent	CMD RESET	<input type="button" value="Set"/>	TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>	TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>	TX1 E_Freq.	0 MHz	TX2 E_Exc Fwd	0 W	CMD TX1 On/Off	<input type="button" value="Set"/>	TX1 E_Mod.	0 KHz	TX2 E_Exc Rfl	0 W	CMD TX2 On/Off	<input type="button" value="Set"/>	TX1 E_Fwd	0 W	TX2 E_Vpa	0 V			TX1 E_Rfl	0 W	TX2 E_Ipa	0 A			TX1 E_Vpa	0 V	TX2 E_Mod. L	0 KHz			TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz			TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent		
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Tx2 OnAIR	Present	TX1 E_R.F.Mute	Absent	SCM Tot Retry	10																																																																																																														
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-----	-----	TX2 Rfl Power	0 W	SCM Fault	Absent																																																																																																														
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TX1 Unbal. Pwr	0 W	TX2 E_Freq.	0 MHz	CMD Auto/Man	<input type="button" value="Set"/>																																																																																																														
TX1 Fault	Absent	TX2 E_Mod.	0 KHz	CMD Exchange	<input type="button" value="Set"/>																																																																																																														
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TX1 E_Ipa	0 A	TX2 E_Mod. R	0 KHz																																																																																																																
TX1 E_Mod. L	0 KHz	TX2 E_PLL Lock	Absent																																																																																																																

Configuration #14: Screen Command

10.1.15 Configuration of System 15

Composition:

- TLK (telemetry)
- SCML1+1SL (changeover)
- PTX-LCD (exciter)
- TEX-LCD (exciter)
- HC-LCD (hybrid coupler)
- nx PJ (amplifier)



Configuration #15: System

10.1.15.1 Configuration of Dip Switch for System 15

	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Config TX 15									x	x	x	x				

Configuration #15: Dip Switch

10.1.15.2 I²C Address for System 15

adr	PTX#1	TEX#2	SCM	HC o PA#1	HC o PA#2	
Config 15	1	2	3	4		(PTX + HC) + TEX

Configuration #15: I²C Address

10.1.15.3 Command Menu - Operator & Administrator for System 15

Web Administration for TLK-WEB

Auto Refresh: Ready!

<p>Menu selection</p> <p>User: Info Measure Alarm List</p> <p>Operator: General Command Alarm Delete</p> <p>Administrator: General Command Alarm Delete Password Network Mail</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Config. 15</td> <td>TX1 E_Mod. R 0 KHz</td> <td>TX2 E_Audio_Alm Absent</td> </tr> <tr> <td>Status Remote</td> <td>TX1 E_PLL Lock Absent</td> <td>TX2 E_Foldback Absent</td> </tr> <tr> <td>Tx1 OnAIR Absent</td> <td>TX1 E_Audio_Alm Absent</td> <td>TX2 E_R.F.Mute Absent</td> </tr> <tr> <td>Tx1 Good Absent</td> <td>TX1 E_Foldback Absent</td> <td>-----</td> </tr> <tr> <td>Tx2 OnAIR Present</td> <td>TX1 E_R.F.Mute Absent</td> <td>SCM Tot Retry 10</td> </tr> <tr> <td>Tx2 Good Absent</td> <td>-----</td> <td>SCM Retry 0</td> </tr> <tr> <td>SCM Status Manual</td> <td>TX2 Fwd Power 0 W</td> <td>SCM Switch Absent</td> </tr> <tr> <td>-----</td> <td>TX2 Rfl Power 0 W</td> <td>SCM Fault Absent</td> </tr> <tr> <td>TX1 Fwd Power 0 W</td> <td>TX2 Unbal. Pwr 0 W</td> <td>-----</td> </tr> <tr> <td>TX1 Rfl Power 0 W</td> <td>TX2 Fault Absent</td> <td>CMD RESET <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Unbal. Pwr 0 W</td> <td>TX2 E_Freq. 0 MHz</td> <td>CMD Auto/Man <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 Fault Absent</td> <td>TX2 E_Mod. 0 KHz</td> <td>CMD Exchange <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Freq. 0 MHz</td> <td>TX2 E_Exc Fwd 0 W</td> <td>CMD TX1 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Mod. 0 KHz</td> <td>TX2 E_Exc Rfl 0 W</td> <td>CMD TX2 On/Off <input type="button" value="Set"/></td> </tr> <tr> <td>TX1 E_Fwd 0 W</td> <td>TX2 E_Vpa 0 V</td> <td></td> </tr> <tr> <td>TX1 E_Rfl 0 W</td> <td>TX2 E_Ipa 0 A</td> <td></td> </tr> <tr> <td>TX1 E_Vpa 0 V</td> <td>TX2 E_Mod. L 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_Ipa 0 A</td> <td>TX2 E_Mod. R 0 KHz</td> <td></td> </tr> <tr> <td>TX1 E_Mod. L 0 KHz</td> <td>TX2 E_PLL Lock Absent</td> <td></td> </tr> </table>	Config. 15	TX1 E_Mod. R 0 KHz	TX2 E_Audio_Alm Absent	Status Remote	TX1 E_PLL Lock Absent	TX2 E_Foldback Absent	Tx1 OnAIR Absent	TX1 E_Audio_Alm Absent	TX2 E_R.F.Mute Absent	Tx1 Good Absent	TX1 E_Foldback Absent	-----	Tx2 OnAIR Present	TX1 E_R.F.Mute Absent	SCM Tot Retry 10	Tx2 Good Absent	-----	SCM Retry 0	SCM Status Manual	TX2 Fwd Power 0 W	SCM Switch Absent	-----	TX2 Rfl Power 0 W	SCM Fault Absent	TX1 Fwd Power 0 W	TX2 Unbal. Pwr 0 W	-----	TX1 Rfl Power 0 W	TX2 Fault Absent	CMD RESET <input type="button" value="Set"/>	TX1 Unbal. Pwr 0 W	TX2 E_Freq. 0 MHz	CMD Auto/Man <input type="button" value="Set"/>	TX1 Fault Absent	TX2 E_Mod. 0 KHz	CMD Exchange <input type="button" value="Set"/>	TX1 E_Freq. 0 MHz	TX2 E_Exc Fwd 0 W	CMD TX1 On/Off <input type="button" value="Set"/>	TX1 E_Mod. 0 KHz	TX2 E_Exc Rfl 0 W	CMD TX2 On/Off <input type="button" value="Set"/>	TX1 E_Fwd 0 W	TX2 E_Vpa 0 V		TX1 E_Rfl 0 W	TX2 E_Ipa 0 A		TX1 E_Vpa 0 V	TX2 E_Mod. L 0 KHz		TX1 E_Ipa 0 A	TX2 E_Mod. R 0 KHz		TX1 E_Mod. L 0 KHz	TX2 E_PLL Lock Absent	
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TX1 E_Ipa 0 A	TX2 E_Mod. R 0 KHz																																																									
TX1 E_Mod. L 0 KHz	TX2 E_PLL Lock Absent																																																									

Configuration #15: Screen Command

11. Connecting TLK to Internet network

In order to connect the system to the public network TLK you must have an internet connection typically provided through a router with NAT (Network Address Translation), which allows devices connected to the LAN to go out with the number router's public IP and protect any attempts at forcing.

In case you have connecting directly with the public IP address on the LAN socket is advisable to insert a router / firewall to avoid exposing the system TLK directly to the public network but manage only the ports used by TLK for the functions of the web interface and SMTP .

The system uses incoming port 80, can not be changed, such as web interface visible from any Web Browser.

For sending the email TLK uses port 25, modifiable.

To ensure that the TLK is visible from the outside is necessary that the router / firewall is set up port forwarding, the function can have different names depending on the brand of your router.

The public port 80 from IP to the IP of TLK for WEB.

To ensure that the unit can send the Trap and the Email needs to be able to use the network at its output ports 162 for Trap and the port 25 for email.

To send the e-mail system TLK uses the MX record for the target domain DNS asked that must be set correctly in the appropriate fields otherwise not be able to send emails.

Also for the emails you must make sure that the destination server accept email from the public IP of our digestive system because the ships directly to the destination SMTP server without going through a server forward as is usual practice for mailers electronics installed on personal computers.

The apparatus as said default IP is set to RVR as 192.168.0.244 and will be adjusted on the network configured as your router's LAN port is used for port forwarding.

If you have multiple devices connected to the LAN after the router is necessary to use different ports on the public interface that will be routed to the fixed ports of the devices TLK must have a LAN IP different from each other.

- TLK#1 IP 192.168.0.244 Port forwarding port 80 > port 80 of 192.168.0.244
- TLK#2 IP 192.168.0.245 Port forwarding port 81 > port 80 of 192.168.0.245

With this configuration, the apparatus TLK # 1 will be visible from WEB as `http://public.ip:80` and apparatus TLK # 2 will be visible from WEB as `http://public.ip:81`.

To send the Trap or Email being output there is no problem, as long as there are no restrictions on using ports 25 are wanted by the service provider.

To know the public IP of our apparatus is desirable to have a FIXED IP connection service that is provided by the provider, if the service has a dynamic IP you will have to rely on a DNS service that gives a name to our IP and keep updated in the event of a change of IP in order to reach the TLK always writing the same name.

This service is provided by many providers, some free and some paid, and usually some routers include this function that can handle some of the service providers, and in case you need to use this service will need to be programmed into your router by following the instructions in that, given the various methods used to manage this function, we can not include this function in the system TLK.

In case your network TLK has many systems connected to the Internet the safest way to manage and functional systems is to create a VPN between all stations and the headquarters in order to have all the devices in the same network in order to view them directly with their IP without the limitations of different ports for devices in the same location, not all routers have this programming possibilities, limits the output ports and having to manage any dynamic IP with a DNS service.

In this case, the customer will have to rely on a company that specializes in networks to configure your VPN between locations.



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