CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window	
PSUPPLY	Calls up the "POWER SUPPLY" window.	
PA LEVELS	Calls up the "PA LEVELS" window.	

* : Operating only when there is more than one cabinet.

** : Operating only when there is more than one amplifier.

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
AMPLIFIERS	Gives the window name.	
CAB 1	Shows the number of the particular cabinet to which the data displayed in this window refer.	
AMPLI 12	Shows the number of the particular amplifier to which the data displayed in this window refer.	
T1 12.3 T2 12.3 T3 12.3 T4 12.3 T5 12.3 T6 12.3	Displays the analogue values of the currents in the transistors T1 to T6.	
PRES	Indicates whether the amplifier is present or missing.	PRES / MISSING (1)
INTRNL OK	Indicates the status of the amplifier auto diagnostic system.	INTRNL OK / INTRNL FAULT (1) INTRNL: Internal
CV CUR OK	Indicates the status of the amplifier Overdrive (RF current) protection system.	OV CUR OK / OV CUR FAULT (1)
TEMP OK	Indicates the status of the amplifier temperature protection system.	TEMP OK / TEMP FAULT (1)
VSWR OK	Indicates the status of the amplifier SWR protection system.	VSWR OK / VSWR FAULT (1)

(1) A fault-free status is displayed in normal video (on black background or green background in case of colour tactile screen). A faulty status is displayed in reverse video (on white background or red background in case of colour tactile screen). The transmitter can operate while the status of the diagnostic systems of one or several RF amplifiers is "FAULT".

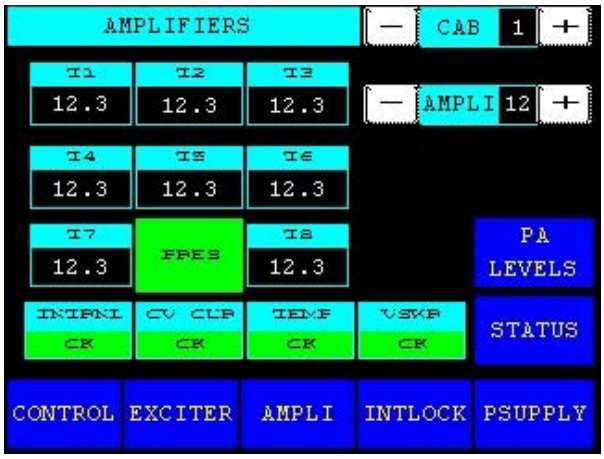
2.1.48. "RF AMPLIFIERS" window, 8 current values (OPTIMUM FAMILY ONLY)

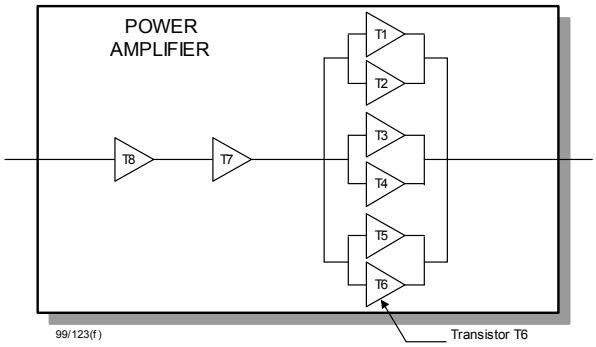
This window is called up by the "AMPLI" command in the other windows.

It displays the status of an RF amplifier.

Notes : An amplifier which is not included in the transmitter configuration can not be accessed by the keys "± AMPLI".

A cabinet which is not included in the transmitter configuration can not be accessed by the "± CAB" control keys.





CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
— CAB 1	Decrements the cabinet number (*).	The number resulting from the decrêmentation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
CAB 1 +	Increments the cabinet number (*).	The number resulting from the incrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
— AMPLI 12	Decrements the amplifier number in a particular cabinet (**).	The number resulting from the decrementation is displayed in the message window between the "+ AMPLI" and "- AMPLI" control keys. Command is disabled while the PCL is locked (disabled).
AMPLI 12 +	Increments the amplifier number in a particular cabinet (**).	The number resulting from the incrementation is displayed in the message window between the "+ AMPLI" and "- AMPLI" control keys. Command is disabled while the PCL is locked (disabled).
STATUS	Calls up the "TRANSMITTER STATUS" window.	
CONTROL	Calls up the "CONTROL Level 1" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window	
PSUPPLY	Calls up the "POWER SUPPLY" window.	
PA LEVELS	Calls up the "PA LEVELS" window.	

* : Operating only when there is more than one cabinet.

** : Operating only when there is more than one amplifier.

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
AMPLIFIERS	Gives the window name.	
CAB 1	Shows the number of the particular cabinet to which the data displayed in this window refer.	
AMPLI 12	Shows the number of the particular amplifier to which the data displayed in this window refer.	
T1 12.3 T2 12.3 T3 12.3 T4 12.3 T5 12.3 T6 12.3 T7 12.3 T8 12.3	Displays the analogue values of the currents in the transistors T1 to T8.	
PRES	Indicates whether the amplifier is present or missing.	PRES / MISSING (1)
INTRNL OK	Indicates the status of the amplifier auto diagnostic system.	INTRNL OK / INTRNL FAULT (1) INTRNL: Internal
OV CUR OK	Indicates the status of the amplifier Overdrive (RF current) protection system.	OV CUR OK / OV CUR FAULT (1)
TEMP OK	Indicates the status of the amplifier temperature protection system.	TEMP OK / TEMP FAULT (1)
VSWR OK	Indicates the status of the amplifier SWR protection system.	VSWR OK / VSWR FAULT (1)

(1) A fault-free status is displayed in normal video (on black background or green background in case of colour tactile screen). A faulty status is displayed in reverse video (on white background or red background in case of colour tactile screen). The transmitter can operate while the status of the diagnostic systems of one or several RF amplifiers is "FAULT".

2.1.49. "PA LEVELS" window (OPTIMUM AND ULTIMATE FAMILIES ONLY)

It is called up by pressing the "PA LEVELS" control key in the "AMPLIFIER" window.

This window displays the AGC voltage values for power amplifiers in selected cabinet.

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
— CAB 1 + (*)	Increments the cabinet number.	The number resulting from the incrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
— CAB 1 + (*)	Decrements the cabinet number.	The number resulting from the decrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
STATUS	Calls up the "TRANSMITTER STATUS" window.	
CONTROL	Calls up the "CONTROL MAINT Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window	
PSUPPLY	Calls up the "POWER SUPPLY" window.	

(*) : Operating only when there is more than one cabinet.

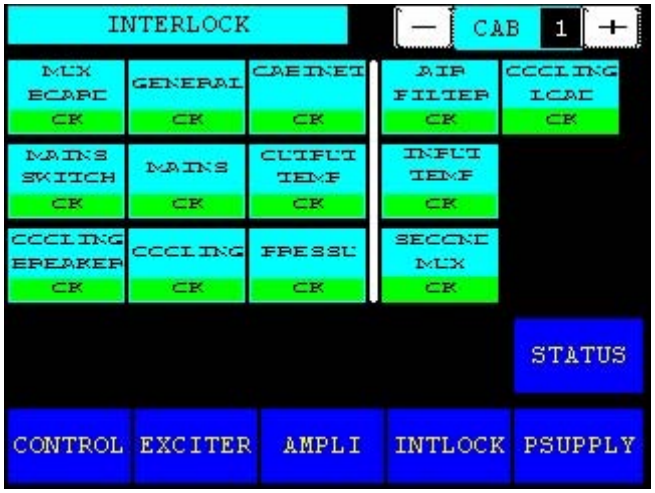
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
PA LEVELS	Gives the window name.	
1 12.34 | 2 12.34 | 3 12.34 | 4 12.34 5 12.34 | 6 12.34 | 7 12.34 | 8 12.34 9 12.34 | 10 12.34 | 11 12.34 | 12 12.34 13 12.34 | 14 12.34 | 15 12.34 | 16 12.34 17 12.34 | 18 12.34 | 19 12.34 | 20 12.34	Displays the AGC voltages for amplifiers 1 to 20 for the selected cabinet	
CAB 1	Indicates the number of the particular cabinet for which data (AGC voltages) are displayed in the window.	

2.1.50. "AIR INTERLOCK" window (OPTIMUM AND ULTIMATE FAMILIES ONLY)

This window is called up by pressing the "INTLOCK" control keys in the other windows.

This window displays the status of the surveillance devices in the cabinet protection system. The data signals from the sensors are arranged in the order of their physical positioning in the cabinet (from left to right and from bottom to top). The data to the left of the vertical bar in the window trigger an emergency shutdown when the associated fault occurs; those to the right of the bar leave the transmitter in operation.

Note : A cabinet which is not included in the transmitter configuration can not be accessed by the "± CAB" control keys.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
CAB 1 + (*)	Increments the cabinet number.	The number resulting from the incrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
— CAB 1 (*)	Decrements the cabinet number.	The number resulting from the decrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window.	
PSUPPLY	Calls up the "POWER SUPPLY" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	

(*) : Operating only when there is more than one cabinet.

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
INTERLOCK	Gives the window name.	
MUX ECART OK	Indicates the status of the multiplex card.	OK / FAULT
GENERAL OK	Indicates the status of the station protection system.	A fault-free status is displayed in normal video (on black background).
CABINET OK	Indicates the status of the cabinet protection system.	
MAINS SWITCH OK	Indicates the status of the principal mains isolator (auxiliary contact).	A faulty status is displayed in reverse video (on white background or red background in case of colour tactile screen).
MAINS OK	Indicates the status of the mains input (phase order and phase balance).	
OUTPUT TEMP OK	Indicates the status of the air outlet temperature protection system.	A fault which is detected by one of these surveillance devices will cause a transmitter shutdown.
COOLING BREAKER OK	Indicates the status of the cooling system power supply (presence of mains).	
COOLING OK	Indicates a cooling system fault (pump fault).	
PRESSU OK	Indicates status of air pressure in the internal cooling system of the transmitter cabinet and also in the ventilation system for the filtering system.	
AIR FILTER OK	Indicates the status of the air filter in the external cooling system.	FAULT, OK
INPUT TEMP OK	Indicates the status of the air inlet temperature protection system.	A fault which is detected by one of these surveillance devices will not cause a transmitter shutdown.
SECOND MUX OK	Indicates the status of the other multiplex card.	

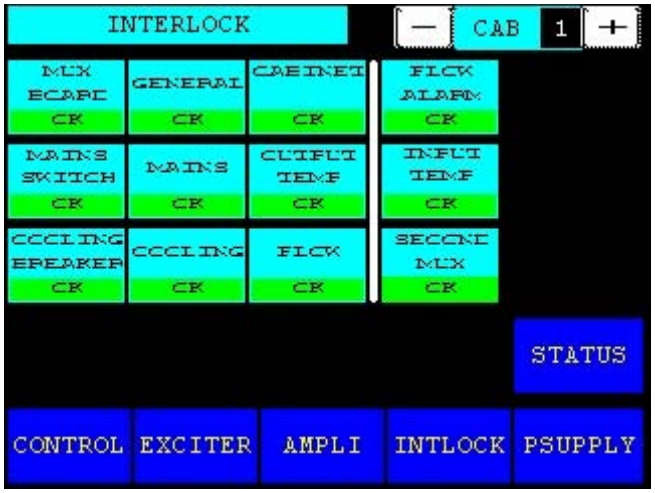
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
	Indicates the status of the Network Load cooling system.	FAULT, OK A fault which is detected by this surveillance device will not cause a transmitter shutdown. The "COOLING LOAD" key status in " INSTALLATION PARAMETERS Level 1 " window must be on "FITTED" then this safety is active Should the opposite occur (NOT FITTED), The "COOLING LOAD" key in "INTERLOCK" window is not available.
	Shows the number of the particular cabinet to which the data displayed in this window refer.	

2.1.51. "LIQUIDE INTERLOCK" window (OPTIMUM AND ULTIMATE FAMILIES ONLY)

This window is called up by pressing the "INTLOCK" control keys in the other windows.

This window displays the status of the surveillance devices in the cabinet protection system. The data signals from the sensors are arranged in the order of their physical positioning in the cabinet (from left to right and from bottom to top). The data to the left of the vertical bar in the window trigger an emergency shutdown when the associated fault occurs; those to the right of the bar leave the transmitter in operation.

Note : A cabinet which is not included in the transmitter configuration can not be accessed by the "± CAB" control keys.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
CAB 1 + (*)	Increments the cabinet number.	The number resulting from the incrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
— CAB 1 (*)	Decrements the cabinet number.	The number resulting from the decrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window.	
PSUPPLY	Calls up the "POWER SUPPLY" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	

(*) : Operating only when there is more than one cabinet.

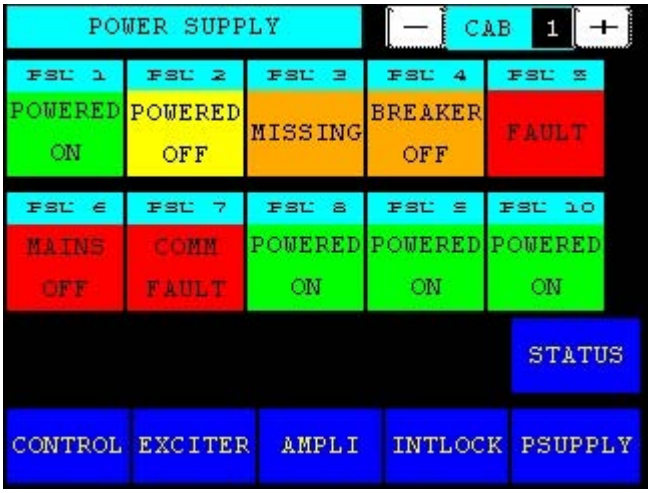
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
INTERLOCK	Gives the window name.	
MUX ECART OK	Indicates the status of the multiplex card.	OK / FAULT
GENERAL OK	Indicates the status of the station protection system.	A fault-free status is displayed in normal video (on black background).
CABINET OK	Indicates the status of the cabinet protection system.	
MAINS SWITCH OK	Indicates the status of the principal mains isolator (auxiliary contact).	A faulty status is displayed in reverse video (on white background or red background in case of colour tactile screen).
MAINS OK	Indicates the status of the mains input (phase order and phase balance).	
OUTPUT TEMP OK	Indicates the status of the liquid outlet temperature protection system.	A fault which is detected by one of these surveillance devices will cause a transmitter shutdown.
COOLING BREAKER OK	Indicates the status of the cooling system power supply (presence of mains).	
COOLING OK	Indicates a cooling system fault (Motor fault).	
FLOW OK	Indicates status of the flow in the internal cooling system of the transmitter cabinet and also in the ventilation system for the filtering system.	
FLOW ALARM OK	Indicates the status of the flow in the external cooling system.	FAULT, OK
INPUT TEMP OK	Indicates the status of the liquid inlet temperature protection system.	A fault which is detected by one of these surveillance devices will not cause a transmitter shutdown.
SECOND MUX OK	Indicates the status of the other multiplex card.	
CAB 1	Shows the number of the particular cabinet to which the data displayed in this window refer.	

2.1.52. "POWER SUPPLY" window (OPTIMUM AND ULTIMATE FAMILIES ONLY)

This window is called up by pressing the "POWER SUPPLY" control keys in the other windows.

It displays the status of the power supplies in a particular cabinet.

Note : A power supply which is not included in the transmitter configuration will not appear. A cabinet which is not included in the transmitter configuration can not be accessed by the "± CAB" control keys.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
CAB 1 +	Increments the cabinet number (*).	The number resulting from the incrementation is displayed in the message window between the "+ CAB" and "- CAB" control keys. Command is disabled while the PCL is locked (disabled).
— CAB 1	Decrements the cabinet number (*).	The number resulting from the decrementation is displayed in the message window between the "+ CAB" and "- CA" control keys. Command is disabled while the PCL is locked (disabled).
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	
INTLOCK	Calls up the «INTERLOCK» window	
PSUPPLY	Calls up the "POWER SUPPLY" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	

(*) : Operating only when there is more than one cabinet.

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
POWER SUPPLY	Gives the window name.	
PSU N	Identifies the number and status of the power supply. The number "n" indicates the physical position of the power supply in the cabinet (n = nth position from the right when looking from behind the cabinet, i.e. in front of the power supply units). There are seven possible power supply status conditions.	COMM FAULT, POWERED OFF, POWERED ON, FAULT, MISSING, BREAKER OFF, MAINS FAULT (1) COMM FAULT : Problem in the multiplex card (internal power supply fault). POWERED OFF : PSU shut down without a fault. POWERED ON : PSU operational without a fault. FAULT : PSU faulty, independently of its operational state (working or shut down). MISSING : PSU missing. BREAKER OFF : PSU isolator open. MAINS OFF : PSU mains fuse faulty.
CAB 1	Shows the number of the particular cabinet to which the data displayed in this window refer.	

* : Operating only when there is more than one cabinet.

(1) : A fault-free status is displayed in normal video (on black background or green background in case of colour tactile screen). A faulty status is displayed in reverse video (on white background or red background in case of colour tactile screen).

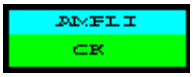
2.1.53. "AFFINITY" window (AFFINITY FAMILY ONLY)

This window is called up by the "AFFINITY" command in the other windows.

It displays the status of the Driver/RF Amplifier AFFINITY rack. This windows is only available with the AFFINITY transmitter.

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AFFIN.	Calls up the "AFFINITY" window.	
STATUS	Calls up the "TRANSMITTER STATUS" window.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
AFFINITY	Gives the window name.	
COMMUNICATION OK	Indicates the status of the communication between the CPU board and the MSI board of Driver/Amplifier rack .	OK / FAULT OK / FAULT
DRIVER OK	Indicates the status of the Driver section .	OK / FAULT OK / FAULT
INPUT OK	Indicates the level status of the RF input signal on the relevant driver section according with the threshold value. The MODAP Exciter must be “ON”. The nominal input value is : + 6dBM	OK / FAULT **OK :** RF input signal > + 1dBm **Fault** : RF input signal < + 1dBm The threshold value is + 1dbm

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
	Indicates the status of the final power supply unit .	 **OK :** All final PSU are correct. **Fault**: The mistake is coming from one of the final PSU.
	Indicates the status of the RF amplifier Affinity rack	 **OK :** All RF amplifier segments are correct. **Fault** : The mistake is coming from one of the RF amplifier segment
	Displays the transmitted RF output power value of the driver	This value is expressed as a percentage of the calibrated power value according with your installation choice
	Displays the failure amplifier number including into RF amplifier Affinity rack	Values: 1 to 8

2.1.54. "GO HOME AND VIEW INSTALL. PARAMETERS" window

This window is called up by pressing on the "STATUS" message window in the "STATUS" window or on the "TRANSMITTER STATUS" message window in the "TRANSMITTER STATUS" window.

It provides information firstly in regard to the "GO HOME" status condition and secondly in regard to the equipment installation parameters.

Digital Transmitter

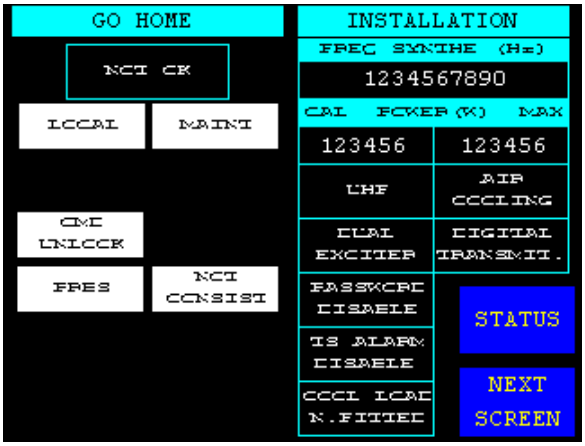


Figure 34 : Single Drive configuration

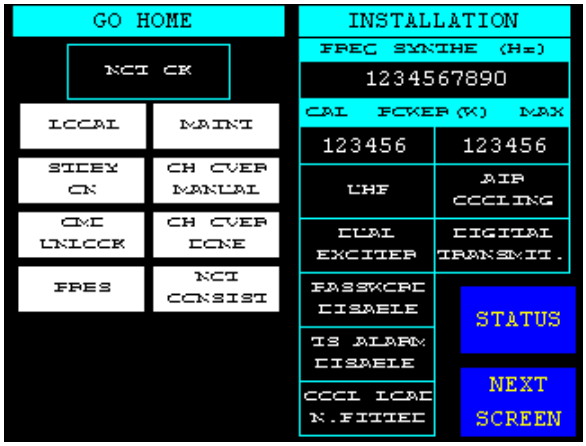
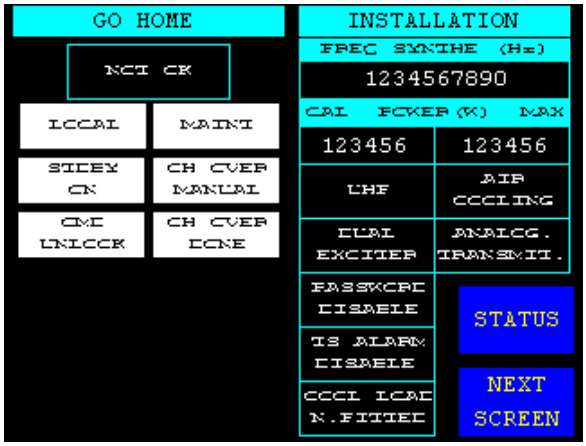


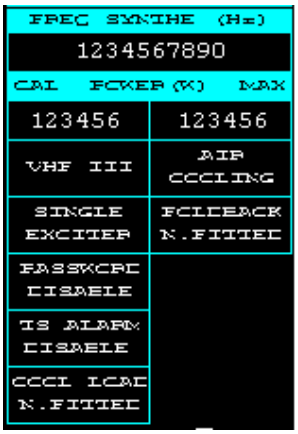
Figure 35 : Dual Drive configuration



Analogue Transmitter

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
NEXT SCREEN	Calls up the "VIEW TRANSMITTER INTERFACE INSTALLATION PARAMETERS" window.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
GO HOME	Displays the title of the columns on the left hand side.	
OK	Indicates the "GO HOME" status.	OK / NOT OK As long one of the "GO HOME" conditions is not satisfied the "NOT OK" signal will be given.
LOCAL	This message window indicates a condition for which GO HOME is NOT OK. Operating mode is in local mode.	LOCAL, invisible if not (1). The "CONTROL Level 1" window provides for selecting the transmitter operating mode (LOCAL / REMOTE).
MAINT	This message window indicates a condition for which GO HOME is NOT OK. Operating mode is in maintenance mode.	MAINT, invisible if not (1). The "CONTROL Level 1" window provides for selecting the transmitter operating mode (MAINT / NORMAL).
STDBY ON	This message window indicates a condition for which GO HOME is NOT OK. (*) Reserve exciter in operation.	STDBY ON, invisible if not. The "CONTROL Level 1" window provides for start-up of the reserve exciter (STDBY ON / STDBY OFF).
CH OVER MANUAL	This message window indicates a condition for which GO HOME is NOT OK. (*) Manual changeover mode.	CH OVER MANUAL, invisible if not. The "EXCITER Level 1" window provides for selecting the transmitter changeover mode (CH OVER MAN / CH OVER AUTO).
CMD UNLOCK	This message window indicates a condition for which GO HOME is NOT OK. Local user interface not locked.	CMD UNLOCK, invisible if not. The "STATUS" window provides for locking the local user interface window; it is imperative to finish in this condition, i.e. the "Go Home" LED is extinguished.
CH OVER DONE	This message window indicates a condition for which GO HOME is NOT OK. (*) Automatic changeover of the exciter has already been carried out.	CH OVER DONE, invisible if not. The RESET button in the front of the PCL provides for re-initialising the changeover system (CH OVER NOT DONE).
PRBS **	This message window indicates a condition for which GO HOME is NOT OK. The input signal to the digital exciter unit is the PRBS signal.	PRBS, invisible if not.
NOT CONSIST **	This message window indicates a condition for which GO HOME is NOT OK. The modulator status is inconsistent.	NOT CONSIST., invisible if not.
INSTALLATION	Title for right hand columns.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
	The display of these parameters serves solely as a summary of the installation configuration.	The configuration parameters are accessible in the "INSTALLATION" window.

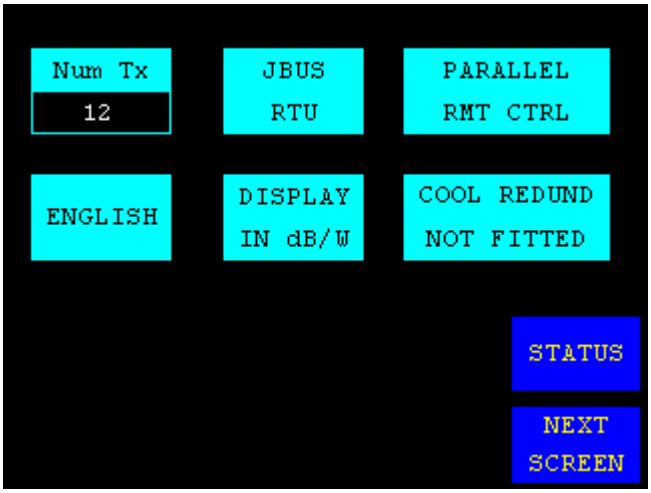
* : Only Dual-Drive version

**: Only available in Digital Transmitter

(1) If the GOHOME condition is satisfied the associated signal will disappear.

2.1.55. "VIEW TRANSMITTER INTERFACE INSTALLATION PARAMETERS" window

This window is called up by pressing on the "NEXT SCREEN" message window in the "GO HOME AND VIEW INSTALLATION PARAMETERS" window.

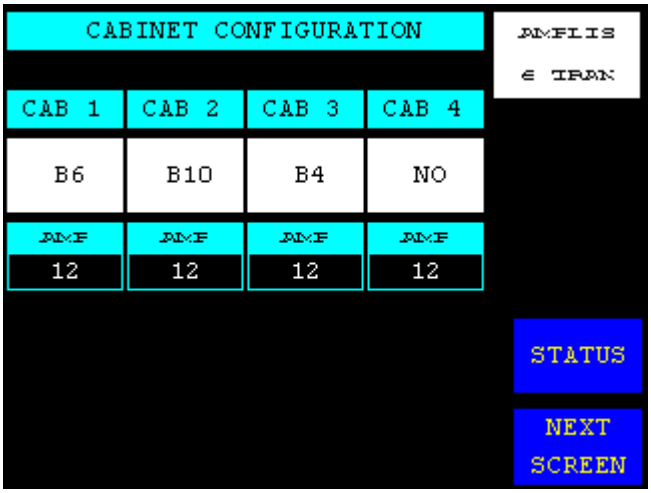


CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
NEXT SCREEN	Calls up the "VIEW CABINET CONFIGURATION " window.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
Tx Num 12	This message window indicates the transmitter ID number in N+1 or Passive Reserve configurations.	The transmitter ID number is used for remote control through an RS 232/485 connection.
JBUS RTU	This message window indicates the type of JBUS protocol operation for remote control	JBUS ASCII JBUS RTU
SERIAL RMT CTRL	This message window indicates the type of remote operation.	SERIAL RMT CTRL, PARALLEL RMT CTRL, USER RMT CTRL
ENGLISH	This message window indicates the language of the Local Control Panel windows.	FRANCAIS, ENGLISH, ESPAGNOL
DISPLAY IN dB/W	This message window indicates the type of power unity.	DISPLAY IN dB/W, DISPLAY IN %
COOL REDUND NOT FITTED	This message window indicates if the CPU software is adapted to suit the safety interface hardware.	COOL REDUND NOT FITTED. ; COOL REDUND FITTED

2.1.56. "VIEW CABINET CONFIGURATION INSTALLATION PARAMETERS" window

This window is called up by pressing on the "NEXT SCREEN" message window in the "VIEW TRANSMITTER INTERFACE INSTALLATION PARAMETERS" window.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
NEXT SCREEN	♦ In case of DIGITAL transmitter calls up the " VIEW ADAPT INSTALLATION PARAMETERS" window ♦ In case of ANALOGUE transmitter calls up the " VIEW EXCITER INSTALLATION PARAMETERS" window	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
CABINET CONFIGURATION	Displays the title of the window	
CAB 1 B6	This message window indicates the type of the cabinet.	
AMP 12	This message window indicates the number of the RF power amplifier including to this cabinet.	
AMPLIS E IRAN	This message window indicates the number of currents measured in operation by amplifier unit.	6 or 8

2.1.57. "VIEW ADAPT INSTALLATION PARAMETERS" window

This window is called up by pressing on the "NEXT SCREEN" message window in the " VIEW CABINET CONFIGURATION INSTALLATION PARAMETERS " window.

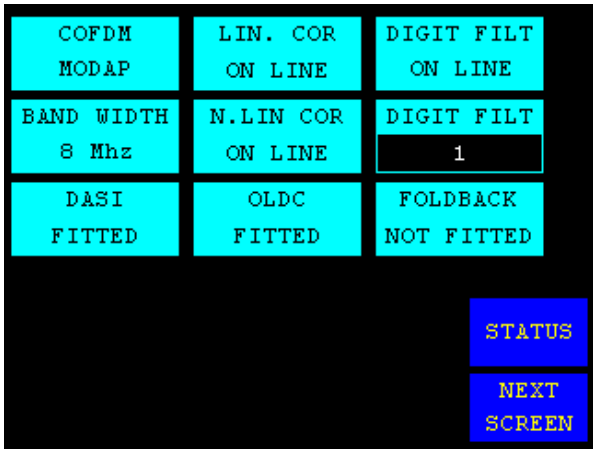


Figure 36 : MODAP Version

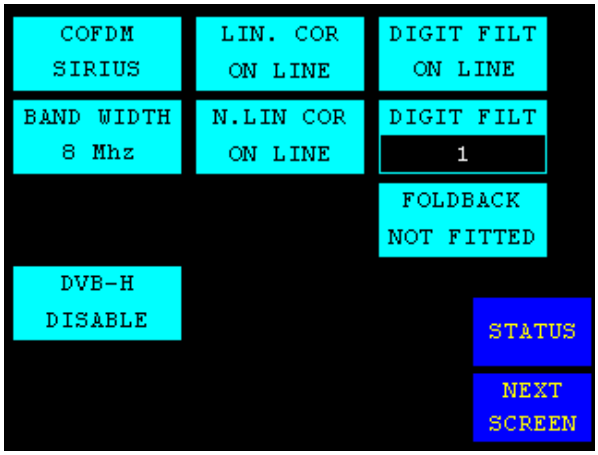


Figure 37 : SIRIUS Version

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
NEXT SCREEN	Calls up the "VIEW ETHERNET INSTALLATION PARAMETERS" window.	

INDICATOR LAMPS AND MESSAGE DISPLAYS	FUNCTIONS	DISPLAY/COMMENTS
COFDM SIRIUS	Displays which type of modulator processes the input signal.	IFIQ BOARD / COFDM EXT / 8VSB BOARD / 8MHz COFDM BOARD/ 7MHz COFDM BOARD / 6MHz COFDM BOARD / FLO SIRIUS /
LIN. COR ON LINE	Indicates the status, of the DAP linearity correction (ALE = Adaptive Linear Equaliser).	LIN. COR NOT FITTED / LIN. COR ON LINE / LIN. COR BYPASSED
DIGIT FILT ON LINE	Indicates the status of the DAP digital filter correction.	DIGIT FILT NOT FITTED / DIGIT FILT ON LINE / DIGIT FILT BYPASSED
BAND WIDTH 8 Mhz (2)	Indicates the bandwidth of the canal for DVB signal (Internal DVB Modulator).	
N.LIN COR ON LINE	Indicates the status, ON LINE or BYPASS, of the DAP non linearity correction (Look Up Table).	N. LIN COR ON LINE / N. LIN COR BYPASSED

INDICATOR LAMPS AND MESSAGE DISPLAYS	FUNCTIONS	DISPLAY/COMMENTS
DIGIT FILT 1	Displays the reference table of the digital filter (1 to 5).	
DASI NOT FITTED (1)	Displays whether a Double ASI input is present or absent in the MODAP unit.	DASI FITTED / DASI NOT FITTED
OLDC NOT FITTED (1)	Displays whether an OLDC unit is present or absent in the MODAP unit.	OLDC FITTED / OLDC NOT FITTED
FOLDBACK NOT FITTED	Displays whether antenna VSWR regulation used is progressively.	
DVB-H DISABLE (2)	Displays whether the DVB-H parameters are accessible (available).	Visible on COFDM SIRIUS modulator only

(1): MODAP version only.

(2): Unavailable on MediaFLO modulator.

2.1.58. "VIEW ETHERNET INSTALLATION PARAMETERS" window

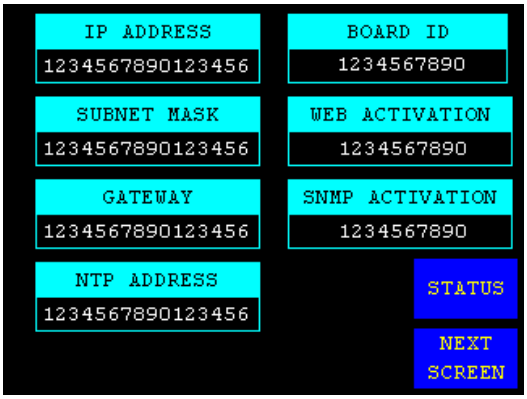
- Digital transmitter

  This window is called up by pressing on the "SCREEN NEXT" message window in the "VIEW ADAPT INSTALLATION PARAMETERS".

- Analogue transmitter

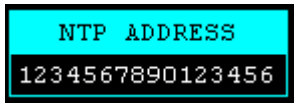
  This window is called up by pressing on the "SCREEN NEXT" message window in the "VIEW EXCITER INSTALLATION PARAMETERS".

It provides information on Ethernet network parameters for the transmitter, according to installation parameters. This window is only available with TH860 CPU Board.

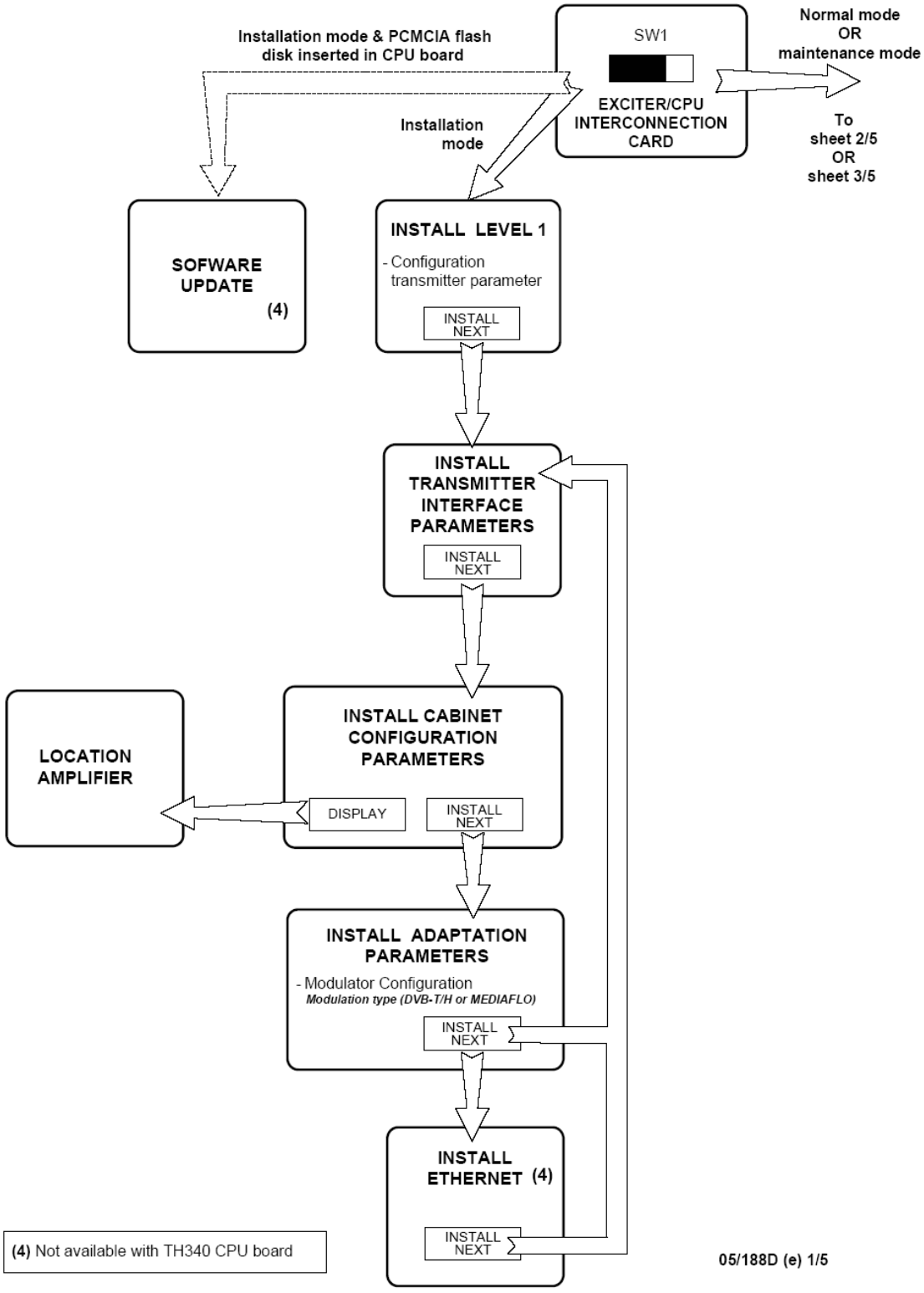


CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
NEXT SCREEN	Calls up the "GO HOME AND VIEW INSTALLATION PARAMETERS" window.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
BOARD ID 1234567890	Displays the Identification number of the CPU board.	
WEB ACTIVATION 1234567890	Displays the WEB activation code value.	Without option in operation the control keys displays: “0”
SNMP ACTIVATION 1234567890	Displays the SNMP activation code value.	Without option in operation the control keys displays: “0”
IP ADDRESS 1234567890123456	Displays the IP address of the transmitter.	When the Ethernet network is not operated the control keys must display: “0.0.0.0”
SUBNET MASK 1234567890123456	Displays the sub-net mask value.	When the Ethernet network is not operated the control keys must display: “0.0.0.0”

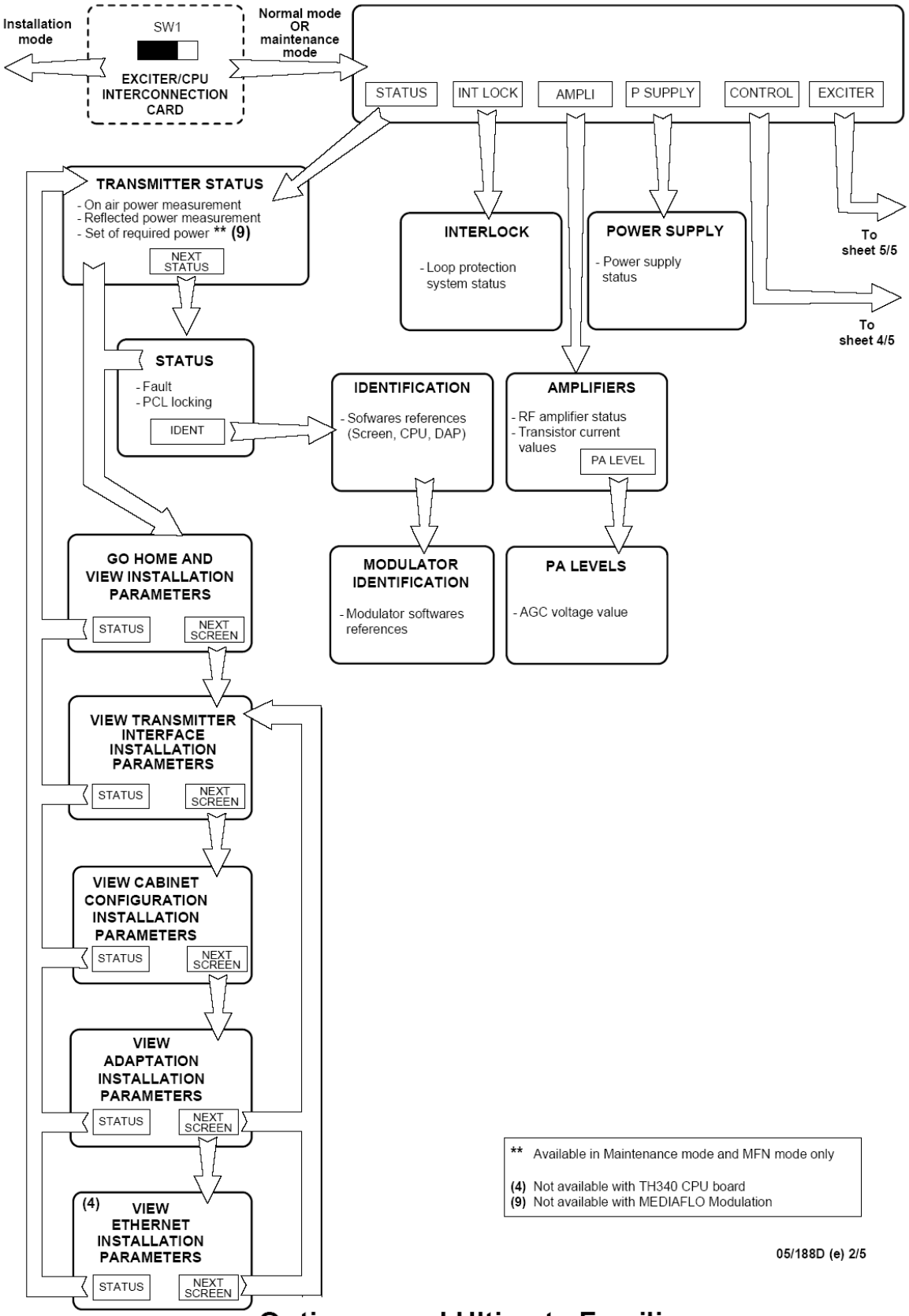
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
	Displays the IP address of the Gateway	When the Ethernet network is not operated the control keys must display: “0.0.0.0”
	Displays the IP address of the Net work Time Protocol (NTP) server	When the Ethernet network is not operated the control keys must display: “0.0.0.0”

2.1.59. Navigating the PCL windows



Optimum, Ultimate and Affinity Families

Figure 38 : Navigation in tactile screen windows (1/5)



Optimum and Ultimate Families

Figure 39 : Navigation in tactile screen windows (2/5)

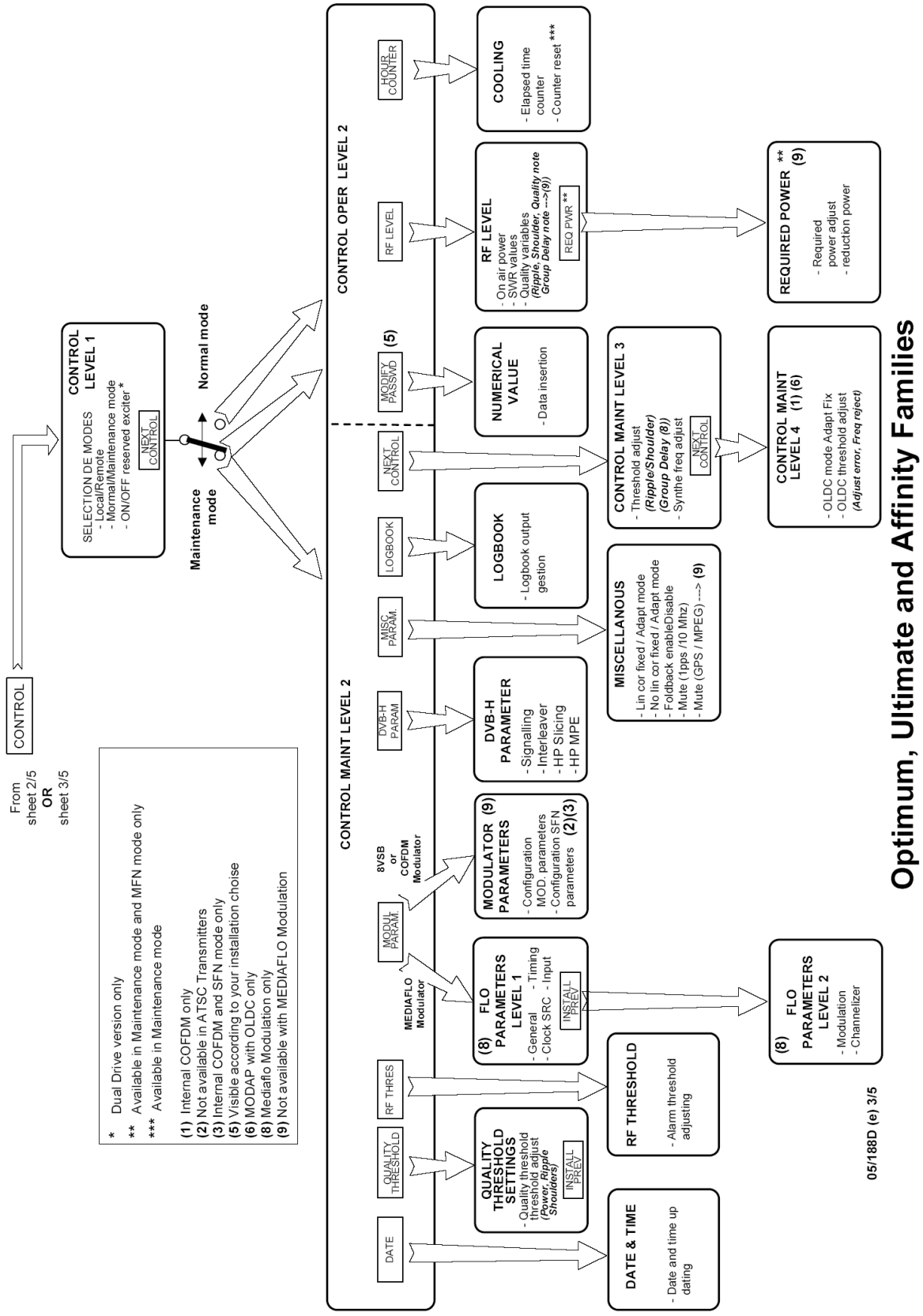


Figure 40 : Navigation in tactile screen windows (3/5)

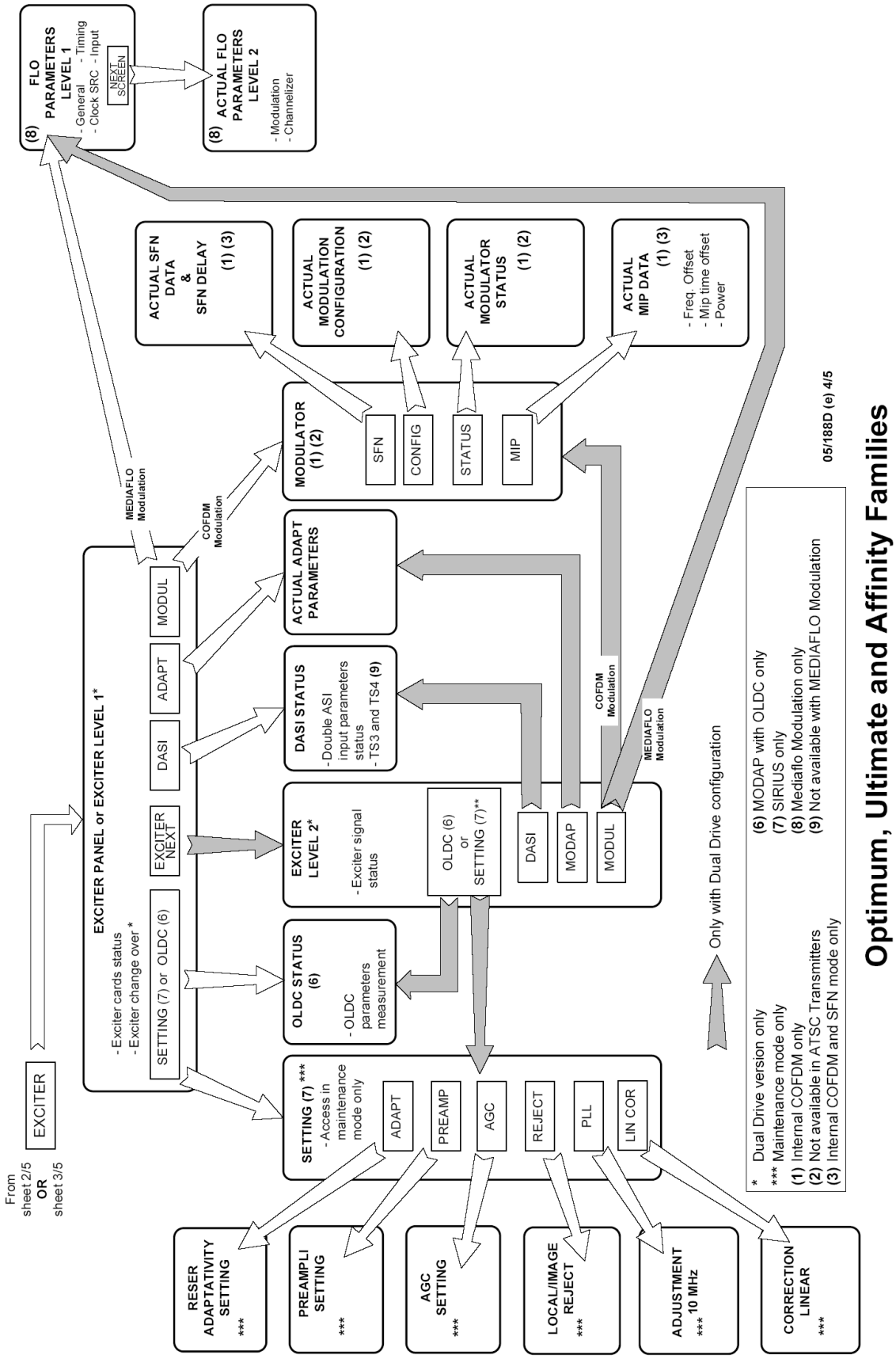


Figure 41 :: Navigation in tactile screen windows (4/5)

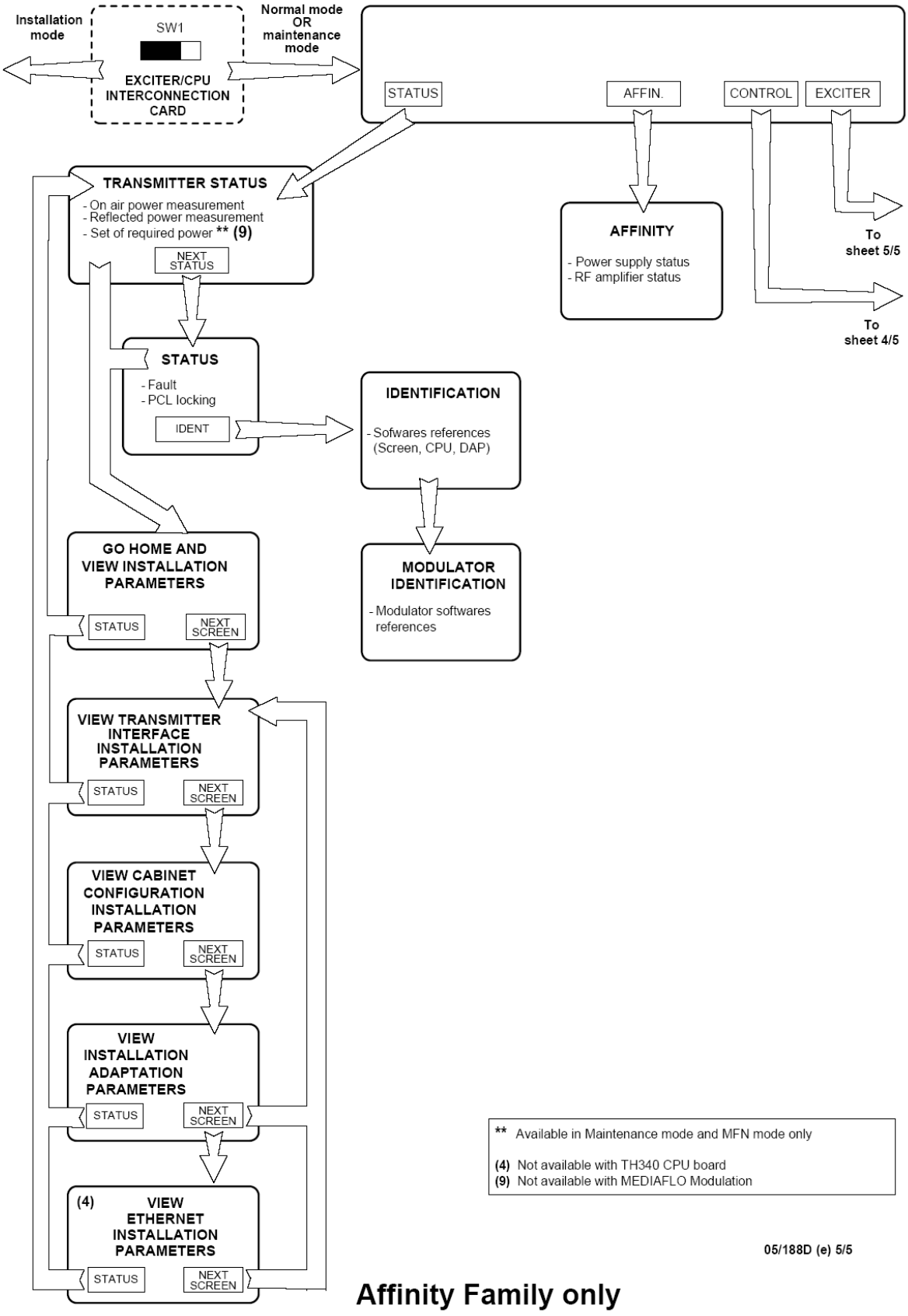


Figure 42 : Navigation in tactile screen windows (5/5)

2.2. Exciter, SIRIUS

2.2.1. Front panel

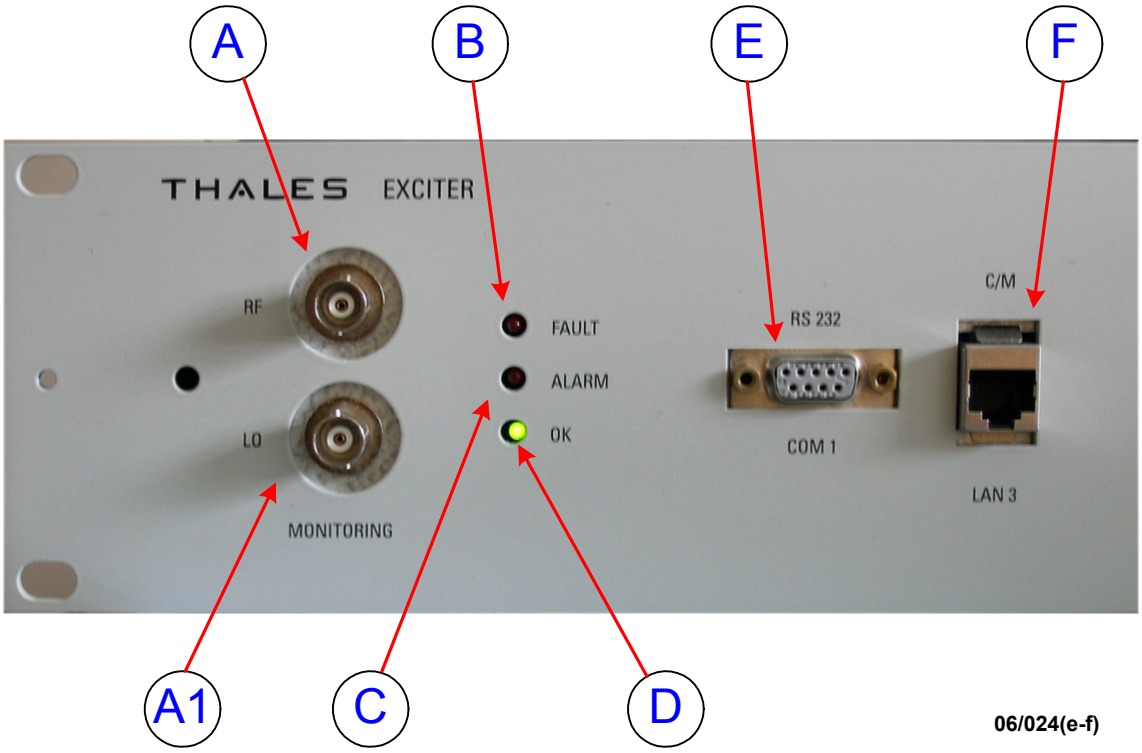
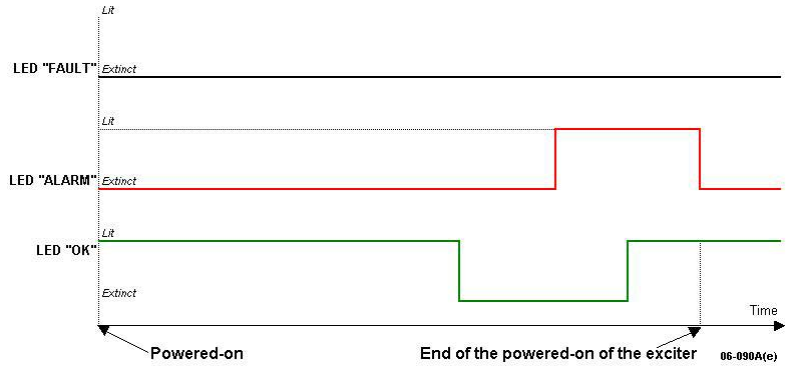


Figure 43 : Front panel (04/271(f-e))

The following appear on the SIRIUS module front panel:

DIAGRAM REFERENCE	COMPONENT	REMARKS
B	Red fault LED	Overall hardware fault ♦ Lit: indicates that one of the boards in the Sirius module is faulty ♦ Extinguished: normal operation
C	Red ALARM LED	MPEG or GPS signals at input (10 MHZ and 1 PPS) ♦ Extinguished: operational ♦ Lit: indicates that one of the input signals is absent. **In SFN mode, the inputs taken into account are:** ♦ ASI 1 ♦ ASI 2 ♦ 10 Mhz ♦ 1 P.P.S.

DIAGRAM REFERENCE	COMPONENT	REMARKS
D	Green OK LED	This LED has two functions: ♦ Extinguished: software fault ♦ Lit: indicates that the microprocessor is operating satisfactorily (software) Note: During the made the powered-on of exciter, the LED “OK” is lit during approximately 15 seconds indicating the operated of power supply then, put out (extinct) during approximately 7 seconds indicating the starting-up of the microprocessor and to end lit. (refer to the diagram below).
		

2.2.1.1. Test Points

The RF output signal from the SIRIUS module can be monitored at connector **A** on the front of the module.

The RF output signal from the synthesiser unit (LO) can be monitored at connector **A1** on the front panel of the SIRIUS rack.

2.2.1.2. Front panel interconnections

The following appear on the SIRIUS module front panel:

DIAGRAM REFERENCE	COMPONENT	REMARKS
E	COM 1 Connector	Reserved for TBM use: Serial link connection (RS232); this enables authorised personnel to have access to the digital card micro program (Modulator). The user must not connect anything to this connector.
F	LAN Connector	Reserved for TBM use: Ethernet link connection (RJ45) with digital card (Modulator). This connection is limited to factory use and gives access to high level functions and fault finding routines in the Sirius module (for use by a technician using a terminal)
G	PC card reader	On the right hand side of the SIRIUS front panel there is a PC card reader which will accept a memory card on which the exciter parameters can be stored (not available)

2.3. Local control panel

The Local Control Panel (PCL) consists of two units:

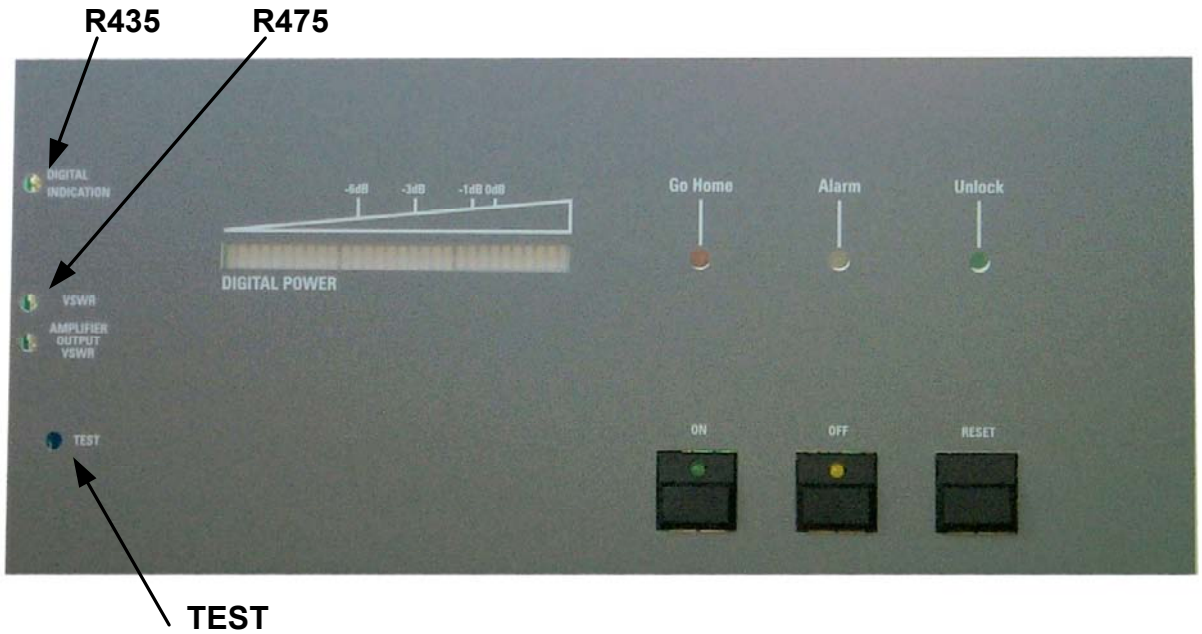
- an LCD touch screen,
- a display circuit.

It is the principal user interface for the transmitter. It gives the operator the facilities to display the various status conditions of the transmitter and its main sub-units.

2.3.1. Indicator lamps and message displays

There are no status indicator lamps to indicate the status conditions of the display card. The indicator lamps on the front of the PCL indicate the overall status of the transmitter.

2.3.2. Adjustment controls



The sensitivity controls on the front of the PCL are used to set the parameters which are displayed by the bar graph on the PCL and in the "RF REFLECTED LEVEL" and "RF LEVEL" windows; these adjustments set the input signals and are as follows :

- R435 “POWER INDICATION” : sensitivity control for output power indication,
- R475 “ANTENNA VSWR” : sensitivity control for antenna SWR indication.

The output power level is displayed on the bargraph.

Return SWR values are displayed on the "RF REFLECTED LEVEL" window.

2.3.3. Test points

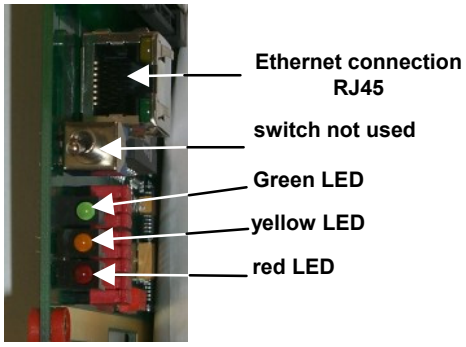
Pressing on the "TEST" button on the front panel of the PCL with a pointed object will check that the indicator lamps and bargraph LED’s are working properly.

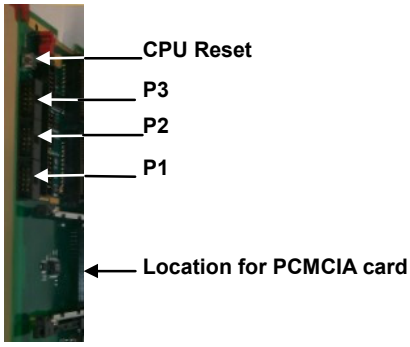
2.4. TH860 CPU Card

2.4.1. Indicator lamps and message displays

The Central Processing Unit card has the following on its front panel :

- a green indicator lamp : when this flashes the memory access is operating satisfactorily,
- an orange/yellow indicator lamp: when this is lit up the CPU card is powered,
- an red indicator lamp: when this is lit up CPU board is not operating properly (light up a short time during CPU start up).





2.4.2. Controls

The switch on the CPU front panel is not used.

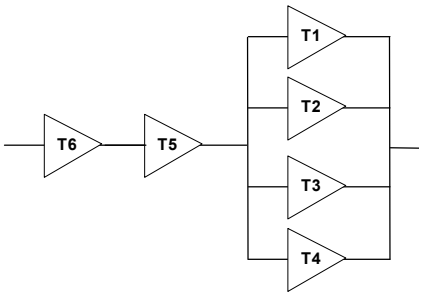
2.5. RF amplifier unit

2.5.1. Indicator lamps and message displays

- A LED indicator on the front panel of the amplifier card indicates the status of the transmitter as follows :
  - LED extinguished : voltage supply has failed or is ≤ 24V,
  - green LED : amplifier voltage supply is present and it is working satisfactorily,
  - red LED :
    - transistor failure as follows :

      I < 2.4 A for a group of 4 power transistors with polarisation (P input > -4dBm)
    - overdrive (over current or power protection system activated and fault stored : 45 A for 4 double transistors),
    - P input > -4 to -3dBm and P output <250W
    - SWR protection system activated and fault stored (≥ 2),
    - thermal protection system activated and fault stored (air input temperature ≥ 60°C),
  - orange LED : internal power supply absent in the protection system card.

NOTE: The PCL «AMPLIFIERS» window displays the status conditions of a power amplifier as follows :



- transistor current values:
  - T1 : amplifier modules 1 and 2,
  - T2 : amplifier modules 3 and 4,
  - T3 : amplifier modules 5 and 6,
  - T4 : amplifier modules 7 and 8,
  - T5 : transistors in class AB drive amplifier,
  - T6 : transistors in class A preamplifier,
- ON,
- general fault,
- SWR fault,
- overdrive fault,
- internal temperature fault,
- presence/absence.

2.5.2. Test points

Connector J1 on the front of the panel provides a test monitoring feed of the amplifier RF output signal.

2.5.3. Adjustment controls

There is a potentiometer control (R164) on the front panel of each RF amplifier module which is used to set the AGC voltage of each power amplifier to the same value.

2.6. Power supply unit

2.6.1. Using the commands

The amplifier power supplies are fed via a switch fuse isolator for protection of the power supply, accessible to the operator on the front panel.

2.6.2. Indicator lamps and message displays

A green LED on the upper panel indicates the status of the power supply as follows :

- when lit up it indicates that there is an output DC voltage and that the power supply is in operation,
- when extinguished it indicates that there is no output DC voltage and that the power supply is shut down or faulty.

Note : The «POWER SUPPLY» window which can be displayed on the PCL displays the status conditions for the power supplies in a bay as follows :

- POWERED OFF : power supply shut down but fault-free,
- POWERED ON : power supply in operation and fault-free,
- FAULT : mains input failure; this indication is independent of the power supply operational status (on or off),
- MISSING : power supply absent,
- BREAKER OFF : fused isolator open circuited,
- MAINS FAULT : one of the mains fuses F2 to F4 has failed,
- UNKNOW : internal power supply fault in the multiplex card.

2.6.3. Test points

The amplifier power supply has no test points.

2.6.4. Adjustment controls

The amplifier power supply has no adjustment controls available to the operator.

2.7. 860 Cabinet Mains distribution

The Mains Distribution Panel provide selective protection for the installation so that only the protective device immediately ahead of the fault will be activated :

- Circuit breaker Q6 : protects the mains feeds of the very low voltage power supply for the Control Processor Unit via the management rack,
- Circuit breaker Q7 : not used,
- Circuit breaker Q8 : protects the mains feeds of external exhaust fan EV3.
- Circuit breaker Q5 : protects the mains feeds of an uninterruptible power supply (UPS) - option,

  This configuration, with an uninterruptible power supply (UPS) is an option. Without this element, Q5 is not used and the mains come from “emergency mains input” (see “LV distribution” drawing for TB1 terminal block configuration)
- Circuit breaker Q2 : protects the mains feeds of Sirius 1,
- Circuit breaker Q3 : protects the mains feeds of Sirius 2,
- Circuit breaker Q4 : protects the mains feeds of the very low voltage power supply for the screen of the control panel via the management rack

2.7.1. Indicator lamps and message displays

- An orange indicator lamp on the mains monitoring relay K1 gives further information on the incoming main supply as follows:
  - Lit up : OK,
  - Extinguished: absence or inversion of phases.
- E1 includes 4 surge arrestors “over voltage protection” (3 between Phases and Ground , the 4 th. one between Neutral and Ground .When one surge arrestor is damaged, the light on the corresponding arrestor is on : the plug-in module has to be replaced .

2.7.2. Test points and adjustment controls

The front panel of the Mains Distribution Panel does not have any test points or adjustment controls, which can be used by the operator.

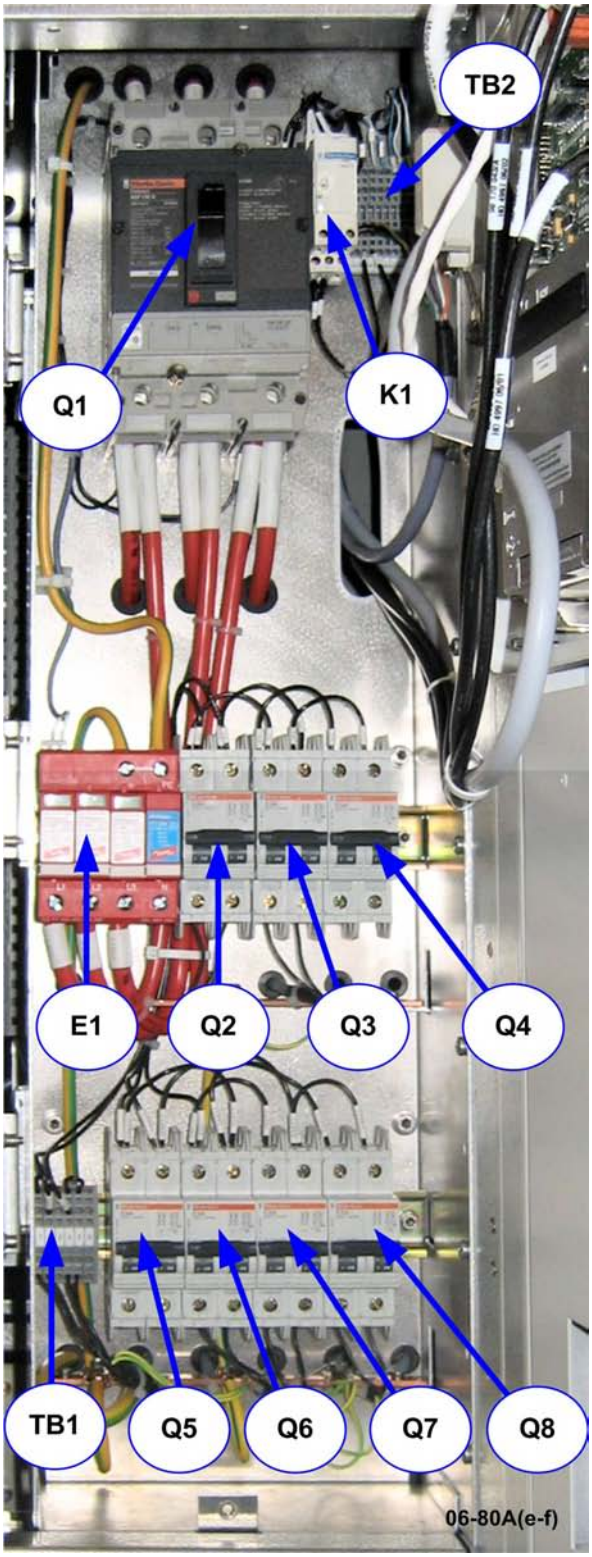


Figure 44 : Localisation of the main items of the Energy plate