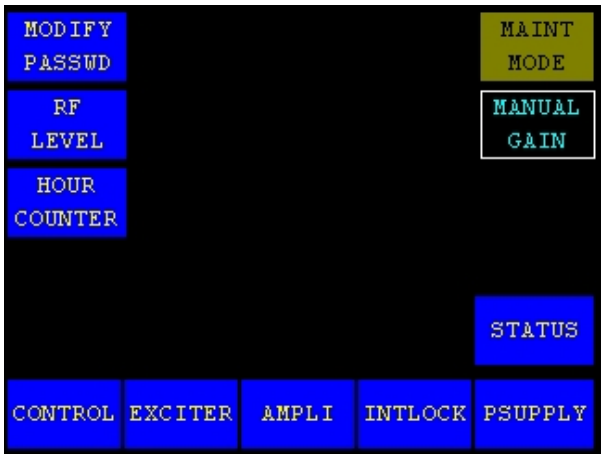
2.1.13. "CONTROL OPER Level 2" window for Normal Mode

This window is called up by pressing the "NEXT CONTROL" control keys in the "CONTROL Level 1" window when the transmitter is in normal mode.

It provides access to a restricted number of commands and information and is only available in Normal Mode.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
MODIFY PASSWD	Calls up the "MODIFY PASSWD" window.	Command is disabled while the PCL is locked (disabled).
RF LEVEL	Calls up the "RF LEVEL" window.	
HOUR COUNTER	Calls up the "HOUR COUNTER" window.	
STATUS	Calls up the "STATUS" window.	
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

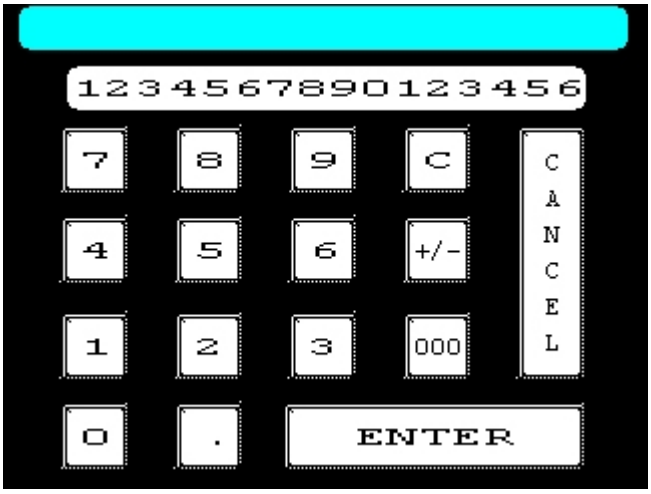
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
MAINT MODE / NORMAL MODE	Displays the current operating mode of the transmitter *(maintenance mode or normal mode)*.	The "NORMAL MODE" message window must be displayed. Blinking message to indicate that the maintenance mode is operating.
MANUAL GAIN / AUTO GAIN	Displays, which gain control mode (manual or automatic) is currently picked up by the transmitter.	AUTO GAIN / MANUAL GAIN

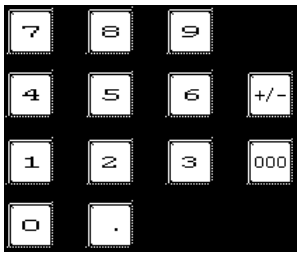
2.1.14. "NUMERICAL VALUE" window

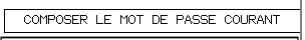
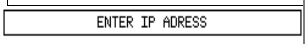
This window is called up after:

- a request to change parameters from one of the PCL windows,
- an enter password command or a change password command.

It is used to input data.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
	Validates the entry and calls back the previous window.	
	Used to insert parameter value. Numeric keys.	
	Cancels the entry and calls back the previous window.	
	Cancels the last digit entry.	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
 Examples:   	Shows the window title.	The title shows the name of the selected parameter.
 	Displays the value of the parameter during entry.	When entering a password, an asterix (*) is displayed each time a numeric key is pressed.

2.1.15. "RF LEVEL" window

This window is called up by the "RF LEVEL" control keys in either the "CONTROL MAINT Level 2" window or the "CONTROL OPER Level 2" window.

This window displays the reflected and forward power values, as well as the quality variables of the RF feedback signal.

OPTIMUM FAMILY OR ULTIMATE FAMILY

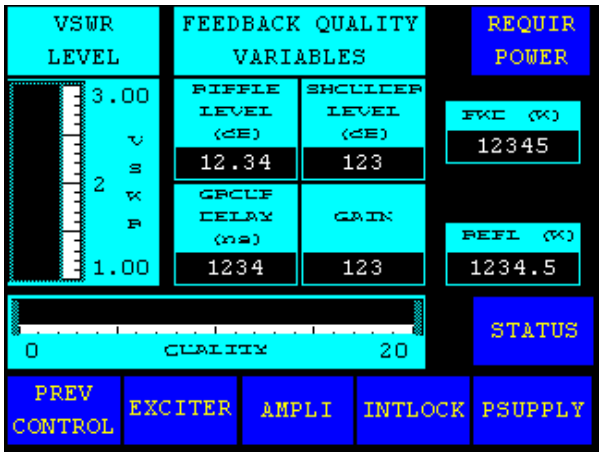


Figure 20 : Maintenance mode and MFN mode operation

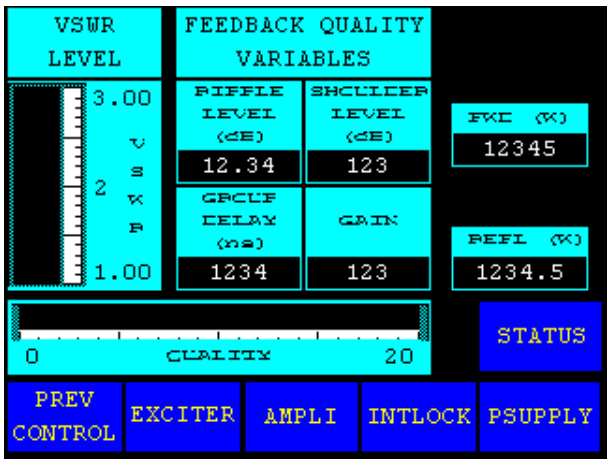


Figure 21 : Normal mode or SFN mode operation and MediaFLO modulator

AFFINTY FAMILY

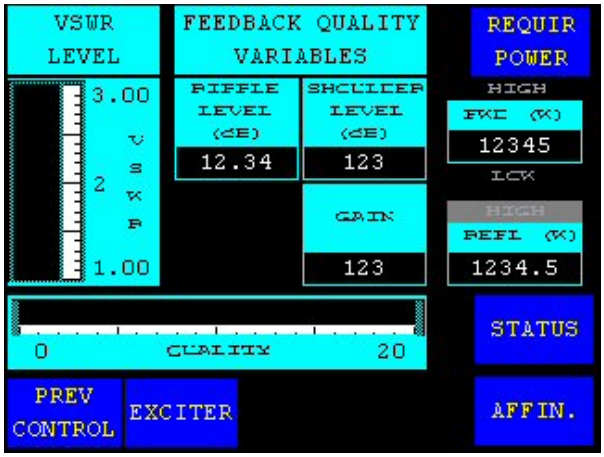


Figure 22 : Maintenance mode and MFN mode operation

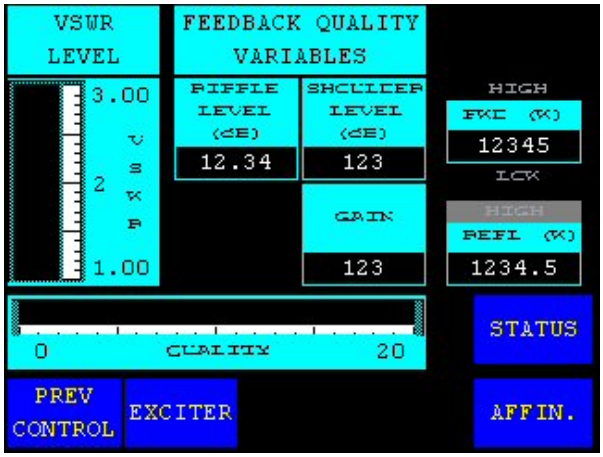


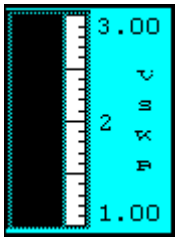
Figure 23 : Normal mode or SFN mode operation

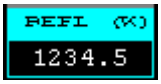
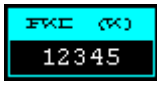
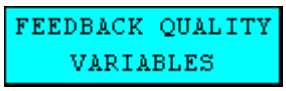
CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
REQUIR POWER	Calls up the "REQUIRED POWER" window. **(3)**	ATSC transmitter This control keys is available in Maintenance mode only. Control key invisible in Normal mode only. DVB-T transmitters This control keys is available in Maintenance mode and MFN mode operation only. Control key invisible in Normal mode or SFN mode operation.
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up windows as follows: "CONTROL MAINT Level 2", if the system is in maintenance mode, "CONTROL OPER Level 2", if the system is in normal mode.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

(3): Unavailable for MediaFLO modulator

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
VSWR LEVEL	Gives the parameter name.	
	Displays the antenna SWR (before RF filter unit).	

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
	Indicates a higher value than the threshold value.	Flashes if the reflected power (reverse power) exceeds 3% of calibrated power Otherwise not visible. The threshold value (3%) is unchanging
	Displays the reflected (reverse) RF power value.	This value is expressed in watts or as a percentage of calibrated power value according with your installation choice
	Indicates a higher value than the high alarm threshold value.	Flashes if the transmitted power exceeds the maximum power threshold value. Otherwise not visible. The alarm threshold is set using the «RF THRESHOLD» window.
	Displays the transmitted RF power value.	This value is expressed in watts or as a percentage of the calibrated power value according with your installation choice
	Indicates a lower value than the low alarm threshold value.	Flashes if the transmitted power is lower than the minimum power threshold value. Otherwise not visible. The alarm threshold is set using the «RF THRESHOLD» window.
	Gives the parameter name.	
	Displays the measured in-band ripple value.	Available in Adaptive mode only.
	Displays the measured shoulder level value.	Available in Adaptive mode only.
	Displays the measured group delay level value **(4)**.	Available in Adaptive mode only.
	Displays the measured gain value.	Available in Adaptive mode only. The nominal value is 128.
	Displays the calculated quality assessment of the transmitter.	Available in Adaptive mode only. The quality assessment depends on the following measured parameters and quality threshold levels : ♦ Power level ♦ Shoulder level ♦ Ripple level The "QUALITY THRESHOLD SETTINGS" window is accessible in installation mode.

(4): MediaFLO modulator only

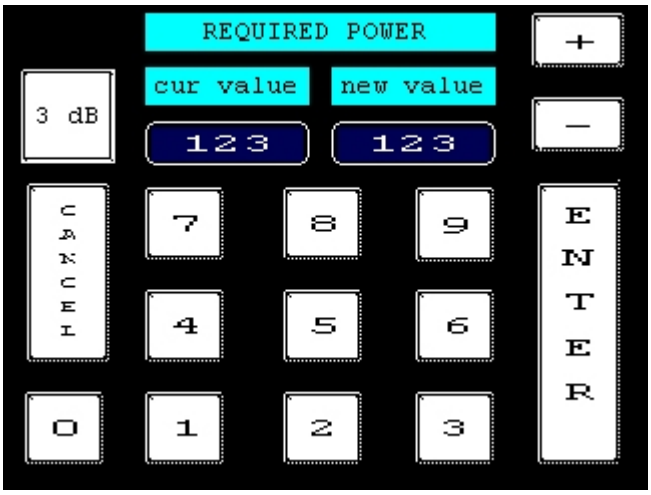
2.1.16. "REQUIRED POWER" window

The «REQ PWR» controls key in either the «RF LEVEL» window or the «TRANSMITTER STATUS» window calls it up when the transmitter is in maintenance mode.

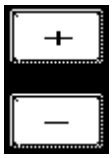
Note: This window is not available for MediaFlo modulator.

This window is used to input the required Power. This is the power level required by an operator (local or remote). The operator can modify this level at any time. Range of variation :

- **0.25** * Calibred Power ≤ Required power ≤ **1.12** * Calibred Power
- With Required power ≤ Maximum Power



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
REQUIRED POWER	Shows the window title.	
cur value 123	Displays the actual value of the required power during entry.	
new value 123	Displays the value of the required power during entry.	Before selecting a new value to modify the value displays is equal to current value.
3 dB	Selects a reduction in power Displays last selection made by the operator or by the system (automatic power reduction).	0dB, 3dB, 6dB For safety reasons, the PCL should be locked when a power reduction to –3dB or –6dB has been commanded. Command is displayed while the PCL is locked
7 8 9 4 5 6 0 1 2 3	Used to insert new value of required power. Numeric keys.	

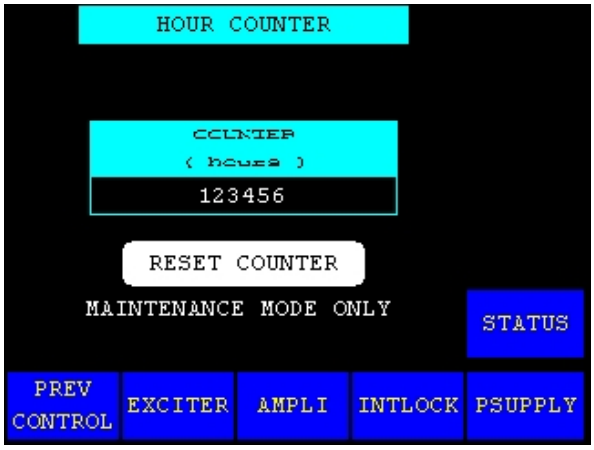
CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
	Used to adjust slightly new value of required power.	
	Cancels the entry and calls back the previous window.	
	Validates the entry and calls back the previous window.	

2.1.17. "HOUR COUNTER" window

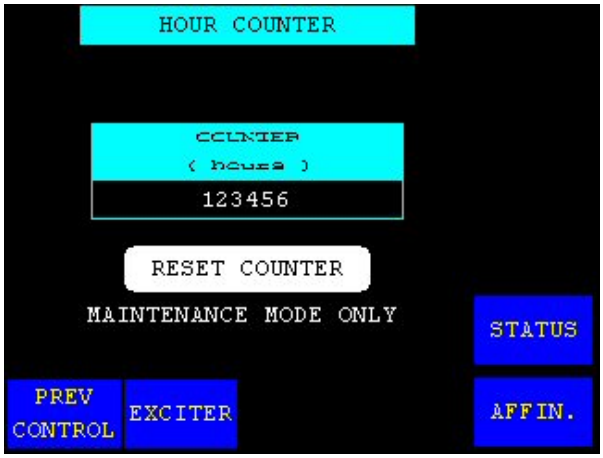
This window is called up by pressing the "HOUR COUNTER" control keys in the "CONTROL MAINT Level 2" window or in the "CONTROL OPER Level 2" window.

It displays a read-out of the elapsed time counter which shows the actual time during which the transmitter has been in operation. This value will also be the actual time during which the cooling system has been in operation.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
RESET COUNTER	Resets the elapsed time counter to zero.	Command is disabled in Normal mode or while the PCL is locked (disabled).
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up windows as follows: "CONTROL MAINT Level 2", if the system is in maintenance mode, "CONTROL OPER Level 2", if the system is in normal mode.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

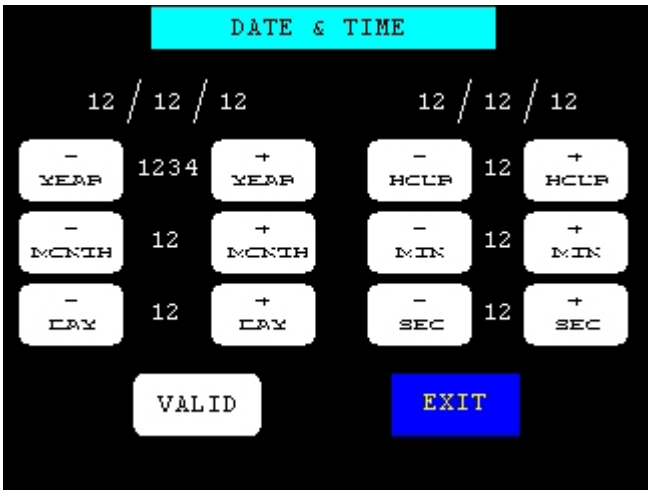
(b): Not Visible for OPTIMUM or ULTIMATE families

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
HOUR COUNTER	Gives the window name.	
CCLNTER (hcus3) 123456	Displays the actual time during which the transmitter has been in operation since it was last reset.	The counter is reset to zero when the "RESET COUNTER" command in this window is activated. The counter value is stored in the CPU; if the CPU is replaced, the counter value will no longer give a true representation of the transmitter operating time.

2.1.18. DATE & TIME" window

It is called up by pressing the "DATE" control keys in the "CONTROL MAINT Level 2" window. It is only accessible when the transmitter is in maintenance mode.

This window is used to update the date and time.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
- YEAR / + YEAR	Increments or decrements the year.	These commands are locked out: if the PCL is locked, while the number resulting from the increment or decrement is being displayed between the two control keys.
- MONTH / + MONTH	Increments or decrements the month.	
- DAY / + DAY	Increments or decrements the day.	
- HOUR / + HOUR	Increments or decrements the hour.	
- MIN / + MIN	Increments or decrements the minutes.	
- SEC / + SEC	Increments or decrements the seconds.	
VALID	Validates the date and time displayed and recalls the "CONTROL MAINT Level 2" window.	
EXIT	Recalls the "CONTROL MAINT Level 2" window without updating the date and time.	

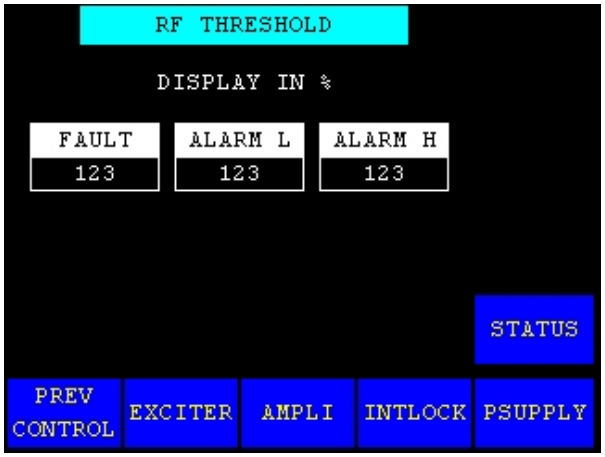
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
DATE & TIME	Gives the window name.	
12 / 12 / 12 12 / 12 / 12	Displays date and time values used by the Central Control Unit.	The date and time values are frozen to values which correspond to the instant when the "DATE" button in the "CONTROL MAINT Level 2" window was pressed. For ATSC transmitter, the display of date is following : Month / Day / Year. For DVDT transmitter, the display of date is following : Day / Month / Year.

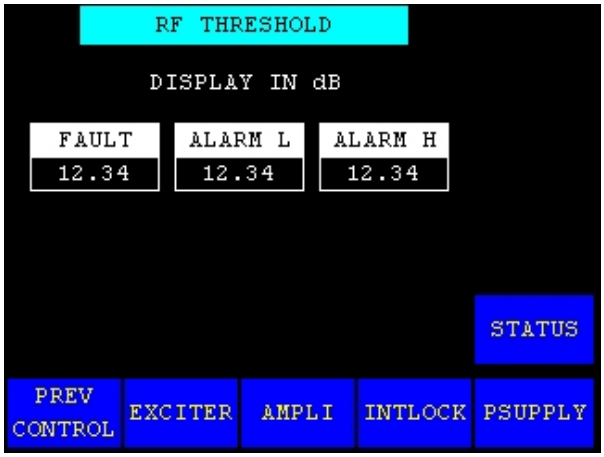
2.1.19. "RF THRESHOLD" window

This window is called up by pressing the "RF THRES" control keys in the "CONTROL MAINT Level 2" window. It is only accessible in maintenance mode.

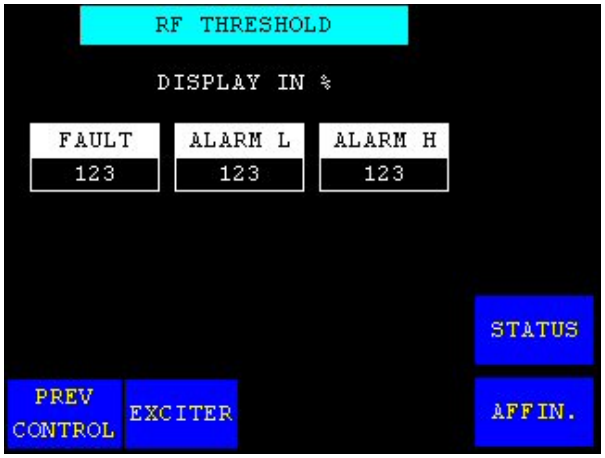
It provides for adjusting the thresholds for triggering the alarm and fault signals which draw the operator's attention to the RF power level status using the PCL "Alarm" indicator lamp.

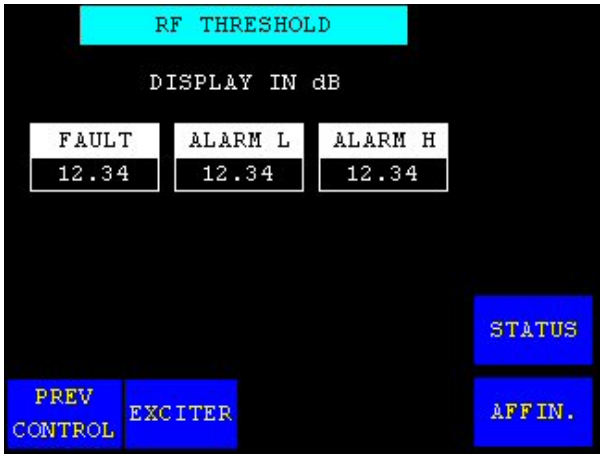
OPTIMUM FAMILY OR ULTIMATE FAMILY





AFFINTY FAMILY





CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
ALARM H 12.34	Calls up the "NUMERICAL VALUE" window in which the high alarm threshold value can be changed. Displays the high alarm threshold for the RF power level.	Commands are disabled while the PCL is locked (disabled). This value is expressed in **dB** or as **a percentage** of the calibrated power value according with your installation choice DISPLAY IN dB / DISPLAY IN %
ALARM L 12.34	Calls up the "NUMERICAL VALUE" window in which the low alarm threshold value can be changed. Displays the low alarm threshold for the RF power level.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
ALARM H 12.34	Calls up the "NUMERICAL VALUE" window in which the fault threshold value can be changed. Displays the fault threshold for the RF power level.	
STATUS	Calls up the "STATUS" window.	
PREV CONTROL	Calls up the "CONTROL MAINT Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

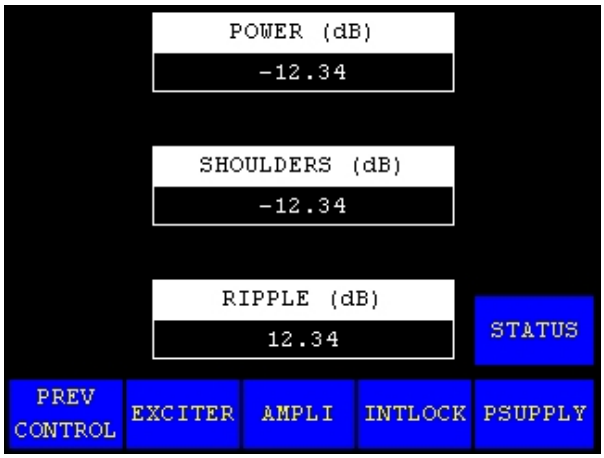
MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
RF THRESHOLD	Gives the window name.	

2.1.20. "QUALITY THRESHOLD SETTINGS" window

It is called up by pressing the "QUALITY THRESHOLD" control keys in the " CONTROL MAINT Level 2" window. It is only accessible in maintenance mode.

This window is used to change the quality threshold levels stored in the CPU card.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY

CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up the "CONTROL MAINT Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	
POWER (dB) -12.34	Displays the quality threshold for the power level. Pressing this key calls up the "NUMERICAL VALUE" window in which this quality threshold can be changed. Displays last selection.	For each parameter, the quality threshold is assessed over a scale of 20, the cubic root of the product of the three assessments (Power, Shoulders, Ripple) providing the overall quality assessment of the transmitter. This overall quality assessment is available to the operator in the "RF LEVEL" screen.

CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up the "CONTROL MAINT Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	
SHOULDERS (dB) -12.34	Displays the quality threshold for the shoulder level. Pressing this key calls up the "NUMERICAL VALUE" window in which this quality threshold can be changed. Displays last selection.	The quality threshold is the maximum permissible deviation (in dB) from a set point before the occurrence of a major fault (overall quality assessment of 13/20), which produces a transmitter changeover in an N+1 or Passive Reserve system. In SD or DD systems, no changeover is performed.
RIPPLE (dB) 12.34	Displays the quality threshold for the ripple level. Pressing this key calls up the "NUMERICAL VALUE" window in which this quality threshold can be changed. Displays last selection.	The set point (Shoulder, Ripple) is the parameter threshold beyond which the MODAP performs a correction. The set points can be defined in the "CONTROL MAINT Level 3" window. The power set point is the nominal power of the transmitter, it is fixed and is available to the operator in the "INSTALLATION PARAMETERS Level 1" window.

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

2.1.21. "COFDM or 8VSB PARAMETERS" window

This window is called up by pressing the "MODUL PARAM." control keys in the "CONTROL MAINT Level 2" window. It is only accessible in maintenance mode.

It is used to change the COFDM or 8VSB modulator card configuration parameters stored in the CPU card.

The COFDM window is only available with an internal COFDM modulator (DVB-T Transmitter).

Note :

- MODAP Version only

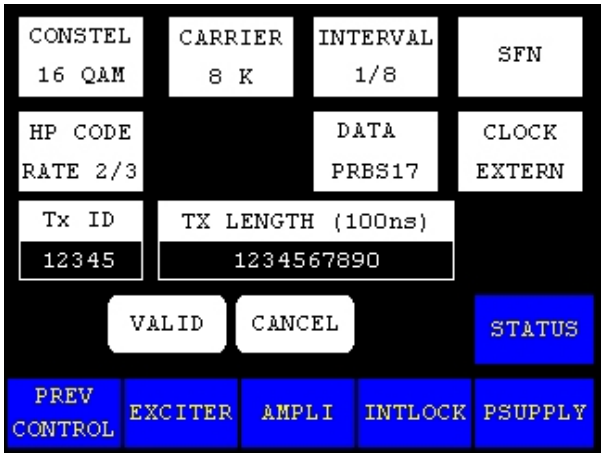
  To set up a new parameter configuration of the modulator, the three corrections (ALE, LUT and OLDC) should be set to the FIXED mode. The control keys can be defined in the "MISCELLANEOUS" windows and "CONTROL MAINT Level 4" windows.

- SIRIUS Version only

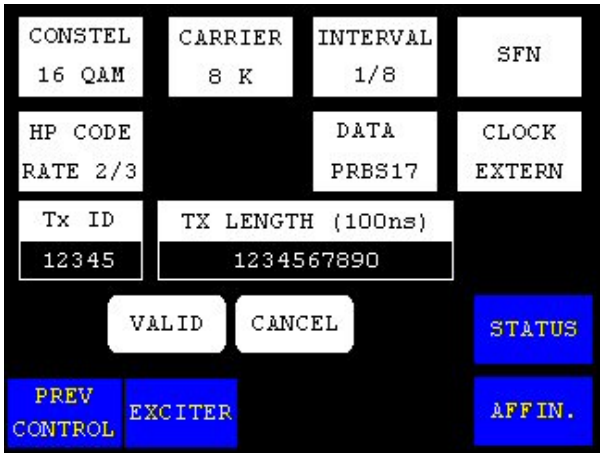
  To set up a new parameter configuration of the modulator, the two corrections (ALE, and LUT) should be set to the FIXED mode. The control keys can be defined in the "MISCELLANEOUS" window.

COFDM MODULATOR

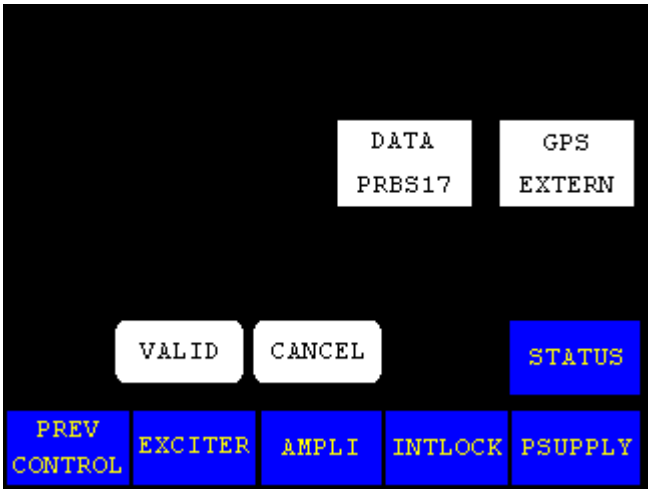
OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY



8VSB MODULATOR



CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
CONSTEL 16 QAM	Selects the constellation type used by the modulator. Displays last selection.	CONSTEL 64-QAM/16-QAM /QPSK 64-QAM : 64-bit representation 16-QAM : 16-bit representation QPSK (4-QAM) : 4-bit representation
CARRIER 8 K	Selects the number of transmitted carriers. Displays last selection.	CARRIER 8K/2K
INTERVAL 1/8	Selects the guard interval used by the COFDM modulator. Displays last selection.	INTERVAL 1/32; 1/16; /1/8; 1/4
HP CODE RATE 2/3	Selects the High Priority code rate of the modulation. Displays last selection.	HP CODE RATE 7/8; 5/6; 3/4; 2/3;1/2
SFN / MFN	Selects the network type. Displays last selection.	SFN / MFN
Tx ID 12345	Selects the transmitter ID number in an SFN network. **(*)** Displays last selection.	This value allows to address the content of the MIP to this identified Tx. Pressing this key calls up the "NUMERICAL VALUE" window in which this identification number can be changed.
TX LENGTH (100ns) 1234567890	Selects the offset delay value. **(*)**	This value can be changed by the MIP. Pressing this key calls up the "NUMERICAL VALUE" window in which this time can be changed.
DATA PRBS17	Selects the input signal type of the modulator	Data PRBS 15 / Data PRBS 17 / Data PRBS 20 / Data PRBS 23 / Data input ASI / Data DVB_SPI *(MODAP version only)* In SFN mode, the "Data PRBS" control keys are not validated by the system.
CLOCK EXTERN	Selects the clock type of the exciter.	CLOCK Internal / CLOCK External In SFN mode, CLOCK external is used.
CANCEL	Cancels a selection.	
VALID	Validates a selection.	
STATUS	Calls up the "STATUS" window.	
PREV CONTROL	Calls up the "CONTROL MAINT Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	

CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(*): Icon is only available in SFN mode with an internal COFDM modulator.

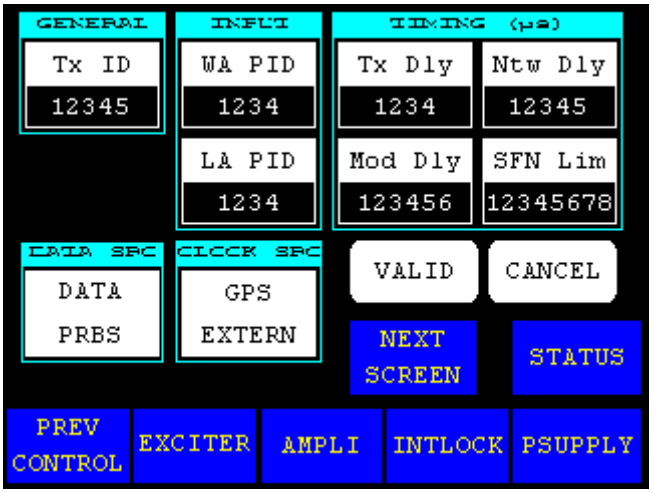
(a): Not Visible for AFFINITY family

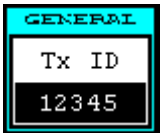
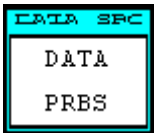
(b): Not Visible for OPTIMUM or ULTIMATE families

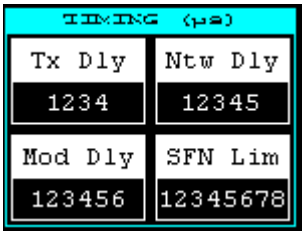
2.1.22. "FLO 1 PARAMETERS" window

This window is called up by pressing the "MODUL PARAM." control keys in the "CONTROL MAINT Level 2" window. It is only accessible in maintenance mode.

It is used to change the MediaFLO modulator card configuration parameters stored in the CPU card.



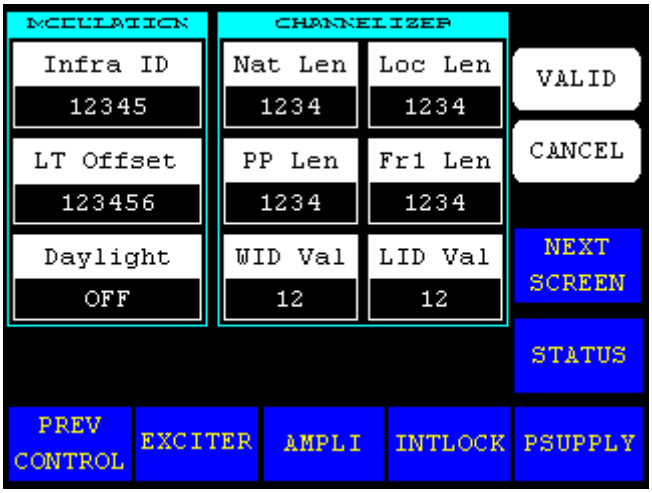
CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
	Selects the transmitter ID number in an SFN network. Displays last selection.	This value allows addressing the content of the MIP to this identified Tx. Pressing this key calls up the "NUMERICAL VALUE" window in which this identification number can be changed.
	Selects the input signal type of the modulator	ASI / PRBS
	Selects the clock type of the exciter.	CLOCK Internal / GPS Internal / GPS External
	Selects the process PID number.	♦ WA PID : This value is programmed Wid Area content process identification (PID). If the wide area PID value in the incoming transport stream matches this value, the stream is forwarded to the channelizer as wide area content. Otherwise, the stream is ignored. ♦ LA PID : This value is programmed Local Area content process identification (PID). If the local area PID value in the incoming transport stream matches this value, the stream is forwarded to the channelizer as local area content. Otherwise, the stream is ignored. Pressing this key calls up the "NUMERICAL VALUE" window in which this PID number can be changed.

CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
	Selects the delay value.	♦ Mod Dly : The number of clock cycles corresponding to the delay through the FLO modulator core. This is set to align the start of superframe at the RF output to the GPS 1PPS. ♦ TX Dly : This value is the latency associated with the transmit hardware. It's used to compensate for the transmit delay in order to synchronize transmissions from multiple sites in an SFN network. ♦ Ntw Dly: This value is the latency associated with the geographic separation of transmitters. It's used to synchronize transmissions from multiple sites in an SFN network. ♦ SFN lim: If the absolute value of the system clock integrity count is greater than this limit, it is out of range and an alarm generated. Pressing this key calls up the "NUMERICAL VALUE" window in which this value can be changed.
CANCEL	Cancels a selection.	
VALID	Validates a selection.	
NEXT SCREEN	Calls up the "FLO 2 MODULATOR PARAMETERS" window.	
STATUS	Calls up the "STATUS" window.	
PREV 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.	

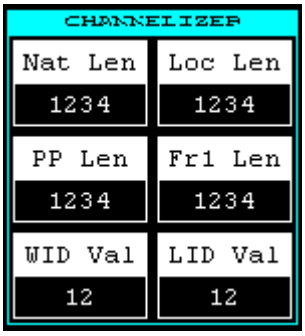
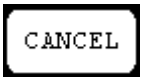
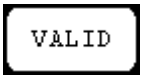
2.1.23. "FLO 2 PARAMETERS" window

This window is called up by pressing the "NEXT SCREEN." control keys in the "FLO 1 MODULATOR PARAMETERS" window. It is only accessible in maintenance mode.

It is used to change the MediaFLO modulator card configuration parameters stored in the CPU card.



CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
	Selects values of the modulation parameters.	♦ Infra ID: This value is inserted into the infrastructure ID field of the Local system parameters message. The network sets this field to the identifier assigned to the local area infrastructure. ♦ LT Offset: This value is inserted into the local time offset field of the local system parameters message. Pressing this key calls up the "NUMERICAL VALUE" window in which this PID number can be changed. ♦ Daylight: ON / OFF This indicator is inserted into the daylight field of the local system parameters message. ON: Local transmitter time is daylight saving time.

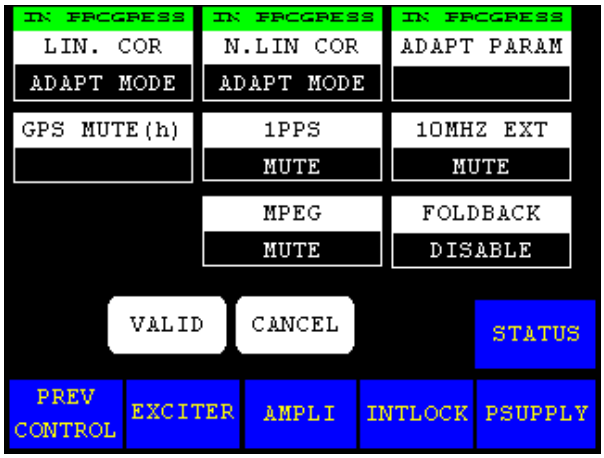
CONTROL KEYS	FUNCTIONS	SELECTIONS AVAILABLE/COMMENTS
	Selects values of the channelizer parameters.	♦ Nat Len: Exciter initialization register indicates National Length. ♦ Loc Len: Exciter initialization register indicates Local Length. ♦ PP Len: Exciter initialization register indicates Positioning Pilot Length. ♦ Fr1 Len: Exciter initialization register indicates FrameLength. ♦ WID Val: Exciter initialization register indicates WID scrambler sequence number. ♦ LID Val: Exciter initialization register indicates LID scrambler sequence number Pressing this key calls up the "NUMERICAL VALUE" window in which this value can be changed.
	Cancels a selection.	
	Validates a selection.	
	Calls up the "CONTROL MAINT Level 2" window.	
	Calls up the "STATUS" window.	
	Calls up the "FLO 1 MODULATOR PARAMETERS" window.	
	Calls up the "EXCITER Level 1" window.	
	Calls up the "AMPLIFIERS" window.	
	Calls up the «INTERLOCK» window	
	Calls up the "POWER SUPPLY" window.	

2.1.24. "MISCELLANEOUS" window

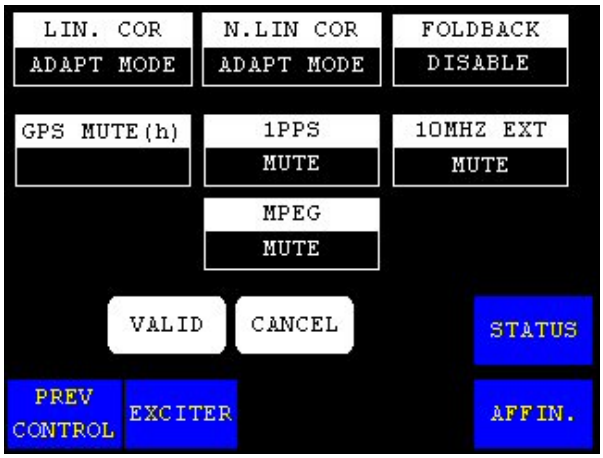
This window is called up by pressing the "MISC PARAM." control keys in the "CONTROL MAINT Level 2" window. It is only accessible in maintenance mode.

It is used to change the ADAPT exciter operation configuration parameters stored in the CPU card.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
LIN. COR ADAPT MODE OR IN PROGRESS LIN. COR ADAPT MODE	Toggles between fixed and adaptive correction of signal distortion. Displays last selection.	LIN. COR ADAPT MODE / LIN. COR FIXED MODE The text colour of control key is grey when you select the adaptive mode. Command is disabled while the PCL is locked (disabled).
N.LIN COR ADAPT MODE OR IN PROGRESS N.LIN COR ADAPT MODE	Displays the current operating mode of the LUT. Displays last selection.	N. LIN COR ADAPT MODE / N.LIN COR FIXED MODE The text colour of control key is grey when you select the adaptive mode. Command is disabled while the PCL is locked (disabled).
IN PROGRESS ADAPT PARAM	Selects the coefficients of the corrections for antenna exciter.	SAVE / RECALL Press this control key and validation ♦ SAVEL: Allows saving coefficients into tables of corrections. ♦ RECALL: Allows loading corrections by using coefficients beforehand recorded. Recalls the coefficients of the last save.

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
FOLDBACK DISABLE	Selects the reflected (reserve) power control mode.	Control key available according to your installation mode FOLDBACK ENABLED: When the reflected power value is higher than the threshold value (3%) the power control is progressively produce through an algorithm. FOLDBACK DISABLED: When the reflected power value is higher than the threshold value (3%) the power control is produce by stairway (-3dB, -6dB and halt 'no power")
GPS MUTE(h)	Displays the actual time during which the transmitter has been in operation since the GPS was muted (Absent). **(1)** Displays last selection.	Range of variation: From 0 to 99 hours In case of the value of display is 0 hour, the transmitter is still working (not mute).
1PPS MUTE	Selects the 1PPS changeover mode. Displays last selection.	MUTE / NOT MUTE Icon is available in SFN mode only. NOT MUTE: In case of disable of 1 PPS signal the transmitter is still working. The SFN network is disturbs MUTE: In case of disable of 1 PPS signal the transmitter is stopped. When the 1 PPS signal reappear with 10MHz signal present the transmitter start alone.
10MHZ EXT MUTE	Selects the 10MHz EXT changeover mode. Displays last selection.	MUTE / NOT MUTE Icon is available in SFN mode only. Visible for External GPS only, Control key used: CLK SOURCE NOT MUTE: In case of disable of 10Mhz signal the transmitter is still working. The SFN network is disturbs MUTE: In case of disable of 10MHz signal the transmitter is stopped. When the 10Mhz signal reappear with 1 PPS signal present the transmitter start alone.
MPEG MUTE	Selects the input signal changeover mode. **(1)** Displays last selection.	MUTE / PRBS SFN mode: this control key has no effect. The icon is only available in MFN mode MFN mode: this control key is used to select the input signal switching mode.
VALID	Validates a selection.	
CANCEL	Cancels a selection.	
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up the "CONTROL MAINT Level 3" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

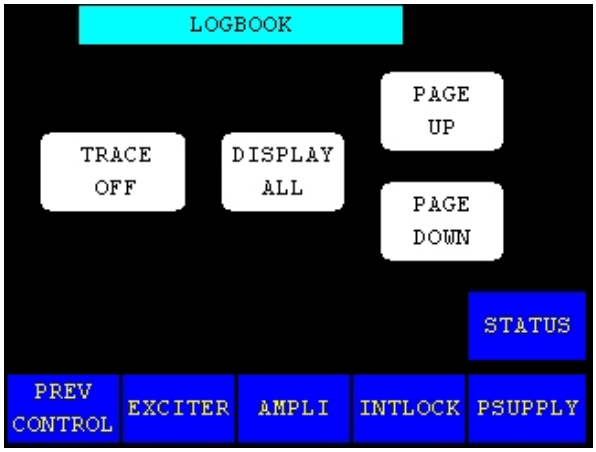
(1): Not Visible for MediaFLO modulator

2.1.25. "LOGBOOK" window

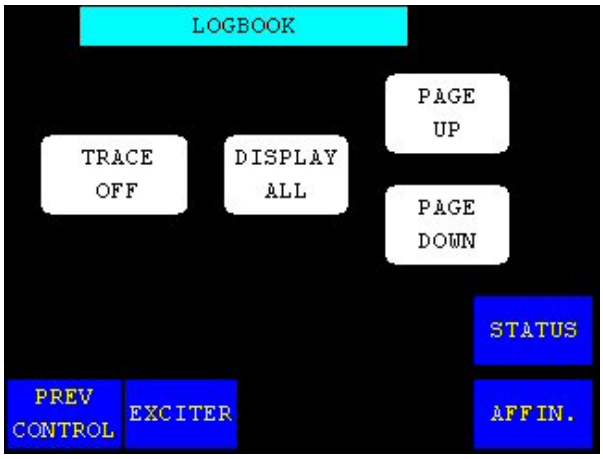
This window is called up by pressing the "LOGBOOK" control keys in the "CONTROL MAINT Level 2" window.

It controls the downloading of the log book data to a terminal. This window is only accessible when the transmitter is in maintenance mode.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
TRACE OFF	Selects the type of information flow to the log book terminal. Displays the type of information flow selected.	TRACE OFF / TRACE ON TRACE ON : the log book output is continuous, data regarding each event is sent in a real time to the logbook terminal. TRACE OFF : the three other buttons are operational. Command is disabled while the PCL is locked (disabled).
DISPLAY ALL	Displays all events stored in the log book.	Command is disabled while the PCL is locked (disabled).
PAGE UP	Displays the 20 events ahead of the last events accessed by the operator.	Command is disabled while the PCL is locked (disabled).
PAGE DOWN	Displays the 20 events which follow on from the last events accessed by the operator.	Command is disabled while the PCL is locked (disabled).
STATUS	Calls up the "TRANSMITTER STATUS" window.	
PREV CONTROL	Calls up the "CONTROL Level 2" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

INDICATOR LAMPS AND MESSAGE DISPLAYS	FUNCTIONS	DISPLAY/COMMENTS
LOGBOOK	Gives the window name.	

2.1.26. "EXCITER Level 1" window, or "EXCITER PANEL" window, MODAP version ONLY

From other windows it can be called up by pressing the "EXCITER" key.

This window, which is called "EXCITER PANEL" in an SD transmitter, displays the status of the exciter cards. It also provides for selecting an exciter and configuring the changeover mode for the exciters *.

OPTIMUM FAMILY OR ULTIMATE FAMILY

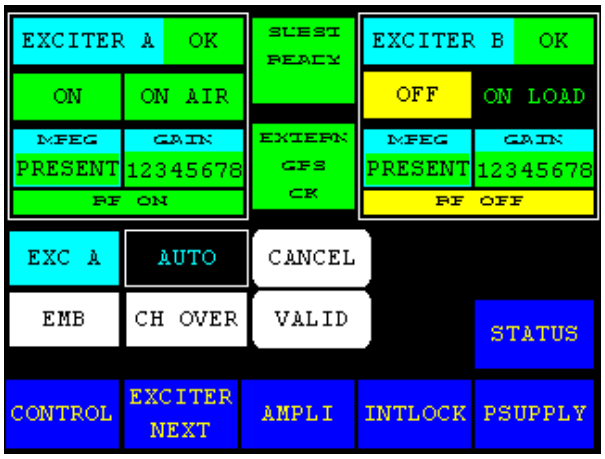


Figure 24 : Dual Drive Transmitter

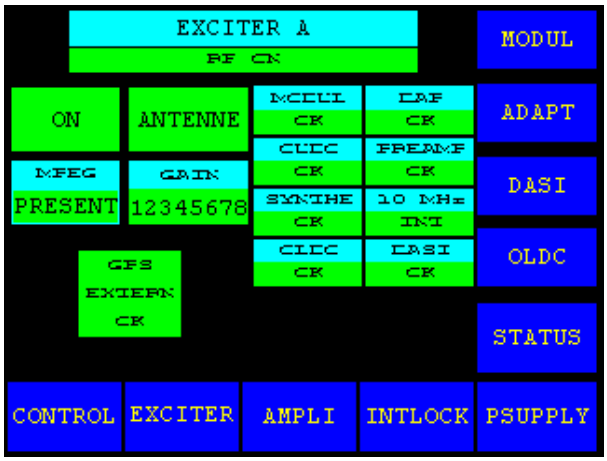


Figure 25 : Single Drive Transmitter

AFFINTY FAMILY

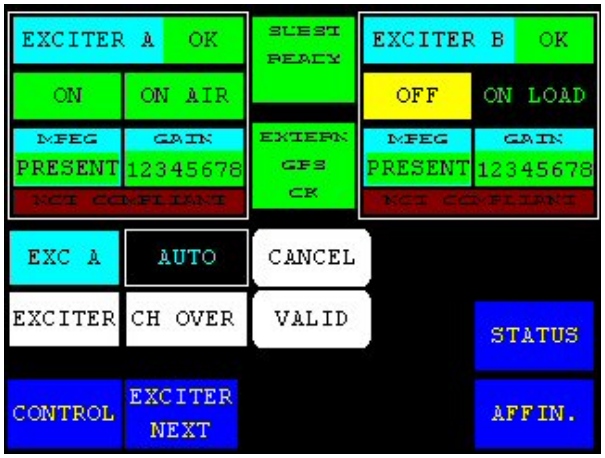


Figure 26 : Dual Drive Transmitter

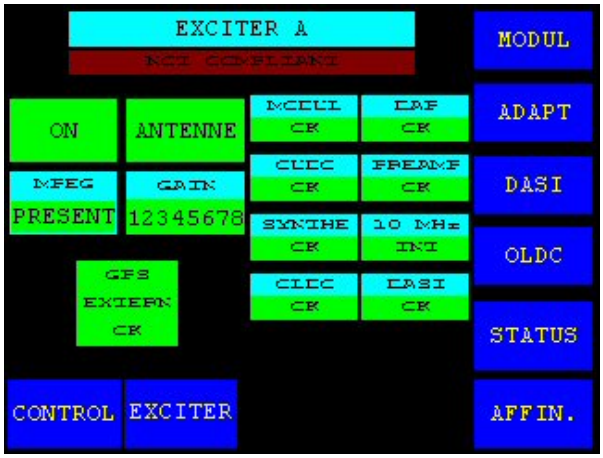


Figure 27 : Single Drive Transmitter

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXCITER	Selects the exciter to be connected to the amplifier channel (exciter to antenna). **(*)**	Command is disabled while the PCL is locked (disabled).
CH OVER	Selects the exciter changeover mode (Automatic or Manual). **(*)**	Command is disabled while the PCL is locked (disabled).
VALID	Validates a selection. **(*)**	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
CANCEL	Cancels a selection. **(*)**	
STATUS	Calls up the "TRANSMITTER STATUS" window.	
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER NEXT	Calls up the "EXCITER Level 2" window. **(*)**	
EXCITER	Calls up the "EXCITER PANEL" window. **(**)**	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	
DASI	Calls up the "DASI STATUS" window **(**)**	This control keys is available and visible in case of DASI board is fitted according with your installation choice
OLDC	Calls up the "OLDC STATUS" window. **(**)**	This control keys is available and visible in case of OLDC board is fitted according with your installation choice
MODUL	Calls up the "MODULATOR " window, in case of a DVB-T Transmitter. **(**)**	This control keys is not used in case of an ATSC Transmitter.
ADAPT	Calls up the " ADAPT PARAMETERS " window. **(**)**	
EXCITER A FAULT EXCITER A OK	Indicates the exciter status (proper operation or fault).	EXCITER A OK / EXCITER B OK EXCITER. A FAULT / EXCITER. B FAULT (1)
RF OFF / RF ON Or NOT COMPLIANT	Indicates whether the exciter delivered the RF power to a load, or on-air. Indicates the consistency between the CPU software configuration and that of the MODAP.	RF ON: RF signal on the exciter output. RF OFF: RF signal absence on the exciter output. NOT COMPLIANT Flashes if the CPU software configuration is not consistent with that of the MODAP. Red square is blinking of light. Otherwise not visible.

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
ON ON / OFF	Indicates the overall status of the exciter.	ON, OFF, MISSING, PSU FLT Exciter "ON" status is displayed in green. Exciter "" status is displayed in yellow PSU FLT : MODAP Power supply is faulty, the status is displayed in red. MISSING : DAP card is missing, the status is displayed in red.
MPEG PRESENT / MPEG ABSENT	Indicates presence or absence of an MPEG2 input signal on the relevant exciter.	MPEG PRESENT / MPEG MISSING (1)
ON LOAD / ON AIR	Indicates whether the exciter is connected to a load, or on-air.	ON LOAD / ON AIR
GAIN 12345678	Indicates the current transmission power level.	PWR= 0 dB / PWR= -3dB / PWR= -6 dB / PWR= STOPPED Exciter levels of -3 dB and -6 dB and the HALT indication are displayed in reverse video. STOPPED : The transmitter is switched off-air when there is an SWR fault or OVERDRIVE fault on the power amplifiers.
EXC A	Indicates the exciter selected. **(*)**	EXC A / EXC B Flashes until the "EXCITER SEL" command is either validated or cleared.
AUTO	Indicates the exciter changeover mode. **(*)**	MAN / AUTO Flashes until the "CH OVER" command is either validated or cleared. MAN (Manual) : only when operator gives a command. AUTO : when the selected exciter is faulty. A manual changeover can be commanded regardless of which changeover mode has been selected.

(*) : Only in Double Drive Version

(**) : Single Drive Version

(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 on red background in case of colour tactile screen).

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

MESSAGES	FUNCTIONS	DISPLAY/COMMENTS
	Indicates the exciter changeover status in automatic mode.	READY : the changeover system is ready for an automatic switch over. DONE : the changeover system is no longer available and it is necessary to change the exciter selected or to carry out a transmitter "RESET" (in this latter case, care must be taken because fault data for all faults which have disappeared will be erased together with their consequences; similarly for all selections carried out on the PCL). FAULT : an attempt to carry out an automatic changeover has failed and the buzzer will be triggered.
	Indicates the external GPS changeover status.	OK : the changeover system is ready for an automatic switch over. The free contact of the external GPS is closed. ALARM : the changeover system is no longer available. The free contact of the external GPS is openned. FAULT : an attempt to carry out an automatic changeover has failed. The free contact of the external GPS is openned In case of disable GPS signal the transmitter is stopped after a delay time according to "GPS MUTE (h) " control key in the "MISCELLANEOUS" window.
	Indicates the status of the very low voltage power supply of the exciter. (2)	P. SUPPLY OK / P. SUPPLY FAULT (1)

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

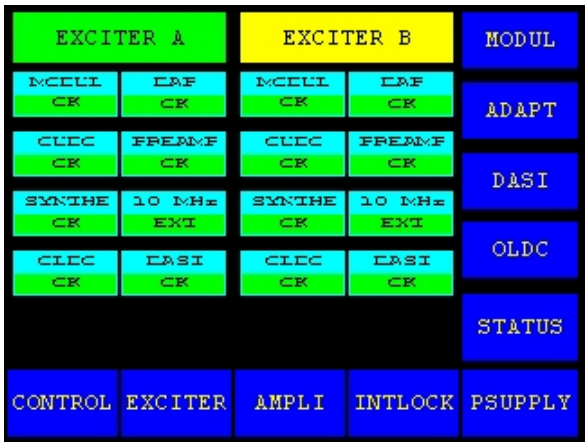
(2) Only Single Drive version.

2.1.27. "EXCITER Level 2" window, MODAP version ONLY

This window is called up by pressing the "EXCITER NEXT" control keys in the "EXCITER Level 1" window.

It displays the status of the exciter signals. This window is only available in **D**ouble **D**rive Transmitters.

OPTIMUM FAMILY OR ULTIMATE FAMILY



AFFINTY FAMILY

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER	Calls up the "EXCITER Level 1" window.	
AMPLI	Calls up the "AMPLIFIERS" window. **(a)**	
INTLOCK	Calls up the «INTERLOCK» window **(a)**	
PSUPPLY	Calls up the "POWER SUPPLY" window. **(a)**	
AFFIN.	Calls up the "AFFINITY" window. **(b)**	
MODUL	Calls up the "MODULATOR " window, in case of a DVB-T Transmitter	This control keys is not used in case of an ATSC Transmitter.
ADAPT	Calls up the " ADAPT PARAMETERS " window.	
OLDC	Calls up the "OLDC STATUS" window.	This control keys is available and visible in case of OLDC board is fitted according with your installation choice

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
DASI	Calls up the "DASI STATUS" window	This control keys is available and visible in case of DASI board is fitted according with your installation choice

(a): Not Visible for AFFINITY family

(b): Not Visible for OPTIMUM or ULTIMATE families

MESSAGE	FUNCTIONS	DISPLAY/COMMENTS
EXCITER A EXCITER B	Shows the double column of the relevant exciter. **(*)** Indicates which exciter is selected and which is on-air, as well as the status (fault-free or faulty) of both exciters (1).	EXCITER A / EXCITER B Message is displayed on green background: Exciter selected Message is displayed on yellow background: Exciter non selected
MODULAT OK	Indicates the overall status of the COFDM modulator.	MODULAT OK / MODULAT FAULT (1)
DAP OK	Indicates the overall status of the DAP.	DAP OK / DAP FAULT (1)
CUDC OK	Indicates the overall status of the CUDC.	CUDC OK / CUDC FAULT (1)
PREAMP OK	Indicates the overall status of the preamplifier.	PREAMP OK / PREAMP FAULT (1)
SYNTHE OK	Indicates the overall status of the RF synthesiser.	SYNTHE OK / SYNTHE FAULT (1)
10 MHz EXT	Indicates the status of the 10 MHz drive oscillator.	10 MHz EXT / 10 MHz INT First case: "10 MHz INT" control keys in "INSTALLATION PARAMETERS Level 1" window is selected. ♦ A status message (10 MHz ext or 10 MHz INT) is displayed in normal video (on black background). Second case: "10 MHz EXT" control keys in "INSTALLATION PARAMETERS Level 1" window is selected. ♦ A status message (10 MHz EXT) is displayed in normal video (on black background). ♦ A fault message (10 MHz INT) is displayed in reverse video (on white background).
OLDC OK	Indicates the overall status of the OLDC unit.	OLDC OK / OLDC FAULT (1)
DASI OK	Indicates the overall status of the DASI board.	DASI OK / DASI FAULT (1)

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

2.1.28. "EXCITER Level 1" window, or "EXCITER PANEL" window, SIRIUS version ONLY

From other windows it can be called up by pressing the "EXCITER" key.

This window, which is called "EXCITER PANEL" in an SD transmitter, displays the status of the exciter cards. It also provides for selecting an exciter and configuring the changeover mode for the exciters *.

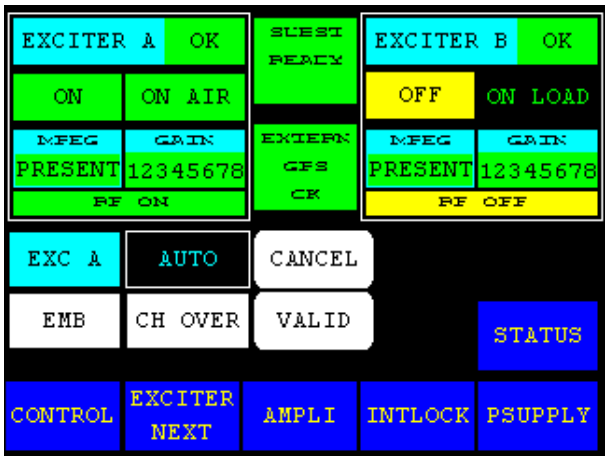


Figure 28 : Dual Drive Transmitter

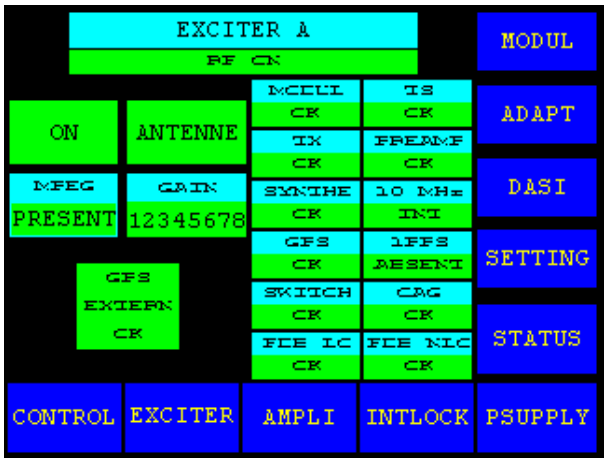


Figure 29 : Single Drive Transmitter

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXCITER (*)	Selects the exciter to be connected to the amplifier channel (exciter to antenna).	Command is disabled while the PCL is locked (disabled).
CH OVER (*)	Selects the exciter changeover mode (Automatic or Manual).	Command is disabled while the PCL is locked (disabled).
VALID (*)	Validates a selection.	
CANCEL (*)	Cancels a selection.	
STATUS	Calls up the "TRANSMITTER STATUS" window.	
CONTROL	Calls up the "CONTROL Level 1" window.	
EXCITER NEXT (*)	Calls up the "EXCITER Level 2" window.	
EXCITER (**)	Calls up the "EXCITER PANEL" window.	
AMPLI	Calls up the "AMPLIFIERS" window.	

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
INTLOCK	Calls up the «INTERLOCK» window	
PSUPPLY	Calls up the "POWER SUPPLY" window.	
DASI (**)	Calls up the "DASI STATUS" window	This control keys is available and visible in case of DASI board is fitted according with your installation choice
SETTING	Calls up the "SETTING" window	
MODUL (**)	Calls up the "MODULATOR " window, in case of a DVB-T Transmitter	This control keys is not used in case of an ATSC Transmitter.
ADAPT (**)	Calls up the " ADAPT PARAMETERS " window.	
EXCITER A FAULT EXCITER A OK	Indicates the exciter status (proper operation or fault).	EXCITER A OK / EXCITER B OK EXCITER. A FAULT / EXCITER. B FAULT (1)
RF ON / RF OFF Or NCI COMPLIANT	Indicates whether the exciter delivered RF power to a load or on-air. Indicates the consistency between the CPU software configuration and that of the SIRIUS exciter.	**RF ON:** RF signal on the exciter output **RF OFF:** RF signal absence on the exciter output **NOT COMPLIANT** Flashes if the CPU software configuration is not consistent with that of the SIRIUS exciter. Red square is blinking of light. Otherwise not visible.
ON ON / OFF	Indicates the overall status of the exciter.	ON, OFF, MISSING, PSU FLT Exciter "ON" status is displayed in green. Exciter "" status is displayed in yellow PSU FLT : Exciter Power supply is faulty, the status is displayed in red. MISSING : DIGITAL card is missing, the status is displayed in orange.
MPEG PRESENT / MPEG ABSENT	Indicates presence or absence of an MPEG2 input signal on the relevant exciter.	MPEG PRESENT / MPEG MISSING (1)
ON LOAD / ON AIR	Indicates whether the exciter is connected to a load, or on-air.	ON LOAD / ON AIR
GAIN 12345678	Indicates the current transmission power level.	PWR= 0 dB / PWR= -3dB / PWR= -6 dB / PWR= STOPPED Exciter levels of -3 dB and -6 dB and the HALT indication are displayed in reverse video. STOPPED : The transmitter is switched off-air when there is an SWR fault or OVERDRIVE fault on the power amplifiers.

CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
EXC A (*)	Indicates the exciter selected.	EXC A / EXC B Flashes until the "EXCITER SEL" command is either validated or cleared.
AUTO (*)	Indicates the exciter changeover mode.	MAN / AUTO Flashes until the "CH OVER" command is either validated or cleared. MAN (Manual) : only when operator gives a command. AUTO : when the selected exciter is faulty. A manual changeover can be commanded regardless of which changeover mode has been selected.

(*) : Only in Double Drive Version

(**) : Single Drive Version

(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 on red background in case of colour tactile screen).

MESSAGES	FUNCTIONS	DISPLAY/COMMENTS
SUBSI READY	Indicates the exciter changeover status in automatic mode.	READY : the changeover system is ready for an automatic switch over. DONE : the changeover system is no longer available and it is necessary to change the exciter selected or to carry out a transmitter "RESET" (in this latter case, care must be taken because fault data for all faults which have disappeared will be erased together with their consequences; similarly for all selections carried out on the PCL). FAULT : an attempt to carry out an automatic changeover has failed and the buzzer will be triggered.
EXTERN GPS OK	Indicates the external GPS changeover status.	OK : the changeover system is ready for an automatic switch over. The free contact of the external GPS is closed. ALARM : the changeover system is no longer available. The free contact of the external GPS is openned. FAULT : an attempt to carry out an automatic changeover has failed. The free contact of the external GPS is openned In case of disable GPS signal the transmitter is stopped after a delay time according to "GPS MUTE (h) " control key in the "MISCELLANEOUS" window.
PSUPPLY OK (2)	Indicates the status of the very low voltage power supply of the exciter.	P. SUPPLY OK / P. SUPPLY FAULT (1)

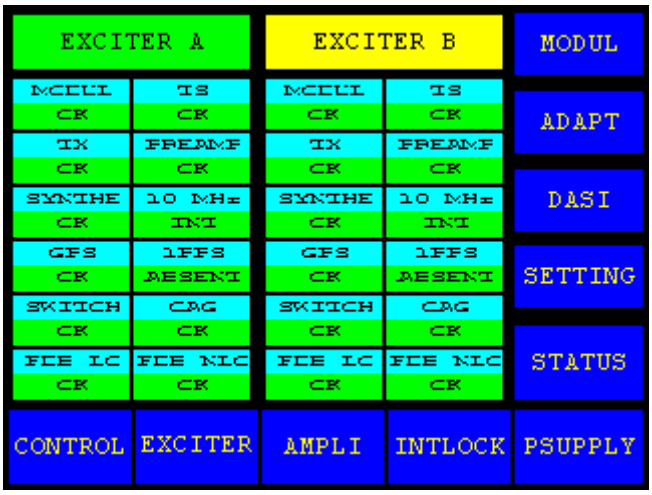
(3) A fault-free status is displayed in normal video (on black background or on green background in case of colour tactile screen). A faulty status is displayed in reverse video (on white background or on red background in case of colour tactile screen).

(4) Only Single Drive version.

2.1.29. "EXCITER Level 2" window, SIRIUS version ONLY

This window is called up by pressing the "EXCITER NEXT" control keys in the "EXCITER Level 1" window.

It displays the status of the exciter signals. This window is only available in **D**ouble **D**rive Transmitters.



CONTROL KEYS	FUNCTIONS	DISPLAY/COMMENTS
STATUS	Calls up the "TRANSMITTER STATUS" window.	
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.	
MODUL	Calls up the "MODULATOR " window, in case of a DVB-T Transmitter	This control keys is not used in case of an ATSC Transmitter.
ADAPT	Calls up the " ADAPT PARAMETERS " window.	
SETTING	Calls up the "SETTINGS" window.	
DASI	Calls up the "DASI STATUS" window	This control keys is available and visible in case of DASI board is fitted according with your installation choice