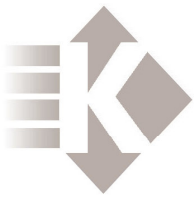
Professional Monitors 10”
BM6010A12

User Manual
BM6010D11

Edition 01

Oct. 2003



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SAFETY INORMATION

WARNING: This product includes critical mechanical and electrical parts which are essential for X-Radiation safety.
For continued safety replace critical components indicated in the service schematic only with exact replacement parts given in the parts list of service Manual.
Operating high voltage for this product is 22 Kv. At minimum brightness. Refer to service manual for measurement procedures and proper service adjustments.

WARNING: Electric shock or fire hazard can be caused if critical components are replaced by non conform components. Refer to parts list of service manual.

CAUTION: High vacuum tube is dangerous to handle refer replacement to qualified personnel.
Replace with a tue of the same type for continued safety

Indice

1. INTRODUCTION

1.1. Aplications

The KROMA BM6010 series monitors have been designed to use in Broadcast studios for signal evaluation requiring accurate picture reproduction. Also it can be used in post-production.

They incorporate microprocessor based control in all its operations, providing automatic color set-up, this eliminating the operator´s subjetive factor.

1.1.1. FEATURES

BM6010A12 10"

Basic version CCVS : (PAL ,NTSC y SECAM). Three inputs composite video, with one configurable as external sync input. They are in the video unit two slots to insert plug-in optional units.

Options:

BM6010X01

Two serial digital vídeo inputs (ITU-R BT601) 10 Bits

BM6010X02

Idem with audio extraction AES EBU

BM6010X03

Analog component input RGB/YP_rP_b

These options can be plugged on the two avaiables slots , duplicating the corresponding inputs

1.1.2. PICTURE TUBE

22 cm,screen diagonal, in-line guns and shadow-mask Slotted Type, with spacing between centers of adjacent phosphor trios (*pitch*) 0.5mm. P22 phosphor.

1.1.3. COLOUR STABILITY

Beam current feedback,which allows to compensate the colour temperature drift caused by CRT variation and environmenttal conditions.

1.1.4. FLEXIBILITY

Modular configuration. It is provided with an analog and digital bus, allowing the exchange of signals between the options installed, making it a system of open architecture to futures options.

1.1.5. AUTO SETUP SYSTEM

By use of KROMA set AK5400X50, composed by a DG5400 test signal generator and a optical probe model SR5400.The generator is able to provide up to 34 patterns designed for monitors alignment.

With this combination,automatic grey scale adjustment can by carried out.

This set also allows transfering automatically the parameter setting of this setup to other monitors.

1.1.6. REMOTE CONTROL

The RS-485 bus included in the BM6010 KROMA monitors is able to control from the RK5000 KROMA controler.

The RK5000 can be connect up to 128 monitors. These can be in group controlled., individually controlled or all of them can be controlled at the same time.

Also is possible to switch the inputs SDI and CCVS by external way through of tally connector.

1.1.7. MENÚ

This help the operation, displaying the operating parameters .and the commands to access at several functions.

The adjustment operations carried out by the specializing personnel are protected with a password.

1.1.8. NORMAL SIZE OR UNDERSCAN and 16:9

The BM6010 range provides facilities for normal picture size or underscan (95% reduced size) and aspect ratio 4:3 and 16:9 selectable by means of "SIZE" key in the front panel and the option 16:9 in the status menú.

1.1.9. MEMORIES

The monitor has 5 available memories

- All memories are accesible via password. (Only to store data).
- Four memories for general purpose.
- One sistem memory (From the factory).

1.1.10 BLUE ONLY FUNCTION

When this option is actived, the blue signal is applied simultaneously to the three CRT guns resulting a black & white picture. It characterize the blue part,of the image and allows to evaluate the noise level of the signal.

1.2. Technical specifications

1.2.1. SCAN & SYNC

Systems: 625/50/2:1 Horizontal frequency 15,625Hz.

525/60/2:1 Horizontal frequency 15734Hz

1.2.2. PICTURE DISPLAY

Aspect ratio: 4:3 and 16:9

Errors: - Linearity error: ≤ 4 % of picture height

- Geometry error: ≤ 1 % Idem.
- Convergene error:

TUBE	ZONE 1	REST
10"	0.3 mm	0.9- 1.1 mm

ZONE 1 IS WITHIN A CIRCLE CENTRED ON THE SCREEN WHOSE DIAMETER IS EQUAL TO PICTURE HEIGHT.

1.2.3. CRT

- 10" 0.5mm pitch phosphor : P22
- Resolution : 350 TV línes a center.
- Colour temperature: 6500º K ± 200º K (IN ALL MEMORIES)
- Black level: Set to 0.5 Nit (10 % APL WINDOW SIGNAL)
- White level: Set to 90 Nit (100% APL WINDOW SIGNAL)
- Beam current limiting: 200 Nit (FLAT FIELD SIGNAL)

1.2.4. DECODER PAL / NTSC / SECAM FEATURES

- **Inputs A , B and C**
  - Level : 1 V_{pp} +3/-6 dB with AGC "ON"
  - Impedance : 75 Ω ± loop-through
  - Return losses : 35 dB @ 5 Mhz
  - Isolation between A , B and C inputs: > 60 dB @ 10 Mhz
  - Mismatch between A B and C inputs: < 1% and < 1º @ 4.43 Mhz
- **External sync input (C input)**
  - Level : 0.3 V_{PP} (Black burst) ±6 dB
  - Impedance : 75 Ω loop-though
  - Return losses : > 35 dB @ 5 Mhz
- **Auxiliary signal (Front panel)**[1]
  - Format : CCVS similar to A and B
  - Impedance : 75 Ω ± 1%

[1] During the alignment it controls R G B channels in parallel.

- Return losses: > **35** dB @ 5 Mhz

1.2.5. LUMINANCE

- Filter: 4/2 lines adaptative comb filter PAL/NTSC .
- Frequency response:
- 100 Khz – 5.5 Mhz ± 1 dB

1.2.6. CHROMINANCE

- Saturation control: >± 6 dB
- Subcarrier oscillator lock.in range: ±400 Hz
- Luminance-crominance delay: < 50 Ns

1.2.7. SDI FEATURES

Compatible with signal source according ITU-R BT.601 y BT.656 SMPTE/EBU 270 Mbps.

- Component & sync demultiplexer (ITU Rec.601 and Rec.656.)
- Inputs S1 y S2 loop-through. 75Ω input Impedance.
- Return losses : > 21 dB @ 270 Mhz. In loop-through input selected
- Frequency response: 0 – 5,5 Mhz. < 0.5 dB
- Tilt (V): < 0,5 %
- K Factor: Kp < 0,3 %
  Kpb < 0,2 %
- Low frequency distortion: < 1%
- Mismatch between component:

Gain: < 0.1%
Delay: < 3 ns

- Analog audio level: (Only BM6010X02)

4Vpp @ 0dBFs

Note: The audio outputs are not designed to work with 4 or 8 ohm load. They will connect to load > 1Kohm.

1.2.8. GENERAL

- Environmental Characteristics:
  - ♦ Warm-up : 20 minutes to meet specifications.
  - ♦ Temperature range :

    From 15 to 40 ºC (TO MEET SPECIFICATIONS)

    From 0 to 45 ºC (OPERATING ONLY)
  - ♦ Relative humidity: 0 to 90 % non condensing @ 40 ºC
  - ♦ Altitude : ≤ 3000 m.
  - ♦ X-ray emission: < 0.1 mR/Hr < 0.1 mR/hr @ 5 cm. monitor outside surface

Supply

- ♦ Voltage : 90 - 240 V_{AC}
- ♦ Power consumption : 45 W

- Dimensions:

	Height	Width	Depth
Model 10"	218 mm. (5 RU.)	222mm.	420mm.

- Weight : 8 Kg.

1.3. Installation

1.3.1. Incoming Inspection

After having removed the equipment from its original packing material, check for visible signs of damage which may have occurred during shipment. Report any shortage or damage to the freight carrier and ***KROMA*** or its representative inmediately.

Check that you have received the following accessories with the monitor:

- AC power cord.
- User´s Manual.

If the equipment has to be reshipped to a long distance, it is recommended to use the original packing material in order to avoid damages during transport.

1.3.2. Safety Information

For electric shock protection, it is necessary to connect the chassis to a protective ground; to this purpose, the ground terminal of the power connector is directly connected to the chassis of the monitor (power cord green-yellow wire). Insert the power plug in a mating outlet with an earth ground contact.

Due to the presence of high voltages inside the equipment, the same can only be open, adjusted or repaired by QUALIFIED PERSONNEL.

1.3.3. Power connection

Before connecting the monitor to the mains, check that the mains voltage corresponds to the voltage range indicated in the rear panel,next to the mains connector.

The fuses should be changed in accordance with the mains voltage used, as per the following table:

VOLTAGE	FUSE
220/240 V	1 A Slow
90/110 V	2.5 A Slow

The access to the fuses is realized by removing the fuse holder in the low part of the power connector. See the figure 1.

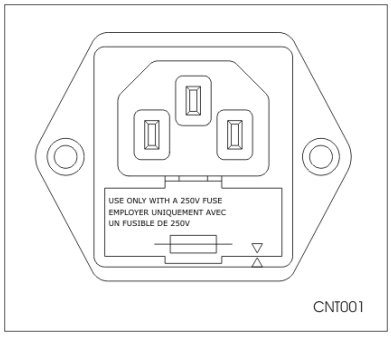


Figure 1

1.3.4. Location

Due to the CRT´s sensitivity to magnetic fields, avoid installing the monitor near this type of disturbance sources such as: Loudspeakers, electric motors, transformers, etc.

The monitor has a dagaussing device incorporated which operates automatically when the equipment is switched on. It can also be activated manually from the front panel controls.

If the monitor is changed of location, some colour impurities may occur due to the variation of the earth magnetic field. This problem disappears by activating the degaussing circuit with the DEG key.
During the time this operation lasts, avoid placing near the monitor items which have magnetic information such as: tapes, cassettes, cards, etc.

1.3.5. Tally Lamp

This lamp, bi-colour ,is located in the front of monitor and can be activated by two tally sources,by means of external voltage in the range of +24 ÷+48 V_{DC} or by contact closure ,via sub-D connector placed in the rear panel. (See fig 2) . Also can be switched the both SDI and CCVS inputs through of this connector by ground connection of the corresponding pins.(See fig 2)

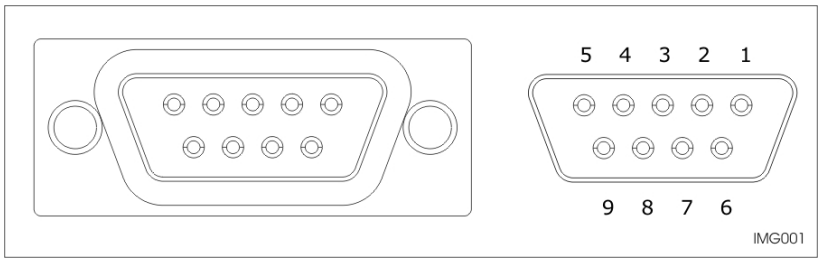


Figure2

1 Tally 1 (Reed) operating by voltage (1)
2 Tally 1 (Reed) operating by contact closure
3 No connection
4 Tally 2 (Amber) operating by voltage(1)
5 Tally 2 (Amber) operating by contact closure
6 Negative pole supply (Ground) Tally 1
7 CCVS A/B switch
8 SDI S1/S2 switch
9 Negative pole supply (Ground) Tally 2

(1) The operating mode: voltage or closure contact is programable by jumpers located in the P.S – Deflection board.

1.3.6. Ground Terminals

Besides of the ground lead included in the power cord ,there is a protection ground terminal connected to the chassis in the rear panel,next to the power connector.

1.3.7. Remote Control connector (Interface RS-485)

They are located in the rear panel of the vídeo unit. The connectors bridge wired (*loop through*) are intended to connect the remote controler KROMA RK-5000. These conectors are used for new software updating.

Configuration

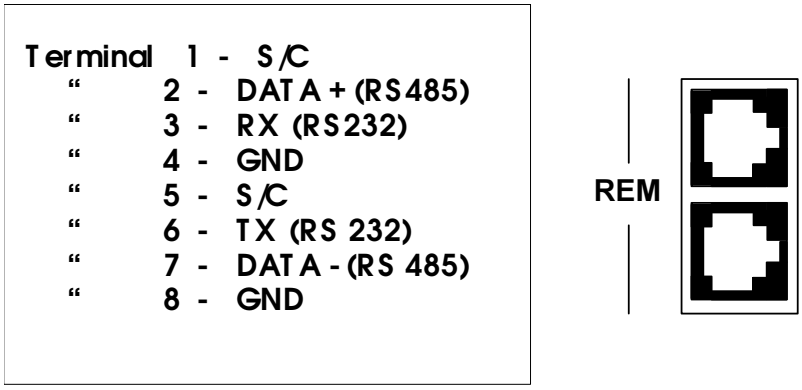


Figure 3

The connection Rx-Tx (RS232) is only available in the lower connector.

2. KEY BOARD

2.1. CCVS KEY

Key for the selection of one of the available composite inputs A , B y C. (C input is possible if the SYNC function is in the OFF mode).

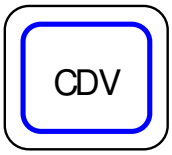
The first time that is pressed appears the current estate, and in the second time will switch the input to the following input. The number of states will be 1 ó 2, depending on the state of the function SYNC.

When this key is pressed ,appears the message:

INPUT: CCVS X

that it will disappear lapsed a few seconds, or by mean of the ESC key.

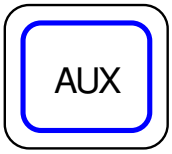
2.2. CDV KEY



Key for selection of the signals applied to the vídeo digital inputs S1 and S2. Upon pressing this key it will appear the message: S1 or S2 that will disappear automatically a few seconds after the key-press, or when you press the ESC key.

In the case of installing 2 SDI options the key select the inputs S1- S4..

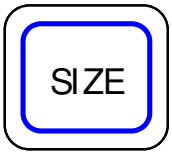
2.3. AUX KEY



Operation similar to the CCVS key.

When this key is pressed ,appears the message: AUX CCVS, that will disappear automatically a few seconds after the key-press, or when you press the ESC key.

2.4. SIZE KEY



This key allows to select between normal size and underscan (reduced size at 95%):

This selection is possible,as much being programmed the monitor with an aspect ratio 4:3.as at 16:9. (See menú options).

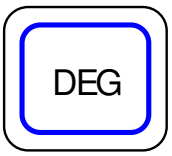
After to press this key, will appear the following messages:

SIZE: NORM 4:3 or SIZE: U/S 4:3 or

SIZE: NORM 16:9 or SIZE: U/S 16:9

The message disappears automatically from the screen about 4 seconds after the last key-press or when you press ESC.

2.5. DEG KEY



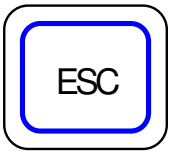
Key to perform manually degauss the CRT of the monitor.

Indirect action by means of relay microprocessor controlled

- Time of activation: 4 seg.
- Minimal time for the next activation after the degaussing: > 5 min.

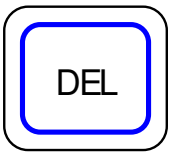
After to press this key, will appear the following messages: DEGAUSSING

2.6. ESC KEY



This key will allow us to return to previous menu and interrupt procedures. When you return from the previous menu or shown some of the controls (BLK, CNT….), if any parameter has been modified,it will save in static mode in the working memory.

2.7. DEL KEY

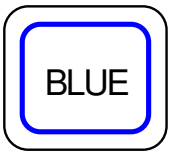


Key for selection of the both horizontal and vertical delay("PULSE OSS")

It allows to control the presentation of sync pulses in the screen, switching between:

NORMAL → H + V DEL

2.8. Tecla BLUE ONLY

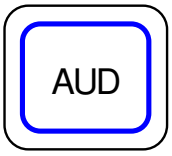


When this key is pressed, the signal of the blue colour is applied to the three TRC guns. The black and white obtained image, it represents the blue portion of the image.This serves two purposes: The blue portion of the image is often the noisiest,so viewing just blue gives you a better idea of the noisy. Also is used in calibration procedures.

Switches between:

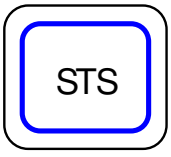
BLUE ONLY : ON → BLUE ONLY : OFF

2.9. AUDIO KEY



With this key we can show the menus of the functions associated to the embeded audio in the digital signal, channel selection, analog output or AES EBU, etc

2.10. STS KEY (STatuS)



This key allows the programming of the internal parameters of the monitor through menus. From the Status menú, this key operates in recurrent mode.

When pressed ,are displayed the configuration parameters or return to the main menu.

3. STATUS MENÚ

When the STS key is pressed from the normal mode of operation, the following menú will appear:

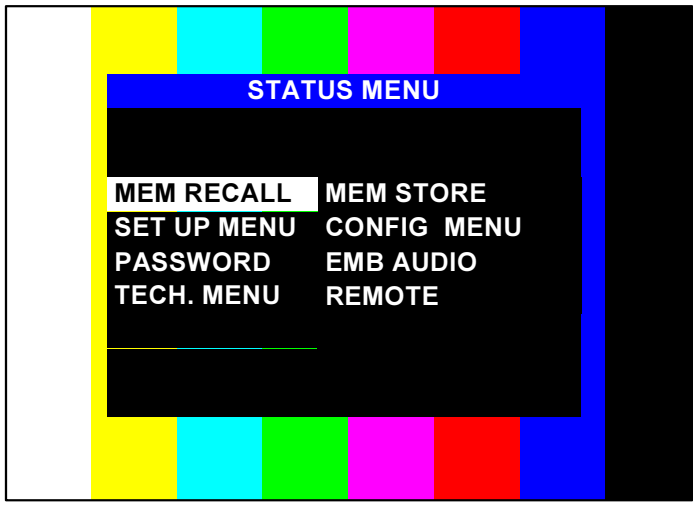


Figure 4

The selection is carried out by turning of the associate button to the STATUS key (BLK button) and push this button in order to validate.

3.1. MEMORY RECALL MENU

Allows to load the working memory with the content of whatever of the existent memories in the monitor (USER 1, USER 2, USER 3 ó USER 4 or TECH).

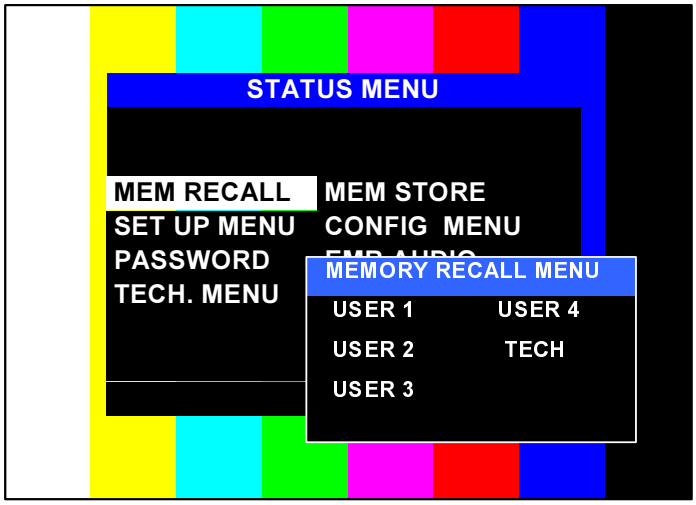


Figure 5

3.2. SET UP MENU

From this menu it is possible to modify and to adjust the parameters of the GRAY SCALE (LL/HL and intermediate values) and the CALIBRATION values of BLCK, CNTR, SAT, HUE, VOL and APT. On having selected this menu, the following submenu will appear requesting the password of access:

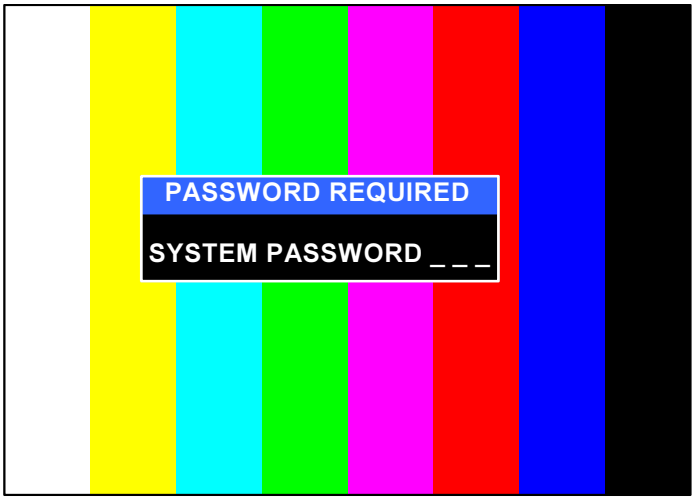


Figure 6

If the introduced password is correct, the system will pass to the following menu:

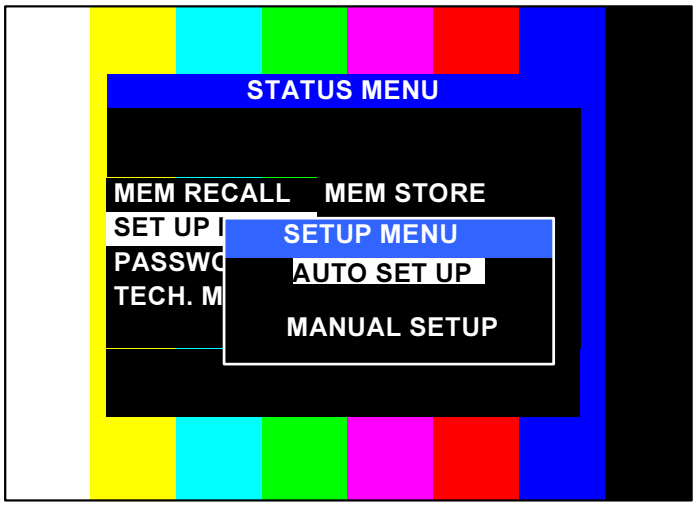


Figure 7

3.2.1. AUTOSETUP

This function needs the use of kit of auto setup AK5400X50 composed by a signal generator DG5400 and an optical probe. Once connected the probe and the

generator, the output of this one is applied to one of the inputs of the monitor, following the steps as follows:

1.- Select in the menu the function AUTOSETUP, pushing later the button selector to activate this function.

On screen the following menu will appear:

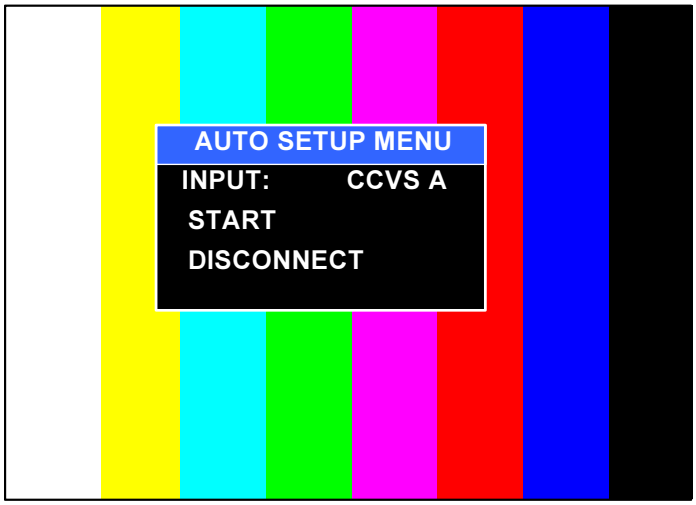


Figure 8

2.- Select the input (AUX, CCVS, CDV). in order to make the auto [setup] by means of the corresponding input key . The selected input will appear written in the menu.

In order to get a more precise adjustment ,the monitor realizes a different adjustment for each of the inputs. Simply select one and the system will realize an independent adjustment to any other type of input. Hereby, when a digital input is changed , the system programmes the values of HLs and LLs corresponding to the adjustment of every type of signal. Consequently, it will obtain a better response of the monitor.

Whatever chosen input, this one must coincide with that of the DG5400.

3.-To place the cursor to the START position and to push the button to initiate the process. Put the optical probe in the center of the screen.

4.-Finished the process successfully will appear the message: "DONE" or " ERROR " in case of failure. In this case, with the cursor to the position DISCONECT push the button to return to the main menu. Repeat the operation . Once completed successfully the adjustment, also there will be auto calibrated in the working memory. If you want to save the adjustment you should use one of four memories (See MEMORY STORE MENU).

3.2.2. MANUAL SETUP

When you select this function, the following menu is obtained:

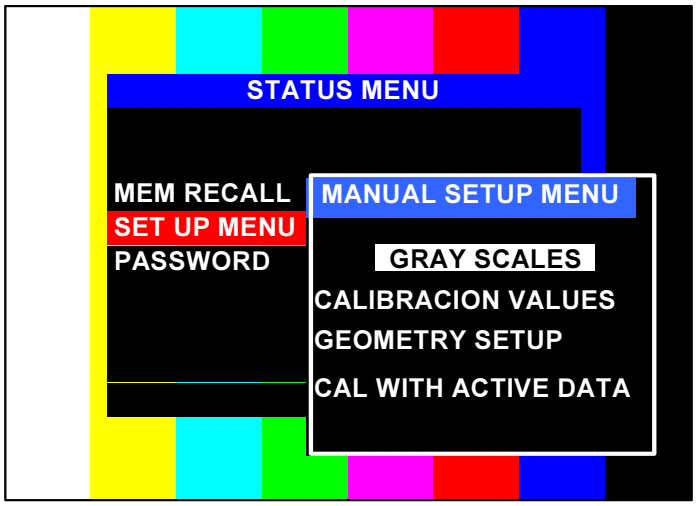


Figure 9

The option MANUAL SET UP in the SET UP MENU allows us to realize a manual adjustment so much of the actives values as those of calibration of all the parameters of the monitor. Such that CNT, BLK, SAT, VOL, APT and HUE, as well as ,the parameters of colour balance (LL'S and HL'S) or gray scales and geometry.

3.2.3. MENU GRAY SCALES

By selecting this option,you may carry out a manually adjustment, of the current biasing levels, of the cathode of the CRT (LLs) and the gain of the RGB video amplifier, (HLs).

The new menu will be the following:

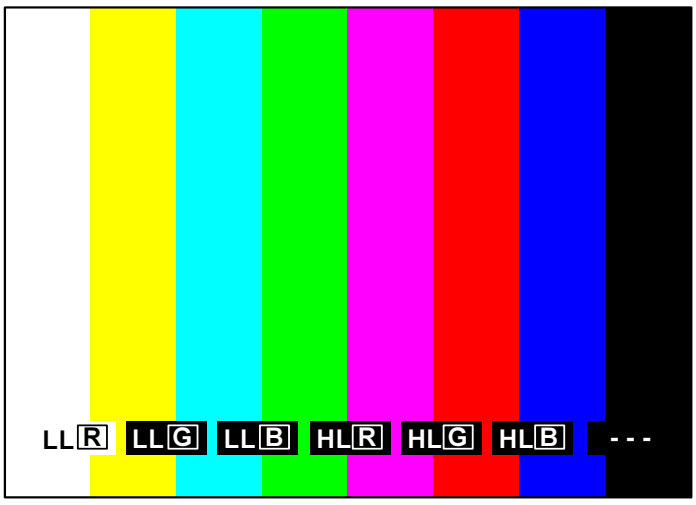


Figure 10

Once selected one of the options the symbols (_ _ _) located in the right hand of the lower part of the screen going to indicate the value of the state of the variable. If the cursor button is pressed again then will be stored the last current value, the dashed lines appear again and one may select another variable.

By the other hand, if ESC key is also pressed, will store the modified value of the variable but it will return to the previous menu.

3.2.4. MENU CALIBRATION VALUES

In this menu we could modify the associate parameters to the primary controls of the monitor.

The menu from wich one we could modify the parameters is the following:

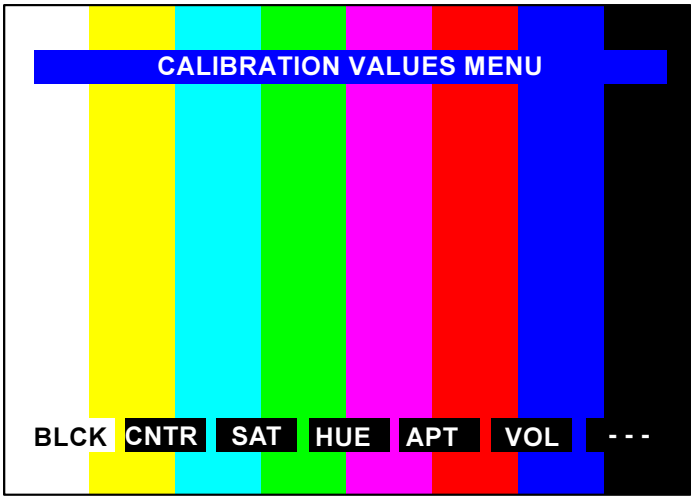


Figure 11

The operation is the same as in the previous case, the dashed lines, of the right hand in lower part of screen, when pressing the cursor button , they will give the values of the variable. However, there are parameters with some particularities that are kept in mind:

1. **The Saturation (SAT):** The monitor detects the system (PAL,NTSC or SECAM) of the input signal , in whose case will modify the associate parameter to this system. In any case the parameter always represents the saturation.

1. **The Volume** (VOL): Although functions exist associated to the VOL key, the system of control won't give you access to this variable, except for the monitor carries incorporate the digital input with audio option.

2. **The Hue Optión**: It will only has access, if the active input signal is NTSC.

3. **The Aperture (APT):** It will only give access to modify their value if the the CCVS input is selected.

3.2.5. GEOMETRY SET UP

By means of this menu could be modified the parameters in relation to the format of the picture, and another with more technical content. The menu through the one will be able to carry out the change is the following:

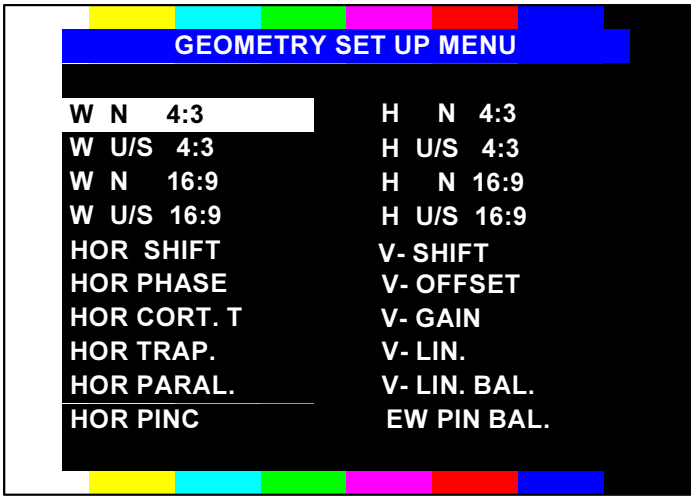


Figure 12

In order to modify a parameter, this will be selected, with aid of the cursor, and activated by pushing the button. It will appear in the lower line of the menú, the name and the value of the parameter, as well as a white bar that indicates the change during the adjustment.
Meanwhile the adjustment is updated, the key ESC and the cursor button work in the same way than in the previous menu.
This option allows us the adjustment of all the variables involved in the geometry adjustment of the monitor.

3.2.6. CAL WITH ACTIVE DATA

With this option you will convert all the active values of the parameters, in calibration values. This option is very appropriate after carrying out an adjustment and before of saving the data in one of the user memories.

During the process of calibration will appear in the lower part of the menu, the message with flashing: "CALIBRATING." and it on having finished the process " CALIBRATING OK. "

3.3. PASSWORD

Allows to change the access password for the Certain functions

When the above mentioned option is selected, the system shows the following menu:

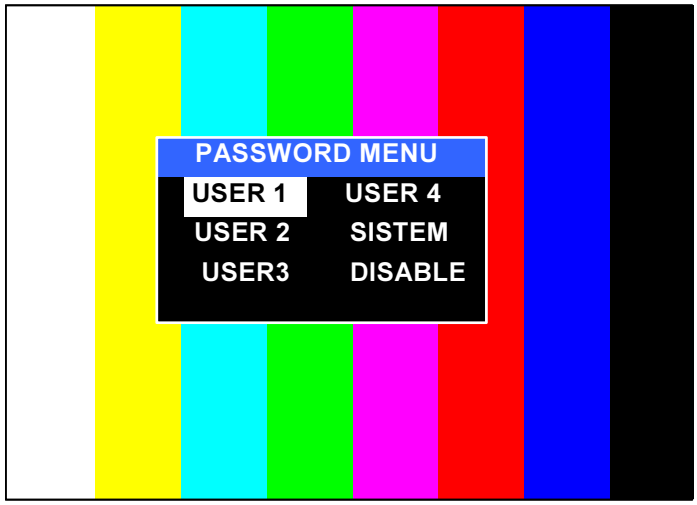


Figure 13

A password can be assigned up to four users individually and a technical or system password. Likewise they all can be deactivated by means of the option " ENABLE ".

For default, all the monitors go out of factory with the password: 1 2 3 4. Inorder to change it, to choose the user with the cursor and to push the button, with what one accedes to the menu of change:

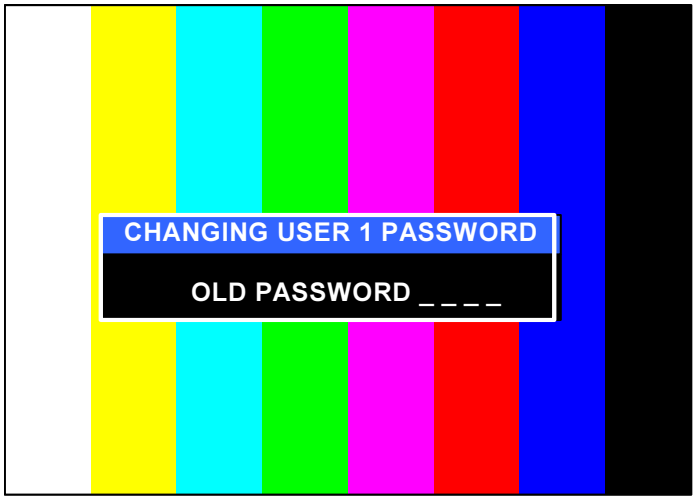


Figure 14

After introducing the password with the numerical keyboard, it presents another similar menu requesting the new password (" NEW PASSWORD ") and his assertion. The process ends with the message: " PASSWORD CHANGED ".

In the same way the system password " SYSTEM " is changed.

DISABLING OF THE PASSWORD ACCESS.

It is carried out by means of the option " DISABLE ", for it the system requests the password access for this function as the following menu shows:

Figure 15

If as soon as the password was accepted ,the cursor button is pushed, into the menu of "PASSWORD" it changes:

DISABLE → ENABLE

And the system remains liberated of the use of numerical key. To recover the functioning with password, put the cursor in " ENABLE " position and push the button. The system goes on directly to functioning with password and in the menu the change takes place:

ENABLE → DISABLE

3.4. TECH. MENU

This menu is composed by options reserved to technicians of KROMA, updates of software and specific operations.

3.5. MEMORY STORE MENU

It allows to store the content of the working memory in any of the existing memories in the monitor (USER 1, USER 2, USER 3, USER 4 AND TECH).

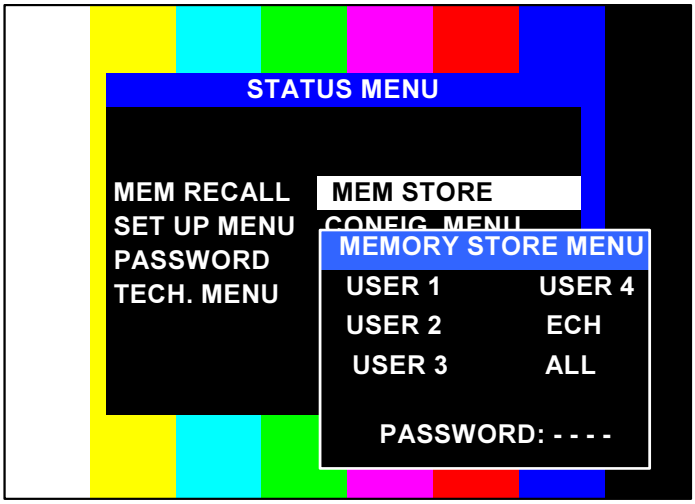


Figure 16

To carry out this operation it is necessary to introduce the individual password of every user, except the positions " TECH " and " ALL " that are reserved to the technical area.

With the "ALL" position is stored the content of the working memory of in all the memories.

In this menu some of the monitor actions can be configurated. The menu will have the following aspect:

3.6. CONFIGURATION MENU

In this menu you may set up several monitor parameters, as the picture below shows:

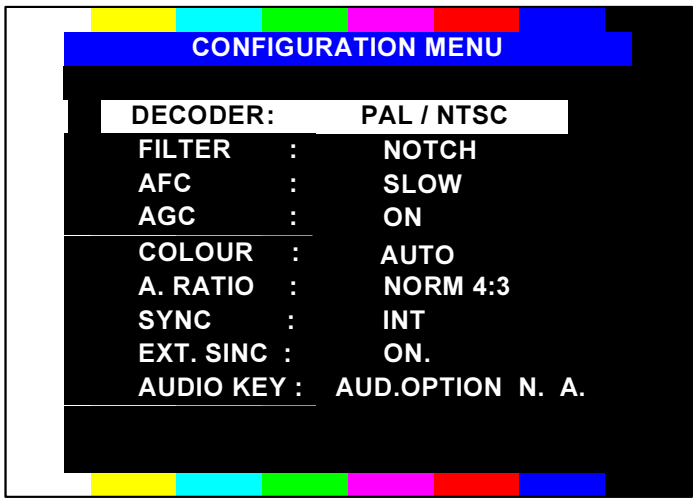


Figure 17

3.6.1. DECODER

Selects the colour television system:

PAL/NTSC → SECAM

3.6.2. FILTER

Allows to choose between two types of luminance filter:

NOTCH → COMB

3.6.3. AFC

SLOW → FAST

With this option can be modified the AFC time constant of the horizontal synchronism in order to improve the stability of image when the signal is received from a VTR.

3.6.4. AGC

ON → OFF

It enables or disables the action of a gain control of the input signal.

When is operative ("ON" Position) assures a change of ± 6 dB.

3.6.5. COLOUR

AUTO → MONO

Selects two operation modes: Color AUTO in which shows the image in color while the signal supports the "burst". In case of a signal without "burst" or at a low level , the monitor shows the image in black and white.

In the position MONO forces the monochrome mode or black and white reproduction .

3.6.6. A. RATIO

NORM 4:3 → NORM 16:9

Changes the aspect ratio between 4:3 and 16:9 when the SIZE key is in NORM or U/S mode.

3.6.7. SYNC

INT → EXT

It select the sync signal from the active video input or external via EXT SYNC/ CCVS C connector.

3.6.8. EXT. SYNC

ON → OFF

Configures the CCVS C input as: External sync input (ON position) or CCVS C input (OFF Position).

3.7. EMBEDDED AUDIO

In this menu we obtain information about of the inserted audio in the SDI signal. In this graph we can see the number of channels occupied by every group also the type of audio signal is indicated by colours (Red estéreo and Green mono mode).

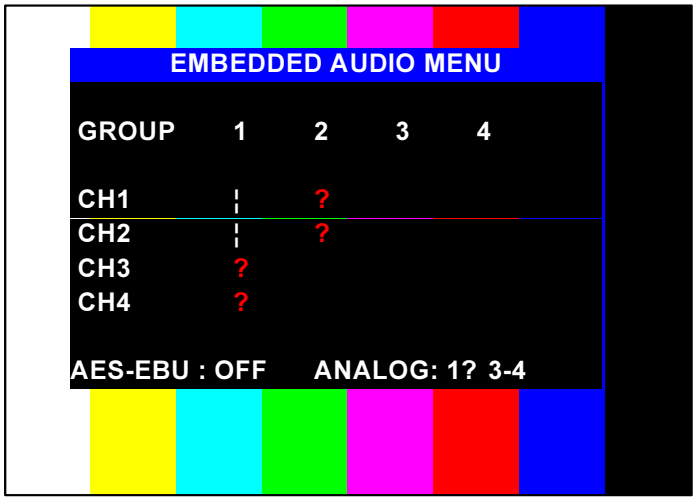


Figure 18

The AES-EBU and ANALOG inputs in the low part, can be selected by the cursor and phusing the button later. This way we will be able to select the group and the wished channel.

3.8. REMOTE CONTROL

The menu of access to the remote control is:

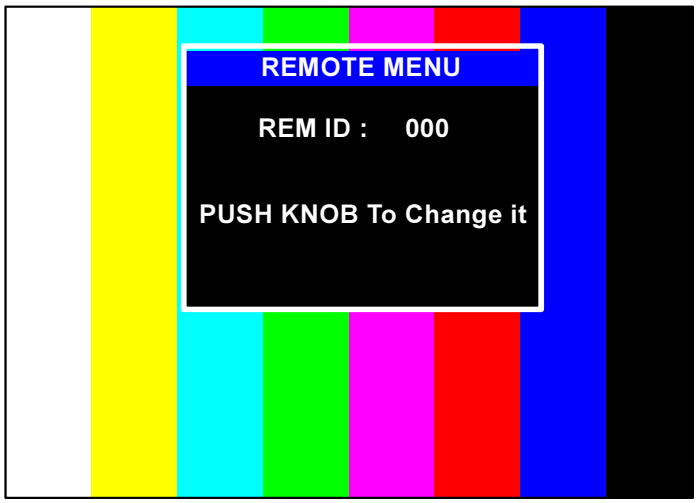


Figure 19

By means of this menu is assigned to every monitor a identification number that will be recognized by the remote controler KROMA RK5000, when it is activated. When the button of the cursor is pressed on this option, a dashed line appear (---) in the place of the previous monitor identification number, the system wait for the introduction, from the keyboard of three numbers of the new identifier. In order to abort the operation to touch repeatedly ESC.

After carrying out this operation the monitor is identified by this number, for all the remote control functions. When the remote control is activated, the monitor preserves the functions of the keyboard, but has preference the remote control. (See information about remote controler RK5000).

4. CONTROLS FUNCTION

4.1. Control BLK (BLacK Level/Bright)

Pushing this button (3) from normal mode, a message appears on screen indicating the current value of the black's level I (bright) and if the value is calibrated or not.

From this moment one enters in the modification mode of this value by turning of the button, increasing in the clockwise and decrease in counterclockwise direction,as it can be observed by the bar located in the low part of the picture.

The maximum value of BLK is 63 and the minimum is 0.

When this work mode, it is oppressed there is updated the value of the black's level to that of calibration, also it is possible to come to this calibration value by turning the button up to corresponding position.

The exit of this Black level(Bright) control, to normal mode (without messages on screen) it is carried out: automatically, after 4 seconds without touching any key or manually pushing the ESC key.

4.2. CNT (CoNTraste)

Similar behavior to described for BLK regarding to the gain of the final video amplifiers (Contrast).

The messages that can appear are:

4.3. SATuración/color

Similar behavior to described for BLK regarding to the gain of the crhominance amplifier. This function is also active when the input signal is in components as well analogical as digital (SDI).

4.4. HUE/tint - tinte (sólo en NTSC)

Similar behavior to described for BLK relative to the crhominance phase regarding to the burst in the decoder. Because it is a parameter of the system NTSC only his modification will be allowed when the active signal corresponds to this system.

The messages that can appear are:

Or: **ONLY NTSC MODE** if the signal is not NTSC.

4.5. APT

When a CCVS video input is selected, it allows to control the signal aperture, In the same way that in the previous cases, pushing the button of this control from the normal mode, takes this parameter his calibration value.

5. MENÚ CONFIGURATION VALUES

It is shown in the screen when touching twice consecutive the STS key. The menu offers information about of: The installed options, the software version, the activated functions as well as the actual and calibration values of the controls bright, contrast, saturation, hue and aperture.

The appearance of this informative menu is :

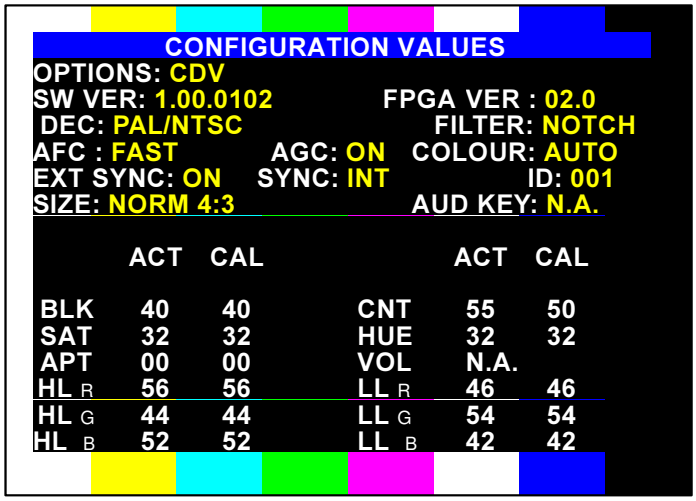


Figure 20

6. INDICATORS

6.1. UnCal LED

This LED is keep activated (Red LED lit) if any of the variables:BLK, CNTR, APT, HUE or SAT, has a different value to the calibratión.