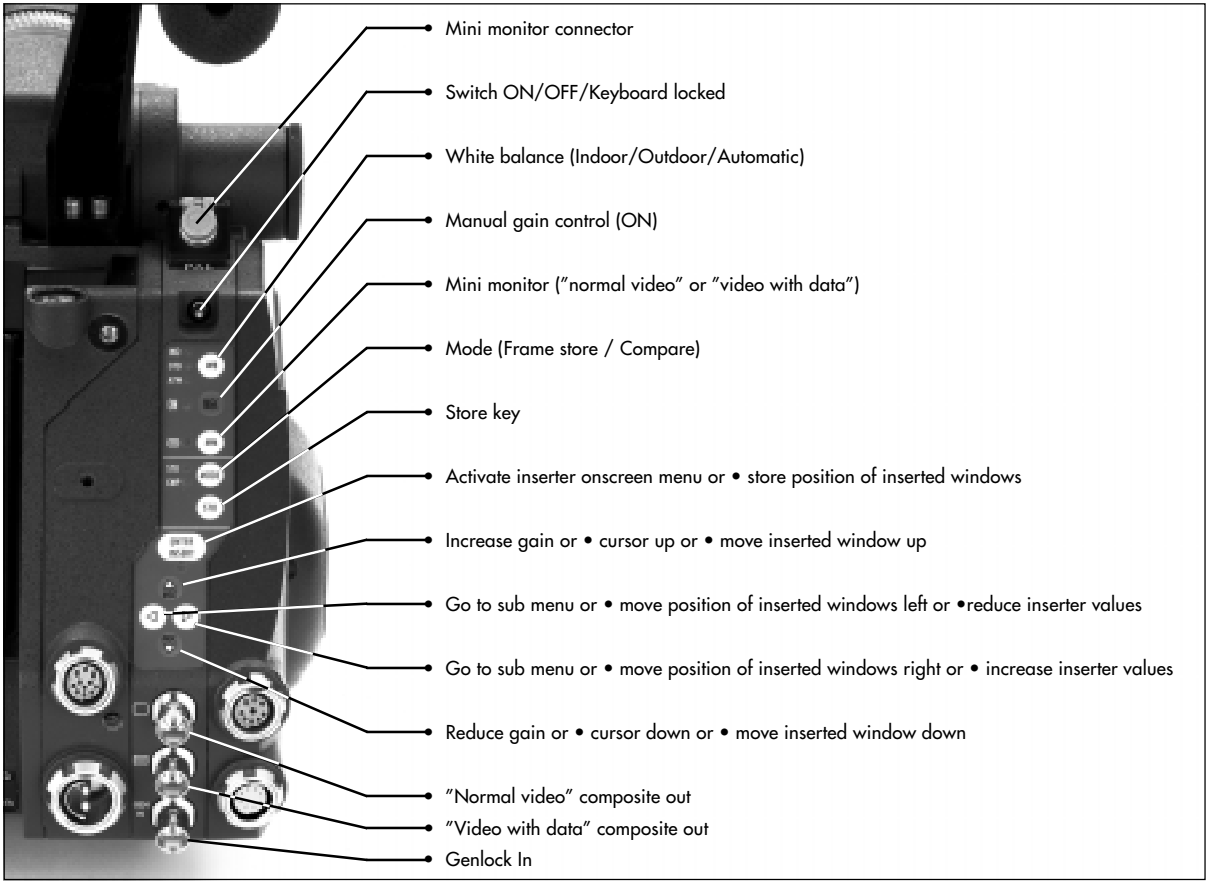
IVS

Integrated Video-Assist System
Instruction Manual


Mini monitor connector
Switch ON/OFF/Keyboard locked
White balance (Indoor/Outdoor/Automatic)
Manual gain control (ON)
Mini monitor ("normal video" or "video with data")
Mode (Frame store / Compare)
Store key
Activate inserter onscreen menu or • store position of inserted windows
Increase gain or • cursor up or • move inserted window up
Go to sub menu or • move position of inserted windows left or •reduce inserter values
Go to sub menu or • move position of inserted windows right or • increase inserter values
Reduce gain or • cursor down or • move inserted window down
"Normal video" composite out
"Video with data" composite out
Genlock In

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2. Safety Specifications

Warnings

Note: Operational error possible!

Danger of injury or equipment damage possible!

General Safety Specifications

Attention! Danger of injury! Never place your hand in the lens mount receptacle or the inside of the camera or magazine while it is running.

- In order to ensure optimal performance, it is essential that you acquaint yourself with this instruction manual, and the manual of the ARRIFLEX 435.
- Use the IVS only with ARRIFLEX 435 cameras, and only as described in this manual.
- Assembly and initial operation should be carried out only by persons who are familiar with the equipment!
- Remove all cables before transport or servicing!
- Repairs should be carried out only by authorized service centers!
- Use only original ARRI replacement parts and accessories!
- Check all operations on the corresponding monitor.

Important Notes

- In wet weather the normal safety precautions for handling electrical equipment should be taken.
- Avoid operational errors!
- Do not touch optical surfaces!
- Clean optical surfaces only with a lens brush or a clean lens cloth! In cases of solid dirt moisten a lens cloth with pure alcohol.
- Do not use solvents in cleaning!
- Do not use force!
- Do not remove any screws which are secured with paint!

Product Specifications

In the case of enquiries or when ordering parts, please advise serial number and model.

Explanation of the Symbols in the Instruction Manual

⇨ **photo** indicates objects which are shown in the photographs or drawings.

3. General Description of the IVS

The Integrated Video-Assist System (IVS) for the ARRIFLEX 435 responds to a strong request from camera users and integrates for the first time a complete video assist system totally into the camera body. It offers unsurpassed image quality combined with a state-of-the-art inserter to add frame lines, time code and text to the video image.

3.1 Main Features

- Integrated into the camera body
  Instead of a bulky add on, the video assist becomes an integrated part of the camera without additional cabling.

- High sensitivity
  A high speed lens with an aperture of 1 : 1.4 and one of the most sensitive CCD-Chip available on the market provide an excellent color video image in editing quality even when the light was set for a high speed film stock, which will be pushed during processing.

- High resolution
  The design of the new IVS optics was based on the 435´s view finder data and resulted in an image quality which can not be realized by add on solutions.

- Flicker-free
  An integrated digital frame store enables the video camera to be synchronized to the film camera´s mirror shutter and provides a flicker-free video image from 5-150 fps because the video image is always taken at the ideal position of the mirror shutter.

- Integrated frame line inserter
  Frame lines can be electronically added to the video image. This ensures that the lines are visible even in difficult conditions. The area outside of the frame lines can be darkened electronically to emphasize the important image area.

- Integrated time code inserter
  It is possible to insert Time code into the video image. Thus, the video assist creates a reliable link to video editing. The information on "3:2" pull-down, which can be inserted as well, ensures the same reliability in an NTSC environment.

- Integrated text inserter
  Additional text like take numbers or production name can be added to the video image by sending characters on a serial interface.

- Two additional Y/C Outputs
  In addition to the usual composite output, the IVS offers a Y/C output (S-VHS) for an even better video image without annoying color artifacts with or without data inserted into the video image.

- On-Screen programming
  All functions, which do not effect the image appearance directly like gain control, can be conveniently programmed with an onscreen programming menu on the video monitor.

- Image compare function
  It is possible to store a particular image and compare it against other images. This clearly shows the difference between the images e.g. during stop effect shots.

- Automatic and manual gain control
  The gain is controlled automatically to its best value but can also be set manually.

- External synchronization input (Genlock)
  The IVS has an external synchronization input to enable multi camera use.

- Indoor/Outdoor and automatic white balance
  White balance can be set to indoor with 3200 K, outdoor with 5600 K and automatic adjustment.

- Mini monitor connector
  The IVS offers a connector for a 12 V LCD mini monitor.

Note: Both ARRIFLEX 435 versions (435 and 435 ES) can be equipped with the IVS independently of the expanded function module**.**
However, the time code functions such as insertion of time code, user bits, pull-down information, VITC and white line flags can only be activated if the expanded function module is installed.

As the IVS is designed for an 80 : 20 beam splitter, there is no need for the 50 : 50 beam splitter, which is used for other color video assists.

3.2 System Components

The IVS consists of:
- Optic Silent and/or K2.47230.0

- Optic Academy K2.47231.0

- Video Electronic complete ..... K2.47118.0 for PAL
  or K2.47232.0 for NTSC

The Video Electronic complete consists of two parts:
- CCD Optic Module ..... K4.47228.0 for PAL
  or K4.47668.0 for NTSC

- Inserter / Antiflicker Module ..... K4.47666.0 for PAL
  or K4.47667.0 for NTSC

Accessories for the IVS are:
- Y/C video cable for video with data,
  KC 45 ..... K2.47477.0
- Y/C video cable for video without data,
  KC 46 ..... K2.47478.0

Software for text input ..... On request

3.2.1 Optic Silent

For a complete and working IVS, either the Optic Silent or the Optic Acacemy has to be installed inside the CCD Optic Module. They can be easily exchanged.

The Optic Silent forms an image on the CCD Chip which is based on the 35 mm silent format with a picture width of 24 mm. An additional area will surround the actual image. This is to check for important objects outside the image area.

The lenses are especially designed and built for the use with the ARRIFLEX 435 to achieve the best possible image quality. Especially the aperture of 1 : 1.4 is important for the use as video assist lenses because only a small portion of the light that goes through the camera lens reaches the video chip. Therefore the lenses are not designed as zoom lenses because it would be impossible to get the same image quality and speed.

All Silent Optics are marked with an S in the serial number, e.g. S0040.

There are no different lenses for PAL and NTSC.

3.2.2 Optic Academy

For a complete and working IVS, either the Optic Silent or the Optic Acacemy has to be installed inside the CCD Optic Module. They can be easily exchanged.

The Optic Academy forms an image on the CCD Chip which is based on the 35 mm academy format with a picture width of 22 mm. An additional area will surround the actual image. This is to check for important objects outside the image area.

The lenses are especially designed and built for the use with the ARRIFLEX 435 to achieve the best possible image quality. Especially the aperture of 1 : 1.4 is important for the use as video assist lenses because only a small portion of the light that goes through the camera lens reaches the video chip. Therefore the lenses are not designed as zoom lenses because it would be impossible to get the same image quality and speed.

All Academy Optics are marked with an N in the serial number, e.g. N0040.

There are no different lenses for PAL and NTSC.

3.2.3 CCD Optic Module

The CCD Optic Module, which is mounted on the ARRIFLEX 435 view finder system has to be equipped with a video lens. This module contains the CCD-Chip and all the necessary elements to center the video image on the TV-Monitor screen and to adjust the focus. It houses also a video pre-amplifier to increase the sensitivity of the IVS at low light conditions.

The CCD Optic Module is available in PAL and NTSC.

It is necessary to keep the combination of CCD Optic Module and Inserter/Antiflicker Module together as delivered. Mixing the modules might lead to a reduced image quality. On request ARRI can supply a second CCD Optic Module optimized for a particular Inserter/Antiflicker Module.

3.2.4 Inserter/Antiflicker Module

The Inserter / Antiflicker Module contains most of the IVS electronics. This 22 mm wide module, which is mounted on the right side of the ARRIFLEX 435, holds the video camera electronic, an anti flicker processor and the entire inserter. All control elements, which are often used, as well as all in- and outputs are located here.

The Inserter / Antiflicker Module is available in PAL and NTSC.

It is necessary to keep the combination of CCD Optic Module and Inserter/Antiflicker Module together as delivered. Mixing the modules might lead to a reduced image quality. On request ARRI can supply a second CCD Optic Module optimized for a particular Inserter / Antiflicker Module.

4. Setup

4.1 Inserting the Optic

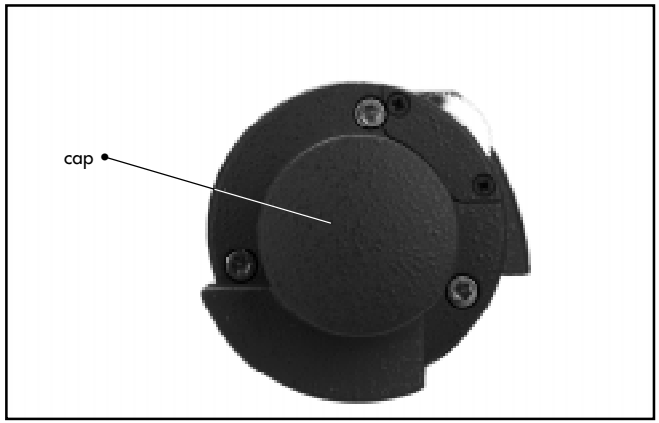
For a complete and working IVS, either the Optic Silent or the Optic Academy has to be installed inside the CCD Optic Module.

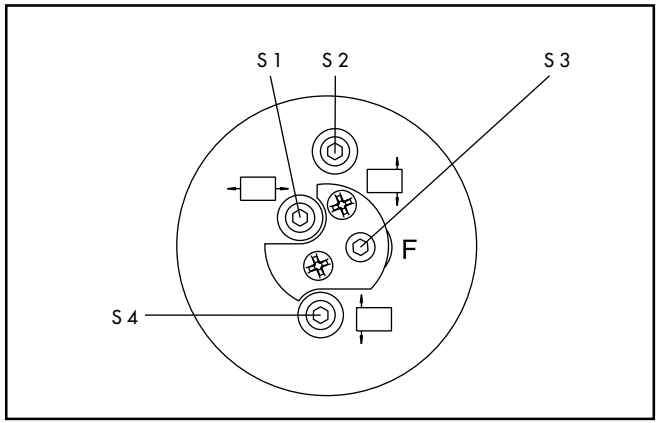
A 1.5 mm allen key is used.

Do not touch optic surfaces.
All lenses must be clean.
Do not use force.

a) Remove the cap, which is located at the end of the module ⇨ **photo** by twisting it counter clockwise to get acess to the alignement screws.

b) Make sure that the focus screw (S3) ⇨ **photo** is in the middle of its range.





c) Insert the optic with the bayonet first into the CCD Optic Module. Make sure that the key is aligned with the key way ⇨ **photo**.

d) Press the optic carefully into the mount and rotate clock wise to the stop.

e) To release the optic rotate carefully counter clock wise until loose and remove forward.

f) Reattach the cap at the end of the CCD Optic Module.

4.2 Mounting the IVS

The following tools are needed to mount the IVS:

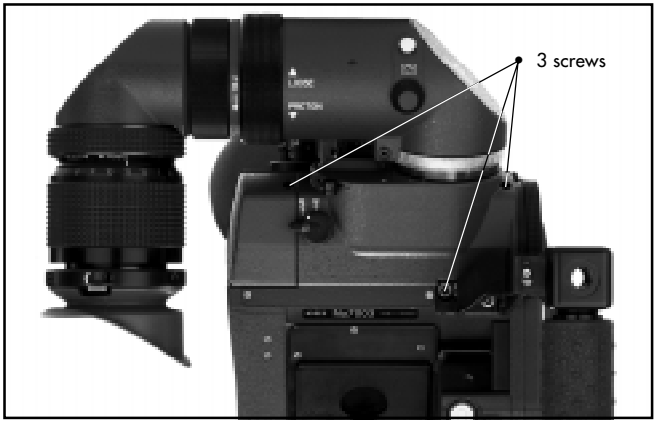
3 mm allen key
0.5 x 3.5 mm screw driver (first time installation only)
2.5 mm allen key

As there is a vertical connector between the CCD Optic Module and the Inserter/Antiflicker Module, it is necessary to take the view finder system off the ARRIFLEX 435 before the IVS is installed.

The CCD Optic Module is mounted on the right side of the ARRIFLEX 435 view finder system:

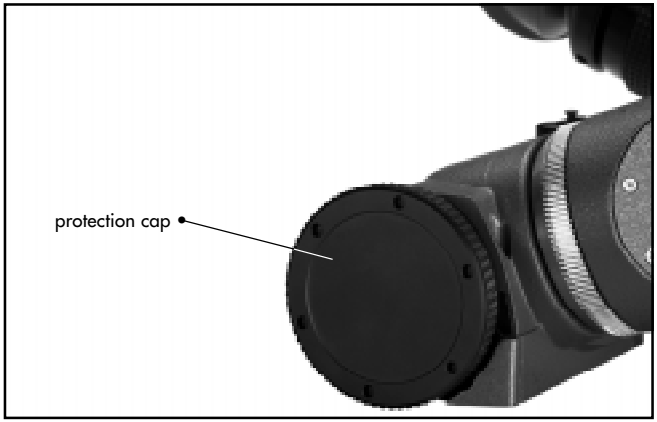
Disconnect camera of all power supplies.

For the initial installation of the IVS on the ARRIFLEX 435 it may be necessary to exchange the flange, which is mounted on the view finder system of the ARRIFLEX 435. The IVS is delivered with a modified flange that can hold the IVS as well as other Video-Assists. This new flange remains on the ARRIFLEX 435. Therefore it is not necessary to remove it when the IVS is taken off.



a) Remove the view finder system by loosening the three mounting screws ➪ **photo**.

Support the viewfinder system.
Do not touch optic surfaces.

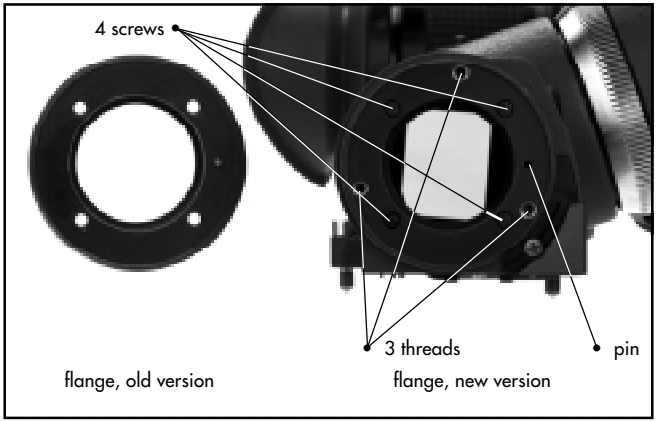


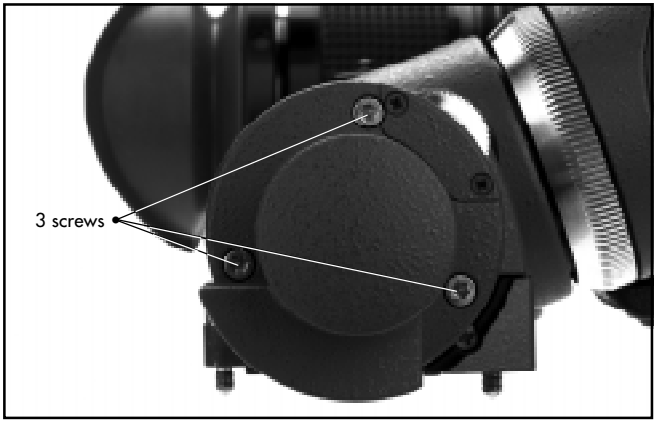
b) Remove the protection cap of the video tap ⇨ **photo**.

Note: Step c) is only necessary for the initial installation of the IVS. If the flange is already modified with three additional threads, proceed with step d).

c) Remove the old flange by taking out the four screws ⇨ **photo** and mount the new flange.
Make sure that the pin is aligned with the borehole. Put the four screws back and close them.

d) Insert the CCD Optic Module and mount it with three screws ⇨ **photo** at the new flange.





e) Take the expanded function module or the cover off the camera. To do so open the mounting screw ➪ **photo** with a 3 mm allen key and swing the cover or the module off.

f) Attach the Inserter/Antiflicker Module to the camera by placing the registration-pins in the appropriate receptables and swing module on.

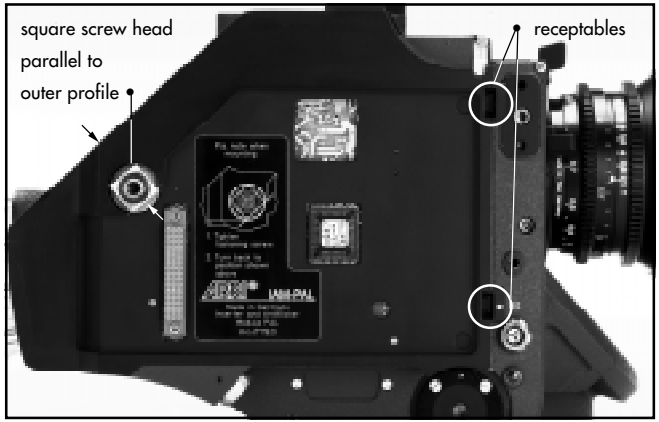
Do not use force

- Close the mounting screw with the same 3 mm allen key that is used for the extended function module or the cover. Turn the mounting screw back until the square screw head is aligned parallel to the profile of the Inserter/Antiflicker Module as illustrated ➪ **photo**.

g) Align the registration pins of the expanded function module or the cover with the receptables of the IVS ➪ **photo**, swing on, and close the mounting screw.

Note: An expanded function module or cover must be in place before operating the camera.

With only the cover attached, there is no TC-recording or related functions.



h) Place the view finder system back on the camera body and close the three mounting screws.

Ensure clean contacts.
Do not use force.

Note: Because of the high speed video optic (Academy or Silent), it is no longer necessary to use a 50 : 50 beam splitter, as it was with other color video assists. The IVS is designed to work with a 80 : 20 beam splitter.

4.3 Changing the Optic

For exchanging the optic between academy and silent format, it is necessary to take the view finder system off the camera in order to remove the CCD Optic Module:

A 1.5 mm allen key is used.

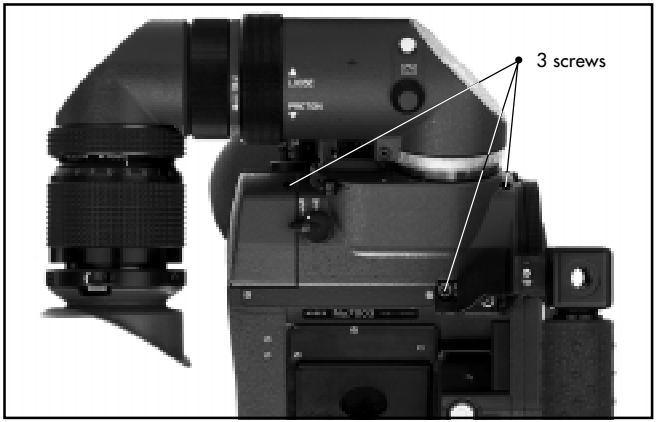
Disconnect camera of all power supplies.
Support the viewfinder system.
Do not touch optic surfaces.

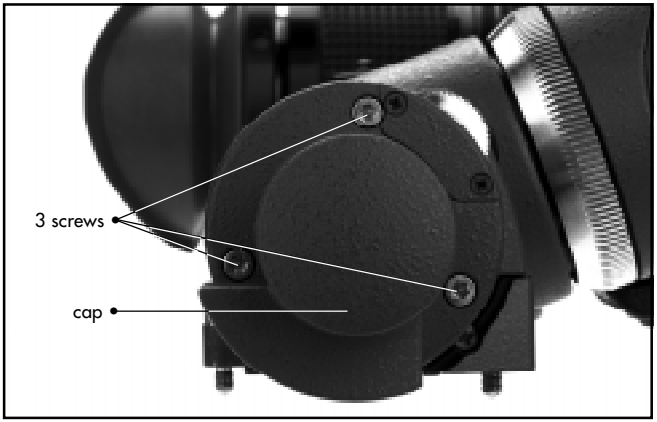
a) Take the view finder system off the camera by loosening the three mounting screws ⇨ **photo**.

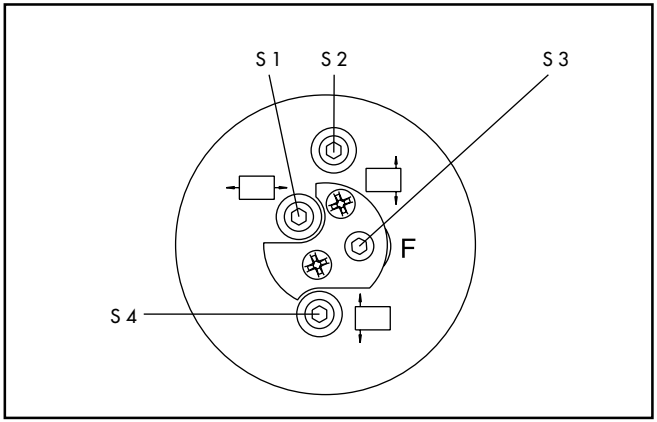
All lenses must be clean.
Do not use force.

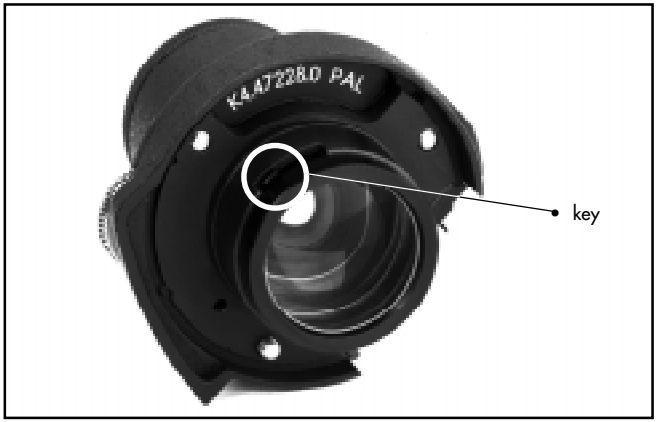
b) Remove the CCD Optic Module by opening the three screws ⇨ **photo**.

c) Remove the cap, which is located at the end of the module ⇨ **photo** by twisting it counter clockwise to get acess to the alignement screws.









d) Make sure that the focus screw (S3) ⇨ **photo** is in the middle of its range.

e) To release the optic rotate carefully counter clock wise until loose and remove forward.

f) Insert the new lens with the bayonet first into the CCD Optic Module. Make sure that the key is aligned with the key way ⇨ **photo**. Press the lens slightly into the module and rotate clockwise to the stop.

g) Reattach the cap at the end of the CCD Optic Module

h) Mount the CCD Optic Module back to the view finder system with the three screws.

i) Put the view finder system back onto the camera and tighten the three mounting screws.

4.4 Connections

4.4.1 Outputs

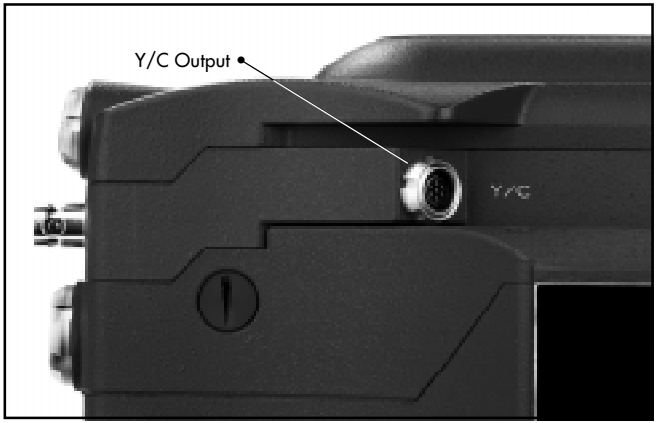
The IVS has two separate outputs for composite video, two outputs for Y/C combined on one connector and one output for a mini monitor. All outputs are available at any time regardless of the use of the other outputs.

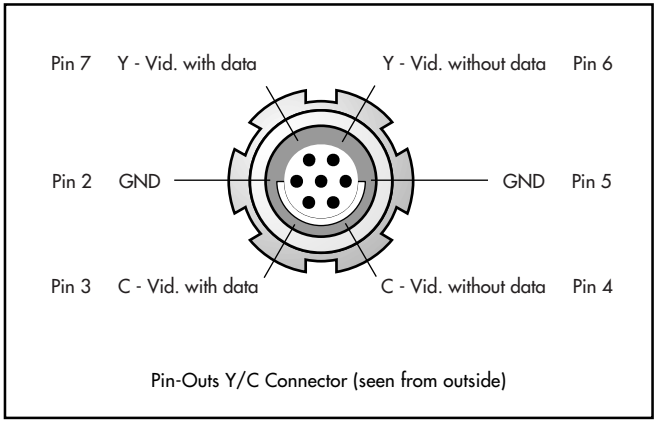
4.4.1.1 Composite Video Outputs

The difference between the outputs is that there is "normal video" on one connector and "video with data" on the other.

In the "normal video" output, which is marked with the "▭" symbol, almost no electronic information is inserted. Only a flashing bar at the button left corner of the video image indicates a running film camera.

In the "video with data" output, which is marked with the "▤" symbol, additional data like format marks or time code can be inserted.





Pin-Outs Y/C Connector (seen from outside)

4.4.1.2 Y/C Outputs

In comparison to the composite outputs, the Y/C outputs offer the better S-VHS quality. There are also "normal video" and "video with data" signals available at the single connector.

In the "normal video" output almost no electronic information is inserted. Only a flashing bar at the down left corner of the video image indicates a running film camera.

In the "video with data" output additional data like format marks or time code can be inserted.

The IVS uses a 7 pin Fischer connector instead of the usual Y/C connector for reasons of mechanical stability.

ARRI offers a set of cables that deliver the Y/C on a standard 4-pin connector:
KC 45 (Id.-No. K2.47477.0) will send video with data to a monitor or VTR, KC 46 (Id.-No. K2.47478.0) will send video without data to a monitor or VTR.

Note: For a standard black and white output, use only the Y Signal (Y - Vid. with or without Data). Corresponding cables which connects the KC 45 or KC 46 to the BNC input of a monitor are commonly available at video shops.

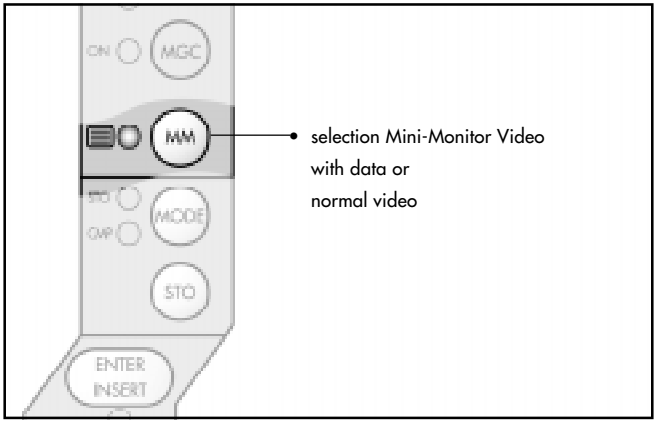
4.4.1.3 Mini-Monitor Output

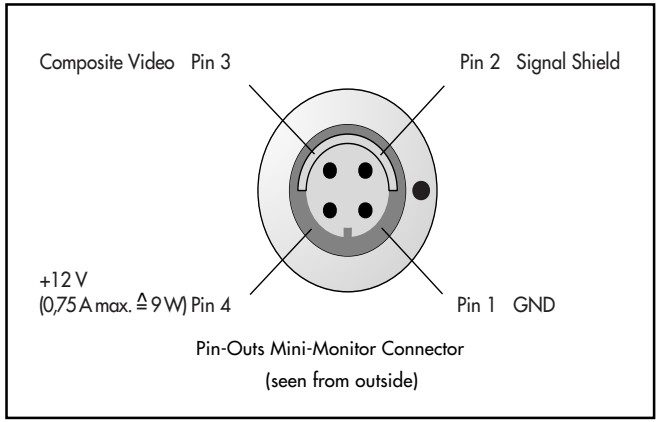
The IVS has a connector for a standard mini-monitor.

As there is only one mini monitor connector, it is possible to switch between "Normal Video" and "Video with Data" on this output.

The output to the mini monitor will be altered at every pressing of the key.

An illuminated LED indicates "Video with Data" at the mini monitor connector.





4.4.2 Inputs

It is possible to synchronize the IVS to an external video source. Furthermore, the IVS can be remote controlled by a computer.

4.4.2.1 Genlock

The genlock input ⇨ **photo** allows the IVS to be synchronized to an external video source. This is necessary if several video cameras are used together.

Input is a standard composite video signal.

4.4.2.2 Remote Control

All inserter functions of the IVS, which can be called or set with the on screen menu, can also be controlled via the film camera's CCU interface.

A corresponding software for the ARRI Laptop Camera Controller is available on request (refer to seperate manual).

5. Standard Video Controls

The IVS can be used like a standard Video Assist if no inserter functions are used.

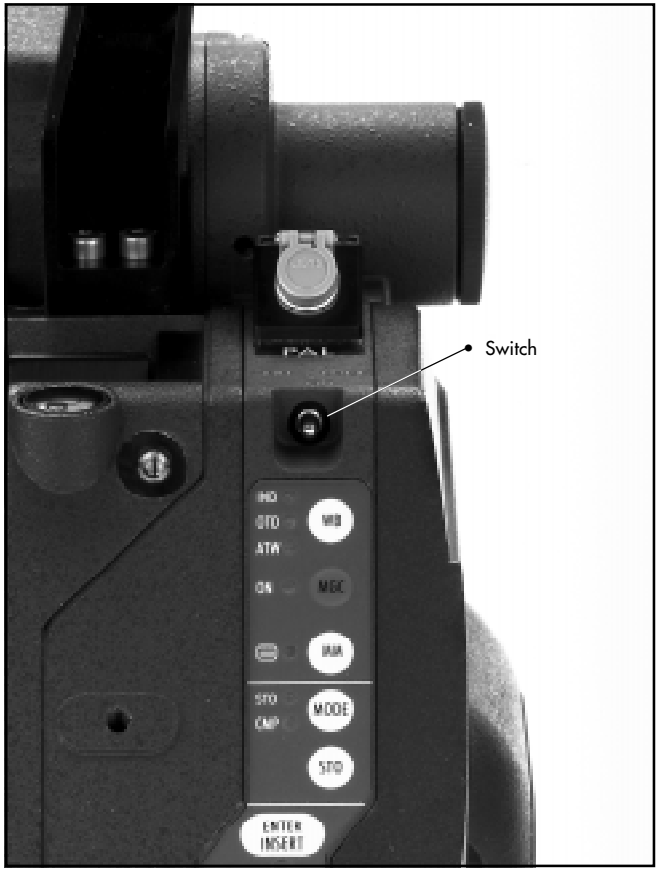
Note: For exchanging the optic between academy and silent format, refer to chapter 4.3 "Changing the Optic".

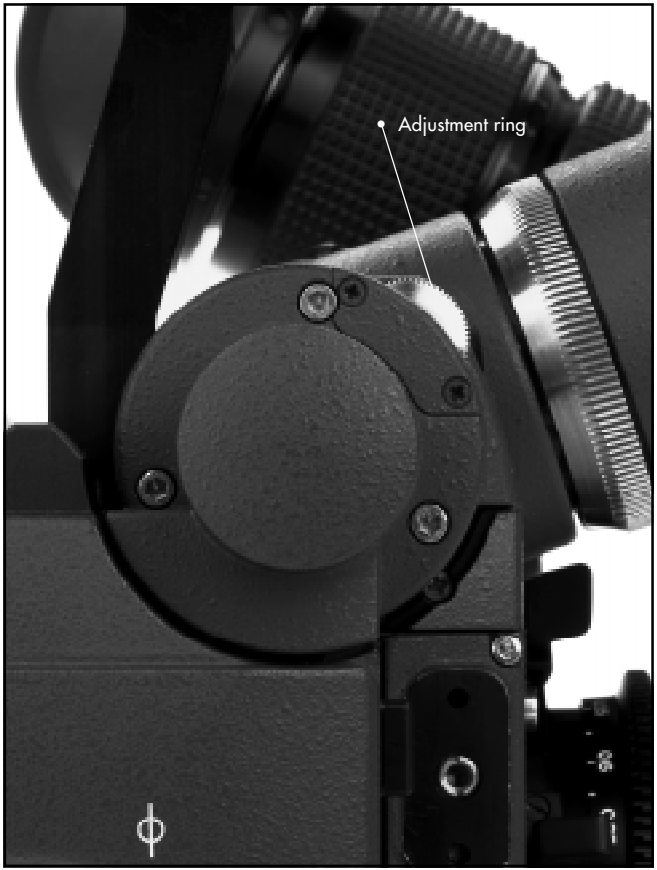
Note: All currently used settings are stored even if the IVS or the camera is switched off. After restarting the IVS the settings are unchanged.

5.1 On/Off and Locking the Keyboard

The IVS can be switched on and off independently of the film camera.

The "OFF" position switches the IVS off without affecting the film camera. "ON" activates the IVS and "LOCK" disables the keyboard to prevent unintentional handling ➪ **photo**.





5.2 Mechanical Iris

Only a relatively small portion of the light which goes through the film cameras´s lens reaches the CCD-Chip of the video assist as the light is shared between the view finder, the CCD-Chip and the film. Therefore the IVS lenses are designed for a normal usage with a totally open iris to have maximum light on the CCD-Chip. Variations in lighting are compensated by the IVS´s gain control (automatically or manually).

Under certain conditions, such as when lighting is set for low-sensitivity film (under 100 ASA) or for motion effects, it is possible that the IVS´s gain range is exceeded. In this case the mechanical iris of the IVS lens can be closed.

Check all settings on the connected monitor.

If the mechanical iris is closed more than necessary, the IVS will compensate by increasing the gain and improve the image brightness electronically. This creates additional electronic noise. Avoid that by opening the mechanical iris.

5.3 Aligning the Image and Focusing

The position of the image on the CCD-Chip can vary slightly from film camera to film camera. The video image on the monitor may appear not centered. In addition to that, it is necessary to focus the lens on every new film camera.

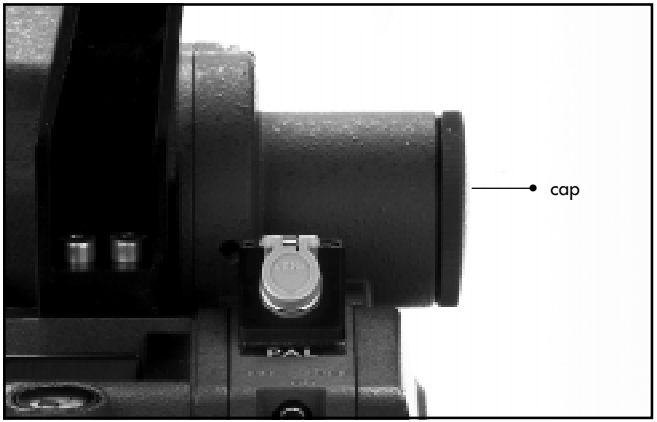
All settings can be made by using a 1,5 mm allen key.

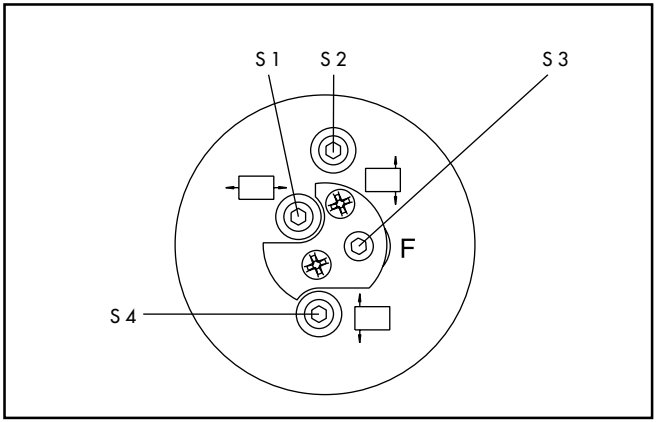
Do not use force.

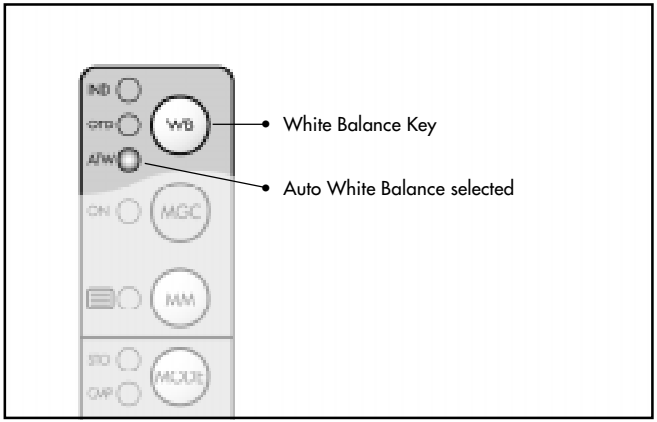
Both adjustments can be done on the CCD Optic Module. Remove the cap, which is located at the end of the module ⇨ **photo** by twisting it counter clockwise to get access to alignment screws.

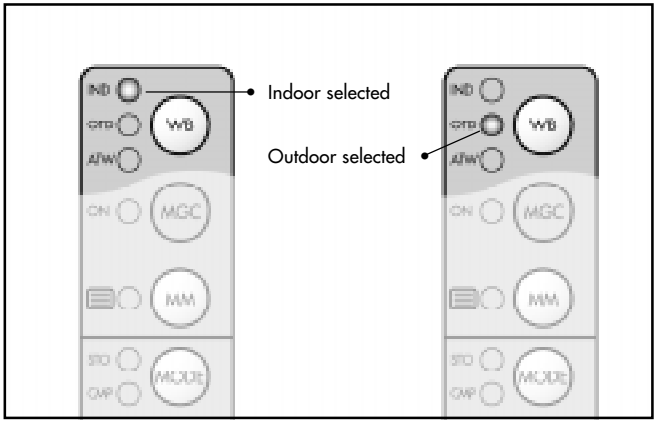
Screw S 1 moves the video image on the monitor horizontally. Screw S 2 rotates the image around a point which is located in the middle of the left side and screw S 4 rotates the image around a point which is located in the middle of the right side. Screw S 3 will focus the lens. Reattach the cap after adjusting.

Note: Make sure that the iris is fully open during focusing in order to optimize focus.









5.4 White Balance (WB)

The IVS offers a choice for White Balance between an automatic control (ATW) or a manual setting of indoor (IND) or outdoor (OTD).

If automatic White Balance (ATW) is selected, the IVS will automatically set White Balance. For this no manual steps are necessary ⇨ **photo**.

If indoor (IND) is selected ⇨ **photo**,
white balance is optimized for tungsten lighting with 3200 K.

The outdoor (OTD) setting ⇨ **photo** optimizes the white balance for daylight with 5600 K.

By pressing the key "WB" ⇨ **photo**, the setting will be changed from IND, OTD to ATW and back to IND. An illuminated LED shows the selected mode.

Check all settings on the connected monitor.

5.5 Gain Control

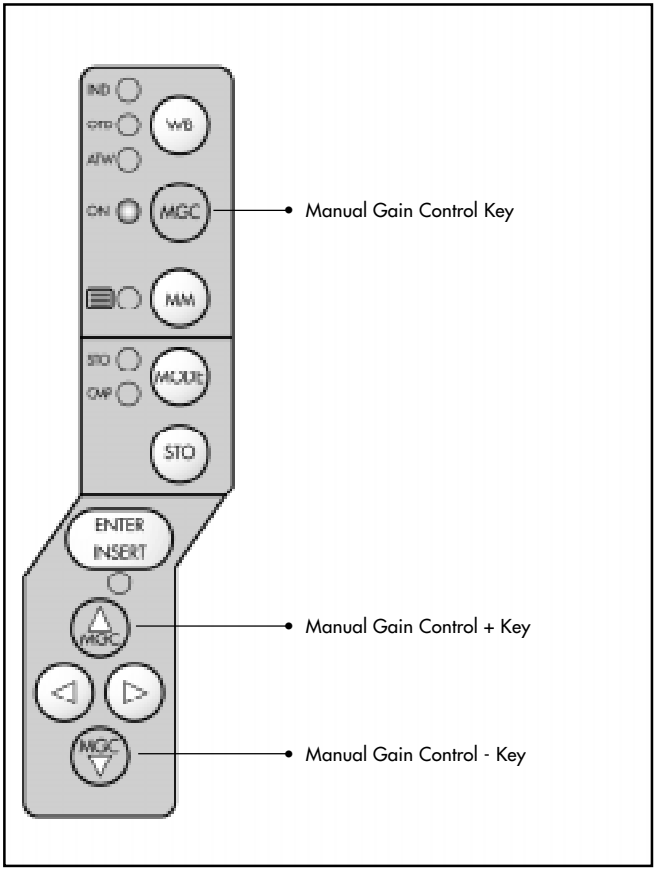
The IVS can control the brightness of the video image electronically. This gain control can be automatic or manual.

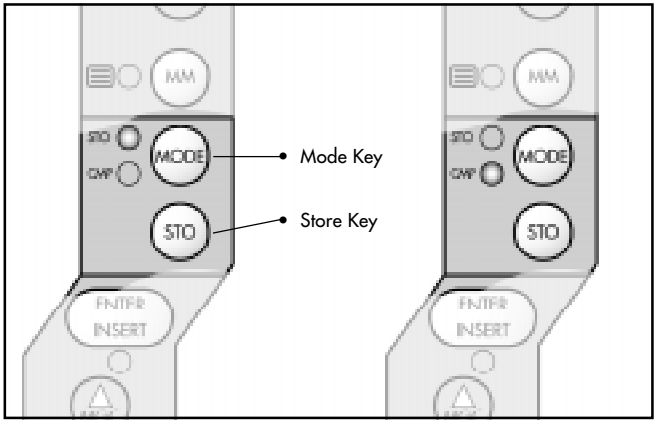
If the automatic control is selected, the IVS outputs the best possible image brightness at all the time. Light changes in front of the film camera are compensated by the IVS, the brightness impression remains almost unchanged.

The brightness of the video image can be manually altered if manual gain control is selected. By using the color coded keys Manual Gain Control (MGC) "Ⓐ" or Manual Gain Control (MGC) "Ⓥ" the brightness can be increased or decreased. An automatic compensation of different light levels in front of the camera is suppressed.

By pressing "Manual Gain Control" (MGC) the setting alters between manual and automatic control. An illuminated LED shows the setting Manual Gain Control.

Check all settings on the connected monitor.





5.6 Frame store and compare

The IVS can store one video image and compare it against the currently incoming images.

Note: There is no image stored when the IVS is switched on. A random image pattern is displayed when the frame store is activated for the first time. After pressing the key "STO" a real image is stored and displayed.

To store video images, activate the frame store mode by pressing the key "MODE". The "STO" LED is illuminated indicating the store mode. By pressing the key "STO" it is possible to grab one video image.

The image remains only stored until another frame is stored or until the IVS or the film camera is switched off or disconnected from the power supply.

To activate the compare mode press the key "MODE" after one image was stored. The illuminated "CMP" LED indicates this mode. The stored image is superimposed with the presently incoming video image. Differences between the two images can be easily seen.

By pressing the key "MODE" the IVS goes from normal mode to store mode to compare mode and back to normal mode. Every time the key "STO" is pressed when the IVS is in store mode, a new video frame is grabbed.

6. Inserter Facilities

In addition to the usual video assist functions, the IVS offers a variety of inserter facilities. There are three different groups of information:

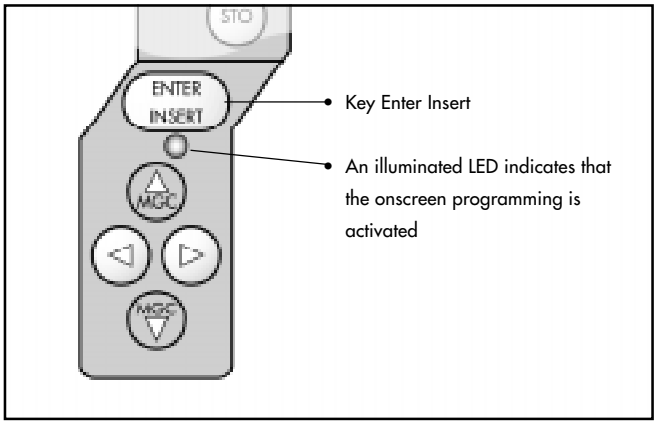
- **Format markings**
  Format markings, which are inserted electronically, are often more visible than format markings on the ground glass or on the ARRIGLOW.

- **Man readable information**
  Time code
  User Bits
  Camera status
  Additional text
  Pull-down information

- **Machine readable information**
  VITC
  White Line Flag

All inserted data are only available at the outputs "Video with data".
All engravings from the ground glass (i. e. TV-Safe etc.) are visible at all times at all outputs.

Note: All currently used settings are stored even if the IVS or the camera is switched off or disconnected from the power supply. After restarting the IVS the settings are unchanged.



6.1 Setting the On Screen Displays

During programming the inserted data are not fully updated (i. e. Pull-down information, TC-Frame Count). To get information updated, leave the onscreen display menu by pressing the key "Enter Insert" for more than three seconds.

Once the onscreen display is activated by pressing the key "Enter Insert" for more than three seconds, the following procedure is used to select and set all functions within the main menu and the sub menus:

Pressing the key "▲" or "▼" will move the cursor "›" up or down. Pressing the key "◀" or "▶" activates sub menus.

Within sub menus the cursor "›" can be moved up and down again by pressing the key "▲" or "▼". The keys "◀" or "▶" will now change settings (e. g. switch the insertion of a time code window on and off), or activates functions (position mode of a window, "EXIT" or the "ALL STANDARD" call).

If the windows position mode is activated, the keys "▲", "▼", "◀" or "▶" will move the window across the video image. To leave the position mode press the key "Enter Insert" shortly.

To go from a sub menu back to the main menu, position the Cursor "›" by using the keys "▲" and "▼" on the line "EXIT" and press the key "▶" or "◀".

All settings are immediately activated by changing them.

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

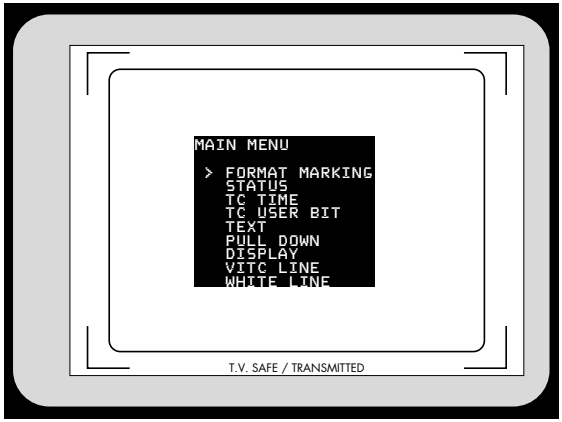
6.2 Main Menu

The inserter´s main menu is displayed on the monitor screen when the onscreen programming is activated by pressing the key "Enter Insert" ⇨ **photo** for more than three seconds.

An illuminated LED indicates that the onscreen programming is activated.

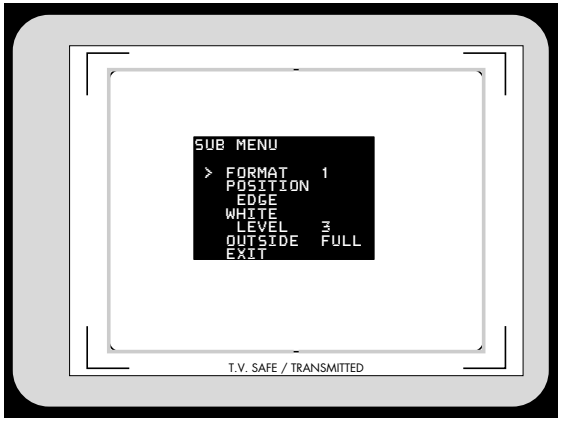
Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

The keys "▲" or "▼" move the cursor "›" up or down. Pressing the key "◁" or "▷" will lead into a sub menu.



6.3 Format Marking Menu

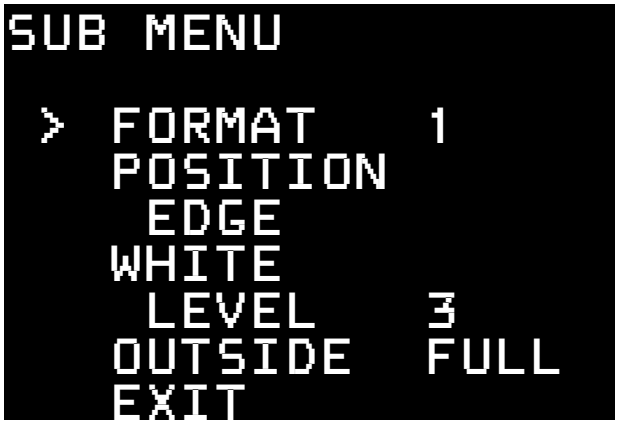
The IVS can insert two different format markings electronically in the video image, either individually or simultaneously. The position of these format markings can be set anywhere on the screen, to line up exactly with the ground glass markings. The brightness is adjustable in four steps and the area outside of one format marking can be electronically darkened.



All settings are immediately activated by changing them.

Check all settings on the connected monitor.

- Enter the Format Marking submenu from the Main menu.



6.3.1 Activate Format Markings

It is possible to have no format marking (OFF),
format marking number one (1),
format marking number two (2)
or both format markings
at the same time (1 & 2) on display.

If the electronic format markings are not parallel to the ground glass format markings, readjust the CCD chip with the alignment screws on the CCD Optic Module (chapter 5.3).

Move the cursor "›" with the keys "▲" and "▽" to the line "FORMAT". Pressing the key "▷" will switch from "OFF" to "1" to "2" to "1 & 2" and back to "OFF", the key "◁" will switch in the opposite direction.

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

6.3.2 *"Position" Positioning of the Format Marks*

The format markings can be adapted to every different format. The format markings on the ground glass serve as a reference.

To align the electronic format markings with the ground glass markings proceed as follows:

a) Point the film camera towards a bright object so that the format markings on the ground glass are clearly visible.

b) Move the cursor "›" with the keys "▲" and "▼" to the line "POSITION". Call the positioning mode with the keys "▶" or "◀".
The submenu is displayed on the screen ➪ **photo**.

- The symbol "1┌" indicates that it is now possible to move the left and the upper line of format 1.

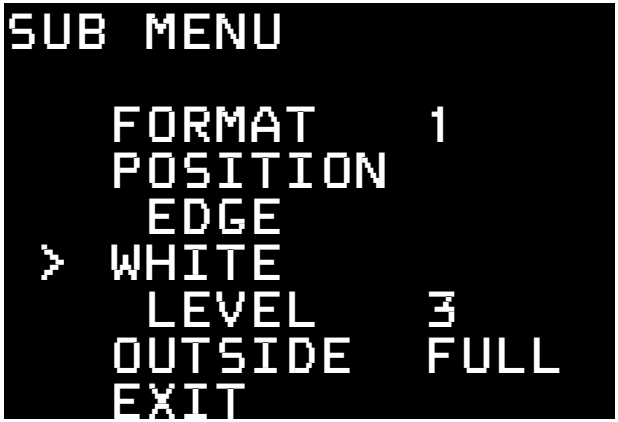
- The keys "▶" or "◀" move the vertical line right or left, the keys "▲" or "▼" move the horizontal line up and down.

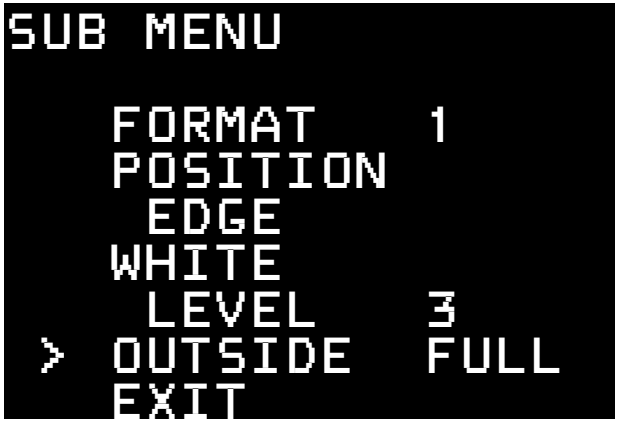
c) When the correct position has been set, confirm by pressing the key "Enter Insert"shortly.

- The symbol will now change "1┌" to "1┘". It is now possible to set the lower and right line with the keys "▲", "▼", "▲" or "▼".

d) When the correct position has been set, confirm by pressing the key "Enter Insert" shortly.

If both format markings are activated, the symbol "2┌" is now displayed. In this case the left and upper line of format 2 can be set. Proceed as described above.





6.3.3 "White" Setting the Brightness of the Format Markings

The brightness of the format markings can be set to black (0), dark gray (1), light gray (2) or white (3).

Move the cursor ">" with the keys "Ⓐ" and "Ⓥ" to the line "WHITE". Pressing the key "Ⓡ" will switch the settings form "0" to "1" to "2" to "3" and back to "0", pressing the key "Ⓛ" will switch the settings in the opposite direction.

6.3.4 "Outside" Darkening the Area outside of the Format Markings

Note: This function is only available if one format marking is activated. No darkening function is available if there is no format marking or if two format markings are switched on.

The brightness of the area outside of one format marking can be reduced electronically to emphasize the important image area. The setting "FULL" shows the outside area with normal brightness, the setting "DARK" will reduce the brightness of that area.

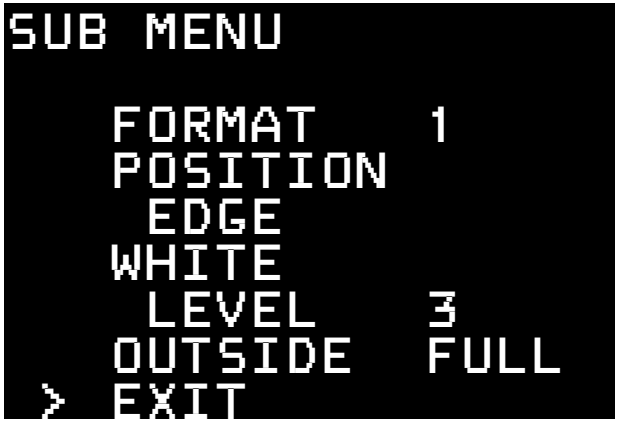
Move the cursor "›" with the keys "▲" and "▼" to the line "OUTSIDE". Pressing the key "▶" or "◀" will switch between "FULL" and "DARK".

6.3.5 Exit

Return to the main menu using Exit.

Move the cursor "›" with the keys "▲" and "▼" to the line "EXIT" and press the key "▶" or "◀".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.



6.4 Status Menu

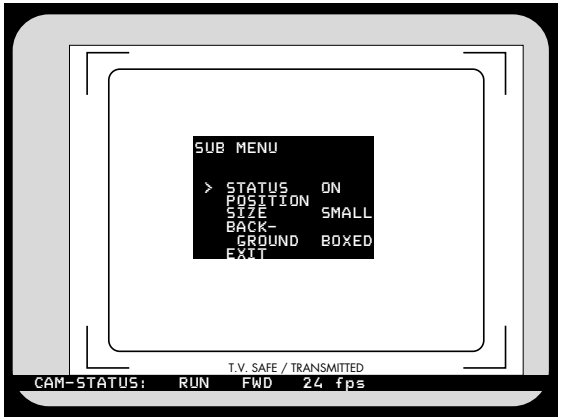
The IVS can insert the camera status into the video image. The following information is available:
- Standby or Run
- Forward (FWD) or Reverse (REV)
- Film camera speed in full frames per second

The information forward or reverse is also displayed if the film camera is in standby. In this case the information refers to the selected camera running direction.

The information on camera speed always displays the current film camera speed. The corresponding digits are blanked out if the camera is in standby.

The data is displayed only in full frames. A camera speed of 23.976 fps would be displayed as 24 fps.

Like all man readable information, the data is inserted as a window on the monitor image. The window can be switched on and off independently. Background, position and character format can be altered without effecting the settings of other windows.



This additional line shows the camera status:

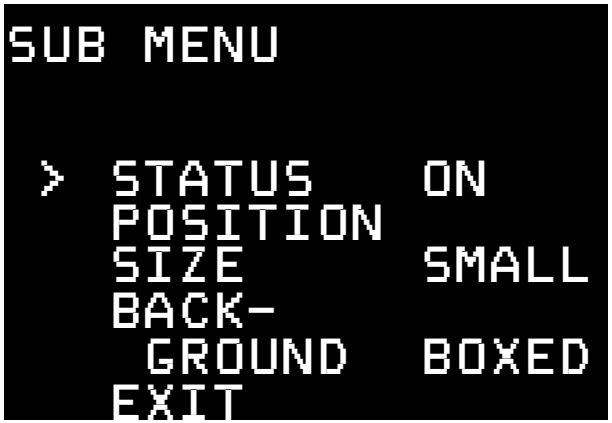
CAM-STATUS: RUN FWD 24 fps

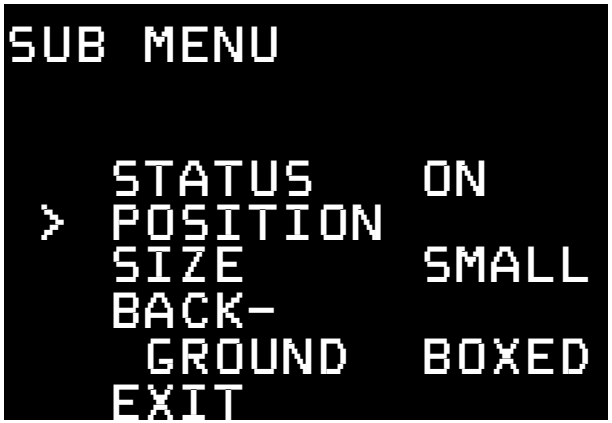
The adjustment of the white level of the inserted data, an inverse display and a fine adjustment of the vertical position is described in chapter 6.9

- Enter the Status Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.





6.4.1 Status

This sub menu line switches the insertion of camera status data on (ON) and off (OFF) independently of other inserted data.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "STATUS". The keys "▶" and "◀" switch the insertion on and off.

6.4.2 Position

The window can be positioned anywhere on the monitor screen.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "POSITION". Call the positioning mode with the keys "▶" or "◀". The following menu is displayed on the screen:

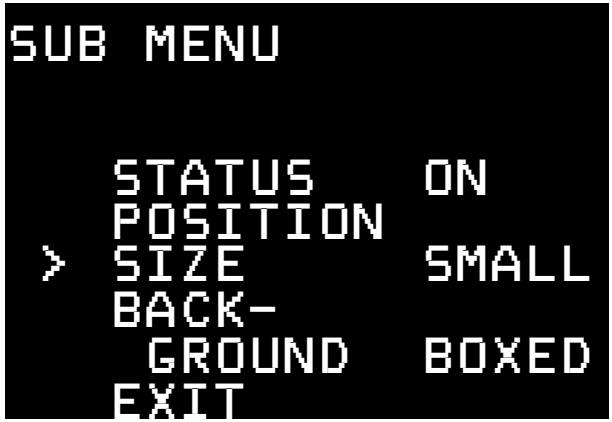
The keys "▲" and "▼" move the window up and down.

When the desired position has been set, confirm by pressing the key "Enter Insert".

6.4.3 Size

The format of the inserted characters can be changed independently of other windows form "SMALL" to "WIDE" to "HIGH" to "BIG".

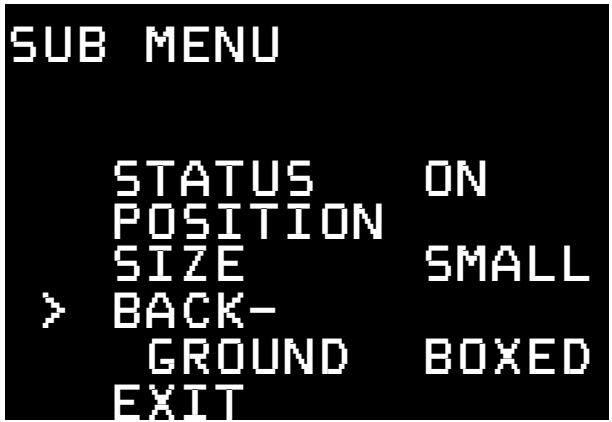
Move the cursor "›" with the keys "△" and "▽" to the line "SIZE". Pressing the key "▷" will change the setting from "SMALL" to "WIDE" to "HIGH" to "BIG" and back to "SMALL". The key "◁" will switch in the opposite direction.

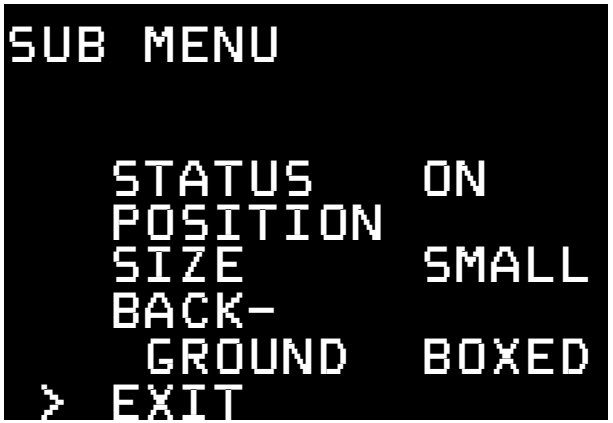


6.4.4 Background

The background of the window can be set electronically to black ("BOXED") to improve the readability. If this is not activated, the area around the text is the normal video image ("VIDEO").

Move the cursor "›" with the keys "△" and "▽" to the line "BACK-". The keys "▷" and "◁" switch between "BOXED" and "VIDEO".





6.4.5 Exit

Return to the main menu using Exit.

Move the cursor "**>**" with the keys "Ⓐ" and "Ⓥ" to the line "EXIT" and press the key "Ⓡ" or "Ⓛ".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

6.5 TIME CODE Menu

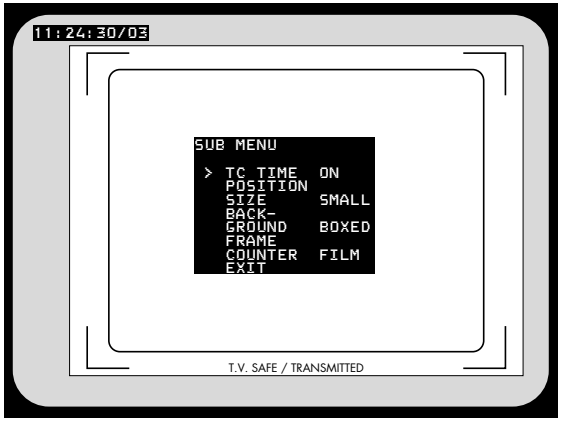
For all TC- and related fuctions, the ARRIFLEX 435 must be equipped with a Function Expansion Module (FEM).

The IVS can insert the film camera's time code into the video assist image to create a direct link to the post production.

It is possible to insert time code, which is related to the film camera speed, e. g. 24 fps or a time code which counts according to the type of video assist (25 full video frames per second with PAL or 30 full video frames per second with NTSC).

Like all man readable information, the data is inserted as a window on the monitor image. The window can be switched on and off independently. Background, position and character format can be altered without effecting the settings of other windows.

The adjustment of the white level of the inserted data, an inverse display and a fine adjustment of the vertical position is described in chapter 6.9



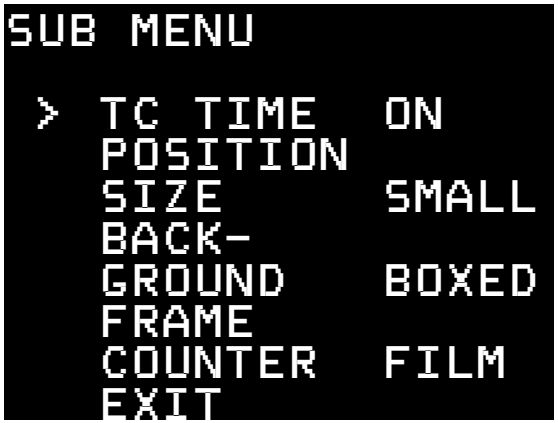
This additional line shows the TC information:

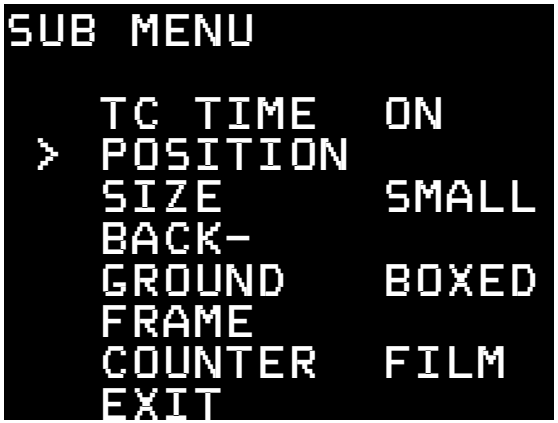
11:24:30/03

Note: The frame information (the last two digits of the time code display) is only active if time code is actually recorded on film. If there is no time code recording on film because for example the camera is not running on a time code speed, only the symbol "**" is displayed on that position.

- Enter the Time Code Menu from the Main Menu.

All settings are immediately activated by changing them. Check all settings on the connected monitor.





6.5.1 TC Time

This sub menu line switches the insertion of time code data on (ON) and off (OFF) independently of other inserted data.

Move the cursor "›" with the keys "▲" and "▼" to the line "TC TIME". The keys "▶" and "◀" switch the insertion on and off.

6.5.2 Position

The window can be positioned anywhere on the monitor screen.

Move the cursor "›" with the keys "▲" and "▼" to the line "POSITION". Activate the positioning mode with the keys "▶" or "◀". The following menu is displayed on the screen:

The keys "▶" and "◀" move the window left and right, the keys "▲" and "▼" move the window up and down.

When the correct position has been set, confirm by pressing the key "Enter Insert".

6.5.3 Size

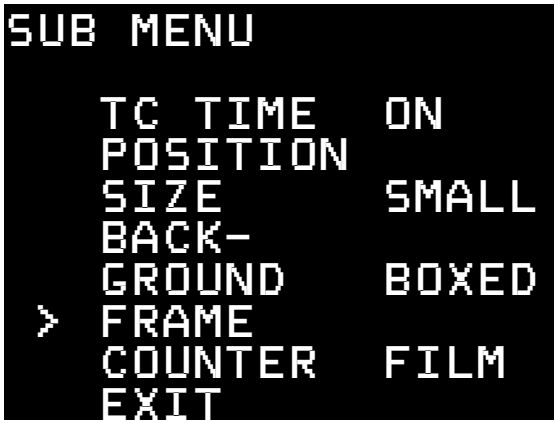
The format of the inserted characters can be changed independently of other windows form "SMALL" to "WIDE" to "HIGH" to "BIG".

Move the cursor ">" with the keys "▲" and "▼" to the line "SIZE". Pressing the key "▶" will change the setting from "SMALL" to "WIDE" to "HIGH" to "BIG" and back to "SMALL". The key "◀" will switch in the opposite direction.

6.5.4 Background

The background of the window can be set electronically to black ("BOXED") to improve the readability. If this is not activated, the area around the text is the normal video image ("VIDEO").

Move the cursor ">" with the keys "▲" and "▼" to the line "BACK-". The keys "▶" and "◀" switch between "BOXED" and "VIDEO".



6.5.5 Frame Counter

It is recommended to check the requirements of all facilities involved in post-production prior to shooting.

Very often the camera is set to run at a different speed than the video system. In areas with NTSC video system for example, the film camera would run at 24 fps whereas the video system works with 30 full video frames per second. In order to adapt to the specific needs there are two different time code formats possible.

To have the time code count related to the film camera, select the mode "Frame counter Film", which is often referred to as "film related time code". In this mode, the frame counter of the time code (the last two digits of the time code display) is increased by 1 if the film is advanced by one frame e.g. 24 times a second at 24 fps. By this it is easy to identify one particular film frame by looking at the video image. On the other hand, this mode will create an unusual time code count because some video images are repeated to cope with the different frame rates of the video and the film camera. These repeated images will get duplicated time code words which will create error messages on some time code readers.

To relate the time code count to the video system, select mode "Frame counter Video". This is often referred to as "video related time code" . Every full video frame will advance the time code by 1 e.g. 25 times a second in PAL or 30 times a second in NTSC. By this the IVS creates a standard time code. On the other hand, it is more difficult to get the link back to the time code, which was recorded on film. To get a reliable relation, it is necessary to utilize the Pull-Down (refer to chapter 6.8) or White-Line-Flag information (refer to chapter 6.11).

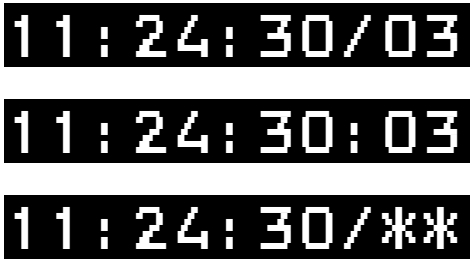
At every full second, both time counts are identical.

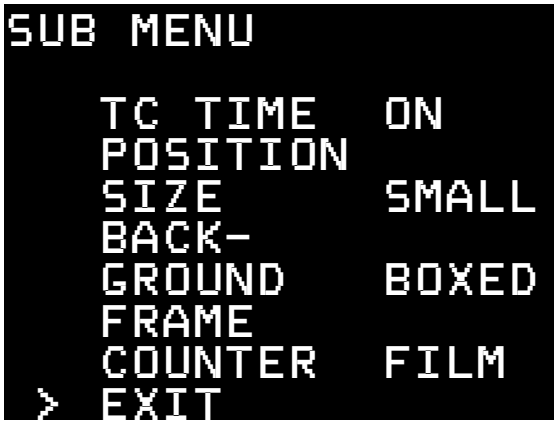
In case of "Frame counter Film" there will be a "/" before the frame count (the last two digits of the time code display), in case of "Frame counter Video" there will be a ":" ⇨ **photo**.

*The frame count is only active if time code is actually recorded on film. In all other cases a "**" ⇨ **photo** symbol will appear for the frame count.*

Time code is only recorded on film at standard speeds. These are 23.976 fps, 24 fps, 25 fps, 29.97 fps and 30 fps. At all other speeds, time code is displayed on the video assist without the frame count and it is not recorded on film.

Move the cursor "›" with the keys "▲" and "▼" to the line "FRAME". The keys "▶" and "◀" switch the frame counter mode between "FILM" and "VIDEO".





6.5.6 Exit

Return to the main menu using Exit.

Move the cursor "**>**" with the keys "Ⓐ" and "Ⓥ" to the line "EXIT" and press the key "Ⓡ" or "Ⓛ".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

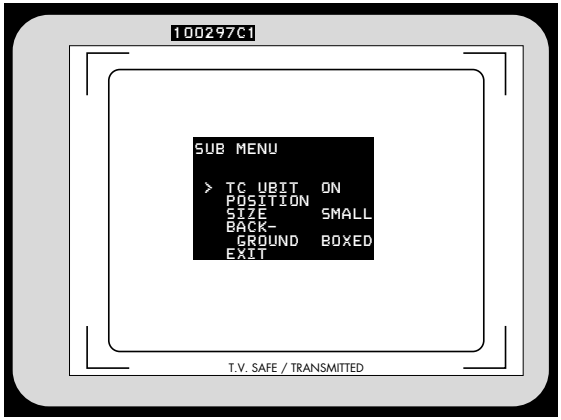
6.6 USER BITS Menu

For all TC- and related fuctions, the ARRIFLEX 435 must be equipped with a Function Expansion Module (FEM).

The IVS can insert the user bits of the film camera's time code into the video assist image to create a direct link to the post production.

Like all man readable information, the data is inserted as a window on the monitor image. The window can be switched on and off independently. Background, position and character format can be altered without effecting the settings of other windows.

The adjustment of the white level of the inserted data, an inverse display and a fine adjustment of the vertical position is described in chapter 6.9

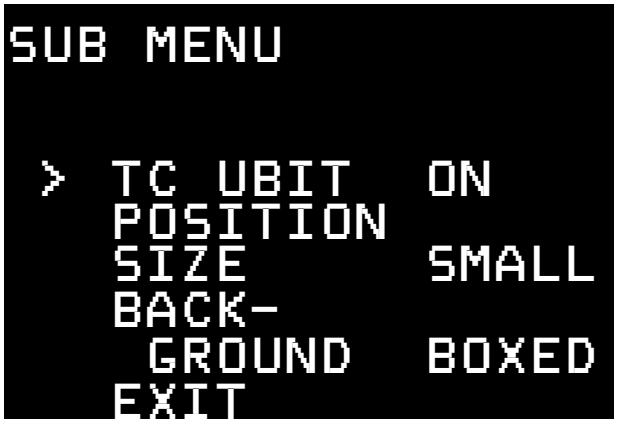


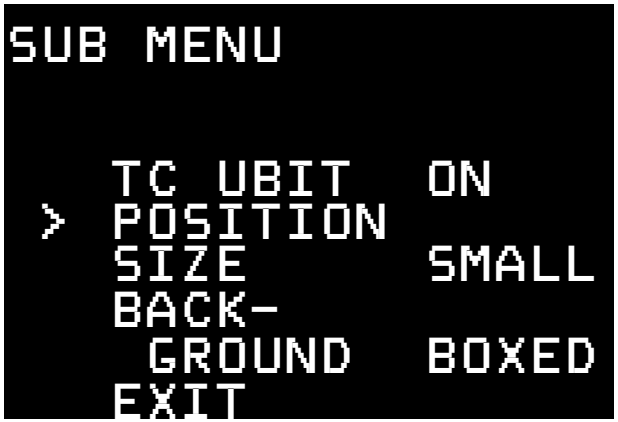
This additional window shows the User Bits information:
100297C1

- Enter the User Bits Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.





6.6.1 TC UBit

This sub menu line switches the insertion of user bit data on (ON) and off (OFF) independently of other inserted data.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "TC UBIT". The keys "▶" and "◀" switch the insertion on and off.

6.6.2 Position

The window can be positioned anywhere on the monitor screen.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "POSITION". Call the positioning mode with the keys "▶" or "◀". The following menu is displayed on the screen:

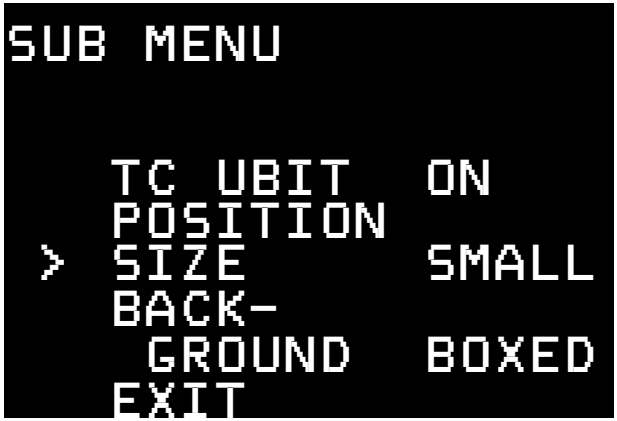
The keys "▶" and "◀" move the window left and right, the keys "▲" and "▼" move the window up and down.

When the desired position has been set, confirm by pressing the key "Enter Insert".

6.6.3 Size

The format of the inserted characters can be changed independently of other windows form "SMALL" to "WIDE" to "HIGH" to "BIG".

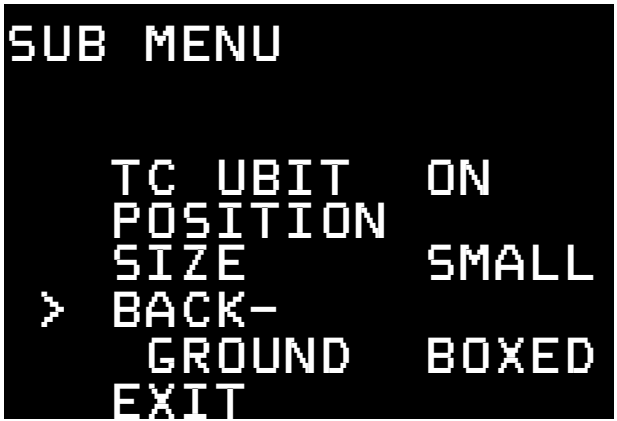
Move the cursor ">" with the keys "▲" and "▼" to the line "SIZE". Pressing the key "▶" will change the setting from "SMALL" to "WIDE" to "HIGH" to "BIG" and back to "SMALL". The key "◀" will switch in the opposite direction.

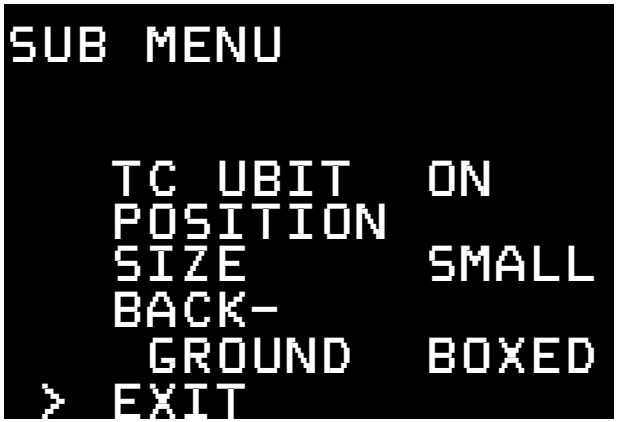


6.6.4 Background

The background of the window can be set electronically to black ("BOXED") to improve the readability. If this is not activated, the area around the text is the normal video image ("VIDEO").

Move the cursor ">" with the keys "▲" and "▼" to the line "BACK-". The keys "▶" and "◀" switch between "BOXED" and "VIDEO".





6.6.5 Exit

Return to the main menu using Exit.

Move the cursor ">" with the keys "Ⓐ" and "Ⓥ" to the line "EXIT" and press the key "Ⓡ" or "Ⓛ".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

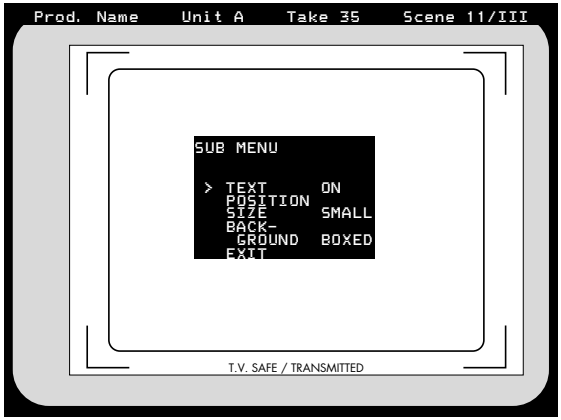
6.7 Text Menu

The IVS can insert additional text into the video image, for example the production name or a scene number. As there is no text input possibility on the camera or on the IVS it is necessary to enter that text on a computer and to send it to the IVS via the RS 232 interface into the CCU connector of the camera.

Future versions of the Laptop Camera Controller will have corresponding possibilities.

If information is stored in the text memory, it will remain there until the memory is cleared or a new information overrides the old one, even if the IVS or the camera is switched off or disconnected from the power supply. This enables for example a camera rental house to store information which is then available to the production team. This might for example be the production name.

Like all man readable information, the data is inserted as a window on the monitor image. The window can be switched on and off independently. Background, position and character format can be altered without effecting the settings of other windows.



This additional line shows the text information:

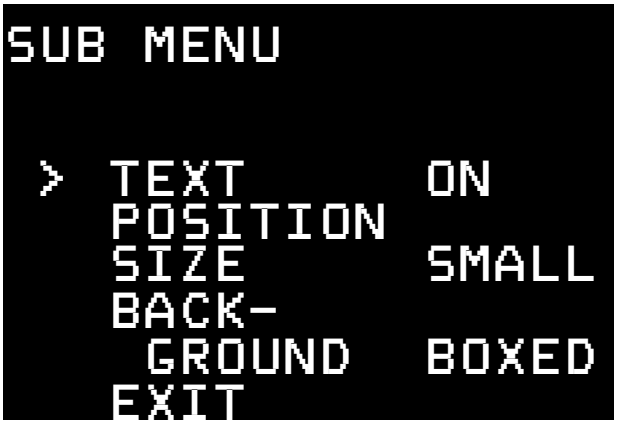
Prod. Name Unit A Take 35 Scene 11/III

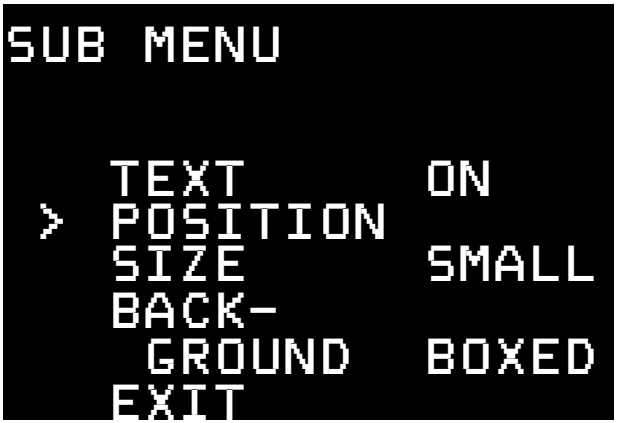
The adjustment of the white level of the inserted data, an inverse display and a fine adjustment of the vertical position is described in chapter 6.9

- Enter the Text Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.





6.7.1 Text

This sub menu line switches the insertion of additional text on (ON) and off (OFF) independently of other inserted data.

Move the cursor "**>**" with the keys "Ⓐ" and "Ⓥ" to the line "TEXT". The keys "Ⓡ" and "Ⓛ" switch the insertion on and off.

6.7.2 Position

The window can be positioned anywhere on the monitor screen.

Move the cursor "**>**" with the keys "Ⓐ" and "Ⓥ" to the line "POSITION". Call the positioning mode with the keys "Ⓡ" or "Ⓛ". The following menu is displayed on the screen:

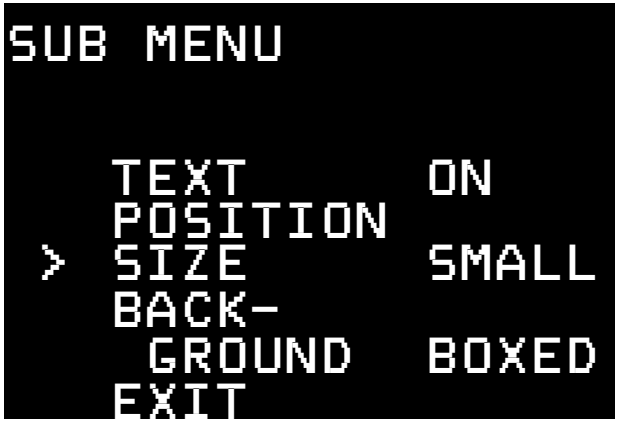
The keys "Ⓐ" and "Ⓥ" move the window up and down.

When the desired position has been set, confirm by pressing the key "Enter Insert".

6.7.3 Size

The format of the inserted characters can be changed independently of other windows form "SMALL" to "WIDE" to "HIGH" to "BIG".

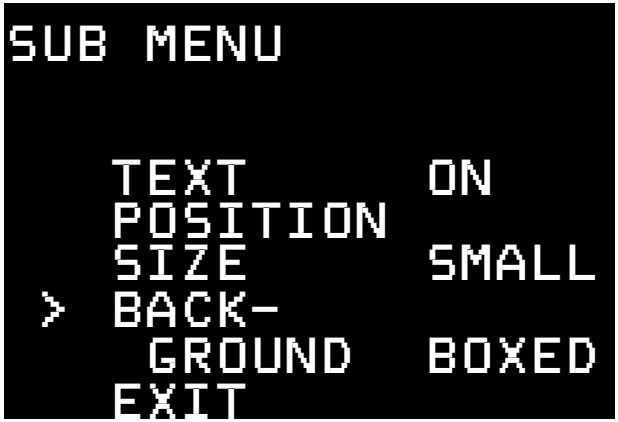
Move the cursor ">" with the keys "△" and "▽" to the line "SIZE". Pressing the key "▷" will change the setting from "SMALL" to "WIDE" to "HIGH" to "BIG" and back to "SMALL". The key "◁" will switch in the opposite direction.

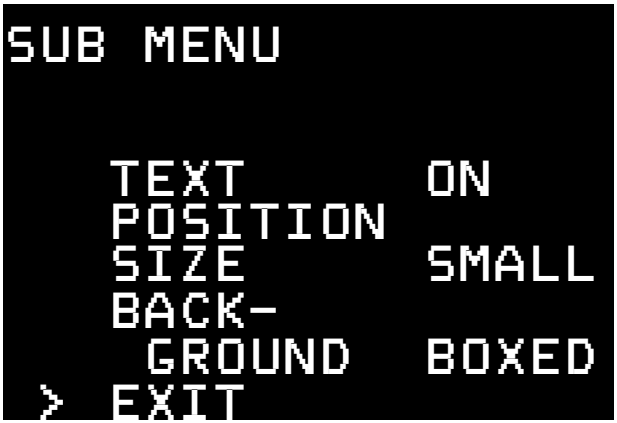


6.7.4 Background

The background of the window can be set electronically to black ("BOXED") to improve the readability. If this is not activated, the area around the text is the normal video image ("VIDEO").

Move the cursor ">" with the keys "△" and "▽" to the line "BACK-". The keys "▷" and "◁" switch between "BOXED" and "VIDEO".





6.7.5 Exit

Return to the main menu using Exit.

Move the cursor ">" with the keys "Ⓐ" and "Ⓥ" to the line "EXIT" and press the key "Ⓡ" or "Ⓛ".

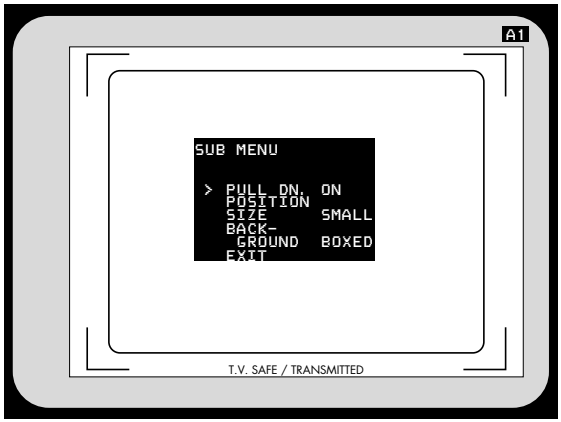
Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

6.8 Pull-Down Menu

For all TC- and related fuctions, the ARRIFLEX 435 must be equipped with a Function Expansion Module (FEM).

The IVS can generate information on whether the current video image corresponds to a new film frame or whether it is a repeated video image. The Pull-Down information displays that in man readable form.

The adjustment of the white level of the inserted data, an inverse display and a fine adjustment of the vertical position is described in chapter 6.9

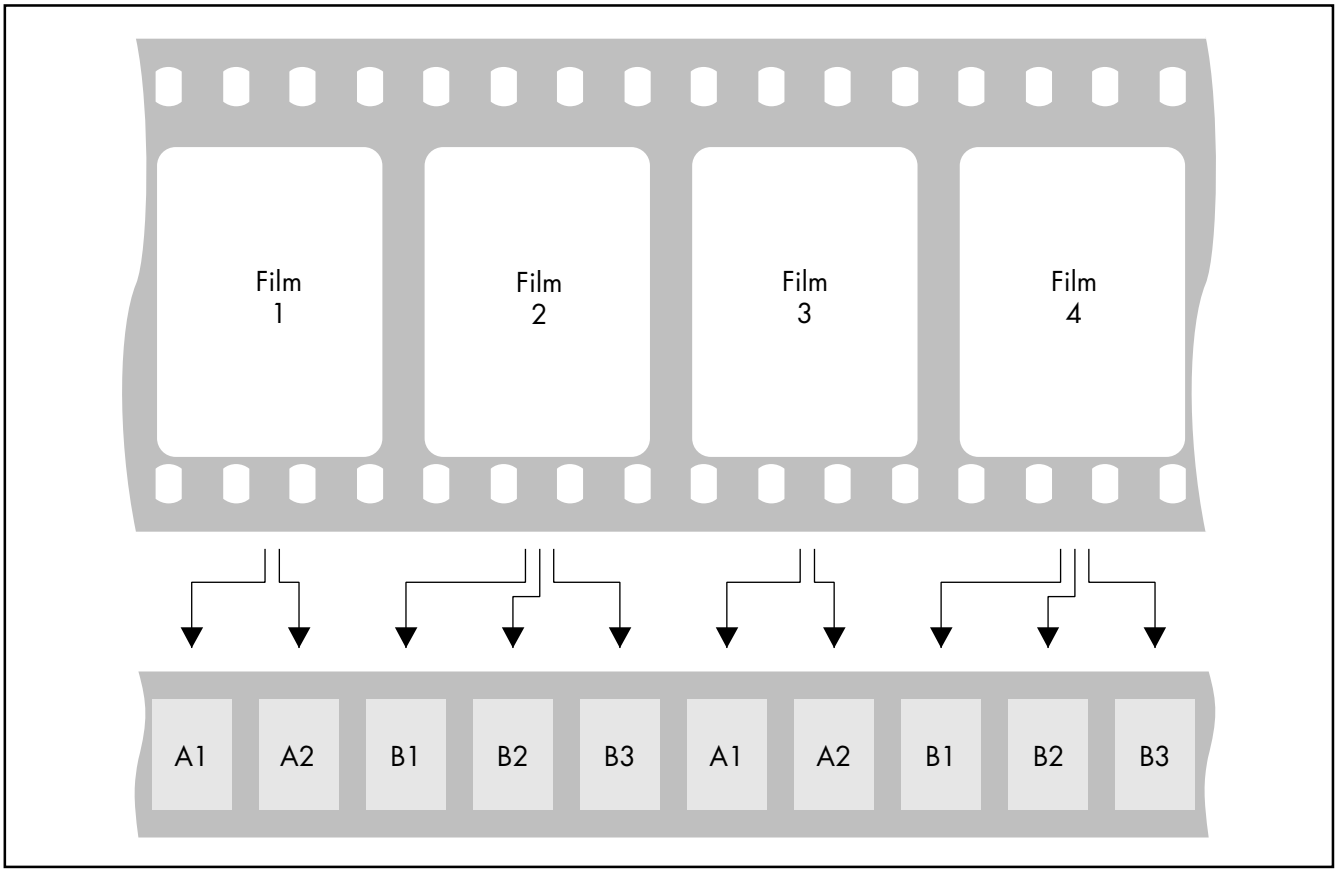


This additional window shows the pull-down information:
A1

- Enter the Pull-Down Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.


Film
1
Film
2
Film
3
Film
4
A1
A2
B1
B2
B3
A1
A2
B1
B2
B3

All video assists are based either on PAL or NTSC video systems, with a fixed video frequency of either 25 full video frames per second with PAL or 29.97 full video frames per second with NTSC. The speed of the film camera on the other hand can be selected over a wide range. At every film speed which is different from the video frequency, the IVS has to add repeated video fields to compensate for the different frame rates.

In practice the most important case is a film camera speed of 23.976 fps and a NTSC video assist.

This creates a situation described in the drawing.

From the first film frame, two video fields are derived, the second film frame, three video fields are derived, from the next film frame, two video fields and so on.

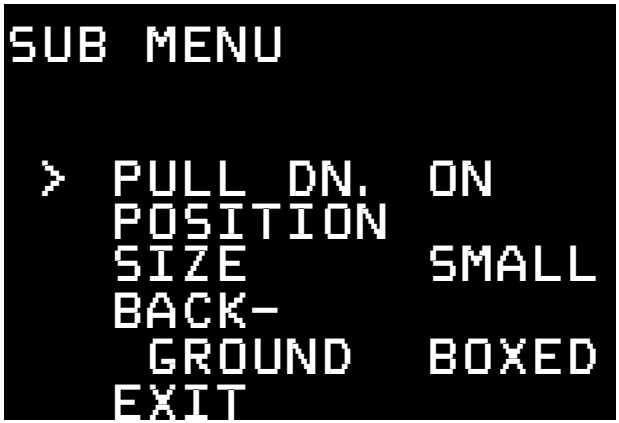
The Pull-Down information is created as follows:

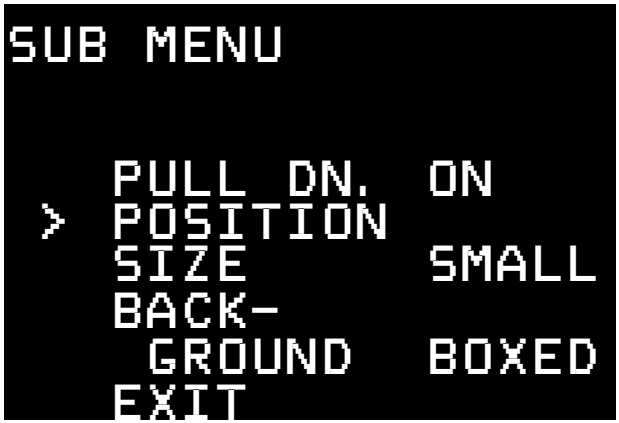
Every time, the video field corresponds to a ***new*** film frame, the letter will change either from A to B or B to A and the number will be set to 1. As long as no new film frame is taken, the video fields are counted, beginning from 1. Consequently A2 is the first repetition of A1. B2 would be the first repetition of B1, B3 would be the second repetition.

In spite of the fact that the name Pull-Down comes from the working practice in the NTSC systems, where on a telecine the film is running on 23.976 fps and gets converted to 29.97 fps, the definition of Pull-Down information on the IVS can also be applied to PAL and to film speeds other than 23.976 fps.

Like all man-readable information, the data is inserted as a window on the monitor image. The window can be switched on and off independently. Background, position and character format can be altered without effecting the settings of other windows.

Note: Pull-Down information is only inserted, when time code is actually recorded on film. If there is no time code recording, for example because the camera is not running on a time code speed, only "A1" will be displayed.





6.8.1 Pull-Down

This sub menu line switches the insertion of pull-down information on (ON) and off (OFF) independently of other inserted data.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "PULL DN.". The keys "▶" and "◀" switch the insertion on and off.

6.8.2 Position

The window can be positioned anywhere on the monitor screen.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "POSITION". Call the positioning mode with the keys "▶" or "◀". The following menu is displayed on the screen:

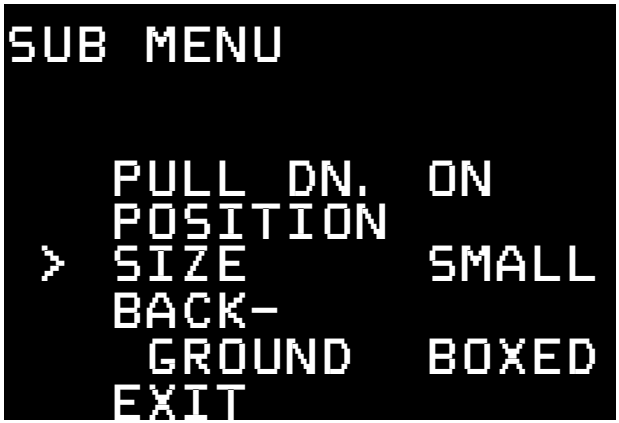
The keys "▶" and "◀" move the window left and right, the keys "▲" and "▼" move the window up and down.

When the desired position has been set, confirm by pressing the key "Enter Insert".

6.8.3 Size

The format of the inserted characters can be changed independently of other windows form "SMALL" to "WIDE" to "HIGH" to "BIG".

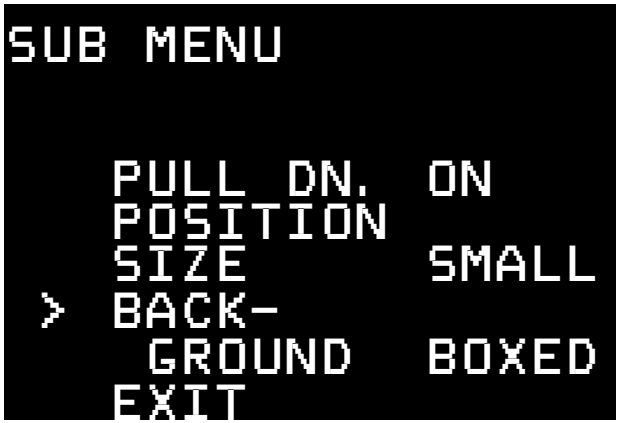
Move the cursor ">" with the keys "▲" and "▼" to the line "SIZE". Pressing the key "" will change the setting from "SMALL" to "WIDE" to "HIGH" to "BIG" and back to "SMALL". The key "" will switch in the opposite direction.

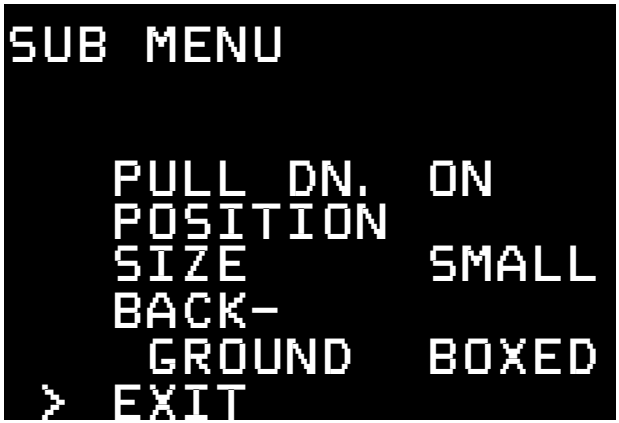


6.8.4 Background

The background of the window can be set electronically to black ("BOXED") to improve the readability. If this is not activated, the area around the text is the normal video image ("VIDEO").

Move the cursor ">" with the keys "▲" and "▼" to the line "BACK-". The keys "▶" and "◀" switch between "BOXED" and "VIDEO".





6.8.5 Exit

Return to the main menu using Exit.

Move the cursor "**>**" with the keys "Ⓐ" and "Ⓥ" to the line "EXIT" and press the key "Ⓡ" or "Ⓛ".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

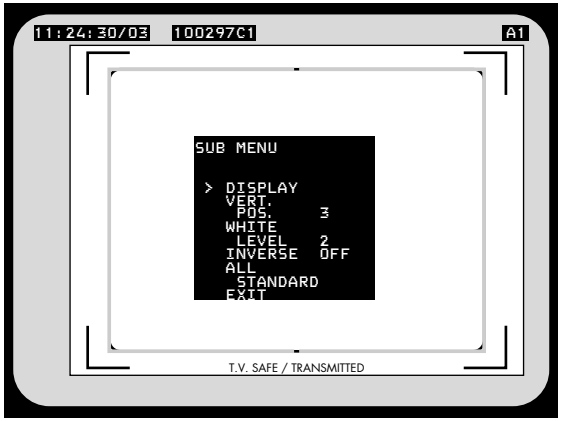
6.9 Display Menu

In the sub menu "Display" it is possible to change some basic settings, which effect all active man-readable windows of the inserter at the same time.

- Enter the Display Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.



6.9.1 Vertical Position

By changing the setting in the line "Vertical Position" of this sub menu it is possible to simultaneously shift all man-readable windows with the exception of the format markings vertically by one video line (fine adjust). The single steps are smaller than the steps in the normal position mode. This will place all windows as far outside the actual image area as possible.

Move the cursor ">" with the keys "△" and "▽" to the line "VERT.". By pressing the key "▷" the value will increment starting form 0 to 9, after that it will go back to 0. Higher values will cause the windows to be at a higher video line. They will therefore appear lower on the video screen. The key "◁" will increment in the opposite direction.

6.9.2 White Level

This line is used to change the brightness of all man-readable windows but the frame lines. Value 0 means dark gray, value 4 corresponds to bright white characters.

Move the cursor "›" with the keys "▲" and "▼" to the line "WHITE". By pressing the key "▶" the values for the brightness of the characters will increment beginning form 0 to 4, and after that back to 0. The key "◀" will decrement in the opposite direction.

6.9.3 Inverse

This menu changes the appearance of all man-readable windows but the format markings. If inverse "OFF" is selected, the characters will appear white. If the background is "BOXED" it will appear black in this case. If inverse "ON" is selected, the characters will appear black. If the background is "BOXED" it will appear white in this case.

Move the cursor "›" with the keys "▲" and "▼" to the line "INVERSE". The keys "▶" or "◀" will switch between "ON" and "OFF".

6.9.4 All Standard

Recalling the default values, will irrevocably overwrite any previously programmed settings!

This menu recalls a default setting of all inserter values. By this, it is possible to obtain basic setting for the IVS. The default values are:

- Format marking 1, White Level 2, Outside Full
- Time-Code ON, Size Big, Background Boxed, Counter Film
- USER-BITS On, Size Big, Background Boxed
- Status On, Size Small, Background Boxed
- Text Off, Size Small, Background Boxed
- Pull-down OFF, Size Big, Background Boxed
- Vertical Position 5, White Level 2, Inverse OFF
- VITC On, Position 1 - 10, Position 2 - 12
- White Line On, Position 11

Move the cursor "**>**" with the keys "△" and "▽" to the line "ALL". Pressing the key "▷" or "◁" recalls the default values.

6.9.5 Exit

Return to the main menu using Exit.

Move the cursor ">" with the keys "△" and "▽" to the line "EXIT" and press the key "▷" or "◁".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.

6.10 VITC Line Menu

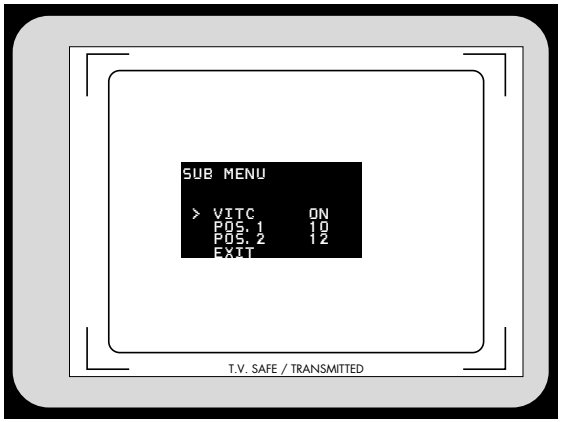
For all TC- and related fuctions, the ARRIFLEX 435 must be equipped with a Function Expansion Module (FEM).

The IVS can convert the time code, which can also be displayed man-readable in the video image, into machine readable VITC (Vertical Interval Time-Code) and place it in non visible video lines.

Note: The time code count that is used ("film related" or "video related time code") depends on the settings of the line "Frame Counter" in the sub menu "Time Code" (see chapter 6.5.5).

Note: VITC is only outputted if time code is actually recorded on film. If no time code is recorded on film for example because the camera is not running at a time code speed, no VITC is available.

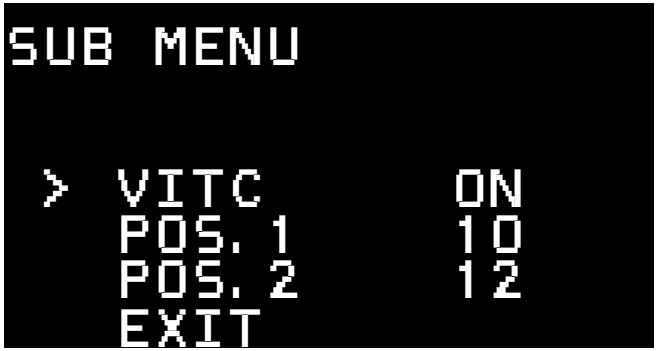
Note: The White Line has priority over VITC lines. If the same line is selected for White Line as well as for VITC, White Line will appear.



- Enter the VITC Line Menu from the Main Menu.

All settings are immediately activated by changing them.

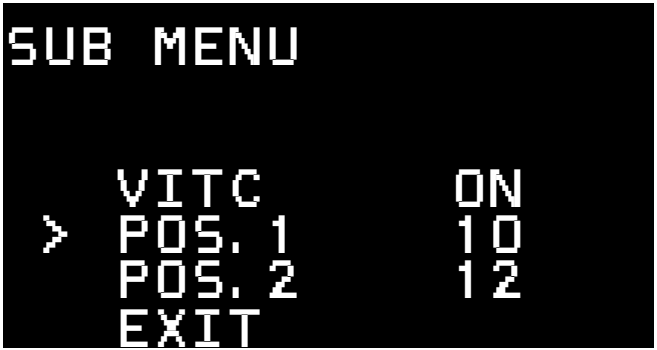
Check all settings on the connected monitor.



6.10.1 VITC

This sub menu line switches the insertion of VITC on (ON) and off (OFF).

Move the cursor "**>**" with the keys "▲" and "▼" to the line "VITC". The keys "▶" and "◀" switch the insertion on and off.



6.10.2 Position 1

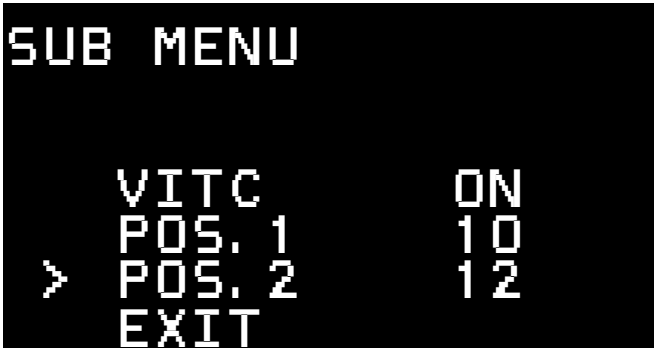
The insertion of VITC can be single or multiple line between line 6 and 22. If the same lines on position 1 and position 2 are selected, the insertion will be single line, otherwise multiple line. The value of position 1 can be higher or lower than that of position 2.

Move the cursor "**>**" with the keys "▲" and "▼" to the line "POS. 1". By pressing the key "▶" the value will be increased until line 22 is selected. By pressing the key "◀" the value will be decreased until line 6 is reached.

6.10.3 Position 2

The insertion of VITC can be single or multiple line between line 6 and 22. If the same lines on position 1 and position 2 are selected, the insertion will be single line, otherwise multiple line. The value of position 1 can be higher or lower than that of position 2.

Move the cursor "›" with the keys "△" and "▽" to the line "POS. 2". By pressing the key "▷" the value will be increased until line 22 is selected. By pressing the key "◁" the value will be decreased until line 6 is reached.

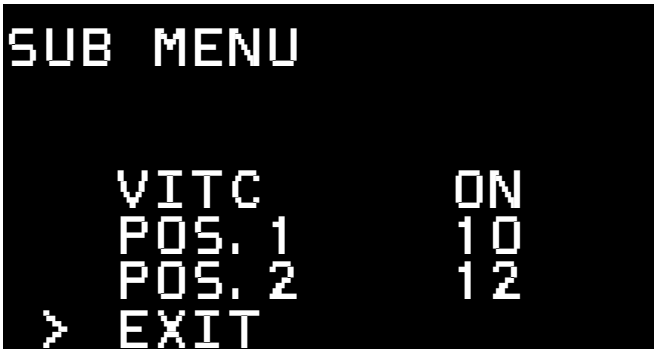


6.10.4 Exit

Return to the main menu using Exit.

Move the cursor "›" with the keys "△" and "▽" to the line "EXIT" and press the key "▷" or "◁".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.



6.11 White Line Menu

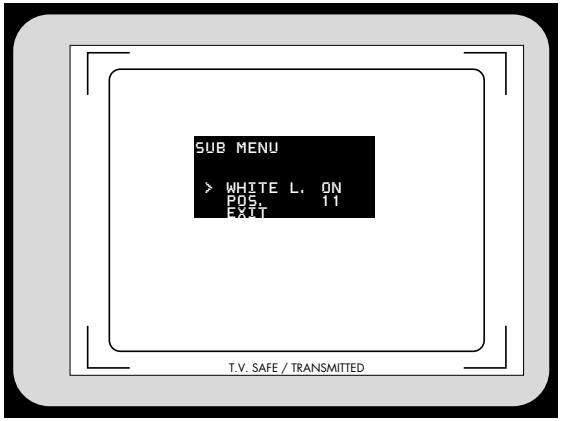
For all TC- and related fuctions, the ARRIFLEX 435 must be equipped with a Function Expansion Module (FEM).

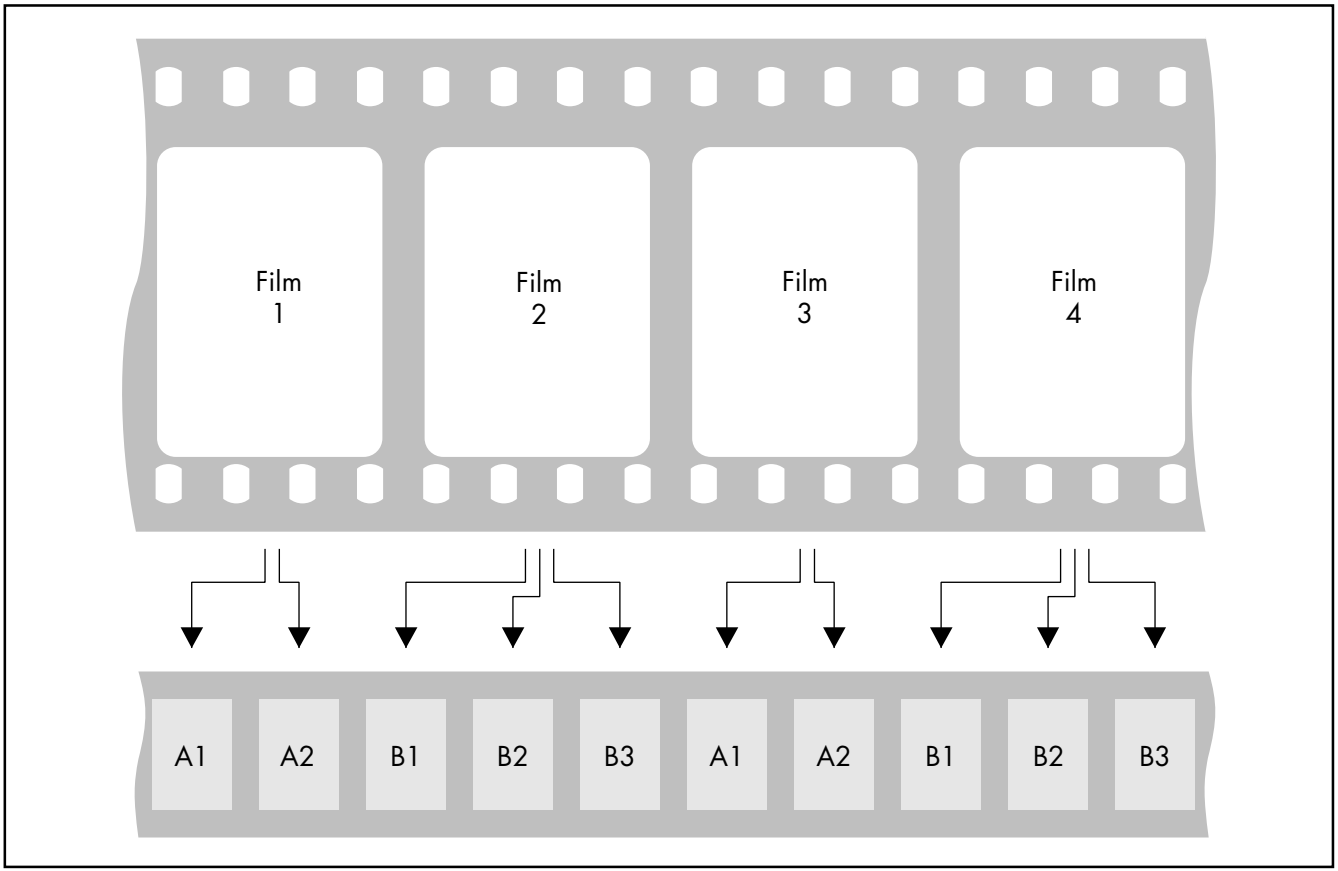
The IVS can generate information on whether the current video image corresponds to a new film frame or whether it is a repeated video image. The White-Line flag displays this in machine readable form.

- Enter the White Line Menu from the Main Menu.

All settings are immediately activated by changing them.

Check all settings on the connected monitor.




Film
1
Film
2
Film
3
Film
4
A1
A2
B1
B2
B3
A1
A2
B1
B2
B3

All video assists are based either on PAL or NTSC video systems, with a fixed video frequency of either 25 full video frames per second with PAL or 29.97 full video frames per second with NTSC. The speed of the film camera on the other hand can be selected over a wide range. At every film speed which is different from the video frequency, the IVS has to add repeated video fields to compensate for the different frame rates.

In practice the most important case is a film camera speed of 23.976 fps and a NTSC video assist.

This creates a situation described in the drawing.

From the first film frame, two video fields are derived, the second film frame, three video fields are derived, from the next film frame, two video fields and so on.

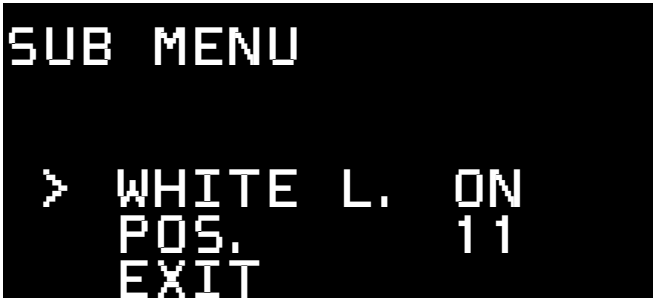
The White-Line flag works as follows:

Every time, the video field corresponds to a ***new*** film frame, the letter will change either from A to B or B to A and the number will be set to 1. As long as no new film frame is taken, the video fields are counted, beginning from 1. Consequently A2 is the first repetition of A1. B2 would be the first repetition of B1, B3 would be the second repetition. On every A1 or B1, the selected video line will get set to video signal white, indicating that only these video frames correlate one-to-one to film frames. The duplicated video fields are not marked.

In spite of the fact that the name Pull-Down comes from the working practice in the NTSC systems, where on a telecine the film is running on 23.976 fps and gets converted to 29.97 fps, the definition of Pull-Down information on the IVS can also be applied to PAL and to film speeds other than 23.976 fps.

Note: The insertion of White-Line flags is only done, when time code is actually recorded on film. If there is no time code recording, for example because the camera is not running on a time code speed, no White-Line flag is sent out.

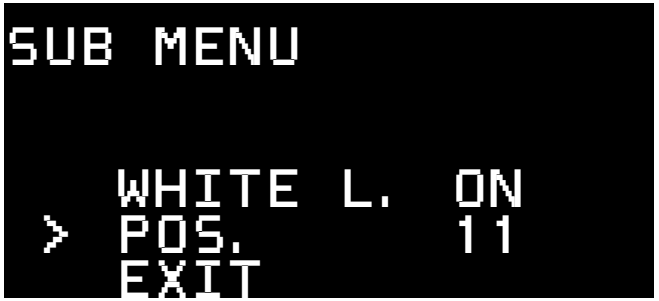
Note: The White Line has priority over VITC lines. If the same line is selected for White Line as well as for VITC, White Line will appear.



6.11.1 White Line

This sub menu line switches the insertion of White-Lines on (ON) and off (OFF).

Move the cursor ">" with the keys "△" and "▽" to the line "WHITE L". The keys "▷" and "◁" switch the insertion on and off.



6.11.2 Position

The insertion of White-Lines can be between line 6 and 22.

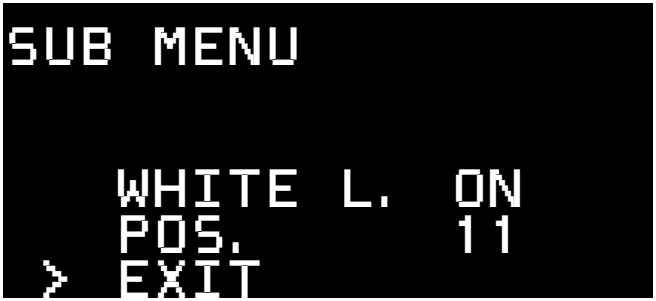
Move the cursor ">" with the keys "△" and "▽" to the line "POS.". By pressing the key "▷" the value will be increased until line 22 is selected. By pressing the key "◁" the value will be decreased until line 6 is reached.

6.11.3 Exit

Return to the main menu using Exit.

Move the cursor "›" with the keys "△" and "▽" to the line "EXIT" and press the key "▷" or "◁".

Note: Pressing the key "Enter Insert" for more than three seconds will cause the system to exit the onscreen programming mode completely, regardless of which menu is activated, with the exeption of the positioning mode.



7. Technical Data

Weight ..... approx. 0,7 kg

Power Consumption ..... approx. 11 W

Width of the Inserter/Antiflicker Module ..... 21,5 mm

Inputs ..... Genlock input for composit video

Outputs ..... 2 outputs for composite video

2 outputs for composite video

1 Mini-Monitor Output

Optic ..... 2 different versions for Academy and Silent Format

Optic Alignment ..... X-Y and focus

8. Order numbers

Optic Silent and/or K2.47230.0

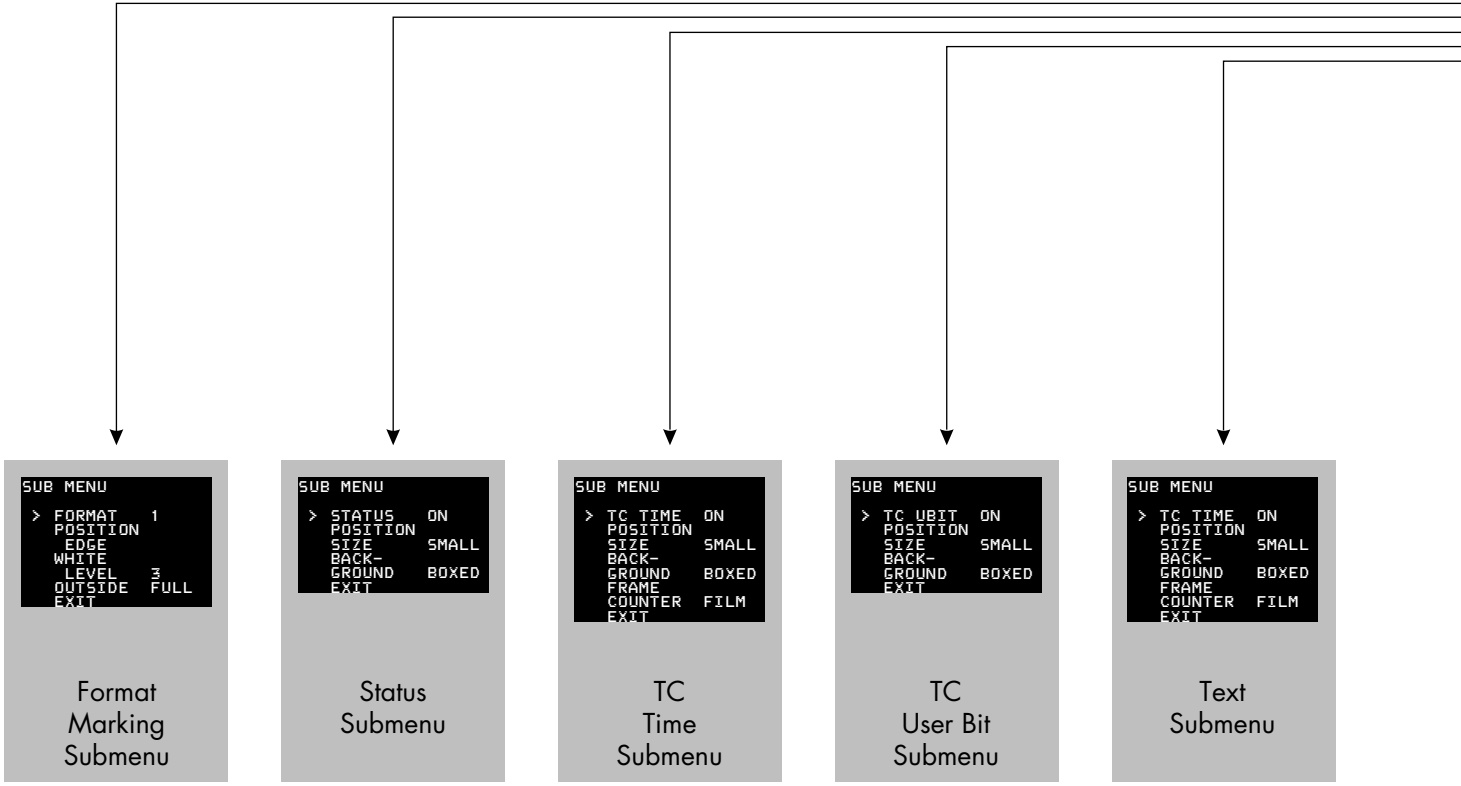
Optic Academy K2.47231.0

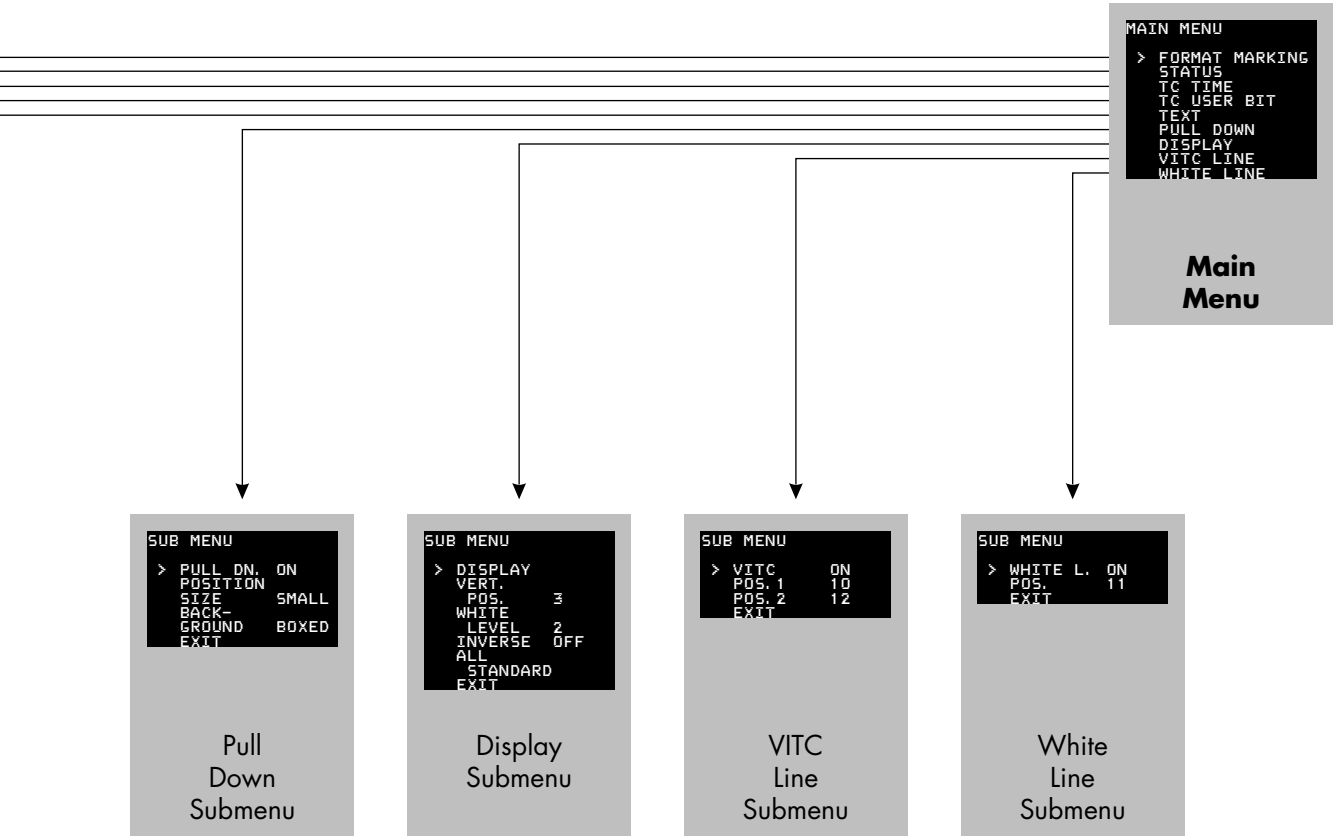
Video Electronic complete ..... K2.47118.0 for PAL
or K2.47232.0 for NTSC

Y/C video cable for video with data, KC 45 ..... K2.47477.0
Y/C video cable for video without data, KC 46 ..... K2.47478.0

9. Index


Adjustment wheel
for iris IVS lens
Y/C out ("normal video" and "video with data")


SUB MENU
> FORMAT 1
POSITION
EDGE
WHITE
LEVEL 3
OUTSIDE FULL
EXIT
Format
Marking
Submenu
SUB MENU
> STATUS ON
POSITION
SIZE SMALL
BACK-
GROUND BOXED
EXIT
Status
Submenu
SUB MENU
> TC TIME ON
POSITION
SIZE SMALL
BACK-
GROUND BOXED
FRAME
COUNTER FILM
EXIT
TC
Time
Submenu
SUB MENU
> TC UBIT ON
POSITION
SIZE SMALL
BACK-
GROUND BOXED
EXIT
TC
User Bit
Submenu
SUB MENU
> TC TIME ON
POSITION
SIZE SMALL
BACK-
GROUND BOXED
FRAME
COUNTER FILM
EXIT
Text
Submenu


MAIN MENU
> FORMAT MARKING
STATUS
TC TIME
TC USER BIT
TEXT
PULL DOWN
DISPLAY
VITC LINE
WHITE LINE
Main Menu
SUB MENU
> PULL DN. ON
POSITION
SIZE SMALL
BACK-
GROUND BOXED
EXIT
Pull Down Submenu
SUB MENU
> DISPLAY
VERT.
POS. 3
WHITE
LEVEL 2
INVERSE OFF
ALL
STANDARD
EXIT
Display Submenu
SUB MENU
> VITC ON
POS.1 10
POS.2 12
EXIT
VITC Line Submenu
SUB MENU
> WHITE L. ON
POS. 11
EXIT
White Line Submenu

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available languages
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