Configuration Manual

Version 10.04 - January 2011

XTnano

Production & Playout Server

EVS

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What's New?

The changes linked to new features on XTnano version 10.04 are listed in the table below, and are identified in the user manual by the 'New' logo in the margin

Updates for XTnano version 10.04	
Section 2.6	New warning messages related to the Gigabit connection

1. Introduction

1.1 PURPOSE AND STRUCTURE

The aim of this manual is to describe the various configuration parameters that have to be defined when you work on a server in SportLight mode.

1.2 APPLICATION SELECTION AND CHANNEL CONFIGURATION

Prior to configuring the Multicam and server settings in the Setup Configuration module or on the nano Remote Panel, you must have selected the application you will run on the server. In this step, you also define the channel configuration to be used with the selected application, as well as several audio and video parameters for the server.

You perform this initial step in the EVS and AVCFG software programs. The EVS software is started when the server is switched on. For more information on this, refer to the XTnano Tech Ref Software manual.

If a default application has been previously selected, this application will start automatically after a few seconds if no key is hit.

If a default application hasn't been defined or if the space bar is hit, the system will remain in the EVS main menu and wait for the operator's next command.

2. Setup in Multicam

2.1 INTRODUCTION

2.1.1 OVERVIEW

When you work in Spotbox mode, the 'Setup Configuration' module available in the Multicam application, using the **SHIFT + F2** keyboard combination, allows you to configure the Multicam software and define server settings in relation to timecodes, protocol communication, etc.

The other Multicam modules are discussed in the following manuals:

- Monitoring modules in the XTnano Tech Ref Software manual
- Multicam application in the User manual

This module contains several pages, or screens, which are described in details in this section:

Setup page and section name	Content
Page 1 See Section 2.2 'General Settings (Page 1)', on page 4.	It includes several general settings on the timecodes, the OSD, the VGA, the clip management, the record trains, the channel names.
Page 2 See Section 2.3 'VITC/ANC Timecode Management (Page 2)', on page 11	It includes detailed settings on the insertion of VITC or ANC timecodes, channel by channel.
Page 3 See section 2.4 'SMPTE 334M Packets Management (Page 3)', on page 15.	It includes settings on the SMPTE 334M packet management.
Page 4 See section 2.5 'GPI Settings (Page 4), on page 17	It includes the settings on the GPIs IN and OUT

Setup page and section name	Content
Page 5	Not available for XTnano.
Page 6 See section 2.6 'HCTX Gigabit Connection Settings (Page 6)', on page 21 and 2.7 'LAN Connection Settings (Page 6)', on page 23	It includes detailed settings on the HCTX gigabit connection and the MTPC board connection.
Page 7/8/9	Not available for XTnano.
Page 10 See section 2.8 'Multiviewer Settings (Page 10)', on page 24	It includes the settings for the connection of an external multiviewer.

2.1.2 HOW TO ACCESS THE SETUP CONFIGURATION

The Setup Configuration module is available by pressing simultaneously **SHIFT + F2** on the keyboard with **CAPS LOCK** disabled. The Setup Configuration is not accessible if **CAPS LOCK** is ON.

2.1.3 HOW TO MOVE INSIDE THE SETUP CONFIGURATION

- Use **TAB** or **SHIFT + TAB** to move from one parameter to the next or previous one, and the **LEFT** or **RIGHT ARROW** keys to change the value of a parameter.
- Use **PAGE UP** and **PAGE DOWN** to access the other configuration screens.

2.2 GENERAL SETTINGS (PAGE 1)

2.2.1 INTRODUCTION

The first page of the Setup Configuration module contains some parameters from the Setup menu of the nano Remote Panel that are useful to adjust when working in a Spotbox mode.

If you modify the values for parameters available both in the Setup menu of the Remote Panel and in the Setup Configuration menu, the changes are reflected immediately in the Remote Setup Menu, and vice-versa.

2.2.2 SYSTEM INFORMATION

The Setup screen also provides information about:

- The actual and maximum number of clips on the server: 5400 clips.
- The version of the Multicam software.
- The codec and video configuration, and bitrate used.
- The computer current date and time.
- The synchronization of the computer time with the timecode.

2.2.3 OSD SETTINGS

You can also define the OSD settings on page 1.1 or 5.1 of the setup menu on the Remote Panel. You will find a description of these settings in the Multicam user manual.

GENLOCK ERROR

Possible values: Yes (default) / No

This function enables or disables the Genlock information on the output monitor. If Genlock reference is not correct, the "!GkV" message appears on the output monitor.

DISK ERROR

Possible values: Yes (default) / No

This function displays an error message "!Raid" on the output monitor when a disk is faulty.

Note

The server is equipped with a RAID disk array. This means that the operation can continue seamlessly even with one faulty disk. If one disk is disconnected during operation, the "!Raid" message appears on all output monitors, and another message appears when the operator shuts down the application, to invite him to replace the disk and rebuild the RAID array.

Refer to the XTnano Tech Ref Hardware manual for details on the RAID system and its maintenance.

AUDIO METERS ON OSD

Possible values: Yes (default) / No

This parameter enables/disables the display of audio meters at the bottom of each output monitor.

AUDIO METERS ADJ.(DB)

Possible range: -83.2 dB to 0 dB. Default 0 dB

This parameter allows adjusting the sensitivity of audio meters on the OSD of the output monitors. A positive value means that the meters will be more sensitive.

2.2.4 CLIP MANAGEMENT

You can also define most of the Clip management settings on pages 3.1 to 3.3 of the setup menu on the Remote Panel. You will find a description of these settings in the Multicam user manual.

DEFAULT COPY/MOVE

Possible value: GbE

The Default Copy/Move parameter allows specifying whether the copy operations should be executed preferably using the SDTI or the HCTX GigE network.

Since only the GigE network is available on XTnano servers, the value for this parameter is forced to GbE.

AUTONAME CLIP

Possible values: Disable (default) / TC IN / Cam Name / ID Louth / VarID 32

If this function is enabled, the value of the selected field will automatically be used to name the clip upon creation.

The values from the following fields can be used to automatically name clips:

Value	Meaning
Disable	No name is assigned to a clip when it is created. Default value.
TC IN	The timecode of the IN point of the clip is automatically assigned to a clip when it is created.
Cam Name	The name of the recorder channel is automatically assigned to a clip when it is created.
ID Louth	The ID Louth of the clip, that is a unique identifier for the clip, is assigned to a clip when it is created (used mostly with an XNet network not available with XTnano).
VarID 32	The VarID 32 of the clip is assigned to a clip when it is created. When this option is selected, the VarID 32 used to assign a name to the clip will be limited to the first 8 characters of this field.

DATE FORMAT

Read-only value: dd/mm/yy

This is the date format used for the dates in searches or in clip information display. This parameter is read-only and provided for information purpose.

RESET ARCHIVE STS

Pressing **F6** will reset the archive status of all clips present on the system. A confirmation is required. Refer to the description of the **Archive** function for details.

2.2.5 RECORD TRAINS

CONTINUOUS LOOP REC

This setting is read-only in the setup configuration window. It corresponds to the value assigned to the **Loop Rec** setting for the related configuration in the AVCFG.

RESYNC TO TC REF

You can also define this setting on page 2.1 of the setup menu on the Remote Panel. You will find a description of this setting in the Multicam user manual.

2.2.6 VGA SETTINGS

You can also define the **VGA & RMT Sync** setting on page 6.2 of the setup menu on the Remote Panel.

2.2.7 VGA & RMT SYNC

Possible values: No, Yes

This parameter selects whether the current clips machine, page and bank of VGA screens and EVS Remote Panel must be synchronized.

Value	Meaning
No (Default)	Clip machine, page and bank can be selected independently on the VGA screen and on the EVS Remote Panel.
Yes	Clip machine, page and bank are synchronized between VGA screen and EVS Remote panel. Connecting to the clips of a network machine or coming back to the clips of the local machine, or selecting a new page or bank on one side will be automatically reflected on the other.

2.2.8 CHANNEL NAMES

Play and record channels can be named (12 characters max.). The name of record channels will be displayed on the OSD of the video output monitor when a record train is loaded, displayed on the E/E monitoring outputs and can also be used to name clips automatically when the **Autoname clip** parameter is set to “CAM name”.

The name of the player channel will be displayed on the OSD, but truncated to 4 characters.

2.2.9 GENERAL TIMECODE SETTINGS

From Multicam version 9 onwards, the management of timecodes has been improved. The users can now choose which type of timecode they want to use as the reference to work on a given recorder of a server. This is made possible by the management of two timecode jump tables.

TIMECODE SETTINGS

The timecode jump tables contain records with timecodes of video material recorded on the server. A new record is created in the table each time a jump in timecodes is detected on the recorded material.

The records of timecode jumps allow the identification of all the recorded material. The timecode jump tables are used on all searches for and manipulations of video material recorded on a server.

The two timecode jump tables are filled with the following data:

- The first table is always filled in with the LTC timecode. This is the timecode defined on or plugged into the server.
- The second table is filled in with the timecodes selected by the user. This can be one of the following timecode type:
  - LTC and VITC (default) timecodes in SD
  - LTC, HANC LTC (default) or HANC VITC in HD

Note

The timecode jump tables are circular: when the table is full, the latest entry will overwrite the oldest one.

For more information on the settings related to the timecode jump tables, refer to the sections below.

For more information on the settings related to the definition and monitoring of timecode jumps, refer to section on the timecode statuses in the Server Monitoring section of the XTnano Tech Ref Software manual.

TIMECODE TYPES AVAILABLE ON A RECORDER

The settings related to the timecode jump tables are specified on the first page of the Setup screen (accessed via **SHIFT + F2**).

The operators can use two types of timecodes to work with the video material stored by a given recorder on a server:

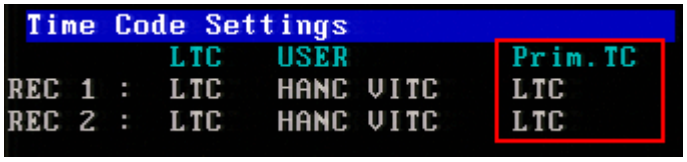
- The LTC timecodes are automatically stored in the first timecode jump table called the 'LTC table'. This is specified in the LTC field, which is not editable.
- The second type of timecodes has to be specified by the user in the USER field. It will be stored in the second timecode jump table, the 'USER TC table'.

The users can specify one of the following timecode types in the USER setting:

- LTC and VITC timecodes in SD
- LTC, HANC LTC and HANC VITC in HD

The user will have the possibility to work with one of the timecode types defined for the recorder. Usually, an LTC timecode is used to perform operations on live events. A VITC timecode is used for video material ingested from tapes as it is the timecode embedded in the video signal.

TIMECODE TYPES USED ON A RECORDER



On the first page of the VGA Setup screen, the **Prim.TC** field (Primary TC) specifies which timecode type will be displayed at the bottom the VGA and will be used to work with the video material stored on the given recorder.

Possible Values

The values can be the following:

- LTC — LTC timecode, which is automatically stored in the LTC table. It is specified in the LTC field
- USER — User-defined timecode, which is stored in the USER TC table and specified in the USER field.

Timecode Color on the OSD

Depending on the value selected for this setting, the timecode displayed at the bottom of the user's OSD will have a different color:

- If the LTC timecode is selected, the timecode color will be white.
- If the USER timecode is selected, the timecode color will be yellow.

HOW TO SETUP THE PRIMARY TC AND USER FIELDS

To set up the primary TC or VITC field, proceed as follows:

1. Press **SHIFT + F2** to open the Setup screen.
2. Use the **TAB** key to position the cursor on the field to edit.
3. Use the **LEFT** and **RIGHT ARROW** keys to go through the possible values for that field.

   The value defined when you leave the field will be saved.

2.3 VITC/ANC TIMECODE MANAGEMENT (PAGE 2)

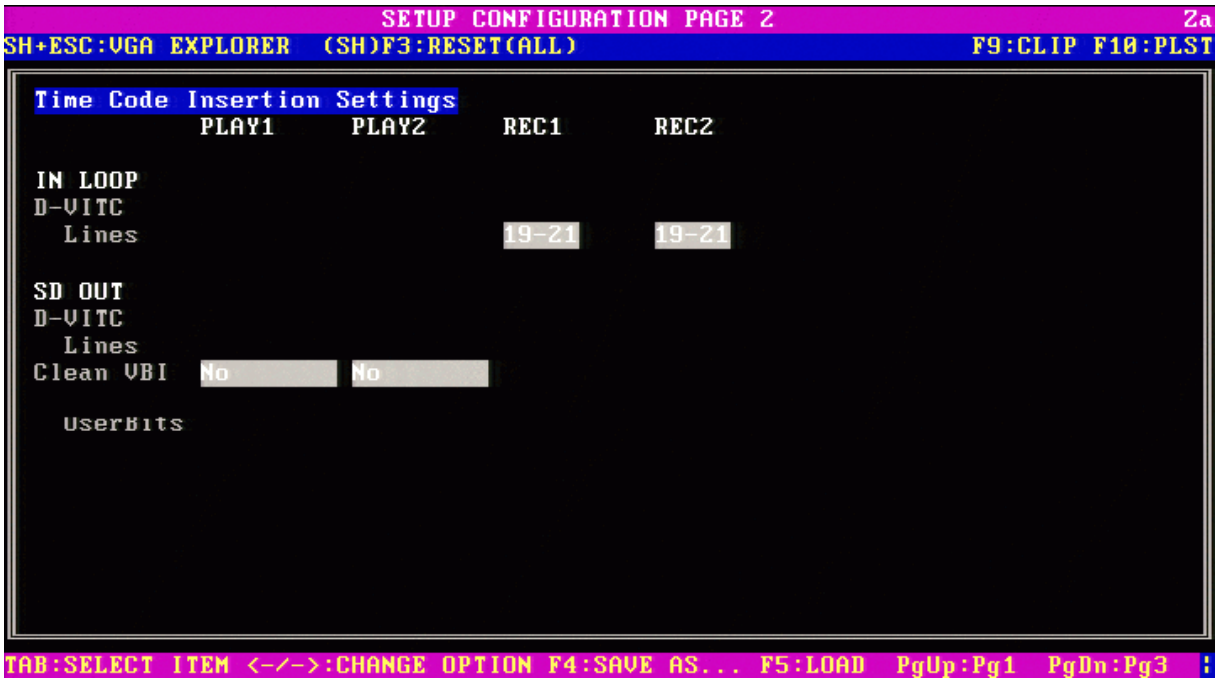
The second page available in the Setup Configuration menu (**SHIFT + F2**) on servers allows the channel-by-channel management of VITC or ANC TC management.

It also allows the users to clean or not the VBI information: the VITC being recorded in the active video lines, it can be disrupted in play var because of interpolation or parity violation on some fields. Moreover, if the server inserts VITC on the output while there is already VITC on another line, it can create problems.

The server allows the user to totally clean the VBI information from the vertical blanking at playback or to clean it only when it would not have been preserved.

2.3.1 VITC/ANC MANAGEMENT IN SD IN AND OUT

In SD, the page is as follows:

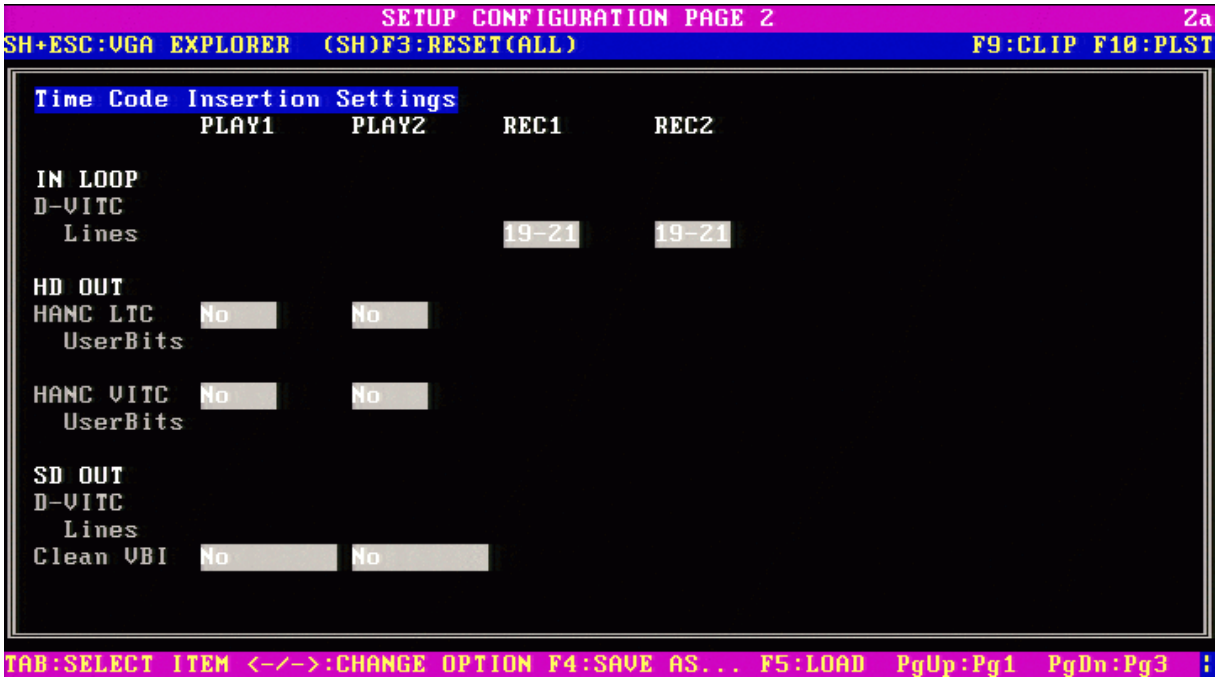


The following parameters can be defined:

IN LOOP	
D-VITC	The TC and user bits are always written on the SD outputs of the record codec and are the same as on the source video.
Lines	Lines on which the VITC must be written on the output connectors of the record codec. By default, these are lines 14-16 in NTSC and 19-21 in PAL.
SD OUT	
D-VITC	Field to specify if embedded timecode has to be inserted in the output. The possible values are: **No** — No new timecode inserted in the output. **In (default)** — Same timecode as in the input inserted in the output. **LTC** — Timecode from the LTC table inserted in the output. **USER** — User-defined timecode inserted in the output.
Lines	Lines on which the specified timecode must be written on the output.
UserBits	Yes/No flag to specify if the user bits have to be included in the output. The default value is 'Yes'.
Clean VBI	Field in which the use specifies whether the VBI needs to be cleaned on the output. The possible values are: **No** — The VBI is not cleaned in the output. **Always** — The VBI is always cleaned in the output. **If not OK** — The VBI is cleaned in the output if it is not correct (play var mode, vertical split screen, etc.)

2.3.2 VITC/ANC MANAGEMENT IN HD IN AND HD/SD OUT

In HD, the page is as follows:



The following parameters can be defined:

IN LOOP

D-VITC	The TC and user bits are always written on the monitoring SD outputs of the record codec and are the same as on the source video.
Lines	Lines on which the VITC must be written on the monitoring output connectors of the record codec. By default, these are lines 14-16 in NTSC and 19-21 in PAL.

HD OUT

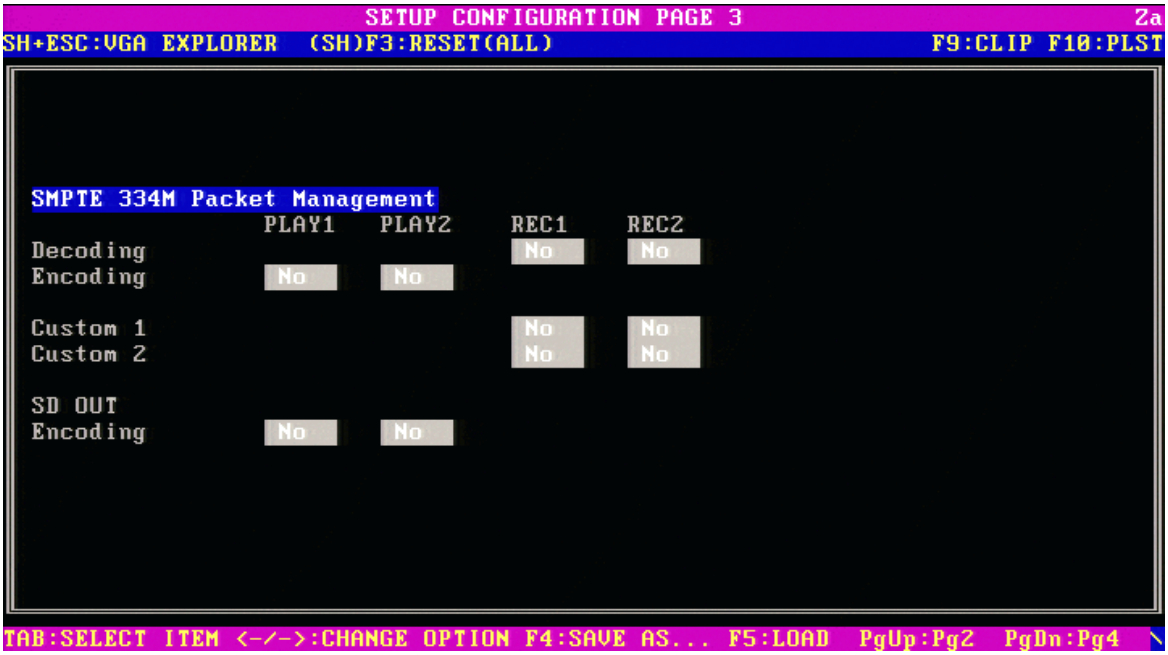
HANC LTC	Field to specify if embedded timecode has to be inserted in the output. The value specified has to be the same as for the HANC VITC field. The possible values are:

No	No new timecode inserted in the output.
In (default)	Same timecode as in the input inserted in the output.
LTC	Timecode from the LTC table inserted in the output.
USER	User-defined timecode inserted in the output.

UserBits	Yes/No flag to specify if the user bits have to be inserted in the output. The default value is 'Yes'.
HANC VITC	Field to specify if embedded timecode has to be inserted in the output. The value specified has to be the same as for the HANC LTC field. The possible values are: **No** — No new timecode inserted in the output. **In (default)** — Same timecode as in the input inserted in the output. **LTC** — Timecode from the LTC table inserted in the output. **USER** — User-defined timecode inserted in the output.
SD OUT	
D-VITC	Field to specify if embedded timecode has to be inserted in the output. The possible values are: **No** — No new timecode inserted in the output. **In (default)** — Same timecode as in the input inserted in the output. **LTC** — Timecode from the LTC table inserted in the output. **USER** — User-defined timecode inserted in the output.
Lines	Lines on which the specified timecode must be written on the loop of the input. By default, these are lines 14-16 in NTSC and 19-21 in PAL.
UserBits	Yes/No flag to specify if the user bits have to be inserted in the output. The default value is 'Yes'.
Clean VBI	Field in which the use specifies whether the VBI needs to be cleaned on the output. The possible values are: **No** — The VBI is not cleaned in the output. **Always** — The VBI is always cleaned in the output. **If not OK** — The VBI is cleaned in the output if it is not correct (play var mode, vertical split screen, etc.)

2.4 SMPTE 334M PACKETS MANAGEMENT (PAGE 3)

In Multicam, ancillary data packet in the vertical ancillary data space in HD and SD signals are supported, as defined in the SMPTE standards 334M, 291M (type 2 ANC packet).



ACTIVATE / DEACTIVATE VANC DATA PACKET SUPPORT

In the Setup Configuration module (**SHIFT + F2**), press **PAGE DOWN** until you access the SMPTE 334M Packet Management section.

You can turn on/off the SMPTE 334M packet decoding for each record channel.

You can turn on/off the SMPTE 334M packet encoding for each player channel.

PACKETS SUPPORTED

Up to now, SMPTE 334M data packets carried on the chrominance (C) data stream within the SMPTE 292M signal are not decoded (HD).

In Multicam, all DIDs mentioned in the SMPTE 334M standards are supported:

- 61 ➔ 62
- 40 ➔ 5F
- C0 ➔ DF

Those DIDs are saved and restored on the output channels on their original lines.

The other DIDs are not saved.

The maximum number of bytes saved per field (frame for 720p) is 2014. One saved SMPTE 334M packet is composed of user data word (UDW) plus 7 configuration bytes. It has to be taken into account to compute the number of bytes saved.

Please refer to the SMPTE RP 291-2006 standard for the assignment of DIDs to specific applications.

ENCODING OF THE SMPTE 334M PACKETS ON THE DOWNCONVERTED OUTPUTS

Multicam 8.03, and higher versions, can manage the encoding of the SMPTE334M present on the HD output on the SD downconverted output as well.

This parameter can be activated on the shift-F2 screen.

For the downconverted output, one SMPTE 334M packet is encoded per line starting from the second line after the line specified for the switching line. In other words, the maximum number of packet per field is as follows:

- 8 packets per field in 525i (lines 12-19 and 275-282)
- 15 packets per field in 625i (lines 8-22 and 321-335)

The limitations are:

The data are re-encoded in the same order as they were in HD, but not necessarily on the same lines.

If VITC in inserted in the downconverted output, no SMPTE 334M data will be inserted on the lines carrying the VITC.

KEEPING CUSTOM UNCOMPRESSED DATA

Upon request, it is possible to customize the decoding of the SMPTE 334M data. If you wish to keep uncompressed 8-bit data in the VANC data space, you can select two lines - L_a and L_b - on which N_a and N_b bytes can be saved per field (frame for 720p).

The saved data are left aligned after SAV (Start of Active Video) and the maximum number of data saved (N_a + N_b + regular SMPTE 334M packet) must not exceed 2014.

If you require this customization, please contact your EVS representative to specify the number of bytes you want to keep and on which lines. EVS will provide you with a specific customization file.

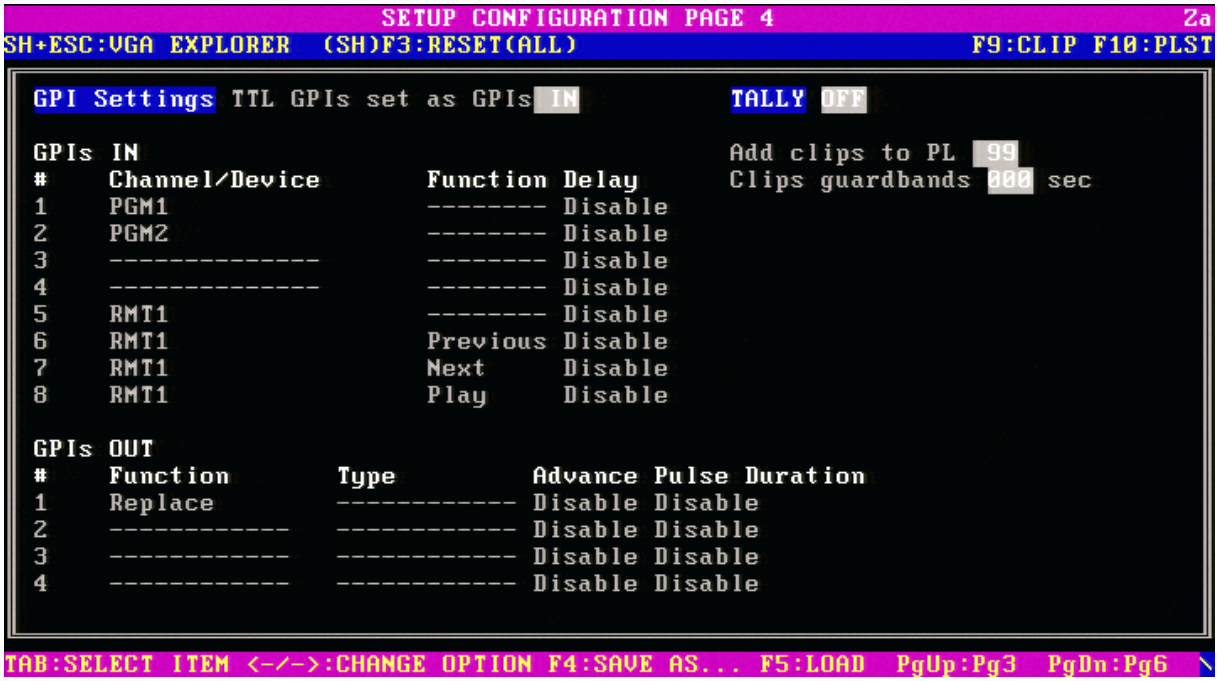
This specific configuration file will be activated using the Custom VANC grab 1 and 2 parameters in the **SHIFT + F2** screen.

COMPATIBILITY INFORMATION

SDI Video streams (SD or HD) recorded with SMPTE 334M must be played by a server running a version equal or higher to Multicam 8.03 to keep the 334M information.

2.5 GPI SETTINGS (PAGE 4)

On the fourth page of the Setup Configuration module (**SHIFT + F2**), it is possible to define GPI settings:



2.5.1 GPI TYPES

Three types of GPIs are available to be used on the servers:

- Relay GPIs, which are always GPIs OUT, numbered from 1 to 4.
- OPTO GPIs, which are always GPIs IN, numbered from 1 to 4.
- TTL GPIs, which are switchable from GPIs IN to GPIs OUT or vice versa.

  By default, they are GPIs IN. If TTL GPIs are already assigned when you switch their type, a warning message will be displayed.

2.5.2 GPI-RELATED INFORMATION

The following information is defined for each individual GPI IN:

Setting	Description	
#	GPI number	
Channel/Device	Server channel or external device that will send the GPI.	
Port	Port on which the server will receive the GPI.	
Function	Operation executed by the server when receiving the given GPI IN. The following functions can be defined depending on the protocols:	
	Play	Initiates a play command at 100% on the selected channel.
	Pause	Initiates a pause command on the selected channel.
	Recue	Initiates a jump to the IN point of the on air element on the selected channel. If this is a playlist, the jump is performed to the IN point of the first clip of the playlist.
	Previous	Initiates a command to go to the previous clip of a playlist on the selected channel.
	Next	Initiates a command to go to the next clip of a playlist on the selected channel.
	Skip	Initiates a command to skip the clip being played on the selected channel.
	Tally	Activates or deactivates the on-air flag on the selected channel. This GPI is only used by IPDirector.
	Mark IN	Sets an IN point on the corresponding recorder channel.
	Mark OUT	Sets an OUT point on the corresponding recorder channel.
	Mark Tly	Sets IN and OUT points on record trains based on changes in camera angles of the director's cut. An IN point is set on the train to which the director switches and an OUT point is set on the train that the director leaves.

Setting	Description	
	Exit ASP	Initiates a command to exit the loop as soon as possible without playing the current element until its end and jump to the selected element. This GPI is used with playlists in IPDirector.
	Exit OUT	Initiates a command to exit the loop as soon as the OUT point of the current element is reached and jump to the selected element. This GPI is used with playlists in IPDirector.
	None	No value is defined.
GPI Delay	Number of seconds and/or frames that the server will wait after receiving the GPI IN signal to execute the GPI-related function. The default value is 'disabled'.	

The following information is defined for each individual GPI OUT:

Setting	Description		
#	GPI number		
Function	Operation that will trigger the GPI OUT. The GPI OUT can be defined with the following function: • Replace function		
Type	Type of GPI signal. Four types are possible:		
	Close-High		The trigger is done when the level changes to high level
	Close-High Pulse		The trigger is done on a rising edge pulse
	Open-Low		The trigger is done when the level changes to low level
	Open-Low Pulse		The trigger is done on a falling edge pulse.
GPI OUT advance	Number of seconds and/or frames ahead of the timecode (on which a GPI is defined) corresponding to the time when the GPI OUT will be sent by the server. The default value is 'disabled'.		
GPI Pulse Duration	The pulse duration needs to be defined for pulse signals. The default value is 'disabled'.		

2.5.3 How to Modify the Type of TTL GPIs

To modify the type of TTL GPIs, proceed as follows:

1. Press the **TAB** key to select the field on the first line of Page 4.
2. Press the **LEFT** and **RIGHT ARROW** keys to change the value.

Depending on the type defined, the lines 5 to 8 will automatically move from one GPI section to the other.

For more information on the GPI IN settings, refer to section on the GPI IN settings in the Setup menu chapter of the Multicam user manual.

2.5.4 Using the Tally Function to Create a Director's Cut Playlist

Introduction

The **Tally** feature allows the users to automatically create a clip for each change of camera performed on the director's cut and to add all the clips to a playlist. The clips are created automatically by the server as it receives GPIs IN from a switcher when the director changes the camera angle.

How to Set up the Tally Function

You will set up the Tally function on page 4 of the Setup Configuration.

To set up the tally function, proceed as follows:

1. Press the **TAB** key to select the **Tally** field value and press the **LEFT** and **RIGHT ARROW** keys to set the Tally function to 'ON'.
2. In the **Add clips to PL** field, specify the LSM ID of the playlist to which you want to add the tally clips.
3. In the **Clips guardbands** field, specify how much the guardbands should be in seconds.
4. In the GPIs IN section, for a given GPI,
   - select the REC on which the director's cut is performed
   - define the 'Mark Tly' function on this GPI IN

The tally function is now active: When the server receives a 'Mark tally' GPI, an IN point is marked on the corresponding record train (for ex. cam a). When a second 'Mark Tally' GPI is received on a different record train (for ex. cam b), the server marks an OUT point on the first record train (cam a) and an IN point on the second record train. All the clips created this way are added to the defined playlist.

2.6 HCTX GIGABIT CONNECTION SETTINGS (PAGE 6)

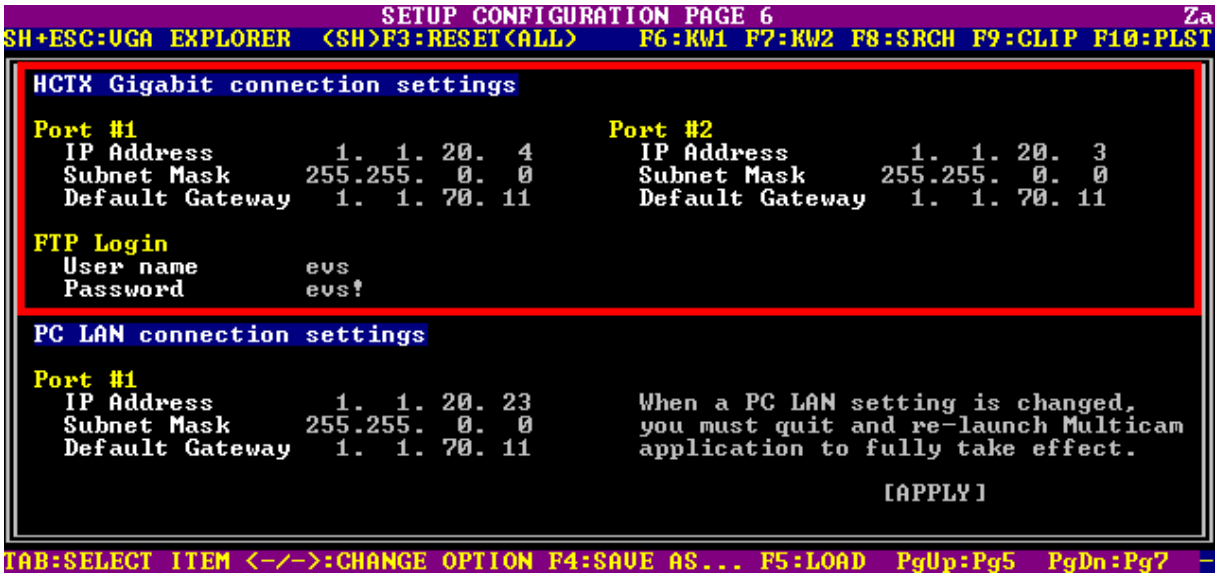
2.6.1 INTRODUCTION

In the Setup Configuration module (**SHIFT + F2**), press the **PAGE DOWN** key until you access the page 6. It displays the connection parameters for the HCTX board and the MTPC board.

The XTnano servers support a Gigabit Ethernet connection. It allows the backup of the audio and video data.

The Gigabit connection is provided via the HCTX board. Its backplane is equipped with two Gigabit Ethernet ports. The settings need to be defined on at least one port for the server to be able to operate the Ethernet connection.

When the Gigabit module is not present on the HCTX board, the first line of the HCTX Gigabit connection settings will display the message `!Not detected!`



2.6.2 SETTINGS DESCRIPTION

The HCTX Gigabit connection settings are described in the table below:

Port #1 / Port #2

IP Address 	Specifies the IP address to connect to port 1 / port 2 of the Gigabit Ethernet connection on the server: • The IP addresses of both HCTX GigE ports must belong to different subnet masks. Otherwise, it would return an error message. • The IP addresses 0.0.0.0 and 255.255.255.255 are not allowed.
Subnet Mask	Specifies the range of logical addresses within the address space assigned to the Gigabit Ethernet network. In the screenshot, the logical addresses available within the network are from 128.1.254.1 to 128.1.254.254.
Default Gateway	Specifies the IP address of the router on the Gigabit Ethernet network that serves as an access point to external networks.

FTP Login

User name	Specifies the user name for an FTP access to the server via the Gigabit Ethernet connection.
Password	Specifies the password for an FTP access to the server via the Gigabit Ethernet connection. The password is not hidden.

Note

The modifications of parameter values in this screen are not applied when you leave the field. You need to select the **APPLY** option at the bottom right of the screen and press **ENTER** to apply the modifications.

2.6.3 LOST GIGABIT NETWORK CONNECTION

If a problem is detected on the GigE connection during operation, the following message is displayed on the Remote panel, OSD and VGA:

‘Warning: GigE connection has been lost.
[Enter]: Continue’

In such a case, the message !Not detected! also appears at the top of page 6.

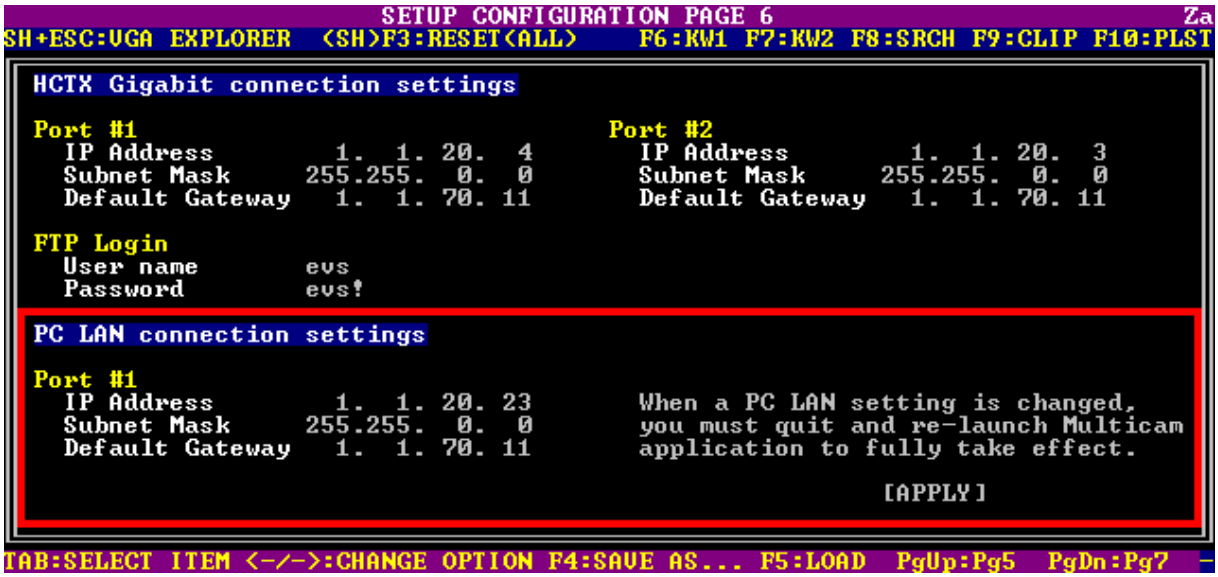
2.7 LAN CONNECTION SETTINGS (PAGE 6)

2.7.1 INTRODUCTION

The settings for the connection with the MTPC board are defined in the Setup Configuration module, on page 6.

This will allow interaction between the LAN and the MTPC board for the purpose of system maintenance. The MTPC board and another workstation on the XNet network will communicate through telnet or FTP access.

The XNet Monitor will use the LAN IP connection to transfer the monitoring data.



2.7.2 SETTINGS DESCRIPTION

The MTPC board connection settings are described in the table below:

Port #1

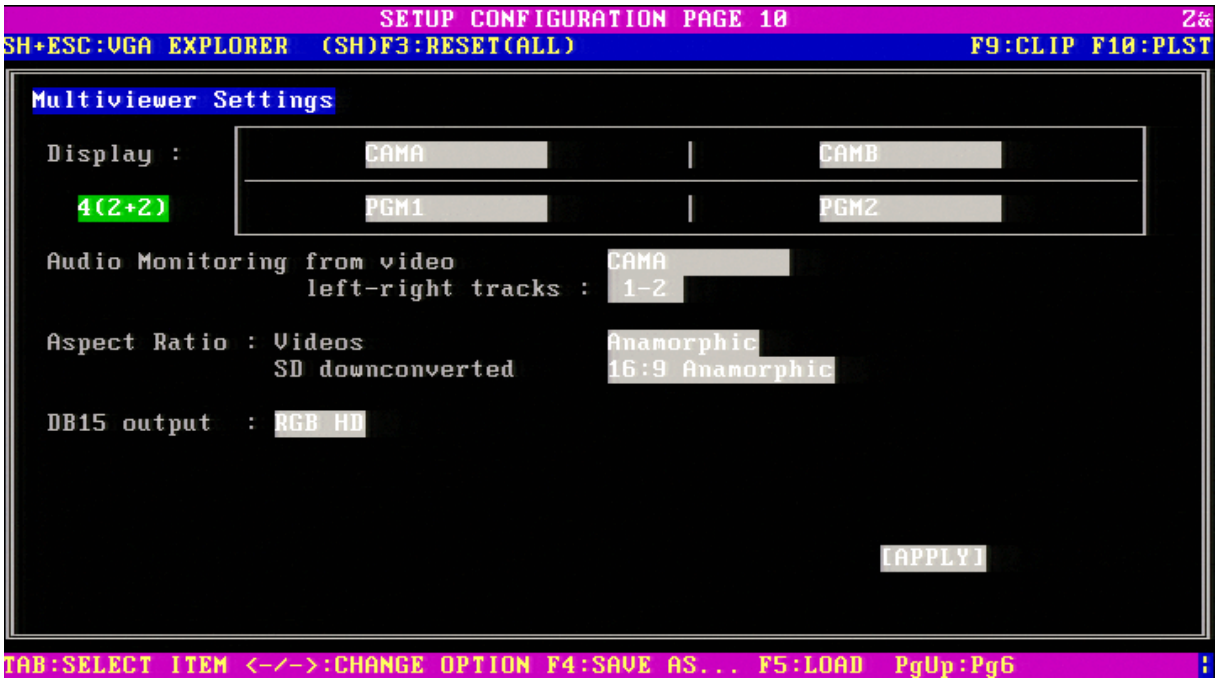
IP Address	Specifies the IP address to connect to the port 1 of the MTPC board on the server. The IP addresses 0.0.0.0 and 255.255.255.255 are not allowed.
Subnet Mask	Specifies the range of logical addresses within the address space assigned to the MTPC board connection.
Default Gateway	Specifies the IP address of the router on the XNet network that the MTPC board can use as an access point to external networks.

Note

The modifications of parameter values in this screen are not applied when you leave the field. You need to select the **APPLY** option at the bottom right of the screen and press **ENTER** to apply the modifications.

2.8 MULTIVIEWER SETTINGS (PAGE 10)

The Page 10 of the Setup Configuration module makes it possible to specify the settings for a multiviewer connected to the server.



2.8.1 INTRODUCTION

When an optional multiviewer board is installed on the server, you can monitor the server channels on a multiviewer.

The server is connected to the display device via one of the dedicated connectors on the server backplane:

- HD SDI connector
- SD SDI connector
- DB15 configurable connector.

When the multiviewer board is installed, Multicam automatically detects it. This means the multiviewer feature is directly available and the user can specify the multiviewer settings. Otherwise, the message `!Not Detected!` is displayed on the first line of Page 10.

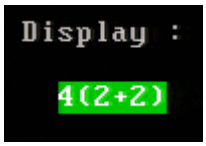
2.8.2 SETTINGS

As usual in the **SHIFT + F2** screens, you move from one field to the other with the <TAB> key and you change the value of a field by means of the arrow keys.

DISPLAY SETTINGS

Multiviewer Composition

The number of recorder or player channels to be displayed and the multiviewer composition are defined in the field below:



The selected composition is shown on the schema on the right. The following compositions are possible:

Value	Composition
4 (2+2)	2 split images at the top and 2 at the bottom.  This is the default composition for XT[2] 4U.
6 (4+2)	4 small split images at the top and 2 large split images at the bottom of the screen.  This is impossible to display the same source in small and large size. If the user has already set a small image at the top and tries to set the same in a large size, the small one is automatically replaced by 'None'. This is composition is not useful with an XTnano.
6 (3+3)	3 split images at the top and 3 at the bottom.  This is composition is not useful with an XTnano.

Displayed Channels

For each source, you need to specify which recorder channel (CAM A to CAM C max.) or player channel (PGM1 to PGM2 max.) available in the current channel configuration should be displayed. If you select 'None', no image is displayed.

AUDIO MONITORING SETTINGS

In the **Audio Monitoring from video** field, you can select the channel for which the audio can be monitored via the SDI outputs.

In the **left-right track** field, you can select the pair of stereo audio tracks of the selected channel which should be monitored.

By default, the first stereo pair of the source displayed in the top left image is selected.

ASPECT RATIO SETTINGS

In the **Videos** field of the **Aspect Ratio** group box, you can change the aspect ratio of the video in HD. The following aspect ratios are available:

- 16:9 Anamorphic (default)
- Crop
- 4:3 aspect

In the **SD downconverted** field of the **Aspect Ratio** group box, you can change the aspect ratio of the video in SD. The following aspect ratios are available:

- 16:9 Anamorphic (default)
- 4:3 Crop
- 4:3 Letterbox

DB15 OUTPUT SETTING

It is possible to configure the DB15 output and use one of the following formats:

- RGB HD (default)
- CVBS

  If you use the CVBS format, the connected multiviewer needs to be in full HD and to support the country-specific frequency.
- YUV HD

2.9 SAVING AND LOADING SETUP FILES

Twenty setup files can be saved on the XT system disk.

2.9.1 HOW TO SAVE CURRENT SETUP

To save the current setup, proceed as follows:

1. Press **F4**.
2. Enter a file name. The file name contains max. 8 characters, no space or special character.
3. Press **ENTER**.

2.9.2 HOW TO LOAD A SETUP FILE

1. Press **F5**.
2. Select the desired file with the ↑/↓ arrow keys.
3. Press **ENTER**.

   A user message pops-up for the user to confirm which settings to load back.
4. Answer to the message by selecting the letter corresponding to the requested settings to load back :
   - (O) Operational settings (pages 1 to 6 of the remote setup)
   - (T) Technical settings (RS422 ports, GPI, PGM names and TC settings)
   - (A) All settings (operational and technical)

2.9.3 HOW TO DELETE A SETUP FILE

1. Press **F5**.
2. Select the desired file with the ↑/↓ arrow keys.
3. Press **DEL**. The setup file is immediately deleted.

IMPORTING/EXPORTING A SETUP FILE

Setup files can be imported from/exported to a floppy disk using the 'Import/Export Setup Files' option in the EVS Maintenance menu.

3. Setup from the Remote Panel

3.1 INTRODUCTION

When you work in SportLight mode, the Setup menu available on the nano Remote Panel allows you to define parameters. The values assigned to the parameters are saved as soon as they are assigned.

Important

Prior to using Multicam, the operator should enter the Setup menu and set all necessary parameters. If clips are stored with certain parameters and the operator wishes to change them afterwards, those clips and playlists will not change. It is thus important to set these parameters first.

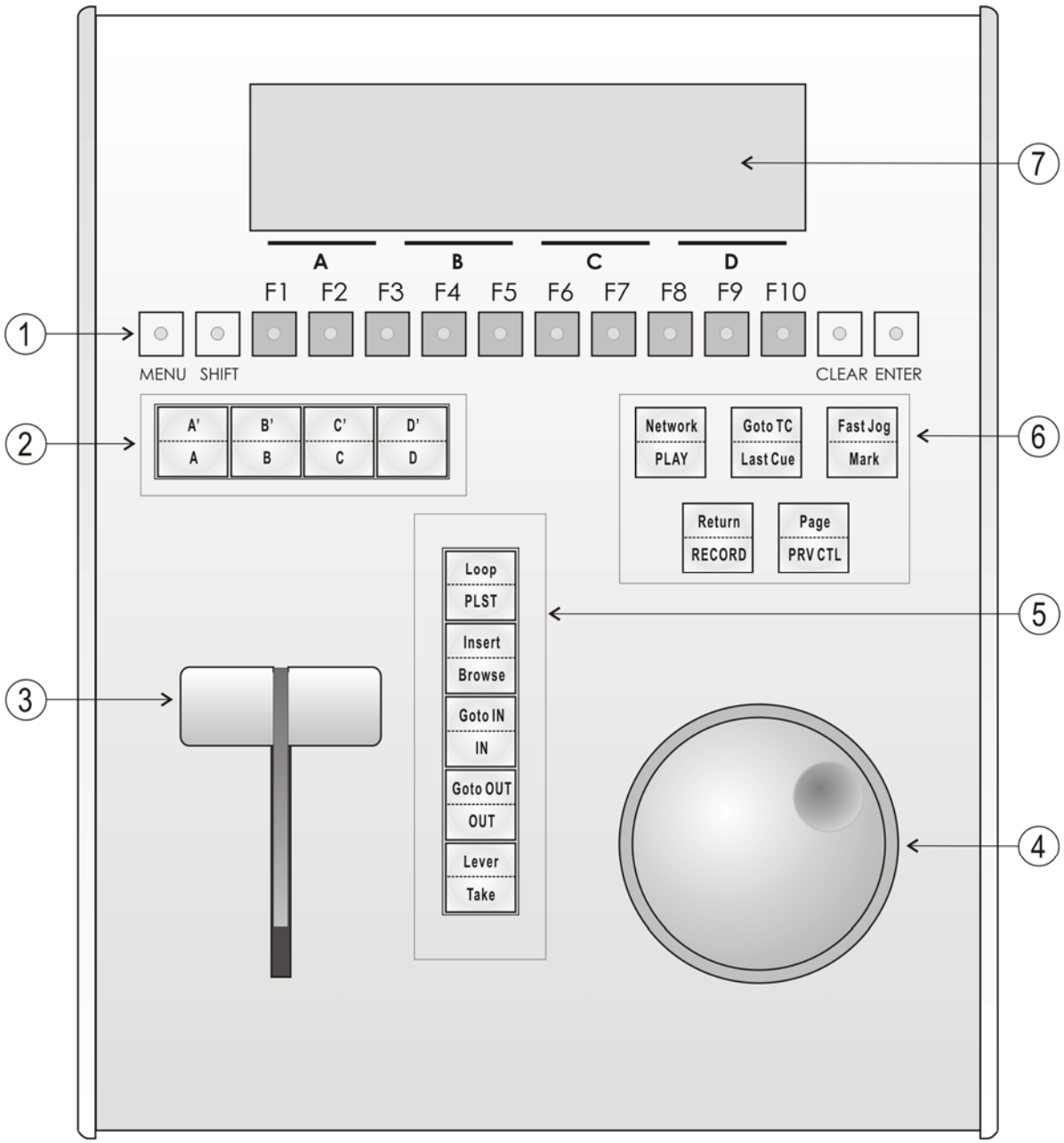
3.2 GENERAL LAYOUT

The following diagram shows the Remote Panel along with a brief description of each area.

1.	**F-keys and small buttons**	Multi-purpose keys
2.	**Soft keys**	With LCD display, allows the operator to enter the Multicam MENU system
3.	**Lever**	Initiates slow motion and playlist replay
4.	**Jog dial**	Used to accurately cue disk recorder
5.	**Operational block 1**	See Multicam Operational manual for more information
6.	**Operational block 2**	See Multicam Operational manual for more information
7.	LCD Display	Provides current status of system

Note

The operational buttons have PRIMARY and SECONDARY functions and are divided into upper and lower sections. By pressing the **SHIFT** button you gain access to the secondary functions.

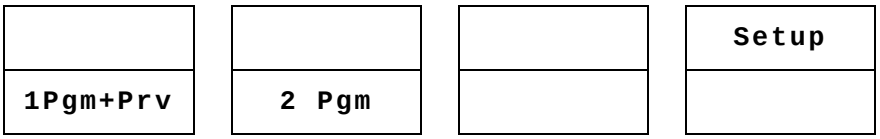


3.3 HOW TO ACCESS THE SETUP MENU

To access the Setup menu, proceed as follows:

1. If you are in Playlist mode, press **RECORD** first to exit this mode.

2. Press **SHIFT + MENU** key to go to the Main menu:

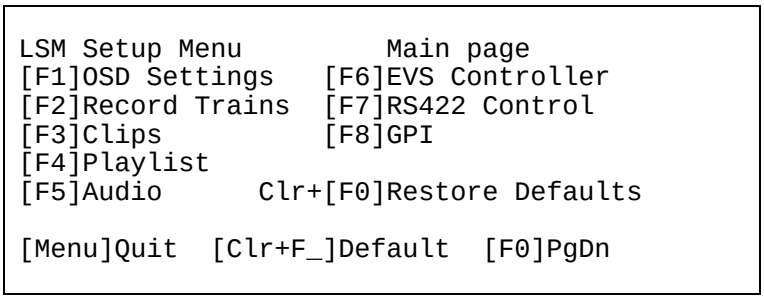


3. Select **Setup** by pressing **SHIFT + D** to enter the Setup menu.

   The Setup menu is divided in sections (clips, playlists, audio, control, GPI, etc.) When entering the setup, a menu presents these sections.

4. To access a section, press the corresponding **F_** key.

3.4 HOW TO NAVIGATE IN THE SETUP MENU



The navigation within the Setup menu follows the following principles:

- To move to the previous/next page inside a section, use **F9** and **F10**.
- To more directly to another section when you are inside a section, press **SHIFT + F_** key corresponding to the section to access.
- To move from a section to the next one, press **F10** when you reach the last page of a section. You will access the first page of the next section. By starting on the first page and pressing **F10**, the operator goes through all pages: p.1.1 → p.2.1 → p.2.2 →...
- To move from a section to the former one, press **F9** when you reach the first page of a section. You will access the last page of the previous section.

- To leave a section and go back to the main page of the Setup menu (see screenshot below), press the **MENU** key.
- To exit the Setup menu when you are in the main page of the Setup menu, press the **MENU** key.

3.5 HOW TO SELECT AND TO MODIFY PARAMETERS

To modify the parameters, you can proceed as follows for most of the parameters:

1. Go to the desired page as explained in the Section 3.4.
2. Select the parameter to be modified by pressing the corresponding **F_** key.
3. Make adjustment by rotating the jog dial.
4. Press the corresponding **F_** key again to validate the modification.
5. Press **MENU** to return to the main page of the Setup menu.

3.6 HOW TO RESET THE DEFAULT VALUES

To restore the default value of a parameter in the Setup menu, proceed as follows:

1. Go to the desired page as explained in the Section 3.4.
2. Press **CLEAR** and the **F_** key that corresponds to the parameter on which to restore the default value. Confirm the action.

To restore the default values on the entire Setup menu, press **CLEAR + F0** and confirm the action.

3.7 OSD SETTINGS

```
OSD Settings            p.1.1
[F1]Genlock Error Msg : Yes
[F2]Disk Error Msg    : Yes

[F4]Cue number on OSD : Yes


[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.7.1 GENLOCK ERROR MSG

Possible values: Yes (default) / No

This function enables or disables the Genlock information on the output monitor. If Genlock reference is not correct, the "!GkV" message appears on the output monitor.

3.7.2 DISK ERROR MSG

Possible values: Yes (default) / No

This function displays an error message "!Raid" on the output monitor when a disk is faulty.

Note

The server is equipped with a RAID disk array. This means that the operation can continue seamlessly even with one faulty disk. If one disk is disconnected during operation, the "!Raid" message appears on all output monitors, and another message appears when the operator shuts down the application, to invite him to replace the disk and rebuild the RAID array.

Refer to the Technical Reference manual for details on the RAID system and its maintenance.

3.7.3 CUE NUMBER ON OSD

Possible values: Yes (default) / No

When set to 'Yes', the cue number is displayed on the OSD of the output monitors when a cue point is recalled inside a record train.

3.8 RECORD TRAIN SETTINGS

```
Record Trains                    p.2.1
[F1]Auto make clip for cam A  : Yes
[F2]Auto make clip for cam B  : Yes
[F3]Auto make clip for cam C  : Yes


[F6]Resync to TC ref
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.8.1 AUTO MAKE CLIP FOR CAM A/B/C

Possible values: Yes (default) / No

This function selects the automatic camera creation. When creating clips, the clip corresponding to the camera on which IN/OUT points have been marked are always saved. It is possible to save automatically the same action independently for each camera.

3.8.2 RESYNC TO TC REF

The Multicam application uses an internal table to reference all timecode discontinuities detected on the LTC input of the system. This table is used to match a recorded field to its timecode. When the number of TC discontinuities is too important, a "!TC" warning appears on the OSD of the output monitors and the system switches to the "internal timecode mode". The operator can clear the TC discontinuities by calling the **Resync to TC ref** function. This function synchronizes the internal TC to the timecode read on the LTC input of the server. From that moment on, the system will assume that the timecode was continuous for previously recorded material, and will take into account the new timecode discontinuities.

Note that the above explanation is only valid for record trains. For clips, the timecode of the first field of the clip is memorized at the creation of the clip, and the timecode is always assumed continuous inside the clip. Clearing the internal TC table will consequently have no effect on the timecode of recorded clips.

To call the **Resync to TC ref** function, simply press the **F6** key. The function is immediately performed and the message "`TC resynchronization done`" is displayed.

```
Record Trains                 p.2.2
[F1]Guardbands              : 05s00fr
[F2]Default clip duration   : 04s00fr
[F3]Mark cue points         : Live
[F4]Preroll                 : 02s00fr
[F5]Record train OUTs       : Play Through
[F6]Freeze on cue points    : No
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.8.3 GUARDBANDS

Range: from 00s00fr to 60s00fr. Default: 05s00fr

This option specifies the amount of saved 'guardband' before and after the clips.

3.8.4 DEFAULT CLIP DURATION

Possible values: Disable, or from 00s01fr to 4h. Default: 04s00fr

This option allows the user to set the duration of clips created with only IN point or only OUT point. When set to 'Disable', both IN and OUT points are required to be able to create a clip.

The duration can be set:

- With second granularity up to 1 minute.
- With minute granularity from 1 minute up to 4 hours.

3.8.5 MARK CUE POINTS

Possible values: Live (default) / Playback

Live: memorizes cue points based on the timecode of the LIVE input. **Playback:** memorizes cue points based on the timecode of the field loaded on the main play channel.

3.8.6 PREROLL

Range: from 0s01fr to 5s00fr. Default: 0s05fr

Pre-roll duration used when recalling a cue point.

3.8.7 RECORD TRAIN OUTS

Possible values: Play Through (default) / Freeze

When this parameter is set to “Freeze”, and an OUT point is marked in a record train, Multicam will countdown to the OUT point and automatically freeze on that picture (if the Post-roll mode is disabled) or on that picture + the Post-roll duration (if the Post-roll mode is enabled) when replaying that section.

When the parameter is set to “Play Through”, Multicam will still countdown to the OUT point, but will keep playing through this point. In a clip, Multicam always freezes on the OUT point (or OUT point + Post-roll duration when Post-roll mode is enabled).

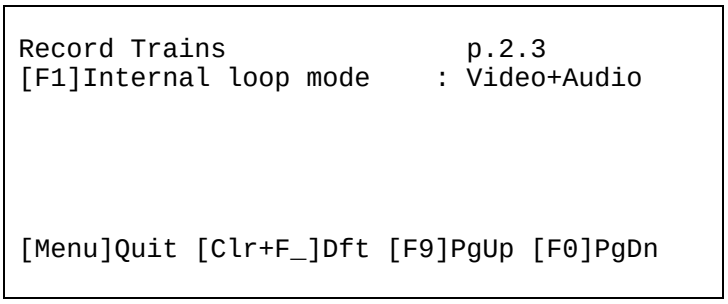
3.8.8 FREEZE ON CUE POINTS

Possible values: No (default) / Yes

The purpose of this functionality is to allow marking cue points on any field of a record train and freeze on the cue point when the playback reaches it. This is similar to the freeze on OUT point functionality but because it will be done on cue point, you will be able to freeze on any field (impossible with OUT points).

When playing record trains where cue points have been marked, the playout freezes on the cue point if the parameter is set to “Yes”. It plays through if the parameter is set to “No”.

The Post-roll parameter is not taken into account for this functionality.



3.8.9 INTERNAL LOOP MODE

Possible values: Video+Audio (default) / Video only

This parameter defines which components of PGM1 output must be recorded back into the server when the Loop mode is engaged.

- **Video+Audio:** Both video and audio signals of PGM1 are recorded back into CAM A input.
- **Video only:** Only the video signal of PGM1 is recorded back into CAM A input. This allows the operator to continue the record of live audio tracks during the Loop process. This can be useful to add music, voice or live sound to an edit for example.

Note

In audio embedded, the audio is always looped, whether the loop mode is set to video+audio or video only.

3.9 CLIPS SETTINGS

```
Clips                                  p.3.1
[F1]Protect pages : 1 2 3 4 5 6 7 8 9 0
[F2]Confirm delete clip  : Off
[F3]Auto name clips      : Disable
[F4]Clip post-roll       : 02s00fr


[Menu]Quit  [Clr+F_]Dft  [F9]PgUp  [F0]PgDn
```

3.9.1 PROTECT PAGES

Possible values: No (default), or select one or more clip pages from 1 to 10

This function allows users to protect clips stored on selected pages from accidental deletion. These clips are also protected when using the **Clear All Clips** function from the main menu of the Remote Panel.

Note

When doing a “Clear All Clips” from the main menu of the Remote Panel, protected clips will not be deleted. When doing a “Clear Video Disks” from EVS Maintenance menu, all clips are deleted, including protected ones!

Note

The OSD will display a key icon next to the clip number when the clip is protected.

HOW TO PROTECT CLIPS ON SELECTED PAGES

To protect clips on selected pages, proceed as follows:

1. In the 1st page of Clip settings, press the **F1** key to edit this setting.
2. Press the **F_** key corresponding to the page number you want to protect/unprotect.

   Protected pages will be highlighted on the LCD and the corresponding **F_** key lights red. **F_** key of unprotected pages lights green.
3. Press **ENTER** to validate your selection.

The LCD display indicates the progress of the status update for the selected pages. This might take several seconds, depending on the number of clips in the pages that must be updated. In the above example, pages 3, 5 and 6 are protected.

3.9.2 CONFIRM DELETE

Possible values: Off (default) / Clips / Playlists / Clips+Plsts

This option allows you to ask the users to confirm the Delete action when they delete clips, playlists or in both situations.

Value	Meaning
Off	Clips and playlists are immediately deleted.
Clips	A confirmation is required for a clip deletion, but not for a playlist deletion.
Playlists	A confirmation is required for a playlist deletion, but not for a clip deletion.
Clips+Plsts	A confirmation is required both for a playlist deletion, and for a clip deletion.

Note

This parameter does not apply to the **Clear All Clips** command (Main menu) which already has its own confirmation message.

3.9.3 AUTO NAME CLIPS

Possible values: Disable (default) / TC IN / CAM Name / ID Louth / VarID 32

If this function is enabled, the value of the selected field will automatically be used to name the clip upon creation.

The values from the following fields can be used to automatically name clips:

Value	Meaning
Disabled (Default)	No name is assigned to a clip when it is created.
TC IN	The timecode of the IN point of the clip is automatically assigned to a clip when it is created.
CAM Name	The name of the recorder channel is automatically assigned to a clip when it is created.
ID Louth	The ID Louth of the clip, that is a unique identifier for the clip, is assigned to a clip when it is created (used mostly with a XNet network not available with XTnano).
VarID 32	The VarID 32 of the clip is assigned to a clip when it is created. When this option is selected, the VarID 32 used to assign a name to the clip will be limited to the first 8 characters of this field.

3.9.4 CLIP POST-ROLL

Possible range: 00s00fr to 30s00fr. Default: 02s00fr.

When the **Post-roll** function is enabled from the secondary clip menu, the clip will play through its OUT point for a duration defined by the Post-roll parameter. This is also valid inside record trains if the Record Train OUTs parameter is set to “Freeze”.

```
Clips (PUSH)                              p.3.3
[F1] Target     :  Gigabit
[F2] Target 1   :  Yellow 255.255.255.255
[F3] Target 2   :
[F4] Mode       :  Short
[F5] Receive Pg :  1 2 3 4 5 6 7 8 9 0

[Menu]Quit   [Ctr+F]Dft   [F9]PgUp   [F0]PgDn
```

3.9.5 TARGET

Possible value: Gigabit

This parameter specifies which EVS servers will be listed as possible targets for push actions when the user selects:

- the default Target 1 and Target 2 in the settings, or
- a target for a specific push action if no default target has been configured.

Since only the GigE network is available on XTnano servers, the value for this setting is forced to 'Gigabit', and only the servers reachable via the GigE network are listed with their GigE server name, and IP Address.

3.9.6 TARGET 1 & 2

Possible values: GigE server name and IP Address

Default: -------- #--

This parameter specifies which machine(s) on the network clips must automatically be sent to when the operator uses the PUSH function on the EVS Remote Panel.

The users can define two default targets: (**F2**): Target 1, (**F3**): Target 2. The clips will be pushed in sequential order.

If no target is defined in these parameters, the user will be able to define the requested target when (s)he calls the PUSH function.

3.9.7 MODE

Possible values: Short / Long

This parameter specifies how the clips should be sent using the PUSH function:

- **Short:** The clips are sent from the Short IN to the Short OUT points, to which the guardbands of the destination machine are added.
- **Long:** The clips are sent from the Protect IN to the Protect OUT.

3.9.8 RECEIVE PAGE

Possible values: Select one or more clip pages from 1 to 10. Default: p.5

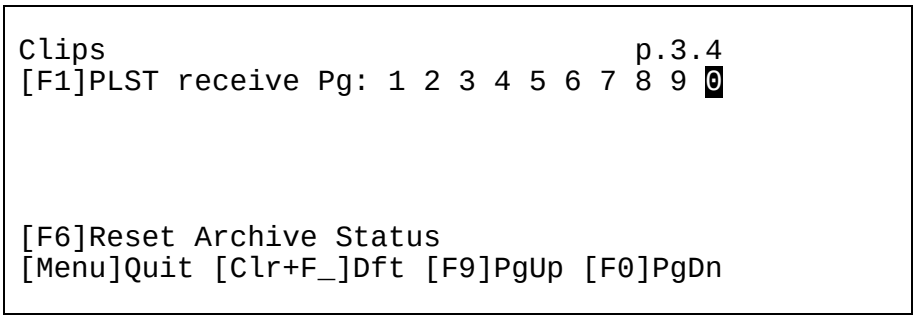
This parameter specifies the page of your machine where clips sent to you by other network operators using the PUSH function must be stored.

How to Specify PUSH Receive Page(s)

To specify the page(s) to which the clips pushed from another network operator will be stored, proceed as follows:

1. In the 2nd page of Clip parameters, press the **F5** key to edit the PUSH Receive Page parameter.
2. Press the **F_** key corresponding to the page number you want to select/unselect as PUSH Receive Page.

   The selected pages will be highlighted on the LCD and the corresponding **F_** keys light red. **F_** keys of unselected pages light green.
3. Press **ENTER** to validate your selection.



3.9.9 PLST RECEIVE PG

Possible values: Select one or more clip pages from 1 to 10, default: page 10 (0).

This function allows the operator to automatically create a copy of all clips when copying a playlist. In this setting, you need to select the page(s) of your machine where clips received when using the PLST+CLIPS copy function must be stored. Refer to the description of the Playlist copy function for details. Clip pages can be assigned simultaneously as PUSH and PLST Receive Pages.

3.9.10 RESET ARCHIVE STATUS

Pressing **F6** will reset the archive status of all clips present on the system. A confirmation is required. Refer to the description of the **Archive** function for details.

3.10 PLAYLIST SETTINGS

```
Playlist                          p.4.1
[F1]Video effect duration : 00s10fr

[F3]Wipe type             : Vert.    L>R
[F4]Default plst speed    : Unk.
[F5]Insert in playlist    : After
[F6]Confirm Ins/del clips : No
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.10.1 VIDEO EFFECT DURATION

Possible range: 0s00fr to 20s00fr. Default: 00s10fr

This parameter sets the duration of the video transition effect. The specified value is used as default value in Playlist Edit mode. Note that the duration of the video transition when using the **TAKE** button in 1Pgm+Prv mode has its own parameter in another section of the Setup menu.

3.10.2 WIPE TYPE

Possible values: Vert. L>R (default) / Vert. R>L

This parameter specifies the vertical wipe effects from Left to Right or from Right to Left.

3.10.3 DEFAULT PLST SPEED

Possible values: Unk. (unknown - default), or from 0% to 100%

This defines the default speed used for clips entered into playlist. “Unknown” means that the speed of the previous clip in the playlist will be used as a reference for the current clip. 0% will force the playlist to pause at the end of the previous clip.

3.10.4 INSERT IN PLAYLIST

Possible values: After (default) / Before

This setting defines how the **Insert** function of playlist will be performed: depending on the value specified in this setting, the new clip will be inserted after or before the current clip in the playlist.

3.10.5 CONFIRM INS/DEL CLIPS

Possible values: No (default) / Yes

If enabled, a confirmation will be required each time the operator wants to add a clip to the playlist or remove a clip from the playlist.

```
Playlist                              p.4.2




[F4]Playlist loop          : No
[F5]Load playlist          : Always
[F6]Playlist auto fill     : All Cam

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.10.6 PLAYLIST LOOP

Possible values: No (default) / Yes

This parameter makes it possible to loop playlists and replay them continuously.

3.10.7 LOAD PLAYLIST

Possible values: Always (default) / Conditional

This parameter is only used in 2PGM mode.

- **Always:** This always loads the selected playlist in PGM/PRV mode.
- **Conditional:** This loads the selected playlist on the selected PGM only if only 1 channel is active when entering the PLST EDIT mode. Allows loading and playing multiple playlists using a single Remote Panel.

3.10.8 PLAYLIST AUTO FILL

Possible values: All Cam (default) / Prim+Sec / Primary / Secondary / CAM A / CAM B / CAM C / CAM D / CAM E / CAM F

This parameter selects which camera angles will be used when using the Playlist Auto Fill function from the main menu of the remote.

```
Playlist                              p.4.3
[F1] Fade to/from colour:    Black



[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.10.9 FADE TO/FROM COLOR

Possible values: Black (default) / White

This parameter specifies the color that is used in the transition effects 'fade to color', 'fade from color' and 'fade to/from color' (V fade).

3.11 AUDIO SETTINGS

```
Audio                                 p.5.1
[F1]Audio slow motion     : No
[F2]Lipsync value(ms)     : 00,000
[F3]Audio meters on OSD   : Yes
[F4]Audio meters adj.(db) : 0.0
[F5]Aux track output : Prv

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.11.1 AUDIO SLOW MOTION

Possible values: No (default) / Yes

Playback or mute the audio track when playing off-speed (speed different than 100%).

3.11.2 LIPSYNC VALUE (MS)

Range for PAL:

- From -41,458 ms to 14,708 ms ➔ 848 to 3544 (samples)
- With 0 ms = 2838

Range for NTSC:

- From -34,625 to 12,125 ms ➔ 688 to 2932 (samples)
- With 0 ms = 2350

The Lipsync parameter is the delay (in ms) between video and audio signals. A positive value means video is ahead of audio. A negative value means audio ahead of video.

This parameter is also available from the Channel Parameters option of the EVS Maintenance menu. Changing the Lipsync value in the Setup menu will update it in the EVS menu and vice versa.

Note

This adjustment is done during the record process. A new Lipsync value will apply for the next recorded pictures only.

3.11.3 AUDIO METERS ON OSD

Possible values: Yes (default) / No

This parameter enables/disables the display of audio meters at the bottom of each output monitor.

3.11.4 AUDIO METERS ADJ.(DB)

Possible range: -83.2 to 0 dB. Default: 0.0 dB

This parameter allows adjusting the sensitivity of audio meters on the OSD of the output monitors. A positive value means that the meters will be more sensitive.

3.11.5 AUX TRACK OUTPUT

Possible values: Prv / Prv&7-8/15-16 / PGM

This parameter defines to which audio outputs the Aux. Track of the playlist will be played out of.

Value	Meaning
Prv (default)	The Aux. Track will use the audio outputs normally assigned to the PRV channel. If no PRV channel is available, the Aux Track will not be assigned to any audio output.
Prv&7-8/15-16	The Aux. Track will use the audio outputs normally assigned to the PRV channel if there is one, plus all the audio outputs from 7-8/15-16 that have not yet been assigned to another channel. Use this option if you need an aux track without PRV channel available.
PGM	The Aux. Track will use the audio outputs normally assigned to the PGM channel.

3.12 EVS CONTROLLER SETTINGS

```
EVS Controller                      p.6.1
[F1]Effect duration for Take : 00s05fr
[F2]Fast jog                 : 20x
[F3]PGM Speed/Var Max        : 050%
[F4]Lever engage mode        : Direct
[F5]Second lever range       : -100% <-> +100%
[F6]Recall Clip Toggle       : Enable
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.12.1 EFFECT DURATION FOR TAKE

Possible range: 00s00fr to 20s00fr. Default: 00s05fr

This parameter defines the duration of the transition when using the TAKE key to chain 2 sequences in PGM+PRV mode.

3.12.2 FAST JOG

Possible values: 01 to 20 times. Default: 20x

This parameter sets the increment of the jump when in Fast Jog mode.

3.12.3 PGM SPEED/VAR MAX

Possible values: 1 to 400%. Default: 50%

During playback, if **PGM Spd** or **VarMax** has been enabled in the secondary menu of the Remote Panel, the lever range will be adapted so that:

- The only playback value for any position of the lever other than 0, is the one specified by this parameter in the setup (PGM Spd mode ON),

  Or

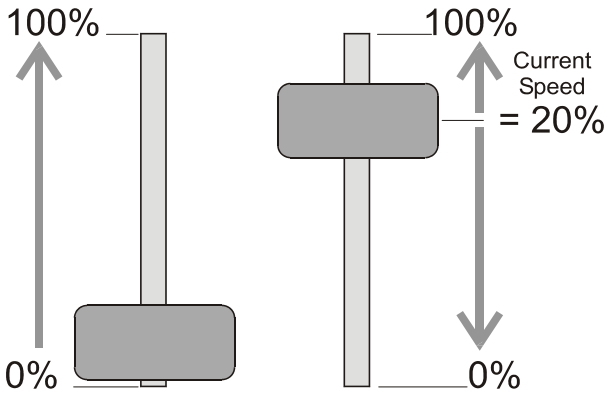
- The speed range defined by the lever is limited to the value specified by this parameter (VarMax mode ON).

3.12.4 LEVER ENGAGE MODE

Possible values: Direct (default) / Current Speed

The speed variation depends on the position of the lever.

- **Direct mode:** the lever will engage directly when moved, resulting in a speed jump to the desired speed determined by the lever arm position.
- **Current speed mode:** the lever will only engage when it reaches the current playback speed, whereas a move of the lever arm in the opposite direction of the current speed will result in a direct speed change.



3.12.5 SECOND LEVER RANGE

The lever can be used in normal mode to play back clips at slow motion speed from 0 to 100%. A secondary range is available to playback material at the following speed ranges:

-100% ➔ +100% (default)

0 ➔ +200%

-200% ➔+200%

0 ➔ +400%

-400% ➔ +400%

To gain access to the secondary speed from the remote controller, press **SHIFT + LEVER/TAKE**.

The second lever range is also available when editing the speed of playlist clips.

3.12.6 RECALL CLIP TOGGLE

Possible values: Enable (default) / Disable

This option allows the operator to select the camera of a clip through the Function keys. Pressing several times the **F_** key allows browsing to CAM A, CAM B, and CAM C.

```
EVS Controller                        p.6.2
[F1]Record key      : Start REC + Live

[F3]VGA & RMT Sync  : No
[F4]PGM/PRV Mode    : Enable


[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

3.12.7 RECORD KEY

Possible values: Start REC + Live (default) / Live

This parameter changes the function of the **RECORD** key on the remote:

- **Start REC + Live:** Pressing the **RECORD** key starts the record process and switches to **LIVE** mode.
- **Live:** Pressing the **RECORD** key only switches to last recorded picture, but the record is not restarted if it has been previously stopped by the operator.

3.12.8 VGA & RMT SYNC

Possible values: No, Yes

This parameter selects whether the current clips machine, page and bank of VGA screens and EVS Remote Panel must be synchronized.

Value	Meaning
No (Default)	Clip machine, page and bank can be selected independently on the VGA screen and on the EVS Remote Panel.
Yes	Clip machine, page and bank are synchronized between VGA screen and EVS Remote Panel. Connecting to the clips of a network machine or coming back to the clips of the local machine, or selecting a new page or bank on one side will be automatically reflected on the other.

3.12.9 PGM/PRV MODE

Possible values: Enable (default) / Disable

When this setting is enabled, the user has the possibility to select the PGM/PRV mode on the LCD display as a function accessible from the **A** button on the Remote main menu. Otherwise, the PGM/PRV mode selection is not accessible from the **A** button.

3.13 CONTROLLER AND PROTOCOL SETTINGS

```
    Port      Device/Protocol      p.7.1
    RS422 #1  EVS Remote
[F2]RS422 #2  EVS Remote




[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

This page is used to define if a XTnano remote controller is connected to each RS422 port of the server.

3.13.1 RS422 #1

Value: EVS Remote

When working in a SportLight configuration, the first RS422 port must always be connected to an EVS remote. No other possible selection.

3.13.2 RS422 #2

Value: EVS Remote

The second RS422 port can only be connected to an EVS remote. No other possible selection

3.14 GPI IN SETTINGS

3.14.1 TTL GPIS ASSIGNMENT

The 4 Relay GPIs (GPIs OUT) and the 4 OPTO GPIs (GPIs IN) provide GPIs having a predefined and fixed type. The 4 TTL GPIs are switchable to GPIs IN or GPIs OUT. Depending on whether they are defined as GPIs IN or OUT, the pages related to the GPIs settings will differ.

The type for the TTL GPIs, that is to say GPI IN or GPI OUT, is set on page 8.1.

```
GPI Settings                          p.8.1
[F1]TTL GPIs set as    : IN




[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

When the TTL GPIs are defined as GPIs IN:

- The pages 8.2 to 8.4 include the settings for the 8 GPIs IN.
- The pages 8.5 and 8.6 include the settings for the 4 GPIs OUT.

When the TTL GPIs are defined as GPIs OUT:

- The pages 8.2 and 8.3 include the settings for the 4 GPIs IN.
- The pages 8.4 to 8.6 include the settings for the 8 GPIs OUT.

3.14.2 GPIs IN Definition

If 8 GPIs IN are defined, the pages 8.2 and 8.3 include the settings for the GPI inputs of the server.

```
GPI IN Settings                       p.8.2
GPI# Channel/Device          Function
1[F1]PGM1                 [F5]Play
2[F2]PGM2                 [F6]Play
3[F3]--------------       [F7]--------
4[F4]--------------       [F8]--------

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

```
GPI IN Settings                       p.8.3
GPI# Channel/Device          Function
5[F1]RMT1                 [F5]Previous
6[F2]RMT1                 [F6]Next
7[F3]RMT1                 [F7]Skip
8[F4]--------------       [F8]Pause

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

For each GPI input, the operator has the possibility to define the following parameters:

CHANNEL/DEVICE

This parameter specifies the channel that the GPI will affect or the device that will send the GPI to the server.

A device can be an EVS Remote #1. If the operator selects EVS Remote #1, the GPI will trigger the selected action on all channels controlled by that Remote Panel.

FUNCTION

This parameter specifies the function that the GPI will trigger: **Play**, **Pause**, **Recue**, **Previous** (recue to previous clip inside the playlist), **Next** (go to next clip inside the playlist), **Skip** (skip the next clip in the playlist), **--------** (no action is taken) or **Tally**. For more information on the possible functions, refer to the explanation on page 4 of the Setup Configuration in Multicam.

For the pinout of the GPI connector and wiring instructions, please refer to the XT Tech Ref Hardware manual.

3.14.3 GPIS IN DELAY

```
GPI IN Settings                        p.8.4
GPI#  Delay      GPI#  Delay
1[F1]Disable     5[F5]Disable
2[F2]Disable     6[F6]Disable
3[F3]Disable     7[F7]Disable
4[F4]Disable     8[F8]Disable

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

Possible values: Disable (default, immediate reaction), or 00s01fr to 02s00fr

This parameter defines the number of seconds and/or frames that the server will wait after receiving the GPI IN signal to execute the GPI-related function.

3.14.4 GPIS OUT DEFINITION

```
GPI OUT Settings                       p.8.3
GPI#  Function          Type
1[F1]------------   [F5]------------
2[F2]------------   [F6]------------
3[F3]------------   [F7]------------
4[F4]Replace        [F8]Open Pulse

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

The GPIs OUT have been implemented primarily for the **Replace** function. On the IN/OUT point when executing the Replace, users can trigger GPIs OUT.

For each GPI output, the operator has the possibility to define the following parameters:

- The function that will trigger a GPI OUT: (Empty) not used (default value) or Replace
- The type of GPI signal that will be used. Possible values are:
  - Open-Low
  - Open-Low Pulse
  - Close-High
  - Close-High Pulse

Example

Users can select all types of GPIs. The behavior varies accordingly:

	Before the IN	**On Replace IN**	Between IN and OUT	**On Replace OUT**	After the OUT
Close-High	Low	**High**	High	**Low**	Low
Open-Low	High	**Low**	Low	**High**	High
Close-High Pulse	Low	**High Pulse**	Low	**High Pulse**	Low
Open-Low Pulse	High	**Low Pulse**	High	**Low Pulse**	High

3.14.5 GPIs OUT ADVANCE AND DURATION

```
GPI OUT Settings                    p.8.6
GPI#  Advance          Duration
1[F1]Disable        [F5]01s00fr
2[F2]Disable        [F6]01s00fr
3[F3]Disable        [F7]01s00fr
4[F4]Disable        [F8]01s00fr

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

```
GPI OUT Settings                    p.8.7
GPI#  Advance           Duration
5[F1]Disable        [F5]01s00fr
6[F2]Disable        [F6]01s00fr
7[F3]Disable        [F7]01s00fr
8[F4]Disable        [F8]01s00fr

[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

GPI OUT ADVANCE

Possible values: Disable (default), or 00s01fr to 02s00fr

Possible values: up to 2 seconds, frame by frame (like GPI delay)

When a GPI out advance setting is set (for instance 2 fr.), the GPI OUT is sent 2 frames in advance.

GPI PULSE DURATION

Possible values: Disable, or 00s01fr to 02s00fr. Default: 01s00fr.

Set the default duration for pulse GPIs.

Glossary

Dolby Digital	Also called Dolby 5.1 or AC-3. It is an audio coding system containing up to 6 discrete channels of sound, with 5 channels for normal-range speakers (20 Hz - 20,000 Hz) (Right front, Center, Left Front, Right Rear and Left Rear) and one channel (20 Hz - 120 Hz) for the LFE, or subwoofer.
Dolby E	It is a professional coding system optimized for the distribution of surround and multichannel audio through two-channel postproduction and broadcasting infrastructures, or for recording surround audio on two audio tracks of conventional digital video tapes, video servers, communication links, switchers, and routers.
Primary TC	Timecode (LTC or user-defined timecode type) that is displayed at the bottom the VGA and is used to work with the video material stored on a given recorder. The Primary TC is defined for each recorder on page 1 of the setup configuration in Multicam.
LTC	Longitudinal timecode (LTC) is a timing signal that is part of an audio tape recording. It is recorded on a track that runs lengthwise along the tape, which is why it is called longitudinal. It can only be read if the tape is playing.
VITC	Vertical interval timecode (VITC) is a timing signal that is part of a video recording. It is recorded in the vertical blanking intervals between successive picture frames, hence the "vertical interval."

Instant Tapeless Technology

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