

New Product Release – Package 8

XT[2] System and Software

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1.1 New Operational Features in Multicam 8

1.1.1. Controller Set up Menu Items

Page 2.2 : Record Trains

```
Record Trains                               P.2.2
[F1]Guardbands                             : 05s00fr
[F2]Default clip duration                   : 04s00fr
[F3]Mark cue Points                         : Playback
[F4]Preroll                                 : 00s00fr
[F5]Record train OUTs                       : Play Through
[F6]Freeze on cue Points                    : No
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

In default mode of 'No' this setting has no impact on the operation of the software.

When activated by selecting 'Yes' the video output of a channel when playing a record train will freeze at each cue point marked. This allows the output to be stopped at multiple places on playback.

Note: The setting chosen in Page 2.2 (F3) will determine whether the mark is made on the 'LIVE' train or on the playback of the train.

Page 3.3 : Clips

```
Clips                                       P.3.3
[F1]PLST receive Pg: 1 2 3 4 5 6 7 8 9
[F2]Protocol receive Page: 06
[F3]Default Xfile : XFile #28
[F4]Grab image : Enable
[F5]Browse button : Browse
[F6]Reset Archive Status
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

This setting changes the function of the Browse button. In the default Browse mode, it will activate Browse.

If the assignment is changed to SORT-TC, the system will perform a SORT-TC.

Note: The system will not prompt the user with a menu to select the SORT criteria but will use the last settings selected in the soft menu SORT-TC , and use the current TC of the selected output channel.

To perform a search with different criteria (Search Net or Local, StartDate, EndDate, CAM/CLIP, etc...) the user should use the normal soft menu Sort-TC.

Page 3.4 : TimeLine

```
TimeLine                                   P.3.4
[F1]Receive Page : 1 2 3 4 5 6 7 8 9
[F2]Mono Per Track : 2
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn
```

The Receive Page setting selects where clips that are created as part of the timeline editing process will be stored.

The Mono Per Track setting determines how the audio tracks are grouped for editing using the timeline feature.



Page 6.2 : EVS Controller

```

EVS Controller                               P.6.2
[F1]Record key      : Start REC + Live
[F2]Pointing device : Tablet
[F3]UGA & RMT Sync : Yes
[F4]PGM/PRV Mode   : Enable
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn

```

Allows the user to disable the PGM/PRV mode from appearing on the remote's main menu ([A] Button).

Page 7.3 : Special Control Settings

```

Special Control Setting                       P.7.3
Main      RS422      Second. RS422
PGM5:[F1]----- [F5]-----
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn

```

Multicam is now capable of operating in LSM Base Config with 5 play channels assigned. This added Protocol assignment page is where the user can define the protocols and ports to manage this channel. **The LSM remote by itself cannot control 5 PGM channels at one time, two remotes or devices must be used.**

Page 7.4 : Special Control Settings

```

Special Control Setting                       P.7.4
Control Type      OSD Display
PGM1:[F1]Parallel [F5]Main
PGM2:[F2]Parallel [F6]Main
PGM3:[F3]Parallel [F7]Main
PGM4:[F4]Parallel [F8]Main
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn

```

This allows channels to either be controlled in 'Exclusive' control (the exclusive controller being set by 2nd Control Mode) or in Parallel Mode.

In Parallel mode, the user can also define which device will manage the OSD display characters.

Page 7.5 : Special Control Settings

```

Special Control Setting                       P.7.5
Control Type      OSD Display
PGM5:[F1]Exclusive
[Menu]Quit [Clr+F_]Dft [F9]PgUp [F0]PgDn

```

This page is the same as Page 7.4, but assigns PGM5.

1.1.2. New OSD Display items Redundant Hot Swap PSU (Optional)

With redundant power supply units installed, the OSD information **!PSU1** or **!PSU2** is displayed on the OSD when one unit fails (or if one of the power supplies has no power lead connected).

OSD Monitoring on the Input Channels (XT[2] only)

Timecode information, the Cam Name defined and the audio monitoring display can now be displayed on the input monitoring display. Alt-R in the shift-F2 screen toggles the OSD on or off on the input monitoring.



1.1.3. VGA Setup Screen Additions Information Window

```

System Info
Local Clips : 56/4096
Network Clips : 117/16000
Network Speed : 540Mbps Relay
Network Mode : Master # 03
Multicam v 08.00.01 / 30.27
SD 625i 50.00 IMX 600 1
Date: 30/11/05 - Time: 10:15:03
  
```

The Info Window now displays more detailed information about the configuration of the server. On XT[2] servers, it displays in red configuration parameters that are not compatible with XT servers.

VITC/ANC Management

There is a second page available on the Shift-F2 page on **XT[2] servers**, this page allows channel-by-channel management of VITC or ANC TC management. For more Information refer to section [4.1.2 of the Version 8.04 - Software Technical Reference Manual](#).

In SD, the page displays:

```

SH+ESC:UGA EXPLORER <SH>F3:RESET<ALL> F6:KW1 F7:KW2 F8:SRCH F9:CLIP F10:PLST
Time Code Setting
PLAY1 PLAY2 REC1 REC2
IN
TC REF LTC LTC
IN LOOP
D-UITC
Lines 19-21 19-21
SD OUT
D-UITC No No
Lines
UserBits
TAB:SELECT ITEM <-/->:CHANGE OPTION F4:SAVE AS... F5:LOAD
  
```

In HD, the page displays:

```

Time Code Setting
PLAY1 PLAY2 REC1 REC2
IN
TC REF LTC LTC
IN LOOP
D-UITC
Lines 14-16 14-16
HD OUT
HANC LTC No No
UserBits
HANC UITC In No
UserBits Yes
SD OUT
D-UITC No
Lines
UserBits
  
```

XNet[2] Network monitoring screen

A new set of screens has been added in Shift-F4 to enable more accurate monitoring of the SDTI network status.

```

SDTI NETWORK MONITORING                               ZiS
SH+ESC:UGA EXPLORER <SH>F3:RESET<ALL> F6:RW1 F7:RW2 F8:SRCH F9:CLIP F10:PLST
27 maxs      29 XFile      02 LSM2484    03 LSM-XT2
20200        10010        24840        31780<Loc>
Srv          Mst          Mst/A        Mst/A
Station: 4 / 4
<->: CHANGE PAGE PgDn: SN Sort RETURN: RST COUNTER SPACE: PAUSE
  
```

Information displayed

All the machines are displayed in the logical connection order: i.e., the way they are effectively connected on the network.

For each machine, the display shows:

- The net number + name
- The serial number
- The main network configuration setting (server, master, or client).

The background colour of the machine means:

- Blue: effective server
- Grey: not currently server

The colour of the text indicates the video network overload (based on how many SDTI network mailboxes are used):

- White: ok, less than 90% capacity
- Red (over 90%): risk of network overload.

The colour of the link indicates the physical link status between two machines:

- green: OK
- red: errors

Pressing the **Space bar** pauses or restarts the monitoring.

Pressing **[Enter]** resets the counters.

```

SH+ESC:UGA EXPLORER <SH>F3:RESET<ALL> F6:RW1 F7:RW2 F8:SRCH F9:CLIP F10:PLST
SDTI Sn      PrvSn Name      CpLk Frm Mb
S11L 29010 23650 mdu xt2 0000 0000 11
M01 23650 51980 MDU 1 0000 0000 11
M20 51980 29010 XFile 0000 0000 11
Refresh time: 023/030 s [+/-] Change time [F5] Refresh Station: 3 / 3
Database check: Ok [Size 00005320 Nb 000015]
<->: CHANGE PAGE PgDn: SN Sort RETURN: RST STAT SPACE: PAUSE
  
```

Pressing **[->]** displays a new screen with the information of the list of machines with error counters information. Ideally there should be no errors shown here, but practically until the whole network is configured and connected errors will be logged. Once the whole Network is Setup and running, the counters should be reset by using the return key.

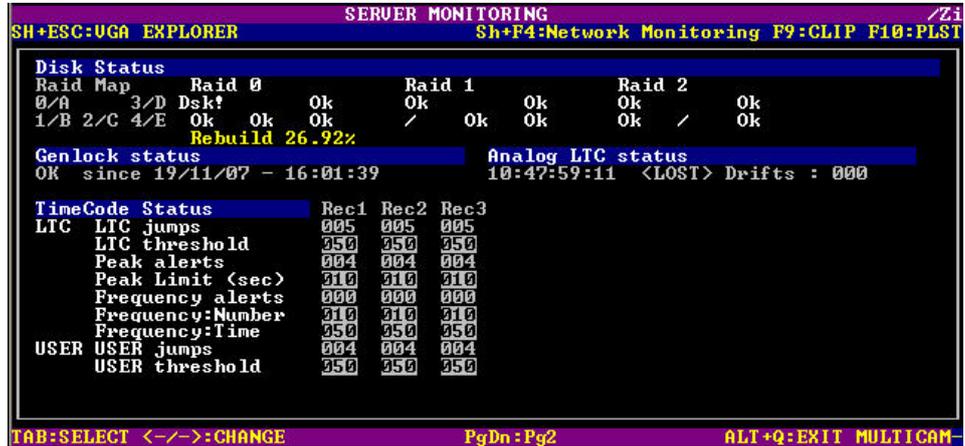
Any errors shown represent a fault with the network, In operating conditions, when all machines are connected, the CpLk (electrical quality of the network) and Frm (checksum on the data packets) counters should not increase at all.

The location of any errors can be determined referring to the serial numbers where the counters are registering errors. Generally replacing a cable used in this location will clear the fault.

Server monitoring

The first page of the Server Monitoring section makes it possible to monitor the Disk Status, Genlock and Timecode of the XT server.

It is available by selecting SHIFT-F5 in the Multicam application. For more information refer to [section 4.3 of the Version 8.04 - Software Technical Reference Manual](#).



Loop Mode



Loop mode is now possible on an XT[2] Server, however it can not be performed internally and requires a physical connection (BNC to BNC cable) between the BNC socket marked LOOP on the back plane and an output from the channel to be replayed (the LOOP connector overrides the connection to input 1 of the XT when the LOOP function is enabled on the remote panel). The Loop socket may not be present on all XT[2] machines but can be fitted if necessary.

Make Local

If a Play-list is created that contains clips from a network server, there is now a command to make the clip local. To select this feature, recall the playlist, press menu and the 'Make Local (B)' key. The network clips in the list will be copied to the local machine in the Page chosen as Playlist receive page in P3.3 of the Setup menu.

Undo and Redo

This feature is in the secondary menu of the playlist editing function, so that it is not always considered when looking to recover a previous state within a playlist. It allows 9 levels of undo and redo as long as the playlist is not exited. If the playlist is exited the ability to undo or redo is lost. To see if it is possible to undo or redo the last actions, select menu while in playlist mode, the (C) and (D) soft menu keys will display these functions.

In Timeline the Undo and Redo feature is on the primary menu when available.

Merge Playlists

From the **clip playlist** page on the VGA, it is possible to merge two playlists by copying a playlist (ctrl + c) and then pasting it to an existing playlist (ctrl + v). The copied playlist will be added at the end of the destination playlist when the confirmation message is acknowledged. This merge function now also supports merging network playlists onto local ones.

1.2 New hardware features

1.2.1. MTPC boards A2/A3 and A2/A4

These boards are in newer XT[2] servers and have additional features such as being able to boot from the USB port, these boards have no floppy disk drives. **Care must be taken when upgrading and particularly downgrading these machines.** Please see the document [Multicam 8.04.33 Installation Guide](#) on the EVS website.

1.2.2. External Raid Array XT-HDX FOR XT[2] Server



It is now possible to add external storage with up to 15 disks to an XT[2] server. Please see [section 3.4.3 in the Hardware Technical Reference manual](#) for more information.

1.3 New System features

There are new features for the management of XT servers, please refer to the relevant sections Version 8.04 - [Software Technical Reference Manual](#).

- Online Rebuild of the video disk RAID (XT[2] only) - *section 2.3.14.1 Disk errors and disconnection*
- Overwrite VITC on Output Video - *section 4.1.2*
- Network priorities per channel on the server - The selection of pgm channels on the local server to have a higher priority when playing network clips or trains - *section 4.1.3*
- Support for 334M ancillary data packet information - *section 4.1.4*
- Load/ Save of setup parameters to distinguish operational settings from technical settings – *section 4.1.5 Saving and loading setup files*
- Bootable USB installation for MTPC boards A2/A3 and A2/A4 - please see the document [Multicam 8.04.33 Installation Guide](#) on the EVS website.

1.4 Bug Fixes up to 08.04.33

Please see the [Release Notes](#) in the Download Center of the Website (Support & Training page – Package 8) to determine if a previously reported bug has been fixed.



1.5 Known Issues

- Create a playlist and load it. If you go back to live and move to another machine the clip that was last loaded on the player, the playlist will not reload.
- Occasionally the clip TC displayed on the remote in timeline mode may not be accurate.
- Setup Menu, Audio Meters Adjustment : when this parameters is set to 10 or 12dB, the audio meters on the OSD disappear.
- When loading a clip or playlist after a network train, then marking a cue live, the cue is marked on the local trains, not on the previously loaded network train.
- Freeze on OUT point in record trains in target tracking doesn't work when in PLAY VAR **only**. It is OK in normal play.
- When pressing BROWSE in playlist mode, this can cause the AUX clip to start playing. If the user pushes the play key or moves the lever immediately after that, the playlist will start while the AUX clip is already playing, thus they will not be synced properly. To avoid this, before starting the play again, press the PLST key first to recue the playlist, or move the jog dial.
- Sometimes that after upgrading, the "Audio IN/OUT" field (type of audio connectors installed on the system) has been reset to "None". Always check that the value of this field is the same before and after the upgrade. Adjust the value after upgrading if necessary.
- In ADA Adjustment mode, Output 4 actually shows the video incoming on Input 2 rather than Input 4 (bug not present in XT[2]).
- In Load Playlist conditional, when a different playlist is loaded on 2 PGMs, the playlist name displayed on the first PGM corresponds to the name of the playlist loaded on PGM2. The images are correct.
- After having done a search on the remote, the browse function always browses in the results of the clip search, it is not then possible to browse in the clips of the remote.

1.6 Limitations

- Timeline should not be used on XT1 – risks of audio problems in some configurations.
- OSD on the monitoring of the recorders is only available in Multicam mode and Replay-Only mode.
- Internal loop : in audio embedded, you always get the embedded audio, whether the loop mode is set to video+audio or video only.
- Clear Video Disks from EVS Maintenance Menu is necessary when upgrading from version 04.xx.xx, 5.03.xx or lower ! This is not necessary when upgrading from version 05.04.16 or higher.
- The internal loop mode is not available with HCTS HD systems or with Super Motion systems.
- The keyword file must be distributed to all systems on a network by the Network Server. However, if this machine is disconnected for any reason, another server will automatically be designated as Network Server and will now be in charge of distributing the keyword file. If the "old" Network Server is reconnected to the network but does not recover automatically its Network Server status, the machine acting as the current Network Server must be disconnected in order to allow the "old" one to take back that job and distribute the keyword file again. This will be resolved in a future version by allowing a system not acting as Network Server to distribute keyword files as well.
- When playing HD Super Motion material through the network with the default settings (HD video bitrate 100Mbps and network speed 540Mbps), the network is close to its performance limit and this may cause occasional "freezes". Playback at 50% or 33% dependant on camera type, is OK. If you want to play super motion material on air at 100% speed, you should make a local copy of the clip first, or work with the 1485Mbps network.
- Resetting the "Protect Clip Pages" parameter in the setup does not reset the protect status of existing clips.



1.7 Clip Compatibility

- All clips created with Multicam 5.04.16 or higher are compatible with version 08.04.33. **Multicam 9 files have a different structure and will not be compatible with previous versions.**
- **Important note:** if you downgrade from Multicam 08.04.33 to Multicam 08.00.xx or Multicam 08.01.xx, clips will still be present but the system will show that 1 video disk is disconnected → you have to start a disk rebuild (if you need to keep the clips), or clear clips to reconnect this disk.
- Clips created on XT[2] in configurations not available on XT servers will not play correctly on XT servers ! Those configurations are:
 - SD Mjpeg 625i 608 lines
 - SD Mjpeg 525i 480 lines and 512 lines
 - SD IMX D10
 - SD MPEG2 i-field
 - HD 720p with horizontal resolution of 640 and 1280
 - HD 1080i with horizontal resolution of 1536 (only incompatible in NTSC), 1600 and 1920.
 - HD AVID DNxHD® Codec
 - ProRes Codec
- **“CLEAR VIDEO DISKS” from the EVS Maintenance Menu must be done when upgrading from:**
 - any version lower than 05.04.16 to version 08.04.33
 - any version of multicam 9 to a version of 8 or lower!!