MVS-8000/DVS-9000

System Application Software V7.22
(BZS-8050 Plug In Editor V6.00)

Applicable Model(s)
BKDS-9470
BZS-8050
DVS-9000
DVS-9000SF
MKS-8010
MKS-8010A
MKS-9011
MKS-9011A
MKS-9012
MKS-9012A
MVE-8000A
MVE-9000
MVS-8000A
MVS-8000ASF
MVS-8000G
MVS-8000GSF

1. Overview of the New Version Software

The application software of the MVS-8000/DVS-9000 system are upgraded as described below respectively. V7.22 (Switcher), and V7.21 (MVE-8000A, Panel and Menu) or V7.20 (MVE-9000 and BKDS-9470). The Editing Control Software BZS－8050 (Plug In Editor) that is contained in the above software is also upgraded to V6.00.

All of the software that are described in Release Notes should be upgraded simultaneously to the new versions respectively in order to realize the new functions as described below.

MVS-8000/SF and MVE-8000 (MKS-8800) are not upgraded this time. However, the new functions that are enabled by the Panel/Menu software version V7.21 can be used by upgrading the Panel/Menu software alone to V7.21.

1.1 New Functions

1.1.1 Switcher New Functions

(1) Recording and Playback of Frame Memory Ancillary Data

The frame memory clip can record and play back the ancillary data that can be used as the embedded audio, in addition to the video signal.

When an operator wants to record the ancillary data, select the menus as follows: Select Menu7316.8: Eng Setup > System > Install/Unit Config menu, and set the [FM Ancillary] to ON to change the frame memory data save mode.

Please note that only the AUX bus and the edit preview bus can output the ancillary data. Therefore, select the menus as follows: Select Menu 7333.3: Eng Setup > Switcher> Output> V Blank/Through menu, and set the Through Mode of the output terminal to which the desired output signal has been assigned, to ON, at the same time.

◆ Recommended connection (system configuration example) to use the embedded audio

When client wants to establish a system with which the embedded audio signal recorded in the frame memory clip can be played back, an example of recommended system configuration is shown in the figure below. In an example of recommended system configuration, the SDI signal that is output to the AUX bus is decoded by the Demultiplexer first. Then, mix the separated audio signals with use of an external audio mixer.

Connecting the SDI signal which still contains the embedded audio signal in it to any equipment other than the Demultiplexer is not recommended.

To use it as the video signal, assign it to other AUX in which the Through Mode is set to OFF.
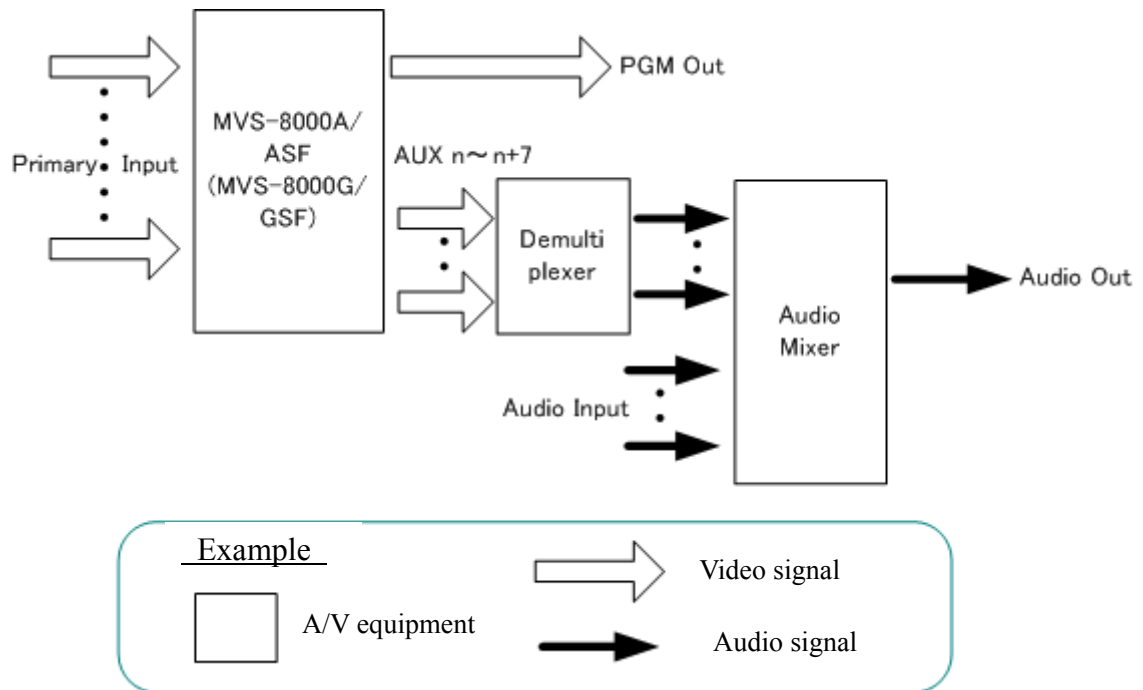
Recommended Demultiplexer

    HD: HKSP-106 HD AV Demultiplexer Board

    SD: BKPF-L606 AV Demultiplexer Board

Restriction items and note

◆ Restriction items that are commonly applicable to all formats

- The embedded audio signal that is going to be input to the Frame Memory must be synchronized with the video signal.

- When the AUX output signal to which the Frame Memory OUT has been assigned, is monitored by a waveform monitor, the AES/EBU channel status indicates "Consumer" and the sampling frequency is displayed as 44.1 kHz during the period of Clip Recall/Stop.

◆ Restriction items applicable to the HD format

- When the AUX output signal to which the Frame Memory OUT has been assigned, is connected to VTR or equivalent equipment directly, the audio signal of fifth channel and higher of the embedded audio may be muted during the Clip operation (Enable/Record/Recall/Play/Stop operations) depending on the model of the connected equipment.

- When handling the formats of 1080/59.94i or 720/59.94P or 1080/29.97PsF, and when the AUX output signal to which the Frame Memory OUT has been assigned, is connected to VTR or equivalent equipment directly, audio noise may occur during Clip Recall/Stop depending on the model of the connected equipment.

◆ Restriction items applicable to the SD format

  Use of the embedded audio in the 480/59.94i format is fundamentally recommended because the 480/59.94i format has the inherent restrictions as described below.

- The equipment to which the AUX output signal on which the Frame Memory Out is assigned is connected, detects sometimes the format error during the period of Clip Recall Stop.
- Noise occurs sometimes at the start of Clip playback. Occurrence of this problem can be prevented sometimes by creating the silent (sound-muted) period of 9 frames or longer at the top of a Clip.

(2) Frame Memory Clip Transition

  The Frame Memory Clip (moving picture that is stored in a frame memory) output signal can be played back in synchronism with the transitions such as mix and wipe.

Restriction items and note

- The Clip Transition should be executed with the use of the V/K-paired Frame Memory Clip. At the same time, the Clip Transition should be executed with the Pair mode being set to ON whereas the Pair mode is located in the Frame Memory > Clip menu.
- The Clip Transition should be executed with the Loop mode being set to OFF.
- The Clip Transition setup cannot be saved in the Key Frame. If the Key Frame is executed, the Clip Transition setup is set to OFF.
- While the Clip Transition is in use, the Pattern Limit cannot be set to ON. Also, when the Pattern Limit is being set to ON, the Transition Type cannot be changed to the Clip Transition.
- The transitions that require two-strokes to execute them such as the picture-in-picture pattern and the pre-set color mix in which the stroke mode is set to Normal, cannot be executed normally.
- While the Clip Transition is in use, the system cannot be operated with the Split Fader being set to ON.
- While the Clip Transition is in use, the Transition Preview function cannot be used.
- While the Clip Transition is in use, Start/Stop TC which has been set to Frame Memory Clip is ignored.
- The Clip Transition setup cannot become the target data of M/E copy and M/E swap.
- Values of Clip Transition do not change in manner of the Link-operation with the M/E Link. Values of Clip Transition cannot be copied/swapped by the Copy/Swap function of M/E in the same manner.
- When Start/Stop of the Background Transition has been set, a part of the Wipe pattern (a part of Karaoke and Rotary Wipe) will not be cut-out but remains un-cut on the screen.

Do not use the following patterns, or do not set Start/Stop for the following patterns:

Karaoke#220, 221, 222 and 223

Rotary Wipe#101, 103, 104, 105, 106, 107, 150, 156, 158, 160, 162, 518, 604, 624 and 661

- The HIGH tally turns ON until the end of a transition once a Clip Transition is started even when the background picture of A/B bus is not output.

- When the Clip Transitions that use the same frame memory output, are executed from the multiple M/E rows at the same time, the Clip Transitions do not work normally.

- The Auto Transition operation and the Clip Transition operation using the Fader are different when the Advanced Tally Mode has been set. At the same time, the background transition delays but the Clip does not delay when the Advanced Tally Mode has been set.

- The status while the Clip Transition is under execution cannot be memorized in the snap shot. When the snap shot is called, the Clip position cannot be reproduced, but system goes to the top always.

- If a snap shot containing Clip Transition is called while the Clip Transition is under execution, the transition immediately after the call does not work normally. Be sure to call snap shot after Transition is completed.

- If the snap shot containing the Clip Transition with EFF DISSOLVE is called consecutively, the Background Transition may shifts sometimes.

- When snap shots of multiple regions having the same register number are called, the clip that has the higher order of priority in (P/P>M/E-1>2>3>P/P Sub>M/E-1 Sub>2>3>User) is called. However, if the snap shots having different register numbers depending on shot box are specified and called, the order of priority is ignored.

(3) Recording and Calling of the Extended Clip (Supporting the second frame memory board)

When two pieces of the frame memory board (MKS-8440A for MVS-8000A, and MKS-8442G for MVS-8000G) are installed, the second frame memory board becomes the dedicated board for Clip. The Clip that is saved in the second frame memory board is called "Extended Clip (Ext Clip)". Clip can be recorded in the Extended Clip and can be called from the Extended Clip. To record Clip in the Extended Clip. Access the << Record Enable >> group button and select [Ext Clip].

(*) The Clip that is saved in the first frame memory board is called "Common Clip (Common Clip)".

Restriction items and note

- This function is valid in MVS-8000A or MVS-8000G only.

- In the MVS-8000A, FM1 and FM2 only can call the Extended Clip. The Extended Clip cannot be called from FM3 through FM8. MVS-8000G does not have such restriction.

- Still picture cannot be saved in the second memory board and higher.
- Therefore, any clip that extends over the two memory boards cannot be created.
- Common Clip in the register cannot be changed to Ext. Clip. (vice versa) Clip in the register should be saved once in HDD by operating menu to change it from Common Clip to Ext. Clip in the HDD. Then, it should be called back again in the register.
- The phenomenon that the FM2 picture can appear momentarily on the FM1 signal if [Ext Clip] is pressed in the status of Clip Pair = ON in MVS-8000A.

(4) 1080P/59.94 and 1080P/50 formats dual link is supported.

The signal format can be changed to either 1080P/59.94 or 1080P/50 by installing the switcher upgrade software BZS-8560 in the MVS-8000G, and by installing the DME upgrade software BZDM-8560 in the MVE-8000A. The signal input and output are performed by the Dual Link a) in this case.

Dual Link a): The signal format that is defined by SMPTE372M-2002. Because a single video signal is transmitted by using the two HD-SDI signals, the data processing with extended number of frames is enabled with this format.

The Install Key must be entered in order to enable the software before using the switcher upgrade software BZS-8560 and the DME upgrade software.

Restriction items and note
- This function is valid in MVS-8000G (SWR) and MVE-8000A (DME) only.
- The software option a) for multi-format is required to switch the signal format to 1080P/59.94 or 1080P/50. In addition to the software option a), single or more of the MKS-8110G board that enables 17 inputs and single or more of the MKS-8160G board that enables 24 outputs.
- The software options for multi-format are described below.

The Install Key must be input to use the following software.

Merchandise name	Model name	Applicable model
Switcher upgrade software	BZS-8500M	MVS-8000G
	BZS-8510M	MVS-8000GSF

In addition to the above, the following software options are required in accordance with the number of M/E.

Merchandise name	Model name	Applicable model
Mix/Effect Upgrade Software	BZS-8520M	MVS-8000GSF 2M/E system or MVS-8000G 3M/E system
	BZS-8520M and BZS-8560M	MVS-8000G 4M/E system

- Number of input/outputs are reduced to half.
- Operating speed of effect is either 30 key frames or 25 key frames per second.

◆ Switcher

➢ Configuration shall be PP + ME1 + ME2 during the mode of PP+ME1 with Simple P/P.

➢ The M/E Config supports only the Standard mode.

➢ The frame memory function does not work.

➢ The format converter does not work both at input and output.

➢ The Logical M/E Assign cannot be used.

➢ The Key Edge and Resizer will have the same picture quality as that of 1080i.

➢ The DME Monitor output cannot support simultaneous output of the Video output and the Key output. Either one of them should be selected, and the selected output is provided.

◆ DME

➢ Number of channels is maximum 2 channels per single cabinet.

➢ Brick, Film and Combine of more than 3 channels cannot be used.

➢ The DME – Wipe that employs 3 channels cannot be used.

➢ If the Key Frame that has been created by the Key Frame Strobe is executed during the 2-channel Combine, the shifted picture will be strobed.

➢ The Power On File Load does not function.

(5) Key Drop Off mode (Frame Delay Mode)

The function that enables correction so that the Key level does not decrease even when Edge is added to the Key is added.

In the Key Drop Off mode, the Key picture delays by one frame. To enable this function, select the menus; Menu1 x 24.4: M/E > Key > Edge > Key Delay Mode menu, and set the Key Delay Mode to the Frame Delay position.

Restriction items and note

- This function is valid in MVS-8000A/MVS-8000G only.
- Because this function employs the Resizer, the desired effect cannot be obtained in the case if Resizer cannot be used when it has already been occupied for the DME wipe even when the effect is set by operator in the following cases.

➢ When the DME function is used by key (Processed Key)

➢ When the Key DME Wipe function is in use.

➢ When [Dual Rszr Effect] is set to On.

- When the Key Non Drop is set to On in the full-screen Key mode, visible clearance appears in the bottom of a screen. At the same time, the Edge effect cannot work in the bottom of a screen.

(6) Re-Entry Mode between M/E Main row and Sub row

Re-entry between the Main row and the Sub row within the same M/E row is enabled when the Multi Program2 function is used. To enable this function, select the menus as follows: Menu7331 Engineering Setup > Switcher > Config menu; and enable [MP2 Free Re-Entry].

Restriction items and note

- The signal that has re-entered between the Main row and the Sub row is delayed by 1H. At the same time, if re-entry is repeated, error can occur in the video signal. Re-entry can be repeated 8 times at a maximum. However, the final output signal will be delayed by 4H.

- Amount of delay of the output signal changes depending on the order of selection of the re-entry signal.

- If the output signal is delayed, the frame memory ancillary data will become invalid even though the Through Mode is set to On.

(7) The Snapshot/Effect Recall operation is improved when the Multi Program2 function is used.

The Snapshot/Effect Recall operation is improved in the way that the Key status can be reproduced in accordance with the Key setup that has been assigned to the M/E Main/Sub row when the Snapshot/Effect Recall is executed while the Multi Program2 function is being used.

For example, only the Key1 data can be reproduced by calling Snapshot of the P/P Main Region if only Key1 is set to Enable as the Key setup of the P/P Main row.

(8) Extension of the number of Keys that can use DME among the M/E row.

A mode added that enables simultaneous use of the Processed Key using the DME of the dedicated interface and the Processed Key using the DME of the SDI interface, within the single M/E row.

To enable this function, select the menu as follows: Menu7337.6 Engineering Setup > Switcher > Device Interface > DME Type Setting menu, and select the 《DME Assigned Key Per M/E》 group button to enable [Up to 3 Keys].

When this mode is selected, and when Combine of the Processed key using the DME of the SDI interface is going to be used, the material of the second channel should be selected by the AUX bus not by the DME external video bus.

Restriction items and note

- The DME Wipe function and the Processed Key DME of the same M/E row cannot be used at the same time.

(9) A new mode is added that enables selection of the re-entry signal as the input signal to the color corrector.

    The signals that are generated internally inside the switcher can be selected as the input material to the color corrector.

    To enable this function, select the menus as follows: Menu7335 Engineering Setup > Switcher > Key/Wipe/FM/CCR menu, and enable [CCR Internal Signal Enable].

    Restriction items and note
- This function is valid in MVS-8000G/GSF only.
- When the re-entry signal of the M/E row is selected as the input signal to color corrector, the output signal of the M/E row will be delayed by 1H.
- There can be cases that re-entry cannot be reproduced in the occasions such as booting up in the Resume mode, or during the Snapshot Recall mode.

(10) Addition of the Utility 2 Bus Selection Mode to the preset color mix.

    The video signal that has been selected by the Utility 2 Bus can be used in the preset color mixed transition instead of Matte signal.

(11) FM Data Port

    When the FM Data Port is enabled, the time required for transferring the frame memory data between switcher and control panel can be shortened.

    To use the FM Data Port, select the menus as follows: Menu7312.2 Engineering Setup > System > System Config > Switcher Assign menu and set [FM Data Port Enbl] to On.

    Restriction items and note
- Simultaneous data transfer from multiple clients (menus or System Manager) to the FM Data Port of a switcher is not possible. If the simultaneous data transfer is attempted, an error will occur and data will not be transferred normally.
- If multiple numbers of the clients (control panel or System Manager) exist from which data transfer is going to be made, set [FM Data Port Enbl] to On at an single client only, and set [FM Data Port Enbl] of other clients to Off.

(12) Self-diagnostics

Target items of the self-diagnostics are enlarged.

1. Circuit Board

Function	Operating status of the card board (CPU abnormal operation detection)
Temperature	Monitoring of the abnormal temperature inside the chassis.

2. PSU

Function AC	Monitoring of abnormality in the power supply
Operation Hours AC	Monitoring of the power-on operating hours.

3. Fan

Function	Monitoring of the chassis fan operating condition
Operation Hours	Monitoring of the chassis fan operating hours.

For details of the self-diagnostics, refer to the Technical Memo SWEM08-025 "MVS-8000/DVS-9000 series Maintenance Menu について".

Restriction items and note

- In order to make these functions work normal, be sure to execute the following procedure upon completion of the software version upgrade.

1. Menu 9991.9: Board Config

Set the appropriate values into the Board Status of the respective equipment.

(1) When operator wants to setup the mode that does not detect error in units of printed circuit board (i.e., the same operations as those of the conventional version):

Set the Board Status items of all board except the CA board, to "Not Exist" and press the Execute button.

(2) When operator wants to setup the mode that detects error in units of printed circuit board:

Execute the Auto Scan to confirm that the actual installation status of the respective boards correspond normally to the Board Status information of the list shown on the screen. Alternately, set an appropriate value (Exist or Not Exist) in the Board Status window for the respective boards, and press the Execute button.

2. Menu 9991.3: PSU

Set the appropriate values into the PSU Operation Hours of the respective equipment.

3. Menu 9991.4: Fan

Set the appropriate values into the Fan Operation Hours of the respective equipment.

1.1.2. DME New Functions

(1) 1080P/59.94 and 1080P/50 formats dual link is supported.

For details, refer to section "1.1.1. Switcher New Functions (4) 1080P/59.94 and 1080P/50 formats dual link is supported" of these Release Notes

Restriction items and note

- This function is valid in MVS-8000G (SWR) and MVE-8000A (DME) only.

(2) Self-diagnostics

Target items of the self-diagnostics are enlarged.

For details refer to section "1.1.1. Switcher New Functions (12) Self-diagnostics" in these Release Notes.

1.1.3. Panel New Functions

(1) Audio-follow-video

A function that links the audio mixer crosspoint operations with the picture creation block crosspoint operations and with the signal selection operations at the AUX bus block is supported.

The audio mixer that supports the RS-422 ESAM- protocol can be used.

To use the audio-follow-video function, the following setups must be completed before using it.

Execute the procedure described below to complete the setups before using the captioned function.

1. Select the menus as follows: Menu7355 Eng Setup > DCU > Serial Port Assign menu, and assign the DCU serial port.

   In this case, set "Mixer ESAM-II".

2. Select the menus as follows: Menu7322.11 Eng Setup > PNL > Xpt Assign > Mixer Xpt Assign menu, and assign the crosspoint of audio mixer to the switcher crosspoint pair (video/key).

3. Select the menus as follows: Menu7322 Eng Setup > PNL > Xpt Assign menu, and select the picture creation block or the bus that is linked with the audio mixer.

4. Press [Audio Follow] to set it to On.

   The message "Enable" is displayed in the "Audio Follow" column on the left list.

Restriction items and note

- The crosspoint link function supports the manual operations only, and does not support the signal switching by snapshot, key frame and macro.
- When the bus-fixed mode is selected by the setup, the audio mixer program output links with the bus that is output as background.
- Audio mixer does not link in the case of transition caused by fader lever.
- Audio mixer does not link in the case of transition caused by keys.
- Video signal does not match the audio signal in the following cases:
  - A part of the DME wipe (in such a case when crossfade is executed on "Picture-in-Picture".)
  - When the preset color mix is executed by the 2-stroke mode.
- Even when the auto transition is stopped by pressing the [CUT] button while the auto transmission is under execution, the transition at the mixer side will not be stopped.

(2) Macro timeline

The Macro calling/execution action can be automatically executed by registering it in timeline as a keyframe.

Multiple numbers (99 at a maximum) of macro can be executed in parallel by registering it in timeline.

Restriction items and note

- Multiple numbers of macro can be registered in a single keyframe point, or multiple keyframes can be registered on a single timeline. However, number of events that can be executed at the same time are limited. Macros sometimes may not be reproduced as scheduled by the registered timeline depending the number of events that are executed simultaneously.
- To use the Macro timeline, the Macro region should be assigned to the region selection button of the ten-key operation block. Select the menus as follows: Menu7321.7; Eng Setup > Panel > Config > 10Key Region Assign menu, and perform assignment of the Macro regions.
- The Macro calling/execution action only should be registered in the Macro timeline. The Macro data itself that will be called by the Macro timeline is not included in this timeline. The Macro data itself should be prepared separately beforehand.
- The actions that have been set to the keyframe is executed only when the keyframe effect is executed in the normal direction. Because the actions will not be executed in the reverse direction, care should be taken when executing the switcher or the DME keyframe effect at the same time.
- If the event of Pause 0 has been registered in the Macro that is specified by the Macro

timeline, all of the subsequent events will be ignored.
- The Macro Timeline Recall cannot be set as a Macro Event.
- The keyframe functions that are described below cannot be used in the Macro timeline.
  - KF LOOP, EFFECT LOOP, REVERSE, NORMAL/REVERSE and PATH

(3) Inhibit setup operation on the respective crosspoint buttons

Inhibit (inhibiting operations) can be set temporarily on the respective crosspoints by the operations from the control panel.

The target buttons on which the Inhibit can be set are the crosspoint buttons on the AUX operation block and those of the M/E crosspoint module.

To enable this function, select the menus of Menu 7321.12 Engineering Setup > Panel > Config > Link/Program Button > Xpt Module menu, or alternately select the menus of Menu 7324 Engineering Setup > Panel > Pref/Utility menu, and assign the buttons on which the Inhibit operation is going to be set.

Restriction items and note
- The Inhibit setup is cancelled when the Control Panel is reset.
- The Macro attachment can be set even when the crosspoint buttons are set to Inhibit.

(4) Addition of a mode in which crosspoint switching will not be performed during the Macro attachment setup.

A mode is added in which the Macro attachment can be set by pressing the crosspoint button without switching the crosspoint pictures, when setting up the Macro attachment. To enable this mode, select the menus of Menu7326.6 Engineering Setup > Panel > Operation > Macro menu, and set <<Attachment Setting Mode>> to [W/o Button Function]."

(5) Calling Macro by the GPI input

Macro can be called by the GPI input.

(6) Addition of the Macro Only Mode setup function

A mode is added in which Macro attachment can be performed in the Macro Only Mode by pressing the [PRE MCRO] button and the [POST MCRO] button at the same time.

(7) Addition of Macro events

The following items are added to the Macro events.
- Calling the Frame Memory Clip (ClipFileLoad)
- Recording into VTR/Disc recorder (VDCP Rec)

1.1.4. Menu New Functions

(1) Self-diagnostics

The communication status between the Control LAN and the Data LAN within the MVS-8000 system can be checked by the menu selected as follows: Menu 7431 Diag > System Info > LAN Status. The system configuration equipment that are displayed by the LAN Status menu, will be displayed only when they are connected.

(2) Addition of the Snapshot Calling/Saving function as the menu operation

Calling, saving and deletion of snapshot can be performed from the menu screen. The menu screen resembles the image of the Flexi Pad operation block and the operations on the menu screen are interlocked with the Flexi Pad operation block of the panel.

The following menus can operate the snap shot.

- Wipe Snapshot
  - Menu 1x57 (x = 1 to 5) M/E – x (x = 1 to 3), or alternately /P > Wipe > Wipe Snapshot menu
- DME Wipe Snapshot
  - Menu 1 x 67 (x = 1 to 5) M/E – x (x = 1 to 3) or alternately P/P > Wipe > DME Wipe Snapshot menu
- Snapshot
  - Menu 1 x 77 (x = 1 to 4) M/E – x (x = 1 to 3) or alternately P/P > Misc > Snapshot menu

(3) USB automatic detection

The USB equipment primary setup can be executed automatically. To enable the automatic setup of the USB equipment primary setup, select the menus of Menu 7317 Engineering Setup > System > Maintenance menu, and set the <<USB Storage Device>> group button to [Auto Detect].

Restriction items and note

- The automatic recognition timings of the connection status are described below.
  - When [Refresh] is pressed,
  - When [Memory Card] is selected by the device selection button of the File menu (Menu71xx).
  - When the Install menu (Menu7316.10) is opened,
  - When Log Sampling is executed from the Menu 9999 Sony Engineering menu.

1.1.5. BZS-8050 V6.00 New Functions

(1) KEY - - - KEY CUT IN/OUT, KEY MIX IN/OUT, KEY NAM IN/OUT, KEY S-MIX IN/OUT, KEY WIPE IN/OUT and KEY FADE IN/OUT can be set as the main effects.

(2) KEY EVENT - - - CUT and AUTO TRANSITION that are the transitions dedicated to Key can be set up by the same operation as that of GIP regardless of the main effects.

(3) MENU DISP - - - Layout, background color and character color within the operation screen can be set up in details.

(4) GIP function extension - - - The following functions are added.
- A function of setting up the event time with the use of player timecode.
- A function of outputting the continuous pulses by specifying interval and number of times.
- A function of displaying list of setups by scrolling.

(5) BACK AUX - - - Various setups such as GPI event time can be copied into the scratch pad. To enable this function, the desired function should be assigned to the key by using the keyboard assign.

(6) STORE CONST/RECALL CONST - - - The constant registers that are dedicated to the respective devices are set to all devices.
To enable this function, the desired function should be assigned to the key by using the keyboard assign.

(7) RECALL SEGMENT - - - The CCR setups are added as a target of recall.

(8) FM CLIP Control - - - A Clip can be selected from the Clip List display of the frame memory, can be loaded and be controlled in the same way as VTR. The Clip that is used for editing is registered in EDL and is called automatically during execution. In addition to it, a new Clip can be created and memorized with the use of the CLIP REC function.
Note: If frame memory is operation from the switcher side while recording of a new clip is in progress, the new clip may not be recorded normally.

(9) DDR VDCP file load - - - A file can be selected from the file list of disc recorder (DDR VDCP), and can be loaded. The Clip that is used for editing is

(10) 3:2 LOAD - - - The EDL that has been created by using the materials which have been converted into the 30 frame system with the use of the 2-3 PULLDOWN function can be loaded into the 24-frame system and can be edited.

Note: The above function supports REPLACE – CLEAR only. To add the materials to an existing EDL, the materials should be loaded into any other EDL once and then use the MERGE EDL function.

(11) A-ROLL RELEASE MODE setup - - - After transitions are completed by the A/B roll editing, the A roller can be stopped and released. Without waiting for completion of an editing, operator can search the scenes to be used for next editing, or can exchange tapes.

   INIT > F2: EXECUTION > 8. A-ROLL RELEASE MODE

(12) BVE REEL setup - - - When loading the EDL of the BVE-9100 format, the reel name that has been set to DME or to color can be changed to a reel name (DM1-DM8, CB1, CB2) that is dedicated to the BZS-8050. In the same way, a reel name that has been dedicated to BZS-8050 can be changed to the set reel name and be output when saving the EDL of the BVE-9100 format. Regarding DME, the effect register numbers that have been registered earlier are continued.

   INIT > F6: ASSIGN3 > BVE REEL

(13) DMC RANGE setup - - - Speed range of variable, and the SLOW/SCAN speed can be set for the respective devices. In the same way, when the FF/REW key is pressed, the speed that has been set to FWD/REV will be resumed.

   AUX > F9: DMC RANGE

1.2 Specification Changes
1.2.1. Switcher related specification changes

(1) If the non-recommended IEEE1394 HDD is connected, the system may enter the status in which all of the frame memory operations become impossible because the system waits until communication is established. If such a trouble occurs, rebooting the system is required. In order to prevent the system from occurrence of such trouble, a function that releases connection to the IEEE1394 HDD is added for such occasion that communication

cannot be established for a certain period of time. (It does not mean that the non-recommended IEEE1394 HDD becomes usable.))

(2) Frame memory clip operation in the 720P video format is improved.

The recording/playback operation of the frame memory clip when the video format is 720P has been in units of 2 frames. However, specification is changed so that the frame memory clip recording/playback operation can be operated in units of 1 frame.

Restriction items and note

- File compatibility is lost between the software versions before 7.20 and after 7.20 or higher because recording method of the Clip file and the Extended Clip file in the 720P system is different. However, the Still file has compatibility.
- When Clip is recorded, the Clip that consists of even number of Clips is created all the time. Because the even number of Clips is recorded in all recordings of Clip, the remaining number of Clip may be 1 Clip or 3 Clips when Clip Pair = ON, or remaining number of frames may be 1 Clip when Clip Pair = OFF at the end of recording if recording up to the full capacity is specified. However, this is normal.
- Because number of Clips to be recorded per every second is doubled, the Clip Duration will be reduced to half of that with the versions before V7.20 if Clips are recorded to the full capacity.
- Clip that consists of even number of Clips cannot be used for any operation.   Be sure to use the Clip that consists of even number of Clips. When Loading or Importing Clips, be sure to transfer even number of Clips. In the same way, be sure to delete Clip in units of two still pictures when deleting still pictures that constitute Clip.
- The Keyframe Animation cannot perform the Progressive operation. It can perform the single Keyframe/Frame operation.
- If the Clip that has been saved by any version before V7.20 is played by the version V7.20, it is played back by double speed.
- If a snap shot having attribute of Clip Auto Play is called, the top frame of the Clip will not be played back, but the playback starts from the second frame.

1.2.2. Menu related specification changes

(1) Behavior of the Key OFF when the All Stop command is supplied to the switcher from an editor can be set by the menu that is selected as follows: Menu 7337.8 Eng Setup > Swer > Device Interface > Editor Interface menu.

Restriction items and note

- If switcher receives the "All Stop" command while transition is in progress, the Key that is going to be selected by the next transition will become Key OFF too.

(2) Extension of number of directories by the File menu

Number of directories that can be operated by the File menu is extended. Number of directories is different depending on each device. Numbers of directories for the following devices are shown below.

- USB Memory: 120
- HDD: 200

(3) Operability of Macro Offline editing is improved.

Register number can be specified for the save operation of the Macro event Offline editing.

(4) XPT Assign menu is improved.

Background color of the rows of the Shift side is changed to enable operator to understand the range of Shift side at a glance when viewing the list with which the crosspoint button is set using the menu that is selected as follows: Menu 7322.x Engineering Setup > Panel > Xpt Assign menu.

1.2.3. BZS-8050 specification changes

(1) Order of the pop-up display channels when setting up the multi-split is changed from selection of either F8: CH1 - CH12 or F9: CH13 - CH16, to the sequential switching of the display channels starting from CH1-4 → CH1-8 → CH1-12 → CH1-16 → CH1-4 each time F9: MORE is pressed. The display status that is shown on the screen last will be kept memorized in a memory even after the power is turned off.

(2) Recording of an already registered Edit with open end has been prohibited. However, recording is made possible as a new page only in the case when INIT > F2: EXECUTION 4. BACKGROUND REC has been set to "OFF" and INIT > F3: EDL 9. QUICK EDIT MODE has been set to "ON".
Note: In this setup, the recording will not be stopped until the REC OFF key or the ALL STOP key is pressed.

(3) Applicable target of superimpose is changed from EDIT PVW fixed but to the bus that has been set by the menu of SETUP > F3: SW CTRL 5. USED PVW BUS.   Please note that the superimpose operation will not take place even when the SUPER key is pressed if the setup of SETUP > F6: SUPER 1. START UP has been set to "OFF" at booting of a system. To use the superimpose function, a system should boot up with "ON" state of the above setup.

(4) The MARK SPEED setup has been prohibited when the system is in STOP and STANDBY

(5) During preview and during approximately 0.5 seconds immediately after recording is stopped by ALL STOP, control over any device has been prohibited. The time period of approximately 0.5 seconds is shorted.

(6) When an Edit that uses DME/KF is called and going to be executed with AUTO EFFECT DATA = OFF, the effect having the registered number is recalled, not the effect having the registered number of currently recalled. It is changed so that the effects that have the same register number will not be recalled.

(7) The devices that have been set to Master or Sub also became target of the match frame of the Action Track, Scroll Track, Auto Track, Recorder Track and Player Track.

(8) Operations of the devices when recording is ended by pressing the REC OFF key are changed to the same operations after the OUT point is passed.

1.3 Restrictions
1.3.1. Restrictions on System Operating Environment

(1) Applicable target models of the switcher software V7.22/V7.21/V7.20
   The applicable target models of the MVS Switcher Software versions V7.22/V7.21/V7.20 are only MVS-8000G/GSF, MVS-8000A/ASF and DVS-9000/SF. It cannot be installed in the MVS-8000/SF.
   It can be operated only when the CPU-DT module is installed in the CA-54 board. For the replacement procedure of the CPU module ask Sony Service about UPG336A.

(2) The applicable target models of the DME Software V7.21/V7.20
   The applicable target models of the DME Software versions V7.21/V7.20 are only MVE-8000A, MVE-9000 and BKDS-9470. It cannot be installed in the MVE-8000 (MKS-8800).

1.3.2. Restrictions on Frame Memory

(1) In 1080Psf, the picture that is being input to FM Proc may be displayed momentarily at the moment of calling the frame memory.

(2) When saving a still picture after a Clip is recorded, the filename that is used for Clip recording will be used continuously as it is. Please specify a new filename for saving still picture.

(3) The Freeze/Record operations cannot be executed while Clip playback/frame memory animation is in progress.

1.3.3. Restrictions on Macro

The Macro data that contains the Even which calls Wipe/DME Wipe Snapshot of the M/E Sub row that has been created or saved by the Panel software V7.20 cannot be loaded. In such a case, please re-create the Macro data.

1.3.4 Restrictions on Side Flag

(1) When Snapshot is called, the Side Flag ON of the B-bus side is not reproduced normally when [Auto Side Flag] is set to OFF.

(2) The Side Flag ON status that is set by the DME Wipe of the Sub side cannot be saved normally by the Insert operation of the Key Frame when the multi-program 2 is selected.

1.3.5 Restrictions on Snapshot

When the AUX region (region of the User to which AUX is assigned) and the M/E region are called at the same time by Snapshot while using the DME of SDI interface, the Snapshot cannot be called normally sometimes.

1.3.6 Restrictions on Downward Compatibility

If the first character of a directory name is "$", the error (Source File Open) will occur at the loading of downward compatibility.

1.3.7. Restrictions on BZS-8050 V6.00

When using an effect (key frame) of a switcher, pay attention to the followings

(1) When two types of key frames are mixed whereas DME has been set to one type of key frame while DME has not been set to the other type, there can be a case that the effect can lag or lead in the midst of the effect. To prevent occurrence of this trouble, set DME from the very first key frame.

(2) If an effect in which animation of frame memory data has been created is used, execution of the effect delays after the set editing point by one frame. To prevent occurrence of this trouble, advance the editing point by one frame beforehand.

(3) When using the effect that is used to create animation of frame memory, do not set the initial speed.

(4) When the AUTO SCAN is in progress while the system is connected to a system manager, there can be cases that several 10 seconds are required to transfer to register data of the switcher. (The TRANSFERRING FILE is displayed.)

1.4. Bugs Corrected

This section describes the bugs that are corrected by the MVS System Software V7.20, and also the bugs that are corrected by the software versions listed below which are released as the bug corrections after V7.20 has been released.

MVS SWR V7.21/V7.22

MVE-8000A V7.21

MVS PNL V7.21

MVS Menu V7.21

1.4.1. Switcher Bugs Corrected

◆ Bugs that are corrected by the switcher software V7.22

(1) The output picture becomes black if the Frame Memory Output is not Locked when recalling the Clip Transition Snapshot.

(2) The Key3/Key4 level is output at the half of the normal level when the Show Key is executed.

(3) The GPI output is not supplied normally if the Effect Recall&Run is set in GPI Output Action.

(4) If the Keyframe Insert of the M/E Sub row is executed in the Multi Program 2 mode, the Side Flag signal flickers.

(5) When the Auto Side Flag is set to Disable, the Side Flag status of the Bkgd B-bus is not reproduced normally when Snapshot is Recalled.

(6) The Frame Memory Data - Port may not function normally when SWR is rebooted or when Video Format is changed.

(7) If the Restore/Backup operation of Frame Memory that employs IEEE1394 HDD is executed, the MY board self-diagnostics error (Board Config Error) occurs.

(8) When the Setup File Loading is executed, the trouble occurs sometimes that all of the License information becomes invalid, and the optional functions such as Multi Program 2 are disabled and cannot be used.

◆ Bugs that are corrected by the switcher software V7.21

(1) When the Clip Transition Snapshot that uses Pair Clip is recalled, the Pair Mode of Still (still picture) is forced to ON.

◆ Bugs that are corrected by the switcher software V7.20

(1) The operations when the Key Frame Modify of switcher is operated are not normal in the versions V5.30 and higher. Wipe size is changed when the Modify operation is performed even when the wipe size is not changed.

(2) When the following menus are selected: Menu 7334.2 Engineering Setup > Switcher > Transition > Transition Curve, while the <<Fader Curve>> group button [Adv Tally Mode] is being selected, and if the ME region snapshot is Recalled and the Fader lever is

moved, the picture starts moving after the transition position of the picture has shifted.

(3) When the transition type is set to NAM in the Split Fader Enable, and the Transition operation is performed, the Transition operation is not correct.

◇ In case of the Standard mode:

First, set the Key to ON by the Fader lever with the Split Fader Enable. Then, select Bkgd as the next transition, and select NAM as the transition type. The Key Tally is turned off when the NAM is selected, and the state is established in which both of Bkgd and Key are being selected.

◇ In case of the Multi PGM mode and the Multi PGM 2 mode:

When the Fader Levers A and B are used to set the A/B Bus gain to 0% while the Key has been set to ON with Split Fader Enable, the Key Tally is turned off regardless of the fact that the Key is turned OFF on the screen.

(4) When the following menus are selected: Menu 7331 Eng Setup > Swer > Config menu, while the <<Fader Curve>> group button [Adv Tally Mode] is being selected by the Menu 7334.2 Eng Setup > Swer > Transition > Transition Curve menu, and if Key is has been selected as the Next Transition and the Common Fader Lever or the Common AutoTrans is executed, the switcher starts the following operations:

◇ In case of TransType = DME-Wipe;

- Key is turned OFF at transition. (Key cannot be turned ON.) - The Nor/Rev operations are disabled. (Fixed to Normal or to Reverse))

◇ In case of TransType = Wipe;

- The Nor/Rev operations are disabled. (Fixed to Normal or to Reverse))

(5) During the Multi Program 2 mode, the B-bus signal of BKGD DME Wipe becomes sometimes the Key source signal selecting DME.

(6) The DME Wipe that uses the second DME cannot be released sometimes.

(7) When FM Clip Cueup is specified as the GPI Input Action, the Rewind operation is executed instead of the Cueup operation.

(8) During the Multi Program 2 mode, the Resizer ON/OFF status could not follow normally when the Snapshot of the M/E Sub row is executed.

(9) When the GPI Link is set by using the menu of Menu 7336.5 Eng Setup > Swer > Link > GPI Link > GPI Link Adjust menu, the GPI Out did not function normally.

(10) The Adv Tally Mode could not be set to valid during the DME Wipe.

(11) The system has hung up sometimes when the file containing the setup data is loaded.

(12) When the register data of the Snapshot (Wipe/DME Wipe/Key Snapshot also) is swapped, the status could not be reproduced normally when Recall is executed.

(13) The message Reference Error is displayed on the menu when video format is switched.

(14) The system has hung up sometimes when the Snapshot that creates loop of input signal is called.

(15) The frame memory function did not function normally when the Snapshot in which Clip Event has been set is Recalled, and if the corresponding Clip did not exist.

(16) The frame memory function does not work normally if the Setup Load is executed with

the frame memory lock function is set to ON.

(17) The GPI Input Action Aspect of the M/E Sub row did not function.

(18) If a transition of the M/E Sub row is execute with the bus toggle OFF mode, the ancillary data of the M/E Main row is transitioned sometimes.

(19) The parallel tally output of the DME3V (SDI I/F) of the AUX bus or the DME Util2 bus (dedicated I/F) is not provided normally when the DME Wipe is used at the M/E Sub row.

(20) The Lines inside the Border is field-inverted when the Border V is set to the Resizer.

(21) When the GPI Action is set to the Key side (even numbered side) while using the frame memory clip in the Pair ON status, the system does not work normally.

1.4.2 DME Bugs Corrected

◆ Bugs that are corrected by MVE-8000A V7.21

(1) The Duallink Option License cannot be Activated normally.

◆ Bugs that are corrected by V7.20 (MVE-9000/8000A/BKDS-9470)

(1) When the slide type pattern is used, the border signal leaks into the top-most line and the bottom-most line.

(2) The Global Region has not functioned normally when the Keyframe is operated from the GPI Input.

(3) When the DME Keyframe that employs the Target Location is used as the User DME Wipe, the Position change does not work normally.

1.4.3 Panel/Menu Bugs Corrected

◆ Bugs that are corrected by Panel/Menu V7.21

(1) The DME Freeze effect "Film" Mode cannot be selected in the 1080Psf format.

(2) When the Macro register data that has been created by using the software of V7.20 or before is loaded, an error occurs and loading will not come to the end.

(3) The Wipe/DME Wipe Snapshot of the M/E Sub row cannot be executed normally in the Multi Program 2 mode.

(4) There exist some Timecode values that cannot be entered by the Macro Event which specifies Timecode.

(5) When the same pair signal is assigned to both of the XPT row of the Shift side and of the Un-Shift wide by the CCP-9000, the Shift side is displayed always in the Shift Hold Mode when XPT is selected.

(6) If recording is stopped by ALL STOP while monitoring either PVW (PARA) or PVW (MIX) in the BZS-8050, the signal at the end of a recording can be distorted to be out of synchronization. When recording is terminated by REC OFF as specified by the standard operating procedure, no problem will occur. (This remedial measure affects operations of the BZS－8050 (Plug In Editor).))

◆ Bugs that are corrected by Panel/Menu V7.20

(1) When the Button Tally has been set to System Tally and AUX has been set to High Tally, and if the AUX is used to select the Re-Entry button, the buttons of the M/E row do not go to High Tally.

(2) If the Dual BKGD BUS is used in the [S-Bus Description Name] mode, the NAME display shows the Shift-side on both of the two display lines.

(3) If the SETUP data that is created by the software of older versions is loaded upon completion of version upgrade in the MVS-8000A, the tallies of FM1 to FM8 light ON with C1 (PRIMARY 1). (Remedial measure that has been taken in PNL V7.10 was not sufficient.)

(4) When the SCU starts up with the already-set User Setup in the S-BUS related equipment, all of the AUX other than AUX1 that has been assigned to Output Assign, become IN1.

(5) When the Button Tally has been set to the System Tally, and the P/P row is set to high-tally, the AUX does not go to high-tally even when Output Assign is changed from P/P PGM to AUX.

(6) When DME of the SDI I/F is assigned to the Key that has been set to Key ON, all of the panel operations are disabled. Menu selection from touch panel is possible but control of switcher is disabled.

(7) Tally has sometimes stopped its operation when a specific setup is loaded.

(8) When the following menus are selected: Menu 7325.1 Eng Setup > Panel > Device Interface > GPI Input, there can be cases that the Clip Record for FM2 and higher does not function normally, or the subsequent panel operations become impossible

(9) The Rewind operation takes place when Cueup is set in the PNL/DCU GPI Input Action.

(10) If MACRO is executed after Delay has been set in Device Control Module or in Page5331 (Cueup&Play), the START/STOP TC that have already been set are deleted.

(11) The indicators of the DSK Fader module do not light ON when Key On/Off (Take) is executed in the Bug Toggle OFF mode.

(12) Loading of the VDCP File list fails sometimes in the Variable Length Mode. At the same time, loading cannot be executed normally if a filename contains a blank space.

(13) If VAR button is pressed during the Frame Memory Clip PLAY, the PLAY comes to STOP.

(14) If the Master Effect is Recalled by the Flexi Pad operation block, and if Rewind is executed, all regions including what are not registered in the Master have been selected.

(15) The GPI Output Port setups are sometimes not updated normally if the Setup Load is executed.

(16) FM executes the Clip Record in accordance with the Duration value that has been already set when executing Clip Recording of FM by the GPI operation from PNL.

(17) The Duration indication specification is different in the Menu and the Device Control Module.

(18) When the Button Tally is set as the System Tally, the CCR bus that has been assigned to the AUX module and the High Tally of frame memory bus do not turn ON normally.

(19) The M/E Utility 1/2 buses that are assigned to the AUX Module and the red Tally of the A/B bus of the M/E row are interlocked and turn ON at the same time.

(20) When the Current Work Register is blank in such cases as immediately after booting, the Macro Attach cannot be deleted.

(21) When the M/E Proc V/K is selected, red Tally of the M/E background turns ON sometimes.

(22) When using the Sideflag function, the Menu display becomes erroneous if Macro Attach is executed on the M/E Reentry button.

(23) While Macro is under execution, the Original Function of the button to which Macro Attach is executed by Macro Only starts working.

(24) When the DME Wipe 2 Stroke Pattern is selected, Tally turns OFF with the single stroke operation of the DME button of the Key Control Module.

(25) When the Master Effect Rewind/RUN is executed from the Flexi Pad, the Master button of the 10-key Module lights ON.

(26) When the Store button is turned ON in the 10-Key Module Master mode (with MASTER button pressed ON), and then the system exits the Master mode, the STORE button freezes.

(27) While using the AUX module in the RTR mode, if the Menu 7323.1: RTR Dest Shift Mode setup is changed with the Shift-side button being selected, all of the signal select operations afterward become erroneous.

(28) When the AUX Bus Override is applied on the GPI Input Action, the signals cannot be selected normally if the signal select operation is executed swiftly.

(29) During the Multi Program 2 mode, the red Tally of the B-bus of the M/E Sub row does not turn ON normally.

(30) The red Tally of the DME Ext V bus does not turn ON in the System Tally mode. (However, the red Tally of the User DME Wipe Pattern works normal.))

(31) When the Independent Key Transition mode is used by the Compact Key Transition Module, the Transition Rate at the OFF side is not displayed normally if the SHIFT button is pressed down.

(32) In the 1st KF Auto Insert Mode, the 1st KF was not Inserted normally at the first Keyframe editing after booting.

(33) When the Reentry signal is selected in the Key bus, the red Tally sometimes does not turn ON normally.

(34) When a Switcher is rebooted (Reset) from the Menu, the System Tally and the operations from the S-BUS do not work normally.

(35) Setups of the DME Wipe Edge Type have changed sometimes if the Menu1x64: DME Wipe Edge/Direction menu is displayed.

(36) Setup of the menu that is selected by Menu 7323.3: Engineering Setup > Panel > AUX Assign > RTR Mode Setting > Source Table Assign are changed sometimes to all "1". At the same time, the setting up can be performed in the order of the Source Numbers.

(37) When the Clip Event is set to the Snapshot, the orange bar indication is sometimes erroneous.

(38) When the MCRO button of the 10-Key Module is double-clicked, the jump operation to the corresponding Menu does not take place normally.

(39) When the Clip Event is set in Snapshot, the system enters the Auto Play OFF.

(40) When the SWR is booted after the PNL, the functions (such as Multi Program2 and FM Clip) that are supported after SWR V6.00 and higher cannot be set normally.

1.4.4 BZS-8050 Bugs Corrected

◆ Bugs that are corrected by BZS-8050 V6.00

(1) When the DME WIPE is selected by the switcher side, the system sometimes remains in the DME WIPE even when MIX or WIPE is executed.

(2) Even when the DMC EVEN is set to BKGD-B by the manual operation, it is not executed if duration of the edit has already been set.

(3) When entry of the next character becomes the new entry on the scratch pad, the new entry does not take place if a sign key or F/TC key is pressed before entering a numeral.

1.5. Related Technical Memos

■ Tech Bulletin 20-2008-185 "MVS-8000/DVS-9000 Series V7.20 Change of Button Sheet".

2. Parts Required for Version Upgrade

2.1. Application Software

The following application software are required for version upgrading.

Data are stored in the locations as described below:

MVS-8000G/GSF	/Application/SWR
MVS-8000A/ASF	/Application/SWR
DVS-9000/SF	/Application/SWR
MVE-8000A/9000/BKDS-9470	/Application/DME
MKS-8010/8010A/ CCP-9011/9011A/9012/9012A	/Application/PNL
MKS-8010/8010A/ CCP-9011/9011A/9012/9012A	/Application/MENU

* The software do not have model name because it is not the optional merchandise.

** Download the software from the specified FTP site.

Names of the respective application software are described below.

Software for MVS-8000G/GSF	Switcher software
Software for MVE-8000A/ASF	Switcher software
Software for DVS-9000/SF	Switcher software
Software for MVE-8000A	DME software
Software for MVE-9000	DME software
Software for BKDS-9470	DME software
Software for MKS-8010/8010A/ CCP-9011/9011A/9012/9012A Panel	Panel software
Software for MKS-8010/8010A/ CCP-9011/9011A/9012/9012A Menu	Menu software

2.2. FPGA Data for MVS-8000A/ASF and MVS-8000G/GSF

For the MVS-8000A/ASF and MVS-8000G/GSF, the FPGA data should be installed at the same time.

The following FPGA data are required for version upgrading.

Data are stored in the locations as described below:

FPGA Data V2.10 MVS-8000A/ASF	/SWR_FPGA
FPGA Data V1.20 for MVS-8000G/GSF	/SWR_FPGA_G

* The FPGA data do not have model names because they are not the optional merchandises.

** Download the FPGA data from the specified FTP site.

2.3 User's Guide

2.3.1. MVS-8000 System User's Guide

MVS-8000A/ASF System

   For operations from the CCP-8000/A

    MVS-8000_CCP8000 V7.20 Volume 1.pdf

    MVS-8000_CCP8000 V7.20 Volume 2.pdf

   For operations from the CCP-9000/A

    MVS-8000_CCP9000 V7.20 Volume 1.pdf

    MVS-8000_CCP9000 V7.20 Volume 2.pdf

DVS-9000/SF System

   For operations from the CCP-8000/A

    DVS-9000_CCP8000 V7.20 Volume 1.pdf

    DVS-9000_CCP8000 V7.20 Volume 2.pdf

   For operations from the CCP-9000/A

    DVS-9000_CCP9000 V7.20 Volume 1.pdf

    DVS-9000_CCP9000 V7.20 Volume 2.pdf

2.3.2. BZS-8050 V6.00 User's Guide

pie_ug_v600_e.pdf

3. Preparation before Starting Version Upgrading

3.1 Confirming the FPGA Data for MVS-8000A/ASF/G/GSF

For the MVS-8000A/ASF/G/GSF, the FPGA data must also be installed at the same time. If the FPGA data of the specified version is not installed, operations are not guaranteed.

Confirm the version number of the already installed FPGA data before starting the version upgrade.

When version number of the FPGA data matches the following list, the Upgrade package (Upgrade) can be used. If conditions that are required as shown in the following list, install the Full Package (Full) according to section **[4.5 Installation of the FPGA Data (MVS-8000A/ASF/G/GSF only)]** of these Release Notes.

(1) For MVS-8000A/ASF

FPGA data:	Version.
MVS8000A-FM-FPGA-1	V1.50
MVS8000A-FM-FPGA-2	V1.60
MVS8000A-OUTPROC-FPGA-1	V1.70
MVS8000A-OUTPROC-FPGA-2	V1.70
MVS8000A-CCR-FPGA-1	V2.03
MVS8000A-MVEIF-FPGA-1	V2.20
MVS8000A-xxx-FPGA-1	V2.00
MVS8000A-xxx-FPGA-2	V1.60
MVS8000A-xxx-FPGA-3	V1.90
MVS8000A-xxx-FPGA-4	V1.10
MVS8000A-xxx-FPGA-5	V1.60
MVS8000A-xxx-FPGA-6	V1.60
MVS8000A-xxx-FPGA-7	V1.90
MVS8000A-xxx-FPGA-8	V1.10

xxx: PP, ME1, ME2, ME3

(2) For MVS-8000G/GSF

FPGA data:	Version.
MVS8000G-MVEIF-FPGA-1	V1.00
MVS8000G-MVEIF-FPGA-2	V1.00
MVS8000G-MVEIF-FPGA-3	V1.00
MVS8000G-MY114-FPGA-1	V1.10
MVS8000G-MY114-FPGA-2	V1.10
MVS8000G-MY114-FPGA-3	V1.10
MVS8000G-XXX-FPGA-1	V1.10
MVS8000G-XXX-FPGA-2	V1.00
MVS8000G-XXX-FPGA-3	V1.10
MVS8000G-XXX-FPGA-4	V1.11
MVS8000G-XXX-FPGA-5	V1.20
MVS8000G-XXX-FPGA-6	V1.00
MVS8000G-XXX-FPGA-7	V1.00
MVS8000G-XXX-FPGA-8	V1.00
MVS8000G-XXX-FPGA-9	V1.10
MVS8000G-XXX-FPGA-10	V1.10
MVS8000G-XXX-SOLID	V1.00
MVS8000G-OUTPROC-FPGA-1	V1.20
MVS8000G-OUTPROC-FPGA-2	V1.21
MVS8000G-OUTPROC-FPGA-3	V1.10
MVS8000G-OUTPROC-FPGA-4	V1.10
MVS8000G-OUTPROC-FPGA-5	V1.10
MVS8000G-OUTPROC-FPGA-6	V1.00
MVS8000G-OUTPROC-FPGA-7	V1.00
MVS8000G-OUTPROC-FPGA-8	V1.00
MVS8000G-OUTPROC-FPGA-9	V1.00
MVS8000G-OUTPROC-FPGA-10	V1.00
MVS8000G-OUTPROC-FPGA-11	V1.00
MVS8000G-OUTPROC-FPGA-12	V1.00
MVS8000G-OUTPROC-FPGA-13	V1.00
MVS8000G-OUTPROC-FPGA-14	V1.00
MVS8000G-OUTPROC-FPGA-15	V1.00
MVS8000G-OUTPROC-FPGA-16	V1.00

xxx: PP, ME1, ME2, ME3

3.2 Confirmation of the Existing Software Version

Confirm the version numbers of the existing application software by following the steps described below;

(1) Press the following buttons in the order shown: ENG SETUP > System > Install/Unit Config to open the Install/Unit Config menu (Page 7316).

(2) Confirm that version numbers of the software of the respective equipment have already been upgraded to the version or higher versions as shown below or higher.

Device	Current Information
Menu	Version 5.00
PNL1	Version 5.00
SWR1	Version 5.00
DME1	Version 5.00
DCU1(MKS-8700)	Version 4.13
DCU1(MKS-2700)	Version 4.13

Note:

* Menu/PNL/SWR/DME

If the version of any equipment has not been upgraded to V5.00 or higher, upgrade them to V5.21 first. After they are upgraded, implement these Release Notes. For the procedure of upgrading versions to V5.21, refer to Technical Memo SWEM06-014R.

There can be cases that an error occurs during installation of the Panel software. Therefore, take a required measure by referring to Technical Memo SWEM06-025.

* DCU

If the version is not upgraded yet to V4.13, upgrade the version by referring to SWEM06-044R.

3.3. Copying the Application Software and FPGA Data (MVS-8000A/ASF/G/GSF only)

Download the software data from the specified FTP site, and copy the downloaded data to a memory card or to an USB storage device (to be referred to as "memory card" hereafter in these Release Notes").

Some files are compressed. Copy them as they are without uncompressing.

    Software: /Application/   (approx. 123 Mbytes)

    FPGA data: /SWR_FPGA/ (MVS-8000A/ASF) (approx. 38 Mbytes)

            /SWR_FPGA_G/ (MVS-8000G/GSF)   (approx. 71 Mbytes)

If all data cannot be copied in a single memory card due to the limited size of memory card, copy the software data and the FPGA data in the separate memory cards. Replace the memory cards as required in the following procedure.

3.4 Other Precautions

● Different software are provided for the respective models. Select the software that corresponds to the correct model when installing the software.

Especially, when either the software for the MVS-8000G/GSF system and for the MVS-8000A/ASF system is installed by mistake for the software for the DVS-9000/SF erroneously, the trouble such as "System does not start up" will occur. Be very careful not to make mistake in selecting the software types.

● Confirm that the switch No. 8 of the DIP switch (S101) on the CA board of the switcher is set to OFF.

4. Version Upgrade Procedure

Note: <u>Never turn off the power while the version upgrade is in progress unless otherwise specified</u>. Pay attention to it particularly when software installation is in progress. If the power is turned off during the installation, the equipment may not start up.

4.1 Saving the User Setup Data of the Switcher System

Save the User Setup data of the switcher system by using the procedure described below.

(1) Press the following buttons in the order shown: ENG SETUP > System > Start Up to open the Start Up menu (Page 7314).

(2) Select PNL1. Set the Start Up Mode to [Custom], and set the Setup and the Initial Status to [User].

(3) Establish the same setting as described above for SWR1 and DME1.

(4) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.
When step (4) is completed, the Start Up mode of Setup of Panel, Switcher and DME is switched to User.

(5) Press the [Initialize] button of the underneath Function key to display the "Initialize" menu (page7315).

(6) Select PNL1 and press the [Reset] button.

(7) Press the [Reset] button in SWR1 and DME1 in the same way.

(8) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.
The Panel, Switcher and DME restart by booting with the User Setup.

(9) Insert a memory card into the corresponding slot on the Control Panel.

(10) Press the [File] button, [All] button and [External File] button in this order to display the "File" menu (Menu 7161).

(11) Select [Memory Card] as the destination Device of Save, and select [Setup] and [Initial Status] as the data to be saved.

(12) Select the data such as [Snapshot] or [Effect] that you want to save, as required.

(13) Press the [Save] button, and then press "Yes" in reply to the message prompting your confirmation.

(14) When saving is complete, remove the memory card.

* There can be a case that the flash memory card cannot be recognized so that an error is issued after the above step (12) is executed. In such a case, open the Maintenance page by clicking ENG SETUP > System > Maintenance in this order. Then press the [Refresh] button and select the recognized memory card. Finally press the [Set Primary] button. Upon completion of the above steps, repeat the above steps starting from step (9). If a flash

memory card cannot be recognized in the procedures shown below, try the above-described procedure whenever needed.

4.2 Installing the Menu and Panel Software, and Re-Setting the Network Configuration

There can be cases that an error occurs during installation of the Panel software. Therefore, take a required measure by referring to Technical Memo SWEM06-025.

(1) Press the following buttons in the order shown: ENG SETUP > System > Start Up to open the Start Up menu (Page 7314).

(2) Move the cursor to PNL1 and, press [Custom] of Start Up Mode and press [Factory] of Setup, and then [Factory] of Initial Status in this order.

(3) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.
When the above operations are complete, set the Start Up mode of Setup and that of Initial Status to "Factory".

(4) Insert a compact flash memory card in which the application software is copied, into the memory card adaptor.

(5) Press the following buttons in the order shown: ENG SETUP > System > Install to open the Install menu (Page 7316).

(6) Press the [Install] button to show the equipment list and list of software that can be installed. Then, select Menu from the equipment list.
Move the cursor to the software file that you want to install among the following software in accordance with the type of Panel that is the target of version upgrade, and press the [Set] button to turn it ON.

  - To upgrade MKS-8010/CCP-9000 to V7.21 (or to V7.20):
    : MENU CPU (for upgrade from V1.30 or later)
    : MKS8010/CCP9000 PNL CTRL *Upgrade
  - To upgrade MKS-8010A/CCP-9000A to V7.21:
    : MENU CPU MKS8010A (for full install)
    : MKS8010A/CCP9000A PNL CTRL *Upgrade*

(7) Press the [Exec] button, and then "Yes" in reply to the message prompting your confirmation.

(8) File transfer begins. If the message indicating completion of file transfer appears, press "OK".

(9) Press the Menu number indicating block in the top left of the menu screen to display the Menu number entry pop-up screen.

(10) Enter "9999" to display the Engineering Menu.

(11) Press the [Reboot Panel] button to reboot the control panel.

 * There can be cases that an error occurs even though it occurs very rarely, during installation

of the Panel application software. In such a case, re-boot the Panel application software by the procedure described below, and re-install the software.

(1) Press the following buttons in the order shown: ENG SETUP > System > Initialize to display the Initialize menu (Menu 7315).

(2) Select PNL1 and press the [All Clear] button.

(3) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.

* When installation of the required software is complete, continue to execute the following operations.

(1) When the menu is displayed again, press the following buttons in the order shown: ENG SETUP > System > Network Config to open the Network Config menu (Page 7311).

(2) Press the [Auto Config] button, and then "Yes" in reply to a confirmation message.

(3) Confirm that all of the equipment that are connected in this system are displayed on the menu. Then press the [Define] button.

(4) When a message prompting your confirmation appears, press "Yes".

4.3 Installing the Switcher Software

(1) Insert a compact flash memory card in which the application software is copied, into the memory card adaptor.

(2) Press the following buttons in the order shown: ENG SETUP > System > Install to open the Install menu (Page 7316).

(3) Press the [Install] button to show the equipment list and list of software that can be installed. Then, select SWR from the equipment list.

(4) Move the cursor to the software file that you want to install among the following software in accordance with the type of software that is the target of version upgrade, and press the [Set] button to turn it ON.
(The displayed list does not necessarily contain all models because the switcher models are identified and the installable software are filtered before display.)
   - To upgrade MVS-8000G to V7.22: MVS8000G Proc. [V7.22] (for upgrade)
   - To upgrade MVS-8000GSF to V7.22: MVS8000GSF Proc. [V7.22] (for upgrade)
   - To upgrade MVS-8000A to V7.22: MVS8000A Proc. [V7.22] (for upgrade)
   - To upgrade MVS-8000ASF to V7.22: MVS8000ASF Proc. [V7.22] (for upgrade)
   - To update DVS-9000 to V7.22: DVS9000 Proc. [V7.22] (for NO FPGA)
   - To update DVS-9000SF to V7.22: DVS9000SF Proc. [V7.20] (for NO FPGA)

(5) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.

(6) File transfer begins. If the message indicating completion of file transfer appears, press "OK".

When installation of the software is complete, re-boot the system.

(7) Turn off the power of MVS/DVS and perform the following check works.
   Confirm that the DIP switch setting of the CPU-DT module of the CA board is set to the default setting when shipped from the factory (i.e., all switches are set to the OFF position).

(8) Turn on the power of the MVS/DVS to reboot the MVS/DVS.

There can be a case that the MVS/DVS does not start up normally at the first re-start upon completion of the version upgrade of MVS/DVS. In this case, execute All Clear using the DIP switch by referring to section "7. All Clear of the Switcher using the DIP Switch" of these Release Notes.

4.4 Installing the DME Software

(1) Insert a compact flash memory card in which the application software is copied, into the memory card adaptor.

(2) Press the following buttons in the order shown: ENG SETUP > System > Install to open the Install menu (Page 7316).

(3) Press the [Install] button to show the equipment list and list of software that can be installed. Then, select PNL from the equipment list.

(4) Move the cursor to the software file that you want to install among the following software in accordance with the type of software that is the target of version upgrade, and press the [Set] button to turn it ON.
   Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.
      * For upgrading the version of MVE-8000A to V7.21: MVE-8000A [V7.21]
      * For upgrading the version of MVS-9000 to V7.20: MVE-9000 [V7.20]
      * For upgrading the version of BKDS-9470 to V7.20: BKDS-9470 [V7.20]

(5) File transfer begins. If the message indicating completion of file transfer appears, press "OK".

(6) Turn off the power of the MVE once and back on again to re-start the MVE. (In the case of the BKDS-9470, turn off the power of the DVS once and back on again to re-start the DVS.)

4.5. Installation of the FPGA Data (MVS-8000A/ASF/G/GSF only)

(1) Insert a memory card in which the FPGA data is copied, into the memory card adaptor.

(2) Press the following buttons in the order shown: ENG SETUP > System > Install to open the Install menu (Page 7316).

(3) Press the [Install] button to show the equipment list and list of software that can be installed. Then, select SWR from the equipment list.

(4) Move the cursor to the FPGA Data file that you want to install among the following FPGA

Data files in accordance with the type of FPGA Data that is the target of version upgrade, and press the [Set] button to turn it ON.

(The displayed list does not necessarily contain all models because the switcher models are identified and the installable software are filtered before display.)

- To install the FPGA data (Full) to the MVS-8000G: MVS8000G-FPGA Full
- To install the FPGA data (Upgrade) to the MVS-8000G: MVS8000G-FPGA (for upgrade)
- To install the FPGA data (Full) to the MVS-8000GSF: MVS8000GSF-FPGA Full
- To install the FPGA data (Upgrade) to the MVS-8000GSF: MVS8000GSF-FPGA (for upgrade)
- To install the FPGA data (Full) to the MVS-8000A: MVS8000A-FPGA Full
- To install the FPGA data (Upgrade) to the MVS-8000A: MVS8000A-FPGA Upgrade
- To install the FPGA data (Full) to the MVS-8000ASF: MVS8000ASF-FPGA Full
- To install the FPGA data (Upgrade) to the MVS-8000ASF: MVS8000ASF-FPGA Upgrade

(5) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.

(6) File transfer begins. If the message indicating completion of file transfer appears, press "OK".

When installation of the software is complete, re-boot the system.

(7) Turn off the power of the MVS once and back on again to reboot the MVS.

There can be a case that the MVS does not start up normally at the first re-start upon completion of the version upgrade of MVS. In this case, execute All Clear using the DIP switch by referring to section "7. All Clear of the Switcher using the DIP Switch" of these Release Notes.

4.6 Clearing Memory and Rebooting

(1) Press the following buttons in the order shown: ENG SETUP > System > Initialize to display the Initialize menu (Menu 7315).

(2) Select PNL1 and press the [All Clear] button.

(3) Press the [Al Clear] button in SWR1 and DME1 in the same way.

(4) Press the [Exec] button, and then press "Yes" in reply to the message prompting your confirmation.

4.7 Initializing Flash Memory

(1) Press the following buttons in the order shown: ENG SETUP > System > Start Up to open the Start Up menu (Page 7314).

(2) Move the cursor to PNL1 and press the [Setup Define] button. When the message

prompting your confirmation appears, press "Yes".

(3) Press the [Initial Status Define] button, and then "Yes" in reply to the message prompting your confirmation.

(4) Execute [Setup Define] and [Initial Status Define] in SWR1 and DME1 in the same way.

4.8 Verifying the Installed Version

This completes the version upgrading. In order to make sure that the installation has ended with success, verify the version number of the installed software.

(1) Press the following buttons in the order shown: ENG SETUP > System > Install/Unit Config to open the Install menu (Page 7316).

(2) Confirm that the respective software are upgraded to the versions as described below on the menu.

Device	Current Information
Menu (For MKS-8010/CCP-9000)	Version 7.21 (Jul.10.2008 11:35)
(For MKS-8010A/CCP-9000A)	Version 7.21 (Jul.10.2008 11:59)
PNL1	Version 7.21 (Jul.11.2008 12:00)
SWR1	Version 7.22 (Jul.17.2008 10:01)
DME1 (For MVE-8000A)	Version 7.21 (May.28.2008 20:07)
(For MVE-9000)	Version 7.20 (May.13.2008 12:59)
(For BKDS-9470)	Version 7.20 (May.13.2008 13:27)

* The time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

** The version numbers that are displayed here, are the version numbers of the application software of the respective equipment. If the correct version numbers are displayed on the menu, it indicates that the installation has ended with success. However for your confirmation, check the detailed information of the respective software that are installed in each equipment using the procedure as shown below.

(3) Move the cursor to Menu and press the [Detail Information] button.

(4) Confirm that the respective software/firmware have already been upgraded to the versions shown.

(5) Verify the version numbers of the PNL1, SWR1 and DME1 software in the same way.
For details of the version information of the Menu V7.20, PNL V7.20, SWR V7.20/V7.21 and MVE-8000A V7.20, refer to [DetailInfo.txt] that is packed within the product.

Menu (For MKS-8010/CCP-9000)

Software/Firmware Name	Version
MKS8010-MENU-GUI	Version 7.21 (Jul.10.2008 11:35)
MKS8010-MENU-IF	Version 7.21 (Jul.10.2008 11:35)
MKS8010-MENU-FCV	Version 1.10 (May.13.2008 12:00)
MKS8010-MENU-KERNEL	Version 2.4.20#2 (Aug.30.2005 20:27)

For the MKS8010-MENU-KERNEL, check that the version number and data match with those shown in the above list exactly.

For other software, the time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

Menu (For MKS-8010A/CCP-9000A)

Software/Firmware Name	Version
MKS8010A-MENU-GUI	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-IF	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-FCV	Version 1.10 (May.13.2008 12:00)
MKS8010A-MENU-PIE[*1]	Version 6.00 (May.13.2008 12:01)
MKS8010A-MENU-GUI-RECOVERY	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-IF-RECOVERY	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-FCV-RECOVERY	Version 1.10 (May.13.2008 12:00)
MKS8010A-MENU-PIE-RECOVERY[*1]	Version 6.00 (May.13.2008 12:01)
MKS8010A-MENU-GUI-RESTORE	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-IF-RESTORE	Version 7.21 (Jul.10.2008 11:59)
MKS8010A-MENU-FCV-RESTORE	Version 1.10 (May.13.2008 12:00)
MKS8010A-MENU-PIE-RESTORE[*1]	Version 6.00 (May.13.2008 12:01)
MKS8010A-MENU-KERNEL	Version 2.4.20#1 (Jul.13.2005 08:08)

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

*1 It is displayed only when license of the Editing Control Software BZS-8050 is valid.

PNL1 (For MKS-8010/CCP-9000)

Software/Firmware Name	Version
MKS8010-CTRL-MAIN-BOOT	Version 1.11 (Aug.3.2007 23:38)
MKS8010-CTRL-MAIN-APP	Version 7.21 (Jul.11.2008 12:00)
MKS8010-CTRL-COMM1-BOOT	Version 1.3 (Mar.18.2003 22:10)
MKS8010-CTRL-COMM1-APP	Version 1.3 (Mar.18.2003 22:10)
MKS8010-CTRL-COMM2-BOOT	Version 1.3 (Mar.18.2003 22:10)
MKS8010-CTRL-COMM2-APP	Version 1.3 (Mar.18.2003 22:10)

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

For CCP-9000, the indication CCP-9000 is displayed instead of MKS-8010 in PNL1.

PNL1 (For
MKS-8010A/CCP-9000A)

Software/Firmware Name	Version
MKS8010A-CTRL-MAIN-BOOT[*1]	Version 1.32 (Aug.6.2007 08:19)
MKS8010A-CTRL-MAIN-APP	Version 7.21 (Jul.11.2008 12:00)
MKS8010A-CTRL-COMM1-BOOT	Version 1.10 (Jul.26.2005 14:37)
MKS8010A-CTRL-COMM1-APP	Version 2.03 (Jan.6.2005 14:49)
MKS8010A-CTRL-COMM2-BOOT	Version 1.10 (Jul.26.2005 14:37)

| MKS8010A-CTRL-COMM2-APP | Version 2.03 (Jan.6.2005 14:49) |

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

For CCP-9000A, the indication CCP-9000A is displayed instead of MKS-8010A in PNL1.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.

*1: If the CPU-DT is installed, it becomes Version1.31 (Jun.27.2006 21:03).

SWER (for MVS-8000G/GSF)

Software/Firmware Name	Version
MVS8000G-MAIN-BOOT-DT	Version 7.22 (Jul.17.2008 10:01)
MVS8000G-MAIN-APP-DT	Version 7.22 (Jul.17.2008 19:26)
MVS8000G-COMM1-BOOT	Version 1.3 (Mar.18.2003 22:10)
MVS8000G-COMM1-APP	Version 1.6 (Jul.26.2005 18:02)
MVS8000G-COMM2-BOOT-DT	Version 7.22 (Jul.17.2008 9:59)
MVS8000G-COMM2-APP–DT	Version 7.22 (Jul.17.2008 10:00)
MVS8000G-XPT-BOOT (*2)	Version 7.22 (Jul.17.2008 9:58)
MVS8000G-XPT-APP (*2)	Version 7.22 (Jul.17.2008 10:00)
MVS8000G-MY114-BOOT–DT	Version 7.22 (Jul.17.2008 10:01)
MVS8000G-MY114-APP–DT	Version 7.22 (Jul.17.2008 10:03)
MVS8000G-MVEIF-BOOT-DT (*2)	Version 7.22 (Jul.17.2008 9:58)
MVS8000G-MVEIF-APP-DT (*2)	Version 7.22 (Jul.17.2008 10:00)
MVS8000G-OUTPROC-BOOT–DT	Version 7.22 (Jul.17.2008 10:01)
MVS8000G-OUTPROC-APP–DT	Version 7.22 (Jul.17.2008 10:03)
MVS8000G-XXX-BOOT–DT (*1)	Version 7.22 (Jul.17.2008 10:01)
MVS8000G-XXX-APP–DT (*1)	Version 7.22 (Jul.17.2008 10:02)
MVS8000G-MVEIF-FPGA-1 (*2)	Version 1.00 (May 11.2007 16:54)
MVS8000G-MVEIF-FPGA-2 (*2)	Version 1.00 (May 11.2007 16:54)
MVS8000G-MVEIF-FPGA-3 (*2)	Version 1.00 (May 11.2007 16:55)
MVS8000G-MY114-FPGA-1 (*2)	Version 1.10 (May 13.2008 16:20)
MVS8000G-MY114-FPGA-2 (*2)	Version 1.10 (May 13.2008 20:38)
MVS8000G-MY114-FPGA-3 (*2)	Version 1.10 (May 13.2008 20:39)
MVS8000G-XXX-FPGA-1 (*1)	Version 1.10 (Aug.27.2007 15:38)
MVS8000G-XXX-FPGA-2 (*1)	Version 1.00 (May 10.2007 14:17)
MVS8000G-XXX-FPGA-3 (*1)	Version 1.10 (Aug.27.2007 15:35)
MVS8000G-XXX-FPGA-4 (*1)	Version 1.11 (Dec.05.2007 20:26)
MVS8000G-XXX-FPGA-5 (*1)	Version 1.20 (May 13.2008 19:23)
MVS8000G-XXX-FPGA-6 (*1)	Version 1.00 (May 08.2007 19:26)
MVS8000G-XXX-FPGA-7 (*1)	Version 1.00 (May 10.2007 14:18)
MVS8000G-XXX-FPGA-8 (*1)	Version 1.00 (May 08.2007 19:27)
MVS8000G-XXX-FPGA-9 (*1)	Version 1.10 (Aug.27.2007 15:45)
MVS8000G-XXX-FPGA-10 (*1)	Version 1.10 (Aug.27.2007 16:18)
MVS8000G-XXX-SOLID (*1)	Version 1.00 (Nov.21.2006 15:05)
MVS8000G-OUTPROC-FPGA-1	Version 1.20 (May 13.2008 19:12)
MVS8000G-OUTPROC-FPGA-2	Version 1.21 (Mar.04.2008 15:56)
MVS8000G-OUTPROC-FPGA-3	Version 1.11 (Jun.05.2007 19:37)
MVS8000G-OUTPROC-FPGA-4	Version 1.11 (Jun.06.2007 17:02)
MVS8000G-OUTPROC-FPGA-5	Version 1.11 (Jun.06.2007 17:02)

MVS8000G-OUTPROC-FPGA-6	Version 1.00 (May 09.2007 14:35)
MVS8000G-OUTPROC-FPGA-7	Version 1.00 (May 09.2007 14:35)
MVS8000G-OUTPROC-FPGA-8	Version 1.00 (May 09.2007 14:35)
MVS8000G-OUTPROC-FPGA-9	Version 1.00 (May 09.2007 14:35)
MVS8000G-OUTPROC-FPGA-10	Version 1.00 (May 09.2007 14:35)
MVS8000G-OUTPROC-FPGA-11	Version 1.00 (May 09.2007 14:36)
MVS8000G-OUTPROC-FPGA-12	Version 1.00 (May 09.2007 14:36)
MVS8000G-OUTPROC-FPGA-13	Version 1.00 (May 09.2007 14:36)
MVS8000G-OUTPROC-FPGA-14	Version 1.00 (May 09.2007 14:36)
MVS8000G-OUTPROC-FPGA-15	Version 1.00 (May 09.2007 14:36)
MVS8000G-OUTPROC-FPGA-16	Version 1.00 (May 09.2007 14:36)

*1: XXX: PP or ME1, ME2, ME3

*2: It is not displayed in MVS-8000GSF.

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

The above lists are the examples of display when all optional boards are installed in the MVS-8000G. If any optional board is not installed, information of the un-installed board will not be displayed.

SWER (for MVS-8000A/ASF)

Software/Firmware Name	Version
MVS8000A-MAIN-BOOT-DT	Version 7.22 (Jul.17.2008 10:01)
MVS8000A-MAIN-APP-DT	Version 7.22 (Jul.17.2008 19:26)
MVS8000A-COMM1-BOOT	Version 1.3 (Mar.18.2003 22:10)
MVS8000A-COMM1-APP	Version 1.6 (Jul.26.2005 18:02)
MVS8000A-COMM2-BOOT	Version 7.22 (Jul.17.2008 9:59)
MVS8000A-COMM2-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-XPT-BOOT	Version 7.22 (Jul.17.2008 9:58)
MVS8000A-XPT-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-FM-BOOT	Version 7.22 (Jul.17.2008 9:59)
MVS8000A-FM-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-MVEIF-BOOT	Version 7.22 (Jul.17.2008 9:58)
MVS8000A-MVEIF-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-OUTPROC-BOOT	Version 7.22 (Jul.17.2008 9:59)
MVS8000A-OUTPROC-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-XXX-BOOT	Version 7.22 (Jul.17.2008 9:59)
MVS8000A-XXX-APP	Version 7.22 (Jul.17.2008 10:00)
MVS8000A-CCR-BOOT	Version 7.22 (Jul.17.2008 9:59)
MVS8000A-CCR-APP	Version 7.22 (Jul.17.2008 10:01)
MVS8000A-FM-FPGA-1	Version 1.60(May 13.2008 16:19)
MVS8000A-FM-FPGA-2	Version 1.60(Jun.27.2006 19:19)
MVS8000A-OUTPROC- FPGA-1	Version 1.70(Aug.25.2006 15:31)
MVS8000A-OUTPROC- FPGA-2	Version 1.70(Aug.25.2006 15:31)
MVS8000A-CCR-FPGA-1	Version 2.03(Sep.04.2003 20:00)
MVS8000A-MVEIF- FPGA-1	Version 2.20(Apr.14.2005 21:23)

MVS8000A-XXX-FPGA-1	Version 2.00(Aug.31.2007 14:24)
MVS8000A-XXX-FPGA-2	Version 1.60(Jun.27.2006 19:17)
MVS8000A-XXX-FPGA-3	Version 1.90(Jun.07.2007 15:14)
MVS8000A-XXX-FPGA-4	Version 1.10(Oct.20.2004 09:32)
MVS8000A-XXX-FPGA-5	Version 1.60(Jun.27.2006 19:18)
MVS8000A-XXX-FPGA-6	Version 1.60(Jun.27.2006 19:17)
MVS8000A-XXX-FPGA-7	Version 1.90(Jun.07.2007 15:14)
MVS8000A-XXX-FPGA-8	Version 1.10(Oct.20.2004 09:32)

*: XXX: PP or ME1, ME2, ME3

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

The above lists are the example of display when all optional boards are installed in the MVS-8000A. If any optional board is not installed, information of the un-installed board will not be displayed.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.

SWER (for DVS-9000/SF software)

Software/Firmware Name	Version
DVS9000-MAIN-BOOT-DT	Version 7.22 (Jul.17.2008 10:01)
DVS9000-MAIN-APP-DT	Version 7.22 (Jul.17.2008 19:26)
DVS9000-COMM1-BOOT	Version 1.3 (Mar.18.2003 22:10)
DVS9000-COMM1-APP	Version 1.6 (Jul.26.2005 18:02)
DVS9000-COMM2-BOOT	Version 7.22 (Jul.17.2008 9:59)
DVS9000-COMM2-APP	Version 7.22 (Jul.17.2008 10:00)
DVS9000-XPT-BOOT	Version 7.22 (Jul.17.2008 9:59)
DVS9000-XPT-APP	Version 7.22 (Jul.17.2008 10:00)
DVS9000-OUTPROC-BOOT	Version 7.22 (Jul.17.2008 9:59)
DVS9000-OUTPROC-APP	Version 7.22 (Jul.17.2008 10:00)
DVS9000-OUTPROC-FPGA	Version 2.20 (Feb.16.2006 20:51)
DVS9000-FM-BOOT	Version 7.22 (Jul.17.2008 9:59)
DVS9000-FM-APP	Version 7.22 (Jul.17.2008 10:01)
DVS9000-FM-FPGA	Version 2.20 (Feb.16.2006 20:53)
DVS9000-XXX-BOOT	Version 7.22 (Jul.17.2008 9:59)
DVS9000-XXX-APP	Version 7.22 (Jul.17.2008 10:00)
DVS9000-XXX-FPGA-1(*1)	Version 3.20 (Feb.16.2006 20:55)
DVS9000-XXX-FPGA-2(*2)	Version 4.30 (Oct.10.2007 18:41)
DVS9000-XXX-FPGA-3(*3)	Version 5.20 (Feb.16.2006 20:58)
DVS9000-XXX-FPGA-4(*3)	Version 5.02 (Oct.31.2005 16:00)
DVS9000-XXX-SOLID	Version 1.00 (Jul.10.2001 13:52)

*: XXX: PP or ME1, ME2, ME3

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

The above lists are the example of display when all optional boards are installed in the DVS-9000. If any optional board is not installed, information of the un-installed board will not be displayed.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.
(*1) In the case when the MIX-46 board suffix is –11.
(*2) In the case when the MIX-46 board suffix is –12.
(*3) In the case when the MIX-46 board suffix is –16.

DME (For MVE-8000A)

Software/Firmware Name	Version
MVE-8000A-MAIN-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-MAIN-APP	Version 7.21 (May.28.2008 20:07)
MVE-8000A-COMM1-BOOT	Version 2.81 (May.28.2008 20:03)
MVE-8000A-COMM1-APP	Version 7.21 (May.28.2008 20:04)
MVE-8000A-COMM2-BOOT	Version 2.81 (May.28.2008 20:05)
MVE-8000A-COMM2-APP	Version 7.21 (May.28.2008 20:05)
MVE-8000A-VIF-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-VIF-APP	Version 7.21 (May.28.2008 20:00)
MVE-8000A-DVP1-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-DVP1-APP	Version 7.21 (May.28.2008 20:00)
MVE-8000A-DVP2-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-DVP2-APP	Version 7.21 (May.28.2008 20:00)
MVE-8000A-DVP3-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-DVP3-APP	Version 7.21 (May.28.2008 20:00)
MVE-8000A-DVP4-BOOT	Version 2.81 (May.28.2008 20:01)
MVE-8000A-DVP4-APP	Version 7.21 (May.28.2008 20:00)

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

The above list is the example of display when all optional boards are installed in the MVE-8000A. If DVP board is not installed, information of the DVP board will not be displayed.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.

DME (For MVE-9000)

Software/Firmware Name	Version
MVE9000-MAIN-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-MAIN-APP	Version 7.20 (May.13.2008 12:59)
MVE9000-COMM1-BOOT	Version 2.90 (May.13.2008 12:55)

MVE9000-COMM1-APP	Version 7.20 (May.13.2008 12:55)
MVE9000-COMM2-BOOT	Version 2.90 (May.13.2008 12:57)
MVE9000-COMM2-APP	Version 7.20 (May.13.2008 12:57)
MVE9000-VIF-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-VIF-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP1-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP1-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP2-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP2-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP3-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP3-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP4-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP4-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP5-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP5-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP6-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP6-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP7-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP7-APP	Version 7.20 (May.13.2008 12:52)
MVE9000-DVP8-BOOT	Version 2.90 (May.13.2008 12:53)
MVE9000-DVP8-APP	Version 7.20 (May.13.2008 12:52)

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

The above list is the example of display when all optional boards are installed in the MVE-9000. If DVP board is not installed, information of the DVP board will not be displayed. Because the two types of software are required for a single DVP board, the software up to DVP-8 can be used when the four DVP boards are used.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.

DME (For BKDS-9470)

Software/Firmware Name	Version
BKDS9470-MAIN-BOOT	Version 2.70 (May.13.2008 13:21)
BKDS9470-MAIN-APP	Version 7.20 (May.13.2008 13:27)
BKDS9470-COMM1-BOOT	Version 2.70 (May.13.2008 13:24)
BKDS9470-COMM1-APP	Version 7.20 (May.13.2008 13:24)
BKDS9470-COMM2-BOOT	Version 2.70 (May.13.2008 13:25)
BKDS9470-COMM2-APP	Version 7.20 (May.13.2008 13:25)
BKDS9470-DVP1-BOOT	Version 2.70 (May.13.2008 13:22)
BKDS9470-DVP1-APP	Version 7.20 (May.13.2008 13:21)
BKDS9470-DVP2-BOOT	Version 2.70 (May.13.2008 13:22)
BKDS9470-DVP2-APP	Version 7.20 (May.13.2008 13:21)

Time and data that are displayed on the menu can be different from the above list. The time and date differences create no problem as far as the version number is correct.

When the CPU-DT is installed as the CPU Module, -DT is added at the end of the software name.

4.9. Loading the User Setup Data of the Switcher System, and Writing It in Flash Memory

(1) 0Insert a memory card in which the User Setup Data is copied in step 4.1, into the memory card slot of the Control Panel.

(2) Press the [File] button, [All] button and [External File] button in this order to display the "File" menu (Menu 7161).

(3) Select [Memory Card] as the Device in which data is saved, and select [Setup] and [Initial Status] as the data to be loaded. If there is any other data that have been saved beforehand, press the corresponding buttons and select them.

(4) Press the [Load] button and then press "Yes" in reply to the message prompting your confirmation.

(5) When loading is complete, remove the memory card.
=> The Initial Status data is written in a flash memory in this step.

(6) Press the following buttons in the order shown: ENG SETUP > System > Start Up to open the Start Up menu (Page 7314).

(7) Move the cursor to PNL1 and press the [Setup Define] button. When the message prompting your confirmation appears, press "Yes".

(8) Execute [Setup Define] in both of SWR1 and DME1.

5. Compatibility with Previous Versions

・BZS-8050

The EDL, the Setup File and the Initialize File of the old version can be used in this version too. Using the files of the old versions will not create any compatibility problem.

If an EDL that has been used in the older versions before BZS-8050 V2.01 exists, the EDL will be replaced by the EDL having the name "DEFAULT" in the "DEFAULT" project.

However, the EDL that is created by this version cannot be used in the versions before V5.01.

・Downward compatibility (MVS-8000/8000SF)

Even when the data which are saved by the versions MVS-8000A/ASF, MVS-8000G/GSF and DVS-9000 V7.10 or higher is loaded into the system of MVS-8000/SF V5.42 and higher, any problem does not occur because the downward compatibility is supported.

However, when loading such data, the Menu software V7.10 is required.

In addition, in order to enable the data compatibility function, select the following menus in this order: Menu 7316.8 Eng Setup > System > Install/Unit Config > Unit Config menu, and set [File Auto Convert] to ON.

The following data are supported by the data compatibility function.

- Setup (FC Setup alone is not supported.)
- Initial Status
- Key Memory
- Video Proc Memory
- Effect
- Snapshot
- Wipe Snapshot
- DME Snapshot
- Key Snapshot

6. Description on the Recovery Data (MKS-8010A and CCP-901xA only)

When the internal HDD is replaced with the new HDD or when the recovery data that has been stored in the HDD beforehand has been damaged due to any reason, the error message "Internal Error: Recovery HDD" is displayed
on the MENU PANEL. .. In such a case, re-setting of the recovery data becomes necessary.

The recovery data are different depending on the respective versions. The following recovery data is provided for V7.12.
RecoveryData/mks8010a-2.0.0-hdc4.tar.gz
RecoveryData/mks8010a-2.0.0-hdc4_patches.tar.gz

Download the desired from the specified FTP download site as required and use it.
For details of the recovery data, and for the installation procedure of the recovery data, refer to SWEM05-036 "Internal Error: The error message: Recovery HDD is displayed".

7. All Clear of the Switcher using the DIP Switch

There can be a case that the switcher does not start up normally at the first startup after version upgrade of the switcher. Perform All Clear using the DIP switch with the following procedure.

(1) Turn off the power.
(2) Remove the CA-44/54 board and set the switch No. 4 of the front panel DIP switch (S101) to ON, and return the CA-44/54 board back to the original position.
(3) Turn on the power.
(4) Progress of the processing is displayed on the 7-segment LED of the CA-44/54 board. (The count-down display is shown.)
(5) Indication of "—" is displayed on the 7-segment LED of the CA-44/54 board. (Processing ends.)
(6) Turn off the power.
(7) Remove the CA-44/54 board and set the switch No. 4 of the front panel DIP switch (S101)

to OFF, and return the CA-44/54 board back to the original position.

(8) Turn on the power.

8. Software Version History

8.1 MVS-8000 Series

Date:	MVS Non-A/A/G	PANEL Non-A/A	MENU Non-A/A	MVE-8000 Non-A/A	MVE-9000	DCU 8700 /2700
'01.08	V1.00	V1.01	V1.00	V1.00		V1.00
'01.12	V1.10	V1.10	V1.10	V1.11		V1.10
'02.04	V1.20	V1.20	V1.20	V1.20		V1.20
'02.05	V1.21	V1.21	V1.21	V1.21		↑
'02.08	V1.30	V1.30	V1.30	V1.30		V1.30
'02.09	V1.31	V1.31.1	V1.31	V1.31		V1.31
'02.11	V1.35	V1.35	V1.35	V1.35		↑
'03.01	V1.36	↑	↑	↑		↑
'03.03	V2.00	V2.00	V2.00	V2.00		V2.00
'03.04	V2.10	V2.10	V2.10	V2.01		V2.10
'03.05	V2.20.1	V2.20	V2.20	V2.20		↑
'03.06	V2.21	V2.21	V2.21	V2.21		↑
'03.06	↑	↑	↑	↑	V2.21	↑
'03.08	V2.22	V2.23	V2.22	V2.22	V2.22	↑
'03.10	V3.00	V3.00	V3.00	V3.00	V3.00	V3.00
'03.11	V3.01	V3.01	V3.01	↑	V3.01	↑
'04.02	V3.10	V3.10	V3.10	V3.10	V3.10	↑
'04.03	V3.11	↑	V3.11	↑	V3.11	↑
'04.03	↑	↑/V3.10	↑ /V3.11	↑	↑	↑
'04.06	V3.20	V3.20	V3.21	↑	↑	↑
'04.06	↑/V3.20	↑	↑	↑	↑	↑/V3.20
'04.07	V3.22	V3.22	V3.22	V3.22	V3.22	↑/↑
'04.07	↑	↑	↑	↑/V3.30	↑	↑/↑
'04.08	↑	↑	V3.40	↑/V3.40	↑	↑/↑
'04.08	V3.23	V3.23	↑	V3.23/↑	V3.23	↑/↑
'05.10	V3.25	↑	↑	↑	↑	↑/↑
'04.10	V4.00	V4.00	V4.00	V4.00	V4.00	↑/↑
'04.12	↑	↑/V4.10	↑/V4.10	↑	↑	V4.10
'05.01	V4.01	↑	↑	↑	↑	↑
'05.03	↑	V4.01/V4.11	V4.01/V4.11	↑	V4.02	↑/V4.11
'05.05	↑	↑/V4.12	↑	↑	↑	↑
'05.07	V4.21	↑/V4.20	V4.20	↑/V4.20	V4.20	↑
'05.09	↑	↑	↑	V4.02/V4.21	V4.21	↑
'05.09	V4.22	↑	↑	↑	↑	↑
'05.12	↑/V4.24	↑	↑	↑	↑	↑
'05.10	V5.00	V5.00	V5.00	V5.00	V5.00	↑
'05.10	↑	↑/V5.10	↑/V5.10	↑	↑	↑
'05.11	V5.01	↑	↑	↑	↑	↑
'06.02	V5.12	V5.12	V5.11	V5.12	V5.12	↑
'06.02	↑	↑/V5.20	↑/V5.20	↑	↑	↑
'06.03	V5.21	V5.21	V5.21	V5.21	V5.21	↑
'06.07	V5.31	V5.30	V5.30	V5.30	V5.30	↑

'06.09	V5.40	V5.40	V5.40	V5.40	V5.40	↑
'07.07	↑	V5.42	↑	↑	↑	↑
'07.03	V5.42	↑	↑	V5.42	V5.42	↑
'07.12	V5.43	V5.43	V5.41	V5.43	V5.43	↑
'06.12	↑ /V6.00	V6.10	V6.10	↑ /V6.00	V6.00	V4.13
'07.03	↑/V6.11	V6.11	V6.11	V5.42 /V6.11	V6.11	↑
'07.06	↑/↑	V6.13	↑	↑/↑	↑	↑
'07.06	↑/↑/V7.00	V7.00	V7.00	↑/↑	↑	↑
'07.09	↑/V7.10/V7.10	V7.10	V7.10	↑/V7.10	V7.10	↑
'07.11	↑/V7.11/V7.11	V7.11	V7.11	↑/↑	↑	↑
'08.04	↑/V7.12/V7.12	V7.12	V7.12	↑/V7.11	V7.11	↑
'08.05	**↑/V7.20/V7.20**	**V7.20**	**V7.20**	**↑/V7.20**	**V7.20**	↑
'08.06	**↑/V7.21/V7.21**	↑	↑	**↑/V7.21**	↑	↑
'08.07	**↑/V7.22/V7.21**	**V7.21**	**V7.21**	**↑/↑**	↑	↑

8.2 DVS-9000 Series

Date:	DVS	PANEL Non-A/A	MENU Non-A/A	BKDS-9470	MVE-9000/8000A	DCU 8700/2700
'02.09	V1.30	V1.30	V1.30	-		V1.30
'02.11	V1.35	V1.35	V1.35	-		V1.31
'02.12	↑	↑	↑	V1.36		↑
'03.01	V1.37	↑	↑	↑		↑
'03.03	V2.00	V2.00	V2.00	V1.40		V2.00
'03.04	V2.10	V2.10	V2.10	V1.41		V2.10
'03.05	V2.20.1	V2.20	V2.20	V1.42		↑
'03.06	V2.21	V2.21	V2.21	↑		↑
'03.06	↑	↑	↑	↑	V2.21/	↑
'03.08	V2.22	V2.23	V2.22	V1.43	V2.22/	↑
'03.10	V3.00	V3.00	V3.00	↑	V3.00/	V3.00
'03.11	↑	↑	↑	V3.01	↑	↑
'04.02	V3.10	V3.10	V3.10	↑	V3.10/	↑
'04.03	↑	↑	V3.11	↑	V3.11/	↑
'04.03	↑	↑/V3.10	↑/V3.11	↑	↑	↑
'04.06	V3.20	V3.20	V3.21	↑	↑	↑
'04.06	↑	↑	↑	↑	↑	↑/V3.20
'04.07	V3.22	V3.22	V3.22	↑	V3.22/	↑/↑
'04.08	↑	↑	↑	V3.10	↑	↑/↑
'04.08	↑	↑	V3.40	↑	↑/V3.40	↑/↑
'04.08	V3.23	V3.23	↑	↑	V3.23/ ↑	↑/↑
'05.10	V3.25	↑	↑	↑	↑	↑/↑
'04.10	V4.00	V4.00	V4.00	V4.00	V4.00/V4.00	↑/↑
'04.12	↑	↑/V4.10	↑/V4.10	↑	↑	V4.10
'05.01	V4.01	↑	↑	↑	↑	↑
'05.03	↑	V4.01/V4.11	V4.01/V4.11	V4.02	V4.02/↑	↑/V4.11
'05.05	↑	↑/V4.12	↑	↑	↑	↑
'05.07	V4.21	↑/V4.20	V4.20	V4.20	V4.20	↑
'05.09	↑	↑	↑	V4.21	V4.21	↑
'05.09	V4.22	↑	↑	↑	↑	↑
'05.10	V5.00	V5.00	V5.00	V5.00	V5.00	↑
'05.10	↑	↑/V5.10	↑/V5.10	↑	↑	↑
'05.11	V5.01	↑	↑	↑	↑	↑
'06.02	V5.12	V5.12	V5.11	V5.12	V5.12	↑
'06.02	↑	↑/V5.20	↑/V5.20	↑	↑	↑
'06.03	V5.21	V5.21	V5.21	V5.21	V5.21	↑
'06.07	V5.31	V5.30	V5.30	V5.30	V5.30	↑
'06.09	V5.40	V5.40	V5.40	V5.40	V5.40	↑
'07.03	V5.42	↑	↑	V5.42	V5.42	↑
'07.07	↑	V5.42	↑	↑	↑	↑
'07.12	V5.43	V5.43	V5.41	V5.43	V5.43	↑
'06.12	V6.00	V6.10	V6.10	V6.00	V6.00	V4.13
'07.03	V6.11	V6.11	V6.11	V6.11	V6.11	↑
'07.06	↑	V6.13	↑	↑	↑	↑

'07.09	V7.10	V7.10	V7.10	V7.10	V7.10	↑
'07.11	V7.11	V7.11	V7.11	↑	↑	↑
'08.04	V7.12	V7.12	V7.12	V7.11	V7.11	↑
'08.05	**V7.20**	**V7.20**	**V7.20**	**V7.20**	**V7.20**	↑
'08.06	**V7.21**	↑	↑	↑	**↑/V7.21**	↑
'08.07	**V7.22**	**V7.21**	**V7.21**	↑	**↑/↑**	↑

8.3. BZS-8050

Date	BZS-8050	MVS-8000/A/G/DVS-9000
'04.12	V1.00	V4.00/V4.00/-/V4.00
'05.03	V1.01	V4.01/V4.01/-/V4.01
'05.10	V1.11	V5.00/V5.00/-/V5.00
'06.02	V1.12	V5.12/V5.12/-/V5.12
'06.02	V2.00	↑/↑/-/↑
'06.03	V2.01	V5.21/V5.21/-/V5.21
'06.09	V3.00	V5.40/V5.40/-/V5.40
'06.12	V4.00	↑/V6.00/-/V6.00
'07.09	V5.00	V5.42/V7.10/V7.10/V7.10
'08.05	**V6.00**	**V5.43/V7.22/V7.22/V7.22**

8.4. MVS-8000A FPGA Data

Date:	FPGA	MVS-8000A
'04.06	V1.00	V3.20
'04.11	V1.10	V4.00
'05.02	V1.20	V4.01
'06.03	V1.30	V5.00
'06.02	V1.40	V5.12
'06.06	V1.50	V5.21
'06.08	V1.60	V5.31
'06.09	V1.70	V5.40
'07.06	V1.90	V6.11
'07.09	V2.00	V7.10
'07.11	↑	V7.11
'08.04	↑	V7.12
'08.05	**V2.10**	**V7.20**
'08.06	↑	**V7.21**
'08.07	↑	**V7.22**

8.5. MVS-8000G FPGA Data

Date:	FPGA	MVS-8000G
'07.06	V1.00	V7.00

'07.09	V1.10	V7.10
'07.11	↑	V7.11
'08.04	↑	V7.12
'08.05	**V1.20**	**V7.20**
'08.06	**V1.21**	**V7.21**
'08.07	**↑**	**V7.22**