FOR.A®
INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY

OPERATION MANUAL

UFM-30NR

Digital Noise Reducer

1st Edition – Rev. 1

(Version 1.00 or Higher)

FOR-A COMPANY LIMITED

Edition Revision History

Edit.	Rev.	Ver..	Date	Description	Section/Page
1	-	1.00	2013/04/10	First Edition	
1	1		2014/06/06	Added a note on UFM-30CTL control	P15

Precautions

Important Safety Warnings

[Power]

 Stop	**Do not** place or drop heavy or sharp-edged objects on power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check power cord for excessive wear or damage to avoid possible fire / electrical hazards.

[Circuitry Access]

 Stop	**Do not** touch any parts / circuitry with a high heat factor. Capacitors can retain enough electric charge to cause mild to serious shock, even after the power has been disconnected. Capacitors associated with the power supply are especially hazardous. Avoid contact with any capacitors.
 Hazard	Unit **should not** be operated or stored with cover, panels, and / or casing removed. Operating unit with circuitry exposed could result in electric shock / fire hazards or unit malfunction.

[Potential Hazards]

 Caution	If abnormal odors or noises are noticed coming from the unit, immediately turn the power off and disconnect the power cord to avoid potentially hazardous conditions. If problems similar to the above occur, contact an authorized service representative **before** attempting to operate the unit again.

[Consumables]

 Caution	Consumable items that are used in the unit must be periodically replaced. For further details on which parts are consumables and when they should be replaced, refer to the specifications at the end of the Operation Manual. Since the service life of consumables varies greatly depending on the environment in which they are used, such items should be replaced at an early date. For details on replacing consumable items, contact your dealer.

Upon Receipt

Unpacking

UFM-30NR module units and their accessories are fully inspected and adjusted prior to shipment. Operation can be performed immediately upon completing all required connections and operational settings.
Check your received items against the packing lists below. Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

ITEM	QTY	REMARKS
UFM-30NR	1 set	Front module x 1 Rear module x 1
CD-ROM	1	UFM Series User manuals (PDF

Table of Contents

1. Prior to Starting

1-1. Welcome

Congratulations! By purchasing a UFM-30NR Digital Noise Reducer you have entered the world of FOR-A and its many innovative products. Thank you for your patronage and we hope you will turn to FOR-A products again and again to satisfy your video and audio needs.
FOR-A provides a wide range of products, from basic support units to complex system controllers, which have been increasingly joined by products for computer video-based systems. Whatever your needs, talk to your FOR-A representative. We will do our best to be of continuing service to you.

The UFM-30NR is a modular, multi-format noise reducer designed to fit into FOR-A's UFM frames. It can accept HD/SD-SDI and Composite signals, select one of these signals and output the noise-reduced HD/SD-SDI signal.
The reducer removes the **low-light noise** that is present in video footage taken by monitoring cameras or night-vision cameras used for monitoring purposes. Effective for **Crime prevention** , s**cientific experimental recording** and **surveillance applications**.

◆ **Supported Video Formats**

Input Signal		Output Signal	
HD-SDI	1080/59.94i 1080/50i 720/59.94p 720/50p	HD-SDI	1080/59.94i 1080/50i 720/59.94p 720/50p
SD-SDI	525/60 625/50	SD-SDI	525/60 625/50
Composite	NTSC PAL	Composite (*2)	NTSC PAL

(*1)

(*1) Unable to up-, down-, cross or IP convert.
(*2) Composite output is used for video monitoring and menu display.

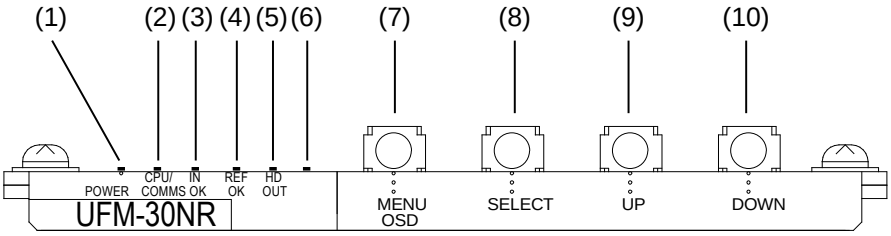
1-2. Features

- Supports HD/SD-SDI input/output and Composite input.
- HD/SD-SDI: 1 input, Composite: 1 input
- HD/SD-SDI: 3 outputs, Composite: 1 input (*1)
- SDI embedded audio pass-through: 8-channel (Group1 and 2)
- On-screen Display (OSD) installed: Allows menu display on analog composite monitor output screens.
- Built-in Frame Synchronizer and genlock to external devices using BB or Tri-level sync. (*2)
- Process Amp
- Recursive and Spatial filters separately adjustable
- Auto filtering mode
- Built-in Video Enhancer
- Vertical and horizontal independent enhancements
- Closed Caption pass-through
- Remote control and monitoring on web browsers via Ethernet (UFM-30CTL required) (*3)

(*1) Use the analog composite output only for monitoring purposes.
(*2) Video horizontal phase can be adjusted If Black Burst is used, but not sub-carrier phase. (H lock)
(*3) Support planned from Version 2.00

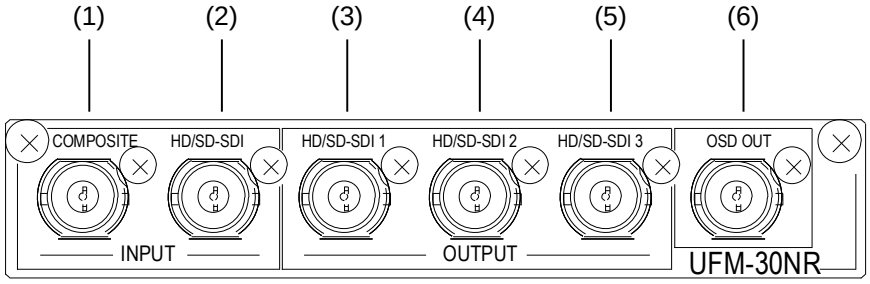
2. Panel Descriptions

2-1. Front Panel



No.	Name	Description
(1)	POWER LED	Power indication will light when power is applied to the unit.
(2)	CPU/COMMS LED	The indicator will light when an UFM-30CTL is installed on the same UFM frame.
(3)	IN OK LED	The indicator will light when a video signal is present.
(4)	REF OK LED	The indicator will light when a genlock signal is input to the UFM frame.
(5)	HD OUT LED	The indicator will light when HD-SDI signal output is present.
(6)	---	Not used. (Always unlit)
(7)	MENU OSD button	Used to change menu settings. (See section 4-2. Menu Operation.)
(8)	SELECT button	
(9)	UP button	
(10)	DOWN button	

2-2. Rear Panel

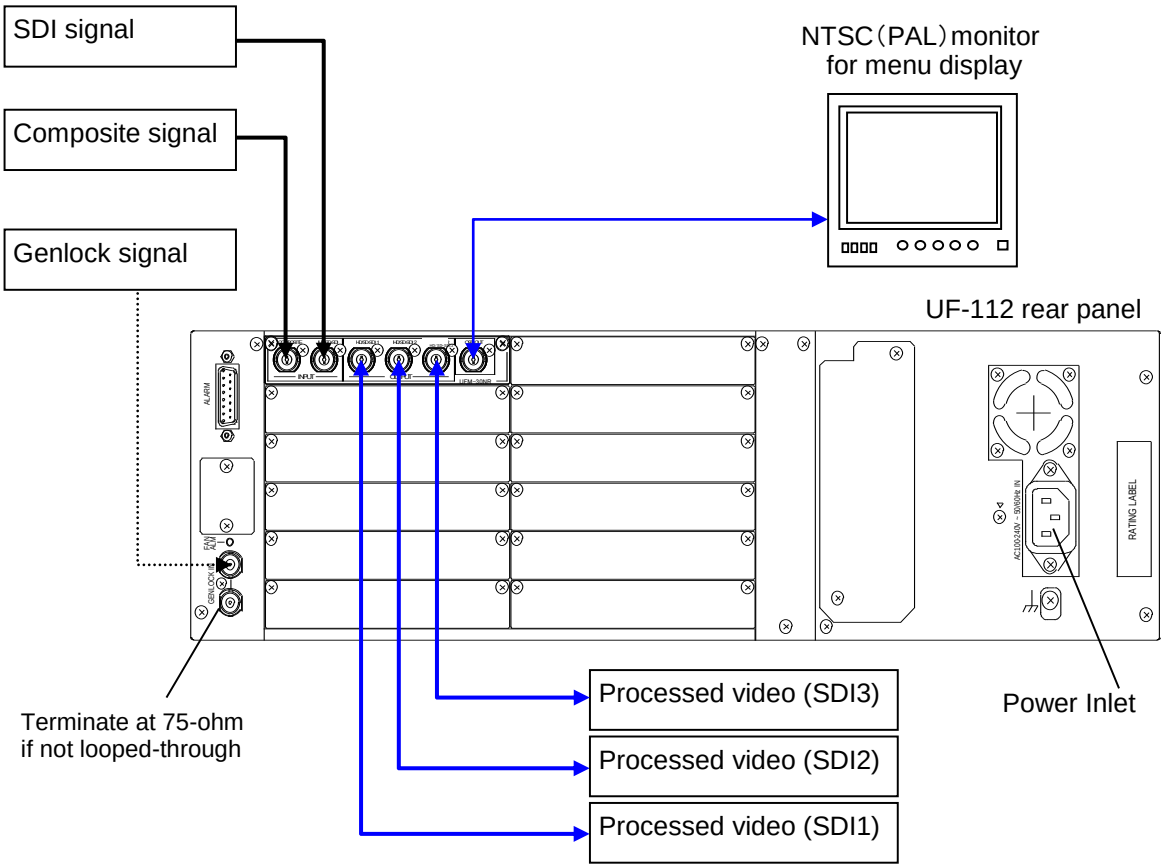


No.	Name		Description
(1)	INPUT	COMPOSITE	Used for composite video input.
(2)	INPUT	HD/SD-SDI	Used for HD/SD-SDI input.
(3)	OUTPUT	HD/SD-SDI 1	Used for HD/SD-SDI output.
(4)	OUTPUT	HD/SD-SDI 2	
(5)	OUTPUT	HD/SD-SDI 3	
(6)	OSD OUT		Used for composite video monitoring and menu display output. Refer to section 3-3. "Composite Monitor Setup" for details on monitor setup.

3. Connection and Setup

3-1. Connection

Refer to the figure below for details on connecting the UFM-30NR to other devices. Turn all power OFF before making any connections.



IMPORTANT
Although there are **two** video inputs, UFM-30NR modules can handle only **one** video stream. It can distribute the processed video signal from **4 ports** (HD/SD-SDI 1 to 3 and OSD OUT).(*1) If Black Burst is used as a reference, the video horizontal phase can be adjusted, but not the sub-carrier phase. (See section 5-3. "Output Menu.")

Tri-level Sync signals are also available for synchronizing HD-SDI inputs.

(*1) The OSD OUT port can always be used for menu displays and settings, but not for video output when an HD-SDI signal is processed.

3-2. Note on Composite Input

The following menu should be set manually for NTSC composite signals. The default setting is Off (0 IRE). See section 4-2 "Menu Operation" for details on menu settings.

Parameter	Setting	NTSC Setup Level
Input > NTSC setup	Off (default)	0 IRE (for Japan)
	On	7.5 IRE (for USA)

3-3. Composite Monitor Setup

Prepare a composite monitor for displaying and setting menus. Select the appropriate monitor type that matches the input signal format.

Monitor type	Input signal
NTSC monitor	Signals at 59.94 Hz (NTSC, 525/60, 720/59.94p, 1080/59.94i)
PAL monitor	Signals at 50 Hz (PAL, 625/50, 720/50p, 1080/50i)

Connect the NTSC or PAL monitor to the **OSD OUT** port on the UFM-30NR rear panel.

◆ Monitor Settings

According to your monitor type, set **OSD out** as shown in the table below:
See section 4-2. "Menu Operation" for details on menu settings.

Menu	Parameter	Monitor type	Setting
Output	OSD out	NTSC monitor (0 IRE)	**PAL/NTSC-J** (default)
		NTSC monitor (7.5 IRE)	**PAL/NTSC**
		PAL monitor	**PAL/NTSC** or **PAL/NTSC-J**

◆ Video Monitoring

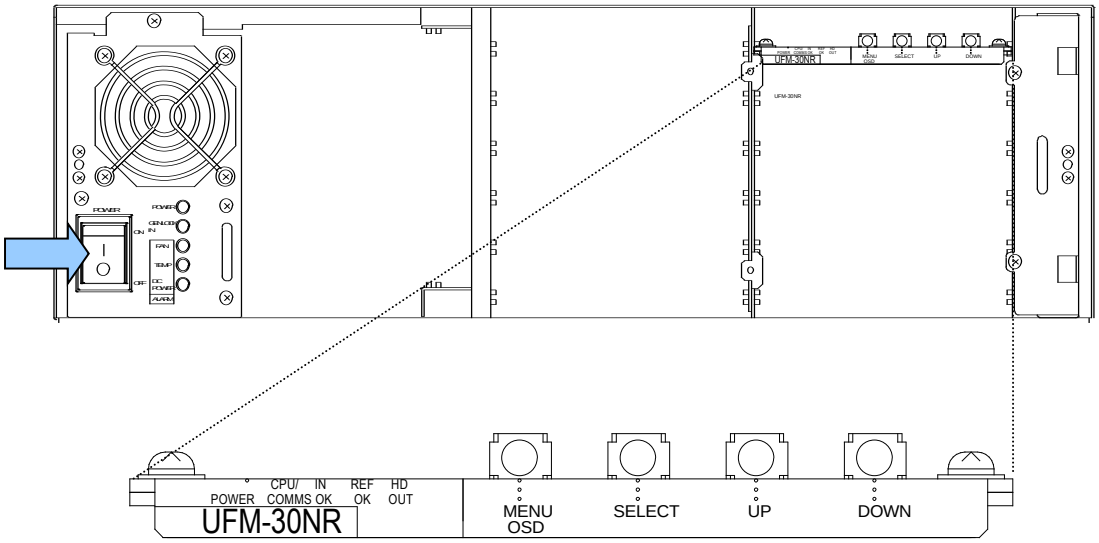
Live video monitoring is available through the OSD OUT port, if a **Composite or SD-SDI** signal is processed. Note that the output video is **not** phase-adjusted by the reference signal.

4. Operation

4-1. Power ON

Make sure all devices are properly connected, loosen and pull the screw knobs on both sides to open the front panel of the UFM frame and turn on the power switch(es).
If power, video and genlock signals are input, the **Power**, **INPUT** and **GENLOCK** indicators respectively light green.

UF-112 front inside

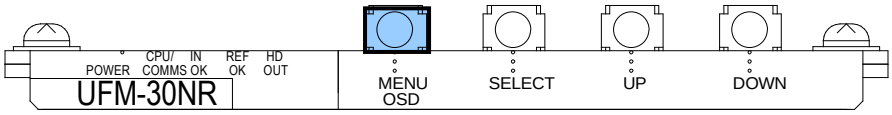


UFM-30NR front panel

4-2. Menu Operation

4-2-1. Displaying Menu Items

1) Connect your NTSC or PAL monitor to the UFM-30NR OSD OUT port.
2) Press [**MENU OSD**].

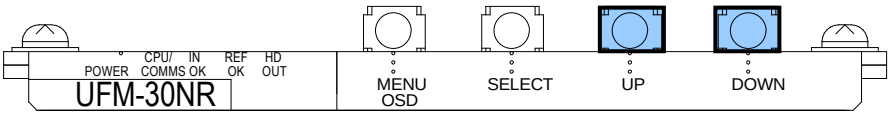


The menu will be displayed in the NTSC (PAL) monitor screen as shown below.

<Menu>
Status
Input
Output
Noise reduction
Enhancer
Memory

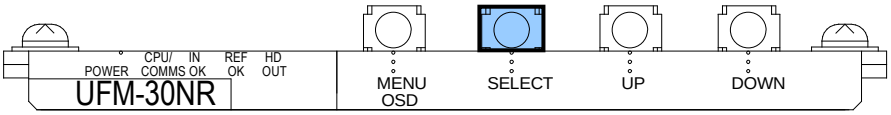
4-2-2. Displaying Current Status

1) Press [**UP**] or [**DOWN**] to move the cursor to **Status**.



<Menu>
Status
Input
Output
Noise reduction
Enhancer
Memory

2) Press [**SELECT**] to display the current status.



<Status>

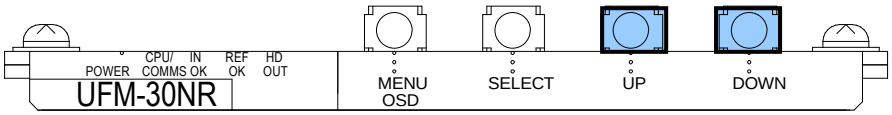
Input standard	1080i 59.94
Output standard	1080i 59.94
Reference	525i
Input	SDI
Code version	build XXX

The current input video, output video and, reference signal formats and other information are displayed. (See section 5-1. "Status Menu (Display Only).")

4-2-3. Changing Menu Settings

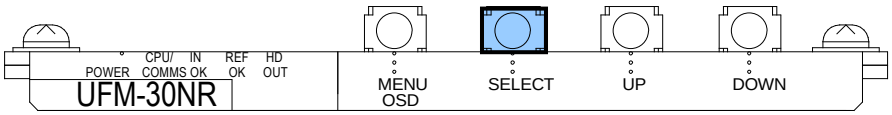
The following procedure explains how to change menu settings by changing **Input** from SDI to Composite as an example.

1) Press [**UP**] or [**DOWN**] in the <Menu> page to move the cursor to **Input**.

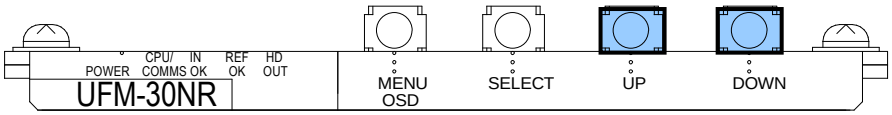


<Menu>
Status
Input
Output
Noise reduction
Enhancer
Memory

2) Press [**SELECT**] to display parameters.



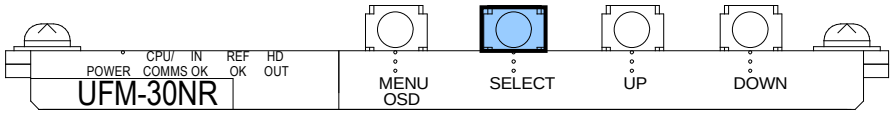
3) Press [**UP**] or [**DOWN**] to move the cursor to **Source**.



<Input>

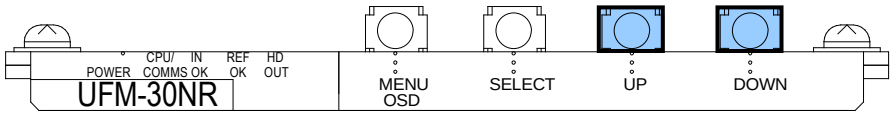
Source	SDI
Black level	0.0mV
Video level	0.0dB
Chroma level	0.0dB
NTSC setup	Off

4) Press [**SELECT**] to move the cursor to the right (SDI in this example).



<Input>
Source SDI
Black level 0.0mV
Video level 0.0dB
Chroma level 0.0dB
NTSC setup Off

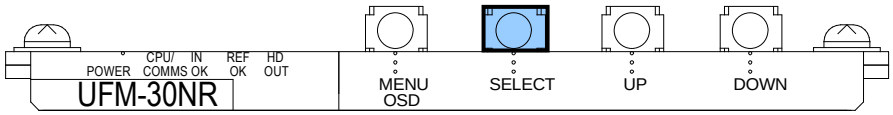
5) Press [**UP**] or [**DOWN**] to change from SDI to Composite.



<Input>
Source Composite
Black level 0.0mV
Video level 0.0dB
Chroma level 0.0dB
NTSC setup Off

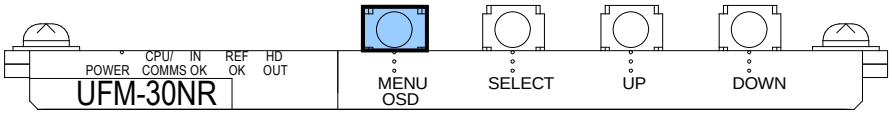
* Note that simultaneously pressing [**UP**] and [**DOWN**] returns each parameter to its default setting.

6) Press [**SELECT**] to confirm the change. The cursor will automatically return to the parameter (**Source**) position.



<Input>
Source Composite
Black level 0.0mV
Video level 0.0dB
Chroma level 0.0dB
NTSC setup Off

7) To return to the menu level, press [**MENU OSD**].



<Menu>
Status
Input
Output
Noise reduction
Enhancer
Memory

8) To close the menu display, press [**MENU OSD**] again.

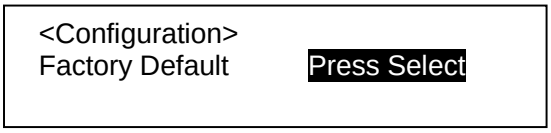
IMPORTANT
About **Auto Data Save**: UFM-30NR modules automatically save menu settings and always preserve the latest values. When menu settings are changed, wait **at least 5 seconds** before powering off. Otherwise, the latest menu settings may not be saved.

IMPORTANT
About **UFM-30CTL Remote Control**: UFM-30NR units can be controlled from the unit OSD menu and UFM-30CTL simultaneously. The same menu parameter, however, cannot be set at the same time. In such cases, the OSD menu has a higher priority than UFM-30CTL.

4-2-4. Returning Parameters to Default

1) Press [**MENU OSD**] to display the menu on the monitor screen.
2) Press [**MENU OSD**] again to close the menu display.
3) Press and hold [**DOWN**] at least 10 seconds.
4) With [**DOWN**] held down, press [**MENU OSD**] to display **Configuration** at the bottom of the menu list. Release [**DOWN**].
5) Use [**UP**] and [**DOWN**] to select **Configuration**, then press [**SELECT**] to display the Configuration parameters.

6) Select **Factory Default** in the Configuration menu, then press [**SELECT**]. After the cursor moves to **Press Select**, press [**SELECT**] again to perform the factory reset.



7) Press [**MENU OSD**] to close the Configuration menu.
8) Press [**MENU OSD**] again to close the menu display.

◆ **Returning Each Parameter To Its Default Value**

1) Align the cursor with a parameter value.
2) Simultaneously press [**UP**] and [**DOWN**] to return the parameter to its default setting.

5. Menu List

The UFM-30NR has six menus: **Status**, **Input**, **Output**, **Noise reduction**, **Enhancer**, and **Memory.**

5-1. Status Menu (Display Only)

Item	Display
Input standard	Displays the input video signal format.
Output standard	Displays the output video signal format.
Reference	Displays the format of the reference signal input to the UFM frame. * Displays the reference signal format regardless of use whenever it is present.
Input	Displays the input selection. (SDI or Composite)
Code version	Displays the UFM-30NR firmware version.

5-2. Input Menu

Parameter	Setting (Default in bold)	Description
Source	**SDI** Composite	Selects an input signal port to be processed. (HD/SD auto detection) **SDI:** Uses the HD/SD-SDI input. **Composite:** Uses the composite input.
Black level	-100 to +100mV **0.0mV**	Adjusts the black level in 0.8-mV steps.
Video level	-6.0 to +6.0dB **0.0dB**	Adjusts the video level in 0.2-dB steps.
Chroma level	-6.0 to +6.0dB **0.0dB**	Adjusts the chroma level in 0.2-dB steps.
NTSC setup	**Off** On	Selects the NTSC setup. **Off:** Uses the NTSC 0 IRE setup for the composite input. **On:** Uses the NTSC 7.5 IRE setup for the composite input.

5-3. Output Menu

Parameter	Setting (Default in bold)	Description
Genlock	Reference lock Input lock **Free run**	Selects the reference mode. **Reference lock:** Adjusts the input signal within one frame by using an external reference signal. If Black Burst is used, the video horizontal phase can be adjusted, but not the sub-carrier phase. (H lock) **Input lock:** Adjusts and outputs video in synchronized with the input video. **Free run:** Outputs video in free-running mode.
Genlock H phase (*1)	-1319 to +1319 **0 pixels**	Adjust the horizontal phase of the reference signal on a **per-pixel** basis when **Genlock** is set to Reference lock.
Genlock V phase (*1)	-563 to +562 **0 lines**	Adjust the vertical phase of the reference signal on a **per-line** basis when **Genlock** is set to Reference lock.
Test signal	**Off** Ramp Color bar Black	Outputs an internally-generated test signal. **Off:** Outputs the processed input video. **Ramp:** Outputs the Ramp signal. **Color bar:** Outputs the Color bar signal. **Black:** Outputs the Black signal.
OSD out	**PAL/NTSC-J** PAL/NTSC	Selects the OSD output signal format. **PAL/NTSC-J:** Uses Japanese NTSC with 0 IRE setup or PAL. **PAL/NTSC:** Uses North American NTSC with 7.5 setup or PAL.

(*1) Phase-adjustable range by genlock signals

The minimum adjustable ranges of all video formats are **-1319 to +1319 pixels** for H-phase and **-562 to +562 lines** for V-phase. The maximum adjustable ranges vary depending on the video format as shown in the table below. If setting values exceed these ranges, the limit values are applied.

Input video format	Genlock H Phase [pixels]	Genlock V Phase [lines]
NTSC	-858 to +858	-262 to +262
PAL	-864 to +864	-312 to +312
525/60	-858 to +858	-262 to +262
625/50i	-864 to +864	-312 to +312
1080/59.94i	-1100 to +1100	-562 to +562
1080/50i	-1319 to +1319	-562 to +562
720/59.94p	-825 to +825	-375 to +375
720/50p	-990 to +990	-375 to +375

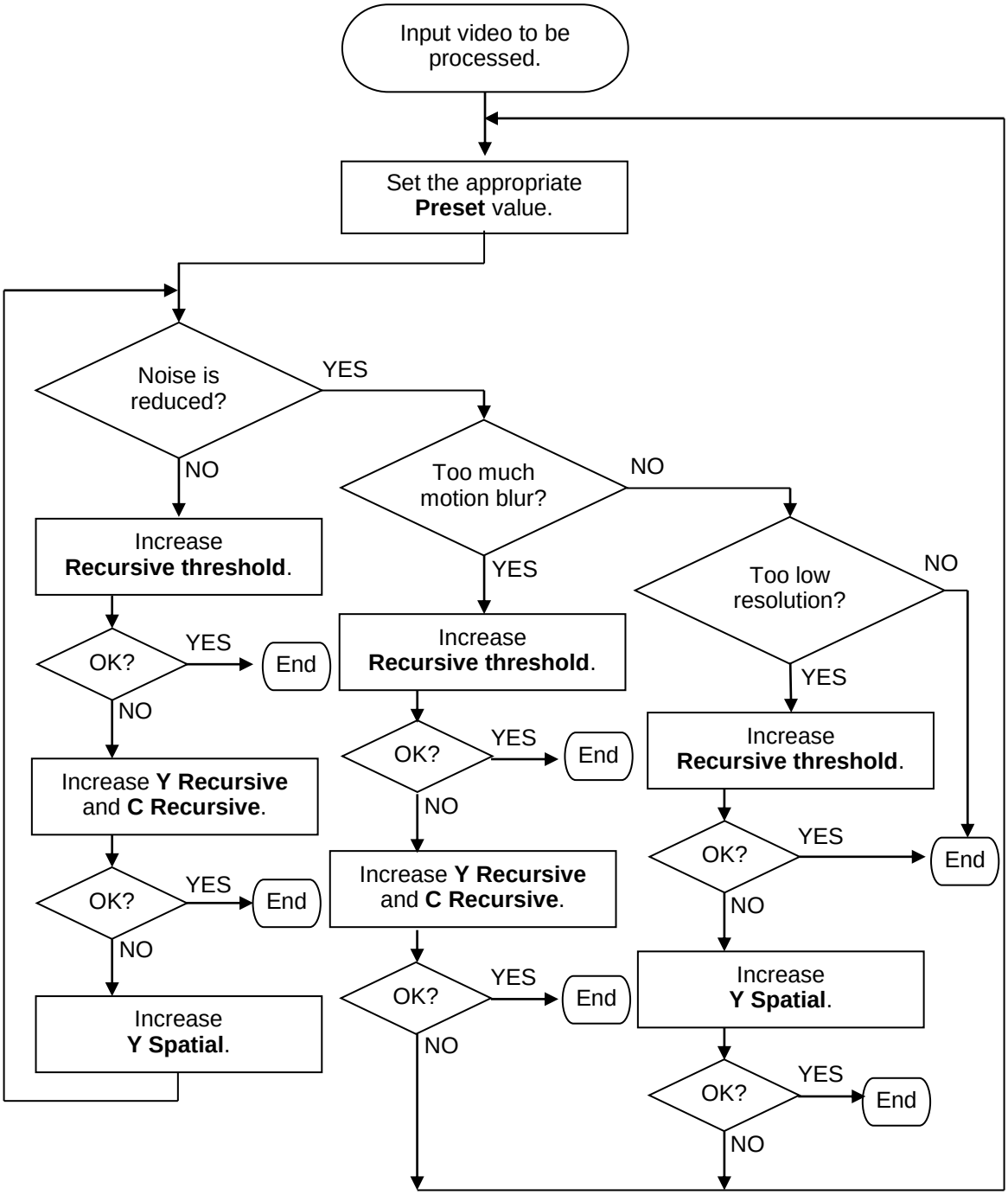
5-4. Noise Reduction Menu

Parameter	Setting (Default in bold)	Description
Preset (*1)	**Off** Low 2 to 15 High **-**	Sets the strength of the overall noise filter. **Off:** Performs no filtering. **Low** to **High:** The higher the value, the more noise reduction there is. **-:** Indicates any parameter **other than the Preset** is changed or adjusted.
Y Recursive (*2) C Recursive (*2)	**Off** Min 2 to 6 Max	Sets the strength of the temporal recursive filter. **Y Recursive** adjusts luminance and **C Recursive** adjusts chrominance components. **Off:** Performs no filtering. **Min** to **Max:** The higher the value, the more noise reduction there is.
Recursive threshold	**Auto** Min 2 to 7 Fixed	Sets the ratio of recursive-filtered regions against non-filtered regions of the output video. **Auto:** Automatically sets the ratio according to the strength of temporal noise. **Min** to **7:** The higher the value, the more filtered regions there are. **Fixed:** Processes all video regions using the recursive filter.
Y Spatial	**Off** Min 2 to 7 Max	Sets the strength of the spatial (luminance) filter. **Off:** Performs no filtering. **Min** to **Max:** The higher the value, the more noise reduction there is, but edge blurring and loss of details increase.
Spatial threshold	**Auto** Min 2 to 7 Fixed	Sets the ratio of spatially-filtered regions against non-filtered regions of the output video. **Auto:** Automatically sets the ratio according to the strength of spatial noise. **Min** to **7:** The higher the value, the more filtered regions there are. **Fixed:** Processes all video regions using the spatial filter.
Split screen	**Off** On	**Off:** Displays the filtered video in full screen mode. **On:** Displays the filtered video on the left side and the input video on the right side. * This is the same setting as **Split screen** in the **Enhancer** menu.

(*1) If the desired result can not be obtained by the **Preset** setting. See the next page and adjust other parameters.

(*2) If the recursive filter level is increased, noise levels are effectively reduced for still scenes, but ghost-like noise may become noticeable for moving objects.

◆ **Flowchart for Noise Reduction Settings**



5-5. Enhancer Menu

Parameter	Setting (Default in bold)	Description
H Enhance (*1)	Soft **Off** Sharp 1 Sharp 2 Sharp 3	Sets the horizontal enhancement level. **Soft:** Attenuates the High-frequency portion of the video signal. **Off:** Performs no enhancement processing. **Sharp 1** to **3:** The higher the value, the denser the High-frequency portion.
H Enhance bandwidth (*1)	Low 2 Low 1 **Normal** High 1 High 2	Sets the bandwidth to which the horizontal enhancer is applied. **Low 2** to **1:** Enhances Low- to Mid-frequency portion of the video signal. **Low 2** can enhance lower frequency portions than that of **Low 1**. **Normal:** Enhances Mid- to High-frequency portions of the video signal. **High 1** to **2:** Enhances High-frequency portions of the video signal. **High 2** can enhance higher frequency portions than that of **High 1**.
V Enhance (*1)	Soft **Off** Sharp 1 Sharp 2 Sharp 3	Sets the vertical enhancement level. **Soft:** Attenuates the High-frequency portion of the video signal. **Off:** Performs no enhancement processing. **Sharp 1** to **3:** The higher the value, the denser the High-frequency portion.
Enhance threshold	**Off** Min 2 3 4 5 6 Max	Adjusts the amount of enhancement. **Off:** Performs enhancement processing without adding extra overhead. **Min** to **Max:** The higher the value, the less overhead is added.
Split screen	**Off** On	**Off:** Displays the filtered video in full screen mode. **On:** Displays the filtered video on the left side and the input video on the right side. * This is the same setting as **Split screen** in the **Noise reduction** menu.

(*1) Enhancements only affect the luminance component of video signals.

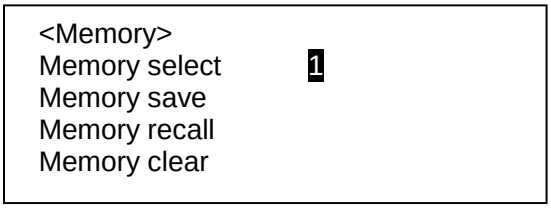
5-6. Memory Menu

Parameter	Setting (Default in bold)	Description
Memory select	**1** to 16	Selects the memory number.
Memory save	**Press Select**	Pressing [**SELECT**] with **Press Select** selected saves the current settings to the selected memory number.
Memory recall	**Press Select**	Pressing [**SELECT**] with **Press Select** selected loads the settings saved in the selected memory number.
Memory clear	**Press Select**	Pressing [**SELECT**] with **Press Select** selected clears the selected memory data.

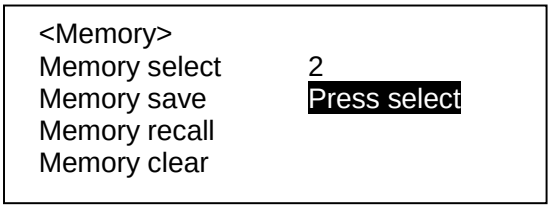
Ex.) Saving Settings to Memory 2

1) Press [**MENU OSD**].
2) Press [**DOWN**] several times to align the cursor with **Memory**.
3) Press [**SELECT**] to display the Memory parameters.

4) The cursor will position on **Memory select**. Press [**SELECT**] to move the cursor to the memory number (1 in this example).
5) Press [**DOWN**] to select **2**.
6) Press [**SELECT**] to confirm the change. The cursor will go back to **Memory select**.



7) Press [**DOWN**] to go to **Memory save**.
8) Press [**SELECT**] on **Memory save** to go to **Press Select**.
9) Press [**SELECT**] to save the current settings to No. 2.
   (To cancel the procedure, press [**MENU OSD**].)



IMPORTANT
About **Auto Data Save**: UFM-30NR modules automatically save menu settings and always preserve the latest values. When menu settings are changed, wait **at least 5 seconds** before powering off. Otherwise, the latest menu settings may not be saved.

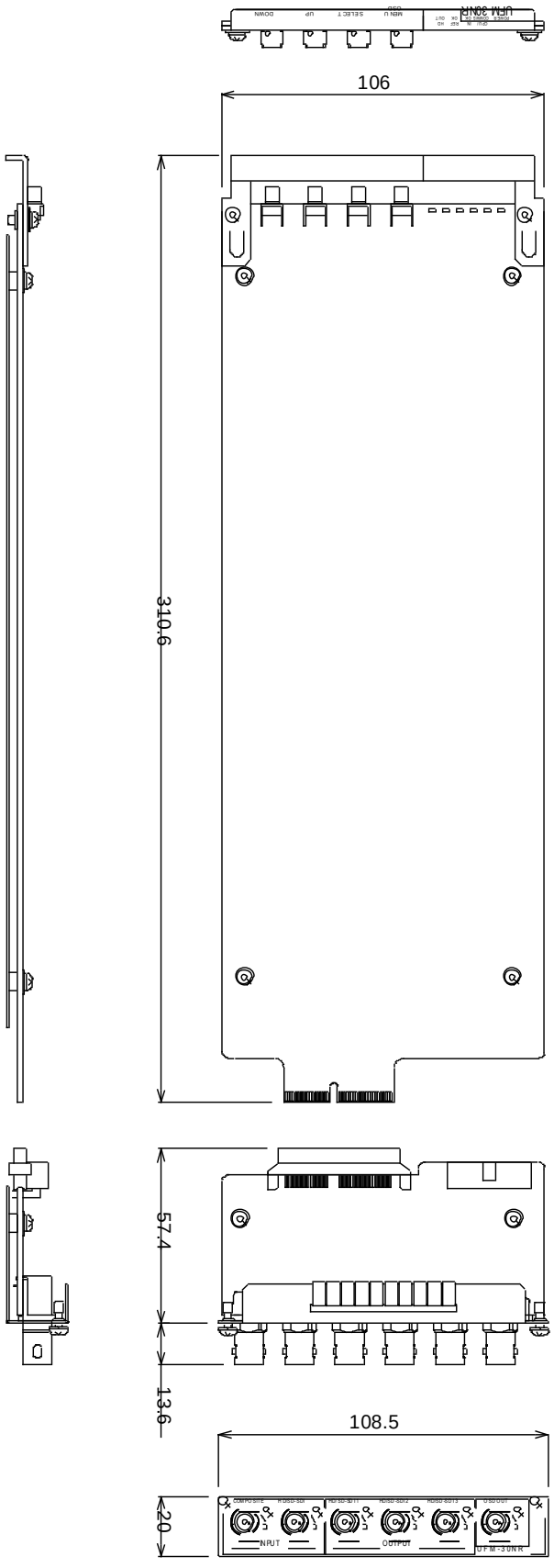
6. Specifications and Dimensions

6-1. Specifications

Video Formats	HD-SDI	1080/50i, 59.94i, 720/50p, 59.94p
	SD-SDI	525/60, 625/50
	Composite	NTSC, PAL
	Composite output is for video monitoring.	
Video I/O Processing	2 inputs > Single video processed < 3 distributed outputs	
Quantization	Y: 10-bit, C: 10-bit	
Sampling frequency	Y: 74.25 MHz, 74.25/1.001 MHz or 13.5 MHz C: 37.125 MHz, 37.125/1.001 MHz or 6.75 MHz	
Video input (SDI)	75Ω, BNC x 1	
	HD-SDI	1.5 Gbps
	SD-SDI	270 Mbps
Video input (Composite)	1.0 Vp-p, 75Ω, BNC x 1	
Video output (SDI)	75Ω, BNC x 3	
	HD-SDI	1.5 Gbps
	SD-SDI	270 Mbps
OSD output (Composite)	NTSC or PAL, 1.0Vp-p, 75Ω, BNC x 1 For video monitoring (Composite or SD-SDI input) and menu display	
Embedded audio pass-through	48 kHz, 8-ch (GROUP1-2)	
Genlock input	Tri-level sync (HDTV) 0.6 Vp-p or BB: 0.429 Vp-p (NTSC) or 0.45 Vp-p (PAL) (BB is used as Bi-level sync.) (supplied from the UFM frame)	
Sync mode	Reference lock, Input lock, Free run	
I/O delay	Reference lock mode	0 to 1 frame plus 200 µs
	Input lock mode	1 ms
	Free run mode	0 to 1 frame plus 200 µs
System Phase Adjustment	Reference lock mode (Tri-level sync or BB)	H phase: -1/2 H to +1/2 H V phase: -1/2 frame to +1/2 frame
Process Amp	Black Level	Unity: 0 mV ±100mV (in 0.8 mV steps)
	Video(Y) Level	Unity: 0 dB ±6dB (in 0.2dB steps)
	Chroma Level	Unity: 0 dB ±6dB (in 0.2dB steps)
	Setup Level (NTSC only)	0 IRE, 7.5 IRE
Temperature	0°C to 40°C	
Humidity	0% to 85% (no condensation)	
Power	+24V DC (supplied from the UFM frame)	
Power Consumption	Approx. 0.5 A	
Dimensions	Front module: 106(W) x 310.6(D) (mm)	
	Rear module: 108.5(W) x 71(D) x 20(H) (mm)	
Weight	Approx. 0.5 kg	
Required slot	1 slot	
Consumables	None	

6-2. External Dimensions

(All dimensions in mm.)



Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

2014/06/02 Printed in Japan

FOR.A®

FOR-A COMPANY LIMITED

Head Office	3-8-1 Ebisu, Shibuya-ku, Tokyo 150-0013, Japan
Overseas Division	Phone: +81(0)3-3446-3936, Fax: +81(0)3-3446-1470
Japan Branch Offices	Osaka/Okinawa/Fukuoka/Hiroshima/Nagoya/Sendai/Sapporo
R&D/Production	Sakura Center/Sapporo Center

FOR-A America Corporate Office
11155 Knott Ave., Suite G&H, Cypress, CA 90630, USA
Phone: +1-714-894-3311 Fax: +1-714-894-5399

FOR-A America East Coast Office
2 Executive Drive, Suite 670, Fort Lee Executive Park, Fort Lee, NJ 07024, USA
Phone: +1-201-944-1120 Fax : +1-201-944-1132

FOR-A America Distribution & Service Center
2400 N.E. Waldo Road, Gainesville, FL 32609, USA
Phone: +1-352-371-1505 Fax: +1-352-378-5320

FOR-A Corporation of Canada
346A Queen Street West, Toronto, Ontario M5V 2A2, Canada
Phone: +1-416-977-0343 Fax: +1-416-977-0657

FOR-A Latin America & the Caribbean
5200 Blue Lagoon Drive, Suite 760, Miami, FL 33126, USA
Phone: +1-305-931-1700 Fax: +1-305-264-7890

FOR-A UK Limited
UNIT C71, Barwell Business Park, Leatherhead Road, Chessington Surrey, KT9 2NY, UK
Phone: +44(0)20-8391-7979 Fax: +44(0)20-8391-7978

FOR-A Italia S.r.l.
Via Volturno 37, 20047 Brugherio MB, Italy
Phone: +39-039-881-086/103 Fax: +39-039-878-140

FOR-A Corporation of Korea
1007, 57-5,Yangsan-ro,Yeongdeungpo-gu, Seoul 150-103, Korea
Phone: +82(0)2-2637-0761 Fax: +82(0)2-2637-0760

FOR-A China Limited
708B Huateng Bldg., No. 302, 3 District, Jinsong, Chaoyang, Beijing 100021, China
Phone: +86(0)10-8721-6023 Fax: +86(0)10-8721-6033

FOR-A Middle East-Africa Office
Jebel Ali Free Zone, LOB-16, Office 619, P. O. Box: 261914 Dubai, UAE
Phone: +971 4 887 6712 Fax: +971 4 887 6713

http://www.for-a.com/