

# ASD24 Reference Generator

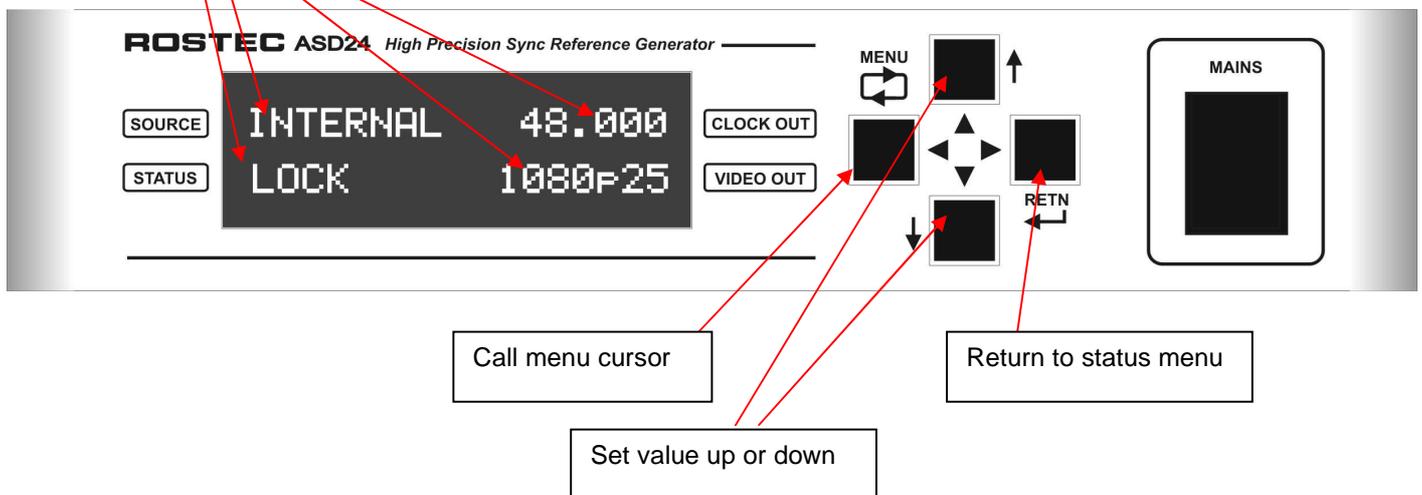


## ROSTEC ASD24 High Precision Sync Reference Generator

### Front panel quick guide

#### Status menu (default at power on):

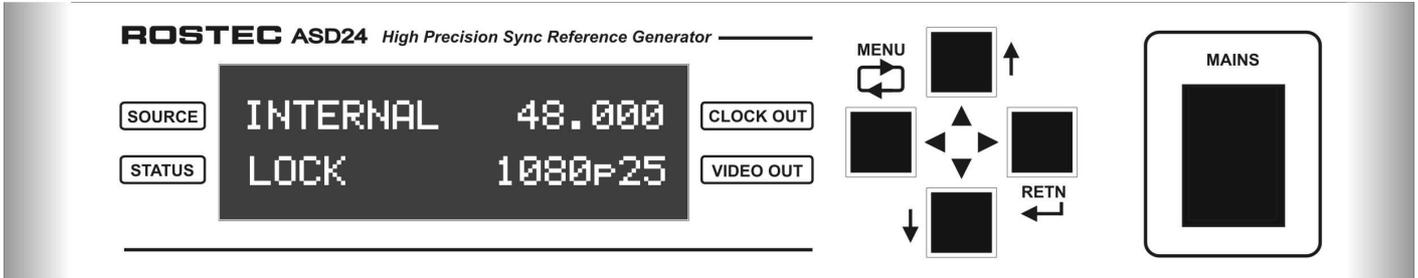
The operational **status** is displayed at the four corners of the display. The principle is “What You See Is What You Get”



# ASD24 Reference Generator

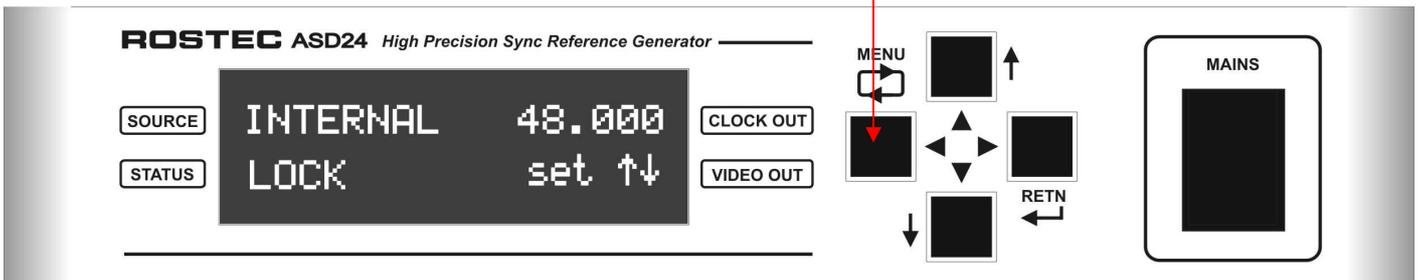
## How to change video parameter (example):

Step 1: For example, you start with this status menu:



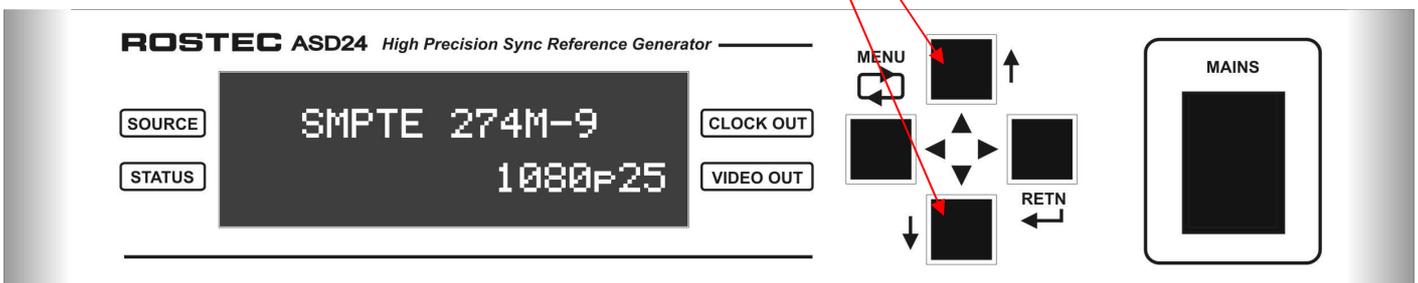
Step 2: Press the MENU button

Observe that the setting cursor appears. The arrows indicate that you now can change the value at the cursor position with the arrow buttons. Press MENU repeatedly to change the position of the cursor. If you don't wish to change anything, just press RETN to return to the status menu.



Step 3: Press one of the ARROW buttons. It doesn't matter which one.

Observe that the current parameter at the cursor position is displayed. Video standard and video format are shown. Everything else is blanked out.



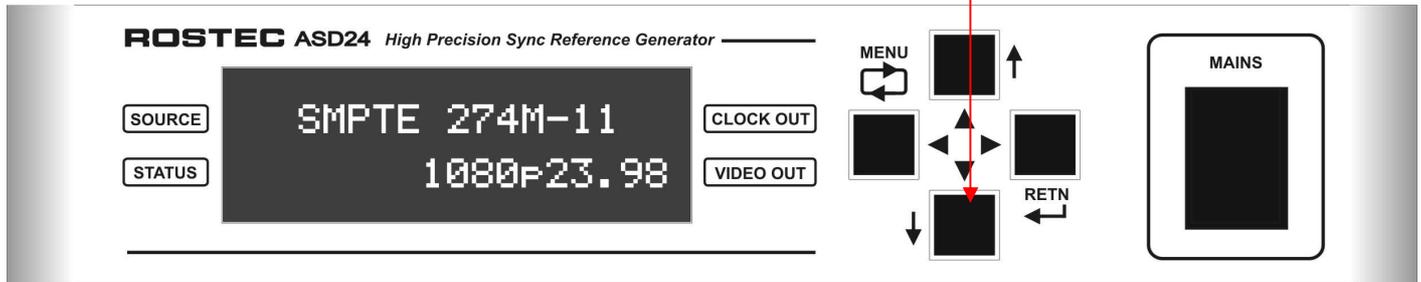
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# ASD24 Reference Generator

Step 4: Press the DOWN ARROW button (two times in this example)

The video standard changes from SMPTE 274M-9 to SMPTE 274M-11, and video changes from 1080p25 to 1080p23.98.

You can press up/down arrow buttons repeatedly to scroll through the list of formats.

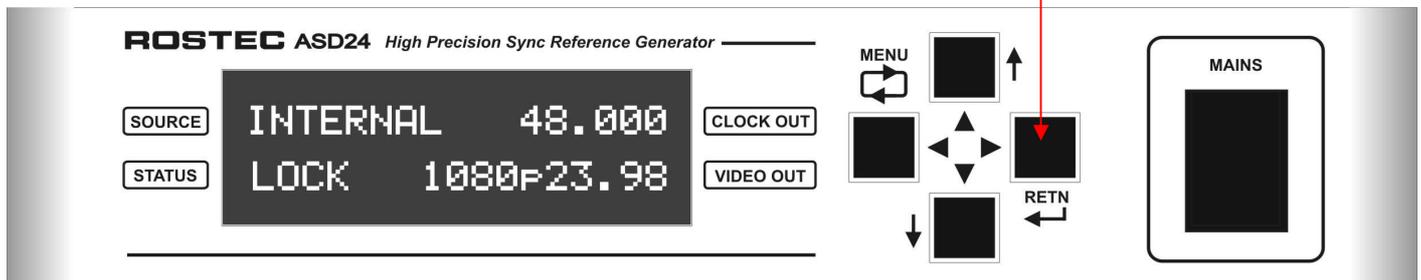


Step 5: When you are satisfied with your choice, press the RETN button

The unit will return to the status menu and show you an overview of your settings.

Remember that pressing RETN will always bring you back to the status menu.

No need to worry about saving. The unit automatically saves your setting when you change anything.



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# ASD24 Reference Generator

## **SOURCE:**

**INTERNAL:** The unit runs on the internal oven crystal clock oscillator.

**44.1 kHz to 10 MHz (see list below) :** Enabling external synchronization at the selected frequency.

## **CLOCK OUT:**

**44.1 kHz to 6.144 MHz (see list below):** It shows the selected word clock output frequency. It also shows the sampling frequency for AES and SPDIF outputs. However, the sampling frequency for AES and SPDIF is limited to a maximum of 192 kHz. (see details in the list below).

## **VIDEO OUTPUT:**

**SD and HD Video formats (see list below):** It shows the selected video format.

## **STATUS:**

**Shows the status of the unit:** When the unit runs on INTERNAL, the status is shown as LOCK. When a change of video format or clock frequency is made, the unit will briefly display WAIT until all phase locked loops have settled. Typically this will last for less than 1 second.

When any external sync is selected (44.1 etc.) and no input sync is present at the BNC connector at the back, the unit will display - - - to indicate that no external sync is present. When the incoming sync is at a valid frequency, the unit will perform a phase lock and display LOCK.

OBS: When the incoming sync is invalid, for example if it is at a different frequency than the SOURCE setting, the unit will not lock, and the display will show ERROR.

There is a hidden setting in the STATUS position (the only one in the unit): Press the menu button until the arrows cursor is at the STATUS position, and then press the up- or down arrow. You will then be presented with the choice TS OFF or TS ON. This setting controls the Test Signal embedded in the video output: Color bar for PAL and NTSC formats, hatch pattern (grid) for all other formats.

This feature is meant as a test tool for tracking down problems in installations. It is irrelevant for synchronization purposes.

## **Sync references (SOURCE on the front display)**

1. INTERNAL internal oven crystal oscillator
2. 44.1 kHz standard audio sampling frequency
3. 48 kHz standard audio sampling frequency
4. 88.2 kHz standard audio sampling frequency
5. 96 kHz standard audio sampling frequency
6. 176.4 kHz standard audio sampling frequency
7. 192 kHz standard audio sampling frequency
8. 352.8 kHz audio sampling frequency from future audio equipment
9. 384 kHz audio sampling frequency from future audio equipment
10. 705.6 kHz audio sampling frequency from future audio equipment
11. 768 kHz audio sampling frequency from future audio equipment
12. 1.544 MHz clock from T1 Telecom systems
13. 2.048 MHz clock from E1 Telecom systems
14. 10 MHz clock from GPS receivers, rubidium oscillators, cesium oscillators (aka atomic clocks)

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## Video Sync Outputs (VIDEO OUT on the front display)

1. PAL B	PAL B 25i	interlaced
2. NTSC	NTSC 29.97i	interlaced
3. 525p 59.94	ITU-BT 1362	progressive
4. 625p 50	ITU-BT 1362	progressive
5. 720p 23.98	SMPTE 296M-8	progressive
6. 720p 24	SMPTE 296M-7	progressive
7. 720p 25	SMPTE 296M-6	progressive
8. 720p 29.97	SMPTE 296M-5	progressive
9. 720p 30	SMPTE 296M-4	progressive
10. 720p 50	SMPTE 296M-3	progressive
11. 720p 59.94	SMPTE 296M-2	progressive
12. 720p 60	SMPTE 296M-1	progressive
13. 1035i 29.97	SMPTE 240M	interlaced
14. 1035i 30	SMPTE 240M	interlaced
15. 1080i 25	SMPTE 274M-6	interlaced
16. 1080i 29.97	SMPTE 274M-5	interlaced
17. 1080i 30	SMPTE 274M-4	interlaced
18. 1080p 23.98	SMPTE 274M-11	progressive
19. 1080p 24	SMPTE 274M-10	progressive
20. 1080p 25	SMPTE 274M-9	progressive
21. 1080p 29.97	SMPTE 274M-8	progressive
22. 1080p 30	SMPTE 274M-7	progressive
23. 1080psf 24	ITU-R BT.709-5	interlaced
24. 1080psf 23.98	Non Standard	interlaced

## Word Clock Outputs (CLOCK OUT on the front display)

1. 44.1 kHz	standard audio sampling frequency
2. 48 kHz	standard audio sampling frequency
3. 88.2 kHz	standard audio sampling frequency
4. 96 kHz	standard audio sampling frequency
5. 176.4 kHz	standard audio sampling frequency
6. 192 kHz	standard audio sampling frequency
7. 352.4 kHz	audio sampling frequency for future audio equipment
8. 384 kHz	audio sampling frequency for future audio equipment
9. 705.6 kHz	audio sampling frequency for future audio equipment
10. 768 kHz	audio sampling frequency for future audio equipment
11. 1.4112 MHz	audio sampling frequency for 1-bit converters
12. 1.536 MHz	audio sampling frequency for 1-bit converters
13. 2.8224 MHz	mostly for test bench/lab work
14. 3.072 MHz	mostly for test bench/lab work
15. 5.6448 MHz	mostly for test bench/lab work
16. 6.144 MHz	mostly for test bench/lab work

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# ASD24 Reference Generator

## **AES/SPDIF Outputs (follows CLOCK OUT on the front display)**

1. 44.1 kHz standard audio sampling frequency
2. 48 kHz standard audio sampling frequency
3. 88.2 kHz standard audio sampling frequency
4. 96 kHz standard audio sampling frequency
5. 176.4 kHz standard audio sampling frequency
6. 192 kHz standard audio sampling frequency

Note: At word clock output frequencies above 192 kHz, the AES/SPDIF outputs stay at 176.4 kHz for 44.1 kHz base frequencies and stay at 192 kHz for 48 kHz base frequencies.