

All about

**Steinberg**

# UR28M/UR824

- the brand new audio I/O for home and studio recording -



The key tool for music creation using DAW - Audio Interface. Among high-end tools released from various manufactures, this Steinberg UR series provides extraordinary impact. The UR28M has an internal monitor controller function, and the UR824 has multiple inputs/outputs. Not to mention the high quality sound, the series offer users modern usability that fits the music production environment by, for example, including DSP mixers and effects. We would like to completely review these two devices and explore their secret from various aspects through professional recording reports (using UR824) and an interview with the developer.

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## UR28M/UR824 Preview

Text by Kensuke Ushio (agraph/LAMA)

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## Serious Professional Recording evaluates UR824 from top to bottom

-CHIIHIRO recording session-

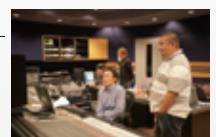
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## UR824 product review

Text by Masaaki Enatsu (marimoRECORDS / FILTER KYODAI)

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## Behind the scene story – UR series development



# Desktop type with 3 monitor control functions – from recording to mixing –



▼ Preview 1

# UR28M

Text by Kensuke Ushio

**2 High quality sound mic preamps  
“D-PRE” for Mic/Line/Guitar input**

At this time, I would like to introduce 2 audio interfaces newly released from Steinberg: UR28M and UR824. Both support 24 bit/96kHz and a USB connection, and DSP effects are included.

Let's start with UR28M (Picture 1). UR28M is a table top type with an internal monitor controller. I personally use CI2+, which was also released from Steinberg last year for on-site recording, but this is at least 2 sizes bigger. The premium texture of the unit adds the richness of the model. That shows the developing team's devotion

Inputs include 4 analogs inputs, 1 S/P DIF coaxial input and 2tr inputs for reference monitors that directly connect to output buses (it does not output to PC). 2 of the analog inputs include discrete preamp, “D-PRE”. This is a very high-end preamp that was used for the previous flagship, MR series. These 2 inputs are an XLR/TRS phone combo and can be useful for various applications such as recording of twin vocals. Also, these 2 inputs include not only +48V phantom AC, but also Hi-Z buttons for direct connections of guitar/bass and -26dB PAD buttons for devices with high output levels,

such as synthesizers. Large and luxurious gain knobs are available for the 2 channels. The analog input for the remaining 2 channels is a TRS phone jack for line input.

S/P DIF input includes a sample rate converter to automatically adjust the input signal to match the project rate. Very convenient! The 2tr input has an independent level control knob and an ON/OFF button for stress-free monitoring of reference sounds from portable players, etc... In addition, an input level meter is also included. Many table-top products of this size usually do not have meters or only have 1 LED indicator, but this unit has the meter (picture 2). You can set which input level to display on this meter using included control software “dsp-MixFx”, which will be introduced later. The meter is not only very useful for checking the levels, but also to find a trouble source when something goes wrong.

**You can select 3 stereo outputs as well as assign 3 mixes to any output**

There are 6 analog outputs, 1 S/P DIF output and 2 headphones. As you use them, you realize their design is very interesting. First of all, the 6 analog outputs are designed to be used as 3 stereo outputs, and the 3 buses (MIX1/2/3) in the DAW soft-

ware are for these outputs. The signal of the bus goes to DSP Mixer's MIX1/2/3 within UR28M, and each mix balance between input channel can be set separately (picture 3/ for more information on how to create each MIX, please refer CLOSE-UP). Then you select from 2 output modes: alternate mode and independent mode. The alternate mode can be used like a selector: for example, you can select MIX1/2/3 using the SOURCE SELECT button on the top panel and send to either one of OUTPUT A/B/C. The independent mode is more unique: it allows you to freely route MIX1/2/3 and OUTPUT A/B/C just like a matrix mixer. For example, you can easily assign 3 monitor mixes that you create during recording to 3 stereo outputs individually, or assign them to any output (including 2 headphone jacks). Also, since you have 6 output channels, 5.1ch surround output is of course possible. Moreover, there is an especially large knob to control output level. There is no way you will confuse the knobs during your work, and you can fine tune the levels. This knob will be useful in many ways.

On the bottom row of the top panel, there is a knob for headphone levels that can be used to control the levels of UR28M's 2 headphone outputs. You will realize the

► UR28M's top and rear. On the top, controls that look like monitor controller device are lined up. Connection jacks are on the rear panel: from left, 2tr input (stereo mini), USB2.0, S/P DIF input/output (coaxial), headphone x 2 (stereo phone), line output x 6 (TRS phone), line input x 2 (TRS phone) and Mic/Line input x 2 (XLR & TRS phone combo).



▲Picture 1: This is me, checking UR28M. I tried it with Steinberg Cubase. The control knob for output level is capable of fine adjusting, which is very good.



▲Picture 2: 4-step level meters are available for both input and output. The red indicates level over, the 2 oranges under the red indicate higher than -3 dB/-14 dB respectively and the green indicates higher than -48 dB.



▲Picture 3: in the Alternate mode, the MIX selected in the SOURCE SELECT (refer to CLOSE-UP) will be output A to C. In the independent mode, each MIX will be output from each OUTPUT.



► Screen 1: When you use this device with Cubase 6, "input hardware" column will be displayed in the Cubase! Input level, low cut or insert points for DSP effects can be set within Cubase. This is same for UR824.

effect of these useful functions little by little as you use them. There are also MONO MIX/DIM/MUTE buttons for output. The MONO MIX button switches the output to mono to check levels or phase problems. DIM button decreases all the output levels to 20dB at once to control loudness. There's probably no need to explain the MUTE button. The functions of regular monitor controllers are available here too. All you need from recording to final mix is this unit. Of course not only are its functions great, but the sound quality is great. The clarity of D-PRE and clean and spacious output quality are also worth mentioning.

**Extremely compatible with Cubase with dedicated window.**

This device can be used with any ASIO/ Core Audio/WDM compatible software, but

it will be most powerful when used with Steinberg's Cubase. When you install the driver of this unit and launch Cubase, the dialogue to confirm the use of UR28M shows up. That's first-party software!

Then, when you display detailed input channel in the Cubase, the new "input hardware" item is added to control UR28M's functions from Cubase (picture 1). No need to launch dspMixFx anymore. This is a common window for UR28M/UR824 where you can control main functions of the device.

**[SPECIFICATIONS]**

- Dimensions: 291 (W) x59(H)x164(D)mm
- Weight: 1.4kg
- Included software: Steinberg Cubase AI6, VST3 Plugin version of REV-X, SWEET SPOT MORPHING CHANNEL STRIP
- [REQUIREMENTS (UR28M unit)]**
- Mac: Mac OS X 10.5.8/10.6.3 (32/64bit kernel)/10.7 (32/64 bit kernel), INTEL Processor (higher than Core

You can also use this window to change the location to insert DSP effects (refer to next page), which will allow you to record with effects or make a setting to add reverb to the singer's monitor during recording.

Of course these functions are available with other DAW through dspMixFx, so it is not "only available with Cubase". Still I think the function that allows detailed setup/control of 3-way monitor mix, output assigns or version up confirmation is useful.

- Duo is recommended), RAM more than 1GB, DAW application that supports Core Audio
- PC: Windows XP(SP3)/Vista(SP2, 32/64 bit)/7 (32/64bit), Higher than INTEL Pentium/ MD Athlon Processor 2GHz (Dual core is recommended), RAM more than 1GB (for Windows 7/64 bit, more than 2GB), DAW application that supports ASIO or WDM
- MAC/PC: CD-ROM drive, USB2.0 jack, Internet connection (for activation)

**CLOSE-UP**

**Use dspMixFx to set input/output**

The series come with a control software, "dspMixFx" that allows users to control the unit. The faders for input channel, DAW output and master output that will be displayed when opening the DSP mixer screen allow users to set up to 3 pan or level balances as a "MIX". For example, in the case of vocal recording, you can set regular mix balance to MIX1 for operator and MIX 2 with "higher vocal balance" for the singer and output MIX1 from line output and MIX2 from headphone jack 2. Also, you can set different balances for MIX1 to 3 and switch them using the panel's SOURCE SELECT. For UR24, you can set MIX1 to 4. Moreover, internal DSP effect can also be controlled from this screen (both UR28M and UR824).

Balance can be set for MIX1 to 3



Output from DAW  
Input channels Master output



**1U rack type with multiple channel input/output and versatile functions to be the center piece of the studio**

▼ Preview 2

# UR824

Text by Kensuke Ushio

**All 8 channels of analog inputs have D-PRE, enabling up to 24 in/24 out**

Next is the UR824 (picture 1). As you can see, this is 1U rack mount type. As for input/output, this model has 8ch of inputs with the D-PRE mic preamp! You can use D-PRE for all analog inputs. Of course, just like UR28M, the clear sound is guaranteed.

Moreover, the 8 gain knobs (the same knob as the one on the UR28M) available for each input make input level control very easy. Of course, all the input jacks are XLR-TRS phone combos for flexible connection to various devices (picture 2). The inputs for ch1/ch2 on the front panel have the Hi-Z button and -26dB PAD just like UR28M. When rack mounted, you can easily connect guitars or synthesizers for quick recording. The other 6 input channels have PAD, so you can use these channels other than Mic/Line inputs too. With so many mic preamps, one UR824 should be enough for some recordings. +48V phantom power supplies that can switch on/off for every 2 channels are also included in all the channels.

Outputs are 2 ADAT optical input/output jacks (can be switched to S/P DIF), as well as 8 TRS phone jacks. ADAT normally transfers

up to 48kHz. However, since this unit supports S/MUX, you can handle 24bit/96kHz data by using twice the channels (picture 3). In other words, by using 2 ADAT jacks, you can have a total of 8 channels of 24bit/96kHz audio input/output. When using at 48kHz, this device holds up to 24 channels of input/output for analog and digital. Being able to use that many channels using only 1 USB cable is amazing.

**Word clock support: from multi-recording to live**

Other than audio input/output, this device also has word clock input/output. This word clock is very intelligent. When using UR824 as a master clock (word clock in is not used), you can switch any unused input jack to output jack so that you can have 2 clock outs. Moreover, there is a monitor section on the panel with 2 headphone jacks with individual level settings and output level knobs (picture 4). This large and easy-to-use knob comes in handy when you work.

Equipped with so many functions, UR824 is enough to handle most of the interaction between computer and external devices. It is of course possible to record the drums using multiple mics while taking full advan-

tage of 8 channels of D-PRE, or to record entire bands at once. Personally, I have wanted to “establish a mixer-less environment by connecting all of my synthesizers to a multi-channel audio interface”, and this device perfectly fits that purpose.

When you need to send tracks from DAW to PA in parallel, for example, for a live performance using programming, by using 2 ADAT outputs, you can output up to 24 channels. This expandability can be useful for various scenes. By the way, UR824 can function as an AD/DA converter when it is not connected to a computer. Just like UR28M, it comes with “dspMixFx” as the control software where you can set the routing of inputs/outputs. You can also save the setting to use as stand-alone.

**Both UR824 and UR28M have DSP: EQ & Comp and reverb are available.**

Now, let’s talk about an important function common for UR824/UR28M: internal DSP. Both models have DSP, so they can send input sound at zero latency. That means, no matter how complicated the routing for recordings, there will be no delay at monitor... well this is not surprising for new audio interfaces. But what makes



▲UR824's front and rear. In the front, there are Mic/Line inputs for 2 channels (XLR/TRS phone combo), gain knobs for all the analog inputs and 2 headphones (stereo phone). On the rear, from left, USB2.0, word clock input/output (BNC), 2 ADAT optical input/output (can be switched to S/P DIF), 8 Line output (TRS phone) and 6 Mic/Line input (XLR/TRS phone combo).



▲Picture 1 : This is me, checking UR824. By adding ADAT input/output, 24 in/24 out can be used and only 1 USB cable is needed to do this. This unit can be the center device of the studio.



▲Picture 2 : Mic/Line input on the front. There is also HI-Z switch to directly switch on for high-impedance guitar or base. There is also -26dB PAD button



▲Picture 3 : ADAT optical jack on the rear. It supports S/MUX. When working at normal 48kHz, you can use 2 outs for 16 in/16 out, even at 96kHz, you can use 8 in/8 out.



▲Picture 4 : Just like UR28M, there are 2 headphone outs. Each out can be monitored by any mix balance from Mix 1 to 4 which is set by dspMixFx.

UR824/UR28M extraordinary is that they utilize this DSP to apply very high-quality channel strip and reverb effect. This can be set from the control software "dspMixfx".

The high quality of this effect is guaranteed by the fact that its comp & EQ's channel strip, "SWEET SPOT MORPHING CHANNEL STRIP", is developed by the famous K'S LAB and the reverb "REV-X" is, as you can imagine from its name, based on the REV-X algorithm that is included in Yamaha digital mixers as an add-on effect.

For example, it is rare to find good spatial effect plugins, but REV-X, which uses dedicated DSP and based on the Yamaha technology, offers extraordinary results from transparency to natural decay with no comparison to other reverbs. Sweet Spot Morphing Channel Strip is also great. Not to mention its quality, it has presets by famous

engineers. In addition, by morphing these presets, you can adjust the setting to your liking. When you are stuck at comp setting, one of these presets may give you some new ideas. I hope this function will be added to other Steinberg products. (Laugh)

On the UR28M, up to 4 mono (2 stereo) SWEET SPOT MORPHING CHANNEL STRIP/ 1 stereo REV-X can be used at once. On the UR824, up to 8 mono (4 stereo) SWEET SPOT MORPHING CHANNEL STRIP/ 1 REV-X can be used at once.

[SPECIFICATIONS]

- Dimensions: 480(W)×44(H)×275(D)mm
- Weight: 3.1kg
- Included software: Steinberg Cubase AI6, VST3 Plugin version of REV-X, SWEET SPOT MORPHING CHANNEL STRIP

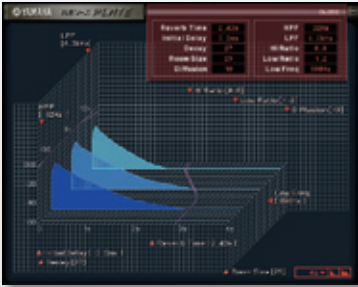
[REQUIREMENTS (UR824 unit)]

- Mac:Mac OS X 10.5.8/10.6.3 (32/64bit kernel)/10.7 (32/64 bit kernel), INTEL Processor (higher than Core


**CLOSE-UP**

**Included plug-ins: VST version is also included**

UR series comes with DSP effects "SWEET SPOT MORPHING CHANNEL STRIP" and "REV-X". As mentioned in the main article, they are powerful ready-to-use tools. However, these effects are basically for limited applications such as recording input channels with effects or applying effects to the monitor. So, UR series included the VST3 plugin versions of these 2 effects. That means, you can use these effects as native plugins without consuming DSP power as long as CPU power allows. Take advantage of them from creating tracks to mixing.



▲REV-X reverb utilizing Yamaha's technology. Based on Hall/Room/Plate, detailed setting is available.



▲SWEET SPOT MORPHING CHANNEL STRIP. Professional engineers' EQ/Comp setting is recorded.

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UR28M combines enough audio interfaces and monitor controllers functions. And UR824 can function as a center piece of the studio. Both models can be introduced, depending on your environment. These many functions including DSP effect for an affordable price. I expected double the price for both models, so I was impressed by its cost performance as well as its functionality.

- Duo is recommended), RAM more than 1GB, DAW application that supports Core Audio
- PC:Windows XP (SP3)/Vista(SP2, 32/64 bit)/7 (32/64bit), Higher than INTEL Pentium/ AMD Athlon Processor 2GHz (Dual core is recommended), RAM more than 1GB (for Windows 7/64 bit, more than 2GB), DAW application that supports ASIO or WDM
  - MAC/PC:CD-ROM drive, USB2.0 jack, Internet connection (for activation)

# Serious Professional Recording evaluates UR824 from top to bottom

## -CHIHRO recording session-



Here, to thoroughly evaluate the power of the UR Series' Flagship model, "UR824", we will report the recording under DAW environment using UR824 + Cubase 6 at a professional recording studio. It is the recording session of "4°C", the new single of female vocalist CHIHRO. Recording session producer, Mr. Ryosuke Nakanishi, engineer, Mr. Masaki Kosugi (picture 1), and assistant engineer, Mr. Naoya Tsuruta, thoroughly check if UR824 really fits in the professional environment.

**Internal effect EQ/Comp/Reverb offers excellent recording sound, even in the professional environment**

The location is one of the few fully equipped studios in Tokyo - Planet Kingdom 1st. The R&B singer is CHIHRO, whose hit songs include "In the FLOOR", "Bye-Bad-Bye" and "Koi Hanabi". UR824 + Cubase 6 are used to record her new song, "4°C" (has been released since end of November as a digital download single). The producer, Mr. Nakanishi, brought the track that he created based on a song written by CHIHRO, and an acoustic guitar, strings (both by guest musicians), and CHIHRO's vocal are overdubbed to that track.

The studio's center system is of course UR824 + Cubase 6. Microphones for the play-

ers were sent to Cubase 6 through UR824's mic preamp, D-PRE. No other outboards were used. The monitors for the players were routed to UR824 > SSL desk > Cue box, and 2-mix orchestra, which was created by Cubase 6's control room feature. Performance sound and clicks were paralleled to the desk from UR824. According to Mr. Tsuruta, "theoretically, UR824's internal mixer is enough to control monitor balances individually", but this time cue boxes are used so that players can control their balances at hand. Of course DSP effect REV-X, instead of external outboard, was used as reverb for monitors. The recording was done by "24bit/48khz, which is often used in the studios," said Mr. Tsuruta.

Well, the recording session started with acoustic guitar. The player was Mr. Tetsuro Toyama. He blended his idea into his deep and rich performance (picture 2). Mr. Toyama commented on the REV-X reverb applied to the monitor. "It was very beautiful reverb. I don't care if a reverb is expensive or not. If I don't like it I'll say it without hesitation, but today's reverb sounded very natural." It was the moment when UR824's power was already proven.

Then, the vocal was recorded (picture 3).

The NEUMANN U67 was the microphone used, and it was of course directly sent to D-PRE. It perfectly captured CHIHRO's clear voice. The strings were recorded as quartette and their dynamic sound was excellently captured (picture 4). In either case, the sound coming from the studio's monitor environment was truly "professional". Not only does it provides excellent sound - it also saves time. Even Mr. Tsuruta, who operated Cubase 6 for the first time on that day, realized its value, saying, "I was confused at first because it is different from the DAW I usually use, but it is good that you can customize the functions for your preference. I think as you use this software, you can make it closer to your preference."

**Preamp with extensive ultra-high band - brilliant acoustic guitar sound is excellent**

Now, let's talk about the sound quality. First, engineer Mr. Kosugi evaluated UR824 as follows (picture 5):

"I usually use another audio interface, but as for today's recording of acoustic guitar, UR824 offered surprisingly great sound, to be honest. Mid to high bands are very extensive... considering my usual work, I was surprised by the good sound of acoustic guitar.



◀ **picture 1** : The two main guys for CHIIHIRO's production: Producer, Mr. Ryosuke Nakanishi (right) and the head of Plant Kingdom and Engineer, Mr. Masaki Kosugi (left). 2 UR824s on the right of Mr. Nakanishi were used for this recording session.



▶ **picture 2** : The guitarist, Mr. Tetsuro Toyama. He plays melancholic phrases through his acoustic and gut-string guitar. He also commented that he is satisfied with the reverb REV-X at the monitor.



◀ **picture 3** : Recording CHIIHIRO's vocal. Monitor has EQ & Comp by SWEET SPOT MORPHING CHANNEL STRIP, as well as REV-X reverb to capture her clear singing voice.



▶ **picture 4** : Recording strings quartet. NEUMANN U67 microphones were used for 1st and 2nd violins; U87 was used for the viola and cello, and ROYER R-121 was used as an ambience microphone. Of course UR824's D-Pre mic preamp was used for these microphones.



◀ **picture 5** : Mr. Kosugi, operating Cubase 6 for the recording. He comments on UR824's recording sound that mid-high band, especially acoustic guitar, extends really well. As for Cubase, he said "the mid-band has a punch." On the right end is an assistant engineer, Mr. Naoya Tsuruta.

**This song was recorded!**

CHIIHIRO  
"4°C"  
(digital download,  
single) Smile

I think this is the interface that shows clear depth and phase. Strings also had extensive ultra-high band. As for vocal, I personally prefer rusty sound, but my impression of UR824 was very hi-fi. Well, this depends on the users' preferences. Anyway, the preamp has the characteristics that extend up to ultra-high band, and Reverb and EQ blend in very well."

Producer Mr. Nakanishi said,

"I think the recording sound was excellent. There was not much difference from other devices of the commercial studio. I agree with Masaki (Mr.Kosugi) that the recording sound of acoustic guitar was especially good. We could record the brilliant sound."

Moreover, REV-X's sound quality caught Mr. Kosugi's attention.

"I was glad to find that it had similar sound characteristics to Yamaha SPX, which I am familiar with. The parameters were limited to necessary functions and I think this is very

useful digital reverb. I grinned, thinking, 'Ah, that's the sound of Yamaha reverb! (laugh)'"

Mr. Nakanishi agreed.

"SPX sounds never make mistake. IR reverbs are popular now and Cubase 6 has a sampling reverb called Reverence, but for pop music recording, actually digital reverbs like REV-X are easier to use. It is also good that VST version is included. There are not so many reverbs that are reliable, so we can feel assured if we can use familiar Yamaha's reverb."

UR824 is getting high evaluation in many points. The two shifted their course of dialogue to its high cost performance.

"This is a relief that you can get these functions for this price. It is also important that this product is from Yamaha so that you can have a support from a specialist who also knows how to use Cubase. This is a perfect interface for intermediate to advanced users. Cubase itself has a good impression with a

punch in the mid-high bands. Quite a lot of arrangers around me started using Cubase, so it is possible that Cubase will be the standard software in studios", said Mr. Kosugi. Mr. Nakanishi followed,

"Considering the price and performance, UR824 is amazing... It has 8 preamps. This is perfect for not only professionals, but also those who want to start home recording, for example. I will definitely recommend buying this unit. Today was my first time to use this, but I want to take it home (laugh)."

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Cubase can be the standard DAW software among the commercial studio, and UR824 has great compatibility with the Cubase. The combination of the two proved their power as a recording system in the professional environment where mistakes are not acceptable. Please realize the UR824's power by listening to CHIIHIRO's "4°C", which was created from this recording session.

# UP TO 24 IN/24 OUT, USB AUDIO I/O WITH COMPLETED DSP MIXER.

By Mashiro Enatsu (marimoRECORDS/FILTER KYODAI)



## Steinberg UR824

UR824, the audio interface for intermediate to advanced users that Steinberg announced in Fall 2011, was finally released. It is a 24 bit/96kHz compatible unit via USB 2.0 connection. With its rich 24 IN/24 OUT and maniac features, this product can satisfy even professional users. Some people might think this is just an audio interface with many inputs and outputs, but it also has dedicated DSP, which makes this unit very high-end. The affordable price is also attractive. Moreover, this product has almost the same functions as the company's flagship unit, MR816 CSX. Considering this unit is around 60 percent of the market price of that MR816 CSX, you can realize how affordable the price is. Of course, this UR824 is from Steinberg, the brand that is famous for Cubase/Nuendo. But the unit can also be used as an audio interface for other DAWs that support ASIO/Core Audio/WDM.

**Extensive inputs/outputs including ADTA and D-PRE, the mic preamp that adds less color.**

First, let me talk about inputs/outputs. 8 analog inputs have mixer/audio interface Yamaha N8/N12 and the mic preamp "D-PRE" that received high reputation from above mentioned MR series. This D-PRE is a discrete class A mic preamp and specially designed for music production. I actually listened to the sound connecting several microphones such as NEUMANN U87 AI, AKG C414B-XLII, AUDIO-TECHNICA AT4040 and SHURE SM58, and the sound was clear with no color added from low to high band while taking advantage of each microphone's characteristics. The sound is rich: smooth, but at the same time has full bases. There is less color added and will fit any microphone. This is a mic preamp that can be used for any music genre or style.

In addition, it has 2 ADAT for digital inputs. Combined with 8 analog inputs, it will allow up to 24 inputs (16 inputs for 96kHz). That means that this unit alone can handle the recording of entire bands with additional AD converters and so on. This UR824 also has word clock input/output, but input can switch to output, so 2 word clocks can be output as the clock master. Functions like that are good enough for professional use. By the way, UR824's digital I/O is based on the JetPPL, the jitter elimination technology. That also enforces its high-quality sound.

As for outputs, there are a total of 24 outputs adding 8 analog inputs and 2 ADAT. Not only does it support multi-outputs such as surround, it also allows users to set up complicated monitor CUE system or connect an external outboard. So there is more room for system expansion. This is good for those who want to customize their systems or who want to do multi-channel recordings.

**Dedicated DSP mixer, dspMixFx included – VST3 version of DSP effect is also included**

The biggest selling point of this unit is the included DSP. Using the included mixer software, dspMixFx (screen 1), you can create latency free monitor mix with audio data from the DAW, while adding a DSP effect to the input sound. Also, you can save monitor mix settings such as input channel and output channel from DAW as up to 4 "MIXs" on the dspMixFx. Then it is also possible to output 4 MIXs individually using the unit's 8 analog outs as 4 stereo pairs.

Each of dspMixFx's input channel has an intuitive comp & EQ effect, SWEET SPOT MORPHING CHANNEL STRIP (screen 2) with many presets. These presets include set-

tings by famous engineers, and you can instinctively look for the preset that fits your sound. It is also a good point of SWEET SPOT MORPHING CHANNEL STRIP that there is no need for difficult parameter settings. Choose your favorite preset and move the knob in the center to change parameters. That's how you find your sound.

REV-X (screen 3) is also included as a DSP reverb that can be applied to monitor mixes. REV-X was included in MR series, but in this unit, different GUI, whose parameters are easier to check graphically, is used. That made it easier to reach ideal sound. There are many presets as well. Its sound quality needs to be mentioned. This is the plugin version of the popular algorithm that was used in masterpieces including Yamaha SPX series, and it fits any source. By the way, this REV-X is so reliable that it is used for Yamaha's digital consoles (in many cases, it is added as Add-On Effects). Many users support this reverb.

Basically, the above DSP effects can be used only on the dspMixFx's monitor mix. That means that you cannot use these DSP effects as a plugin on the DAW. However, UR824 comes with VST3 plugin versions of REV-X and SWEET SPOT MORPHING CHANNEL STRIP. In other words, you can use REV-X and SWEET SPOT MORPHING CHANNEL STRIP on the hardware's DSP when recording/monitoring, and use them as VST3 plugins on the DAW's tracks during playback. Of course, when using as VST3 plugin, the processing will depend on the CPU, but it is very beneficial that both DSP/VST3 are supported. There should be many users who have wanted to use this REV-X as VST plugin. These users can receive a great benefit that Yamaha's full-scale reverb Yamaha can be used either for monitor or mix during recording.



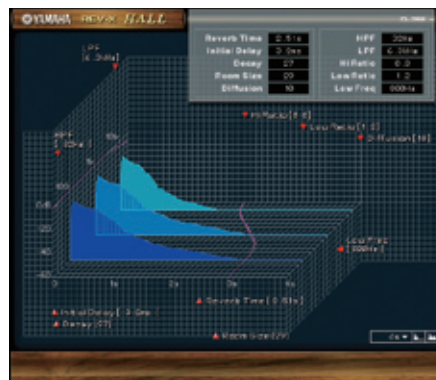


◀ **screen 1** : Dedicated DSP mixer software, dspMixFx. As the screen shows, there are input channels including both analog and digital; output channels from DAW and master channel to output monitor mix. You can adjust the balance between each channel and create your own monitor mix. You can save up to 4 "MIXS".

▶ **screen 4** : When used with Steinberg Cubase, the dedicated input setting screen will be displayed within Cubase where you can set gain, +48V phantom power supply, phase inversion, and REV-X's send amount without opening dspMixFx. Depending on the insert point of SWEET SPOT MORPHING CHANNEL STRIP, you can record with effects as well as monitor.



▲ **screen 2** : A dspMixFx's DSP effect, SWEET SPOT MORPHING CHANNEL STRIP. The Morph knob in the center has 5 comp/EQ settings recorded for each preset. As you turn the knob, the parameter value changes just like it is morphing.



◀ **screen 3** : A dspMixFx's DSP effect, REV-X. It is made with the Yamaha SPX series' algorithm and 3 types (HALL/ROOM/PLATE) are available. You can graphically display reverb time and decay.

The settings you made using dspMixFx will be saved on the UR824 unit, so you can use this unit separately without connecting to the computer. In this way, you can use it as a standalone as an AD converter or mixer.

**High compatibility with Cubase - Input/output setting is available from Cubase.**

Using UR824 for the recording with Cubase, I realized various useful functions. First of all, when you select UR824 as an audio interface, 4 templates will be ready in the recording tabs in the project assistant window that is displayed when launching Cubase. By choosing these templates, you can start recording in various styles right away. You can eliminate cumbersome routing or assignments. Also, by connecting UR824, you can choose "hardware" menu from the input channel's extended mixer to display a dedicated input setting screen

(screen 4). You can make settings from inputs that are related to parameters such as gain, +48 phantom power supply and phase inversion to monitor volume, the send amount of DSP effect REV-X, and the insert point of SWEET SPOT MORPHING CHANNEL STRIP. Depending on the insert point, you can record with SWEET SPOT MORPHING CHANNEL STRIP.

Also, in Cubase, you can set UR824's unit from the "Audio Hardware Setup" menu. Here can you not only set REV-X's parameter, but also choose output jack to assign the aforementioned MIX. You can also assign MIXs to 2 headphones. When there is a player and a director present, by assigning MIXs with different monitor mix settings to 2 headphone outs, both of them can listen to different sounds that are fit for them while recording.

You can set a bypass filter for each channel

of analog inputs here. You can set in 5 steps by 20Hz from 40Hz to 120Hz.

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Channel 1 to 2 on the front panel support Hi-Z so you can connect electric guitars easily. Recently, amp simulators have become popular, so the benefit to directly connect electric guitars is great. If you are for home recording, you can connect guitars and microphones to channels 1 to 2 and line instruments, such as synthesizers, to channel 3 and further to use the unit as a mixer. For those who want to record a band in a rehearsal studio, there is phantom power supply and mic preamp with PAD for channel 3 and further, so you will not have to worry about inputs whether it is for microphone or line. UR824 fits for any production style - it is a multi-use unit.



▲ On the rear panel, there are, from left, USB 2.0, word clock input/output (BNC), 2 ADAT optical inputs/outputs (switchable to S/P DIF), 8 Line outputs (TRS phone) and 6 Mic/Line inputs (XLR/TRS phone combo). On the front, there are 2 channels of mic/line/Hi-Z inputs (XLR/TRS phone combo).

# Behind the scene story – UR series development

UR28M and UR824 have already received a great reputation from many creators/engineers. Here, through the comments of the developers, you will find out how these 2 models were created and to what points they were persistent. The two people who were involved with the planning/developing of the UR series will be in this story: Mr. Yuichi Sekido (picture 1, left) and Mr. Kazuhiro Goto (picture 1, right), developmental department 2, MPP group, PA Division, Yamaha.

**The concept of D-PRE mic preamp is to create the pure sound that is easy to work with.**

MR816X/MR816CSX was released in 2008 as a professional audio I/O from Steinberg. While the 2 in/2 out CI series that followed them is also popular, there were quite a few requests for a high-spec audio I/O that will rival MR series. These requests from the users made Mr. Sekido decide to develop the UR series.

"We have released MR series for a FireWire connection and CI series for a USB 1.1 connection. And we started thinking about developing a "USB 2.0 audio I/O that provides high-quality sound" fit for professional use. We released 2 models this time, assuming 2 different needs. 1U rack type UR824 is for the users who handle multi inputs/outputs like MR series, while UR28M is for those who do not need that many inputs/outputs but need high-quality sound in compact sizes. And we just didn't simply make it compact, but also

included monitor control functions to reflect the current trend."

The main concepts of the UR series seem to be "high-quality sound" and "USB 2.0 connection". When it comes to high-quality sound, the sound quality of mic preamp is one of the most important points for audio I/Os. What is special about Mic preamp of UR series, "D-PRE" (picture 2)? Mr. Goto says, "D-PRE can seriously capture the expression of music source - the nuance of the performances of vocal or guitar solos, for example. As a result, it is tuned to provide wide volume change and harmonic change to easily convey the message of the performance. Usually, preamps use one transistor each for hot and cold per unit to amplify the signal. However, the UR series uses an inverted Darlington circuit where 2 transistors are used for each hot and cold - total of 4 per unit. When there is only one transistor, signal level increase tends to increase distortion. By using 4 transistors, the low distortion can be maintained regardless of the signal level. By the way, "D" of D-PRE stands for Darlington"

Some users might expect mic preamps to color sound. Is D-PRE the one to maintain the original sound or to add some color?

"For example, some vintage mic preamps that are called masterpieces are good at amplifying the "core ingredients" of the music. When you use such mic preamps for vocal recording, you can get great sound. However, those preamps do not always fit for every music part. On the other hand, D-PRE has a very wide frequency range so that it can handle any music source. It does not amplify

the "core ingredients" as much, but our concept is "the pure original sound should be captured during recording, and plugins should add color to it". However, it does not mean that we did not adjust D-PRE at all . . . we tuned it so that it can capture the aforementioned and most important point: "expression of the performance," said Mr. Goto. While leaving flexibility for later editing, it provides a sound that is easy to handle . . . They took a lot of time to adjust this subtle balance. Their focus on the sound quality reached even to the headphone jacks. Mr. Sekido explains as follows:

"We designed headphone jacks for sound good enough for monitoring. By the way, both models have 2 headphone jacks. I believe that there are many occasions to record 2 players at the same time, such as a vocal and a guitar. Moreover, with UR series, you can create multiple mixes using the included mixer soft, dspMixFx, and monitor them separately. I think this is the advantage."

**Ready-to-use internal effects by Custom DSP Chip**

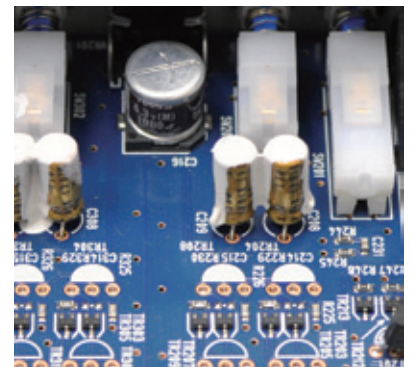
As you know, UR series' internal DSP allows users to create a monitor mix or effect processing using dspMixFx. This DSP also has the point to mention. Mr. Sekido says,

"We used Yamaha's custom chip instead of generic DSP chip. MR series also has the DSP, but this is a more advanced chip. As for 2 internal effects, REV-X and SWEET SPOT MORPHING CHANNEL STRIP (SSMCS), there is not much sonic difference from MR series, but we improved the GUI of REV-X and it



◀ **Picture 1** : Mr. Yuichi Sekido (picture 1, left) and Mr. Kazuhiro Goto (picture 1, right), Development department 2, MPP group, PA Division, Yamaha. They were involved with planning/developing of UR series.

▶ **Picture 2** : The discrete class A mic preamp, D-PRE in the internal circuit. Using an Inverted Darlington circuit that uses 4 transistors per unit, it provides high-quality sound that keeps low distortion even when the signal level changes.



looks different.”

REV-X is an effect that reminds users of Yamaha’s vintage digital reverbs. For its high quality, it has received high reputation from various fields.

“We developed it to be the best reverb for monitoring. Especially, it is used a lot for vocal recording,” says Mr. Sekido. He also comments on SSMCS:

“It is an effect with comp and EQ, but it has many presets of famous engineers. It is designed for users to find the sweet spot by using a knob, without parameter settings. SSMCS was first used for Yamaha’s mixer type audio I/O N series, but the one in this model is improved from the original. We worked with engineers to make comp and EQ change relative to one another as users turn the knob.”

#### Never compromise sound quality

Now you know the UR series is created paying detailed attentions from basic circuit to mixer software. In addition, UR28M has the aforementioned monitor control function as added feature. Mr. Sekido says,

“It is a current trend to release products with large volume knobs. Considering this trend, we decided to include one to our model too. We put a lot of time to make the knob’s parts and grips perfect. We aimed to match the volume of high-end AV amps, even though the price range is totally different. . . we didn’t want it to be cheap. This is an important point.”

The monitor control section has functions similar to the professional devices, such as 3 output selections, mute and dim. What makes it unique is the 2tr input to connect a portable player and so on.

“We included 2tr input considering the time when users want to quickly connect sound sources to listen even when not in production. It can be useful to check external sound sources when working with other people, or to play the guide sound when you are playing an instrument. By the way, UR series can be



#### UR28M

This is the unit with monitor control function which is currently mainstream. They selected parts and adjusted the grip for the volume knob on the right of the panel through trial and error. They seem to have given lots of thoughts to its modern design. Put it on your desk then it will surely give you great inspiration.

used as standalone. . . It is possible to output monitor mix with the setting made in dsp-MixFx”.

So, as long as you connect an external sound source, it can output the sounds like a mixer without using a computer. This flexibility is also the sales point of the UR series.

On the other hand, the upper model UR824 has functions to be the center of the studio. We asked Mr. Sekido about the biggest selling point.

“It is definitely sound quality. Following the good example of MR series and N series, as we mentioned in the beginning, we wanted to make high quality sound audio I/O via USB2.0 connection. So we focused on that point until the end. At the same time, we wanted to keep the cost as affordable as possible. While maintaining the sound quality, we lowered the cost by, for example, eliminating the encoder’s LED that MR series had.”

Mr. Goto continues,

“That doesn’t mean that we use cheap parts. The inside is almost the same as the MR series. The more expensive parts don’t necessarily mean better sound. The sound is not that simple. After all, the thorough tuning is important to make sound good. I think we took advantage of our many years of know how to realize it.”

Also, UR series, which is Steinberg brand,

works perfectly with Steinberg’s DAW software, Cubase 6. Many people have experienced struggling with the combination of DAW and audio I/O, but you don’t have to worry about it. Mr. Sekido also is confident with the convenience of using the two.

“When using with Cubase 6, dspMixFx is integrated to Cubase mixer, so you can start using without special settings. It is nothing special because these two are from the same brand, but the workflow efficiency can be significantly improved. Of course, it works well with any other DAWs that support ASIO/Core Audio/WDM. We have checked the compatibility with main DAW software.”

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Yamaha developing team proudly presented UR series. Lastly, we asked Mr. Sekido what kind of users they target.

“The product fits for every user from amateurs to professional. The price is lower than professional devices, but there is no need to separate professional and consumer by price range. However, even though we reduced the price, we never compromised the sound. We checked the sound over and over again until the sound reached ultimate clarity. So we strongly recommend listening to the sound. Sometimes words cannot convince, so please experience UR series sound by yourself.”



#### UR824

It is positioned as the USB 2.0 connection model of the MR816, but it realizes multi-channel inputs/outputs for an affordable price. However, it didn’t compromise the sound quality at all. They made the low price possible by replacing parts unrelated to the sound. The silver and black colors on the simple design give out the sophisticated image.

All about  
**Steinberg**  
**UR28M/UR824**

- the brand new audio I/O for home and studio recording -



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