

MOTIF XS

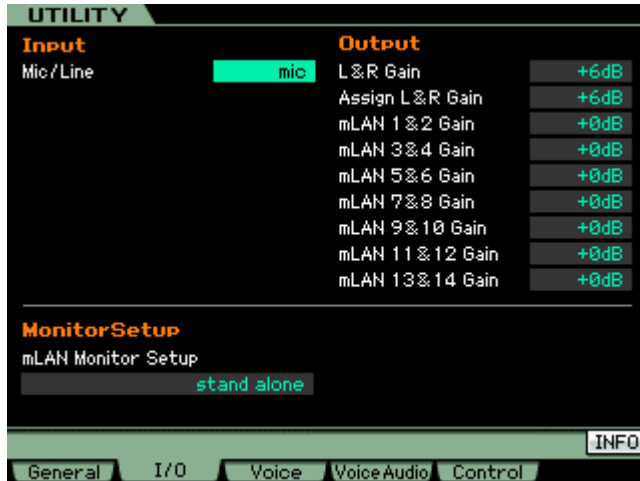
Tweak of the Week: Setting up a Microphone for Overdub Recording (Sampling)

QUICK GUIDE:

In order to setup for sampling, you first need to know how to setup the A/D INPUT. A/D is short for Analog-to-Digital. We will use a microphone for our example but you could substitute a guitar, a bass or virtually any kind of input device. These are analog devices and we are going to convert their audio to digital signals inside the Motif XS and ultimately as sampled audio. The Integrated Sampling Sequencer allows you to sample (record audio) while automatically synchronizing with recorded tracks!

Set the A/D Input

- Press [SONG] (or PATTERN) mode, whichever you are going to use, and recall your composition



- Press [UTILITY]

- Press [F2] I/O

- Set the MIC/LINE parameter to **MIC**

- Use the Gain control on the back panel of the Motif to raise or lower the input gain. Microphones are weak signal so it is not unusual at all to have the gain set at maximum.

Setup for Audio processing

If you want to record with the INSERTION EFFECT, let's set that up now.

- Press [SONG] or [PATTERN]

- Press [MIXING]

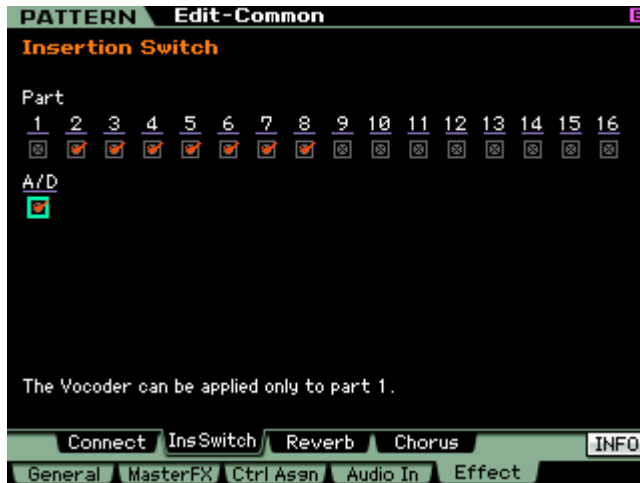
- Press [EDIT]

- Press [COMMON EDIT]

- Press [F5] EFFECT

To turn on the Insertion Effect for the A/D input:

- Press [SF2] INS SWITCH (Insert Switch)



You can select the A/D PART **switch** if, and only if, you have an INSERTION EFFECT available. It may be necessary to turn the INSERTION SWITCH OFF temporarily on another Part so that you can record (sample) through it for this operation. Only 8 PARTS can have their Dual Insertion Effects active at a time. Later you can turn it back ON for the Part from which you borrow it. Once we record through this Insertion Effects the results will be recorded to the sample thus freeing the Effect processor for other duties.

Set the AUDIO IN parameters:

- Press [F4] AUDIO IN

- Press [SF1] OUTPUT - Set the parameters for the A/D INPUT PART, including the pan, output level, Mono/Stereo, etc.

- Set the Mono/Stereo to "L mono" to correspond to the

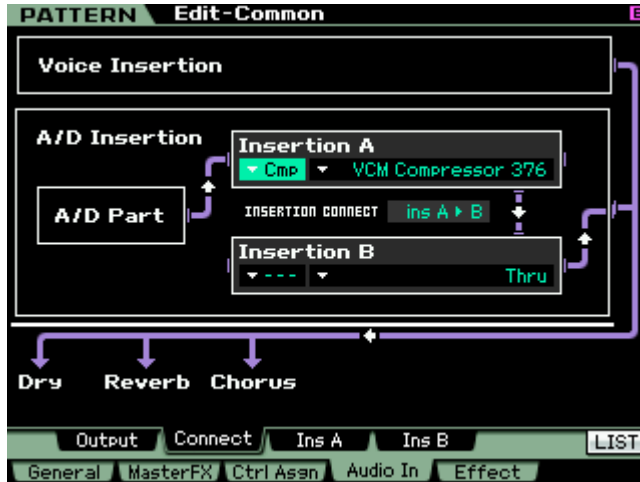
jack you are using on the back panel of the Motif XS for the microphone or guitar input.

The Reverb Send and Chorus Send (SYSTEM EFFECTS) cannot be recorded. These will not be recorded (sampled). If you want to record with Reverb, you can use one of the two INSERTION EFFECTS to select an appropriate reverb type. Only the INSERTION EFFECTS will be recorded. Or you can simply add reverb later (on playback, after you are finished sampling). Technically speaking, we are patching the INSERTION EFFECT on the input stage prior to the signal going to the recorder (sampler) – the INSERT EFFECTS are inserted, in-line, between the input and the sampler. The Reverb and Chorus processors are SYSTEM EFFECTS and are located 'post' (or after) the recorder and therefore will not be able to be sampled (or even heard, for that matter) when we enter the sampling mode.

Select the **INSERTION EFFECT(s)** for the **AD INPUT**:

- While still in [F4] AUDIO IN press [SF2] **CONNECT** (shown below)
- Please turn down your main Volume. It is always a good idea when scrolling through effects to prevent ear damage.

Here you have the dual processors, INSERTION A and INSERTION B. The effects applied here will be recorded (sampled) to the "Sample Voice". It is "what-you-hear-is-what-you-get". You can select from among Compressors, Reverbs, Chorus, Delays, etc. Again, lower your VOLUME while selecting effects.



Set the INSERTION A to the "Cmp" category and select the **VCM Compressor 376**. The VCM Compressor will allow you to maximize record level and add *presence* and *punch* to your recording.

- Press [SF3] INS_A to edit the selected Insertion Effect parameters. (shown directly below)

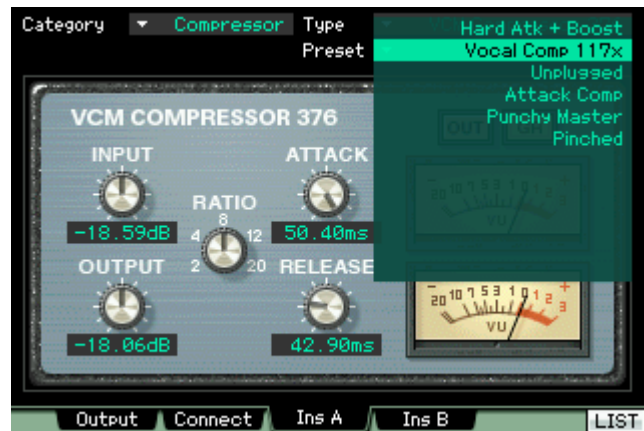
Now you can edit the INSERTION_A effect. Just below the CATEGORY and Effect TYPE you will see that you can select a PRESET. Move the cursor to highlight the "PRESET" parameter.

- Press [SF6] LIST

This will let you select from a list of preset setups for the VCM Compressor 376. Scroll down the list and select the Preset called, "Vocal Comp 117x". This

preset is a good starting point for vocal recording.

The compressor parameters are outlined in detail in a separate POWER USER¹ document, but in general you want to work with the **Input** parameter until you get about a -1db to -3dB Gain Reduction (negative deflection) on the "GR" VU meter. This deflection should be on the very loudest peaks of the vocal performance. The amount of INPUT necessary to get this deflection will vary according the source (the microphone and the person singing, speaking or playing). The VU meter works back from 0VU showing how much signal is being reduced - as you attempt to get louder it compresses the peaks.



A compressor is in a category of devices known as "Leveling Amplifiers" and will prevent the output from clipping and at the same time add the benefit of adding presence to the signal. Take care not to over-compress your dynamic range or distort the signal. Use your ears! Know that by compressing the dynamic range you are make the distance between "soft" and "loud" narrower. So things like breathing in and out will now sound closer to the listener. "In-your-face" is sometimes used to describe a compressed signal. It is important to "run through" the performance while setting up the compressor. A run through must be done with the same vocal output level one would use when actually singing or speaking the part you are going to record. You cannot make a proper setting without the providing a run through with the same **energy** as the actual performance.

Setting up the **INTEGRATED SAMPLING SEQUENCER**:

- Press [INTEGRATED SAMPLING]
- Press [F6] REC>
- Set the RECORDING TYPE = 'sample+note'
- Set the INPUT SOURCE = **A/D INPUT**
- Set the Mono/Stereo = 'monoL+R'

Setting the MONO/STEREO to 'monoL+R' – this will allow you to monitor the input in the Center when your source is mono (microphone).

¹ [Virtual Circuit Modeling: Understanding Compressor/Limiters](#)

sample+note as RECORD TYPE means literally that the sample will be recorded and that a note-on event will be created in the sequencer to trigger playback of that audio. The duration (or “gate time”) and placement of the note will be precisely determined by the TRIGGER Mode selected on the Record Standby screen.

- On the right side of the screen set the target “Sample Destination” parameters

Here you can review that you have assigned the Target Track and since we have selected “Sample+Note” as the sampling TYPE you can target a specific TRACK and KEYBANK (NOTE) for the MIDI trigger event, “C3” or middle “C”.

- Press [F6] STANDBY – To setup for the actual sample

You can test the microphone and see the bar graph that represents the record level. The object is to get as much level as possible without clipping. Listen to the quality of the sound you are getting as well as looking at the level. You can distort without clipping. The more level the better – short of distortion. Adjust the GAIN control on the back panel for more or less overall level. If you are getting decent level but are hearing distortion, double check your settings on your compressor. The “RECORD MONITOR” parameter on this screen will only affect how loud you’re A/D INPUT is compared to the music you are overdubbing to – it does **not** affect the recorded volume. If you are too loud in your own mix, you can turn yourself down with the RECORD MONITOR **without** affecting the record level.

- Select **MEAS** (Measure) as the Trigger Mode and set the measures for Punch-in and Punch-out points²
- Press [F5] START – To arm the sampler

“WAITING” will appear on the screen. It is waiting for you to press play on the sequencer transport. When the Punch-in measure is reached the sampler will begin recording, and when the Punch-out measure is reached sampling will end and the sequencer will stop. Give yourself several measures to get into the feel of the music prior to Punch-in point (or use the **Sampling Count-in** function)³. The current measure is shown in the upper right corner of the screen. Use the [<<] and [>>] buttons in the Sequencer Transport to locate measures.

Sound advice: It is very important that you use a good set of headphones anytime you are “overdubbing” with a live microphone in the same room with your monitor speakers. Be sure to turn your speakers completely OFF. You cannot record with a microphone in the same room with your speakers... your microphone will pick up the speakers and will re-record your other tracks or, worse case, you will get horrific feedback. Isolate your microphone from your speakers, turn your TV off, shut off the air conditioning, and wait for the refrigerator to stop running – in other words make your record environment as free from outside noises as you can. You will soon learn there is no such thing as a perfectly quiet environment – particularly in the average home or apartment. But do the best you can. Start with your speakers. Good headphones for recording are those that enclose the ear and are comfortable, in addition to sounding good. Get a microphone stand with a good microphone clip – do not let any singer touch a recording microphone. Handling noise can be deadly to your recording (and most singers do not know how to hold a microphone). A good rule of thumb is to: Mic the nose or the chin, not the mouth. This prevents “plosives”. Plosives are explosive syllables like the “p” in petunia popping in the microphone.

When the sample is complete, you can AUDITION your recording by pressing and holding down the AUDITION button or holding down the key to which you assigned it. Your recording will sound much softer on playback (this is normal) as you are now monitoring playback, not the “live” signal. See the Power User “Sampling in Sequencer Mode” for tips and tricks about editing your results. If you are confident of your record levels do not worry about the playback volume... editing and mixing, you can handle separately.

If the performance is acceptable (musically) and the recording is clean, press [ENTER] to keep the sample.

For much more on this important topic please see the more in depth “**Sampling in Sequencer Mode**” Power User article.

² The **punch-out** point must be set to top of the next measure. If your goal is to record the first 16 measures, for example, the punch-in and punch-out points would be 001-017. In order to record sixteen complete measures you must record through to the top of measure 017.

³ **Sampling Count-in** is found by pressing [SEQ SETUP] > [F1] CLICK. You can setup from 1 to 8 measures of click prior to sampling. The ‘click’ will disappear when sampling begins. This is very useful when sampling to PATTERN mode and the sample must begin on the down beat.