

VTMC-M2 THE VINTAGE TUBE MASTERING COMPRESSOR

From CDSoundMaster
Created by Mx2
Michael Heiler and Michael Angel



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About the VTMC-M2

The VTMC-M2 is the second Plug-In designed by Michael Heiler and Michael Angel. The sound system, signal chain, and processing design is an original concept created by Michael Angel that began back in 2005 and took until 2009 to begin implementation. Michael Heiler provided the perfect coding and development partnership to bring this process to fruition in VST Plug-In form. This made for the development team "Mx2" under exclusive release by CDSoundMaster.

The VTMC-M2 stands for "Vintage Tube Mastering Compressor" developed by "Mx2" or "Michael Times Two".

The original concept for the signal chain developed by Michael Angel of CDSoundMaster is called

"Virtual Interactive Signal Chain Technology", and has been brilliantly executed in code by Michael Heiler.

This unique process provides the most advanced and complex system for recreating analog circuitry with the benefit of using a stream-lined and memory-efficient sound procedure. With very few steps, it is able to generate a more complex response than other algorithmic processes.

Every device that is created using the "Virtual Interactive Signal Chain Technology" is designed in comparison to real analog recording devices for the ultimate in realism and excellence in sound.

The name "Vintage Tube Mastering Compressor" represents three incredibly complex characteristics, each containing extremely high expectations. We believe that you will find that the VTMC-M2 accomplishes this task with an amazing and individual personality that will find its place in a wide range of mixes and final masters.

The VTMC-M2 is not an emulator of a single specific device. It is built upon years of hands-on knowledge of many different classic devices, each famous for their particular character and capabilities.

The VTMC-M2 is not designed to be everything that a single Mastering Compressor can be. There are some features that may be particular to a more modern, or digital Mastering Compressor, such as perfectly linear processing, look-ahead, side-chaining, and specific attack and release times. These are all good features, some for mixing, some for mastering. But, we place emphasis on the "Vintage" in the vintage design of this special plug-in.

It is our design philosophy to avoid doing what has been done before, especially if it has been done time and time again, and even more so if it has been accomplished by others with excellence. This is not a plug-in designed to be perfectly pristine, linear, and covering the widest range of mastering tasks. In fact, some of our goals with this processor is to widen your mastering, and mixing, palette, and in doing so, to widen your view on what makes for a great sounding master! By placing the right range of limitations on control, feature-set, and use, you will find a wide palette of options with colorful, musical, masterful possibilities.

Many vintage devices provided a "less is more" approach to design. Although there may have been 20 different things happening under the hood, the operator was to think about simple procedures; did something need to sound a little louder without sounding squashed? Did a mix need to get tightened up and punchier, or did it need to sound more fluid and sustained?

Did the drums need to have more punch or did the bass need to glue together with the feel of the rest of the mix? These are timeless and necessary adjustments we might make in critical listening and mastering processes, but all-too-often we think of mastering as such an elusive process that we do not trust our ears, and we rely on the digital mastering processor to be precise and exact, even in times that we are not certain if it truly sounds as good as it could.

The broader strokes of the VTMC-M2 are designed to let you work as a creative producer/engineer and not just as a technician. Use your ears and the ease of controls to guide your way to a more musical and beautiful sounding recording!

So, the "Vintage" in "Vintage Tube Mastering Compressor" stands for purity in the highest quality of sound, with an intentionally analog and expressive coloration and tone. It also stands for a design that has been a formula for success as early as the 1950's and revered for its continued benefits today. This includes controls that range from slow to fast for the attack and release for flexibility, but also an overall choice to have the compressor switch the range of attack and release available in a slow mode and fast mode. This changes the signal flow and operations between two sets of response curves, allowing you to choose the one that fits your particular mixing and mastering needs.

"Vintage" represents the VU-inspired metering of the VTMC-M2, allowing you to watch the needle dance, showing the volume of the music, or showing you only the amount of gain reduction taking place. But, as a mastering device, we also provide digital metering in case that is preferred.

"Vintage" also represents the actual sonic character of the device, which tends to add that special coloration that is often lacking in modern processors. You are able to tune the amount of

valve character, making it easy to keep things cleaner, or push the signal a little harder, so that the harder you compress, the more you can also bring in more natural tube harmonics in the process. The choice is up to you.

Speaking of "valves" or "tubes", the "Tube" in "Vintage Tube Mastering Compressor" is an important part in the cherished musicality of this unique processor.

The tube design of the VTMC-M2 is a completely original sound, but those who have loved the range of tones that classic tube gear provides will instantly recognize the tube personality in this device. In the same way that the VTM-M2 is undeniably a Vintage Tape Machine, the VTMC-M2 is a "New Classic" tube device. You can keep it clean or get more overtly aggressive.

Even though the VTMC-M2 is a unique creation, not designed around one specific device, it contains characteristics in the tube sound that are reminiscent of the most beloved processors. Michael Angel, the designer of the sound engine for this technology, has many years of experience with tube devices, having not only worked with many devices for recording and mastering, but going so far as to create the hardware tube device for his mastering studio, Angel Lofte, which was used to design the highly favored "Vintage Tube Collection" and "Tube Booster" Plug-Ins, also available from CDS!

Tubes can have a fizzy, edgy sound, or they can be almost perfectly transparent. Different tube manufacturers were known for specializing in different tonal qualities, from expansive high Frequencies to rich, musical, forward-sounding mid-range, usually with a 3D quality that audiophiles love tubes for. The preamplification tube tends to have its own warmth and coloration compared to power tubes and rectifier-section

designs. A full tube signal path can be designed to help direct the signal flow, change harmonic structure, increase volume, buffer the input or output signal, split the positive and negative polarity of the signal, and numerous tasks.

All of these characteristics are considered in the "Tube" design of the VTMC-M2. We give you a feel for the range of musical characteristics in many of the best tube devices ever made, allowing you to tune your VTMC-M2 to your own personal style and work-flow, so you are not just working with a good mastering tool, but you have the paintbrush that sets the artist free.

The word "Mastering" is not taken lightly in the naming of the VTMC-M2. Mastering tends to signify the final, all-important process in the recording process. Once every source instrument and vocal performance is carefully captured and specific track decisions are made, the song is brought together in a mix. The best mixes work towards a product that needs very little change, but also leaves some dynamic room with the understanding that a certain "glue" and polishing will take place at the mastering stage. Many engineers and producers in the modern digital age of mixing mostly in the box, will combine the mastering stage into their mixdown, at the master buss. This can have advantages and disadvantages. It is traditionally accepted that the best results come from critical listening for all details in a mix during the final mixing process, allowing a fresh set of ears, albeit nowadays this is often the same set of ears that have been given a brief listening break, to treat the mastering of material as a separate and final process.

In mastering, we listen to the entire mix, but also in relation to other tracks in the same project. Consistency is the ultimate goal, but we usually aim to leave the final result sounding more sweetened, a little bigger and broader in its reach to the listener, and certainly the most enjoyable on the widest range of listening devices.

Compression has often been used towards specific tasks. A good tracking compressor can control levels going to tape without harming the performance, thus giving a good average level to avoid hiss but controlling overs to keep from distorting. The buss or mix compressor is known to help bring sections of music together, feeding the overall performance's unique timing and blending elements. Often, the mix buss compressor handles groups of instruments, like a drumset buss group, but is also expected to have the ability to blend unification to multiple instruments or full mixes. The buss compressor generally makes a great sounding mastering compressor, but usually is known for specific characteristics.

The mastering compressor is expected to feed a final brickwall limiter, which is responsible for controlling the final volume level to prevent overs that would harm the final listening stage. The mastering compressor should be able to bring the peaks and average levels into a similar feeling or expression. If the mix has been handled well, the mastering compressor should not have to place a lot of focus on controlling the range of dynamics to resolve unruly changes. This is a sign of an unfinished mix, but if it is expected to take on challenging tasks, it better perform well, and we have indeed placed high expectations on the VTMC-M2.

The mastering compressor must be able to sound good and control a wide range of music, and thus we have given multiple modes and timing ranges for the user to tune in exactly the sound they expect. But, the VTMC-M2 does this with a great amount of personality, always with a top-notch sound quality that gives the user confidence in their decision. More transparent and demanding mixes can be used with less tube processing, and can even be blended with the original, unprocessed signal, to give any range of polish desired. In fact, you can even do what many Vintage processors have been known to do, which is process the sound by just running it through the signal path without applying any compression at all! This in itself gives the sound of natural compressing without timed overt compression. The VTMC-M2 does so many things with the simplicity of signal flow that we love the classics for.

And finally, the word "Mastering" in the VTMC-M2 name brings it all together. You are given a range of controls that cover the mastering tasks of many types of musical material, allowing you to tune in the tubes as desired, for more boldness or clarity. You can run the compressor with a slow or fast action response. Create a long overall compression designed to catch peaks over the whole of the song, or use faster response to get things under control with more precise action. Use a deep threshold and shallow ratio to compress the entire dynamic range, but only by a small amount, or use a very shallow threshold with a lot of ratio to get only the loudest peaks under control. Use these scenarios with more obvious attack and release settings to change the feel of the song's tempo or coloration of material, or go extremely heavy-handed if you wish! No matter what setting sounds the best for your master, you can always blend it with the original dry signal at whatever percentage you wish, giving you incredible control and flexibility.

The VTMC-M2 is not designed to be all mastering compressors to all people at all times. We believe that the pristine, surgical digital compressor has been achieved in many forms by many hardware manufacturers and software developers, and we do not believe in re-inventing the wheel. But, rather CDS believes in bringing something to the audio community that has not been done in this manner before. We believe that after some time with the VTMC-M2, you will wonder how you got the sound you were after without it!

WINDOWS INSTALLATION

Close all programs.

Log on to your computer as administrator.

Use right click 'run as administrator' to install and also when opening your DAW.

When you click on the installer you will see the image shown in figure 1 below.



Figure 1

Choose next to continue.

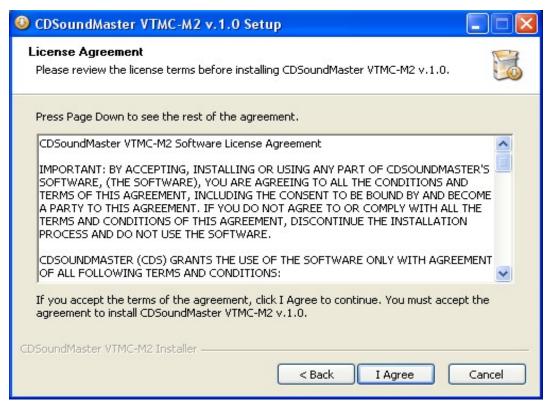


Figure 2

Please read the License Agreement when you first download and demo the VTMC-M2. If you agree to all terms, press "I Agree" to continue with the installation.

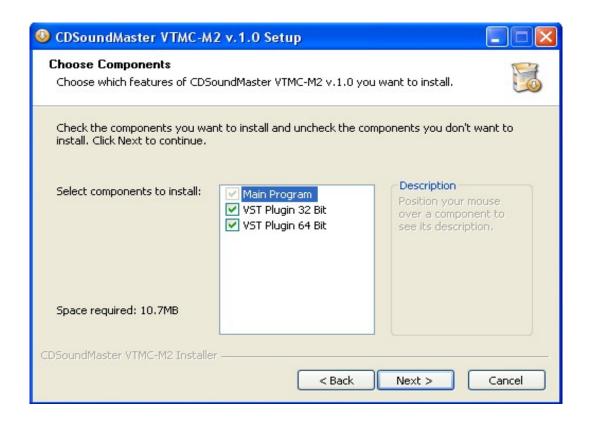


Figure 3

Please choose the version of VTMC-M2 that is correct for your system. If you are running Windows 32 Bit, check only the 32 Bit version. If you are running Windows 64 Bit, but you are using a 32 Bit DAW, check only the 32 Bit version. If you are running 64 Bit for your OS and for your DAW, check 64 Bit.

On a 64 Bit system, we recommend only installing 64 Bit, at least on your first installation since some systems and DAW's are more susceptible to misreading 32 Bit and 64 Bit simultaneously. If you are comfortable with the location of your programs and are confident that your DAW can read both versions on a 64 Bit system, then you can leave both versions checked and install 32 Bit and 64 Bit at the same time.

Choose the location to install the VTMC-M2 Licenser program. This is typically installed to

C:\Program Files\CDSoundMaster\VTMCM2 folder.

Choose a different location if you would like.

The plug-in will be installed in your vstplugins folder, but this step is for the licenser.

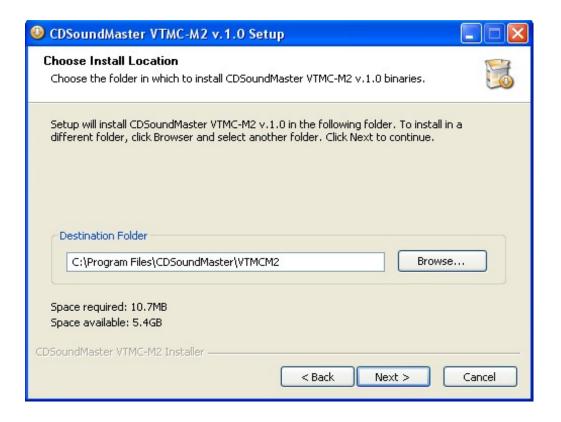


Figure 4

Choose the location to install the Plug-In.

For your 32 Bit version on a purely 32 Bit OS, this is typically

C:\Program Files\Steinberg\vstplugins.

On a 64 Bit OS, the 32 Bit folder it typically called

C:\Program Files (x86)\Steinberg\vstplugins.

For the 64 Bit version on a purely 64 Bit OS, the 64 Bit vstplugin folder is typically located at

C:\Program Files\Steinberg\vstplugins.

Individual DAW programs often have their own vstplugin directory, so if you have trouble locating your new installation after opening your DAW, make sure to check the DAW's preferences and either move the VTMC-M2 to the proper location, or add your installation directory in the places that your DAW scans.

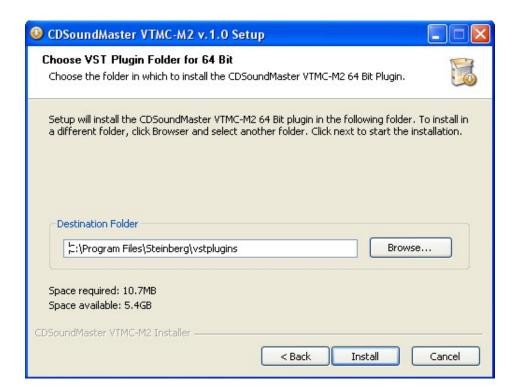


Figure 5



Figure 6

Now that you have installed the Plug-In, you are given the option to open the licenser. You will want to do so in order to Start the VTMC-M2 Demo.

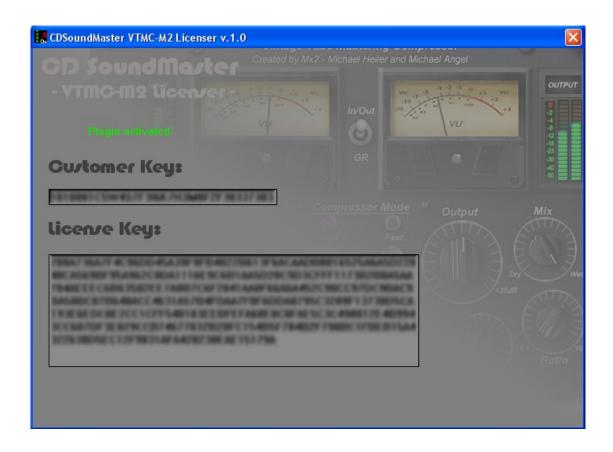


Figure 7

The first time that you run the licenser, you will choose to Start The Demo. Even if you have already purchased the VTMC-M2, you will need to begin by starting the Demo.

This will generate your individual Customer Key.

To register your purchased license of the VTMC-M2, email this Customer Key to us, and we will send your individual License Key.

To copy the Customer Key, "right click" your mouse inside the Customer Key window and choose "select all" and copy. Paste this number into your email.

When you receive your License Key from us, paste it into the License Key folder.

Your VTMC-M2 Commercial License will now be activated.

Open an instance in your DAW program and enjoy!

User Controls



The "Attack" control provides a range of attack speeds ranging from the fastest response all the way counter-clockwise to the slowest response fully clockwise. "Attack" identifies how fast the VTMC-M2 responds to the first input signal. This can also be described as how fast the compressor can respond to the earliest peak. The VTMC-M2 has two compression modes; "Slow" and "Fast".

These two modes adjust the range of the "Attack" control automatically, changing the range of how slow and fast it can respond. This changes the character of the possible range of "Attack" and "Release" to suit the program material.

Terms like "Slow" and "Fast", "Minimum" and "Maximum" will guide your decisions when using the VTMC-M2. There are times where we may seek a more surgical compressor for mastering, where we know the exact timing, not from ear but by the microsecond. Other than the fact that we want you to use the VTMC-M2 instinctively for its incredible musical response, these broad terms are used for its function because it mimics the most program-dependent and music-specific processes developed in classic devices. There is not a single timing response happening on its own, but a more complex process that identifies the timing of the music and responds with more than one simple timing. The ranges, slow and fast, employ a range of timing changes, but are constantly adjusting to your music to give it a unique response, perfect for mastering.

Faster "Attack" times can be more transparent when used correctly, because they are designed to respond to peaks and get them under control more quickly. But, there are many factors involved in compression response. One factor is the length of the sound waveform. Lower Frequencies are created by longer waveforms, and when fast "Attack" is used on them, it can create an audible distortion, which is the result of the waveform trying to push through the timing response. This can be desired to add aggression to a low-Frequency instrument, but is usually avoided by slightly slower "Attack". Moderately slower "Attack" can be used to intentionally clamp down on the peak a short time after initiated, which is often used to create "snappy" drums or the "pop" or "crack" of the drum, but in subtle use it can add more liveliness to full program material.



The "Release" control provides a wide range of timing response from minimum counter-clockwise, to longer lengths clockwise.

The range of control is adjusted by the "Slow" and "Fast" compressor modes.

"Release" determines how long the compressor waits until letting go of the signal once the "Attack" is initiated. Another way to describe this function is the duration that the compressor will wait until it allows the next peak to be compressed by the "Attack" function. An extremely short "Release" time can make for more obvious compression, because it is more commonly letting go of the altered signal to allow the "Attack" to respond more often. Longer "Release" times act as more of an averaging compression, leaving the program material in the same state of reduction as was initiated by the "Attack". The longer that it is left, the longer the material will be adjusted.



The "Threshold" control defines the volume that is used to initiate the compressor response. The "Threshold" ranges from no response counter-clockwise, to a full -30dB fully clockwise.

This control is used to define when the compressor will respond.

When the "Threshold" is at 0dB, it does not matter what the "Attack", "Release", or "Ratio" are set to; they will not begin to operate on the signal until the "Threshold" is below 0dB.

"Threshold" interacts with the volume of the audio signal, so it will not begin to compress until the "Threshold" reaches the loudest signal that is present, or the peak signal. For instance, if your audio ranges from -40dB to -6dB, the compressor will not affect the "Attack", "Release", or "Ratio" until the "Threshold" is at least -6dB. If it is only set to -6dB or -7dB in this example, it will only compress on these loudest peaks in the signal and will not change anything below that volume, but the "Attack" and "Release will change the timing response of anything that reaches that volume.

Deeper "Threshold" levels are used to compress more of the audio information than shallow levels, but the interaction with the "Ratio" determines a great deal of the resulting character. With a high "Ratio", the amount of compression, or gain reduction, will be greater at that same dynamic range, where a very small "Ratio" can be very subtle or even impossible to hear.



The "Ratio" control determines how much of the "Attack" and "Release" functions are applied to the signal. At a 1:1 ratio, there is no effect, regardless of the depth of the "Threshold". The more that the "Ratio" knob is turned towards the clockwise position, the greater the amount of processed signal over the unprocessed signal will occur. At a 2:1 ratio, compression will be audible but may not have as many dB of volume change as a 6:1 compression ratio at the same "Threshold".

The interaction between "Threshold" and "Ratio" is just as crucial as the relatio between "Attack" and "Release". A shallow "Threshold" and a deep "Ratio" can control an extreme amount of peak and leave the majority of the dynamic recording alone, where a deep "Threshold" and a very small "Ratio" can compress the entire signal but only by a very small amount.



The "Input" control allows you to balance the input signal to the VTMC-M2. Even though this is a very straightforward control, there are a couple of things to know about its special usefulness. The "Input" reacts as a true analog circuit, where the "Output" acts as a final digital volume control. You can balance whatever level is coming into the VTMC-M2 with the "Output" or the "Make-Up" controls. The "Input carries with it the amount of analog processing that is emulated inside the circuitry design.

Increasing the "Input" also increases how hard you are hitting the analog tube gain stage, and thus you can increase the amount of harmonic distortion and other pleasing sonic coloration by turning the "Input" up higher. You can reduce the "Output" by the same amount for processing the sound just for the sound of the tube amplification and buffering stages.

The "Input" similarly controls the input signal's relationship to the incoming signal volume and also the circuitry detection emulated inside the Plug-In. This means that turning up the "Input" not only increases the harmonic content emulated, but it brings the volume of the audio track higher in the compressor detection. This means that if you have a track that is a maximum peak of -6dB and you have a "Threshold" of -7dB, it can compress a dB of material overall, but if you increase the input by 5dB, you are increasing how deep the "Threshold" detects the signal. This is the true analog reaction to circuitry, and this natural

interaction makes it easy to get the exact sensitivity desired in the signal. To get a very small amount of tube coloration, reduce the "Input" control using the "Light" tube setting. To drive the device extremely hard, crank up the "Input" and set the tubes to "Heavy".



The "Output" control provides an accurate digital output signal. It carries the signal chain in its entirety to the output signal without further changes. Use the "Output" control to finely tune the level desired leaquing the VTMC-M2.





The digital "Input" and "Output" meters allow you to see responsive real-time volume levels coming into the VTMC-M2 and leaving the output level. View the difference in your "Input" and "Output" settings here. The "Output" meter will show you any affects that compression have on the resulting levels and reduction, factoring in "Wet/Dry" and "Make-Up Gain".



The analog-style "VU Meters" allow you to switch between two different visualization modes. The first mode allows you to view the input levels on the left meter and the output levels on the right meter. This is particularly helpful to view the needle response in comparison to the digital response, both as they enter and leave the unit. The second mode allows you to view the Gain Reduction, meaning that the sensitivity of the needles are only displaying the difference in the original signal and the amount of compression that results. If there is no compression, the needles will not move. If the program material is compressed from any combination of "Threshold", "Ratio", and "Input" level, the "GR" meter will show the amount as it constantly fluctuates, and you will be able to simultaneously continue to monitor the In/Out digital meters as well.



Use this control to switch the VU Meters between In/Out and Gain Reduction modes. In the up position, the left VU Meter shows you the incoming signal while the right VU Meter displays the outgoing signal. When switched down, both VU Meters display the amount of compression, or Gain Reduction, that is taking place.



The "Compression" control allows you to turn on and off the compression signal path in the VTMC-M2. This may sound like a standard bypass control, but it serves a more flexible and valuable purpose. This control allows you to continue running the analog signal path of the VTMC-M2 while turning off only the compression. This serves several purposes. For monitoring, you can listen to just the effect that the valves have on the signal while A/B'ing the effect the compression has on the signal. This can be used for processing by using the "Input", "Tube Modes", and even the "Wet/Dry" controls to shape the natural valve character to the exact amount that is right for your mix. By providing you with the separate on/off control for the entire

chain and just for the compression, you have the ultimate control over the signal for any mastering need.



The "On/Off" control turns the entire signal path on and off, allowing you to compare the processed signal to the unprocessed signal.



The "Compressor Mode" offers you two buttons to choose from "Slow" and "Fast" compression response.

This has an affect on the "Attack" and "Release" ranges of timing characteristics, but also affects how the entire circuitry design reacts to program material. The complexity of the design is largely what makes the VTMC-M2 so ideal for a wide range of mastering tasks, because it is designed to treat your audio with more than just one range of timing elements. Our ears respond to the timing elements of music with great sensitivity and

awareness, and certain "Attack" and "Release" settings that we become accustomed to, like the "wack!" of a drum head or the "hummmm" of a sustained guitar or bass, may initially intrigue us, but as time goes on we become tired of the redundant

behavior. On the flip-side, if there is more than one element to the reaction of timing elements, with more control over more aspects of the signal, we find ourselves repeatedly pleased with the amount of control and personality that a final mix can have.

Both "Slow" and "Fast" modes have a wide range of timing elements to choose from, but because there is a complex process taking place, they are controlled by a range from minimum to maximum instead of specific timing. The more familiar you become with the VTMC-M2's character, the more instinctive it will become to know exactly where to set your timing elements.



The "Tube Mode" allows you to choose between three tube tuning modes. Although there is a single cohesive overall character that the VTMC-M2 contains, you have a great amount of control over how the tubes react in the signal chain. In "Light" mode, we have the high voltage clarity and preamp buffering modes that work together to power the compression process throughout the chain, subtly reacting with harmonic distortion. You are able to control

the amount of each setting with the reduction or increase of the "Input" signal. You have a great ease of use in adding digital volume back to the signal if you choose to reduce the input by a large amount, including the "Output" signal and also the "Make-Up Gain". The lower the "Input" setting, the less tube character is introduced, not only at the start of the signal chain with the

preamp buffering, but throughout the entire chain including push-pull amplification and portions of the process that are designed specifically based on our extensive knowledge of the sonic character of our favorite tube devices.

The "Light" setting is logically designed to give a cleaner signal path, where the "Regular" setting is useful for the typical mixing/mastering session. The increase in the perceived size of the signal is more evident in "Regular" mode and remains clean enough to use regularly. The tubes have a unique response. Like Tape, they saturate the signal in a controllable manner, but unique to tubes that are studied in a real world comparison, go from very smooth and specific even/odd harmonic structures, to fizzy and aggressive character in "Heavy" mode if pushed hard.

This range of character can provide you an incredible range of control in shaping your audio signal, and you can find a balance between growing the signal with some saturation and low-to-moderate compression. For mixing, individual instruments, and even parellel processing, extreme tube and compression settings can give instruments or busses and incredible edge that is unique to the VTMC-M2.



The "Make-Up" control allows you to increase up to 15dB of extra volume. This is useful to "make-up" the overall volume that reduces when you increase compression. The compression that takes place is also known as gain reduction, and so as you control the dynamics of a mix, it reduces peaks and lowers the volume. The "Make-Up" gain can allow you to bring this level back up before making any adjustments to the "Output" signal.

"Make-Up" gain may sem redundant, since it is a digital output control similar to the "Output" signal, but it provides added flexibility specific to the amount of gain reduction that occurs.

Let us say that you have your input set for a good "Threshold" setting and also for the amount of tube coloration that you wish to hear. You set your "Ratio" to get the right amount of compression, but you do not want to change your "Output" level while making A/B comparisons to the compressed and uncompressed signal, and also comparing the compressed signal to the tube-only signal. You can set the "Make-Up" gain to adjust the compressed signal and compare levels without changing your "Output" level to compensate, making it easier to find the perfect balance of control.



The "Mix" control allows you an incredible amount of flexibility in your mastering decisions. The "Mix" covers the expanse of how the audio is processed, from a fully "Dry" signal counterclockwise to a fully "Wet" signal fully clockwise. You can set up any processing from the tubes and compression elements, slow or fast, light, medium, or heavy, and blend them with any percentage of the original clean, unprocessed signal. This can be used for parallel, or "New York Style" compression, where there is an even blend of wet and dry signals, or you can just barely include the tube and compression signal. You can make extreme settings to tubes or compression and barely include them in the signal, or you can make extremely small amounts of processing and make the signal fully wet. The choices are up to you!

Recommended Settings

The VTMC-M2 provides you with the ultimate compressor mastering tool with the vintage character of tubes that give a creative freedom to your production tastes, with the highest quality processing suitable for any mastering needs.

I recommend getting to know the range of abilities of the VTMC-M2 by using it on individual tracks and buss groups first. It is easier to hear how something performs on individual performances, loops, or samples first, while 'breaking it in'. Once you are comfortable with how it operates, try using the Presets in real world applications. I have carefully made these settings in real world mixing and mastering applications, so even though there are cliches attached to "presets" that couldn't possibly be proper for your particular needs, they make for useful starting points, and are not designed to simply mimic popular compressor concepts.

I recommend getting comfortable with the sonic texture of the "Regular" tube setting on real mixes you are working on. Push it hard to get to know where the tubes break up and how much is enough to give a pleasant affect. Once you know the range of the sonic palette, you will be comfortable in the best uses for your production personality.

For cleaner settings, use the "Light" tube mode with the "Input" level turned down by a few dB and the "Wet/Dry" signal turned to its halfway point. For typical mixing and mastering use, use the "Regular" setting with typical compression amounts.

I recommend switching back and forth to "In/Out" and "GR" settings to get familiar with how much compression sounds good to your ears.

I find that it is helpful to intentionally overshoot the "Threshold" and "Ratio" when targeting the best "Attack" and "Release" settings. By pushing the settings harder than needed, it is easy to hear the affect of the timing decisions first. Then, gently roll back the "Threshold" and/or "Ratio" levels until it is subtle enough to master the song while enjoying the coloration and change in timing.

Use the VTMC-M2 ahead of your final brickwall limiter. The combination of tubes and compression will make it easier for your mastering limiter to control final peaks and it will result in a more natural sound. The VTMC-M2 is obviously designed to complement my tube and tape plug-ins, but I do not use this as an advertisement, but rather to suggest that you consider using a combination of tape and tube processing for an incredible range of analog sonic control. Tape and tubes have unique characteristics, and both have a place in mastering without harming transients or ruining the purity of the signal. Using tape and the VTMC-M2 in the chain, place your VTM-M2 and/or R2R, Apex Tape Collection, and TB+ processors ahead of the VTMC-M2, followed by your choice of mastering limiters. Use each program with less effect than you would choose is using it on its

own, and you will hear a natural, expressive response in your masters that you never thought was possible in the digital realm.

If you are considering blending the "Dry" signal with the "Wet" signal, test your compressor settings in fully "Wet" mode until you know the timing effect that you want, and then if it is too heavy-handed, reduce the "Wet" signal leaning towards "Dry" until it is the right balance. In the same way that increasing "Threshold" and "Ratio" help you identify the best "Attack" and "Release" settings, listening to the full "Wet" signal to get the sound correct and then gradually stepping towards a "Dry" combination leads to the best audio choice.

I recommend experimenting with two instances of the VTMC-M2 in serial, meaning one followed by a second, using two timing elements or two instances of "Threshold" and "Attack". Although a single instance is incredibly musical and affects more than just a linear timing, by doing a small amount of shaping in more than one manner, you can control different aspects of the program material with an incredible complexity and efficiency with amazing results.

An example would be to set very fast "Attack" and "Release at a very small amount of gain reduction, mixed with some "Wet" and some "Dry" signal, then feeding a "Slow" compression process to shape the resulting peaks. Or, you can create a deep "Threshold" compression to affect the timing of the entire dynamic range, with a very small amount of the result mixed in "Wet", sending the result to a very shallow compression that only affects less common peaks. The result can be an amazing musical personality to the final master, where the entire song has a unified sense of timing, while the less common peaks have an extra bit of

"Attack" and intensity. This is great for heavier styles of music that need an aggressive peak but in a manner that does not become tiring to the ears. Style can outperform loudness in any music genre!

I recommend trying a few sample settings on a mix before resolving to the final result. You may wish to edit different passages with a little bit different compression settings or even pre-edit different settings throughout the mix.

There are incredible techniques like dual-stage compression, parallel compression, and setting the ideal gain-staging to tune the tubes to your liking, that all require your expertise in carrying them out correctly. Experimentation and spending time with this complex and advanced processor will yield results that arm you with an impressive professional tool like no other.

The VTMC-M2 is a mastering compressor because it is designed to handle the complexity and high level of quality expected in mastering. But, it is highly useful for individual instruments and mix-buss applications. Use the VTMC-M2 to get a vintage vibe and incredible timing control on drums, bass, guitar, keys, vocals, and anything that you would use a compressor for.

Use the VTMC-M2 to tune and shape your signal more than just trying to tame peaks or reduce the average resulting volume.

I recommend using the VTMC-M2 ahead of a mastering limiter that is known for transparency. I believe that seeking the compressor in the mastering chain for personality and character is matched well to using the limiter for final volume control and peak limiting. Use the VTMC-M2 more for the resulting

personality desired and use as little limiting as is needed to get the volume you desire.

I recommend experimenting with the VTMC-M2 just ahead of your favorite track and buss compressors with the "Mix" set mostly to "Dry" and the tube set to "Regular" to get a better result from your other compressors. They will work with less effort and give a more realistic analog result by doing so.

Use the VTMC-M2 alongside itself on the same instrument by placing it on an instrument track and then duplicating it, then change the timing or tube elements slightly. This can give interesting effects to sustain an instrument on one track while increasing its "Attack" on another. Try controlling a little of your vocal on one track and sustaining it on another. This can give an incredible range of expressiveness in performances that were not coming out as well without this effect.

On tracks, add the "Regular" or even "Heavy" tube effect to thin sounding tracks, especially use it in a chain after R2R/Apex/TB+/VTM-M2. Learn to adjust the levels between these analog-style devices to shape and mold your tracks with incredible flexibility and range of tonality.

I sincerely hope that you love working with the VTMC-M2 and find it serves as a classic in your mixing and mastering processes.

Thanks and God Bless You. Sincerely, Michael Angel CDSoundMaster.com

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