

Elmwood

GUITAR AMPLIFIERS



M 6 0 / M 9 0 M O D E N A

Owner's Manual

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WELCOME

Congratulations

to your purchase of an ELMWOOD MODENA. We hope that you will find a new best friend in your MODENA and that you can look forward to many hours of inspiring musical creativity and pleasuring tones.

M60 Modena

The M60 MODENA is a 60 watt pure tube amp with two channels including separate EQ on each channel and with boost functionality on both channels.

The sound and feeling of this amp will help you express everything from heaven to hell and its 60 watts in Pentode mode are specially optimized to give you all the power you need. But the M60 MODENA can also easily be switched to Triode mode to reduce output power to about 30 watts.

M90 Modena

The M90 MODENA is the Big Brother of Modena M60 with the same superior functionality and external design. But - it differs from the M60 not only by its muscular 90 watts, it's equipped with 2 KT88 power amp tubes that runs on a significant higher anode voltage and the preamp is slightly modified from the M60.

Due to its higher performance the M90 has a special designed transformer for the power supply and a heat fan on the back side

Modena Features

- 2 channel, all tube amplifier
- M60 Modena has two power modes – Pentode 60 watts and Triode 30 watts
- Separate EQ section for each channel
- Separate Drive control for Drive mode on each channel
- Separate Drive Volume control for Drive mode on channel 1
- Two Master volumes independent of channel and channel settings.
- Controls for Edge, Fat and F/X Loop
- Four different jack sockets for connecting different speaker impedances.
- Two jack sockets for connecting the accompanying foot switch
- Foot switch - controlling Master Volumes, Channel selection and Drive

INTRODUCTION

About Elmwood Amps

Elmwood Amps was founded in 1998 in Sweden. The goal was to build guitar tube amplifiers with the most outstanding sound and functionality available. The Elmwood staff and everyone who has ever tried an Elmwood are of the opinion that Elmwood has succeeded.

From the beginning, the goal was to take the best parts of historical tube amplifiers while critically questioning the original ideas - making them better - re-inventing the great potential of tube characteristics to create a sound that would stun the world - the Elmwood sound.

The Elmwood amps are built to last. Only parts of highest possible quality are used and each Elmwood product is carefully tested and approved before shipping.

An Elmwood amp is an amazing extension of the performing guitarist's heart and soul, providing the most genuine and expressive tones imaginable. Elmwood users all over the world give testimonials of the fantastic response, versatility and tone of their Elmwood amps.

The amps are designed with a special attention to live performance versatility - giving endless possibilities of shaping your sound with your guitar volume, tone settings, picking technique, string handling, EQ settings and channel switching.

An Elmwood will be your best companion no matter what your style of playing - from soft whispers to hard punches - from lush clean to screaming high gain - from heaven to hell - always interacting with your deepest musical intentions.

We are always glad to get to know our existing and future users - to get your feedback and to give you the best service possible.

The Elmwood team

PRECAUTIONS & WARNINGS

PRECAUTIONS & WARNINGS

Always follow the safety instructions listed here and use common sense.

- Read this manual carefully before switching on your amplifier.
- Do not try to open the amplifier chassis – there are no serviceable parts.
- Vacuum tube amplifiers generate heat. Insure proper ventilation. Keep away from curtains or any flammable objects.
- Tubes may be extremely hot after the amplifier has been on. Never touch a hot tube.
- Do not expose the amplifier to rain, moisture, or any kind of water or liquids. Never use the amplifier in wet condition.
- Do not block ventilation openings on the rear of the amplifier.
- Never operate the amplifier without a connected speaker or load since this can cause severe damage to the amplifier.
- Always insure that amplifier is properly grounded.
- Always unplug power cord before changing fuses or any tubes. When replacing fuse, use only same type and rating. Avoid direct contact with heated tubes.
- Keep children away from the amplifier.
- Be sure to always connect an AC power supply that corresponds to the amplifiers power supply specification / setup.
- Always turn off the power of all related equipment before making any connections.
- Make sure that you are using a correct speaker cable for the speaker outputs. Low signal cables, such as regular guitar cables, might seriously damage the output stage of the amplifier.
- Always remove power plug from the wall socket if there is any risk of lightning occurring nearby or if the amplifier is not used for longer periods.
- Always treat your amplifier with caution and never use excessive force.
- Never use solvents for cleaning. Wipe of the exterior with a soft cloth.
- Your amplifier can create high sound volumes. Do not exposure yourself or others to high sound volumes that may cause permanent hearing damage.

GETTING STARTED

Getting started

1. Connect the amplifier to the mains. Always connect the mains to an earthed outlet with a 3 pole CE approved mains cord.
2. Make sure that there's a speaker cabinet connected to the appropriate jack socket, regarding impedance, on the back of the amplifier.
3. Make sure that you are using a correct speaker cable for the speaker outputs. Low signal cables, such as regular guitar cables, might seriously damage the output stage of the amplifier.

Note: *Never operate the amplifier without a connected speaker since this can cause severe damage to the amplifier.*



4. Connect the accompanying foot switch to the jack sockets marked 1 and 2 respectively.
5. Set the Power switch to position ON.
6. Check that Master 1 and Master 2 volumes are set fully counter clock wise.
7. Allow the amplifier to build up heater and bias voltages for approximately 30 seconds before enabling the Standby switch.
8. [M60 only] When switching between Pentode and Triode, allow the switch to “land” in its middle position for about 5-10 seconds before proceeding.
Pentode mode enables full output power of about 60 watt.
Triode mode reduces the output power to about 30 watts, softening the sound.

The amplifier is now ready for use.
Plug in your guitar cable in the Input jack socket.

Getting some sound

1. Adjust all the knobs **except the Master volumes**, on the front of the amplifier to 12 o'clock.
2. Set the toggle switches at the front of the amplifier to position OFF and Channel 1 respectively.
3. Press the Master 1 switch on the foot switch so the Master 1 led will light up and slowly turn up the Master 1 control on the amplifier.

You should now be able to hear some sound coming out the speaker(s).

CHANNEL 1

Channel 1

- Press the Channel switch on the foot switch so that the led will go dark to activate Channel 1.

By adjusting Volume, Treble, Mid and Bass you can change the sound and vary from clean to distortion. The EQ section is very effective and you will not have any problem finding your favourite sounds.

For cleaner sounds it's recommended to keep the channel 1 volume control below 12 o'clock (*some low output single coil equipped guitars might stay clean beyond 12 o'clock, while a hum bucker equipped guitar needs lower settings for clean sounds*) and adjust the overall output with the master volume(s).

Channel 1 – Drive mode

- Press the Boost/Drive switch on the foot switch so that the led will light up.

You have now activated the Drive mode.

- Still on Channel 1 - slowly turn up the controls for Drive Ch1 and Drive Ch1 Volume.

The Drive Ch1 control decides the amount of distortion and the Drive Ch1 Volume control controls the volume in drive mode.

The EQ section and the Volume on Channel1 are still active also when Drive is activated.

By adjusting the controls for Drive Ch1 and Volume differently, there are a wide range of different sounds to achieve - from lightly break-ups to heavy crunch.

- To turn off Drive mode; simply press the Boost/Drive switch again.

CHANNEL 2

Channel 2 / Channel 2 – Drive

- Press the Channel switch on the foot switch so that the led will light up to activate Channel 2.

As on Channel 1 there are many possibilities to tailor the sound by adjusting; Gain, Volume, Treble, Mid and Bass. At lower Gain settings there is the same smooth, touch sensitive feel/sound as on Channel 1.

By activating Drive on Channel 2;

- Press the Drive switch on the foot switch so the led will light up
- and having low gain setting - the drive control can be turned up to achieve a competent crunch/lead sound. With this setting you can go from bluesy break-ups to fat crunch and lead simply by pressing the drive switch on the foot switch.

- Press the Drive switch on the foot switch so the led will go dark

When turning the Gain control more clockwise; the gain will increase and the sound will become more compressed. Even if the gain and compression increases - the string definition and tone will remain. If setting the Gain control to, say 12 o'clock, there will be a very potent rock/hard rock rhythm sound.

With this gain setting you can again activate Drive;

- Press the Drive switch on the foot switch so the led will light up
- and increase Drive settings for even more fat, singing lead tones.

Note: Avoid having Drive, Gain and Channel 2 Volume set to fully clockwise as it may cause oscillation due to the large amount of gain.

TOGGLE SWITCHES

Toggle switches

Toggle switch marked Drive.

OFF - this is the default position when the foot switch's connected.
The Drive mode is now switch able, on and off, from the Drive switch on the foot switch.

ON - The Drive is activated at all times. If the foot switch is not connected you can still activate Drive by setting the toggle switch to this position. Even with the foot switch connected, this position takes the Drive switch on the foot switch out of function.

M1 - In this position, Drive will be automatically activated when Master 1 is chosen from the foot switch. Even in this position you can still activate/deactivate the Drive mode by pressing the Drive switch on the foot switch while playing on Master 2.

Note: *The Drive led on the foot switch will not light up when Master 1 is activated in this position.*

Toggle switch marked Channel select.

Enables switching between Channel 1 and Channel 2 when the foot switch is not connected.

Connecting the foot switch will disable the function of the toggle switch and in that case Channel selection is being made from the foot switch instead.

MASTER VOLUMES

The two Master Volumes

The MODENA is equipped with two footswitch able Master Volumes. This enables the possibility for increasing the volume of any sound.

Master 1 is controlling the maximum volume level of the amplifier and is used for setting the lead volume level.

Master 2 is dependent of Master 1 and is used for setting the rhythm volume level.

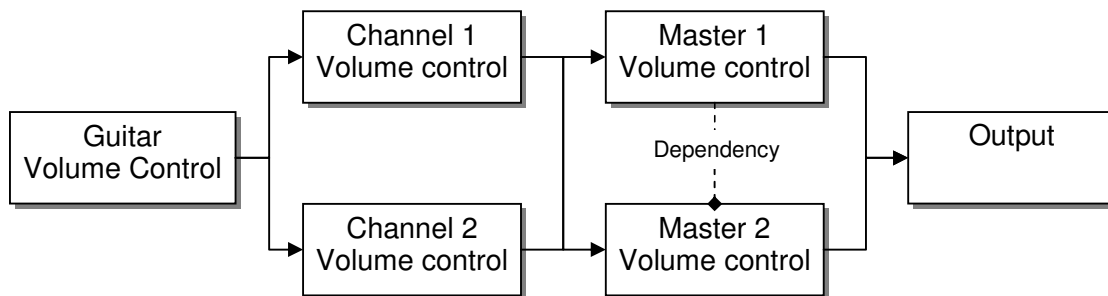
Master volume set up:

- Press the foot switch marked Master 1 so the Master 1 led will light up.
- Adjust the Master 1 to the loudest volume you will be playing at.
- Press the foot switch marked Master 1 again so that the Led will go dark.
- Now adjust the Master 2 to rhythm level.

You have now set a relationship between the two Master Volumes.

If you want to adjust the overall volume - simply adjust Master 1 volume up or down and the volume level of Master 2 will follow in relation to Master 1.

If you want to adjust the volume difference between the two Master Volumes - simply adjust Master 2.



Note : *When the Footswitch is not connected , only Master 1 is active.*

BACK PANEL

Back Panel

Speaker outputs

- Two jack sockets for 1x4 ohm or 2x8 ohms impedance. Here you connect either one 4 ohm cabinet or two 8 ohms cabinets.
- Two jack sockets for 1x8 ohm or 2x16 ohms impedance. Here you connect either one 8 ohm cabinet or two 16 ohms cabinets.

According to Ohms law: Two 8 ohms speakers in parallel equals 4 ohm and two 16 ohms speakers in parallel equals 8 ohm.

Note: *Never operate the amplifier without a connected speaker since this can cause severe damage to the amplifier.*

Back Panel - Control knobs

- **Edge**
The Edge control is global; it affects both channels. Adjusting this clockwise will add high mid/treble to the sound.
- **Fat**
The Fat control is also global; it affects both channels. Adjusting this clockwise will add low mid/bass to the sound.
- **Mix**
Mix control for the F/X loop. When set full counter clockwise at the 10% mark, the loop is in parallel. Only a small amount of the connected effect pedal/rack unit in the send/return jack sockets will be mixed in the dry signal.

By turning the Mix knob more towards the 100% mark the F/X loop becomes more serial. When turned fully clockwise, to the 100% mark, the F/X loop is in serial mode.

The F/X loop is designed to suit both stomp boxes and rack units and operates at -10 dB level. The F/X loop is active on both channels.

Foot switch jack sockets

Connect the foot switch plugs marked 1 and 2 to the jack sockets respectively. The foot switch jack sockets can also be operated from a Patch bay/ MIDI switcher. This allows all the foot switch functions to be managed by a MIDI operated unit.

Mains input

Always connect the mains to an earthed outlet with a 3 pole CE approved mains cord.

Fuse

Replace broken fuse only with the same type of slow blow fuse - voltage/current.

TUBES - MAINTENANCE

Tubes – Maintenance

CAUTION: Tubes may be extremely hot after the amplifier has been on. Never touch a hot tube.



Tubes – general

The great thing about a tube amplifier is... that's right – the tubes. Tubes are the components that provide your amplifier with heart and soul together with that unmatched organic, dynamic response.

But as light bulbs, the tubes need to be replaced at some time and can occasionally malfunction. How frequent you need to change tubes is depending on how often you use your amplifier and how hard you push it. Normally you need to replace the tubes every 1 – 2 years, but if you are a pro-guitarist on tour, you might want to replace them even more often to be sure your tubes are performing at an optimal level.

A shortened lifetime of a tube can also be dependent on shocks during transportation, incorrect speaker load, peaks from the power supply or other abuse.

To access the tubes, place your amplifier on a stable surface, remove the 5 screws on the back-grill using a crosshead screwdriver and then remove the back-grill. (For M90, pay attention to unplug the fan-connector. Remember to connect it when assembling)

See tube chart below for positions and functions for speeding up your diagnose.

Power tubes

If the power of the amplifier is getting weak and your tone is flattening, try replacing the power tubes.

Power tubes can short-cut when malfunctioning, making the main fuse blow. If your amplifier should act strange and/or then be out of business – first replace the power tubes – and, if needed, check the main fuse and replace with a fuse of same type.

The power tubes should always be replaced in matched pairs for best performance. See tube socket for match grade. Always use the same type of power tubes as the original ones.

If the replacement tubes have a different match grade – the amplifier needs to be re-biased by a certified service technician. Bias instructions can be sent upon request.

If the amplifier is still not working properly, there are fuses inside the amplifier that needs to be checked by a certified service technician.

Pre-amp tubes

If you experience noise, un-normal feedback - rattling or fuzzy sounds from the output of your amplifier – it is very likely to be caused by a bad pre-amp tube. The best way to diagnose a bad pre-amp tube is to use a replacement tube of the same type, that is known to be good and substitute it in each possible tube location, one at the time, until the problem disappears. See tube chart for positions and functions for speeding up your diagnose.

TUBES - MAINTENANCE

Tubes – Microphonics

Microphonics is a term used for high-pitched clanging noises that can occur from bad tubes. You can test for microphonics by gently tapping the tubes with a wooden pen, or similar, when amp is turned on. It's normal to hear some noise when tapping the tubes, especially the pre-amp tube located closest to the input jacket is sensitive.

Which tubes will work with my amplifier?

PreAmp Tubes:

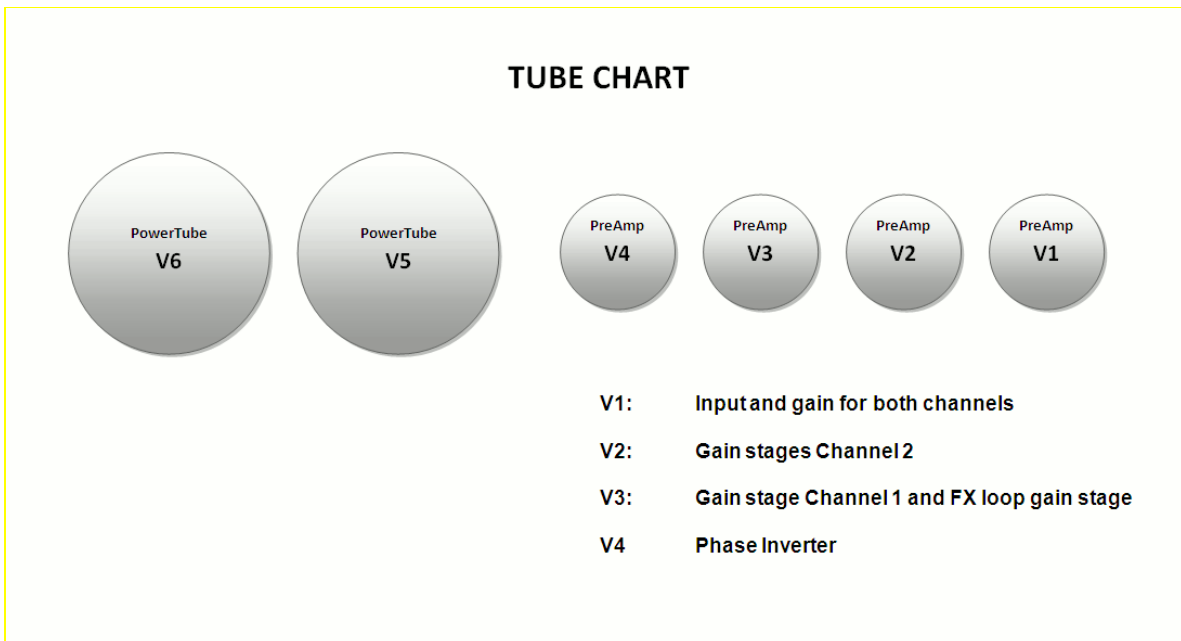
M60 / M90 MODENA – Any 12AX7 (ECC83) of good quality.
PreAmp tubes need no calibration or biasing.

Power Tubes:

M60 MODENA – Any EL34 of good quality.
KT66, KT77 and 6L6 can be used if preferred, but needs different biasing.

M90 MODENA – Any KT88 of good quality.
EL34 can be used if preferred, but needs different biasing.

Always check the match grade of your Power tubes before replacing them. If replaced with tubes with a different match grade the amplifier may need to be re-biased. The match grade should be visible at the power tube sockets.



SPECIFICATIONS

Specifications M60 Modena

Preamp tubes 4 x ECC83 (12AX7WA)
Poweramp tubes 2 x EL34
Poweramp mode Push-Pull class AB
Dimensions (W*D*H). 585 x 240 x 270 mm
Weight 17 kg
Footswitch (W*D*H) 210 x 110 x 50 mm

Specifications M90 Modena

Preamp tubes 4 x ECC83 (12AX7WA)
Poweramp tubes 2 x KT88
Poweramp mode Push-Pull class AB
Dimensions (W*D*H). 585 x 240 x 270 mm
Weight 17 kg
Footswitch (W*D*H) 210 x 110 x 50 mm

Specifications are subject to change without notice!

CONTACT

Contact

The team at Elmwood Amps is always glad to get to know existing and future users, to get your feedback and to give you the best service possible.

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