

Elmwood

GUITAR AMPLIFIERS



M90 MODENA

Owner's Manual

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Congratulations

to your purchase of a M90 MODENA.

The M90 MODENA is the Big Brother of the M60 MODENA, 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 poweramp 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.

Features

- The M90 MODENA is a 2 channel, all tube amplifier
- Each channel has its own EQ section.
- Channel 2 does also have a Gain knob in addition
- There are two Drive controls, one for each channel.
- On Channel 1 there is also a Drive Volume knob.
- Two Master volumes those are independent of channels and channel settings.
- On the back panel there are three knobs for adjusting - Edge, Fat and F/X Loop.
- Four different jack sockets for connecting different speaker impedances.
- Two jack sockets for connecting the accompanying foot switch.

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.
- 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.

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

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 switch marked "Power" 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 switching on the Standby switch.

The amplifier is now ready for use.

Plug in your guitar in the Input jack socket.

Getting some sound

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

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

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's volume 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).

- 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 Drive Ch1 and Drive Ch1 Volume.

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

The EQ section and the Volume on Channel1 are still active also when Drive is activated. By adjusting 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 the Drive mode; simply press the Boost/Drive switch again.

Channel 2

- 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;

- Press the Drive switch on the foot switch so the led will light up

and having low gain setting - the drive knob can be turned up to achieve a competent crunch/leadsound. 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 knob 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 knob 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 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 not connected you can still activate Drive by setting the toggle switch to this position. Even if 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 take this toggle switch out of function and Channel selection is being made from the foot switch instead.

MASTER VOLUMES

The two Master Volumes

The M90 MODENA is equipped with two footswitch able Master Volumes. This is to be able to have any sound you are playing in a louder version at any time.

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

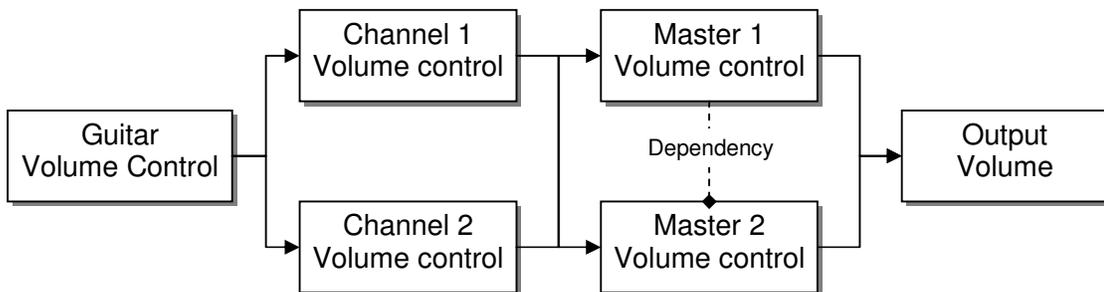
Master 2 is dependent of Master 1 and is used for setting the rhythm volume level.

Master volume set up:

- Press the switch marked Master 1 again so that the Led will light up.
- Adjust the Master 1 to what you believe will be the loudest level you will be playing at.
- Press the 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 find the overall volume to be too silent or to loud - simply adjust Master 1 volume up or down and the volume level of Master 2 will follow in relation to Master 1. If you find the difference between the two Master Volumes to mismatch - adjust the relationship with Master 2.



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

BACK PANEL

Back Panel

Speaker outputs

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

Cooling fan

On the back grill of the M90 sits a fan for cooling the tubes for extended tube life and for evacuate the heat built up inside the cabinet.

Make sure that the fan is running at all times when the amp is switched on.

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**
Mixing 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.

BACK PANEL

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's functions through a MIDI operated unit.

Mains input

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

Fuse 1AT

Replace broken fuse only with the same type-Voltage/current. The mains fuse is a 250 Volt, 4 Ampere slow blow. (3.15 Ampere on early models)

SPECIFICATIONS

Specifications

Preamp tubes	4 x ECC83 (12AX7WA)
Poweramp tubes	2 x KT88 Shuguang
Poweramp mode	Ultralinear 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 staff at Elmwood Amps is always glad to get to know our existing and future users - to get your feedback and to give you the best service possible.

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