

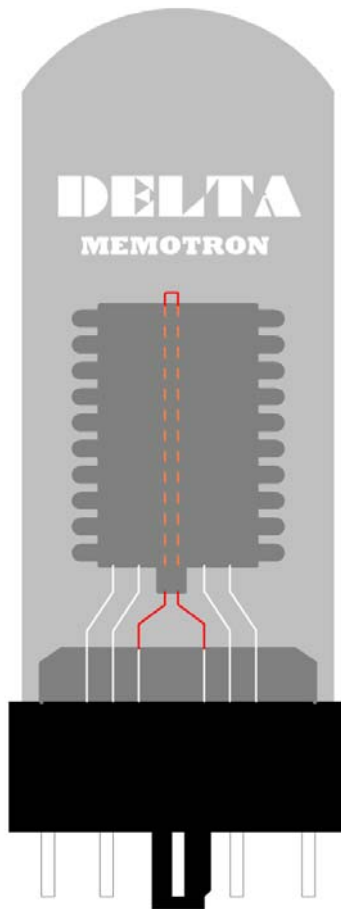
DELTA

MEMOTRON

USER MANUAL

M15L / M15V / M30L / M30V

EUROPE - ENGLISH



Respect the past - Embrace the future!



READ THIS USER MANUAL BEFORE SWITCHING ON

WARNING! This Equipment **MUST BE EARTHED!**

ALWAYS use the supplied Mains Lead.

If a replacement is required, contact Delta-Retrotec or one of our authorised agents.

NEVER attempt to defeat fuses or fit fuses of the incorrect type or value.

NEVER attempt to remove any Amplifier Chassis.

Hazardous voltages exist within these components and there are no user-Serviceable parts inside.

NEVER use the equipment in damp or wet conditions.

NEVER place liquids or objects filled with liquids on the equipment.

ALWAYS unplug the equipment when not in use & during electrical storms.

ALWAYS protect the Mains-Lead from damage including...

Walking on it, tripping over it & kinking it.

NEVER obstruct the rear ventilation hole.

Always allow free movement of air at the rear of the equipment.

NEVER operate the Amplifier if it has been damaged in any way including...

Damage to the Mains-Lead,

The ingress of any liquid or metallic object into the case,

Exposure to rain or moisture,

Exposure to severe mechanical shock ie Dropped,

Any malfunction causing the equipment to operate incorrectly.

ALWAYS refer all servicing to a qualified Service Engineer.

This includes replacement of Valves and Fuses.



Note: This equipment has been tested and found to comply with the requirements of the EMC directive 2004/108/EC and Low Voltage directive 2006/95/EC in the E.U.

INTRODUCTION

Welcome to a new generation of All-Valve, Hand-Wired Guitar Amplifiers...
The **DELTA-MEMOTRON**.

Respect the Past – Embrace the Future!

We've hand-picked the best technology available over the past 70 years and merged it all together to produce a Guitar Amplifier with unrivaled versatility and stunning tone. From the rugged 6V6GT valves (1937) driving the legendary Celestion Alnico speaker (1950's) and the breathtaking Accutronics Reverb (1960's) to our unique Memotron system storing your knob settings in EEPROM memory (1980's) all controlled by powerful microcontrollers (1990's). For the 2000's and beyond, the optional MEMOLINK opens the door to PC/Internet and Email connectivity.

Under The Bonnet

The hand-wired signal path uses a combination of point-to-point and Eylet board construction. The Pre-Amp ECC83 (12AX7) valves are controlled by MEMOTRON "Knob Memory" circuits.

The MEMOTRON design provides full control and storage of the knob settings in the traditional valve amplifier circuits and ensures that NO modern semi-conductor device forms part of the signal path.

The Class AB Cathode Bias requires no adjustment and produces a softer Power-Amp "Crunch" than conventional Fixed-Bias Amps when cranked-up!

What is the MEMOTRON?

Forget all you've learned about guitar amp clean channels, drive channels, lead channels, bright switches, Lo/Hi inputs, common EQ, etc., etc.

Instead imagine a single channel, all-valve, hand-wired amp with enough knobs to take you from "squeaky clean" through "raunchy-blues" to "down-n-dirty" with just the right amount of good old fashioned spring reverb.

Then add a memory, so you can save all of your precious knob set-ups as a preset sound.

The MEMOTRON is born !!

(Your sounds are safe ! No more grief from knob twiddlers down the pub!)

The Real Thing!

Why use valve-modelling or simulation techniques when you can have the **Real** thing!

These amps use **Real** valves throughout to produce **Real** valve tone.

The Memotron only controls the "knobs", your guitar tone is pure hand-wired valve simplicity from input through to speaker!

LOUD or Watt?

These amps can pump-out some serious sound pressure when cranked-up!

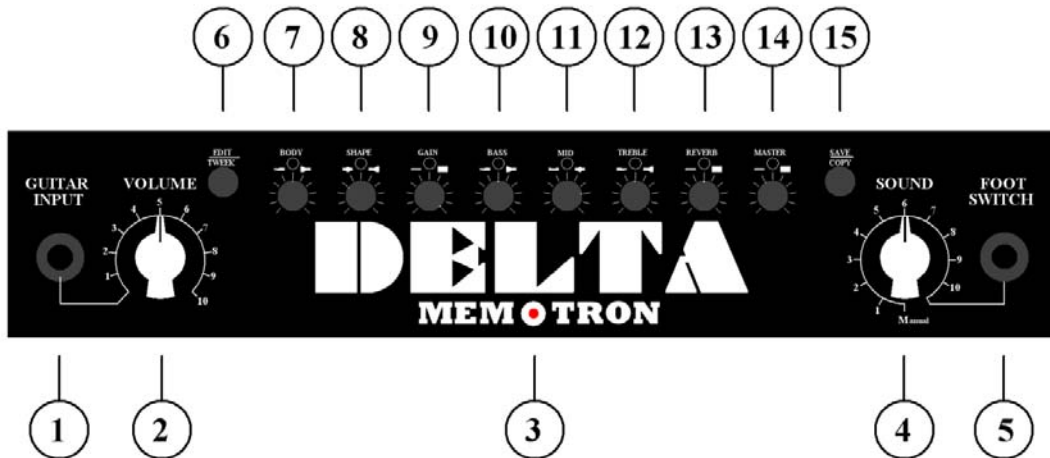
Being loud isn't just about having enough watts, it's the efficiency of the speaker which really makes the difference!

If speakers were nigh-on-perfect, you could play Gladstonbury with a One-Watt-Amp!

The Celestion Neo speaker which we fit to our M30L version, for example, is so efficient that it produces the same sound pressure as a 95 Watt conventional amp!

Ear Protectors advised!

AROUND THE FRONT PANEL



GUITAR INPUT (1)

This is where you plug your guitar in.

Always use the highest quality screened audio cable to connect your guitar.

Cheap screened cables are a false economy, they're noisy and can dull your sound!

VOLUME (2)

Use this control to turn the volume up (and occasionally down)!

POWER / OUTPUT INDICATOR LAMP (3)

This Lamp is lit when mains power is On & also shows the Output mode...

Red : Output Mode is set to *HIGH Mode (100% Power)*.

Flashing Red: Standby Mode.

Green: Output Mode is set to *LOW Mode (20% Power)*.

SOUND (4)

Turn this switch to select Manual Mode, Presets 1 to 10 and Footswitch operation.

*In **Manual Mode** the Amp is like a conventional Single channel one.*

All the knobs Body (7) thru Master (14) are active. Use this mode when you first try the Amp to find out what all the knobs do!

Switch positions 1 thru 10 select one of your 10 presets.

*If you're using the **Footswitch** you must set this switch to the Footswitch Position.*

FOOTSWITCH (5)

This is where you plug your Footswitch or MemoLink in.

EDIT/TWEEK (6)

Press this switch to enable Tweek or Edit modes.

See (Using Tweek Mode) and (Creating & Editing Your Sounds).

BODY & SHAPE CONTROLS (7 & 8)

The Body & Shape controls are Pre-Gain tone controls.

These alter your guitar tone before the amp's main Gain & Tone stages.

***Body** is similar to a conventional Bass control, but because it's pre-gain it alters the density and tone of your low-end distortion.*

*Set to minimum for "**Thin n Bluesy**" thru to maximum for "**Fat n Heavy**"!*

***Shape** is a combined Mid-Boost and Treble-Boost control.*

Again, because this control is pre-gain it alters the density and tone of your high-mid and high-end distortion.

*Set to minimum for "**Boxy-Humbucker**" thru to maximum for "**Serious Bite**"!*

GAIN CONTROL (9)

This control sets the amount of pre-amp distortion.

For "Clean" sounds, or if you prefer Power-Amp-Distortion to Pre-Amp-Distortion, set the gain level as high as possible without distorting your sound.

If you're into Pre-Amp-Distortion, crank-it-up as high as you like!

BASS, MID. & TREBLE CONTROLS (10, 11 & 12)

The Bass, Mid. And Treble controls are conventional Post-Gain tone controls.

These alter your guitar tone after the amp's Gain stage.

These tone controls operate independently of each other ie. changing the Bass control does not appreciably effect the Mid. or Treble functions.

***Bass** controls your bottom-end tone.*

*Set to minimum for "**Thin n Crispy**" thru to maximum for "**Rich n Warm**"!*

***Mid.** controls your middle range tone.*

*Set to minimum for "**Scooped-Out**" thru to maximum for "**In-a-Bucket**" resonance!*

***Treble** controls your top-end tone.*

*Set to minimum for "**Mellow-Jazz**" thru to maximum for "**Super-Bright**"!*

REVERB CONTROL (13)

The Reverb control sets the amount of Spring Reverb in your sound.

MASTER CONTROL (14)

The Master control sets the overall volume level for your sound.

For your cleanest/quietest sounds, set Master to maximum to ensure that you have enough volume available to reach full power.

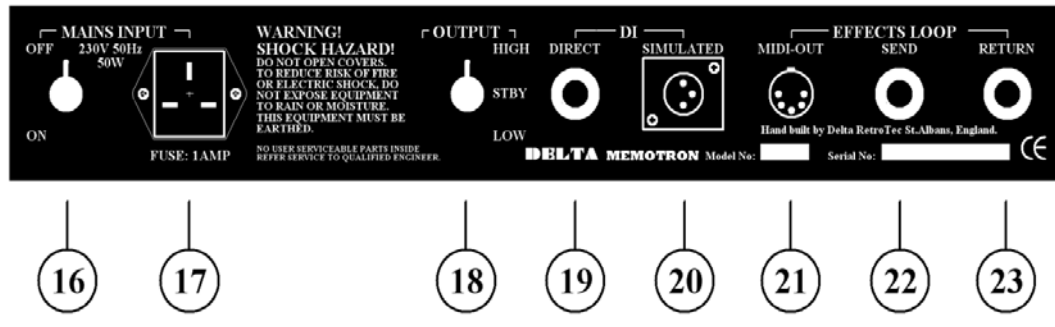
For your dirtiest/loudest sounds, set Master to a lower level to maintain volume balance with your cleaner sounds.

SAVE/COPY (15)

Press this switch to Save or Copy Sounds.

See (Creating & Editing Your Sounds).

AROUND THE REAR PANEL



MAINS ON/OFF SWITCH (16)

This switch turns the mains power on and off.

To extend the life of the amplifier's valves, you should operate this switch in conjunction with the Output switch (18) as follows.

TURNING ON: *Move Output switch to STBY (Standby) position.
Move Mains switch to ON position.
Wait 30 Secs.
Move Output switch to HIGH or LOW position as required.*

TURNING OFF: *Move Output switch to STBY (Standby) position.
Move Mains switch to OFF position.*

MAINS INPUT FUSED CONNECTOR (17)

This is the Mains Input Power Connector with integral fuse.

Connect the supplied Mains-Lead here!

Always use the supplied Mains-Lead.

If a replacement Lead or Fuse is required, contact Delta-Retrotec or one of our authorised agents.

OUTPUT MODE SWITCH (18)

This 3-Position switch sets the amplifiers Output Mode.

*HIGH: Power-Amp operates in Full (100%) Power Mode. Panel Lamp=**Red**.*

*STBY: Power-Amp is in Standby Mode. Panel Lamp = **Flashing Red**.*

*LOW: Power-Amp operates in Low (20%) Power Mode. Panel Lamp = **Green**.*

DI-DIRECT OUTPUT (19)

This Output is an un-simulated "Direct Instrument" balanced output.

Use this output to drive a Slave Amp or similar device which does not require the use of a simulated signal.

For best results use a balanced TRS Jack terminated cable assembly.

Use an un-balanced Mono Jack cable assembly if the device you're connecting to has only an un-balanced input.

DI-SIMULATED OUTPUT (20)

This XLR Output is a simulated “Direct Instrument” balanced output.

Accurate Simulation-Filters are used here, to mimic the subtle resonances and frequency response of the amp’s speaker, so you don’t have to “Mic-Up” the Amp!

Use this output to drive into a PA or Mixing-Desk.

This Balanced output MUST only be connected to a Balanced input.

If it is connected to an un-balanced input the Simulation filters will NOT operate correctly!

MIDI OUTPUT (21)

This Midi output sends a Program-Change message whenever you change sounds.

Use this output to drive a midi-equipped external effects unit.

By programming the external effects unit, you can have a different external effect for each of your amp’s Sounds if you want!

For Amp Sounds 1-10, a Program Change 1-10 is output.

For Manual Mode, a Program Change 11 is output.

EFFECT SEND OUTPUT (22)

This un-balanced output is the Effect Send or Pre-Amp Output Jack.

Use this output to connect to the input of an external effects unit or external Power-Amplifier.

This output is Post-Volume control.

EFFECT RETURN INPUT (23)

This un-balanced input is the Effect Return or Power-Amp Input Jack.

Use this input to connect to the output of an external effects unit.

When a Jack-Plug is inserted in this socket, the internal link which normally connects the amplifiers Pre-Amp-output to the amplifiers Power-Amp-input is broken, so that the external effects unit is “ inserted” into the signal path.

USING TWEAK MODE

Tweak mode gives you fine adjustment of Bass, Treble and Reverb for all sounds when playing “Live” for example, without changing any of your programmed settings.

It’s like having separate overall Bass, Treble and Reverb controls.

For example you can...

Turn off Reverb for recording.

Turn Reverb down when gigging an empty hall.. it happens!

Add a bit more “Top-end” at a particular venue etc..etc..

*To enable Tweak mode, simply press & release **Edit/Tweak (6)**.*

The Edit-Lamps above Bass, Treble and Reverb knobs light to indicate Tweak Mode.

For Bass and Treble knob positions...

Midway: No Boost or Cut (Programmed level).

Maximum: Full-Boost.

Minimum: Full-Cut.

For Reverb knob position...

Maximum: Full (Programmed level).

Minimum: Off.

To quit Tweak mode, simply press & release Edit/Tweak again. All Edit-Lamps extinguish.

Note: Tweak mode is NOT available in Manual mode!

CREATING & EDITING YOUR SOUNDS

TO CREATE A NEW SOUND FROM SCRATCH

STEP	ACTION	NOTE
1	Turn Sound-Switch (4) to Manual.	
2	Adjust Knobs Body (7) thru Master (14) to create your sound.	1
3	Press & release Save/Copy (15). All Edit-Lamps (7) thru (14) will flash.	2 & 3
4	Turn Sound-Switch to the sound No.(1-10) you wish to save to.	2 & 3
5	Press & hold Save/Copy for about 5 secs, until Edit-Lamps Scroll. Release Save/Copy. Your new sound is now saved.	3 & 4
<p><i>Note 1: When creating "Clean" sounds, always set Gain (9) as high as possible. For your "Cleanest/Quietest" sounds, always set Master (14) to maximum to ensure that you have enough volume available to reach full power!</i></p> <p><i>Note 2: To quit without saving, press and release Save/Copy again. All Edit-Lamps will extinguish.</i></p> <p><i>Note 3: You must start Step 5 within about 10 Secs. of starting Step 3 otherwise the function will quit and all Edit-Lamps will extinguish.</i></p> <p><i>Note 4: To quit without saving, release Save/Copy before the Edit-Lamps scroll.</i></p>		

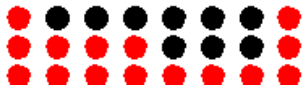
TO EDIT AN EXISTING SOUND

STEP	ACTION	NOTE
1	Turn Sound Switch (4) to the sound (1-10) you wish to edit.	
2	Press & hold Edit/Tweek (6) for about 5 Secs. until all Edit-Lamps (7-14) light.	
3	Adjust each knob Body-Master (7-14) until it's Edit-Lamp is on steady. <i>If a lamp is flashing FAST turn the knob UP (clockwise).</i> <i>If a lamp is flashing SLOW turn the knob DOWN (anti-clockwise).</i> Each knob is now set to the current stored position for this sound. Now make any changes you require.	1
4	Press & release Save/Copy (15). All Edit-Lamps will flash. To save your changes to the current sound, skip to step 5. To save your changes to a different sound turn the Sound Switch to the new Sound No. (1-10) you require.	2 & 3
5	Press & hold Save/Copy for about 5 Secs. until Edit-Lamps scroll. Release Save/Copy. Your Changes are now saved.	3 & 4
<p><i>Note 1: To quit editing, press and release Edit/Tweek. All Edit-Lamps will extinguish.</i></p> <p><i>Note 2: To quit without saving, press and release Save/Copy again. All Edit-Lamps will extinguish.</i></p> <p><i>Note 3: You must start Step 5 within about 10 Secs. of starting Step 4 otherwise the function will quit and all Edit-Lamps will extinguish.</i></p> <p><i>Note 4: To quit without saving, release Save/Copy before the Edit-Lamps scroll.</i></p>		

TO COPY ONE SOUND TO ANOTHER

STEP	ACTION	NOTE
1	Turn Sound-Switch (4) to the sound (Manual-10) you want to copy from.	
2	Press & release Save/Copy (15). All Edit-Lamps (7) thru (14) will flash.	1&2
3	Turn Sound-Switch to the sound No.(1-10) you wish to save to.	1&2
4	Press & hold Save/Copy for about 5 secs, until Edit-Lamps Scroll. Release Save/Copy. Your sound is now copied.	2&3
<p><i>Note 1: To quit without saving, press and release Save/Copy again. All Edit-Lamps will extinguish.</i></p> <p><i>Note 2: You must start Step 4 within about 10 Secs. of starting Step 2 otherwise the function will quit and all Edit-Lamps will extinguish.</i></p> <p><i>Note 3: To quit without saving, release Save/Copy before the Edit-Lamps scroll.</i></p>		

TO BALANCE YOUR SOUND LEVELS (MASTER-EDIT MODE)

STEP	ACTION	NOTE
1	Turn Sound-Switch (4) to the Manual position.	
2	Press & hold Edit/Tweek (6) for about 5 Secs. until Master Lamp (14) flashes. Release Edit/Tweek. You're now in Master-Edit-Mode.	1
3	Turn Sound-Switch to the sound No.(1-10) you wish to Master-Edit.	
4	The Edit-Lamps indicate the current Master level for the sound ie....  ●●●●●●●●●● Minimum Level ●●●●●●●●●● Medium Level ●●●●●●●●●● Maximum Level Press & release Save/Copy (15) to INCREASE the level. Press & release Edit/Tweek to REDUCE the level. Repeat from Step 3 until ALL your sound levels are balanced as required.	2
5	Turn Sound-Switch to Manual.	1
6	Press & hold Save/Copy for about 5 Secs. until Edit-Lamps scroll. Release Save/Copy. Your new Master-Levels are now saved.	1 & 3
<p><i>Note 1: To quit without saving, press and release Edit/Tweek again. Master Lamp will extinguish.</i></p> <p><i>Note 2: Always set your "Cleanest/Quietest" sound to Maximum Level, to ensure that you have enough volume available to reach full power!</i></p> <p><i>Note 3: To quit without saving, release Save/Copy before the Edit-Lamps scroll.</i></p>		

TECHNICAL SPECIFICATIONS

CONTROLS

BODY (7)	Low EQ (pre-gain). <i>20dB boost/cut range @ 80Hz.</i>
SHAPE (8)	Mid/Top combined EQ (pre-gain). <i>Mid-boost: 16dB range @ 1.3Khz.</i> <i>Top-boost: 18dB range @ 5Khz.</i>
GAIN (9)	Pre-amp gain. <i>45dB range.</i>
BASS (10)	Low EQ (post-gain). <i>14dB boost/cut range @ 80Hz.</i>
MID (11)	Mid EQ (post-gain). <i>30dB boost/cut range @ 660Hz.</i>
TREBLE (12)	Top EQ (post-gain). <i>13dB boost/cut range @ 5Khz.</i>

OUTPUT POWER

POWER SWITCH (18) **High:** 100% Power/Panel Lamp = **RED**.
Output Power = 15W(M15) / 30W(M30).

Standby: Panel Lamp = **Flashing RED**.

Low: 20% Power/Panel Lamp = **GREEN**.
Output Power = 3W(M15) / 6W(M30).

INPUTS/OUTPUTS

GUITAR INPUT (1)	Guitar Input Jack. <i>Sensitivity 150mV (typ) 800mV (max) RMS.</i>
EFFECT SEND (22)	External-Effect-Send or Pre-Amp-Out Jack. <i>Output Level (Mode=High): 850mV RMS (-1.4dBV) @ Full Volume.</i> <i>Minimum external load: 500K.</i>
EFFECT RETURN (23)	External-Effect-Return or Power-Amp-In Jack. <i>Sensitivity (Mode=High): 850mV RMS (-1.4dBV) for Full Power.</i>
MIDI OUT (21)	Midi-Out DIN Socket. <i>Sends Program-Change message for each Sound.</i> <i>Program No. 1-10 for Sounds 1-10.</i> <i>Program No. 11 for Manual.</i>
DI-DIRECT (19)	Balanced (Un-Simulated) TRS Output Jack. <i>Output Level (Mode=High): 1000mV RMS (0dBV) @ Full Power.</i> <i>Zout=1K0.</i>
DI-SIMULATED (20)	Balanced Simulated XLR Output. <i>Output Level (Mode=High): 425mV RMS (-7.4dBV) @ Full Power.</i> <i>Zout=1K8</i>
MAINS INPUT (17)	Fused IEC Mains Inlet. Fuse 20mm/1Amp Anti-Surge.

WEIGHTS, DIMENSIONS & TOLERANCES

Weight: M15V:18.0Kg M15L:15.5Kg M30V:18.2Kg M30L:16.1Kg

Dimensions: 447(W) x 530(H) x 266(D) mm Including handles and feet.

Tolerances: All dimensions are nominal (+5mm). All power and voltage levels are nominal (+10%) measured at 240V supply input.

OPTIONAL ACCESSORIES

FT01 FOOTSWITCH/TUNER	Full-Function 2-Button Footswitch and guitar tuner.
FT02 FOOTSWITCH/TUNER	Full-Function 11-Button Footswitch and guitar tuner.
ML01 MEMOLINK	Memolink PC adaptor for RS232 and/or USB.