



THE GUIDE TO AVALON

PRELIMINARY VERSION

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INTRODUCTION

AVALON and POLYSUBBASS are very new for the guitar world.

The design of AVALON,
its mechanical construction,
its polyphonic piezo pickup
the wiring with NEUTRICON plugs,
the Bass Effect of POLYSUBBASS,
the separate outputs for all six strings...

... all seem independent new features.

Each one may have attracted your attention and led you to purchase the fascinating system.

To us, these new features are related, because they all arouse from one idea about a modern instrument and the music of the coming age. So whatever might have been the reason for you to like the instrument, we would like to make the tremendous musical potential you purchased as clear as possible to you - and since you know the instrument, you do not expect an ordinary "Owners Manual", do you?

Nowadays, musicians are overcharged with manuals to study and electronics to be understood. We claim that our system is not over technisized. You will understand most of it intuitively. It is mainly designed to reproduce and enhance your personal expression, not to cover it with fancy sounds.

But the following pages may give you some interesting information and interesting hints on system connection.

This is how the manual is organized:

For the **technically advanced brain**, the Block Diagram (page 8) is the base to understand everything.
For the **visually receptive**, we recommend to get some inspiration from the Configuration Examples (page 5-7).
For the **verbally talented**, the texts in the Functions Diagram (page 4) explain the plugs and buttons.

If you do not understand something in one section, look into another.

If you do not understand the following two paragraphs, do not worry:

Do not search for **technical specifications**. You will not have a problem with the sound quality of the instrument. The tremendous progress in technology made it easy to satisfy the needs of any musician in terms of reproduction quality. Using this studio standard in electronics, we have mainly improved the accuracy and linearity (towards bass and treble) of the instrument itself - compared to both electric and acoustic guitars.

This equipment did not arise out of the trial to build "what musicians want". It can pass more to you than just the satisfaction to use a perfect instrument . - like you want to pass more to your public, than just a perfect arrangement of perfect sounds - and the listener wants to live more during your concert than the experience of perfection. - We are all looking for **creation**.

THE SECOND SUPPLY

Since we do not want to force you to use the POLYSUBBASS whenever you play AVALON, we offer a monophonic cable and a power supply with the guitar. The cable has a NEUTRICON plug (guitar end) and a jack plug on the (amplifier end).

Radially built into the jack plug you find the socket for the 3mm minijack of the power supply.

-> Do not use this cable out of the THRU plug of the POLYSUBBASS. (It would lower the string separation)



POLYSUBBASS™ DESCRIPTION

POLYSUBBASS is a versatile extension for the *PARADIS hexaphonic guitars*. It is capable to lower the lowest picked string by one octave and add it to the original sound. Softly added, the result is an amazing full bass sound. Used more strongly it can give the impression of an accompanying bass player. Furthermore, the machine provides the necessary 10 outputs to treat each string and it mixes to mono or stereo for amplification on a hi-fi or PA system.

THE BASS EFFECT

The lower three strings are divided by three special versions of the known octave effect. Since they are adapted for this purpose and tuned to the strings, they work very softly and produce no errors. Contrary to a MIDled bass sound, this effect oscillates synchronously with the string and therefore joins it like a natural part of the vibration. The bass signal is slightly limited to avoid overloading of the equipment and to preserve the natural attack of the instrument. Towards the higher notes of the bass strings the effect smoothly fades.

In the regular mode, all three strings are oktaved at the same time, which produces a particularly heavy bass sound for straight chords. But in general, the mixture of low bass notes produce disliked intermodulation. Therefore we have developed the Priority circuit (pat. pend.) that selects the lowest of the played strings and does not octave the others. In this priority mode, always a single clean bass line appears - a feature that MIDI does not offer so far.

The volume of the effect can be controlled on the front. It can either be mixed to the mono and stereo outputs or wired separately to a channel on the mixer. To bypass the effect, there is a switch on the front and a jack on the back that accepts a common on/off foot switch.

SEPARATE STRING OUTPUTS

On six jacks on the back, you have access to each string. They give you unlimited creativity. On a mixer, they can be equalized and panned individually and put through different effects. The dream might be a MIDled multi-effect for each string. Playing noises can be filtered effectively with a noise gate on each string. If you provide six channels on the multi-track machine, you can even edit unwanted notes from single chords.

MIXING

In most cases the individual treatment of the strings is unnecessary or too complex. Therefore a mono and a stereo output is provided. Stereo can be wired with two monojacks or one stereo jack (which can serve as a headphones output too). The stereo effect is produced by the following distribution of the strings in space:



This is just one good possibility out of an infinite number. If you find a different personal preference, it can be realized in your machine by changing plugged resistors. We gladly advise you.

GUITAR TO MIDI

Only hexaphonic guitar signals can be converted to MIDI. The various Producers of such systems all use different wiring. Most guitar-to-MIDI converters can be connected to the hexaphonic output on the back. We offer the cable to the ROLAND GR50.

SUPPLY OF THE BUILT IN PREAMP IN THE GUITAR

To avoid losses on the cables, high class guitars use a preamplifier in the instrument. But the checking and changing of the battery is a headache for most musicians. Also, the best noiseless chips cannot be used because they draw too much current from the battery. In our system the six high quality preamps in the guitar are fed through a separate wire in the cable - you note the higher dynamic !



FRONT- AND BACKPANEL FUNCTIONS



INPUT Neutricon plug

Connect a poly - phonic guitar like AVALON.

EFFECT LEVEL Potentiometer

Controls the volume of the Bass Effect.

PRIORITY MODE Switch and lamp

Pressed (lamp lit):
PRIORITY (bass line mode)

A very unique feature: Only the lowest currently played bass string creates a low bass note. Keeps the bass range clean.

Not pressed (lamp off):
(polyphonic mode)

All three bass strings can create a low bass note at the same time. The sound becomes really fat in case you play simple intervals on the low strings.

BYPASS Switch and lamp

Pressed (lamp lit):
The Bass Effect is off on all outputs.

Not pressed:

In this position, a Bypass Foot Switch connected to the Backpanel switches the effect on and off. (Lamp shows state)
If no Foot Switch is connected, the effect is on and the lamp is off.

POWER Main switch and lamp

When switch is up, power is on, and lamp indicates proper connection.

STRINGS output jacks

You can connect every single string to a separate effect unit or channel on your mixer. Even recording on separate channels makes sense to become able to correct single notes.

LOW LEVEL OUTPUT

From here you feed an guitar amplifier or guitar effects. This output is suitable for tuner and stage equipment, if the three high level outputs are used to feed the PA system. Also in this case, the output contains the Effect signal.

EFFECT OUTPUT

You can connect the Bass Effect alone to a separate channel on your mixer or to specific bass equipment.

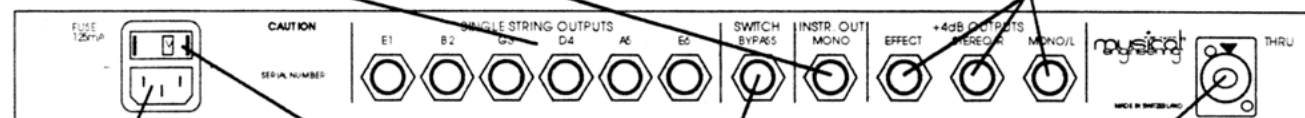
If the socket is *used*, the Bass Effect is *not* mixed to the STEREO/R and MONO/L jacks.

HIGH LEVEL MAIN OUTPUTS

The MONO/L socket is the output to use, if you connect a MONO system, like a channel on a mixer.

If the MONO/L socket is not used, the STEREO/R socket offers a stereo picture of the strings as shown on the previous page. It is not a real headphones output, but helps to control, tune or practice if you connect a 600Ω headphones (not miniature walkman type!).

If both sockets are used, the stereo signal is fed into two mono cables.



POWER international norm plug

In every country there is a suitable power cord to connect to this plug.

VOLTAGE AND FUSE

On a grip with two fingernails on its short sides, the rectangle comes out and you can change the fuse or turn the small square the way the voltage of your country appears on top.

BYPASS foot switch

Connect a toggeling foot switch to switch the Bass Effect on and off.

The foot switch has no effect when the front BYPASS switch is pressed.

THRU Neutricon connector

This output is used to connect polyphonic products or a guitar-to-MIDI converter to your polyphonic guitar. A cable to the ROLAND GR50 is available.

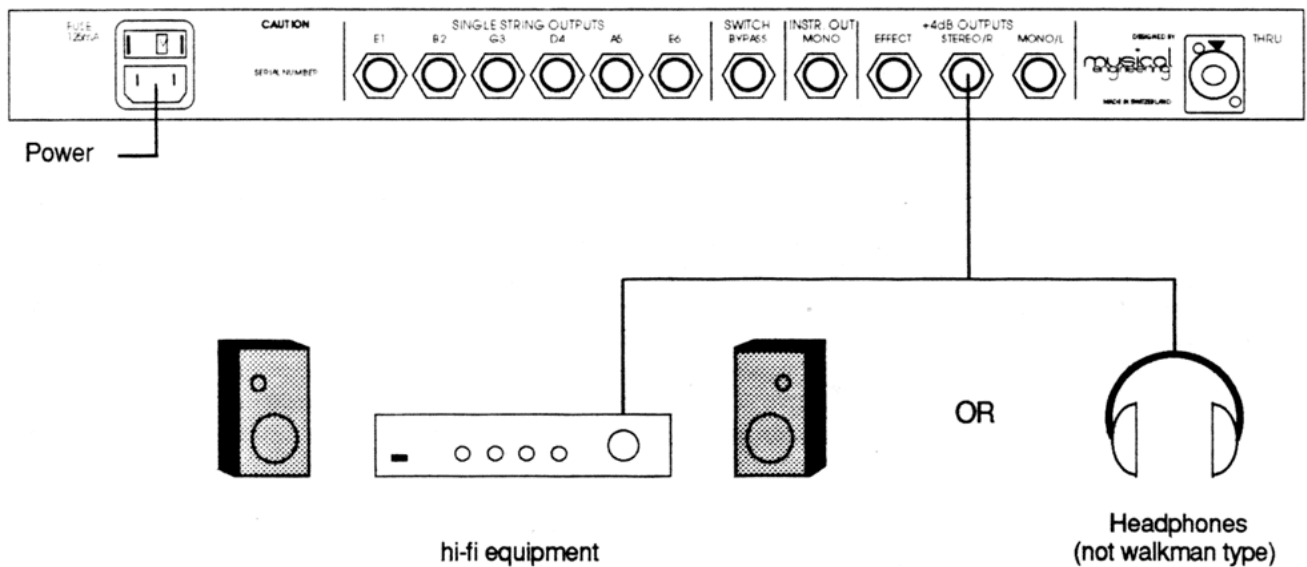
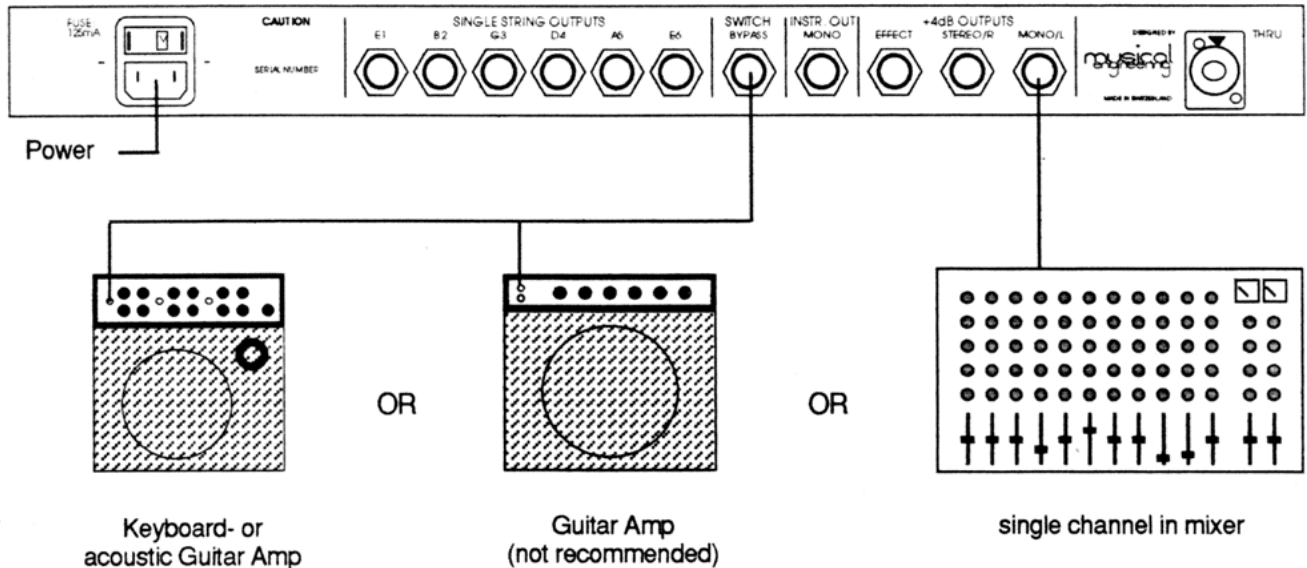
It is identical to the front panel input and serves as guitar input if you do not like cables in front of your rack.



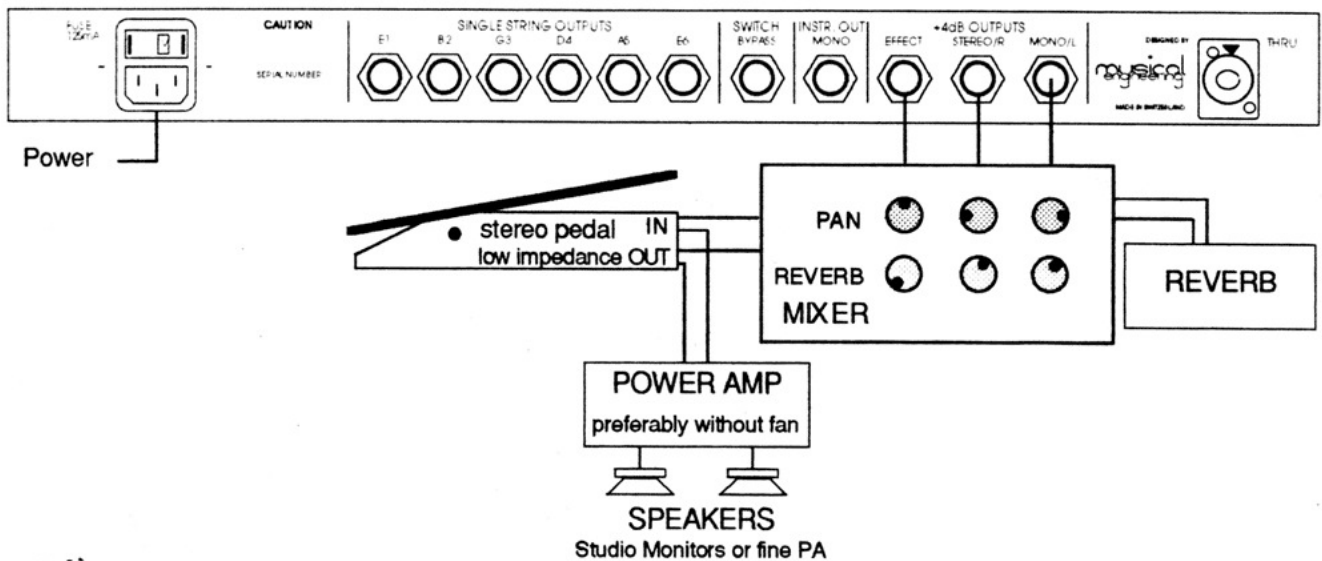
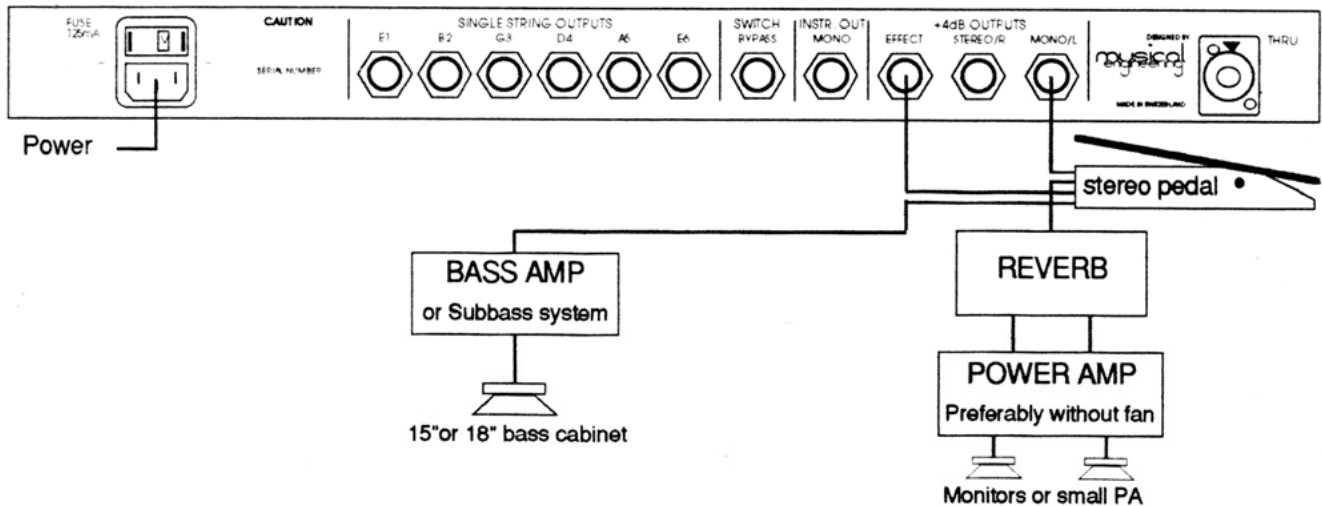
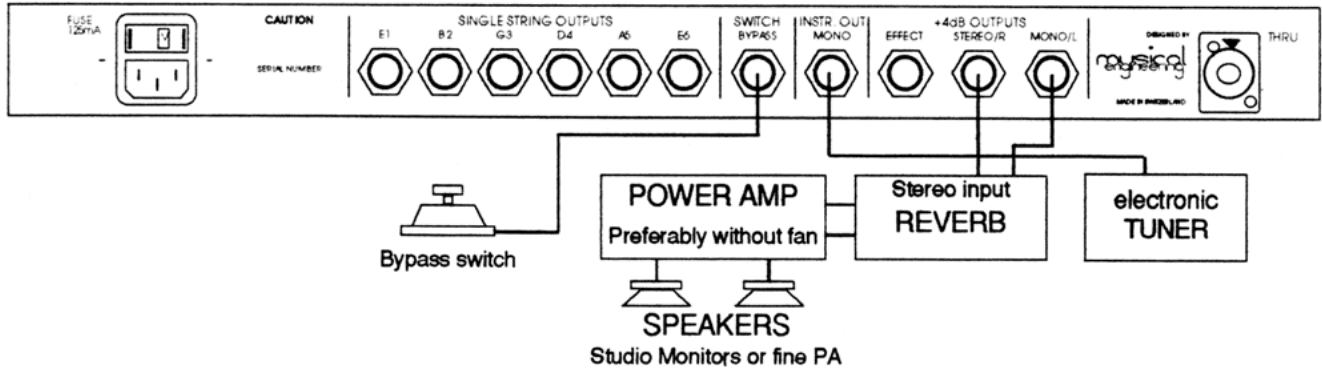
WIRING EXAMPLES FOR THE POLYSUBBASS

not all possibilities are shown, any combinations of the examples below are possible

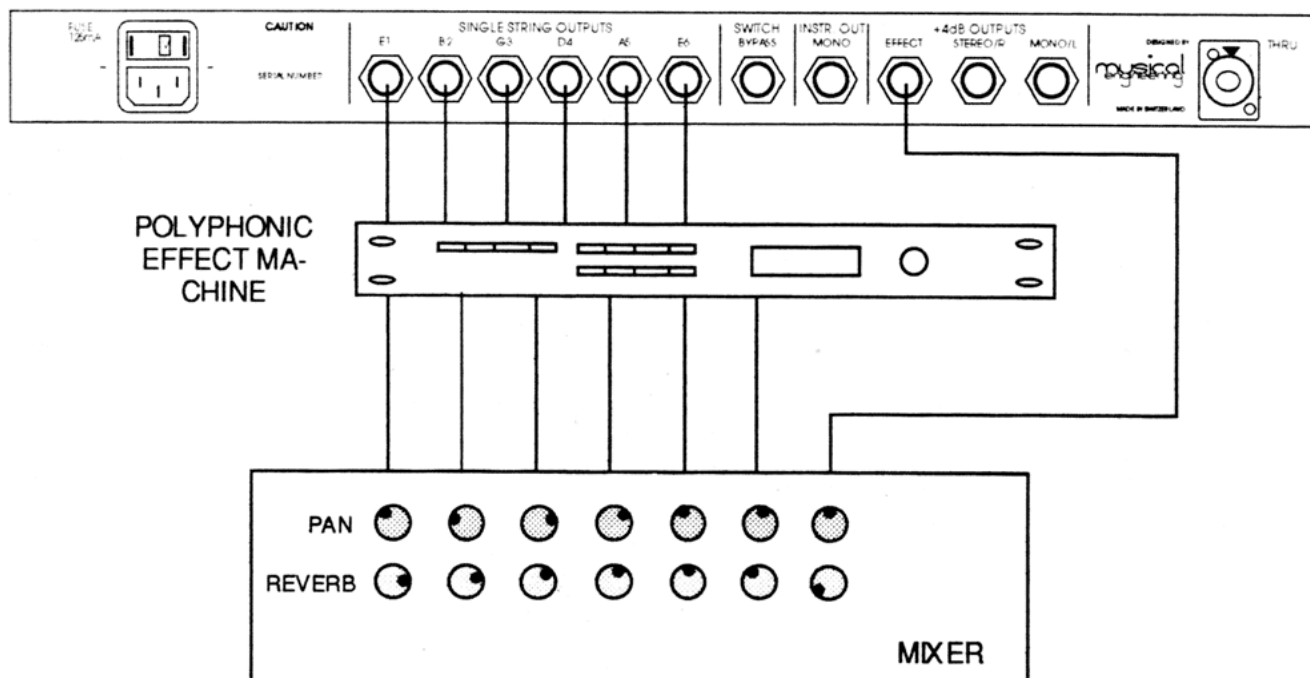
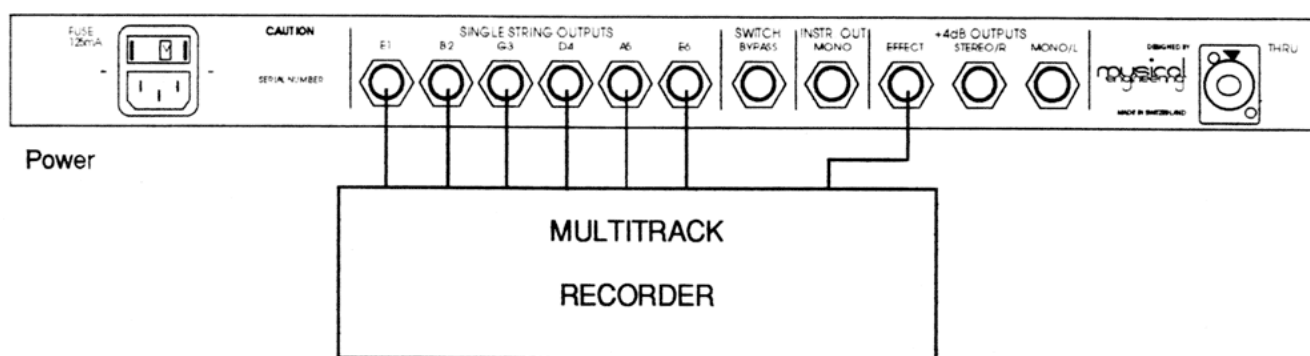
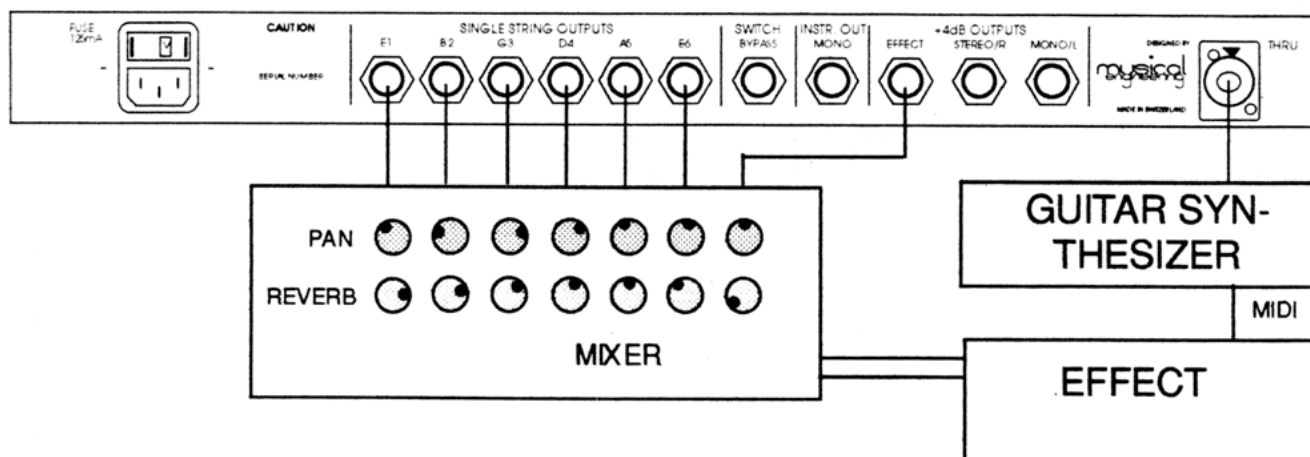
THE MOST SIMPLE WAYS



THE STANDARD WAYS

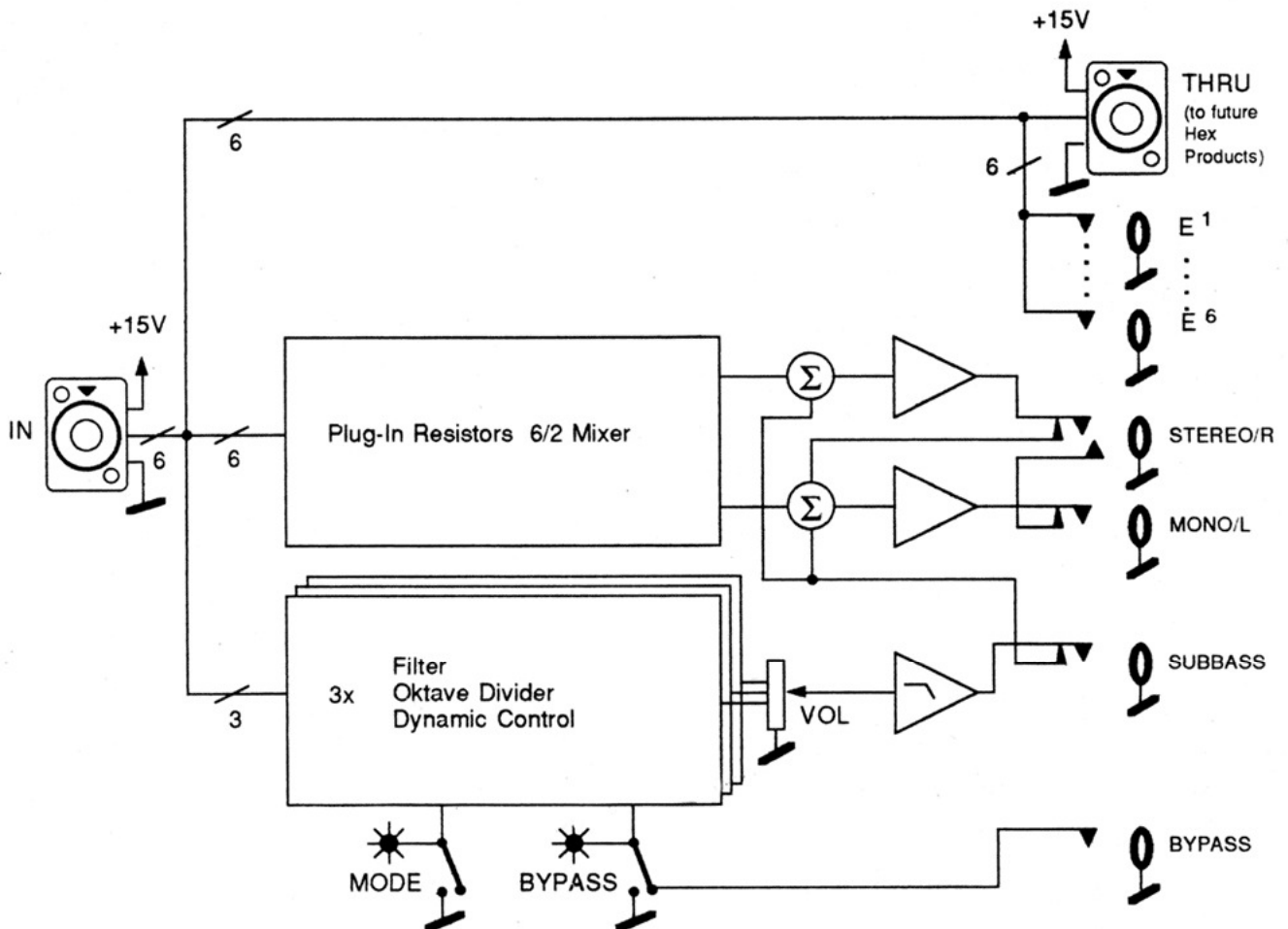


MORE SOPHISTICATED IDEAS



BLOCK DIAGRAM

POLYSUBBASS™



Hexaphonic
Guitarplug
NEUTRICON

Funktion	Pin
E¹	1
B	2
G	3
D	4
A	5
E⁶	6
Gnd	7
+15V	8

