
Line 2
Line 1
Phono 4
Phono 3
Phono 2
Phono 1
Load
Phono
Level
RIAA
Turnover
hf-Curve
SYNC


JPA-66
Vario-Curve
Tube
Stereo Control Center
EMT 948

A Time Machine for Phonograph Records – Made in Switzerland

To call this unbelievable device merely a pre-amp would be a serious understatement, because it's nothing less than full-on (studio-grade) equipment from EMT.

It's really quite amazing. For years, nothing really special seems to occur. And then, suddenly it happens! For one single issue of "image hifi" I get my eager hands on two amplifiers so superb that upon first hearing them my jaw just dropped in sheer amazement. The tube-based JPA 66 pre-amp from EMT not only sounds absolutely exquisite (you may regard that as an understatement to the max) but also exhibits the following key distinctions:

a) It's completely different from "the average bear" pre-amp.

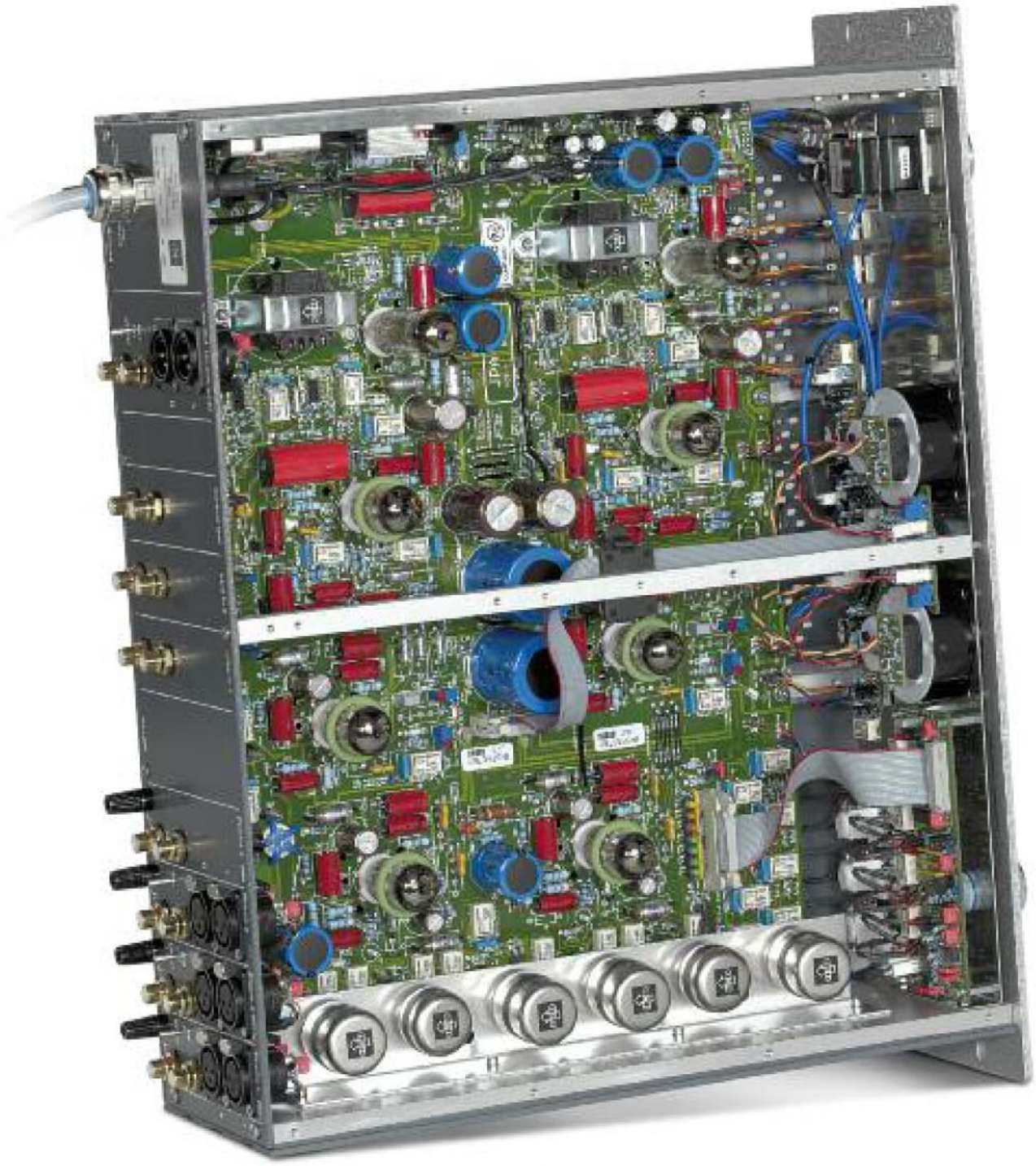
b) It resolutely ignores a long list of supposedly hard and fast rules governing audio units.

c) Its very appearance defies some of our usual design expectations.

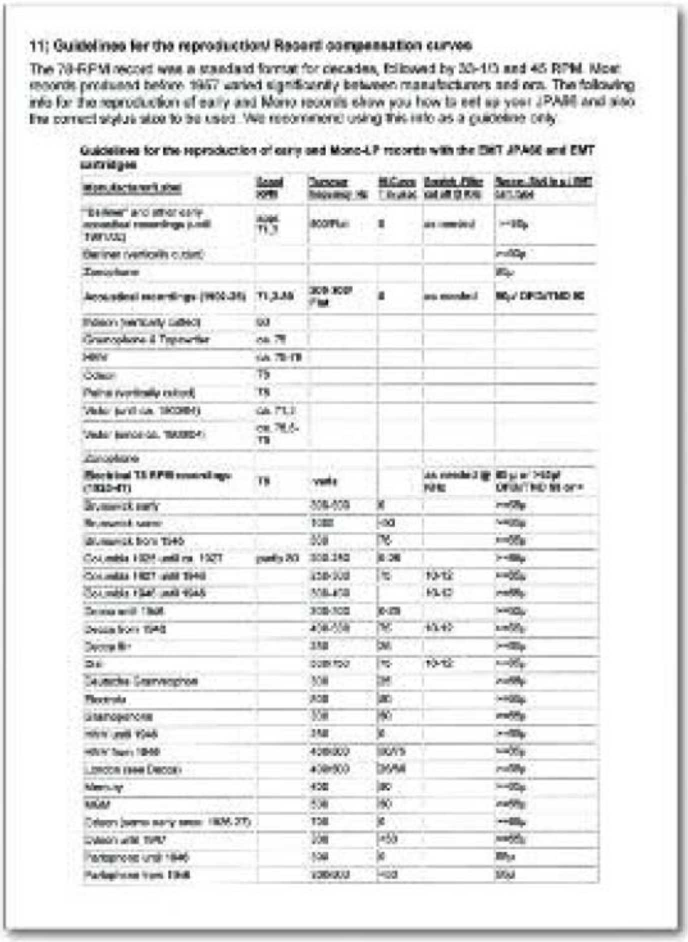
This third point is critical, for the EMT JPA 66 (I'm sure that you'll agree) looks completely different from what we commonly see nowadays in high-end components. In fact, it's right here where the perspectives – or to put it more exactly, the technical requirements – of the studio pros get their due consideration. Now, it's not that I personally presume that studio-oriented technology is in and of itself "better" than end-user-oriented high-end audio, even if this conventional myth may perhaps still have had a grain of truth to it back in the 60's and 70's. And I know that professional-grade equipment has always had its occasional hardcore adherents among high-end audio fans. But as far as I'm concerned, I'm rather inclined to think that there are truly outstanding devices, as well as brutally overrated ones, on both sides of this audio-equipment fence. However, you've got to keep one thing in mind: The requirements of those on each side of that fence are, and indeed also must be, entirely different ones. It's at this fence where EMT's JPA 66 pre-amp opens a gateway from one side to the other, one that's as broad as an interstate highway – but more about that later.

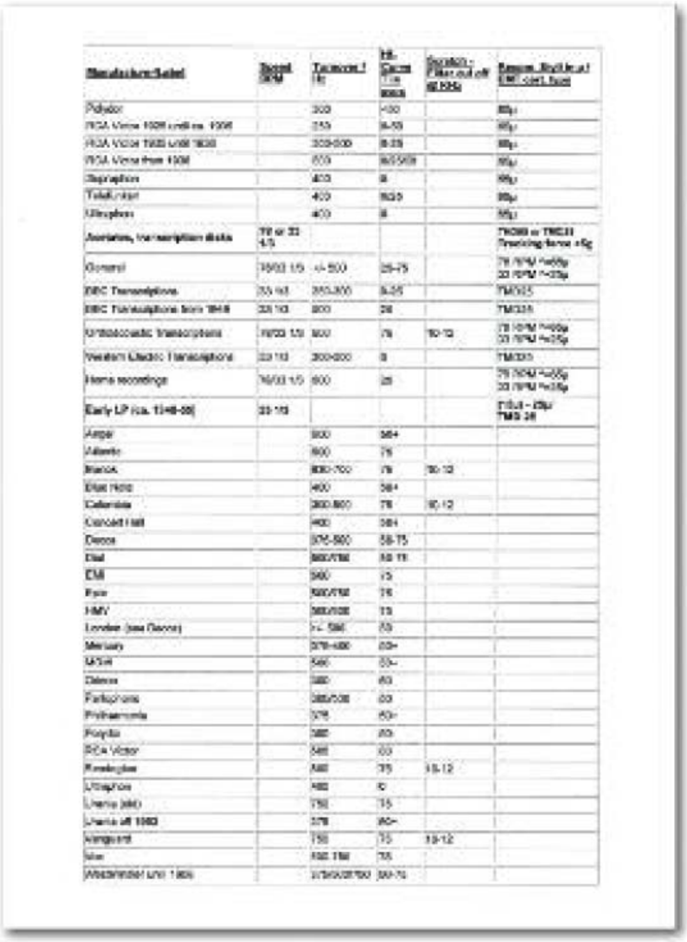
But first let's consider some fundamental questions: What exactly is the JPA 66? What exactly can it do? Well, first and foremost it's a phono pre-amp, yet that's just the start because it covers to the highest degree all aspects of phonograph record playback. By "all" I mean all possible phonograph records – from the earliest disc recordings from around 1902, to shellac "78s", on to high-fidelity 33 rpm mono records and, of course, all the way up to the most modern stereo pressings. This "allness" can probably give you some sense of the breadth and depth that this unit, with its extremely variable and universal phono compensation (record equalization) capabilities, can actually handle. Besides that, the JPA 66 is in every respect a most flexible audio pre-amp with some features that might get lost in the shuffle by those with a perhaps excessively purist approach to audio matters. In this case, I'm talking about a balance control, a subsonic filter, a scratch filter or even quite simply a mono switch. But you might also imagine a device that switches over between inputs with essentially no snaps, crackles or pops – even at cranked-up volumes. Or one that lets you use one stepless knob to adjust phono moving coil (MC) input impedances and bring out the best in cartridges. And those are only some of the superb features that the JPA 66 offers, ones that have at times been unjustly/unwisely ignored by those pursuing "great sound" with myopic fanaticism. At the same time, this pre-amp proves that you really can smoothly combine one thing with another without having to accept the slightest compromises in (sound) quality. But even that praise doesn't do it justice. So, let's put it this way instead: The JPA 66 proves beyond any doubt that a really super easy-to-use phono pre-amp with all its refinements and features can still sound incredibly great. In fact, I'm so sure of this that I'm going to stick my neck out even further: In my opinion, the JPA 66 probably only has two or three really worthy competitors out there in the whole wide world of audio that might "soundly" equal it in terms of phono reproduction. Even so, I'm still unaware of any other pre-amp that has the abundance of features and functions that the JPA 66 so ably offers.

Furthermore, this Swiss precision



Lined up right there at the bottom: the six transformers for the phono inputs. At the top: the two output transformers





Included with the pre-amp: Detailed guidelines for correct playback compensation and playback speed (rpm) based on record label and year of manufacture

audio device offers a substantial set of audiophile virtues, such as a beyond exemplary signal-to-noise ratio (S/N) (to put it in plain English: with a phono MC and at reasonable volume levels you hear practically nothing at all). No hum. No hiss. No static. What's more, it remains silent as it's powered up (even with the main power amplifier inadvertently switched on). And just in case I still haven't made it clear enough by now, let me add the following: The "Varia Curve Tube Stereo Control Center" is a "full-tube" pre-amp in which a total of six ECC803S tubes and two ECC99 tubes take up their warmly glowing residence. When it comes to its electromechanical construction, it's much like the proverbial and exemplary Swiss watch. In other words, it's built to the most modern electronic standards that will satisfy the most demanding – professional – requirements. To put it another way, you could also claim, perhaps even object, that the tubes on its circuit board look like misplaced relics of a bygone age. The fact that behind its thoroughly retro ("outmoded" if you're feeling a bit snarky) front panel with its two pointer-style gauges there's nothing,

and I mean really nothing, that resembles today's usual high-end workshop craftsmanship (which I really don't have anything against) does, however, have its own kind of solid appeal. By the way, in case you expect (as I myself did) to find nice old-style bulb fixtures hiding behind the pleasantly red/yellow-hued instrument displays, you can just forget about that sort of thing. That light is actually produced by a clever mixture of modern LED bulbs, and it really does awaken fond memories of older electronic devices.

Let's take some time to discuss the front panel, which is designed around one principle: Each and every function and control of the pre-amp is able to be operated directly from the front side – including the steplessly adjustable MC terminal resistances and their associated amplification factors. The JPA 66 comes standard with a total of four phono inputs, two of them for MC cartridges. Whereas one of the MC inputs is designed for standard moving coils (nominal sensitivity of 1 mV), the second MC input (0.250 mV) is specially designed for low-ohm pickups such as in Ortofon's SPU series or Fidelity Research (FR) cartridges. Phono 1 has 200 ohms of input impedance; a rotary knob allows this terminating resistance to be set between minus 50% and plus 100%. Phono 2 is rated at 47 ohms, which also can be adjusted between minus 50% and plus 100% by means of a rotary knob. The third phono input is meant for moving magnet (MM) cartridges and thus has the usual 47 kOhm termination, which can also be steplessly adjusted between minus 50% and plus 100%. The fourth phono input is also an MM type. However, it is a stepped rotary switch allowing four distinct capacitance values from 100 to 330 picofarads. Phono 4 is the only phono input with no amplification control; all the other three phono inputs have rotary knobs for setting gain factors between -10 dB and +10 dB. By using a test record and referring to the gauges, you can set the exact same level for all three phono inputs, such as for testing and comparison purposes. Furthermore, the JPA 66 also allows symmetrical inputs to be selected for phono inputs 1 through 3. In this respect, the device has a total of six internal input transformers, of which four also serve as step-ups for MC cartridges. This incredible amount of engineering effort spent on the phono input section alone certainly speaks for itself!

But when it comes to phono features, the JPA 66 offers much more than that. The second "function group" on the front panel concerns phono playback compensation. This feature is fully variable and allows the use of practically any filter or equalization curve needed by means of steplessly adjustable "turnover" frequencies as well as steplessly adjustable time constants. Although it seems almost unnecessary to mention, we should note that the whole adjustment system can also be bypassed by means of a "Flat" switch. As result, the instruction manual contains a two-page table with information on record labels and the typical compensation curves that apply to them. The use of the "scratch" filter with operational frequencies between 3 kHz and 50 kHz is left solely to the discretion of the user. What this all comes down to is this: The JPA 66 enables exactly correct reproduction of practically any phonograph record ever made, including the oldest discs, when used in combination with the correct turntable and cartridge to "electrically" bring them back to sonic life. As such, the JPA 66 will prove to be nothing less than the door to paradise for record collectors or, more generically and even more exactly, music collectors.

Let's take a moment and consider all the possibilities at hand with the ability to manipulate everything, including creative application of phono playback equalization. It's now possible to make variable settings for optimum playback of even

Accompanying Equipment

Turntable: Platine Verdier **Tone arms:** EMT 309 v. A23 (SME-type connection), SME 3012 **Cartridges:** Shindo, Ortofon SPU Classic, Koetsu Black, Denon DL-103 **Power amplifiers:** Shindo Laboratory Palmer VT52, Welter EbIII, 300B Standard, Leben CS-200 P **CD/SACD-Player:** Marantz SA-11S1 Series II **Music Server:** iMac **Loudspeakers:** A23 Rondo, Epos ELS 3 **Low-frequency and LS cable:** Auditorium 23 **Power distributor and conditioner:** Energia Definitiva (HMS) **Power cords:** HMS **Accessories:** "The Bench" + LF damper D172 from the workshops of Norbert Gütte, Acoustic Systems resonators, Acoustic Solid adjustment set

The JPA 66 comes standard with fully tested and burned-in JJ tubes

the oldest disc-type sound recordings. You can even "fast forward" chronologically and enjoy superb playback of new pressings, whether digital or analog. The fact that the JPA 66 also completely covers playback of early 33 mono LPs along with their associated compensation curves is quite evident. Also, for the latest "modern" stereo pressings the option of using the often better-sounding Neumann curve (RIAA+) instead of the standard RIAA curve deserves special mention.

A long road: A notable feature of the power supply is the long cable connection to the amplifier

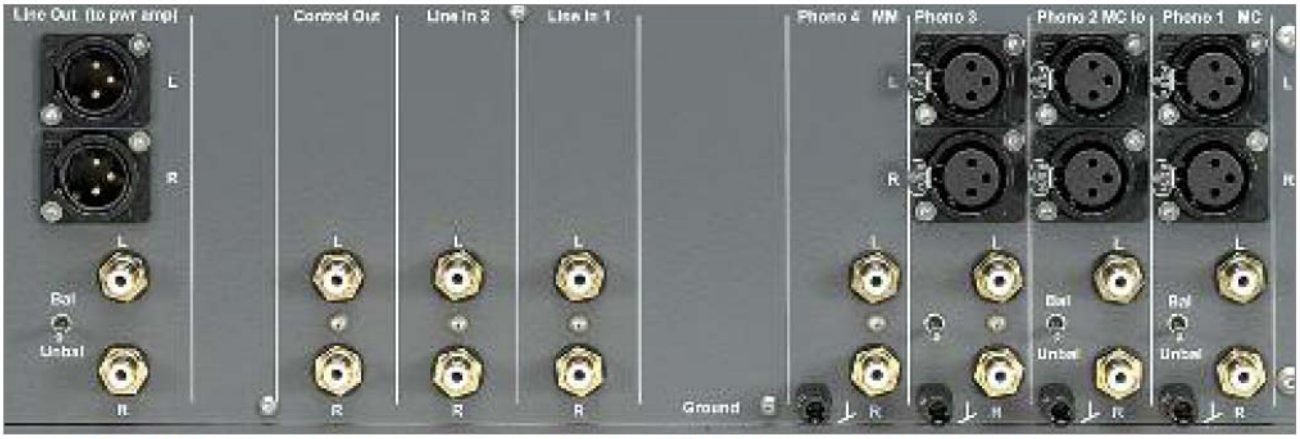
It's undeniable that the JPA 66 covers all formats and modes of disc playback that have existed throughout the history of phonograph records. Now, I already know exactly what you're thinking: Aren't there already a few devices available that offer something close (enough) to this, at least when it comes to setting reproduction compensation? You're right; that's quite true. But the key to appreciating what EMT has achieved with the JPA 66, quite apart from its consistent, holistic, feature-rich design and its four supremely flexible phono inputs, is one thing in particular: It simply delivers far superior sound!

So now it's high time to tip our hats respectfully in the direction of its designers. You see, those who dare to design the circuits required for the kind of adjustable phono compensations found here face a huge number of potentially nasty technical pitfalls. To get that part done right with the requisite stability while also offering variable amplification factors and without settling for significant sonic compromises along the way is nothing less than an expression of the highest art of electronics engineering. Unfortunately, the identity of the person whose hand we'd really like to shake remains a secret, more exactly a secret closely guarded by EMT's President, Jules Limon. Whenever this topic is brought up, Limon, who is normally a fountain of information, clams right up, saying only that the JPA 66 was a "joint development complete-

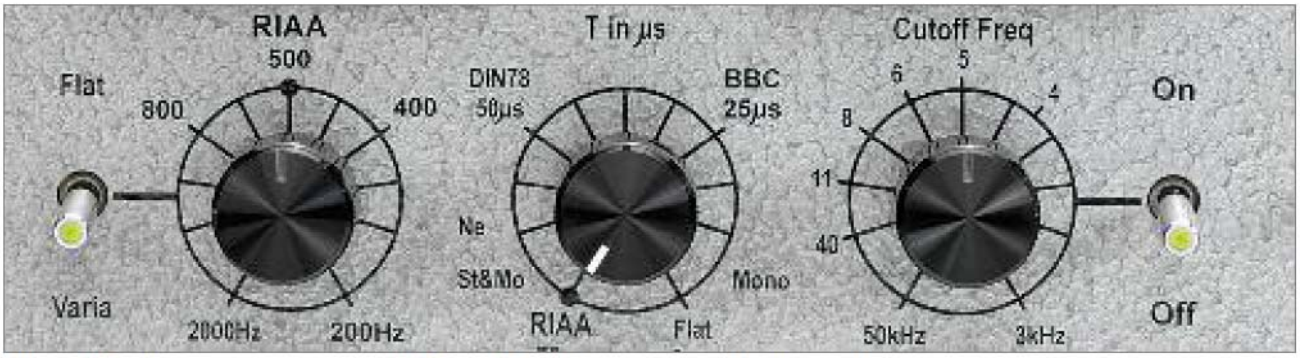
The toolkit for everything that's black, flat and round – all the way to the OFS65 shellac playback system

ly designed and manufactured in Switzerland." Of course! What else? He's certainly willing to talk about the problematic aspects of the unit's gray hammer-tone outside finish – these days now an ancient special paintwork that can be the bane of audio professionals. But when the talk turns to what's under the device housing cover secured by umpteen screws, his mood suddenly changes. You want circuitry details? Not a chance! After all, according to Limon, the JPA 66 was really meant to be heard and not intended to be worked over as an object of discussion concerning the supposed advantages and disadvantages of certain types of tube-based circuits, much less of certain components. With a Swiss penchant for going into super-meticulous detail, Limon fluently handles the quality-related questions that come up. For instance, our test unit actually had a second-choice front panel (the dust-particle-sized flaws in the paintwork on the upper edge had apparently gone unnoticed). But once all that's over with, Limon prefers to look for EMT product presentations on his laptop and talk about his passion for collecting antique high-fidelity units and music boxes or about the primary signal pick-up source for his pre-amp, which, not surprisingly, is an EMT cartridge. The bottom line: There are EMT products for all uses, from the half-open-housing, anniversary-edition JSD 6G pickup all the way to the special cartridge with a 65-micron needle tip designed to play back shellac records at nine grams of tracking force. The fact that half of the manual for the JPA 66 is dedicated to unraveling the intricacies of cartridge and tonearm adjustments is no less surprising than the Swiss precision that has gone into supposedly small yet still critical details: As was once quite common years ago in the high-end audio world, the JPA 66 comes with replacement fuses and housing screws as well as a set of tools, not to mention white gloves. Of course, what deserves more than just passing mention is the previously noted section of the device manual entitled "Guidelines for the reproduction/Record compensation curves". It's a respectable piece of research work and practical reference that proud JPA 66 owners will love to have framed and then hang on the wall above the line-up of record players to be used with this superb control center.

At this point, we've arrived at the time and place to discuss tubes: The JPA 66 depends on triode tubes that are currently in production and have



"Control Out"? What's that? It's a fixed-level output, used for special purposes such as taking measurements



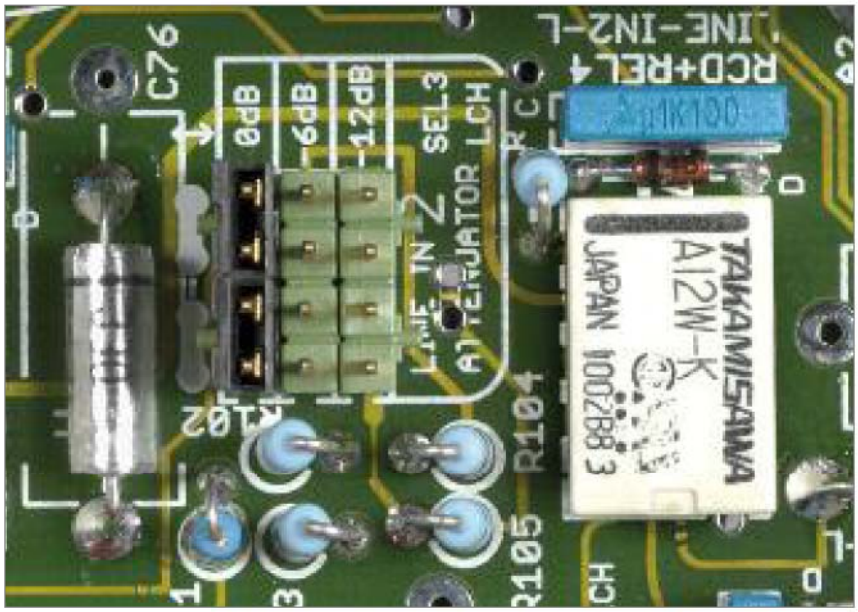
The variable phono compensation can also be switched off. The same goes for the scratch filter.

not only been subjected to extensive testing and measuring but also have had to endure 100 hours of burn-in time. Even I, a totally committed triode freak, would advise against using any esoteric tubes instead, especially since the ECC99s from JJ Electronics used in the transformer output have no NOS (new old stock) equivalents. With its only 30 ohms of output impedance, the JPA 66 is likely to be able to drive almost anything it encounters such as longer cables and unusual 1 kOhm power amps. The amplification factor of its high-level section is rated at a nominal 12 dB, and with the help of internal jumpers can be upped to 18 dB. Even both high-level inputs (yes, it's got them, too!) can be varied by plus or minus 6 dB by means of jumpers. Working in tandem with adjustable phono amplification, the JPA 66 should be able to be seamlessly and professionally integrated in any conceivable installation, as long as the level control lies in the optimum range above the "12 o'-clock" setting. It's precisely this point that I consider to be an extremely important one. In actual practice, non-standard power amplifier sensitivity along with great differences in loudspeaker efficiencies produce such variations in actual set-up conditions that less flexible pre-amps, probably due to incorrectly understood purist tendencies, would suffer a decline in signal to noise ratio (SNR) and thus dynamics.

The fact that I at this point would like to once again refer to the JPA 66's exemplary signal to noise ratio (SNR) is not without good reason.

You see, I really do think that a serious portion the extraordinary, full-bodied transparency and dynamics that the JPA 66 doubtlessly possesses, is entirely due to this very characteristic. In fact, in this case the simply amazing transparency of the finest, most subtle sonic clarity and detail across the entire spectrum of reproduction frequencies reaches an impressive scale that you only very, very rarely ever get to hear, if even at all. There's also an unusual stability to its playback sound: It provides a deep, solid black background against which all aspects of sonic hues can shine in all their splendor. The result is a penetrating directness that truly captivates the listener. In fact, sometimes I can't escape having the distinct impression that I'm seemingly a few rows closer to the circumstances of the original performance, yielding a depth of perception that increases the intensity of the listening experience even more. In this respect, we should also mention that this pre-amp – assuming an enabled RIAA compensation curve and a disabled scratch filter – can seem merciless in what it's able to detect and reveal. So much, in fact, that you'll wish that you had a record-cleaning machine for certain recordings and even a separate treble control for others. For instance, I've never heard a violin or trumpet sound so fascinatingly realistic, yet at times this uncompromising clarity can also be actually strenuous to listen to, believe it or not. What asserts itself is the conclusion that not just a few amplifiers are at times too forgiving ("pretty") in their reproduction qualities. Even the immediately preceding comments are no

Also supplied for experimenting with the JPA 66: Jules Limon's EMT 948



Just the right thing, proven in practice: Level adjustments for the line inputs are made internally with jumpers.

contradiction here, for there's no doubt that the JPA 66 is magical in its ability to detect all the subtle sonic coloration from a given disc. Having heard such definitive sound, you'll probably want to find a new definition for the term "pale" because compared to the JPA 66, less capable electronics reproduce music in a manner that is as sickly sounding as the wan, pallid appearance of a vampire's face. Now, I concede that this comparison is a bit awkward, perhaps clumsy, but it does get the point across.

Another thing that greatly shocked me at times was the massive difference between the sound quality of even good digital recordings and that of phonograph records. In this case, especially in terms of the presence and spaciousness of the sound, the CD is standing at the edge of an abyss that it will never cross. The huge sound stage that the JPA 66 can generate from very good records seems almost uncanny. In particular, many of my very old stereo records revealed new, until now unheard dimensions. Of course, this is also accompanied by the unavoidable surface noise of these old discs, which is also more evident than ever before. That's all because the JPA 66 itself simply doesn't add to or graciously cover up what's actually there. It's a totally honest intermediary. The whole impression is amazing yet quite logical. By the way: When playing back more than a few early stereo recordings I had a wonderful time fine-tuning the compensation controls. This fiddling produced some sonic miracles, so much so that it's clear that the widely accepted RIAA curve simply cannot be appropriate for some of these records. And let's not forget mono LPs, either – a truly worthy area of research. Despite the centered focus of their sound they also revealed some amazing recordings from which the JPA 66 can effortlessly extract every possible nuance with its precise compensation options.

As far as the usual audio settings go, that is, bass, mid-range, treble, level, volume and whatever other buzzword settings there may be, well, there's really no point in mentioning them when talking about the capabilities of the JPA 66. Sorry, but they're just too ordinary. You may simply assume that the JPA 66 handles these adjustments nothing less than perfectly. What seems more important to me is what this exceptional pre-amp is fully capable of way beyond these settings. And I mean this solely in terms of its sonic capabilities. There's no doubt that the JPA 66 is truly a dream unit for record collectors. Perhaps I should mention a final point. No, actually I really must do so: This device is no doubt a very costly pleasure. So what I'm now about to write doesn't come out as easily as you might think. However, please keep this in mind: Despite its high price, the JPA 66 is very good value for the money, to put it utterly mildly. Right down to the very last cent. Period, end, full stop. In short, case closed.

Author: Roland Kraft
Photography: Rolf Winter

EMT JPA 66 Tube-Type Phono Pre-amp

Inputs: 2 x Phono MC (Cinch), 2 x Phono MC symmetrical (XLR), 1 x Phono MM (Cinch), 1 x Phono MM symmetrical (XLR), 1 x Phono MM (Cinch), 2 x Line In (Cinch) **Outputs:** 1 x Line Out (Cinch), 1 x Line Out symmetrical (XLR), 1 x Control Out (Cinch), fixed level **Output impedance:** 30 | **Input impedance high-level:** 20 k | **Gain:** MM 53 dB, MC 73 dB **Tubes:** 6 x ECC803S, 2 x ECC99 **Special features:** Four phono inputs, three of which can be symmetrically switched, selectively symmetrical MM input, MC "hi" and "lo", stepless control of load impedance, input-related level control, variable phono playback compensation, scratch filter, balance control, mute switch, subsonic filter, VU meters, mono switch, adjustable high-level amplification, separate power supply unit with 3 m connection cable **Dimensions (W/H/D):** 49/15/43 cm (pre-amp), 49/14/27 cm (power supply) **Weight:** 14 kg (complete) **Warranty period:** 2 years (tubes: 6 months)

For more information, contact: EMT Studiotechnik GmbH, Industriestrasse 25, 77972 Mahlberg, Germany, Tel.: 07825/879470, www.emt-studiotechnik.de