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Takumi K-10 Pre-amplifier & K-70 Power Amplifier

Some time ago Chris from Audio Exotics asked me, "Lincoln, we have just become the Hong Kong distributor of a Japanese brand of 'state-of-the-art' amplifiers. They have only two products - Takumi K-10 Pre-amplifier and K-70 Power Amplifier. They are not really cheap (HK\$700,000), but with unique designs, excellent build quality and superb sound performance, this combo is highly acclaimed by audiophiles. Without performing any marketing, I have already sold 14 sets. Do you want to try them?" I had two thoughts immediately. First Chris has a good track record of bringing in good products, although a majority of them are quite exotic and expensive. Two of the remarkable examples are Thales Simplicity Tonearm and Tripoint Troy. I'm using both at home and extremely pleased with their benefits. If the same logic applies, Robert Koda would be very interesting to me. Second, this Japanese brand sounds completely new to me. I have no clue when their products started emerging in the hi-fi market. If they were good, there should have been many people discussing about them. Why is it not the case? That was what I was thinking until I found that both "Hi-Fi News" and "Hi Fi Critics" had very high comments on Takumi K-70 in April 2011 and November 2011 respectively. Is this really a problem? All well-known Hi-Fi brands always started like this at the beginning, didn't they?



The Background of Robert Koda

Just like what I always do with a new product, before listening to K-10 and K-70, I researched on their creator - Robert Koda. The founder of this company, Robert Koch, was born in South Africa. Influenced by his audiophile father, Robert was very interested in Hi-Fi systems and musics. He started gaining interest in audio, radio and electronics when he was 12 years old. When he was 16, he became famous within the community near his home. He also started formal lessons of electronic engineering. Soon after that, he started his career in the Hi-Fi industry in a Hi-Fi shop responsible for selling equipment and repairing. He had a lot of exposure to legendary brands such as Audio Research, Mark Levinson and Jeff Rowland. Once he travelled in Australia and met a dealer in Perth who was a big fan of Audio Note / Kondo. He vividly remember that his father told him about high fidelity tube amplification and the sound of 300B being the real High-End tube sound. Since then, the tube amplifiers designed by Hiroyasu Kondo fascinated him. He even naively faxed his resume and wrote to Kondo-san so that he could apprentice under him. As you could imagine, nothing really happened.

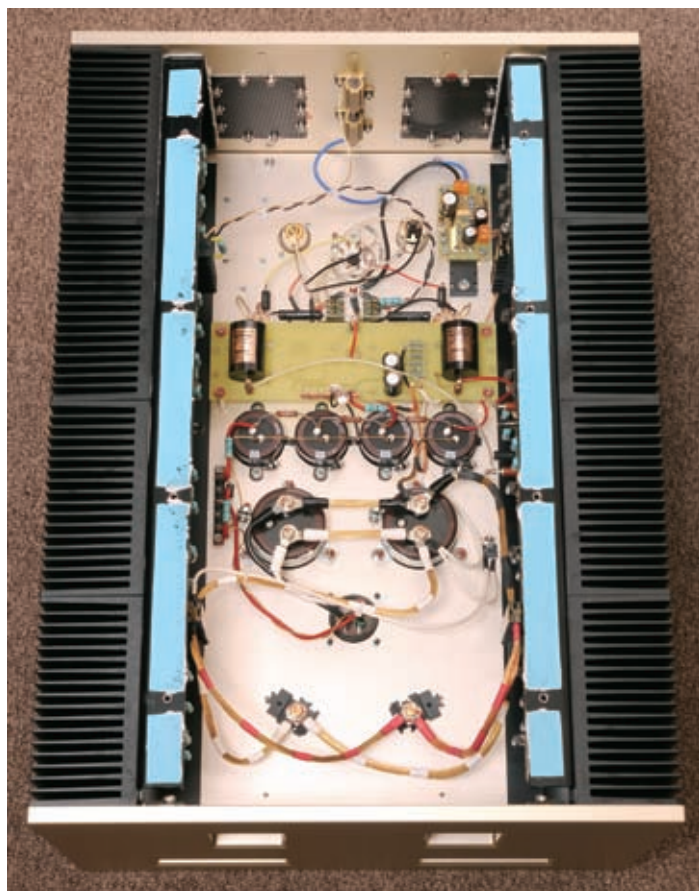
After some time, Robert found a job in Audio Note UK when he went to the UK for a long holiday. That was where he had opportunity to get in touch with Kondo-san and impressed him. Kondo-san brought him back to Japan and had him joined the Kondo family. Working in a conservative Japanese Hi-Fi family was a mixture of tears and laughter for somebody who has been enjoying freedom in South Africa. He joined and rejoined Kondo for three times. Without doubt, Robert has learned a lot about the concepts and techniques of Hi-End Audio from Kondo-san. He even got an opportunity to be part of the development efforts of M1000 Pre-amplifier. During his adventure in Kondo, Robert started thinking of developing an ideal amplifier. When he joined Kondo for the third time, Kondo-san just passed away. He started working with the new CEO, Ashizawa Masaki, who is also his close friend. This time Robert stayed with Kondo for a relatively long time. Meanwhile he took part in the development of M1000 Mk 2 pre-amplifier and DAC, as well as looking after the production line

of other products. After a while, Kondo moved their factory from Meguro to Kanagawa, which is far away from Robert's home. As Robert thought that it's not ideal to travel for a long distance to work, and his work on his amplifier was close to completion, he decided to leave Kondo again. This time Robert decided to set up his own company. He also combined his own name and his Japanese wife's family name together for his company brand - Robert Koda.

The first product from Robert Koda is Takumi K-70 mono channel power amplifier. The word "Takumi" is a word describing mastery craftsmanship in Japan. In 2011, Robert Koda released Takumi K-10 Pre-amplifier to match Takumi K-70. The unit that we tested in AudioTechnique is the latest build of Takumi K-70.

Unique Exterior Design

Frankly speaking, I have spent tens of years auditioning various types of audio equipment, but never have I seen one that is as exotic as K-70 in terms of exterior design, or as flexible as you could place the power amps. K-70 consists of three chassis of identical size. One of those is the power supply weighed 40 kg and the other two are mono block power amplifiers weighted 20kg. Their dimensions are 380 mm W x 256



mm H x 500 mm D. Both front plate and back plate are made of aluminum in champagne-gold finish. There are two rectangular holes (90mm x 35mm) near the upper edges, which serve as lifting handles. By design, the power supply is to be placed with the handles near the floor. But one could also turn the whole block upside down so that parts such as capacitors, tubes, speaker poles etc. face upward. Each of those is connected with a 2 meter four strand DC power cable. How these blocks are placed is not a major concern. What's more concerning is the real estate they occupy. Fortunately, our audition room is spacious enough to accommodate the whole party. The party simply looks awesome!

Inside K-70

Takumi K-70 is a hybrid class A amplifier which takes advantage of both tubes and transistors. The input stage is based on two Raytheon 5842 WA single-ended Triode vacuum tubes, driving an array of 34 Toshiba 2SC5200 NPN type transistors per channel mounted on massive thermally stable heat sinks. The output is 70W class A. The parts inside the main chassis are of high quality. They include Nippon Chemi-Con 560 μ F/450V capacitor, Nippon Chemi-Con 33,000 μ F/50V capacitor, Tone Factory 0.5 μ F/630V non-inductive copper foil capacitor etc. and top grade resistors from Dale, Mills and Tokyo Koden. The internal layout is largely built using point-to-point wiring using pure silver cables and copper Litz cables coated with gold. All the contacts are secured with pure silver solder. The main circuit board is based on Litz multipath printed on copper tracks as thick as 280 μ m which are coated with gold to ensure optimal signal transmission. Robert stressed that the layouts and the soldering are done with extreme level of details. Each contact point is cleaned and checked after soldering to prevent oxidation and poor contacts respectively. Six capacities, two 5842 vacuum tubes, DC power 4-pin plug, XLR and RCA inputs are clearly visible from the top side of the chassis.

Between the two tubes, there is a RCA/XLR selector and Hi-Z/Lo-Z selector. The manufacturer said having both RCA and XLR plugs connected at the same time is not recommended. The Hi-Z/Lo-Z selector allows the user to pair the amplifiers with speakers of different impedances. Low-Z is designed for speakers with low impedance. This will consume more power and generate more heat. However, the manufacturer recommends Hi-Z for better sound, which I intend to agree. There is a plug-



in octal base Type 1933 balance transformer next to the RCA/XLR and Hi-Z/Lo-Z selectors. When the balanced input is used, the balance transformer can be replaced with a bypass. I prefer bypass to the transformer as the former makes the sound lighter and livelier while the latter sounds sweeter.

Aside from the normal voltage Pre-amplifier input, there is an current input option based on a 50 ohms loading input transformer available to order from the manufacturer.

The WBT 0763 gold-plated speaker output needs some attention here. The manufacturer said that given K-70 is single-ended and there is always floating DC voltage in the output, the user should never connect the power amp to the speakers while the power is on. Also, the speaker connections have to be tightened up. If the cable falls off and has a contact with a chassis, you

can say goodbye to your speakers. Semi-active speakers with built-in bass amplifier are not recommended matches with K-70.

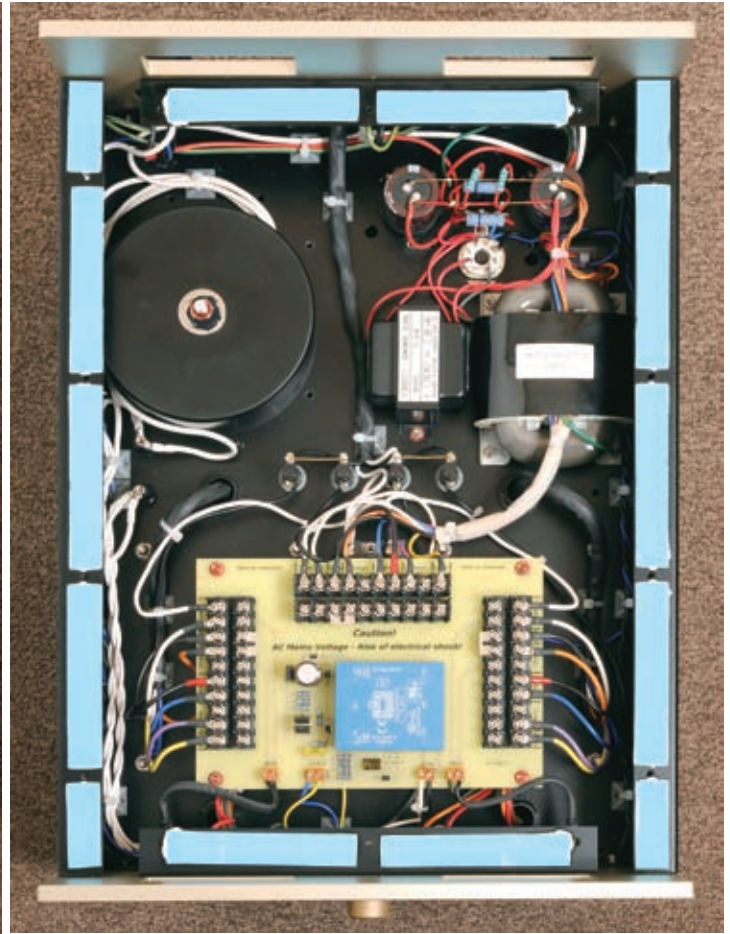


Heavy Duty Power Supply

There is a lot of attention paid to the materials and design of the power supply. It is a dual mono design. After opening up the bottom plate of the chassis, two top quality 600W R-core transformers are seen - one per each channel.

They are connected to two choke supplies made of inductor and transformer enclosed in a black metallic case and a smaller R-core transformer and two chokes which supply power to the triode tubes amplification circuit. The power regulator is implemented using a 5AR4 vacuum tube. Similar to the main chassis, most of the circuits are point-to-point and soldered with silver. The circuit board is also printed with 280µm gold plated copper paths. The layout,





design and craftsmanship really reflect Robert Koch's passion to high-end audio. What makes this product more unique is its ultra low input impedance as low as 0.07 ohm (20Hz-20kHz), high output impedance 30k ohm, S/N ratio greater than 115dB and signal gain of 25.5dB.

Since each set of K-70 is handmade by Robert Koch, the annual production is less than 20 sets per year. Each set costs HK\$420,000.

Design of K-10

Compared with K-70, K-10 Pre-amplifier is a lot simpler and slimmer. There is only one chassis with dimension 380 W x 169 H x 380 D (mm). There are only a power switch and a

selector in the aluminum front plate, which is 5 mm thick. The triple shielding design of chassis and the heavy-duty parts inside it make a gross weight of 27 kg. The DC supply is made up a massive R-core transformer enclosed in a rectangular 2mm thick iron chamber, and a standalone regulator circuit with no negative feedback designed by Robert Koch. He has also designed a unique amplification circuit based on inverted transconductance coupling (ITC) technique. Not only this circuit can eliminate the crosstalk distortion in the power supply upon massive dynamics signal inputs, but also drastically reduce harmonic distortion without using negative feedback. All the sensitive components of ITC amplification circuit are housed in a standalone double-shielded shell, which comprises copper and Mu-metal to eliminate the radio frequency (RF) and electromagnetic (EM) interferences.

The copper main chassis provides the ultimate shield to block these interferences. The bottom of the chassis is a sandwiched metallic plate interleaved with damping materials, which absorb and reduce vibration. What a sophisticated design!



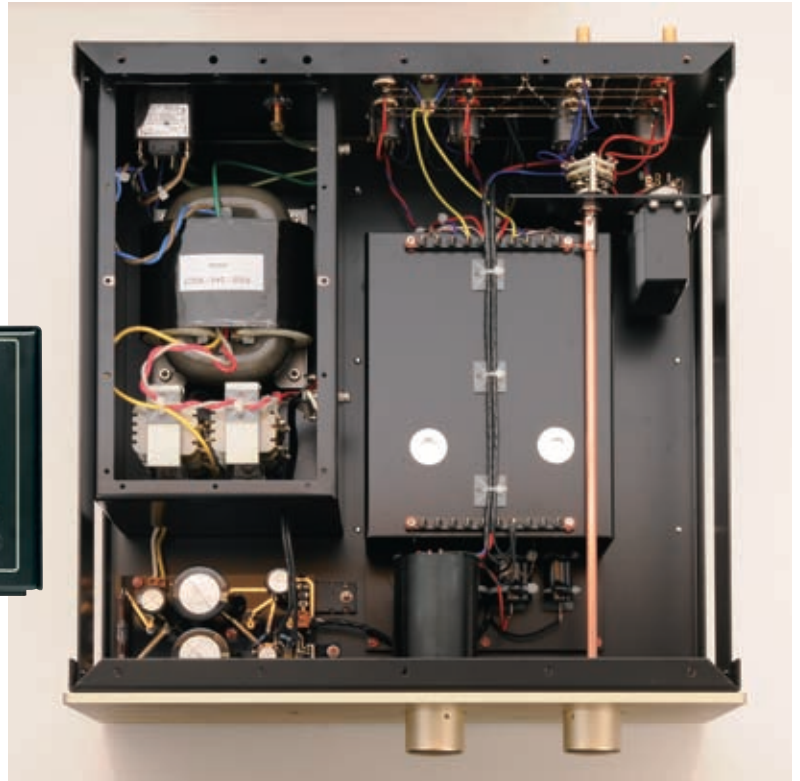


K-10 provides 3 sets of single ended RCA inputs and 1 set of XLR balanced inputs backed by input transformer. It also provides 2 sets of single ended RCA output and 1 set of balanced XLR output. One of the biggest selling points of this Pre-amplifier is volume control, which is a 23 step resistor handmade in Japan. Source selector is also made of high end parts from Japan. All the connections are done through silver Litz and gold coated copper wires. The input impedance of K-10 is 50k ohm (single ended RCA). The S/N ratio is 110dB. The frequency response is 20Hz-20kHz(+/-0.03dB). The distortion rate is 0.00003%@1kHz/2.5V/100k ohm.

Matching

I matched Takumi K-10 and K-70 with the reference CD player, Wadia 971, 922 and 931 combo. The speaker was Dynaudio C4 Signature and Trenner & Friedl Pharoah with its crystal super tweeter. Interconnect, speaker and power cables for K-70 are Siltech Royal Reference Double Crown series. Siltech Ruby Hill II power cable is used for K-10. Given that both K-10 and K-70 have been broken in for about a month beforehand, the additional run-in process in our audition room was very straightforward and took only a couple of days.

In this one-month audition period, K-70 and K-10 sound so great that I couldn't help spending more time listening to them in our audition room. From my audition experience, I can almost tell Robert Koch is really gifted in audio design and has learned the essentials from Kondo.



Exceptionally Quiet

Robert has been stressing the importance of high quality power supply in his amplifier design. This is evident in K-10 and K-70 - the noise floor is extremely low, which is made very obvious in our quiet auditioning environment. The background is absolutely dark for good recording. The sound image, whether in a voice recording or an instrumental recording, is exquisitely embossed. The resolution of K-10 and K-70 is so high that the micro details in the recordings are exceptionally apparent. It makes every recording that I'm already familiar sound so fresh to me. This is absolutely beyond my expectation. When I played "To Me" from Koji Tamaki's "Wine Red No Kokoro", the introductory passage performed by piano was crystal clear and rich in details. Tamaki-san's voice was so real, not just because of his charming voice but also the strong sense of vicissitudes and masculinity. When I heard his fingers vibrated on the strings, I couldn't help asked myself, "Why comes I didn't notice this before?" I feel excited and enjoyed so much listening to this song, as much as I do with a very high quality recording that I newly discovered....

Charm of Single ended Amplification

Although the output power of K-70 is merely 70W, it is based on class A type of amplification



powered by 34 pieces of 150W Toshiba diode transistors. Not only the sound is silky smooth, but it also has great controlling power to the speakers. It is like a Tai Chi master who has a lot of unlimited hidden power - you just don't see it. I also listened to "Misty" from Tsuyoshi Yamamoto Trio. The playing of Yamamoto-san was absolutely fantastic. Every note and every touch is crystal clear whether it's a passionate passage or a quiet one. When the hamper hits the string, the resonance from the vibrating soundboard is appealing to ears. The transience is very sharp too. The double bass sounds very

crispy, making Yamamoto's piano sound like flashing stars at a quiet night. The music is also made so romantic with the drums played by Tetsujiro Obara. K70 and K10 simply make "Misty" so fabulous - thanks to slightly warm 'goldish' sound without compromising the speed and the punch power. The sound stage is wide and three-dimensional. The reverb is rich but not over saturated. The amplifiers are able to completely immerse you into the music world without any significant effort.



Conclusion

Undeniably Takumi K-10 pre-amplifier and K-70 power amplifier have achieved the top tier in terms of audiophile amplification technology. Robert Koch has demonstrated to all of us how he builds truly high-end amplifiers with his passion to learn and seize every opportunity that he came across. In view of the superior design and superb music they deliver, I wholeheartedly recommend Takumi K-10 and K-70.

Ideal partner of horn speakers

Robert Koda

Takumi K-10 pre-amplifier and Takumi K-70 power amplifier

I'm not too sure if the Kanji "Craftsman" in the product logo for Robert Koda means "Superior Craftsmanship". But after I auditioned the four block Takumi K-10 pre-amplifier and K-70 power amplifier, I feel that "Superior Craftsmanship" is really an appropriate terms describing the products.

We matched K-10 and K-70 with different speakers in Audiotechnique. When Trenner & Friedl Pharoah horn speakers are used, the amplifiers take to something like a duck to water and manage to persuade me to stick my bud on the chair. Every CD I listened sounds so new and fresh to me. The unlimited power delivered by the horn speakers arrested my attention to the tiny details that I never noticed before. This apparently demonstrates great analytical power of K-10 and K-70. Take "Friday Night in San Francisco" which I have listened for more than 10 years as an example. At the beginning of the first track, I heard the sound of metronome, which I have never noticed in the past 100+ times. Their ability to deliver finest details of music is even better than many transistor amplifiers I came across before. The performance was apparently uncompromised by the fact that these amplifiers are of hybrid design. Details such as strumming, pressing, plucking and sliding on guitar strings are vividly delivered. The realistic ambience created by the music virtually takes me to the recording venue. This is just exciting!

In recent years, many amplifier makers set their design goal to achieve realism. There is, however, a school of thoughts that amplifiers as such are not good match with horn speakers. They think that the sound would be too thin and dry. But they are reluctant to fall back to vintage tube amps in fear of their poorer stability and weaker controlling power of bass. If you encounter with these problems, you are likely to realize that the delivery of human voices are extraordinarily appealing, similar to my listening experience in Audiotechnique's audition room. I listened to the new CD from Olga Peretyatko, who is acclaimed to be the successor of Anna Netrebko. There is no question about Olga Peretyatko's singing technique of course. K-10 and K-70 delivers sweet voice yet without harshness in the treble. I can clearly notice the subtle changes in her emotional and addictive voice. The accompanying

instruments are not eclipsed by the female voice. The sound stage is three-dimensional. I also listened male voices using the combo, which delivers very unique masculinity in the HQCD edition of Koji Tamaki's "Wine Red No Kokoro". I clearly heard the strumming sound of guitar strings in first track "To Me". This convinces me that K-10 and K-70 are excellent in unleashing the power of horn speakers.

Takumi K-70 is based on single ended amplification implemented by 34 Toshiba diodes connected in parallel. Although the output power is merely 70W, the power of driving and controlling the speakers should not be overlooked. In track 11 of "Live is life" performed by Arne Domnerus and Lars Erstrand, the drum is so realistic. The mid tones of K-10 and K-70 are somewhat thick (of course not in form of distortion) so they manage to deliver metallic sound of cymbals and punchy drum sounds. This is not just a test on how much power the amps can deliver, but also a test on how much contrast they could make in terms of strong and weak sounds. The micro-dynamics in the soft passages are very satisfactory.

Takumi K-10 and K-70 are products that deliver music I could spend the whole afternoon listening to, without tiring my ears. They sound very "human" but at the same time there is almost no distortion. I recommend this combo to readers who are looking for good amplifiers to match their horn speakers. You will know what makes good partners when they come together! 音

