

VALVE

VINTAGE AUDIO LISTENERS AND VALVE ENTHUSIASTS

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If you want a subject fraught with idiocies, at the moment there's this craze that valve amplifiers are better, and that the Quad II valve amplifiers are now the best, in terms of reproduction.

-Mike Albinson, assistant to Peter Walker 1978

dynaco bake off

They trickled in throughout the morning, some arriving alone and some in pairs. Each looked more or less like the other, but the differences were there, too visible to deny.

They came together under the premise of 'just having a good time', but everyone knew there was much at stake. Each one had been placed for all to see and hear in the hopes that at least one other individual would leave convinced that 'this one' was the best.

And then it was time. Amid cries of "Can't those speakers play any louder?", and "It's not fair, you're using a solid state preamp!", the jury grimly made their

judgments.

And you know what? There was no clear winner. Once again it was proven that this whole issue of 'the best' is very much a matter of personal taste.

But it also became clear that modifications can make significant audible differences in the sound of an amplifier.

Thus went the great Stereo 70 bakeoff of 1994.

I would like to offer profuse thanks to everyone who came to listen and opine, and particular thanks to Dave, Greg, Chris, Eric, and Wayne for bringing their amps for a 'look & listen'.

But I am way ahead of myself. We got our second VALVE meeting of to a start with a quick discussion (pitch) about yours truly administering the club for a proposed annual membership fee of \$35.00. By unanimous decision, that's how it will be. I will handle all the mundane stuff like dues collection, meeting site location, coordination of equipment demos,

CLASSIC RADIO'S REFERENCE SYSTEM
MAR. 94
FRONT SPEAKERS - MAGNEPAN MG11A
AMP - CLASSIC RADIO MOD STEREO 70
PREAMP - APT HOLMAN
PHONO - DENON DP6000/DA305/AUDIOQUEST 404
CD - ONKYO DX1400
TUNER - KENWOOD L-07T
OPEN REEL - AMPEX 800
(AMBIENCE RECOVERY AND SIGNAL
PROCESSING EQUIPMENT NOT USED THIS
MONTH)

Cont. page 2

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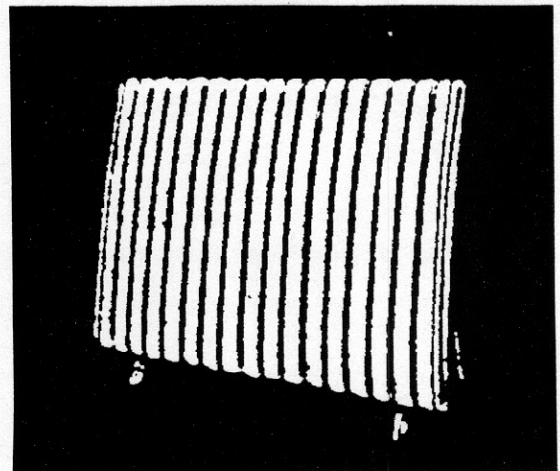
acoustical quad

This month's demo is a very special one. Through the generosity of Eric and Dave we will audition what is to many vintage buffs the *ne plus ultra* of vintage high fidelity systems, an entire QUAD system.

It will be composed of the QUAD FM Tuner, QUAD Multiplex Decoder, QUAD 22 Control Unit, two Quad II Power Amplifiers and two QUAD ESL's.

All of these components are in very nice shape and will be set up as originally intended right down to the KT-66 output tubes.

Acoustical Manufacturing Company, makers of the QUality Amplifier for Domestic use, was started by Peter J. Walker in London in



Cont. page 4

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Dan Schmale,
editor

Next Meeting
4/10/94 12 noon

newsletter production, etc. The members will be responsible for equipment presentation, newsletter articles, and other fun stuff.

See the insert for info on membership.

Next came a presentation of a near mint KLH model 8 table radio by Chris. The fidelity of that dinky little speaker was quite impressive, nice bass for its size and a good tonal balance. I asked Chris for a little writeup on the Model 8 and he gave me a nice ad from KLH which I will have available at the next meeting. Chris was also kind enough to bring an interesting assortment of software, most notably a CD and vinyl copy of some Nat King Cole issues.

The comparison of the two was quite interesting. Somewhere in the process of digital remastering the bass went away, and there seemed to be more distortion in that breathy edge in Nat Cole's voice.

I must admit that this was the first opportunity I had to compare analog vinyl with a digital remaster, and it left me feeling pretty good about all the used vinyl I've been picking up in the thrifts this year (about 200 albums).

Of course there's that problem of a good cartridge costing as much as a CD player these days --

On to the main event.

Here's what showed up to be heard:

a stock Stereo 70 with Chinese EL34's, brought with the comment "this should be useful as an example of the worst",

a 70 with polypropylene coupling and bypass caps and American tubes,

a 70 with the Sound Values modification (a new driver board with 6GH8A's and polypro caps) and some extra filter capacitance,

my 70 with 2200 mfd of filtration, a bigger power transformer, and

my version of Koren's triode driver mod, polypropylene caps, GE 6CA7's on one side, Japanese Amperex EL34's on the other, GE 7199's and 5963 drivers.

a Curcio mod 70 (solid state, regulated power supply, pentode output, and 6DJ8 triode input and driver) with Siemens EL34's.

Evaluation forms were passed out before the listening tests. Each amp was auditioned with a selection from Telarc's Wagner Without Words CD, playing through the reference system listed on the front page. For you cable freaks, interconnects were Raydeau Shaque Gold Plate and

any requests?

We're looking for British amps and preamps for a demo. Please let us know if you have any neat British stuff.

I'd also like to do some tube comparisons. Any input would be appreciated. I can offer 6L6, 6L6G, 6L6GA, 6L6GB, 6L6GC, 5881, 807, 1614, 1625 in matched pairs. Let's do a homebrew demo. I know some of you guys are building out there. Come show off your work.

Please bring some of your favorite software to meetings for demo use. We can handle any kind!

speaker cables were 6' Monster Cable, properly time and phase aligned with the Oort cloud and all significant remnants of the big bang, and shielded from radium watch dials, birdsong, and any other bad vibes.

Some folks left their evaluation sheets after the meeting, and I have extracted some prosaic nuggets from them, but first I'll give you a taste of my own prejudice.

The stock 70 sounded like a stock 70, nice, OK bass, kind of fuzzy or veiled on the top end.

The recapped 70, which had been mine two owners ago, sounded clearer and more detailed on the top end. This amp was liked best by Eric.

The Sound Values amp was a surprise to me. While it seemed to lack some sensitivity and punch, it was quite detailed and sweet sounding, enough so that I will try 6GH8A's on my 70.

My amp was supposed to do three things better than the rest. Better bass, courtesy the brute force power supply, cleaner top end due to triode input and reworked feedback, and better punch, due to the big filter and the added driver stage.

Bass was definitely better than the others, a fact I had proven by making the filter bank a plug in. so I could A/B the increased capacitance.

High end was also better tahn stock, less harsh, particularly on massed strings, but whether it was better than the Curcio or Sound Values is hard for me to say.

Punch was a little better to me, but I don't know that anyone else agreed. It wasn't significant, as this amp, like all the rest, broke up on one "impossible fortissimo".

I do think there was more power on tap, as I could play the Magnepans louder with my 70 than with the others. This of course may not be an issue to Vintage Listeners with sensitive Vintage Loudspeakers.

Imaging was no better than the other amps as near as I could tell. The Curcio offered the most changed sound of all. It has been described in the past as analytical, lacking euphony, very detailed, and neutral. I agree with these observations, having borrowed this particular amp for a month, and would add that it was perhaps a bit compressed. it was interesting to watch a small lightning bolt strike in one output tubes as the impossible fortissimo played. Maybe the driver has the beans but the regulated output gets overwhelmed by it.

At any rate, it sounded very nice. The six evaluations I did find came

out as follows:

Stock 70: poor, muddy, pinched mid to upper range, muddy tympani, soft -- six fifth place rankings

recapped stock 70: better high end, detail, transparency, tympani cleaner -- one second, one third, four fourths, (and Eric's first, which I received verbally)

Sound Values 70: upper range distant, smooth, lower volume, reserved, basses clean, but tympani not as good as recapped stock -- one first, one second, two thirds, two fourths

Classic Radio (Dan's) mod: more sensitive, louder, mids bright, some distortion on tympani roll, good low mids, good upper definition, tight low end -- four firsts, two seconds

Curcio mod: much more sensitive, most even response, up front sound, some distortion on tympani, handled tympani the best, loudest, level too high for tubes? -- one first, one second three thirds, and one unranked.

So there you have it, another completely objective, unsolicited testimonial --

dan

P.S. Oh yeah, next month is our full QUAD system demo, featuring a QUAD FM tuner with multiplex decoder, QUAD 22 control unit, a pair of QUAD II power amps and QUAD ESL's. We will meet on the SECOND SUNDAY, April 10th, because the first Sunday is Easter.

Check out the rest of this issue for lots of neat QUAD info.

**NEXT MEETING
SUNDAY APRIL 10, 1994
SWAP MEET AT 10 AM
MEETING AT NOON**

I have included in this issue an application form for membership.

As I have personally funded this club up to this point, prompt payment of dues will be greatly appreciated and will help to maintain our momentum.

As an incentive I will make July 1, 1995 our first renewal date, so you get a 15 month membership for the price of 12.

I must also make this the last issue of the newsletter you will receive until your dues are paid. Hey, this newsletter may become a collector's item 30 years hence, don't miss an issue!

Done any interesting projects lately? Why don't you share your experience with us? You don't need to write a formal article, unless you'd like to. Just send us a letter, pictures, schematics, etc. We'll put it in an upcoming issue. Send your correspondence to VALVE, 1127 N.W. Brito Star Lane, Poulsbo, WA 98370 or call 206-697-1936. C'mon, share!

the library -

We received the following new items this month:

Audio Amateur - complete through 4/93

HK Citation I owners manual

Dyna Mk IV manual

McIntosh 225 manual
McIntosh C20 manual

Stereo 70 review from *American Record Guide*, October 1961

Thanks to those who contribute. Keep those manuals coming! Remember, copies of any documents are only a nickel a page for members vs. 25 cents for non members. If you need a couple of McIntosh manual copies check out Audio Classic's prices. You could join VALVE and get copies for not much more than their price for the manuals alone!

what's brewin' ?

Chris is having us install the triode input mod we used on our Stereo 70 on his Mark III's --

Rick gave parts and plans to us for construction of the preamp tube tester described in *Glass Audio* --

Dave has collected parts to build the OTL dynamic headphone amp in *Glass Audio* --

Mike had us build a pair of custom crossovers to use in a new set of enclosures he's building for his Altec 604B's --

Myron built a preamp based on an Eico ST-40 chassis using 12DW7 tubes --

Bill has been experimenting with a neat set of adapters built by Myron which adapts an 807 to an octal socket

the late 30's.

The original QUAD components were introduced around 1954. At the time the loudspeakers, while revolutionary in their construction and accuracy, were rather poorly received in an era of horn speakers with giant sized bass response.

A very interesting interview of Peter Walker can be found in *The Audio Amateur*, 3/1978.

I won't rehash the entire article here (we do have it in the library), but a few select plums from the article help to explain the design philosophy behind Peter Walker's products —

on differences in amplifiers:

" If people test two different amplifiers and say " These sound different," there's no magic in it. Spend two days, maybe a whole week in the lab, and you find out exactly why they're different and you can write the whole thing down in purely practical, physical terms."

on listening tests:

" We designed our valve amplifier, put it on the market, and never actually listened to it."

" We never sit down and listen to a music record through an amplifier in the design stage. We listen to funny noises, funny distortions, and see whether these things are going to matter, to get a subjective assesment."

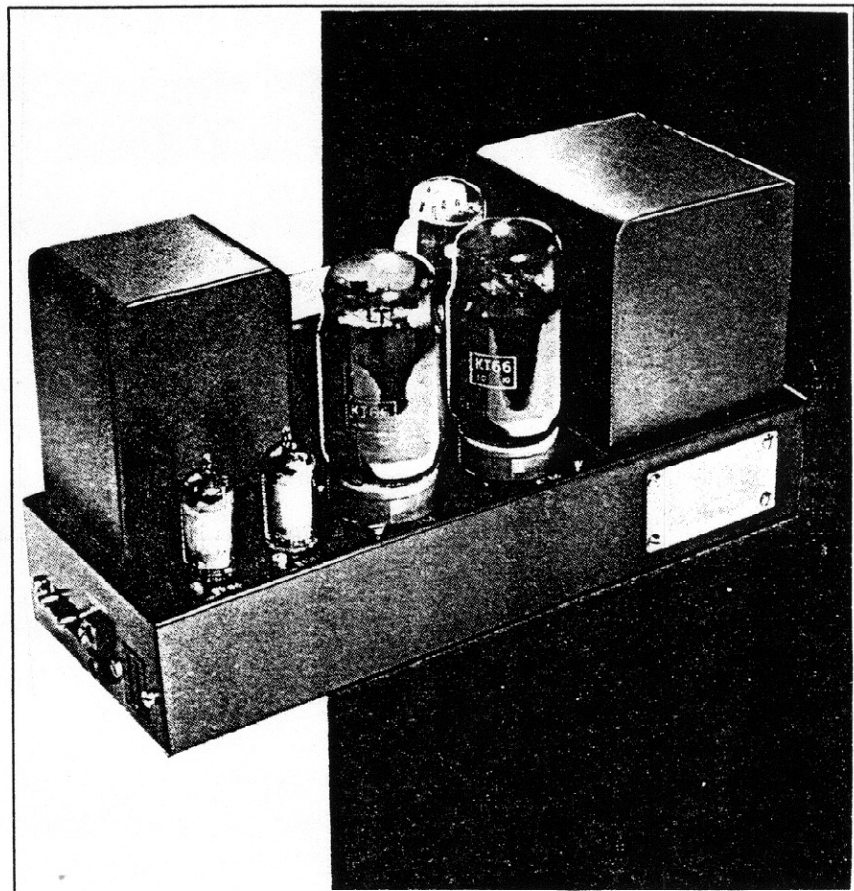
on his satisfaction with the ESL:

"We think our loudspeaker is very poor, but we think that the others are even poorer!"

" in the early days -- most people didn't like it."

" It couldn't shake the windows, which was the criterion in those days."

on adding subwoofers for improved response below 100 Hz:



" people -- use two of our panels, one above the other. This is quite reasonable because it really is a strip source, you can extend the strip source without deteriorating anything. All you do is add 6dB at the bottom end and 3dB everywhere else. -- Adding woofers has never been very good."

On the ease of designing and building tube amps vs. transistor amps:

" much more forgiving, yes -- much easier"

You have to admire the conservative, thoughtful approach of the great British audio designers of the early days. QUAD ESL's have gone through only one major redesign in 40 years, and still get high praise from the audiophile community.

Moving from history to componentry, here's a rundown on the equipment we'll be hearing.

The tuner uses a 6BH6 pentode in the RF stage, coupled to a 12AT7 mixer/oscillator, which is permeability tuned.

1st IF/AGC is a 6BJ6. 2nd IF is a 6BH6, as is the limiter. The phase discriminator uses a 6AL5. AFC and tuning indication at the discriminator are accomplished through the use of a 12AX7 used as a cathode coupled phase inverter feeding a neon bulb from each plate.

Mistuning turns off the neon in the direction of mistune, and one side of the triode acts as a reactance valve across the local oscillator coil for AFC action.

The multiplex decoder is a solid state unit which attaches to the back of the tuner. It consists of an impedance matching stage feeding a diode ring demodulator.

The demodulator is switched by a 38KHz oscillator.

The oscillator is synched to rectified 38KHz pulses which are derived from the pilot tone. Power is supplied from the tuner.

The control unit is in a beautiful cast aluminum cabinet which matches the tuner. All power switching is performed through the unit which has sockets, cables and jacks on the back for the connection of amps, tuner, phono, tape, mic, and adapters for various phono and tape loads. The input stage uses EF86/6267's and the high level stage uses a pair of 12AX7's.

One interesting feature of the unit is a switching system which allows various EQ curves to be switched in when playing older phonograph recordings in the MONO mode. A list of settings for various labels is included in the owner's manual.

The power amps are as attractive looking as the rest of the components.

The input/driver consists of two EF86's, each feeding one output tube. One tube is fed a signal 6dB below balance from the other. The imbalance is compensated by connection of the output tube grid returns at a point where the phase difference creates a small signal difference which compensates for the initial imbalance, as well as mismatch between tubes.

The output stage uses KT-66's in push-pull and a unique transformer with five windings divided into fourteen subsections. It employs a cathode feedback winding, enabling greater power output than a standard "tetrode operated as triode" circuit.

The owner's manual makes reference to an article in the September 1952 issue of *Wireless World* which apparently gives the

design rationale for the amp (does anyone have a collection of *Wireless World* issues? - dan).

Full chapters have been devoted to description of the electrostatic loudspeakers. The reference considered a must read on the subject is Peter Walker's original series in *Wireless World*, May, June and August, 1955. Another excellent article by Reg Williamson can be found in *Speaker Builder*, 1/82. I have capsuled his description of the speaker here:

" The basic design consist(s) of a light, thin diaphragm (*lighter than the air layers on either side*) of plastic which was made weakly conductive and suspended between two outer electrodes."

"The diaphragm is also given a constant charge from a high voltage polarizing source."

"The driving signal is fed across the two fixed electrodes,— a genuine push-pull system and fully symmetrical."

"The higher frequencies (*are*) handled by a narrow strip in the center and the bass by two rather wide strips on either side. In the first production models, the crossover point, around 1KHz, was mechanical."

" Post-1966 production models incorporated a simple high pass filter in the signal path to the center unit. Finally, to improve the waveshape, the entire unit was curved gently in the vertical plane."

Put it all together and you have one neat demo for our April 10th meeting!

dan

**REMEMBER ---
THE APRIL
MEETING IS ON
THE SECOND
SUNDAY, APRIL 10**