

In-Car
Entertainment

butler

TDB 475

The return of TRUE BLUE

Tube rules! This holds true as far as the audiophiles' system in the home but tube amps are a rarity for car audio. In a car, the stressful environment (specifically heat and vibration) takes its toll on these relatively fragile thermionic devices. Then there are the few (you can count by the number of fingers in one hand) that braved the elements and come up with a workable solution. Butler is one of the exclusive members of the thermionic club.

The history of Butler is interesting and tube lovers would do themselves a favour by checking out Butler's website www.butleraudio.com. The current range of Butler amplifiers can be described as the forth generation of the patented TubeDriver Blue design. This design is unique to Butler amplifiers and Butler claims the technology offers the best of all worlds - high on reliability, long service life for the tubes and all the sonic benefits of a tube amplifier.

I checked out Butler's site FAQ and found this description for the TubeDriver Blue.

By directly interfacing the mechanical-electrical speaker load with twin-triode vacuum tubes, TubeDriver BLUE produces the response and tonality of 'all tube' power amplifiers.

Utilizing the original pure Edison effect, the TubeDriver BLUE circuit design safely biases the twin-triode tubes to a constant, near plate-saturated or overload condition. The results are greatly expanded dynamics, punch and presence from naturally produced vacuum tube harmonics.

Pretty heady stuff. I guess I am more interested in how it performs than how the technology works. After all, you don't buy the technology; you buy the benefits the technology brings. And that brings us to the 4-channel TDB 475. Rated at a conservative 4 x 75 watts into 4 ohms or 2 x 200 watts bridged into 4 ohms. In non-bridged mode, the amp is 2 ohm stable though the regulated power supplies restrain the power delivery to the same 75 watts per channel. In bridged mode, do stick to the stipulated 4-ohm load. The amp does not use global feedback to reduce distortion yet Butler claims the distortion is many orders lower than typical vacuum tube amplifiers and hence comparable to solid-state amplifiers. There are no crossovers or HiPass/LoPass filters so if the system is run in active mode, you have to control from the source.

Inside the amplifier, four 6SL7GT vacuum tubes (one per channel) are mounted on two daughter boards and then mounted on the motherboard. The feet of the tubes are soldered to the board and it seems not too easy for user to replace with other preferred alternatives. Butler claims there is no real benefit to use other makes of tubes but of course will that deter diehard tube fanatics? Guess not! Apparently the tubes are running at only 5% capacity and a long service life can be expected, perhaps even outlasting the lifetime of this amplifier. Four solid-state output devices per channel should be able to deliver more than the rated output so it seems Butler under rate their amplifiers. This should bode well for reliability. The four tubes aside, the amplifier is all solid state, so reliability should not be an issue. An internal temperature controlled fan is a nice assurance and the heat sinks that lined

both sides of the amplifier keep the amplifier stable once it reaches its optimal operating temperature. One end of the amplifier is the 8-gauge power cable terminals while the other end is the RCA inputs and speaker terminals. Dimensions is a reasonable 20.5 inch long,

10.25 inch wide, 2.4 inch tall and weighs 14 lbs. Oh, did I forget to mention the **Butlers are all handmade in the USA?** They are made in small quantities by any standards so do be patient should the occasional shortfall in stocks occurs. Good things are worth waiting for! Given the construction and being tube, the TDB 475 sells for a reasonable \$1660.

I had the brand new unit installed in my Honda driving a pair of Focal Utopia's W165 midbasses with Morel Supremo Piccolo tweeters. Source is the trusty Alpine F#1. As the amplifier is new, I was told it needs some time to break in. I agree, don't take what you hear seriously for the first couple of days, I reckon you need about 20 hours before you start to hear what the Butler can do. It should bed in after about 100 hours. The amp has a 10-15 second 'soft start' delay; so don't get too excited when you hear nothing when the system is turned on. Thankfully there is no switch on thumps. This is assuring for ICE competitors.

In use the amplifier seems to take very little time to warm up. The blue glow of the tubes is unusual, as tubes should glow an orangey yellow. Actually, the blue glow comes from some blue LEDs on the PCB. I have no idea what it does: Realign the electron flow? You can see the tubes through a perforated window on top of the amplifier. Prior to running in, the Butler sounds reclusive and constipated. You can almost hear him saying, 'leave me alone, I am not ready yet!' After about 3 days, the amplifier suddenly took on a different personality - like a hopping mad 'Energizer' jackrabbit in heat.

If good soundstaging capability rates high on your score sheet, the TDB 475 is a good bet. The staging is well balanced with a good spread across the entire width of the car instead of bunching up in the center and on the extreme left and right. In other words there is good focus and the sound sources simply 'snaps' into place. What is obvious is also the sense of acoustic within the soundfield, most amplifiers are able to render strong image focus but the 'air' of the recording can be lacking, the result is a rather dry and emotionless presentation. This is one of the tube (airy) vs transistor (dry) arguments that have gone on for years, in this respect, the Butler sounds more like a good tube amplifier than solid state.

Along with good soundstage is the exceptional natural tonality of the sound across the audible bandwidth that left me hard pressed

to find tonal anomalies. In fact the amplifier exhibits exceptional superb transparency especially in the midband allowing the nature of the recording to shine through.

Based on my experience, the Focal Utopia midbass driver

needs loads of clean power to perform and typically 100 watts rms being the minimum and 200+ would kick ass! Hence, I find it quite incredulous that with 'only' 75 watts, this Butler gave the Focal driver a good workout! Listening to my current fave, Black Eyed Peas' 'Monkey Business' is maniacal fun! Track 15 'Union' featuring Sting, is

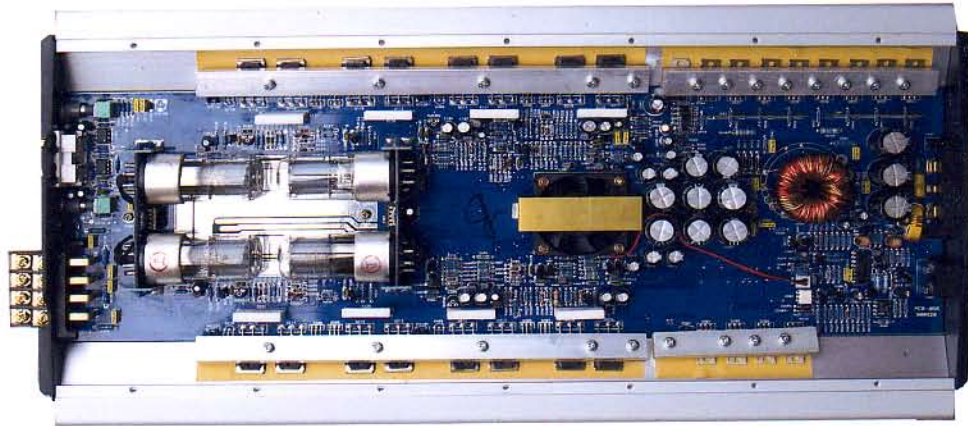
what BEP called a tribute to his 'Englishman in New York' from 'Ten Summoner's Tales' his best album till date. With the subwoofer switched off, the powerful midbass punch of the Focal makes for a good workout. Clean and tight with exceptionally smooth tonality and good extension. Further up, the superb midband can give an exceptional insight to the recording and is a joy to listen to while the sweet treble is innocuous enough to keep listening fatigue at bay.

The Butler needs to be played at a healthy level to keep the 'energy level' high, at low listening levels, the sound can be anemic, this is certainly not an amplifier to invest in if your idea of music on the move is akin to elevator music. Perhaps the power hungry Focal Utopia midbass contribute somewhat to the overall perception, either way, the relatively low power rating of this amplifier shows up. Amplifiers with more power are better able to control the output even when playing softly. I would not suggest this to be a weakness of this design but we have to be realistic about what we can expect from a 75 watts amplifier compared to say something with 250 watts

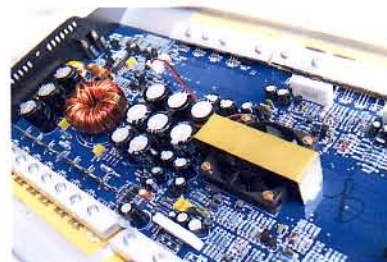
per channel. That said, the 75 watts you are getting here are pretty good ones indeed!

The Butler is but one of the many choices for a tube hybrid car amplifier. I don't suppose you would buy this amplifier because it leaves you with warm and fuzzy with all that glowing stuff inside the amplifier. With its mild mannered nature, it is a nice amplifier to spend time exploring your music. There is very little I can fault the amplifier except for its lack of dynamics at low playback level. Maybe my Focal Utopia midbass is just a little too demanding, if you have an easier speaker to drive, I suppose the Butler will be in its element. As far as I am aware, the TDB 475 is perhaps the least expensive tube hybrid amplifier yet its performance puts it right up amongst the better amplifiers at any price. As

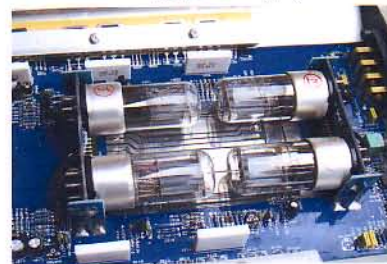
such, I would say the Butler TDB 475 is actually one heck of a good amplifier and for the asking price, quite a bargain.



• Inside the TDB 475



• The power supply



• The quartet of tubes



• Power connection end



• RCA and speaker end