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## Bryston B100 SST

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No Criticism of common sense, or the legend of the  
Integrated Amplifier.



**What we like:**

Conservative, dignified perfection.

**What is missing:**

Nothing – you even get an optional all-metal remote control if wanted.

**What surprised us:**

Modular add-on capability!

**What you should do:**

Acquire the Phono module, and despite techno trend challenges collect vinyl.

The elder among us will still remember: There were times in which integrated amplifiers were offered in every price class. They formed – together with receivers – the backbone of the Hi-Fi range of products. The whole thing started

with, well perhaps 500 Marks, and ended with the five digit High-End nirvana. But today we can only state that those times have passed. The offerings from the “normal” entertainment electronics sector is limited to roughly three or four components, while any number of surround sound amplifiers are in the market place, and their expected life – according to insiders – should possibly not be expected to be too high, since they could readily be displaced by design oriented complete installations and tiny active loudspeakers.

You and I know into which territories the last oppressed specimens have taken refuge, naturally to the High Enders, and here one is glad to note that the two-channel integrated amplifier not only lives, but gratifyingly is even multiplying ... What might be the reason for this? It’s quite clear: According to the marketing strategists of the multi-media new decade, Surround Sound, Video, Networking, and “Portability” – nice word – belong to the essential product characteristics of modern entertainment electronics. Admittedly somewhat maliciously the author allows himself to add: Half-value life-times of six months, difficult operation, appalling sound, a battle for pricing at the expense of quality leading to frequent defects, can likewise no longer be brushed away from the characteristics of “modern” entertainment and communications technology. If the future production spectrum is based on the computer industry – which is indeed expected – then look out! If you would like to hear my experiences from the last 24 months relating to this: A printer right out of the box, defective, a computer with processor damage after three hours of use, a laptop which had keyboard problems after two months of use and power supply problems after three months, a scanner whose software disk was neither readable, nor was it replaced on the electronic scrap market, a memory stick which died after one week, as well as a WLAN station with a range of barely ten meters.

**Therefore it’s hardly a wonder when not only I, but also others, are finally fed up with the beautiful new world, and insist on products that are a) not complicated, b) maintain their value, c) sound good, and d) are reliable.**

Besides that, it could be that someone “merely wants to listen” to good music ... and therefore the survival of integrated amplifiers – at least for those for whom sound (quality) still means something – i.e. the high enders, should be guaranteed.

This brings us to an exemplar of the category “Integrated Amplifier” whose profile fits precisely into the mentioned points above, namely a newcomer from **Bryston**. It is known as the **B-100 SST** and maintains a limited list of specifications, which was created by high fidelity common sense: Enough power for every reasonable loudspeaker, enough inputs for any circumstance, and in addition remote controllable. Added to this are a few interesting features, which will be discussed shortly; but first we must determine whether the origin of the Canadian amp also guarantees monetary value, in light of the fact that there is no trace of a devaluating frenzied product change.

Bryston was founded in 1962 in Toronto by John W. Russell, an ex NASA engineer, and for the last 25 years the concern has been in the hands of his two sons, Brian and Chris Russell. At the present time Bryston has about 80 employees and produces about 3000 components each year. The legendary well-known 20-year warranty is considered to be exemplary, and therefore about 100,000 units of all types of Bryston built components – actually it is said to be 140,000 – still are covered by the warranty. Furthermore, as has always been the case, Bryston electronics are built by hand, which means that even their printed circuit boards are loaded by hand and not by machine, and despite this impressive background, Bryston represents a “No-Nonsense” brand. Ornamentation in the form of chrome, gold, and aluminum trim strips will not be found, nor LEDs that merely serve for adornment, and the components stand on feet not spikes. The new milled-in logo on the front panel of the amplifier might already safely be evaluated as a downright temperamental outburst.

That the company could convince itself to finally also offer silver besides black components is commendable. However this understated brand is always in great danger of being unrecognized or even simply overlooked. Moreover on the B100 front panel, endowed with a blatantly prominent (for Bryston) horizontal indentation, nothing will be found that even remotely could be considered as decoration. The front panel is dominated by a volume control knob and, besides a conspicuous headphone jack, one also notices neat little push buttons for input selection plus – thank God! – the more often than not spurned balance control adjustment. That's it, and we now turn to the much more exciting back panel, which represents a strict dual mono concept. Here are located first-rate gold plated RCA (Cinch) jacks and loudspeaker binding posts separated far apart by channel, an arrangement that is continued internally as far as possible.

Based on two 250 Watt power transformers, two completely independent separate circuits with considerable filter capacity supply the output stages with just about 200 Watt 4 Ohm output. A third smaller power transformer takes care of the "Standby" formalities as well as the clean handling of these matters, and here so called Triacs help, rather than the frequently commonly used input switching "current brakes" in the form of high capacity resistors, which in the long run turned out to be unreliable. A small, extremely high quality, well known sound enhancing extra can already be found "in front" of the power supply, i.e. active compensation (a unique ultra-linear input buffer) for eventual variations in the input voltage supply.

Resulting from only a sturdy pair of 250-Watt bipolar output transistors per channel, the Bryston circuit technology in principle represents a smooth, clean solution with short signal paths. Despite this, **there are a number of clever audiophile design features including a very modern digitally controlled volume control using a resistance network on a chip. Mind you, this technology, in reference to the signal path, is located in the analog section and offers many advantages, for instance perfect channel balance, a simple**

**integrated balance adjustment without additional parts, practically zero adjustment noises, first class behavior in reference to noise and distortion, as well as adjustment via software.** It's quite clear, the Bryston amp not only makes use of this type of system for reasons just mentioned, but also because if it becomes necessary **the B-100 can be updated by means of an RS-232 port.**

Likewise the organization of the inputs and outputs uses the most up-to-date technology, i.e. gas tight relays take over all switching functions, and additionally the signal ground is always switched too, thereby eliminating stray disturbances and ground circuit voltages. "Not selected acts like disconnected" comments the Sun Audio Company, for almost 20 years the Bryston representative in Germany. The B100 integrated amplifier also offers complete separation between the preamp and the amplifier sections in order to be able to accept external processors, and the preamp section itself embodies powerful output drivers. The same is true for the "Tape Out" signal: Also a discrete switching technology operational amplifier is used, which the Canadians have "cultivated" for quite some time, or perhaps we should say "optimized." The actual B100 power amplifier segment consists of fully complementary circuitry with internal symmetrical control, which naturally contributes to the excellent signal quality. The thoroughly successful electro-mechanical build-up of the circuit board assemblies onto two separate heat sink modules reveals the vast experience of the manufacturer.

That protective circuitry must be part of a modern absolutely reliable amplifier is crystal clear. The Bryston integrated amp depends for this on a quite clever electronic circuit which compares the input and the output signal by means of a divider circuit. Deviations are interpreted as a fault, and the advantage is in the observance of the load impedance, where the possible erroneous output observation no longer serves as the only clipping indicator. And apropos clipping: Although measured specifications don't reveal everything about the quality of reproduction, one can indeed pay close attention to the self-confident

Bryston designations. The developers with their full 100 Watts at the output only activate the “third digit” after the decimal point, which says just about everything about the objective qualities of the B100 SST integrated amp.

Besides the clinically clean power output, the Bryston amp is certainly capable of satisfying other requirements. Shouldn't a truly universal “old style” integrated amplifier also embody Phono Input? And shouldn't there also be a ground post provided? But of course: As an option the Canadians offer an MM Phono module in the form of a plug-in circuit board, which is recognized and accommodated by the operating system. But that's not all: Also digital matters are considered, namely in the form of a likewise optional plug-in D to A Converter circuit board, which offers four (two optical and two coaxial) digital inputs. The 24/bit Delta Sigma Converter incorporates its own analog buffer stage as well as its own electronic voltage stabilization, and is of course usable with the Phono Input module.

**But there remains the old crucial question: How does it sound?** And specifically here the good Bryston – mind you for the first time – presents challenges. Because clever and pragmatic as its developers are, they decided cunningly, to do everything for everyone without hurting anyone, which certainly does not make the life of this reporter any simpler, because I would prefer to write about exactly determinable characteristics, or at least about anticipated tendencies. Unfortunately nothing like this can be credited to the Bryston amp, which makes life difficult even for a professional bean counter. **Thus its tonal tuning is an admirable secure balancing act between ‘clear as glass transparency’ and ‘natural reserved representation’.** Its bass reproduction, the most praiseworthy compromise between substance and control, its spatial representation, a well-balanced middle between diffuse expansion and graspable presence, and the accurate remarkable unassailable presentation of a live event. One must also add a large portion of detail accuracy plus an underlying basic high frequency reproduction which errs

**in no specific direction.** It becomes clear that the B100 SST amp does not even seek worthy of mention variations around an imaginary audible zero line. Furthermore, not even the smallest sign of a small flaw around the upper bass region can be found – however readily diagnosed in its USA neighbors. We have here an unadorned neutral, simple, friendly exact representative of its kind, who one can accuse maliciously either of informality, or in a positive vein, everything else than too simple a neutrality.

So there I stand now, fool that I am, and just as smart as before, especially since this representation, this unassailable reproduction capability along with tranquility as a matter of course, which unquestionably stems from capacity, i.e. solid power reserve. To upset the rigidly controlling amp is hardly achievable, with the possible exception of an “eighties” one ohm speaker which successfully feigns bass short circuits. Otherwise nothing will “ruffle the feathers” of the Bryston B100 amp, and least of all – like with me – power hungry speakers. This also demonstrates how superbly the Bryston developers of professional equipment succeeded in matters of low noise and hum. Only with one’s ear next to a 96 dB speaker can one be aware of barely perceivable rushing noise, which confirms that even the finest musical nuances appear from a completely silent background. **Furthermore, the fact that even the spoiled user of somewhat romantic tubes won’t over analyze, not to speak of being on edge, also speaks volumes about the accomplished design of the B100 amplifier.**

But if it would only be a cultivated bore, however with first class manners, but also anointed with a noncommittal attitude, then one could confidently move on to the business of the day, i.e. state that one has experienced another thoroughly well-behaved integrated amplifier, and reseal the shipping carton. However the matter is not quite that simple, since this “understatement package”, this impish “I am not even here” performer, at the least leaves a void when its Muting-LED comes into play. Upon more exact reflection of what has happened many ears, spoiled by much higher price ranges, determine that they truly miss the

steadfastness, and, well yes, let's call it the sympathetic neutrality of the Bryston amp. **It appears that the integrated amplifier fits seamlessly into a musical happening, that it enters into the moved heart of the listener with velvety smoothness.** What at least "I" do not want to allege about many transistorized components, some of them do incorporate certain built-in nervous elements, which however are seldom halfway objectively graspable, but nevertheless are always present. Exactly this annoying feature is missing from the Bryston amp, which therefore somehow always sounds correct, which likewise is hardly objectively graspable, but rather appears to be a question of a "feeling well" sensation.

Perhaps a healthy portion of self-confidence is necessary in order to simply utilize such an optically conservative, sound wise initially unobtrusive, technically effective, perfect amplifier. Possibly you are a connoisseur in secret, possibly one whose Hi-Fi career went into one or another false path, and who is not seeking extremes now, but rather longs for a trustworthy relationship. Possibly you are someone who even forgets his components in a cabinet, as long as they simply make music with harmonic accuracy. However in all of these situations you should definitely acquaint yourself with the Bryston B100 SST integrated amplifier, and possibly a relationship will result, one which is guaranteed for at least 20 years.

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### **image information**

#### **Bryston B100 SST Integrated Amplifier**

Power Output (4/8 ohm):	2 x 180/100 Watt
Inputs:	6 x High level RCA (Cinch) 1 x Power Amp Section RCA (Cinch)
Outputs:	1 x Tape RCA (Cinch) 1 x Preamp RCA (Cinch) 2 x Loudspeaker
Special Features:	Remote Control, Balance Control, Headphone Jack, RS-232 Interface, Optional Phono-MM and D/A Converter Modules



Measurements (W/H/D):	43/12/38 cm. (17/4.75/16 inches)
Weight:	14 Kg. (30 lbs.)
Length of Warranty:	240 Months
Price:	3500 Euros, With Phono 3900 Euros, With D/A Converter 4200 Euros

## **Contact**

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## **Test Setup Components**

Turntable:	Platine Verdier
Tone Arms:	SME M2-12, Ortofon 309
Phono Cartridges:	SPU Classic, Denon DL-103, Koetsu Black
Phono Transformer:	Ortofon, A23
CD Player:	Marantz SA-8400
Tuner:	Tivoli Audio PAL
Loudspeakers:	A23 Rondo
Cables:	A23 Shindo, Ortofon, HMS, Sun Wire Phono

*Translated from the German by Peter Ullman*