

COMPACT
DIGITAL AUDIO
PASC172

BETHOVEN

SYMPHONY NO 2 IN D, OP. 36

SYMPHONY NO. 4 IN B FLAT, OP. 60

NBC SYMPHONY ORCHESTRA

CONDUCTED BY ARTURO TOSCANINI

PRISTINE
AUDIO
XR

Symphony No. 2 in D

- 1 1st mvt. - Adagio molto - Allegro con brio (9:33)
 - 2 2nd mvt. - Larghetto (10:22)
 - 3 3rd mvt. - Scherzo (Allegro) (3:28)
 - 4 4th mvt. - Allegro molto (6:25)
- NDS-MM-4201 & NDS-MM-4203 Nos. 60B and 61B

Symphony No. 4 in B flat

- 5 1st mvt. - Adagio - Allegro vivace (12:43)
 - 6 2nd mvt. - Adagio (8:58)
 - 7 3rd mvt. - Allegro vivace (5:15)
 - 8 4th mvt. - Allegro ma non troppo (7:05)
- NDS-MM-4338, NDS-MM-4340 & NDS-MM-4339 Nos. 66A, 67A and 66B



Recorded live NBC Studio 8H, 3rd December 1944; 4th November 1939

Source discs from the collection of Christophe Pizzutti

The *Lira Panamericana* series of radio transcription discs featuring Toscanini conducting Beethoven were largely drawn from his 1944 cycle. However, the *Fourth Symphony* was not played that year, and NBC included his November 1939 broadcast recording for their South American radio set. Note too that all announcements were cut from these discs.

Transfer and XR remastering by Andrew Rose at Pristine Audio, June 2009

Cover artwork based on a photograph of Arturo Toscanini

Total duration: 63:49 ©2009 Pristine Audio.

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PRISTINE
AUDIO
XR

BETHOVEN

Serie Musical
LIRA PANAMERICANA
Sección Sinfónica



BEETHOVEN: SYMPHONIES 2 & 4

TOSCANINI, NBC SYMPHONY ORCHESTRA

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BEETHOVEN: SYMPHONIES 2 IN D, 4 IN B FLAT
TOSCANINI, NBC SYMPHONY ORCHESTRA

The 40cm (15.7 inch) diameter vinyl discs used for the *Lira Panamericana* radio broadcast series are very interesting - and often quite frustrating - from a technical viewpoint. The solution of large discs, pressed in an early but very familiar incarnation of vinyl and rotating at 33rpm was aimed at addressing a number of problems in re-broadcasting recordings in the age before tape, when all recordings were cut direct to disc - normally a 30cm (12 inch) disc rotating at 78rpm.

These discs might, at a real push, be persuaded to accept around five minutes of music, though four was the norm per side. (Later developments in the 1950s saw the likes of Telefunken producing excellent and genuinely hi-fi 78rpm discs with up to 11 minutes per side.) The acetate originals were exceptionally delicate, especially given the heavy tracking weights used at the time. Shellac pressings were equally short, fragile (the discs were to be shipped across continents), and suffered noisy surfaces and poor frequency extensions. Put simply, you'd know immediately you were listening to a pre-recorded item, which is why the Germans' use of their tape technology during the Second World War to broadcast speeches in high quality so confused the Allies - they sounded so convincingly 'live'.

Vinyl solved, at least partially, the noise problem. Slowing the rotation speed down to 33 1/3rpm increased the playing time significantly, but brought with it an additional problem of loss of quality through simple loss of linear velocity. A problem common throughout the 78rpm era was the fall-off of treble towards the end of each side, as the speed of the stylus playing through the grooves diminished enormously at the centre of the disc. A simple solution to this, given the constant angular velocity (or rotational rate) of all records, is to make them bigger - the further away from the centre hole your stylus is, the faster the groove passes below it. (CDs work in the other way round - the requirement for a constant linear reading velocity leads to a variable angular velocity - a CD player spins two and a half times faster when reading the inner part of the disc at 500rpm than its rate at the outer edges, 200rpm.)

The *Lira Panamericana* discs thus show the beginnings of a new technology, to be unleashed in microgroove format in 1948 in the USA, and two years later in the UK, with some technical teething problems (particularly swish) that were still not really ironed out until the mid-1950s. NBC apparently opted for a slightly narrower groove cut than that which a standard 0.0030" 78pm stylus tracks - optimal replay has been achieved with a stylus at 0.0025" radius. Anything larger than this increases swish (already a significant issue, especially at the edges of the discs), anything smaller than this results in a much reduced and distorted replay signal. Mono microgroove styli had a radius of 0.0010", their stereo cousins an even narrower 0.0007" - clearly styli were getting smaller in 1944, but they had some way yet to go.

I've touched on swish. This has proven to be very variable across the records, and often the left groove wall has also proved generally much quieter in replay than the right. This could be a result of damage and wear from very heavily-tracked styli designed more for shellac in mind than the comparatively delicate vinyl. There is often a significantly extended frequency range to be found on these discs, though in some cases this appears obvious only in louder passages. It's also clear that a degree of volume-level compression was in use, something it's just about impossible to undo. That said, it is clear that the *Lira Panamericana* series of records can and do offer much for the modern restoration engineer to work from, even if they are somewhat more variable in quality than one might ideally wish for!

NOTES BY ANDREW ROSE - FURTHER NOTES ONLINE AT WWW.PRISTINECLASSICAL.COM