

= Linn Isobarik =

The Linn Isobarik , nicknamed " Bariks " or " Briks " , is a loudspeaker designed and manufactured by Linn Products . The Isobarik is known for both its reproduction of low bass frequencies and being very demanding on amplifiers .

Launched in 1973 , the Isobarik DMS , Linn 's maiden and flagship loudspeaker was based on and named for the isobaric loading principle invented in the 1950s . The speaker exists also as the Isobarik PMS ? destined for the professional market . Although discontinued in 1992 , it remains popular among audiophiles .

= = History = =

While other loudspeaker manufacturers sought to outperform each other to produce more quantum bass output from their products , Linn was seeking clear undistorted low frequency bass . Linn theorised a design whose bass could go all the way to DC and be without fundamental resonance . The quest for that extra octave of " dry and extended bass sound " and more accurate reproduction resulted in the Isobarik .

Linn launched the original Isobarik DMS loudspeaker in 1973 , the year following the release of its first product , the Sondek LP12 . " DMS " is the contraction for " domestic monitor system " , and is designed to be driven passively in the home setting ? it incorporated a crossover within the loudspeaker cabinet . The Isobarik PMS (" professional monitor system ") loudspeaker launched in 1977 , destined for the professional market is without the internal crossover . This latter configuration opens up more wiring and driving options , in particular active operation and tri @-@ amping .

The Isobarik is so named as it employs the isobaric loading principle invented by Harry Olson in the 1950s : two bass units are mounted in a sealed container and driven in parallel so as to effectively double the speaker enclosure volume and extend its bass frequency response beyond what would be possible for otherwise identical speakers . Linn used a variant of the isobaric principle and patented the use of two bass drive units (" woofers ") facing forward in an isobaric arrangement in early 1974 .

In 1988 , Linn externalised the crossover of the DMS to boards with nominal 4 @-@ ohm impedance designed to lie flat at the base of the stands . Upon that change , the original distinction between DMS and PMS disappeared along with the suffix designation . The " DMS " was thus discontinued , although " Isobarik PMS " remained on price lists until the speaker was discontinued in 1992 .

= = Speaker = =

Linn brochures dwell little on performance specifications , mentioning somewhat vaguely that the frequency response " varies by only a few db from 20Hz to 20KHz with the isobaric loading extending usable bass response to below 10Hz " . Linn also claimed " very low distortion " and " high sound pressure levels " , without quantification . Recommended amplifier power rating is in the range of 50 ? 500 watts . Hi @-@ Fi for Pleasure noted that the speakers ' impedance , although quoted at 3 ohms nominal , dipped considerably at some parts of the audio spectrum . This made the DMS Isobarik very hard for amplifiers to drive , potentially causing many amplifiers ' output protection to trip . Equally , the two heavy woofers in each Isobarik made them twice as power @-@ hungry . Such demands happened to make Naim amplification the perfect match because of its high current delivery capabilities and its toleration of near short circuits . The Isobarik was famously used as the acid test for the budget @-@ priced NAD 3020 amplifier at its UK launch . In the 1970s , the DMS Isobarik , available in a number of veneers , sold for £ 1 @,@ 000 .

As part of their corporate philosophy , Linn intended significant dealer involvement in customer education and decision @-@ making , and included teaching customers how to listen correctly for musical attributes . The trial and evaluation of the product prior to purchase and dealer 's expert

installation are considered by Linn to be important parts of the value added of their top @-@ end products . As such , no instructions were supplied with the product . The Isobaric PMS retailed at £ 2 @, @ 400 including stands in May 1991 , and the 4 @-@ ohm crossover was priced at just under £ 500 .

== = Design == =

As a three @-@ way loudspeaker system employing six individual drive units , each Isobarik kabinet has two tweeters , two midrange drivers and two woofers . One driver of each frequency range faces forward ; a second tweeter and midrange are mounted on the top surface of the enclosure , and one bass unit is hidden from view . While the bass units are isobaric loaded , the midrange is mounted in a terminated transmission line . Crossover points are set at 375 Hz between the woofer and midrange , and 3 kHz between the tweeter and midrange . The upward @-@ firing drivers were designed to aid dispersion and improve the off @-@ axis listening experience .

The Isobarik , like the Sara and Kan that were developed in the 1970s and 80s , was designed to work best near room boundaries . Manufacturer 's leaflets advise positioning of the speaker close to a rear wall and approximately 2 to 3 feet (60 to 90 cm) from corners . The trade @-@ off is the less than solid stereo image . Linn declared forthrightly that loudspeakers that were not designed to work tight against a wall were without merit . According to Art Dudley of Stereophile , Linn also maintained provocatively that " anyone who would design , manufacture , buy , sell , or positively review a loudspeaker made to be installed away from room boundaries was a fool " .

In early product manuals , Linn recommended using the Isobarik PMS in tri @-@ amped configuration with Naim amplifiers . Three NAP 250 amplifiers , fed by a 3 @-@ way Naim electronic crossover , would typically be used , one for each pair of the doubled @-@ up treble , midrange and bass units . From its introduction in 1984 , the monaural NAP 135 can be used in a " 6 @-@ pack " configuration .

After Linn had started manufacturing electronics and upon the release of the Isobarik Aktiv crossover , Linn declared that the ' AKTIV ' system comprises : the source components plus one Linn LK1 preamplifier , one Linn Aktiv Isobarik crossover , three Linn LK2 power amplifiers , one pair of Linn Isobarik loudspeakers and the necessary cables .

== = Construction == =

The loudspeaker cabinet measures 15 × 15 × 30 inches (38 × 38 × 76 cm) . The extremely rigid 55 @-@ litre cabinet is constructed using 19mm high @-@ density particle board that is strategically damped in places , and extensively braced . According to the manufacturer , there is an array of stressed steel rods inside the enclosure to control energy flows . The techniques employed ensure that energy that would have caused the unwanted motion of the front panel and drivers is cancelled by a similar but opposite energy from the upward facing units , resulting in the minimum amount of resonances . The cabinets were initially made by Linn in their own factory , but the manufacturing was later outsourced to furniture @-@ makers Leon Levin of Glasgow .

Although the speaker uses bought @-@ in drivers , they have been rebuilt using stronger materials . Drivers ' metal baskets are treated to reduce the effects of vibration , and the enclosure designed and constructed to control energy . The drive units (T27 , B110 and B139) were sourced from KEF in kit form , and two KEFKIT3 kits were judiciously used for each cabinet . However , Linn found the T27 tweeter too fragile and replaced it with the more robust and better @-@ sounding D2008 from Scan @-@ Speak after a very short run ; the Scan @-@ Speak tweeter was later changed to a Linn D20 @-@ LP @-@ 1 , sourced from Hiquphon in Denmark . The midrange KEF B110 , known for its use in the LS3 / 5A BBC monitor , is a 100mm @-@ diameter unit to which Linn applied a layer of doping . The woofer is a KEF B139 .

Each unit of the Isobarik cabinet weighs 40 kilograms (88 lb) , and is designed to be placed on stands that are 33 centimetres (13 in) tall so that the tweeter is positioned at the listener 's ear @-@ level . The speaker is supplied with heavy stands made from welded square cross @-@

section tubing , to which top and bottom spikes are fitted prior to positioning the speaker cabinet .

Input connections are established through 3 @-@ pin XLR connectors . Later versions and the PMS version have banana sockets (see image) .

= = = Product revisions = = =

1973 Isobarik DMS launched .

1976 Sep Revised cabinet style .

1977 Isobarik PMS launched .

1978 Sep Damping : Midrange enclosure and cabinet damping changed . SN . 10283 / 4

1979 The smaller Isobarik Sara launched .

1979 Nov Midrange unit : Vented . SN . 10 @, @ 800 / 1

1980 Feb Treble unit : Scan @-@ Speak treble unit replaced SN . 10 @, @ 925 / 6

1980 Mar Wiring : common earth at cannon socket . SN . 11 @, @ 035 / 6

1981 Oct Treble unit : Fitted with t @-@ nuts . SN . 2741 / 2

1982 Jan Cabinet : Changed from chipboard to medite and veneered on both sides . SN . 2859 / 60

1983 Mar Bass / Midrange units : Sound deadening material painted on bass and midrange units . SN . 3000 / 1

1984 May Crossover / Treble units : circuit board with wider tracks and improved layout . New treble units with a smoother response . Linn logo incorporated on front plate . SN . 3939 / 40

1985 Dec Cabinet : improved internal sealing and damping SN . 4825 / 6

1986 Apr Midrange units : harder rubber used for surround . SN . 4953 / 4

1987 Cabinet : Crossover moved to compartment in bottom of speaker . SN . 5575 / 6

1987 Sep Isobarik Sara 9 replaces Isobarik Sara

1988 Crossover : New 4 ohm external crossover fitted in stand . Facility for tri @-@ wiring .

1988 DMS discontinued ? PMS can be driven passively (4 ohm) or actively . SN . 6701 / 2

1989 Isobarik Sara 9 discontinued

1991 Dec Speaker : Addition of Ku @-@ Stone ceramic absorber , sealant changed to gaskets from silicone , improved cabinet bracing (non @-@ retrofittable) SN . 8293 / 4

1992 Isobarik discontinued .

Source : Linn

= = = Reception = = =

The Isobarik loudspeaker has received some polarised opinions , although Hi @-@ fi News noted that the speaker kept its promise by managing to " play the lowest bass guitar notes cleanly and give an impression of unlimited bass extension " . The Linn / Naim triamped active system , using a LP12 source , Naim amplification and electronic crossovers together with the Isobarik PMS , was regarded as the pinnacle of " flat @-@ earther " hi @-@ fi systems , and the speaker is integral to the general aura of mysticism that went with the Linn / Naim equipment .

= = Other Isobarik products = =

The Isobarik Sara is a product concurrent with the PMS for the whole of its life . This 2 @-@ way , 4 @-@ ohm , design was a physically much smaller product ? measuring 425 x 332 x 244 mm (16 @. @ 7 x 13 @. @ 1 x 9 @. @ 6 in) ? that required tall speaker stands . Launched in 1978 , it was Linn 's entry @-@ level loudspeaker until the Kan (a non @-@ isobaric bookshelf speaker using the same Linn D20 @-@ LP @-@ 1 and KEF B110 drive units as its big brother) was released . The Kan was discontinued in 1990 .

In the late 1980s , Linn worked on a replacement for the Isobarik . The project bearing the codename " Isobarik LS2000 " became the Keltik . Although the final product does not bear the Isobarik name , the technology was mentioned in marketing materials and the product manual .

Other products bearing the trade @-@ marked " Isobarik " name include the Melodik Active Isobarik Bass and the Majik Isobarik (2011 ?)