 **SONOR®**

The Drummer's Drum.



In this Catalogue

In the constantly changing world of today's music, drummers and percussionists are placing more importance on the quality of their instruments than ever before.

A drum set needs to be versatile to allow the musician freedom to play rock, jazz, fusion, country or any other kind of music. Of course, as the technical standards of music have increased, so have the technical requirements of a drum set.

This catalogue is designed to comply with these requirements. It shows how a high standard of quality can be achieved by the right mixture of scientific research, modern technology, and a constant exchange of ideas and experiences with you, the drummer.

In this catalogue, the professional musician will find everything needed to keep his or her equipment current, while the beginners will find important details to help them select their first set.

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The Sonor History

Johannes Link, born in 1847 in the small Bavarian village Forheim near Nördlingen, was a wood-turner and a tanner. These crafts were the basis for the percussion instruments factory he founded in 1875 in Weißenfels/Saale, in what is now East Germany.



Founder Johannes Link



Illustration above:
Cover of one the first Sonor catalogues from 1899

Below:
Combined mechanism for playing bass drum and cymbals from a catalogue of 1907

At the beginning, there was only one employee working at the factory where natural hide drum heads and military drums were produced. However, only a few years later, the small workshop had to be enlarged. By 1900, the factory already employed 53 craftsmen. The company manufactured tympani, concert drums, xylophones, glockenspiels, tambourines, cymbals, triangles and sound effects.

A catalogue issued in 1907 shows for the first time a combined mechanism for playing the bass drum and cymbals, which is a predecessor to the bass drum pedal and hi-hat. The first complete drum sets were built in the early twenties. Their components were already similar to those of a contemporary outfit: bass drum, snare drum, tom tom, cymbal, bass drum pedal and also bottom cymbal, as well as a number of small percussion instruments. At that time 145 employees were working for Sonor. Consul Otto Link, son of the founder Johannes Link and his father's successor, lead the enterprise securely and resolutely through the great depression, war, and post-war turmoils until the factory was expropriated in 1950. This was when he and his son Horst Link moved to the freedom of West Germany to establish a new, modern factory in Aue/Westphalia.

By 1955 a catalogue with 100 pages presented a complete range of instruments for drummers and percussionists.

Today, Horst Link leads the company together with a dynamic young staff. Today's Sonor instruments are the result of more than 100 years of experience in drum making. Our systematic

research and development program has been time tested throughout our history, as has the creative efficiency of our craftsmen, musicians, and designers. This blend of old and new, of tradition and progress, is the cornerstone of the Sonor trademark.



Consul Otto Link

07. 1425]
Nr. 99332. G. 5495/25.
Erste Trommelfabrik Weißenfels Johs. Link, Weißenfels.
Anmeldung vom 16. 4. 1907. Eintragung am 1. 7. 1907.
Geschäftsbetrieb: Herstellung und Vertrieb von Schlaginstrumenten und Spielwaren.
Waren: Trommeln, Tambourins, Pauken, Trommelfelle, Schlaginstrumente aller Art und deren Bestandteile.

Registration of the Sonor trademark at the Imperial Patent office in Berlin on July 1st 1907

President Horst Link

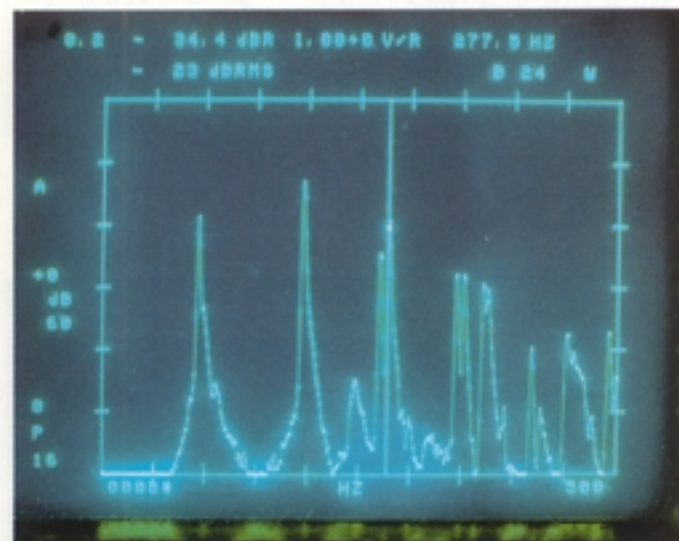


Research

In the past, acoustic properties of drums had hardly ever been studied. The decisive factor for judging the sound quality of a drum set was and still is subjective, and often influenced by current trends.

In order to provide a generally accepted, impartial criterion for classification, scientists of the German Federal Institute for Physics and Technology have been and are continuing to do thorough research on drum acoustics on behalf of the German Association of Music Manufacturers.

In their laboratory for musical acoustics, the scientists have answered the crucial question of how the materials, form and size of a drum interrelate and affect the sound quality of the instrument.



Frequency spectrum of a drum without resonating head (T13 CW) with fundamental tone (89 Hz) and overtones.

Picture on the right: Measuring with a frequency analyzer in a laboratory with non-reflecting walls.

The sound of a drum as perceived by the auditor consists of a fundamental tone as well as the overtones belonging to it. Basically, it is the fundamental tone that makes us hear low or high pitched sounds. The overtones are responsible for the characteristic sound of the instrument. The more overtones it has, the brighter and more brilliant the sound. With fewer overtones, the sound will be softer and darker.

The head and shell of a drum have different functions which contribute to be sound.

The drum head

The drums sound starts with the head. The air above and below the head will start to vibrate when it is struck or, as the scientists say, stimulated. This means that the head is not only the sound generator, but also the acoustic projecting element. The better the head can vibrate, the more effective the energy can be transformed into sound.



Research

Furthermore, the sound quality of a drum is influenced by the material of the specific drum head. Depending on the mass and structure of a head, the overtones have a longer or shorter decay. Drum heads with short overtone decay (such as Pin Stripe, CS) seem to have more distinct fundamental tones and sound softer and darker.

Head Specification	Mass	Thickness	Decay in seconds	
	m/g	h/mm	Fundamental tone 176 Hz/s	Overtones 500 Hz-Terz/s
Ambassador	50	0,3	0,9	2,5
Diplomat	40	0,25	0,8	2,7
Emperor	75	0,46	1,05	2,5
Pin Stripe	62	0,35	1,0	1,4
Controlled Sound	50	0,3/0,4	1,0	1,1

A comparison of the decay of fundamental tones and overtones of the various types of drum heads. The shorter decay of overtones of Pin Stripe and Controlled Sound heads can be clearly recognized.

The drum shell

According to scientific discoveries, the drum shell itself is acoustically passive. The shell does not contribute notably to the sound projection, rather, the frequency of the drum's sound is determined by its dimensions.

The bigger the drum shell, the greater the vibrating air column above and below the head will be. Accordingly, the fundamental tone of a bigger drum will be lower than that of a smaller drum, providing they are tuned the same way. Therefore, the shell influences only the vibrations of the head and its sound projection. In order to fulfill this function in the best possible way, the shell of a drum has to meet the following requirements:

- The shell must not vibrate, in order not to deprive vibration energy of the drum head by its own vibrations.
- The shell must have a high flexional resistance: the higher the flexional resistance, the less chance of the shell producing its own vibrations.
- The shell must have a great mass, thus making the decay of the drum sound to a large



Scientific research on drums: Measuring with a Third Octave Analyzer and a Beat Frequency Oscillator

extent independent from the way it is fixed to holders and stands. Furthermore, it favors an efficient projection of the fundamental tone.

- The frictional loss at the inside of the shell has to be kept as small as possible. A low frictional loss means a more effective transformation of the head vibrations into sound.
- The edge of the shell must be finished in such a way that the vibrations of the head are muffled as little as possible. Friction at the edge of a shell causes a muffling of the high sound components. The least possible muffling is achieved with a narrow edge, whereas a wide edge causes a stronger muffling. The harder the material of the shell, the less the overtones are muffled. This is the reason why snare drums with metal shells have a more distinct range of overtones than those with wood shells.

The stability of the drum shells is very important, as only a solidly built shell with hard edges allows optimal vibrations of the drum head.

Wall thickness of the drum shell

Apart from the dimensions of the shell, the wall thickness also influences the sound quality of the fundamental tone.

- The basic frequency will be more muffled when the shell has a thin wall, so that the upper frequencies emerge. The sound seems to have more overtones, to be more brilliant and sustaining.
- Shells with a thicker wall and equipped with the same type of heads have the same spectrum of overtones as thin shells. However the projection of the fundamental tone is better. The sound seems to be softer and fuller.

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Features

Sonor wood shells

Basis for a better sound

Beech and birch, being two of the world's strongest timbers, are the basic materials for all Sonor drum shells. Both woods have a uniform density, so that their surfaces are smooth, firm and resistant to wear. Because of their outstanding acoustic properties and their flexibility and resilience, they are ideally suited for the production of drum shells.

Construction of the wood shells

The highly solid Sonor shell is produced by a special forming procedure. This process includes the cross laminating of the separate plies. There are also no sound restraining reinforcement hoops or shell supports, so the shell has a minimum of vibration and the same level of stability at every point.

"floating heads"

In order to allow a drum head vibration unaffected by secondary

Physical properties of various types of wood used in drum making

Type of wood	Gravity g/cm ³	Modulus of elasticity N/mm ²	Pressure resistance N/mm ²	Flexional strength N/mm ²	Hardness N/mm ²
Bubinga	0,88	15.800	66	132	
Beech	0,69	14.270	56	116	34
Birch	0,67	14.780	60	121	29
Lauan*	0,64	13.250	51	94	22
Maple	0,61	11.720	48	98	23
Poplar	0,43	9.680	37	71	12

Modulus of elasticity: Factor of proportionality for the interrelation of power and bending strain

Pressure resistance: The pressure applied to the wood until the point of breaking

Flexional strength: The bending strain applied to the wood until the point of breaking

Hardness: Measure for the strain when pressure is applied perpendicular to the grain

N/mm²: Power / Surface

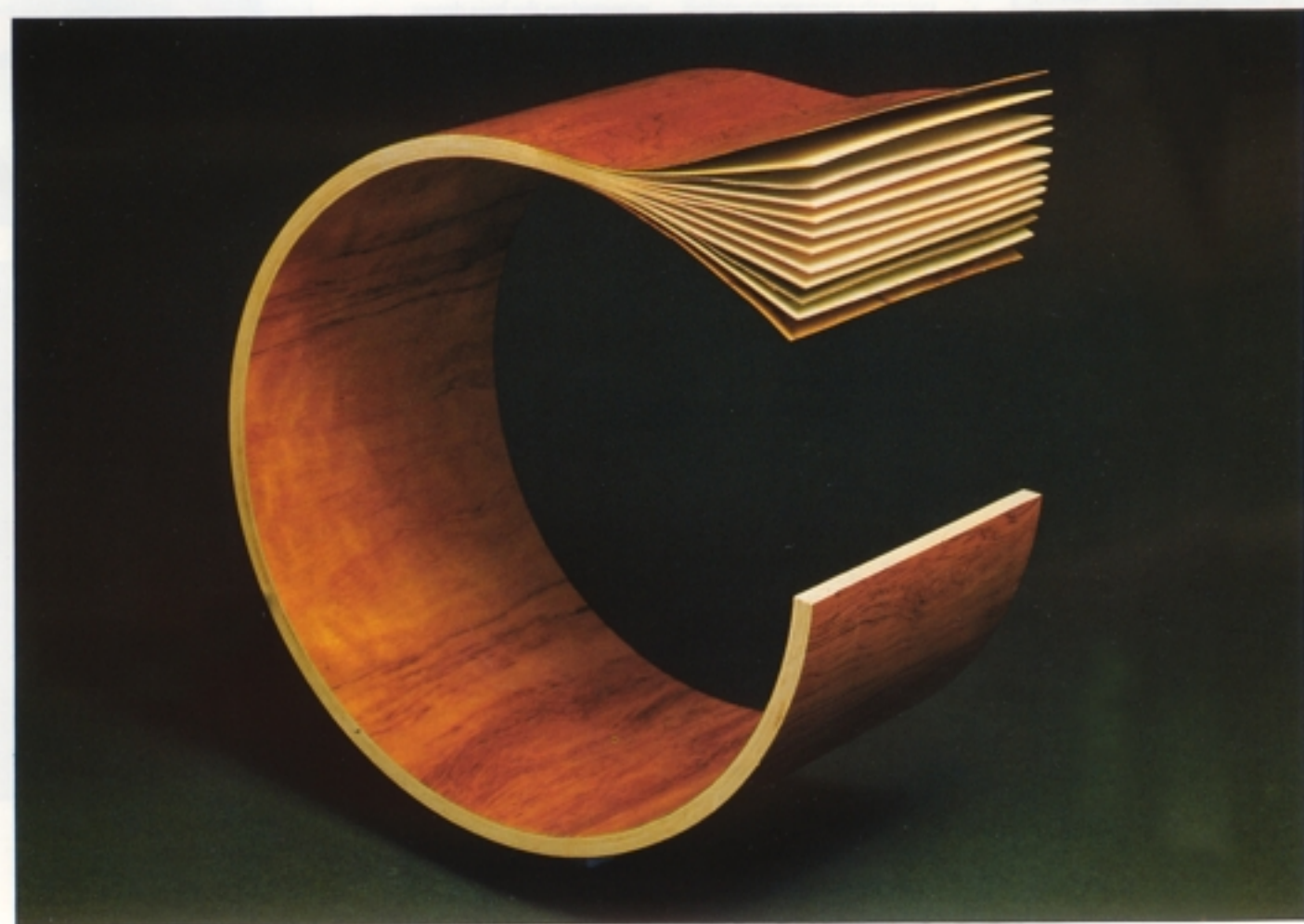
* Red Lauan is sometimes called "Philippine Mahogany", although it is not mahogany (Informationsdienst Holz, No. 5)

The high level of stability of all Sonor drum shells is ensured by cross-laminating several plies of wood.

Illustrated below is a 12-ply Signature shell

noise, we use the principle of floating heads, which is also used for concert tympani. The sizes of the Sonor shells and rims prevent a contact of the drum head rim to the shell. Measurements show that

vibrations are projected in the best possible way when there is an angle of 45° from the edge of the shell to the head. Accordingly, the top and bottom edges of Sonor shells are bevelled at 45°.



Features

Manufacture of metal drum shells

Sonor metal shells are made seamless of ferro-manganese steel. Like the wood shells, these shells are designed to have minimal vibration of their own, allowing an optimal vibration of the head. A flat steel disc is formed into a perfectly round shape on a projection machine. Cold forming ensures a regular wall thickness and a high stability of the shell. In the following galvanization process, every shell is first copper-plated, then nickel-plated and finally chrome-plated.

Fittings

The drums, rims, lugs and tension screws are parts that take the most stress. Therefore, special care is devoted to their production. Similar to the snare drum shells, the rims are formed seamless from ferro-manganese steel. The flanged rim with its beaded upper edge allows clean rimshots and prevents a high breakage of sticks.

Sonor tension screws for snare drums, tom toms and floor toms have the characteristic slotted cylinder head and can even be turned with a coin if there is no key at hand.

The inside of the drum lugs consists of:

- ① Thread housing made from nonferrous metal, to prevent high wear
- ② "Snap-lock" fixing the thread to prevent the head from going out of tune
- ③ Tension spring as a bedding for the thread-housing
- ④ Foam lug insert to prevent rattling

"Snap Lock" (patented)

The "Snap Lock" system, developed and patented by Sonor, is an important innovation in drum making. It prevents the tension screws from loosening and causing the drum head to come out of tune during play. The system is as simple as it is effective. A clamping ring above the thread housing is pressed against the tension screw, which is flattened on two sides. When the screw is

tightened it will lock at every half turn, securing its position. The tension screws of the snap lock can be turned easily with a Sonor drum key, in contrast to the lock nut system which is a difficult and more time consuming process. For best results in head changing we recommend spin key Z 5070. For tuning we recommend keys Z 5071 and Z 5072.

Shell mounts

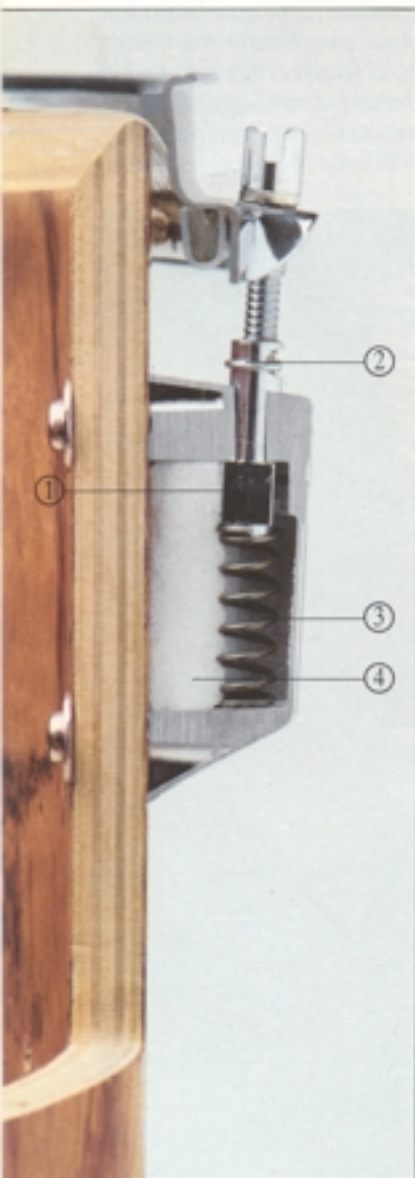
The shell mounts on tom toms and bass drums are holders in two respects. First, on all Sonor shell mounts the tom holders are fixed by tightening a wing screw down on a spring loaded and steel reinforced nylon wedge. The shell mount holds horizontally by the wedge, and is doubly secured by means of a fix clamp.

Second, the mount is held securely on the drum by 2-point drilling of the toms and 4-point drilling of the bass drum. The mount has a full outside and inside allowing tremendous weight to be mounted on the bass drums without the mount loosening.

Bass drum spurs and floor tom legs (DGM)

Bass drum spurs and floor tom legs are adjusted by prism clamps, which enclose a section of the spur or leg making slippage virtually impossible. The prism clamp itself is fixed to the shell at 3 points. The spurs are of a superior "non-creep" design, and are quickly adjustable from rubber feet to metal spikes to keep the bass drum rigid on any surface. The floor tom legs are equipped with solid rubber feet.

Cutaway of a Sonor lug



Cutaway of tom tom mounts (top) and bass drum mounts (center)

Prism clamp for floor tom legs (bottom)

Drum Set-up

The drum set is a very personal instrument. It has to meet the individual requirements of every drummer. In most cases the purchase of a complete drum set means a large investment planned for several years of use. The person who wants to make that decision should therefore be able to answer a number of important questions:

What kind of music will you be playing?

When choosing the equipment, the kind of music to be played and the number of musicians playing in the band should be taken into consideration. For example, in most cases a 4-piece set with 18" bass drum, 5 1/4" snare drum, 12" or 13" tom tom and 14" floor tom will be suitable for the traditional jazz band. Playing in a rock band, however, requires a drum set with larger drums.

What kind of sound do you want?

Every drummer has individual ideas regarding sound. This is why Sonor offers 5 types of drum shells with different sounds. When these are combined with the many types of drum heads available there is a nearly unlimited variety of drum sounds.

Does the drum set suit your technique?

The individual abilities of the drummer are the criteria for the choice of equipment. The beginner should start with a standard set, consisting of bass drum, snare drum, one or two tom toms and floor tom. The set can later be enlarged with additional drums.

Where will you play your drums?

Unfavorable surroundings sometimes prevent the set-up of a large drum set. There are alternatives to the traditional set-up which help to avoid problems in a narrow room: the double bass drum pedal HLZ 5382, the Vario-Clamp

system, the quadruple tom tom holder Z 5518b, as well as the double cymbal stand Z 5278.

How will you transport and store your drum set?

Covers and cases help to preserve the value of a drum set for a long time. If the position of the set is not changed very often, it is sufficient to use drum covers for transport. For drummers who travel a lot, the purchase of fibre cases will be worthwhile.

Before composing a drum set, one should know the different components and their use:



The Snare Drum is the most important component of a

drum set. It not only has to meet very high standards, but also very different requirements. Whether it is being played delicately with brushes, or standing up to rimshots, the sound of the complete drum set is influenced by the snare drum. The purchase of a good snare drum is a wise investment.



The Bass Drum together with the snare drum, is the foundation of a drum set. It is

the largest instrument with the deepest tones, so that we recommend you choose the size of the other drums in accordance with the bass drum.



The Tom Toms and Floor Toms supplement the sound of a drum set.

Due to the large assortment of different sizes, the tom toms must be regarded as a considerable enrichment to the sound of a drum set.



The Cymbals are used for rhythmical accentuation. The basic

equipment comprises Ride, Crash and a pair of Hi-Hat cymbals. The set can be enlarged with additional sound and effects, as, for example, Chinese, Flat Ride and Splash cymbals.



The Hardware consists of a bass drum pedal, hi-hat, cymbal stands,

tom tom holders or tom tom stands, snare drum stand and drummer's throne. With multiple holders, Vario-Clamp and stand combinations, a variety of set-ups are possible.



Drum Heads and Drum Sticks have a considerable

influence on the sound of a drum set. Thickness and quality of the heads, as well as the material and weight of the sticks are of crucial importance.

Snare Drums

Sonor has a long tradition of manufacturing snare drums, which began in the 1890s. A catalogue from 1899 contains more than 20 different models of snare drums, some of them with genuine brass shells and nickel plated fittings.

The turbulent musical developments of the twenties and thirties inevitably lead to improvements and innovations in the making of drums. The "Favorit" model of 1930 already had most of the technical features of a modern snare drum: "Throw-off" snare strainer, fine adjustment of the snares as well as "floating heads".

An especially creative phase began in the early fifties. Sonor technicians designed drums for the future, such as the first snare drum with a central tuning system and a parallel internal muffler, unique at the time.

To this day, the demands on the sound and quality of a snare drum have constantly increased. All of the snare drums shown in this catalogue are manufactured by experienced craftsmen with the help of modern technology.

Snare Drums for all sounds

There are 27 different Sonor snare drum models, with shells from beech or birch, or ferro-manganese steel. Everybody will find a snare drum to suit his or her personal idea of sound, from

the clear, transparent sound of the super-flat D 420 to the forceful volume of an HLD 588.

Which snare drum for which sound?

The metal shell produces a sharp, responsive sound, while the wooden shell generates a fuller, more mellow sound. The deeper the shell, the more volume it projects. The thickness of the shell also influences the sound. Drums with thick shells produce a soft sound with few overtones, while thin shells have distinct overtones and therefore a more brilliant sound.

Sonor snare drum shells: seamless ferro-manganese steel shell, 12-ply Signature Heavy shell, 12-ply Signature Light shell, 12-ply Sonorlite birch shell, 9-ply Phonic and Phonic Plus beech wood shell



The "Favorit" snare drum of 1930



Nr. 971



*Signature snare drum HLD 580
with parallel snare action
① turnable lever ② two
adjustments for infinitely
variable snare tensioning*

*③ triple axle guide ④ axle for
parallel action ⑤ height
adjustable housing*

The Snare Strainers

The snare strainer must allow the quick and noiseless lifting and release of the snares, while at the same time regulating their resting and tension. There are four different types of Sonor snare strainers:

The Parallel Snare Action

for Signature and Sonorlite Snare Drums was made to satisfy the highest demands. Due to the parallel movement, the snares

remain under tension. Every single strand is resting exactly on the snare head and guarantees a precise response of the snare drum at any dynamic level.

The "Throw-off"

for Phonic snare drums is the most popular model. The strainer and butt end allow the snares to be adjusted from either side. Nylon strings have the advantage of a 4-point suspension which allows perfect balancing of the tension.



"Throw-off II" snare action



"Throw-off" snare action

The "Throw-off II"

for D 508x, D 518x and LD 547x is an advanced model of the "Throw-off" release. The snares surpass the edge of the head, so that the whole length of the strands is resting even better on the snare head. Furthermore, muffling is avoided since the metal plates of the snare mechanism do not touch the snare head.

The Standard Snare Strainer

for the D 420 is a time-tested, easily controllable system. The tension of the snares is adjusted with a knurled screw at the snare butt.

Snare Drums

Die-cast rims for full,
heavy sound

24 tension screws permit exact
tuning of the batter head and
snare head

"Snap-lock" prevents loosening
of the tension screws

Drum lugs muffled with a foam
lug insert and threads bedded
on springs

Turnable lever for easy throwing
off and quick lifting of the snares.

Seamless, 8" deep shell from
ferro-manganese steel with high
flexional strength and outstanding
sound volume

Parallel snare action allows exact
resting of the snares on the snare
head and precise response at every
dynamic level

Infinitely variable tensioning with
adjustments on both sides of the
snare strainer

Equipped with "Rock" as well as
"Jazz" snares with 22 or 24 strands
from stainless steel

Triple axle guide relieves the shell
from high stress and protects the
snares from damage



HLD 588 Signature Snare Drum
14" x 8"



HLD 580 RH



HLD 582



HLD 588



LD 557 CL



LD 557 GL



LD 547x MB



D 518x MR



D 508x



D 518x CB



D 516



D 420



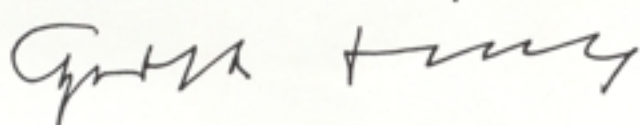
D 505

Features at a glance	HLD 590	HLD 588	HLD 580	HLD 582	HLD 581	LD 557	LD 547x	D 518x	D 508x	D 516	D 506	D 505	D 420
Parallel snare strainer	•	•	•	•	•	•							
„Throw-off II” strainer							•	•	•				
„Throw-off” strainer										•	•	•	
Standard snare strainer													•
Die-cast rims	•	•	•	•	•	•							
Ferro-manganese steel rims							•	•	•	•	•	•	•
24 tension screws	•	•	•	•	•	•							
20 tension screws							•	•	•	•	•	•	•
Snap-lock	•	•	•	•	•	•	•	•	•	•	•	•	
2 exchangeable snares	•	•	•	•	•	•							
Oscillographic tuning	•	•	•	•	•	•	•	•	•	•	•	•	•
External mufflers	•	•	•	•	•	•	•	•	•	•	•	•	•
Wood shell			•		•	•	•	•		•			
Ferro-manganese steel shell		•		•					•		•	•	•
Casted bronze shell	•												

Signature Series

The Signature Series comprises everything that is necessary for the perfection of sound and playing technique. This series is a breakthrough in the manufacturing of drums, of which we are very proud. As I feel personally responsible for this top-line, the drums are bearing my signature.

Signature drum sets are created by experts for professionals. For drummers who regard their drum set as a part of their message. For drummers who identify themselves with their instruments. A limited edition of distinction to which I proudly and confidently add my personal endorsement.



Horst Link



Signature Shell

The deep, 12-ply shells are the core of the Signature sound. Due to this careful construction, every shell has a high flexional strength. Signature drums have newly designed extra deep shells, ensuring a perfectly balanced sound volume and projection.

The Signature Sound

The construction of the Signature Series drum shells is different than that of conventional drums. The 12-ply shells are formed tension free from selected woods. Tension free means that the single plies form a solid sound unity, thus allowing the drums head an optimum of vibration. All Signature Series drums are available in two versions, giving the drummer a choice of two Signature Sounds: Heavy or Lite. The Heavy shell made of beech with a thickness of 12 mm produces a mellow and dry sound. The Lite shell, made of birch and only 7 mm thick, has a sound more responsive and direct. The special dimensions of the Lite shells ensure a more brilliant and transparent sound quality.

Signature Finish

The inner and outer plies of a drum also have an influence on the sound. Because of their special structure and their outstanding acoustic properties, we chose African Bubinga and Indonesian Makassar Ebony. Firmly joined to the basic plies they contribute to the balanced sound of the Signature Series.

Signature Warranty

Worldwide, the Signature Series is the first and only drum set with a 10-year limited warranty on materials and workmanship. This shows how much care is devoted to the construction of Sonor drums. From the stages of planning and testing, to production and service, one principle applies, quality.

Signature Snare Drums


Cat. No.	Shell sizes
HLD 588	14" x 8"
HLD 580	14" x 8"
HLD 581	14" x 6½"
HLD 582	14" x 6½"
HLD 590*	14" x 8"

NEW!

* Snare drum with 8" casted bronze shell



HLD 580 EB

 HLD 580, HLD 581 in 12-ply wood shells, Heavy or Lite, in African Bubinga (RH) and Makassar Ebony (EB). HLD 588, HLD 582, made seamless from ferro-manganese steel. All have parallel snare strainers, exchangeable jazz (24) and rock (22) snares, die cast rims,

24 tensions screws with "Snap-lock" (pat.) system, oscillographically tuned batter and snare heads, adjustable external muffler.



HLD 582

HLD 581 RH

Signature Bass Drums

Cat. No.	Shell sizes	
	Heavy	Lite
HLG 18	18" x 16"	18" x 15"
HLG 20	20" x 17"	20" x 16"
HLG 22	22" x 18"	22" x 17"
HLG 24	24" x 18"	24" x 17"

 12-ply wood shell, available Heavy or Lite version, finishes African Bubinga (RH) or Makassar Ebony (EB), twin-upright internal muffler system, shell mount fixed at four points, prism clamps for bass drum spurs, bass drum spurs which instantly convert from rubber tips to metal spikes (DGM), wooden hoops with Bubinga or Ebony finishes, "Snap-lock" (pat.) Pin Stripe batter head, transparent Ambassador front head.



HLG 22 RH



Signature Tom Toms

Cat. No.	Shell sizes	
	Heavy	Lite
HLT 8	8" x 8"	8" x 8"
HLT 10	10" x 10"	10" x 9"
HLT 12	12" x 12"	12" x 10"
HLT 13	13" x 13"	13" x 11"
HLT 14	14" x 14"	14" x 12"
HLT 15	15" x 15"	15" x 13"
HLT 16	16" x 16"	16" x 14"



12-ply wood shell in Heavy or Lite version. Finishes African Bubinga (RH) or Makassar Ebony (EB), shell mounts fixed at two points, seamless rims from ferro-manganese steel, tension screws with "Snap-lock" system (pat.), Pin Stripe batter head, transparent Ambassador bottom head, adjustable external muffler.



Wood is a natural product. Sonor drums with wood finishes always have a characteristic grain and a natural color. Therefore, two drums with wood finishes can never look exactly the same.



HLT 14 RH

HLT 14 EB

Signature Floor Toms

Cat. No.	Shell sizes	
	Heavy	Lite
HLFT 14	14" x 16"	14" x 15"
HLFT 15	15" x 17"	15" x 16"
HLFT 16	16" x 18"	16" x 17"
HLFT 18	18" x 19"	18" x 18"



12-ply wood shell in Heavy or Lite version, finishes African Bubinga (RH) or Makassar Ebony (EB), prism clamp for floor tom legs, legs instantly convertible from rubber tips to metal spurs (DGM), seamless rims from ferro-manganese steel, tension screws with "Snap-lock" (pat.), Pin Stripe batter head, transparent Ambassador bottom head, adjustable external muffler. Also available, a set of extra long floor tom legs (Z 5080).



Z 5080



HLFT 16 EB

HLFT 16 RH









Signature drums available in the following finishes:

- RH Bubinga
- EB Ebony
- CL Creme lacquer
- IL Impala lacquer





Suggested combinations for the Signature Series

Drum Set Code										
HLK 2085	HLD 581	HLG 18	HLT 10 HLT 12	HLFT 14	HLZ 5380	HLZ 5480	2x HLZ 5280	HLZ 5513b	HLZ 5580	
HLK 2005	HLD 582	HLG 20	HLT 12 HLT 13	HLFT 15	HLZ 5380	HLZ 5480	2x HLZ 5280	HLZ 5513b	HLZ 5580	
HLK 2028	HLD 580	HLG 22	HLT 10 HLT 12 HLT 13 HLT 14	HLFT 15 HLFT 16	HLZ 5380	HLZ 5480	4x HLZ 5280 1x Z 5273	HLZ 5513b	HLZ 5580	HLZ 5285
HLK 2046	HLD 588	HLG 24	HLT 13 HLT 14	HLFT 16 HLFT 18	HLZ 5380	HLZ 5480	3x HLZ 5280	HLZ 5513b	HLZ 5580	
Your personal choice										

Hardware

Signature Series Hardware with instantly convertible "flip-over" rubber tips to metal spikes (DGM), pre-set "fix-clamps" for easy set-up, large lever grips for swift tightening, double braced legs with solid stainless steel riveting.

HLZ 5285 double tom stand

HLZ 5580 snare drum stand with quick-release on-and-off lever

Phonic Plus Hardware with double braced legs for support, legs equipped with solid rubber tips, steel ring clamps for secure height adjustments.

Drummer's thrones

Z 5803 drummer's throne, upholstered, adjustable height, foldable legs

Z 5810 drummer's throne, upholstered, threaded height adjustment for quick and accurate set-up

Z 5812 most comfortable drummer's throne with saddle and back rest, ideal for long sessions, quick and accurate height adjustment with heavy duty base



Z 5275 double tom stand

Z 5570 snare drum stand with quick-release on-and-off lever

Z 5579 extension tube for Z 5570 and HLZ 5580

Z 7204 bongo stand



Z 5812

Z 5810

Z 5803



Z 7204

Z 5570

HLZ 5580

HLZ 5285

Z 5275

Z 5579



Signature Series Cymbal Stand with instantly convertible "flip-over" rubber tips to metal spurs (DGM), pre-set "fix-clamps", large lever grips for easy tightening, double braced legs.

HLZ 5280 cymbal stand

Phonic Plus Cymbal Stand with double braced legs, solid rubber feet, steel ring clamps for secure height adjustments

- Z 5272** light weight single braced cymbal stand
- Z 5270** heavy duty double braced cymbal stand
- Z 5278** double cymbal stand
- Z 5279** double stand for cymbal/tom tom
- Z 5273** cymbal boom arm without tilter
- Z 5277** cymbal extension arm without tilter



Z 5272

Z 5270

HLZ 5280

Z 5278

Z 5279

Z 5273

Z 5277

Bass Drum Pedals

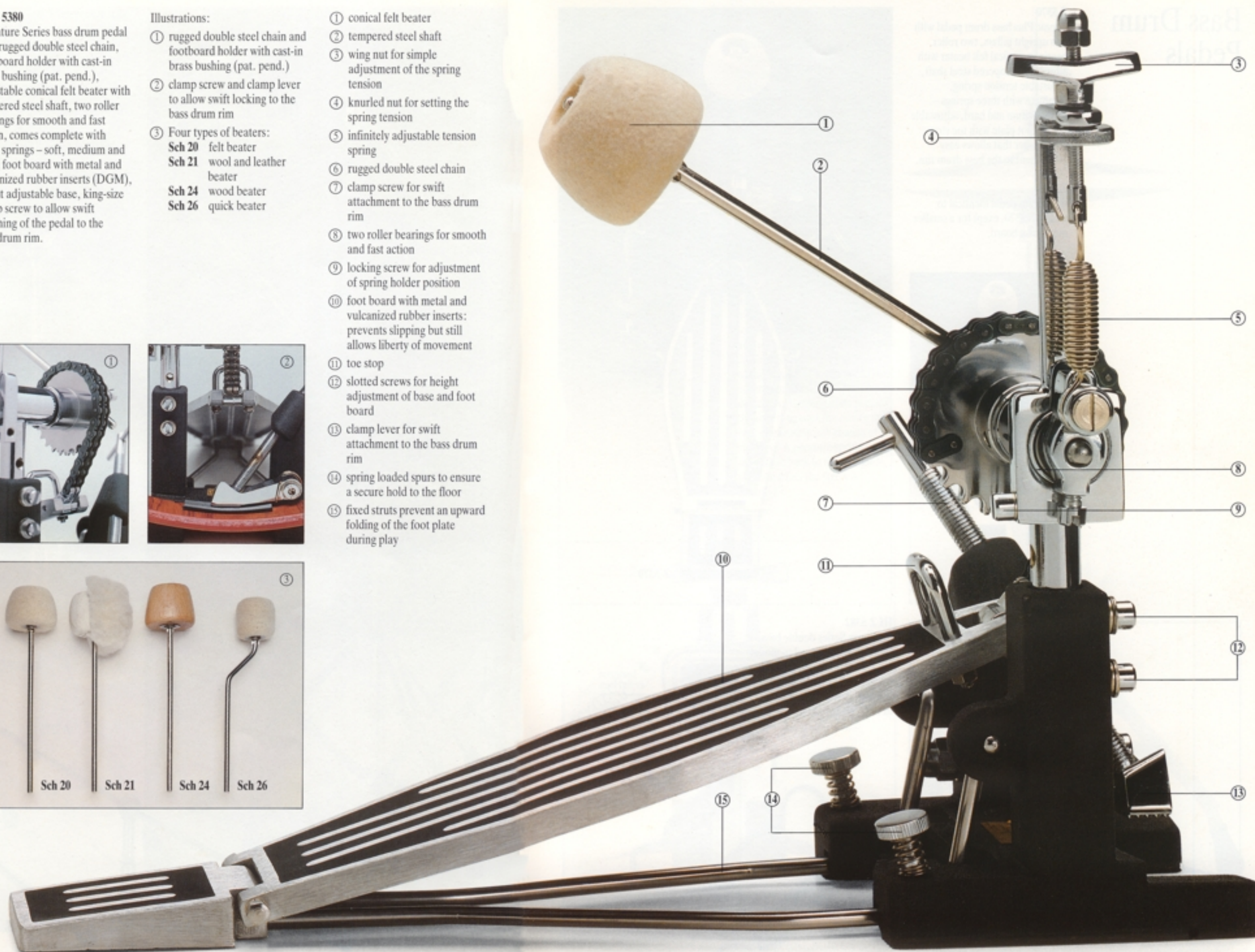
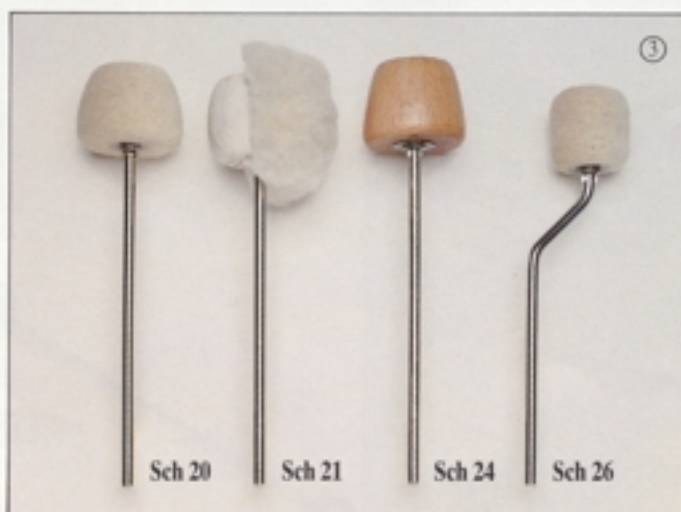
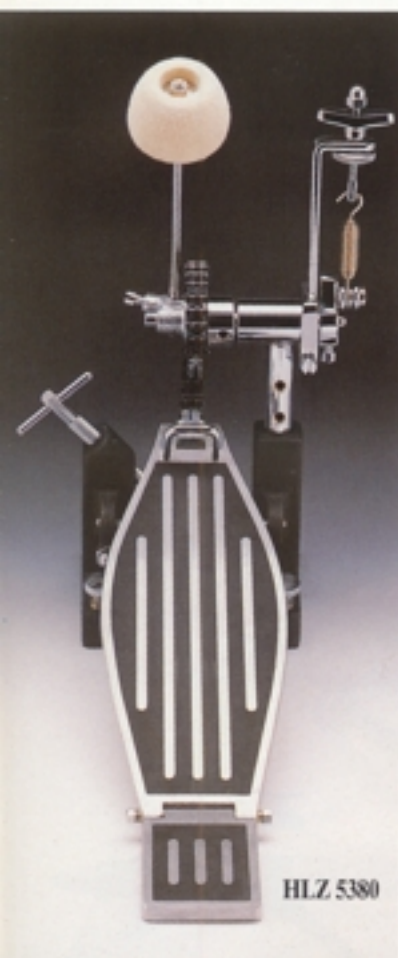
HLZ 5380

Signature Series bass drum pedal with rugged double steel chain, foot board holder with cast-in brass bushing (pat. pend.), adjustable conical felt beater with tempered steel shaft, two roller bearings for smooth and fast action, comes complete with three springs – soft, medium and hard, foot board with metal and vulcanized rubber inserts (DGM), height adjustable base, king-size clamp screw to allow swift attaching of the pedal to the bass drum rim.

Illustrations:

- ① rugged double steel chain and footboard holder with cast-in brass bushing (pat. pend.)
- ② clamp screw and clamp lever to allow swift locking to the bass drum rim
- ③ Four types of beaters:
Sch 20 felt beater
Sch 21 wool and leather beater
Sch 24 wood beater
Sch 26 quick beater

- ① conical felt beater
- ② tempered steel shaft
- ③ wing nut for simple adjustment of the spring tension
- ④ knurled nut for setting the spring tension
- ⑤ infinitely adjustable tension spring
- ⑥ rugged double steel chain
- ⑦ clamp screw for swift attachment to the bass drum rim
- ⑧ two roller bearings for smooth and fast action
- ⑨ locking screw for adjustment of spring holder position
- ⑩ foot board with metal and vulcanized rubber inserts: prevents slipping but still allows liberty of movement
- ⑪ toe stop
- ⑫ slotted screws for height adjustment of base and foot board
- ⑬ clamp lever for swift attachment to the bass drum rim
- ⑭ spring loaded spurs to ensure a secure hold to the floor
- ⑮ fixed struts prevent an upward folding of the foot plate during play



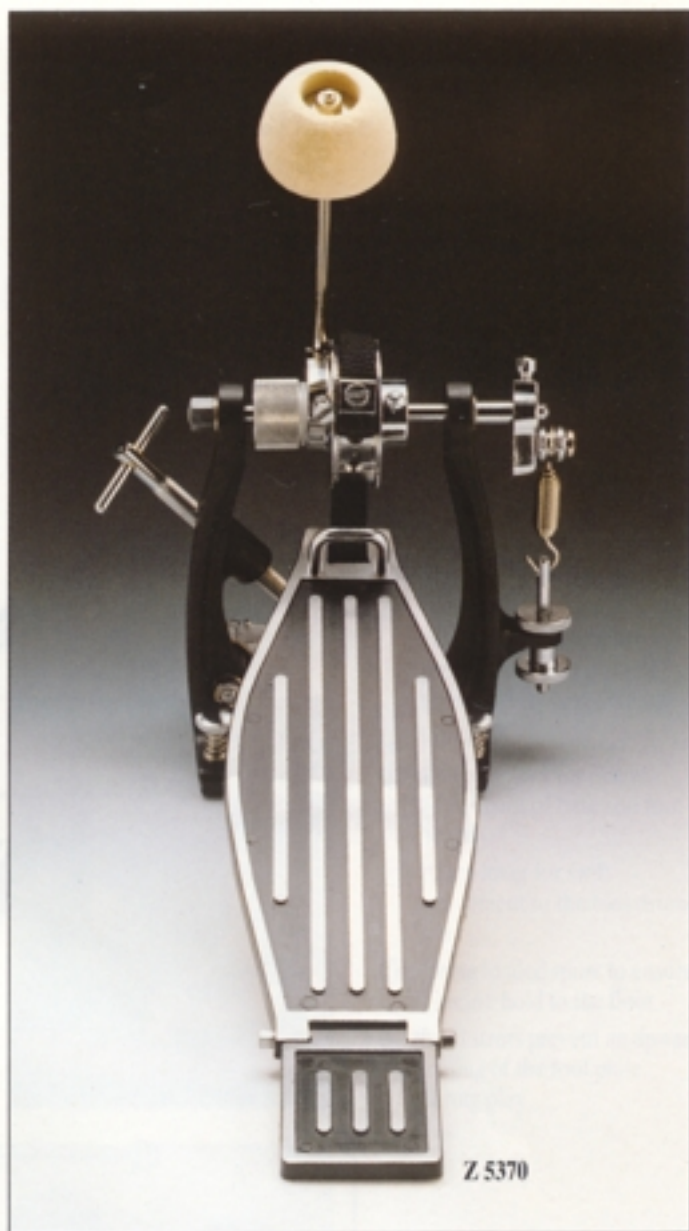
Bass Drum Pedals

Z 5370

Phonic Plus bass drum pedal with two upright pillars, two roller bearings, conical felt beater with adjustable tempered steel shaft, adjustable tension spring, complete with three springs – soft, medium and hard, adjustable height foot plate with toe stop, clamp lever that allows easy attachment to the bass drum rim.

Z 5371

Bass drum pedal identical to model Z 5370, except for a smaller metal foot board.



HLZ 5382

Signature Series double bass drum pedal, identical to model HLZ 5380, but gives double bass drum effect, adjustable pedal spacing, connection piece for hi-hat, two special felt beaters.

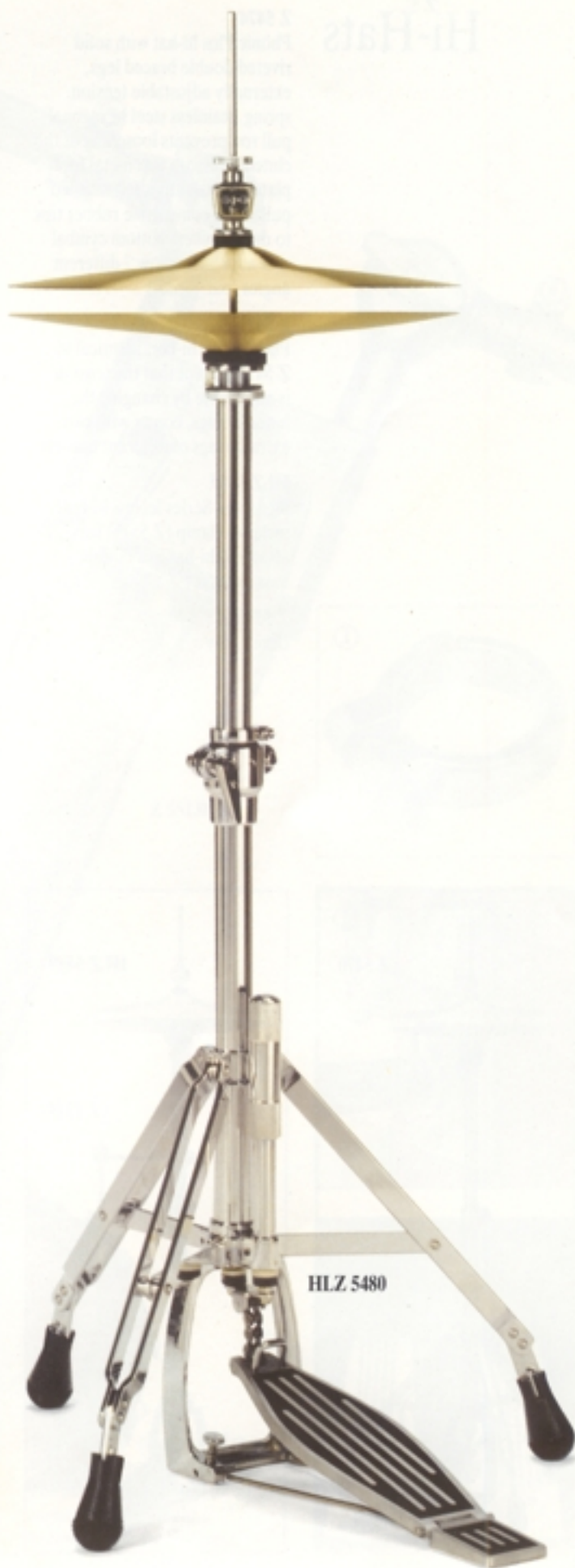
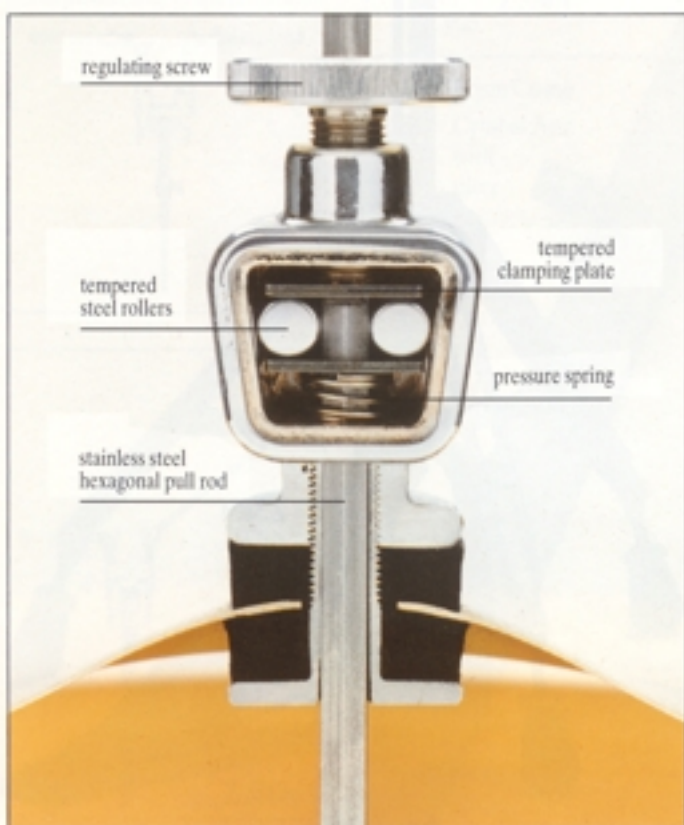


Hi-Hats

HLZ 5480

Signature Series hi-hat with adjustable spring tension, clutch with roller locking device (pat. pend.) to tightly secure top cymbal, bottom cymbal seat with angle adjustment screw, "flip-over" rubber tips to metal spurs for secure hold on every kind of floor (DGM), rugged steel pull chain (DGM), foot plate integrating vulcanized rubber with metal inserts (DGM), pre-set "fix-clamps".

Sonor developed the clutch with a roller locking device (pat. pend.) to ensure an absolutely secure and reliable adjustment of the top cymbal. Slight finger tightening of the regulating screw is all that is necessary to fix the locking device. A clamping plate presses the rollers against the centre pull rod, eliminating any chance of slippage. A pressure spring brings the rollers back to their original position when the screw is released.



Hi-Hats

Z 5474

Phonic Plus hi-hat with solid riveted double braced legs, externally adjustable tension spring, stainless steel hexagonal pull rod prevents loosening of the clutch, pressure cast metal foot plate with toe stop, felt muffled pull strap, convertible rubber tips to metal spikes, bottom cymbal seat adjusts to allow 7 different angles (pat. pend.)

Z 5470

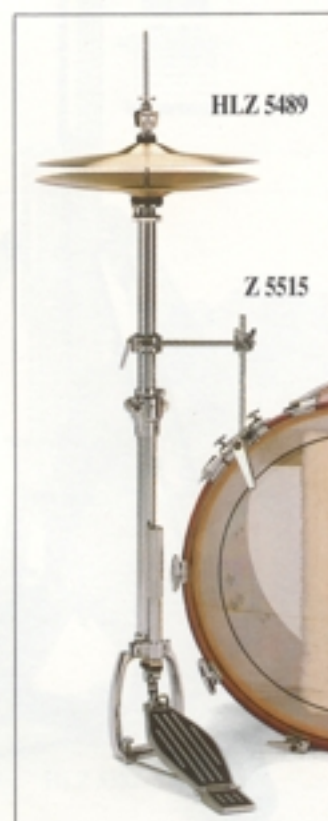
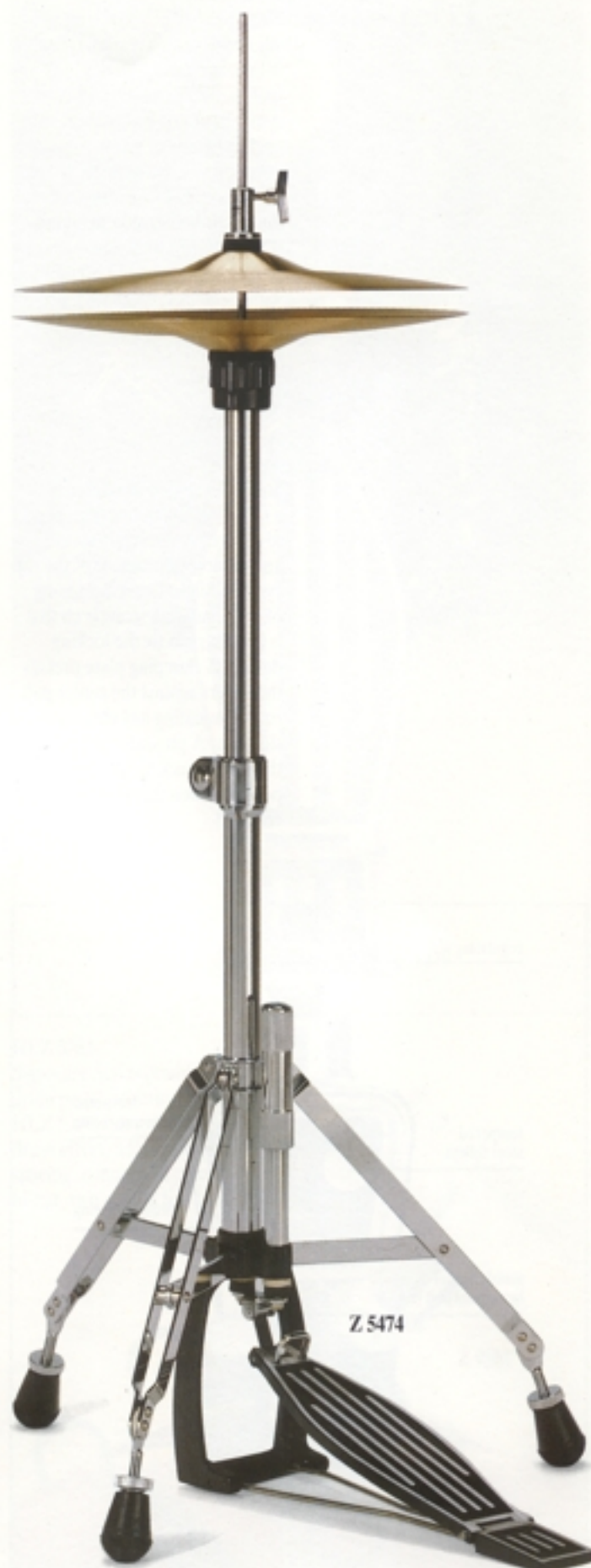
Phonic Plus hi-hat, identical to Z 5474, except that the tension is adjustable by changing the inner springs, comes with two extra springs of different tension

HLZ 5489

Signature Series legless hi-hat includes clamp (Z 5515) for attaching hi-hat to a double bass drum set

Z 5515

clamp only



The Sonor Holder System



Z 5511b



Z 5516b



Z 5518b



Z 5513e

The Sonor holder system allows a large number of secure set-ups to fit any drummer's needs. The double tom holder (Z 5513b) is the nucleus of this system, with an attachment for prism clamp Z 5507c for expansion.

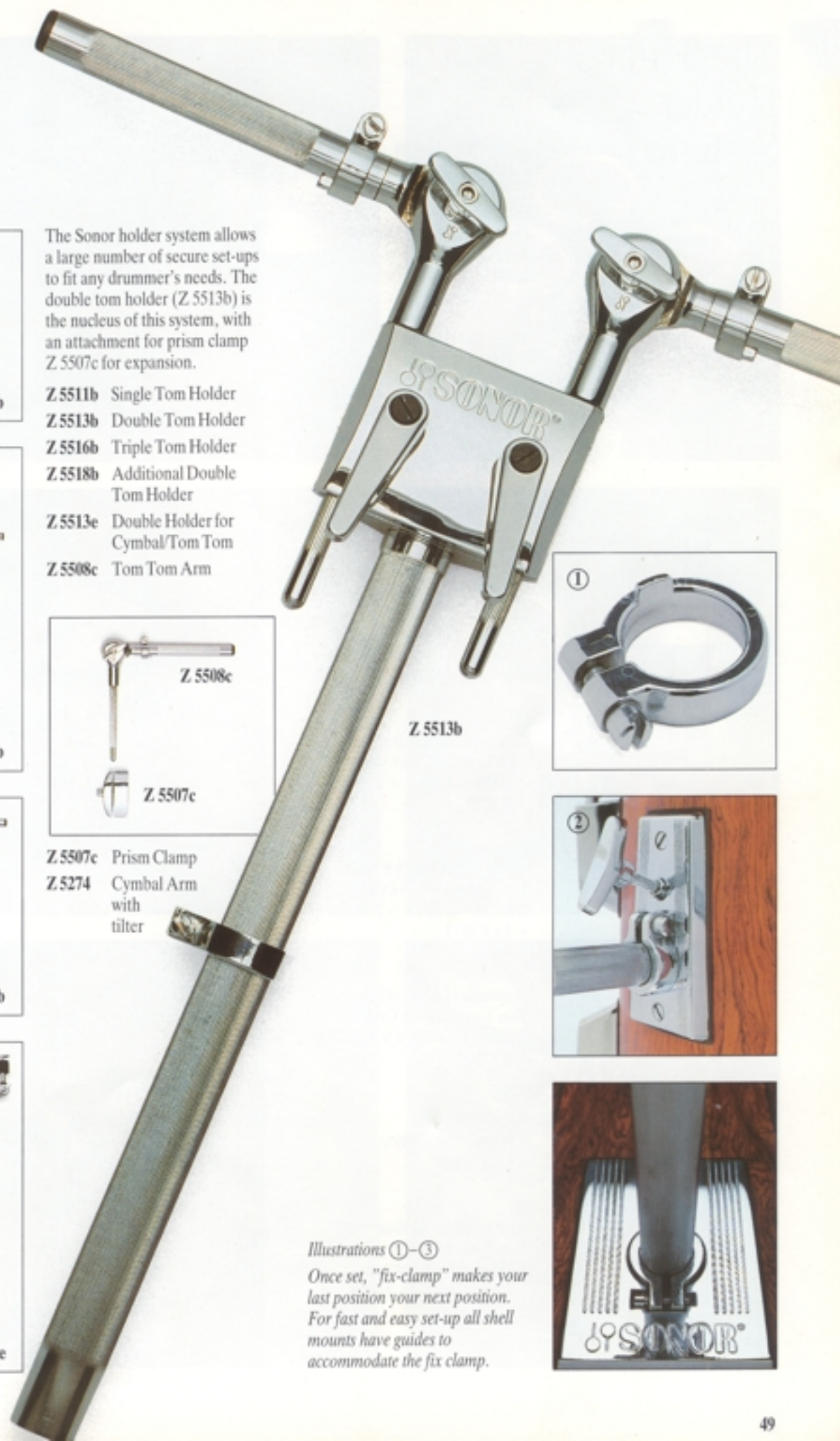
- Z 5511b Single Tom Holder
- Z 5513b Double Tom Holder
- Z 5516b Triple Tom Holder
- Z 5518b Additional Double Tom Holder
- Z 5513e Double Holder for Cymbal/Tom Tom
- Z 5508c Tom Tom Arm



Z 5508c

Z 5507c

- Z 5507c Prism Clamp
- Z 5274 Cymbal Arm with tilter



Z 5513b

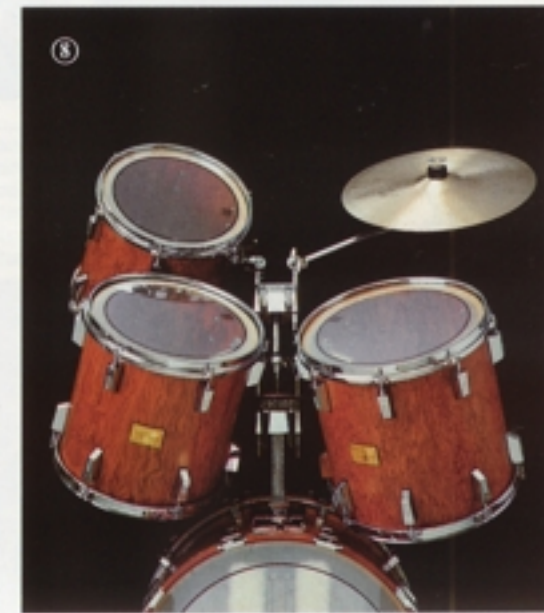
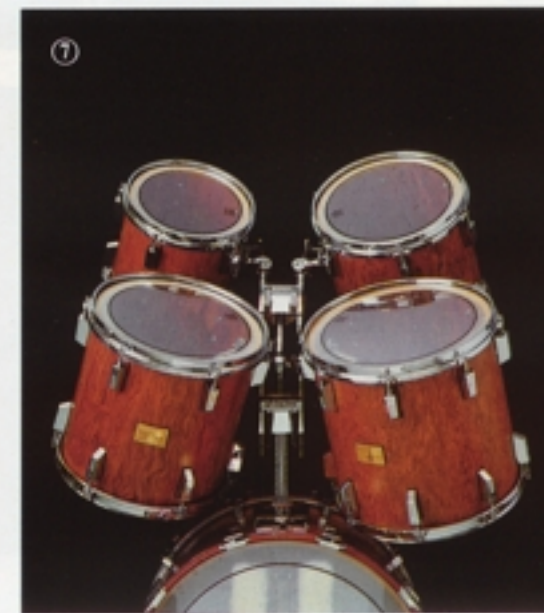
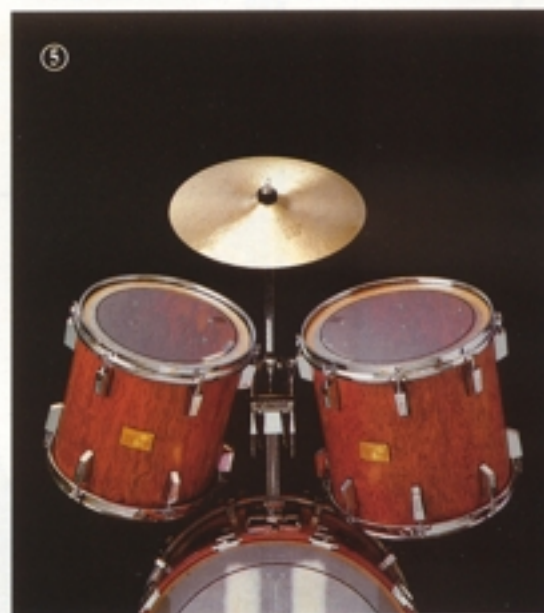
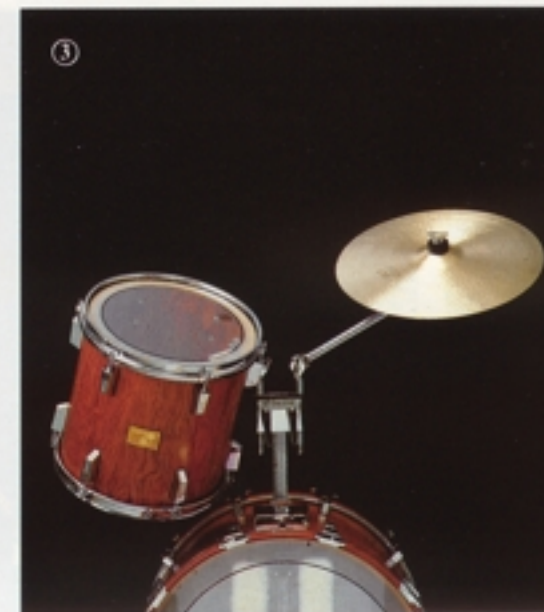
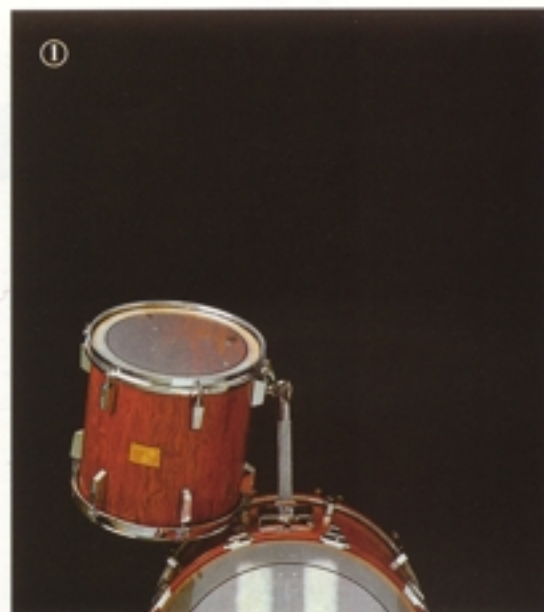


Illustrations ①-③

Once set, "fix-clamp" makes your last position your next position. For fast and easy set-up all shell mounts have guides to accommodate the fix clamp.

The Sonor Holder System

- ① Single Tom Holder
Z 5511b
- ② Double Tom Holder
Z 5513b
- ③ Double Holder for Cymbal/
Tom Tom
Z 5513e
- ④ Triple Tom Holder
Z 5516b
- ⑤ Triple Holder for two Tom Toms
and one Cymbal
Z 5513b + Z 5507c + Z 5274
- ⑥ Triple Holder for one Tom Tom
and two Cymbals
Z 5513e + Z 5507c + Z 5274
+ Z 5277
- ⑦ Quadruple Tom Holder
Z 5513b + Z 5507c + Z 5518b
- ⑧ Quadruple Holder for three
Tom Toms and one Cymbal
Z 5513b + Z 5507c + Z 5518b
+ Z 5274
- ⑨ Quadruple Holder for two
Tom Toms and two Cymbals
Z 5513b + Z 5507c + Z 5518b
+ 2 x Z 5274
- ⑩ Quintuple Holder for four
Tom Toms and one Cymbal
Z 5513b + 2 x Z 5507c + Z 5518b
+ Z 5274
- ⑪ Sixfold Holder
Z 5513b + 2 x Z 5507c
+ 2 x Z 5518b
- ⑫ Sixfold Holder for four
Tom Toms and two Cymbals
Z 5513b + 2 x Z 5507c
+ 2 x Z 5518b + 2 x Z 5274



Vario Clamp System

This system allows a great number of set-ups that were never possible before. Its prism mechanism clamps tightly and guarantees secure adjustment. Tubes and rods measuring between 6 and 32 mm can be assembled with the Vario Clamp. A ratchet link allows not only height and side adjustments, but also a wide variety of angle positions. For fast assembly the Vario Clamp has a folding mechanism which opens the prism.

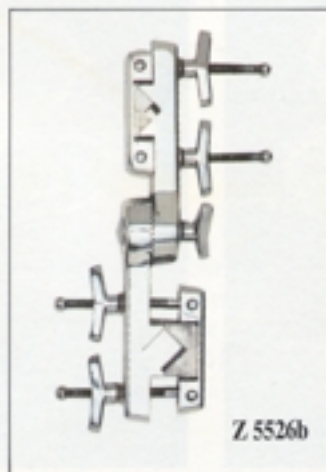


Z 5526a Vario Clamp

Z 5526b Vario Clamp



Z 5526a



Z 5526b



Sonor Drum Heads Made in Germany

In 1875 Johannes Link started manufacturing finest natural calfskin heads for percussion instruments. Today this tradition continues in the production of high quality drum heads made from selected synthetic films. Secret methods of treating these synthetic films are incorporated within the manufacturing process. They guarantee unique sound quality and perfect resistance against temperature changes and humidity. Sonor drum heads are available in a large choice of sounds. Choose the perfect type of drum head for your kind of sound.

All Sonor drum heads are firmly wrapped around an aluminium ring which is then pressed into a metal profile to avoid "pull outs". This procedure is superior to common manufacturing methods. It gives Sonor drum heads excellent durability.

On the right: Cut through a Sonor drum head

Sonor Regular Drum Heads

Great sounding heads available in many different versions. Sonor Regular Drum Heads are offered in smooth white, white coated, transparent, and black. Three thicknesses Thin, Medium, and Heavy allow for precise sound adjustments.



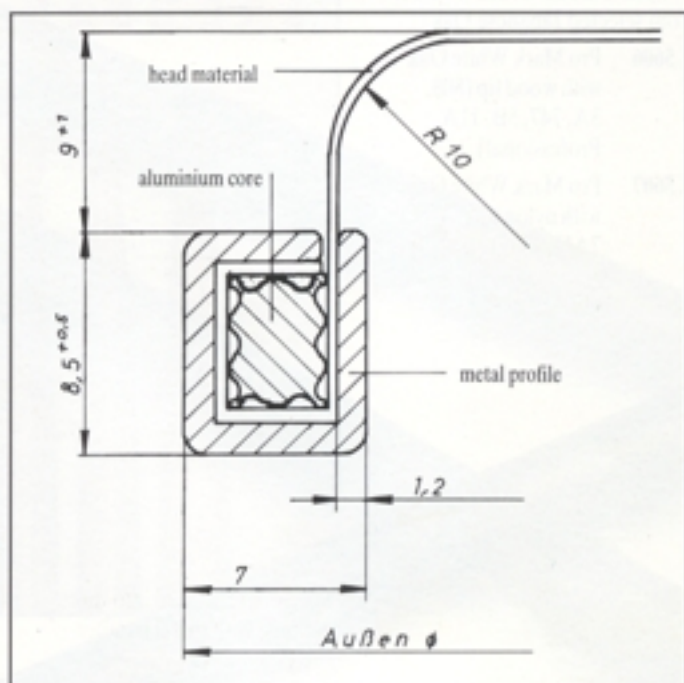
Sonor CP Medium Drum Heads

The CP Controlled Power drum head gives you a perfectly balanced, controlled sound. It is made from transparent films with a black control center.



One of the largest Sonor drum heads ever made, shown

here mounted to a giant bass drum in 1930.



Sonor XP Heavy Drum Heads

XP for X-tra power. Drum heads with two special transparent layers of film for powerful sounds that cut through.



Sonor RC Medium Drum Heads*

Drum heads with ring control. Controlled overtones, and a strong, dominating fundamental tone. Transparent heads with black control stripes.

* not available in the U.S.A.

Master Series Chart

	Shell dia.	Signature Series			Sonorlite		Phonic Plus		Phonic	
		Cat. No.	Shell sizes		Cat. No.	Shell sizes	Cat. No.	Shell sizes	Cat. No.	Shell sizes
	Heavy		Lite							
Tom Toms	8"	HLT 8	8" x 8"	8" x 8"	LT 8	8" x 8"	T 8	8" x 8"	T780	8" x 8"
	10"	HLT10	10" x 10"	10" x 9"	LT10	10" x 9"	T10	10" x 10"	T720	10" x 8"
	12"	HLT12	12" x 12"	12" x 10"	LT12	12" x 10"	T12	12" x 12"	T722	12" x 8"
	13"	HLT13	13" x 13"	13" x 11"	LT13	13" x 11"	T13	13" x 13"	T723	13" x 9"
	14"	HLT14	14" x 14"	14" x 12"	LT14	14" x 12"	T14	14" x 14"	T724	14" x 10"
	15"	HLT15	15" x 15"	15" x 13"	LT15	15" x 13"	T15	15" x 15"	T725	15" x 12"
	16"	HLT16	16" x 16"	16" x 14"	–	–	–	–	–	–
Floor Toms	14"	HLFT14	14" x 16"	14" x 15"	LFT14	14" x 15"	–	–	T734	14" x 14"
	15"	HLFT15	15" x 17"	15" x 16"	LFT15	15" x 16"	FT15	15" x 17"	–	–
	16"	HLFT16	16" x 18"	16" x 17"	LFT16	16" x 17"	FT16	16" x 18"	T736	16" x 16"
	18"	HLFT18	18" x 19"	18" x 18"	LFT18	18" x 18"	FT18	18" x 19"	T738	18" x 16"
Bass Drums	18"	HLG18	18" x 16"	18" x 15"	LG18	18" x 15"	–	–	G318	18" x 14"
	20"	HLG20	20" x 17"	20" x 16"	LG20	20" x 16"	G20	20" x 17"	G320	20" x 14"
	22"	HLG22	22" x 18"	22" x 17"	LG22	22" x 17"	G22	22" x 18"	G322	22" x 14"
	24"	HLG24	24" x 18"	24" x 17"	LG24	24" x 17"	G24	24" x 18"	G324	24" x 14"
Snare Drums	Shell depth	Signature Series			Sonorlite		Phonic Plus		Phonic	
	3½"	–	–	–	–	–	–	–	D420	14" x 3½"
	5¼"	–	–	–	–	–	–	–	D505	14" x 5¼"
	6½"	HLD581,582	14" x 6½"	–	–	–	–	–	D506,516	14" x 6½"
	7¼"	–	–	–	LD557,547x	14 x 7¼"	–	–	–	–
	8"	HLD580,588	14" x 8"	–	–	–	D508x,518x	14" x 8"	–	–

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