### M&K150 SERIES

# **Technical Specifications**

### S150 MKII THX Ultra2

Impedance:
Frequency Response:
Recommended Power:
Finish:Black Satin
Dimensions (HxWxD): 12.5 x 10.5 x 12.5" / 31.8 x 26.8 x 31.8 cm
Weight:

### 2510P Powered Monitor

Input Impedance: 15 kOhm unbalanced, 60 kOhm balanced
Input Sensitivity: 90 dB SPL, 1 meter, unbalanced, 100mV
90 dB SPL, 1 meter, balanced, 200mV
Max Output Level:
Maximum Input:+24 dBu, balanced
Frequency Response: 80 Hz – 20 kHz, $\pm$ 3 dB
Vertical Directivity: Wide Mode - 50 degrees
Narrow Mode - 30 degrees
80 Hz Filter Type: Butterworth Q= 0.707
80 Hz Filter Slope: 12 dB/octave
80 Hz Filter Switch
Power Amplifiers: Two channels, symmetrically balanced
discrete bipolar transistors
Power Output Bas/Mid Amp: 180 Watts, 4 Ohm,0.004% THD,100 Hz
Power Output Tweeter Amp: .180 Watts, 4 Ohm, 0.01% THD, 3 kHz
Dimensions (HxWxD): 12.5 x 10.5 x 16.5" / 31.5 x 26.5 x 42 cm

ns (HxWxD): . . . . 12.5 x 10.5 x 16.5" / 31.5 x 26.5 x 42 cm Weight: ..... 42lb/ 19 kg

### S150T THX Ultra2 Tripole™ Side/Rear

Impedance:
Frequency Response:
Recommended Power: 25-200 Watts
Finish:
Dimensions (HxWxD): 10.5 x 8 x 6.5" / 26.7 x 20.3 x 16.5 cm
Weight:

### MP150 On-Wall

Impedance:	hm
Frequency Response:	₿d₿
Recommended Power: 25 - 400 Wa	atts
Finish:Black or White Sa	atin
Dimensions (HxWxD): 12.3 x 10.5x 5.4" / 31.4 x 26.8 x 13.7	cm
Weight:	kg

### IW150 In-Wall

Impedance:	4 Ohm
Frequency Response:	77 Hz – 20 kHz, ±3dB
Recommended Power:	25 - 400 Watts
Finish:	White Grill. Paintable
Dimensions grill (HxWxD): . 12.4 x 10.7 x 0.39" /	31.5 x 27.2 x 9.9 cm
Dimensions baffle (HxW ): 12.1 x 1	0.5″ / 30.7 x 26.7 cm
Wall cutout (HxW):	9.9″ / 28.2 x 25.1 cm
Mounting depth:	
Weight:	



manufacturers to join George Lucas and his Lucas- ity standard dedicated to the accurate reproducfilm Home THX program. The original THX program was created to ensure that movie theaters meet

X12

M&KSOUND<sup>®</sup>

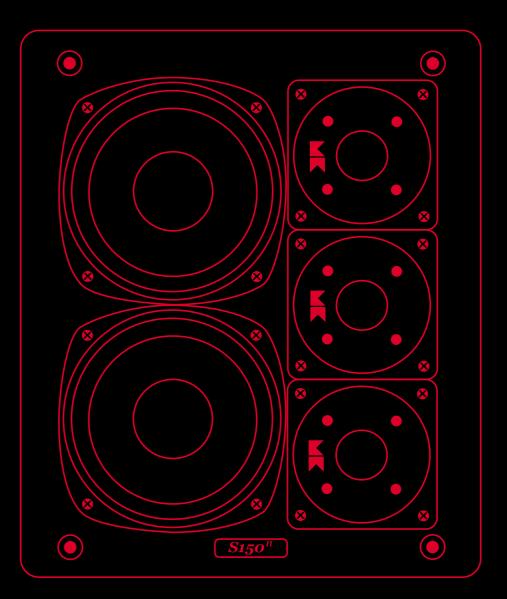
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strict quality standards. The THX logo immediately became recognized as a seal of approval for quality-conscious cinema-goers around the world.

In 1991, M&K SOUND became one of the first Today, THX Ultra2 is the highest independent qualtion of audio in the home. The M&K SOUND S-150 and S-150T Tripole™ meet or exceed strict

THX Ultra2 specifications to deliver music and movies with natural, effortless realism and power.

# THIS IS THE LOUDSPEAKER



# **M&K SOUND 150 SERIES**

"This is the story of a speaker company that helped shape home theater (and even music recording) into what it is today."

THEATER

Home Theater, USA, February, 2011



Svanemærket tryksag 5041 0826 LaserTryk.dk 



16



# THIS IS THE LOUDSPEAKER...

This is the loudspeaker chosen for the first public demonstrations of the Blu-ray disc format.

This is the loudspeaker chosen to create the very first Dolby EX 6.1 channel soundtrack. This is the loudspeaker chosen to create Blu-ray and DVD masters for Sony, MGM, TriStar, Columbia and many others.

This is the loudspeaker chosen to record the complete Carl Nielsen symphonies with the New York Philharmonic Orchestra.

This is the loudspeaker chosen for sound design for Star Wars Phantom Menace, Attack of the Clones and Revenge of the Sith. This is the loudspeaker chosen to restore

and remaster such film classics as Gone with the Wind and The Wizard of Oz.

This is the loudspeaker chosen for sound production on Wall-E, Iron Man, King Kong, The Incredibles, Lord of the Rings: Return of the King, Finding Nemo, Pirates Of The Caribbean, Chicago, Lord of the Rings: The Two Towers, Black Hawk Down, Pearl Harbor, Lord of the Rings Fellowship of the Rings, Cast Away and many other major releases.

This is the loudspeaker that is available in the format of your choice: passive standmount (S150 MKII THX Ultra2), active standmount (MPS2510P), wall-mount (MP150) or in-wall/in-ceiling (IW150).

# THIS IS THE LOUDSPEAKER!

# A FAMILY AFFAIR



M&K Sound 150 family of loudspeakers currently in use around the world in countless professional and domestic installations is the product of decades of evolutionary development that have made M&K Sound one of the most respected names in pro and consumer audio

In all its many configuration options variations, passive monitor, on-wall, in-wall and the legendary pro powered monitor version with built-in Class A/B amplification, one thing remains constant: the M&K Sound 150 line-up is universally acclaimed and praised, not for sleek lines, fancy wood finish options or avant-garde styling, but for the only thing that really matters: reliability under the most extreme conditions and pure, natural sound quality that allows the user to listen for hours on end with no hint of fatigue.

Without coloration or over-emphasis on any musical element, the 150 family strikes the perfect balance between the rendering of micro- detail, timbre, tonal subtleties, timing and precision on one hand and the overall big picture of the musical event with full three-dimensional body, weight and emotional impact fully intact.

Deceptively small, every M&K Sound 150 loudspeaker system offers seriously big sound in a surprisingly compact package.







The Iconic Configuration – **Born for a Purpose** 

The 150 concept can be summed up as the symbiosis of specially designed drivers operating in parallel arrays and integrated with a dedicated crossover network to achieve an extraordinarily low crossover point. Phase shift between the triple tweeter array and mid/woofer section is minimized, eliminating the temporal smearing in the midband range that afflicts most conventional systems, causing them to lose focus and transparency.

The M&K Sound 150 configuration of triple stacked tweeters alongside dual woofers is a distinctly different and instantly recognizable layout that offers considerable performance and placement benefits.

This array offers wide horizontal dispersion with slightly narrower dispersion in the vertical plane, thereby minimizing reflected sound. Unlike conventional loudspeakers, where the direct sound is obscured by a dense smear of intrusive room reflections, M&K Sound 150 models allow the listener to experience much more of the original recorded space, with all the subtle room cues and ambient sounds that contribute to a credible you-are-there illusion.

2

Dual 5.25" bass/mid drivers provide an effective surface area almost 20% larger than a single 6" drive unit. By sharing the load between two separate motor systems and two cones, 150 monitors achieve improved heat dissipation, increased power handling and enhanced linearity at large excursion.

Because the mid/woofer sections' contribution to the overall sound is generated entirely by the drivers operating well with their purely pistonic range, measured response exhibits ideal linear behavior, uncolored by cone break up or off-axis response deviations.

Altogether, this means higher system efficiency and the capability to play louder without strain or break-up. 🕨









Placing the drivers side by side in close proximity reduces cabinet size significantly for enhanced structural integrity at no sacrifice in performance. Because all drivers are close to the edge of the baffle, diffraction phenomena are virtually eliminated.

In the groundbreaking 150 triple tweeter array, the top end is handled by a trio of specially designed high frequency transducers driven together to operate effectively as a single, compact high frequency generator.

Because the stacked triple tweeters improve power handling by distributing energy among three individual drivers at the same time, the multi-element configuration also makes possible a lower crossover point than is found in most conventional systems.

In traditional systems, restricted high frequency power handling demands the use of much higher crossover points than 2.5 KHz to reduce the load on the tweeter. Consequently, the crossover point occurs in the critical mid frequency range which must be reproduced by both a mid/woofer and a tweeter in combination, with undesirable side effects such as phase issues and timing problems that compromise the integrity of the midrange.

And, unfortunately, studies have shown that the critical 2.5 - 3 kHz midband range is the area in which human hearing is most sensitive to sonic deviations and aberrations.

Because we expanded our design mandate far beyond mere flat frequency response (although the 150 range remains flat to within +/-2 dB (average) across the full audio band at typical listening distances), the 150 driver configuration eliminates these issues entirely. Because three tweeters can handle more power than one, the crossover point can be substantially lower at 1.5 kHz, resulting in a smooth, undetectable transition between woofers and tweeters.

The clearly audible result in every M&K Sound monitor is optimal timing between high and low frequencies and minimal acoustic phase shift (time delay) for accurate rendering of detail with exceptional transient speed.

M&K Sound 150 systems present an almost purely resistive load to the power amplifier with a minimum impedance rated at 4 Ohm for fine results with any quality power amplifier.

Most other surround systems are forced to compromise and use a smaller, horizontally mounted center channel loudspeaker, simply because their main monitors are too large to fit beneath a screen. The resulting changes in driver size and configuration in a desperate attempt to approximate symmetrical dispersion from a cigar box compromise ultimate system performance.

### Identical Front Surround Array

But thanks to exceptionally compact cabinet dimensions, multi-channel 150 installations can employ identical loudspeakers across the three front channels, ensuring perfect voice-matching for a seamlessly natural, integrated front soundfield.

# The Shortest Path – Direct to You

The carefully calculated third and second order crossover networks employed in the 150 range ensure a seamless, virtually one-way integration of the parallel driver stacks. Designed for the shortest possible signal path and minimal loss, the crossover is based on select, precision components, including large metalized poly capacitors with production tolerances as low as 5%.

M&K Sound's exclusive Phase-Focused<sup>™</sup> crossover ensures even, consistent sound coverage throughout the listening area, for both centrally seated listeners and those placed off to the side. Wide horizontal dispersion means a much larger "sweet spot" and the carefully controlled vertical radiation pattern minimizes reflections from floors and ceilings for ultra-sharp imaging.

The implementation of robust, meticulously designed and assembled components provides constant parameters and consistent performance under the most stressful dynamic conditions and temperature fluctuations.

This is just one aspect of the sophisticated science brought to bear in the development and construction of the 150 loudspeaker series. No magic, no snake oil, just the conscientious application of decades of acquired knowledge, expertise and experience.

# **HIGH FREQUENCY REFINEMENT AND** INSIGHT

# Coated silk dome with lightweight, copperclad aluminum wiring for low mass and high sensitivity

Vents in high sensitivity, ferrofluid cooled voice coil for reduced compression at large excursion

Cast aluminum front plate bolted directly to the magnet system for improved mechanical stabilitv

Elimination of built-up captive air mass behind the dome thanks to double flow resistor foam plug in vented pole piece for enhanced speed and precision across the high frequency range

Unique low-compression rear chamber tubes for minimal distortion and controlled transient response, especially at the bottom end of the driver's range

Semi-shielded magnet system based on large ferrite double magnet to optimize distribution of magnetic flux in the air gap

Calibrated waveguide for controlled directivity and smooth integration with mid/bass drivers

# **M&K SOUND PRO TWEETER**

aving served the needs of leading music and film studios around the world in close dialog for over three decades, M&K Sound knows exactly what is expected and demanded of a high frequency drive unit intended for critical listening in a professional recording environment.

Pro users require an unblemished, uncolored rendering of the sonic event that is natural and crystal clear and never a burden on the ears, consistent excellence for hours on end, at high levels with extreme reliability. Unscheduled downtime with expensive performers in the studio is simply not an option.

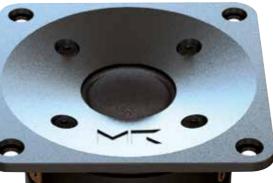
This is why M&K Sound has been the choice of professionals for over three decades.

Developed initially for our market leading selfpowered MPS 2510P and MPS 1611P professional studio monitors, the custom designed M&K Sound high frequency drive unit applies classic M&K Sound innovation and attention to detail to eliminate high frequency smearing and phase/combing anomalies. The result is a breakthrough level of high frequency resolution and ease of listening worthy of the M&K Sound brand name.

The all-new M&K tweeter breaks away from the industry convention of offering drivers with standardized impedance values. Instead, the impedance of the M&K tweeter is designed to match specific crossover component values to ensure total control of the frequency range.

Optimized for implementation in the distinctive 150 triple tweeter array, the purpose-built drivers offer extended frequency response (all the way down to 1,000 Hz) with unrestricted power handling capabilities and transient control. The broad frequency coverage of the tweeter eliminates the need for a third driver with a complicated, powersucking crossover network.

Deftly designed to meld into a single uniform source, the triple tweeter array provides ideal dispersion

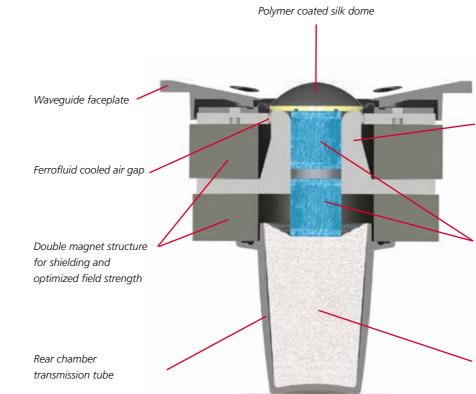


at all frequencies. Driving three tweeters together as one also ensure superior phase characteristics, a unique design feature that is a major factor in the openness and transparency of all M&K Sound models.

electrical and acoustic perfection demanded by professionals and home audio enthusiasts alike in a high frequency driver created expressly for an ultra-compact, twoway monitor, M&K Sound brought the full talent and experience of our skilled engineers to bear on the Pro tweeter project.

In order to attain the level of mechanical,

Most tweeters will not perform anywhere near their best, unless crossed over at least two octaves above the fundamental driver resonance frequency. For a





typical 1" dome tweeter with a resonance frequency in the 900 to 1,200 Hz range, this leads to typical crossover frequencies from 2.7 to 3.6 KHz.

The M&K Pro tweeter takes a radically different approach that allows useable output at a much lower crossover point at no sacrifice in the resolution of finest high frequency micro-details.

Low Compression for Maximum Extension

Tweeters without a rear chamber normally require a higher resonance frequency as a consequence of the stiff suspension and air cavity behind the dome. Since a higher resonance frequency in a tweeter is largely a direct product of a compressed air mass under the dome, M&K Sound implements five crucial measures to reduce air compression behind the dome, for a lower resonance point and extended frequency response.

Vented pole piece for low compression

Double disc damping structure to eliminate rear chamber reflections and unwanted air mass loading of the moving dome

Mineral damping of rear chamber

The M&K Sound Pro tweeter is fitted with a short waveguide front plate for well controlled dispersion characteristics with smooth response both on axis and off axis.

While a traditional horn on a dome tweeter results in significant boost at the highest frequencies when measured on axis and falling off-axis response as frequency rises, the precision calibrated M&K Sound waveguide ensures consistent response across the frequency band across the listening area.

The M&K Sound waveguide design is optimized in the triple tweeter array for well balanced overall response at all frequencies.

# final system. Step 5: Carefully selected damping

This requires far tighter production tolerances, but

offers the bonus of much greater consistency in the

# material in the added rear chamber tube

Proper loading prevents any sound from the rear chamber tube reflecting back to the moving dome system and eliminates a potential source of coloration.

Taken together, these five steps in the design of the M&K Sound Pro tweeter provide a precision mechanical foundation for the exceptional fluidity, vividness and authority of the high frequency performance of the triple stacked tweeter configuration.

# **Polymer Coating for Linear Damping**

The low mass of the polymer coated silk dome incorporated in the M&K Sound Pro tweeter weighs less than 140 mg for a substantial contribution to the impressive speed and accuracy of the system's high frequency response.

Commonly used tweeters characterized as "hard dome" types typically display significant frequency peaks and dips. In the M&K Sound Pro tweeter, this kind of extreme response irregularity is unacceptable and virtually non-existent thanks to the damping effect of the uniform coating applied to the silk dome. The polymer coating provides a high degree of uniform, linear damping for the silk dome's natural break-up modes.

fatigue.

## Step 1: Large, vented air cavity behind the dome

Adding a rear chamber tube to the tweeter construction places the dome in front of a much larger air cavity. Through a large vent in the magnet system's pole piece, the internal air pressure load that would otherwise build up behind the dome is released harmlessly.

## Step 2: Proper pressure release under the dome suspension roll

In typical tweeter design, some attention may be paid to step one, but our research revealed that, especially in tweeters with Ferrofluid in the air gap, it is equally important to achieve proper ventilation of the area under the dome suspension roll, because the Ferrofluid in the magnet systems' air gap actually seals in the air under the suspension roll. Pricking tiny holes in the voice coil former of the M&K Pro tweeter ensures the release of trapped air under the suspension roll via the larger cavity under the dome.



# Step 3: Correct Ferrofluid viscosity and dosage in the air gap

The quantity and viscosity of Ferrofluid exert serious direct impact on the tweeter resonance and must be kept within extremely tight tolerances during production. The M&K Pro tweeter employs a nominal dosage of 110 mg of Ferrofluid administered with tolerances tighter than 3%!

# Step 4: Proper damping structure in the vented pole piece

With no damping in the vented pole piece, the air volume in the pole piece would behave like an air mass load to the dome, causing irregularities in the tweeter's low end frequency response.

Instead of conventional one-piece, high-density damping, the M&K Pro tweeter utilizes two pieces of lower density to ensure a much better defined and controlled airflow through the vent in the magnet system pole piece.





### **Waveguide for Even Dispersion**

The dome suspension roll is partly covered by a specially designed overhang in the front plate to



eliminate any frequency peaks from the suspension roll that would interfere with the dome's pistonic motion.

Because soundwaves generated by the outer edge of the dome suspension roll at the very highest frequencies are out of phase with sound from main dome area, the overhang faceplate has been designed to prevent such out of phase phenomena and the

smearing that they would cause.

Continuing the M&K Sound legacy of high frequency transparency and focus, the exceptionally fast and accurate open-back M&K Sound Pro driver illuminates the emotion and timbre of the recorded event accurately and naturally, allowing the user to listen at any level and for as long as desired without

As is true of each and every individual component that goes into every single M&K Sound loudspeaker, the all-new M&K Sound professional tweeter is designed by professionals for professionals.

M&K150 SERIES

**BASSPOWER** AND MIDRANGE FINESSE

exclusive, custom designed M&K Sound 5.25" bass/ midrange drive unit represents the culmination of over three decades of intensely focused transducer design. While most loudspeaker manufacturers make specious boasts that their drivers are "heavily modified to their specifications," the drivers used in the M&K Sound 150 range are in fact designed in-house by fulltime engineers that have been instrumental in the design of M&K Sound transducers for more than two decades.

Because M&K Sound alone dictates the specifications for our drive units down to the very last detail, based on extensive original experimentation and research, our loudspeakers are not subject to the changing whims and fads of standard off-the-shelf drive units.

M&K Sound proudly works to a higher, stricter standard, implementing meaningful changes as technology advances.

The dual 5.25" 150 woofer configuration employs a pin-cushion basket design with narrow

basket flange to permit close placement of woofers two on a compact baffle. Modest baffle dimensions ensure structural integrity, while eliminating destructive diffraction phenomena. A completely open cast aluminum basket structure with four solid pillars allows unimpeded airflow on both sides of the cone and around all moving parts for immediate heat dissipation. Unlike conventional baskets designed with a plateau for spider mounting, the M&K design team opted for a cup spider design, ensuring absolutely free airflow.

The development of cone and surround, crucial components with major impact on ultimate sound quality, was a collaborative effort with Peerless, leading Danish transducer specialists intimately familiar with M&K Sound's design objectives after decades as supplier and partner.

Working closely, M&K Sound and the Peerless transducer team (Among the world's foremost transducer designers, Peerless was founded in Denmark in 1926.) developed a breakthrough cone geometry, optimized to work in combination with a unique polypropylene based diaphragm material. The Polypropylene base, infused with 20% carefully selected minerals, provides a perfect balance between cone stiffness and internal damping.

The woofer's low reflectivity cone is the result

of a carefully calibrated

combination of materials and geometry with a low-loss SBR rubber surround and edge resonance stabilizer.

The cone geometry is not the typical industry standard hyperbolic geometry found in many other systems. M&K woofers feature instead a

linear cone shape that combines with a small radius at the voice coil neck to provide enhanced mechanical coupling between voice coil and cone.

Open, cast

aluminumbasket

Mineral-loaded

polypropylene cone

Spider center suspension

As the earliest cone break-up modes generally occur close to the voice coil, the advanced mathematics underlying the cone geometry provides substantial reduction of travelling waves well before they reach the edge of the cone. The result is significant control of unwanted edge resonances in the driver.

The unstrained clarity and sonic purity that have been the hallmark of the M&K Sound 150 range from the very beginning are in large part a direct result of this conscientious, innovative design work.

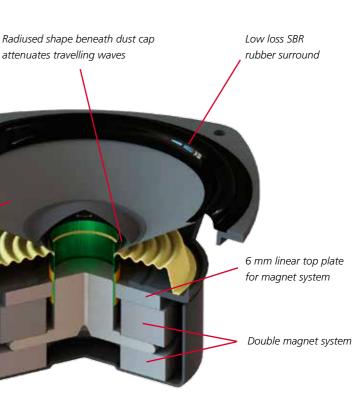
The M&K woofer features a thermally stable voice coil wound on an aluminum former. The former ensures linear damping for strict system control even at high sound pressure levels.

The thermally stable voice coil is wound with heat resistant copper wire designed to handle temperatures up to 200 degrees Celsius, measured at the coil.

The coil is symmetrically mounted in a strontium ferrite magnet system to function as an overhung coil in the gap for reliable, consistent handling of

It is this extreme level of precision and effortless, natural sound reproduction that continues to make the M&K Sound 150 range the choice of professionals and enthusiasts.





M&K Sound 5.25" bass/midrange drive unit

powerful transients and sustained high output. Unlike most magnetic materials that lose power at temperature extremes, the M&K strontium magnet retains full power across a broad temperature spectrum.

The magnet system generates a linear magnetic field across the full coil length even at maximum excursion (+/- 3.5 mm), for minimal distortion all the way up to the driver's maximum output levels.

A shielding magnet and can are added to minimize stray field emissions and to focus additional flux in the gap. These uncompromising methods ensure that the driver continues to meet its strict performance requirements for years to come.

With a mere 8.5 gram of moving mass, the M&K Sound bass/mid unit is capable of lightning fast, accurate response across its entire operating range with a firm grip even on the most complicated program material.



# **S150 MKII THX Ultra2** Monitor **The Next Level**

What this updated version of the legendary studio monitor does in the conveyance of exactly what is there in the recorded source, no more and no less, is difficult to formulate in just a few words. Essentially, it does pretty much nothing, except open up a wide, clean, clear window on every aspect of recorded sound, allowing you to shift your personal focus as you choose between specific details, instruments or voices, while never losing sight of the totality of the overall musical experience.

With no additive or subtractive effects,

it maintains the full integrity of the source, making it possible to listen with uncanny precision into the recorded event, to experience the intricate interplay of performers, the subtle tonal shadings and timbral nuances that bring you to the emotional core of the performance.

Questions of greater suitability for music or movies or for specific genres fall away, as these speakers simply lay out the unveiled, uncolored truth of any source with a scintillating realism and naturalness



Extraordinary dynamic capabilities, effortless presentation of complex rhythms, linear frequency response and temporal integrity make the M&K Sound S150 MKII THX Ultra2 a true joy to listen to for serious sessions or just for pure pleasure.





# **MPS2510P Powered** Monitor **Your Empowered Alternative**

For the ultimate, revealing, tell-all listening experience, M&K Sound offers a self-powered reference monitor with separate onboard Class A/B power amplifiers for each driver section. Internal bi-amplification means isolated, clean power for each speaker as well as for each high and low frequency section with no interference. Physical separation of the amplifiers for each speaker pair eliminates any possibility of undesirable interaction between the two channels such as crosstalk, etc.

As an active monitor, MPS2510P effectively eliminates the final, insurmountable

unknown of loudspeaker design: What size, guality and type of amplification will be used to partner it? The performance advantages of assembling drivers, active crossover, cabinet and amplifier to work together as a unified system are enormous and bring with them corresponding practical benefits, eliminating costly amplifier enclosures, speaker cables and the need to make space for amplifiers in the listening room.

connection.





Coming from the M&K Sound pro monitor range, MPS2510P incorporates useful room integration and connectivity features, including variable vertical directivity and a throughput for connection of multiple speakers per channel or for direct subwoofer

Occupying less than a single cubic foot, the compact M&K Sound 2510P system produces amazing output levels with tremendous clarity, extraordinary dialog intelligibility and sublime musicality.





# **MP150 MKII On-Wall Speaker Your Surface-Mount Alternative**

For environments where stand-mounting or desktop placement is not an option, M&K Sound offers MP150 MKII, a wall-mount configuration of our state of the art S150 MKII THX ULTRA2.

The new MP150 MKII now features the ultra-low compression tweeter as used in the M&K Professional Monitors as well as in the legendary S150 MKII. With the "Professional" tweeter aboard the MP150 MKII offers exactly identical components, drivers and technologies in order to deliver the same uncompromising sound quality heard in recording studios and post-production facilities worldwide.

At a mere 10.8 cm (4.25 inches) deep - one-third of the depth of the S150 MKII THX Ultra2 - this dedicated wall-mount monitor can be installed discretely





as an attractive visual complement to any flatscreen television. Magnetic shielding allows safe placement next to any television and the elegant integral wallmounting system ensures convenient and reliable mountina.

Naturally, the MP150 is timbre-matched to the full range of M&K Sound satellite speakers and subwoofers for ideal performance and system integration in any system combination.



# **S150T Tripole**<sup>™</sup> Side/Rear Monitor **An Entirely New Perspective**

Side- or rear-mounted speakers in a multi-channel audio system pose a radically different set of performance challenges relative to conventional stereo systems, because surround speakers are typically positioned much closer to the listener and deliver sound to the ears from very different angles. Unfortunately, most multi-channel installations ignore these critical factors entirely and simply employ the same type of direct-radiating monopole drivers that have been the norm for well over a century. These conventional loudspeakers feature drivers mounted on one side only (monopole) and aimed directly at the listening position. As a result of the close proximity to the listening area, they are easily identifiable as the source of sound, failing to disappear in a credible you-are-there sonic illusion.

A costly alternative in recent decades is the dipole surround speaker with no drivers on the front directly facing the audience, but identical sets of drivers on two sides. By generating sound from one side in phase and the other out of phase (dipole) with no sound radiating directly at the listening position, dipoles successfully create a diffuse soundfield, but at the expense of any sound actually intended to be heard as a specific image.

The proprietary M&K Sound Tripole<sup>™</sup> configuration, essentially two speakers mounted in a single cabinet, mise

# IW150 **In-Wall Speaker Your Flush-Mount Alternative**

The built-in IW150 offers the sound quality of the world's most acclaimed studio reference monitor in a virtually invisible alternative configuration with frameless, architectural styling that is every designer's delight. M&K Sound IW150 in-wall speakers incor-



porate the very same exclusive M&K Sound technologies, Phase-Focused crossovers, proprietary drivers and sophisticated crossovers found in our acclaimed professional and home loudspeaker systems. The M&K mounting system ensures quick and easy Installation for elegant concealment with smooth, consistent sound

coverage throughout the room for superior imaging in stereo or surround, even when the speakers are installed in the ceiling. Eliminating the flimsy plastic baffles fitted on virtually all other in-wall speakers, the frameless IW150 employs a heavy steel baffle e that actually reinforces drywall, providing a rock steady foundation.

IW150 is voice-matched for use in combination with all M&K Sound satellites and subwoofers.









is the first and only technology to effectively address these major issues to deliver both image specificity and an enveloping surround field, without compro-

The M&K Sound S150T THX Tripole™ combines both front and side mounted drivers to direct the surround image both indirectly and directly into the listening area, for a smoother, more robust surround image in perfect harmony with the front three channels. Because the S150T THX Ultra2 Tripole™ employs the same exclusive, innovative high frequency driver as the S150 MKII THX Ultra2, sonic consistency and voice matching are assured.