



ARCHITECTURAL ACOUSTIC CONSULTING

MEDIA SYSTEMS ENGINEERING

Company Profile Residential / Screening Rooms

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Company Background and Structure

Company Background

WSDG - Walters-Storyk Design Group is a global architecture, acoustic, electro-acoustics and advanced audiovisual systems integration consulting and design firm. Pioneering architect/acoustician, John Storyk (AIA), founded the company in 1969 with the creation of Jimi Hendrix's Electric Lady Studios in New York.

WSDG was co-founded by Beth Walters and John Storyk. The firm's headquarters are located in Highland, New York, and it also has offices and representation in Latin America, Europe, Middle East and Asia as well as a global team that includes over 70 partners, associates and design professionals.

WSDG's history of innovative design achievement has produced over 4,000 diverse global projects, including acoustics and systems design for clients such as: Apple, Google, Spotify, Sony, Amazon, NY's Jazz At Lincoln Center, Alicia Keys, Jay-Z, Bob Marley, Bruce Springsteen, Celine Dion, Def-Jam Records, Epic Games, ESPN, KKL (Switzerland), MTV, TV Globo, WNET, UCLA, and Vienna Symphonic Library.

WSDG is a thirteen-time winner of the international NAMM TEC Award for studio design creativity. Recent WSDG TEC winners include: Jungle City Studios, NY, the Berklee College of Music – 160 Mass. Ave. recording/teaching complex, Boston, The Church Studios, London, Boston Symphony Orchestra Control Room, Boston, MA, Spotify at Mateo, Los Angeles, and Mix with The Masters' Rue Boyer, Paris. The firm's work has been published extensively and discussed in numerous professional audio, broadcast and systems design publications.













Company Structure

WSDG maintains offices and representation around the world:

USA:

Highland, New York Miami, Florida San Francisco, California Los Angeles, California

Europe:

Basel, Switzerland Berlin, Germany (ADA-AMC GmbH) Barcelona, Spain Porto, Portugal Vienna, Austria

Latin America:

Buenos Aires, Argentina Belo Horizonte, Brazil Bogotá, Colombia México DF, México Punta del Este, Uruguay

Asia:

Beijing, China Guangzhou City, China Mumbai, India St. Petersburg, Russia

Services | Architectural Acoustic Consulting

Acoustic Testing, Measurement and Assessment

WSDG employs sophisticated measurement equipment, the most up-to-date acoustical data-collection and analysis software and complex visualization tools to determine and optimize existing acoustical conditions in time and frequency domains, including RT60 Reverberation Times, Transmission Loss, STI Speech Intelligibility Assessments, SPL Sound Pressure Level distribution, Background Noise Levels and many other parameters. Our engineering team specializes in acquiring critical measurement data in-situ or laboratory-based for documentation. This work applies to both technical design and legal / forensic purposes and presents useful interpretations of measurement results and their consequences. All work complies to the latest international standards, industry benchmarks and professional compliance values.

Acoustic Simulation, Modeling, Auralization

WSDG uses complex prediction and analysis software, including some proprietary software that we developed ourselves, to model and study the behavior of sound in a three-dimensional virtual prototyping environment by means of an iterative process and has also pioneered the use of acoustical modeling tools and auralization by using the industry's most advanced acoustic prediction and modeling software. These software tools facilitate "auralization" - a complex calculated algorithm that allows for input of an original, non-processed audio file (such as a speech announcement or an acoustical instrument recording) and then renders an audible reproduction of the future acoustical situation in the virtual building environment. This allows all stakeholders to listen to music, speech or any audio content in the virtual design reality, thus providing an invaluable tool during design and planning.

Room Acoustics Analysis and Surface Treatments Design

Room Acoustics is the science of controlling a room's internal acoustic characteristics by creating geometry in combination with creative surface materialization using reflection, absorption and/or diffusion. Excessive reverberation time can lead to poor speech intelligibility, high ambient noise levels, poor ability to concentrate and limited comfort, specifically in workplace and privacy / confidentiality applications. Interior acoustical floor, wall, and ceiling surfaces can be created using a wide variety of materials and finishes, including perforated, slotted, fabric covered, foam based, plastic, wood, glass, metal or gypsum materialization. WSDG carefully studies and specifies appropriate materials and applications, always with a keen eye and respect for a project's underlying architecture.

Sound Isolation, Structural Acoustics Analysis and Design

Structural Acoustics analyzes noise transmission from building exterior envelope to interior and vice versa, as well as noise transmission from one room to another within the building environment. Inadequate acoustical isolation may lead to elevated sound levels within the space which reduces privacy, comfort level and concentration ability, severely limits speech intelligibility, and has implications for noise health effects. Primary noise paths often include through roofs, ceilings, walls, windows, doors, flanking around room partitions, as well as ducting and other penetrations. Sufficient noise containment control ensures space functionality and is often required by local municipal codes or by a project's technical requirements. WSDG specifications include construction details for wall and slab assemblies and special acoustical isolation conditions (including "room-within-room" construction).

Peer Review, Expert Reports, Studies and Surveys WSDG is a trusted partner for Peer Review, Expert Reports, Studies and Surveys within the context of Architectural Acoustics Consultation. Peer review is the evaluation of work and studies conducted by other parties. This work is often required to maintain standards of quality, assess solutions and designs, provide a second opinion or variations to a concept, create alternate solutions to improve performance and efficiency, provide credibility, and verify costing and time table analysis. WSDG's studies and surveys are often based on in-situ or laboratory measurements and assessments utilizing a wide range of international benchmarks and standards.

Media Facility Site, Facility, Master Planning, Feasibility Studies

WSDG provides a wide portfolio of design and consulting services that support media facility conceptual planning, master planning, site selection and feasibility studies as well as timely, detailed, and cost-effective advice on highly sensitive and complex architectural construction and renovation projects. WSDG has extensive experience with sensitive architectural issues including historical renovations, additions, and new construction projects in media production, corporate, government, education, broadcasting and cultural / entertainment sectors.

Broadcast and Recording Studio Design

WSDG brings over 50 years of experience in providing design and consulting services that support Broadcast and Recording Studio projects during all phases (master planning, schematic design, design development, construction documentation, bidding / pricing, construction administration, and final commissioning / close out). WSDG provides timely, detailed, and cost-effective advice on highly sensitive and complex architectural construction and renovation projects, from small but critical retrofits to challenging ground-up construction. WSDG brings extensive experience to sensitive architectural issues including historical renovations, additions, and new construction projects in media production, corporate, government, education, broadcasting and cultural / entertainment sectors.

Technical Interior Design, Product Development and Prototype Testing WSDG provides technical interior design and integration services for media production, cultural, entertainment and corporate environments in close collaboration with all stakeholders with the goal of enhancing room design, achieving a healthier, more inspiring, more ergonomically, and more aesthetically pleasing environment. WSDG provides conceptual development, space planning, site inspection, programming, research, and construction management for technical AV and lighting design, lighting control, acoustical surfaces, and sightline considerations. Designs are illustrated by means of 3D visualizations, renderings, and VR simulations. WSDG's engineering team and laboratories are available for acoustical studies, assessments, and measurements as well as for supporting further optimization of acoustical parameters of a given product under development. Feasibility studies and virtual prototyping can be conducted to ascertain the product's acoustical performance level and market position.

Services | Media Systems Engineering

Media Systems Design and Equipment Recommendations WSDG gives guidance in an increasingly crowded world of technology devices, standards, and practices all claiming to be the best and the most futureproof. Corporate, cultural, educational, residential, and governmental sites alike are constantly striving to improve their media systems in an effort to stay on top of current presentation, communication, collaboration, conferencing, and entertainment techniques. WSDG provides highly integrated AV System Designs based on the highest industry standards, while working collaboratively with its clients in developing long term visions, outlooks, and strategies.

Media Network, Distribution, System Control, IT and Communication Systems Telecollaboration, teleconferencing, and telecommuting significantly influence corporate culture and workflow. Substantial engineering and integration efforts are required to make these technological advances supportive to the workforce. WSDG designs individual office, boardroom, conference center, and site wide media networks, while providing AV infrastructure with solid privacy protection and high usability to satisfy even highest quality requirements in both sonic and visual aspects.

Audio / Electroacoustic Engineering, Simulation, Modeling and Auralization The most visible part of the electroacoustical system is the loudspeaker. Loudspeakers are complex electromechanical devices so varied and rapidly shifting that the market is challenging to oversee even for professionals. WSDG specifications are based on 3D acoustical software simulations and virtual prototyping of the venue or room where the architectural conditions are overlaid with the technical, aesthetical, and budgetary criteria of the project at hand. WSDG often creates simulated audio playback demonstrations, called auralizations, to facilitate decisions based on auditory impact. Selecting the electroacoustic system most suitable for the space, after determining room acoustics and structural boundary conditions in what-if scenarios, enables WSDG to achieve and exceed target parameters such as loudness level, frequency range, coverage, directivity control, and speech intelligibility (STI). Electro acoustical systems may be used in voice alarm / emergency scenarios. where properties such as redundancy, certification, and reliability are highly critical. WSDG has extensive experience for such systems and is fully familiar with all current national and international regulation including e.g. FIFA, IOC, and UEFA.

Audio, Electroacoustic Systems Calibration, Tuning and Optimization Audio System Calibration or Audio System Tuning is the science and art of bringing the entire sound system to operate at its peak performance. The commissioning process involves WSDG's highly experienced experts in audio measurement and sonic accuracy and is based on a sequence of tasks to obtain the maximum audio precision of the component ensemble installed in a space. Frequency and time-domain measurements as well as extensive listening tests are employed to carefully determine the correct placement, phase-alignments, crossover points, equalization, and gain control of a loudspeaker-room system. Full documentation concerning component settings is issued by WSDG for client's reference. For professional audio systems, WSDG recommends recalibration every 12 to 24 months to increase system accuracy and to maximize ROI.

Video Systems Engineering, Content Capturing, Display, Visibility and Sightline Studies No media experience is complete without a clear, bright, high resolution visual solution. WSDG provides comprehensive video system engineering services, including design of networks, hardware, software, and other related infrastructure to support video applications within production, broadcasting, educational, corporate, information and entertainment contexts. Camera and display / projection system positioning often require integration and placement studies that are based on 3D visualization and studies. Typical auxiliary WSDG engineering fields include heat management and noise mitigation.

Peer Review, Experts Reports, Studies and Surveys WSDG is a trusted partner for Peer Review, Expert Reports, Studies and Surveys within the context of Media Systems Engineering. Peer review is the evaluation of work and studies done by other parties. This work is often required to maintain standards of quality, assess solutions and designs, provide a second opinion or variations to a concept, create alternate solutions to improve performance and efficiency, provide credibility, and to verify costing and time table analysis. WSDG's studies and surveys are often based on in-situ or laboratory measurements and assessments utilizing a wide range of international benchmarks and standards.

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Theatrical Systems

Theatrical Systems Engineering refers to conceptualizing, designing, and implementing technical equipment and devices for the performance community, while integrating these designs into the architectural and acoustic fabric of projects. WSDG provides these services including networking infrastructure, theatrical audio-video systems, immersive 3D audio replay, theatrical lighting, wired and wireless communication devices, and stage machinery with the goal to give venue owners, producers, and artists the means to express their talents to the full extent of their creative imagination.

Key Personnel



Beth Walters

Founder Partner

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Beth Walters-Storyk is a graduate of the Fashion Institute of Technology (New York) with two degrees, A.A.S. in Textile Design and a B.F.A. in Product Design. Her construction experience comes with having been a senior installation designer for the Gallery's exhibition and installation staff at the Fashion Institute for over 10 years. From 1982-1988, Beth also was the display and merchandising director for such noted home furnishing fabric firms as Boris Kroll Fabrics, Greff Fabrics and Design Tex Fabrics. Beth is a founding partner and principal of Walters-Storyk Design Group and leads the interior design services division.



John Storyk, R.A. Founder Partner

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John Storyk, registered architect and acoustician, is a founding partner of WSDG. He has provided facility planning, acoustical and systems design services for the professional audio-video production and performance community since the 1969 completion of Jimi Hendrix's Electric Lady Studios in New York City. John received his architectural studies from Princeton and Columbia Universities. As an independent designer, engineer and founding partner of WSDG, he has been responsible for over 3,500 world-class audiovideo production facilities, including studios, radio stations, video suites, entertainment clubs and theaters. He is a member of the American Institute of Architects (AIA), Audio Engineering Society (AES) and Acoustical Society of America (ASA) and is a frequent contributor to AES convention papers and professional industry periodicals. John is a frequent lecturer at schools throughout the nation and has established courses in acoustics at Full Sail (Orlando), Ex'Pression Center for the Media Arts (San Francisco), while maintaining adjunct professor status in Acoustics and Studio Design at Berklee College of Music (Boston).



Sergio Molho
Partner / Director of Business Development
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Named Partner/Director of Business Development in 2016 for the global WSDG architecture/acoustic design firm, Sergio Molho was a founding partner of WSDG Latin America in 1994. He has provided technical, acoustical and architectural supervision as well as project management for all WSDG Latin projects. He now provides daily and long-term technical, marketing, social media and business management direction for the firm's multiple offices. Sergio Molho has been an audio/video and recording industry professional since 1982. An accomplished keyboard artist and vocalist, in the 1980's he led popular Argentine funk band CASH. His technical credits range from AV and Systems Integration/design to project management. Sergio is a frequent contributor to technical workshops and is committed to expanding the knowledge and education of acoustics and electro-acoustics in their relationship to architecture. Sergio also serves as Director of WSDG International Relations, and contributes to the promotion and acquisition of new business worldwide.



Joshua Morris
Partner / Chief Operating Officer
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Joshua Morris graduated from the University of North Carolina in Charlotte with two Degrees, a Bachelor of Arts in Architecture and a Bachelor of Architecture. A love of music has led him to seek a combination of architecture and acoustics, beginning with his thesis on acoustics. Additionally, Josh has been educated in the Suzuki method for violin since age three, making acoustic design a natural choice for a career path. Joshua joined the WSDG team in January of 2005, moving from North Carolina to New York, and quickly settled into a key role as a project manager, designer, to his current status as a partner and COO. He has managed dozens of projects from China to the United States to Germany, and continues to add more skills to his design vocabulary each day, while refining his already well developed practice as a luthier.



Dirk Noy
Partner / Director of Applied Science and Engineering
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Dirk Noy, M.Sc. Physics, has a Diploma in Experimental Solid State Physics from the University of Basel, Switzerland and graduated from Full Sail Center for the Recording Arts, Orlando, USA, where he was one of John Storyk's students. After joining WSDG in early 1997 Dirk now heads the WSDG Europe office in Basel, Switzerland. Dirk has extensive experience in applied mathematics, acoustical measurement and calculation techniques, audio engineering, systems design and all facets of Information Technologies. His language abilities include German, Dutch, French and English. As a publishing member of the Audio Engineering Society (AES) and the Swiss Acoustical Society (SGA) he is a frequent lecturer at trade conventions, recording colleges, as well as architectural education institutions.



Silvia Campos Ulloa Molho

Partner / Art Director

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An audio/video industry professional since 1987, Silvia Molho has developed striking interior designs for an international client base ranging from luxury homes to high-end recording studios and state-of-the-art educational complexes. A graduate of the Bellas Artes University in Lima, Peru and Visual Anthropology in UBA, Buenos Aires. Silvia has served as a producer on several video and film productions and documentaries in Peru, Paraguay and Argentina. Her areas of expertise include graphic design and art direction. As a long-time partner in WSDG, she is a leader (with founding partner Beth Walters) of the firm's global graphic design team. Since joining the firm in 1994 she has represented WSDG in Latin America and served as interior designer and supervisor for countless high-end design projects including world class facilities.



Gabriel Hauser

Partner / Director of Acoustics

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Gabriel Hauser graduated with a degree in electrical engineering from the Swiss Federal Institute of Technology, Zurich, in 2000. Analog and digital signal processing and acoustics were his primary focus. His Thesis was titled "Reduction of Nonlinear Distortion of Loudspeakers employing Volterra Filters" (at Studer Professional AG, Switzerland). After joining the WSDG New York office, Gabriel returned to Switzerland to become a founding partner at WSDG Europe. His specialties include Acoustical Simulation and Measurement, complex Acoustical Analysis and Methodology as well as Architectural Acoustics. During his studies Gabriel was a founding member of Abbaxx Soundsystems Ltd., whose principal field of work is sound reinforcement and loudspeaker technology. While with Abbaxx, he designed and developed sound systems for concert use, churches and installations. He writes articles for audio magazines and continues to be a performing musician.



Prof. Dr. Wolfgang Ahnert

Partner / Director of ADA/AMC, a WSDG Company

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After studying Technical Acoustics at the Technical University of Dresden and passing one year at the Moscow State University (Lomonossov) for a complementary course, Dr. Ahnert wrote his doctoral thesis and attained a Ph.D. In 1990 he founded the Engineering Office ADA – Acoustic Design Ahnert with at first two colleagues at the site of the former governmental Institute. In January 1993 the Office moved to a new location at the Berliner 'Innovations-und Gründerzentrum' (Berlin Innovation and Founders' Center) – BIG – which was established in an abandoned industrial area, formerly used by AEG, in Berlin's Municipal District of Wedding. Dr. Ahnert is a sought-after author, contributor, educator and lecturer at professional conferences and tradeshows and has authored countless white papers on subject matters such as acoustical simulation processes, measurement technology, electro-acoustical theory and applications.



Matthew Ballos
Partner / Director of Architectural Technology
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Mid-Hudson Valley, New York native Matt Ballos earned dual degrees in Architecture and Construction Management. A background in civil engineering and a lifelong love of construction and design has enabled Matt to quickly become a valuable member of WSDG's design and production team, currently as a project designer and manager. Matt's love of design extends from his drawing skills to his personal workshop where he spends his free time building furniture and fabricating functional pieces of art. He believes his experiences at WSDG coupled with having grown up on construction sites provides him with a functional knowledge of what can and can't be built, and enables him to apply his design talents in creating uniquely useful, beautiful and acoustically accurate spaces. WSDG is proud of Matt's continued affiliation with the US Air Force Reserve as an engineering specialist.



Tobias Behrens
Electrical Engineer / Project Engineer
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Tobias Behrens graduated in electrical engineering at the Technical University of Berlin in 1994 with a focus on technical acoustics and communications technologies. He then performed post graduate acoustic research on psychoacoustic topics at ITA/Technical University, Berlin and ISVR / Southampton University, UK. At ADA-AMC (A WSDG Company) Tobias Behrens is working as a Project Engineer on room acoustics, electro acoustics and architectural acoustics, as well as executing and analyzing room acoustical and electro acoustical measurements. He brings with him 20 years of experience in professional planning and consulting on national and international projects. Room acoustic simulation and analysis, laboratory and field measurements, sound absorber technologies and electronic enhancement systems are main components of his recent work. During the last 24 years he coauthored over 15 papers and contributions for DAGA, ASA and ICA.



Jonathan Bickoff
Partner / Project Engineer
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Jonathan earned his B.S. in Music Technology and Business from Mercy College in 2009. He then went on to develop his skills in applied acoustics mixing front of house for live shows, AV for corporate functions, and mixing for commercials, TV, and film. Jonathan brings this real world experience and enthusiasm to the Highland, NY acoustics team. When not arguing about music and headphones, Jonathan is busy playing cello, road cycling, hiking, stand-up paddle boarding and practicing yoga.



Will Brown
Partner / Project Manager
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Will earned his B.S. in Mechanical Engineering from Columbia University and his B.S. in Applied Physics from Providence College. Once out of school, he spent 6 years in the manufacturing and construction industry designing and building highly specialized shielded door systems for applications in the aerospace, defense, energy, and entertainment industries. Will brings this design knowledge and expertise as well as a love for analog music production to the WSDG Highland NY team in the areas of Project Management and Engineering.



Victor Cañellas (Weike) Representative

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Acousmatic Sinologist Víctor Cañellas (Weike) has been a successful acoustician/sound researcher in China since 2003. His expertise in developing acoustic interfaces for visual arts in performance venues has contributed to such demanding assignments as the Park19 and LOFT345 clubs in Guangzhou and for the popular 2007 La Fura dels Baus 'Imperium' premiere in Beijing. His expertise in acoustic treatments was enriched by serving as a representative for Jocavi Acoustic Panels and Soundbox Acoustic Tech fixed architectural acoustic systems. Victor studied Social Science at Universitat de Barcelona, Asian Studies at Universitat Autonoma de Barcelona Center of International and Intercultural Studies, and attended Chinese Language Studies in Sun Yat Sen University in Guangzhou. His wide-knowledge of 'Eastern thought and logics' provide a solid foundation for him in his new role as a WSDG representative.



Michael Chollet
Partner / Director of Systems
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Michael Chollet's first activities in the professional audio field were the development of loudspeaker systems and electronics. After graduation from High School with a focus on engineering he started self education in the fields of acoustical measurements, DSP programming, computer and network technology. He augmented this know-how foundation with advanced training courses in acoustics and environmental noise protection. At WSDG Michael has been in charge of different studio construction projects and large scale Installations, as the Swiss national broadcaster TSR in Geneva. Additional specialties include system integration, DSP programming and research on advanced problem solving. His language skills include German, French and English.



Judy Elliot-Brown
Senior Systems Designer Engineer

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Judy Elliott-Brown has been a professional audio engineer since 1977, with a background in live touring, remote recording, music recording, sound for television, studio maintenance and systems design. She has been responsible for the systems infrastructure design and installation of over 100 projects worldwide. Projects she has worked on include world class audio recording studios, media/broadcast production studios, educational facilities and multi-use performance spaces. Judy is a full-time systems design engineer and project manager, and has been responsible for systems design and installation on many WSDG projects for over 25 years. Judy is a member of the Audio Engineering Society (AES) and National Academy of Recording Arts and Sciences (NARAS). Additionally, she has worked on several Grammy nominated albums and was a sound engineer for a Sci-Fi cartoon show.



Enno Finder
Project Engineer
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Enno Finder studied Electrical Engineering at the Technical University Berlin, Germany, with a focus on Acoustics by Michael Möser. Having started 1995 as an intern at ADA Acoustic Design Ahnert, he was asked to join the company as an AV project consultant, starting at designing electro acoustical systems for major train stations, airports, working on large Houses of Worship such as the Berlin Cathedral, Parliament Buildings, up to large venue design (e.g. Berlin O2 World, Olympic Stadium). Enno Finder brings with him a rich musical experience in classical vocal music, having taken up singing as a little boy, he currently is an active member of several Berlin based vocal choirs and ensembles.



Flavio Gallacchi
Project Engineer
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Flavio Gallacchi received his diploma as an audio engineer from the audio engineering course ffton in Zurich, Switzerland. His main focus lies on performing room-acoustical and electro-acoustical measurements, their analysis and the subsequent process of optimization, which involves room-acoustics software and programming audio DPS. He is also busy working on the technical design and integration of audio and video-systems in WSDG Projects. Before joining WSDG, Flavio has been working as a live mixing engineer and as a technician in a local Hi-Fi retail store where he trained his ears and specialized in calibrating turntables. He has been owner of a drum school where he also was an instructor after graduating from the Los Angeles Music Academy.



Pietro Gennenzi Project Manager / Project Engineer

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After studying electrical engineering at the Ecole Centrale d'Electronique in Paris, Pietro moved to the US to pursue his passion for music and graduate from Berklee College of Music with a degree in Contemporary Writing and Production. Being part of several musical projects as a bass player, he spent countless hours in recording studios and concert venues around the world. Inspired by the variety and uniqueness of the spaces and places he experienced, his growing interest for architecture and design led him to WSDG in 2019. Since then he has been involved in acoustic prediction and analysis, measurement and modelling, as well as room tuning and calibration.



Leandro Kirjner
Project Manager
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Leandro Kirjner is a young professional from Argentina, graduated from Buenos Aires University (UBA) with Master of Architecture degree. In 2012 he joined to the WSDG Latin team, since that moment he has been involved in several projects around the world, being the project manager and in charge of the production for the construction documentation and part of the Audio / Video team. As one of the Architectural Team member, he decided to do a Lighting Design grade to improve his knowledge and let him to be in charge of the most of the lighting projects that the Latin Office had. Also, he did a BIM Manager grade to continue performing his skills in order to give an efficiencies approach on each project.



Romina Larregina
Partner / Director of Production

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Romina Larregina graduated from the University of Palermo, Buenos Aires, with a degree in Architecture. Upon graduating, Romina took her skills to an engineering office, while teaching English and helping with the set up of trade shows. She apprenticed at WSDG – Latin for several years before moving to the United States in 1999, to become an integral member and now partner at WSDG (New York). Her multi-lingual skills in English, Spanish and Portuguese have been instrumental in leading numerous international projects. Romina is the Latin liaison, as well as project management and production coordinator for the New York office. She loves to travel and enjoys the day-to-day client interaction.



Alan Machado Project Manager alan.machado@wsdg.com

Alan graduated as an Architect and Urban Planner from FUMEC University, Belo Horizonte in 2013. Since then he has worked in many different areas of architecture, going from house and building modeling and executive project to markets and shopping malls. Alan has a deep connection with music, he is a passionate listener and has been playing the electric guitar as a hobby since the early 2000s. Working at WSDG since 2016, he discovered a new way to combine his passion for music and architecture and work with them for a common objective.



Breno Magalhães
Architect / Project Manager
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Breno graduated as an Architect and Urban Planner from Federal University of Minas Gerais (UFMG) in 2010 and as a Product Designer from State University of Minas Gerais (UEMG) in 2006, both in Belo Horizonte. His interest in music and acoustics grew during his university period. Breno enjoys playing the guitar and he turned this hobby into his Product Design final graduation project, by developing an electric guitar with an innovative pickup swapping system for studio applications. The same thing happened in his Architect and Urban Planner graduation project when he designed a new music Arena for Belo Horizonte. At this point he was already a WSDG member. Also as a Product Design student, Breno took part in several research groups related to furniture design focused on manufacture optimization, ergonomics and sustainability. He was a partner in a design office with the same approach. Breno has worked as a Project Manager and Designer at WSDG Brazil office since 2008.



Robert Margouleff
Project Engineer

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Grammy-winning engineer/producer/studio-owner Robert Margouleff brings 40+ years of hands on experience in his role with WSDG. Beyond his long-time collaboration with Stevie Wonder, capped by a Best Engineered Album Grammy for *Innervisions* (shared with Malcolm Cecil,) Margouleff's producer/ engineer credits include work with Devo, Billy Preston, Depeche Mode, Jeff Beck, The Doobie Brothers, Quincy Jones, and many other stellar artists. After building his Hollywood-based Mi Casa Multimedia Studios, Margouleff became a leader in surround audio for home theater, and provided 5.1 and 7.1 mixing and mastering for DVD and Blu-ray releases and restorations for such films as: *The Sound Of Music*, six *James Bond* features, *Rush Hour* and the complete *Lord Of The Rings* cycle. Margouleff will be involved in all aspects of WSDG's west coast projects. He will consult with new clients on details ranging from site selection to design, construction, technology, acoustic treatments and systems integration.



David Molho
Project Engineer
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David graduated Magna Cum Laude as a Music Production & Engineering major from Berklee College of Music in 2011. Since then he has been working as an engineer, producer and composer for world renowned record labels in his Groovyland Studios in the city of Miami. After being involved with WSDG for several years, in 2018 he switched his role to become a Project Engineer in the area of acoustics, and a project manager for several projects ranging from recording studios to luxury buildings, performance venues, and corporate. Due to his ability in audio engineering, David is in charge of performing room calibration and commissioning services for projects around the globe.



Adam Paiva
Project Manager, Acoustic Engineer
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Adam earned his B.S. in Architectural Engineering with a Structural Concentration from Drexel University in 2007. A love of audiophilia combined with a passion for architecture, design, and engineering led him to the field of acoustics. He developed his knowledge in the acoustics and isolation fields over 15 years, working on a variety of projects ranging from large corporate office fit-outs to boutique fitness clubs to concert halls. He also spent several years working on the client side in the design team of an international high-end fitness brand. Adam brings his expertise in architectural acoustics, isolation, and mechanical systems design to all our projects. Adam is a member of both ASA and INCE.



Gustavo Perezlindo Systems Engineer gustavo.perezlindo@wsdg.com

Gustavo Perezlindo has ventured from a young age in the development of technical solutions for live shows, applying his capabilities of Electronic Engineering, Architecture and Production, allowing him to face the integral production of shows in a wide spectrum, ranging from theatrical and rigging systems design, production, and technical direction, from the initial concept to the final reality.



Esther Roger Project Manager esther.roger@wsdg.com

Esther Roger is a South Florida native which graduated from FIU (Florida International University) with a Master of Architecture degree, and from FAMU (Florida A&M University) with a Bachelor of Science in Architectural Studies. As a young professional her career began with her love for humanitarian work as she began familiarizing herself with construction as an AmeriCorps worker at Habitat of Humanity in the construction division.

Esther joined the WSDG team in May of 2017 and works as a Project Manager and a 3 Dimensional Visual Creator in the Technical Interior Department.



Bob Skye
Project Engineer
bob.skye@wsdq.com

Bob is a leader in electro/acoustic design, recording studio construction and, a Grammy-winning engineer with Gold and Platinum credits, has joined the Walters-Storyk Design Group. As WSDG's west coast representative and project engineer, Skye shoulders a host of responsibilities ranging from new client development and overall business management to hands-on project design and construction supervision. He is a member of Audio Engineering Society, American College of Forensic Examiners and American Board of Recorded Evidence.



Laura Stillwell
Administration, Financial
laura.stillwell@wsdg.com

A skilled tactical and strategic planner, diplomatic problem solver and meticulous Bookkeeper, Laura Stillwell encapsulates all the prerequisites to meet the multitudinous requirements of WSDG's wide-ranging corporate family. After earning a Bachelor of Fine Arts, Photography Degree from Western Carolina University, Laura began a nine-year residence as Administrative/Executive Assistant for a privately owned regional utility company in Sylva, NC. Moving to Highland in 2017 she assumed Bookkeeper duties at Kimlin Energy Services in 2018. An intriguing Help Wanted ad from neighboring WSDG prompted her to interview and she was quickly hired. Laura easily adapted to WSDG's "Fast paced and frequently fascinating operation and celebrity client base."



Mariana E. Varon Project Manager

mariana.varon@wsdg.com

Mariana studied architecture at the UBA (Universidad Nacional de Buenos Aires / University of Buenos Aires) and graduated in 1995. Along with her MBA in Architectural Design at FADU (UBA) she continued her architecture studies at Universidad Torcuato Di Tella. From 2004 to 2011 she worked for WSDG Latin, being the project manager of many projects and in charge of the production of the construction documentation. In 2011, she created her own Architectural Firm: Mvaron Arch. & Assoc., working on Steel Framing projects and dry-wall construction. Mariana has been involved as a project manager with several architectural firms, including Clorindo Testa, Roberto Frangella and Justo Solsona Arquitectos. Her work led her to win several awards and mentions during her career.



Marc Viadiu
Project Engineer
marc.viadiu@wsdg.com

Marc studied Technical Engineering in Sound and Image and Higher Engineering in Electronics at the University Ramon Llull in Barcelona, Spain. After graduation, Marc worked in an industrial acoustics company in Barcelona. Later he started his own company of acoustic engineering and distribution of acoustic and audio products. At the beginning of 2009, Marc undertook a six month internship at the WSDG New York office preparing drawings, taking acoustical measurements and performing room acoustical calculations. Upon returning to Spain in 2010, he started a new company of designing acoustical products and opening the new WSDG office in Spain.



Nahuel Zaccagnino
Senior Project Engineer
nahuel.zaccagnino@wsdg.com

Nahuel received his degree in Electronic Arts from UNTreF and has worked as a professional audio engineer and musician based out of Buenos Aires ever since. His keen sensibilities for the crossroads of music and technology have made him an in-demand audio integrator, consultant, and tech support professional for many recording studios, broadcast facilities, and live event venues. Nahuel is a systems engineer at WSDG and has utilized his broad experience in these areas to develop the AV System Design department across many challenging projects.

Professional References

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Taylor Swift, Lana Del Rey (Contact information on request)

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Relevant Experience

WSDG (Walters-Storyk Design Group) and its principals have an extensive body of clients in the fields of architectural acoustic consulting, facility master planning, and media systems engineering. A list of projects that supports our company profile and credentials follows. For a more extensive client list, please see www.wsdg.com. Our experience spans over 50 years in architectural design, internal room acoustics, advanced noise isolation, and systems design required for acoustically sensitive projects of all sizes. Moreover, WSDG has the ability to work seamlessly within a team design environment.

We have assembled a list of projects that underscore our experience with multiple project types:

Alan May Listening Room & Home Theater

Dallas, USA

The Palace Residence

Huber Music Room Carlsbad, USA

Bal Harbour, USA

Jungle City Studios (Mincieli, Keys)

New York City, USA

KKL Concert Hall Luzern, Switzerland

Aura Club Events Hall Zurich, Switzerland

Rio 2016 – Barra Olympic Park

Rio de Janeiro, Brazil

Berklee College of Music - 160 Mass Ave

Boston, USA

Sonastério Studios

Belo Horizonte, Brazil

CUEC - UNAM Mexico City, Mexico

Groovyland Studios North Miami Beach, USA Casa FOA

Buenos Aires, Argentina

Casa Ezeiza

Buenos Aires, Argentina

Ribeiro Home Theater

Belo Horizonte, Brazil

Jazz at Lincoln Center

New York, USA

Flughafenkopf – Zurich Airport

Zurich, Switzerland

The Ultimate Home Theater

Belo Horizonte, Brazil

The Metroplex at KITEC

Hong Kong, China

ESPN Digital Center 2

Bristol, USA

Carter Burwell

Amagansett, USA

Inhotim Theater Brumadinho, Brazil

Doha Oasis

Doha, Qatar

Casa Cor Home Cinema

Belo Horizonte, Brazil

Morro do Chapeu

Belo Horizonte, Brazil

Tomas Braun

Buenos Aires, Argentina

Fontela Residence

Buenos Aires, Argentina

VSL Synchron Stage

Vienna, Austria

El Porteño

Buenos Aires, Argentina

Electric Lady Studios

New York, USA

PepsiCo Content Studio

New York, USA

UCLA Herb Alpert - Lani Hall

Los Angeles, USA

Spotify at Mateo

Los Angeles, USA

Bedford Playhouse

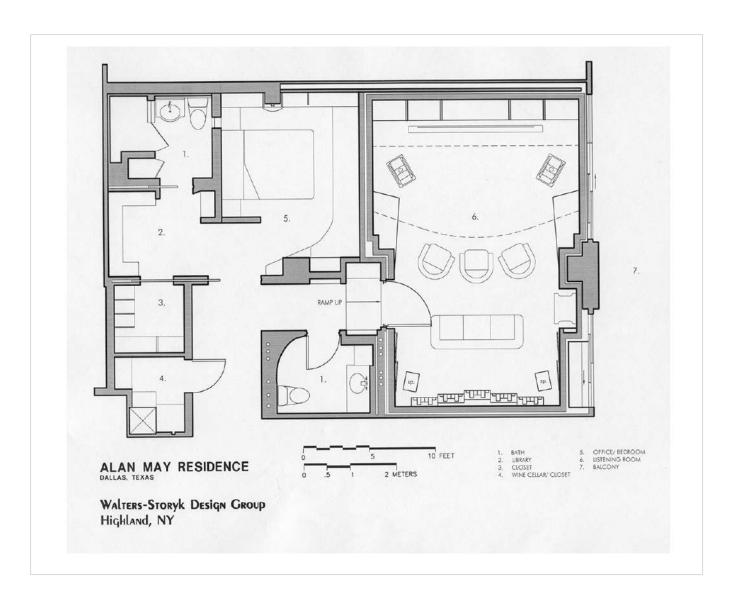
Bedford, USA

Alan May Listening Room & Home Theater - Dallas, USA

"After nearly 50 years of enjoying classical music, four years ago I decided to build as close to a world-class Listening Room/Home Theater as I could accommodate in my existing Dallas hi-rise condominium apartment. It took about a year to select the designers, 15 months to design, and another 15 months to build. There was no budget limitation."

"Before the room was designed, John Storyk took a guitar amplifier and blasted the loudest sound he possibly could from the area in which the room was to be constructed. He then went to the neighbor's apartments and measured how much sound was getting through. Using this data, he designed the room so that no matter how much sound was being produced, the neighbors would hear nothing. Since the room was completed there has never been a single complaint from any neighbor. Boundary sound transfer ratings in excess of STC 70 were obtained from the fully isolated room construction." Alan May said.

The equipment of the room includes: front mains Wilson X-1 Grand Slamm Series III, L&R rear surrounds Wilson WATT Puppys Series 6.0, Front Center Wilson WATCH-Center Subwoofer Wilson WATCH Dog powered subwoofer, A pair of Krell Full Power Balanced 650Mc amplifiers w/custom 50-amp plugs, Three Krell Full Power Balanced 350Mc amplifiers, etc.



Alan May Listening Room & Home Theater - Dallas, USA

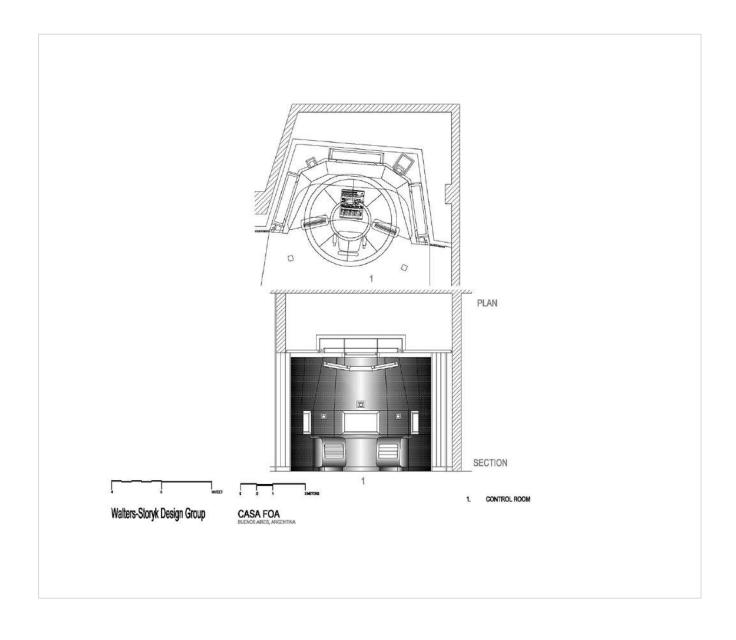




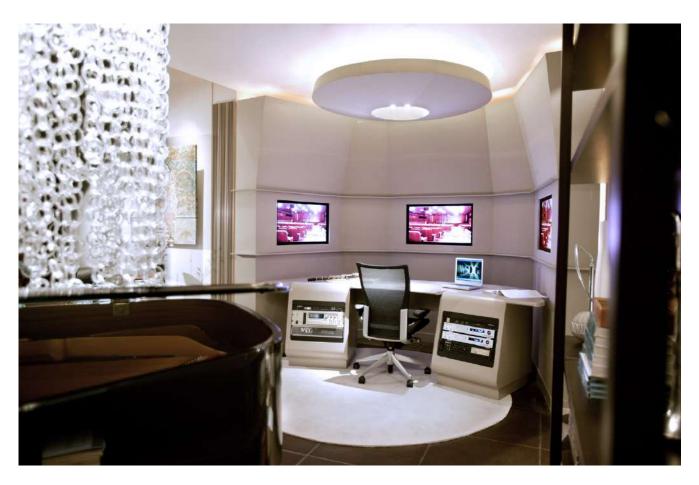
Casa FOA - Buenos Aires, Argentina

Once a year, in Buenos Aires, Argentina, the most respected architects and interior designers are gathered for the greatest design show called Casa Foa, along the months of October and November. Each of them present a different room designed specifically for the occasion.

For the first time, WSDG is responsible for the acoustical quality of a space. We are helping a very respected Interior Designer, Diana Gradel, to bring the appropriate sound balance to the environment she has created, named: "Space for a gourmet-musician – Exquisites sounds and flavors". The challenge was to create his working place inside his house. We made an audio-video-broadcast control and developed an acoustic space where the technology combines with the shapes, the light, the colors and the noble materials, creating a kind of a bridge for our senses, becoming a unique and personal experience.



Casa FOA - Buenos Aires, Argentina





Casa Cor Home Cinema - Belo Horizonte, Brazil

Casa Cor is the most recognized and respected interior design show in Brazil. Once a year, 10 top Brazilian cities host the event that assembles the most respected architects and interior design professionals in the country. Usually one or two houses get to be remodeled and each professional gets to design a different room in the house.

The dedicated Home Cinema, was awarded the best leisure and entertainment environment, and received two mentions of honor: for best project and the other for sustainability, because of the materials used at the acoustic treatment.

The spaced was acoustically designed with the same technology used for professional studios, including a speaker wall based on the THX specifications for Movie Theaters. The acoustical treatments were carefully studied to provide the most adequate frequency and time response for the incredible sound produced by the 7.1 Adam speakers (3 S5's at the front (L,C,R), two Sub 24 and 4 S2X for the surrounds.

Using the same symmetry of real cinema rooms, hall, arc of light on the walls, seats and tables, the space uses the latest in technology to gather friends and have enjoyed in great stile.



Casa Cor Home Cinema - Belo Horizonte, Brazil





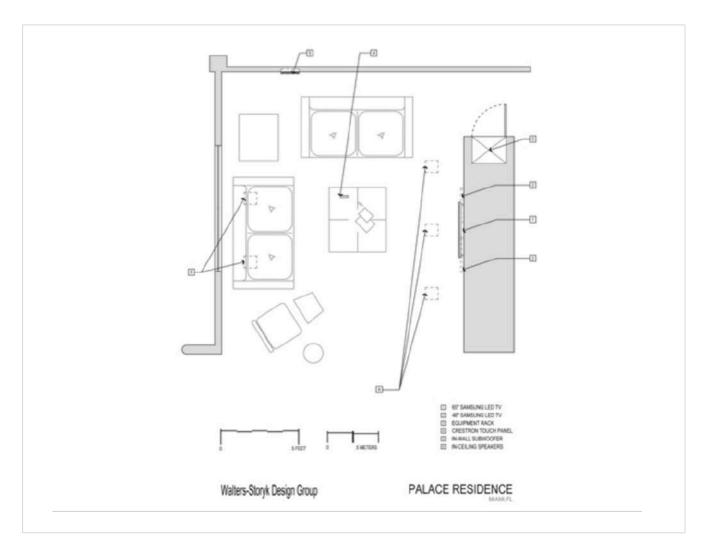
The Palace Residence - Bal Harbour, USA

This project required design and installation of a complete A/V system, custom lighting and shade system, fully automated throughout the entire residence.

The 3,690 sq. ft. unit located at the luxurious The Palace in Bal Harbour, FL, includes a whole house full automation system controlled by Crestron. The Lutron Lighting system, security system, HVAC, audio, video and motorized shades all can be can be controlled by touch-panels and keypads. The centralized rack is placed neatly at the edge of a thick room divider, which is additionally utilized as the primary wall for the media room.

The Media Room consists of three Samsung LED TV monitors arranged in an upside down pyramid schematic. Each TV can display different channel or movies and the audio can be switch with the TP depending on the user preference. The audio is a 5.1 system with in-ceiling speakers and an in-wall sub. In-ceiling speakers were also installed throughout the residence creating different audio zones, including the terrace controlled by the user. Video was also installed in every room of the residence.

The Shading, lighting and HVAC system are all automated and program to work based on the time of year and outside temperature, making this a very environmentally friendly residence



The Palace Residence - Bal Harbour, USA



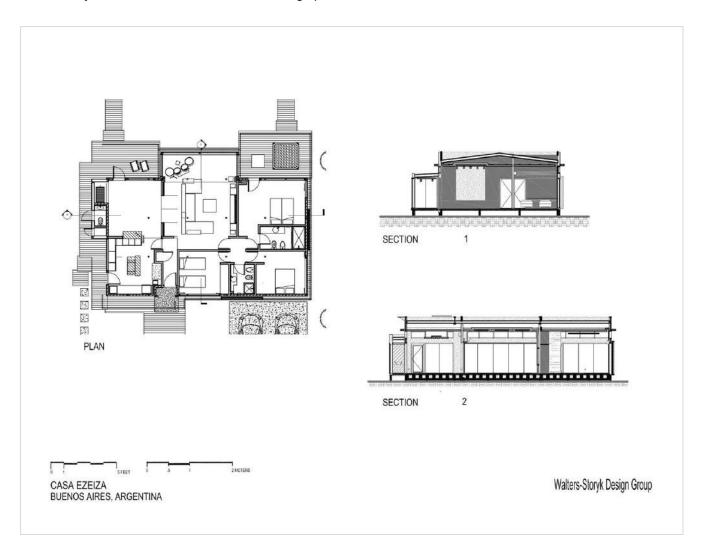


Casa Ezeiza - Buenos Aires, Argentina

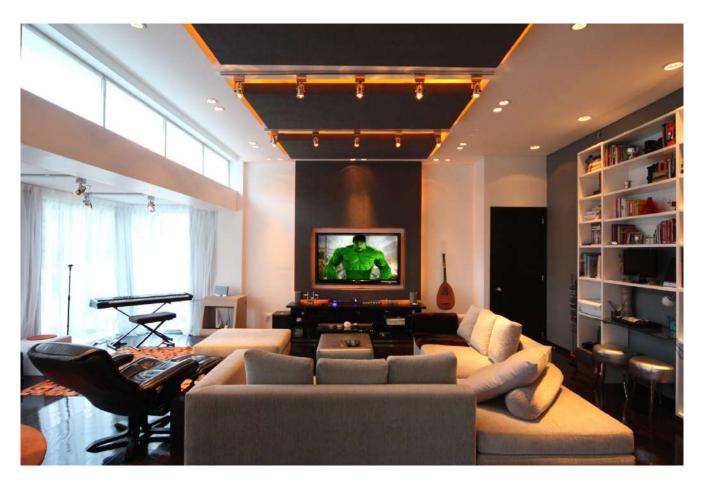
Casa Ezeiza is located in the golf area of a country club in Ezeiza, in the outskirts of Buenos Aires near the city's international airport. The goal was to build a home suited to the needs and hobbies of the family members as well as a recording studio/rehearsal room/home theater. With the goal of keeping construction costs down, other less traditional methods were considered. Ultimately the projected building size was reduced while simultaneously increasing its flexibility.

Thanks to the use of steel framing, the construction process was speedy and economical. The house was built one meter above the street level, to create further isolation. Double glass windows were employed to guarantee ideal acoustic and thermal isolation, consistent with sustainable architecture, and positioned for maximum energy efficiency and natural lighting benefits. The interior design focused on creating a comfortable, modern living space. Musical instruments and recording technology are displayed as works of art.

The house features automated control over the lighting, audio and video systems in the living room area. The audio system is also automated throughout the dining room, kitchen, garden and pool area. The house can bet set to a "party" mode, where all the rooms play the same music at once, and there is also a "show" mode. The audio and lighting are linked to pre-programmed scenes which create a special ambiance for every situation. The kitchen and dining area are unified with a 'loft-like' design, with large windows allowing golf course views. The bedrooms are graced with acoustical clouds and indirect lighting. Service areas are large and comfortable, and hallways were eliminated to maximize living space.



Casa Ezeiza - Buenos Aires, Argentina





Morro do Chapeu Residence - Belo Horizonte, Brazil

The architectural and acoustical design devised by WSDG for the villa's home theater and other living spaces leaned on solution suggested by the firms' professional recording studio expertise. Inhibiting sound from leaking into or out of sensitive listening areas such as recording studio live and control rooms is a WSDG specialty. The enclosed pool and spa area, however presented more troubling waters. Particularly challenging was the need for the acoustical treatments to unobtrusively compliment the custom finishes.

WSDG also designed a spacious (but cozy) home theater, which integrates the highest levels of audio and video technology. Recording studio-level, acoustical wall and ceiling treatments were engaged to provide superb frequency and time response. Bedrooms and a home office also benefitted from acoustical ceiling clouds, designed to control the reverberation time over a broad sound spectrum enabling each room's individual 5.1 surround sound and HD video system to deliver maximum performance quality.

The swimming pool and spa area, however, presented the project's primary acoustic challenge. The large area includes a gym, Jacuzzi and wet bar, surrounded by three walls of double height windows and a movable glass sealing system to maintain interior warmth in the cool, mountain region evenings. Again, professional recording studio design techniques provided solutions. Each window, including an expansive skylight grid of 20 individual panels was fitted with Acoustical Clearsorber Foil. Imported from Germany, the innovative translucent plastic sheets absorb medium and high frequency reverberation to resolve sonic reflection issues. Clearsorber also serves as a full room UV ray filtering system! Full transparency insures unimpeded views and, conversations free of traditional pool house reverberation.



Morro do Chapeu Residence - Belo Horizonte, Brazil



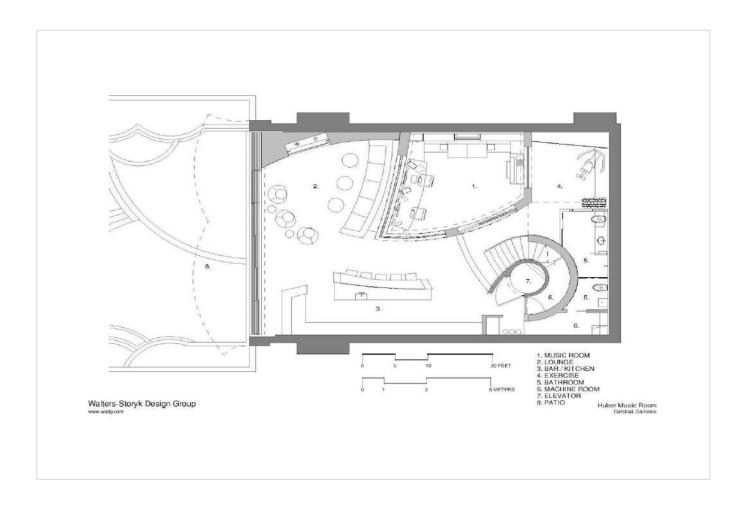


Huber Music Room - Carlsbad, USA

An inspirational view of the Pacific coastline melds with flawless acoustics to establish the ultimate creative environment for musician/businessman, Chris Huber's personal studio. Music has always been an integral part of Huber's lifestyle, and when he bought a family home in Carlsbad, CA, he knew exactly where the studio would live. A primary aesthetic concern was to retain the panoramic ocean view through the expansive ground floor windows. Huber discovered WSDG while researching studio designers. Diante Do Trono, a luxurious Brazilian studio with a sweeping view into its live room through an enormous 'Cinemascope-style', control room window embodied exactly the look he sought for his own studio.

WSDG worked with local contractors to ensure the flawless translation of drawing to completed studio. The client was committed to high-end finishes, and the local architect had done an excellent job on the aesthetic look with extensive use of wood and glass. Though on paper it looked like an acoustic nightmare sophisticated acoustic modeling ensured flawless room acoustics with the incorporation of high-level absorptive elements including perforated wood wall treatments and 'acoustic ceiling plaster' which looks reflective but is actually highly efficient low frequency absorption. The Huber Music Room is a textbook example of an ideally realized acoustic balance.

While its view is an irrefutable "eye catcher," the Huber Music Room is a serious working studio, constructed with complete room-within-room isolation. WSDG insured the client's ability to pump the volume up to twelve with a high comfort level within the studio and, no sound leakage to the rest of the house. And, the isolation works both ways: they have experienced zero family related noise intrusion during their recording sessions.



Huber Music Room - Carlsbad, USA





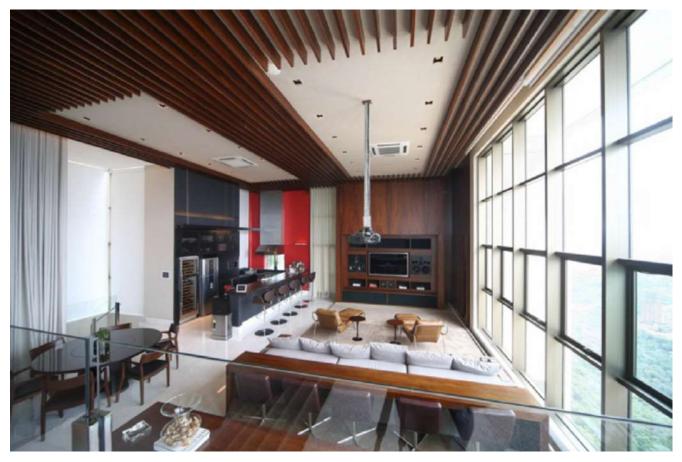
Ribeiro Home Theater - Belo Horizonte, Brazil

Preparing to move to a palatial new penthouse in Belo Horizonte's prestigious Belvedere section, our client decided on a substantial upgrade to the home theater built in his original apartment. Recognizing the need for high level technology and meticulous acoustic treatments to provide exceptional sound AND eliminate noise leaking into (or out of) his home, he reached out to WSDG Brazil for technology recommendations, design, and construction supervision. Beyond concerns for sound intruding to the bedrooms directly beneath his new home theater, he was committed to shielding his neighbors from noise infiltrating the two elevator shafts which service homes on the floors below his in this luxury condominium.

To eliminate sound leakage to the lower level WSDG built a suspended floor over vibration isolators which greatly minimize the transmission of noise from the subwoofers to the residential section of the apartment. High STC acoustical doors, providing over 40dB of isolation were installed to prohibit sound from reaching neighboring apartments via the two elevator shafts. Additionally, cuts were made in the floor in front of the Adam Sub24 subwoofer mounted inside the custom front cabinet, to compensate for their vibration. Adam S2Aspeakers were mounted on the outside wall facing the lap pool. And ambient sound speakers were installed behind the screen to improve sound for a private dinning space.



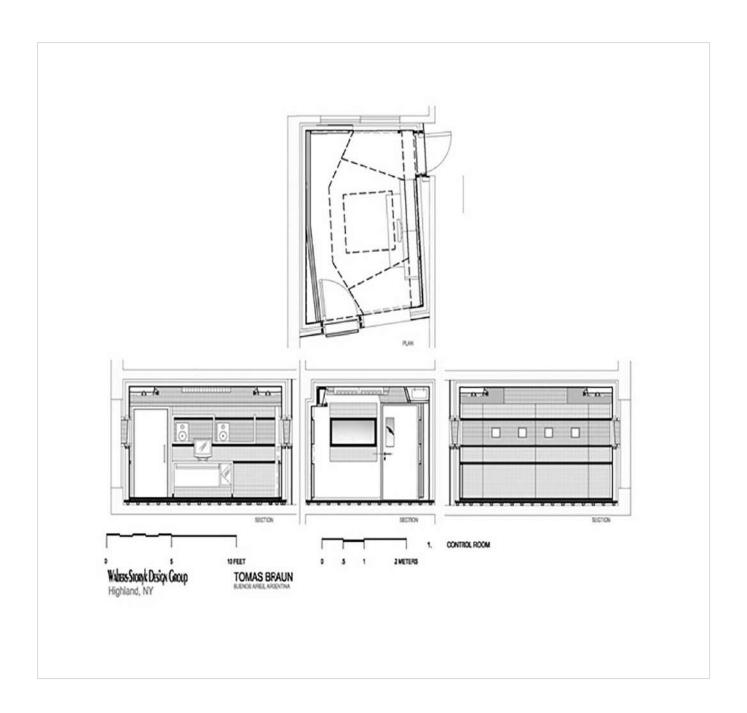
Ribeiro Home Theater - Belo Horizonte, Brazil





Tomas Braun - Buenos Aires, Argentina

Tomás Braun is a young musician that works at the corporative world in Buenos Aires, Argentina. When he decided to move to a new apartment in Palermo neighborhood in Buenos Aires, he wanted to have a space acoustically isolated and audibly perfect in order to be able to develop his passion towards music at any time he wanted.



Tomas Braun - Buenos Aires, Argentina



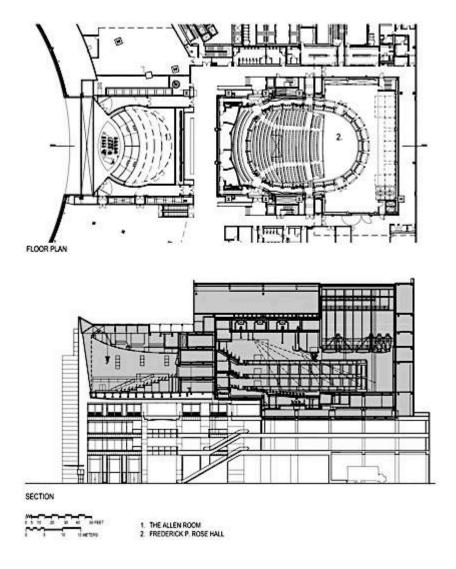


Jazz at Lincoln Center - New York, USA

Jazz at Lincoln Center is one of New York City's premier attractions, housing over 100,000 sq. ft. of performance venues, educational suites and recording/post production facilities.

The Frederick P. Rose Hall project consists of a 1,200-seat concert hall with movable seating towers. The hall can be configured for dance, opera, theater as well as provide an intimate jazz setting by surrounding the musicians with the audience seated on three levels in a stage surround setting. The Allen Room is a 300 - 600 seat performance space with tiered platforms ascending from the stage level to a dance floor with movable tables and chairs. The Irene Diamond Education Center is 3,500 sq. ft. and contains two state-of-the-art education/rehearsal studios.

WSDG, as partners in the Sound of Jazz Consulting Group, worked closely with the architects and Wynton Marsalis to acoustically design the education, rehearsal and recording spaces. The systems integration design for all performance, educational and listening spaces within this facility are linked together for recording and playback. This facility is the world's first performing arts center designed specially for the performance and recording of jazz.



Jazz at Lincoln Center - New York, USA





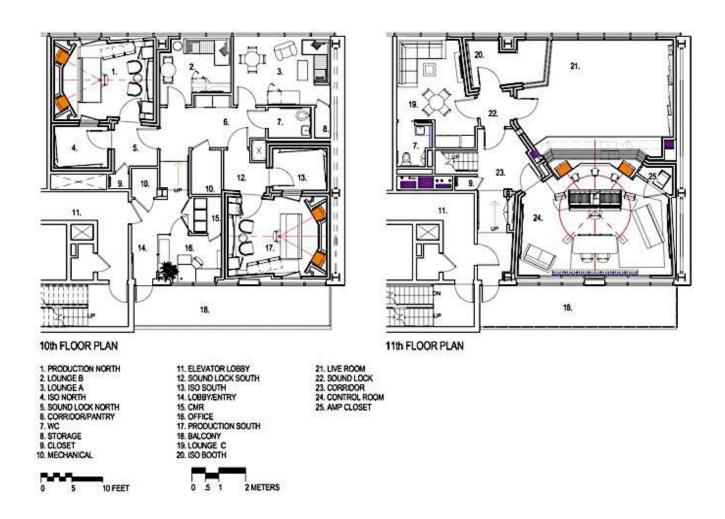
Jungle City Studios (Ann Mincieli, Alicia Keys) - New York, USA

Studio founder/Engineer Ann Mincieli has created Manhattan's first true destination studio, playing host to a wide range of artists such as Alicia Keys, Usher, Coldplay, Jay-Z, and more.

The challenge of creating the signature 11th floor live studio/control room directly above the two 10th floor production suites in a newly constructed lightweight, concrete building presented complex isolation challenges.

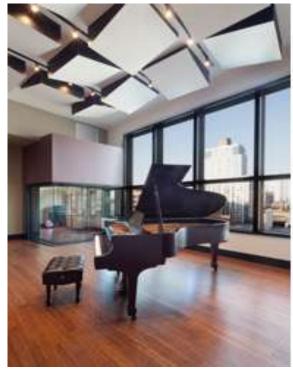
To maximize the impact of the studios' expansive North and South picture windows, WSDG decoupled the custom speakers in an outsized glass speaker baffle. This created a virtual "wall of sound" between the live and control rooms, which provides artists and engineers with the creative advantage of full visual connectivity. Additional isolation details allowed WSDG to install the expansive window wall to expose an impressive view of the Manhattan skyline and the new Highline Park, while maintaining strict isolation requirements for studio use. Test results show an NC rating of 15, which is nearly unparalleled for a studio glass wall application.

"Jungle City is one of the first major projects in our office to take advantage of the Revit 3D modeling program," reports Joshua Morris. "Revit enabled us to maximize the design by analyzing the relationships between the 10th and 11th floors. The program helped us to capitalize on adjacencies, particularly in terms of critical isolation. It also facilitated the elimination of an existing interior staircase which enabled us to capture a critical 120 square foot space which we transformed into a second 10th floor lounge to permit both suites to operate autonomously."



Jungle City Studios (Ann Mincieli, Alicia Keys) - New York, USA







Fontela Residence - Buenos Aires, Argentina

Early on in the process of planning their 3000 sq. ft. dream home in Buenos Aires' upscale suburb of Cañuelas, the owners commissioned WSDG partners Silvia and Sergio Molho to create the entire interior design, from color palette and furniture to a high end, acoustically fine-tuned, home theater. The project provided interior designer Silvia Molho with a rare opportunity to apply her skills to the creation of a fully cohesive internal program, from fabrics through accessories and finishes.

Having known the owners socially, Ms. Molho undertook the ambitious assignment with the advantage of a deep familiarity with their aesthetic tastes. Likewise, her expertise with proprietary WSDG computer design programs, and her experience with LED programmable lighting systems, also played critical roles in her creative process. Pristine white walls throughout the residence provide an ideal blank canvas for the system's infinite color mixing options.

Ms. Molho developed a custom Zebrawood furniture ensemble for the loft-like kitchen, dining room, and living room/home theater, including a handsome sideboard/buffet/bar. A pair of telescoping, mahogany doors, establish a two-way acoustic barrier to inhibit sound leakage into (and out of) the home theater. Suspended from the center of a triple recessed oval in the ceiling above the double height 'great room' entranceway is a one of a kind chandelier. Adorned with fifty-eight individual crystal beaded strands of color programmable LEDs, the iconic fixture provides the template for series of smaller lighting units, which adorn the dining room and home theater. A dramatic mahogany and glass staircase leads to the balcony game/room, two bedrooms (with custom designed furniture), and two ensuite bathrooms. Designed to provide maximum creature comfort and total ease of maintenance the home has already earned the total appreciation of the owners and their guests.



Fontela Residence - Buenos Aires, Argentina





KKL Concert Hall - Luzern, Switzerland

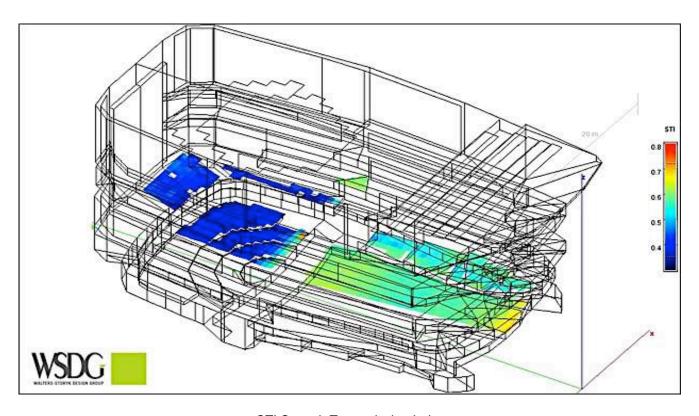
From its opening performance by the Berlin Philharmonic in August 1998, the KKL Luzern Concert Hall was recognized as one of the world's great performance centers. An international landmark, both architecturally and culturally, the complex attracts music fans from around the world to its picturesque lakeside setting. More than a dozen years of constant use – with an impressive yearly booking rate of more than 90% – coupled with significant technological advances prompted the KKL Luzern management group to upgrade its retractable electro acoustical system. WSDG was brought in to accomplish this essential project.

A major issue of this hall is the wide distribution of seats on five vertical levels surrounding three of the four walls, and consequently, the coverage requirements of the electro acoustical sound system. The core of the solution was the realization that the Hall is mainly designed for acoustical sources placed directly on stage. Consequently, the new main loudspeaker system was installed significantly lower and closer to the stage than the original system. The main system is supplemented by elements, which are permanently installed but retractable by motors. The project was divided into three phases: 1) Identification of the requirements, system planning and preparation of specifications; 2) On-site evaluation of a three loudspeaker system candidates; 3) The execution phase of installation planning, supervision and commissioning.

The new sound reinforcement system consists of the Left Right main system with two line arrays of eight d&b V12 units each, suspended above the stage front edge; two additional line arrays for covering each of the balconies with five d&b V12 units; a stage edge in-fill system consisting of two d&b V-Sub and two d&b V12 units each on the right and left and a stage mounted front-fill provided by six d&b E6 units. For events requiring a 360-degree speech reproduction, a retractable center cluster was provided with a front section (consisting of eleven d&b T10 units) and a rear section (consisting of three RCF VSA 2050 digitally controlled column loudspeakers).



KKL Concert Hall - Luzern, Switzerland



STI Speech Transmission Index

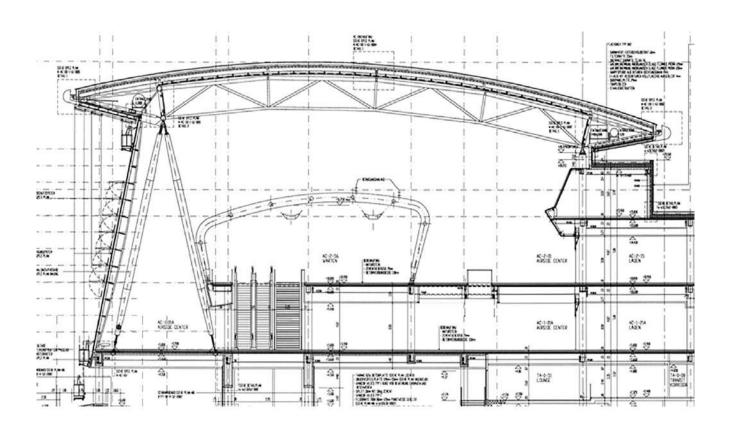


Flughafenkopf - Zurich Airport - Zurich, Switzerland

The Airside Center (A500), located between the existing finger docks A and B, acts as a focal point for travellers at the airport. The project is comprised of the new Airside Center (housing new shops and restaurants), the Underground Skymetro Station which connects the Airside Center to the Dock Midfield, the Arrival Hall just above the Skymetro Station, and various renovations within the A and B terminals. The previously existing buildings are all connected and the Airside Center, with its prominent shape, reflects the new identity of the airport.

WSDG was awarded the full electro-acoustic design of both of these new facilities by the responsible electrical engineering firm, Ernst Basler + Partner AG. WSDG's project scope included creating the electro-acoustic project requirements (e.g. Speech Intelligibility, Sound Pressure Levels, Frequency Responses, Coverage, etc.) in line with the appropriate national and international standards - IEC 60849; electro-acoustic design and optimization with assistance of computer simulations and other means of calculation; specifications and supervision of all driver components to the electro-acoustic system.

The specified system for the large open spaces with high ceilings is based on Duran Audio's Intellivox loudspeakers (a total of 16 units). These line array loudspeakers offer full digital beam steering control and, due to their narrow form factor, can be installed in a nearly invisible manner, meeting the project's architectural requirements. Ancillary specified loudspeakers for support spaces and adjacent areas are highly directional units from Frazier and HK.



Flughafenkopf – Zurich Airport - Zurich, Switzerland

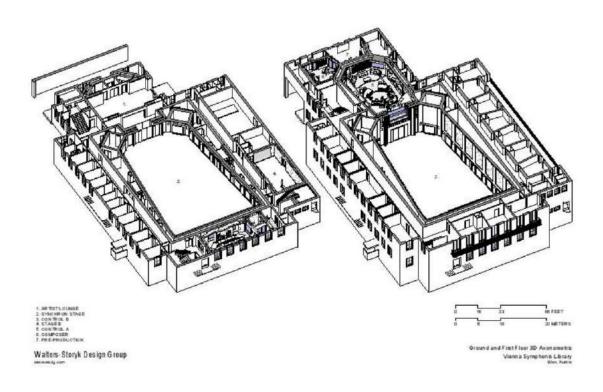




VSL Synchron Stage - Vienna, Austria

A leading developer of orchestral sample libraries and music production software, the VSL Synchron Stage enlisted WSDG to upgrade its historical (circa 1940) scoring stage into a cutting-edge recording facility. The reconfigured complex now provides enhanced acoustics and cutting edge technology for recording film music and, the full spectrum of orchestral and choral works. The 2,000 sq. m. / 21,000 sq. ft., VSL complex represents the World's only scoring stage capable of merging proprietary software innovations with traditional technologies and procedures.

The scope of the multi-year assignment required WSDG's wide-ranging facility planning services. Beginning with documentation of the overall state of the property, WSDG performed room and structural acoustical measurements and schematic conceptual planning. The Design Development Planning stage included interior design by company co-founder, Beth Walters. Construction Documentation was completed in collaboration with local architect, Schneider-Schumacher. The scope of work comprised: The VSL Synchron Stage A Control Room and large Recording Hall; VSL Synchron Stage B CR and Live Room; and the Studio C Edit Room, and Preproduction Suite. WSDG also performed the electro-acoustical system calibration for the audio monitoring system. The VSL Synchron State is distinguished by uniquely future-proof technology, making it a superb recording facility for film music and other orchestral and choral works. A large scale Dante Audio Network with input and output interface connection points at all relevant locations, serves as the facility's network backbone.



VSL Synchron Stage - Vienna, Austria





Aura Club Events Hall - Zurich, Switzerland

Built within the historic 21,000 sq. ft. (2,000 sq. meter) former "Alte Boerse" Zurich Stock Exchange Building, AURA encompasses four distinct settings, a 100 seat gourmet restaurant, an intimate bar, a chic, stylish smokers' lounge and, a 4,800 sq. ft. (450 sq. meter) Events Hall capable of accommodating up to 500 guests. Featuring groundbreaking 360° panoramic video projection and 3D audio systems, the Events Hall is designed to host galas ranging from awards and fashion shows to banquets, weddings and corporate gatherings.

AURA's uniquely flexible, multi-purpose strategy required the amalgamation of state of the art technology, within a highly sophisticated acoustic environment. The video presentation system engages eight, ceiling-mounted, high-performance projectors. Audio distribution employs a total of 80 loudspeakers, (70 of which are skillfully concealed by acoustically transparent, architectural construction). Deploying such a massive arsenal of cutting edge technology within this urbane, 21st Century atmosphere necessitated an extremely flexible and creative systems integration.

Aura's vision for 3D audio presentation required full integration with the venue's video imagery and innovative lighting, to establish a combined central focus for the Events Hall. All three elements were tasked with functioning interactively, to achieve a fully immersive environment capable of completely engaging guests within messaging and/or entertainment programs. WSDG's Basel office was retained to design and coordinate the massive sound isolation planning and construction project to fully adhere to Zurich's stringent city center legislations and limits. Various preset programs were developed to enable a myriad of speaker combinations (all together, or in an infinite range of individual or cluster groupings), depending on need, e.g. live performance, 3D surround sound, etc. Additionally, the 'sweet spot' can be expanded to encompass the entire room, providing a spatial sound experience for all guests.



Aura Club Events Hall - Zurich, Switzerland





The Ultimate Home Theater - Belo Horizonte, Brazil

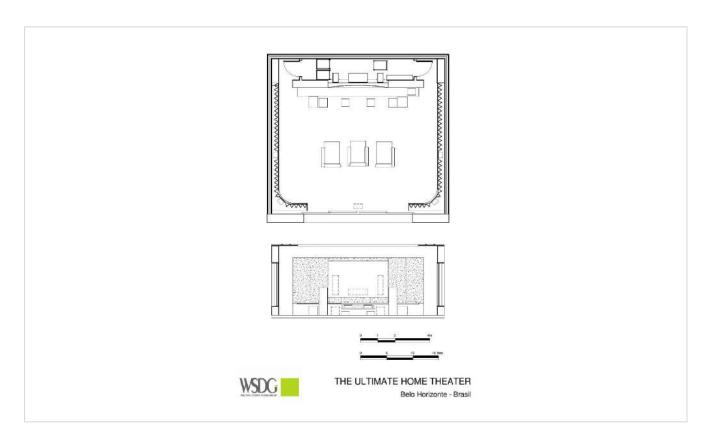
The discriminating owners of this ultra luxurious, 50,000 sq. ft., home situated in an exclusive area of Belo Horizonte, Brazil had two primary requirements for their new home theater. (1) The quintessence of advanced audio and video technology, for unparalleled listening and viewing performance. (2) It was to be housed in the most sumptuous and acoustically pristine environment imaginable. The budgetary guideline was equally straightforward, "only the best is acceptable."

The expansive (950 sq. ft.) home theater features a 16' high ceiling and 15' high, wood framed, acoustically treated, telescoping wooden doors. Recessed within the walls when open, in closed position, these impressive portals provide Acoustic Isolation to and from the neighboring rooms. The sides of these doors that face the room are treated with QRD diffusors to further enhance the listening experience. All these treatments are 'invisible," to guests, as aesthetics were of paramount concern.

To provide a definitive stereo performance AND the ultimate feature film/video surround sound experience, the client stipulated that two distinct audio systems be installed. The main system is a state-of-the-art stereo configuration comprised of free standing Hansen The King E speakers, Classé amplifiers, a Meridian 808 CD player and a Clearaudio Innovation vinyl player. For the ideal feature film and video surround sound experience, a secondary system consisting of 7.4 B&W CT Series speakers for multichannel audio reproduction, was soffit mounted to the acoustical treatments behind the 160" cinemascope perforated screen.



The Ultimate Home Theater - Belo Horizonte, Brazil





El Porteño - Buenos Aires, Argentina

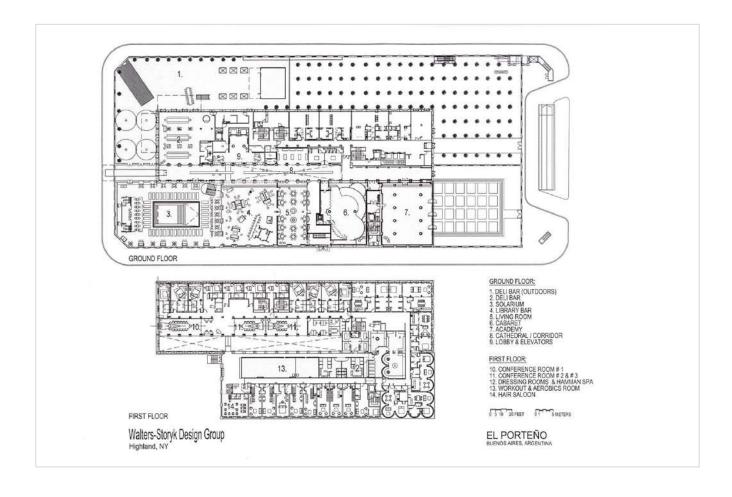
Alan Faena, an audacious argentine entrepreneur, summoned the well known designer Philippe Stark to remodel and redesign an antique building placed at the exclusive area of "Puerto Madero" in Buenos Aires City, Argentina.

Inside the hotel and the apartments building, more than 14 spaces for multiple uses can be found, among which we can appreciate the imposing Cathedral that is the entrance hall and hotel reception; the Living Room and the Cabaret.

The idea was to have an intelligent system of distributed music that could be capable of administrating different musical programs for each of the public spaces, turning the hotel into a gigantic radio station of 14 simultaneous channels, distinguished simultaneously. On the other hand, we specified to the kind of architecture of the project, all the acoustic details for the isolation of the critical sound spaces (Night Club) in relation with the hotel rooms and apartments.

The challenge was to integrate all the acoustic and system integration solutions to the wonderful design team leaded by Philippe Starck.

In order to achieve the acoustic isolation of the critical spaces, we need to use a system of walls, floating ceilings hanging through springs; details that enabled the total isolation and acoustic decouplement among very close spaces.



El Porteño - Buenos Aires, Argentina





Rio 2016 - Barra Olympic Park - Rio de Janeiro, Brazil

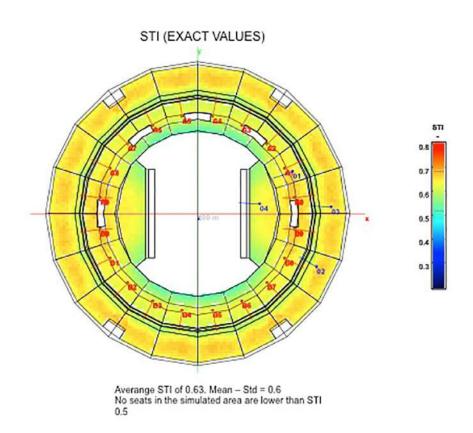
Barra Olympic Park was developed as Rio's primary 2016 Olympic and Paralympic Games competition center. Now it also serves as the city's largest sporting legacy. With an area of 1.18 million sq. m., Olympic Park includes nine sports venues. The Olympic Arena and Maria Lenk Aquatic Centre were built for the Rio 2007 Pan American Games. The seven new stadiums/sports venues are: The Olympic Tennis Centre, Aquatics Stadium and Rio Olympic Velodrome; plus: Olympic Hall 1 (basketball, wheelchair basketball and wheelchair rugby), Olympic Hall 2 (Olympic and Paralympic judo, plus wrestling and bocce), Olympic Hall 3 (taekwondo, fencing, sitting volleyball) and, Olympic Hall 4 (handball and goalball). Work on Olympic Halls 1, 2 and 3, plus the Tennis Centre began earlier.

The developers of this enormous Olympics complex retained WSDG to design the acoustics, sound and video systems for the 3 Tennis Arenas + practice fields (10,000, 5,000 and 3,000 seats); the 18,000 seat Aquatic Arena + Warm Up Pool; and, Audio and Video Systems for the COT Arenas (16,000 seat Basketball, 10,000 seat Judo and 10,000 Wrestling arenas).

All the systems were designed to meet international security standards and, Olympics Committee requirements. WSDG began the process by performing sophisticated electro-acoustic and modeling studies. The findings of these tests and procedures determined multiple solutions for each specific sound system. The primary goal was to insure the highest quality Speech Intelligibility and Sound Pressure levels. WSDG also designed large-scale Video Walls and Score Board screens, as well as Time Clock and Media Displays. Each unit was scaled to provide optimal visibility from every seat in the stands. Every Olympic Park stadium was created with 'future-proofing', for long post-competition service as Brazil's first Olympic Training Centre (OTC) and, South America's premium high performance athletic campus. The campus includes a research lab for nutrition, physiotherapy, sports and clinical medicine.



Rio 2016 – Barra Olympic Park - Rio de Janeiro, Brazil





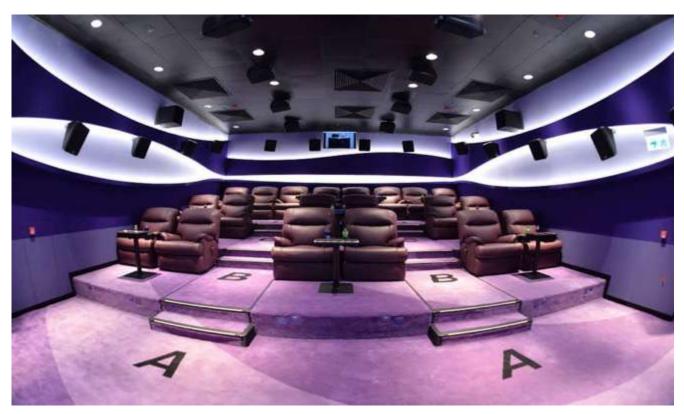
The Metroplex at KITEC - Hong Kong, China

The Metroplex, a luxurious 9 screen multiplex cinema, opened in Hong Kong's iconic Kowloon Bay International Trade & Exhibition Centre. Adjacent to the widely popular Star Hall, scene of many major international concerts, The Metroplex is an investment property of Hopewell Holdings Limited. The complex reflects the Group's vast experience in operating large-scale venues, and it establishes a new level of lavish comfort for filmgoers. Their unique concept was to bridge the gap between film and music by creating cross-over events and festivals that would benefit from the venue's diverse dining, socializing, large and small theaters and intimate screening rooms.

House 1, the Metroplex's largest theater, can accommodate an audience of 430. The five other "public" theaters can seat groups ranging from 151 to 97 guests. Three plush VIP Screening Suites (#'s 7,8, 9) are each designed to host twenty guests. Theaters 1 and 3 as well as all three VIP Suites offer opulent reclining lounge chairs, state of the art lighting, exquisite interior designs and Dolby® Atmos™+ Dolby Surround 7. 1 sound. The four other theaters are outfitted with Dolby Surround 7.1. The futuristic lobby and dining areas provide an unsurpassed ambience for elegant gatherings. WSDG provided a comprehensive review of the architectural master plan layouts and a detailed analysis of the acoustic package recommendations provided by a local consultant. Particular attention was addressed to issues of sound isolation and (RT60) internal room acoustics. The client's primary concern was to assure absolute sound isolation between the movie theaters and the large event hall located on the upper floor specifically with regard to NC and STC parameters.



The Metroplex at KITEC – Hong Kong, China

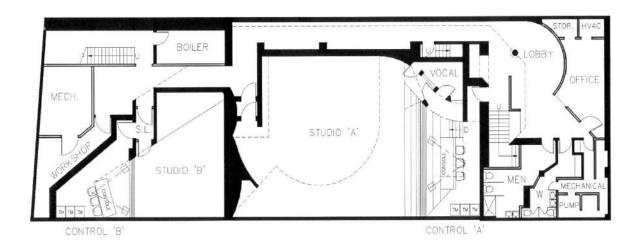




Electric Lady Studios - New York, USA

Electric Lady is one of the world's first artist owned recording studios and one of the oldest, most famous and most successful studios ever. WSDG co-founder John Storyk was a 22-year-old fledgling architect fresh out of Princeton University when he was hired to design a studio for Jimi Hendrix. One summer evening in 1968, Storyk was enjoying an ice cream cone and leafing through the Village Voice when a classified ad caught his eye: "Carpenters wanted to work for free on experimental nightclub." Dialing the number from a corner pay phone, he got the gig. That club, Cerebrum, made the cover of Life Magazine after 6 months. When Jimi Hendrix visited the club one night and decided to hire Storyk to design his club (which became ELS), well the rest is history.

Eddie Kramer (Jimi's engineer) was adamant about Electric Lady having a tall, bright room similar to NY's legendary A&R Studios where Phil Spector did some of his greatest work. Kramer was also familiar with European studios like London's Olympic and Abbey Road. He believed drums required a big room. Storyk accommodated Kramer's need for high ceilings by excavating the basement, digging down to raise the height of the underground rooms. For the studios' interior, Jimi specified theatrical lighting, and his desire to have as many curved surfaces as possible (design elements which Storyk had originally incorporated in Cerebrum). Electric Lady's walls were painted white, so they could easily be turned into whatever color Hendrix was in the mood for with simple adjustments. One day Jimi arrived at the construction site and decided that he didn't like the square look of the expensive acoustic doors, which had just been installed. He asked Storyk if he could round off the tops, and when that proved impractical, he had them replaced by custom units with rounded, porthole-style windows.





Electric Lady Studios - New York, USA



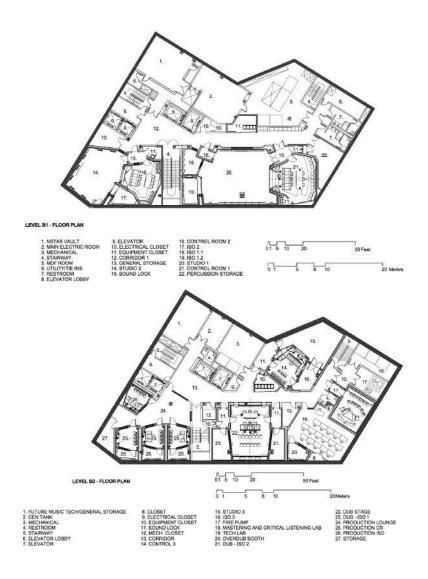


Berklee College of Music - 160 Mass Ave - Boston, USA

For one of its latest real estate acquisitions, Berklee College of Music created *160 Massachusetts Avenue*, a 16-story, 170,000-square-foot mixed-use building. It houses dorm rooms with 350 beds, increasing Berklee's oncampus housing capacity to approximately 1,200 students, as well as a two-story dining hall that seats 400 and also includes a venue for student performances. Most importantly it is the new home for nine new audio production / teaching studios – housed in two levels below grade – all fully decoupled and capable of simultaneous use.

The music technology complex includes two professional-quality recording studios, a Dubbing Stage, a Mastering and Critical Listening lab, four production suites and a flexible performance venue / film scoring studio. WSDG designed and supervised construction of this facility in collaboration with chairs, deans, and technology lab staff from Berklee College of Music during a period of three years. Students can enjoy performance spaces that emulate professional environments, with state-of-the-art equipment and a wide variety of musical instruments.

In addition, WSDG worked on the two-story dining hall to address internal room acoustics, specifically with regard to the general intelligibility of the dining hall. The facility opened in 2014 and received a NAMM TEC award for Best Studio Design Project.



Berklee College of Music – 160 Mass Ave - Boston, USA





ESPN Digital Center 2 - Bristol, USA

ESPN, the global leader in comprehensive sports coverage, has completed a five-year development and construction project for its new Digital Center 2 studio/media production center. An ambitious addition to ESPN's existing Digital Center 1 campus in Bristol, Connecticut, the 194,000 sq. ft. complex was envisioned as a "format-agnostic/future-proof" creative production facility with unlimited potential for trail-blazing content creation. A comprehensive green and employee comfort-focused environment were primary goals for the new facility.

With six new production control rooms, four audio control rooms and 16 edit suites, ESPN's Digital Center 2 technical capabilities are exemplified by a multi-dimensional monitor wall featuring 56 variably sized individual monitors designed to provide 3D-like graphic images. An arsenal of 40 state-of-the-art cameras is highlighted by a JITA cam capable of swooping up to a height of 22 ft. and following a circular track to deliver a sweeping 360° studio overview. The Center 2 routing system can accommodate as many as 60,000 simultaneous signals over 1,100 miles of fiber optic and 247 miles of copper cable deployed throughout the facility.

All these rooms are dedicated to producing flawless audio and video for programs, interviews, voiceover recording and the full spectrum of broadcast audio for video support. Overall quietness throughout the entire creative plant was an absolute priority. High performance broadcast acoustic specifications and recommendations were developed for all critical services including HVAC, fire protection and electrical systems. ESPN Digital Center 2 represents the apex of broadcast, cable, and Internet streaming production. The complex stands as a major accomplishment in next-generation audio/video production and delivery.



ESPN Digital Center 2 - Bristol, USA



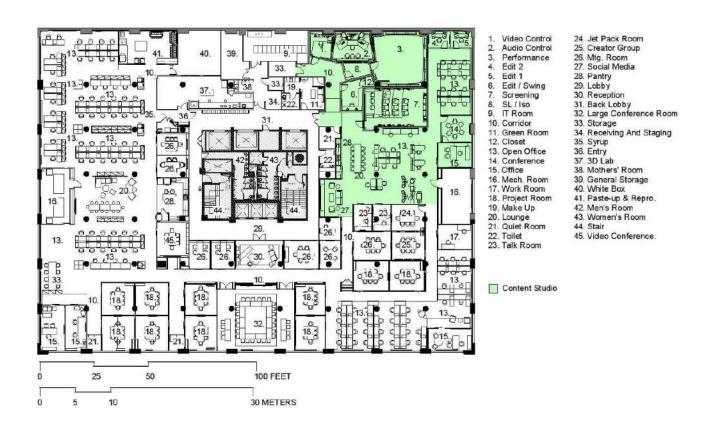


PepsiCo Content Studio - New York, USA

With the goal of initiating and nurturing synergistic relationships with new and established video, music, TV, digital and Internet content creators, PepsiCo commissioned a cutting edge 4,000 sq. ft. production/post-production complex at the hub of NYC's pacesetting SoHo artistic community. WSDG's architectural/ acoustical expertise was engaged to collaborate with Granoff Architects to create a technically flawless, aesthetically invigorating environment for the ambitious venture.

Designed to house a team of six to ten technicians and engineers, PepsiCo's Content Studio features an 1,150 sq. ft. multi use recording studio, five editing and production bays, a 575 sq. ft. soundstage, a 515 sq. ft. multiformat screening room, an 1,800 sq. ft. 'loft-like' creative bullpen and a spacious, informal reception/dining area. The concept was to establish a high tech production facility to provide a community of creative thinkers, artists and producers with the technological resources to foster their vision.

A striking, flexible, highly functional environment, the PepsiCo Content Audio Recording Studio is centered on an SSL AWS 948 console, complimented by a pair of soffit-mounted ATC SCM150ASL stereo monitors. Genelec 8250A monitors provide 5.1 – surround playback. A variety of outboard gear and mic preamps offer a wide range of options. Video is captured on the 26' x 25' Soundstage/Performance Area in resolutions up to 4K, and can be routed live throughout the facility in 1080p through SDI tie lines. A broadcast grade production switcher (Newtek Tricaster 460) expedites video feeds for live editing and processing for webcast, or to be stored in the Promax storage array. The switcher offers a full selection of video post-production tools, including live Chroma keying, virtual sets and color correction. Post also boasts a full nonlinear editing station and a digital audio workstation for ADR. Green Screen and LED production lights are managed from the VCR.



PepsiCo Content Studio - New York, USA





Sonastério Studios - Belo Horizonte, Brazil

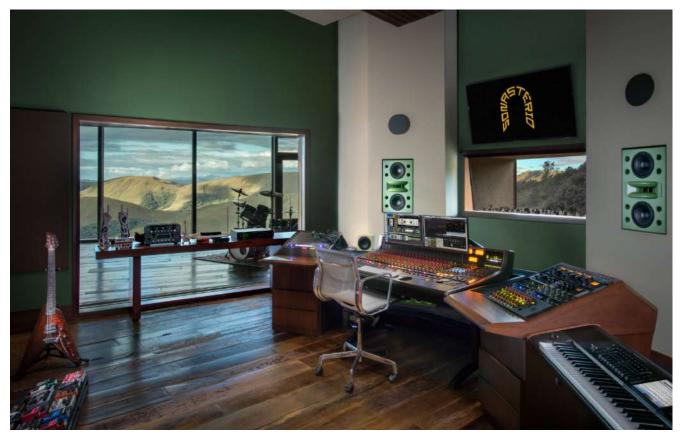
Bruno Barros, a young musician/engineer completing his education at the Musicians Institute in Hollywood, CA. decided to create a destination studio in Belo Horizonte. His family retained famed Brazilian architect <u>João Diniz</u> to design a luxury home overlooking the Minas Gerais mountain range. Barros knew it was critical for the architect and the acoustician/studio designer to begin their collaboration at the earliest planning phase to ensure the studios optimal acoustic environment. Henrique Portugal, keyboard player for top Brazilian band <u>Skank</u>, recommended WSDG's services.

João Diniz developed an elegant concrete and glass 8,000 sq. ft. showcase home with three guest bedrooms, five star amenities, and a 1500 sq. ft. space with a 20' ceiling height dedicated for the studio. Working with WSDG at the initial design stage enabled Diniz to eliminate costly reconstruction by predetermining all acoustic priorities. Technology selections were aided by consultations with <u>SSL</u>Rep Max Noach, who proposed the AWS 924 console to combine classic SSL analogue technology with full DAW control, as most appropriate for this facility.

<u>"Sonastério"</u> is Brazil's first destination studio" Sergio Molho states. "Superb acoustics begin with geometry, we worked hand in glove with the architect to ensure that every square foot was precisely calibrated." Studio owner Bruno Barros adds, "Sonastério Studios is a work of art in itself. More than just a studio, it is a house of creation designed to enhance the natural expressiveness of each artist."



Sonastério Studios – Belo Horizonte, Brazil



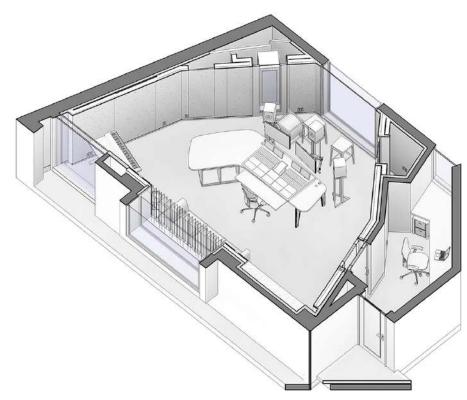


Carter Burwell - Amagansett, USA

'The Body,' Carter Burwell's first WSDG studio was completed in his Tribeca loft in 1999. That initial home studio served the prolific film score composer exceedingly well. His IMDb CV includes iconic film score credits ranging from Todd Haynes' 2015 feature Carol and Martin McDonagh's Three Billboards Outside Ebbing, Missouri (both Academy Award nominees) to Spike Jonze's Being John Malkovich and, all but one of the Coen Brothers idiosyncratic films including Fargo and The Big Lebowski. Burwell returned to John Storyk and WSDG to commission a new 'The Body' studio in an ultra modern 4420sf Maziar Behrooz-designed home on a bluff overlooking the Atlantic Ocean near Montauk Point.

Engaging WSDG while his new home was still on the drawing boards provided Burwell with many advantages. Founding partner John Storyk and the design team made acoustic and ergonomic recommendations early on in the process that maximized the efficiency of the available space and enhanced the room's recording and listening quality. WSDG Partner/COO/Project Manager, Joshua Morris describes the sunny, high ceilinged studio as an ideal creative space. "His composing keyboard can alternate between a spot at the listening mix position with the ocean view and an alternate location in the rear of the room with a view of the bay," Morris says. "He installed a flat screen monitor on a motorized flip-down mount, and motorized blackout shades to mask distracting views and brilliant sunlight when necessary. Working with an open floor plan WSDG prescribed a 600+ SQ. FT. studio in a separate wing attached to the 2nd floor of Burwell's new home. Insulated from the living/entertaining quarters, the studio is large enough to host visiting filmmakers, and small enough to make an inconspicuous footprint in a new home graced by bay views at the rear and front views of the Atlantic Ocean."

A study in fully-floated isolation, and precisely tuned with an RPG Acrylic Quadratic Residue Diffusor, and Micro-Perforated RPG wall treatments, the studio assures Burwell of ideal recording and listening acoustics. A compact Iso booth, equipment closet and small rectangular office complete a studio that fundamentally represents a 600 sq. ft. sweet spot.



Walters-Storyk Design Group

Carter Burwell "The Body" Amagansett, USA

Carter Burwell - Amagansett, USA



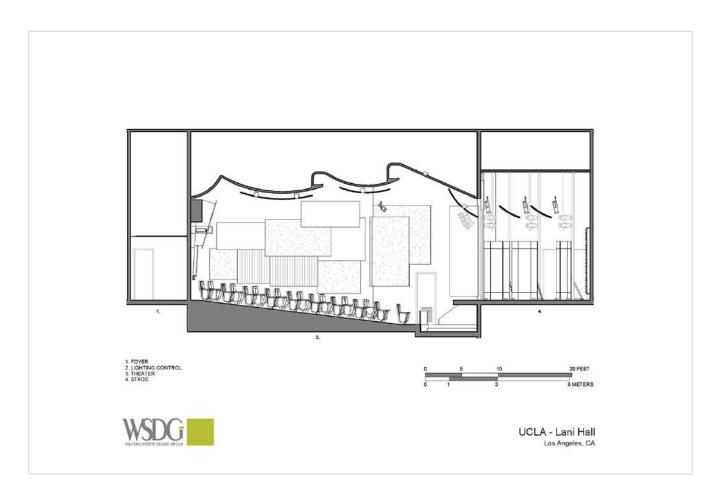


UCLA Herb Alpert School of Music - Lani Hall - Los Angeles, USA

Established by a grant from the Herb Alpert Foundation, The Herb Alpert School of Music on the UCLA campus is dedicated to providing students with academic opportunities that balance cutting-edge scholarship with sophisticated performance and composition mastery. Students are immersed in a multitude of learning and performing opportunities and have access to world-class archives and related study options. The missing link to this extraordinary musical education experience was a live performance venue with acoustic properties devised to provide artists with exceptional sound alternatives.

To meet this critical requirement, The Herb Alpert Foundation engaged WSDG to fully re-design the interior and acoustics for the small on-campus theater. The recently completed venue has been christened Lani Hall in honor of Grammy-winning vocalist (and co-founder with husband Herb Alpert of the foundation which bears his name) accommodates both musical and theatrical presentations. The 135 seat auditorium features a raised stage, innovative perforated wood rear and sidewall acoustic treatments and three innovative, full-width cylindrical ceiling treatments deployed above the stage. Outfitted with six multi-positional perforated gobos to provide the variable acoustics required by diverse performing artists and instrumentalists, the stage offers classic performance options.

Matthew Ballos, WSDG partner and co-designer of Lani Hall with founding partner John Storyk, reports that the tubular overhead wooden stage treatments, are complimented by twin 'rounded' wooden ceiling cloud/lighting fixtures, positioned over the audience seats, to further enhance listener audio quality. An elegant, cantilevered wooden rear wall diffuser fine-tunes the theater into an auditorium-size 'sweet spot.'



UCLA Herb Alpert School of Music - Lani Hall - Los Angeles, USA

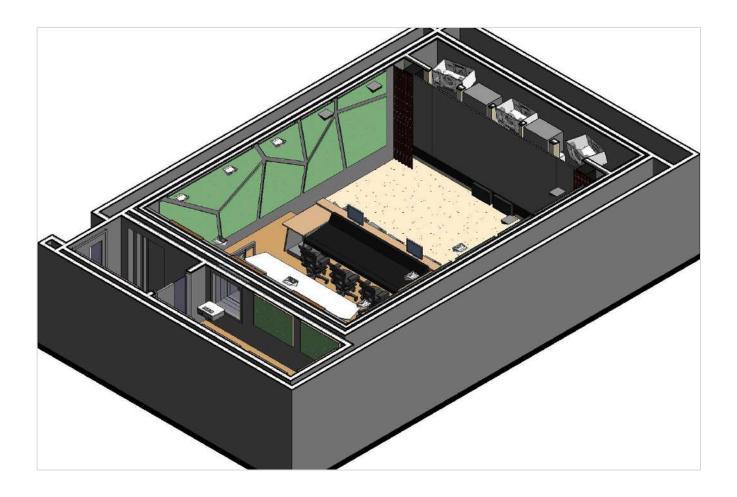




CUEC - UNAM - Mexico City, Mexico

Founded in 1963, and influenced by both Nouvelle Vague and Mexico's First Contest of Experimental Film, CUEC (Centro Universitario de Estudios Cinematográficos) is the Film School of the National Autonomous University of Mexico (UNAM). It is one of the largest universities and film schools in Latin America, and also one of the oldest, most influential, most prolific and important in the region, producing over 100 short films a year. Notable CUEC alumni includes: Alfonso Cuaron (Y Tu Mamá También, Harry Potter and the Prisoner of Azkaban and, cinematographer Emmanuel Lubezki. Both of whom won Oscars in 2014 as Best Director and Best Cinematographer respectively, for Gravity The main CUEC campus is a World Heritage site designed by some of Mexico's best-known architects of the 20th Century. Located in the southern part of Mexico City UNAM's main campus includes a stadium which hosted the 1968 Olympics; 40 faculties and institutes; the Cultural Center; an ecological reserve; the Central Library; and a number of museums. WSDG was engaged to design the internal room architecture, acoustics and technology integration for CUEC's new building.

Because the Mixing Room had to function simultaneously with classes being held directly on the floor below, isolation presented a primary challenge. To eliminate sound leakage into or out of the mixing room, WSDG developed a Room-Within-Room, acoustical isolation program. Incorporating concrete perimeter walls, completely detached from the interior walls via a network of springs enabled WSDG to achieve the specified, NC20. This pro recording studio-level, construction method enables the room to produce high volume sound without disturbing surrounding classrooms.



CUEC - UNAM - Mexico City, Mexico



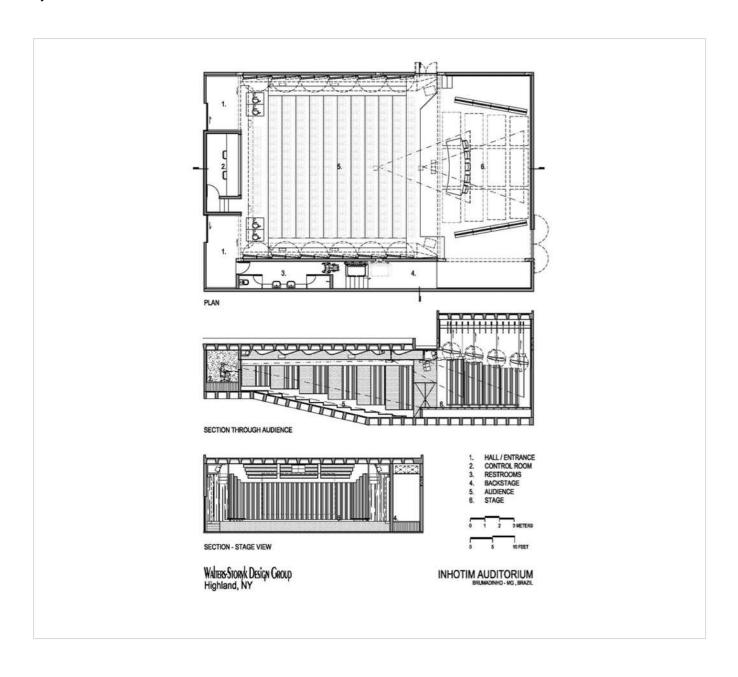


Inhotim Theater - Brumadinho, Brazil

Inhotim is the largest open-air museum of contemporary art in the word, located at Brumadinho a city nearby Belo Horizonte, Brazil. It has the most important contemporary art collections nowadays in the world. Besides that the foundation also works on cultural, social and environmental conscious projects and events.

They needed to expand the museum facility by adding a small world-class theater; WSDG was invited to meet the client's expectations for the new building. The 250-seat space was designed to accommodate various types of music presentations, plays and art-oriented movies.

To achieve that, a series of variable acoustic panels, including an acoustic orchestra shell were installed. WSDG was responsible for all the acoustic design including construction and integration of the 7.1 surround audio system.



Inhotim Theater - Brumadinho, Brazil



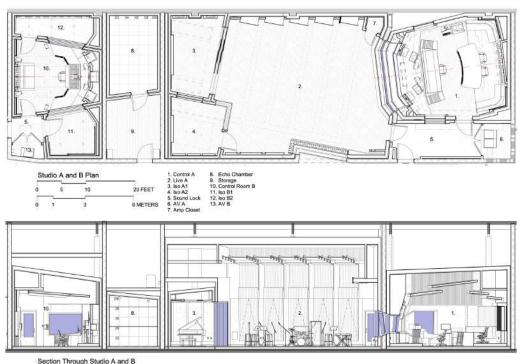


Spotify at Mateo - Los Angeles, USA

Spotify is the world's largest streaming music provider with over 485 million active monthly users and growing. After several years of design and construction, the company opened Spotify At Mateo in 2022. The 150,000 sq ft campus is located in the heart of LA's historic Arts District and serves as Spotify's flagship destination for their rapidly growing content creation division as well as a crucial artistic hub for LA's podcast and music professionals.

Designed to be an immersive, all-in-one experience with all aspects of music and podcast production, post-production, and performance under one roof, Spotify At Mateo required a wide variety of recording and production spaces that would be utilized by both visiting artists and Spotify's in-house team of creators and producers. In addition to this, communal listening and performance spaces were also required. The campus was designed by LA design firm RIOS, with studio design, electroacoustics, A/V systems design, and production lighting by WSDG.

Building One has a pair of full-featured recording studios, A and B, and a podcast recording studio. Studio A features a 48-channel Rupert Neve Designs Shelford 5088 console. Studio B is equipped with an Avid S4 24-fader Control Surface with Dolby Atmos mix capability. Both studios share a purpose-designed echo chamber. Studios A and B also feature innovative sets of hinged acoustic panels which allow for variable acoustical conditions within the spaces as well as a purpose-designed echo chamber. WSDG also designed the acoustics of the onsite screening room, event hall, and three listening rooms in Building Two. Building Four's 'Pod City' is a honeycombed collection of spaces created specifically for podcasting. This includes Spotify's Flagship Podcast Studio D, as well as 15 additional podcast studios, two production rooms, and three artist lounges. All of the rooms have multiple windows for access to natural light and greenery and were created with ideal acoustic conditions and seamless system design in partnership with SPL. The exterior design of the rooms nicknamed 'The Craggle', give the space a sense of excitement and flow.





Spotify Los Angeles, CA

Spotify at Mateo - Los Angeles, USA



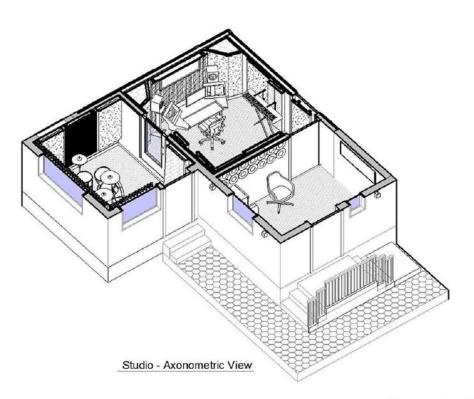


Groovyland Studios - North Miami Beach, USA

The culmination of an extensive period of computer modeling and acoustic development, Groovyland Studios in North Miami Beach, FL represents a sophisticated new era for WSDG's emerging generation 'eStudio' Model. Weighting in at just under 350 sq. ft., and built within the walls of a private home, Groovyland is a compact, multipurpose recording/mixing/ editing facility geared to produce a wide variety of music genres. It modernizes the earlier 'personal studio' to address post-COVID-19 quarantine-inspired lifestyles. It is efficient, extremely comfortable, precisely tuned and cocooned to keep sound from infiltrating within or escaping out.

The primary concerns for Groovyland were to provide a professional environment to record, track and mix music while accommodating a tight but realistic budget. Studio owner/engineer/producer David Molho required a facility, capable of hosting sessions in any category from pop, rock, jazz and rap to folk and hip-hop. Committed to a predetermined area, every inch of the studio's floor and wall space had to be exploited. The WSDG team developed a floor plan that included a 148 sq. ft. Control Room, a 95 sq. ft. Live Room and a 100 sq. ft. Lounge. All three environments are capable of recording both individually or simultaneously.

Overseeing this genuine family project were WSDG partners Sergio Molho and, Art Director, Silvia Molho. The acoustic treatments were painted in white and Champagne Mist to compliment a programmable LED lighting system capable of dialing in an infinite color menu to enhance any creative mood. NIRO™, an innovative computer-modeling/predictive analyses software program, was indispensable for optimizing room acoustics. Ms. Molho recommended perforated wood panels and three silver ceiling diffusers to precisely tune the frequency response within the room. Acoustic curtains on the two courtyard-facing windows can be drawn or opened to modify the room's wet/dry sound. "We had an extremely concise budget for construction and planning," Sergio Molho says. "And we met all our goals."





Groovyland Studios
North Miami Beach, FL

Groovyland Studios - North Miami Beach, USA







Doha Oasis - Doha, Qatar

One of the most ambitious, futuristic, and compelling 'destination' magnet projects ever built, The Doha Oasis is a "city-within-a-city" in the heart of Musheireb, State of Qatar. Totaling 4 million ft2/37,000 m2 of hotel suites and exclusive residences, the complex is comprised of two ultra-luxury, 20-story elliptical glass residence buildings, each with nine floors of duplex apartments; a 29-story, seven star hotel with 7 restaurants, and a business center. The "Jewel in the Crown," is a nearly 775,000ft2/72,000m2, "Themed Experience Center" (TEC) featuring twenty-six next generation, self-contained experiential attractions and the Doha Oasis Boutique, afour-level underground "Commercial Podium" housing the TEC, an exclusive spa, and extensive high-end shopping options.

Project's general contractor RedcoConstruction ALMANA retained WSDG to address a plethora of latent acoustic issues. To ensure complete sound isolation throughout the mammoth complex, the global WSDG acoustic team engaged its entire arsenal of acoustic measurement, testing and analysis protocols as well as critical isolation and design services to identify and eliminate all potential sound isolation issues.

The WSDG acoustic measurement team consisted of Miami-based Project Manager/Acoustic Engineer, David Molho and Middle East representative Marc Viadiu. They performed a full week of comprehensive acoustic analysis and modeling tests in Doha for a critical Peer Review Testing mission of the expansive complex using world-class BNK 2250 microphones and sophisticated DODEC Omni-directional speakers.

The Doha Oasis will open officially in 2022 in conjunction with that year's World Cup Games being held in Qatar. Describing the process David Molho reports, "We performed over 1000 individual area STC and reverb time measurements for this assignment, and our comprehensive analysis confirms the quality of ARUP Group work. The Doha Oasis complex is magnificent, and we look forward to our next round of testing in this extraordinary multifaceted environment."



Doha Oasis - Doha, Qatar



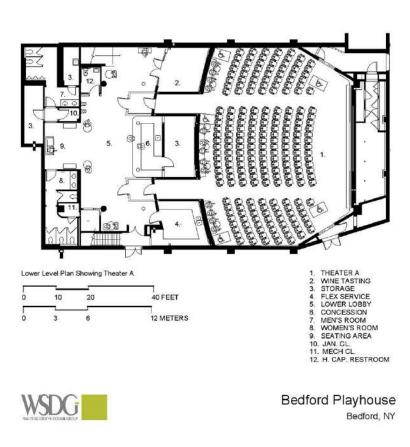


Bedford Playhouse - Bedford, USA

The Bedford Playhouse / Clive Davis Arts Center is a classic movie theater circa (1947), now in the final stages of a total renovation as a not-for-profit cinema / community hub. The complex features five distinct attractions: (1) The main theater, a 176 seat, state-of-the-art space outfitted with a large 37' x 16' projection screen and Dolby Atmos film sound system, will present high quality first run indie, foreign and documentary films. (2) The 40 seat Clive Davis Theater and (3), the 32-seat David Worby Theater will serve as a "jewel box" venues for private screenings, educational, civic and private cultural events including small concerts. (4) The Playhouse Café for drinks and light dining, and (5) an expansive Concessions Area. WSDG is providing complete acoustic and A/V design and consultation for the complex.

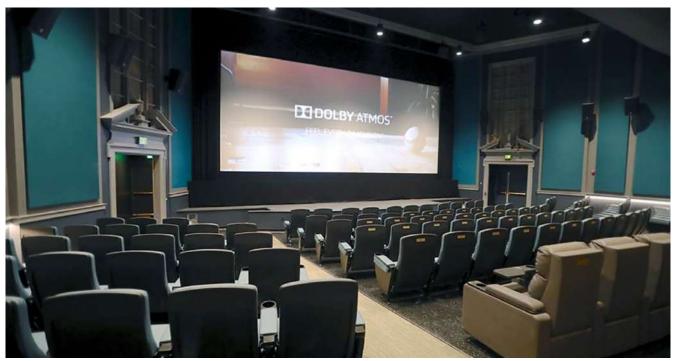
Outfitted with plush seating, world-class video projectors, Dolby Atmos DSP (in theaters 1 & 2), top-flight speaker systems, microperforated vinyl screens, motorized vertical and horizontal masking, and adjustable acoustic curtains, the theaters will have low reverberation with curtains drawn, and higher reverberation when open. These variable acoustic options will accommodate diverse screening requirements and equally varied source material including DVD, BluRay, Flash Drives, HDDs and SSDs. They will also present video feeds from live TV, Internet and new media sources. Theater C will serve as a 'multipurpose' room for live events ranging from lectures, receptions and exhibits to small performances and parties.

At first glance, The Bedford Playhouse may appear to be a cinema and arts center in the classic mold, but beneath the floors and within its walls, and ceilings, its operating systems are thoroughly state-of-the-art. Floating floors, and acoustic isolation between walls will block sound leakage between the theaters. A password protected, tablet-based system assures user-friendly control of all lighting, sound, HVAC, and related systems. The Lobby area will employ ceiling speakers for distributed background music and public address. Five LCD screens will display messaging, and programming previews. This cool, inviting theater / community arts center looms as an important addition to the local community.



Bedford Playhouse - Bedford, USA





Representative Client List

26 Sushi & Tapas (Morris J. Kaplan) Surfside, FL

3:3:2 Buenos Aires, Argentina

54 Below New York, NY

55TEC Studios Beijing, China

Adverse Residence Belo Horizonte, Brazil

Alan May Listening Room Home Theater Dallas, TX

Albano Residence Monte Claros, Brazil Alejandro Lerner Buenos Aires, Argentina Alicia Keys (Oven Studios) Long Island, NY

Allaire Studios, Woodstock, NY American University Washington, DC

Anel Paz - Supercharango Buenos Aires, Argentina

Appalachian State University Boone, NC

Art Institutes United States

AR Studios Rio de Janeiro, Brazil

Atlantic Recording New York, NY

Atomica Santiago, Chile audioEngine New York, NY

Aura Club Events Hall Zurich, Switzerland

Bamyasi Studio Miami, FL BBC Mundo, Coral Gables, FL Bearsville Recording Bearsville, NY

Berklee College of Music – 160 Mass Ave Boston, MA Berklee College of Music - Valencia Valencia, Spain

Big Mo Mobile Recording Kensington, MD

Blue Table Post Brooklyn, NY

Bob Margouleff (Mi Casa Studios) Hollywood, CA

Bob Marley Kingston, Jamaica

Boston Symphony Orchestra Control Room Boston, MA Bruce Springsteen (Thrill Hill Studios) United States Camden Yard / Baltimore Orioles Baltimore, MD

Carter Burwell New York, NY
Casa Cor Belo Horizonte, Brazil
Casa Ezeiza Buenos Aires, Argentina

Celine Dion United States

Central Synagogue New York, NY

Church Le Noirmont Le Noirmont, Jura, Switzerland

Citicorp Credit Services Huntington, NY

Clap Studios Medellin, Colombia Club NEO Zurich, Switzerland Comunidad de Fe Quito, Ecuador Credit Suisse Zurich, Switzerland

Crossroads Tabernacle - Studio on the Hill Bronx, NY Cuyahoga Community College - Center for Innovation in

the Arts Cleveland, OH

Daniel Studio São Paulo, Brazil Damian Marley Miami, FL

Diante do Trono Belo Horizonte, Brazil

Diego Torres Private Studio Buenos Aires, Argentina

Di Tella University Buenos Aires, Argentina Different Fur Music San Francisco, CA

Dream Asylum - Danja & Marcella Araica Miami, FL

Duke Ellington High School Washington, DC

Eddie Kramer Rhinebeck, NY EFE-X Bogota, Columbia

El Aleph Building - Norman Foster Buenos Aires, Arg

El Porteño Buenos Aires, Argentina Electric Lady Studios New York, NY Electronic Arts Vancouver, Canada Elektra Entertainment New York, NY

Ellis Marsalis Center for Music (EMCM) – NOLA, LA EMI – Escola de Marketing Industrial São Paulo, Brazil

Equiscosa Mexico City, Mexico

EUE Screen Gems (Rachel Ray) New York, NY

ESPN Bristol, CT

ESPM Broadcast Teaching Center São Paulo, Brazil

Estudio 13 Mexico City, NY

Ex'Pression College for Digital Arts San Jose, CA

Fito Paez (Circo Beat Studios) Buenos Aires, Argentina Flughafenkopf – Zurich Airport Zurich, Switzerland

Fenix Club San Rafael, CA

Fontela Residence Buenos Aires, Argentina

Food Network New York, NY

Full Sail Center for the Recording Arts Orlando, FL Goesgen Nuclear Plant Däniken, Switzerland Goo Goo Dolls (GCR Audio) Buffalo, USA

Graeme Judd Voiceover Studio Calgary, Canada Green Day – Jingletown Recording Oakland, CA

Hard Rock Cafe New York, NY

Harman Flagship Store Listening Room New York, NY

Hilton Garden Inn Montevideo, Uruguay Hirslanden Group Zurich, Switzerland Hoffman LaRoche Basel, Switzerland Howard Schwartz Recording New York, NY

Huber Music Room Carlsbad, CA Hunter College New York, NY IMAX Buenos Aires, Argentina IDZI Lab Mexico City, Mexico

Independencia Stadium Belo Horizonte, Brazil Interlochen Public Radio Interlochen, MI Interim Services Ft. Lauderdale, FL

Isaac Hayes Westchester, NY

J Records (Clive Davis) New York, NY

J.A. Castle Recording Utica, NY

James Earl Jones Theater - PDS Poughkeepsie, NY

Jay-Z (Roc the Mic Studios) New York, NY Jazz at Lincoln Center New York, NY Jim Cramer's Real Money New York, NY

Jungle City Studios New York, NY
Kimmel Center Philadelphia, PA
KKL Concert Hall Luzern, Switzerland
La Rioja Theater La Rioja, Argentina
Le Poisson Rouge New York, NY
Mad Oak Studios Boston, MA

Maracana Stadium Rio de Janeiro Manhattan School of Music New York, NY

Martin Scorsese Media Center Bronx. NY

Minnesota Public Radio Minneapolis, MN

Merriweather Pavilion Columbia. MD

Mineirao Stadium – FIFA Belo Horizonte, Brazil

MJI Broadcasting / Clear Channel New York, NY

MonkMusic Studios East Hampton, NY Murray Arts Center Marietta, GA

MTV Latin America Buenos Aires, Argentina National Council of Switzerland Bern, Switzerland

National Museum of the American Indian Washington, DC

New York University New York, NY Northern Lights New York, NY Novartis Basel, Switzerland

NYISO (NY Independent System Operator) Albany, NY

Peavey Electronics Meridian, MS
PepsiCo Content Studio New York, NY

Peloton Flagship Spinning Center New York, NY

PostFinance Arena Bern, Switzerland

Philippe Moritz Zurich, Switzerland

Planet Hollywood Screening Room New York, NY Proctor and Gamble Buenos Aires, Argentina

Qatar Television Doha, Qatar Record Plant Los Angeles, CA

Restaurant T Buenos Aires, Argentina

Richard Gere New York, NY

Rio 2016 – Barra Olympic Park Rio de Janeiro, Brazil Robert Clivilles (Paradise Garage) Westchester, NY

Salvation Ministries Port Harcourt, Nigeria

SBK / EMI Records New York, NY Skank Belo Horizonte, Brazil SONY Corporation Teaneck, NJ

Spank! Music and Sound Design Chicago, IL Stanwich Congregational Church Greenwich, CT St. Gallen Train Station St. Gallen, Switzerland Stevie Wonder (Wonderland) Los Angeles, CA

Sumitomo Boardroom New York, NY Sunshine Mastering Vienna, Austria Swiss Parliament Basel, Switzerland Telefé Buenos Aires, Argentina

Teleproductions, Inc. Washington, DC

TSR - Télévision Suisse Romande Geneva, Switzerland

The Carpenters Church Port Harcourt, Nigeria
The Church Studios – Paul Epworth London, UK

The Cosmopolitan Las Vegas, Nevada
The Standard Hotel New York, NY
Thirteen / WNET New York, NY
TV Globo Sao Paulo, Brazil
Union College Schenectady, NY

University of Colorado - ATLAS Boulder, CO

University of Michigan Ann Arbor, MI

Univison Miami, USA

Universidad ICESI Cali, Colombia Vassar Chapel Poughkeepsie, NY Video Arts Studios Fargo, ND Village Studios Guangzhou, China

Vocomotion Skokie, IL

VSL Synchron Stage Vienna, Austria Vivace Studios Montevideo, Uruguay Whitney Houston United States

WNYC Radio New York, NY

Woodrow Wilson Center- Smithsonian Washington, DC

Young Israel Synagogue Miami, FL



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