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Beginning with Aircheck's first issue, we have seen many of the reader response cards asking for basic studio design information. With this issue, we begin a series on planning and executing studio projects from A to Z. For the first article, Al D'Alessio of Northeastern Communications Concepts in New York City shares with our readers the issues which should be addressed before beginning any new facility project.

While the money PR&E spends on advertising is not of primary importance to you, it makes us very curious about what publications Aircheck readers read. Note the emphasis on the word *read*. You *probably receive* every broadcast rag published, but which ones do you actually commit the time to read? We have listed many of the available publications on the reader response card for you to check-off and may publish the results of this modest and unscientific poll in a later issue.

Finally, a sad note. Deane Jensen, founder and owner of Jensen Transformers, died suddenly in his research and development laboratory last October at age 47. Deane was well known throughout the professional audio industry for his efforts to improve the fidelity of sound in the recording, reinforcement and broadcast industries. I met Deane in the late 1960's when I was designer of audio and video recording studios for the University of California and he was a console designer at Universal Audio, the forerunner of today's UREI. We never lost touch other over the years while we built Pacific and he built Jensen Transformers into an internationally respected firm. While the broadcast industry probably identifies Deane with high-performance audio transformers, those of us who design products remember his ready willingness to share his latest pure circuitry research freely and openly. Deane even patented the JE990 amplifier design simply to place and protect it in the public domain and thereby encourage its use. Finally, we benefited from his philosophy to always "find the best way; good enough is not an option."

Jack Williams
President, PR&E

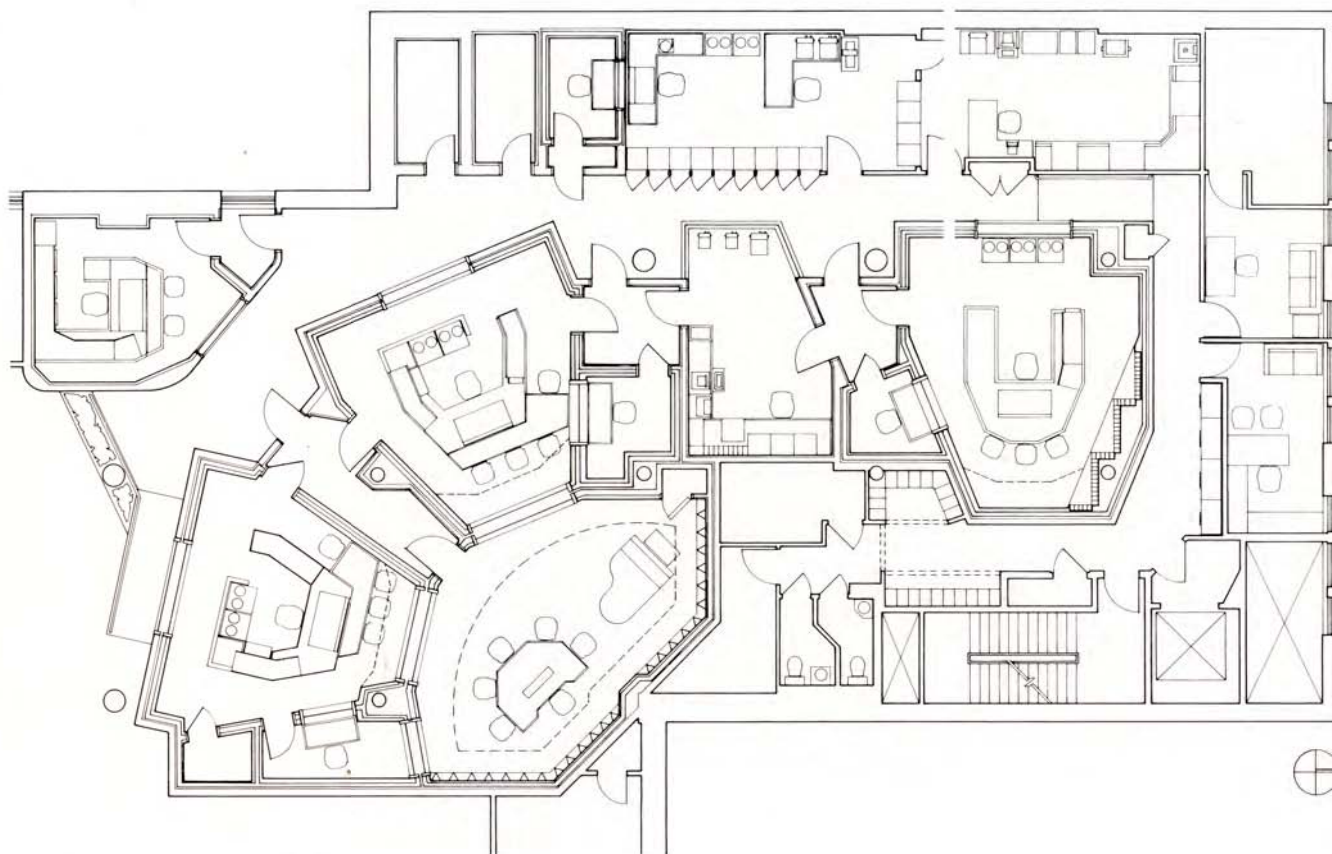


Look closely, would you believe this studio is a steel-paneled, floating, pre-fabricated room?

A BROADCAST NEWSQUARTERLY FROM PACIFIC RECORDERS & ENGINEERING #10

Our 1989 NAB showcase of WQXR's Control Room-2 system drew so much interest and so many questions, it was obvious the finished project belonged in Aircheck. While we don't expect to see this one-of-a-kind facility duplicated, it is full of design and execution ideas which are applicable to many other broadcast situations.

WQXR AM & FM, the Radio Stations of The New York Times, recently moved to new studios from their old facility in the newspaper's headquarters just off Times Square. The original studios, dating from the station's founding, had been revamped through



countless remodels, renovations and updates. In other words, the facility had become a maze. The opportunity for a "clean sheet of paper" approach arrived when the Times decided it needed the space for newspaper functions and would build a new home for the stations.

Chief engineer Herb Squire says WQXR's management defined an ambitious mission to support and expand their claim as New York City's pre-eminent classical station. To achieve this, Squire said they required a facility which was technically without parallel, and aesthetically pleasing and user friendly as well. The architectural, acoustic and technical facilities were designed by Northeastern Communications Consultants (NCC) of New York

City and the technical systems installed by Spectrum Broadcast, Inc. As may be seen in the floor plan, the broadcast complex consists of four control rooms, a performance studio, five announce booths, two edit booths, a news room and a terminal room equipped with its own production system. Also note the very large music library. WQXR has a huge collection of 82,880 records, many of them rare or impossible to replace, plus capacity for 15,486 CDs.

All the broadcast rooms, with the exception of Control Room-4, are of floating modular construction and accessed through sound locks. The image which usually comes to mind when considering prefabricated sound rooms is industrial looking refrigerator lockers. The acoustic shells of WQXR's studios are



Storage for 1,600 tape cartridges is built into the wall of Control Room-1 as part of the American Cherry architectural detail.

built using such rooms which were then finished out as shown in the pictures. To provide the dynamic range required by WQXR's classical format, the rooms were designed for a maximum residual noise level of NC-20 as measured with all studios in full operation. Even the lighting dimmers are motorized under remote control from the consoles.

The splayed and stepped ceilings used in the Control Rooms is a dramatic architectural statement whose purpose is the acoustical absorption of low frequency energy. The ceiling design also provides a convenient form for indirect lighting and for hiding the air conditioning supply and return registers. The loudspeaker soffit properly couples the monitor speakers to the room and also provides space for



View from the guest position in Control Room-2. Note the built-in CD "jewel case" easel in front of the CD players.



Control Room-3 provides multitrack production capability with an ABX-34. Note the soffit mounted equipment over the window into Studio-A.

modulation and loudness monitoring equipment, status display of the NCC Program Switcher, the electronic billboard annunciator and the clock.

Control Room-1

Control Room-1 is the main combo studio for WQXR's daily classical music program origination and is equipped with a BMX-26 with custom meter panel, three Technics CD players, six Micromax cartridge players, four Studer tape recorders and two Technics turntables. Three guest positions are provided opposite the console operator.

About 65% of the daily recorded music is on CD; therefore, three CD players are provided on a shelf over the two turntables. The face of the shelf is an

easel for the CD "jewel cases" while the shelf itself provides protection for the turntables. An incandescent light strip is installed on the underside of the shelf to illuminate the turntables. In addition to generous rack space, a large expanse of counter space surrounds the host for often neglected needs, even including a keyboard drawer for a planned traffic computer terminal. Four tape machines are used to play back pre-recorded or syndicated programming or to record the Opera – a live remote from the Metropolitan Opera House at Lincoln Center for the Performing Arts. As a side note, the Opera is heard every Saturday afternoon during the season and is the oldest syndicated classical music program in the country.

Control Room-2

Control Room-2 is a near-duplicate of Control Room-1 with the addition of a Producer's desk and control turret. It is intended for stereo production and On-Air back-up. As is standard for a production room, all three of the tape recorders are arranged within reach of the operator and are enclosed in a cabinetry "corral" to keep them neat. The room has a vision panel into Studio-A, and can originate live or taped programming from the studio or its own three guest positions.



The large music library is enclosed by a curved wrap-around glass wall. Glass was used extensively throughout the support and office areas, both as walls and transom panels, to provide a light and open environment.

News Room

The News Room is located between Control Rooms 1&2 and is where news, financial, editorial and current events programming is prepared. The news is read from the announce booths which flank the News Room, and provide line-of-sight to their attendant control room.

Control Room-3

Control Room-3 is a visual duplicate of Control Room-2, except it is designed for multitrack and stereo production, using an ABX-34 console.

Studio-A

The studio was designed for the WQXR program "The Listening Room." Because of the program's format, the studio is required to be acoustically correct for simultaneous voice and music broadcasting and recording. The reverb time of the room is adjustable by rotating hinged wall panels. The ceiling is a field of custom built RPG diffusers opposite a wood parquet floor.

The studio has a grand piano, space for a chamber music ensemble and an interview table capable of accommodating a host and five guests. The table is equipped with internal casters and may be unplugged from a sub-floor connector panel and rolled out of the way for music recording sessions. All the studio signals, including microphone, monitor, logic control, timer sync, etc., may be routed to either Control Room-2 or Control Room-3 through a studio assignment switcher.

Control Room-4

WQXR simulcasts all of its programming on AM and FM with the exception of five hours per day. AM programming such as "Kitchen Classics" originate from Control Room-4. This facility is available for stereo production during the simulcast time of day and is equipped similarly to Control Room-1.

Announce Booths

Each of the four announce booths, one for each of the Control Rooms and one for the Terminal Room production system, is equipped with a control turret providing microphone and monitoring control, plus clock and timer facilities.



View of the Terminal Room towards the BMX-14 Production/Dubbing system and Announce Booth.

Terminal Room

Thirteen racks provide WQXR's electronic nexus. Rear access for nine of the racks is made through architectural doors incorporated into the carpeted hallway partitions. The other racks have rear access through the maintenance shop. The racks are basically dedicated to the following functions:

- Rack-A FM Processing, distribution and transmitter control
- Rack-B AM Processing, distribution and transmitter control
- Rack-C Network processing, Studio Switcher
- Rack-D EBS, broadcast receivers, STL, house monitor
- Rack-E Satellite demodulators, master clock, fiber optic terminals
- Rack-F Telco send receive and noise reduction
- Rack-G Main 624-point patch field, annunciator control system
- Rack-H Distribution switcher
- Rack-I Reel to reel tape recorders 1&2
- Rack-J Reel to reel tape recorders 3&4
- Rack-K Cassette duplication, syndication cartridge decks
- Rack-L Dual logger
- Rack-M Video and DAT recorders

The Terminal Room also features a quality assurance desk position for an operator to monitor the status and audio signal of practically any WQXR function from studio to transmitter. A production area, used for limited carting, dubbing and voice-over work, is located at the far end of the Terminal Room. This system is equipped with a BMX-14, Technics CD player, Technics turntable, Micromax cartridge recorder, Tascam cassette deck and two Studer tape recorders.