

COMMUNITY IN WINNER'S CIRCLE AT AQUEDUCT RACETRACK

Managers of track operations wanted to ensure that they placed their money on a sure winner when it came time to replace the house sound system in Aqueduct Racetrack's pari-mutuel betting area. And like any wise bettor playing the ponies, they carefully weighed their choices before selecting a system based around Community Light & Sound's M200 drivers and PC Series horns.

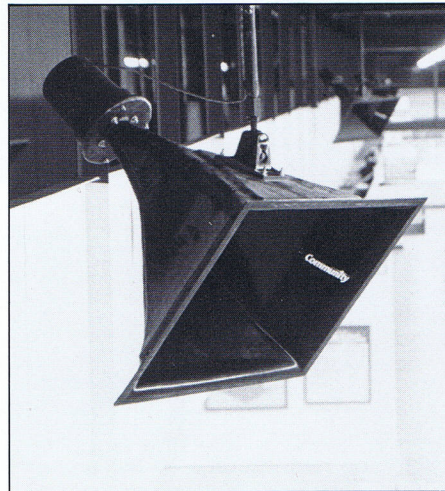
Located on the eastern edge of the borough of Queens on New York's Long Island, Aqueduct is joined by Belmont Park and Saratoga in creating the triumverate of dedicated horse racing tracks owned and operated by the New York Association of Racetracks. In use over the last three decades, Aqueduct features a grandstand section roughly ¼ mile long. The first two levels of the grandstand house the pari-mutuel betting area, which is completely indoors. Filled with the discordant sounds created by bets being placed, shuffling feet, and the various verbalizations associated with the emotions of winning and losing, Aqueduct's betting area is marked with a stripe of betting bays down the center. Overhead closed circuit TVs display the race in action, replays, or simulcast races from other tracks, while a row of windows looks out onto the track itself. Until recently, sound reinforcement for the race announcer in the betting area was supplied by an ailing system. Coverage was poor at best, and the drivers, even when overdriven, couldn't be heard intelligibly either from afar or by those standing in close proximity to the horn's mouths.

The first step Aqueduct management took in repairing their sound deficiencies was to call upon Riedel Audio Services in Islip, New York. After explaining their problems, Riedel Audio's owner Rich Riedel offered his services as a design engineer/consultant, which track management readily enlisted. Riedel set out studying the environment, and found among other things, that

there were too few devices to provide proper coverage in the old system, and that the harsh, acoustical qualities created by the extensive use of steel and concrete would pose large reverberation problems.

"The old system was far from directive in the primary voice range, and as a result, the drivers were spitting out sound that bounced all over the place," Riedel recalls. "At this point, I recommended that the old system be entirely discarded, and began taking measurements to determine reverberation times. Once they were calculated, I was able to pick the proper horn/driver combinations."

Naturally, there were both performance and budgetary concerns to be taken into consideration in selecting the loudspeaker devices. Within his allotted parameters, Riedel settled upon a design utilizing Community Light & Sound's M200 compression drivers and PC 200 horns.



28 of Community's M200 compression loudspeaker/ PC 200 horn combinations were chosen by Riedel Audio Services to handle sound needs in Aqueduct's betting area.

"I tested the M200 alongside other drivers, and found that it was clearly the logical choice because of its price and performance," Riedel added. "All of the drivers I tested worked well, but when I operated them at high SPLs, a few blew up if I didn't use some type of compres-

sion device such as a limiter. Conversely, all the M200 needed was a little minor EQ for the vocal range, and it would perform flawlessly, regardless of the power levels I would input. This fact alone helped me immensely in bringing the job in according to budget."

Noted for its high sensitivity, power handling capacity, and extremely low distortion, Community's M200 midrange compression driver is ideally suited for applications ranging from 3-way enclosed loudspeaker systems to 1-way, full range voice systems.

Having proven itself to be a rugged performer in Community's RS Series of professional components, the M200 is unique in that it utilizes a much larger throat exit area than other 2-inch midrange compression drivers. Like its larger predecessor the M4, the M200 produces low-end power by means of long linear diaphragm travel as opposed to being equipped with a small throat and high compression ratio. The result of this unique configuration is that dynamic high-level output capabilities are increased, while distortion remains at a bare minimum.

Designed exclusively to cover the frequency range lying between 400 and 4,000 Hz, the M200 eliminates the need for a crossover point in the crucial mid-frequency range. Internally, a large magnet structure produces high-flux density in a tall symmetrical gap, providing high motor force and long linear excursion. Constructed of molded aluminum Mylar, the M200's integral diaphragm and suspension assembly are virtually immune to fatigue failure. The voice coil is edgewound from rectangular copper-clad aluminum wire on a Kapton former, and is suspended in ferro-fluid to ensure optimum heat transfer.

A test system employing the M200/PC 200 combinations was setup for the Aqueduct management team. One listen later, they gave Riedel the go-ahead to proceed with a full-scale design based upon what they heard. As installed, the finished system includes 28 M200s and PC 200 horns, which are driven by 7500 watts of power. Today, with the help of Rich Riedel and Community, Aqueduct's sound is destined to be a winner's circle regular rather than a sonic also-ran. ■