



Base of the 335' Tower and Coupling House.

**D**OWN in the Lone Star State they do things in a big way and that's the reason KROD is one of the biggest and best equipped small stations in the country. Mr. Dorrance D. Roderick believed that the local station had a real purpose and place in the scheme of broadcasting and went ahead accordingly. No expense was spared to make KROD one of the Southwest's outstanding stations regardless of power.

The studios and office building are located on one of El Paso's main traffic arteries. In keeping with the historic background of the section the beautiful home of the station is modeled after the Spanish architecture of the region slightly modified by modern influences. White stucco has been used on the exterior with brilliant Spanish colors as a trim. Hand-made Mexican glazed tile in blue, red, green, orange and yellow, outlines the main entrance and the tower windows. Blue call letters of concrete are mounted on the four sides of the tower and illuminated by floodlights at night.

#### Interior

The Spanish treatment was carried out in the Entry Hall, Public Lounge, and Clients' Room. Adzed redwood beams with Span-

## A TWO-FIFTY IN TEXAS

### *KROD Installation Sets Pace for Low Power Stations*

ish stenciling support these ceilings. The ceiling area between the beams is a faint blue and is made of special insulating and acoustical material.

The walls are a textured plaster finish. This wall treatment is used throughout the building, with the exception of the three studios, control room and sound locks. Flooring in all the ground-floor offices, and corridors is asphalt tile in variegated dark reds.

Visitors in the Public Lounge are made comfortable in roomy, hand-carved, furniture of natural oak in ranch style. A 64-B speaker brings the programs direct from the control room and there is a large double-glass window looking into Studio A. The lounge and the Clients' Room are acoustically treated for good listening.

KROD's Clients' Room is furnished to give a living-room atmosphere. The redwood beams are stenciled and the ceiling be-

tween is a faint blue. Drapes of a Spanish design are at the steel casement windows.

#### Offices

The office of Dorrance D. Roderick, owner of KROD, is finished in New Mexico Indian style. The walls are rough Spanish plaster and ceiling beams are peeled vigas or logs. Spanish drapes are at the large steel casement windows. A Navajo rug is on the floor while an antique center lamp hangs from a viga. The ranch style furniture, desk and chairs are handcarved oak. Radio receivers in the owner's and manager's offices can be tuned to any station on the air or switched to a direct line from the control room for auditions.

The office of Merle Tucker, general manager of KROD, has an acoustical tile ceiling for noise reduction. The walls are Spanish white, like all the interior walls

Exterior of Studio and Office Building.





Control Room showing RCA Console and Turntables.

of the building with asphalt tile flooring. This same flooring is in the lobby, public lounge, book-keeper's office, commercial department, announcers' room, artists' lounge, program and continuity room, and chief engineer's office.

In order, after the manager's office, are the secretary-book-keeping office, commercial office, artists' lounge, traffic and announcers, musical director and continuity, news room, and the chief engineer's office.

All of these offices except the artists' lounge are furnished with modern steel furniture in metallic gray with deep red leather upholstery. The artists' lounge, where those waiting to go on the air may relax in comfortable chairs, has Monterey furniture.

Two teletypes in the traffic department handle CBS communications and regular telegraph business. Two more teletypes in the news room bring in the stories and feature articles of International News Service.

The office of Edward P. Talbott, chief engineer of KROD, is on the northeast corner of the building. Besides a desk and test bench, remote equipment is kept in this room so that it will be handy and ready to be taken out for a broadcast of a grid-iron battle, baseball game, or any other outside event.

#### Music Library

With 2500 numbers and orchestrations already installed, KROD has one of the finest radio sheet music libraries in the country. A file system, cross indexed and otherwise labeled, enables the li-

brarian to find any desired number without delay.

The orchestrations include every type of music. There are opera selection, light opera, comic opera, ballet music, suites, marches, waltzes, symphonies, overtures, symphonic poems and mood music available for background music for dramatic presentation.

#### Heating and Cooling

The basement holds the York heating and air-conditioning equipment. A refrigeration cooling system is combined with gas-



Dorrance D. Roderick, Owner of KROD.

fired warm air heating. The system gives absolute automatic control of inside temperature and

humidity, winter or summer. The entire installation was planned to preserve the low noise level required in the studios.

#### Studios

The three studios and control room are isolated from the offices by the main corridors. On the opening program sixty pieces of the El Paso Symphony Orchestra performed with excellent ballance in Studio A. When the artists are few, a studio audience of 100 can be seated in one end. The dimensions are 24 feet by 48 feet with 16 foot ceiling. Studio B, 12 feet by 20 feet is for smaller groups and soloists. Studio C is the newscast room and is also used for speakers.

The control room has a raised floor to improve vision into all three studios. Entrance may be had only through sound locks which have sound-proof doors.

The speech equipment comprises a 76-B1 Console and Power Supply, two 70-C turntables with vertical and lateral pick-ups, a 72-C recorder, a 9-AJX Cabinet Rack, and a 64-B Monitor Speaker. OP 5 and OP 6 remote amplifiers and an assortment of RCA microphones complete the technical set-up. The console is mounted on a table

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Transmitter Room at KROD.





**KROD**

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designed and finished to match the turntable cabinets. There is also a transcription file cabinet.

Cueing speakers are provided in each studio and also microphone warning lights and "On the Air" signs at the doors. Monitor speaker lines run to the Clients' Room, Public Lounge, Owner's office, Manager's office, and Chief Engineer's Office.

The large studio is equipped with two Steinway pianos and a Hammond organ. Studio B has another grand piano.

**Studio Acoustic Treatment**

Two major problems, one sound isolation or sound-proofing, and the other acoustic treatment, were involved in KROD's three studios.

The floors, walls, and ceilings are all floated on steel springs and felt pads away from the construction of the building. In each studio, construction consists of a box within a box. The inner box is suspended and has no contact with the outer box, except through steel springs and felt pads. In addition to this, the walls are built with double rows of studding and a rock wool blanket is laced between the studs.

Control windows were sound-proofed by making them of double sheets of plate glass of two different thicknesses. They are mounted at a slight angle to each other so that there will be no sound reflection between the two panes of glass. The glass is suspended in the frames on sponge rubber and felt.

Special soundproof doors, designed by the Riverbank Acoustic Laboratories, were used weighing 208 pounds each.

Air ducts which bring in air from the cooling systems are lined with rock wool to prevent noise transmission through the ducts. Each room has a separate duct back to the basement with no branches, so there will be no connection between studios by means of the ventilating system. The ducts are covered on the outside with heat insulating material.

The acoustic treatment in KROD was computed carefully to give exactly the correct balance between reverberation and absorption, so that programs would have natural reproduction. Careful balance also was obtained in the absorption of low and high notes, so that neither was unduly emphasized or suppressed.

Mercury switches are used for lights, because there is no clicking sound. Fluorescent lighting in the main studio has proved to be excellent for script and music reading besides cutting down the heat load on the air-conditioning system. The fixtures used are phased to eliminate stroboscopic effect and are power factor corrected.

All electric conduits passing through studio walls were made with flexible connections so that there would be no conduction of sound through rigid piping.

**Transmitter Site**

The transmitter building and radiator are located outside the populated area of the city on a 16 acre site in an old river bed of the Rio Grande just a quarter of a mile from Mexico. Water is only  $7\frac{1}{2}$  feet below the surface.

KROD uses water from Elephant Butte and Caballo Dan reservoirs. It is taken from the Franklin Canal to irrigate the portion of the 16-acre site not taken up by the building. This acreage has been planted in alfalfa. The green of the crop enhances the appearance of the entire tract and retains moisture.

**Radiating System**

A Truscon, self-supporting tower 335 feet high, a half-wave length at 1500 kilocycles, is the radiator. An excellent ground has been obtained by burying 12 miles of heavy copper wire in the 16-acre field surrounding the tower. These wires were buried, with plow and tractor, about eight inches deep in 240 furrows radiating from the base of the tower for 410 feet. The wires, with a total weight of 1995 pounds, are all brazed together at the base of the tower.

The radio frequency energy is fed from the transmitter out to the base of the tower through two underground coaxial lines.

**Transmitter Building**

Spanish architectural design of KROD's transmitter building corresponds to that of the Studio Building. The brick walls are painted Spanish white. The tile trim is cream colored and the door and window trim is Spanish blue. Blue windows, "ventanas azules," are said to bring luck in Spain and Mexico. On the left of the entry hall is the transmitter room, 15 x 17 feet.

In the room are the transmitter, monitor apparatus, and operator's control desk. The ceiling is acoustically treated for better monitoring. Lighting is from fluorescent tubes and a silent blower over the ceiling carries off the heat of the transmitter.

A special control desk was built to match the transmitter which is a DeLuxe 250-D. One of the first of the new model RCA-311-A Frequency Monitors is installed in the monitor rack along with a 66-A Modulation Monitor, 96-AX Volume Limiter Amplifier and an 82-B Monitor Amplifier. Test runs with beat frequency oscillator and distortion meter showed all the equipment to exceed specifications as to frequency response, distortion, and noise level.

Opening to the right of the entry hall are living quarters for one of the operators. These comprise a bath with shower, bedroom furnished with Monterey type furniture, complete kitchen, with sink, cabinets, electric water heater, refrigerator, and electric stove. The building has its own well, 65 feet deep, and is equipped with an electric pump.

Although this is a new station with no past to serve as a guide to requirements, the buildings have already shown themselves so well suited in arrangement, size, and details of equipment, that hardly a change would be made if they were to be rebuilt today.

In these "wide open spaces" where the nearest 50 kilowatt station is over 600 miles away, the daylight coverage of KROD is phenomenal for 250 watts. Reliable, every-day, listening is being reported from points over 100 miles away in every direction.