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From Ballantyne of Hartington
to
BALLANTYNE OF OMAHA

Robert Scott Ballantyne (1888-1978), of Hartington, Nebraska, got his start in the theatre industry in 1910 when he began operating the Crystal Theatre in Norfolk, Nebraska. He sold the Crystal a year later and began working for the Progressive Film Company. Shortly afterwards, when the Mutual Film Corporation was formed, Ballantyne was appointed branch manager for Mutual at Des Moines, Iowa. He served as branch manager and district manager until 1918.

Ballantyne became identified with the exhibitor's side of the story when he was named manager of the Moon and Muse theatres in Omaha. Three years later, he returned to Norfolk, Nebraska, to operate the Grand, Auditorium, and Lyric theatres for the Norfolk National Bank.

In 1923, Ballantyne transferred to Des Moines as branch manager for Pathe Exchange, Inc. When Pathe and PDC merged in 1929, he came to Omaha as district manager, and a year later was moved to Chicago as midwest division manager.

Ballantyne returned to Omaha in the fall of 1931 to organize his own firm. The Scott-Ballantyne Company was formed in 1932, and was devoted to sound and air conditioning equipment. It soon developed that these lines were so closely allied with other theatre equipment that the company decided operations should be expanded to serve theatres more fully. By 1938, the company embraced every possible theatre need in the way of equipment and service. Company quarters were located at 222 North 16th Street in the heart of Omaha's "Filmrow" and occupied 10,000 square feet on four and one-half floors.

An ongoing relationship with the Largen Manufacturing Company of Creighton, Nebraska was established at this time. Largen manufactured the Soundmaster line of amplifiers and soundheads, and Light-Master and Arc-Master lamphouses. These products were marketed under Ballantyne's name. Soundmaster was later manufactured by Ballantyne. To this day, Largen remains the primary supplier of Ballantyne's many castings.

Ballantyne also marketed the Ballantyne BW 35mm projector, manufactured by Wenzel. Like the standard Wenzel projector, the BW was very similar to the Simplex projector manufactured at that time.

By the Second World War, mechanical manufacturing of Ballantyne equipment was done at Largen's Creighton factory, and assembly and electronics at Ballantyne's Omaha plant. During the war, practically all of Ballantyne's production was taken by the armed forces, and larger manufacturing facilities were required. Construction of Ballantyne's new headquarters, at 1707 Davenport Street in Omaha, was still underway when the war ended. When completed, the building occupied 20,000 square feet.

Peacetime saw a 300% increase in Royal Soundmaster production, with 25% of units for export. "Our equipment probably talks in more different languages for Omaha, and in more different countries than does any other," said Mr. Ballantyne. Domestic sales were handled through independent theatre supply dealers.

In 1946, Ballantyne became instrumental in the development of the post-war rage, the Drive-In Theatre. The earliest drive-in theatres broadcast sound by means of "blast" speaker horns mounted to the screen tower or the concession stand. The elements were not kind to these exposed speakers, and the speakers were not kind to residential areas surrounding drive-ins. To meets the changing needs of the drive-ins, Ballantyne developed the Soundmaster MX amplifier. This powerful amplifier fed an underground grid of direct-bury speaker lines which terminated at above-ground, pole-mounted junction boxes. The junction box, also developed by Ballantyne, contained a step-down transformer and hookup terminals for two drive-in speakers. In-car speakers enabled patrons to set their own sound level in each car. Ballantyne naturally manufactured and sold drive-in speakers, and developed a double-

cone speaker with superior weatherproofing qualities. By 1949, Ballantyne equipped 282 of the 846 drive-ins then operating. From 1949 to 1950, 150,000 Soundmaster speakers alone were sold.

In 1952, Ballantyne designed and marketed a prefabricated screen tower for drive-in theatres. In accordance with the National Production Authority, the screen tower was made largely from wood, and used only 900 pounds of steel. The tower weighed 12½ tons, and was shipped on a flatbed truck. Sections were marked for assembly on the ground, allowing the entire tower to be painted and surfaced on the ground. A tractor and crane were then used to lift the tower onto its eight concrete footings. When erected, the tower would withstand 100 mile per hour winds (35 pounds/square foot).

Ballantyne kept pace with new developments in improved sound in the indoor theatre. Royal Soundmaster systems were developed for four-channel CinemaScope sound, and later, for six-channel 70mm reproduction. Royal Soundmaster systems included preamplifiers, sound changeovers, and multi-channel power amplifiers.

A planned addition to the Davenport Street factory never took place, because the building was condemned and razed to make way for the Omaha Civic Auditorium. The company moved to a rebuilt parking garage, near the downtown area, at 1720 Jackson Street. Ballantyne purchased more of the block to allow for expansion to 55,000 square feet, and opened new offices at 1712 Jackson Street.

In the early 1960's, Norelco projectors, manufactured by Philips (Holland), were imported by Ballantyne. The units were finished and assembled in Ballantyne's Omaha plant, and shipped to American theatres. This product line included the now famous 35/70mm Norelco AA.

When Robert Ballantyne retired in 1960, his company was sold to the ABC Vending Corporation of New York, and re-named Ballantyne Instruments & Electronics, Inc. ABC was in turn purchased in 1967 by the Ogden Corporation, also of New York. In 1970, Ballantyne president J. Robert Hoff and executive vice-president Edward J. Nelson, heading a group of investors, purchased the company from Ogden.

The new company, re-chartered as Ballantyne of Omaha, Incorporated, introduced the Pro-35 projector in 1970. The Pro-35 culminated years of research and development in the quest to design the first "new" projector mechanism in 25 years. The foundation of the mechanism is a sturdy, one-piece cast main frame. All drive components are located inside this main frame, running in an oil bath. Drive gears are cut from steel, and drive fibre gears to minimize operating noise. The intermittent movement features an extremely large star and cam, and includes an outboard ball bearing support for the intermittent sprocket shaft. The conical shutter is located close to the picture aperture for maximum light efficiency. A water-cooling jacket on the film trap is standard. The film gate pressure pad assembly can be easily removed without tools for cleaning. The unique film gate design permits pressure pad tension adjustments while the film is running. Framing is accomplished through a Delron spiral coupler, and no shutter compensation is required. Unlike other projection systems of that period, the projector drives the soundhead.

The first production run of four pairs was installed at Douglas Theatre's Cinema Four at 120th and "Q" Street in Omaha. To date, those units are still running on a daily basis, and the theatre (now the "Q" Cinema 9) has no intentions of replacing them. All new screens at this location also use Pro-35s, with the exception of one, using a Pro-35/70, introduced in 1979.

The early 1970's saw a boom in new theatre construction. Ballantyne combined the Pro-35 with their Model VII soundhead on a custom designed base, and introduced the VIP. The VIP base included an adjustable lamphouse table and space for a xenon power supply, an automation controller, and a sound system. An external film rewind could be added, and an automatic lens/aperture changer was available for the projector. Normally sold in pairs ("master" and "slave"), VIP systems were manufactured, assembled, wired, tested, and shipped complete from the Ballantyne plant.

Introduction of the film platter made rewinding, and the second projector itself, obsolete. The

Ballantyne Pro-35, with its rugged construction, was ready for the demands of the continuous, "double" duty cycle required of a projector in a platter installation.

The Ballantyne Pro-35 is still manufactured and remains the projector of choice for many cinema chains. While the Ballantyne projector never gained the general acceptance as the Simplex and Century heads with motion picture exhibitors, it has become increasingly popular in the high-technology "Special Venue" market.

Special Venue installations are usually found in museums and theme parks such as Epcot Center and Universal Studios. Another growing utilization of Special Venue projectors is simulation rides offered by the Iwerks Group and IMAX. These applications employ non-standard film formats, such as eight- and ten-perforation 70mm prints. Some formats are transported to the film trap horizontally rather than vertically. Specialized lenses permit dome and 360° projection. The rugged construction of the Ballantyne main frame and intermittent movement, combined with the flexibility of the film path design parameters, have made Ballantyne-built heads the most commonly used Special Venue projector available.

Two Specal Venue machines in current production utilize features found in no other projector mechanism. The 35mm IMAX *RideFilm* projector is a horizontal-delivery system which includes an intermittent movement that uncouples from the drive train to allow high-speed reverse operation for rewind. The *CineKinetic* projector, manufactured for MegaSystems of St. Augustine, Florida, is available in either five- or eight-perforation 70mm. Each *CineKinetic* projector uses *two* intermittent movements. The intermittents, above and below the picture aperture, are carefully synchronized and eliminate the need for a film trap. No tension at all is applied to the film at the film gate.

Ballantyne of Omaha was purchased by Canrad-Hanovia of Newark, New Jersey, in 1976. This acquisition followed that of the Strong Electric Corporation in Toledo, Ohio, and completed the triangle of companies whose combined product lines were first marketed by *Strong International.*

The Simplex Projector Company was purchased by Ballantyne of Omaha and added to the Strong International product line in 1983. Simplex production was relocated to the Ballantyne plant in Omaha. Since Ballantyne and Simplex had established their own followings of loyal users, no attempt was made to create a single "hybrid" projector. Simplex was, and remains, the most popular cinema projector in the world.

Strong Electric operations were moved to Omaha in 1984-85. With all fabrication under one roof, the Strong International division established a separate Prewire Department, offering any combination of Highlight, Super Highlight, X-90, or VIP Console with either Ballantyne or Simplex projection, and the customer's choice of sound and automation. Units could then be assembled, wired and tested, and shipped complete to the theatre.

Strong International rapidly outgrew the Ballantyne plant on Jackson Street, and in 1989, moved to their present quarters, occupying 140,000 square feet of factory and offices, at 4350 McKinley Street in North Omaha. A 20,000 square foot addition, expanding the Shipping and Prewire departments, was completed in 1998.

In 1993, Ballantyne purchased the Cinema Products Division from the Optical Radiation Corporation of Azusa, California. This acquisition added the Century projector and soundhead, the Optimax Xenon Projection Console, the Xenographic Slide Projector, and assorted automation systems and xenon power supplies to the Strong International product line. Ballantyne then made Strong "International" by acquiring Westrex/Asia, a Hong Kong based supplier of theatre equipment, in 1994.

Ballantyne of Omaha, Inc. became a public corporation with the Initial Public Offering (IPO) of Ballantyne stock in September 1995. Ballantyne, now traded as BTN on the New York Stock Exchange, maintains a 65% market share of American theatre equipment sales. The foreign market share of 30% is expected to climb as Strong International customers continue to expand into Mexico, Europe, and the Pacific Rim.

Two acquisitions made in 1997 established Ballantyne's Strong Lighting division as the dominent manufacturer of xenon lighting fixtures. Xenotech, of Hollywood, California, is a leading supplier of xenon searchlights used in film production and special venue lighting. The Xenotech searchlight atop the Luxor Pyramid in Las Vegas can be seen from the space shuttle. SkyTracker provides the automated searchlights which brighten the sky and pinpoint the location of Hollywood openings and other special events. Xenotech and SkyTracker production was moved to the Omaha headquarters in January 1999, and sales and rental offices were opened in Orlando, Seattle, and North Hollywood.

Design & Manufacturing, of Fisher, Illinois, has been the exclusive supplier of Ballantyne's platter film transports and make-up tables since 1977. Ballantyne purchased the firm in 1998 to make them an official member of the Strong International Team. Ballantyne platters and make-up tables continue to be built in Design's modern plant, and Design's staff is becoming a valuable source of component parts for Ballantyne's specialty projectors.