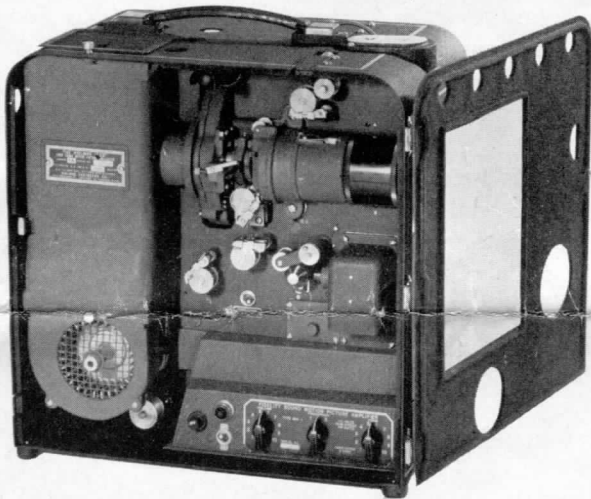


Holmes Presents



the "Rex" Mazda

Superlative is the word that defines the REX 16 millimeter sound on film equipment. Like all Holmes products, this unit combines fine materials with precision workmanship which, in the final analysis, spells quality.

The Rexarc

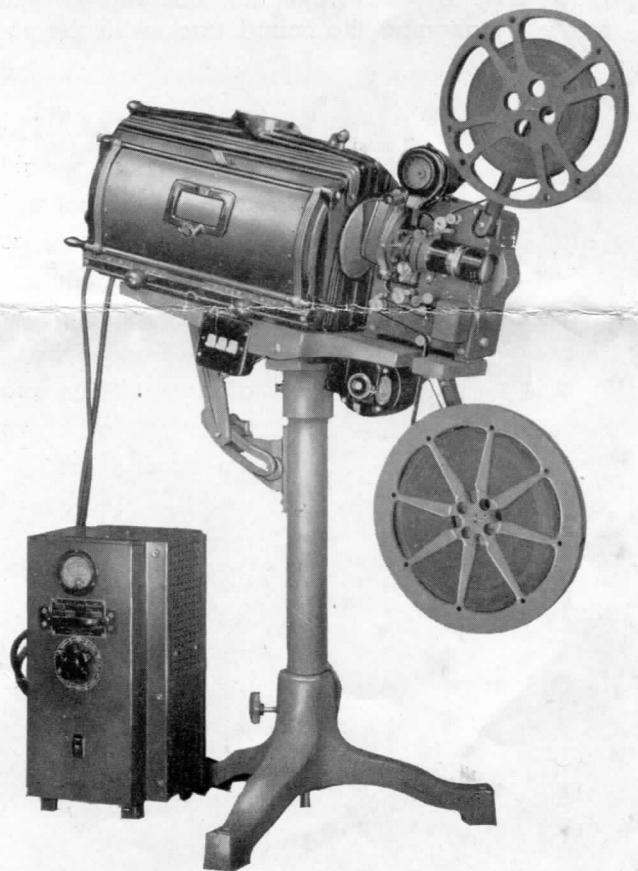
The "REX" Arc Equipment, like the "REX" Mazda, is 10 years in advance of all others. Holmes has never tried to make a 1949 Model out of a 1937 by adding gadgets. When he announces a new product, it is a complete new mechanism in every detail, embodying new features that simplify threading, improve quality of sound reproduction, increase illumination and obtain finer definition by using the large Series II lens (no other 16 MM. projector has this feature). A special blower mounted above the aperture gate keeps the entire mechanism cool regardless of the length of time it is in operation.

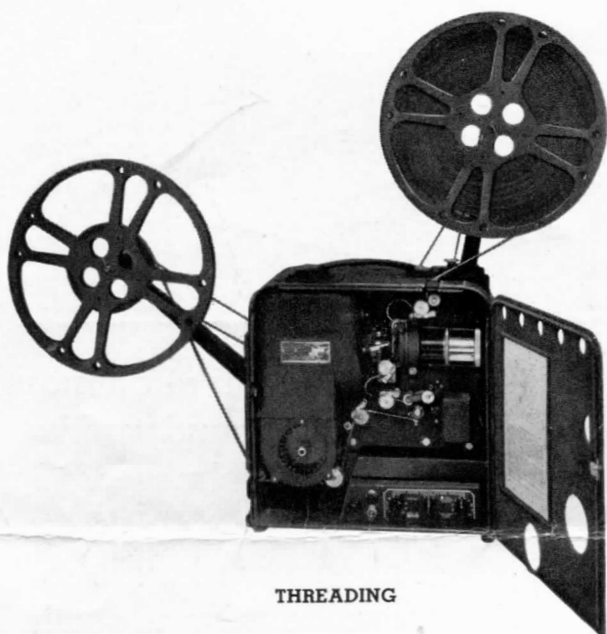
Reel arms will accommodate 4,000 foot reels.

The one-piece cast aluminum side plate has the sound head as an integral part. The lens mount will accommodate the standard or the large Series II lens.

The mechanism is so designed that no special tools are necessary to replace any part or parts. A screw driver is the only tool required.

With over 30 years of projector building experience back of the "REXARC" this machine, like all its predecessors, had to prove itself by going through the most gruelling tests ever given a motion picture projector.





THREADING

NOTE THE FILM THREADED IN THE REX. The 10-tooth sprockets make it possible for 4 teeth to be engaged into the film at all times, giving maximum film life. Too, there are no close quarters, small rollers, or loops in inaccessible places which would make the machine difficult to thread. Simplicity is the highest form of ingenuity.

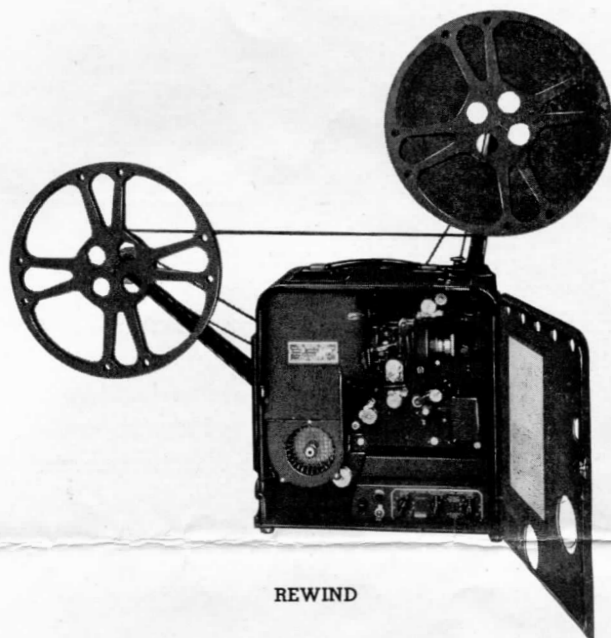
THE ONE PAD ROLLER, which holds the film in place on the stabilizer drum, has an adjustment screw for aligning the sound track with the sound lens.



PEDESTAL. The sturdy light weight, 3-Point Pedestal with tilting top is an accessory that will pay for itself in a short time. Besides being able to tilt the projector up or down, the machine can be raised — this adjustment is made by simply loosening the locking hand wheel on the pedestal column, setting the projector to desired height, then tightening hand wheel.

SERIES II LENS EXCLUSIVE REX FEATURE. The illustration, upper left, shows the REX equipped with the Series II lens. Compare this large lens with the standard lens shown lower right.

What does the Series II lens mean? A faster lens, better definition and increased illumination; to describe this lens briefly. In focal lengths from 2 to 4 inches, the speed of these lenses are F 1.6. In tests using a 3-inch Series II F 1.6 against a 3-inch standard lens, F 2.3, the illumination obtained from the Series II lens was 200 per cent greater on the edges and 100 per cent greater in the center of the screen over the standard 3-inch lens. The definition obtained from the Series II lens was so far superior that even the layman could see the outstanding difference by just changing lenses while a picture was being projected. See Pages 4 and 5.

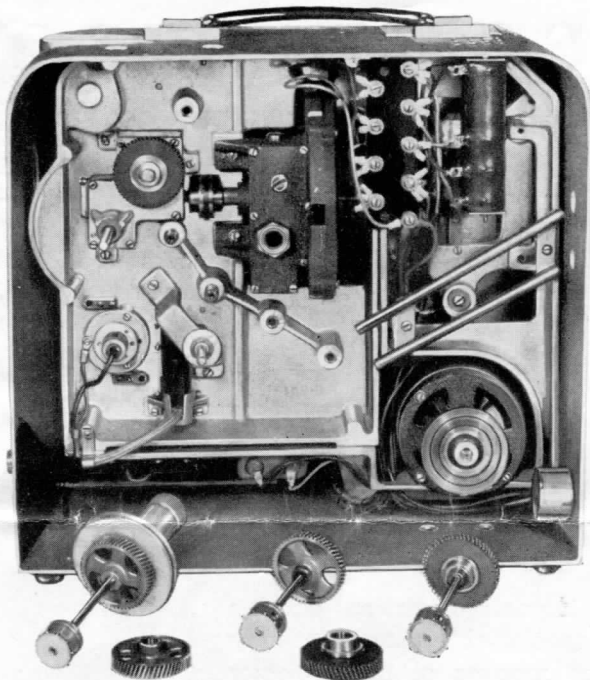


REWIND

REWINDING is a very simple procedure with a REX. The end of the film on the full reel is placed back onto the empty reel. Release the drive clutch, by turning a button. Start the motor. A full reel can be rewound in a minute's time.

It is not necessary to reverse reels on the REX when rewinding.

THE FEED AND TAKE-UP REEL ARMS are held in position with large round knurled screws. To remove the arms is simply a matter of loosening these screws, which remain in the reel arms at all times.

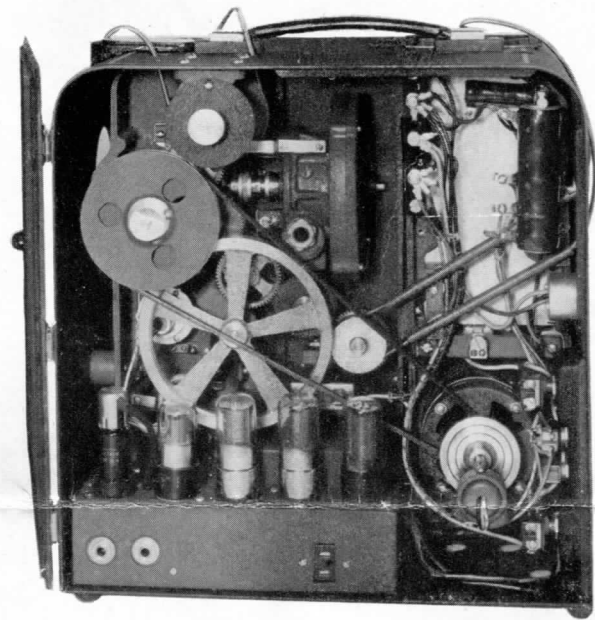


GEAR TRAIN: In keeping with the sturdy construction of the REX, called for a train of gears that would give years of continuous trouble-free service. To achieve this, required wide face gears and a combination of the finest grade bronze and genuine linen bakelite. All gears are helical cut bronze meshing into bakelite—insuring smooth running, quiet operation and long life.

THE SIDE PLATE AND BASE consist of two aluminum castings reinforced with generous ribs throughout, to add greater strength. The use of such castings require accurate machining plus fine tools.

The entire mechanism is very accessible. By opening door on left side of projector every part of the machine and amplifier is at your finger tips.

Two screws hold the amplifier in position; all wire connections are made with receptacles and plugs. No joints to unsolder.



All machine parts are made up into units, and can be replaced by anyone when repairs become necessary.

The only tool required is a screw driver.

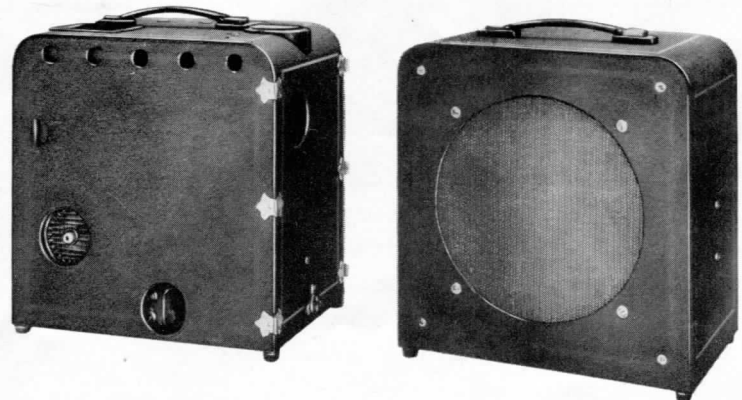
THE ELECTRIC GOVERNOR on the end of the motor shaft, is the 3-segment commutator type, and has 3 carbon brushes riding on the commutators which makes it possible to run the machine at silent or sound speeds, by throwing a switch on the control panel.

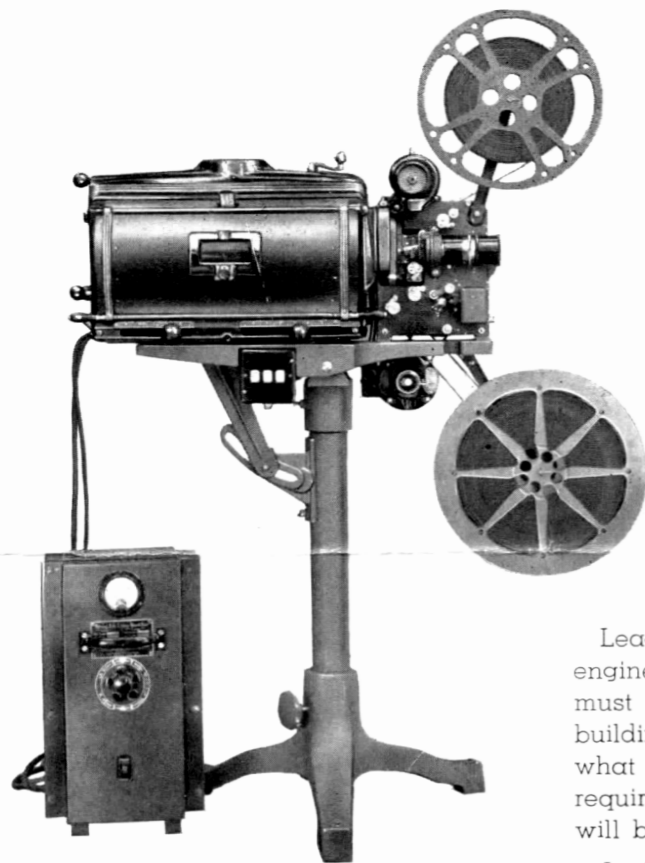
Replacing worn governor brushes is just a matter of loosening one screw, lifting out the governor brush holder unit, and replacing brushes and brush holder unit. This whole operation consists of just a few minute's time and a screw driver.

The REX equipment consists of two cases of equal size (as illustrated). Height $14\frac{3}{4}$ " , length $14\frac{1}{2}$ " , width $9\frac{1}{2}$ " . The above sizes make them very convenient to carry.

Provisions for carrying the reel arms, empty reel and speaker cable have been provided for in the speaker case.

Code word: REXA.





REXARC WITH HIGH INTENSITY ARC LAMP

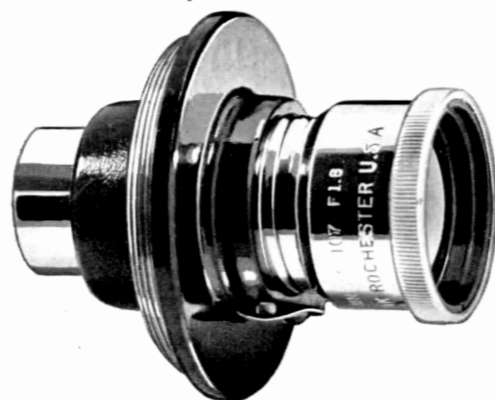
Simplicity of Operation

There is no mechanical skill required to get a perfect light on the screen. The arc lamp has a meter that tells at a glance the amperage being used. When the rectifier is connected to a 110 volt, 60 cycle A.C. line, the arc lamp draws less current than a 1500 watt, 110 volt Mazda lamp consumes.

The illumination obtained from the High Intensity Arc Lamp eliminates the size of picture and distance of projection problems.

Standard 2" Lens and Adapter

The Standard 2" Lens and Adapter illustrated, right, is included in the price of the REX or REXARC equipments. When a Series II lens with jacket is ordered with either of the above machines, the standard lens jacket adapter is included at no extra charge.



STANDARD 2" LENS AND ADAPTER
Included in price of REX or REXARC.

COMPARISON ALWAYS PAYS

Only by Comparison Can You Really Appreciate the Many Outstanding Exclusive Features Embodied in the REXARC

Air Cooled Aperture

The REXARC is the only arc-equipped 16 MM. that has in addition to the rear shutter, a separate highly efficient motor driven blower mounted on top of the projector mechanism. This exclusive Holmes feature has been used on his 16 MM. arc equipments for seven years.

This blower directs a tremendous blast of air on the film at the picture aperture, also effectually cooling the entire mechanism which permits constant running of films.

Every bit of light available from the arc is transmitted to the screen—none is wasted in heat filters.

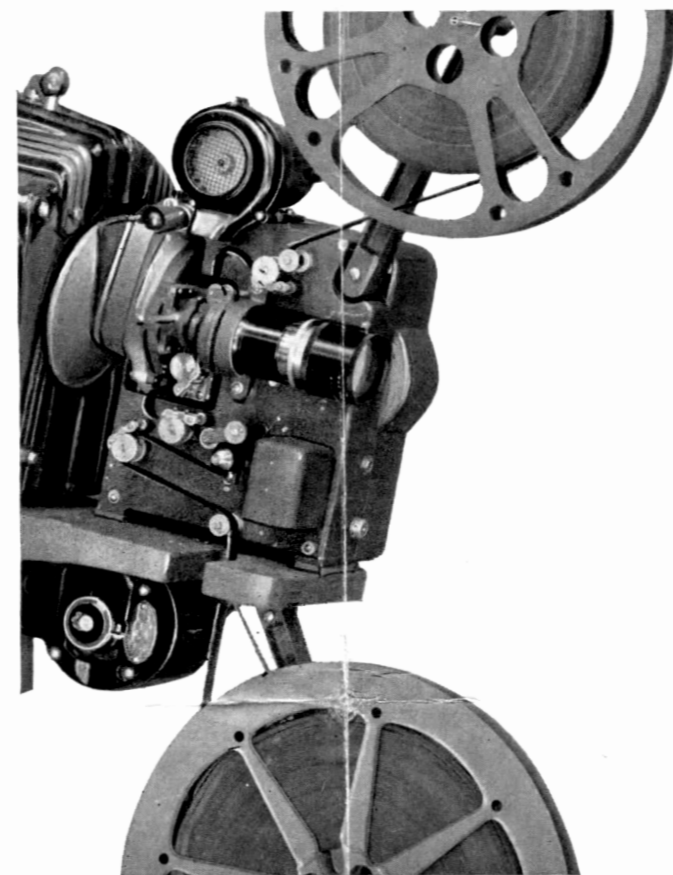
The REXARC will not warp or buckle the film.

Leadership

Leadership imposes on Holmes and his engineers a special obligation. Not only must they be masters of the projector building art, but they must also know what is needed now and what the future requirements of tomorrow's projector will be.

In November 1936, Holmes demonstrated his first arc equipped 16 MM. sound on film equipment for a national institution in Washington, D. C. The demonstration was held in Constitution Hall. The projection distance was 144 feet and the size of the picture was 24 feet wide. Of course, the Holmes was purchased, and it was the first and only arc equipped 16 MM. on the market. That's leadership.

Early in 1937 Holmes advertised his arc 16 MM. in a number of school magazines; shortly thereafter there were several other makes of 16 MM. machines equipped with arc lamps.

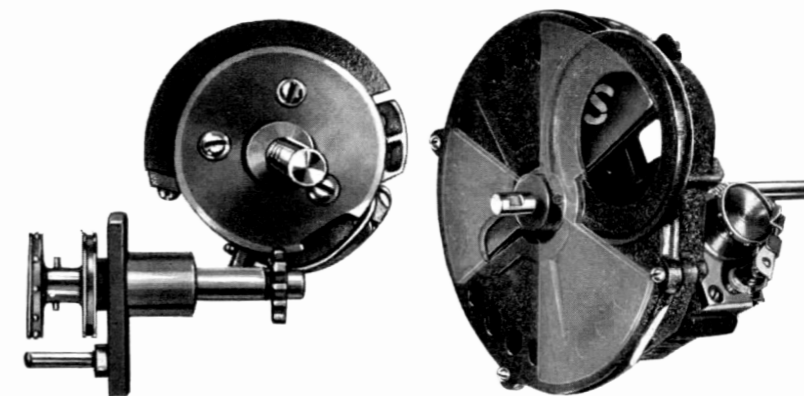


CLOSE-UP OF REXARC MECHANISM

Rear Shutter

Like all Holmes projectors, the REXARC all sprocket, sound on film projector has the picture shutter between the aperture and the lamp.

In 1921 Holmes designed and built the first all shaft drive 35 MM. portable projector. On this machine he placed the picture shutter between the film aperture and the lamp, an innovation which reduced the heat on the film 50 per cent. It took ten years for other manufacturers to adopt this feature.



The Decimittent Movement

The Decimittent Movement (illustrated above), is unique in its construction. It differs from all other makes; the specially designed single cam enters and leaves the deci cross very gradually. The actual movement is rapid, but not abrupt. The decimittent movement is hardened and ground. For over eight years this movement has been used on Holmes 16 MM. projectors, and time has proven its superiority.

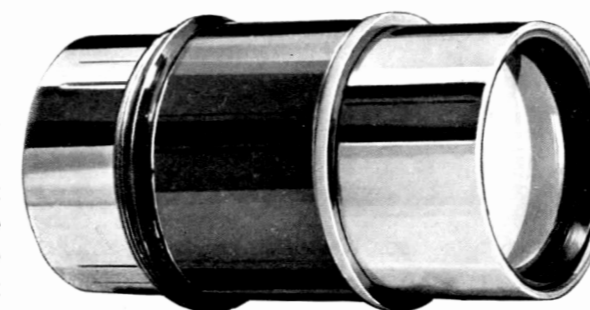
This smooth, quiet movement means at least three times the film life, a perfect rock-steady picture, and no high-speed running shafts or claw movements.

Always Has and Still Leads

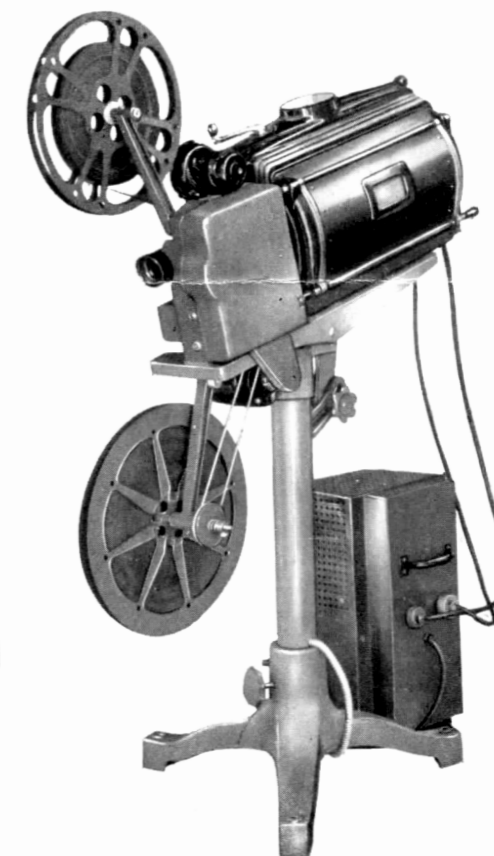
The REXARC, illustrated on these pages, is equipped with a Series II F 1.6, 3½-inch focus lens.

When the REXARC predecessor, known as the Holmes Type 12, was designed and built in 1940, there was one problem that had to be overcome and that was how to increase the speed of the objective lens. There wasn't any sense of using an arc lamp giving more light and then losing the increased illumination by using lenses with focal lengths from 2½ inches to 4 inches with speeds of F 1.8 to F 2.7.

The next problem was to get lenses with larger free aperture openings with a speed of F 1.6 that would permit all of the light to pass through, also improve the definition. With the lens problem solved by the leading optical company in the country, the design of the mechanism to accommodate the larger lenses was simplicity itself. The REX and the REXARC 16 MM. projectors are the only ones that will accommodate these larger Series II lenses.



2" FOCUS SERIES II LENS AND JACKET
There is an additional charge for this lens and jacket.





Model K-15-G Amplifier

This compact amplifier has an output capacity of 15 watts which is sufficient for auditoriums having up to 800 seats. The tube complement consists of 1 - 6J7, 2 - 56, 2 - 2A3, 1 - 80, 1 - 83.

Input receptacles for one or two machines.

Volume control.

Changeover switch.

Continuously variable built-in tone control.

Receptacle for electric turntable.

Receptacles for carbon or crystal microphones.

Output impedance for speaker 8 ohms.

Operating voltage 110 A.C., 50 or 60 cycles.

This amplifier is light in weight and very compact. When used with arc equipped 16 MM. machine that is permanently installed, we furnish wall mounting brackets and an asbestos transite board shelf. All connections are made with polarized plugs.

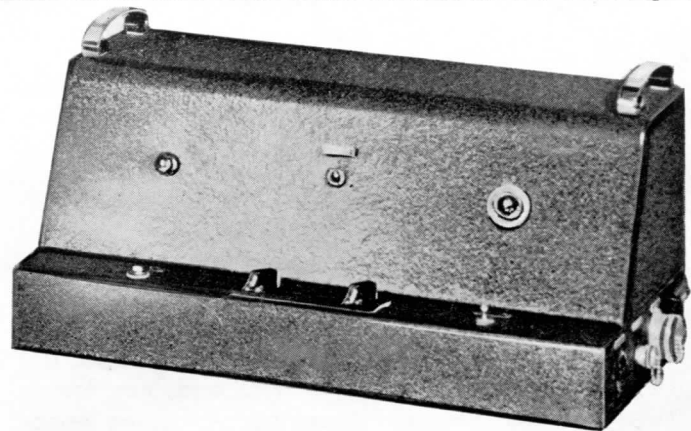
For the Finest Projection, Speech and Music . . . It Must Be Holmes Fidelity Amplifiers

For the faithful reproduction of sound on film recordings not "just any amplifier" will do. On it rests the responsibility for amplifying the extremely feeble electric current which the light, sensitive or "photo-electric" cell generates. The power developed by this cell is less than a BILLIONTH of that used by an ordinary incandescent lamp. This must be amplified or increased in power several hundred million times before it can actuate the loud speaker satisfactorily.

Not only must this current be amplified but the original variation in intensity and the proper balance between all the notes in the musical scale, preserved.

Arc equipped 16 MM. sound projectors as a rule are used in auditoriums of which the sizes vary; for example, an auditorium seating 3,000 requires more output than one with 1,500 seats, therefore, it is necessary to have a wide selection of amplifiers of different power outputs.

The amplifiers illustrated on this page have power outputs from 15 to 40 watts which will cover auditoriums from 800 seats up to 5,000.



Model L-25-N

This amplifier has an output capacity of 25 watts which will cover auditoriums up to 2,000 seats. The tube complement consists of 1 - 6J7, 2 - 6C5, 2 - 6L6G, 1 - 5U4G.

Input receptacles for one or two machines.

Volume control. Changeover switch.

Continuously variable built-in tone control.

Receptacle for electric turntable.

Receptacles for carbon or crystal microphones.

Output impedance for speaker 8 or 16 ohms.

Operating voltage 110 A.C., 50 or 60 cycles.

Model L-40

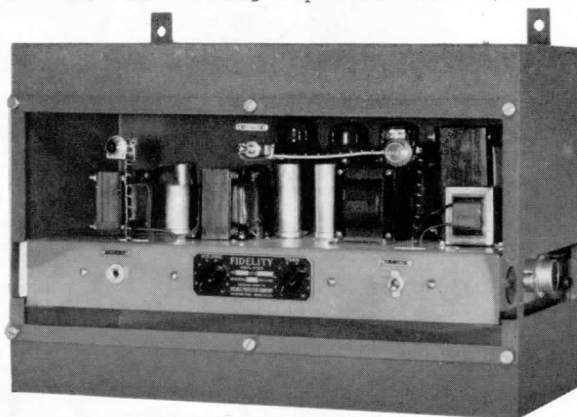
The L-40 Wall Mounting Type Amplifier has an output of 40 watts which is sufficient for auditoriums or theatres with seating capacities from 3,000 to 5,000 persons. Access to amplifier and tubes is achieved by loosening a few screws and pulling out the complete amplifier, which is as simple as pulling out any drawer.

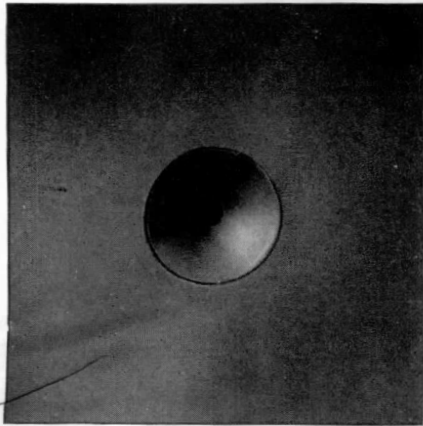
All connections are made with polarized plugs.

The tube complement consists of: 1 - 6J7, 1 - 6C5, 1 - 6V6GT, 2 - 6L6G, 1 - 5U4G. The amplifier circuit employs inverse feedback and a non-resonant dual tone control for separately adjusting both low and high frequency response.

Changeover switch, volume control knob and other controls are all conveniently mounted on the front of the amplifier. The amplifier is protected by an accessible fuse. Besides this protection, a neon lamp indicates any short between deflector plate and screen of the 6L6G tubes.

Input receptacles are provided for two projectors. Two jacks permit the use of auxiliary equipment such as phonograph or microphone.





A-12 PM SPEAKER WITH BAFFLE

Correct Speakers

Selecting speaker equipment for an auditorium requires a certain type of speaker to get proper sound distribution throughout. Wide auditoriums often require two or more speakers to get equal sound distribution throughout. In order to obtain the type of speaker or speakers best suited for your auditorium, we suggest that all dimensions along with the distance of projection be sent to us. With the above information, we can then recommend the correct speaker equipment.



A-12 PM SPEAKER IN CASE BAFFLE

Base Reflex Speaker

The speaker used in this system is of the coaxial type, entirely new in design. It is coaxially assembled into a compact unit with a built-in frequency dividing network having a crossover at 1800 CPS. High frequencies are reproduced by a new compression type high frequency speaker, and the low frequencies by a 15-inch low frequency speaker. Both are powered by Alnico 5 permanent magnets.

Minimum distortion and unusually good polar distribution is obtained.

The speaker is mounted in a base reflex cabinet which is highly recommended for theatres.

Cabinet Type Two-Way Reproducer

The cabinet type two-way reproducer consists of a special type multi-cellular horn and a high frequency speaker unit with a small but very rugged diaphragm of new design. The 18-inch low frequency speaker and a high frequency speaker are both of the permanent magnet type.

The cabinet is equipped with an 800 cycle dividing network that provides high and low frequency separation. Each unit is equipped with an attenuator permitting balancing of the high and low frequency response.

Angle of distribution is 100 to 120 degrees horizontal and 60 degrees vertical.

For auditoriums or theatres up to 1,500 seats.



RB-151



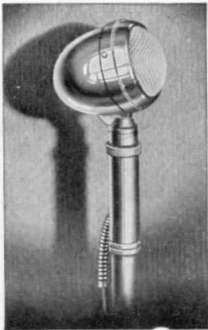
CABINET TYPE
TWO-WAY
REPRODUCER

HOLMES
PRESENTS
 THE
"Rex" Mazda
 AND
"Rexarc"
 16 mm. SOUND ON FILM
 EQUIPMENTS

RETURN POSTAGE GUARANTEED

HOLMES PROJECTOR COMPANY
 1815 ORCHARD STREET -- CHICAGO 14, ILLINOIS

ACORN MICROPHONE



This is a new type of crystal diaphragm microphone with a swiveled head, permitting its use as a directional or non-directional unit. Frequency response is flat (plus or minus 4 db.) from 30 to 10,000 cycles.

MONITOR SPEAKER



A booth monitor speaker is very essential for the operator. It comes complete, mounted in metal case with volume control, cord and plug to insert into amplifier.

ELECTRIC TURNTABLE

Non-synchronous Electric Turntable with Electric Pickup for phonograph records. This unit plays the standard 10-inch records which operate at a speed of 78 r.p.m. Code Word—TURNA.

Non-synchronous Electric Turntable with Electric Pickup. This unit plays phonograph records of 10-inch, 12-inch or 16-inch diameters. For 16-inch records the speed is reduced to 33 $\frac{1}{3}$ r.p.m. by simply moving a small lever. Code Word—TWOPA.

These units come complete with cords and plugs ready to connect to any 110 volt 60 cycle alternating current.

Cord and plug is furnished for Electric Pickup to amplifier. Connection is made by inserting plug on pickup cord into amplifier.



HOLMES PROJECTOR CO.

1815 ORCHARD STREET, CHICAGO 14, ILLINOIS