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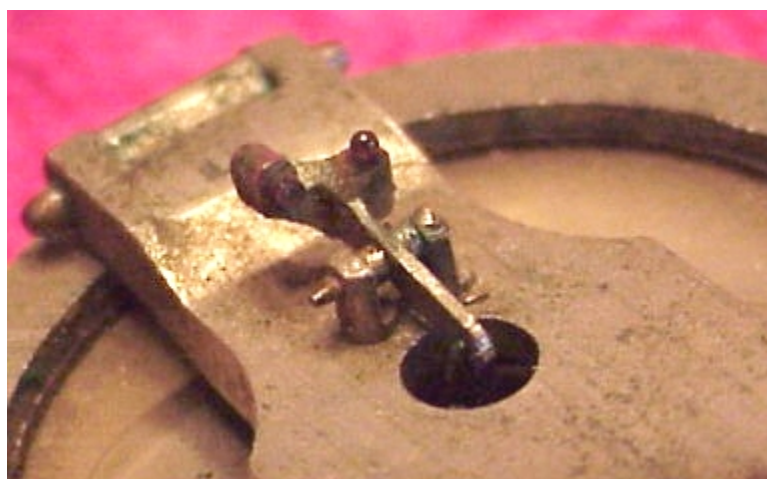


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Cylinder Reproducers

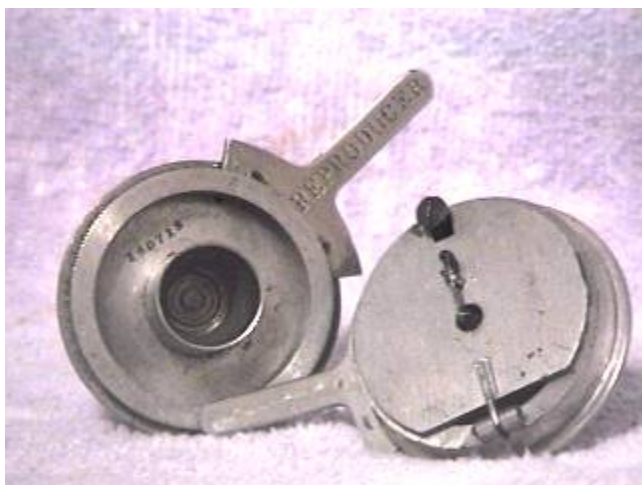
a primer for the novice collector

An assortment of different cylinder reproducers exist. Each was designed with a specific purpose and in some instances using the incorrect one can damage or destroy irreplaceable recordings. I will attempt to describe all of the reproducers (and recorders) associated with the Edison line of entertainment phonographs produced from the mid-1890's until the closure of the phonograph works in 1929.



(left - recording cutter | right - reproducing stylus)

The first improvement to the reproducer of the 'Perfected' phonograph of 1888 was the **Standard Speaker** which was introduced in 1889. This was actually both a recorder and reproducer. By rotating the reproducer slightly in the carrier eye, either the recording cutter (left) or the reproducing stylus (right) was brought into use. The rigid mounting required for this design made it difficult to correctly align the unit for playback. This has got to be one of the most difficult Edison reproducers to locate. Expect to pay \$800.00 or better for a complete one. I am only aware of three that have been available for sale in the past 10 years.



The earliest reproducer that is likely to be encountered by the collector is the **AUTOMATIC** which was introduced in 1892. This reproducer was a dramatic step forward in that the stylus bar mounting was designed to allow a slight amount of lateral movement, which automatically allowed the stylus to align itself in the record groove (hence its name). On all prior reproducers the stylus bar was fixed, that is to say no lateral movement was allowed, and fine adjustment of a screw on the carrier arm was required to properly align the stylus with the groove. The Automatic still had an arm on its side for *fine tuning* the tracking with the same screw arrangement. Originally it had an extremely light weight (like that of the Standard Speaker) for playing the soft wax records then available. As better formulations of wax were developed a heavier weight was substituted. The diaphragm was made of extremely thin (and fragile) glass. Current market price: Around \$250.00 to \$300.00



In 1902 the Automatic was replaced by both the **Model B** and **Model C** reproducers. The Model B had a much heavier weight than the Automatic and was intended for use with the denser dark brown wax then in use. As standard the diaphragm was of glass, but mica would be substituted upon request. This reproducer did not have an arm attached as did the Automatic and the weight was stamped *Model B*. The Model B was discontinued in 1907. Current market price: \$175.00



This is an early version of the Model B reproducer. The body is the same as that of the early Model C reproducer but the weight is different from either the Automatic or the later Model B. This particular example has an aluminum diaphragm with the same shape as that of the copper diaphragms introduced in 1907.



Detail of the weight & stylus of the later and more commonly found Model B. These later Model B's did not have the arm attached to the body

MODEL C

The Model C had a weight even heavier than that of the model B and was intended for playing the new moulded Black Wax records which had just come out. Two holes were cast in the end of the fish tail shaped weight. These were intended for mounting of additional weight which would have produced a slight increase in volume, however this was not pursued for fear that the additional weight would damage the record.

The earliest Model C's still retained the arm on the side but served no purpose as the body of the reproducer now had a small slot cut into the edge to align with a pin in the carrier arm. The diaphragm was originally of stepped mica (and occasionally glass) until 1907, when it was replaced with a copper diaphragm.



Earliest style of the Model C reproducer which still retained the arm of the earlier Automatic reproducer



A 'Transitional' Model C. The arm was dropped but this example still had the holes for the arm. The holes were filled with pins and the letters REP'D were stamped in between.



The most often seen version of the Model C reproducer

Can be used with any of the 2-minute black wax and Indestructible records. **NOTE:** *Do not use with brown wax records.*

Model D - no picture available



The new 4-minute wax amberol records introduced in 1908 required the **Model H** reproducer. In design it was very similar to the Model C, differing only in the stylus & stylus bar. The stylus was of sapphire with

the tip in the shape of a button, which was positioned so that its edge tracked the groove. The early stylus bar was of two thickness with the a V-shaped stop to limit lateral movement. Later Model-H's had a stylus bar of uniform thickness and the V-stop was omitted. The diaphragm was of copper.

While designed for 4-minute wax amberols, it can be safely used to play Indestructible 2 & 4 minute records as well as Edison's Blue Amberol records, although sound reproduction will not be as good as that of the reproducers which were designed to play these celluloid records.

Warning: *Under no circumstance should the Model H be used to play 2-minute wax records!*



The **Model J** was intended for use on Edison Concert phonographs which had been converted to play standard size cylinders. While similar to the Model H reproducer, the weight is slightly smaller and only has a slight bend to it. A slit was cut into the weight for the limit loop to pass through.



The **Model K** reproducer was the first Edison reproducer to incorporate both a 2-minute and a 4-minute stylus on a single reproducer. While still retaining the same body and weight shape as the Model C and Model H reproducers, the tail weight was of a new design. The central portion of the weight was able to swivel 180 degrees so that the correct stylus could be brought into use. Originally supplied with the combination Fireside and combination Gem phonographs only. Combination Standards, Homes &: Triumphs were still supplied with both the Model C and Model H reproducer. The short coming to this reproducer was

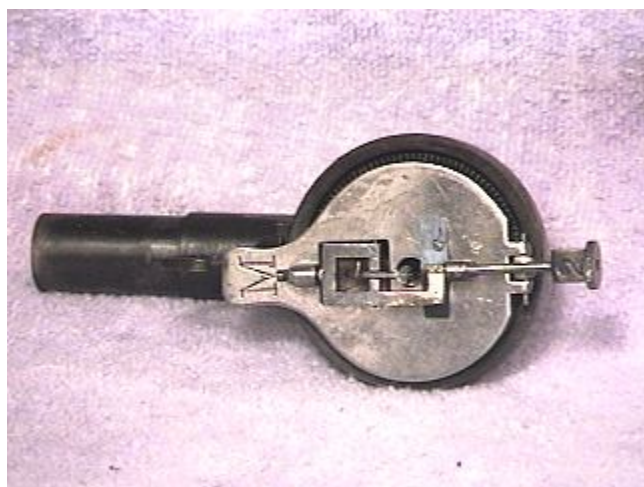
that to change from a 2-minute record to a 4-minute record, the reproducer had to be removed from the phonograph so that the central part of the weight could be rotated to the correct position.

Note: *Be careful when playing any records which are the slightest out of round as the high point may strike the central point where the two stylus bars are linked, causing the record to be damaged. There is no way to adjust for this problem.*



The Amberola I was the first Edison phonograph since the Tinfoil model to have the record move laterally under the reproducer as opposed to having the reproducer move. This same design was used in the Amberola III and Opera models. A suitable reproducer was designed that was self supported by its output tube. This was the **Model L**. This had a larger copper diaphragm embossed with spoked ridges (similar to the designs found on high-end audio component tweeters) for better sound reproduction. Designed for the 4-minute wax amberol, it can also be used for Indestructible 2 & 4 minute records as well as Blue Amberol records.

Warning: *Under no circumstance should the Model L be used to play 2-minute wax records!*



Introduced mid-1910, the **Model M** was a combination reproducer incorporating a stylus bar which could be flipped over bring the correct stylus into use. This reproducer is extremely scarce as it was only designed for the Amberola I which was a combination phonograph. The Amberola III and the Opera are both 4-minute only machines. Suitable for playing all types of 2 & 4 minute cylinders *except* brown wax records.

Note should also be made that complaints were received that the heavy weight of the Model M tended to wear the moulded wax records. The Edison company trimmed the weights down on Model M's which were returned for this complaint.



In 1911 the **Model N** reproducer was released which utilized the larger diaphragm which had been used in the Model L and Model M reproducer, but intended for use in the *standard* Edison lineup of phonographs (at \$200.00 for an Amberola I these were beyond the means of all but the most wealthy). The body was of larger size than the previous models and required a new carrier arm with a larger eye. The basic fish tail-shaped weight of the Model C and Model H was retained. MODEL-N is stamped on the tail of the weight, the earliest simply being over stamped on Model H weights.





The N-56 was for use on the Amberola IV through X so that wax amberol cylinders could be played.



The **Model O** reproducer was a combination reproducer whose basic design was a combination of the body of the Model N and the weight and stylus bar assembly of the Model M. Initially supplied with the Triumph Model E (and a few other high-end Edison phonographs), it required a carrier arm which had the larger eye mounted in a horizontal position. The same complaints were received about wearing of wax records as were being noted with the M reproducer. The weights of some of the O reproducers were also cut down, usually having the letter Q stamped on the weight. This however was not performed on all of the modified O's.



The **Model R** reproducer was designed so that owners of machines with the standard size carrier arm could

enjoy the benefit provided by the larger diaphragm of the N reproducer. The body is very similar to the N except that it is approximately 1/4 inch higher. This was to allow the reproducer body to fit in the small carrier arm eye and still allow use of the new diaphragm. Introduced in 1911. The weight is stamped MODEL-R and was intended for the 4-minute wax amberol records, although it can safely be used on Indestructible 2 & 4 minute records as well as Edison Blue Amberol records.



The **Model S** was a combination reproducer utilizing the body and diaphragm of the Model R and the weight of Model K reproducer. Initially supplied only with the Standard Model F phonograph. Can safely be used to play 2 or 4 minute record *except* brown wax records.



Note: Be careful when playing any records which are the slightest out of round as the high point may strike the central point where the two stylus bars are linked. There is no way to adjust for this problem.



With the introduction of Edison's Blue Amberol Records in 1912 a new series of reproducers were designed to achieve the most accurate sound recreation then possible. For the Amberola I, III & Concert (formerly known as the Opera) phonographs the **Diamond A** was produced. For all other cylinder phonographs produced by Edison since 1896 which were outfitted with either 4-minute or combination 2 & 4-minute gearing, the **Diamond B** was developed. This would fit the carrier arms with large eye situated in a horizontal position. With the introduction of the Amberola 30, 50 & 75 in 1915 the **Diamond C** was developed. All three used a diamond stylus and had a diaphragm of rice paper and cork. None of the reproducers have any identifying marks.



For use only with Indestructible 2 & 4-minute and Blue Amberol celluloid records. Attempting to use a diamond reproducer on any wax record will result in instant ruin of the record!




MODIFICATIONS & AFTERMARKET REPRODUCERS FOR USE ON EDISON CYLINDER PHONOGRAPHS

In addition to the stock Edison reproducers, there were several companies which either modified original Edison equipment or manufactured reproducers to fit the Edison standard size carrier eye. With the exception of the Indestructible reproducers (which were marketed for a time by Columbia) few of these reproducers turn up - in part because they were produced in small numbers.



(L to R - Model N, Modified N for Hexaphone 102, Modified N for Hexaphone 101)

The **Indestructible** reproducers were intended for playing that companies brand of celluloid cylinders and were not intended for wax cylinders. While they do not turn up in large numbers anyone wishing to add one to their collection should be able to locate an example at one of the phonograph shows. These were well made and feature a spring tension device intended to keep the stylus good contact with the record surface at all times. I have several examples, each of which has a different diaphragm. One which is modified for use on the Hexaphone has a ridged & spoked metal diaphragm and features a stylus similar to the Edison Diamond A/B/C reproducers. Of the others I have one has a mica diaphragm and two have what appears to be a paper or composite diaphragm. I have another one which was also modified for use on the Hexaphone and has the weight, stylus & diaphragm of the early Edison B reproducer. Prices on these vary from \$150.00 to \$250.00

	<p>An example with clear mica diaphragm</p>
	<p>An example with purple tinted mica diaphragm</p>
	<p>An example with some type of paper or composition diaphragm</p>



An example with a spoked metal diaphragm, which is tinted purple. This particular reproducer is for a model 102 Hexaphone



The neck was turned down into a ball shape and pierced for mounting on the Regina Hexaphones.



Close up of the modified stylus mounting for the model 102 Regina Hexaphone.



The **Mobley** reproducer is actually a modification of the Edison Automatic reproducer, featuring an added weight for greater volume, a metal diaphragm and a domed sound chamber. I have seen two distinctly different styles of this reproducer. The earlier style had a trowel shaped weight, while the later had a weight similar to that of the Edison C reproducer. This example also has a connector attached for ear tubes. These reproducers rarely turn up and anyone wishing to add one to their collection should be prepared to pay \$400.00 or more.



Domed tube-plate to a different Mobley reproducer



Blackman was another modification of the Edison Automatic. This also featured a domed sound chamber. In addition to the domed tube-plate additional weight was also added to the original automatics weight. Expect to pay \$500.00 for one.



Edison-Bell reproducers were actually intended for that British company's product but fit the Edison carrier eye as well. Pictured is a 'NEW MODEL' - essentially that companies answer to the Edison 'C'. While they rarely turn up here in the United States, they are by no means uncommon in the UK. Edison-Bell also produced a 'cristol' reproducer for playing celluloid cylinders. The value for the NEW MODEL is about the same as for an Edison C reproducer.



The German manufactured **Argosy** reproducer was intended for that companies products, but again the carrier eye is the same as the Edison. These reproducers scarcely show up and when they do most people assume that they are Dictaphone reproducers as the design closely copies that of the Columbia Lyric

reproducer. There are no identifying markings or serial numbers on these.



An excellent sounding reproducer is the [Max Wurcker](#) from Australia which features the Coombs oversized cupped aluminum diaphragm. This reproducer is much louder than the contemporary Edison reproducer. Expect to pay \$600.00 to \$800.00 if you can find one for sale.



[Ediphone](#) - while not exactly what I would recommend for use, the reproducer from the early style 'Ediphone' will also fit the standard size carrier eye. The neck of these reproducers is very short and will not

support a horn but can be used with a morning glory type horn which utilizes a rubber connector from the reproducer to the horn. They feature some type of paper or composite diaphragm which actually sounds quite good. These generally sell for \$50.00 to \$75.00

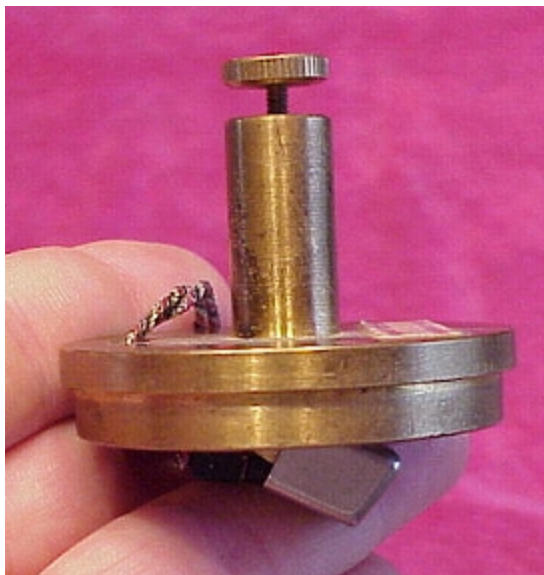
Electric Reproducers for use on Edison Cylinder Phonographs

An article on cylinder reproducers for use on Edison Phonographs would not be complete without commenting on some of the modern devises which have been manufactured for facilitating electrical playback of cylinder records.

To the best of my knowledge there have only been a few companies which have actually produced such devices - specifically the OWL unit which was intended for use on Edison large carrier eye machines and my own ACT pickups which are intended for the standard size carrier eye.



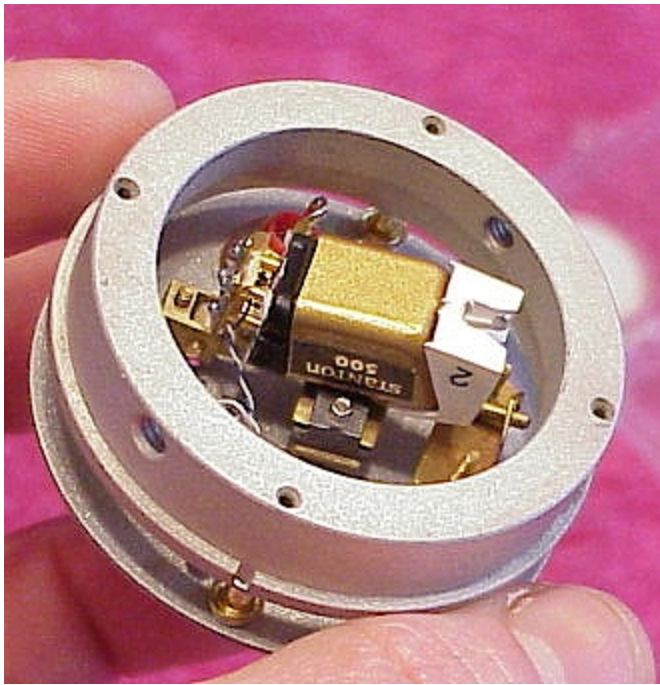
The **Owl** features a rigid mounting that allows little vertical or lateral motion but maintained good contact with the record groove bottom for the most accurate reproduction possible. On badly deformed cylinders this rigid mounting can result in skipping or mis-tracking. This was a professionally manufactured, robust unit and was popular for many years with collectors & institutions. I believe these were discontinued in the early 1990's.



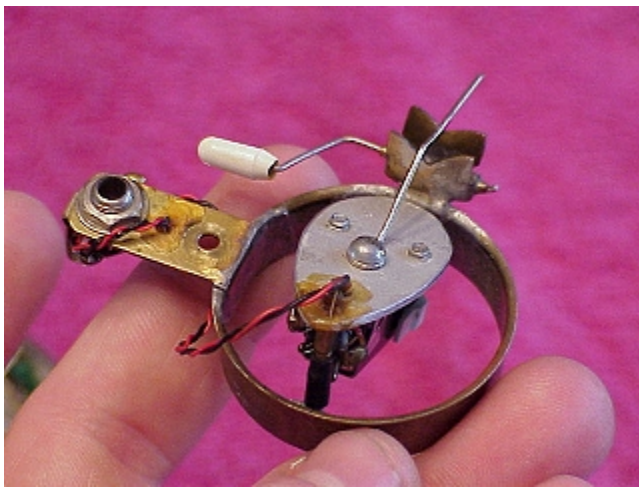
My own **ACT** pickup features a 1" tonearm which allows sufficient lateral and vertical motion to play even badly out of round records or Indestructible records which have shrunk lengthwise resulting in greater than 100 or 200 tpi. Interchangeable sapphire styli are used. As we have been unable to find a cartridge company still willing to mount the large size stylus needed for cylinder records we have to mount our own. Delivery is anywhere from 6 weeks to 6 months. Inquire for availability.



Unit for the standard size Edison carrier eye.



a custom unit for the large size Edison carrier eye.



I received this electric cylinder pickup (**maker unknown**) in trade several years ago. I don't know what vintage it is, but judging from the cartridge used I would guess it was made in the early 1970's. Intended for the standard size carrier eye, the design isn't bad but it is a rather delicate device and did not provide correct styli, instead 'stock' 2.5 mil stylus intended for 78's are used.



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Continue to [Edison Records and Reproducers](#).