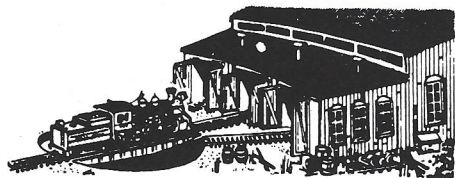


The Roundhouse



The Roundhouse is an American Flyer repair column. Questions on any aspect of AF repair are welcome. Tom Jarcho, 215 W. 101 Street, New York, NY 10025 answers questions on AF cars and locomotives; Carl Contadini, Old Waterbury Rd., Terryville, CT 06786 answers questions on AF accessories. Each editor alternates his column every month.

By Carl Contadini
Illustrations by the author

Visiting the Howland Hughes department store in Waterbury, Connecticut was a Christmas ritual in my family for many years. We always went on a Saturday morning in early December so I could tell Santa Claus what I wanted for Christmas.

I can still remember the sights and sounds as we descended the stairs to the toy department. Christmas carols were playing, the store was crowded with the rush of shoppers, and every now and then you heard through the clutter of sound, "All Aboard! American Flyer through train to New York, Philadelphia, Chicago and all points West! All aboard!"

That just added to the exciting ambience of this delightful time of the year—the season most conducive to running model trains.

AUTOMATIC TALKING STATION

That brings us to the repair and maintenance of the 755 and 755A Talking Station.

The 755 was listed in catalogs from 1948 to 1952, and was originally introduced as A-Koostikin Station. The station has many variations and in 1954, the mechanism was installed in the 799 Union Station. It was later modified slightly and can be found in the 23786 station.

The 755 Station consists of a motor-driven record player and has an axillary cammed

switching system to start and stop the train. The one significant difference between the 755 and 755A was the addition in the 755A of a 10 ohm resistor that would provide a small amount of voltage to the track circuit and keep the E unit in the train from cycling while waiting at the station. Figure #1 shows how to hook up the 755 to your layout.

THE MOTOR

The motor, from a practical standpoint, is a non-serviceable item. It is an inductive wound motor and cannot be easily rewound without elaborate equipment. If you find the motor is burned out, your best bet is to look for a junk unit at your local train meets. Over the years I have seen them from time to time on dealer's tables.

THE RECORD PLAYER

The record player spins at 78 rpm and is driven by a shaft through a fiber gear that runs off the motor shaft. In Figure #5 you will find instructions on changing the records.

THE REPRODUCER AND HORN

The reproducer is a non-serviceable unit and is one of the most sought after items on the talking station. It seems that through the years, because they were not attached to the station, they have been lost or misplaced. I

have had at least five people ask me if I had any spares.

An important part of the reproducer is the needle, and per Gilbert instructions, the needle should protrude 1/4". The needle does wear out and should be replaced, or damage can result to the record. See note in Figure #5

GEAR CAM/SWITCHING MECHANISM

This is the heart of the talking station.

The drive mechanism consists of a worm gear on the motor that drives a fiber gear which is attached to a shaft that drives the record platform. Also on the shaft is another worm gear that drives a second fiber gear which is attached to the switch/cam mechanism.

The gear should be cleaned and then re-lubricated using any commercially available light grease (Gilbert recommended Vaseline). In Figure #2 you will find lubricating instructions from a 23786 station which can apply to 755 and 799 stations.

Over the years, I have repaired 755 units where the gear drive assembly tends to bind, which in turn never allows the record to come up to speed. This is very common when the unit sits for a long time before being used. Usually a few runs and the unit comes up to speed. If that doesn't work, then cleaning and re-lubricating will be in order.

The next area is the switch/cam assembly. This mechanism is used to start and stop the train and moves the reproducer forward to start the record.

As you examine the assembly, you will find three contact fingers that rub on the cam and provide the path of electricity to the various functions of the station. Figure #3 shows the cam profile. Figure #4 shows the wiring of a 755A station.

CLEANING OF THE CAM

The cam is a one piece diecast metal drum

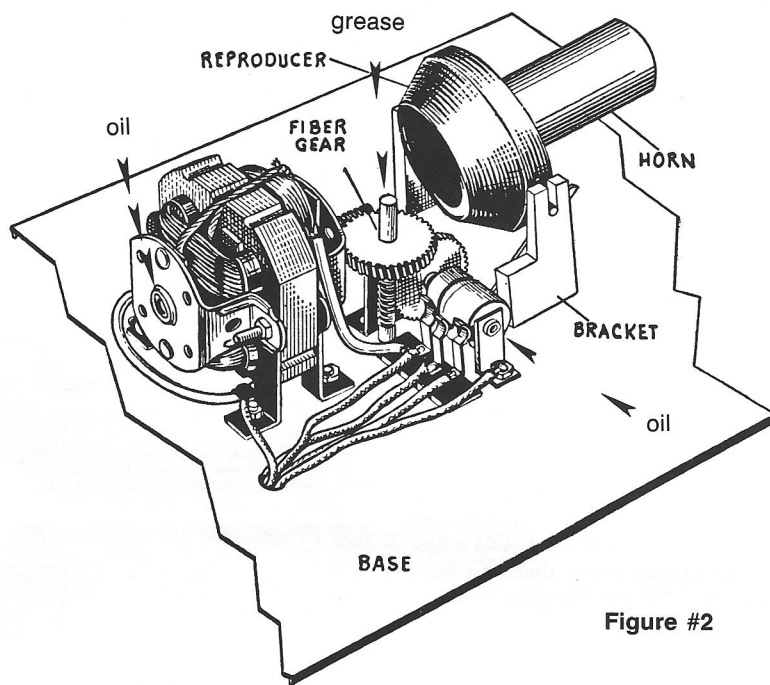


Figure #2

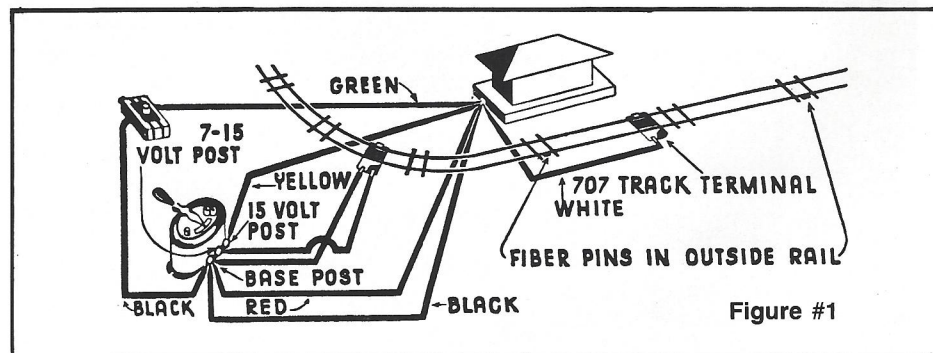


Figure #1

and provides an electrical path. It should be clean and free of any grease. You can use a TV tuner cleaner in moderation to clean the drum.

THE BALANCING ACT

Let's review one complete cycle on the 755 station. To activate the 755 series, you press the button or switch that controls the 755 (see Figure #1). You need to hold the button down long enough so that cam #3 makes contact with the third finger. Once contact is made, the unit will operate independently for the balance of the cycle.

As the drum begins to rotate, cam #2 goes to low lobe and opens the track circuit. If you have an "A" unit or later models with a resistor to low lobe and opens the track circuit. At the same time the track during this open phase. At the same time the lever that holds the cam #4 lowers the lever that holds the reproducer off of the record, and the reproducer comes down and the needle engages the start tracks on the record. This movement causes the reproducer to rely on the needle engagement with the record to complete the cycle. Gilbert recommends a 1/4" protrusion on the needle. I have found if the needle is too short, it will tend to shake across the record. If it is too long, it will tend to stay in the start track of the record.

As the cycle continues, cam #2 makes contact and puts full voltage back to the track. You will note the record is still playing. Then cam #4 allows the lever to lift back up and in turn, the reproducer, which is weighed in such a manner that its center of gravity is beyond mid-point, causes the reproducer to return to the start position.

The last operation is cam #3, which returns back to its start position, and opens the circuit that applies voltage to the motor. This completes the cycle and the unit is now ready to receive the next input from the operator.

Common problems encountered with the 755 series station:

1. You have to hold button in for the complete cycle. Possible solution: Finger #3 does not make contact with drum. Check for alignment, dirt and tension.
2. Station plays continuously and will shut off. Possible solution: Finger #3 has too much tension or may be deformed and remains in contact with drum.
3. Train does not stop at station. Possible solution: Make sure unit is hooked up as shown in Figure #1. Next, make sure finger #2 does not make contact with drum when the low portion of lobe #2 is next to finger #2.
4. Train does not start up automatically. Possible solution: Finger #2 is making poor contact with the cam at the end of the cycle.

All in all, in my opinion, this is one of the best continuous operating devices ever produced by Gilbert, and I am sure this accessory caused a lot of heartburn at Lionel. Even in today's high technology world, the 755 is a good, reliable device. They still can be found at local meets and the prices, while rising slightly in the last couple of years, still reflect an abundance in the marketplace. **S**

REPRODUCTION PARTS

1. Paints
2. Windows
3. Horn "Tube Carbon"
4. Mystic sign on roof
5. Chimney
6. Needle
7. Record
8. Resistor
9. Record turntable
10. Miscellaneous nuts and washers

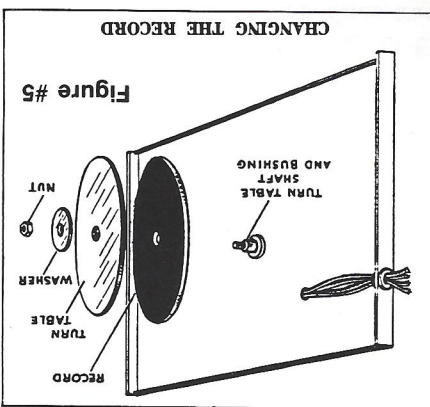
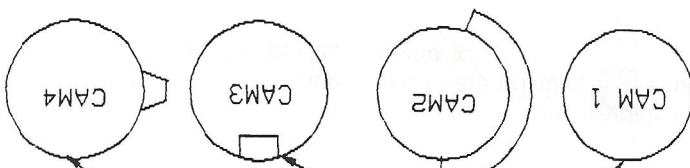


Figure #5
CHANGING THE RECORD

SECTIONAL VIEW OF 755 CAM

FINGERS RIDE ON 1-3
REPRODUCER LEVER RIDES ON CAM 4



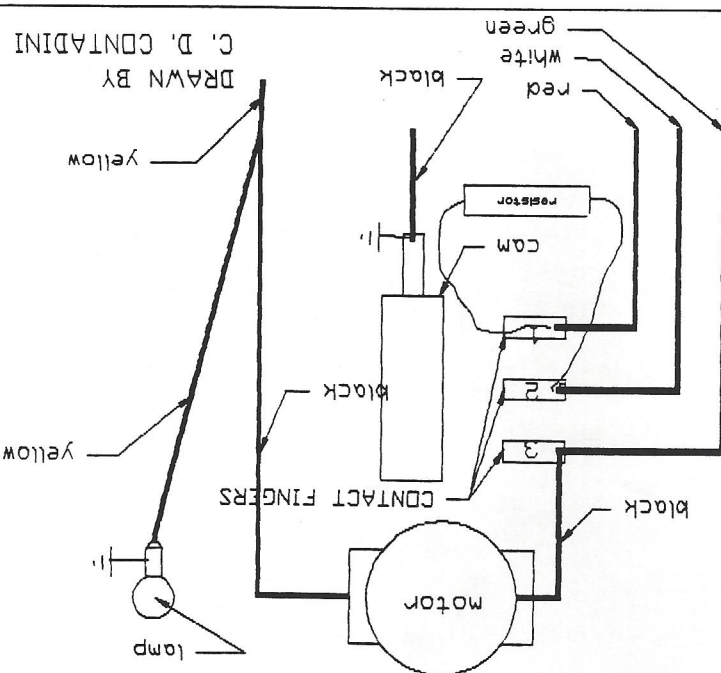
NOTE
CAM 1 LOCATED OPPOSITE FIBER GEAR

FIG.# 3

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755A AUTOMATIC TALKING STATION

FIG.# 4



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