

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768671

KODAK CAROUSEL SLIDE PROJECTORS,
MODELS 600, 650, 700, 750, 800, 850 AND AV-900
AND

KODAK EKTAGRAPHIC SLIDE PROJECTOR AND
KODAK EKTAGRAPHIC SLIDE PROJECTOR, MODEL E

Simplified Replacement Procedure for
Thermal Fuse Part No. 183910

All *KODAK CAROUSEL* and *KODAK EKTAGRAPHIC* Slide Projectors are now equipped with a thermal fuse. This is a safety device which protects the projector from overheating and fire damage caused by overheating within the projector housing. It also provides protection against abnormal surges in electrical current supplied to the projector.

There is no visible change in the appearance of the fuse when it burns out. The most obvious symptom - projector will stop running or will not turn on if it has been off.

The thermal fuse will open only when the operating temperature is too high or because of abnormal electrical current surges. We therefore urge that the entire projector and the conditions in which projector is operating (such as a poorly ventilated, rear-screen projection cabinet) be checked to determine the cause of burn-out, and the condition corrected before the projector is returned to service.

To replace a burned-out thermal fuse:

1. Unplug projector from power source, turn projector upside down.
2. Remove base cover, 5 Phillips head screws.
3. Remove the screw holding the burned-out fuse.
4. Lift out fuse and cut leads at sleeving. Remove sleeving and strip wire for 1/2".
5. Cut leads on replacement fuse to approximately 3". Strip wire for 1/2". Join old leads to new leads with wire connectors (145161).
6. Install new thermal fuse, secure phenolic mounting board with hex-head screw. Dress wires and connectors into space between lamp house door hinge post and rear nameplate. Be sure everything is clear. Try lamphouse door and other moving parts for clearance.

7. Replace base cover.

Thermal fuses may be added to non-fused *KODAK CAROUSELS* (except the 550 series) by following the Installation Instructions furnished with each fuse.

Order: Part No. 183910

Thermal Fuse

From: Eastman Kodak Company, Central Parts Services,
800 Lee Road, Rochester, New York 14650.

This Service Bulletin supersedes Service Bulletin #768659.

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Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

768672

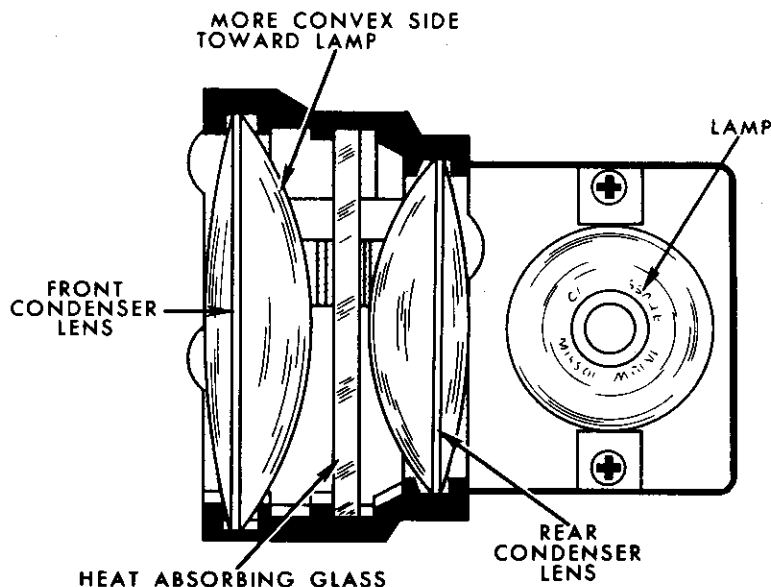
KODAK CAROUSEL PROJECTORS, MODELS 600, 750, 800 AND 850
KODAK EKTAGRAPHIC SLIDE PROJECTOR
AND
KODAK EKTAGRAPHIC SLIDE PROJECTOR, MODEL E

Front Condenser Lenses

All currently produced slide projectors noted above now have the nonsymmetrical front condenser lens.

In the KODAK CAROUSEL Slide Projectors and the KODAK EKTAGRAPHIC Slide Projector, Model E, lens Part Number is 625182 and in the EKTAGRAPHIC Slide Projector the lens Part Number is 625634. The reason for the difference in the part number is the lens (Part No. 625634) used in the KODAK EKTAGRAPHIC Slide Projector is a coated lens.

The correct placement of the nonsymmetrical front condenser lens is essential for proper screen illumination and is especially important on the KODAK CAROUSEL Projector, Model 850 due to the sensitivity of the automatic focus feature, which also prevents use of the coated condenser lens in this model.



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768681

KODAK CAROUSEL PROJECTOR, MODELS 600, 650, 700, 750, 800 AND 850

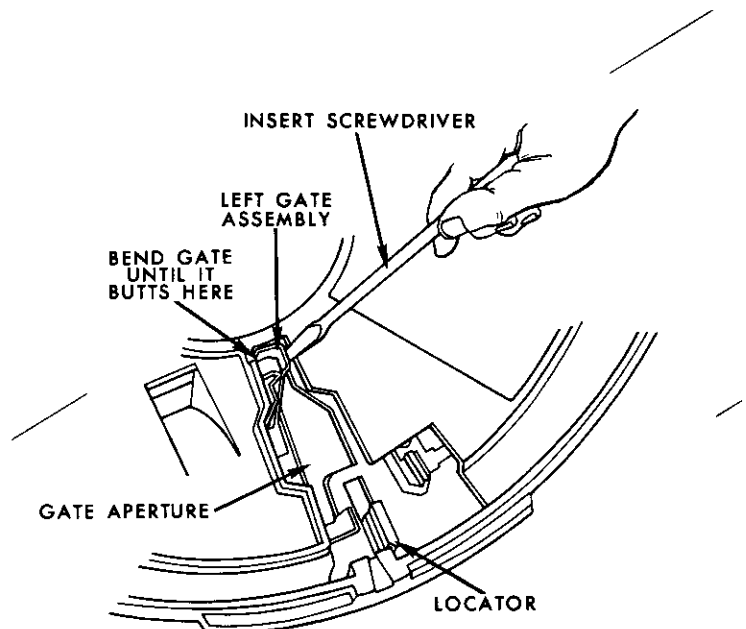
Jammed Slides

As the projected slide is raised back up into slide tray, the cardboard mount strikes the compartment wall dividers and jams projector. The trouble may be in the location of the inboard (left) gate assembly, Part No. 170753. It misdirects the slides as they move back up into the slide tray. The damage is done as each slide strikes the knife-like divider wall between tray compartments. It splits and peels back a small portion of the top inboard corner of the slide mount.

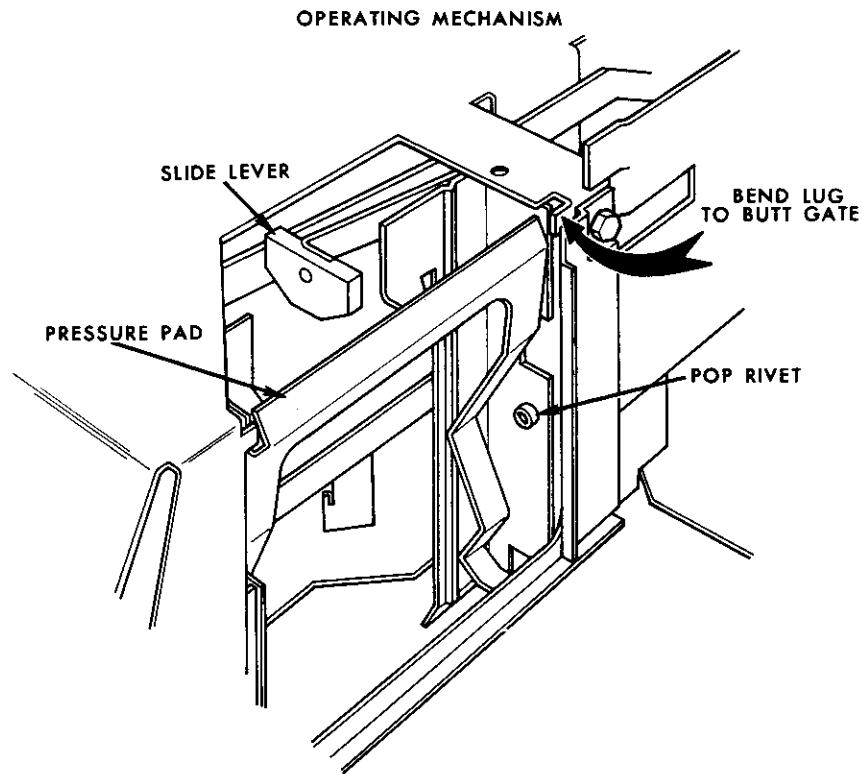
If this condition is not corrected immediately, all the cardboard mounts will eventually become dog-eared. Even though they do not jam at first, soon they will start jamming.

If you have a customer complaint of jamming slides, adjust the left gate assembly as follows:

1. Determine that it is the inboard (left) gate assembly; it usually is.
2. Insert screwdriver and really bend that gate to the rear. You may go all the way until the gate butts the housing. It will spring out a little when pressure is released.



3. Test with tray of slides, repeat (2) if necessary.
4. Remove base cover and go to the bottom of the left gate assembly. Note that gate is positioned by a pop-rivet and a small lug of the mechanism frame. Now that the left gate assembly has been moved, there is a gap between it and the lug.



5. Tap lug with screwdriver and small lightweight hammer. Tap lug just enough to again butt it against the edge of left gate assembly. This anchors the gate assembly against movement.

Eastman Kodak Company
Customer Equipment Services Division
Services Engineering Department
800 Lee Road
Rochester, New York 14650

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768747

KODAK CAROUSEL 850 AND 860 PROJECTORS

Focus Motor

If the focus motor needs to be replaced on the subject projectors, use focus motor Part No. 182740; do not use focus motor assembly, Part No. 184750.

The use of Part No. 184750 will result in erratic action and short focus motor life. It is not made for use on the auto-focus type projectors.

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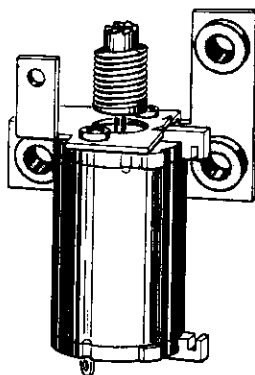
768930

KODAK CAROUSEL PROJECTORS, MODELS
750, 800, 850, 860 AND AV-900

Focus Motor

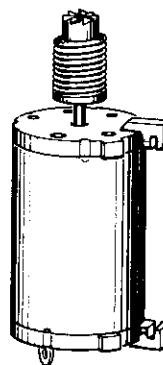
In an effort to clarify the problem of focus motor replacement, the following chart should be of help.

IF YOU HAVE



EARLY

ORDER

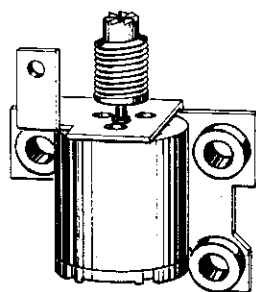


187812

(CONTINUED ON BACK)

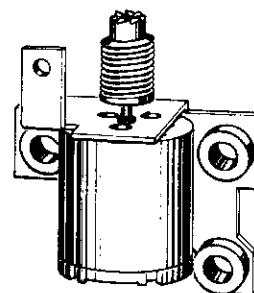
Publication No. 768930
12/69

IF YOU HAVE



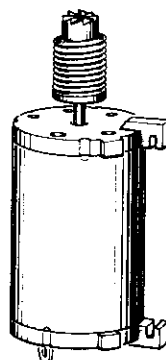
LATE

ORDER



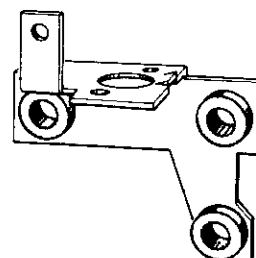
184750

OR

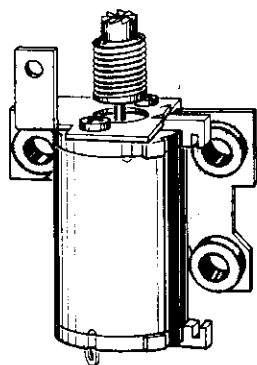


187812

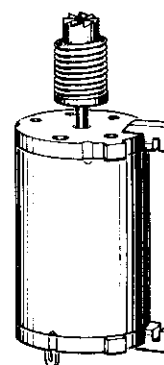
AND



185373



LATE



187812

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768931

KODAK CAROUSEL PROJECTOR, MODELS 850 AND 860

Cell Housing Alignment

When, in the process of setting the null position, there is no response or erratic response the cell housing tab may be malformed.

In order to check the cell housing alignment, remove the cell and cell board as described in Service Manual #768655, "Servicing the KODAK CAROUSEL 850 Projector".

At this point you may use the fan cap (Part No. 172115) as a tool in place of Tool #TL1297. Place the fan cap into the cell opening in the cell housing, adjust the cell housing tab and the cell housing until the image is centered on the center dot in the fan cap. Snug down the screw.

Replace the cell and cell board, then make the fine adjustment for proper null positioning. Tighten and cement screw.

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768952

KODAK CAROUSEL PROJECTOR, MODEL 600
KODAK CAROUSEL PROJECTOR, MODEL 650
KODAK CAROUSEL PROJECTOR, MODEL 700
KODAK CAROUSEL PROJECTOR, MODEL 750
KODAK CAROUSEL PROJECTOR, MODEL 800
KODAK CAROUSEL PROJECTOR, MODEL 850
KODAK CAROUSEL PROJECTOR, MODEL 860

Aligning the Gate Assembly

Misalignment of the LEFT GATE ASSEMBLY (Figures 1 and 2) can cause slides to jam in the projector. The effect of gate misalignment may be to direct the movement of a slide so that it strikes the sharp bottom edge of a tray divider while it is being raised from the gate for return to the tray. In the case of cardboard-mounted slides, the result is that the slides become more and more dog-eared, and the possibility of jamming the projector increases. If the slides being projected are mounted in metal or plastic, the degree of gate misalignment will determine whether or not the slides will jam if they strike the tray divider.

The tray dividers are thinner, and the bottom edge is sharper, in the gray KODAK CAROUSEL Universal Slide Tray than in the black KODAK CAROUSEL Slide Tray. Slide jamming, therefore, is much more likely when using cardboard slides in the gray tray if the projector has a misaligned gate.

To check for gate misalignment, follow these steps:

1. Remove the slide tray and any slide left in the projector gate.
2. Check the gap between the LEFT GATE ASSEMBLY and the edge of the TOP PLATE ASSEMBLY of the mechanism, with gauge (#TL1568), (Figure 1). The diameter of this tool is .115 inches. The tool should just pass through the gap. Clearance should not be excessive.

NOTE: Make certain the measurement is checked between the shiny, plated portion of the GATE ASSEMBLY and the gray sheet-metal TOP PLATE of the internal projector mechanism. Avoid measuring to either the main cast housing of the projector, or the black baffle, which is attached to the GATE ASSEMBLY of autofocus models.

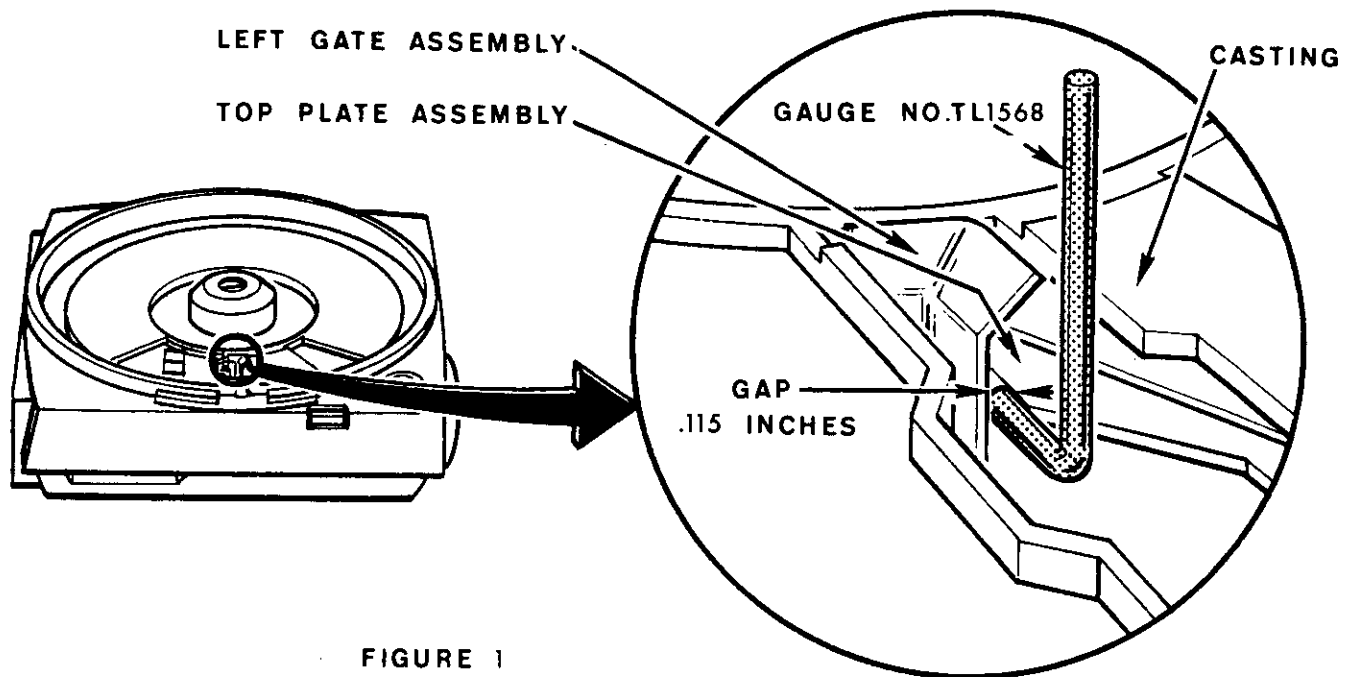


FIGURE 1

If the gap is less than .115 inches, follow steps 3 through 8.

3. Disconnect the power cord.
4. Insert a flat-blade screwdriver between the front edge of the LEFT GATE ASSEMBLY and the top of the main projector housing, as shown in Figure 2. Move the screwdriver handle toward the front of the projector to pry the top of the GATE ASSEMBLY toward the rear of the projector. Pry the assembly until it touches the housing casting at the point indicated in the diagram. The prying action will cause the GATE ASSEMBLY to pivot on the RIVET (Figure 3). When the screwdriver is withdrawn, the GATE ASSEMBLY will spring back slightly.
5. Check to see that the gap between the LEFT GATE ASSEMBLY and the TOP PLATE ASSEMBLY is at least .115 inches. If it is not, repeat step 4 and check again.

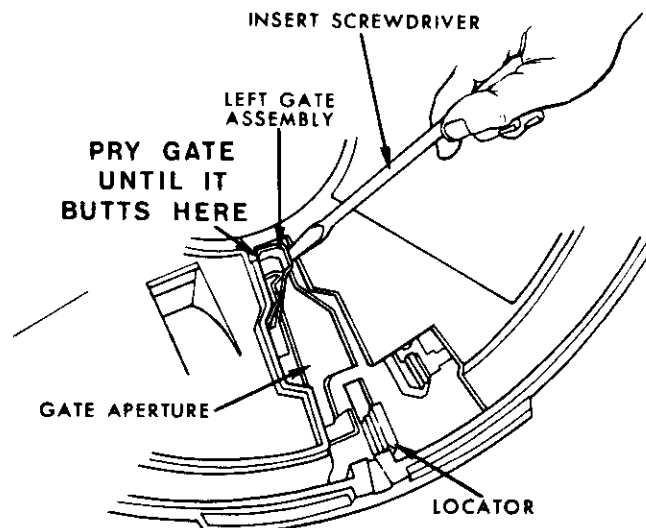
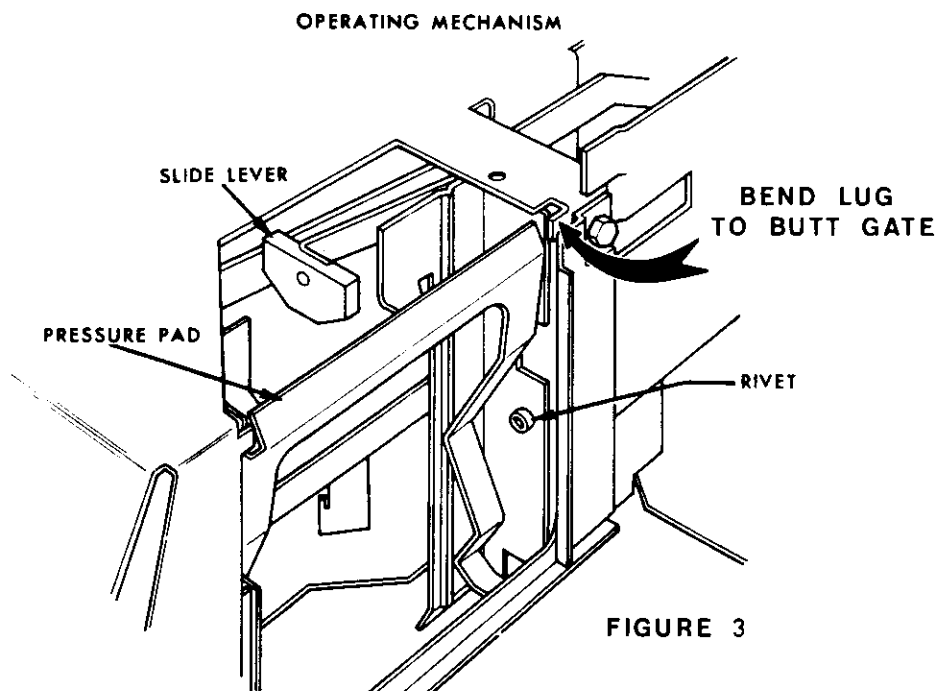


FIGURE 2



MECHANISM ASSEMBLY (Shown upside down with the cover assembly removed)

6. Turn the projector upside down, open the lamphouse door, and remove the front condenser lens, the heat-absorbing glass and the lamp. Locate the LUG (indicated by the heavy arrow in Figure 3 immediately to the right of the cover assembly lip as you look toward the front of the projector. Bend the LUG in the direction shown by the arrow, until it just touches the GATE ASSEMBLY. This can be accomplished by placing the end of a screwdriver against the LUG and tapping the handle lightly with a small hammer. It will ensure that the GATE ASSEMBLY will not easily slip out of alignment again.

NOTE: Autofocus projectors have a black shield covering most of the LUG; however, enough of the LUG is exposed to permit bending as described.

7. Replace the heat-absorbing glass, the front condenser lens, and lamp in the lamphouse compartment.

CAUTION: IF the condenser lens is not symmetrical, place the flatter side toward the front of the projector.

8. Close and lock the lamphouse cover.

The projector is now ready for normal operation.

This Service Bulletin supercedes Service Bulletin No. 768681, dated May, 1969.

Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

KODAK CAROUSEL PROJECTORS, MODELS 600
650, 700, 750, 800, 850 AND 860

775002

Power Switch Replacement

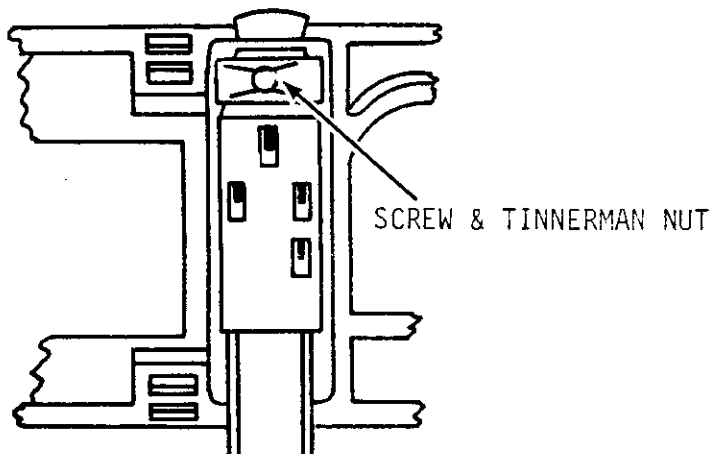
Service Bulletin No. 768911 stipulated that main power switches for the above projectors would be sold only as a part of the grille assembly. Recent changes in switch manufacturers and the resulting wire changes make it feasible for the main power switch to be replaced. There are two switches. One switch, (part No. 187000) is used on KODAK CAROUSEL Projector, Models 600 and 650. The other switch, (part No. 186979) is used on KODAK CAROUSEL Projector, Models 700, 750, 800, 850 and 860.

NOTE: Complete grille assemblies (with switch) are also available. Refer to the Parts List indicated below when ordering.

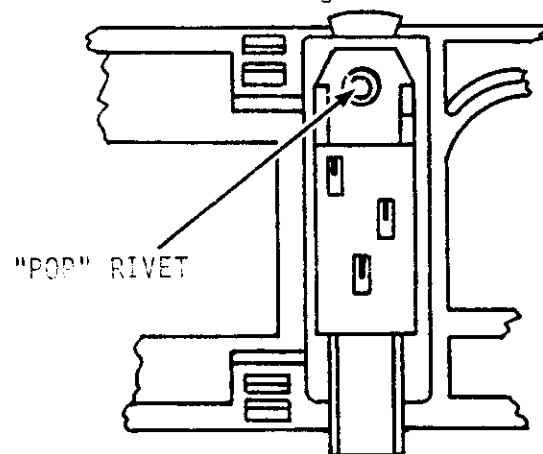
Disconnect the old switch by unsoldering all the leads to it. Remove the grille from the projector and drill out or otherwise remove, the rivets holding the old switch. Replace with appropriate part number switch. There are two methods of fastening the switch to the grille. The preferred method is to use "POP" rivet (part No. 171298) with a pair of "POP" rivet pliers. The second method is to use machine screw (part No. 167109) and Tinnerman speed nut (part No. 116213). Insert a screw through the grille and switch plate and fasten with the nut. (Be sure the long dimension of the nut is parallel to the long dimension of the grille)

To wire the new switch see the appropriate wiring diagram for the particular model projector showing the late style switch. The wiring diagrams are at the back of Parts List No. 768938 for the KODAK CAROUSEL Projector, Models 600, 650, 700, 750 and 800 or Parts List No. 768909 for the KODAK CAROUSEL Projector, Models 850 and 860.

NOTE: When replacing the switch on the KODAK CAROUSEL 700 Projector, use the wiring diagram for the KODAK CAROUSEL 750 Projector.



SWITCH P.N. 186979



SWITCH P.N. 187000

This Bulletin supersedes KODAK Service Bulletin No. 768911 dated 11/69.
Publication No. 11/70B

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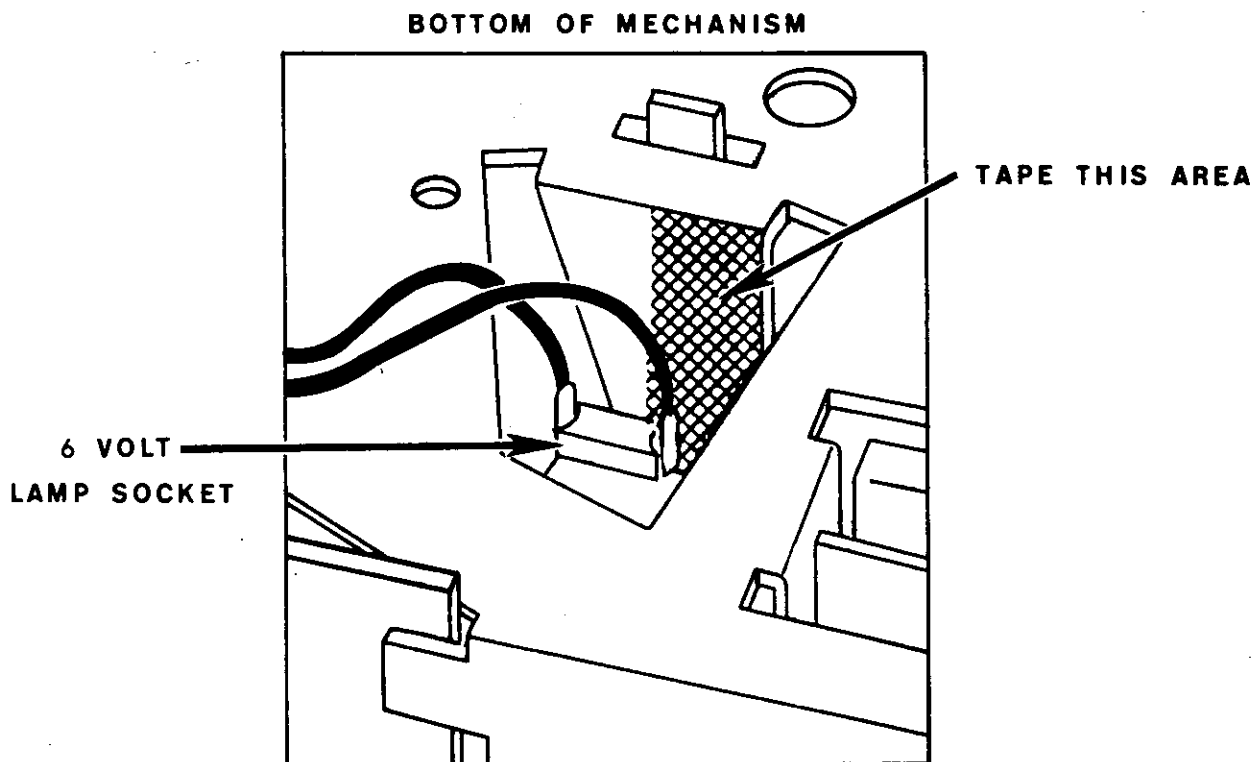
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775004

KODAK CAROUSEL PROJECTORS, MODELS 850, 850K AND 860

It is suggested that when any of the above projectors are received for any repair, you attach a piece of glass tape or electrical tape to the mechanism frame immediately behind the 6-volt lamp socket (see sketch) to prevent a possible short to ground of the 6-volt circuit when the focus rack is at its full back position.



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775074

KODAK CAROUSEL PROJECTORS

With Automatic Focus Feature

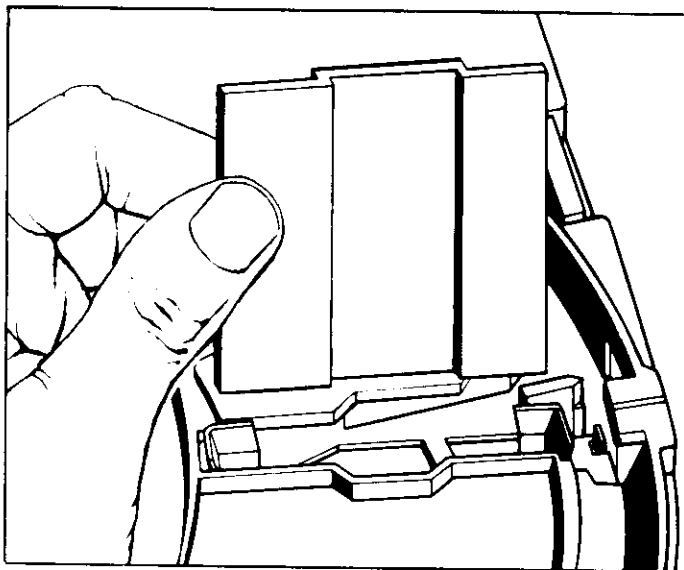
Auto-Focus Gauge (Tool #TL1744)

Some projectors fail to function properly with warped slides even though the automatic focus null position appears to be aligned properly. The focus motor continues to drive the lens either in or out, depending on the warpage.

The Auto-Focus Gauge (Tool #TL1744) provides the check for maximum warped slides. When the gauge is placed in the slide projector gate with the raised central section toward the projection lens, it represents a slide bowed to the maximum of .076-inch forward (see illustration). When the gauge is reversed, so that the raised central section is toward the lamp, the recessed portion on the opposite side now represents a slide bowed .076-inch backward.

Each projector, with automatic focus, should be checked with this gauge. The gauge should be placed in the gate in both directions and in each case sufficient time should be allowed for the focus motor to drive the lens rack to a null position. If the focus motor continues to drive the rack, in either direction, and does not come to a stop, the null adjustment in the projector should be realigned. In these instances, the null adjustment position will require a slight movement, from its current position, in the opposite direction that the rack movement failed to come to a stop. (e.g. if the lens drives forward move the null position backward.)

The Auto-Focus Gauge (#TL1744) is available from Eastman Kodak Company, Central Parts Service, 800 Lee Road, Rochester, New York 14650.



Publication No. 775074
8/71B

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Kodak Service Bulletin

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775101

KODAK CAROUSEL SLIDE PROJECTORS, MODEL 750H AND 800H

Focus Motor

Problem: Noisy Focus Motor

Possible Cause: Focus Motor Speed Excessive

Solution: Disconnect the blue focus motor lead from its connectors, and rewire it to the group of orange leads from the solenoid, clutch contact, contact assembly, and grille assembly.

A recent internal design change in the focus motor for the *KODAK CAROUSEL* Slide Projectors, Models 750H and 800H, resulted in an increase of rpm and noise (gear flutter). The motor part number was not changed. It remains part No. 184750, Motor and Bracket Assembly. This part also serves as a replacement in the *KODAK CAROUSEL* Slide Projectors, Models 750 and 800.

This change in wiring has been incorporated in projectors currently being produced. The lead from the motor has been changed from blue to orange.

***NOTE:** Be sure to check forward and reverse operation after making the change. If the cycling solenoid adjustment is marginal, remote focus actuation could cause forward or reverse cycling also. If this happens, readjust solenoid.

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775294

KODAK CAROUSEL PROJECTORS
MODELS 650, 650H, 700, 750, 750H
760, 760H, 800, 800H, 800HC, 850, 850K
850H, 850HC, 860, 860H, 860HC AND AV 900

Capacitor Installation

Engineering has found that placing the capacitor between the orange and yellow leads, instead of between orange and ground, reduces the spark at the clutch contact (this should prolong clutch contact life,) and also reduces radio interference noise.

Therefore, if you are installing a new capacitor because the old one is defective or because a late-style grille (without capacitor) has been installed and there is no capacitor in the projector, proceed as follows:

First, remove any defective capacitor from the projector. It will be found in one of the following locations: (1) between the orange leads and ground in the wiring trough, (2) between the orange terminal and brown lead terminal at the remote cord receptacle on the grille, or (3) between the orange and yellow leads on the cycle switch terminals.

Then, install a new capacitor (Part No. 204331) between orange and yellow leads.

NOTE: One convenient place to install the new capacitor is between the orange and yellow terminals at the remote cord receptacle.

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KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Make the following corrections and additions in Parts List Publication
No. 775166:

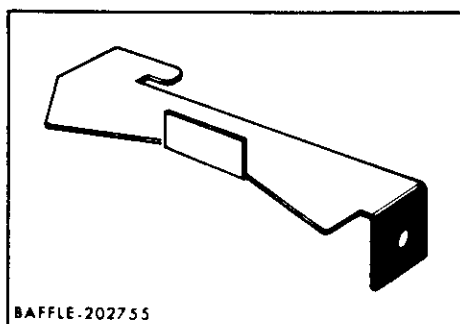
FIGURE 6 CHANGE: BASE COVER ASSEMBLY - 197084

TO: BASE COVER ASSEMBLY COMPLETE - 196960

ADD: BASE AND INSERT ASSEMBLY - 197084

FIGURE 13 ADD: BAFFLE, LAMP MOUNT - 202755

WIRING DIAGRAMS: The attached wiring diagrams replace the wiring diagrams in
Parts List Publication No. 775166.



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Order parts from Eastman Kodak Company, Central Parts Service
800 Lee Road, Rochester, New York 14650
Order by PART NUMBER

Customer Equipment Services Division
EASTMAN KODAK COMPANY • ROCHESTER, N. Y. 14650



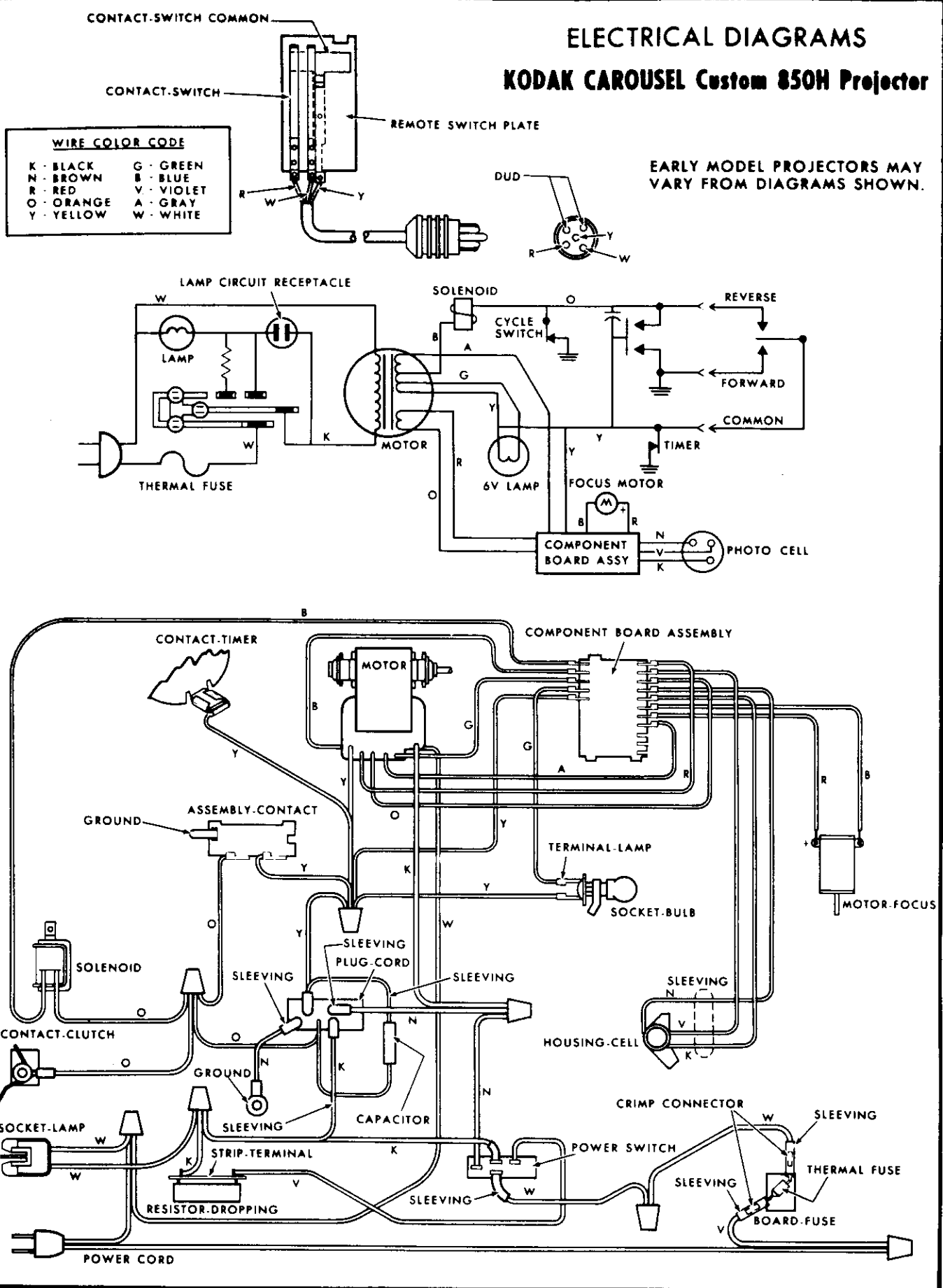
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850H Projector

WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.



ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 850HK Projector

CONTACT-SWITCH COMMON

CONTACT-SWITCH

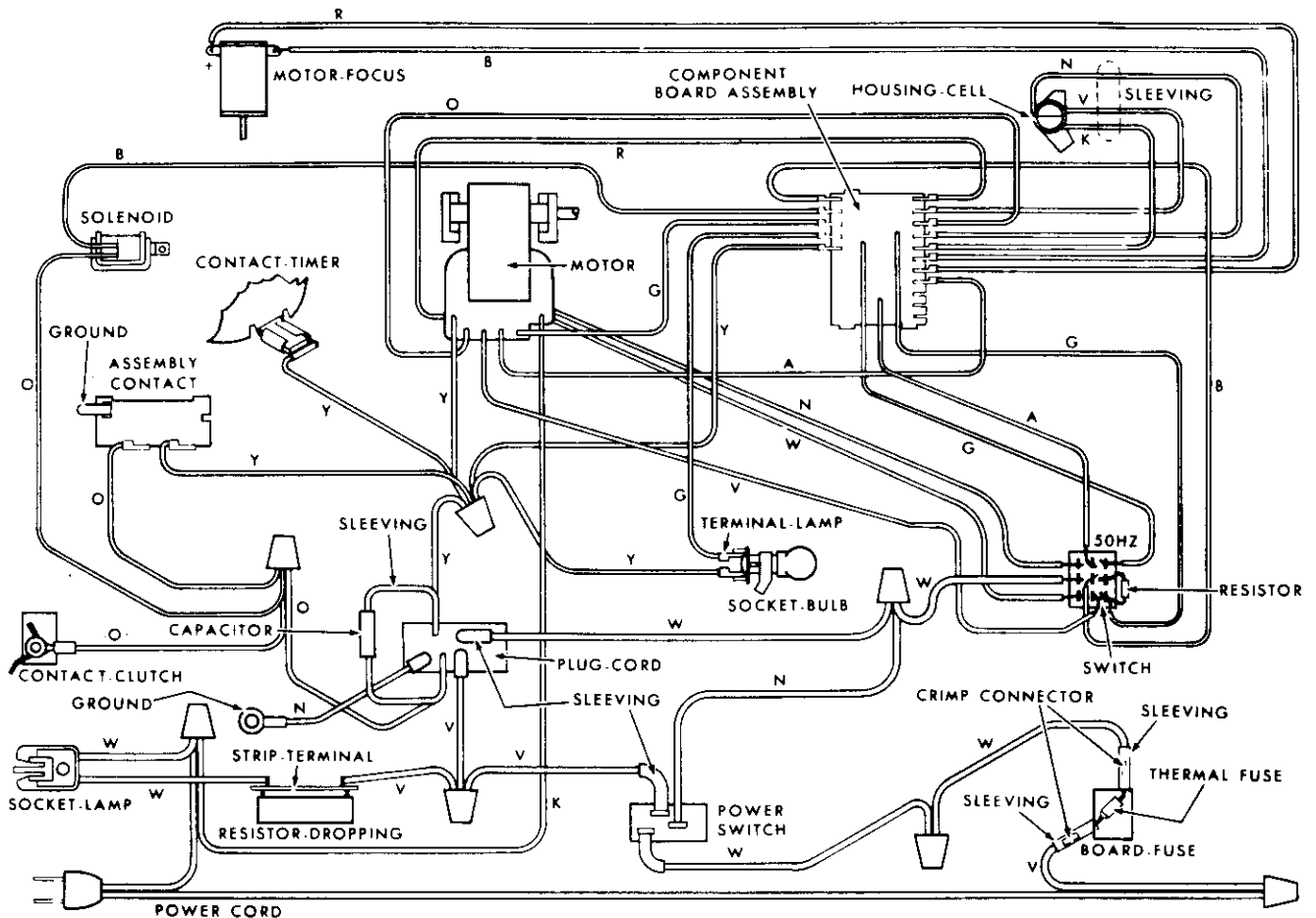
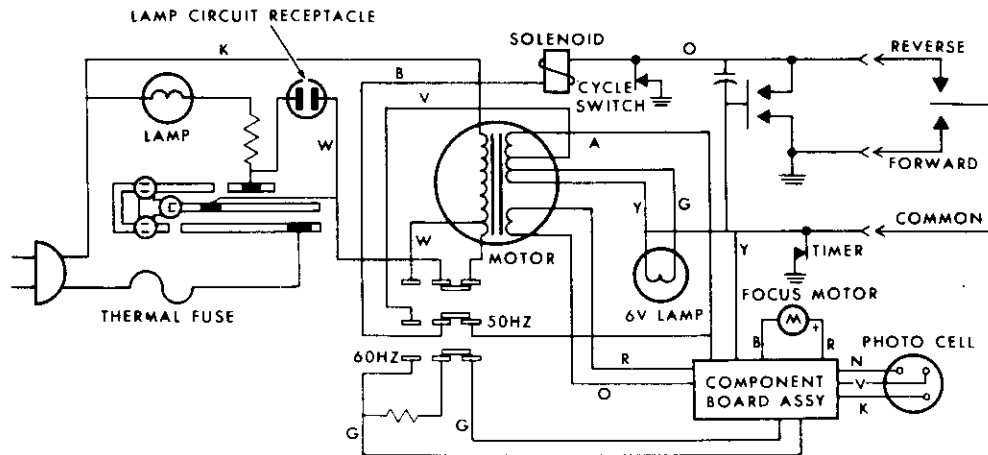
REMOTE SWITCH PLATE

WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

REMOTE CORD

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.



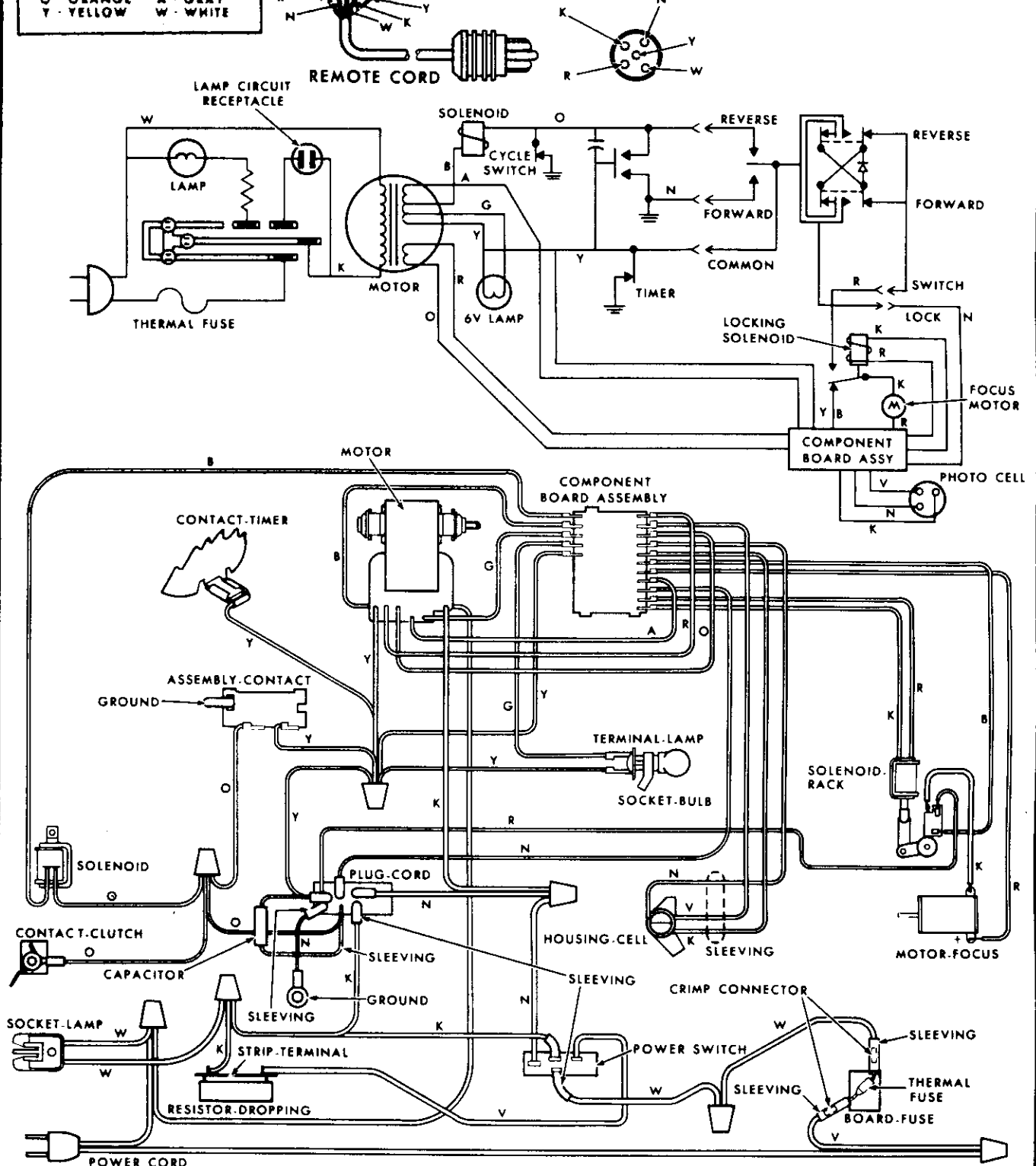
ELECTRICAL DIAGRAMS KODAK CAROUSEL Custom 860H Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.

CONTACT-SWITCH DOUBLE
CONTACT-SWITCH COMMON
CONTACT-SWITCH
CONTACT-SWITCH (AUTO-FOCUS)
REMOTE SWITCH PLATE
PLUS SIDE RECTIFIER

WIRE COLOR CODE

K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE



Kodak Service Bulletin

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775340

KODAK CAROUSEL PROJECTORS,
MODELS 760, 760H, 850, 850H, 860, AND 860H

Main Drive Motors

Currently, the KODAK CAROUSEL Projector, Model 760H is the only model being manufactured with a Kodak motor. All other models including some 760H models have the Bomax-manufactured motor. All models will accept either a Bomax or a Kodak motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

<u>Model</u>	<u>Motor</u>	<u>Part No.</u>
760, 850, and 860	Bomax	198608
760, 850, and 860	Kodak	206023
760H, 850H, and 860H	Bomax	199125
760H, 850H, and 860H	Kodak	199325

If you are replacing a Bomax motor with a Bomax motor or a Kodak motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a Kodak motor with a Kodak motor or a Bomax motor with a Kodak motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a Kodak motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the Kodak motor as shown.

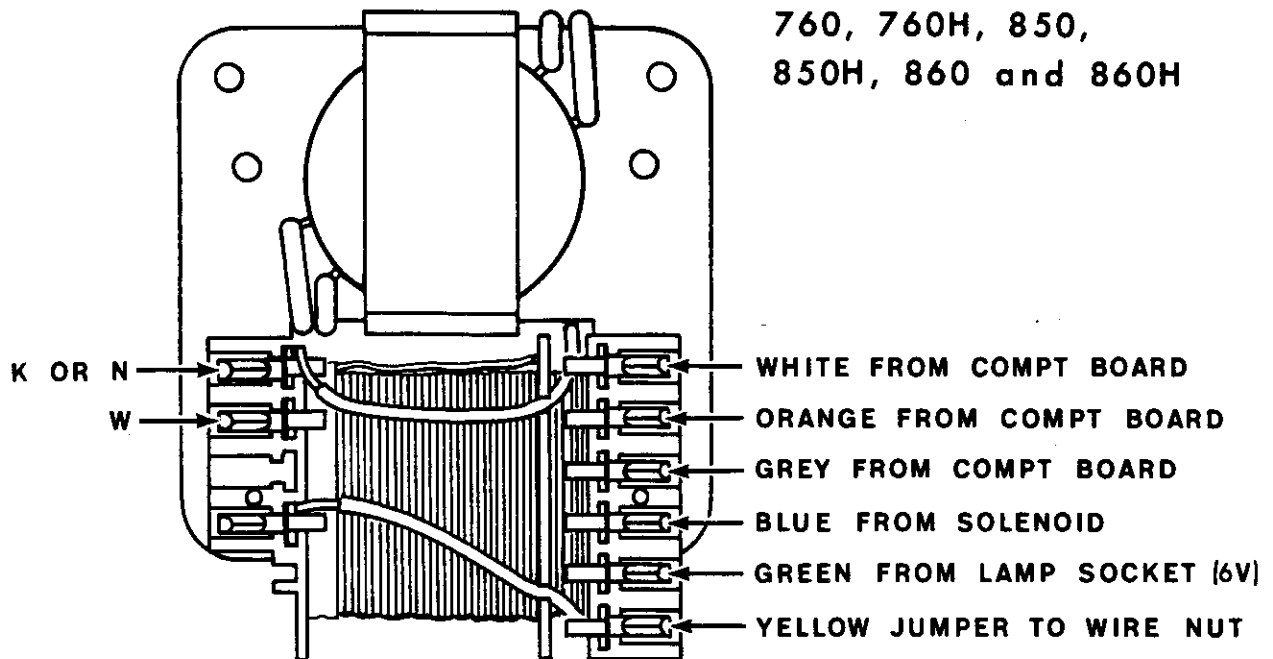
*NOTE: When replacing a Bomax motor with a Kodak motor, use base cover, Part No. 203764 for "H" models or No. 203762 for non-"H" models.

Special Note: Some quantity of Models 760H and 850H have been manufactured with Kodak motors wired differently than the illustration. Replacement Kodak motors will be wired as shown in the illustration.

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KODAK CAROUSEL Projector, Models

**760, 760H, 850,
850H, 860 and 860H**



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775349

KODAK CAROUSEL PROJECTORS, MODELS 600 AND 600H

Currently, both model projectors are being produced with motors manufactured at KODAK. Previously, the motors were manufactured by Bomax. Both models will accept either a Bomax or a KODAK motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

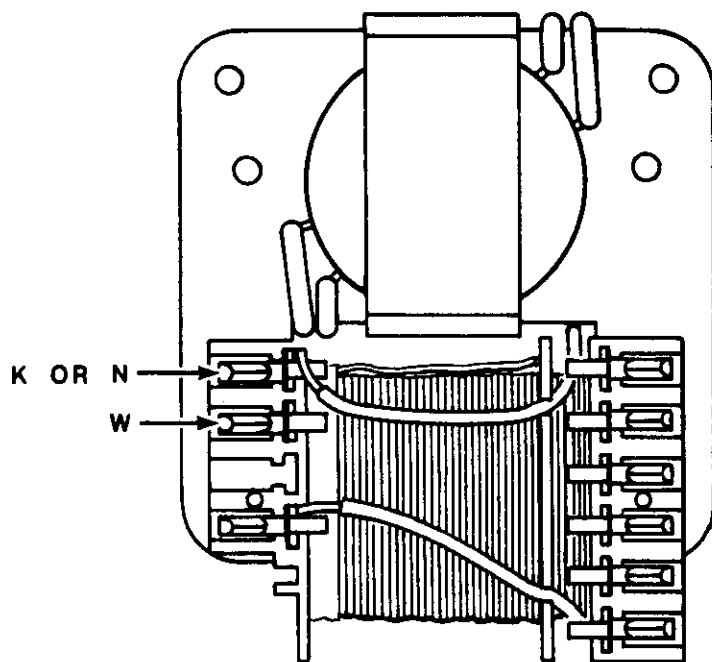
<u>Model</u>	<u>Motor</u>	<u>Part No.</u>
600	Bomax	199907
600	KODAK	202292
600H	Bomax	199910
600H	KODAK	202289

If you are replacing a Bomax motor with a Bomax motor or a KODAK motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a KODAK motor with a KODAK motor or a Bomax motor with a KODAK motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a KODAK motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the KODAK motor as shown.

***NOTE:** When replacing a Bomax motor with a KODAK motor, use base cover, Part No. 203760, for "H" models or No. 203755 for non-"H" models.

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KODAK CAROUSEL Projector, Models
600 and 600H



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Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775351

KODAK CAROUSEL PROJECTORS, MODELS 650, 650H AND 700

Main Drive Motors

Currently, the *KODAK CAROUSEL* Projector, Model 650H is the only model being manufactured with a *KODAK* motor. All other models, including some 650H models, have the Bomax manufactured motor. All models will accept either a Bomax or a *KODAK* motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

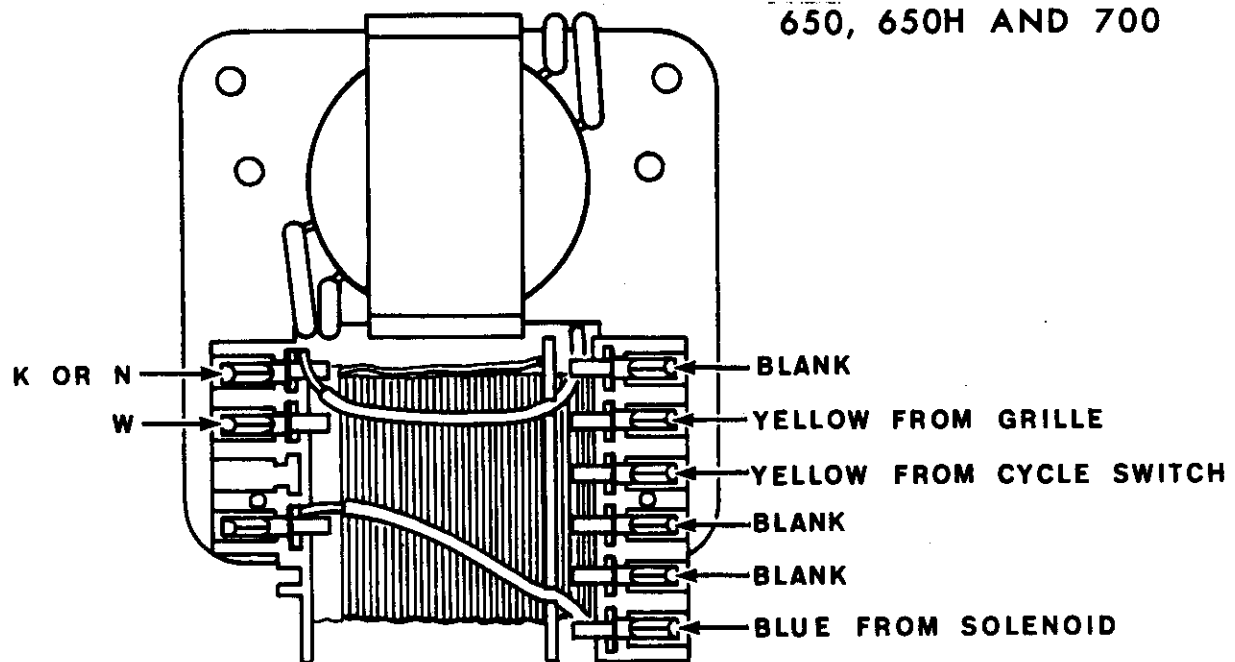
<u>Model</u>	<u>Motor</u>	<u>Part No.</u>
650 and 700	Bomax	203908
650 and 700	KODAK	206024
650H	Bomax	198609
650H	KODAK	199824

If you are replacing a Bomax motor with a Bomax motor or a *KODAK* motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a *KODAK* motor with a *KODAK* motor or a Bomax motor with a *KODAK* motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a *KODAK* motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the *KODAK* motor as shown.

***NOTE:** When replacing a Bomax motor with a *KODAK* motor, use base cover, Part No. 203760 for "H" models, No. 203755 for non-"H" 650 models, and No. 203762 for model 700 projectors.

KODAK and *CAROUSEL* are trademarks.

**KODAK CAROUSEL Projector, Models
650, 650H AND 700**



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775352

KODAK CAROUSEL PROJECTORS,
MODELS 800, 800H AND RA-950

Main Drive Motors

None of the above models are currently manufactured. All models will however, accept either a Bomax or a KODAK motor as a replacement. Every effort should be made to replace motors with those produced by the same manufacturer. Part numbers are as follows:

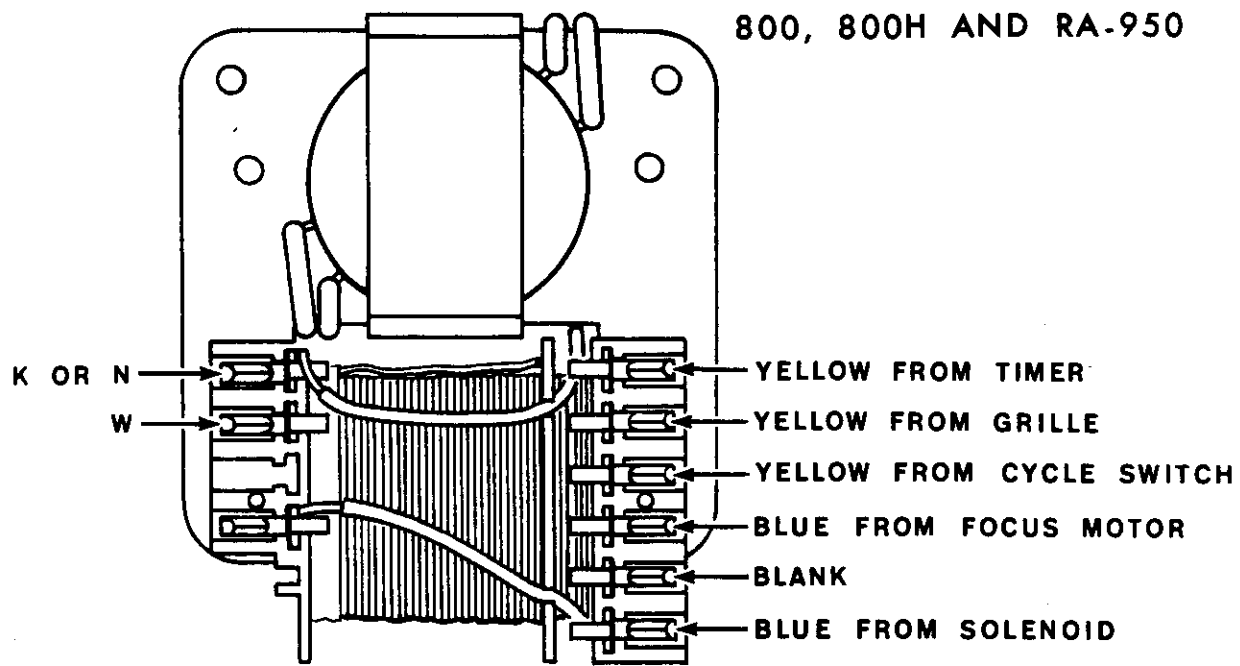
<u>Model</u>	<u>Motor</u>	<u>Part No.</u>
800 and RA-950	Bomax	203908
800 and RA-950	KODAK	206024
800H	Bomax	198609
800H	KODAK	204610

If you are replacing a Bomax motor with a Bomax motor or a KODAK motor with a Bomax motor, use the wiring diagrams in the service manuals. If, however, you are replacing a KODAK motor with a KODAK motor or a Bomax motor with a KODAK motor, connect the wires as shown in the attached illustration.* When replacing a Bomax motor with a KODAK motor, clip the leads from the old Bomax motor as close to the motor as possible. Strip the ends and insert them in the KODAK motor as shown.

*NOTE: When replacing a Bomax motor with a KODAK motor, use base cover, Part No. 203764 for "H" models or No. 203762 for non-"H" models.

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**KODAK CAROUSEL Projector, Models
800, 800H AND RA-950**



Kodak Service Bulletin

Eastman Kodak Company... Customer Equipment Services Division... Rochester, New York 14650

775347

KODAK CAROUSEL PROJECTORS, MODELS 750, 750H, 800 AND 800H

Noisy Solenoid

Since January 1972, the subject projectors have had the focus motor wired in series with the cycle solenoid. Occasionally, a high current drain-focus motor may cause the cycle solenoid to vibrate and/or actually cause the projector to cycle.

The best method to eliminate the problem is to revert to the original wiring of the focus motor. Remove the blue lead of the focus motor from the connection where it joins the orange wires and connect it to the blue lead from the main motor that joins with the blue lead from the solenoid.

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SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 16

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
KODAK CAROUSEL 760H, 850H, and 860H Projectors
KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Auto-Focus Circuit Board

Component Test Procedure

This procedure is for testing the auto-focus circuit board (1 Transistor, 1SCR) in the above model projectors. Replace any defective component on the circuit board. Refer to the wiring diagrams, Pages 3 and 4.

I. Circuit Board Preparations:

- a. Remove the circuit board from the projector. Refer to the service manual publications listed on page 2.
- b. Connect the following circuit board wires, figure 1:

White, orange, gray, and yellow wires to the MAIN MOTOR.

Blue (negative), and red (positive) to the D.C. VOLTMETER, and FOCUS MOTOR WITH LOCKED ROTOR.

Brown, black, and violet wires to the PHOTOCELL SIMILATOR.

II. Testing the Circuit Board:

- a. Place switches S1 and S2 in "OPEN" position.
Voltmeter must read zero.
- b. Place switch S1 in "CLOSED" position, and switch S2 in "OPEN" position.
Voltmeter must read -12.5 ± 2.5 volts.
- c. Place switches S1 and S2 in "CLOSED" position.
Voltmeter must read zero.
- d. Place switch S1 in "OPEN" position, and switch S2 in "CLOSED" position.
Voltmeter must read $+12.5 \pm 2.5$ volts.
- e. Measure the resistance between the violet and brown wires.
Resistance must be $2K\Omega \pm 20\%$.
- f. Measure the resistance between the blue and gray wires.
Resistance must be 1 Meg ohm.

Publication No. 775414

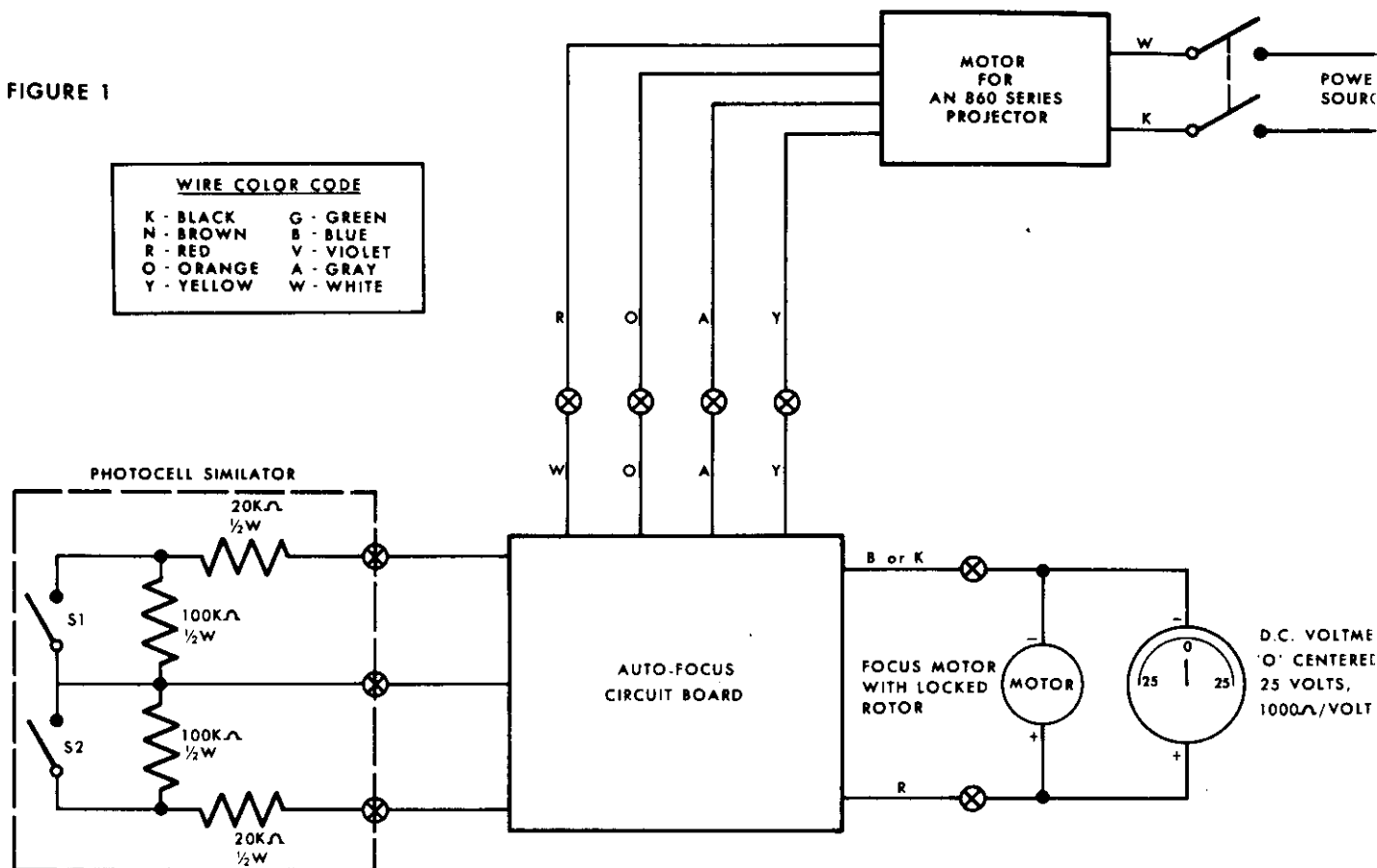
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III. Circuit Board - Trouble/Remedy Chart:

Switch S1 Position	Switch S2 Position	D.C. Volt Meter Reading	Check Component
Open	Open	Negative	CR2, CR5
Open	Open	Positive	CR3, CR4
Open	Closed	0	CR2, CR5, Q1, Q2
Open	Closed	Negative	Q1, Q2
Closed	Closed	Negative	CR2, CR5
Closed	Closed	Positive	CR3, CR4
Closed	Open	0	CR3, CR4, Q1, Q2
Closed	Open	Positive	Q1, Q2

FIGURE 1



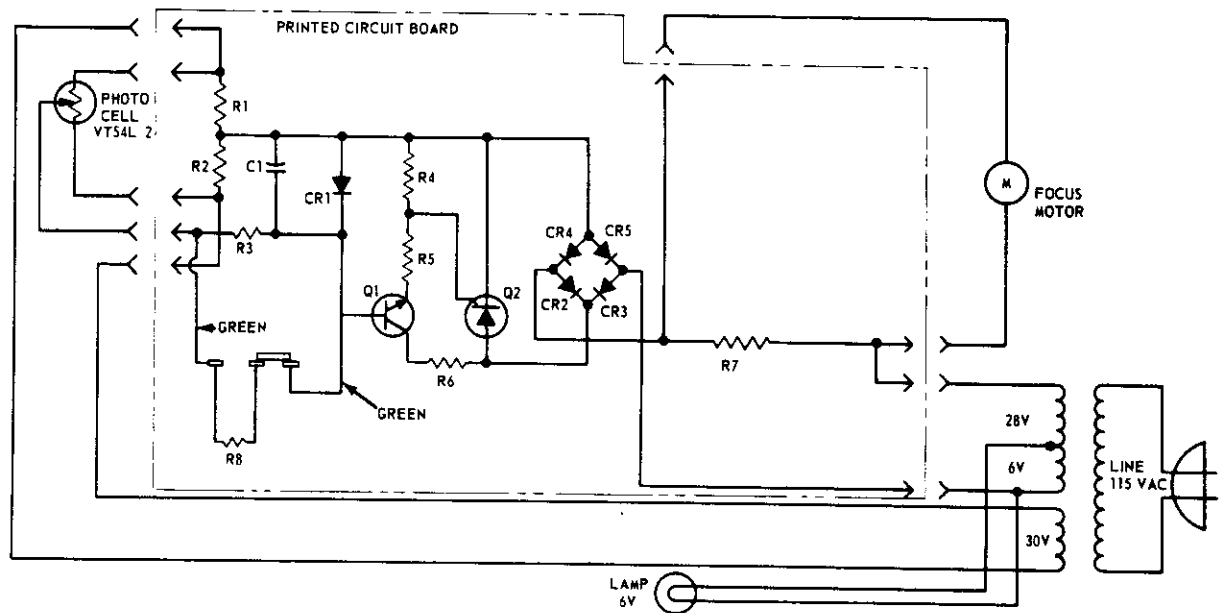
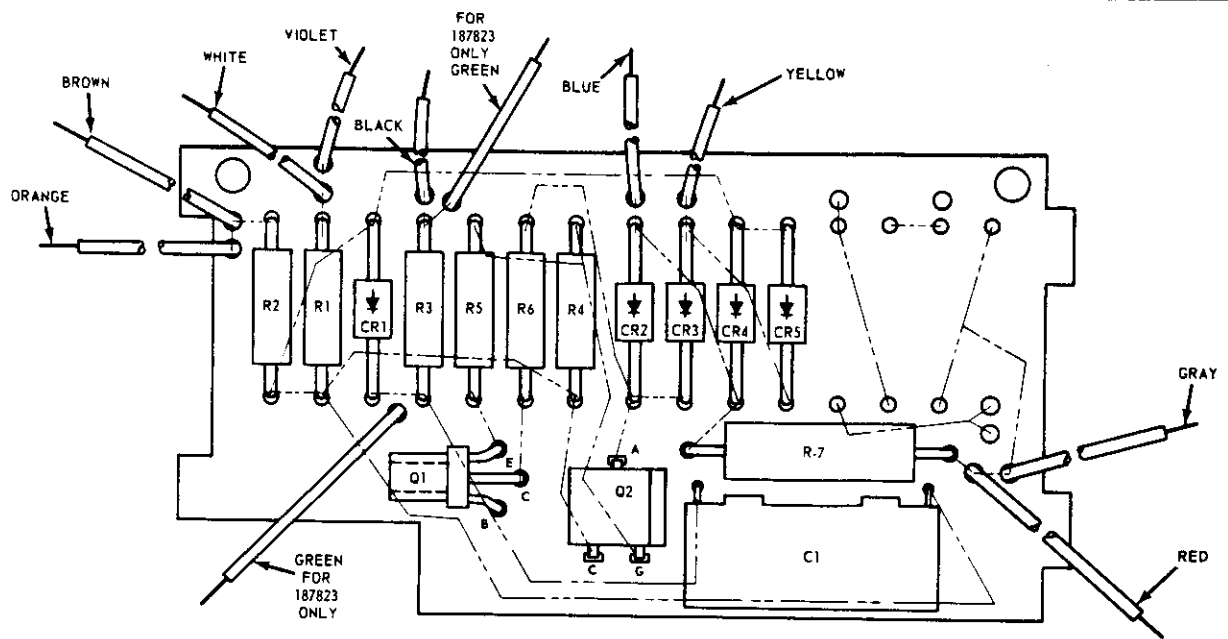
References:

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL 760H, 850H, and 860H Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors
Service Manual Publication No. 775165

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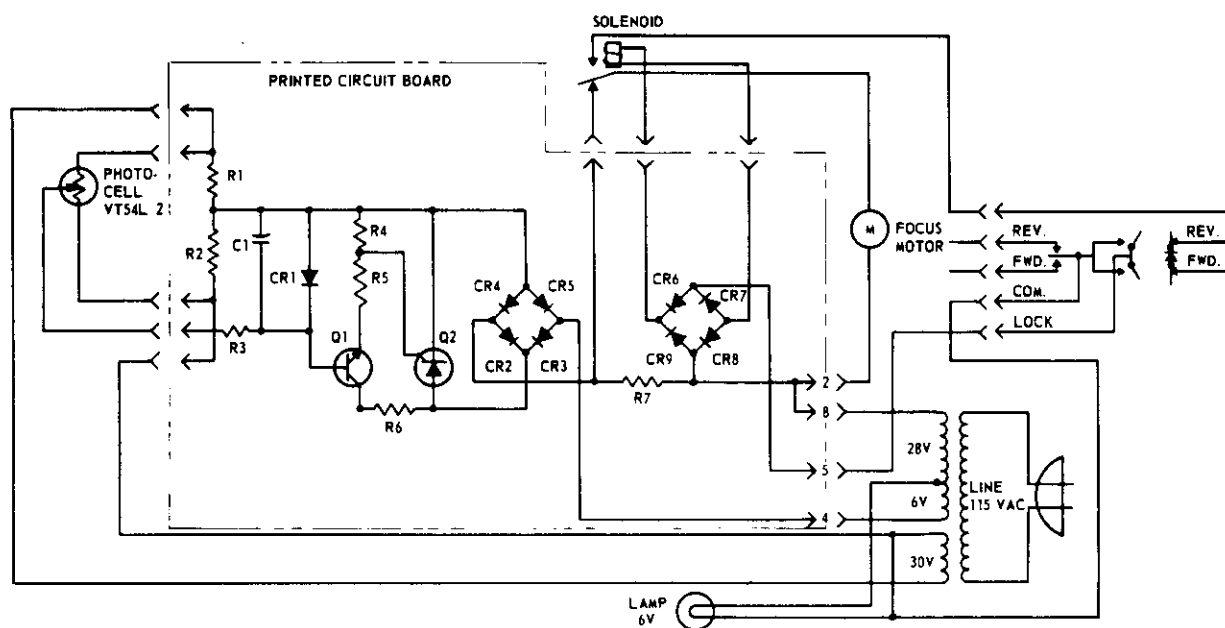
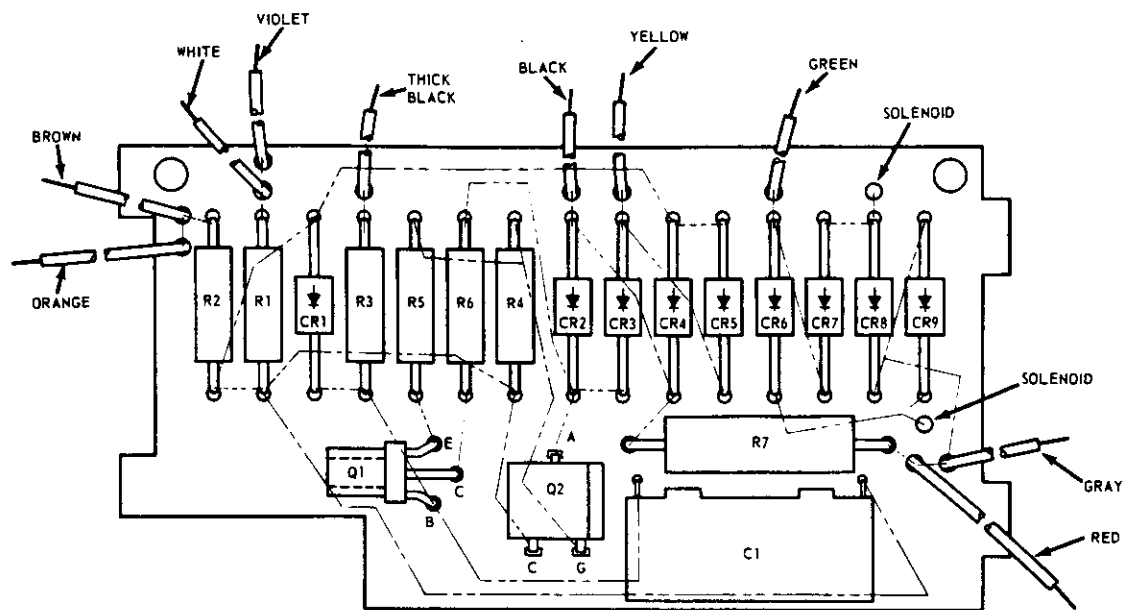


COMPONENT BOARD FOR
KODAK CAROUSEL
760 and 850 PROJECTORS

1 TRANSISTOR, SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR, 0.1μF -10%, 50VDC GE-75F2R5-104-A
CR1,2,3,4,5	187813	GE RECTIFIER, EK-1-A
Q1	186555	TRANSISTOR, 2N5172, GE.
Q2	185766	SCR, C106F41-GE
R1,2,3,4,5	187814	RESISTOR, 1KΩ -5%, 1/2WATT
R3	186962	RESISTOR, 47KΩ -5%, 1/2WATT
R6	126900	RESISTOR, 10KΩ -10%, 1/2WATT
R7	146619	RESISTOR, 220Ω -10%, 1WATT

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COMPONENT BOARD FOR **KODAK CAROUSEL 860 PROJECTOR**

1 TRANSISTOR, 1 SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR, 0.1 μ F, $\pm$ 10%, 50VDC, G.E. 75F2R5-104-A
CR1,2,3,4,5,6,7,8	187813	G.E. RECTIFIER, EK-1-A
9	"	"
Q1	186555	TRANSISTOR - 2N5172 - G.E.
Q2	185766	S.C.R. - C106F41 - G.E.
R-1,2,4,5	187814	RESISTOR, 1K Ω , $\pm$ 5%, 1/2WATT
R3	186962	RESISTOR, 47K Ω , $\pm$ 5%, 1/2WATT
R6	126900	RESISTOR, 10K Ω , $\pm$ 10%, 1/2WATT
R7	146619	RESISTOR, 220 Ω , $\pm$ 10%, 1WATT

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SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 29

KODAK CAROUSEL SLIDE PROJECTORS, MODELS 650H, 750H, AND 760H
KODAK CAROUSEL CUSTOM SLIDE PROJECTORS, MODELS 800HC, 850HC, 850HC-K, AND 860HC

Electrical Fuses in Secondary Circuits

Electrical fuses have been added to the secondary circuits in the above model projectors, which have a BOMAX main motor. These fuses have been added to protect the main motor secondary from a current overload.

When the motor operates and there is no current in a secondary circuit, check the electrical fuse in the circuit. If the fuse is open, replace it.

Check the mechanical and electrical functions to prevent a repeat of the fuse failure.

Install the replacement electrical fuses as shown in the attached wiring diagrams.

Fuse part numbers and values are listed below:

ALL MODELS

<u>Part Number</u>	<u>Value</u>	<u>Secondary Circuit</u>
207129	1.5 amp.	Joining main motor to yellow leads

NON CUSTOM AUTO FOCUS MODELS

<u>Part Number</u>	<u>Value</u>	<u>Secondary Circuit</u>
207128	0.4 amp.	Red lead from motor to white from component board
207132	1.5 amp.	Green lead from motor to green from six-volt lamp

CUSTOM AUTO FOCUS MODELS

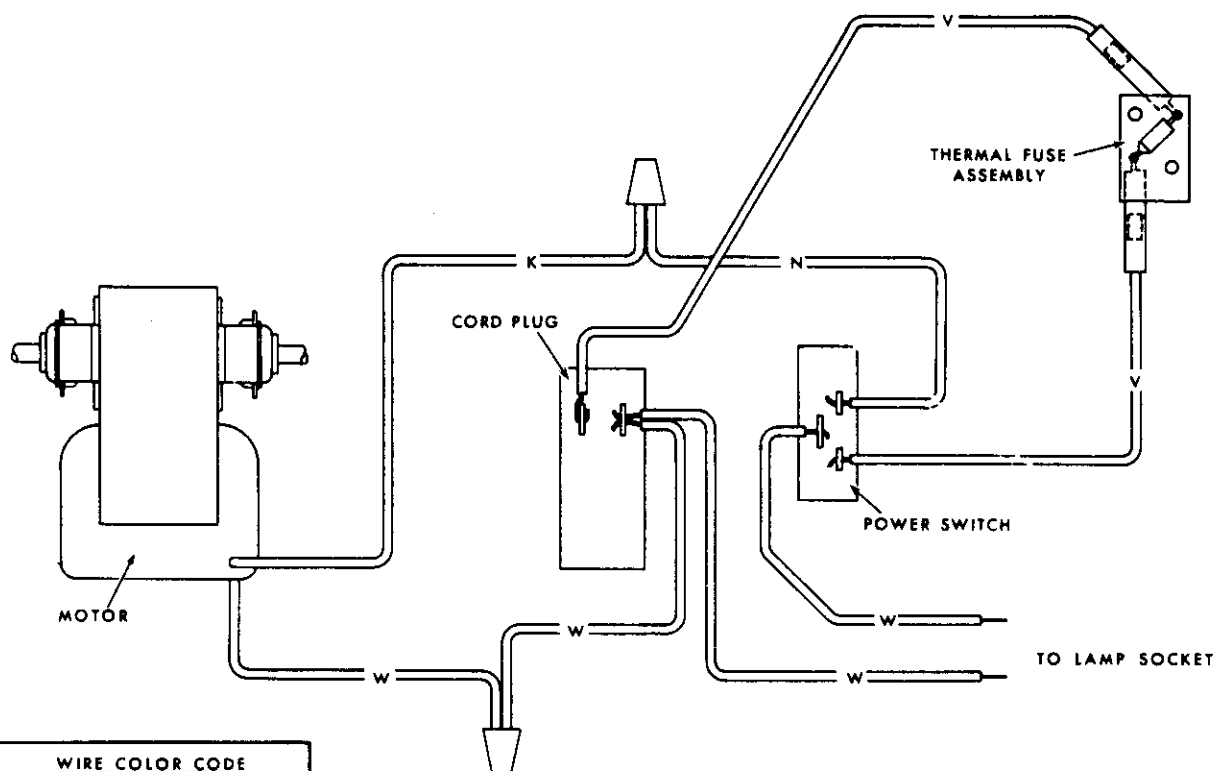
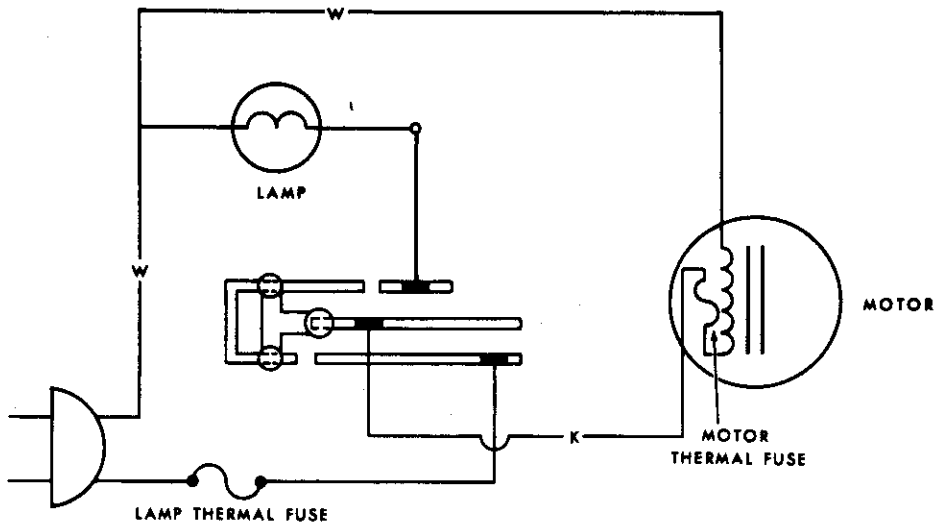
<u>Part Number</u>	<u>Value</u>	<u>Secondary Circuit</u>
207130	0.4 amp.	Red lead from motor to its connection on component board
207131	1.5 amp.	Green lead from motor to its connection on component board

Publication No. 775436
3/74 B

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ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 600 and 600H PROJECTORS

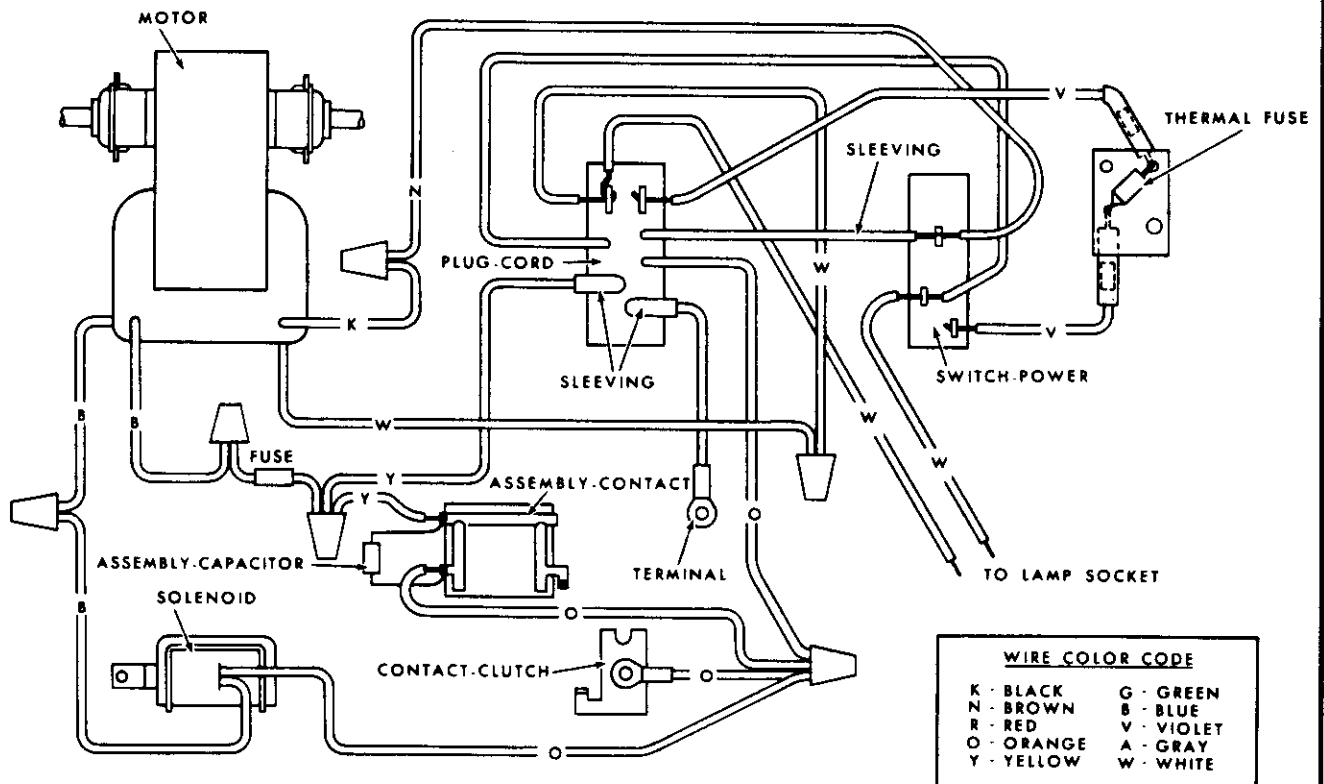


WIRE COLOR CODE	
K - BLACK	G - GREEN
N - BROWN	B - BLUE
R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

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KODAK CAROUSEL MODELS 650 and 650H PROJECTORS



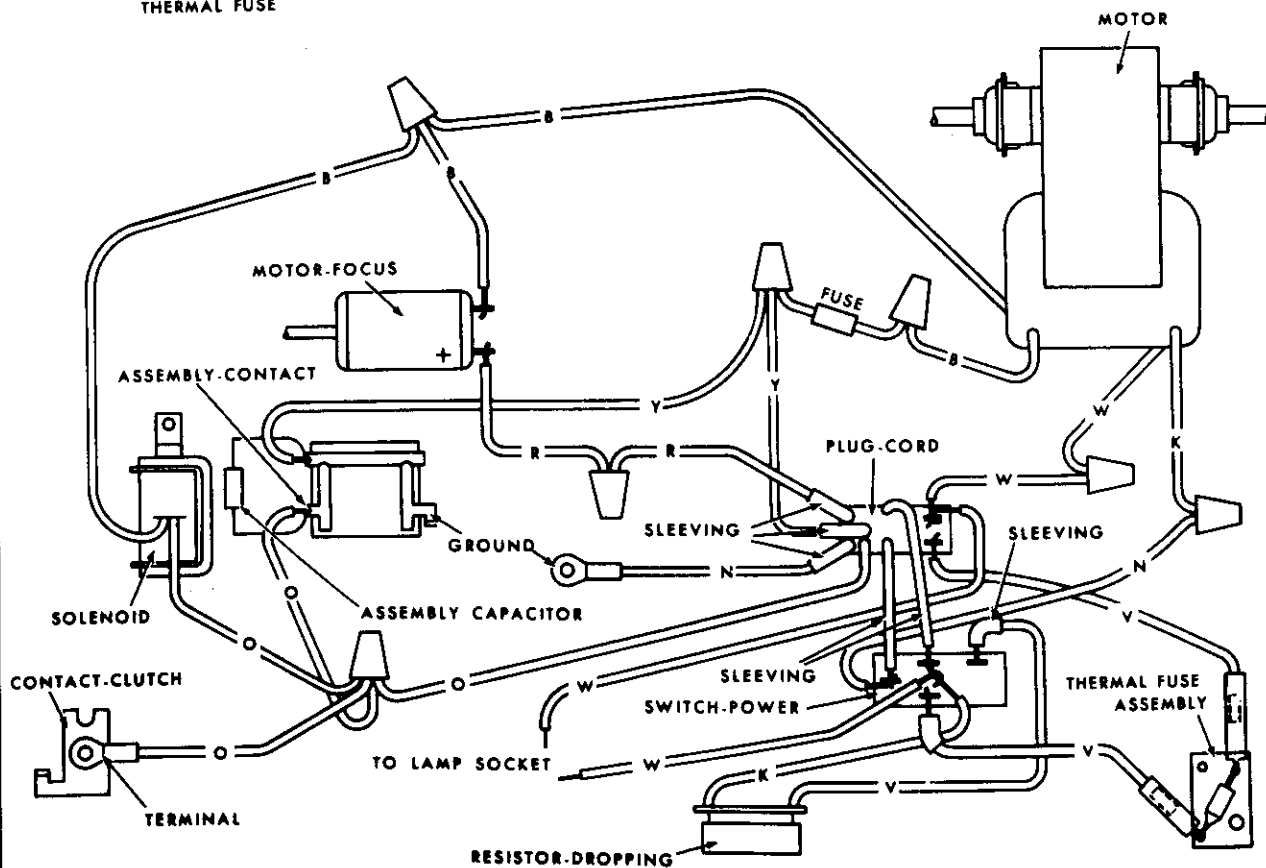
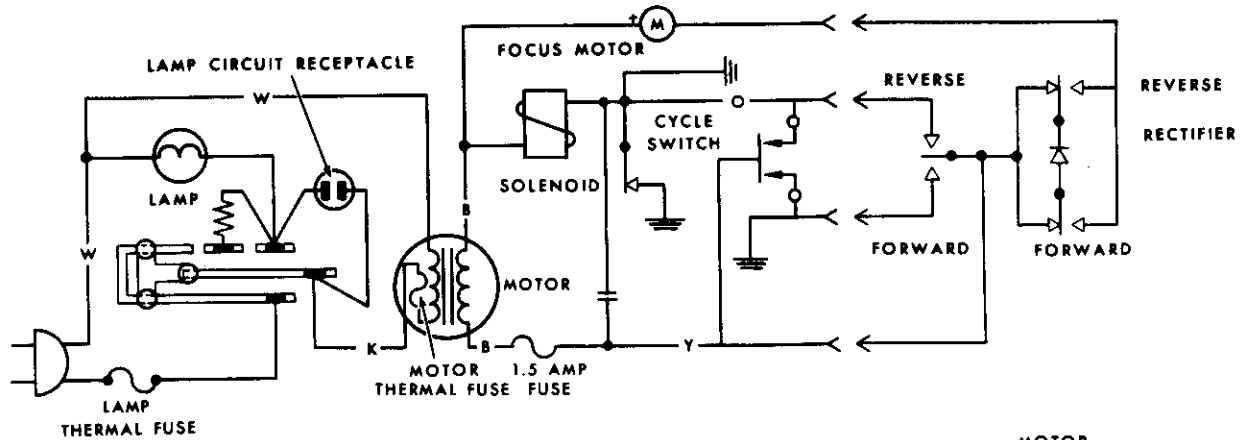
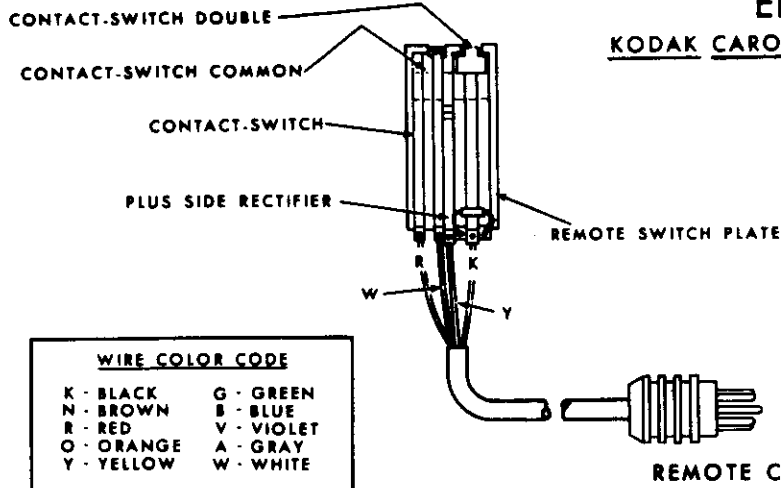
EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

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ELECTRICAL DIAGRAMS

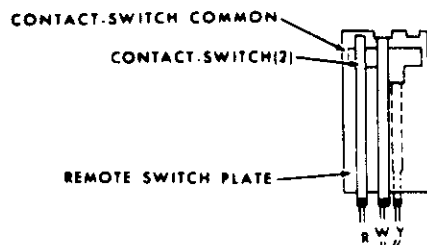
KODAK CAROUSEL MODELS 750 and 750H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN



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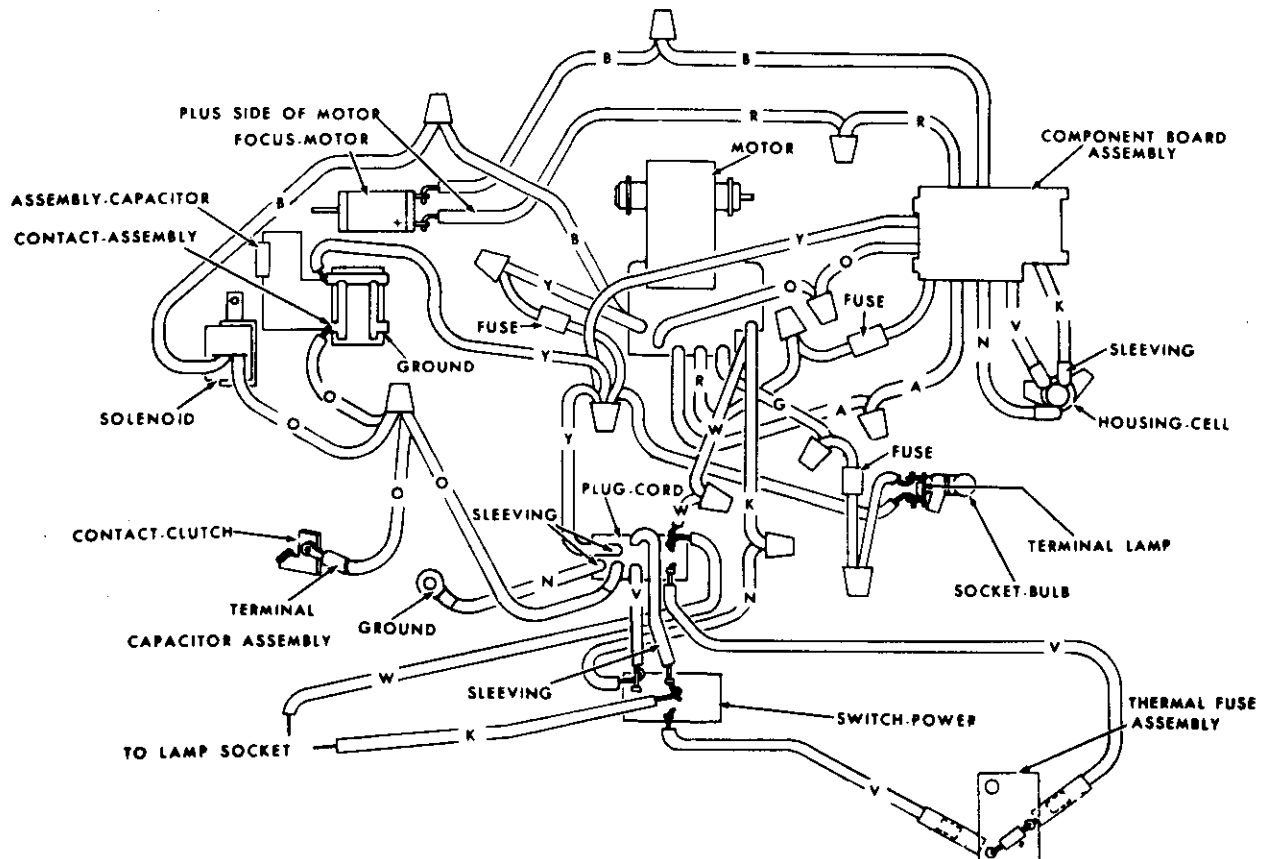
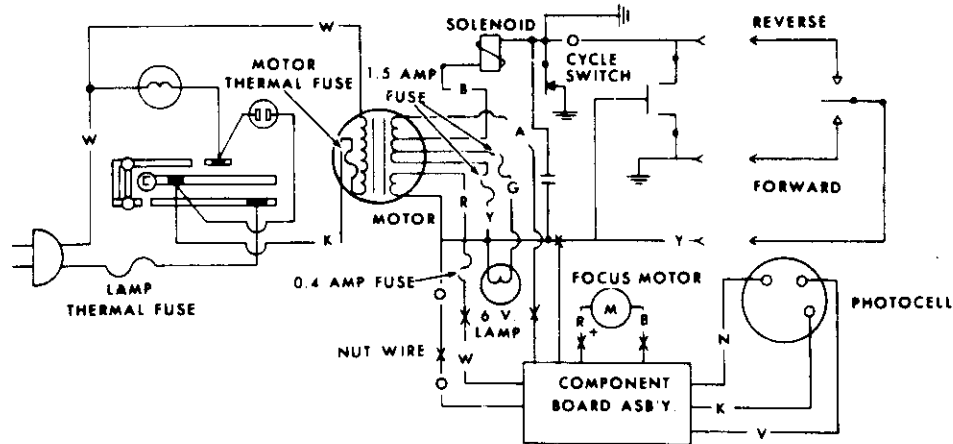
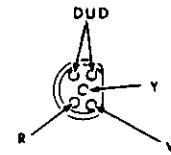
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 760 and 760H PROJECTORS

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN

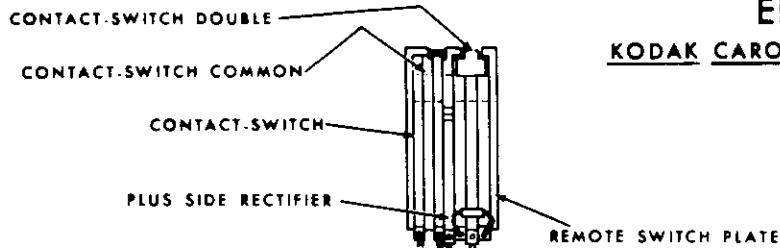
WIRE COLOR CODE			
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N - BROWN	B - BLUE		
R - RED	V - VIOLET		
O - ORANGE	A - GRAY		
Y - YELLOW	W - WHITE		

REMOTE CORD



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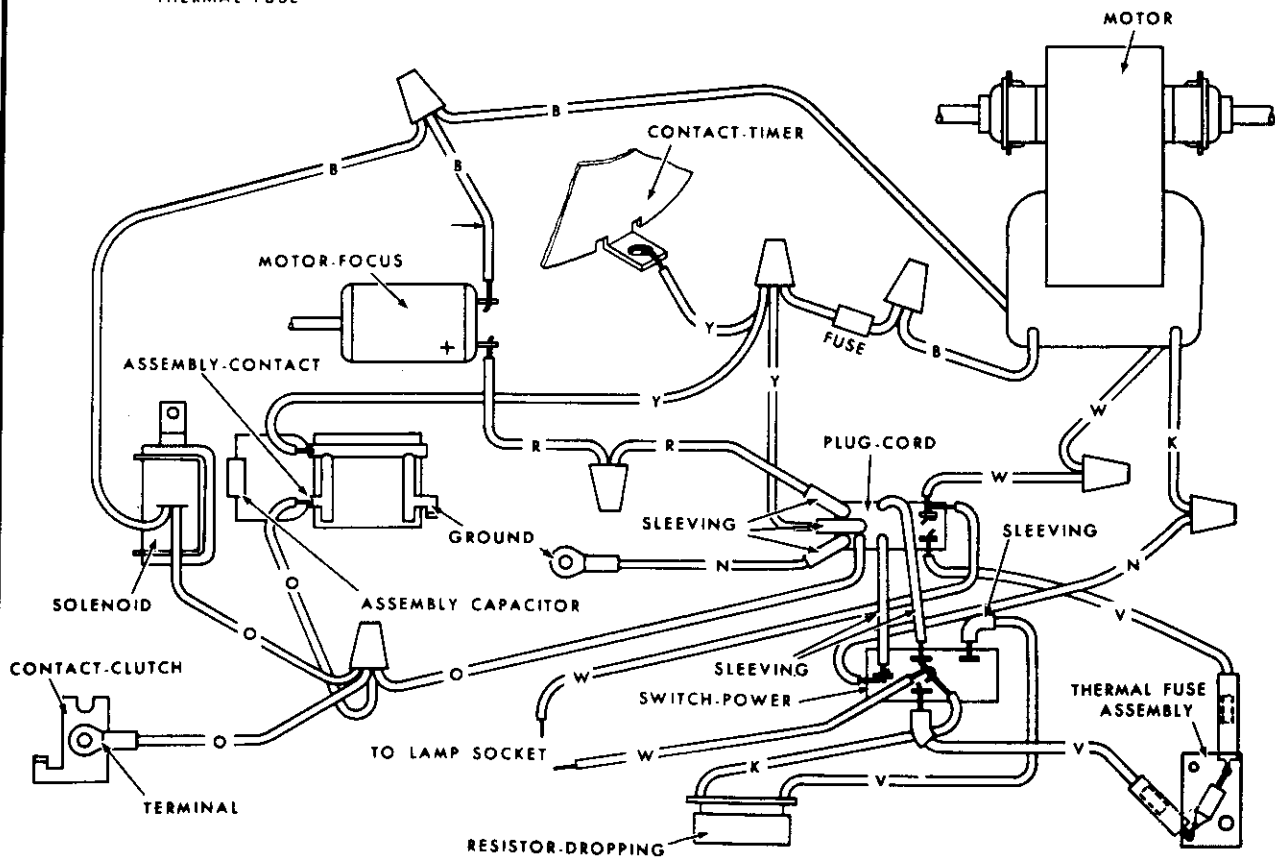
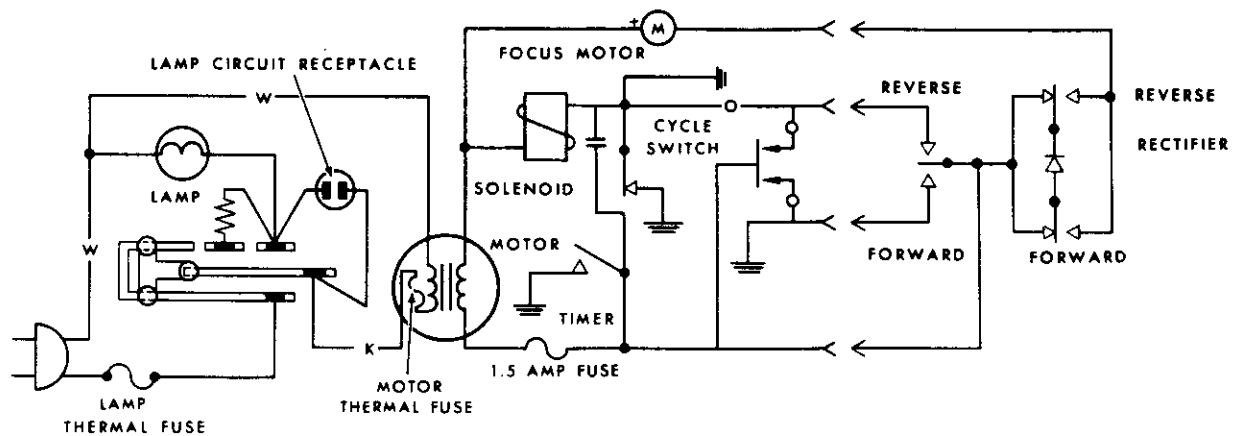
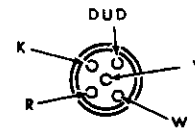
ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 800 and 800H PROJECTORS

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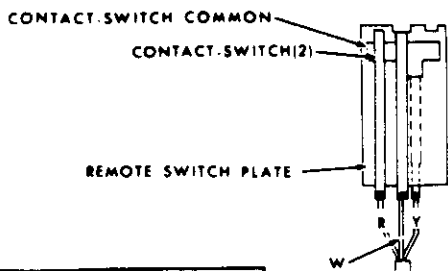
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R - RED	V - VIOLET
O - ORANGE	A - GRAY
Y - YELLOW	W - WHITE

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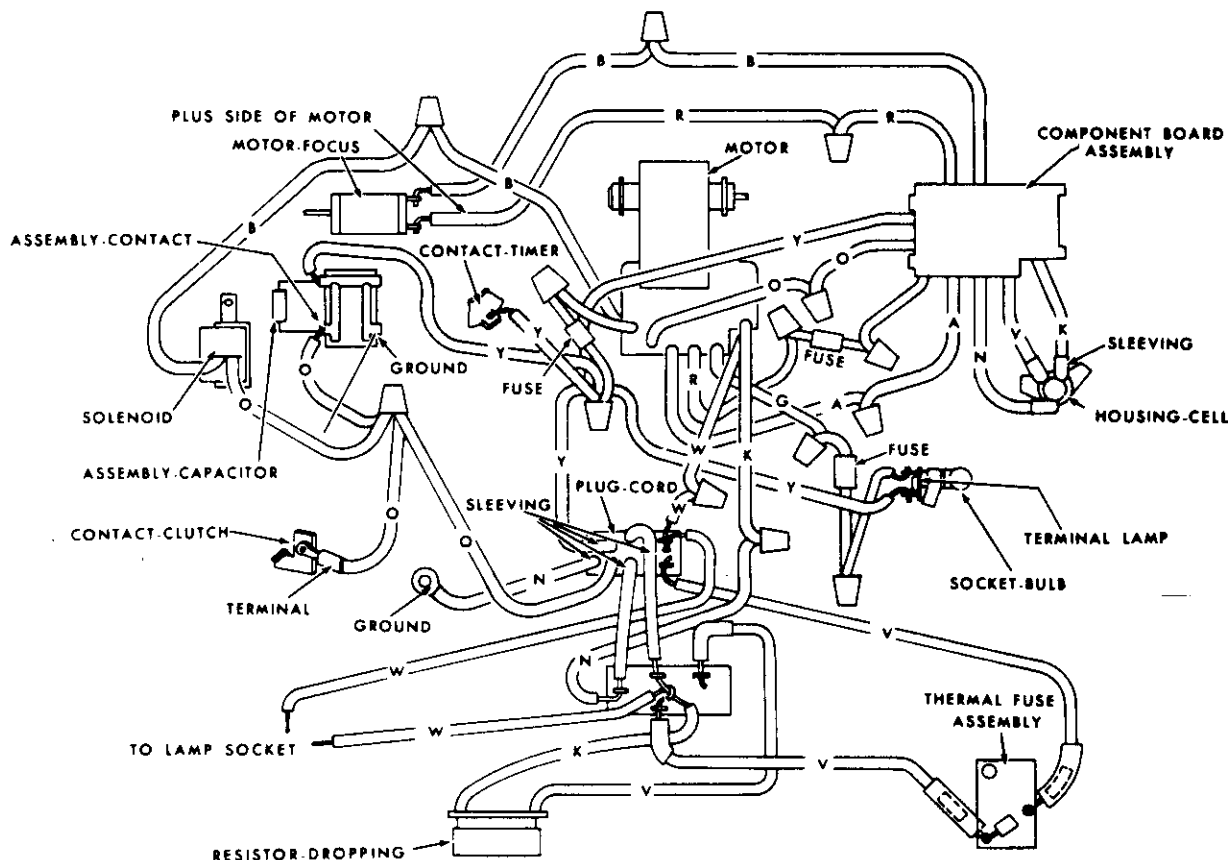
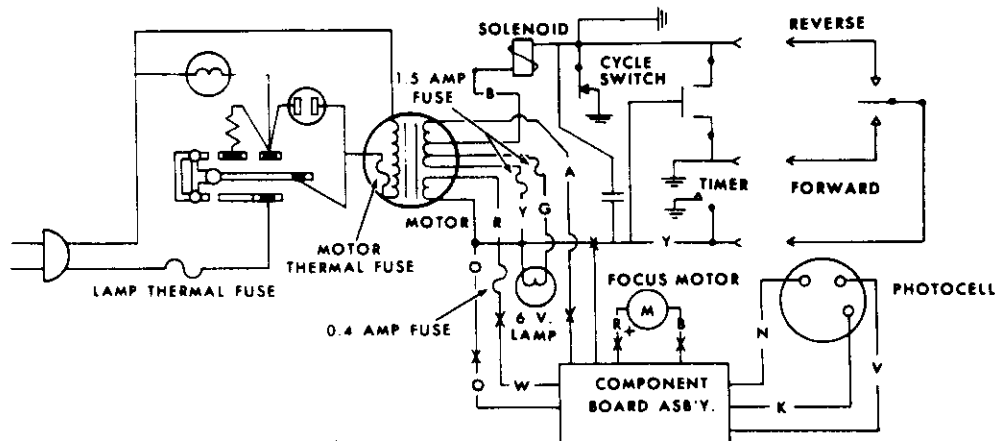
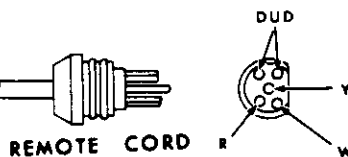
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ELECTRICAL DIAGRAMS **KODAK CAROUSEL MODELS B50 and B50H PROJECTORS**

EARLY MODEL PROJECTORS MAY
VARY FROM DIAGRAMS SHOWN

WIRE COLOR CODE			
K	BLACK	G	GREEN
N	BROWN	B	BLUE
R	RED	V	VIOLET
O	ORANGE	A	GRAY
Y	YELLOW	W	WHITE



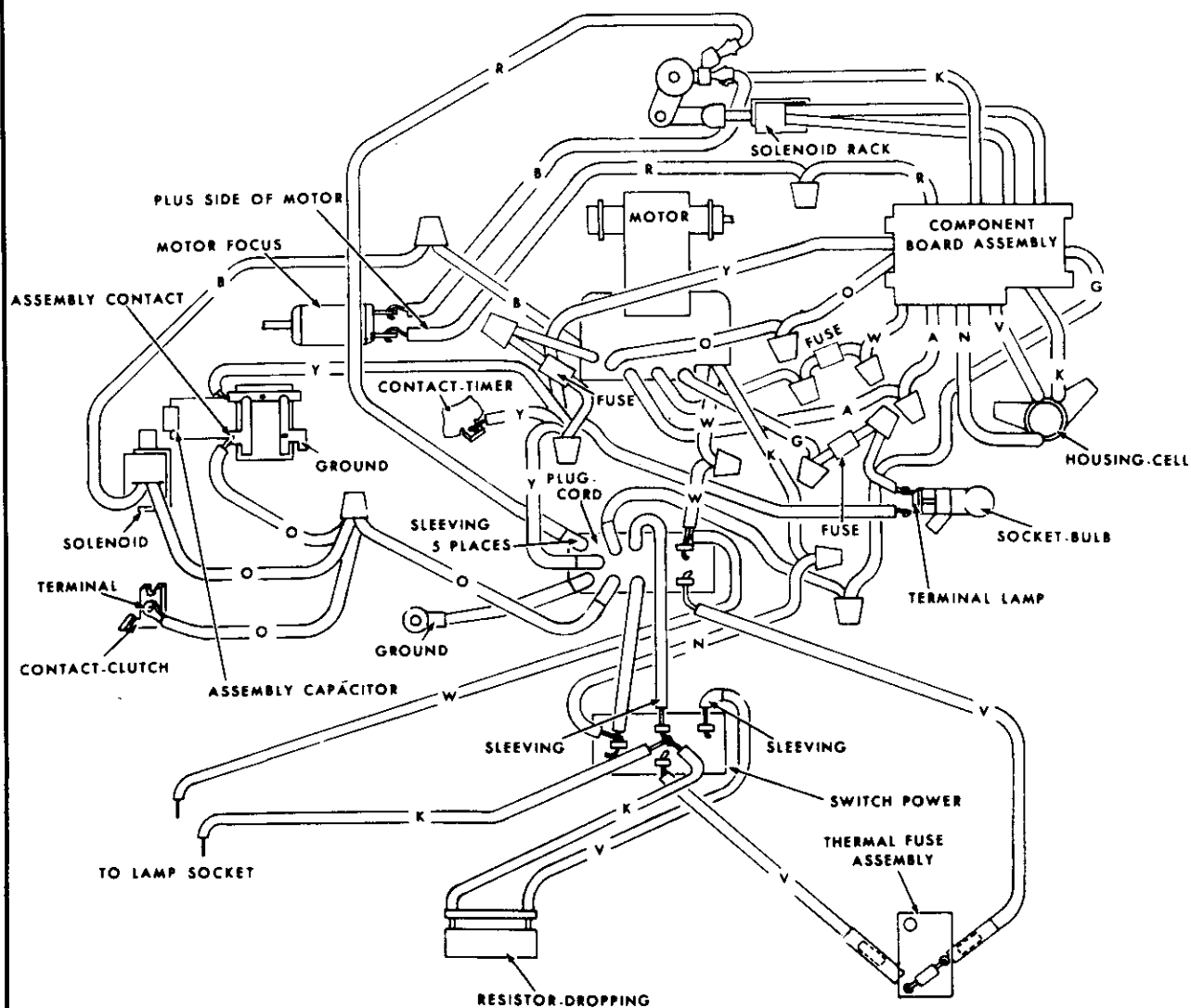
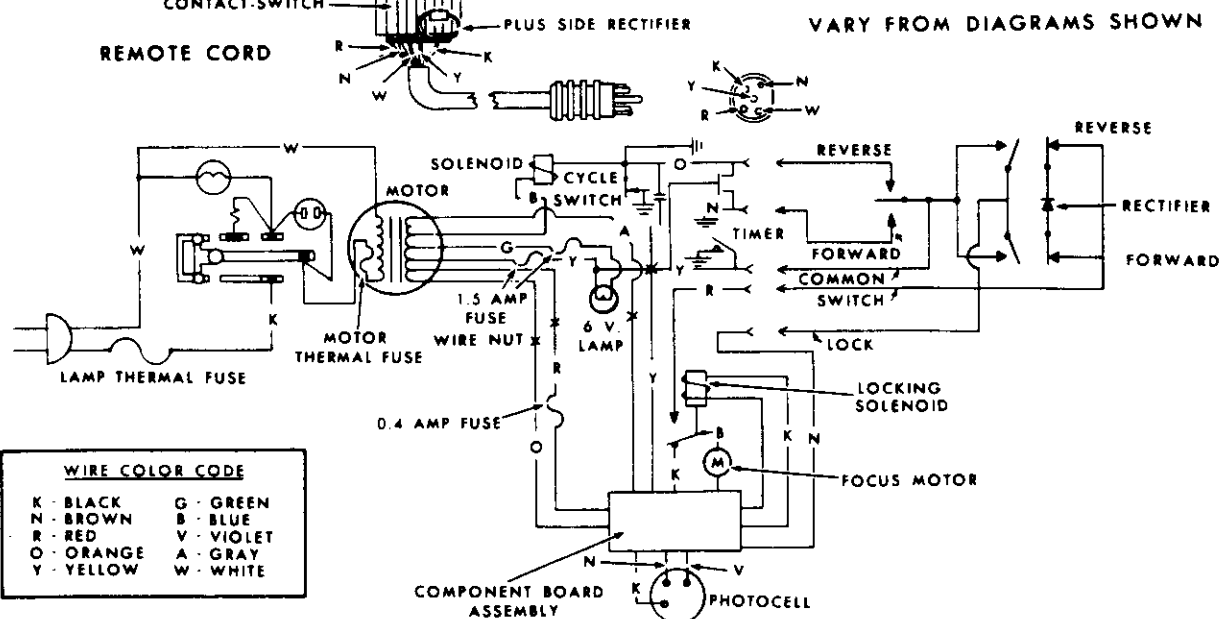
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CONTACT-SWITCH AUTO FOCUS
 CONTACT-SWITCH DOUBLE
 CONTACT-SWITCH COMMON
 REMOTE SWITCH PLATE
 CONTACT-SWITCH
 REMOTE CORD

ELECTRICAL DIAGRAMS

KODAK CAROUSEL MODELS 860 and 860H PROJECTORS

EARLY MODEL PROJECTORS MAY
 VARY FROM DIAGRAMS SHOWN



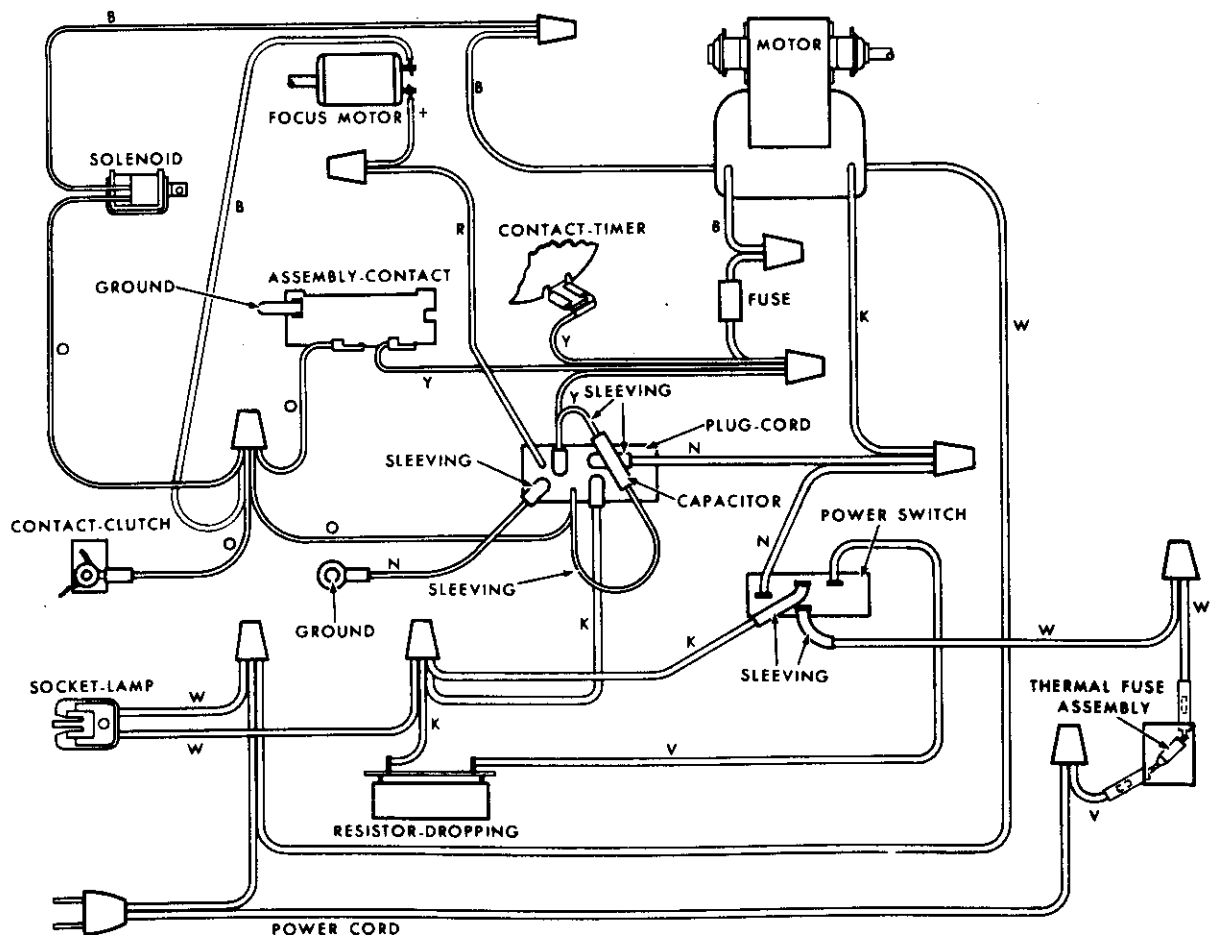
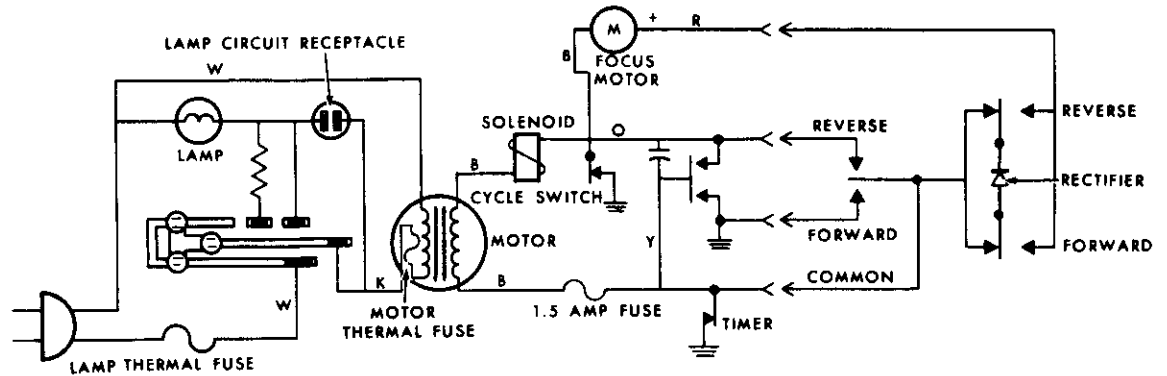
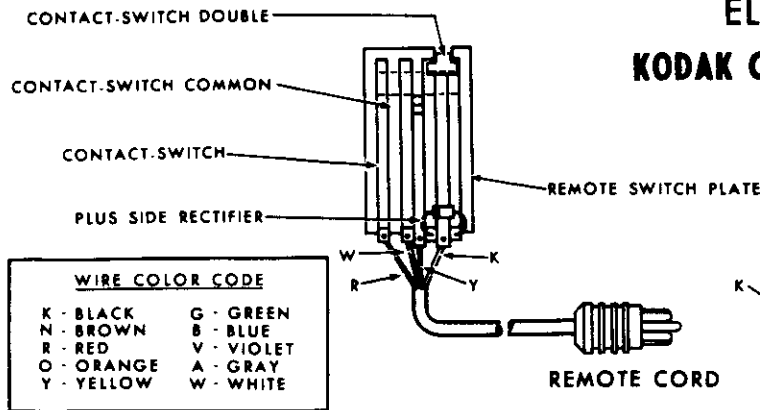
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ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 800H Projector

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CONTACT-SWITCH

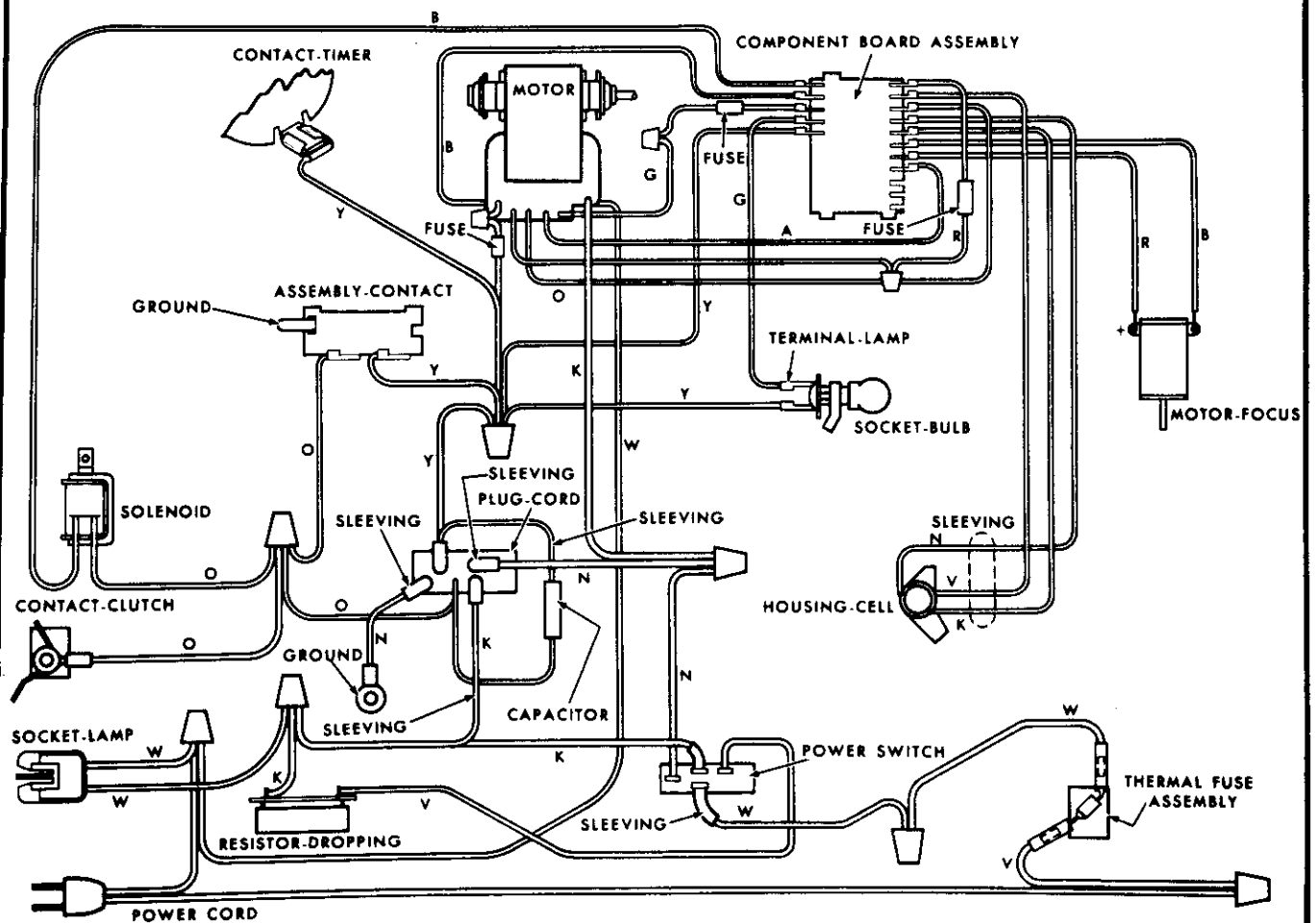
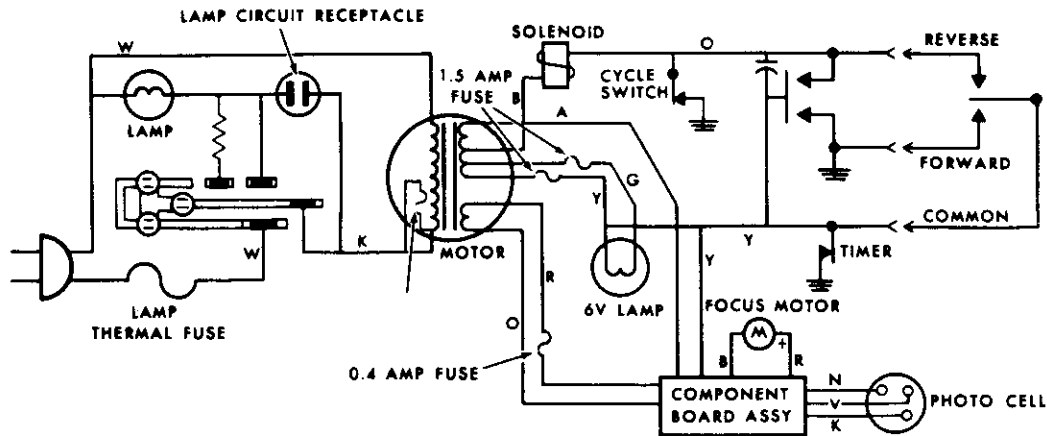
REMOTE SWITCH PLATE

WIRE COLOR CODE

K - BLACK G - GREEN
N - BROWN B - BLUE
R - RED V - VIOLET
O - ORANGE A - GRAY
Y - YELLOW W - WHITE

ELECTRICAL DIAGRAMS KODAK CAROUSEL Custom 850H Projector

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CONTACT-SWITCH

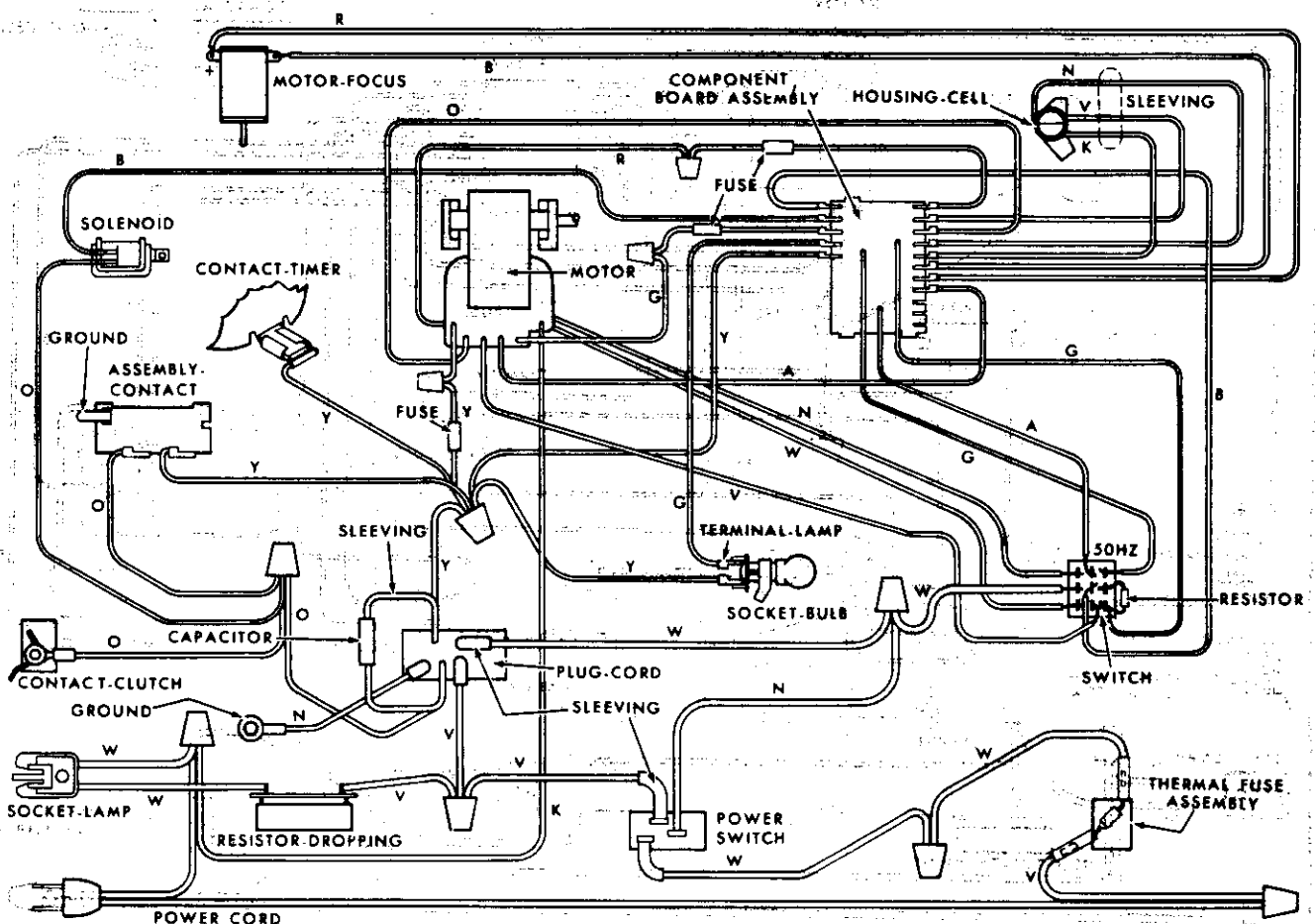
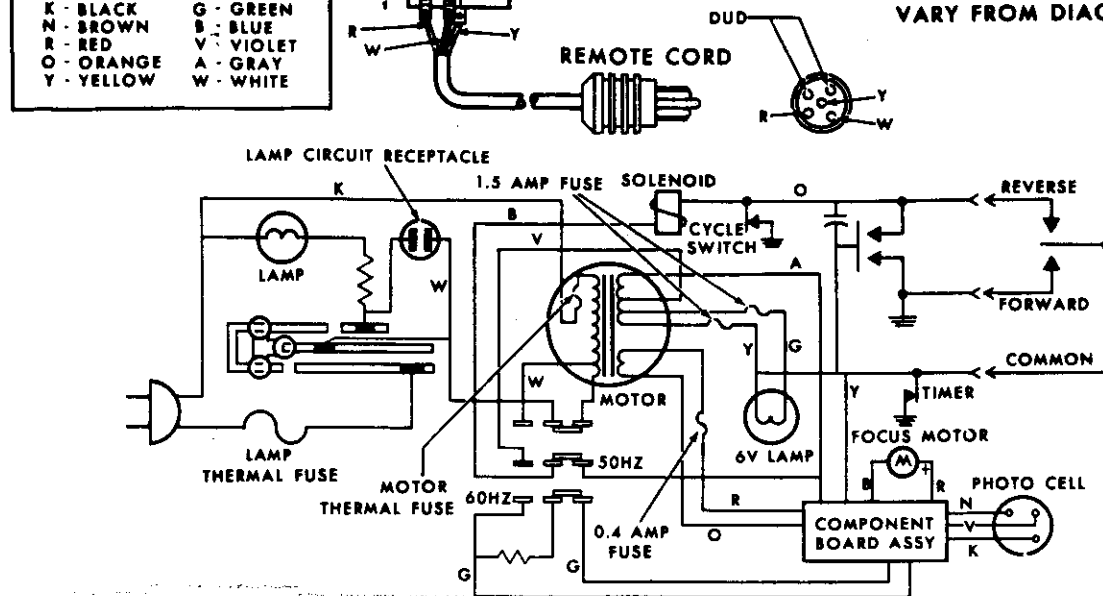
REMOTE SWITCH PLATE

WIRE COLOR CODE

K - BLACK
N - BROWN
R - RED
O - ORANGE
Y - YELLOW
G - GREEN
B - BLUE
V - VIOLET
A - GRAY
W - WHITE

ELECTRICAL DIAGRAMS KODAK CAROUSEL Custom 850HK Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.



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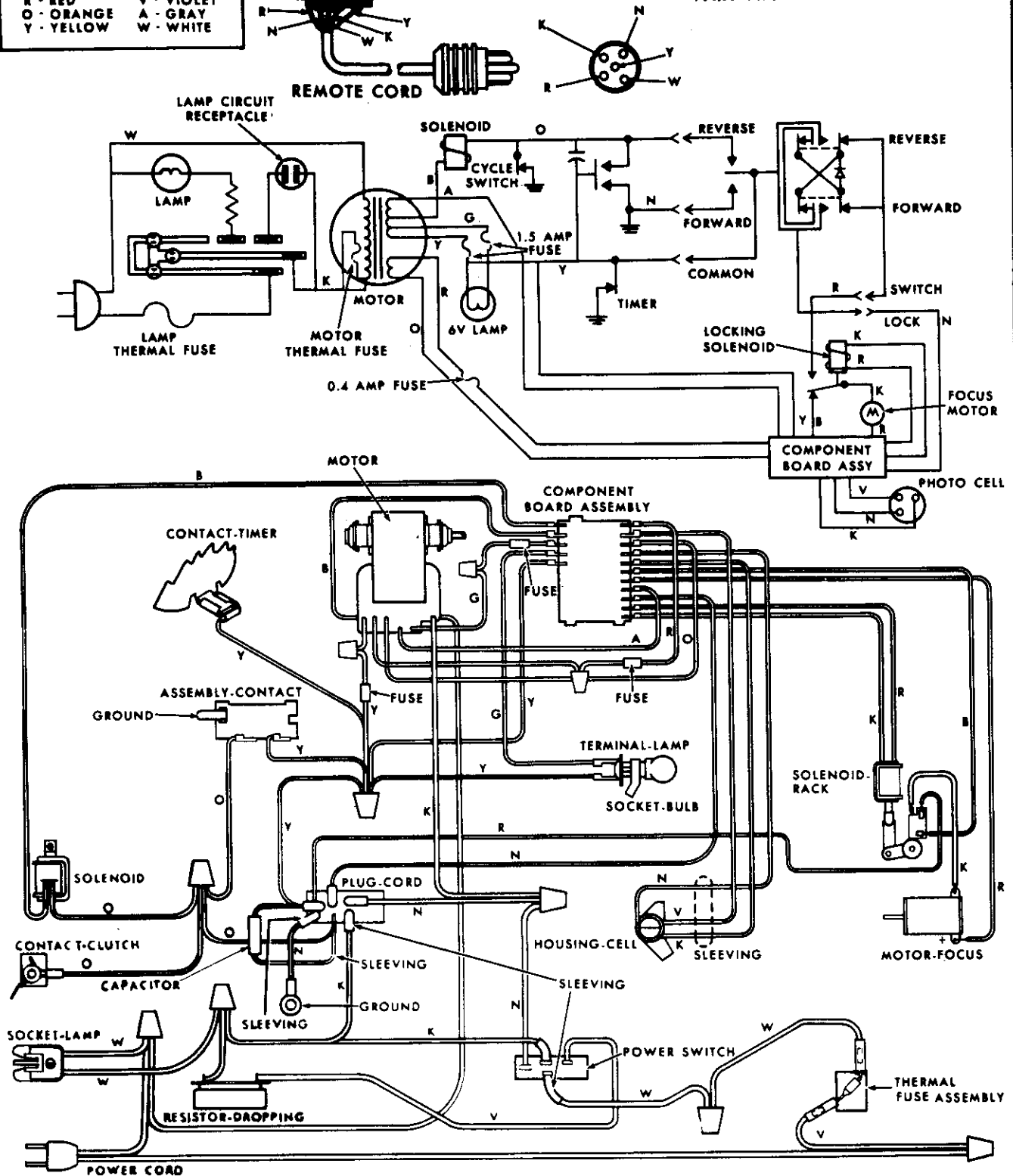
ELECTRICAL DIAGRAMS

KODAK CAROUSEL Custom 860H Projector

EARLY MODEL PROJECTORS MAY VARY FROM DIAGRAMS SHOWN.

WIRE COLOR CODE

K - BLACK
N - BROWN
R - RED
O - ORANGE
Y - YELLOW
G - GREEN
B - BLUE
V - VIOLET
A - GRAY
W - WHITE



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12



SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

KODAK CAROUSEL PROJECTORS,
MODELS 600, 600H, 650H, 750H, AND 760H
KODAK CAROUSEL CUSTOM PROJECTORS
MODELS 800HC, 850HC, 850HCK, AND 860HC

SE/AM 27

KODAK MANUFACTURED MOTORS

Many of the currently produced *CAROUSEL* Projectors have a main motor manufactured by KODAK. If a motor failure should occur in a projector with a KODAK motor it should be replaced with a KODAK motor.

When replacing a KODAK motor with a KODAK motor the motor cover (Part No. 199348) and two drive screws (Part No. 123602) are required. You may use the parts from the motor just removed or you may use new parts.

Wire connections for the KODAK motor are shown in the attached diagrams.

The motor part numbers are:

<u>PROJECTOR MODEL</u>	<u>KODAK MOTOR PART NO.</u>
600	202292
600H	202289
650H	199824
750H	204610
760H	199325
Custom 800H	202293
Custom 850H	202280
Custom 850H-K	202420
Custom 860H	202280

Do not use these numbers if you are replacing a BOMAX motor. Use the motor assembly part number in the appropriate Parts List.

Supersedes Service Bulletin #775340, 775349, 775351, 775352, and 775357

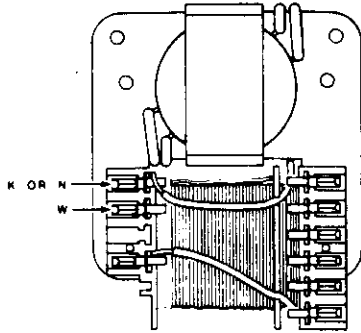
Publication No. 775433

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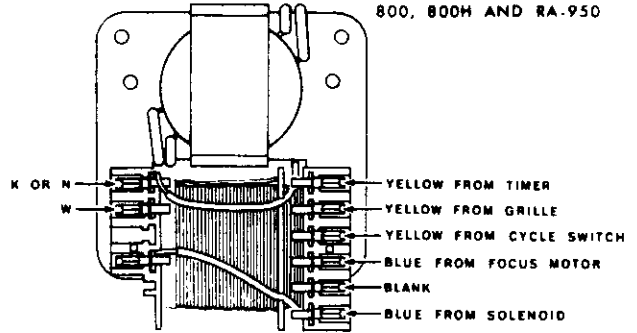
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WIRING DIAGRAMS

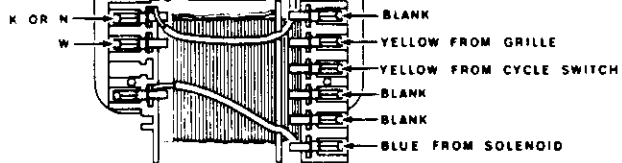
**KODAK CAROUSEL Projector, Models
600 and 600H**



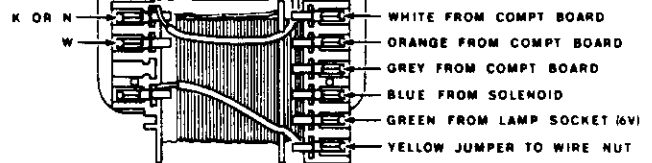
**KODAK CAROUSEL Projector, Models
800, 800H AND RA-950**



**KODAK CAROUSEL Projector, Models
650, 650H AND 700
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
E AND E-2**

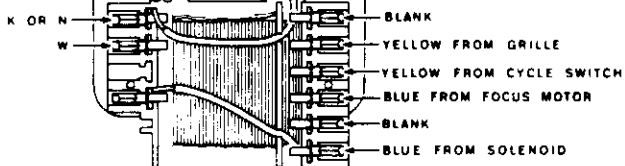


**KODAK CAROUSEL Projector, Models
760, 760H, 850,
850H, 860 and 860H
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
AF, AF-2, RA-960 AND ARC**

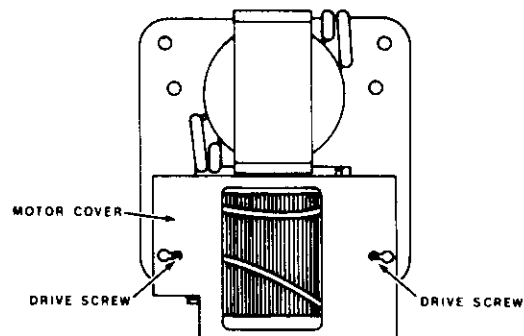
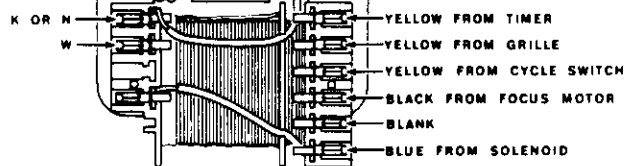


KODAK Custom CAROUSEL Projector, Models 850HC AND 860HC

**KODAK CAROUSEL Projector, Models
750 AND 750H
AND
KODAK EKTAGRAPHIC
Slide Projector, Models
B AND B-2**



**KODAK Custom CAROUSEL
Projector, Models
800HC**





SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 24

KODAK CAROUSEL PROJECTORS, MODELS 760H AND 800H
KODAK CAROUSEL CUSTOM 800H PROJECTOR

Cycling Problems

If a projector cycles either when actuating the remote focus button, or cycles only in reverse, or the projector will not cycle; check the focus motor wiring.

Most projectors have the minus (-) wire from the focus motor connected to the orange wires. Rewire the minus wire from the focus motor to join the yellow wires.

If the cycle problem is not eliminated, replace the focus motor and rewire the minus wire (as above).

Publication No. 775428
3/74B

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SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 33

KODAK CAROUSEL PROJECTORS, MODELS 650H, 750H, AND 760H

Capacitor

Replace the gray capacitor on the above late-model projectors with the following conditions:

1. Failure of the clutch contact or the clutch spring.
2. Visible wear on the point of contact with clutch spring and clutch contact.
3. Customer complaints of excessive noise in the tape recorder used with the projector.

Replace the gray capacitor 204345, Figure 1, on the cycle switch, located behind the forward and reverse buttons, with either a brown or orange capacitor 204331, Figure 2. Connect the new capacitor to the orange wires, and the yellow wires at the wire connector in the wire trough.

NOTE: There are no visible indications that an open capacitor is not functioning properly.

GRAY

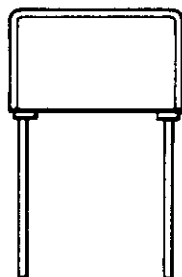


FIGURE 1

BROWN
OR
ORANGE

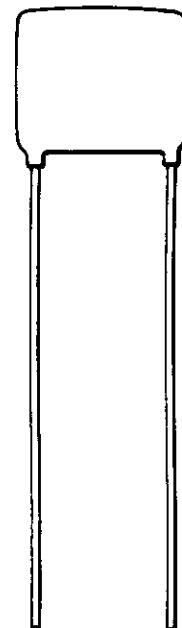


FIGURE 2

Publication No. 775443
4/74B

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SERVICE ENGINEERING BULLETIN

CUSTOMER EQUIPMENT SERVICES DIVISION EASTMAN KODAK COMPANY

SE/AM 16

Revised

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
KODAK CAROUSEL 760H, 850H, and 860H Projectors
KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors

Auto-Focus Circuit Board

Component Test Procedure

This procedure is for testing the auto-focus circuit board (1 Transistor, 1SCR) in the above model projectors. Replace any defective component on the circuit board. Refer to the wiring diagrams, Pages 3 and 4.

I. Circuit Board Preparations:

a. Remove the circuit board from the projector. Refer to the service manual publications listed on page 2.

b. Connect the following circuit board wires, figure 1:

White, orange, gray, and yellow wires to the MAIN MOTOR.

Blue (negative), and red (positive) to the D.C. VOLTMETER, and FOCUS MOTOR WITH LOCKED ROTOR.

Brown, black, and violet wires to the PHOTOCELL SIMILATOR.

II. Testing the Circuit Board:

a. Place switches S1 and S2 in "OPEN" position.
Voltmeter must read zero.

b. Place switch S1 in "CLOSED" position, and switch S2 in "OPEN" position.
Voltmeter must read -12.5 ± 2.5 volts.

c. Place switches S1 and S2 in "CLOSED" position.
Voltmeter must read zero.

d. Place switch S1 in "OPEN" position, and switch S2 in "CLOSED" position.
Voltmeter must read $+12.5 \pm 2.5$ volts.

e. Measure the resistance between the violet and brown wires.
Resistance must be $2K\Omega \pm 20\%$.

f. Measure the resistance between the blue and gray wires.
Resistance must be 1 Meg ohm.

Publication No. 775414
8/74B

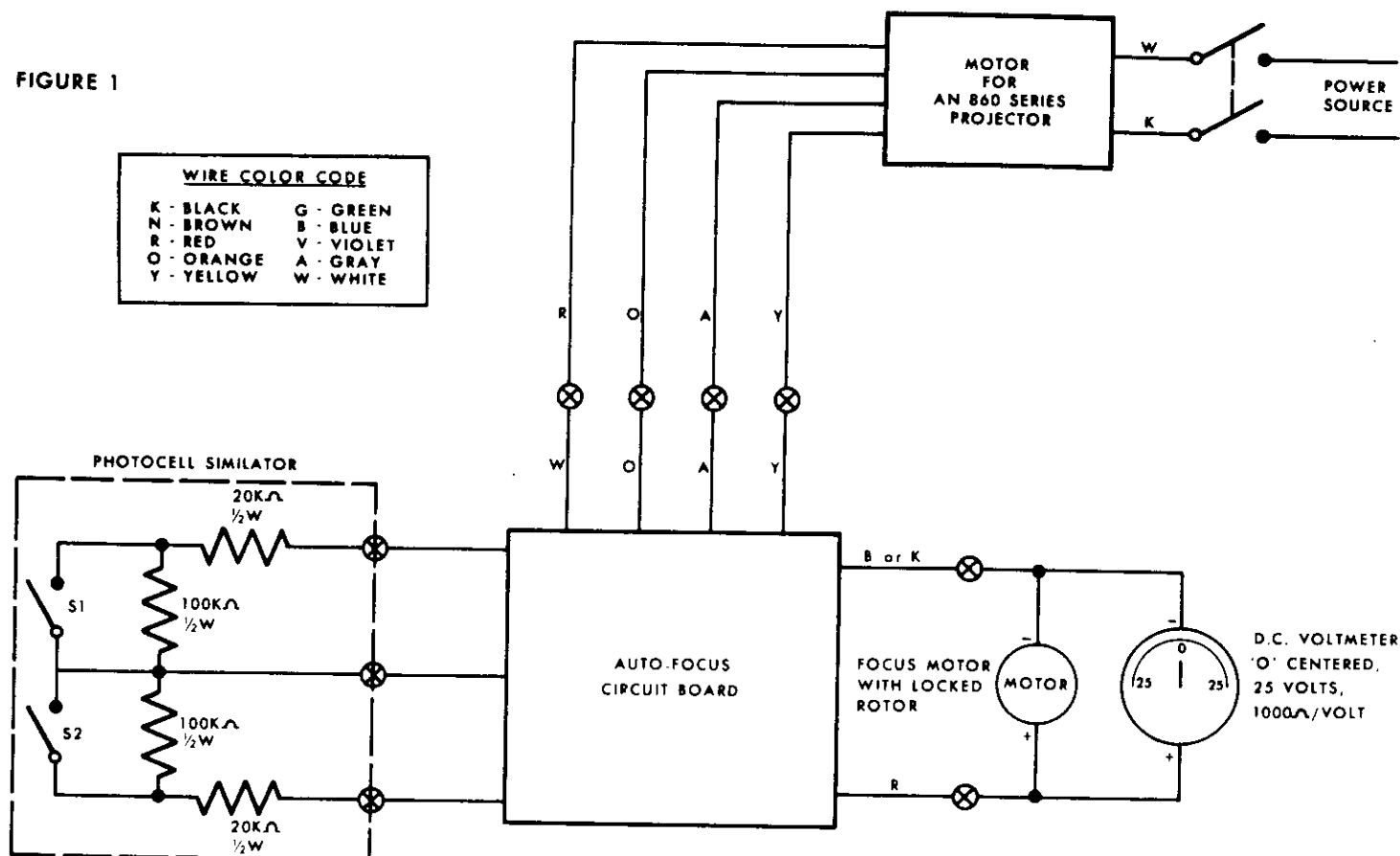
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III. Circuit Board - Trouble/Remedy Chart:

SE/AM16

Switch S1 Position	Switch S2 Position	D.C. Volt Meter Reading	Check Component
Open	Open	Negative	CR2, CR5
Open	Open	Positive	CR3, CR4
Open	Closed	0	CR2, CR5, Q1, Q2
Open	Closed	Negative	Q1, Q2
Closed	Closed	Negative	CR2, CR5
Closed	Closed	Positive	CR3, CR4
Closed	Open	0	CR3, CR4, Q1, Q2
Closed	Open	Positive	Q1, Q2

FIGURE 1



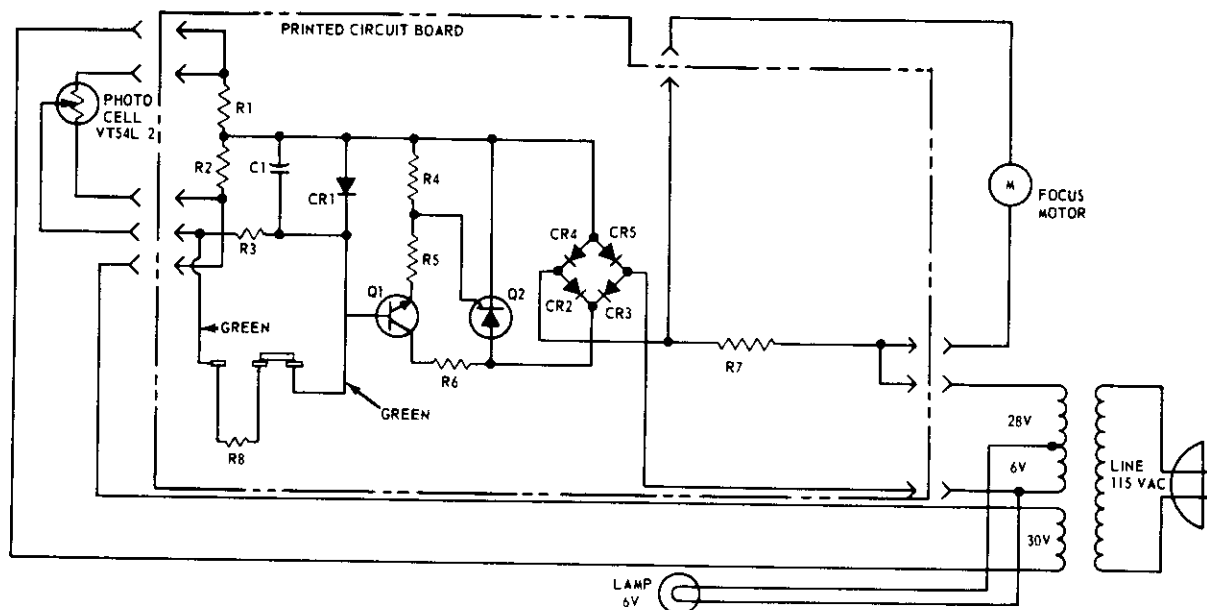
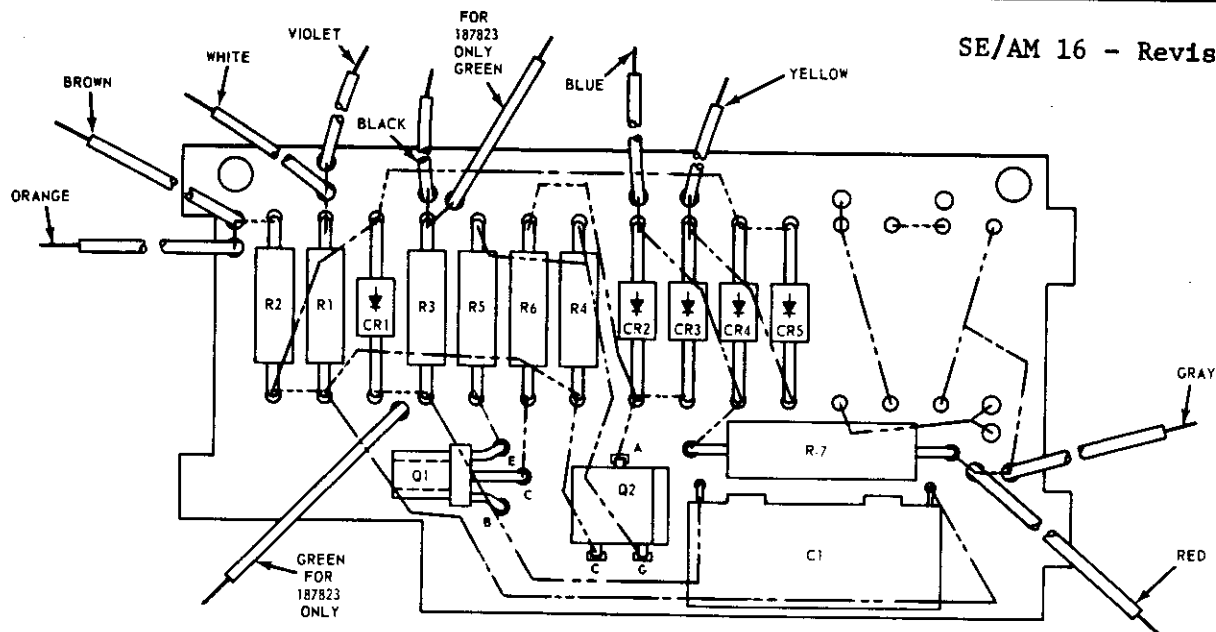
References:

KODAK CAROUSEL 760, 850, 850K, and 860 Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL 760H, 850H, and 860H Projectors
Service Manual Publication No. 775051

KODAK CAROUSEL Custom 850H, 850H-K, and 860H Projectors
Service Manual Publication No. 775165

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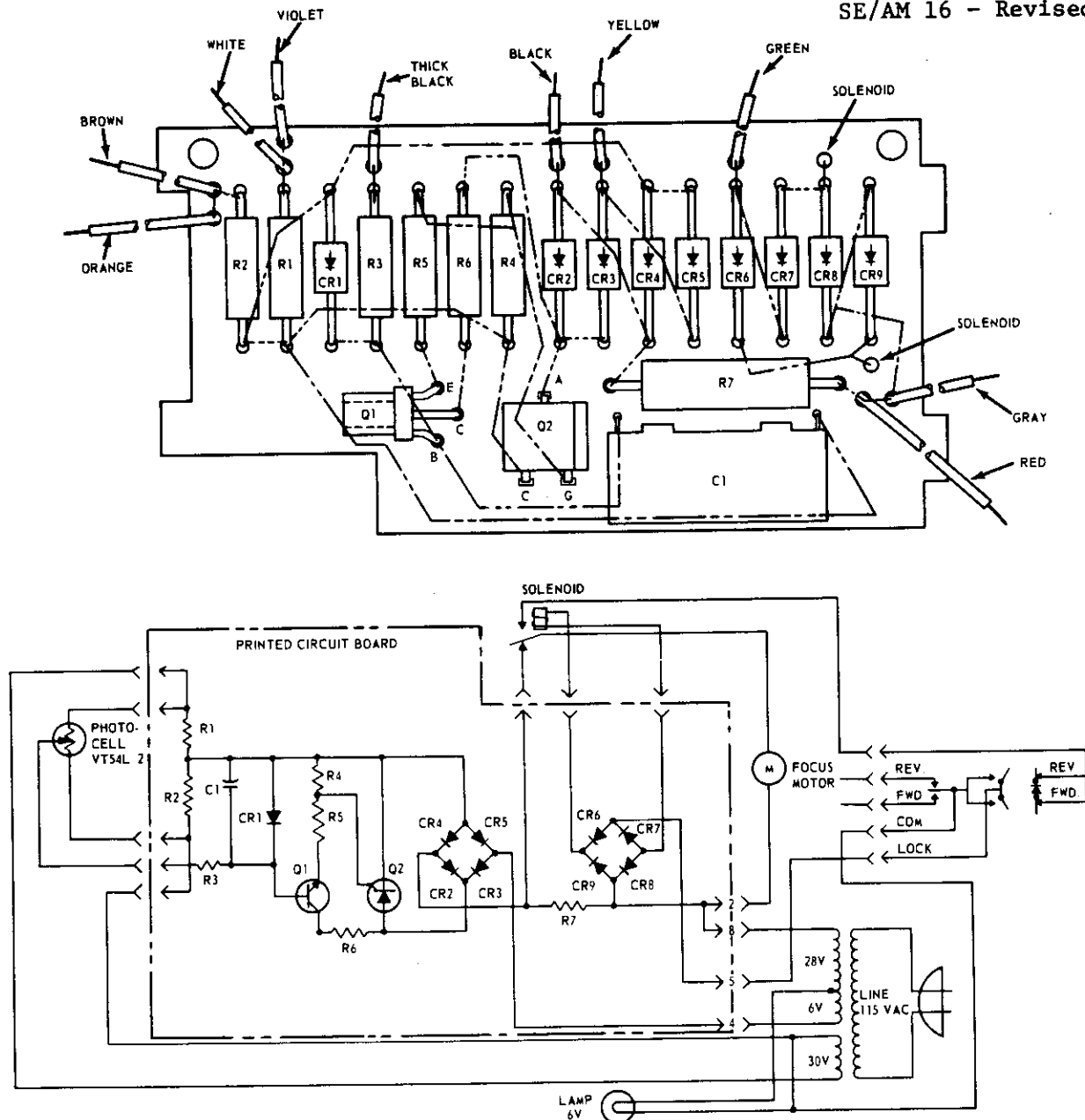
COMPONENT BOARD FOR
KODAK CAROUSEL
760 and 850 PROJECTORS

1 TRANSISTOR, SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR, 0.1μF ±10%, 50VDC GE #25F2R5-104 A
CR1,2,3,4,5	187813	GE RECTIFIER, EK-1-A
Q1	186555	TRANSISTOR, 2N5172, GE
Q2	197459	S.C.R. MCR 106-2 (SELECTED)
R1,2	187814	RESISTOR, 1KΩ ±5%, 1/2 WATT
R3	186962	RESISTOR, 47KΩ ±5%, 1/2 WATT
(R) R3	195564	RESISTOR, 47KΩ ±5%, 1/2 WATT
R4, 5	187814	RESISTOR, 1KΩ ±5%, 1/2 WATT
(R) R4	140825	RESISTOR, 270Ω ±5%, 1/2 WATT
(R) R5	200314	RESISTOR, 100Ω ±5%, 1/2 WATT
R6	126900	RESISTOR, 10KΩ ±10%, 1/2 WATT
(R) R6	187814	RESISTOR, 1KΩ ±5%, 1/2 WATT
R7	146619	RESISTOR, 220Ω ±10%, 1 WATT

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COMPONENT BOARD FOR KODAK CAROUSEL 860 PROJECTOR

1 TRANSISTOR, 1 SCR TYPE (CURRENT)

PRINTED CIRCUIT BOARD COMPONENT NOMENCLATURE		
C1	186554	CAPACITOR 0.1 $\pm$ 10% 50VDC, G.E., Z5F2R5-104A
CR1,2,3,4	187813	G.E. RECTIFIER, EK-1-A
5,6,7,8,9	187813	G.E. RECTIFIER EK-1-A
Q1	186555	TRANSISTOR - 2N5172, G.E.
Q2	197459	S.C.R. MCR 106-2 (SELECTED)
R-1,2	187814	RESISTOR, 1K Ω $\pm$ 5%, 1/2 WATT
(R) R3 EARLY STYLE	186962	RESISTOR, 47K Ω $\pm$ 5%, 1/2 WATT
(R) R3 LATE STYLE	195564	RESISTOR, 47K Ω $\pm$ 5%, 1/2 WATT
(R) R4,5 EARLY STYLE	187814	RESISTOR, 1K Ω $\pm$ 5%, 1/2 WATT
(R) R4 LATE STYLE	140825	RESISTOR, 270 Ω $\pm$ 5%, 1/2 WATT
(R) R5 LATE STYLE	200314	RESISTOR, 100 Ω $\pm$ 5%, 1/2 WATT
R6 EARLY STYLE	126900	RESISTOR, 10K Ω $\pm$ 10%, 1/2 WATT
(R) LATE STYLE	187814	RESISTOR, 1K Ω $\pm$ 5%, 1/2 WATT
R7	146619	RESISTOR, 220 Ω $\pm$ 10%, 1 WATT

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