

WURLITZER

5220 Series Wall Box

& Steppers 259B & 261B



5220 SERIES WALL BOX

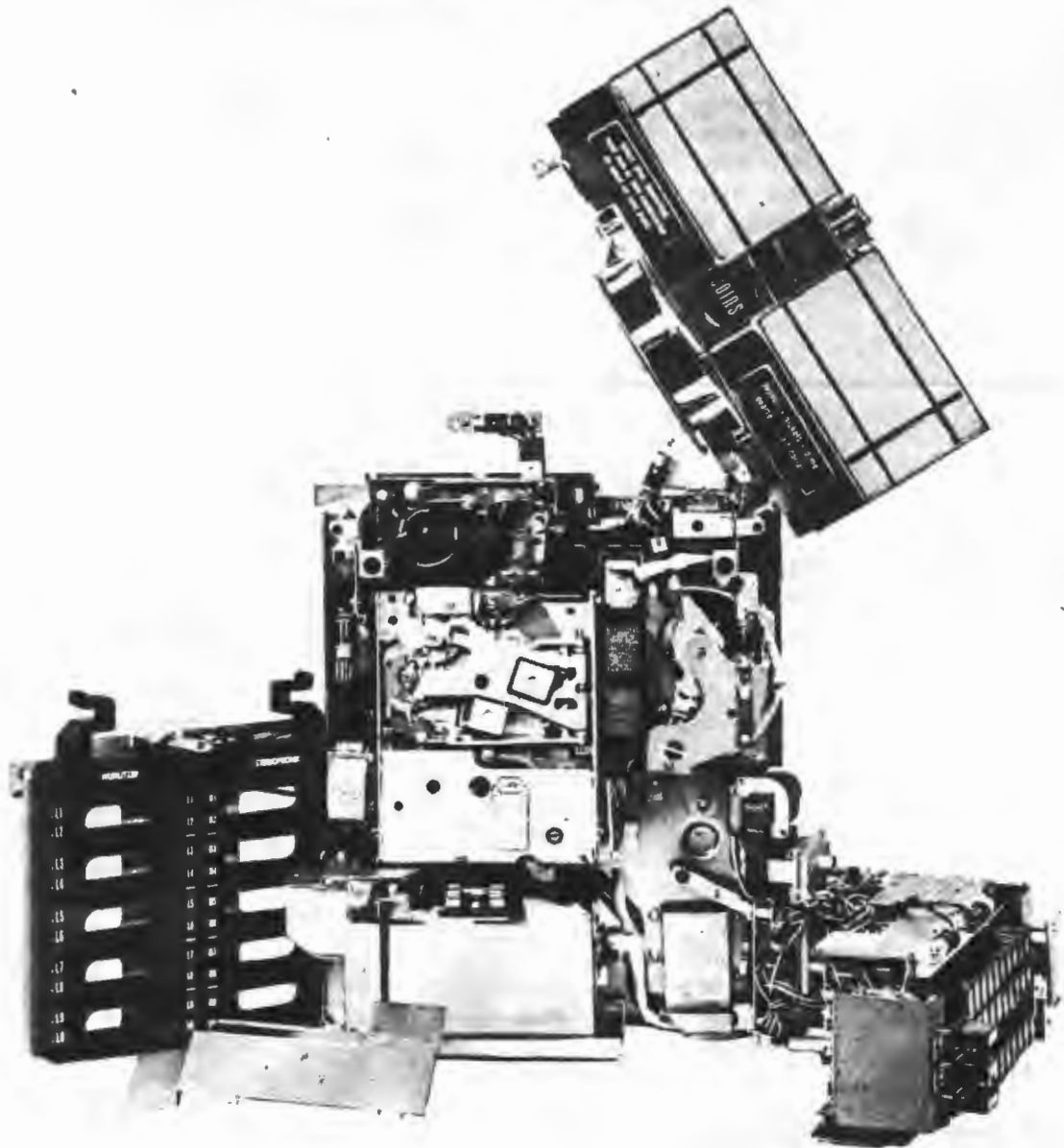


FIG. 1.

The Model 5220 Series Wall Box was designed to operate with Wurlitzer 100 and 200 Selection Phonographs.

5220 (200 Selection) and 5225 (100 Selection) Wall Boxes are both audio equipped with stereo speakers, level control switches for personal listening pleasure (Soft, Medium and Loud) and the famous Golden Bar for selecting a preset program of the Ten Top Tunes.

5220A (200 Selection) and the 5225A (100 Selection) Wall Boxes are not equipped with stereo speakers, level controls and the Golden Bar.

All 5220 Series Wall Boxes will accept nickels, dime, quarters and a half dollar. Provisions in the wall box are available for dual price setting such as used for LP selections and the associated wiring and switch circuits for coin totalizing or counting when used with a phonograph that has the Kit 183D Cashrak incorporated.

The 5220 Series Wall Boxes require 24 Volts A.C. for its operation such as credits, lights and selector motor. Up to four wall boxes can be operated when used with a phonograph with stepper without the addition of extra booster transformers. If

more boxes at the location is desired, the Wurlitzer 222B Booster Transformer must be used for each addition of one to four wall boxes.

The 5220 and 5225 Wall Boxes require a 12 conductor cable.

- 1 Ground Circuit - #16 Wire
- 1 Pulse Circuit - #20 Wire
- 1 Top Tunes Circuit - #22 Wire
- 1 24 Volt A.C. Circuit - #16 Wire
- 4 Cashrak Circuits - #22 Wire
- 4 Audio Circuits - #22 Wire

Pricing can be changed conveniently by moving the stop levers on the playrak.

The standard factory setting of the wall box playrak is as follows:

- One credit for a dime or two nickels.
- Three credits for a quarter.
- Seven credits for a half dollar or two consecutive quarters.

The necessary steppers required in the 100 and 200 Selection Phonographs for wall box operation are as follows:

- 259B Stepper for 100 Selection (5225 - 5225A)
- 261B Stepper for 200 Selection (5220 - 5220A)

WALL BOX CONNECTIONS

5220 Wall Box 5225 Wall Box Terminal No.		261B Stepper 259B Stepper Terminal No.	Color	Wire Gauge	Function
1	to	1	Grey	20	Pulse
G	to	G	White	16	Ground
2	to	2	Red	22	T. T.
3	to	3	Black	16	24 V. A.C.
4	to	4	Yellow	22	Spkr. Gnd.
5	to	5	Green	22	Relay Gnd.
6	to	6	Blue	22	Channel "B"
7	to	7	Violet	22	Channel "A"
		Cashrak Terminal			
8	to	8- 5¢	Orange	22	5¢
9	to	9-10¢	Pink	22	10¢
10	to	10-25¢	Tan	22	25¢
11	to	11-50¢	Brown	22	50¢
5220A Wall Box 5225A Wall Box Terminal No.		261B Stepper 259B Stepper Terminal No.	Color	Wire Gauge	Function
1	to	1	Grey	20	Pulse
G	to	G	White	16	Ground
3	to	3	Black	16	24 V. A.C.
		Cashrak Terminal			
8	to	8- 5¢	Orange	22	5¢
9	to	9-10¢	Pink	22	10¢
10	to	10-25¢	Tan	22	25¢
11	to	11-50¢	Brown	22	50¢

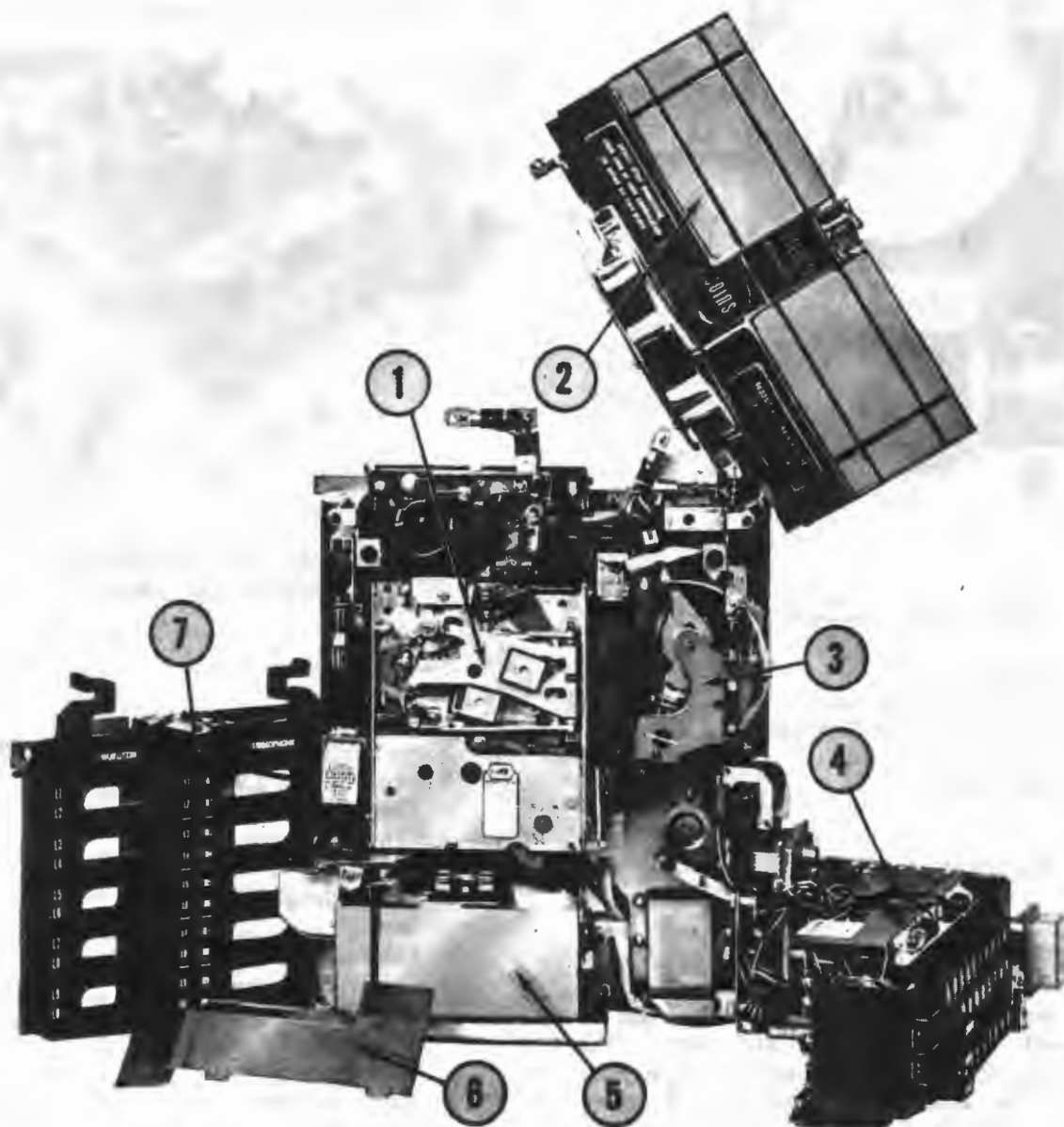


FIG. 2. 5225 WALL BOX

- | | |
|--|----------|
| 1. Slug Rejector Assembly | National |
| 2. Top Casting Assembly | |
| 3. Playrak | |
| 4. Mounting Bracket, Switch & Button Assy. | |
| 5. Cash Box & Cup Assy. | 125781 |
| 6. Guard & Tape Assy. | 126487 |
| 7. Program Page Assy. | |

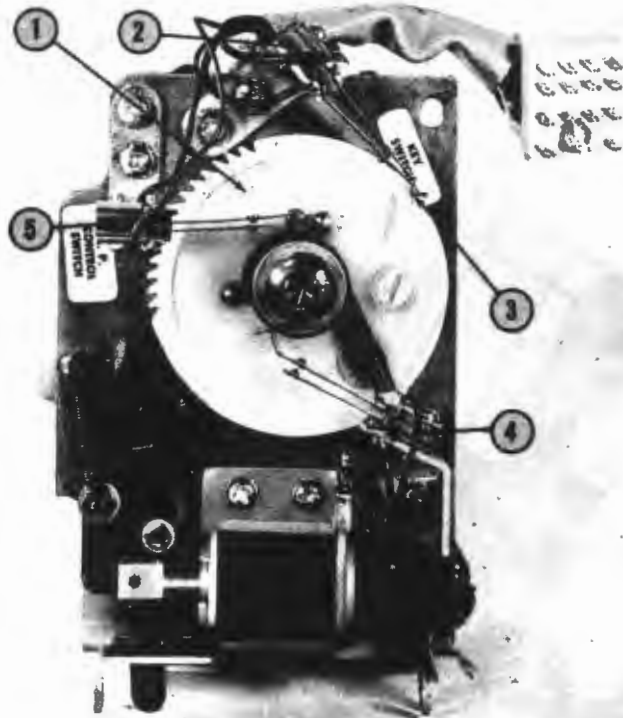


FIG. 3. WALL BOX PLAYRAK ADJUSTMENT

- | | |
|-------------------------------------|--------|
| 1. Cancel Wheel | 123628 |
| 2. Key Switch & Bracket Assy. | 125638 |
| 3. Vee Formed Portion of Key Switch | |
| 4. Switch, Top Tune Control | 125640 |
| 5. Switch, LP Control | 125639 |

WALL BOX PLAYRAK ADJUSTMENT

The Cancel Wheel (Fig. 3, Item 1) must be in the rest position with all credits cancelled off. The Key Switch and Bracket Assembly (Item 2) should be positioned with the contacts open .015-.020". The Vee formed portion of the longer contact blade must rest on the center area of the Delrin Boss as shown in Figure 3, Item 3. Establish one credit on the Cancel Wheel, the contacts must close with overtravel.

Establish six credits on the Cancel Wheel. Position the Top Tune Control Switch and Bracket Assembly (Fig. 3, Item 4) to provide .020" opening of the contacts. Advance the Cancel Wheel to the seven credit position, the contacts should make with overtravel. The long contact blade must bear on the fiber cam at all times.

Establish two credits on the Cancel Wheel. Position the LP Control Switch and Bracket Assembly (Item 5) to provide .020" opening of the contacts.

Advance the Cancel Wheel to the three credit position, the contacts should make with overtravel. The long contact blade must bear on the fiber cam at all times.

The Blade, part of the Key Switch and Bracket Assembly (Item 2), must bear against the Cancel Wheel with a pressure of 3 to 3-1/2 ounces.

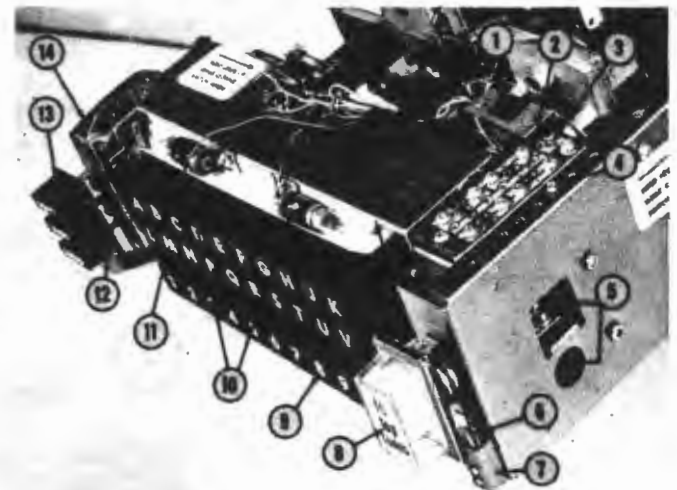


FIG. 4. SELECTOR SWITCH LATCH ADJUSTMENT

- | | |
|--|---|
| 1. Switch, Service | 126122 |
| 2. Printed Board | 126027 |
| 3. Extra Cancel Control | |
| 4. Extra Bridging Screws, 6-32 x 1/4" | 73533-22 |
| 5. Selector Switch Latch Adjusting
Screws | 67433 |
| 6. Switch | 125304 |
| 7. Guard | 127729 |
| 8. Button & Plunger Assy.
Button
Insert, Top Tunes
Insert, Translucent
Retaining Clip
Spring
Hair Pin
Lamp Socket | 125352
125021
126834
126101
126804
125309
74402-1
125354 |
| 9. Selector Buttons, 1 to 10
to | 125671
125680 |
| 10. Lamp Socket Assy. | 125625 |
| 11. Selector Buttons, A - K
to | 125651
125660 |
| Selector Buttons, L - V
to | 125661
125670 |
| 12. Switch, Volume | 125286 |
| 13. Button, Soft
Button, Med.
Button, Loud | 125018
125019
125020 |
| 14. Shield | 126791 |

SELECTOR SWITCH LATCH ADJUSTMENT

The Selector Switch Latch Adjusting Screws are accessible through the openings Fig. 4, Item 5.

Turn the Service Switch (Fig. 4, Item 1) off. Rotate the Cancel Cam and Contact Assembly (Fig. 5, Item 1) counter-clockwise until the Long Contact (Item 6) rests at the center of Contact Ring (Item 3). Press a Letter and a Number Button. Rotate the Cancel Cam and Contact Assembly until the Selector Buttons release. Both buttons must release at the position indicated by Item 5.

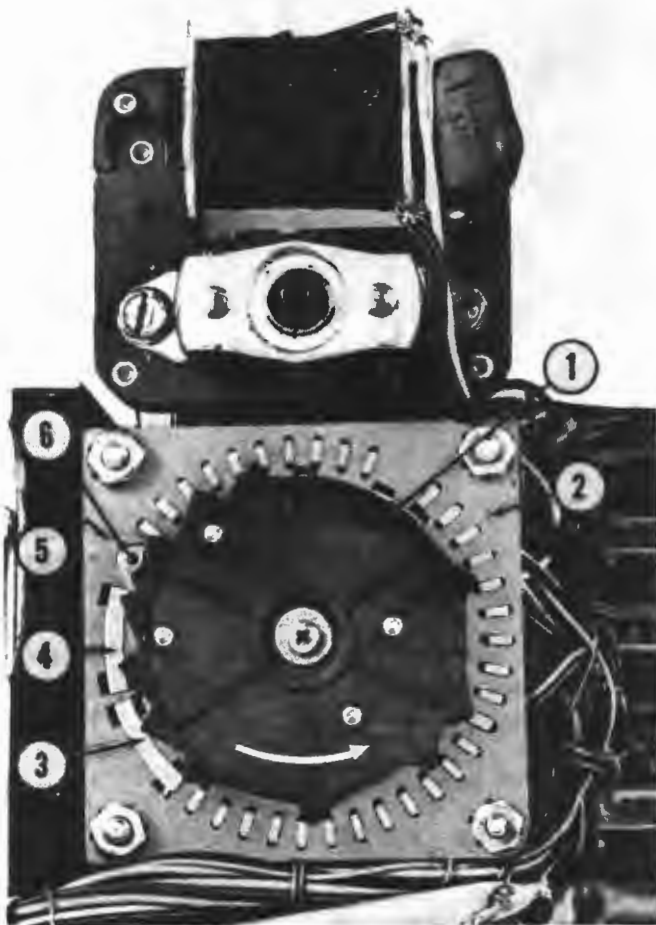


FIG. 5. SELECTOR SWITCH LATCH ADJUSTMENT

1.	Cancel Cam & Contact Assy., 5220-5220A	125785
	Cancel Cam & Contact Assy., 5225-5225A	125789
2.	Contact Plate Assy., 5220-5220A	125754
	Contact Plate Assy., 5225-5225A	125802
3.	Contact Ring	125771
4.	Contact Ring	125771
5.	Selector Switch Unlatch Position	
6.	Long Contact	125789

PLAYRAK CANCEL ADJUSTMENT

The Wall Box must be mounted on a vertical

flat surface with the mounting screws tight before making the following adjustment.

Playrak credit cancellation is controlled by the vertical position of the Playrak (Fig. 6, Item 10). The position may be changed by loosening the Thumb Screw (Item 11) and the three screws securing the Pivot Stud and Bracket Assembly (Item 9).

The Playrak should be positioned to provide 1/16" clearance (Item 2) between the Lever and Cancel Pawl Assembly (Item 1) and the Cancel Lever and Arm Assembly (Item 3) with the Mounting Bracket, Switch and Button Assembly in the closed position with the Hinge Pin (Fig. 9, Item 21) in place.

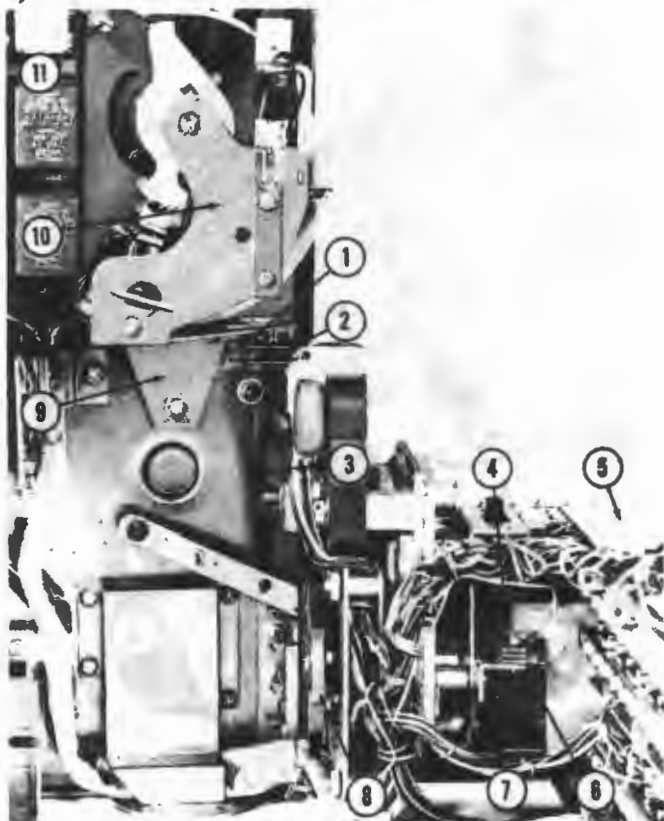


FIG. 6. CANCEL & SWITCH ADJUSTMENT

1.	Lever & Cancel Pawl Assy.	125732
2.	Dimension, 1/8" with Mounting Bracket, Switch & Button Assy. Closed	
3.	Cancel Lever & Arm Assy.	125743
4.	Switch, Speaker Control	126794
5.	Mounting Bracket, Switch & Button Assy.	
6.	Cam	125796
7.	Switch, Interlock	126749
8.	Cancel Cam & Contact Assy.	125789
9.	Pivot Stud & Bracket Assy.	126143
10.	Wall Box Playrak	
11.	Thumb Screw	67969

SPEAKER CONTROL AND INTERLOCK SWITCH ADJUSTMENTS

The Speaker Control Switch (Fig. 6, Item 4)

and the Interlock Switch (Item 7) are operated by the Cam (Item 6). The Vee formed blade of each Switch must bear on the Cam at all times.

The Speaker Control Switch (Item 4) is normally open. It must close with overtravel midway through one counter-clockwise revolution of the Cancel Cam and Contract Assembly (Item 8).

The Interlock Switch (Item 7) is open when the Wall Box is in the at rest position with no credits on the Playrak. It must be closed with overtravel at all other times.

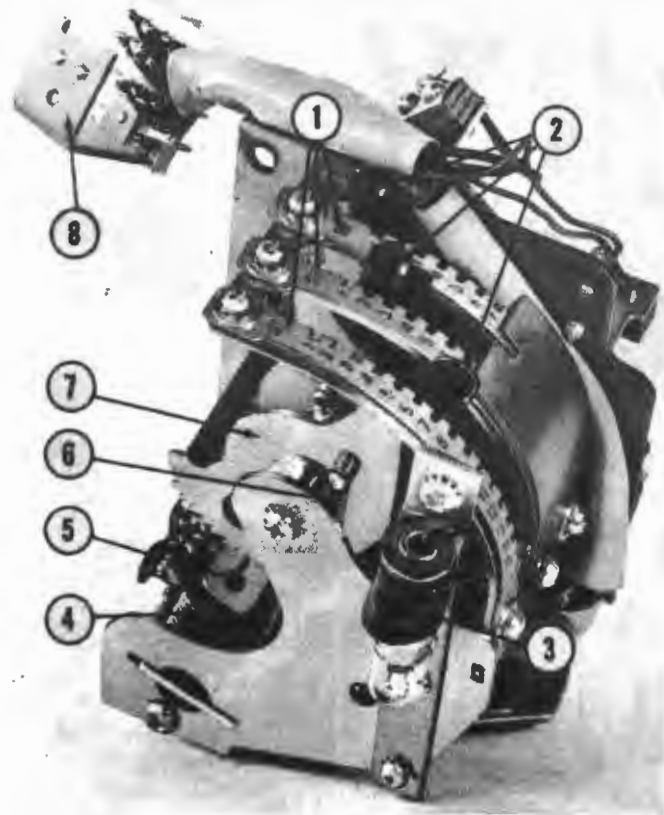


FIG. 7. PLAYRAK ASSEMBLY, FRONT

1.	Indexing Strip Assy., 50¢	123657
	Indexing Strip Assy., 25¢	123658
	Indexing Strip Assy., 10¢	123659
2.	Stop Lever & Spring Assy.	66138
3.	Lamp Socket & Wire Assy.	114574
4.	Coin Magnet & Bracket Assy.	123641
5.	Lever, Hub & Stud Assy.	125635
	Spring	58781
6.	Spring, Accumulator Wheel	124849
7.	Accumulator Wheel & Hub Assy.	123650
8.	Plug	126364

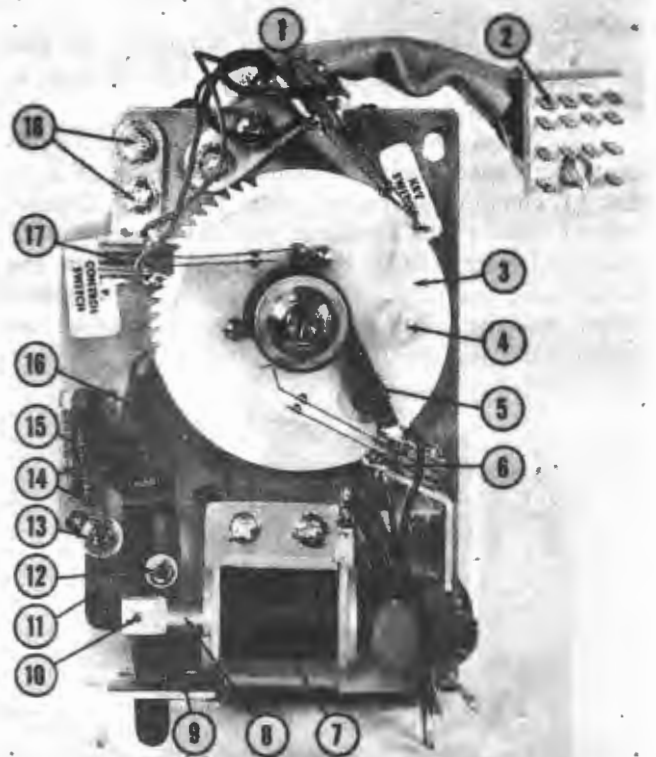


FIG. 8. PLAYRAK ASSEMBLY, REAR

1.	Key Switch & Bracket Assy.	125638
2.	Plug	126364
3.	Cancel Wheel	123628
4.	Screw, Nylon	74977-14
5.	Spring	127646
6.	Switch, Top Tune Control	125640
7.	Solenoid	125738
	Mounting Plate	125950
8.	Plunger	125738-1
9.	Felt Pad	126321
10.	Roll Pin	73782-2
11.	Bell Crank & Link Assy.	126081
12.	Retaining Ring	73724-9
	Washer	126089
13.	Stop Nut	73871-1
	Washer	126089
14.	Spring	125737
15.	Spring	125736
16.	Lever & Cancel Pawl Assy.	125732
17.	Switch, LP Control	125639
18.	Screw, 6-32 x 3/16"	73533-21

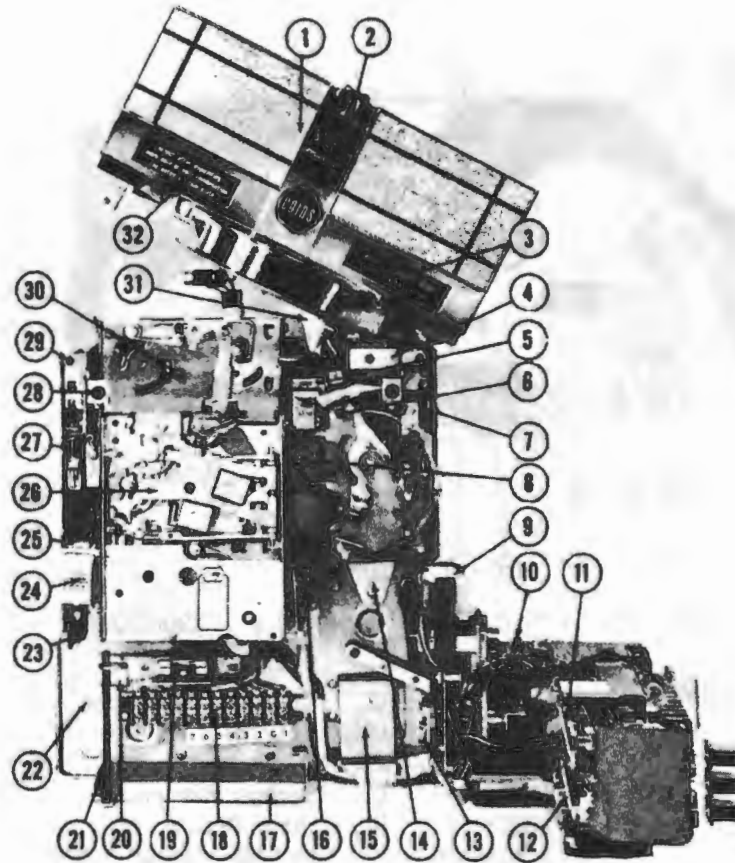


FIG. 9. WALL BOX

1. Grille	125283	14. Pivot Stud & Bracket Assy.	126143
2. Trim Plate, Stereo	125288	15. Shield	125624
3. Coin Denomination Label	125252	16. Coin Switch	125645
Window Blank, Thick, 5220-5225	125211	17. Slide & Guide Bracket Assy.	125750
Window Blank, Thin, 5220-5225	126986	18. Terminal Strip, 5220-5225	126459
Window Blank, Thick, 5220A-5225A	127703	Terminal Strip, (2) 5220A-5225A	125623
4. Bracket, Pin & Transformer Assy.	69958	19. Fuse Clip	46602
Transformer	110227	Fuse, 8/10 Amp. Fusetron	71591-10
5. Mounting Bracket, Relay	125756	20. Cover & Hinge Plate	125749
Socket, Relay	122131	21. Hinge Pin	125723
Retainer	122132	22. Base, Bracket & Lever Assy.	126790
Rectifier	127068	23. Slide, Bracket & Pin Assy.	115263
6. Thumb Screw	67969	24. Relay, White	122133
Washer	42120	Mounting Bracket	126186
Mounting Bracket, Playrak, Upper	125946	25. Capacitor, 25 Mfd. 50 V.	76462-37
7. Slide, R.H. Lock	66890	26. Slug Rejector	National
Retaining Ring	73724-25	27. Socket	126515
Lever & Pin Assy. (Cross Lever)	67320	28. Bracket & Pin Assy.	69959
8. Relay, Red	122366	29. Hinge Pin	110149
9. Motor	125574	30. Coin Separator	National
Roll Pin	73782-32	31. Cap, 6 Circuit	113527
10. Switch, Service	126122	Socket, 6 Circuit	113528
11. Selector Switch, Letters, 5220-5220A	125571	Contact	111527
Selector Switch, Letters,		32. Instruction Label	125725
5225-5225A	125572	Window Blank, Thick, 5220-5225	125211
12. Selector Switch, Numbers	66895	Window Blank, Thin, 5220-5225	126986
13. Stop, Cancel Lever	125947	Window Blank, Thick, 5220A-5225A	127703

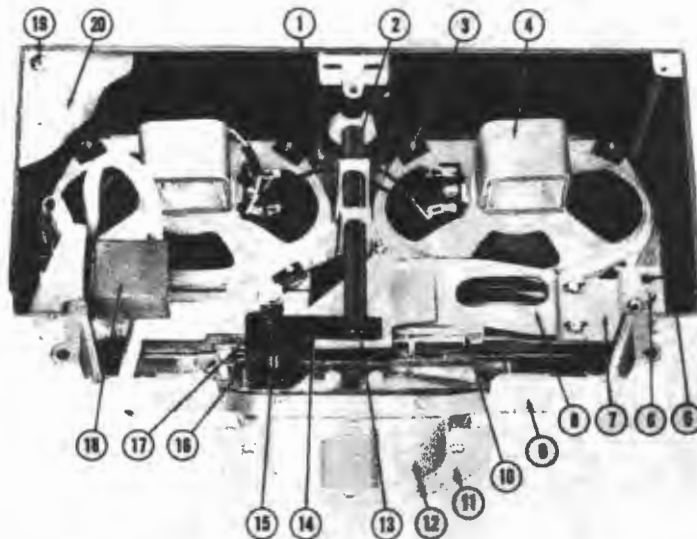


FIG. 10. TOP CASTING ASSEMBLY, 5220-5225

1. Casting, Top	125007	11. Plate	67522
2. Reject Button & Rod Assembly	125244	12. Casting, Top Front	67011
3. Speed Nut	73655-27	13. Roll Ptn	73782-30
4. Speaker	125282	14. Scavenger Lever	69910
5. Spring	126489	15. Spring, Return	110513
6. Adjusting Screw	73533-28	16. Hinge Ptn	125256
7. Coin Chute, Front	125311	17. Retaining Ring	125257
8. Coin Chute, Rear	125312	18. Relay, Red	122366
9. Guard	125747	19. Screw, 6-32 x 1/4" Chrome	76357-66
10. Coin Entry, Plastic	125284	20. Cover Plate	126483

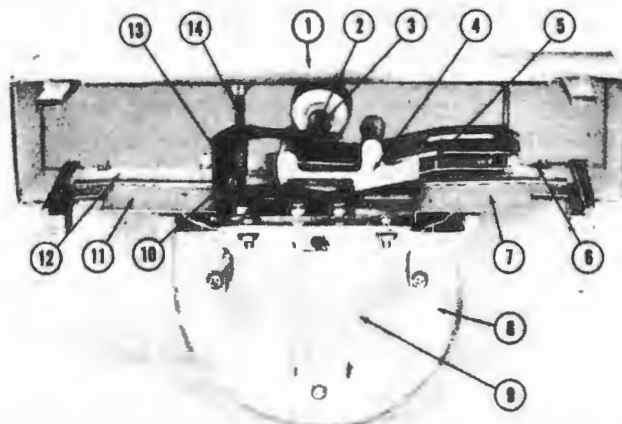


FIG. 11. TOP CASTING ASSEMBLY, 5220A-5225A

1. Casting, Top	124999	8. Plate, Top Casting	67522
2. Reject Button & Rod Assy.	125246	9. Casting, Top Front	67011
3. Roll Pin	73782-30	10. Spring, Return	110513
4. Clamp, Coin Entry Plastic	125340	11. Clip, R.H.	125338
5. Coin Entry Plastic	125284	12. Coin Denomination Label	125252
6. Instruction Label	125725	Window Blank	127703
7. Clip, L.H.	125339	13. Scavenger Lever	69910
		14. Hinge Pin	126831

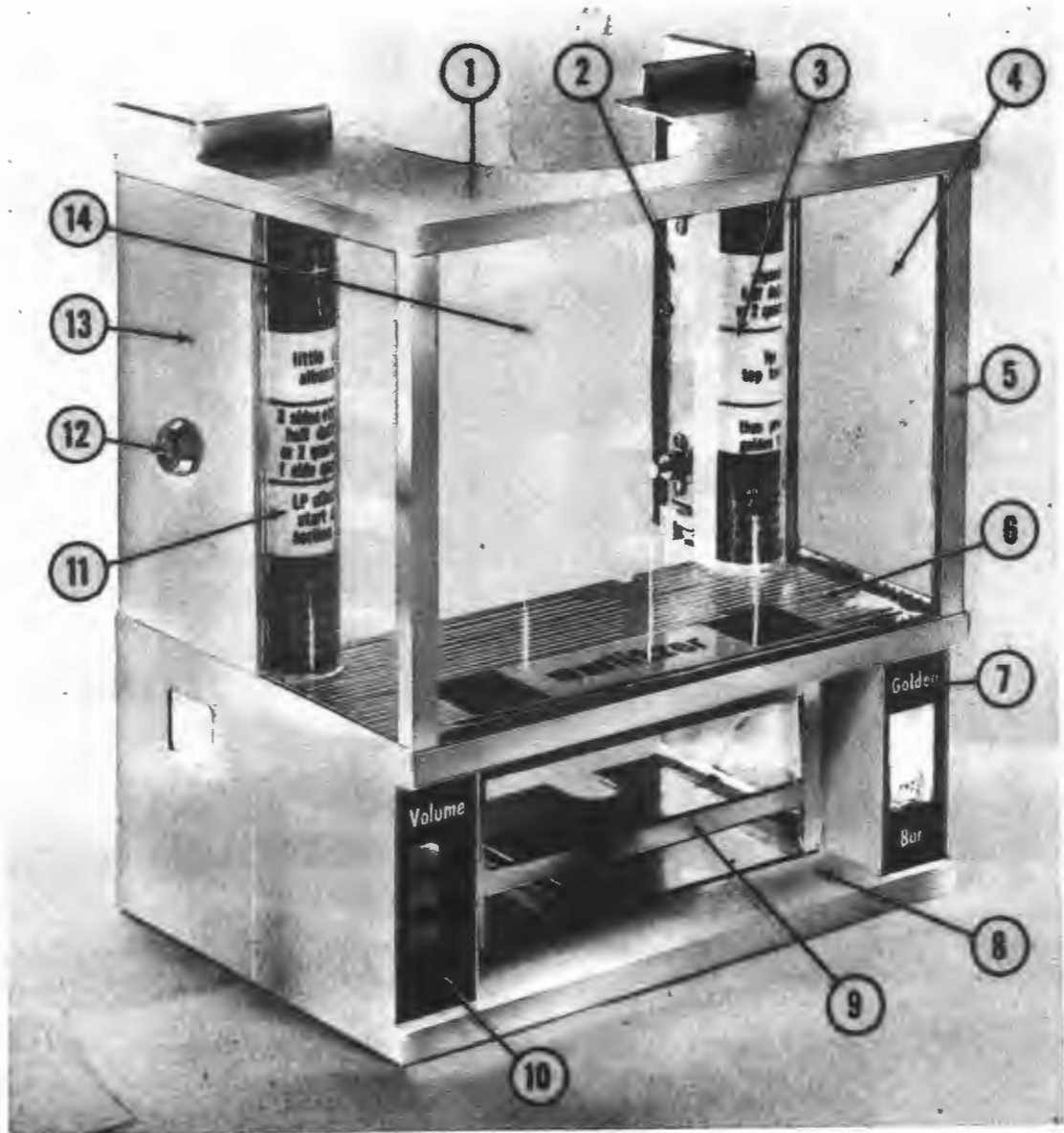


FIG. 12. COVER ASSEMBLY

1. Top Casting	125000	8. Bottom Casting	125003
2. Casting & Stud Assy., R.H.	125325	9. Casting, Face Plate 200 Selection	125004
3. Pilaster	126827	Casting, Face Plate 100 Selection	125005
Insert, Star	126817	10. Trim Plate, Volume	125290
Instruction Label, Top Tunes	125853	11. Coin Denomination Label	125854
Coin Denomination Label	126870	Coin Denomination Label,	
4. Glass, Side (2)	125239	9-50¢, 4-25¢, 1-10¢	126836
Gasket, Bulk	64510	12. Lock & Key Assy.	125780
Tape 7/16"	126815	13. Casting and Stud Assy., L.H.	125326
5. Extrusion, Corner Post	125072	14. Glass	125240
6. Decorative Shelf Assy.	125784	Gasket, Bulk	64510
7. Trim Plate, Golden Bar	125291	Tape 7/16"	126815
Trim Plate & Backer Assy., Stars	126750	Extrusion, Glass Retainer	125248
Retainer	125287		
Pal Nut	73797-4		

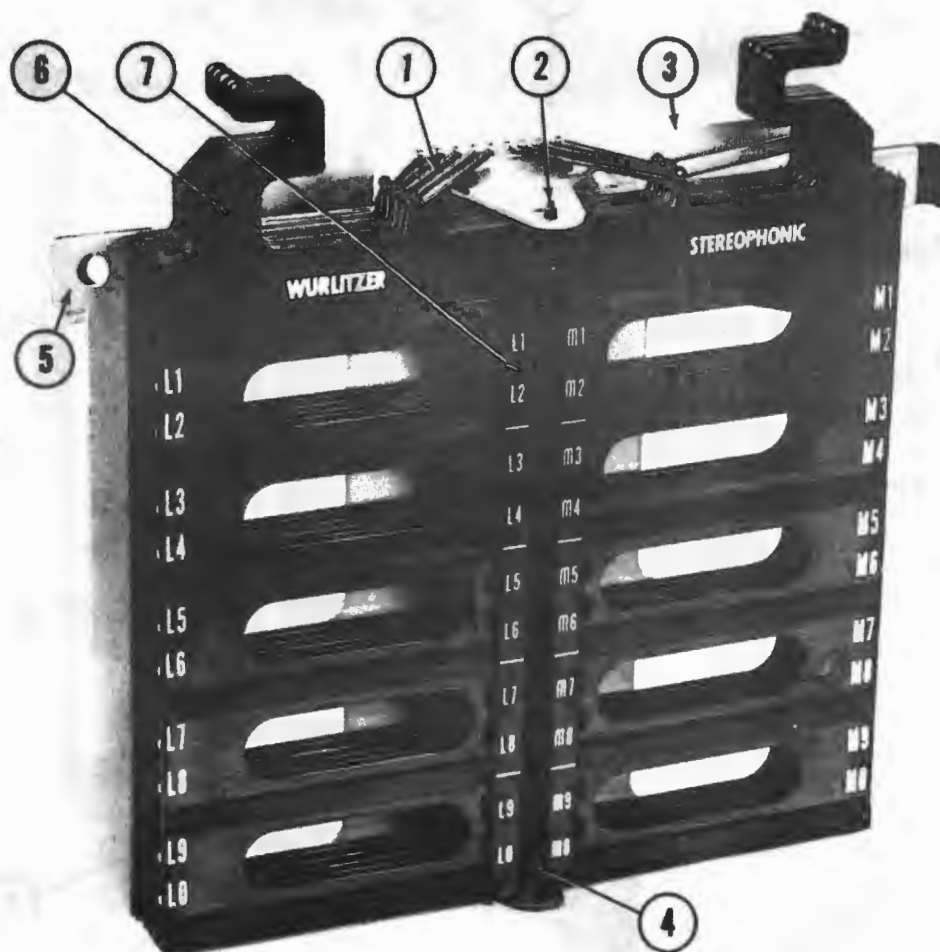


FIG. 13. PROGRAM PAGE ASSEMBLY

1.	Spring	67744	(Program Page Assemblies, 5220-5220A Cont'd)	
2.	Rod	67098		P1-Q0 125810
	Retaining Ring	73724-9		R1-S0 125812
3.	Bracket, Anti-Cheat	110241		T1-V0 125814
	Spacer, L.H.	110243		V1-V0 125805
	Spacer, R.H.	110244	Program Page Assemblies, 5225-5225A	
4.	Spacer, Program Hinge, 5225-5225A	114172		A1-A0 125804
5.	Mounting Plate & Lock Slide Assy.	125201		B1-C0 125851
	Spring	110269		D1-E0 125850
6.	Program Page Assemblies, 5220-5220A			F1-G0 125849
	A1-A0	125804		H1-J0 125848
	B1-C0	125815		K1-K0 125806
	D1-E0	125813		Spacer, A1-A0 114170
	F1-G0	125811		Spacer, K1-K0 114171
	H1-J0	125809	7.	Letter & Number Strips, Adhesive,
	K1-L0	125807		A1-K0 126594-A
	M1-N0	125808		L1-V0 126604-A

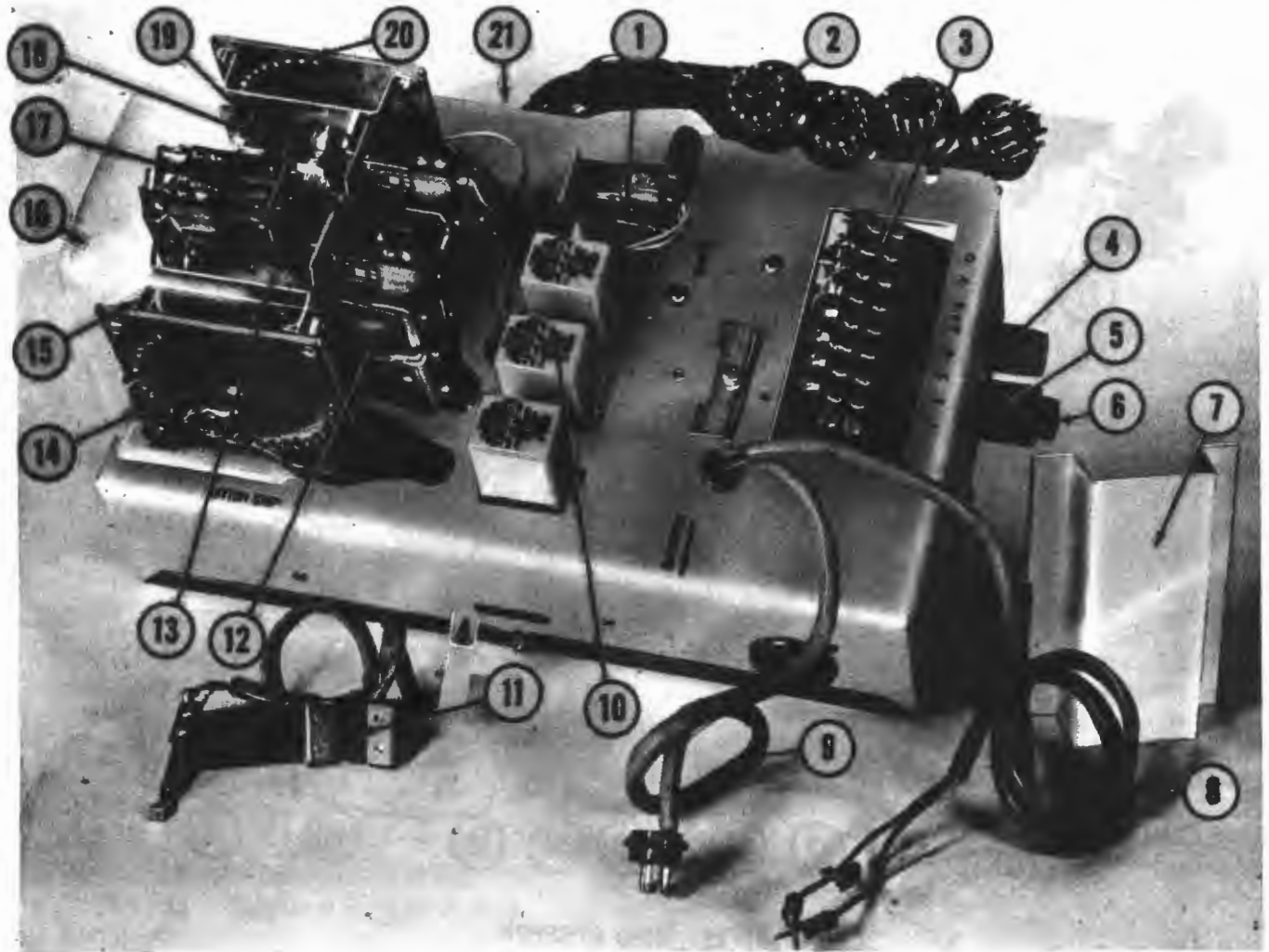


FIG. 14. 261B STEPPER

1. Relay, Timing	118553	13. Delrin Ratchet Wheel, Letters	114346-D
2. Plug, 11 Prong	121584	Delrin Ratchet Wheel, Numbers	114346-C
Plug, 12 Prong	124327	Teflon Shim Washer	61004-A
3. Terminal Strip	125759	14. Contact Plate, Letters	114346-F
4. Fuse Post	121809	Contact Arm Assy., Letters	114346-G
Fuse, 1/2 Amp. Slo Blo	71591-6	15. Frame, Letter Contact Plate	114346-K
5. Fuse Holder	126491	16. Cover, Plastic	65801
6. Fuse, 3.2 Amp. Slo Blo	126717	17. Relay, Release Latch	114346-A
7. Cover, Terminal Strip	126377	Pawl, Relay, Release Latch	114346-AA
8. Wire & Lug Assy.	126379	18. Spring, Return, Numbers	114346-M
9. Plug & Wire Assy.	126378	Spring, Return, Letters	114346-L
Plug, 4 Pin	69089	19. Frame, Number Contact Plate	114346-J
10. Relay, White	122133	20. Contact Plate, Numbers	114346-E
11. Switch, Bracket & Wire Assy.	126381	Contact Arm Assy., Numbers	114346-G
Clamp (2)	124851	21. Relay, Audio	123588
Screws (4) 4-40 x 3/8"	73533-4	Capacitor, .47 Mfd., 400V	71815-240
12. Step Magnet (2)	114346-B	Capacitor, 500 Mfd., 50V	71816
Pawl	114346-BA	Capacitor, 20 Mfd., 50V	73840-42
Armature	114346-BB	Capacitor, 50 Mfd., 50V	73845-32

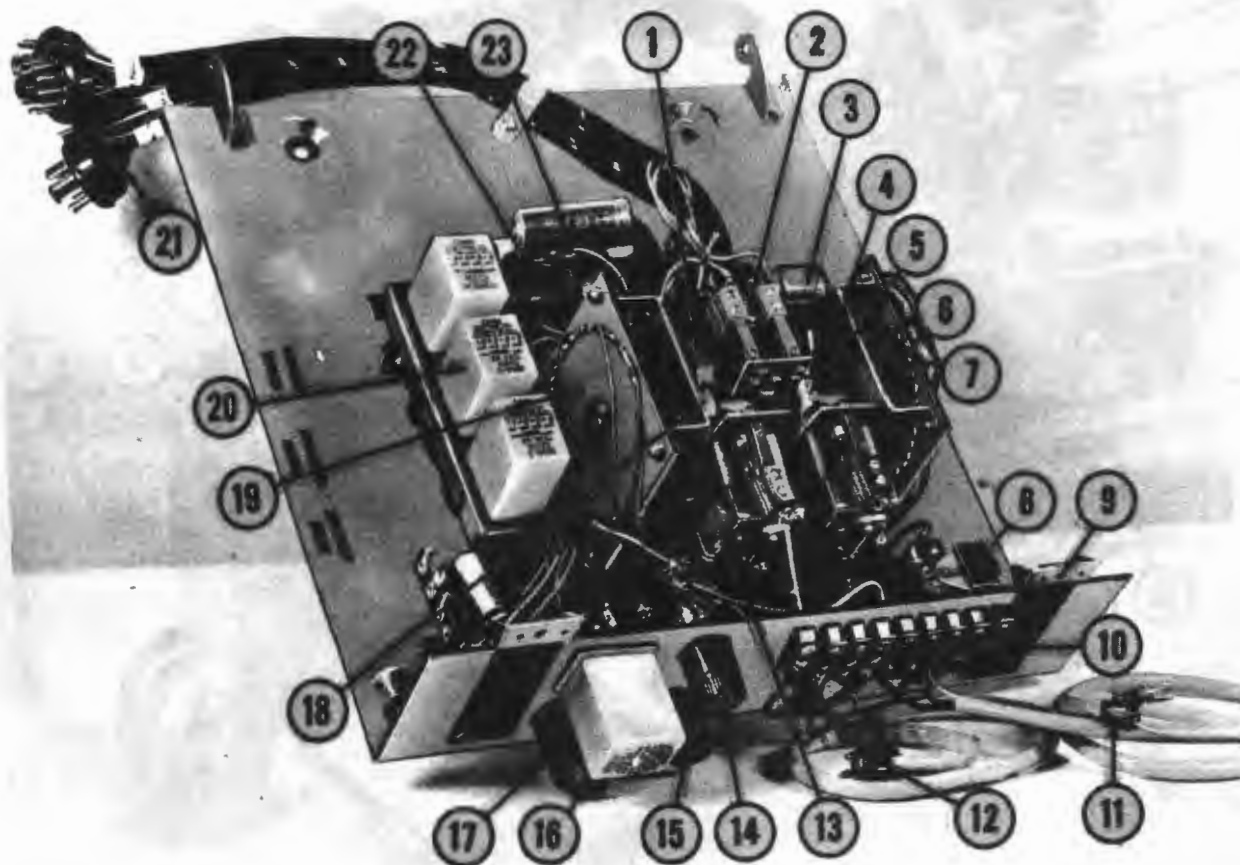


FIG. 15. 259B STEPPER

1. Pawl, Relay, Release Latch	114346-AA	13. Step Magnet (2)	114346-B
2. Relay, Release Latch	114346-A	Pawl	114346-BA
3. Capacitor, .47 Mfd., 400V	71815-240	Armature	114346-BB
Capacitor, 35 Mfd., 50V	76356	14. Fuse Post	121809
4. Frame, 4 Circuit	114346-F	Fuse, 1/2 Amp. Slo Blo	71591-6
5. Delrin Ratchet Wheel, 4 Circuit	114346-D	Fuse, 8/10 Amp. Slo Blo	121809
Return Spring, 4 Circuit	114346-M	15. Fuse Post	71591-10
Teflon Shim Washer	61004-A	Fuse, 3.2 Amp. Slo Blo	126717
6. Contact Plate Assy., 4 Circuit	114528-F	16. Fuse, 3.2 Amp. Slo Blo	126491
7. Contact Arm Assy., 4 Circuit	114528-H	17. Fuse Holder	114346-C
8. Relay, Audio	123588	18. Delrin Ratchet Wheel, 2 Circuit	114346-L
9. Spring & Clip Assy.	115832	Return Spring, 2 Circuit	114528-E
10. Terminal Strip	125759	19. Contact Plate Assy., 2 Circuit	114528-G
Cover, Terminal Strip	126568	Contact Arm Assy., 2 Circuit	122133
11. Cable Assy.	126423	20. Relay, White	38439
12. Cable & Plug Assy.	126420	21. Plug, 11 Prong	73889-620
Plug, 4 Pin	69089	22. Capacitor, 150 Mfd., 50V	73846-32
		23. Capacitor, 100 Mfd., 50V	

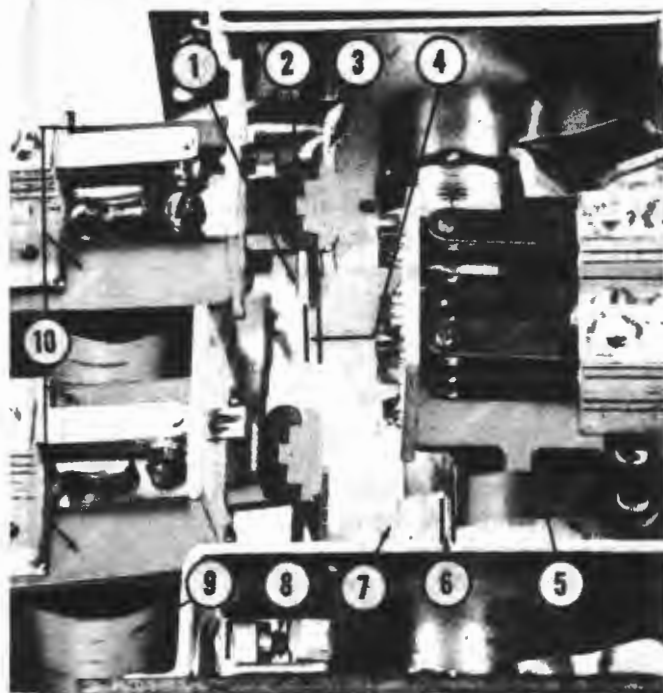


FIG. 16. STEPPER ADJUSTMENTS

1. Lower Stop Guide Tab
2. Pawl
3. Upper Stop Guide Tab
4. Dimension, .002" to .007"
5. Pawl, Relay Release Latch
6. Dimension, .002" to .008"
7. Delrin Ratchet Wheel
8. Adjusting Screw, Bristol
9. Step Magnet
10. Manual Operating Points

STEPPER ADJUSTMENTS

RATCHET WHEEL OVERTRAVEL

The Ratchet Wheel overtravel should be .002" to .008" (Fig. 16, Item 6) as measured between the Ratchet Wheel teeth (Item 7) and Release Latch Relay Spring Holding Pawl (Item 5) with the Latch Relay and the Step Magnet held down. The overtravel may be varied by repositioning the Step Magnet (Item 9).

UPPER STOP GUIDE TAB ADJUSTMENT

The Upper Stop Guide Tab (Item 3) must be formed to permit the Pawl (Item 2) to engage the Ratchet Wheel midway down the slope of a tooth when the Step Magnet is activated manually at points indicated in Item 10. The Pawl must advance the Ratchet Wheel one position.

LOWER STOP GUIDE TAB ADJUSTMENT

There must be a clearance of .002" to .007" between the Pawl (Item 2) and the Lower Stop Guide Tab (Item 1) with the Step Magnet held in the down position by pressure applied to the armature, see Item 10. Bristol Adjusting Screws (Item 8) control the clearance.

WARRANTY

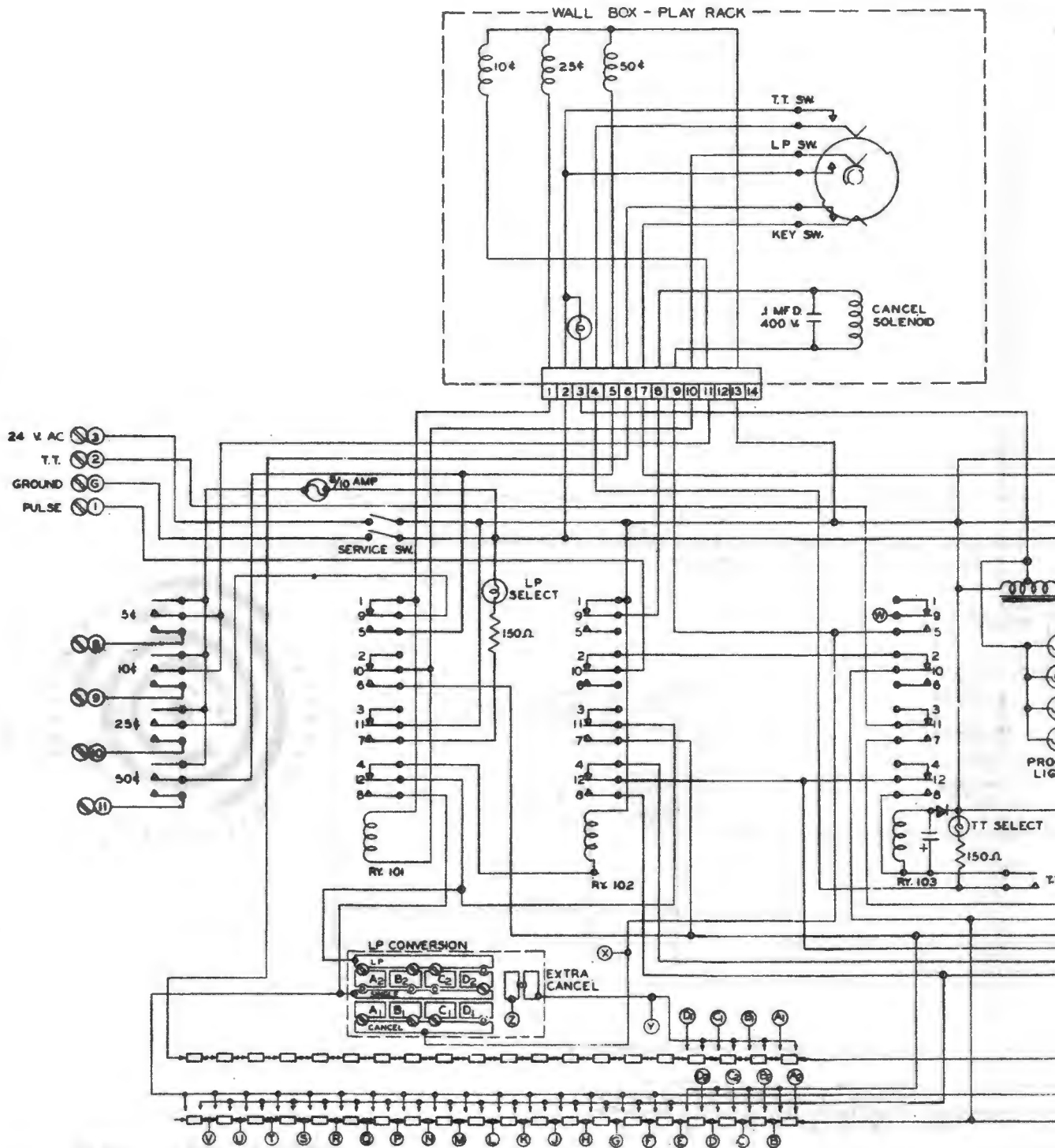
The component parts of automatic phonographs and accessory equipment manufactured by the Wurlitzer Company are warranted to be free from defects in material and workmanship and to operate properly under normal use and conditions, as follows:

- (A) Mechanical parts (Excluding coin equipment) for a period of one year from date of delivery by the Distributor to his customer.
- (B) Coin equipment and electrical parts (Including such parts as speakers, volume control assemblies, pick-up assemblies, amplifiers, motors, junction box assemblies, and all wiring) for a period of three months from date of delivery by the Distributor to his customer.
- (C) Cabinets (Subject to the Company's inspection and determination as to defect) for a period of three months from date of delivery by the Distributor to his customer.

The company's liability under this warranty is limited to replacement, free of charge, F.O.B. North Tonawanda, New York, of any part or parts which prove defective within the limitations of said warranty. The Company shall not be liable for damages of any nature due to delayed shipment, or defective parts.

THE WURLITZER COMPANY
NORTH TONAWANDA, N. Y.

MODEL 5220

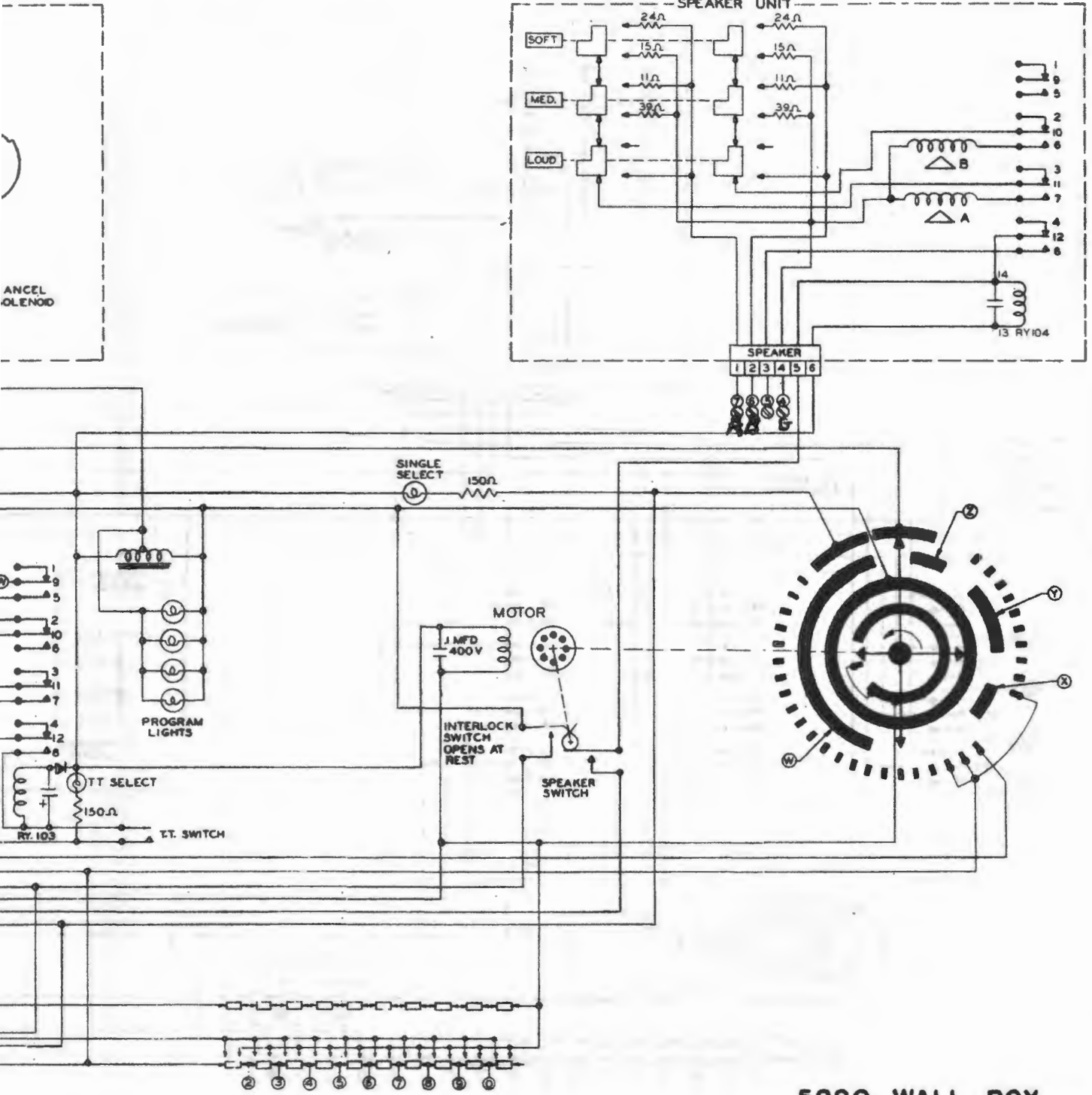


NOTE, ALL SWITCHES ARE SHOWN IN A MECHANICAL "AT REST" POSITION

THIS SCHEMATIC IS SHOWN IN THE LATEST CONDITION AT THE TIME OF PRINTING

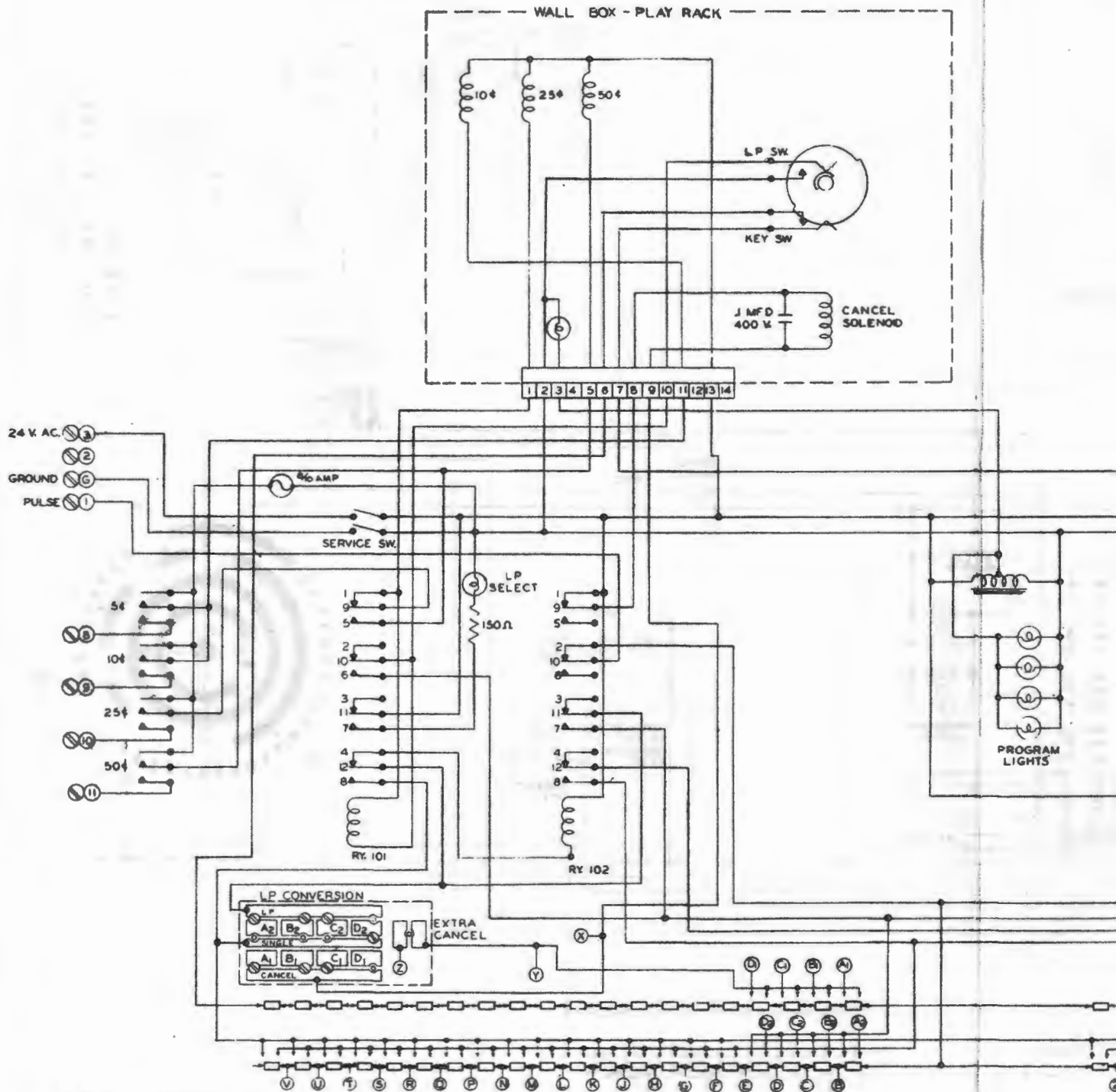
FIG. 19. MODEL 5220

5220 WALL BOX



**5220 WALL BOX
WIRING DIAGRAM I25855**

MODEL 5220A WALL

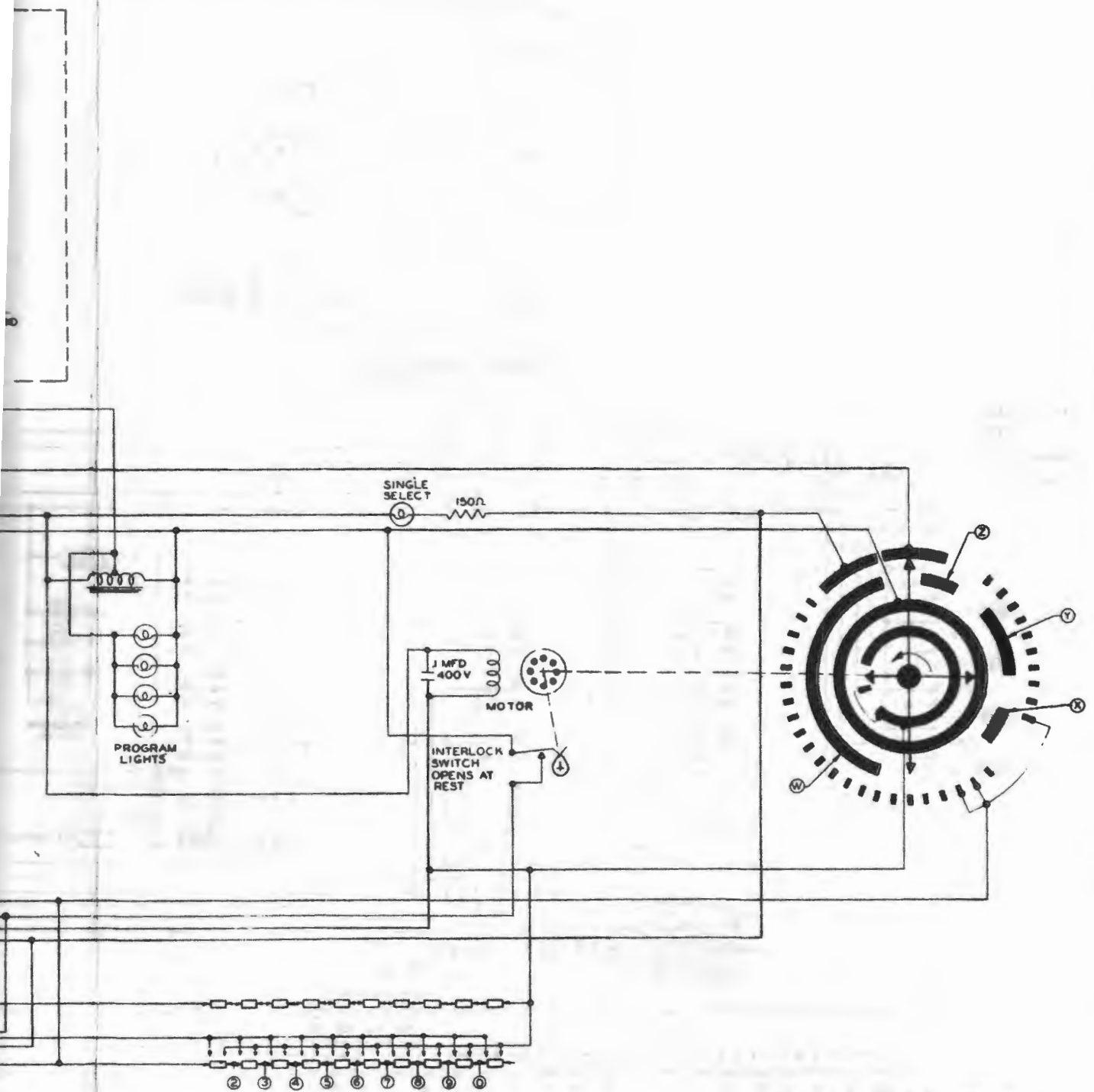


NOTE, ALL SWITCHES ARE SHOWN IN A MECHANICAL "AT REST" POSITION

THIS SCHEMATIC IS SHOWN IN THE LATEST CONDITION AT THE TIME OF PRINTING

FIG. 20. MODEL 5220A WALL

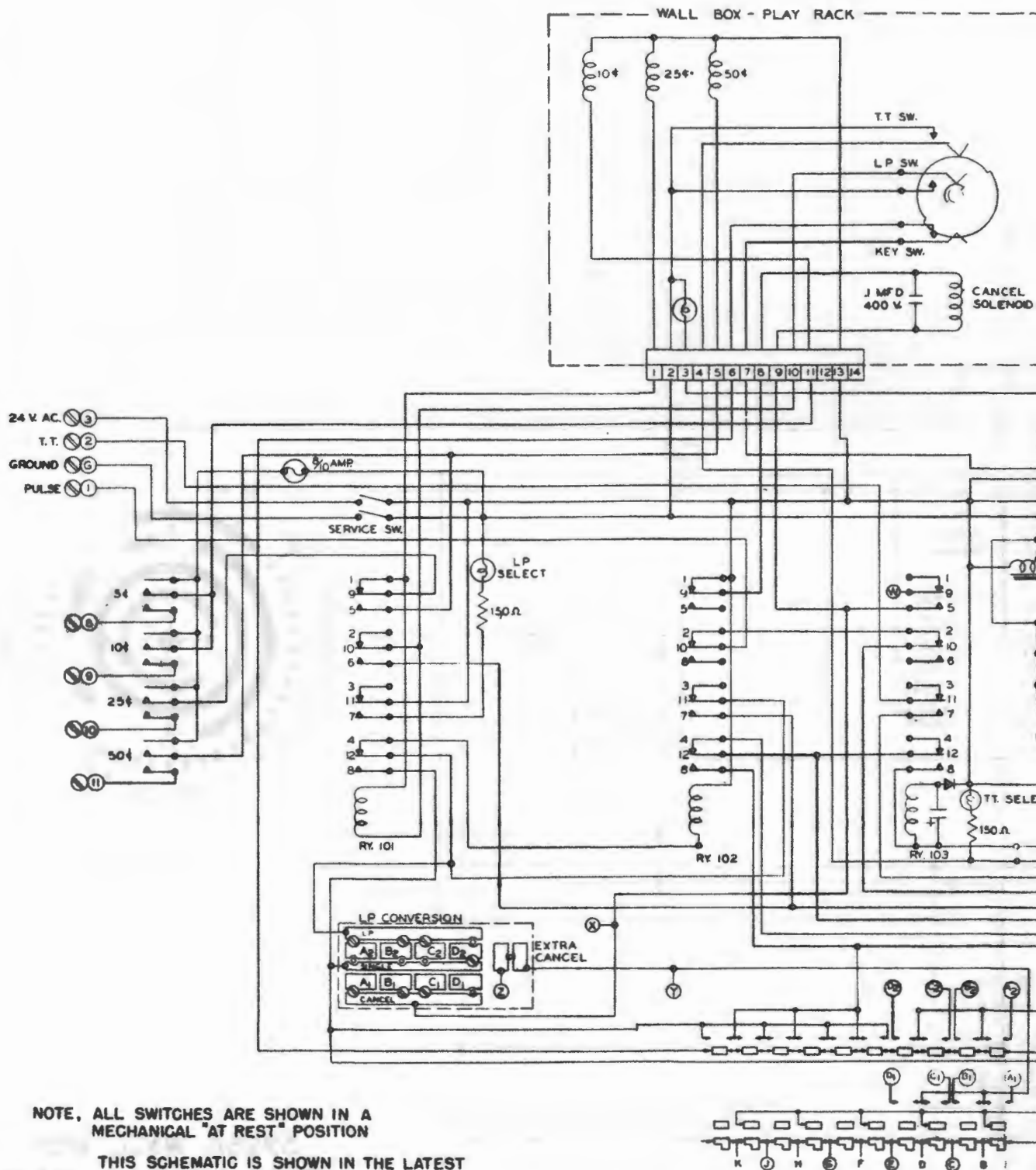
5220A WALL BOX



5220A WALL BOX
WIRING DIAGRAM 125884

MODEL 5220A WALL BOX

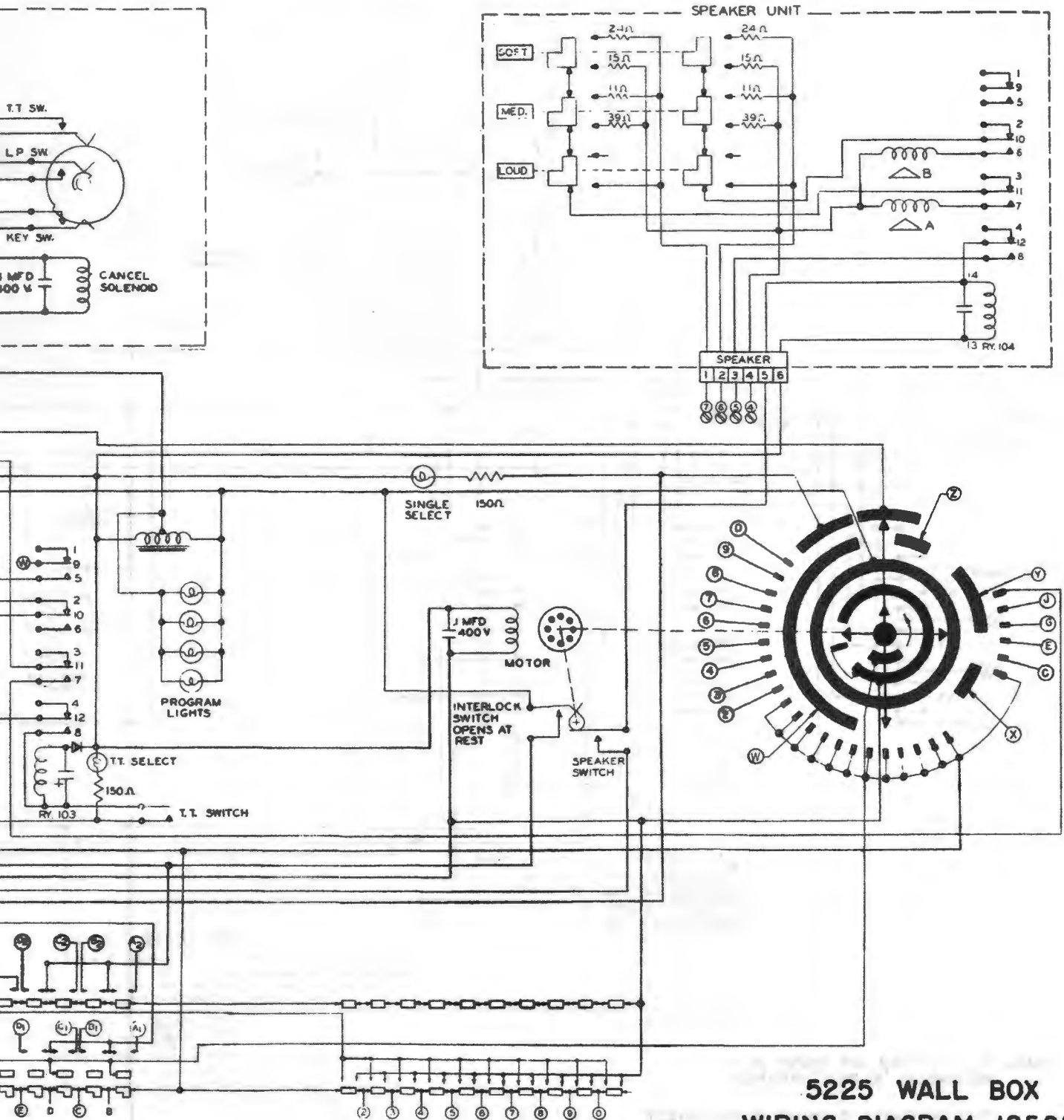
MODEL 5225



NOTE. ALL SWITCHES ARE SHOWN IN A MECHANICAL "AT REST" POSITION
 THIS SCHEMATIC IS SHOWN IN THE LATEST CONDITION AT THE TIME OF PRINTING

FIG. 21. MODEL 5225

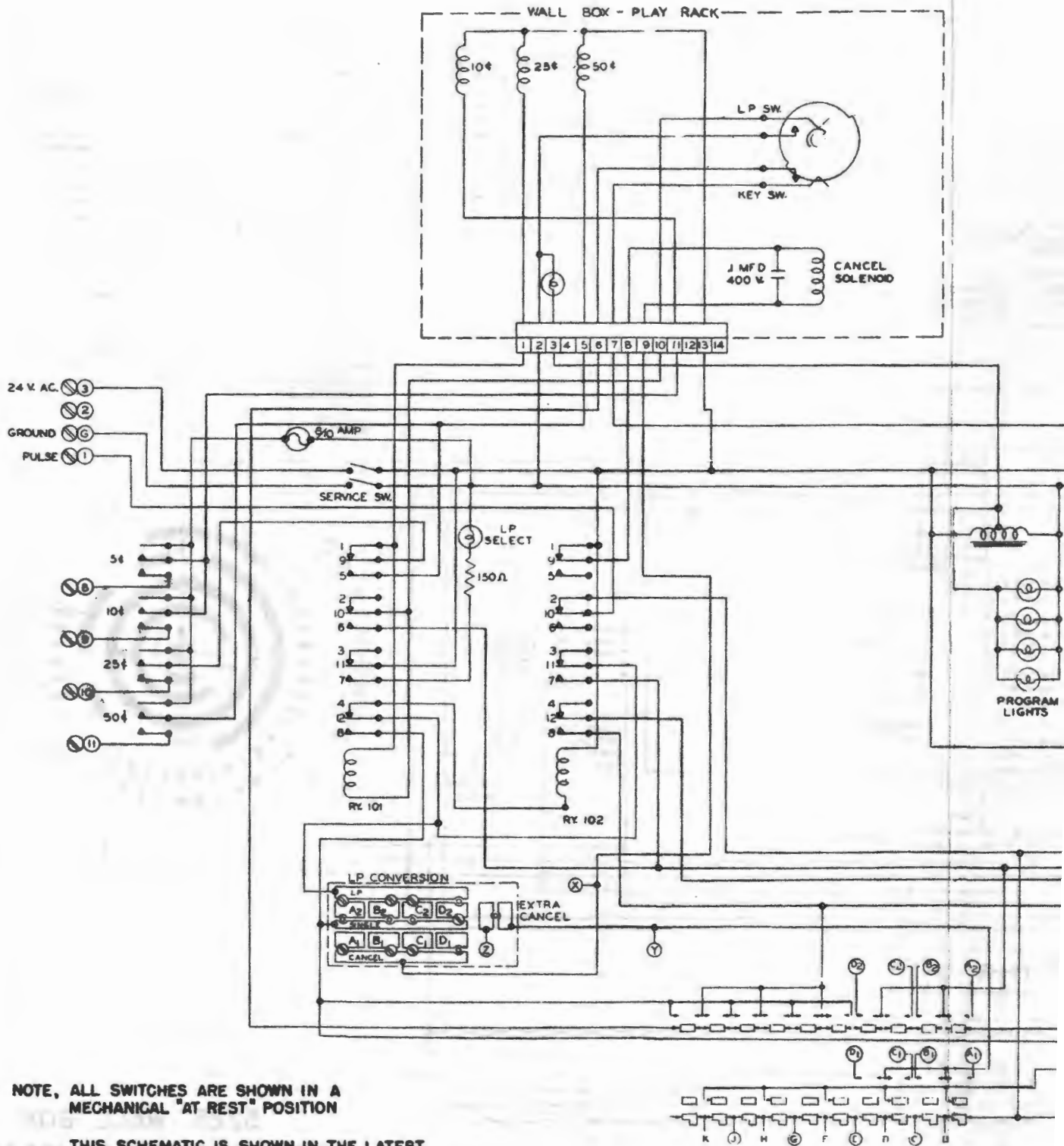
5225 WALL BOX



5225 WALL BOX
WIRING DIAGRAM 125857

21. MODEL 5225 WALL BOX

MODEL 5225A WA

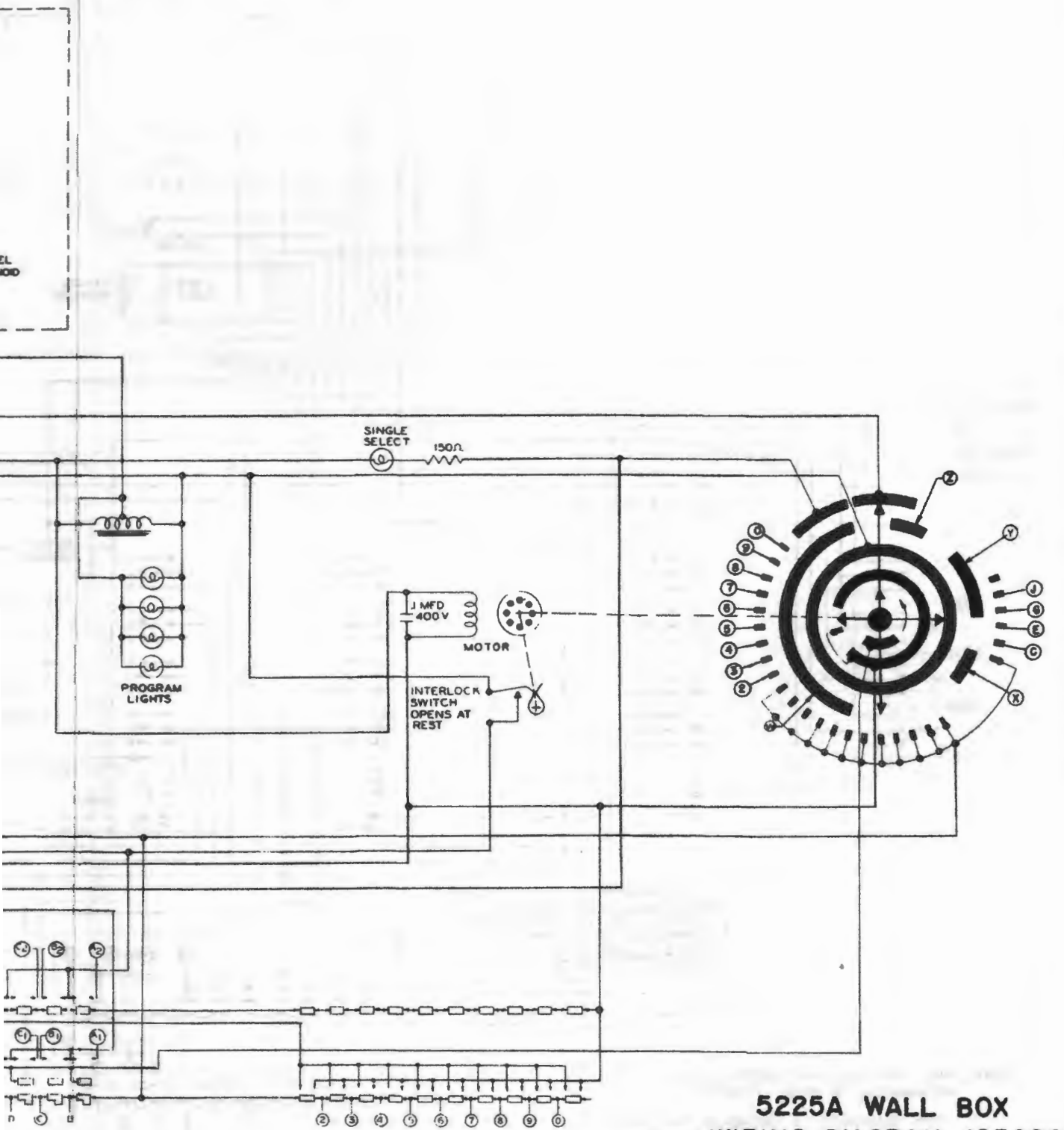


NOTE, ALL SWITCHES ARE SHOWN IN A MECHANICAL "AT REST" POSITION

THIS SCHEMATIC IS SHOWN IN THE LATEST CONDITION AT THE TIME OF PRINTING

FIG. 22. MODEL 5225A WA

5225A WALL BOX



**5225A WALL BOX
WIRING DIAGRAM 125892**

MODEL 5225A WALL BOX

