**SERVICE MANUAL**

**No. 1·**

**SEE BURG SYMPHONOLAS**

• 1941 Models

7800, 7880, 8800, 9800 .

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**J. P. SEEBURG CORPORATION** ,· 1500 DAYTON STREET • CHIC A G 0, U. S. A. IL\_

Pnntc ill U. S. A.

**FOREWORD**

This manual has been prepared to assist the service

engineer in making any adjustments and repairs that may be

necessary on 1941 Seeburg Symphonolas.

In preparing this manual every effort was made to

present the material in as simple a form as possible.

Seeburg maintains a nation-wide organization of

field engineers to instruct and co-operate with your servicE

department. You will find these men up to date on all in-

formation pertaining to service. In addition, we maintain

a home service department at the factory to help you and

to furnish you with any technical or service information

you may desire.

When requesting information by wire or letter

relative to the Symphonola, please give Jvlodel and Serial

Number.

YH1en ordering·

to give the name of the

a part, it is especially important

part and the part number as Jell

as the Model and Serial Numbers of the Unit on which it is

used.

Always give a full description of the problem at

hand so that we may be better able to serve you.

c **TABLE OF CONTENTS**

Page

INSTALLATION A. UNPACK I MG •••• . . . . . .

B. CURRENT SUPPLY FOR INSTRUMENT. • •

C. INSTRUCTIONS FOR INSTALLING RECORDS • **t** • • **t t** D. NEEDLE. . . ' . . . . . . . . . . . . . . • • 2

FUNCTIONS OF COMPONENTS IN SYSTEM I • SYMPHONOLA, • • • • • • • • • • . • • • • 3 A. COIN SWITCH ASSEMBLY. • • • • 3 B. METHOD OF SELECTING TRAYS I N THE S YMP HO NOLA CHASSIS 3 c. MOTOR MOUN TING. • • • • • . • • • • • • • • 3 c D. RECORD PLAYING INDICATOR DIAL • • • • • • • • 3 E. RECORD PREFERENCE METER • • • • • • . • • • • 3 2. AMP L I F I E R S. . • • • • • • • • • ~ A . GENERAL • • . • • • • • • • • • • • . • ~ B • FUNCTIONS OF SOCKETS AND SWITCHES • • • • • • • ll c . FUSES ON AMPLIFIER. • • 5 3. ELECTRICAL SELECTOR • • • • • . • • 5 A. GENERAL . • • • • • • • • • 5 B • COIN OR CREDIT CIRCUIT. • • • • • • • 6 c. SELECTOR SWITCH • • . • . • 0 D • SERIES RELAY CIRCUIT. • • • • • 6 E . CANCEL SOLENO ID CIRCUIT • • • • • • • • • • • • • b F. INTERLOCKING CI RCU I T. • • • 7 G. INTERLOCKING RELAY. • • • • • • • • 7 H • NON-CHEATING CIRCUIT. 7

Service Manual '41 Models 7800, 7850, 8800 and 9800

Page

I • ELECTR ICAL COUNTER • • • • • • • • • • • 7

J. CREDIT INDICATING CIRCUIT. • • • 8 1!. SOLENOID DRUM ASSEMBLY • . • . • 8

A. GENERAL. • • • • • • • • • • • • • • • • • • • • 8 B • SELECTIONS ON SOLENOIDS. • • • • • 8 c. CREDIT ON PINS • • • • • • • • • 8 D • COUNTER UNIT • . • • 9

OPERATION AND MAINTENANCE I • GENERAL. . • • • • • • • • • • • • • • • • I I A. APPEARANCE . • . • • • • • • • • • I I B • LUBRICATION. • • • • • • • • • • • • • . I I

2. TONE ARM • • • • • • • • • • • • • • • I I A. TONE ARM WEIGHT ADJUSTMENT . • . . . . . . • • I I B. PICKUP • • • • • • • • • • • • 12

3. SOUND EQUIPMENT. • • • • • • • • • • • • • • • • • 12 A. AMPLIFIER. • . • • • • • 12 B. VOLUME CONTROL • • . • • . • 12 c. TUBES. • • • • • • • • 12

D. SPEAKERS • • • • • • • • 12

1!. INSTRUCTIONS FOR INSTALLATION OF WIRED REMOTE SPEAKER. 13

5. ELECTRICAL S ELECTOR. • • • • • • • • • • • Ill

A. CREDIT MECHANISM • • • • II! B. SERIES RELAY • • • • • • • • . . • • • I ~ c. CANCEL SOLENOID. • • • • • • • . • • • • • II! D. INTERLOCKING SWITCH AND INTERLOCKING RELAY . • • • 15

Service Manual '41 Models 7800, 7850, 8800 and 9800

*('*

Page 6. SOLENOID DRUM ASSEMBLY, • • • • • • • • • • . • 15 A. ACCESS TO SOLENOID DRUM ASSEMBLY, • • • • • • • • . 15 8 • SELECTION SOL EHO I OS • • • • • • • • • • . I 5 c. MOTOR CONTROL RELAY • • • • • • • • • • • • • 16 D. ALIGH~1EN T OF REAR VERT I CAL HELIX. • • • • • • • 16 E. PIN CANCEL RELAY. • • • • • • • • • • • • 16 F, SELECTOR DISC AND STOP PIN ADJUSTMENT • • • . 17 G. SELECTOR SHAFT ADJUSTMENT • • • • • • . • . 17 H • COUNTER UNIT. • • • • • • • • • 17 I • COUNTER RELAY • • . • • • • • • • • • • • • 17

SERVICE NOTES

I , PROPER HUMBER OF CREDITS FAIL TO REGISTER IN THE MECHANICAL S ELECTOR. . • • • ; • • • • • . • . • • • • • • • • • 19 A. MAGAZINE RELAY DOES NOT RESPOND TO COIN • • • • • • • 19 B. TOO FEW PLAYS FOR THE AMOUNT OF COINS INSERTED. • • • 19 c. TOO MANY PLAYS FOR THE AMOUNT OF COINS INSERTED • . • 19 2. MOTOR FAILURE • • • • • • • • • • • . . • . . • . • • • • 19 A, MOTOR DOES NOT START. • • • • • • • . . • . . . 19 B • MOTOR DOES NOT START UNTIL COUPLING IS DISCONNECTED AND MOTOR IS SPUN WITH FINGERS. "' • • • • • • 19 c. STARTING WINDING CUTS IN AND OUT CONTINUOUSLY • 20 D. MOTOR FUSE BLOWS. • • • . • . • . . • • • • • • • 20

3. RECORD TRAY SELECTOR PULL! NG OUT TWO OR MORE TRAYS AT ONE Tl ME. . • • • • • • • • • • • • • . • . • • • • • • • 20 ~. TIMING OF MECHANICAL SELECTOR WITH REAR HEL I X • • • • • • 20 5. TURNTABLE DOES NOT FUNCTION PROPERLY. • • . • . . . 21

A. TURNTABL E FAILS TO RISE TO PLAYING POSITION • • • • • 2 1

Service Manual '41 Models 7800, 7850, 8800 and 9800

Page

B. TURNTABLE DOES NOT ROTATE WHEN IN PLAYING POSITION. , 21

6. 7. 8. 9. IMPROPER ADVANCE OF REAR HELl X, , • • • • • • •

A. SELECTOR MECHANISM BINDS, •• • • • • • •

B . FRONT HELIX PINS CAUGHT ON SELECTOR LEVER TOOTH , c. D.

• • 22 • • 22 • • 22 22 22 22 • 22 • 22 • • 23 • • 23 23 • • 23 23 • 23 • A. CONTACT PRESSURE. • ••••••• B. DEGREE OF CONTACT OPENING • • • C. TIMING OF MOTOR CARRY OVER SWITCH. 24 I 0. WARBLE OR TREMOLO EFFECTS IN THE MUS I C. 24 25 25 26 26

• . • . . . .

. . . ' • .

I I •

I 2.

13.

IMPROPER TIMING OF REAR HELIX •• , • • • • • • • HELIX LOCK ROLLER STOPS ON SPROCKET TOOTH • • CHANGING PLAY, MECHANISM • • • • • • NOT . SET • • IN OPERATION • • • • A. WORN OR DAMAGED STOP GROOVE AT END OF RECORD • • • •

• • • • • . • B. BINDING OF TONE ARM SUPPORT ROD • • c. INCORRECT CUT-OFF ADJUSTMENTS • • • • • • • • • • D. BINDING OF TRANSMISSION WORM SHAFT. • • • • • • • E. BINDING OF TRIP LEVER • • • • • • • • • • • • • NEEDLE DOES NOT ENTER RECORD GROOVE PROPERLY,

A . B. ALl GNMENT OF .H EEDLE WITH EDGE OF RECORD

NEEDLE FAILS TO ENTER GROOVE. • • . • • • • • MOTOR CARRY OVER SWITCH ADJUSTMENT, • • • • • • •

SLOW RECORD START . . . . • • • • • • • • • • • • • • • ADJUSTMENT OF SYMPHONOLA SOUND EQUI PMEN'T ••• . . CLUTCH . . .. THROWOUT ... . . . LEVERS • • • • • •

• • A. SOUND EQUIPMENT APPARENTLY "DEAD'' •• • • • •

Service Manual '41 Models 7800, 7850, 8800 and 9800

B, c.

Page

DISTORTED TONE QUALITY.

• • 26 MOTOR HUM • • •

• 27 *D.* HUM DURING WARMUP PERIOD.

• • • • • 27 E. MICROPHONIC TUBES • • • • •

• • •

27

**SELECTOR.** • • • • • • • • • • • • • • • • • 27

A. CREDIT MAGNET DOES NOT RESPOND TO COIN. , , • • • • • B. COIN SWITCH CONTACTS NOT PROPERLY ADJUSTED. •

C. RATCHET WHEEL ESCAPEMENT LEVER TOO FAR FROM CREDIT **MAGN ET •** • , ••••••••• **0 0 0 0 0 I 0 0** --

D. RATCHET ESCAPEMENT LEVER ALLOWS TOO MANY PLAYS FOR

• • • • 14. PROPER NUMBER OF CREDITS FAIL TO REGISTER IN THE ELECTRICAL

27 28 28

COINS INSERTED •• , , , • • E. RATCHET WHEEL BINDING ••••• , • • • • ' . , . • . • .

28

I 5. ELECTRICAL SELECTOR MAKES NO RESPONSE WHEN BUTTONS ARE **PRESSED** • • • • • • , ••• , . .

A. B. GENERAL CAUSE • • • • • CREDIT SWITCH CONTACTS, • • • • • • • • • • .. . • . • . • . • •

•

C. INTERLOCKING RELAY CONTACTS • **f 0 0 I 0 0** • • 16. CREDIT DOES NOT CANCEL ON ELECTRICAL A. SERIES RELAY CONTACTS • B. CREDIT CANCEL SOLENOID. SELECTOR • .. . • .. . . . . .

• • • • •

• • 17. C. D. RATCHET WHEEL ESCAPEMENT LEVER. **0** SOLENOID GUIDE STOP BRACKET ••• . **I** . **0 0** E. RATCHET WHEEL STOP BRACKET MOTOR TRICAL DOES SELECTOR. NOT START • WHEN • • A SELECTION • • INTERFERES • • • IS MADE • . • ' ON THE • • •

. • • .. .

• • •

• ELEC- • , A. GENERAL . •• • • . .

28 28 28 29 29 29 29 29 29 29 29 30 30

Service Manual '41 Models 7800, 7850, 8800 and 9800

Page B. SOLENOID PLUNGER DOES NOT PUSH UP . • • • • • 30 c. t.!OTOR CONTROL RELAY DOES NOT OPERATE PROPERLY 30

0. MOTOR CONTROL CIRCUIT ••• • • • • • • • • • • • • 30

18. SELECTIONS FAIL TO REGISTER ON SOL ENOl D 0 RUM ASSEMBLY. 31

I 9. ADJUSTMENTS OF 5¢-10¢-25¢ SLUG REJECTOR • • • 31

A • LEVELING. • • • • • • • • • • • • • • • • 31

B • 25¢ ADJUSTMENT, • • • • • • • • • 31 c. I 0¢ ADJUSTMENT. • • • • . 31

D. MISCELLANEOUS • • • • 31

CIRCUIT DIAGRAMS AND DRAWINGS AND PARTS PRICE LIST F i g. I - Cabinet Wiring Diagram for Models 8800 and 9800. • ' 33 ) Fig, 2 - Cabinet Wiring Diagram for ~lode I 78 50' ' • • 34 F i g, 3 - Cabinet Wiring Diagram for Mode I 7800. ' • • • 35 F i g, lj - Symphonol a Chassis - Rear View (Cutaway) • . • • 36,37 F i g, 5 - Front View of Mechanical Symp hono 1 a Chassis. • • 38,39 F i g, 6 - Symphonola Chassis - Rear View • • • • • • • • • . llO,Ill F i g. 7 - Symphonol a Chassis - End View. . . . . . • . 44,45 Fig. 8 - Symp honola Ch assis - Front View. • • • . • • • • • • 47 Fig, 9 - S ch em at i c Diagram for Type 825-10 Amp 1 i f i e r. • • • • • 48 F i g. 10 - Front View of Type 8 25-I 0 Amplifier. • • ' • • ' • ' 50 Fig, I I - Bottom View of Type 8 25-I 0 Amp 1 if i er • • . • • ' . 51 F i g. 12 - Schematic Diagram for Type 825-5 Amplifier • . 52 F i g. 13 - Front View of Type 825-5 Amp I if i er • • . . 54 F i g. I 4 - Bottom View of Type 8 25-5 Amp 1 i f i er. . • • 55 Fig, 15 - Schematic Diagram for Type 6 I 5-3 Amplifier 56 *F* i g, 16 - Front View of Type 615-3 A:nplifier • • • • • • • • 58 F i g. 17 - Bottom View of Type 6 I 5-3 Amplifier. ••• • • • • • 59 Fig. 18 - Schematic Diagram Electrical Selector Type B • 60 F i g. 19 - Schematic Diagram Electrical Selector Type c 6 I F i g. 20 - Schematic Diagram Series Relay (Selection) Circuit 62 F i g. 21 - Schematic D i a gram Credit Circuit . . • • • • • • • 63 Fig, 22 - Electrical Selector Type ES-5Z •• ,, • • • • • • • • 61l F i g. 23 - Switch Assembly Type SA-6 Z • ' • . • • • • • • • • • 65 F i g. 24 - Relay Box Type ,RB-6 Z • . • . . . . . . • . . • 66 F i g • 25 - Solenoid Drum Ass emb 1 y Type SD20-7Z {Top View) . • 67 F i g, 26 - Solenoid Drum Assembly Type SD20-7Z (Bottom View). • • 68 F i g, 27 - Schematic Diagram Motor Control Ci rcuit. • • • • 69 Fig, 28 - Schema t i c Diagram Solenoid Or um Type S020-7Z • . . • 70

Service Manual '41 Models 7800, 7850, 8800 and 9800 c

Page F i g. 29 - Coin Mechanism Ass em b 1 y. .. 7 1 F i g. 30 - s 1 u g Rejector . • . . • • • • • • • • 72 F i g. 31 - Coin Tripper Assembly. • • • • • • . • • • • 73 F i g, 32 - ~to de 1 7800 Cabinet Front View. . . • • • • 711 Fi g . 33 - Mode 1 7800 Cabinet (Front View) Door Qp en. • • • • • 75 F i g. 311 - No del 7800 Cabinet (Rear View) • • • • . • • • • • 76 Fig. 35 - ~to del 7850 Cabinet (Front View). . • . • • • • • 77 Fi g. 36 - Mode 1 7850 Cabinet (Front Vi ew) Door Open. 7S F i g, 37 - Model 7850 Cabinet (Rear Vi ew) • . • 79 F i g, 38 - ~lode 1 8800 Cabinet (Front View), • . • • 80 F i g. 39 - t~ode l 9800 Cabinet (Front View). . . 81 Fig, 110 - Hi-Tone Cabinet Assemb.l y (Rear View) . . 82 F i g. Il l - Hi-Tone Cabinet A6cessories (Upper Rear View), • 83 F i g, 112 - Hi-Tone Cabinet Accessories (Lower Rear View), • • • • 84 F i g. 43 - Hi-Tone Cabinet Accessories (Front Door Open), • • 85 Fig. 411 - Front Door Light ing Assembly . . . . • . . . . 86

c

***r***

**INSTALLATION**

A. UNPACKING

fied. unboxing case should concealed tation the following We be \vhen company there advise carefully the damages, unpacking be instrument, procedure:

that should any examined the indication the be we transpor- packing and noti- advise before of (1) Remove ing sides. packing the the back case screws of to the the hold- (2) Carefully instrument packing box. remove from the the (3)

(4)

( 5)

(6)

(7) F.emove nuts the chassi in the each s.

four corner wing *oi'* NOTE: may nuts This and chassi should in sential that resiliently the the to that be tbe be best instrument tightened is should they the moved, s be The spring absolutely in obtained. r chassis i tone nold gidly. removed order wing suspended be these quality down mounting. is replaced th.e nuts may that \Vhen so again wing es- so be B. CURRID~T SUPPLY FOn IN~TRUMENT current upon rect, meter as company ment which signed to Open back keys tained tacked by which the in on means doors cloth the-bacl,. are *of* con- in bag the the • Remove wooden ord strument agatn Remove poses. the the from shipping bracket. block the transportation to the keep machine. motor bottom tone trays, the holding when block the the It these and brace arm tone rigidly is of transporting fastening shipping and wbich use post braces advisable the arm the and pur- the them for rec- in- to hold in Remove ing changer bottom screws t11e of and t mechanism. he brackets the blocks ~;wo record wood on hold- the On which will look or whether gives to at for the call operate. be at the the ·this back the found or the the location instrument type not of information. local house a If each name of the in current is watt power instru- type doubt is plate cor- de- of C. RECORDS INSTRUCTIONS FOR INSTP~LING neath necessary both discs centered side should support records is trays. important of A the each will be set discs are the discs properly used to of be record. being cabinet. remove to from found record as and make a changed, in recor·ds the It fastened support the the certain support One is trays record record disc not but are under- when in- that it the records Vlhen installing in 'the instrument, or replacing it

Service Manual '41 Models 7800, 7850, 8800 and 9800

is stack Install the put that put program the the tray tive best records records in in record and trays. particular of its its holder. or to work record change tray proper install in are starting As No. down each record in trays the 20 place the or thrpugh their title with record tray balance until replace should in respec- No. for first. the the all is 1 be of filled After they all must trays be returned have been to

2

excepting their main over original the No. 20 turntable. position which should by hand re- D. NEEDLE

mend signed instrument. installed graph the the needle grooves The the needle, to Symphonola type use having aligned in The however, any supplied the needle the standard record.

parallel Pickup flat with we should recom- part is phono- the to de- be of •

*(*

**FUNCTIONS OF COMPONENTS IN SYSTEM**

J, SYMP **HONO L A**

A. COIN S\viTCH ASSEMBLY

downward, for switches bly moves tact the runway each play (Fl made wben the of g. Nos. magazine. lever making a levers should 29 the -B) 25¢ 1, coin moved. coin it a sLore 2, of successively single switch 3, the enters 4 Each a coin and pl assem- contact ay con- the 5 in lever This right ward, play coin the the coin 5¢ magazine. enters, Fig. should making on hand and No. swi~ch 29-A 10¢ runway, store 4 a it coin single. runway. is assembly cravels one a moving front svd contact. play tch down ~/hen showing view the down- in a the the of 5¢ way, s'll'itch two travels two contacts. plays 1,'/hen moving levers down in a No. 10¢ the the downward, This l coin play left and should enters, No. magazine. hand making 5 store T'un- coin it B. JvlETHOD OF SELECTING TRAYS IN Tt:E SYNPHONOLA CHASSIS

Helix on 1184) 1183) selector a by which these the tray pawls time, means a rollers ~/hen only tray inward, slide there thereby (Fig. (No. The of slide a should (No. 3201) *6H,* are pawls selection (No. the trays as moving 1110) pawl No. selector twenty. push 1223) shown be engages .are 1183) spring pulled when the against is of in withdravm One made pawl slide Fig. a one of the out (No. l ug of one of (No. the 6B. at No. times tor 1183) pawl The by selector springs the are action urged (No. pawls inward of 1184) the (Fig. at selec- . 6H, all 3

and and from against pawl the 1180) as action springs selector (Fig. But trays the selector shown exception action prevents overcomes when which engaging 6H, is (Fig. of the (No. pawl in in pawis the No. the of is 6G). selector Fig. position 1113) the selector 1184). selector of springs the the the pressed opposite 6G, selec~or that That helix lugs pr·es is pawl wt t in hen particular slide stronger sure (No. pawl on is, -c;h roller the through spring pawls the the the 1184) of with lugs lift (No. the C. MOTOR MOUNTING

1841 order mounted through the the mtor pickup. The as to the on shown motor be:lng prevent steel chassi.s in is transmitted springs Fl.g. vib!'at'i.on resiliently and 5A) reaching (No. in from D. RECORD PLAYING INDICATOR DIAL

dial hi illuminated record cator of illuminate is a single the tic. - manner timed tone the number and The dial lamp cabinet playing models with the 11tha-c; record being is the by illuminates front is located the dial, 8800 escutcheon the program always playing" played. selector vertical same and the just holder. lamps 9800 indicates both credit On and indi- in back plas- a the the is such that It E . RECORD PREFERENCE METER

number front each post. each cated record A record and shelf An of play attached plays J.ndividual below turns meter is conveniently obtained indicating one the underneath dial notch

tone from for arm lo- the the

Service Manual '41 Models 7800, 7850, 8800 and 9800

first at dials come ing record played clockwise tion. the the to under allowing No. A comes individual cabinet a reading stop as 20-record, the. to its after the shelf. lid playing can corre~ponding escutcheon Symphonola and it be tnen has To looking posi- taken reset

lift- by to 1nodels and reach necessary before clockwise switch the dials, turn the on 8800 playmeter on by to right stop turn and light open hand position. 9800 side them can until the by means be of counter- it front cab:Lnet they will read. On of door be Z. AMP l I F I E R S

A. GENERAL

Symphonola duces located amplifier which in can ing power record. to plug the tion various the wrong best the and of The for no the cabinet functions on power be Tbe amplifier socket plug all panel. sound socket. units is the taken power from equipment can the front and arrangement recorded by of be up source also The in is the means of by each put supplied the distribu- amplifier describ- located repro- the of on into 1941 of socket a in a B. SWITCHES FUNCTIONS OF SOCKETS AND operative. Fig. When posi is is the the the supplied ready Symphonola main up tlon, 14, The this position, power Item ror switch switch the \vi and operation. 1; Symphonola th is to (Fig. the is Fig, the standby all controlled in instrument s~ri 11, 17, units the tch is power Item Item dovm in in in- by 1; 1). Item electr·ical Item uted solenoid coils socket the 25 3· 3} Tne to on volts also Fig. the supplies drum octal the selector. various has 13, supply solenoid from socket two Item 25 which relays lugs volts j,s drum Th 3; (Fig. distrib- i s Fig. point which

to and and 10, the 16, on are carry amplifier are socket operate the the motor connected closed. the solenoid provides the when control power counter In to these addition, drum. the to the relay the unit power contacts contacts motor and located this to they and of M-22; mitter Item sockets is Item the be the 1"!22; Fig. are any solenoid contact plugs receives type the another It 2J seen schema power 2) when . Fig. wired fig. narm can 13, output T-32 Fig. socket (Fig. vtill that the drum resulting. Item 15, be This in transmitter to tic 12, octal to one R.F. 13, be parallel a interchanged these 1; diagrams 9, and Items the Items socket type (Fig. noted is Fig. I Items socket A-C output tem transmitter used. two T-3Z M-18 10, M-21 The 16, and line. 2; supplies so that M-21 octal it (Fig. and from Fig. Item small trans- that carries l''rom without Item and will there and 1{-19) 1; 10, a the 16, 1) 4 *F!g.* Fig. rnotor equipment Symphonola. contacts 10, power (Fig. rtem 16, The 16~ 10, for when 9 4; Item Item are Item any that contact the Fig. The closed. remote 4) 5) may motor 5; 13, supplieS 2 is Fig. be socket contact the control Item control added 13, source 4; power (Fig. outlet Item to relay of the 5; to

Service Manual '41 Models 7800, 7850, 8800 and 9800

lights pilaster is electrical and Item socket (Fig. in 9800 7) The 11, the are (Fig. supplies lights Symphonolas. small "onItem on selector 10, 11 when l; 2 position. on contact 6 Item Fig. volts the the and 7; Model 14, These main upper Fig. for polarized Item switch 8800 the 13, l) and Fig. all ously. are control closed. F1g. The middle 10, 16, controlled swi ing switc.h (Fig. lights (Fig. to transformer the tch lights 7850 off transformer t~em Item power 17, The 2, 16, 11, is in are position, primary With relay Item at also Item The 1 6? 6) in Item Item to the energized all on by contact Fig. supplies (Fig. 17; the 4 this the only supplies 2). up contacts the contact 6) 2; times. of are do1m switch Fig. the pos'ltion, 13, Fig. on 1, light the transformer when *v.'hen* socket on Models above 117 Item Item by l 3, position, 117 are With socket 14, ighting continu- the switch this the in volts Item 17; 6; (Fig. volts

lights Item the these 7800 motor the light- Fig. 13)., is 2; lights to switch the the "on" are program {Fig. position.

on 17, as lights. long Item 1) as These the is in main supplies magnet (Fig. The 16, through 25 small Item volts 7) 5 the contact on to coin Model the switches. magazine socket 7800 C. FUSES ON P~PLIFIER

16, fuse Fig. Item 13, cartridge Items The Item with 16; cles the Item sc~·ew tamperable phonola tant Fig.13, Item covez'ed !~em fuse 13, 14; 17; There 16) (Fig. (Fig. one that 14 type motor. 15; Items 14) and Fig. Fig. of (Fig. is a type 10, are socket type 10, receptacle blown a the is It;em 16) Fig. 13, 16, 2-1/2 10, light I Item 14 two fuse It a correct terns on 16, 16; Item 2-l/2 Item and fuse (Fig. fuse Item is 17; ampere the 14 fuse. for 16; Item Fig. very 17) 14; be (Fig. Fig. ampere value. 15; 10, and amplifier. recepta- tbe Fig. replaced Fig. 15) 16, in non- impor- Fig. The 16; I 16l 10, in 13, tem the Sym- 3. ELECTRICAL SELECTOR

A. GENERAL

selector cal selector parts manual. volts. device ing the supplements selector; the tions the Symphonola operating Electrical in to The are are the located mechanical The which One Electrical which discussed made. it 1940 other the is is voltage has Selector on at is mechanical an selector the Two almost arrangement is the which the electrical Selector in type models the is front same

this differ- selec- E except 25 identi- type of of C of Cable. connect 23) electrical it (F·ig. the the consists SA-62 and type 24) ed the *B* Swi -- by characteristics out RB-6Z of means which tcb differs two Assembly Relay are of comoonents a in inter- Selector Box tbat (Fig. as -- Solenoid desired ~unctions works trol phonola the electrical The the in Chassis selection. Electrical Drum rear conjunction of the helix (Fig. selector and mechanism 25) The Selector of effect with the are primary to the Sym- in con- the (l)

Service Manual '41 Models 7800, 7850, 8800 and 9800

on cancel selection the there seleccor selections to only. mistreatment selector ~ions prevent parts establish the electrical designed are performed solenoid the cheattng mechani wl:ich some is credit to or made. credit and selector are secondary for drum overloading s in and m, established es~ablish momentary necessary the In in (2) and possible electrical addition, the when convey func- (3) of them duty a to to in B The unchanged entirely nents reference will the pllfy sel circuits explanaL.ions ec T~e be the in t discussed or function the to will following to operation. the analysis electrical involved. be Type may made of by discussion, C considering be the of almost select-or. ·To ap-plied selector compo- the sim- Typ€ B. COIN OR CREDIT CIRCUIT

M4) lever allows wheel establish contacts sembly, erated equivalent wheel ra (Fig. the Junction time l:chet Symphonola of a The 24, (Fig. (Fig. Lo one by coln the wheel the Coin escape, with i~ credit ohe I~em Electrical to tooth closes 24, the ratchet 24, Switch credit one the through 17; operates Coin Item I~em on on rotati~g credit tooth.

Fig. one escapement the the 13) Switch 9). Assembly magnet Selector an of ratchet 19, ratchet in magnet is angle Each the the con- As- op- and Item in to C. SF.LECTOR S\•!ITCH

excite the structed tion operator '"he desired. two selector that selection to i It ~ make Ls is swi~ches impossible solenoids so the con- selec- "Oeri:lit at to 6

open cussed. A portance plained cel circuit circuit circuit electrical noid permits ments butter-s once. circuits *a1'e* circuit circuit is (Fig. matic to relationship pens. switches study function pressed. sol the when drum 19) diagram is The There enoid are of as red as is ~s ~s is the of such as through when two will other selector not comoleted closed completed. the purpose labeled. after pushed th circuit interlocking shown has are of The or that ls (Fig. Schematic closed show a the more will operated. parts selector black two the on the before and the simultaneously. are ho1v 19) and switch to fundamental selector the The credit but be selector of circuit black The the j dis- this the the ex- Diagram Sche- red relay these the is button the red im- seg- The sole- black left red hap- can- D. SERIBS RELhY CIRCUIT

on Switch. drum. are corresponding circuit est contacts 24, pushes is is *series* tacts through completed, pushed the Item closed the vlhen of a circuit solenoid contacts front the v.'hen close 24; selector the up <;he and series Fig. on credit of the credit selection the and the ls drum. che are the 19, completed series series button, a relay customer solenoid switch Credit selector those switch I The tem solenoid relay circuit to the M3) near- credit (Fig. con- the pin F. CANC~L SOLENOID CIRCUIT

19, is solenoid completed Item Yne Ml) cancel (Fig when through . 24, solenoid the Item tne large 2; cancel circuit Fig. con-

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Service Manual '41 Models 7800, 7850, 8800 and 9800

even switch interlocking open close switch through or After though and contacts operates, maintairling the maintain Lhe the interlocking relay, interlocking interlocking open. operating the contacts the circuit normally relay the However, ~~other normal can relay contacts circuit canceling energized; interlocking gized relay the their (Fig. SllfitCh selector be cancel When normal must 19, and then made, position opens. selection through before o~erate button Item solenoid the the first drops solenoid and the relay position starting normally Ml). As the another allowing is the interlocking return out, they to long held will interlocking ts will series be The ready de- break the relay as closed made. down, selection be to the be series credit the its ener- relay in for the and the 7

insure circuit close cuit cuit cellation cheating directly by The Item begins momentarily, by relay button ulated, nas lightly, selector. 30 interlocking some series series switch. sufficient solenoid series tacts travel is the the the ohm way included tapping initial circuit period been series 1•18) In is until time on and long Candohm circui of functioning relay, through relay selector to broken is order contact . This circuit plunger a included. the to after of permit the travel non-cheating relay When broken. of enough This the the to motion the is in energizing credit. circuit series small t the non-cheating current operate time to in interlocking at the reststor selector is the energy circuit switch the the gap and is current pr'event backward, when series completed left the to during electrical series of of contacts A It energized. series If push relay is cause connects To selector pulse the the (Fig. the the hand is closes source. the buttons increases broken circuit the (Fig. further with to cheating button will manip- cancel which relay non- push series. cir- a relay the 19) con- cir- is can- on 19, the I. ELECTRICAL COUNTER

cuit tion tion (Fig. of of consisting To 26J maintain the the Item last electrical 7) of credit, proper on *a* cancella- resistor counter opera- a cir-

cuit tion tion (Fig. of of consisting To 26J maintain the the Item last electrical 7) of credit, proper on *a* cancella- resistor counter opera- a cir-

ratchet credit The the tacts cpncel series of to wheel. the be solenoid relay series cancelled thus relay permitting energizes from close. the a F. I NTERLOCKING CIRCUIT

19, of cuit of lo.cking which cuit one cancel stroke, pressed, the through maintaining the of selector Item When and (Fig. opens solenoid interlocking the i relay the M6) locks the t a 19) switch closes major selector the operating interlocking switch. {Fig. itself contacts. is has seri.es closeu seglnents portion the 19, switch travelled button 1\fter contacts up the relay Item by through cir- of of inter- (Fig, means is the 717) its cir- , G. I NTERLOCKING RELAY

not he This series from firSt make means the relay selec~or another removes that circuit the his selection button. operator fingers to close. until can- H. NON-CHEATING ClRCOIT

insure circuit close cuit cuit cellation cheating directly by The Item begins momentarily, by relay button ulated, nas lightly, selector. 30 interlocking some series series switch. sufficient solenoid series tacts travel is the the the ohm way included tapping initial circuit period been series 1•18) In is until time on and long Candohm circui of functioning relay, through relay selector to broken is order contact . This circuit plunger a included. the to after of permit the travel non-cheating relay When broken. of enough This the the to motion the is in energizing credit. circuit series small t the non-cheating current operate time to in interlocking at the reststor selector is the energy circuit switch the the gap and is current pr'event backward, when series completed left the to during electrical series of of contacts A It energized. series If push relay is cause connects To selector pulse the the (Fig. the the hand is closes source. the buttons increases broken circuit the (Fig. further with to cheating button will manip- cancel which relay non- push series. cir- a relay the 19) con- cir- is can- on 19, the I. ELECTRICAL COUNTER

Service Manual '41 Models 7800, 7850, 8800 a,nd 9800

Credit merely rent Its energy lay 19) tact (Fig. function break. (Fig. set through 19, Switch a pulse means C 26, Item (Fig. The the is through contacts Item M9) of register to circuit. 19) limiting 8) and prolong is counter when D the used. (Fig. is con- cur- the re- J. CREDIT INDICATING CIRCUIT

means wheel is indicated The of in credit the the Electrical credit to on the the customer indicating

ratchet Selector by dial dial front light. window make. credit selections and The ble until is orinted is (Fig. escutcheon The in illuminated i n visible credit the terms 22, printing the i.nstruc-tions front customer Item of through explain is with the 34). escutch.eon. is established number not may white the on this This visi- the small of a on Item credit the The 53). indicating light type B switch selector lamps which (Fig. includes turns 22, II, SOLENOID DRUM ASSH~BL Y

A. GENERAL

The vidual as provided phonola stores simultaneously. vdth the the taken (Fig. (Fig. they Symphonola Solenoid component The the 25) up 22 functions both Chassis. are Electrical by Sol or to works selections Fig. cancel a played enoid Drum study parts Chassis in l•1eans performed. 23 Drum assembly The off conjunction from Selector and can of Assembly (Fig. 24) and 40). function and i selections the the s best also credit indi- Sym- be of B. SELECTIONS ON 80LENOIDS

disc Drum Ml) 10). of one and 40, solenoid. solenoid selector (Fig. the current Electrical Item of and selector When J1ssembly (Fig. 25, The the pushes drum 7) stop coupling Item a The 25, selector travels which selection stop has pin (Fig. Selector, rotating 11; Item up a pin engages (Fig. the Fig. shaft to 8) stop 25) solenoids of the plunger is on 25, sel through 28, a couples made (Fig. that Sole- the· the pulse ector Item Item in 8

Chassis closed cancel responding posi~ion selected, switch is the the the pushed rotating rear proper relay and (Fig. and by helix dovm the record record the means selects 25, selector (Fig. selection of selector to Item its of the tray. tray 25, the the Sl~phonola 16) disc original has Item corre- cancel stop After pin is been to 6), pin C. CREDIT ON PINS

noid motor on and Item cuit pushed Item is tact the made the the lower When 12). 12). spring plunger (Fig. control up, solenoid between grooved nortion a This 27) credit solenoid (Fig. assembly relay operating drum. completes metal the is of 25, (Fig. plu\_~ger established plunger the contact Item (Fig. Contact the sole- *27,* a is 13) con- on cir- 25, until ate contacts pin (Fig. is the The after 27, up Symphonola close motor and Item the do whe11 12) control last not motor. contacts a open selection selector relay again These oper-

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Service Manual '41 Models 7800, 7850, 8800 and 9800

Chassis, has 17; fore on has has playing relay selector carry-over tion. the Fig. been returned been the energized The rear position, 27, keeps record played. played pin switch solenoid of are Item to the the has until its and pushed F-12) but (Fig. Symphonola motor moved the lowest plunger the the located down 25, turntable control motor record to posi- and Item be- the D. COUNTER UNIT

box. SD20-7Z operates selector trically twice, is made The If the is from one Solenoid operated every or equipped counter from either number time a counter Drum will remote a is with the selection selected type register electrical an control that elec- 9

every two travels tor solenoids. selections. time through a selecting any It operates of pulse the selec- is vent unit, wire to panel inside side panel, visable open sealed of seal The tampering without the and the the through the counter , with sub Solenoid making only Solenoid sub panel breaking a with panel. the the small unit it the Drum numerals window bottom Drum impossible is lead the To counter located sub sub in seal. pre- plate and are the of showing laneous a ing Schematic the its Fig. Solenoid its electrical parts No. Wiring assembly and 25 Drum is Fig. diagram circuits. a SD20-7Z and photograph No. miscel- 27 show- is

**OPERATION AND MAINTENANCE**

I.

A. APPEARANCE

of all earni maintained. be general strument, pearance priate title to made. good the times. ngs. It slips attractiveness for quality upkeep is of Typewritten but important ~he should Thts the A increases and location careful records inscrument not be the only that or of used good sel ! appro- should printed the ts adds ection the at be ap- in- B. LUBRICATION

using friction viscosity high Oil speed an automobile points, the of transmission SAE-10. gears such occasionally oil Oil as having bearings

the all a GENERAL

in and SLIDE QUICKLY VASELINE THE oiled carriers ity mi~sion body the They with ordinary on sticky. recommend transmission grooves and plates tion. the the SELECTOR lubricating re-oil record the should a to GROOVES sparingly The light on slide turntable CAUSING bearings become selector retain *OB* light If become the this carrier slide sparingly. .ANY grease be SLIDE grooves grade shaft, AS toothed washed oil sewing gritty proper GREASE A oil. binding should I has feed grooves shaft, HEAVY T has PLATE.

of may inasmuch ~IILL or or not Wipe or machine clu·Lch lubrica- rack. thoroughly good DO I been bind. the the N LOAD or the the GUN enough may gummy, NOT THE qual- clean trans- record as used ON \ve UP be USE oil 2. TONE ARM

A. TONE ARM \'lEIGHT ADJUSTMENT

ly the the the 3.5 needle record tone On ounces. Model arm should just at 7800 barely the be the needle approximate- clearing weight with of 9800, should the weight On Which be·2.5 Models when use ounces. 7850, t tested one 8800 arm as F-3110, and above in of opposite of the Fig. the the needle When record. scale 5, the using is the needle should leaving indicator the weight be screw the directly pointer grooves just scale as while If the a weight instrument test is is playing,

made J I

it the the is needle grooves. easy starts to determine lifting just out when of weight r ecord. It tests is best near to the make start all of a weight ing the to weight. decrease the tone On may Model flat arm be or upward spring 7800 obtained increase correct underneath or dovmward by the bend- imate 9800 obtained out in (located to to On the decrease center increase Models correct by in turning the of 7850, the the the top weight weight, and weight. the tone 8800 may approx- screw arm) and and be

Service Manual '41 Models 7800, 7850, 8800 and 9800

B. PICKUP

fective, a the changeably 8). and factory entire F-3126) When Two it types rebuilt the un:l in is are t pickup the recommended of be used pickup. pickups tone returned becomes inter- arm (F-3121 that (Fig. for de- tific The device. pickup Its unit characteris-

is a scien- used. nominal damping Such able factory ments be struction reduce tics obtained a quality are which unit To its and charge. rebuilt determined dismantle and magnetism, introduce on cannot will and the exchange pickup be inferioz· materials be of by the maladjust- change corrected. question- which its for unit to con- a will the a can 3. SOUHO EQUIPMEHT

A. AMPLIFIER

high paired. designed Item quency other quality of used Item used because of or amplifiers quencies should tone too set to tor music full bad the great by (Fig. for 21; notes 19; compensators; for The (Fig. or l94l.model be the tone and output by will to Fig modifying Fig. modifying amnlifiers or used 10, an treble or control are subduing faithful 10, operate quality. bass . extent, be 16, 16, Item the equipped in without Item notes notes. greatly Item Item low Symphonolas adjusting from one 19; the the at either used 21; the reproduction All notes 19) distortion and lower Fi high 21) any compensa- with very Care Fig. in g. tone lm- the volume ls is the the 13, all fre- these to dual fre- low 13, are B. VOLUME CONTROL

11, 17, should slightly the to a Item Item back high *It'* cause the 3~ *3)* of and level *,* Fig. volume the which the then when amplifier 14, volume go control is down Item turned located to *3;* panel, (Fig. jump Fig. on again

I 2

control when be replaced. turned is defective sligh;;ly farther, and should the C. TUBES

Each on its each must number its the ing the to tact. do the number proper tube. socket tubes, When tube be tube so on tube paid may is must each installing '·lake on to special ~ube must result firmly to the make tube. be certa.i.n socket; the correspond inserted tube proper attention designated in pushed or The damage socket. failure replac- that con- number in into to to D. SPEAKERS

4? for and full which without rattle music. *4* are erate taken the *J* Fig. used are designed speakers that volume The not make with or 2, built in injury. speakers particular bad to up each Item the of as allow and reproduction the to other the 4; model this Care matched wittstand sound (Fig. dirt amplifier Fig. instrument may components Symphonola should 3, equipment 1, to cause to of enter Item the *Item* op- be a

*r (*

Service Manual '41 Models 7800, 7850, 8800 and 9800

~. INSTRUCTIONS OF WIRED REMOTE FOR SPEAKER INSTALLATION 1941 be speaker speaker olas. the three connected remote Symphonolas. These speakers, volume in instructions speaker the to Symphonola, control incl~ding these and A total Symphon- box the concern the for of may mou..Dted moved hand of control 8800 and on 6-1/2" for purposes viewing rear) mechanism tra phonola plate the the the the speaker 7850, control access speaker The and wall and with which amplifier right below on key from the only. 9800. speaker mounted it mounting (when the to the cabi.net Symphonola 2-7/8covers key control hand should the the the inside control It On must viewing control shelf 11 rear) top on control wall Models from should shelf. the for be box. of be the of from with mounted key hole on (when packing the the removed the box bottom the be l~od 7800 key A Syrn- left for the the ex- re- is el of s control mote cedure When speaker, is box connecting advised: for the use following with the speaker the pro- re- 1. Remove Fig. 16, amplifier. plug Item 13, (Fig. the 10) Item 10, green from 10; Item dummy Fig, the 10; 2. Insert into the speaker either the plug control one from of the

box 13

ll sockets two I Items terns and 7-prong 11 11 12; (Fi and and Fig. g. speaker 12; 12). *10,* 13, Fig. I tems 16, 3-. Insert either 7-prong control remote speaker one the box. sockets of plug the into from in the the 4. Se~ TOTAL 13; speaker correspond in ing Item use. Fig. the panel 13; number link impedance Fig. 16, (Fig. with on of Item 13, 10, speakers the the match- 13) Item to amount speaker control clockwise control clockwi greatest ergy external ly the the remote the tion, position the Symphonola control key There reaching turning of speakers same. se control ls is switch amount from speakers speaker position, posit are in turned is in the the the control six speaker. ion, in of receive box. a the full energy left, Syrnphonola is to clockwise energy. positions the the approximate- the vllien third counter- in greatest external the the When reaches full the the When posi- en- on and the Flg. i level volume s used 14, The desired. control to regular Item set 3; the (Fig. Fig. instrument overall 11, 17, Item Item volume 3; 3)

Service Manual '41 Models 7800. 7850, 8800 and 9800

5. ELECTRICAL SELECTOR

A. CREDIT MECHANISK

or 24, sistance Item ratchet this the tive. 21 credit I 17) is The t ohms em not escapement of which 13) credit magnet for 10.5 the should operates two magnet true ohms ~ay lever coils; have resistance, be per (Fig. the defec- a (Fig. coil if re- 24, This credit lever by The has mately 16) engage l/32n such of sure escapement wheel which ment with place. the the the stop the the loosening the relative and lower escapement credit ratchet ratchet just The cancellation bracket will an st~p . the hold should (Fig. ~agnet l escapement the /32 Adjustment The angle tightening escapement escaped bracket bracket help edge magnet lever 11 tooth the 24, ratchet wheel escapement • be should the posi~ion that to of lever ratchet prevent Item such of will at two the by lever of the pole tooth (Fig. 1t can them approxi- be escapement lever the the 9) escapement credit. that is screws clear of strikes lever. face, be escape- bent lever bouncing against 24, which at again ratchet proper ~d the made when should least Item at in- the at on on It~ (Fig. tacts tacts .030" the the M3) When of 24, when stould ratchet ratchet should the credit Ite~ there credit open wheel 24; wheel. close. is is about Fig. no established switch the credit 19,

The .020" con- con- to I~

B. SERIES RELAY

Series Relay lowance double-Lr~o~ bet~een located sets . 030" of The The . Box Relay contacts. on The on .015" relay series is the the • arc should contact the and contacts left (Fig. relay gap series .025". The of be side 24, should has wear ~he

.020of relay. of Item two 11 the al- be the to 1) necessary make of and at contact same justing the the the Both the time, series same wear armature the contacts normally to should time. moving allowance secure n·lay stop. close be open contact Adjustments shoulo the made or at proper contac~s by to blade close the ad- C. Ct~CEL SOLENOID

a 1:. 24, by selectioL c:-eC.it means Itec The cancel 2) from of operates is the the made solenoid engaging ratche;; and each cancels

pawl. (Fig. ~iheel tiee next. The entire f escapement capement lever of I plunger ratchet ratchet • the ar 010t.em the enough proper 1solenoid ' When tooth 4) can to stroke brass • wheel wheel is lever . the 020'' be pushed with lever clearance to bracket adjusted ad allow by cancel should and between and jus a hand, to clearance through tte tin~ the engage the be.:•;een solerloid be {Fig. by escaoemer.t screws the the tooth. rat.cl.let rotated ol>ans its es- 24, the of the on

***r r***

between bracket ble next a on credit screw adjusted after escapement which rotation tion mounting wheel the ger stop t.lle has after cancel of There tooth beneath support teeth the which ratchet is nearest the this sealed of so plate. cancelled. loosening cancel pawl. are lever of solenoid more may that bracket serves the the the and two wheel move the It has solenoid than the connecting The mechanism ratchet guide the solenoid should to the plunger about engaged when is ratchet one The guide prevent ratchet one adjusta- brackets a tooth posi- plun- wheel 1/16" be and lin.ll: has the .

D. TERLOCKING INTERLOCi<ING RELAY S\riiTCH AND IN- 19, M6) necting sol (Fig. enoid is I The tern 24, actuated link. JV!.l) interlocking (Fig. I t em through Cont&ct 21; 24, by Fig. Item the the switch cancel gap 19, 2; con- *B* Fig. Item

be cancelled contact adjusted contact ratchet should it sufficient eration. switch the the tool. does, tripped extreme contact not is wheel. blade wear by the not The a out and close bending credit end pressure ca.llcel allowance with adjustment crHical. before cause If of too it from a the solenoid the may bending soon. erratic closes it may stroke, lower the has of be The be in- If this may at op- the I interlocking tem interlocking When 22) will selections switch operate relay has are after (Fig. closed. made, the 24, or open mounting ly wear cal closed ber at open grommets shock The contact allowance the contact contact relay plate. same reaching closes. to of should is time should prevent The mounted at it the normally least from open The have mechani- normally normal- in l/32 before the a rub- 11 •

be cancelled contact adjusted contact ratchet should it sufficient eration. switch the the tool. does, tripped extreme contact not is wheel. blade wear by the not The a out and close bending credit end pressure ca.llcel allowance with adjustment crHical. before cause If of too it from a the solenoid the may bending soon. erratic closes it may stroke, lower the has of be The be in- If this may at op- the I interlocking tem interlocking When 22) will selections switch operate relay has are after (Fig. closed. made, the 24, or open mounting ly wear cal closed ber at open grommets shock The contact allowance the contact contact relay plate. same reaching closes. to of should is time should prevent The mounted at it the normally least from open The have mechani- normally normal- in l/32 before the a rub- 11 •

6. SOLENOID **DRUM** ASSEMBLY

A. SEMBLY ACCESS TO SOLENOID DRU~ AS- Solenoid Symphonola drum Symphonola out moved has screws carry-over coin by plug the tion removing electrical the two Access assembly cancel tripper (Fig. by and plug wires Dr~ taking cabinet. frame one 23, switch can switch, the connecting assembly Assembly is terminating selector hex Item off be rear and bolted and nut, gained 13) the the doors The may and the (Fig. cable to two removing taking the plug be solenoid at to selec- the of the motor re- 25) the the that 5 the **15**

necessary ates drum maintenance conductor chassis. a at ssem'Qly the to power amplifier. work, remove from cord it the the will that Symphon~la For solenoid termin- not most be B. SELECTION SOLENOIDS

necessary ates drum maintenance conductor chassis. a at ssem'Qly the to power amplifier. work, remove from cord it the the will that Symphon~la For solenoid termin- not most be B. SELECTION SOLENOIDS

and up. 25, one (Fig. taking bly (Fig. off removing of Item \vhen A 25, 25, defective the the the 11) Item Item selections solenoid Solenoid Symphonola may the 8) 12) be solenoid selector and should Drum replaced plungers are solenoid Chassis Assem- made, disc k1ush (Fig. by

and up. 25, one (Fig. taking bly (Fig. off removing of Item \vhen A 25, 25, defective the the the 11) Item Item selections solenoid Solenoid Symphonola may the 8) 12) be solenoid selector and should Drum replaced plungers are solenoid Chassis Assem- made, disc k1ush (Fig. by

**Service Manual '41 Models 7800, 7850, 8800 and 9800**

Sernce Manual '41 Models 7800, 7850, 8800 and 9800

leads When With placed and blades moved placed. tive guide guide the the defective selector leads t t the and plate aking Soldered erminals. plate and must aid The a that the o:ff be new (Fig. tne disc of solenoid solenoid collector unsoldered to connect a solenoid collector the may soldering 25, their solenoid guide Item then may to respec- re- brush brush from them. be be 9). plate iron re- re- C. MOTOR CONTROL RELAY

may mately Symphonola control or in capable when motor Item closed. amplifier spring receives volt tion. the the stop (Fig. ther.e tne be solenoid relay 12) The the pin power 25, carry-over power checked 30 Its (Fig. relay of may and are motor Tne solenoid its volts or coil Item motor. contacts indicating transformer 25, Master plunger current circuit up motor be the fails may 2) with control A.C. or'when an Item switch plunger ulunger should open be control If a Control operate to or from (Fig. 13). defective volt approxi- the on operate, relay between circuit is the contact operate motor and the the meter 25, relay Thi Sta- tbe 25 s not bending operates cc:mtacts sure sufficient, creased contact are trouble with pitted. dirty start, If or the by the they blade tool. in and If ha.ve contacts. or the bending the motor it the may the pitted, with insufficient most should If relay pressure Symphonola be control the a the dirty Either likely would contact they be contacts stationary in- is and relay may be pres- the does in- be

16

cleaned tool. with a contact burnishing 22) spring relay tained trol the which motor Access relay and elips. by control is removin~ i cover ts to held contacts the (Fig. in relay motor the place motor 25, is by control ob- over Item two con- does of over should to the stop its turntable If not switch travel, be the the open ad Syrnphonola motor jus (Fig. is the the ted. at motor control 25, motor the Item motor bottom circuit carry- relay 2) when D. HELIX ALIGNMENT OF REAR VERTICAL until unit screws should position responding of loosen lower pin the Item the tor the selector disc rear (Fig. is ?) To coupling the of then Symphonola the .and ready al for Helix (Fig. respective 25, the tgn record set rotate be disc selecting for lower Item the tightened arm, 40, screws (Fig. operation. tray. Chassis, stou solenoid ll) I the coupling allow tem finger 40, *for* helix the (Fig. to 9) and The Item a engage the cor- selec- first with is stop set arm 40, the 11) in E. PIN CANCEL RELAY

40, switch selector 25, tion tray Item Item with is The (Fig. selected. 6) 10) stop pin the operates 25, cancel to selection pin push Item when relay dovm in 16; a cancel conjunc- record Fig. the (Fig. shaft that The when should selector the operate pin *pin* cancel freely reset relay so

**Service Manual '41 Models 7800, 7850, 8800 and 9800**

moving armature its essary push reset the tor the armature stop normal spring the shaft a power is selector pin. turn. position. may spring brought may to The be reset lack reduced stop strength is down If the too the pin i the nec- stiff, selec- by t into of will re- F. ADJUSTJ•mN'r SELECTOR DISC AND STOP PIN ditions, Selector Solenoid fore between 25, is chassis Item tact the the gage justments necessary. Item plunger selector 10) Under electrical and the and the no Disc Drum 13). Selector should the should normal dismantled, adjustment is solenoid stop contact is (Fig. However, pushed contact mechanically be removed Disc operating pin 25, checked. spring plunger up (Fig. of Stop Item if is some from slowly, the made the be- 25, con- (Fig. 8) ad- con- en- If the G. SELECTOR SHAFT ADJUSTMENT

no When screw selector noid lates selector shaft, side drum There this at the should thrust disc, shaft. the assembly end adjustment is bottom an thrust rotate of which adjustment There the which of of has is freely. shaft. should the on the regu- been

sole- the The be 17

adjustment made, tightened. the locking screw should nut on be this H. COUNTER UNIT

defective.. defective, ment. unit mended. for (Fig. should ter to tively register each factory Should in 26, The be that the selecting Item made it adjustment repairs the at If field the should 7) all, to the counter unit fail determine is unit pulse and a not is be check of to unit actually adjust- proves returned recom- or this regis- fail posi- I . COUNTER RELAY

unit are dials. It for register no are for Item time the units tact justments adjustments is kept closed, adjustment contacts this 8) The burnisher (Fig. the recommended be Other controls counter one unit returned counter clean are 26, the more of as than rather Item or when are (by counter the relay relay the the unit that to replacement seeing using recommended 7). counter necessary), critical. coun~er cont<~ct the contacts on defective (Fig. unit Each factory a the that con- relay 26, ad- will .

**SERVICE NOTES**

TO REGISIER I. PROPER IN NUMBER THE MECHANICAL OF CREDITS SELECTOR FAIL *A.* SPOND ~AGAZINE TO RELAY COIN DOES NOT RE- let. not should cord respond If connection be the made magazine to a for at coin, a the relay l oose wall a check does lL~e out- defective. wil'e magne1; (:Fig. The or 5A, posts. a magazine No. bad There F3207) connection relay may may be magnet on also a broken the be B . OF TOO COINS FE'.'I' PL INSERTED AYS FOR THE A~10UNT has from contacts a also contact Dirt pressure. coin contact be the the burnishing making accumulated contact contact or be The swttch the blades film insufficient it contacts coin should proper To is fails surfaces surfaces tool. should usually correct switches may dirt be contact. and to be nolished ·There be or or are contact make bent because pitted this, cleaned may because film pitted. may proper with

If not with the on a it a crease contact contact bending pressure. tool to in- '1'00 OF COINS JI!ANY PLAYS INSERTED FOR TBE AJo{OUNT lever. as be when should outlined making One a coin be The of more checked coin in the passes l than coin - switch and B the one above. switches serviced switch contact assembly may binding anii fail or not ment magnet may rotated. lever clearance as escapement after strengthened binding the to the and three the be lever cause ratchet the The lever to or the cutting escapement from (No. of ratchet hold and coils. play the between the ratchet This (Fig. any lever should F-3207) have wheel. the by escapement the escapement magazine off. sort spring ma~azine cutting wheel 5A, about spring ratchet lever be wheel the . in The Check free teeth svri the l/64 lever escape- of- tch for switch of inch may and No. A may (No 1512A) off weak has is (No. relay wheel lever . be 1525A) moved been two 1150) to· 2. MOTOR FAILURE

A. HOTOR DOES NOT START

heavy fier. are allow ing recti the i making play There n ve load it Make the motor magazine to on may proper mechanism turn.

sure fuse the be the are contact. motor a on blown roay contacts closed the and place or ampli- Bind- not de- and in a 19

B. ~OTOR COUPLING MOTOR DOES *I S* IS SPUN NOT DISCONNECTED WITH START FINGERS UNTIL

~D

case starting starting winding the end may The plate switch wtnding cause win<iing. be a defective of of or switch the a trouble By burned motor, removing is starting in made out the this

Service Manual '41 Models 7800, 7850, 8800 and 9800

accessible. with with fine a clean sand It cloth. paper should and be wiped cleaned C. STARTING OUT CONTINUOUSLY WINDING CUTS IN AND motor duced ing allows ing the to enough winding in starting Th.Ls due speed the the speed .Ls to motor chassis is switch, usually switch the immediately to heavy to mechanism open closes whereupon just due drag, the come to again. re- bind- start- which and up the D. 1-lOTOR FUSE BLOWS

what ping There 14173). it ampere strument that blow. the should failure may blocks. If caused are The non-tamperable the Before cause is a be most number completely motor the to replaced Be remove the ~use usual replacing, sure fuse of motor to reason reasons all with fuse the unblocked.

is blow. fuse ship- blown in- a (No. find is 2.5 · to motor overload. coupling ~ears the (No. motor Binding 1071) should (Fi~. (Fig. may After and 4, in turn cause No. 4, tight the loosening No. freely.

3054) transmission the bearings 1083) motor and the the in to due be bricating grease lubricate cause light used grooves. tain cleaned to in Record to grade the dirt should bind. the oil Neither trays the off of or tray trays with ever tray If by good grit are grooves, grease applying may vaseline a be grooves almost quality in brush. be used the has jammed it cer- a nor to be- tray lu- can been fore lubrication which in should ing a a If operating, cold will heavy be the allowed place often load will instrument over otherwise be on blow to the stiff, night, warm the has motor fuse. up the been plac- it be- 3. TWO RECORD OR KORE TRAY TRAYS SELECTOR AT ONE PULLING TIME OUT No line also depress If selector selector below two (Fig. . out 1181) trays The with engages 6A, the of two slide selector pawl line No. may one to the pawl be the i223) have centers springs selected, rail so withdrawn. spring springs helix ti\at moved should (Fig. of (No. the above it rollers down-

causing the SA, be may 1184). roller The in or necessary. No. lugs ward moved with slide selector tempting (Fig. 1183) of slightlyJ the SA, uo rail, the or slide to grooves No. are be Make down. re-align trays kept 6178) or pawls sure certain in move. the Before in which may that the (Fig. alignment helix have selector that this at- the SA, is the q, TIMING OF MECHANICAL SELECTOR WITH REAR HELIX

miter sure In that gears re-aligning the (Fig. proper SF, the mesh No. helix, 1210) of the be is

20

1f maintained, of one the or selector two so rollers that is not the are disturbed. timing out of

-*r*

Service Manual '41 Models 7800, 7850, 8800 and 9800

line greatly helix springs, with roller simplified the the adjustment mounting selector by bending stud pawl can (Fig.

be the 6A, downward selector ment No. of 1222) ~he until pawl r oll slightly spring the er proper ~~th is upward attained. the align- or 5. TURHTABLE DOES HOT FUHCTION PROPERLY

A. TURNTABLE PLAYING POSITiON rAILS TO niSE TO faulty SAE-10 rise there table se~wing If to spindle may oil. machine lubrication the the be playing turntable DO insufficient bearings. oil. NOT on USE position, fails the a Use l or turn- ight to With dust off, operation lightly most with with bearings shaft flood ing matter table turntable the a Foreign by t;he or the position bearings generously to clean may means with grit turntable fingers, are bind. turntable until spindle be No. obstacles cloth. clean. mny of removed and and Dlrt the SfE-10 enter the will and as up the cause in shaft and main Repeat Re-o11 and follows: oil, motor from its wipe such the oil. down .foreign the upper- switch, and off *mov-* turn- the as cut this springs springs too weak, If from (Fig. the replace turntable the SA, factory. No. with 1009) 11ft new are No. turntable slight too the turntable l528A) tightly. It play is gears and possible between There worm steel may gear should that be the worm meshed (:i"ig. teeth the (F'i be g. of 4, 4, No. 1022). ~he transmission

2 1

l casing can between taining table 528A) be worm moved to (Fig. c;he the allow gear steel teeth away 4, No. about (Fig. from of worm 1040) the . assembly 4, 1)05" the gears. No con- turn- play . B. WHEN TURNTABLE IN PLAYING DOES NOT POc;ITION

ROTATR

drive *'1* 1315) clutch clutch event, have the the Lable *,* Wo. jar turntable a The gear should the is pin slight 1014) the as turntable too turntable. clutch underneath it (No. be in engages loose soindle siippage replaced. 1528/,). the spring clutch it lower with In should the will to If th (No. absorb end (Fig. turn- the ls not this of 4, gear pin 1016) 1077) on by cam clutch stop elevating tion, in t~e tion, turntable the No. means the the cam underneath turntable (No. in The (Fig. ~ounted it so the clutch will turntable 1014) roller the can of 1006) turntable that; elevating cam turntable SA, engage correct the be should on release in (Fig. the No. should (Fig. the adjusting sl!gh~ly gear. the the turntable 1528A). clutch turntable the 1, elevating cam playing engage SA, raised turntable pawl be No. clutch does If No. adjusted clear screw (Fig. 1006). (No. the the With posi- posi- not pin of

Se'rvice Manual '41 Models 7800, 7850, 8800 and 9800

6. IMPROPER ADVANCE Of REAR HELIX

A. SELfi'.C'l'OR ~1ECIIANIS~1 BINDS

selector selecting any iS'll properly. should part would The rotate of levers selec cause position. the freely tox- are selector it mechanism to in Binding when operate the mechan- the non- of im- B. FRONT HELIX Pil>TS CAUGJ1'1' ON SELECTOR LEVER TOOTH

1251) continues front and front on lowering helix should tion. the 'Nould I:' heli.x helix the pins levers To be a t~e rcelix repeat lowered eliminste to selector clear pins (Fig. engage stop above. coula the the (.Fig. slightly pin 5B, lev~er one this, same stop not No until 5B of . , toot 6062A) rotate, selec- the teeth No tile by the h . C. IJI\2IIOPER TiiUNG OF RE.A.R HELIX

a cycle 6E, cesses at contact No. be positton, selector put revolution a adjusted a No. 6178A) *The* oolnt of pencil of 1822) - keys rear the place then the where should as mark for cam are in sprocket helix follows: start the one each shaft. the on rotate in roller (J:'ig. roller of the the the complete (No. the When mechanism

This cancelled sprocket 21/20 6A, (F'Lg. re- 12.21) is can all of in , 1807). If or screw in o.f segment selector is (No 21/20 recess pencil this the the ing justment (No. reterding mounted motion the . the helix gear selector 1816) 1822) recession. in of of amount mark, sprocket. T~is gear can is the a (Fig. through .

'~nd the on must revolution, not segmen't segment be and the (Ftg. is of watch the sprocket 5F, made controlled correc stop small The rotation the It selector the No 5A, the ·by lock directly must gear . rotation gear small ~ ~o 1809) or adjusting past , advancing rotation sn . one roller turn the of 1807). by ad- the :Ln of the rotates (No. driv- shaft th<::~t: D. SPROCKF.T HELIX LOCK TOOTH 110LLE·R STOPe ON mechanical rot~tion, ping 1822) above. happen not sprocket No 6 6l78A) proper rotated the the A, . No. helix 1125) sprocket properly \o/hen with resttng distance. should when 'I'he 1807) in (No. rests lock t tbe tr1e such he selector segment . the tlmed Symphonola does stop 1221). lock on helix roller a in rear a The position nol. as after roller tooth the gear may ,Ls helix This helix explained \Fig. recess playing travel be of being (Flg. with (No. ~will stop- is that SE, (No. the of the the in

7. CHANGING MECHANISM NOT SET IN OPERATION AT END Of RECORD PLAY

A. WORN OR DAf4fo.GED STOP G~OOVE

discard record. it with If is a such the new worn stop a one.

record out groo1re or damaged, and i n replaco the 22

B. BINDING OF TONE AR~~ SU??ORT ROD cause follow port Binding rod it the to (Fig. groove. skip of 611, the over [lio. This tone and ll21) binding arm not sup- may

*r*

Service Manual '41 Models 7800, 7850, 8800 and 9800

should tempting be any remedied adjustments. be"ore at- *n* '-'• l NCOiilicCT CUT-OFF ADJUSTr··lENTS

needle ments made. be of be has turntable with until recor(ied the visable trip (Fig. l set found - cut-oi'f trave:..led 7 off The the 6C) be /8tne Occasionally in enters 11 to chenging adjusting necessary, where ~or nst operat.ion from spindle. and proper reset mechanism. such the to mal.!:e the the the within setting the a mechanism limits s!.op music center adju.stments screw Should a when refer record. mechanism r ecord groove a It has has set (No. the distance of to adjust- is should may for been beer. the and ad- 1085) to D. BlNDHW SEAFT OF TRMvSNISSION 1,10\il'l (Fig. The 4, No. tre.nsmission 1044) may worm be bind-

shaft make forth 3054) ened the the gear large causing slightly, weak. ing. (Fig. bend., bend by break.

(Fig. may 4, Tt freely. worm The removing the No should too or mesh taking gear spring 4, . shaft 1075) sl'1arp the No. The too sllde (Fig. and care flat may 1071) to or may steel tightly, bind reforming no1; 10, spring be back the be and worm strength- spring No. to too and the make E. BINDING OF TRIP LEVER

l~ from it clutch rear the o. rear L'"lg lever may hole l 1508) of engaging panel If ever should retaining cause the the through (No. prevent i.nstalled.

cabinet trip wor~ pressure the 1052). lever yoke the tng clutch freely is rear the against (Fig. The binding in yoke retain- with the panel, trip 6C the , the in 8. NEEDLE DOES HOT ENTER RECORD GROOVE PROPERLY

*b.* ALIGNMEHT OF RECORD 01'' NEED:.E WI'rli EDGE f'rom dition adjustable with which contact imately No. rest tone table justed the recor 1846) arm a in As its will is for so record, 9-7/8" its the the d. being in edge. or that be an support reco!'d position proper turntable 3115 average found raised, the in the Ol'his diameter. that needle about needle hook position to as is comes record hol<ls may be the (Fig. tne 3/32" approx- will sl:ould be on turn- con- up The the 6A, ad- *B.* NEEDLE FAILS TO ENTER GROOVE

po.si 'tion If the on needle the record stays anC. in does

one No. may proper well 1121) 'Lhat far not tone the remedied, out 1121). enter t>e tone a$ arm the should reproduction caused excessive of arm instrument support as the level. It this support be playing t>y is traced binding rod record also will imy of may rod (Fig. groove> down cause music binding possible be wear. *o::* (No. 6A, tqo and the as im- it in out eled properly. of up If level, so the all instrument it parts should may is be funcLion too lev- fGr needle This :;o (No. assist may A 1124) toward tone be the is a.rm adjusted movement sho\m the booster playing in if Fig. of spring necessary grooves the SA. 23

Service Manual '41 **Models** 7800, 7850, 8800 and 9800

of booster too the much record. spring tension, is If adjusted it the may tone cause

with arm the record to the tone playing when arm the to position. skid turntable across rises the 9. MOTOR CARRY OVER SWITCH ADJUSTMENT

*A.* CONTACT PRESSURE

adjusted ment bender. 5 when gauge inch (Fig. oz.) 125 The from is on 8, is made Motor No. grams the that applied the by 6179A) movable end. it Carry pressure means will with This should Over blade of just a (approx. adjust- a gra.m Switch open at spring be so 1 3 . DEGREE *OF* CONTACT OPENING

contact's that ~0 When 1/8they 11 •

should in wlll the be be "o:ff" open adjusted from position 1/16 so 11

C. 5\'.ITCll T n1ING OF ~10TOR CARRY OVF.R described Symphonola be and switch ;;omplish done spacing Af~er position. by this above, chassis means the have adjustment, contact of been the In is adjusting order t~ming adjusted, to nressure be the to is oper-

ac- the to as hand, do oughly This Selector at ated at ated and cause as Under After phonola will ticular play ble is tacts. turntable the turntable trays. just:nent. tom the to 1m a be the the to helix r:ext of to the until until result, and is be will be lt if this pusr"ed this its slide bottom bottom tightened next number It chassis a impossible will Disc it loosened checked p:Ln. result. will may stops test condition, should is downward If it the stops all out it oin done, Stop. of of it be be just If not of is turntable will should just at rotated its stops is stopped its to the the tne and selected, then too this On be opens for stroke. selected see this the If stroke way be lower at stro.ke. completely early, slid the timing the happens be be too thls Sym- the that this impossi- up by is over the point. oper- other switch thor- up late, record bot- be- no and, pin the .iust con- ad- the par- it the or 10. WARBLE 0 R TREMOLO EFFECTS IN THE MU Sl C

notes loudness causing pear things Sometimes to or may a be at a warbling contribute wavering tremolo. a rather the of music or Several high steady to varying will this. rate ap- in needle Very near warble. in fective vibration Occasionally the often in needles permanent the loose distorting pickup will needles iron magnet may cause filings the or be or ·

tone de- set tone. the The clean wJ.ll bearings Gummy contri'bute and new oil should oil or to dry applied.

tone be bearings washed warble. free might should couplers shaft effect. the couplings The in contribute is run its not motor are true. spring eccentric properly on should the to If suspension this motor these aligned be or mounted shaft and warble if the it

Service Manual '41 Models 7800, 7850, 8800 and 9800

6A, off These also spindle turntable and to "Burrs" produce burrs allow in the spindle the should varying free or the bearing. 11warbl flats No. movement be surfaces 1121, polished 11 tng on tone. of the Fig. may the No. worm ing properly pressure 1528A, it gear, The in "worn to teeth the Fig. it the direction is in 'ln 6A, fiber 11 possible the • should By gear, fiber of applyl.ng to be the gear push- wear

down applied gear. should plied preferably the motor objectionable w.i The be for th slightly just a a pressure about block soft enough one smooth of and points should minute. wood; to should rna slow in be terial it the be up ap- 1024 gear turntable tion. hub The which small should is holds in retaining be the up free the playing fiber when yoke posi- the No. II . SLOW RECO RO START

This 1815) sounds started tight Occasionally is • clutch as rotating invariably though spring too the the caused (Fig. slowly. turntable music by 4, Item a 'lo.'hile ahead when l528A) table The it drive of it it first coasts, clutch the rotates gear point engages 1s (Fig. the the of too music engagement. turntable the rigid 6, Item turn- starts

~~d up speed. playing tinue'S the with turntable to The and the be clutch it turntable normal.

is sounds running then as and catches at though it slow con- 1mwinding have ducing should bedded spring. less This be end the A used it can tension. of small tension and be the to remedied causing screw-driver spring push of the the back, it clutch by em- to re- 12. ADJUSTMENT 0 F SYMPHONOLA

CLUTCH TH ROWOUT LEVERS

Before of be bronze 1052 sentially set the the sure the playing shaft two This and starting cam. roller levers that Item adjustment (Fig. in posl properly the 1507) in (Fig. any SD, tlon turntable the on Item adjustments 6C, with lowest consists aligning the 1511). Item the re- is part es- in No. of Symphonolas fastened mtssion sure the 1509) Also that shaft. clutch with be is the this flush certain collar setscrews. In and clutch early pin with holds the (Fig. models body the trans- Next the end 4, was of be 25

fork in pin the is against worm at the gear. the bottom casting of the when slot the Clutcn Release Now 1508) first and approximately against ful inside with (Fig. to be it place tighten your The and 6C, permanently take Rele·ase does of Lever the Clutch No. then the thumb, the the Yoke not it Yoke 1052) a retaining (Fig. Leve:r Transmission on holding Retaining vertical rub draw bar the set. (Fig. 6C, against is until (being back shaft it the lever However, ~o. 60, position. Lever there on you first Clutch 1507) in care- the No. up the

Service Manual '41 Models 7800, 7850, 8800 and 9800

have more) the (Fig. the pin turntable approximately 4, space in No. the between 1509) worm transmission and 1/32gear the 11 the end shaft. (no pin of clutch in hold Cl~tch The lease ~hrowout then but slide is screw in angle not Now its tighten Lever line on 1t Release so along the Pawl position loosen of tight with just Cam the the (Fig. Lever the the the as Shaft screw enough lever on shaft Transmission

head 4, to the again Clutch. on lock on No. so of shaft until the the and as 1077); lt. the Re- to it Lever. When agal.nst horizontal the shaft the lts upper locking throwout in should this it edge flat approximately screw be position, pawl will such part on ls be of brought the that under tighten the Release 1/16" when lever. up the of which be be shaft tight driver. ~he used tightened screws In hold a and proper tightening to the are set the with lock held levers screwdr the a nuts screv;s the wrench with to lver· screws should a the up screw- while should 13 . SOUND EQUIPMEN T

A. SOUND EQUIPMENT APPARENTLY

1'DEAD"

replacing, amplifier ampere l1gh blown, 15; (Fig. Fig. t Note circuits. 10, replace fuse 16, Item is whether test (No. blown. Item 15; it for F-7846). 15) with the Fig. shorts If on light a 13, it 2- the Before 1/2 is in fuse Item the separation switch poinLs Make of (l"ig certain the between . 6A, pickup No that the . shorting 6005- contact l.here A). is a ord. is maki~~ Check contact to see with if the the needle rec- heard, amplifier remove marked by 16, control shorting should turntable Item a Item 32; competent ~a be 11the the th on P.u.n Fi~. *30)* switch heard. which the rotating, 6J5GT full, trouble nearest 13, ins sound A should in and tube loud trumen If Item open will the no or the the click (Fig. 32; be t click volume be radio position, on, pickup socket checked Fig. in 10 the is re-the , 26

pair heard pickup up socke& then wires, man. the when marked shorting tl·ouble or If the the a ''P.U. tube S1'11.tch, loud mily pickup 11 nearest click be is r in itself. the emoved, is the the pick- D. DISTORTED TONI- <,;UIILI1Y

Scmetlme dition ords, of course, badly reproduction properly tts others. po]nt Remove will but will be s the under a will replaced. still needle cause the A and more needle fail needle a should, play good narrow poor that to in some and enter quality light. has this of grooves checK rec- worn con- tight The enough. neeule screw may not be music ords condition. record working sound tant, tive, Jl!ake are for \';ill eve~ equipmE>.nt is order. still cei·tain bedly t~e though still This reproduction ln wo1·n, is be is that the fairl;; in very poor or entire perfect the C.efec- good impor- 1f of r ec- the

*r*

Service Manual '41 Models 7800, 7850, 8800 and 9800

is quality. often A shorted a cause or of defective faulty tone tube pickup block the tone A on loose terminals quality. tte connecLlon chassis or t.he can at lerminal affect the ln arm or forth sudden is rotating being may possible by the t-his, rotating rotated a volume and control be Check worn rapidly. played. the dirt changes resisLor it to resistor. are control slowly, the is when remove between the noticed, If advisable. in volutre If, control a in volume, still sudden replacing dirL record after the the It control the or contact control, is causes back changes trying when is often cause scale and of by it C. P40TOR HUK

This motor No. be come the they corrected "motor 1841) damaged do Hum happens mounting not is when touch so~etimes touch. when by in the springs handling where bendtng the loops caused springs they (Fig. them in and cross. the by can 4, so be- D. HUf\1 DURING WAR!t,UP PERIOD

825-5 On and some 825-10 of the amplifiers, earlier type a

slight the tubes 12), winding Fig. 10, up. and schematic ated plifier Item heater Item transformer the tube period tubes the 6.6 connected Item wtring . 'l'o 13, 33) 33) (Fig. the (Fig. hum will of el of volt power hum 23; Item to should diagrams in one iminate 10, to was the be 10, correspond (Fig. during Fig. the winding 25). of transformer the to entirely Item noticeable program Item be amplifier the the heater 13, 10, this removed (Figs. By 33; the 6J5GT 33; of 6.0 Item Item hum, lighting changing with Fig. elimin- warmup Lhe Fig. of volt 9 when (Fi~. warmed 25; driver 23) from and th am- the the 13, 13, ls E. MICROPRONIC TUBES

6J5GT Fig. audio and changing becomes Item not, Flg. replaced either this (Fig. 825-10 Due 13, 13, condition, 33 the output 10, tube of or microphonic 6J5GT to Item Item this with Item the amplifiers, 34) (F'ig. the of 32) 6J5GT a 6J5GT 32) 33 may (Fig. high new and the 10, occasionally or ~ube eliminate . type gain Item the driver tube 34; Inter- tube. if 10, should it 825-5 and 32; tnput with Fig. tubes 13, Item does 32; be Ill • PROP E R ll UMBER 0 F C R E 0 I T S FA I L TO REGISTER IN THE ELECTRICAL SELECTOR

A. CREDn' SPOND TO NAGNET COIN DOES NOT RE- not Solenoid nection be should net defective. respond (Ftg. If be of the Drum. made 24, the Credit to Item a for coin There The coin, Magnet 17) proper chute credit may a may be check does con- to mag- also a

the 27

and of broken 21) proper spected. refer plugs In checkjng series components which should to wire seating schematic relay shows or the be a and involved. checked credit complete should bad diagram contact connection. be circuit, for circuit All i~­ points (Fig.

Service Manual '41 Models 7800, 7850, 8800 and 9800

8. COIN Si,viTCJ-1 CONTACTS NOT PROPERLY ADJUSTJ<,D

film pitt~d cause cleaned ished because pitted. switch proper If on with it contacts assembly contact, a from the the has Dirt coin a contact contact burnishing accumulated the or switch fails 1t should film contacts is surfaces surfaces usually should in to be tool. dirt make the and pol- or are be coin or be- may cient correct ing be tool. There contact bent t~is, may with pressure. the also a conlact conlact be insuffi- To blades bend- C. RATCHET V.•I-:EF.L r:SCAPEMENT MAGNET LEVER TOO FAR FRON CREDIT lever far closer capement of 24, wheel. wheel store engages (Fig. move ratchet the tion the from engaging Item When will the more 24, credit (Fig. ratchet to If escapement the lever 17) escapement the not Item the the the than 24, teeth credit on the tooth credit r<~ be 16) clears ~heel escapement l/16Item tchet the magnetic sufficient of of may stop lever magnet ratchet 11 magnet. by 13) , the the escapement the the be bracket more is ratchet attrac- es- moved and lever teeth (Fig. to too than

If faces, lever. moved 1/52is 11 sealed toward when the against credit the the escapement escapement magnet the credit may lever be pole D. COINS RATCHET foLLOwS INSER'rl.D TOO ESCAPEMENT MANY PLAYS LEVER FOR magnet ment escapement or of ing ratchet 24, Item when usually the slowly to the nearly too the Item ratchet ratchet the The the 14) lever moved by escapement great be escapement two escapement hook 13) is hand. fail or corrected lever engaging lever connected wheel a to toward on to d1stance to which This spring a the engage and lever. together. deformation lever lever ~~e by end points may may the the credit between spring- (Fig. of a (Fig. fail is be It escape- tooth of the due can 24, E. RATC~T \-,'HEEL BINDING

der an cause cleaned remedy ratchet The clamp should to accumulation its screw parts The the the be support this, wheel of shoulder oiled. ratchet ratchet should (Fig. dirt file sllghtly. bushing. of or 22, be the wheel on wheel plating plating Item thoroughly the hub assembly to Dirt 38) To shoul- on bind. and may may the or I ~. ELECTRICAL SELECTOR MAKES NO RESPONSE WHEN BUTTONS ARE PRESSED

A. GENERAL CAUSE

credit ate the pressed, when series It on is a the the assumed relay selection trouble ratchet does that can button not wheel. there be

oper- is If is 28

found relay switch, contacts, the relay. the selector solenoi<i by circuit the lnvestigfl the interlocking s switch, series and (Fig. ting the 20), relay the coun the credit relay t~rough Ler coil, series

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Service Manual '41 Models 7800, 7850, 8800 and 9800

B. CREDIT SwiTCH CON'!'itCTS

burnishing pressure bending be!lding contacts inoperative. tacts tact, If are the the the tool.

may may open starting tool. ~ov!ng credit be be If or cleaned increased necessary, make The relay blade switch con~act poor with will with by con- con- the a a be C. INTERLOCKING RELAY CONTACTS

closing. of bination prevent with of are circuit. 24, oil the Item ~ a The part ar.d burnishing interlocking these of normally 22; Oil They the of oil Fig. or contacts the should surface and dirt 19, closed series tool. dirt relay Item Ol' be from polished may contacts cleaned a relay (Fi~. ~t7) com- 16. CREDIT DOES NOT CANCEL *OH* ELECTRICAL SELECTOR A. SERIES RELAY CONTACTS

have allowance. cancel lGrge close relay The approximately at contac~~ (Fig. solenoid contacts the Both 24, same do canno~ Item contacts not of *time.* .020" 1) the close, opera·e. should If wear series should the the B. CiiEDIT CANCEL SOLE:'IOID

may has ohms is res (Fig. defective, is fail shorted '!'he t.ance (plus 24, credit to Item of or cancel turns. it minus approximately 2) cancel $hould should if 10%) If solenoid this the be . have Credit coil re- coil 1. a 5 pl~ced .

C. ?.1-.TCHE'I" "wEEEL ESCfl.PP'.~T

LEVER

ratchet lower ment 1/32should escapement lever. ment ratchet Icem the escapement 11 lever le) The lever edge to engage If escapement wheel 3/64" ratchet should of it at stop (Fig. by the strikes a..l'l.y the . lever bracket strike wheel 24, The approxim?tely otiler escapemen~ teeth lever Item ratchet is the the escape- likely point, of (Fig. at escape- 13) the the 24, to

29

bounce tooth of a..l'l.d the fail ratchet to engage wheel. the D. SOLENOlD GUIDE STOP BRACKET

has at bracket rotate bracket loosenir~ edge stop adjusted link ins ~~e through the than its far credit engaging sealed, '!'he of of one the about circumference. is enough is \'lhich the this solenoid credit. ratchet that the cancel adjustable that solenoid the l/16P, pav.-1. bracket mounting after the to bracket ratchet wheel solenoid guide connec<cing sHoes. cancel It if the should plunger serves after This measured from screw. nearesL wheel solenoid stop more One be to turn- and may so E . RATCHET WHEEL STOP BRACKET lllTERFERES

wheel lever stop wheel vent ~ooth crmcel credit this tl·ibute may The the trouble.

f on to stop r wheel if orr a be last rotate ratchet t~e bounce, the engagii!g bracket. bent ratchet strikes credit engaging backward wheel bac~ causing the wheel. 'l'his may the to escapement pin desired remedy and ratchet fail may the on The ~re­ con- the to

Service Manual '41 Models 7800, 7850, 8800 and 9800

17. MOTOR IS MADE DOES ON THE NOT START ELECTRICAL WHEN SELECTOR A SELECTION fl . GENERAL

has discussions failure lay were it credit series is in operated. In made assumed is the rel&y all of and an electrical the of concerning has indication that that motor A the cancellation operated. folloiVing the the to selector series selections the sLarL, that the of re- B. SOLENOID PUSH UP PLUNGF.R DOFS NOT •grease ~ee defective up, strike selector from close the Item vent (Fig. switch that solenoid timi~g it 10). being If the the 25, the Section is gwruning the the disc, selector solenoid coil, Item probably motor raised It of stop solenoid stop motor is 12) 9, the which or on control also high stop pin plunger paragraph by does caused the plunger carry •Nould plunger dirt possible (Fig. enough pin rotating not relay, by contact over and and may pre- push 25, 11a C11 to .)

Maintenance.'' it cussed (Fig. should If 25, under the be Item selector replaced "Operation 11) is solenoid defective, as and dis- ing foreign from and parts they due selector \olhen may the should matter to moving slide the oil stop not solenoid or should freely. parts be dirt, pin lubricaLed.

be are so plunger These the cleaned that stick- C. MOTOk OPERATE CONTROL PROPr:RLY

RELAY DOES NOT operates surface spring pushed the tact solenoid 'llhen with up, (Fig. on the a the the the solenoid 2!', plunger motor plunger grooved lower Item control makes plunger portion 13) contact contact and con- relay. of is ate, amplifier. may relay the not 25 If it receives volt may the be receiving relay be transformer defective its does energy energy. not on or from oper- the 1t The is are also Item tacts the probably motor not If the 2) on completlng the may the n;otor does defectlve relay be motor IIOt defective. fuse operates run, control the (Fig. or circuit, the the 27, relay and motor con- 30 burnishing allowance make blade they bending If contact, may may the tool be be of tool. contacts cleaned bent until *at* the least If lower with there with are they 1/32a contact dirty, a is contact fail 11 to wear •

D. MOTOR CONTROL CIRCUI~

motor and diagram only control gram the Fig. of the and Symphonola the is relay circul 27 is simplified motor is self-explanatory. and t a of schematic control the motor. the Symphonola to motor show relay This dia-

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c

Service Manual '41 Models 7800, 7850, 8800 and 9800

"18. SELECTIONS SOLENOID DRUM FAIL ASSEMBLY TO REGISTER ON DrUJD 1) at and is fail pushed push the assumed in the selector series Assembly button If to the up solenoid register a Electrical starting selection relay tt1at has stop (Fig. drt~, been if on (Fig. pin select:Lons the 25) is the Selector

pressed a will 24, 1·eceived motor. Solenoid plunger tha.t Item be a and It has credl series operated. t is relay an nas indication A cancellation operated.

t.hat the o.f Up" "Solenoid to the be under above The applied symptoms Service Plunger paragraph are !\fetes. and discussed Does entitled r·erned Not Push ies in 19. ADJUSTMENTS OF 5¢-10¢-25¢ SLUG REJECTOR

A. LEVr:LING

near necessary button 1/16" 9800, locked this move l when front center ing scavenger used unit, (Fig. that inkage the purpose. in It the the the f.he loosen as free be *cO* t before "he Cabinet here slug is (Ftg. *,* door unit level. required 5¢-10¢- top to l Item evers bubble. absolutely play adjust rejector, will of the 30, it is to To A) in r.todels 25¢ the . engages closed The two the Item be is level to the assembly A.fter the slug wing appr exactly back spirit provided necessary B) 8800 scavenger it and this scavenger oximately rejector, tne nuts or so level- is and level and that for B. 25¢ ADJUSTMEN'J'

lead, cepted, if deflector be ~lector lf will ing slugs slugs any moved adjusted 25¢ The be are (Fig. zinc of move size screws rejected. deflector too for these being or 30, by far the slugs slow german shifting (Fig. accepted, slugs Item deflector down moving of If for D) silver'may 30, are quarters copper brass fast must the Item ac- 25¢ the dovm; de- mov- be C). 3 1 quarters moved out; will if moved be rejected. out too far, C. 10¢ ADJUSTJ"\ENT

will moving moved rejected. for cepted, being Item in; slugs lead, (Fig. fast if F) If be 30, of out accepted, zinc moved 10¢ the must 10¢ rejected. moving copper Item too or size deflector size be j,n far, german E) are moved 10¢ slugs the too slugs must dimes tf adjustment being size far, silver 10¢ .for out, (Fig. be of dimes will slugs size ac- slow brass, moved if are 30, be D. MISCELLANEOUS

for a nets unless and should sli respectively; that the soft pped magnets 5€ "I", No for the coins. be absolutely "iron across adjustment Fig. 25¢, magnets handled are .keeper" 30, tt 5¢ Items the removed, never and is necessary. with are pole is recommended 10¢ "G'' should necessary th~ care be pieces. coins they removed mag.: "H" and be If (Fig. ing screw The 30, 10¢ Item (Fig. scavenger J) 30, has Item an gate N) adjust-

Service Manual '41 Models 7800, 7850, 8800 and 9800

open. If far which (Fig. the in, aO, is adjusting the set Item rear to 0) just scavenger screw will close be is held too gate it. made wire aO, all serves be proper tested Item times. feeler The here path. to K) 5¢ deflect with the If on undersize must unit any dimes this work dimes adjustment should gauge since freely gauge into also also the (Fig. at the is ment, it (Fi work g. The 30, but freely rotary Item it is at L) quarter important all has no times, sizer adjust- that 32

of turning a quarter. easily USE under NO the LUBRICANTS. weight may position released, freely portant for the (Fig. (Fi g. be fast adjustment The 30, 30, and rejected. that m0ving when scavenger Item otherwise Item returns this the N) C). of 25¢ scavenger part is the wiper to a size It effected deflector quarter its move is blade slugs normal im- is by and slug 5¢ and 11S outlet (Fig. 11 10¢ are 30, coins and the Item outlets Items respectively. P) "Q", is for the 11R" 25¢,

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0 0 QO 00 "' **z:**

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® SSLECTION

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~I('I. OfQ l'l(>tVP l.tAC @ F!CKO;> ~ AICE~ 0

11J ··-*\_-::!/* G[;J ·-~=~ ~ ®~)o--r···-·~ ij{-··~-· *;t* :l•~:t,.,V SWITCH SCUh"OI:> D OAUM ® ... r <.----;;\_\_....

@COI N SWITCNJ;$

FI GURE N 0 • 2 - I'W< l>.l.!IV 11'0. REQ. DESCRIPM:OO

:: • l ?· lSC9 F~1'8Gt 1>15-3 ' • • f'-?01-a. F-.6G24-A J'~OCS~A l. l - - le Ft.. lr!.plc Lir.o Cord Outlet • • l .. 6 '!ube lltlpl\:"14r i.$#:0 *'l'\lb68 •* • 1 - 1.5• Ileott"ody- r-A!IJ,..e Sp$!1A;\Or. I. - Llgft~tte~ight. 1'o.''IC A.rn Ae::¢nbly • 1 - i>!el:\»~ Slt<l!"t.l!~ &oit-::h • • ..

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I 1(3 ®® ~$10..Yf LIGH"$ J i ·~ • · ~.\_,..il>tA,n'~!>'..W. *'?an* x·o~ l CABINET WIRING DIAGRAM FOR MOOEL 7850 l'W< !'An'! !00. ll\';Q. t?.SCP.l?!''fOO PR.IC£.1 IT~"'' P/Jtt JiO. f..r.Q. OtsCli!MI011 P!t!Ct 10 • • 7 ?-7411 s.Dro-'l? • f -7413 lll$?

ll r-z~o5

l :i. i'-eS?.7 "' l Z· r..eo~ ~s

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*60Ti01.4* ®®~ UGHTS 0 1 - S:1!.<JLdcd ?tel:'~~!~ t - Qol.,nG-.!.<1 {.A(I(I & PluG• 0:-m.. • • l - ' ~>!'one i'IW: • • L - ~ltoet..!.IJo ~ecel S•l::.ch •• , • 1 - Kor.or -lA\rryo-..~:r

,. f - 1090 " .. l1 P'-'/il42 F-U!::~ r .. ?al.4 19 f'-'1$).7 20 F-?dlO 21 ~-'ltlUi

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Cy¢lb), , • • $11.00 1 - 2 Pror.;; '!'to-

C~P'-'el$ , , . .!.S l - L1~iH,ing 1rc.:w- *21* - !'ormer .. .ltir,tll. $¢¢k(tt., , . • 1 - 1 :; - • t OOi1l s~twh ?t'Qne :y..,·iv.n Piue . . • . • . • ~ - .ss

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$,25 00 . . 1.0 *l1.* - §81 i'.c.x~a. !.M\?• ~ - *.!0* 5 - T.}eht SOellott.. , t<8.. .10

r -7816

4 - Ll.ght. Soe):et.. • M . . 10 *4* - N8? i.t..nxdn ~llP· WI. . I S

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FIGURE HO. 3- CABINET WIRING DIAGRAM FOR MODEL 7800

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AMP1.1'H~.R @ 8 ® @PICK UP PU. $Hiti.O~O PICKI,U> L £AD !lHORTING $WITCH 8 @ ... c •• ' ""''

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lO 7-tttt-1. 0® u r-ln&-.~. lt ,\_..., .. r-nu .. ...... " ...... " ,.,.... " ,\_,.14 " r-11-!? " r-:.ll:> ., ,~ .. ,\_,. fRONt fROtlT UGHTS t..IGKTS @@ @@

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liGHTS ®®

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1111#:1.11'710. "'~ a ,.,, u... c. .... , , • • • • • • • ' ·•' 'lrlplt !)dl•~· • • • • • • • • • • • .u **t** 1\;\o& ~f'lw lo&o l.,..,.,., , , , , N .loO 1~· Jl~~oOUt.lt t,-.r , , , , , U ,oo ~,. .... ~~-... ...... o.oo PS,~I('I;p~$ool.\ottoooooooo oU 3"o\tl,4otol lllNt "-'! O!kl l'l>~C o o o o ot6 $~"'nq *..... .* .. , . .• .to ~1 .. 9o1wb •••• , • • • • • • • • ... •• to ..... •111• ,\_1.., 4t~., •• , , • l,OO ""'\* .. : ... ,:.i\<b. • • • • • • • • • • ·" ~ .. JCotor (UO v • ...o (both•)· ~T-OO t=.to.u"' 1T'oulo.f-r ••• , • , , , •.u t 1'~ ~.,u. .. h •••••••• ' .ll ~,.....\_., .... .•• . ' ....... u ll1 v..lt, u ""'" &.,. ........... u t.J.t:ll\ $Mill•\ • o o • • • • • • o o • ... olO flt.l ''"'"" ""-'"" • 0 • 0 • • ' • • • • ... • .lG u~ r.c~r;e, ...... . . . . . ... .. 10 Ll&Jrl~ S.C..\ •••••••••••• - · .~ /In '·~···· ***.......*** *..... u*

PART 110.

F-1001 J.'-1003 r-1.oos r-100G F- !C07 F-1009 Y-1009 P- 1.010 F-1011 F-1012 :F-101:; F-1014 *Y-lOl.e* r· ... 1o1e. F-U)l9 t-l!W? F'-1024 F-~oro *r-1o5;;* F-lOSS .f"l~O Y-1041 r-1~<9 P-lCE-0 F-1063 f-1065 f-1066 F-l07.i y ... !&/t> -::--.. F-1007 r-107'9 F-lOO:O F-1000 F-.1.09$ t'-11~~9 F-'U3l. F-1.180 F-USJ r ... l !Soi F-1210 !'-1269 F-1509 F-1&11

!'\_:~J>28 f..J.572 F-lbJl r - 1.-001 J'-1815 F- l$4& f'- U-1.1 P-l'..0~4 F-!054 F- !.085 F-~000 }'-3?.01 P~l7&

- Top Shelt. - Reru- ~Moe ... Turnt6b1e E:levatJ.n.e Loever. - 'l'urnt&bl.c Elc•rnt.int.: (:<!"• - 'l\tr:'nttsble tle•T&t.JJ\g Cu Lever. - 0~~0:: Lir.k . - El•.Nating Lever S:pring - T'l,a~W.blo Spi:t(}lt;, + - Ele-vating Tln:ust &&.ring - tle-vatlnt Thru~t ~l.!'i.np, r.irv.. .... l::J.evatLI'JS Tlu·ust Be&!'ing Ring. - 'l'urn~ble Chtch l)(x}'y. + - Tur:lt.ebl..., L~f'Ung Can'l P.olle.r - 'l\:o.'1'Jt9;ble Elov(l.tin.& Linlc Scr(rlf - Y~evll.t..i.ng !'hl·llBt Bea~·ia& Scl'ew - 'l'Umte.blo Drive \l'ol'l?l 00 Oy. lS-1 P.atio - '{'Urrtle.b.lc Gee:r P.,.;,Ut.1ner. - 'l'urntt:. blo "Elt.~vt& tdr.,g Sp.no::cr J.i.n.k &.:.r~w. - TuruU>.ble SpirAle clutch Spe.eer. - 'l'urnl,.t:.blr: S?ir.,<.ilc A:--rH:l:r:t. - 'l'l"Mof!'d:;:;;ioo ~me .. Tnms1111ss1oo Sh!tt"t. • - 'I'ror.r;mi:m1on Clttwh SAafv • .. Cllltch P.olease ::i!~Ce~· . - TraJlGifliMion D:d.Vo? Si'.aft Coll$1". .. !<oLor P:·!.ve Coupl lnr, Shart • - Dr-1 ve Sbaft Coup line- Lea"...ber - Clsm S:rul'l;. l)d\'e *W<:>rB* • +- - Ca!ll Shaft. Driw< Clut.eh £h.gag1ttg Spt·lng - Com S:'1Ah Clu~h Throw-Out Fr.wl. - Cam Shah Clut.eh 'l'hr¢'N-0ut Pawl ~"L"'.g - TrlinSmiSBion iir h<: S:'Ul.f!. Coupl1flg. - Kct.or • • ..• • • 1 • • - l".ol.o:· lloUOtitlS Bolt.. - *Tom* .r.r;n CQ.n Roil~r SeN"''· - Tor.!~ /v"n CQr--:! t'er:idr'l&:l. .Pla~ - Selector Slide (Casting Only). - Sdttetor Sli(!e P.(ID .. - Selector Slide Pewl Sp~1ug • - S~l~etor ~vel Ceor. - Selocto1· Slide Spl'inS Cl~mp. 'l'rn.n$n.H.Sic-n CJ..u:~h nnd Pin. - 'h·a.-,snWis!o!l Clutch Relee.s& 1\(,ld and Pms • . • • . . ••. . • - Turntable PJ.•l\'e ~&r lhtb a.."l.d Pin - TumWbl~ H!fcm"bly , - P.t!Eil" Helix LQck t.L>t): - P.Etnr H$l!x Operating SegMnt *Cess.* - P.e.u· libl.tx Opt.r-at.1!1e Cl~teh Spring - iolotor Xt.g. &t:9. - >1otol" Htt;. Sp.t1nes - .}':·b.n!-~88i.on ilcttri.n~ S\IJ)JX!rt - Cam Shaft Drive )(om Gear. - n~~t- CoUn.r (P.ciU" Holix sr.u.rt.) - RQ(I.l' IJGlix tipp~r Bearing - R~ar H~l!x b~ft • - FV!nr Elr:'lix Jt:>ne11bls.

l:¢. USE!) :•R!Cl:

1 } l 1 1 ~ 1 1 2 1 1 • 1 2 1 1 l 2 • 1 1 1 1 1 l *1 l.* ~ *7.* ' *1* • ' • l 1 l 1 2 1 $ *5* 4.2C· *. ?0* 0 .75 0.~5 ea. on. 0.25 0.25 .?.s .G5 .45 .05 .1$ ea.. ntil • . .10 .10

• os ?.5 ee. *.OS* .85 .os ~e. .05 : i.10 .:?5 .10 .10 .os .10 .10 oo. .OS .00 .10 , J.S ea, .OS .).5 1? .<.'(1 tl(l. . OS .05 .10 ,60

.2S , $ $$ • • ~ . .2S 10 1 1 l.OO .so 1 ."'S 1 ~2S 1 2 ee. . .25 . !0 *1* 1 2 .:.a. 1.10 . . 25 2S 1 1 1 2.50 .10 .10 1 ~ Drdfl'r#!'..6178 1.eo

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FIGURE N0. 4 SYt.i PHO HO~

CHASSIS- REAR VIEW (CUTAWAY) r

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FIGURE NO. 5- FRONT VIEW OF MECHANICAL SYMP '

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INOLA CHASSIS

PART !10.

F- 1001 F- 1002 f-1018 f'-106$ f'- l.lZO :'-114~ :·-nso F'"- 1153 F-usa F-1241 F-1242 F-1~4~ l"- 1249 F-1254 ~-12S5 F-1?..00 F-1.263 F- 1264 f-1512 F-lSU F-1523 f'-1525 !'-1529 S'-1532 ?-153'7 ?-1816 F-182'- J',.l826 ?-1627 ?-1640 F-U,Wl f-18'/S f - 18'/9 *:'-tee.-..* r .. soaa F-6160

MSCRlP'l'I o:~

MSCRlP'l'I o:~

.. 1op Si~~lt - Y'ro:at. rrano - '.('u.rn~bl.~ ~e\'lltif'.g (,ink S<:rew. - i'r<>--.t. ¥~Hx Drivo S'l-.o.!"t Co\.-pli.ng. - Ton$ Ar~ Pickup He&d. • • • . • - I<Qgtl;ine P.tlWtu~t Ret\n"' Spr-ing. - Kacazin~ P.at.chl!lt &;.e.s.peorutn-t Spring. - t'.ag:atL'\e. P.a~holt. Pawl Rcleeso Block - ~ga,1:L-te Sirit.e:~ Conta.et. ?oints •••. •. . - i'ro:~.t. i!elix Drive Sp!.r,u.l Gear- (S/16" Hole.). - i'ront He tile Drive SOO!'t Be$l'"irlP. - !'root Helix Coupl.inf, S"na.t't. · - }'ront. HeliX £levt~-ting l.1nl<. - i~ont H~lix Shaf t P~1nt . . . . • .••. - !'"J.•o!t~ ?'.diX ::levating Link B<>ostt<t' Spdt't: - Self!Ctol' Le.w•t· i''ra,n,:,, .. Selector Le..,or Spri.n.g - Salaetor Lover Spri.r.g Mtg. *&r.* - Kegn~bc: F.S<:~epe:oont w-.d ?i :t - Klte<'~:i.ne Y.ickor 81-«:k and Pin - K$f.(l;1:i;:t(l Sorit.eh ;..:s::«nb).y Co!l'lpleW - Xo;e,MiM P.atobet lfub and J>in. - i'ront H<9lix aM P~ints. - J(({ea-zine P.awhet Pawl Md Pin - Kagaztne f.olay ~$te - :t.aar l~l!.X C"'~ral.!.ng Clut<::t Sp1nd.!.o - Ittdleat.i.ng Dial Spr-ocket. ... bd:le~tLns Dicl. Sp:--oekot Ciut in Idler. - lndientin£ ~ Sprooket C~io Ktg. Br~okot - JW.tor r~un~ Base - Kotor Mounl;.ln,e Spring - l'r~:tt FA11X Dri'le CoupliltS Sp:•ittg - K$Gt'tt1ne. Esosponecl t.e¥or Sto:>p • .. Sal eo *t.or* Lcwar. .. ·c:taln ldlor Spt"}.ne. .. ?ioi('-'P 't.'~,i.ght Sr..Me

.. 1op Si~~lt - Y'ro:at. rrano - '.('u.rn~bl.~ ~e\'lltif'.g (,ink S<:rew. - i'r<>--.t. ¥~Hx Drivo S'l-.o.!"t Co\.-pli.ng. - Ton$ Ar~ Pickup He&d. • • • . • - I<Qgtl;ine P.tlWtu~t Ret\n"' Spr-ing. - Kacazin~ P.at.chl!lt &;.e.s.peorutn-t Spring. - t'.ag:atL'\e. P.a~holt. Pawl Rcleeso Block - ~ga,1:L-te Sirit.e:~ Conta.et. ?oints •••. •. . - i'ro:~.t. i!elix Drive Sp!.r,u.l Gear- (S/16" Hole.). - i'ront He tile Drive SOO!'t Be$l'"irlP. - !'root Helix Coupl.inf, S"na.t't. · - }'ront. HeliX £levt~-ting l.1nl<. - i~ont H~lix Shaf t P~1nt . . . . • .••. - !'"J.•o!t~ ?'.diX ::levating Link B<>ostt<t' Spdt't: - Self!Ctol' Le.w•t· i''ra,n,:,, .. Selector Le..,or Spri.n.g - Salaetor Lover Spri.r.g Mtg. *&r.* - Kegn~bc: F.S<:~epe:oont w-.d ?i :t - Klte<'~:i.ne Y.ickor 81-«:k and Pin - K$f.(l;1:i;:t(l Sorit.eh ;..:s::«nb).y Co!l'lpleW - Xo;e,MiM P.atobet lfub and J>in. - i'ront H<9lix aM P~ints. - J(({ea-zine P.awhet Pawl Md Pin - Kagaztne f.olay ~$te - :t.aar l~l!.X C"'~ral.!.ng Clut<::t Sp1nd.!.o - Ittdleat.i.ng Dial Spr-ocket. ... bd:le~tLns Dicl. Sp:--oekot Ciut in Idler. - lndientin£ ~ Sprooket C~io Ktg. Br~okot - JW.tor r~un~ Base - Kotor Mounl;.ln,e Spring - l'r~:tt FA11X Dri'le CoupliltS Sp:•ittg - K$Gt'tt1ne. Esosponecl t.e¥or Sto:>p • .. Sal eo *t.or* Lcwar. .. ·c:taln ldlor Spt"}.ne. .. ?ioi('-'P 't.'~,i.ght Sr..Me

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!10 . t,lf.RI)

!10 . t,lf.RI)

!10 . t,lf.RI)

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1 1 4 • *!* 1 1 l 2 1 l 1 *2* 1 1 20 1 1 1 l 1 1 l 1 1 2 2 l l 2 1 1 20 1 1

1 1 4 • *!* 1 1 l 2 1 l 1 *2* 1 1 20 1 1 1 l 1 1 l 1 1 2 2 l l 2 1 1 20 1 1

$ 3-20 3 . ?G ~a. .10 (>A, .15 6.50 .OS . 05 .10 '(til . .10 .·;s *.?.5 .!0* ~«. ' .25 e«. oOS .OS l.OO ell. .OS .15 .25 .25 *.15* .so l.?.S .15 1.10 .15 cr. . .15 *w .* . 05 . 05 1.10 oo. . 2S .os .10 ea. .15 . 05 II.C.

$ 3-20 3 . ?G ~a. .10 (>A, .15 6.50 .OS . 05 .10 '(til . .10 .·;s *.?.5 .!0* ~«. ' .25 e«. oOS .OS l.OO ell. .OS .15 .25 .25 *.15* .so l.?.S .15 1.10 .15 cr. . .15 *w .* . 05 . 05 1.10 oo. . 2S .os .10 ea. .15 . 05 II.C.

$ 3-20 3 . ?G ~a. .10 (>A, .15 6.50 .OS . 05 .10 '(til . .10 .·;s *.?.5 .!0* ~«. ' .25 e«. oOS .OS l.OO ell. .OS .15 .25 .25 *.15* .so l.?.S .15 1.10 .15 cr. . .15 *w .* . 05 . 05 1.10 oo. . 2S .os .10 ea. .15 . 05 II.C.

$ 3-20 3 . ?G ~a. .10 (>A, .15 6.50 .OS . 05 .10 '(til . .10 .·;s *.?.5 .!0* ~«. ' .25 e«. oOS .OS l.OO ell. .OS .15 .25 .25 *.15* .so l.?.S .15 1.10 .15 cr. . .15 *w .* . 05 . 05 1.10 oo. . 2S .os .10 ea. .15 . 05 II.C.

FIGURE HO. 6 - SYMPHOH~

"r>"\_si '-=f *Lv•* ..... , .. . *fir/* ~

'+0

LA CHASSIS- REAR VIEW

**''F"**

"E'

MODEL ~-- PARTS *7800* E·78SO E·8800 E·9800 *'A'* ***i6 J6*** f •JZ06 **f·JZ06 f·J206** ~ **112J f•:J/2-3 r<H23 F•3123** ·c· ***1844* f •3 110 f'•3110 r ·3IIO** 'o• ***1845* f ·31U f •.JUI F<YJJJ** ·r · ***18A6* r·:ms f •JIIS F·3tiS**

PART NO.

F-100~ F- LOOS F-l006 r - 10n1 ?~(lOS ~-1009 ?-1010 1'-1011 F-lOlS F-1016 F-10~4 F-1051 >'-1052 F'- 1054 F- 1055 P-1056 t:'- 1057 :'- 1058 :.'-1110 F- 1112 ?- 111t ?- 111{ r-uz1 f·-U2~ F-1124- i!-ll2S F-1122 r-uso F-Utn F- 1165:- F-ll-64 F-1.167 F- llSS F-1~1 0 F-lZZ! r-1222 E'-122! >'-1507 .F-1508 F'-1511 P'-1.52-6 f-l$65 F-1800 F-1605 F-1600 F-1606 l'-1607 1'-1800 it'-1810 F'-1811 F'-181:? l'-1614 F- lCU> ?-l8l0 F-16.1-6 :"-1820 F'-1821 }'- 1822 F-18?.5 r-18~8 F-16~9 P-16{4 F-l8{5 }' .. 1&16 r-1847 P- 00:?2 r-aoe3 r-sos4 F-~089 f-$1.10 1'-Slll r-31.1.; l'-&2t P-~1?.5 F-SS','QO !.'- 5261 F-s::os ?- 5200 l'-32U f--6C()5 J'~l-'18

F HiURf ,'10. 6

SYI<PMOMOLA CllASSIS - REAR V I E~ PARTS ll ST

Reftt' 1\U'll.t.&.bld fran'\!) !:li:\'at.!.n.g • ••••••• i,e•;,.~r •

• 'l\u•nt,able e::ll)9'at.~ng Can • • ~n~ble !levatlag Caa Lever Spaeer Link . • . . • . • !:levatine 'l'urntabl.e Spindle. Le•ter Spring. . • • . . •• • . I:levating 1brw.lt B9Rring: ••• '1\U"ntnble TurnWble Li!'tint; Liftio,g Lila CoJL P.oller. Sere.,. Tu.mt.!t~l.~~ G~~r Rotll:\oor • . • Cbt.c:h Rekl\s"' RQd ~~l'lJ"ing. • Clutch 'Cl Clutch utch Reta1n1n& Ret&L~in~ R9t.>J.ining: Levb~ Yoke Yoke Pivot Pivo~ •••• Pin Coll.ar. Clutch Rc~ioine; Rol~asc Pt~'Nl Clu tch Retah!.r'l.fi 'iok¢ Torts. ion Spdng . Clutch l~ta1nin..g Yoke 11tlck . Reeord Tray . • • • • • • • • Reeord Trey Locl: Spr 1t1g • • • P.eeord 'l'!'ay Selecto:- Sl1de ?aw~ Spt·lng. Record T-one *M:m* 'rr.ay Spindle. Lock Spring . . • Plate Tono 'l'onc llrm Arm Trip Booster Oft SpriPg Lever • , To!le Tone ~M *lll"m Cn;n* Cam P.oJ.l()r P.o-11~~ Sere,.. • • • . . Seleetor- Slide- {Ca:.;ting C>.o.l,)•) Seleewr Selector Seleetor Slide- Slide Slide P..ail Pcwl P&wl Spring. . • . . • • • • S~lcctor- Slide Cr4.nk .. . • Selceto:- Sclc<; tor Slide- De vel Connect:illg: Oco.r . . . Rod RMr UNix: Lock Sprocket. • Hulrl.x St\d. • • . • • • . • Rea~· t!c!iX St.ud ft(>Uer. . • + . . 'i'nlrls-n.W:sj.or: Clul,.oh R~l.r.:~Hi'{~ Lever ~anoo.tsa!o~ Ret.a!ntne Yuke P.'i<:k and Pla-t.~,\_ 'l'l'Mslflis:sion T".zrntl.thl.$ Dri'le Cluteh Getlr 1\e.lease Hub ond Rod ?in. and P1~.s. P.na--:- Heat· 1!<:11X 1-1¢1ix Co:\tt Opera .. tine P.od. o.nd Arm.. Cttm. • • ,

• • • Reo.r !tear Hdtx Helix J.,ock Lo-c.k J.,ink Llnk Arm Guide Roller Scl·ew. . Reo.r Helix Lock Li.nk Spring . • • Rc~t.r llclix Opor<tting Seg!!Wnt Cenr PJ.!tt.:· Ucli x Opc:'(l ting Pinion . • . P.t'!:ftl:· lleHx Opc;-(tt,i\_(l(: Rttt<::hot Fb.ne:o Rea!' Rear l!eliX Helix O~rl)• Ot:.erat.tn,g .. ing R/.l;.o:~hct jt!l.tr..het. Pt1wl ?tl.wl • Sor~~w Rear Helix OpE<!'e.t.tng Clutcll Body. • Rear Helix Ope~e.ttng Clutch Sprin£ ••• Rcur Rev.r Belix Helix Operat1ng Leek ~ver Clutch • . • Sp!~irle • . . • . • • • *P.tlu,-* Hulix. Lock i4vo-r Operating P.olier.

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Jte~u· Helix J..ock. W\•cr Opor<ttint Roller Sc~·ew. ru:>ar Hl:ll!.x SpNd:c t,. Lee kine RoUor. . • • • Roor !ielix S}h·ockoi! L LQck~nt itQller S<l1't::w • • ~er Hel!.Y. Sal"'c tor Slide Con:ncc'!.Sng Spril'.g H6ar Tono !>.sm. r.el 1X (Cssting Lock Lever Only) ActueL~S Spring. Tone Arm Po::; t . 'l'011tt A.l:·m Ctt.teh. Tone Arm ~st,. • Stud 'fru·ust. .. Ct>lla.:r ... . ~ C8JT, Slutft Dr!.ve Oetu". Tone lll'm Spindl e i'bl t. BushlnS ~one Arffl Tono .r.r;n ..

• + L!sht. Ro?::;t Post.

~&ight Pick-U~

Tone Arrn Ca t<:h. • • • Tone Arm Rod ••••• Clutch !teta!n11'.£ Yoke At,lj . 8C:l'e;!'" · Rear Selix Up¢:- Bearing. Rail.!' l~otor Ht!liY. Carryover Shatt. Switch. • . . • , Rear Helix Drh•e Spindle. Switch Motor Switch Aseonbly Shield . • ftl)ar Ucli.x MB<;mb~

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PRICE

$ ·-~0 . 75 .;;s .25 .25 ea.. .25. ,ss ,45 ,10 ,10 .05 .15 -~5 .15 ,os .15 .05 ,15 .50 Assemb. .so

.15 . 2S .10 e::t. .05 ea. .05 .6()

.~:; oa. .OS .2$ . ?I.J .25 ea. . 55 .?.5 J>n:·t. of Reer P.elix .25 .;;o .so 1.00 . 75 .2$ *.iO* ••• .lo .1!: ., •'·"" .10 ..10 .05 *.ot* .2~ ••• ,10 .. 15 .OS .o~ :os .os ,QS .10 .os 1.25 .5~ .lO .25 .05 .10 2.00 .05 l.~S , 55 ,10 . t5 ,05 .10 flert of F-6178 .~S .15 .15 .:r.s 1.60

Fl GURE NO. 7 - SYMPHON

>LA CHASSIS - END VIEt/

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PART NO. llESCRIPTIOll

F-1010 F-1058 - - Turntable Turntable Spindle. Spindle , Brack~. • , • F-llll F-1121 - - Tone Record Arm Tra,y Spindle Stop . ••••• , . . . F-ll23 - Tone Arm I:ID.la):!Ce Spring. • F-1126 - Tone l<rm llalance spring t«>unting Block ?-1168 F-1130 F-1135 P-1137 P-1169 - - - - - Magazine Tone Tone Tone Magazine Arm Arm Arm Counter Pickup Pivot Pivot Veeder Spindle Block Head Co~~ter Oporating • •••••• Screw •••. . .•. • Cam • • • F-ll?O F-l.l.7l - - Ma.gazinu >lagazine Counter Counter Operating Operating Swivel. Crank .. F-ll72 F-1~46 - - ~'agazine Front ~el~x Counter Elevating Mounting Link Bracket.

•••• F-1250 F-1251 J.l'-1252 1,..-1572 Y-125~ F-1507 - - - - 1'-1800 - Roar Front Transmission Turntable Front Front Front Helix Helix Helix He~~ Helix Assembly Oper<.ting Co.neilliog Cancelling Cancelling Cancolling Clutch • Release c;..,, • Cam cam Ca~ • Lever Roller. Roller • Lever. • • • • • • Sere~. F-1844 - f-3022 F-1850 P-1851 F-1859 ?-1860 F-1865 F-~~ - - - - - - - F'-&l54 - Stud TTan$mi$sion Tone Record P~cord P£cord\_ Record; Aecord Arm (Shorting Counter Counter Counter Counter Counter • • Co.~t. Shaft Dri • • • Dial Ratchet Escapement. Fra.~e ve Dearing Switch) Escapement +..rorm • ••• • • • • Support . . Spring . Ge{lr. • F-5005 E'-6062 - - Shorting Front Helix S·.d St'.a!'t t.ch.. • A:$sembly

• • • • F-6065 - Magazine Coven· ASSOII\b:cy. •

NO. USJ::D

l l 2 ea . l l 1 1 1 1 1 1 1 l 1 2 eu. .l l 1 l l 1 1 ~~I 2o 20 Complete Ascembly F-1592 1 l 1 l 1 l

"C':.f~ONT VIEW- U:VE~ ASSEMBLY

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PRICE

$ .65 1.10 .15 .15 .15 .25 s.so .15 .os 1.50 .15 . 10 .10 .lS .25 .25 .:!0 .os .OS . 25 .75 . 25 1.25

7.50

.os . 25 2.50 -15 1.:~5 . 55

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FIGURE HO. 8- SYMPHONOLA CHASSIS- FRONT VIEW

PART NO. DESCRIPTION

F-1001 F-1002 - - 'l'op Front Shelf. Fra~e • •• • , •••••• F-1840 - l'.otor ~lounting Base. • • • • 1'-1841 - ~<:>tor 1-lountin& Spriz>&. • • • F-5110 - Tone-Ar= - Light \Ieight Pick-Up. P-512.1-li - Pick-Up Kead - Li;:ht \leigh~ P;.ek-Up. l'-5126-A - Pick-Up l!ead - Light Wei&bt Pick-Up. F-3206 - Rear Helix Drive Spindle • • , • F-3206 - &1<tctor Helix Spindle BeAring • • •

NO. USED PRICE

l l l 1 1 1 1 1 1

~- 5 . 20 7S 1.10 .25 l.3S 6.00 6.00 .lS . 2()

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Q <..)

I-..: ""' "" X (.) C/)

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lnJI fART 110.

fl~ 82·433 R·!' 6248!' *fl-5* , .. !076 R~ 62613 R-5 8£606 R·O 8£<33 R-'1 6:1428 R·B 8£·1•3 R·9 0?.413 11-10 62443 R·l1 10039 R·1• t324Z~ P.-13 10888 Jt-J.4 6~463 ft-16 61039 ~6 810<C. R-1? 81040 ~18 82719

c-1 86(K:S c-t 86051 c-s 86008 ~ 86013 c-s 86031 c-a 86070

C-7 67!>{2 C-0 075U C-9 87>13 C-10 875)5 ~1-•1 87512 C-U-B C-1£:-A C-12-R 87530 c-12-C

c-13 8l5010

Y~1 l210S9 ~ 12060 "-S 12063 ~ ll$16 IH lD79l l'.-6 12065 M-'1 1?.064 M-6 1221? M-9 12216 M·lO F-1369 M-10 120'17 M·ll P-1349 M-le 12031 M-13 F-7a.16 M-14 14173 M-15 84203 ..... 16 8-4201 M-17 84200 ...... 18 84200 M-19 U~67 1\-20 12032 •-21 84248 Y.-22 842<8 ,\_2! 84U<, 11-24 ll40l M-U 84222 Moo!!& *1'-689'1* M-27 F-0024 M-28 12108 M-~9 14215 M-30 12106 M-31 12105 ..... 32 14121

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Fl OURE MO. 9 SCitOtATI C OIAGRI.II FOR TYPE 82[>. 10 .114Pll Fl ER

D!:scPJPTIOS

500 16,000 s,roo 5,&00 24,000 75,000 2 59,000 39,000 *,zoo* OIIA$ Chao Ohms Ohme Ohm Obmo Ohms Ohm• Ohms l/2 1/2 1/'2. 1/2 'o11/2 0l\ill0 l/2 l/2 l/2 "" •••~ llll~t. W'o.t.t. .. w..~t watt wot~ wott lOS Cortt.rol 10% 10% lOS 10%. ~ 5~ 10~ • • • • • •

• . 39,000 OhJflf.l J./2 Wlltt lO%.

RESt STORS

100,000 Ohms Var1.&r.bl• Bcuae Cc,ml.rol. 620 OhJm) l/2 ' " tt 10% • • • . • . • 1 Megohm Varitt.blo TtebJ (J C<lnt.rol. • 6,800 20 Onmo OUrna s 1/2 ~ott• ll,OOO Ohms 10 W•tt W&tt.e !OS lOS (V1ro l.O:C .•.•.• ~ound) ('llJ.re sso 2,000 au.. Cbo1.o 1 10 •••• \•tt• s~. lOS . (>;Ire . . ... . ••o.a•l). . 'll'ound) . . . PAPER (I)I O(NS£RS

.25 Mf'd, 200 V-olt.&. .(>2 Krd. <00 ~.1 ....

• 1 .. OS Krd. *xte.* 200 400 Volu Volu. • .02 JU'd. 400 'lol~o. .01 Mrd. 1000 Volt.l

1'1. (CTROL YTI C (1)8 DEHSERS

16 !o\f'd. t..7S Volta 'lrt6t 16 Mtd. 47S Volta 'Net. 12 Mfd. 150 Volta ~ 12 20 r.u-d. ~lfd . lbo 25 'lol Volt• t& Dry. Dry 20 M.fd. 25 Vol t g Dt')' • 20 Mrd. 20 20 fU'd Mtc. . 25 ~50 'iol Volto t.a br:t. Dry ~so Volto Dry

•ICA COHD!liSERS .0015 1\fd. 1500 lW. 10!'. • •

s Power Vol\ Tre.mforur Tr41.atomor. . 1'1ll.er 25 Bias Volt Cboke. Cllo~e. ~forMr . . • • • • Bs-ss CJ'o)c. • • • Inpu~ Trar.aforr~r •

• Spoa.k 16 Output Ft. or Transformer Lino Ma. telling Cord Po.ntl. . und 2 Mtl.ir. Ft. s·,.,itcb Line Cord •... I.Uld J>lva ••• Plus · Lip,hl, Switch ••••••• Z-:i./2 AmP· Lir,ht t'UDo ••

Mt stau•mus

2.5 Piekup :U:.p Spcket . Non-tamper&bl., • • • • • Motor • • • f\We. • Socket for s~,honol.a SpeUtr . Socket Socket lmq Pluo fo.r for Socke~ for Wired Wired Tran6a1tLor (<inion Re.mol.<l P~~• Sholl) Outpu~ Speaker Spook~r •••.

• Socket. for ?o.er t.o Tntnt:lailter Socket. Socket. *tor* ror Power Pot.er to to Sol&M1d Rerot.e Control Drur • Equi\_;:~e:a .. Kotor Socl.et. Soekot l51t Remote rtemot.e sy~phonola Recept&c.l•. for for Voltllfl(' VolWllo Llf.btJ..a& EJ..c:. Control Control Sp.aktr. S•hct.or • • • Tnntt'Or'lt$r Mot.or Cable • • • • • Uy)lto. • • •• • •

• • Re~te ?~~te Remot.e Scloet1on Selection Vulwuo Contr-ol Cunctl Cunool Swit.ch S.tt.ch.

Rolny

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PRIC~

• *,fY1 .IYT* .75 *.fY1 .IYT .en .0'1* .07 .07 *.en* .75 .o? .75 . 0'1 . 20 .25 . .15 25 .15 .10 .10 .10 .10 .10

l.OC 1.00 *.!>G* J

1.25 .75 .~5

.20

*•.* 2.50 *so* 1.25 1.75 ~.00 l.SO .GS 2.25 . .es .2b 2() .~5 .45 .10 .25 .10 .10 .15 .15 . 25 .15 .10

.1C .1~ . :I() per toot u.oo e.n .15 . .10 07 . 35

1.25 .45

FIGURE NO. 10- FRO/IT VIEY/ OF TYPE 825- 10 AMPLIFIER

ITEM PART JIQ, DESCRIPTION PPJ:CE ITEN P1\RT JIO. DESCPlPTION PRICE l. 120~2 - Small 4 Contact Socket $ .15 21 100S9 - **Bass Con t.rol** . $ **.75** 2 84248 - **Octal Socket** . .10 22 12077 - 2Ft. Pow~r **Cord &: Plug. .25** 5 84248 - **Octal Socket** . . .10 **25** 12059 - **?o.,·er Trtmsfonner. 4.EO** 4 6424<; - 9 Contact Socket . .10 24 12065 - **25 Volt TrHnsforrner.** 3.00 *5* 11401 - 2 Prong Receptacle *.20* 25 12060 - **6 Volt Tnmsformer 2.!'50** 6 84222 - **4 Contact** ~ocket .10 26 875?2 - 16 ~lfd. **475 Volt 'io.'et** 7 F-8897 - &~11 **Polarized 2 Con- Blectrolytic** Cona~ns~r 1.00 **tact Socket.** . . .15 27 87541 - 16 Mfd. **475 Volt 11\·et** 8 81203 - ***5* Contact Pickup Socket.** .10 **Electrolytic Condeni$er** 1.00 9 84201 - **6 Contact Spee..ker Socket** .10 28 87530 - Dulll 20 ~tfd . **450 Volt.,** 10 ll567 - Durnllv Plug , . . . . . 25 Single 20 1<\fd • **25 Volt** ll 84200 - ***1* ConU..ct Speaker Socket** .15 **Dry Electrolytic Con-** 12 84200 - **'l Contact Speaker Socket** .15 **denser 1.25** 13 12216 - **Speaker Mo. tch:tng: ?anal** . 20 29 12055 - Eass Choke . **1.25** 14 **1?.030** - Light Fuse Receptacl e . . **. 25** 30 120S7 - **'l'ransforJ!l.er Housing.** l.SO l5 F- 7846 - 2-1/2 1\J:p. J'Use. • • • . .10 51 - 'l'.;pe 6SQ7 Tube . **.€4 1$** 14175 - 2-1/2 mp. lion- **52** - Tyye 6JSGT Tube. .sa **tamperable Fuse Sockot** .40 53 - ***'i'>jpe* 6JSGT Tube .** .€8 17 14175 - **2-1/2 Amp. Non-** <-4 - ***T'Jpa* 6JSGT Tube. .ea tamperable ;.use. .25** 35 - 1'ype 6L6 Tube. 1.29 16 10056 - **Control Knob** .10 36 - :i'ne 616 Tube. 1.29 19 10668 - Treble Control **.75** 3? - Type 5U4G Tube .64 20 10056 - Control Knob . .10 **l:J8** - Type SY3G Tube . 44

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1 *t* , • *b* • 'I B 0 10 ll 1~ 1< 1b 18 17

l8 13 20 22

FIGURE HO. II BOTTOM VIEW OF TYPE 825-10 AMPLIFIER

f-1M3 1:00>1 r- ro75 l1515 10791 12n1 lZOi54 llVJ~ 92~02

92433

100~9

10G98

810<0

810.U

92119

O:JC!UYrlOtf

*llain* ucnt S.1 s.-s :.c:h \.C:h. • ~ 1Sfilter 1trJO Otl.WI Cbok~ VolUif.~ ••••• C:.mo.rol .• 81u Cbok6. Inpi.tt. 'l'rw'lt>l'ornlcT .. Output 8hitl.<1ud 'l':un:'IJ"ormor. Inl;.vt. J,Gt«! •• !.·Jo R.cwi• *Ot\1\11*~Ot' *1* l/2. . s,~oo Oh111t1, 1~,000 Rc:~:J~t.ot'. Otl.\_, 'IJul.t, 10% • • L/2 ""'Jl!.t, • • •

1/2 • • ~ •• .. t, 1~

• s" • Roc1•t.or. ~,?00 Ct.N, 1/2 • •• •• • 'Act, s~ *2,200* Jto$.1tttor (»."', •••••• l/2 watt., ~ •• Rodtto:'. • ••• 39,000 Redot.or. ti)"t, l/2 V.iltt., 10$ 1001000 Ct>n~l. c:ti.N; Vari«ble , •.• Hl>-~tl

••. 820 Ohma, l/2 't.'At.L, 10%

Ru~Ut.or. 1 Mt~«ohm VJtr\..•tblo TreQle Con.LroL 20 (Ibn:~, P\_ut~.le~r 5 W..tt, 'liire \lo-:.md

lOS

~,000 fl'oda-:.or ~"11:1 J 11,000 ~'!lll, t() ~t.t, 1.0%. V1~e \found 10 ""-U, 10.% • Beabt.cr "ire \,'o-..:;M • • G,IJOO Res1t.t.or. Q-.l'l't1 1/2 • 6&0 Olwt, L ~'lttt, \'v;t.t, 1~ *5%* R~ :;bi.Or. ~

t. .15 *.n* -~ 1.75 l.GO .os :L:?5 .10

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.1 . .;~ Can.J.,n~ c.,ndon~or '·lfd., l'~:t., or ® 4'00 • • \10:~ Vo!t. • . . • hpcr

••• . J'"'P'"r . . . • r- .l.& • ':>5 i'll'd., 400 Volt. 1~.1r.cr , !);:: Ca00clll1(Jt CondUiii.l()r *!·itd .1* 1 - 1 -1- *i* - 1 - 1 - 1 -,

~00 Volt Pb.J)c;n· 1-, • • • .. eo. 1-

.12 Kt\1 ., 1.000 \'olt Phpr;:-

2 -

Cull:Jor.~•r ,(Yll,$ ...... (1!00 • • • ..... • , • • )

• 1 -

l~ to~« COI'Idll:t~cr C\1,1\l 20 Jf.!o .. , 2-" ~ol \. 0:7 E:.ec;.:oo}¥t.lt eoc..~~n54!'!'" 1 -12 ".fQ. .. , 1$0 'loll *r.t-J* 1-16 E1~~trolTL1~ 1Cf4., 41~ ·:~lt. C<h~onser \ret. E1«1.1'ol,yt1~ Condcn!:e: S- u 'lfd., 47S Vo!!. 'IC"~l Llt'atrol)'W.o c.,.ndenser 1 - lli:.el 20 l·'ftt., .-~SO 5irlf;lo 20 r·t!'d . J 1 -

Dry Eloct.roJ.,:rt.!.~ \'olt25 Conden:;er

\'ol 1 t.

Spcu.a~er >:S t.oh L.n,& P,Hlo.l • 1 -6 PronQ S~&a!(,,r :locket

1-

1 -1-

1 1-

1 -l4 1-

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Fuse. Recept...e:.e

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FIGURE NO.

401 I I r- ,-\_J I I I I I I I I L ----- M·20

12 - SCHEMATIC [)IAGRAM FOR TYPE 825-5 AMPLIFIER

-----------, ~~~!.2i~l ·······;;• ; : : :''·J~ ' \_\_ ~?+-.. .~.~~"~"-'"\.-... .:U ~,.\_.:·:>!r-~-.i •. :;:: • ~~------ : .. '"t=-· :-~1' ----- . .1----r=w\_:""t -~- ··-- ---rl b II

I I I, Ili ~~·------- ..... r I r---.. I I I I *l* 0 t ·~~ I - '~!.~ .$'tn•~OI..II 0 ~------'!! - *(.,* M·l9 -·(-'r-i•foi.-JO ..... J .. 111f.t ·---------,4, .. , , t....::·-t--'f: 1-~:.-- '!\.. ---·---..., ' ..-.... \*I> ~,~ ....:c w '10'1'( Ultt-11 ~ ltlQII' ...... .. :t""" *,,:* "'11!1!!..!!!<.1.; ....... ~,I '< ' ... .. o, o *G'* C\~1 "'""""'I II U't.AJ(f• -~-~--" I I I I ~- ·--·~ ~·; • ~... \_\_\_\_\_\_\_\_ . ...\_ J .. \_. ' ; .. ' : ' ------------' ~~-------J 1 : I o , ;;.,. o I 'L'~ -~·!( I I I I

WOl&t YOl Wlt-1""-H.ll At.""A'"I "'ION) l *l* ;\ 16 Al.l. A Alt. liN! ~Mtll f)MHy H YOI.lt.tl\ ~CIIt.l llo'ltlll(D \'OI.lt.!Lt 'IOI.Ut~l 11'1.1.9 WC,o;ttt t 14'~1)4.W1S Ioiii': Wtloo t'l 'WI! t.llt h Vlt'~~~tO (ITM(II i GI!Elll Vlo1.Cn *o.ttt.SUI'e'....O* A 1000 011( I So!£LL 110M " QIIW ll!ll t r$ O 001 At l'lfl ¢ T,.! SI"()O~O "11-SS-'S. fOW. *U1* YOI..' *1* J.'l (lll(lltV>l. lllMOTC WII(O $11'(,1o([.1t IS V$tD, (,.lfMLit W'lM (lilt

--- - - -- I I

~'~ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_\_J

l..C ,-lltw tloi!Cll. A«.Utotl't t !C.4fll:ll lllt~lC •.fr~CWJ lt·T ffl:e'or At YOI,.UG( tOUNlw1 YOoii.Wt X•'t ~frt 'i~c 01$TC...II 11"0111 OOto"-ol. 1'1' '~" 041Jo!£D "'MPS *01* .uo *t..* •wl"'.trtt~>.s TVIt l.HES kU.<OtiOH .,.A$ • OIT611oED w-11(. *\_) \_)*

ITEJ>I

R-1 R- 2 R-5 ll-4 n-s R-6 R-7 R-6 R-9 P-10 R-11 R-.lZ P...!S R-14 R-15

C- 7 C-8 C-9 C:if,,l C..ll-B C-l2-A C..l2CS C-l2...C

C-15 C-14

M-L X-2 *M- ?J X-4* X- 5 X- 6 >~7 ~-6 X- 9 14-10 1·1-10 ~11 Y.~12 J-1-13 J.~ltl J.~-lS ~\-16 ~\-17 1·\-18 J>\--19 1\-20 1\-21 1\-22 ~~-2~ 1>!- 24 1-1-25 1-!-2G 1·1-27 14-28 r.:\_:..zg 1-l-SO ){- 31 ?-~52

PAR'£ 110 .

82435 82482 f'-50?0 82449 82433 *$242.8* 82443 8245~ 821l48 $2'14:3- 10059 82425 10698 82424 82719

86045 880:;1 86008 86013 860:;1 86069

87542 87541 87513 87513

87512

87550

sso1s 85010

12059 12080 1206~ 11316 10791 12065 1?.064 12ose 12216 1'-1369 12077 ?-1349 1.2031 ?-7846 141'/5 94205 04:<01 64200 84200 11367 12032 8424$ $4248 84244 11401 8~222 F-999'7 F-s-a:~4 12100 14215 12108 12105 141Zl

FIGURE MO. 12

SCHEMATIC DIAGRAM FOR TYPE 825-5 AMPl iFIER

DESCRIPTION RESISTORS 5,-eoo on:-.:: 1/2 lo.'at.t 1~ . 500 Olu>IS 1/2 Watt 10~ •• 16,000 Ohrns Volume CoutJ:ol. l CO ,00) Ohmo 1/2 llatt 10~ • 5,600 2 , 200 Ohl:ts oru.. 1/2 •• tt 1/2 \lett 10% 10% •• • • 39,000 OhM 1/2 )fe1-t 10% •• 100,000 220,000 Ohms Ohms 1/2 1/2 ll•tt w~tt 10% 10% • • 5~,000 Ohm$ 1/~ 'tfet.t 1(1/, • 1.00,000 Ohms Variable Bass Control. 820 Ohms l/2 ~1att 10% • • • • • • • l. Megoh.R Varj.e.ble Treble Control. 1000 650 Oll.r.ls Ohna 1 1/2 \o.'ntt ;:att s,;.

10%. PAPER CONDENSERS

.25 l·ti'd. 200 Volts. . 02 !·1fd . 100 Vol ts. .1 r.u-d. 200 Vol t t:t • .05 l·!fd. 400 Volts. .02 .cos ~tfd f'.i,fd. . 400 Volts. 1000 Volts. ELECTROLYT IC CONOEMSEP.S 10 Mtd. 475 Volto Wet 16 ~d . 475 lJoltto 'tlct 12 IU'd. l50 'lolts *Or:y* 12 Kfd. 130 Volts Dry 20 Kfc\. 25 Volts *Dey.* 20 r<fd. 25 Volts *Dry.* 20 K!'d. ~0 ~~d . *?.5* 450 Volts. Volts Dl""J. *Dry* 20 Xfd. 450 'loHs *Dey*

.002 .0015 ~lfd. Mfd. 20:JO 1500 !'.of. 11."1!. 10% 10%.

Power 'l'.ransf'orme.r • 6 \folt l':'ansfol'lfler. :~s \tolt Tr.·uns.torJnor Fil Bias tor Ci1oko. Choke. • lrlput &t:::: Choke Transfotuoer ••• • Output l'r{msfo:..-mer. Spec:.ker J.'iitching p.,\_,.cl. , 16 I-'t. Line. Cord 1."1t1d f'lug 2 ?'t , Lit:e Cord and Pl ug. t·~in Sv:itcb • • Light. Swi t(.;h. • • • • .. Z-l/?. A1119. Light FUse

~I CA CONOENSERS

MISCELLANEOUS

*:t.s* AAp. 1lon- tal1lpm·abl<: J.kltor Fuse. Socket Picl..-u1> Sockot for Sym:phonole • SpeakP.r Socket f'Ol' Wired Remote Speaker Socket for Wired Remote Spf:laker Soc.ket J.:lulnrey Plus i'cr - Transmitter Green Shell. Output • Socket for Power to Transmitter Socket Socket for !:or Po~er Po..-.ter to t o Solenoid Drum Rer..ote Colltrol • .Equipman·t. t4otor Rcccpt.a¢le. • Socket Socket for for Lif5b1..i E:lcc't:tical ne Tre.nt£or)l!G:r Scle:cto:t· Light.s 15" SyF1pbonole. Speaker. ltcmotu Rcm.ote \'olumc Vol\Ulll.: Control Control Y.otor Ce.ble • . R~;;;mote Volwna Control Swi tcb. Rcrote R~~t¢ SolcctJ.on Selection Ca..ncel Cancel Switch.

*Rclby*

53

PRICE

$ .07 .07 . 75 .07 .07 .07 .0? *.O'l* .07 0'' .?$ .07 .75 .07 .15

.J.S .10 .10 .10 .10 .10

1.00 1.00 !

. .cs 3S .75

1.25

.20 .20

1·SO 2 . SO 3.00 1.50 1.25 1.75 2-. .65 *.::o* 25 .85 .25. .45 .~s .10 .25 . .10 .lS .10 .2S . .lS 15 .10 .10 .10 . .10 2C .15 16. 50 6. 75 per ft. .07 .zs .45 1 . 25

F I G U R E N 0 • I 3 - F R 0 lf T V I E *VI* 0 F . T Y P E 8 2 5- 5 AMP L I F I E R n

I 0

•

l'l'EN **P/tR'r :10.** DESCRIPTION PRICE **ITE\_,** PART NO. DE[:;CRIPTIOlf PRICE

1 **120$2** - **Small 4 Contact Socket** $ .15 21 10059 - **Bass Control** l} .75 2 **84248** - **Octal $ocke"** .10 22 120'17 - **2 Ft.** Power Cord & Plug. **. 25** 5 84248 - Octal Sock"t .10 23 12059 - **Povtor 'I'ransfor1oor.** 4.50 4 84244 - **9 Contact Socket** .10 24 **120GZ** - **25 Volt** 'ITan~former. 3.00 5 11401 - **2 Prong ReceptAcle** .20 25 12060 - **6 Volt Tl·ansformer** 2.50 6 84222 - **4 Contact Socket** .10 26 87542 - 16 i•IFD. **4 75 Volt '"'et** 7 F-8897 - Small Polarized 2 Con- **Electrolytic Condenser** 1.00 !:act Socket. .15 27 87541 - 16 >IFD. 475 Volt \let 8 84203 - **5 Contact Pickup SockAt.** .10 **Electrolytic Condenser** 1.00 9 84201 - **6 Cont&ct Speaker Socket** .10 28 S7soo - ll\utl 20 l'>rLJ. **450 Volt,** 10 11367 - Dummy Plug **. 25** Single 20 eWD. 25 Vol t 11 84200 - **7 Contact Sp-eake-r Socket** .15 Dry Electrolytic Con- 12 84200 - 7 Contact Spe.Xer Socket **.15 denser 1.25** lo 12216 - **Speaker** ~·1atching **Panel** .20 29 12065 - Sass Choku 1.25 14 12050 - **T,.ight. Fuse Receptacle.** .20 50 120S7 - **Tran:;former Hcu:;ing. 1.!50** 15 F-7846 - 2-1/2 Amp. **Fuse.** .10 31 - Typ<> 6SQ7 Tube .64 16 14175 2 1/'' • **Non-** ~2 - **T-\_v--pe GJSCT Tube.** .63 - - ***;c* Mnp .** tamperab1e ru •• Socket • 40 5b - Type 6J5GT Tubo • .68 17 14173 - 2-1/2 Anp. Non- 54 - Type 6JSCT l'ube. .68 tamperable r\>se. .25 **::>5** - Type 6L6 Tube . 1. ~9 18 **10056** - **Control Knob** .10 36 - Type 6L6 'l'ube. 1.29 19 1068() - **'Treble Control** *.15* 57 - **Type** 5Y3G Tube .44 20 **10056** - **Control Knob** .10 sa - **Type 5 U4G Tube** .64

54

FIGURE HO. Ill- BOTTO!'! VI EW OF TYP E 825-5 AMPLIFI ER *r*

11'i:J·l PH'.'I i:o. ?~ . DwCRIPT;Oii PP.ICE ITEM PART tlO. RF.Q. D~Cn!f!1'IOII PRICE

1 F-1~42 1 - l·'lt.in t-'rd, 1\_41t. $ .35 21 86008 1 - .1 l·l."'l>. *J* £00 \rolt $· *2* l:W~·l 1 - Lleht &c.7.tch . !IS Paper Conde-nser. .10 f. F-ZC7(; l - 16 ,ooo Ohm. '.'olu.11e Con- 22 86015 1 .OS I•T:"D. , .;co 'lolt.

tro1 ~ 75 P<mcr Cooder.sf'~'. .10 4 llfl6 1 - Filwr C:10Y.P. l.$0 25 eGO!l 2 .02 ~1!'D. , ~00 \'olt Paper s 107Dl 1 - Eit:S Ch¢ke .65 Cor.ciense:r. cu. .10 6 lZ054 1 - tnp~.:.t. T!'&r•!.fornt;,·:r . 1.75 2< 86069 1 - .oos *1>\?'D. '* lOOt) Volt 7 1~058 1 - O'Utput. *'1'l:t* r.sf *()l'T.er* ;: .:.:.s ?ttpP.~· Con1et:se-r. .10 -- e ll?,.ol; 1 - ShtelCed !r.put leml. . 10 ?.S $;>01$ 1 - .002 ~i?D. (?.COO ;.~;lF) , 9 9246i: 1 -500 Oh~~W, 1/2 , .a~t., ~c~ 1~ i-iie(: eo~)df!nt:er . 20

;(e::;isto:· .07 26 85010 1 - .Oj.lS Nff}. (1500 i·t-T) t 10 e?.45e *2* - s,aoo m·,m:;, l/2 i!f:tt, l()% !Ucs. Co!)cienser . ~0 10~ Hesl sto:· e::.. .07 ?.7 87!.>1~ 1 -Dual 20 XFD., *?.5-* Volt n 62·~·1$ *?.* - 100, 000 Ohms ~ 1/2 '.'a.tt., Dry Elec;.:oolytie *Con-*

10:; Re~iatol' 0.'-· *.01* den$sr . .75 12 8?.42$ 1 - 1. , 200 Oh~-~ , *1/Z \-:6tt.,* 28 87510 *2* - 12 *Mi"D.,* 1St) Volt. try

10~ Re~it:t¢l' .o7 Uectrolytic Com~enser ""· . ~s }3 8M4~ 2 - .:.9 ,000 O!uru;., 1/2 \-.'ett, 29 87&42 1 -16 l·f!'D. , 47S Volt 'lot

l(l~ Re:cistor ""· .07 &octrolytic Co1tderr.s:er 1.00 14 A:;-452. L - :.:~0,000 Ohm:o , 1/2 l''.5.t.i.., F.C 87541 1 16 f·lf"D. , 475 Vol~ 'ti'et.

10% nesistor .0? Electl•olytic ConciemJcr l.OO 15 1C0<9 l -100,000 Ohms \'~l"io hle ~1 87:i;;o 1 - D-.:.!.1 *1.0* ~1:"1). 4.50 \fo.tt,

3!l:::>S *Co:-.vt·ol* . 75 :5-in:;:le ~.0 i-'!?'1). 16 82123 1 - azo Ohmn, 1/2 l"ett, 10% 25 \!olt D!•y

Rcsi~H<Ot' *.o·t* $1Htr-olytic Com:!em;er !.?.S 17 l06se 1 - 1 l>leeo!'>Jil Var!.cblo Trcbl(: ~2 12?.16 1 - Sp(:,..l:er t·~tching p,..:;e·l .20 Com.rol. . ' . . .7$ 53 54201 1 - G Pr-one .3pN:h!· Sccket . 10 18 eN~4 1 - 1,000 ChJ!IS1 l /t! ';at;., *t4* $4200 2 -7 ?ror.g $pet~ *Y.cr* eock~t *ee.* .lS

\0~ ResiJ< ~~r .0"/ Z5 1-1175 1 .. < Amp. lfon-~:c;pet>c..ble - ··~>; 19 82719 1 -G50 O~•r.:; , 1 'r{;.1t.t, 5'% ?u$t': P.cceptacle. . 40 ReSi$to:· .15 *a* uoro 1 - Light :'l~C P.ccep\..,.)Cl('. .25 20 8G04S .l - . 25 ;.rro., 200 Vo!t Paper 'f-7 l?.O~S l - Electrolyt.te 1>1Qtcitin£

Co~lcicr:.:;or . .15 l\:l•t;:.cket . .10 ~8 wa~?- 1 - Electrolytic Nountirlt\ ?lt lt~ . .OS

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"" I LO *<0* w c.. >-1-"" 0 u..

I-< ::£ w :0:: <..> Cl)

LO 0 :z:

L------------~ I I I I L • •

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56

ITEK

R-1 R-2 R-5 R-4 R-5 R-6 R-7 R-8 R-9 R-10 R-U-A R-ll-B

c-1 C-2 C- 3

C-4 c-s c-s C-7-A 1 G-7-B C-8-~} C-8- B

C- 9

lol-l ~t-2 ~t-3 M-4 N-5 )\-6 M-7 H- 8 M-a M-9 M- 10 ~I-ll M-12 M-13 14-14 ~t-15 M-16 M-17 14-18 ~~-19 1~-20 ~~-21 1~-22 M-23 14-24 H-2.5 M- 26 M- 27 M-28 M- 29 ~~-50

PART liD.

82455 82462 F- 3076 82448 82425 82440 10687 82425 10688 **82453** 81003

86043 86068 86026

87001 87001 87524 87517

87512

85017

12057 12063 10036 U072 10711 11541 U 319 F-1~69 12077 **}"-1349** J.2031 F-7846 14173 84203 84201 84200 84200 12052 84248 84248 84244 U 401 84222 12055 11567 F-7018 12108 14215 12106 12105 14121

FIGURE KO. 15

SCHEMATIC DIAGRAM FOR TYPE 615-3 AMPLIFIER

5,600 soo Ohms Ohms 1/2 1/2 ;ro.tt Watt 10% 10% •• • 16,000 Ohm Volume Control 100,000 620 OhnLo Ohms l/2 Watt 1/2 Watt 10% 10% • • 22,000 Ohms 1/2 Wo.tt 10%.

DESCRIPTIO!l RESISTORS

100,000 Ohms Variable 820 Ohms 1/2 \fatt ~0% Bass • . • Control. • . • 5,600 1-Megobm O)).ms Variable 1/2 ·~att Treble 10% .• Control. .•• 200 1400 Ohms Ohms 2-1/2 17- l/2 Wo. ;ratts tts W:Lre W:lre Wound Wound

• PAPER COH DEHSERS .25 .05 l•tFD. MFD. 400 200 Volts. Volts. .015 lolFD. 400 Volts

ELECTROLYTIC CONDENSERS 16 ~!FD. 475 Volts Wet 16 12 Hr"D. ~!FD. 475 450 Volts Volts Wet Dry 20 20 l'iFD. loll'D. 450 450 Volts Volts Dry Dry 20 20 MFD. MFD. 25 25 Volts Vol ts Dry. Dry.

• • 005 MFD. 3000 NMF. 20%

**Povter** 25 Volt **Transformer** Trat•s(ormer • Bass Filter Choke. Choke. • • ••

•

MICA CONDENSERS

M I SCELLAH EOUS

**Input Transformer** . Speaker 16 OUtput Ft. Line Transf lolatehl.ng Cord ormer. Pnnel. & Pl'Ug 2 l~al.n Ft. Swi Power tcb Cord • • & Pl'Ug

• , Light 2-1/2 *2.5* Pickup P;np. Amp. Switeh Socket Non-temperable Light .••. • Fuse . • . • • . • . • • . Motor • • • Fuse. • Socke~ for Symphonola Speaker . Socket for H:lred Remote Spel'lcer **Socket** Socket **for** for **Socket** Socket **for** for **\tlired Remot& Powet·** Power Tr~<nsmitter to **to** OUtput **Spaaker** • Solenoid **Transmitter** Drum **Socket Hotor Receptacl for PO\ver e. to** • **Remote** • • • • **Control** • • • **F£t·u1pt.** Socket Light Sockot for Power • to • Magat.l.ne • • • • Relay.

• • **1sn** Dwro~ ~mphonola Plug Assembly **Speaker** Green **•** • Shell •• Remote Remote Volume Volume Control Control Motor Cable . Romote Remote Select.ion Volume Control Cancel SWitch. Switoh. **Remote So lee tion cancel ReJ.ay** .

57

:} :}

. per ft.

PRICE

$ .07 .07 .75 .07 .07 .07 .75 .07 .75 .07 .35

**.15** .10 .10

1.00 1 .• oo .50 .so

*.15*

.20

4.50 3.00 1.50 1.25 1.60 1.40 .20 .85 . 25 **.35** .45 .10 .25 .10 .10 .15 .15 .15 .10 .10 .10 .20 .10 .15 .25 u.oo 6.75 .07 .55 ,45 1 .25

F I G U R E N 0 • I 6 - FRONT V I E W 0 F T Y P E 6 I 5- 3 A~l P L I F I E R n

ITE!~ l'AR'r NO. DESCRIPTION \'RICE IT&\ PART NO. DESCRIPTION PRICE

1 12032 - &.all 4 Contact Socket $ .15 20 10056 - Control Knob $ .10 2 84248 - Octal Socket . .10 21 10687 - **Bass Control** . . **.75** 3 84248 - Octal Socket .10 22 12077 - *?.* Ft. **Po·t:er Cord & Plug.** .25 4 84244 - **9 Contact Socket** . .10 23 12057 - **Power Transformer.** . **4.50** 5 11401 - 2 Prong Receptacle . .20 24 12063 - **25 Volt Transi'or:ner.** *i..oo* 6 84222 - 4 Contact Socket . . .10 2S 87001 - 16 IQ'D, 4 75 Volt ~let 7 1?.053 - Smull 5 Contact Socket .15 Elcc trolytic **Condenser** 1.00 8 84205 - **S Contact. Pickut:> Socket.** .10 26 87001 - **16 H.FD. 475 Volt 1 ... 'et** 9 84201 - 6 Contact Speaker Socket .10 Electrolytic **CondAnsE'!r** 1.00 10 noG't - Dwnmy Pll.l(l . **. 25** 27 87517 - Dual 20 NFD. 150 Volt ll 84200 - ***7* Cont..ac t Speaker Socket** .15 Dry Electrolytic Con- 12 84200 - **'7 Contact Speaker Socket** .15 **donsol·** . . . 80 lB 11319 - Spe~ker **Matchi ng Panel** .20 28 11072 - Bass Choke . 1.25 14 12050 -Light Fuse Recoptaele. • 25 29 12037 - **Transfo:r·me-r Housi ne. • l.SO** 15 F-7846 - 2-l/2 Amp. Fuse. • . • .10 30 - Type 6JSGT ·Tube. .68 16 14175 - 2-l/2 Amp. **Non- tamper- 51** - Type 6J5GT Tube. .68 &ble **f use Socket** .40 32 - Type 2A3 Tube. 1.29 17 14175 - 2-1/2 Amp. **Non-tam-** 35 - Type 21\0 Tube. l..29 **pera.ble Fuse** .25 54 - Type 5U4G Tube .61 18 10056 - **Control Knob** .10 35 - 'l'.rpe 5Y$G Tube .44 19 10688 - **Treble Control** .75 58

Fl GURE NO. 7 - BOTTOM VIEW OF TYPE 515-3 AMPLIFIER

I"rol **PART *!lO.*** ~ - D::.SCRI?TION !'RIC£ rn;~ PART 110. ?~. ll£SCRIP'!'IO~ PR:CE

1 "-U43 1 - :-lain S..i tch *t* -~ 18 80026 1 - .015 KFD. ~'Xl Volt $ 2 120~1 l - Lit;ht Soli tc~ . . 45 **Paper Cor.don'-Or** .10 3 F-:o"IG 1 - **16,000 O!'Lc** Vol·<XY~e 19 85017 1 .00, .4F!). (3000 loCO') C~,t.rol .75 10~ Kic~ Con<!en~r . .10 • 100~C 1 - rute, Choke. . 1 . 50 zo 87512 1 - Du:.l ro 14ID., ?S Volt 5 10711 1 - **Input** 7rAns!o~mer 1 . ?5 ~Y El&ctrolytic 6 111141 1 - **Out.;::ut** Tran~t:>rmer . 2.25 **Condenlfer** . . 75 7 lll\04 1 - **Shielded (nput Lead** • 11) 21 **87524** l - 12 P!FD., 1$0 Volt Dry 6 821,02 1 - **500 Ohm, 1/2 \,'ntl.,** El~etrolytlc **Con- 10%** Re~is~or. .07 **dena or.** .so 9 024~~ 2 - **5,600 Q!un, l/2 \·Jat.t,** 22 87001 2 - 16 1-I:D. 175 Volt ~e t l~ **Resistor .** . ***ec, .*** *.()'{* Eloctro1:rt1c Con- 10 821•H) 1 - 100,000 Ohm, 1/2 **de1H1er. (.'ll .** 1.00 **f,'att, l O;t Re::iis tor .** .07 2o **87.Sl7** 1 - Du.' 1 20 I·IFD. 150 Volt u 92425 2 - **Oi!O Ohm,** 1/2 l<att, ~ry E1oc t.:·o1y~1c • 10~~ R~ZiDtor **.** ... ••• .07 **Conden3or** . . .ao 12 **82440** 1 - **22,000 Ohm, 1/2 Yia.t.t,** 24 H5l9 1 - **Spenker l'.a tc:hini; 101. P.esis tor.** .07 P~nel .20 13 8100~ 1 - 200-1?00 Ohm, ro watt 25 64~01 1 - **a Prong** Spen~er **P.esistor.** • 35 Socket • .10 14 1.0687 l - **100,000 Ohla 'la:oit!.ble** 26 84200 2 - **7 Prong** Spen~~r Bass Control. .75 Socket. . • "" •• 15 15 10688 l - **1 f.£goha** Wtsriahl.~ 27 14175 1 - **2 . :;** A~. 'lon-~per- **"1':-&ble Co!ltrol. .75** able ru-e Socket. .40 16 86043 1 - .25 KFD. 2'Xl Volt 28 12<n.O 1 - Light !'u.oe :leeept.o.o1e **Paper CondV1lOtlt"** .15 **Wi r\_'lt Cover.** . **. 25** 17 88068 t - .05 HFD. 100 Vol~ 29 **10852** 1 - Eloe troly tic l·lOWl t11'1(; **Pape-r CondenSf!r** .10 Plato . .05

59

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~ I~tw=~ r-~I®TI+l-Wu-IH·Il-1-1 ' ,.. i iJ i •• 1-t:

.. .. • ' ' ' '! \_, ----------

60

*I* lll!l~

~ ~:t!f~e;:::

**c** :!~~~==8 i! .; ....... .

~ :~~~~~~~ a .......... :;.::; .... ""1 ....

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FIGURE NO. 19 - SCHEMATIC DIAGRAM ELECTRICAL SELECTOR TYPE C

L...tf.IIH-Ifi-H+HHlfHHH+-- - - - - - - -- -- -- - - - - - - - - -- - - - - - - - \_ \_j

I L.:...I • ..... I.:..I&...I.L .1.. .. : • .1. .L ..,. lml PART ~0. DESCRIP!'ION 110.!ID,l.

K-1 P-M91 M-2 K-6 11-7 ~& *M-'* P'-~895 r-3866 F-3871 F-!- Y-3892 - - - - Crodit Series Cano~l Credit. So1ono1d s.teoh Rel~. Magnet (Pa.t.r) • • - !:lterl(Jcklna Swlt.ch - interloc:~J.n;: 1\ol<.y. M-8 F-!1887 - :50 O'"!:IIR CaoiSoM. K-9 82718 - 22 ~ 1. ..... tot. H•llt.or. • . . 1

1 1 •• . l poix . . • 1 1 1

• l 14-10 F-='1 M...U ,~ - - 6 6 Pn>og ~ Soekot PlU<~• (Feoale) •• . 1 l

I I r-------------------, 111·1, R(l. AY &Olt .... ~- ft .... tl .,..,. I 1 I I I .... u...... ~~ ll ~· 0 a~ l :ti' • I \_ - *:* : I l I I PRIC&

• 1.50 1.00 .!iO .&3 .25 1.40 .25 . u .25 .so

r- I I I I I I I ... ... ...... '---~""::· ' ..... .... j ··· • 0 I I I .. , '"' I I

L \_ \_\_\_\_\_\_\_\_\_\_\_ \_\_l

ITIX PART 110. DESCRII'T'ION NO.!ID,l,

11-12 11-1~ f-8895 - ~lector Cable. f'-6224-A - Switch Asf!ulfll>l.y (l to . S). 1 1 .11-15 11-14 F-G22.5-A F-6226-A .11-lG P'-6227-! .11-l? M-18 M-19 ,\_1 Si-6Z P.li-6Z - - SwS Swttcl1 15) teh • Mtlombly A33emb\y • • 0 - S .. ttch 20) UIJOiflbl)" . . - S&lec tor S.1 t.ch - - 27 Re16y Co>tacL Box ua.~ty. Pl"' ~8 U l.o to 'LO) 1 • • (16 . ... • UaeMtl.7 (..U.). • • 1 to

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• 2.50 ~-50 &.50

&.50

3.50 U.()() 1.()0 12.50

FIGURE NO. 20 - SCHEMATIC DIAGRAM SERIES RELAY (SELECTION) CIRCUIT

rtrA p;.ar teo. \ {1221.1. U00.1 10 u ......... u. . • fl • 5 6 ' **8** &4~48 l~' lt?tl , lUOO lUIJt um• t'"""'l ..... ,..,.,1 F~W$ '""'\*' **lA: *1-!nt* U P-81at**

rsa.\_p~\_oJl) {]) QIIJ.I~~~~-l.L @ \_ \_\_ l I

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• I I -------------- \_\_, I ~. •• ~··~--------------~r--------------' 4 • • tl POt.llr Pow":- {:on.tiU!~ trnn~!'O'!'~:' 7'1·w•M¢1'11i~ Soeket (k~~r , (~11~1~>-r::) o • .CO!'it.rol .• StAiU.cm} .•• , , , , • • - • s oCoWtt.er $ 1"1'one toi)'Juttor Re.hcy PltJt f'lloo.•r- . ••••••••••• . . . Cord • . . • . • • . .

• . •.•• • . ••••••

• . ••• • • :iol•noSd •••••• •• , •• , • • •••• • ,

• !'. *Z1* 7 COD~fl~ Pr"'- $oel:•t. Pl~o~g.. • •••••••• . , ••••• • , • • • • • • • • • • • • , • • •

• :;.\_t.otoT c...bl.e , , o o , , o o o o • o • o o o • o

• • **6** ~~t. **f'r9IIC** Soeket. (r-te} .•••.•.••• Pli.IC **(Mil•)-** •.•. • . • • . •• , .•• , , • • o.d:t~ Sttlteb. , , , , •• , , • •• •• , • , •• - • liforl•$ laWd~ **k\q** r .. ~ ............ ........ S.l« ~ M~ .&Uii!-"~.IJ ........ ••• .... .. •••.• •• , • . . ,

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NO. 1\£0. i'RICS

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; ~.00 ~ ... .to . • •• ro l .SO .20 ··"' 1.00 .... 1.00 .... 1.40 ... . ,GO ..

*a.* .., ' !TF)I PART NO. 1 { 12211 - 12063 - 2 64246 - 5 12028 - 4 11781 - 5 F-8827 - 6 11'159 - 7 11202 - 8 F-9421 - 9 F-8895 - 10 F-5623 - 11 F-~827 - 12 F-5825 - 13 F-~71 -

*f)*

AMPliFIEif :-----------,

*01! M!.JTlf!(OIITT!OL STATION ,()L(/(0/IJ UUM* S~20 *•7'1.* I I I I

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FIGURE NO. 21 - SCHEMATIC DIAGRAM CREDIT CIRCUIT "'I 1- ' -I ' , ~I

DESCRIPTION NO. !lEXl. P!UCE

Power Power Transfor:ner Transfor~er (.~pl.) (~t.c.s.). 8 6 Contact Prong Plug. Sockot. • • • , • , • • S **6 Prong** Conductor **Plug.** Power • • Cord. • • • • • • . . • • 6 Prong Socke·~. • • • • • • 27 Contact Socket • • • • • Selector 27 Contact Coble Plug ••••••• • 6 Contect Socket. **Series** 6 Prong **Relay** Plug. **•** • ••••••• • • • • • • • • • • • • • . Crecli t Magnet (1 Pair). • • 1 1 1 1 1 1 1 1 1 1 1 1 l l ~5.00 s.oo .10 **.25** .15 **.20** .15 1.00 1.00 2.50 1.50 1.00 .25 .60 C~Jtt ***TIUP/\*1'1U*** I I t\_\_\_ I I I I I -------

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**r----** *1fCLAY* **-------**

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3 ... 5 ~ 'L\_\_j-, .r-111 0 !1"< • ... .-.. , *!)*

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FIGURE NO. 23- SWITCH ASSEMBLY TYPE SA-6Z

l~<l PAilT NO. 11>!1. DESCRIP'I'IOII PiUC.E 1!:::14. *?}.'!:* llO. P~. OESCRI?:rc:~ n:r.:t 1 P-6!!24-,t. 1 .. Sel.Ktor- S·dt.<:h Aneably a P ... 5S23 l - 6 ?ro~ So~ket. (!eMh) . *t* .60 L-5. . *'* :,.so 9 F-7817 ~ - *Ji8l* /l"azda t.s.'\P • . • •• .1C 2 F-6225-A 1 .. Sot..ctor Switc:h Ao~e'1bly 10 F-8886 ~ - Li..,ht Socket. • '"'· . LO 6-10 . • • • • 0 • • $.$0 ll r~-ea97 l - 4 ?rong Soeke~ . .1! *$* P-$~26-i\ 1 Svl.oct.o~· Switch uae:nbl.;; 12 F- fl895 1 - Selector Cable *2.50* 11-1$. 5.50 iS F-9461 l - 27 ~o~ Plug ( tMle) l.OO ~ F-6227-A l .. Solootor Switch A3~e~bly 14 F-8$96 l - 2 ~one Plue ' .ro 16-20. •••••• 0 • 3.$0 lS ~'-895). 2 - Es~utcheon Rofloctor 5 P-9483-A 20 - S1ll.~C Lor Oul:ton AtUJOI!Ulo~· R.H. ••• .:lb (•poci!Y nw..rd) . ••• . 15 16 F..S952 2 - f,scutchM-:'1 P.e!'lec t.ol· G F-9<0l3 4 - Plut1c SU·Lp. ••• .lo L.H. ••• .~$ ? F-940'/ 8 - Plalt.ic St.rlp Spo.oor • doz. .15 65

FIGURE NO· 2tl- RELAY BOX TYPE RB-6Z

UF.N PART liO. REQ. DESCR!Pr!O~ **PRICE** !TEN ?ART liO. ~. DESCRI?TIOll FPJ:CE 1 F-3891 1 - **Series Relay** . $ 1.50 13 F-9429 1 - **Ratchet Escapement.** $ .10 2 **F-3993** 1 - **Credit Cnnce1** So~enoi<l .so 14 F-9465 1 - **Ratchet Escapement** 5 F- 3901 1 - **Series P..elay Noun t.ing Spring.** . . . .os **Br-acket.** . . . .10 15 **F'- 9436** l - **J.'lagnet l·!ou."lting** 4 71168 1 - **Brass Adjusting Scre'ltl' Bracket** • .10 7/8• x #9-32 • • . doz • **. 15** 16 F-9427 1 - **Ratchet Escnpe:-:ent** 5 l'-9482 5 - ~clay ~ounting **Spacer doz.** . 20 **Stop.** . .10 6 F-9416 1 - **Solenoid Bracket** 17 F- 38'11 2 - **Crod.i I#** ~:.Ugnet . p~ . 1.00 (Rear) . . . . • 10 18 78005 5 - **Rubber Cro11'\1Tlct • doz .** . 10 7 F- 9419 l - **Solenoid Bracket** 19 F-9433 1 - **Ratchet Actuator** (Front). . . . . 10 **Levct· Spring .** .10 8 **F-6177** 1 - **Plunger Link A:::sombly . . 20** 20 F'-9436 1 - **Link Guide 3ra.cket .** .10 9 **F-6201- A** 1 - **Ratchet Wheel** A~:::embly .60 21 F- 3894 1 - Int~rlocking **Switch . 25** 10 F- 6212-A 1 - Lowe~· **Coupling Disc** 22 **F- 5692** 1 - **Interlocking** Rel~. 1.40 **Assembly** .10 2~ F-5887 1 - **50 Ohm** Candoh~ **.** .25 ll **F-3898** 1 - **Crodit Dial Spring** . • **. os** 24 F-58S6 1 - Cr~di **t Switch** . 55 12 **F-388!>** 1 - **Ra. tchet ft1leel P:eturn** :~s F-5827 1 - G Prone P1ue ()lale) .25 **Spring** • . . . J.O 26 827W 1 - **22 Oh;::'l 1 Watt Reo- sistor. .15**

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FIGURE NO. 25- SOLENOID DRUM ASSEMBLY TYPE SD20-7Z (TOP VIEW)

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11517 U174 l 1 12017 1 11202 lll59 1 1 11105 ll803-~ 11764-A ll76S-A 1 1 l 1 U naoo 762 20 20 ll768-A 20

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DESCP.:??IOll PR!C! - Sol~:\01d Or-u:n Sub ?\*tJ.nel. - - J.iot..or 27 Contact Co1\~rol Socket P.elay • . •• . . ~ l.l() 1.35 1.00

• 2'/ Cont..uct Socf:et .•• • 1.00

• - ROStH, Pin C6neo\ Shatt Rcl~y Spring Asse~bly. • • • - Co'UplL'1f.! Ar-ffl (Lowtlr) •. • .05 1.15 .15 .. ~olootor Disc Plate AsseJnbl.y • - S~lnc~r Cuide Pla~ Asaeab~. .75 .ss - Sel,.ct.or St.op P!..::. .•••• do3 .• 10

·Solenoid - S.U.ct.o:r Solenoid Plunger J..s~. ••••• ... **each** ch ~10

.:!0 I- PARr liO. P~. D::;<;R:P7lo:l 15 118()1 1 - Plwtge:- Contact. Spl:'tnc: •.• 14 15 16 17 F-6827 F-7413 F~2?.5-•\ l 1 l 6 P:ron.& Ph~ & 'hire t.ut!'mb1y - - 4 Selection Prong Pl~ & Cancel 'lrtir~ Swl~n. ;.\_:;80iflbly . . F-Gl7tl-l\ l - Motor CS.!"ry-c,wel;' S"·11,.¢h Aasumbly 18 F-!r2ll 19 ll420 1 l .. MCH.-ot· Cttrry-o..-er s-.1 t.eh Sh1old - Insulator St...~ip . ... • ?RICE .10 .20 .20 .25 .55 .lS .10 20 12028 21 22 11781 ll779-A 25 ll445 l l - 6 Pror.e Oe;.aL Plug • . - 5 Cor:-ducto:- Po·•·er Cot"() l :!0 - •c• ~1~ 'ilsbc: :Ove~ . A~~eAbly . . . . . .25 .so .15 do:. .• 05

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FIGURE NO. 26 - SOLENOID DRUM ASSEI·IBLY TYPE S020-7Z (BOTTOM VI EW}

DESCRIPTION NO.R;;Q. PRICE ITEf•l PART NO. DESCRIPTION NO.REQ. PRICE

DESCRIPTION NO.R;;Q. PRICE ITEf•l PART NO. DESCRIPTION NO.REQ. PRICE

- Selector Disc Stop. • • 5 ea. $ .OS 5 86045 - .1 MFD 600 Volt Con- - Selector Shaft Adjust- **denser.** . .. . . . . . 1 $ .15 ing Screw • • • • • • 1 doz .• 15 6 11806 - Counter \~indow . . • • • 1 .05 - Adjustine Screw Lock- 7 11785 - Counter Unit •••.•• 1 4.25 nut • • • • • • . • • l doz •• 10 8 11782 - Counter Relay • • • • . 1 1.80 - 10 Offi·1 1/2 Watt R.e- 9 ll785 - Wire Seal • • • • • • • 1 .05 sis tor. • • • • . • • l .07 10 11784 - Sub Panel Bottom. • • . 1 .55

- Selector Disc Stop. • • 5 ea. $ .OS 5 86045 - .1 MFD 600 Volt Con- - Selector Shaft Adjust- **denser.** . .. . . . . . 1 $ .15 ing Screw • • • • • • 1 doz .• 15 6 11806 - Counter \~indow . . • • • 1 .05 - Adjustine Screw Lock- 7 11785 - Counter Unit •••.•• 1 4.25 nut • • • • • • . • • l doz •• 10 8 11782 - Counter Relay • • • • . 1 1.80 - 10 Offi·1 1/2 Watt R.e- 9 ll785 - Wire Seal • • • • • • • 1 .05 sis tor. • • • • . • • l .07 10 11784 - Sub Panel Bottom. • • . 1 .55

- Selector Disc Stop. • • 5 ea. $ .OS 5 86045 - .1 MFD 600 Volt Con- - Selector Shaft Adjust- **denser.** . .. . . . . . 1 $ .15 ing Screw • • • • • • 1 doz .• 15 6 11806 - Counter \~indow . . • • • 1 .05 - Adjustine Screw Lock- 7 11785 - Counter Unit •••.•• 1 4.25 nut • • • • • • . • • l doz •• 10 8 11782 - Counter Relay • • • • . 1 1.80 - 10 Offi·1 1/2 Watt R.e- 9 ll785 - Wire Seal • • • • • • • 1 .05 sis tor. • • • • . • • l .07 10 11784 - Sub Panel Bottom. • • . 1 .55

- Selector Disc Stop. • • 5 ea. $ .OS 5 86045 - .1 MFD 600 Volt Con- - Selector Shaft Adjust- **denser.** . .. . . . . . 1 $ .15 ing Screw • • • • • • 1 doz .• 15 6 11806 - Counter \~indow . . • • • 1 .05 - Adjustine Screw Lock- 7 11785 - Counter Unit •••.•• 1 4.25 nut • • • • • • . • • l doz •• 10 8 11782 - Counter Relay • • • • . 1 1.80 - 10 Offi·1 1/2 Watt R.e- 9 ll785 - Wire Seal • • • • • • • 1 .05 sis tor. • • • • . • • l .07 10 11784 - Sub Panel Bottom. • • . 1 .55

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Fl GURE NO. 27- SCHEMATIC DIAGRAM MOTOR CONTROL Cl RCUIT

AMPLIFlER ·----------- '"'~~ ....... (j)

, OR ...... MASTER .. CONTROL STATION --..., ~ ~ ~ N

SO 20-7Z -----.

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l:O. R!:Q. PRICE

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MTURN 1'-TH THROU9N CHASt i&

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l { Utll 12QG5 2 l4l1S. ! ll401 4 84248 5 l00$S 6 *1* 8 U:ot8 F-1090 1006~ 9 L1U2 10 11181 l2 ll U$1'/

Ll?(UJ .. A 11.00 .06 . .05 .OS

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117 VOLT .. OTOR ClfiCUIT

D!:SC:ftlPT:tON

- Ponr "l'n:.:ls.!'o~!" (fl.uw!' ContrOL S~\.loo) - J'ft-e~ 1'ra.::Lstonaer (!J~Ql itl•rt) - 2-~ ~- ~- - R&ceptael9 • - Oc~1.l S()ci:et • - 2 P':"<l.:\8 Plug • - 5y11phonol..'l )(Q~r - 8 }lrQ!t£ Plug , •

• Ter~el • • • • - Teri'UM.l St..-i? • - ~ S Selector Co:Wuo to:- Solenoid Powe:- Cord Plungar.

• •

- Motor Co!'lt:-ol N;LI~y.

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FIGURE NO. 28- SC H E~IAT I C DIAGRAM SOLENOID DRUM TYPE S020-7Z

1 *?.* • s *s* c 'l e 9 10 ll 12 13 15 l< M·t ~0000 I 1 ··-

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I ~-- --. I *:* I M-t-'" L rl----~ \_\_\_ -~ -~ ~ J M · lS

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DESCRI?l'!O}J

PRICe

- Selu<:Lor SQlci'IQld •• - 1)1n Cancel R.,aly A.:lsembly • - 27 Prong Spl. S~ket. - - 27 Mo~ P:·on~:; Control SQO:O:~tt. Relay • • • . - 4 Pro:~.r:; SockG;t . - - o e .. 1'&'rniMl Prone J•rons Socke Plue. Stl·ip. L. . . • · . · . - Ter~nal Strip. • . . - C<.md~:tttSI)r .1 Mfd. - 600 *'I* • - - .. Cou:tt.et" 10 Powor OHK Cord. l/2 Relay ••• l<a tt • Resl.s tor. - Cou:1.ter U':t! t . . . . . . .

$ • ?.0 1.00 .1.15 1.00 .1. .lS .10 ~5 .os .os .07 .~S .15 1.00 4.ZS .15 70 PARi' XO.

!10. REQ.

llllOO 1180~;. 20 1 12017 1120"..! 11517 11.296 n·rs9 12026 1 1 1 1 1 1 10069 1UGZ l 1 86045 8?.100 1 1 l.l7$i 1178?. 11?$~

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F I G U R E N 0 , 29 - CO I N 1·1 E CHAN I SM ASS Hl BL Y

ITE\1 PART NO. DESCRI?TION lll). !U'.Q. PRICE

1 F-670~A **- Coin Box Assev.bly (Co:..-** p1cte) .• . . . l ~3. 50 2 F-613? - Coin Spout F\L~el Assembly. l . :1l; 3 F-4~28 - Slut: Ejector (S¢- 10¢- 25¢) . 1 10.50 4 F-6198-A - Slug Rc~ur~ Chute Asse~bly . l .70 5 F-88~'1 - **S ?I·onc; ?lug.** . . l .zo 6 ;·-1as~ - **Coin Box Lock ar.d Key** . . l .7s

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FIGURE NO. 30- SLUG REJECTOR

FAONT RE AR

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FIGURE NO. 31- COIN TRIPPER ASSEMBLY

*f\:F"R* ONT VIEW **·e'-REAR** VIEW

USE CARBON TETRACHLORIDE TO CLEAN SI LVER CONTACTS- A PPLY WITH SMALL BRUSH.

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FIGURE NO. 32 - MODEL 7800 CABINET FRONT VIEW

~~ ?df JO. ..,.,.,.,, .. JO. ~. Pl,lct 1~ PUC: SO. am:ai?TlOII SQ. u;:;>. P'IU;.J l 1-UlB - W..t.$~ n...."l.. • ... ' .... 10 *1-1200* .. *r.l.q* ta.Ueaw • , \_\_ - ew--s P"..lM\ow, I . ... ,\_.....,, I ... • ,..,... -~ i't,lu ....... • •. . ... u ,~ - C.io Slo&. • F-11'"'2' \_.,.... ...... ~ Pt.U- ~ ....... ' -· . .. ...a ts.l *S..q.* ' '""" - *Cro.•* hJM ......... 1 .... Ft..•..e .. J"'Nii:.t, l.ts u r-o.uw - ce.11:. &:.qt. • *t-1$44* - G.:r1U rloof' -- PleeUc: •• , • • ... 1.U> o..tt4 3e.ll• u•r· ' P'-'tt'Ot • i'f'o(f'Of,. .. r..-::<Wt.et.- Go~t., ,,.,

•(ln. • •• 1 t.lO .. t-MSS-J. - ~:."£ ?.-l~M ' !'-'tl08 - l'rol.7'-' ~1,1\<..1!,.. J'l~er h.ll)' • 1 ... «<ll. m.. •••• 1 ·" .. t--431'1•4 - Slttt ?.,o:,pt.de. l . .. • f'-'1:002 - StltC\ql'

Ulc:at.ell- •• 1 1.1$ 711

FIGURE NO. 33 - MODEL 7800 CAB I NET (FRONT VIEW) DOOR OPEN

IT'\_,. PA!n' ItO. OESCRIPf!OS SO.REQ. PRICE

l 2 ~ F·781A P-7807 P-7806 - .. - 8a.yol'l<tl. Small *Hor* bon Morbontal tal &cket. ReCUctor Rctlacto:-. (Lid). *0*

s 4 G 7 0 0 10 11 12 P..OO?$-A P...S014-A- F-G07%-A F-<SS? - .. 25.; 10~ S~ Coin Coin Coin Chu-~ Chut."' Cbute & & & Funnel funnel Tunnel .. SJ.u.s !Wt.urn Cb.ut.o • Auell'lbly. A:n:;en.b}J. ..... A~~embly F..t,~$4 P-7018 - - Sl\1.1 15" JtnrJon Rtjo>Otor Sp.akor. Xech /.~oembl:r • P-6..100-J, P-7S2l F-440l - - - SJ.\l& Door Sluu Rtlta.ot Lo.t.eh Rto~ptacle Bracket. Ao.uemblT E:xLension • . 2l 1 1 2 1 1 *$* . 10 .20 .e.s .a• .at .~0 1 1 11.00 .35 1 1 11.~0 .50 1 1 .10 .ss

75