Montgomery Ward & Co.

	Model: 62-327	**Chassis:**	**Year:** Pre October 1937
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources
Riders 8 (VIII) MONT WARD 8-36
Riders 8 (VIII) MONT WARD 8-37
Riders 8 (VIII) MONT WARD 8-38

MODELS 62-327, 62-337
62-427, 62-437

MONTGOMERY-WARD & CO.

Socket, Trimmers, Coils
Voltage, Batt. Connections

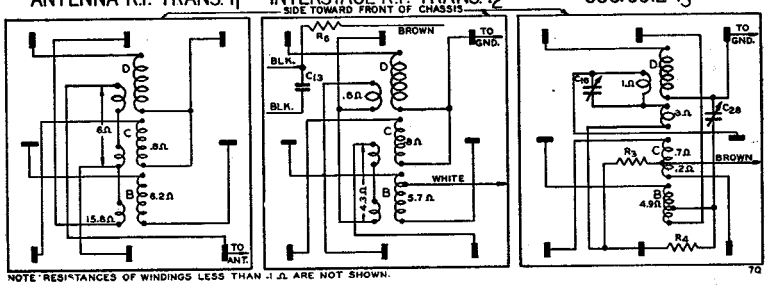


Fig. 7—R.F. and Oscillator Coil Base Terminal Arrangement and D. C. Resistance of Windings

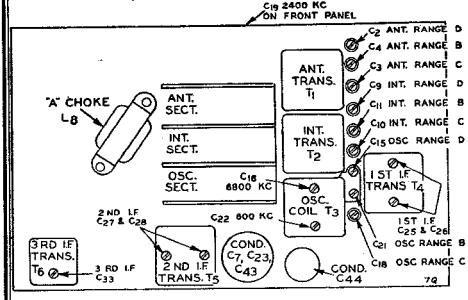


Fig. 3—Location of Trimmers

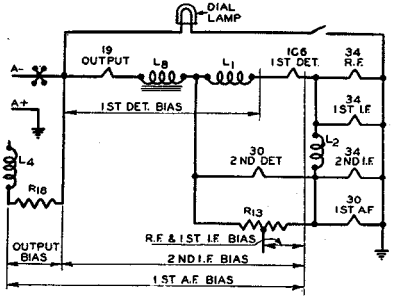


Fig. 5—Abridged wiring diagram showing filament wiring system and points at which no-signal bias voltages are obtained.

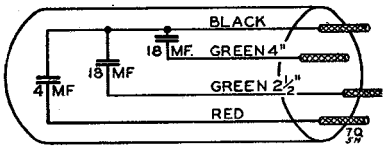


Fig. 8—Electrolytic Condenser Internal Connections

FOR MOVIE DIAL DATA, SEE INDEX

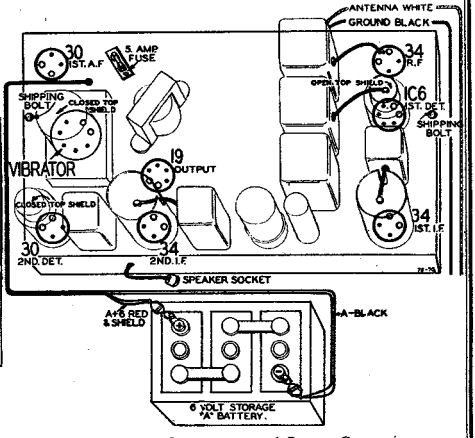


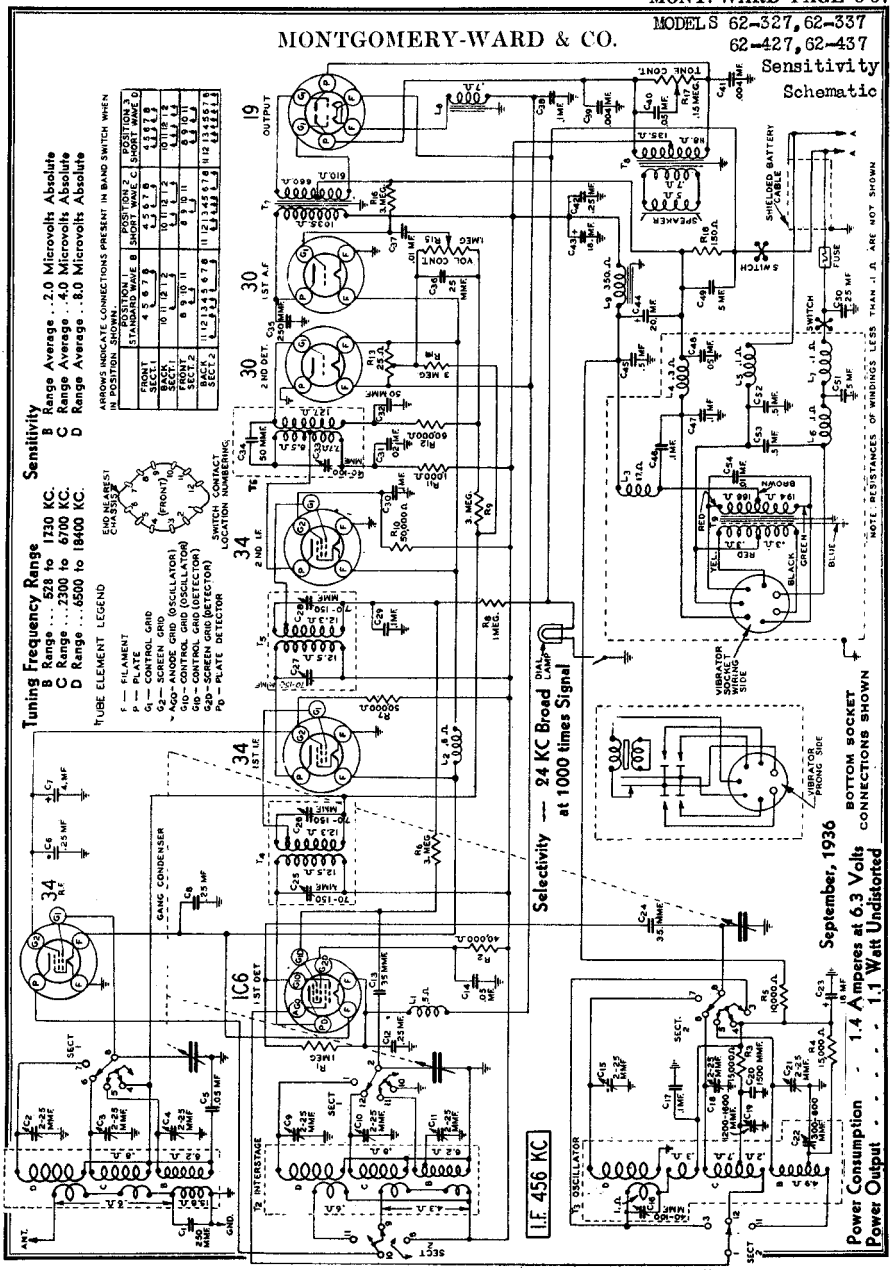
Fig. 4—Tube Arrangement and Battery Connections

VOLTAGES AT SOCKETS

Volume Control at Maximum — Antenna Shorted to Ground
Battery - 6 Volts — Band Switch In Standard Wave Position

Type of Tube	Function	Across Filament	Plate to Ground	Screen to Ground	Bias Voltage See Notes
34	R.F.	2.0	145	55	1.0(1)
1C6	1st Det.-Osc.	2.0	145 90(2)	60	2 (3)
34	1st I.F.	2.0	145	55	1.0(1)
34	2nd I.F.	2.0	140	90	4.0(3)
30	2nd Det.	2.0			
30	1st A.F.	2.0	140		9 (4)
19	Power	2.0	140		5 (5)

(1) As read from negative filament leg to tap of resistor R13.
(2) Anode grid to ground.
(3) As read from negative filament leg to A—.
(4) Total voltage drop from negative filament leg to low potential end of resistor R18.
(5) As read across resistor R18.



MODELS 62-327, 62-337
62-427, 62-437
Alignment, Data, Parts

MONTGOMERY-WARD & CO.

I. F. Adjustment

Set the signal generator for a signal of 456 KC.

Connect the output of the signal generator through a .1 mf. condenser to the grid of the 1st detector G_{1D}.

Connect the ground lead of the receiver to the ground post of the signal generator.

Turn the band switch to the Range B position (standard wave band).

Turn the volume control to the maximum position.

Attenuate the signal from the signal generator to prevent the levelling-off action of the AVC.

Then adjust the five I.F. trimmers until maximum output is obtained. The adjusting screws for these condensers are reached from the top of the chassis and the location is shown in Fig. 3.

Range B Alignment

After the procedure for the alignment of each range, as explained below, is completed, it is advisable to repeat the procedure as a final check.

1730 KC Adjustment

Set the signal generator for 1730 KC.

Turn the rotor of the tuning condenser to the full open position.

Keep the band switch in the standard wave position.

Connect the antenna lead of the receiver through a 200 mmf. condenser to the output of the signal generator.

For this and all subsequent adjustments keep the volume control at the maximum position and attenuate the signal from the signal generator to prevent AVC action.

Adjust the oscillator Range B trimmer (C21) until maximum output is obtained. The location of this trimmer is shown in Fig. 3.

1500 KC Adjustment

Set the signal generator for 1500 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

Loosen the pointer screw and set the pointer at the 1500 KC mark on the standard wave band scale. Retighten the screw.

Adjust the interstage Range B trimmer (C11) and antenna Range B trimmer (C4) to maximum.

Do not change the setting of the oscillator Range B trimmer.

600 KC Adjustment

Set the signal generator for 600 KC.

Turn the tuning condenser rotor until maximum output is obtained.

Turn the rotor slowly back and forth at the same time adjusting the 600 KC trimmer until the peak of greatest intensity is obtained. See Fig. 3 for location of this trimmer.

Range C Alignment

CAUTION—When aligning the short wave bands be sure NOT to adjust at the image frequency. This can be checked as follows: Let us say the signal generator is set for 5000 KC. The signal will then be heard at 5000 KC on the dial of the radio. The image signal, which is much weaker, will be heard at 5000 less 912 KC, or 4088 KC. It may be necessary to increase the input signal to hear the image.

6700 KC Adjustment

Set the signal generator for 6700 KC.

Connect the antenna lead of the receiver through a 400 ohm resistor to the output of the signal generator.

Turn the rotor of the tuning condenser to the full open position.

Turn the band switch to the Range C position (first short wave band).

Adjust the oscillator Range C trimmer (C18) until maximum output is obtained. See Fig. 3 for location of this trimmer.

6000 KC Adjustment

Set the signal generator for 6000 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

Adjust the interstage Range C trimmer (C10) and antenna Range C trimmer (C3) to maximum.

Do not change the setting of the oscillator Range C trimmer.

2400 KC Adjustment

Set the signal generator for 2400 KC.

Turn the tuning condenser rotor until maximum output is obtained.

Turn the rotor slowly back and forth at the same time adjusting the 2400 KC trimmer until the peak of greatest intensity is obtained. See Fig. 3 for location of this trimmer.

Range D Alignment

18,400 KC Adjustment

Set the signal generator for 18,400 KC.

Keep the antenna lead of the receiver connected through the 400 ohm resistor to the output of the signal generator.

Turn the rotor of the tuning condenser to the full open position.

Turn the band switch to the Range D position (second short wave band).

Adjust the oscillator Range D trimmer (C15) until maximum output is obtained. See Fig. 3 for location of this trimmer.

15,000 KC Adjustment

Set the signal generator for 15,000 KC.

Turn the rotor of the tuning condenser carefully until maximum output is obtained.

Adjust the interstage Range D trimmer (C9) and antenna Range D trimmer (C2) to maximum.

When adjusting the interstage and antenna Range D trimmers, it will be necessary at the same time to turn the tuning condenser rotor slowly back and forth until the peak of greatest intensity is obtained.

Do not change the setting of the oscillator Range D trimmer.

6800 KC Adjustment

Set the signal generator for 6800 KC.

Turn the tuning condenser rotor until maximum output is obtained.

Turn the rotor slowly back and forth at the same time adjusting the 6800 KC trimmer until the peak of greatest intensity is obtained. See Fig. 3 for location of this trimmer.

Caution

Do not turn the radio on unless ALL the tubes are in the sockets. Removal of any of them will result in abnormal voltages on the remaining tubes.

Be sure that the battery clips are connected to the battery with the correct polarity. Reversed connections may damage the radio.

Do not use any power source other than a 6 volt storage battery.

If the radio does not operate after being turned on, turn the switch off immediately, examine the battery connections and the fuse and see if all tubes are properly inserted.

Servicing Power Unit

The power unit is that portion of the chassis assembly contained within the large rectangular shield can and the circuit for which is shown within the dotted lines at the lower right side of the schematic diagram, Fig. 2.

Continuity Resistance Check—The power transformer, choke coil circuits and condenser shorts may be checked by utilizing the vibrator socket terminals and various points on the "A" or "B" lines, without removal of the shield can. For example: when checking the continuity or resistance of the upper half of the transformer secondary, contact may be made with the test prods at the proper vibrator socket terminal, as shown on the circuit diagram, and at the positive terminal of the 20 mf. electrolytic condenser, C44.

Removing Transformer and Vibrator Socket Assembly—Take off the ... unit shield can by removing the four self t... screws at the right side (from front) of the ... base and the five hex nuts from the bolts at the top of the chassis.

Unsolder the ground connections from the two lugs on the inside of the chassis base (right side from front). Unsolder the black and white coded wire from the terminal strip lug nearest the front of the chassis. This terminal strip is mounted on the transformer cover. Now unsolder the bracket holding the terminal strip to the transformer cover.

Remove the four nuts from the bolts holding the transformer assembly to the chassis. Do not remove these bolts from the transformer core. Then lift the assembly to free it from the chassis so that all parts of the assembly are readily accessible.

Proceed with replacement of the power transformer or with any other necessary service or replacements and then reassemble.

Replacement of Buffer Condenser C54—This condenser is located in the top of the transformer and vibrator assembly just underneath the vibrator socket. To replace, remove the assembly as explained in the preceding article.

In addition, the two screws holding the vibrator socket to the transformer cover assembly should be taken out. The condenser is then easily replaced.

The planetary assembly is the unit that is integral with the tuning shaft.

If the nut on the back end of this assembly is too tight, the drive will be jerky and will turn hard in high speed. If this condition exists, back off this nut one or two turns and note the effect.

If this nut is too loose, the drive will slip in slow speed. The remedy in this case, of course, is to tighten the nut.

Should the condenser drive cord slip when the planetary pulley is turning, inspect the tuning condenser, drive drum and gears to see that they are turning properly and that they are not being obstructed in some way.

If the drive turns unevenly (rough in spots), this may mean that the planetary assembly is defective or damaged internally and a new unit will be required.

Trimmer Replacement

If one trimmer of the gang trimmer strip should become defective, it is not necessary to replace the entire strip. A single trimmer P-17A36, as shown in the replacement parts list, may be used. Disconnect the lead from the coil side (side not grounded) of the defective trimmer in the strip. This connection is then made to the single trimmer. Connect it to the side of the trimmer not in contact with the adjusting screw. The other side of the single trimmer is then connected to a good ground, using a piece of heavy wire in order to support the trimmer adequately. In replacing a trimmer, be sure to keep both leads as short as possible and keep the ungrounded lead as far from ground as possible.

Replacement Parts

NOTICE—There is a large letter on the chassis which identifies the set as to major part changes. When ordering parts, please be sure to mention the series number and this large letter.

MISCELLANEOUS

SOCKETS

Part No.	Description	List Price
P-3A244	Tube Socket (4 Prong)	$0.10
P-3A247	Tube Socket (6 Prong)	.10
*P-3A234	Vibrator Socket (7 Prong)	.20

SPEAKERS

Part No.	Description	List Price
P-12A252	6" P.M. Dynamic Speaker complete with Output Trans. T8	5.70
P-12A251	8" P.M. Dynamic Speaker complete with Output Trans. T8	6.00
P-13X268	Speaker Cable and Socket Assembly	.46

KNOBS

Specify Name of Knob and Name and Model of Radio

Description	List Price
Tone Control—Small Push-on Type	.15
Volume Control—Small Push on Type	.15
Tuning Control—Large Push-on Type	.15
Band Switch—Large Set Screw Type	.20

GENERAL

Part No.	Description	List Price
P-2X38	Felt Washers (Used behind Knobs) ea.	.10
P-40X23	Rubber Chassis Mounting Cushions ea.	.10
P-4A38	Terminal Strip—Single Lug Insulated (with Mounting Foot to left of lug)	.10
P-4A49	Terminal Strip—Single Lug Insulated (with Mounting Hole at one end)	.10
P-4A50	Terminal Strip—Two Lugs Insulated (with Mounting Hole in Center)	.10
P-4A17	Terminal Strip—Single Lug Insulated (with Mounting Foot to Right of Lug)	.10
P-30X14	Grid Clip Only	.10
P-13X269	Shielded Battery Cable	1.00
P-30X35	Battery Clips (rated at 25 amp.) ea.	.15
P-13X214	Antenna and Ground Lead Assembly	.30
P-16X9	Fuse Clip Assembly	.10
P-16X19	5 amp. Fuse	.10
*P-28X62	Vibrator Spring Clip	.10
*P-32X18	Vibrator Shield Base	.10
P-32X72	Vibrator Shield	.20
P-19A27	Vibrator	4.95
P-32X19	Tube Shield Base (Large)	.10
P-32X30	Tube Shield Base (Small)	.10
P-32X63	Tube Shield (Large)	.20
P-32X22	Tube Shield (Small—Open Top)	.15
P-32X50	Tube Shield (Small—Closed Top)	.10
P-2A58	2 Section, 3 Position, Band Change Switch	1.55
P-40X43	Rubber Mounting Cushions for Gang Condenser (Front) ea.	.10
P-40X44	Rubber Mounting Cushion for Gang Condenser (Rear)	.10
P-8X46	Rubber Mounting Cushion for Gang Condenser (Rear, under Chassis Base)	.10
P-32X71	Shield Can for Filter Assembly (Under Vibrator Assembly)	.50
P-25X221	Chassis Mounting Feet ea.	.10

TRANSFORMERS AND COILS

Part No.	Code	Description	List Price
P-9A634	T1	Antenna Trans. and Can Assembly	$1.85
P-9A636	T2	R.F. Interstage Trans. and Can Assembly	2.75
P-9A636	T3	Oscillator Coil and Can Assembly	3.20
P-9A637	T4	1st I.F. Trans. and Can Assembly	1.50
P-9A638	T5	2nd I.F. Trans. and Can Assembly	1.50
P-9A639	T6	3rd I.F. Trans. and Can Assembly	1.60
P-60X36	T7	Input Transformer	1.95
P-61X44	T8	Output Transformer (Part of Speaker Assembly)	1.30
*P-53X128	T9	Power Transformer Only	2.45
P-25A86		Power Transformer Assembly (Includes Parts Marked *)	3.85
P-9A613	L1	1st Det. Filament Reactor	.40
P-9A607	L2	Filament Reactor	.35
P-9A609	L3	"B" Reactor	.30
P-9A611	L4	"B" Reactor	.30
P-9A603	L5	"A" Line Reactor	.35
P-9A608	L6	"A" Line Reactor	.35
P-9A683	L7	"A" Line Reactor	.35
P-52X47	L8	"A" Choke (Iron Core)	.85
P-52X37	L9	"B" Choke (Iron Core)	1.00

CONDENSERS

TUBULAR

Part No.	Code	Capacitance	Voltage	List Price
P-46X80	C5	.05 mf.	180	.15
P-46X117	C6	.25 mf.	180	.25
P-46X117	C8	.25 mf.	180	.25
P-46X117	C12	.25 mf.	180	.25
P-46X80	C14	.05 mf.	180	.15
P-46X98	C17	.1 mf.	180	.20
P-46X98	C29	.1 mf.	180	.20
P-46X98	C30	.1 mf	180	.20
P-46X107	C31	.02 mf.	180	.15
P-46X124	C37	.01 mf.	180	.15
P-46X196	C38	.1 mf.	180	.15
P-46X114	C39	.004 mf.	600	.15
P-46X103	C40	.05 mf.	240	.15
P-46X114	C41	.004 mf.	600	.15
P-46X117	C42	.25 mf.	180	.25
P-46X136	C45	.5 mf.	180	.40
P-46X98	C46	.1 mf.	180	.20
P-46X98	C47	.1 mf.	180	.20
P-46X80	C48	.05 mf.	180	.15
P-46X196	C49	.5 mf.	180	.30
P-46X117	C50	.25 mf.	180	.25
P-46X136	C51	.5 mf.	180	.40
P-46X136	C52	.5 mf.	180	.40
P-46X204	C53	.5 mf.	180	.30
P-46X201	C54	.1 mf.	1000	.15

ELECTROLYTIC

Part No.	Code	Capacitance	Voltage	Type	List Price
P-46X216	C7, C23, C43	4 mf., 16 mf., 16 mf.	150, 150, 150	Dry	1.50
P-46X17	C44	20 mf.	150	Wet	.95

MOLDED

Part No.	Code	Capacitance	Description	List Price
P-47X46	C1	250 mmf.		.15
P-47X53	C13	35 mmf.		.10
P-47X74	C20	1600 mmf.		.20
P-47X53	C24	35 mmf.		.10
P-47X56	C32	50 mmf.		.10
P-47X56	C34	50 mmf.		.10
P-47X65	C35	250 mmf.		.15
P-47X72	C36	25 mmf.		.10
P-17A45 Trimmer Strip	C2	2-25 mmf.	Range "D" Antenna Trimmer	.95
	C3	2-25 mmf.	Range "C" Antenna Trimmer	
	C4	2-25 mmf.	Range "B" Antenna Trimmer	
	C9	2-25 mmf.	Range "D" Interstage Trimmer	
	C10	2-25 mmf.	Range "C" Interstage Trimmer	
	C11	2-25 mmf.	Range "B" Interstage Trimmer	
	C15	2-25 mmf.	Range "D" Oscillator Trimmer	
	C18	2-25 mmf.	Range "C" Oscillator Trimmer	
	C21	2-25 mmf.	Range "B" Oscillator Trimmer	

See Part Number 17A36 for replacement of any one section

Part No.	Code	Capacitance	Description	List Price
P-17A35	C16, C22	40-100 mmf., 300-600 mmf.	Oscillator Padding Condensers	.45
P-17A50	C19	1200-1600 mmf.	Oscillator Padding Condenser	.50
P-17A31	C25, C26	70-150 mmf., 70-150 mmf.	1st I.F. Trimmer Condensers	.40
P-17A33	C27, C28	70-160 mmf., 70-160 mmf.	2nd I.F. Trimmer Condensers	.40
P-17A38	C33	40-100 mmf.	3rd I.F. Trimmer Condenser	.25
P-17A36		2-25 mmf.	(To be used for replacement of any one section of Trimmer Strip P-17A45)	.10

MISCELLANEOUS

Part No.	Description	List Price
P-14A58	3 Gang Condenser Less Drive Mechanism and Dial Assembly	3.60

RESISTORS

Part No.	Code	Resistance	Wattage	List Price
P-A94104	R1	100,000 Ohm	0.2	.15
P-A95403	R2	40,000 Ohm	0.2	.10
P-A95153	R3	15,000 Ohm	0.2	.10
P-A95153	R4	15,000 Ohm	0.2	.10
P-A94103	R5	10,000 Ohm	0.2	.15
P-A95305	R6	3 Megohm	0.2	.10
P-A94503	R7	50,000 Ohm	0.2	$0.15
P-A95104	R8	100,000 Ohm	0.2	.10
P-A94305	R9	3 Megohm	0.2	.15
P-A94503	R10	50,000 Ohm	0.2	.15
P-A95102	R11	1,000 Ohm	0.2	.10
P-A95403	R12	40,000 Ohm	0.2	.10
P-A94305	R14	3 Megohm	0.2	.15
P-A95305	R16	3 Megohm	0.2	.10

WIRE WOUND

Part No.	Code	Resistance	Wattage	List Price
P-43X60	R13, R18	25 Ohm, 150 Ohm	0.3, 2.0	.46

VARIABLE

Part No.	Code	Resistance	Description	List Price
P-36X222	R15	3 Megohm	Volume Control and On-Off Switch	1.00
P-40X215	R17	.15 Megohm	Tone Control	.65

DIAL AND DRIVE ASSEMBLY

DIAL ASSEMBLY

Part No.	Description	List Price
Specify Name and Model of Radio	Dial Assembly Complete with Dial Glass; Dial Plate; Dial Cardboard; Small Pointers; Reflectors; Small Pointer Cords, Springs, Pulleys and Collars; and Band Indicator Assembly less Large Station Pointer and Micrometer Pointer.	$3.85
See above	Dial Glass Only	1.45
P-26A125	Dial Assembly Mounting Plate, Includes Small Pointer Shafts and Pulleys, and Band Indicator Assembly	1.20

DIAL AND DRIVE ASSEMBLY—Continued

DIAL ASSEMBLY

Part No.	Description	List Price
P-26X297	Dial Assembly Support Brackets (Attached to Gang Condenser) ea.	$0.10
P-16X59	Large Station Pointer	.20
P-16X60	Micrometer Pointer	.10
P-15X57	Small Volume or Tone Control Pointer ea.	.10
P-9X16	Dial Cardboard	.10
P-11X41	Fibre Strip (At Bottom of Dial Glass)	.10
P-41X12	Dial Lamp Reflectors (At each side of Dial Plate) ea.	.10
P-7A17	Dial Lamp Sockets and Clips ea.	.10
P-7A32	Dial Lamps ea.	.20
	10" Black Cord for Small Pointers doz.	.45
P-29X20	Brass Collars with Set Screws for Securing Small Pointer Cords to Shafts ea.	.10
P-28X64	Tension Springs for Small Pointer Cords ea.	.10
P-26X229	Small Pointer Shafts and Pulleys ea.	.10
P-17X15	Glass Dial Crystal	.35
P-28X58	Crystal Retaining Ring	.15
P-2A40	Dial Lamp Push Button Switch Assembly	.60

DRIVE ASSEMBLY

Part No.	Description	List Price
P-5A34	Planetary Assembly Complete with Hex Nut and Lockwasher (This is the unit mounted at the front of the chassis base. It is integral with the tuning shaft.)	1.75
P-10X14	Black Tuning Drive Cord Only	.30
P-28X69	Tension Spring for Tuning Drive Cord	.10
P-25X269	Drive Assembly Bracket Only (Mounted on Gang Condenser)	.25
P-25X283	Rear Mounting Foot for Gang Condenser	.10
P-24X239	Drive Drum Assembly Complete with Gears, Micrometer and Main Pointer Shaft	1.95
P-28X84	Spreader Spring for Rotary Gear (Part of Above Assembly)	.10
P-28X83	Spreader Spring for Stationary Gear (Part of Above Assembly)	.10

Prices Subject to Change Without Notice