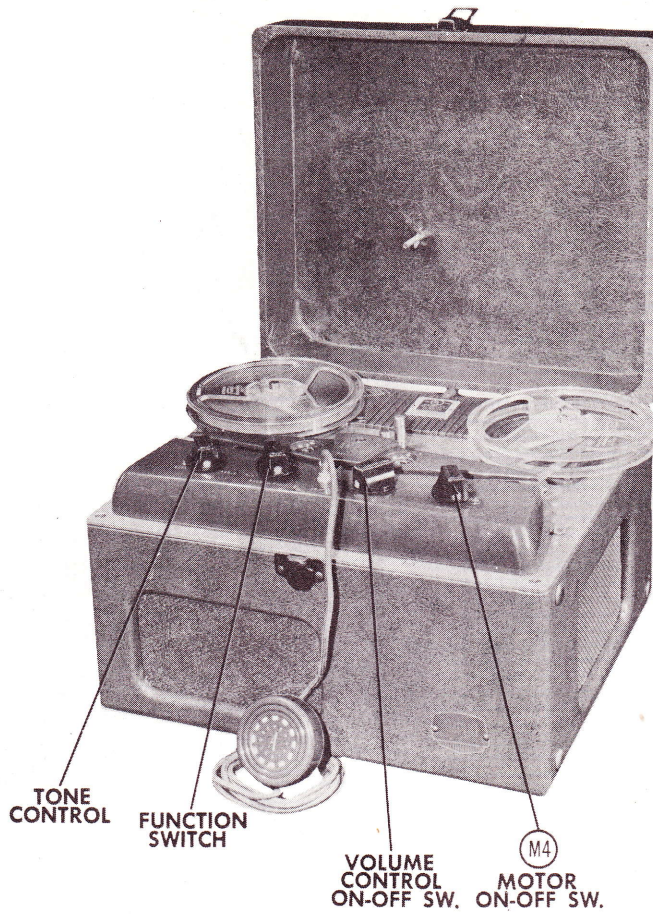




AMPRO
MODEL 731



AMPRO
MODEL 731

TRADE NAME	Ampro Model 731		
MANUFACTURER	Ampro Corp., 2835 N. Western Ave., Chicago 18, Ill.		
TYPE SET	AC Operated Magnetic Tape Recorder And Playback Unit.		
TUBES (Four)	Types 12AX7 Bias Osc. - Pre Amp., 6AU6 Amp., 6AUQ5 Audio Output, 6X4 Re ctifier.		
POWER SUPPLY	110-120 Volts AC	RATING	.31 Amp@ 117 Volts AC

FOR SERVICE INFORMATION ON MECHANICAL UNIT SEE MODEL 730 - PHOTOFACT SET #133 - FOLDER #4.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

AMPRO
MODEL 731

CHASSIS—TOP VIEW

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		AMPRO PART No.	STANDARD REPLACEMENT		
V1	Bias Osc-Pre Amp	18497-S	12AX7	9A	
V2	AF Amplifier	18699	6AU6	7EK	
V3	Audio Output	18701	6AQ5	7BZ	
V4	Rectifier	18700	6X4	5BS	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

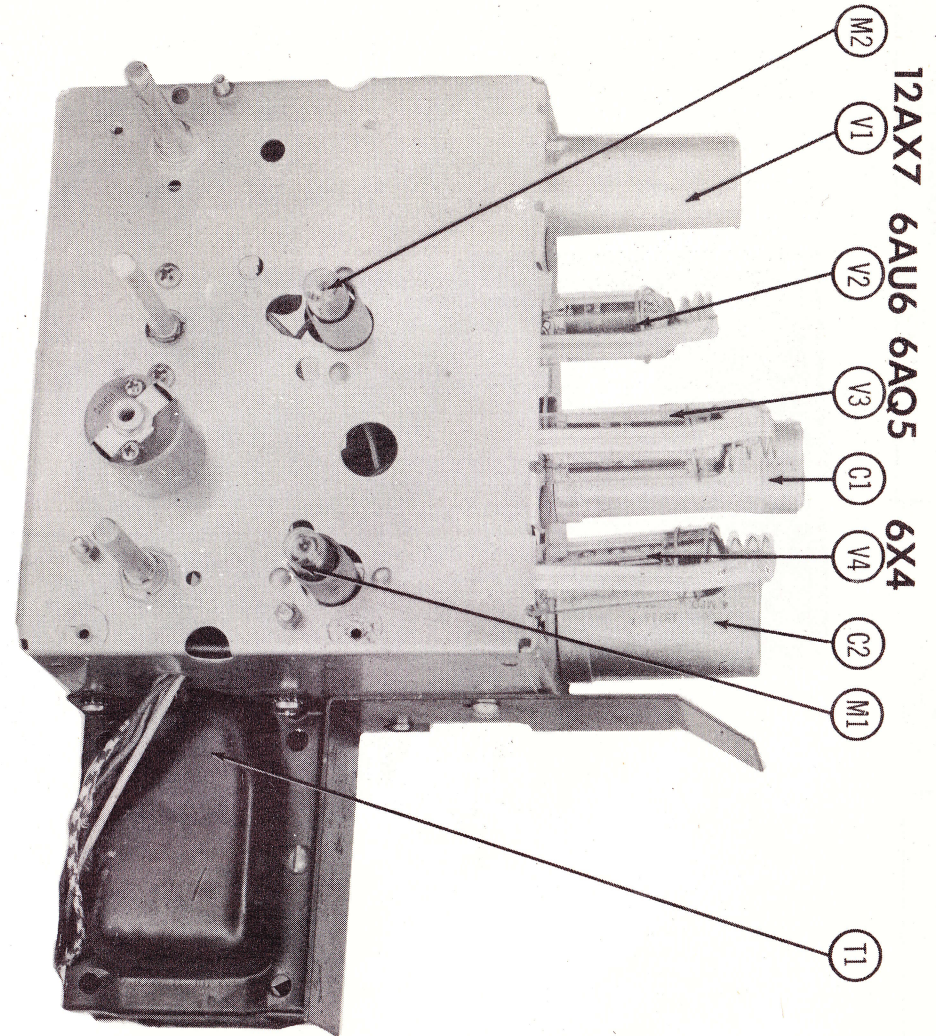
ITEM No.	RATING		REPLACEMENT DATA						IDENTIFICATION CODES AND INSTALLATION NOTES
	CAP.	VOLT	AMPRO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	
C1A	10	350	18715	AFH3-108		UP3035		TVL-1720	▲ Filter
C4	30	350		BRI235A		BRI235A		TVA-1604	■ Filter
C2B	4	350	18716	AFH4-63		UPT1145CC		TVL-4662	▲ Decoupling
B	4	350							■ Decoupling
C	25	15							▲ AF Amp. Cathode
D	25	15							Audio Output Cathode
C3	500		18489	SI500	D6-501	TM5T5	GP2K-501	5GA-T5	Tone Comp.
C4	.03	400	18732	P488-03		PTE6S3		6TM-S3	AF Amp. Screen Bypass
C5	10000		18487	BPD-01	DD-103	TM5S1	821-01	5HK-S1	Audio Coupling
C6	5000		18488	BPD-005	DD-502	TM5D5	811-005	5HK-D5	Indicator Coupling
C7	10000		18485	BPD-001	DD-102	TM5D1	801-001	5HK-D1	Indicator Filter
C8	.03	400	18492	P488-03		PTE6S3		6TM-S3	Audio Coupling
C9	300	500	18733	1469-0003	D6-301	5W5T3	GP2K-301	M5-33	Tone Comp.
C10	.001	600	18091	P688-001	D6-102	PTE6D1	GP2L-102	6TM-D1	Tone Comp.
C11	.007	200	18739	P488-0068	D6-682	PTE6D68	GP2-333-682	6TM-D68	Audio Coupling
C12	.01	400	17782	P488-01	D6-103	PTE4S1	GP2-333-103	4TM-S1	Tone Comp.
C13	10000		18487	BPD-01	DD-103	TM5S1	821-01	5HK-S1	Audio Coupling
C14	1000		18485	BPD-001	DD-102	TM5D1	801-001	5HK-D1	RF Bypass
C15	.03	400	18732	P488-03		PTE6S3		6TM-S3	Bias Osc. Cathode
C16	500		18489	SI500	D6-501	TM5T5	GP2K-501	5GA-T5	Bias Osc. Grid Cap.
C17	.02	400	18731	P488-02	DF-203	PTE4S2		4TM-S2	Fixed Trimmer
C18	2700		18733	SI2700	D6-272	IR5D3	GP2-333-272		Fixed Trimmer
C19	500		18489	SI500	D6-501	TM5T5	GP2K-501	5GA-T5	Bias Osc. Coupling

CONTROLS

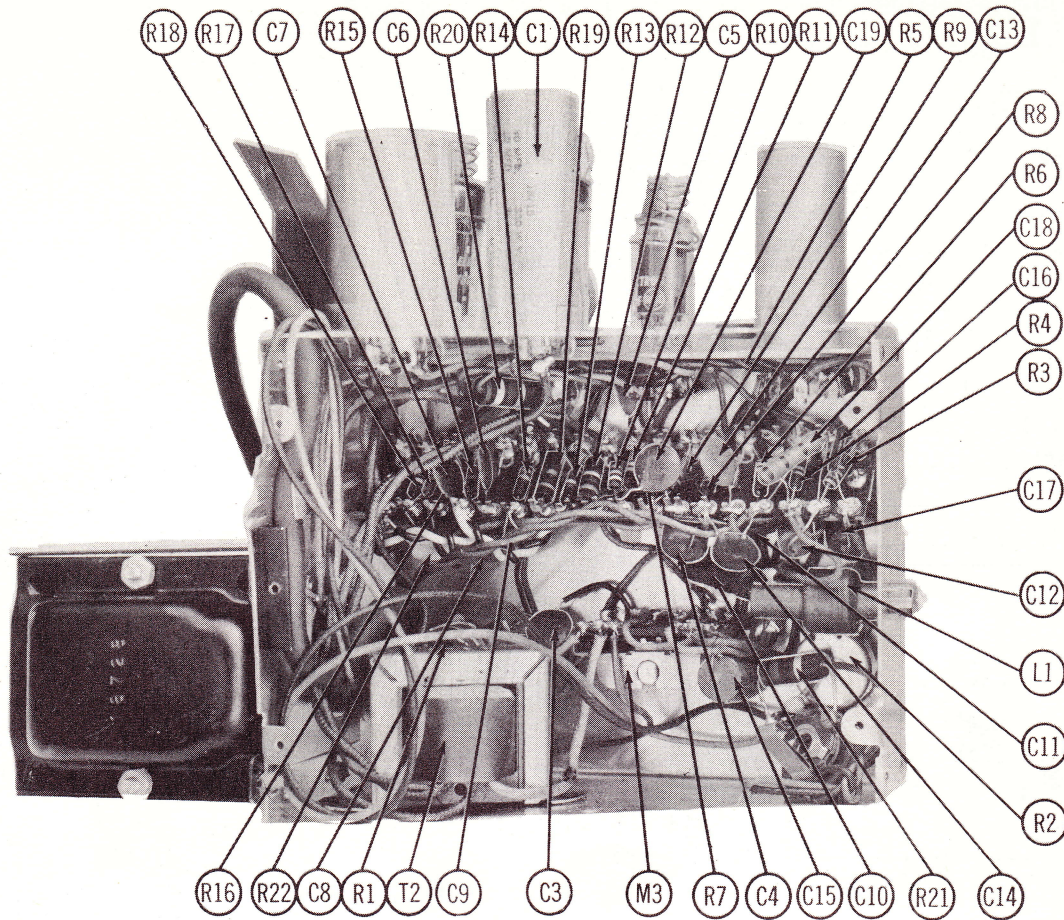
ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	AMPRO PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	
RIA	500K Ω	$\frac{1}{2}$	18709	Q13-133	Ag-60-Z	B-59-S	Volume Control
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Attach to R1A per instructions
C	Switch		Not Req.	76-1	SWB	Not Req.	Attach to R1A per instructions
R2A	50K Ω	$\frac{1}{2}$	18777	Q11-123	AG-44-S	B-31	Tone Control
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Attach to R2A per instructions

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	AMPRO PART No.	IRC PART No.	
R3	470K Ω		18474	BTS-470K	Bias Osc. Grid
R4	220K Ω		17959	BTS-220K	Bias Osc. Plate
R5	10Meg		17554	BTS-10 Meg	Pre Amp. Grid
R6	220K Ω		17959	BTS-220K	Pre Amp. Plate
R7	560K Ω		18467	BTS-560K	AF Amp. Plate
R8	2700 Ω		18582	BTS-2700	AF Amp. Cathode
R9	1.8 Meg		18436	BTS-1.8 Meg	AF Amp. Screen
R10	390K Ω		18729	BTS-390K	Output Grid
R11	100K Ω		18471	BTS-100K	Output Grid
R12	270 Ω		18770	BTA-270	Output Cathode
R13	22K Ω		18583	BTS-22K	Decoupling
R14	220K Ω		17959	BTS-220K	Tone Compensation
R15	100K Ω		18471	BTS-100K	Indicator Network
R16	220K Ω		17959	BTS-220K	Indicator Network
R17	470K Ω		18474	BTS-470K	Indicator Network
R18	390K Ω		18729	BTS-390K	Voltage Divider
R19	2700 Ω	1	18653	BTA-2700	Filter
R20	390 Ω	2	18772	BTB-390	Filter
R21	33 Ω	1	18771		Voice Coil Shunt
R22	3 Ω	5	18718	3/4 A-3	Transformer Shunt - Wire Wound



CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	AMPRO PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.
T1	117VAC ④ .31A	480VCT ④ .050ADC	6.3VAC ④ 1.7A	18728	PC-8419	P-3147	PV-60

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING			REPLACEMENT DATA			INSTALLATION NOTES
	IMPEDANCE	DC RES.	SEC.	AMPRO PART No.	STANCOR PART No.	MERIT PART No.	
T2	5KΩ	3.4Ω	520Ω .70	18762	A-3877D	A-3018D	RO-9 ① ① Drill one new mounting hole.

SPEAKER

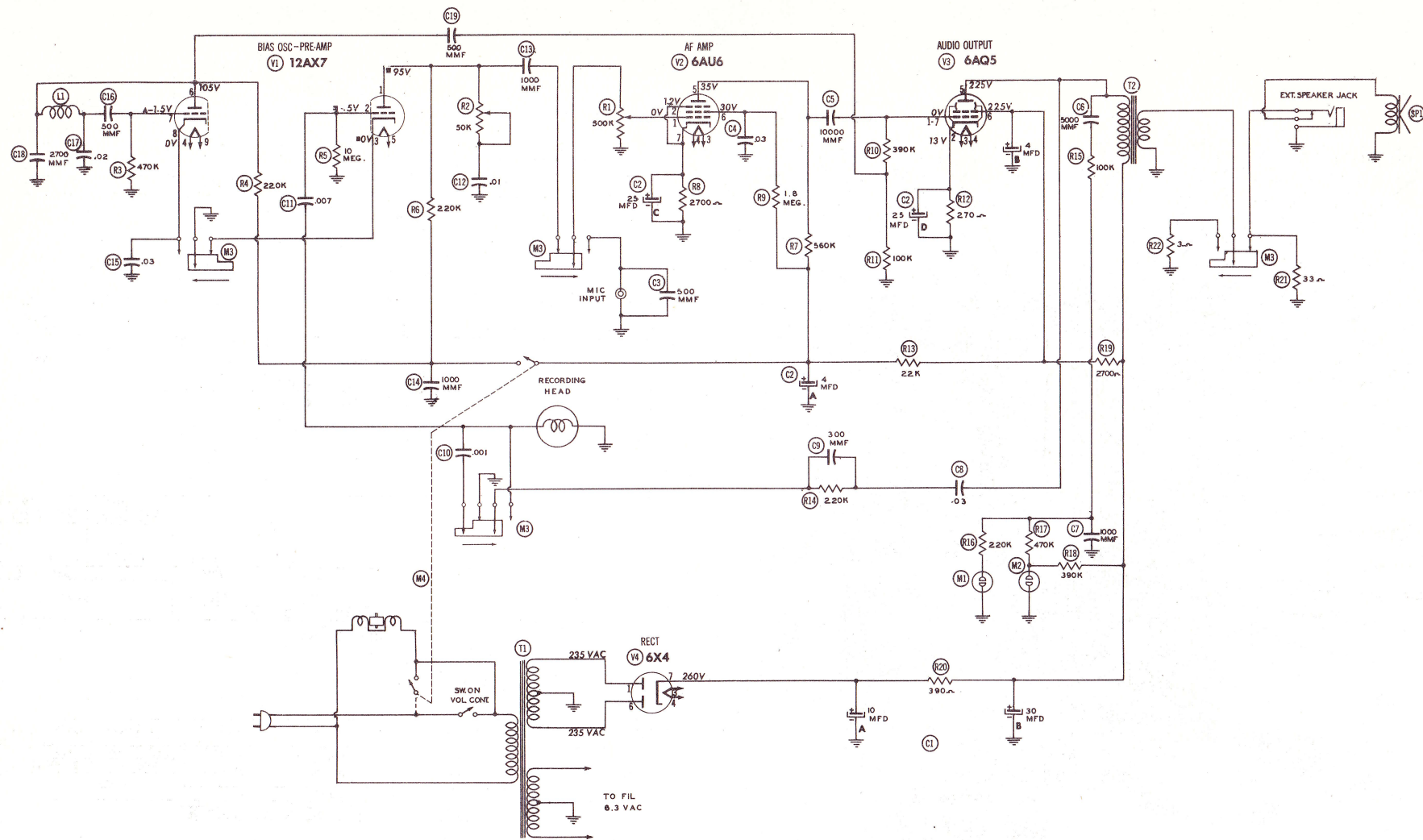
ITEM No.	RATINGS			REPLACEMENT DATA		NOTES
	FIELD RES.	V. C. IMP.	P. M.	AMPRO PART No.	VIKING PART No.	
SP1A		3.4Ω		18775	5779	57A1
SP1B	5"x7"		9/16"			

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA		NOTES
		PRI.	SEC.	AMPRO PART No.	MERIT PART No.	
L1	Bias Osc. Coil	103Ω		18784		

MISCELLANEOUS

ITEM No.	PART NAME	AMPRO PART No.	NOTES
M1	Neon Bulb	16915-1	Type NE-51
M2	Neon Bulb	16915-1	Type NE-51
M3	Switch	17786	Record - Listen
M4	Jack	18696	Motor
	Jack	18708	Phono- Mic
	Jack	18769	Ext. Speaker



RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	12AX7	†345KΩ	10Meg	∞Ω	†.1Ω	†.1Ω	†245KΩ	470KΩ	0Ω	∞Ω
V 2	6AU6	85Ω	2.7KΩ	∞Ω	†.1Ω	†585KΩ	†1.8Meg	2.7KΩ		
V 3	6AQ5	490KΩ	270Ω	∞Ω	†.1Ω	†910Ω	†3.1KΩ	480KΩ		
V 4	6X4	180Ω	∞Ω	†.1Ω	∞Ω	∞Ω	170Ω	100KΩ		

ALL MEASUREMENTS TAKEN IN "RECORD" POSITION UNLESS NOTED
 † MEASURED FROM PIN 7 OF V4
 ‡ MEASURED IN "PLAY" POSITION
 † MEASURED FROM PIN 4 OF V4

THE COOPERATION OF THE MANUFACTURER OF THIS EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACIT STANDARD NOTATION SCHEMATIC
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- 1 - DC Voltage measurements are at 20,000 ohms per volt, AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Line voltage maintained at 117 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of - 15% in voltage and resistance readings.
- 6 - Proper output load connected.