

Technical Service Data

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Schematics Location

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Placement Chart

Product #084135

EMERSON

MODEL

Model TC1973D (Version A)

SCHEMATIC NOTES

For SAFETY use only equivalent replacement part, see parts list.

✕ Circuitry not used in some versions.

--- Circuitry used in some versions.

⏏ Ground

⏏ Chassis ground

▽ Common tie point

△ Taken from common tie point

3 Schematic voltage source tie point.

A— Cabling: Heavy lines reduce use of multiple lines.

Waveforms and voltages are taken from ground, unless noted otherwise.

Waveforms taken with triggered scope and keyed rainbow generator. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.

Supply voltages maintained as seen at input.

Voltages measured with digital meter and a 1000μV RF signal, with colorbar pattern, applied to antenna terminal.

Controls adjusted for normal operation.

Capacitors are 50 volts or less, 5% or greater unless noted.

Electrolytic capacitors are 50 volts or less,

20% or greater unless noted.

Resistors are 1/2W or less, 5% or greater unless noted.

Value in () used in some versions.

Measurements with switching as shown, unless noted.

Rated voltage shown on zener diodes.

PARTS LIST

COILS & TRANSFORMERS

Item No.	Function/Rating	Mfr. Part No.
# DY801	Yoke Horiz 2.7mH Vert 19.9mH	027Z092002
# FB401 (1)	Horizontal Output	043220040F
L001	47 μ H	021673470K
L101	33 μ H	021LA6330K
L202	.47 μ H	021LA6R47M
L203	.91 μ H	021S05R91K
L204	.18 μ H	021S65R18J
L205	.43 μ H	021S05R43J
L206	15 μ H	021LA6150K
L301	22 μ H	021LA6220K
L302	10 μ H	021LA6100K
L406	18 μ H	02186G180M
	18 μ H	021U6A180M
L410	4.7 μ H	021679472K
# L501	Line Filter	0292000070
# L502	Degaussing	028H200016
	Degaussing	028S200008
	Degaussing	028A200021
L602	22 μ H	021LA6220K
L604	33 μ H	021LA6330K
L606	100 μ H	021LA6101K
L607	33 μ H	021LA6330K
L801	100 μ H	021673101K
T401	Horizontal Drive	03305Y002W

For SAFETY use only equivalent replacement part.
 (1) Focus and screen controls are part of FB401.

PARTS LIST continued

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# ATC001	Antenna	0632400005	Unit
# BL001	Plug	0634200015	FJ
# CD501	Line Cord	1206614311	AC, Polarized
CF201	Filter	1027045R72	SAW
CF202	Trap	1011T4R517	4.5MHz
CF301	Filter	1012T4R514	4.5MHz
CF302	Filter	1011T4R504	4.5MHz
CF401	Filter	1002R50304	503kHz
	Filter	1003R50303	503kHz
# F501	Fuse	081PC04003	4Amp, 125V, Slow Blowing
FH501, 02	Fuse Holder	06710T0006	For F501
# J801	Socket	066C130012	CRT
OS101	Receiver	077Q000006	Remote, PIC-12043SP
# RY101	Relay	0560S20113	Power
SP351	Speaker	070J132011	3" Round, 8 Ohms, 2W
SW102	Switch	0504101T32	Power
SW103	Switch	0504101T32	Volume Down
SW104	Switch	0504101T32	Volume Up
SW105	Switch	0504101T32	Channel Down
SW106	Switch	0504101T32	Channel Up
# TU001 (1)	Tuner	0145100040	UHF/VHF, ENV-568N8G3
# V801	CRT	092Z200411	G-A48ACB32X
X101	Crystal	1002T01201	12MHz
X601	Crystal	100W357903	3.58MHz
	PC Board	A3F401A11A	CRT
	PC Board	A3F401A01A	Main
	Transmitter	076R074040	Remote, R25-7345
	Wedges	129A000010	Yoke Positioning (3 Used)

For SAFETY use only equivalent replacement part.

(1) Contact TNI Electronics for replacement; order by part number on tuner.

PARTS LIST continued

CONTROLS & RESISTORS

Item No.	Function/Rating	Mfr. Part No.	NTE Part No.
# R002	100 5% 1W	R3U181101J	1W110
R124	3900 1% 1/6W	R4X5T6392F	-
R135	10K 1% 1/4W	R4X5T4103F	-
R156	56K 1% 1/6W	R4X5T6563F	-
R157	22K 1% 1/6W	R4X5T6223F	-
# R177	1200 5% 10W Wirewound	-	10W212
	1500 5% 10W Wirewound	R5Y2CF152J	10W215
R411	200K 1% 1/6W	R4X5T6204F	-
# R413	47 5% 1/4W Fusible	R635U4470J	-
# R423	10K 5% 2W	R3U18A103J	2W310
R425	15K 1% 1/4W	R4X5T4153F	-
R427	390K 1% 1/4W	R4X5X4394F	-
# R435	100K 1% 1/4W	R4X5T4104F	-
# R436	27K 1% 1/6W	R4X5T6273F	-
# R437	1500 5% 1/8W	R902N8152J	EW215
# R439, 40	15K 1% 1/6W	R4X5T6153F	-
# R441	1800 5% 1/8W	R902N8182J	EW218
# R442	.68 5% 1W Fusible	R63581R68J	-
R445	150K 1% 1/4W	R4X5T4154F	-
# R447, 48	3300 5% 2W	R3U18A332J	2W233
	3900 5% 2W	-	2W239
# R452	1.2 5% 1W Fusible	R63581R2J	F1W1D2
# R490	68 5% 1/2W Fusible	R615U2680J	-
# R501	820K 5% 1/2W	R002T2824J	HW482
# R502	4.7 5% 10W Wirewound	R5Y2CF4R7J	10W4D7
# R506	180 5% 10W	R5Y2CF561J	10W118
	180 15W	-	-
# R507	47 5% 1/4W Fusible	R635U4470J	-
# R509	17K 1% 1/4W	R4X5T4173F	-
# R523	4.7 5% 3W	R3X28B4R7J	3W4D7
# R802	10K 5% 2W	R3U18A103J	2W310
R804	20K 2% 1/6W	R001T6203G	-
# R805	10K 5% 2W	R3U18A103J	2W310
R807	24K 2% 1/4W	R001T4243G	QW324
R808	24K 2% 1/6W	R001T6243G	-
# R810	10K 5% 2W	R3U18A103J	2W310
# TH501	5.1 Cold PTC, 200	D8R0C5R0M0	-

For SAFETY use only equivalent replacement part.

PARTS LIST continued

CAPACITORS & ELECTROLYTICS

Item No.	Rating	Mfr. Part No.
C120	1μF 20% 50V NP	E02ET5010M
C133	.0022 10% 2kV	C13VB07H3K
C228	18pF 5% 50V NPO	C0JTC4G1J
C229	27pF 5% 50V N075	C0NTLH4K1J
C231	68pF 5% 50V N075	C0NTLH4U1J
C232	15pF 5% 50V NPO	C0JTC4E1J
# C412	470μF 20% 10V	E02LT1471M
# C414	100μF 20% 35V	E02LT4101M
C420	2.2μF 20% 50V NP	E02ET52R2M
# C433	1000μF 20% 35V	E02LT4102M
# C434	22μF 20% 63V	E0RIT6220M
# C436	470μF 20% 16V	E02LT2471M
# C442	270pF 10% 2kV	C01TBP7K2K
# C443	.0062 +50% -10% 1.6kV	P4N2F9622H
# C446	1μF 20% 160V	E0E7TB010M
# C448	10μF 20% 100V	E0RIT8100M
C453	.001 10% 1kV	C0JTB0613K
# C478	470μF 20% 16V	E02LT2471M
# C499	47μF 20% 25V	E001T3470M
# C502	.1 10% 250VAC	P2222B104K
C503, 04	.001 10% 2kV	C13VB0713K
# C506	560μF 20% 200V	E5MCF561M
# C507	100μF 20% 160V	E0E7FB101M
C813	.001 10% 2kV	C13VB0713K

For SAFETY use only equivalent replacement part.

PARTS LIST continued

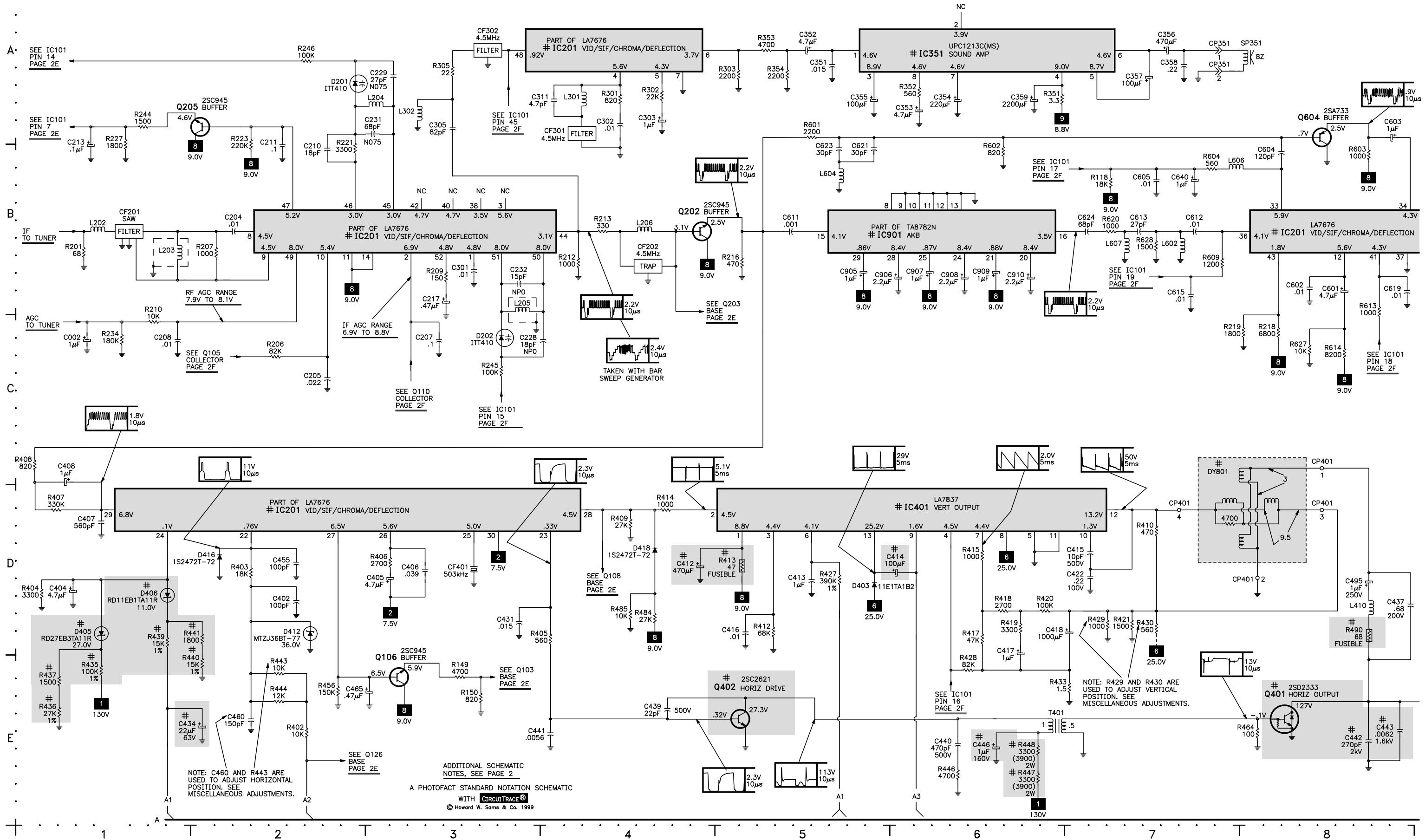
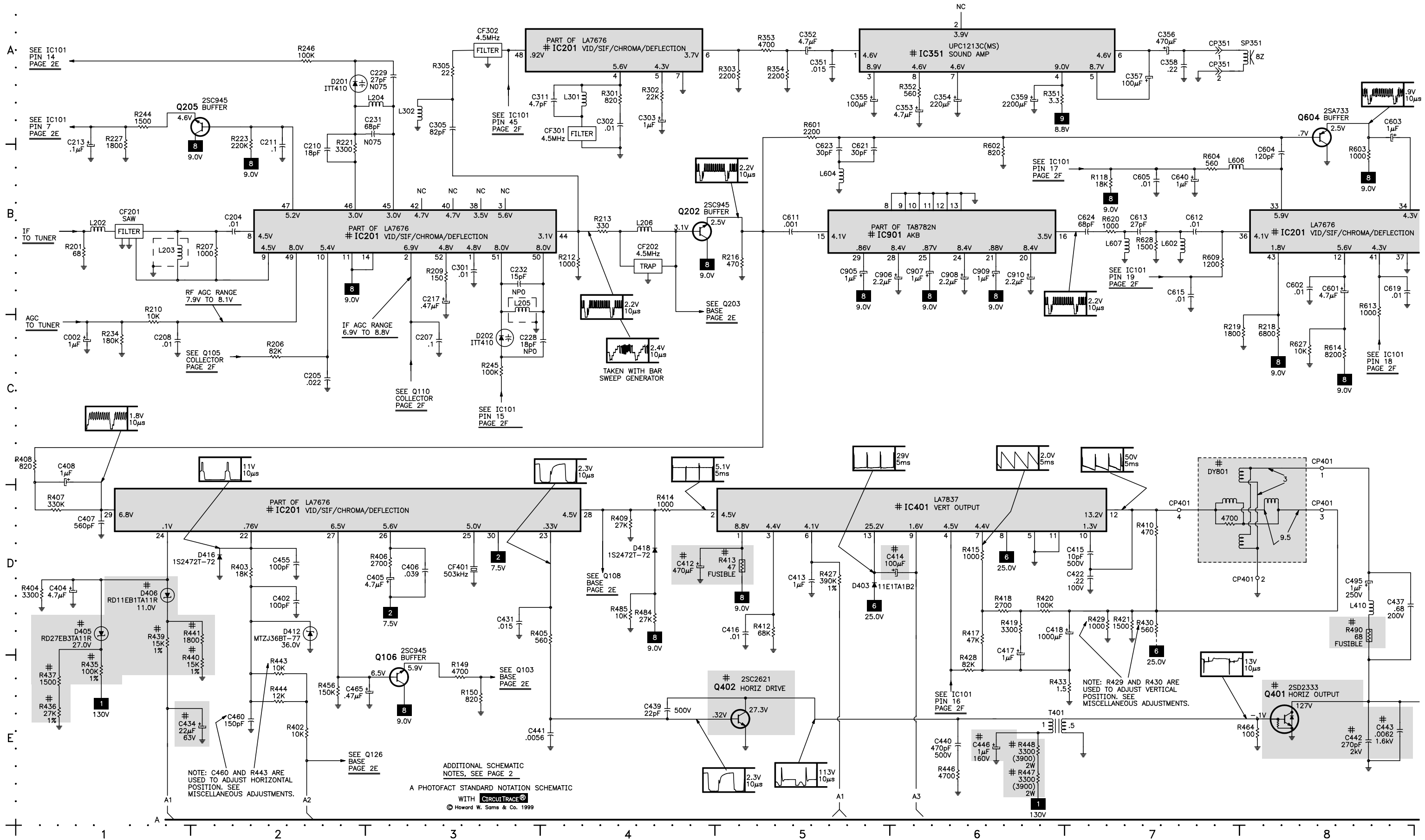
CABINET PARTS	
Item	Mfr. Part No.
Cabinet Front	701APJ0044
Cabinet Front Assembly	A3C809A720
Cabinet Rear	702APA0070
Plate Front	7232020626

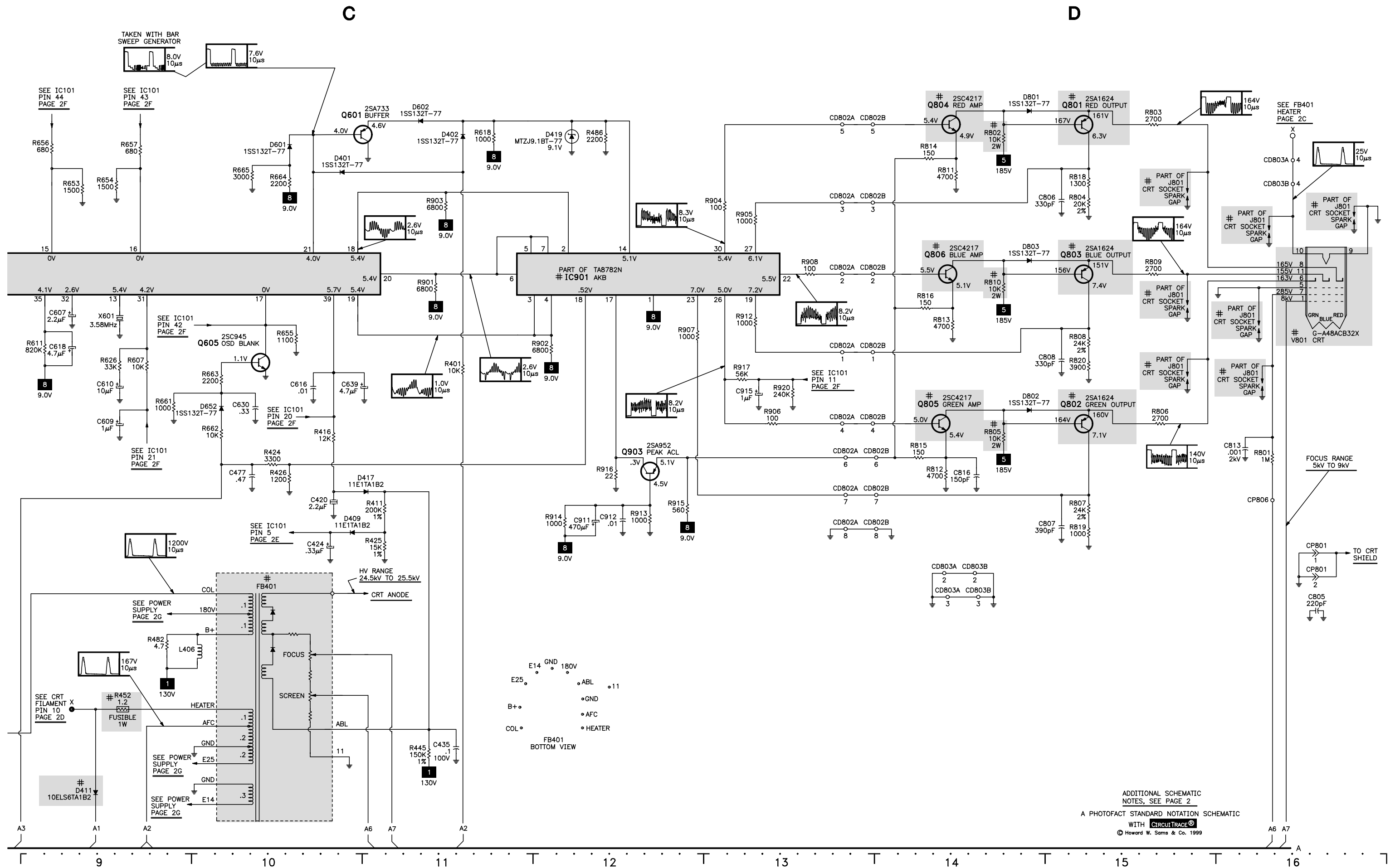
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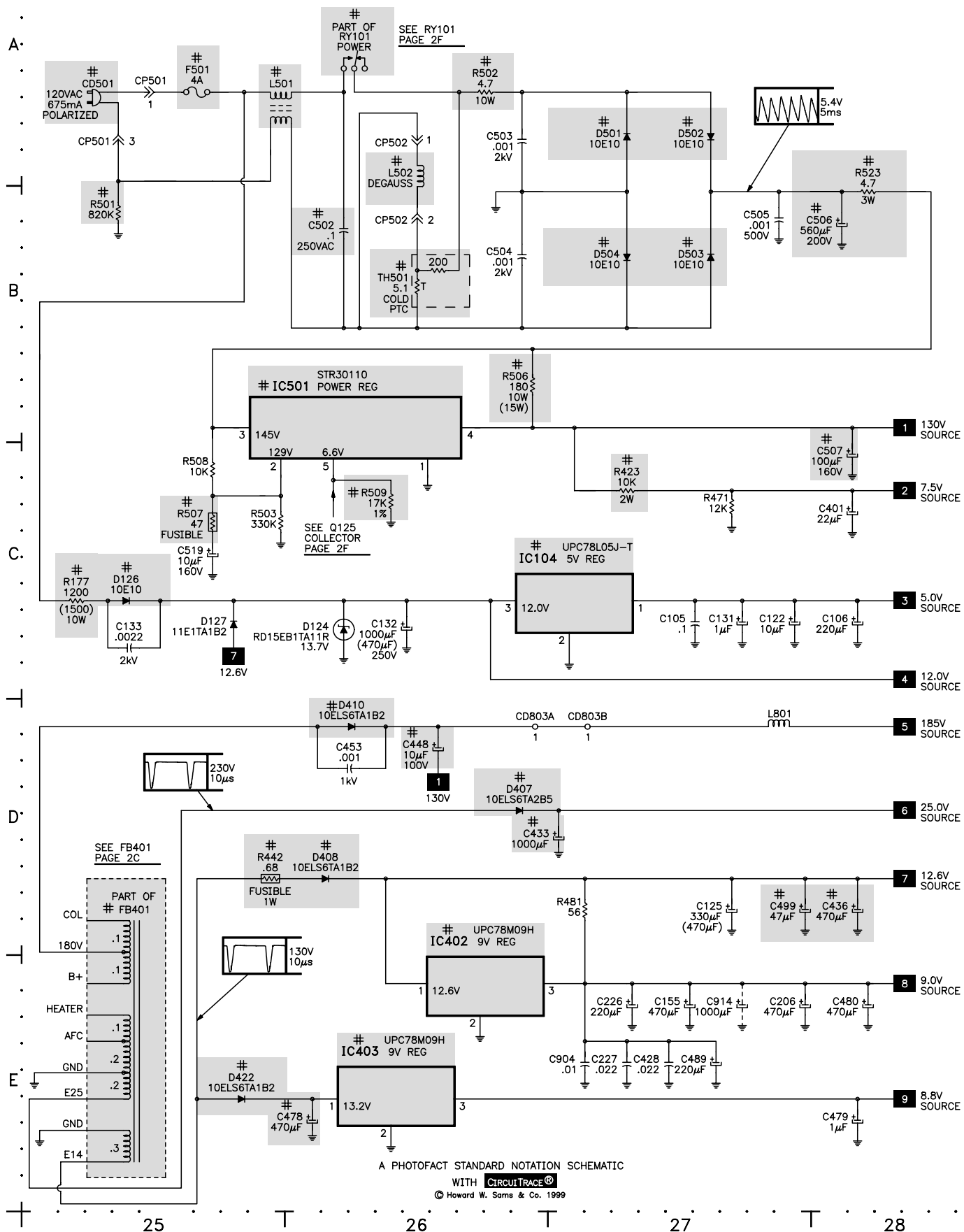
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Item No.	Type No.	Mfr. Part No.	ECG Part No.	NTE Part No.	TCE Part No.
D001	MTZJ5.1AT-77	D97U05R11A	-	-	-
D101	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
D104, 05	MTZJ5.6BT-77	D97U05R61B	ECG5011T1	NTE5011T1	SK9968
D106	MTZJ5.1BT-77	D97U05R11B	-	-	-
	HZS5R1EB2-T	D94TA5R1B2	ECG5010A	NTE5010A	SK5A1
D124	RD15EB1TA11R	D92T0150B1	ECG5023A	NTE5023A	SK14A
D125	1S2472T-77	D1VT024720	ECG177	NTE177	SK9091
# D126	10E10	D28T10E100	ECG125	NTE125	SK3081
	EM1CV1	D2BT0EM1C0	-	-	-
D127	11E1TA1B2	D28T011E10	ECG116	NTE116	SK3313
D139	RD30EB4TA11R	D92T0300B4	ECG5035A	NTE5035A	SK30A
D145	MTZJ6.2BT-77	D97U06R21B	ECG5013T1	NTE5013T1	SK9969
D153	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
D155, 56	MTZJ5.6BT-77	D97U05R61B	ECG5011T1	NTE5011T1	SK9968
D201, 02	ITT410	D5WTTT4100	ECG614	NTE614	SK3327
D401, 02	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
D403	11E1TA1B2	D28T011E10	ECG116	NTE116	SK3313
# D405	RD27EB3TA11R	D92T0270B3	ECG5033A	NTE5033A	SK27A
# D406	RD11EB1TA11R	D92T0110B1	ECG5019A	NTE5019A	SK10A
# D407	10ELS6TA2B5	D28X10ELS6	-	-	-
# D408	10ELS6TA1B2	D28T10ELS6	ECG552	NTE552	SK9000
D409	11E1TA1B2	D28T011E10	ECG116	NTE116	SK3313
# D410, 11	10ELS6TA1B2	D28T10ELS6	ECG552	NTE552	SK9000
D412	MTZJ36BT-77	D97U03601B	-	-	-
D416	1S2472T-72	D17X024720	ECG177	NTE177	SK9091
D417	11E1TA1B2	D28T011E10	ECG116	NTE116	SK3313
D418	1S2472T-72	D17X024720	ECG177	NTE177	SK9091
D419	MTZJ9.1BT-77	D97U09R11B	-	-	-
# D422	10ELS6TA1B2	D28T10ELS6	ECG552	NTE552	SK9000
# D501 Thru					
# D504	RM11C	D2BTRM11C0	ECG125	NTE125	SK3081
	10E10	-	ECG125	NTE125	SK3081
D601, 02	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
D651, 52	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
D801, 02, 03	1SS132T-77	D1VT001320	ECG519	NTE519	SK3100
IC101	OEC8059A	I51D08059A	-	-	-
IC102	ST93C46CB1	IC3D06CB1J	-	-	-
# IC104	UPC78L05J-T	I02J98L050	ECG977	NTE977	SK3462
IC105	PST600C	I9UJ0T600C	-	-	-
# IC201	LA7676	I03DE76760	-	-	-
# IC351	UPC1213C(MS)	I0XDP12130	ECG1516	NTE1516	-
# IC401	LA7837	I03SD78370	ECG7104	NTE7104	-
# IC402, 03	UPC78M09H	I0X398M090	ECG1910	NTE1910	-
# IC501	STR30110	I2B4901100	ECG7077	NTE7077	-
# IC901	TA8782N	I05DE87820	-	-	-
Q103	2SC945A(C)-TP	TCLT00945P	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q104	2SC2001(C)-TL	TCLT02001L	ECG85	NTE85	SK3849
Q105, 06, 08	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q110, 25, 26	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
Q202, 03, 05	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
# Q401	2SD2333-(RQ)	TDKF023330	ECG2331	NTE2331	-
# Q402	2SC2621(D,E)-RAC	TC3Q026210	ECG157	NTE157	SK3747
Q601, 04	2SA733(C)-T	TALT007330	ECG290A	NTE290A	SK3114A
Q605	2SC945A(C)-T	TCLT009450	ECG85	NTE85	SK3124A
	2SC945P,Q	-	ECG85	NTE85	SK3124A
# Q801, 02, 03	2SA1624-AA	TA3T016240	ECG288	NTE288	SK3434
# Q804, 05, 06	2SC4217(D,E)-RAC	TC3F042170	ECG157	NTE157	SK3747
Q903	2SA952(C)-T	TALT00952L	ECG290A	NTE290A	SK3114A

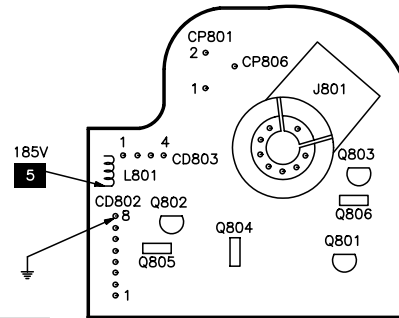
For SAFETY use only equivalent replacement part.







CRT BOARD



MAIN BOARD

