

There appears not to be a Service Manual for the TU-777, I discovered the Sansui 2000 receiver uses the same tuner as the TU-777. I have created this Mini Manual to fill the gap until a TU-777 manual is located.

This PDF contains:

Schematics

Board Layouts

Alignment Procedures

The layout of the following boards are not included

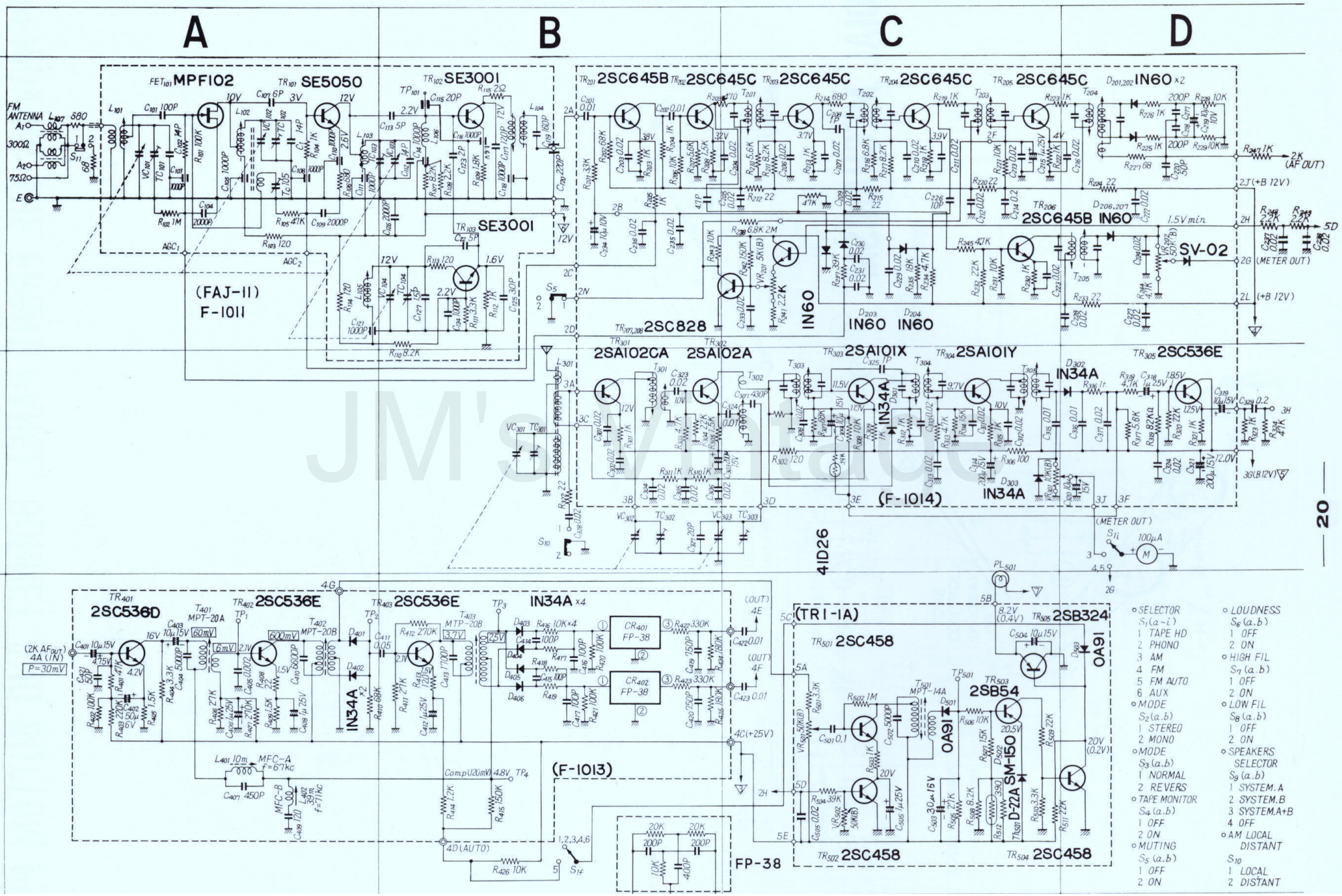
Power supply

JM's Vintage

1

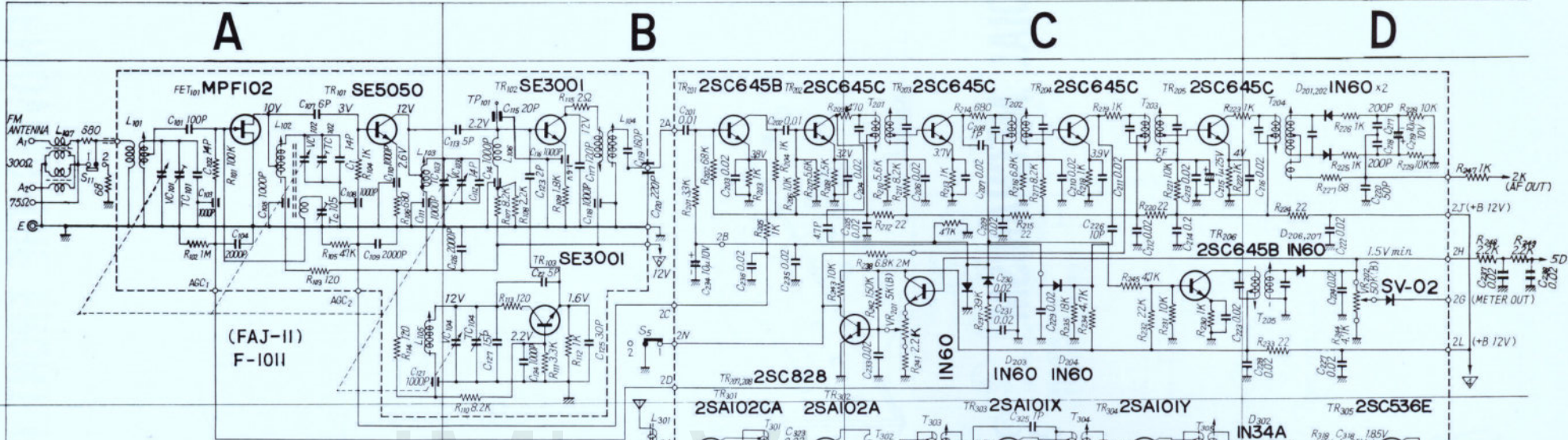
2

3

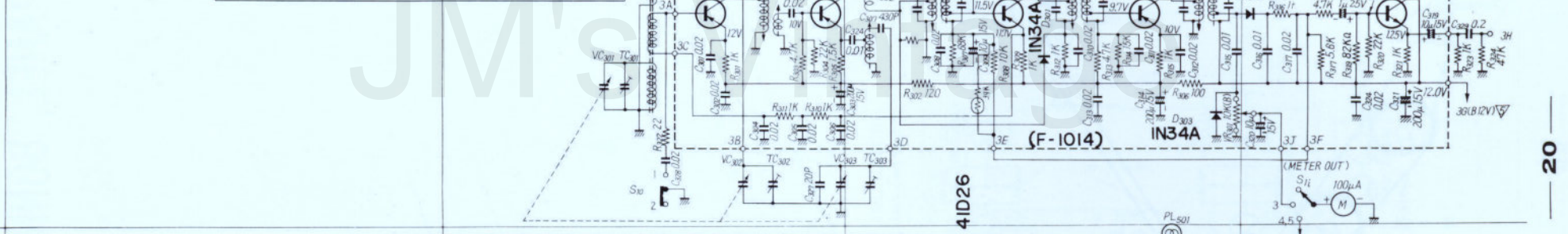


20

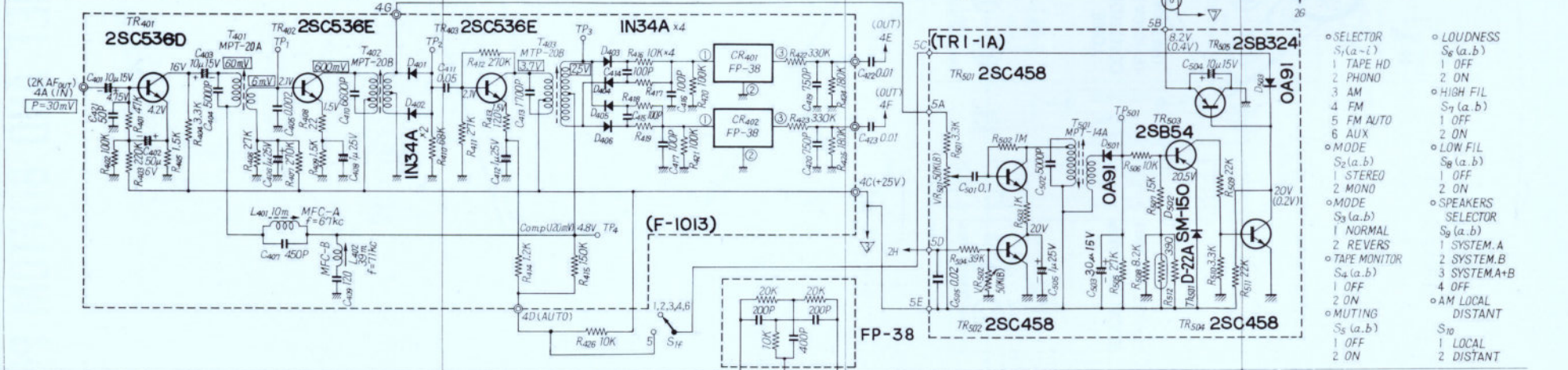
1



2



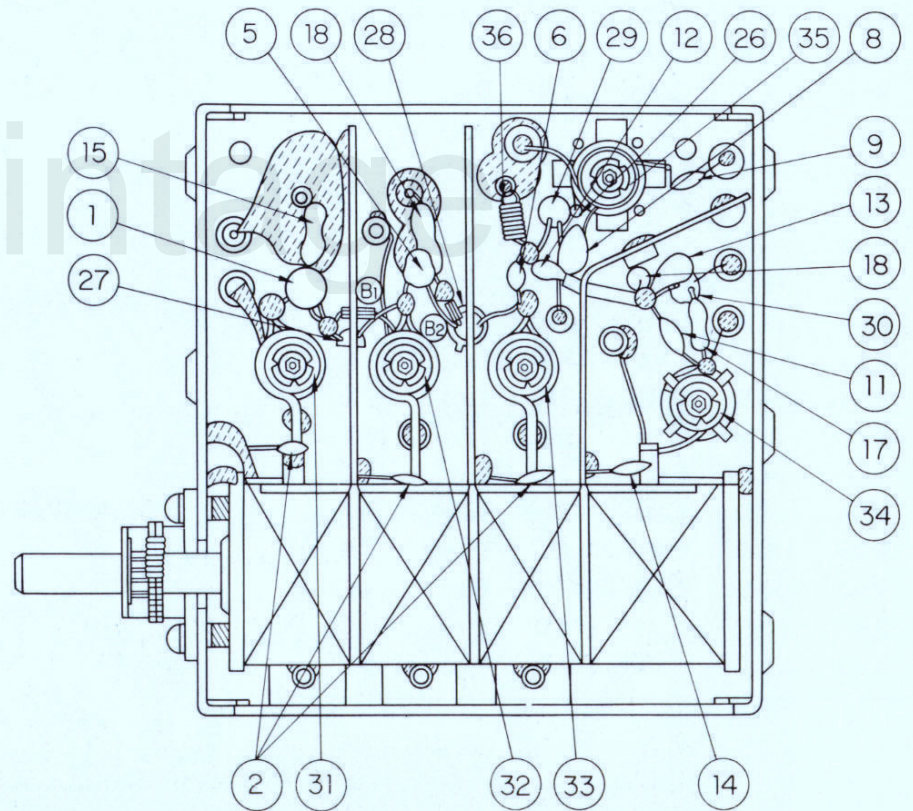
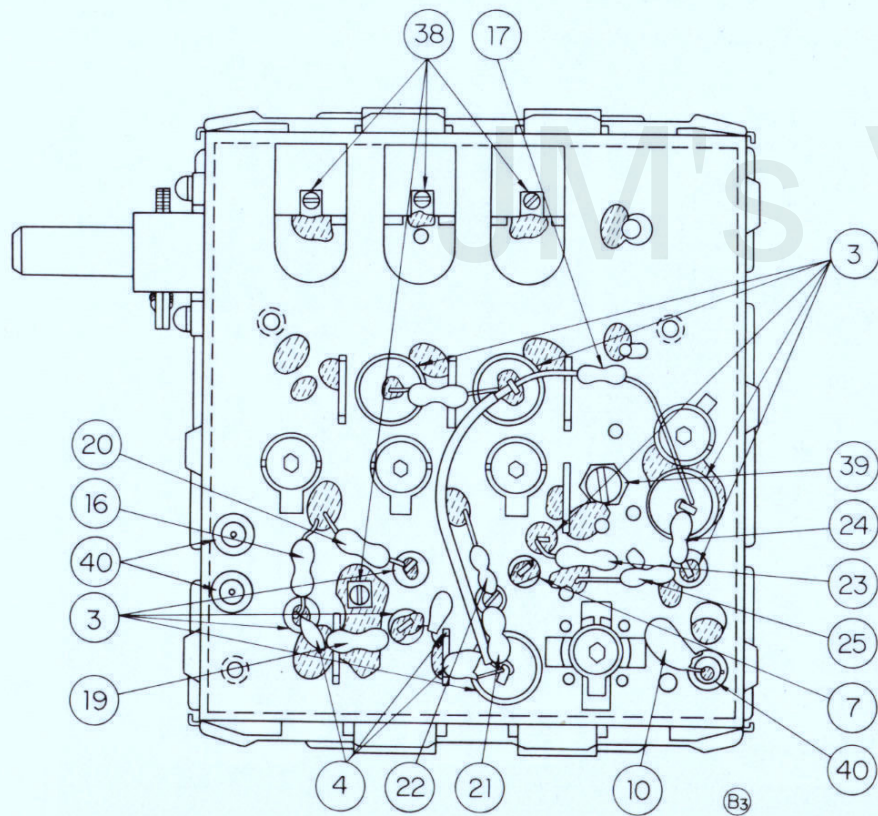
3



# FM TUNER F-1011

## PARTS NAME

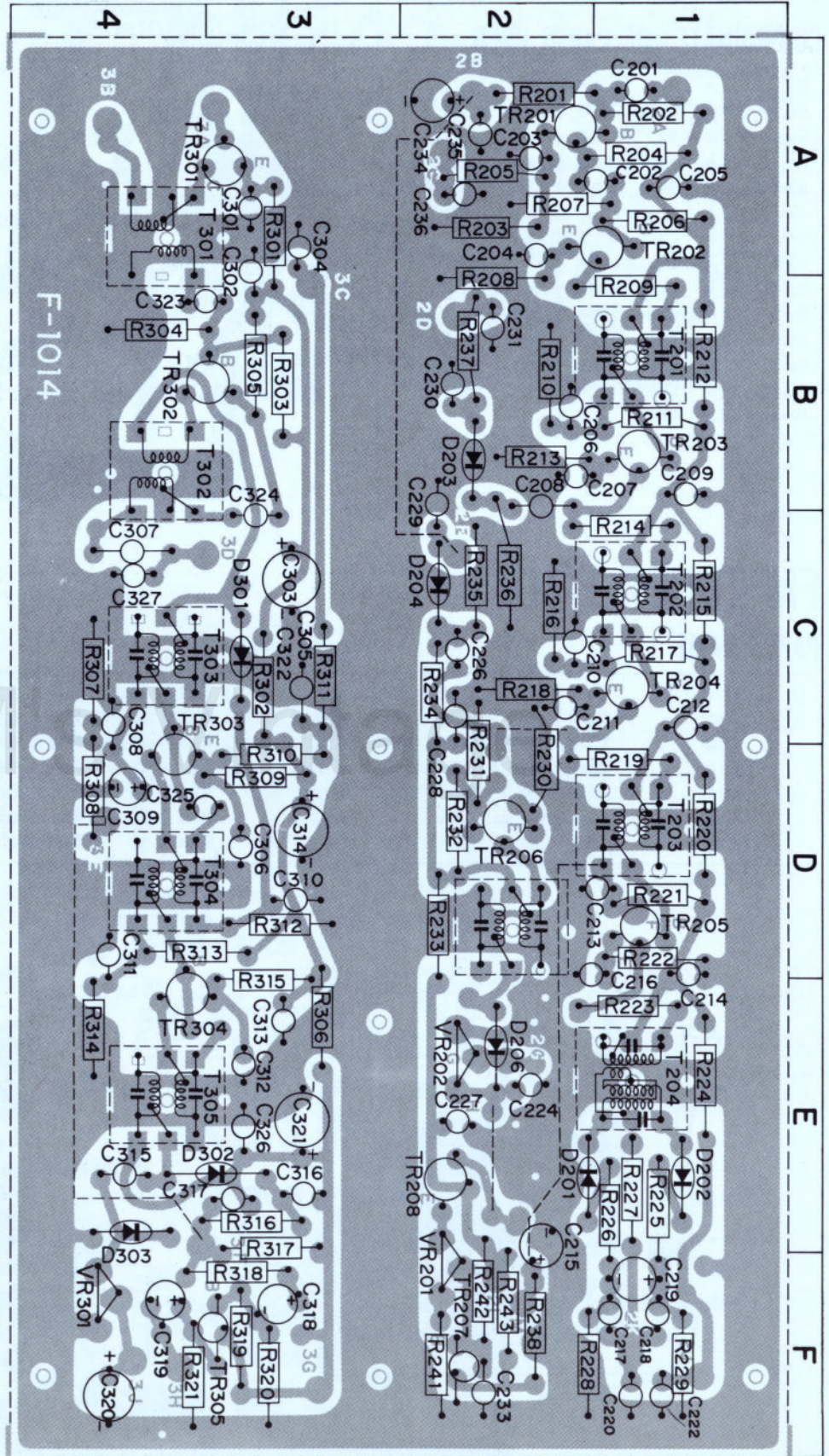
①	C101	C110	④	C104	⑨	C119	⑬	R102	⑲	R106	⑳	FET101	㉔	L105	TC104	
②	C102	C111		C109	⑩	C120	⑭	R103	⑳	R107	㉑	TR101	㉕	L104	㉙	TC105
	C106	C114		C126	⑪	C122		R113	㉒	R108	㉒	TR102	㉖	L106		
	C112	C116	⑤	C107	⑫	C123		R114	㉓	R109	㉓	TR103	㉗	T101		
③	C103	C118	⑥	C113	⑬	C125	⑱	R104	㉔	R110	㉔	L101	㉘	TC101		
	C105	C121	⑦	C115	⑭	C127		R112	㉕	R111	㉕	L102	㉙	TC102		
	C108	C124	⑧	C117	⑮	R101	⑲	R105	㉖	R115	㉖	L103	㉚	TC103		



# FM, AM IFT F-1014

## CO-ORDINATES OF PARTS USED

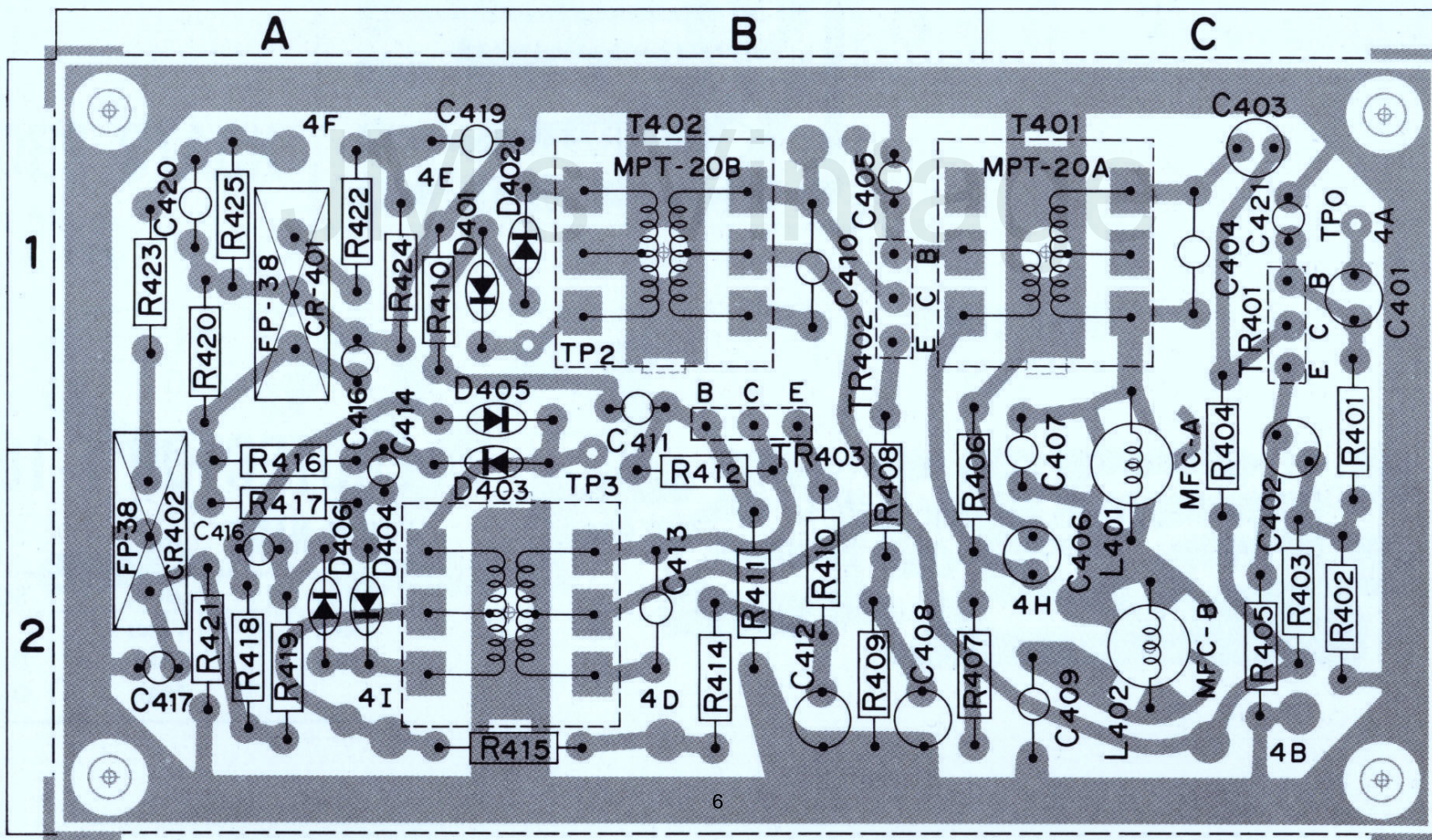
R201 ... 2 A	R313 ... 3, 4 D	C311 ... 4 D
R202 ... 1 A	R314 ... 4 E	C312 ... 3 E
R203 ... 2 A	R315 ... 3D, E	C313 ... 3 E
R204 ... 1 A	R316 ... 3 E	C314 ... 3 D
R205 ... 2 A	R317 ... 3 E	C315 ... 4 E
R206 ... 1 A	R318 ... 3 F	C316 ... 3 E
R207 ... 2 A	R319 ... 3 F	C317 ... 3 E
R208 ... 2 B	R320 ... 3 F	C318 ... 3 F
R209 ... 1 B	R321 ... 4 F	C319 ... 4 F
R210 ... 2 B		C320 ... 4 F
R211 ... 2 B	C201 ... 1 A	C321 ... 3 E
R212 ... 1 B	C202 ... 1, 2 A	C323 ... 3, 4 B
R213 ... 2 B	C203 ... 2 A	C324 ... 3 C
R214 ... 2 C	C204 ... 2 A	C325 ... 3, 4 D
R215 ... 1 C	C205 ... 1 A	C326 ... 3 E
R216 ... 2 C	C206 ... 2 B	C327 ... 4 C
R217 ... 1 C	C207 ... 2 B	
R218 ... 2 C	C208 ... 2 B	TR201 ... 1, 2A
R219 ... 1 D	C209 ... 1 B	TR202 ... 1, 2A
R220 ... 1 D	C210 ... 2 C	TR203 ... 1 B
R221 ... 1 D	C211 ... 2 C	TR204 ... 1 C
R222 ... 1 D	C212 ... 1 C	TR205 ... 1 D
R223 ... 1 E	C213 ... 1, 2 D	TR206 ... 2 D
R224 ... 1 E	C214 ... 1 D	TR207 ... 2 F
R225 ... 1 E	C215 ... 2 E, F	TR208 ... 2 E
R226 ... 1 E	C216 ... 1, 2 D	TR301 ... 3 A
R227 ... 1 E	C217 ... 1 F	TR302 ... 3, 4 B
R228 ... 2 E	C218 ... 1 F	TR303 ... 4 C, D
R229 ... 1 F	C219 ... 1 F	TR304 ... 4 D, E
R230 ... 2 D	C220 ... 1 F	TR305 ... 3 F
R231 ... 2 D	C222 ... 1 F	
R232 ... 2 D	C223 ... 2 F	D201 ... 2 E
R233 ... 2 D	C224 ... 2 E	D202 ... 1 E
R234 ... 2 C	C226 ... 2 C	D203 ... 2 B
R235 ... 2 C	C227 ... 2 E	D204 ... 2 C
R236 ... 2 C	C228 ... 2 C	D206 ... 2 E
R237 ... 2 B	C229 ... 2 B	D301 ... 3 C
R238 ... 1 F	C230 ... 2 B	D302 ... 3, 4 E
R241 ... 2 F	C231 ... 2 B	D303 ... 4 E
R242 ... 2 F	C233 ... 2 F	VR201 ... 2 E, F
R243 ... 2 F	C234 ... 2 A	VR202 ... 2 E
R301 ... 3 A	C235 ... 2 A	VR203 ... 4 F
R302 ... 3 C	C236 ... 2 A	
R303 ... 3 B	C301 ... 3 A	T201 ... 1 B
R304 ... 4 B	C302 ... 3 A, B	T202 ... 1 C
R305 ... 3 B	C303 ... 3 C	T203 ... 1 D
R306 ... 3 E	C304 ... 3 A	T204 ... 1 E
R307 ... 4 C	C305 ... 3 C	T205 ... 2 D
R308 ... 4 D	C306 ... 2 D	T301 ... 4 A
R309 ... 3 D	C307 ... 4 C	T302 ... 4 B
R310 ... 3 D	C308 ... 4 C	T303 ... 4 C
R311 ... 3 C	C309 ... 4 D	T304 ... 4 D
R312 ... 3 D	C310 ... 3 D	T305 ... 4 E



# FM MULTIPLEX F-1013

## CO-ORDINATES OF PARTS USED

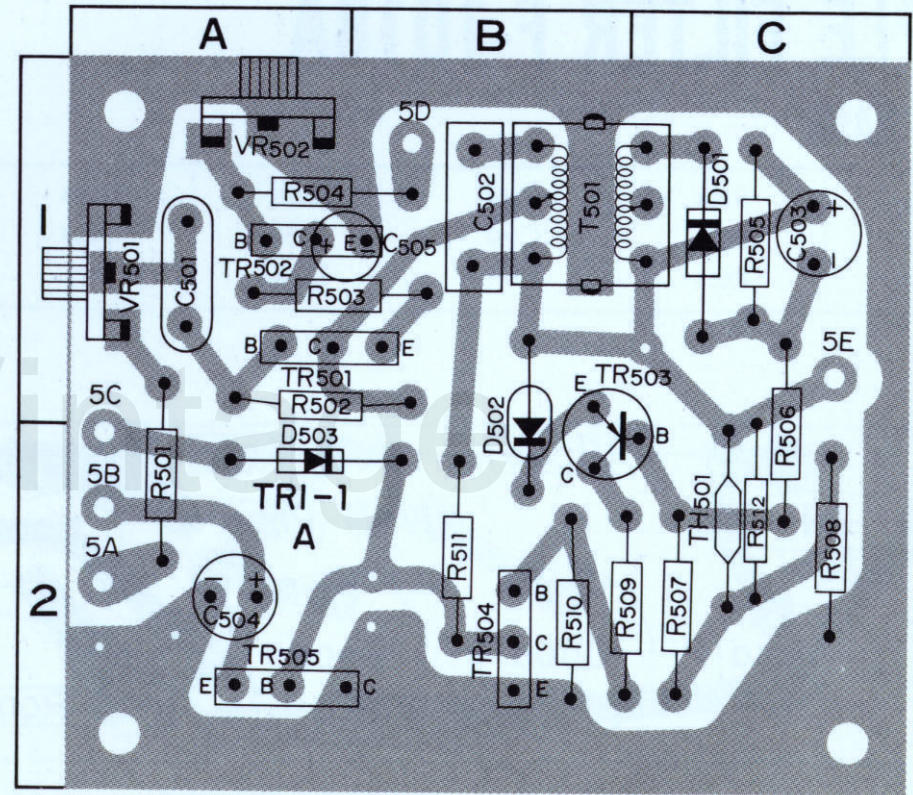
R401....1 C	R409....2 B	R417....2 A	R425....1 A	C407...1, 2 C	C415....2 A	CR401 ..1 A	D402....1 B	T401....1 C
R402....2 C	R410....1 A	R418....2 A		C408....2 B	C416....1 A	CR402 ..2 A	D403.. 2A, B	T402....1 B
R403....2 C	R411....2 B	R419....2 A	C401....1 C	C409....1 C	C417....2 A		D404....2 A	T403.. 2A, B
R404..1, 2 C	R412....2 B	R420....1 A	C402...1, 2 C	C410....1 B	C418....	TR401 ..1 C	D405.. 1A, B	
R405....2 C	R413....2 B	R421....2 A	C403....1 C	C411....2 B	C419....1 A	TR402 ..2 B	D406....2 A	
R406....2 B	R414....2 B	R422....1 A	C404....1 C	C412....2 B	C420....1 A	TR403 ..2 B		
R407....2 B	R415.. 2A, B	R423....1 A	C405....1 B	C413....2 B	C421....1 C		L401 ..1, 2 C	
R408.. :2 B	R416....2 A	R424....1 A	C406....2 C	C414....2 A		D401....1 A	L402 ....2 C	

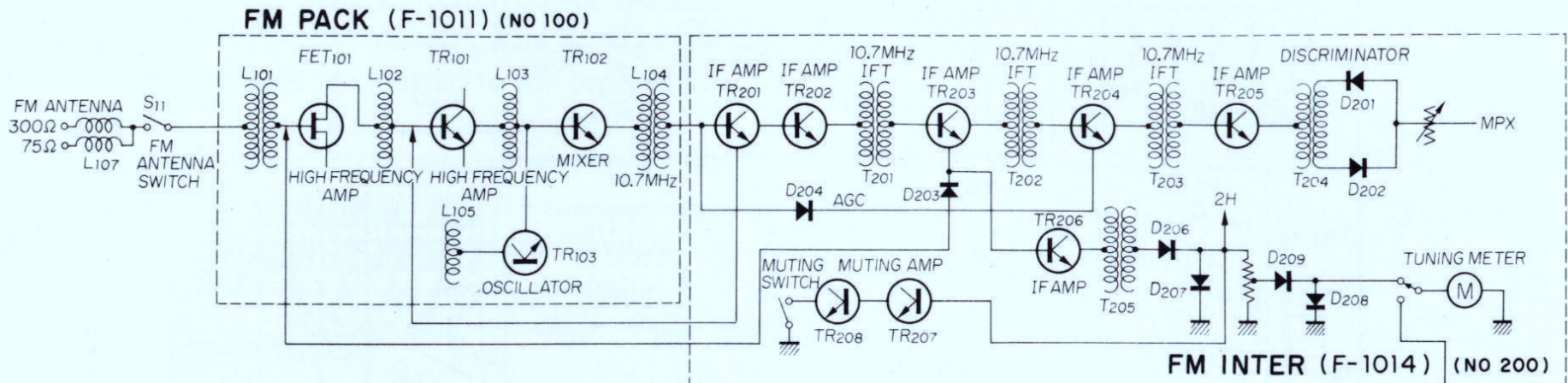


# FM STEREO INDICATOR TRI-1A

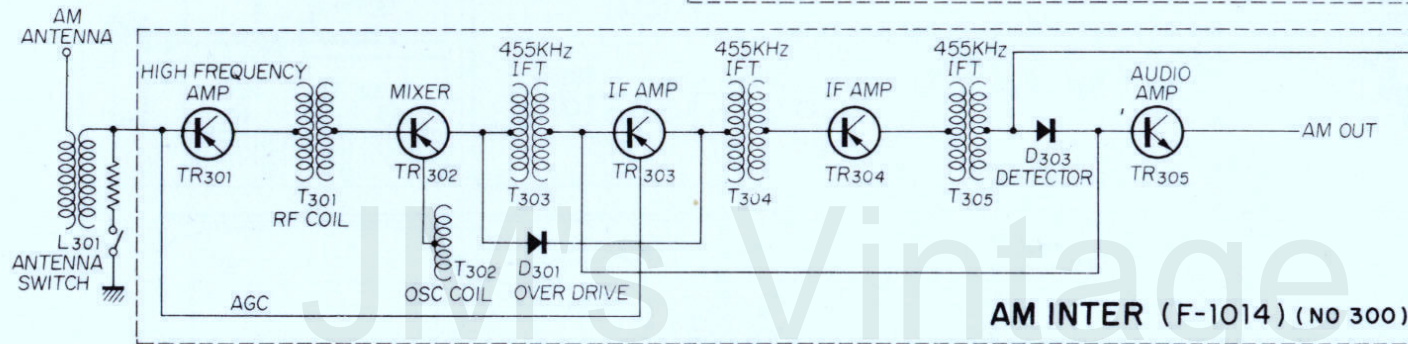
## CO-ORDINATES OF PARTS USED

R501 ... 2 A	R510 ... 2 C	T501 ... 1 B	TR503 .. 2 B
R502 ... 1 A	R511 ... 2 B		TR504 .. 2 B
R503 ... 1 A	R512 ... 2 C	VR501 .. 1 A	TR505 .. 2 A
R504 ... 1 A		VR502 .. 1 A	
R505 ... 1 C	C501 ... 1 A		D501 ... 1 C
R506 ... 1 C	C502 ... 1 B	TH501 .. 2 C	D502 ... 1 B
R507 ... 2 C	C503 ... 1 C		D503 ... 2 A
R508 ... 2 C	C504 ... 2 A	TR501 .. 1 A	
R509 ... 2 C	C505 ... 1 A	TR502 .. 1 A	

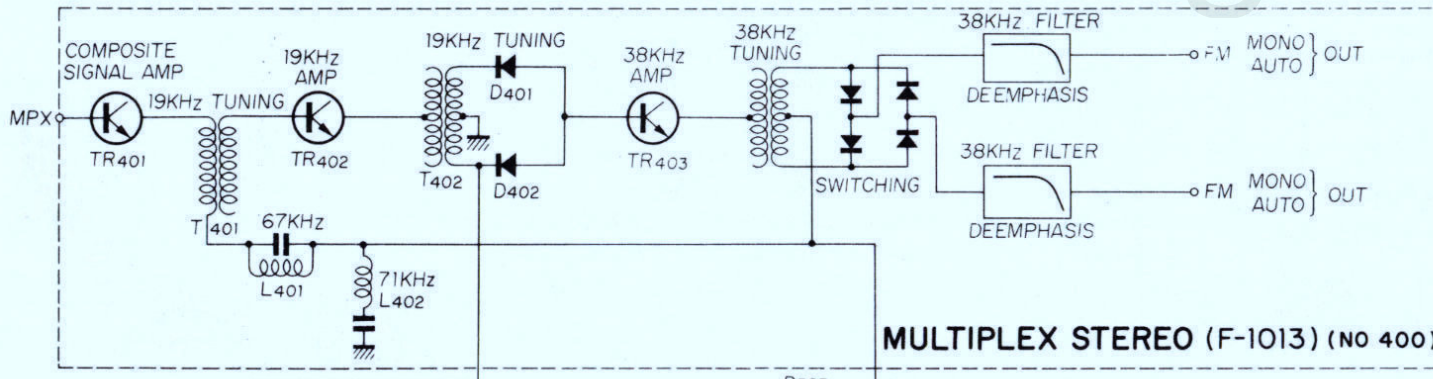




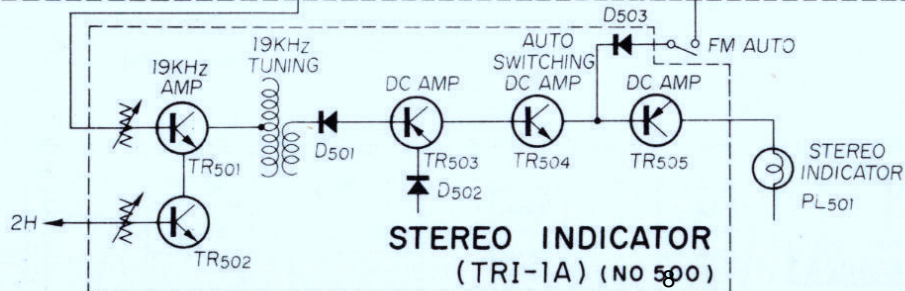
FM INTER (F-1014) (NO 200)



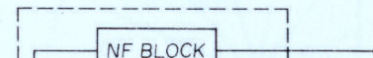
AM INTER (F-1014) (NO 300)



MULTIPLEX STEREO (F-1013) (NO 400)



STEREO INDICATOR (TRI-1A) (NO 500)





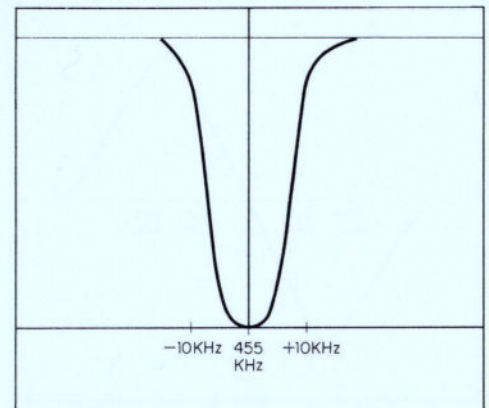
# ALIGNMENT

## AM ALIGNMENT PROCEDURE

NOTE: To align, set the AM Signal Generator level to minimum.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	I.F. Transformer	455 KHz ±30 KHz Sweep-generator	Antenna terminals	Oscilloscope and V.T.V.M. is connected to TR <sub>305</sub> emitter		Primary and secondary sides from the 1st I.F.T. (T <sub>303</sub> ) to the 3rd I.F.T. (T <sub>305</sub> )	Best I.F.T. wave form
2.	O.S.C.	AM-generator 600 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 KHz	O.S.C. Coil T <sub>302</sub>	Maximum
3.	O.S.C.	AM-generator 1400 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400 KHz	O.S.C. Trimmer cap. TC <sub>303</sub>	Maximum
4.	Repeat 2 and 3						
5.	RF amp.	AM-generator 600 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 KHz	RF transformer T <sub>301</sub>	Maximum
6.	Antenna circuit	AM-generator 600 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 KHz	Ferrite bar Antenna coil L <sub>301</sub>	Maximum
7.	RF amp.	AM-generator 1400 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400 KHz	RF Trimmer TC <sub>302</sub>	Maximum
8.	Antenna circuit	AM-generator 1400 KHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400 KHz	Antenna circuit Trimmer TC <sub>301</sub>	Maximum
9.	Repeat 5, 6, 7, 8						

AM IF CHARACTERISTIC



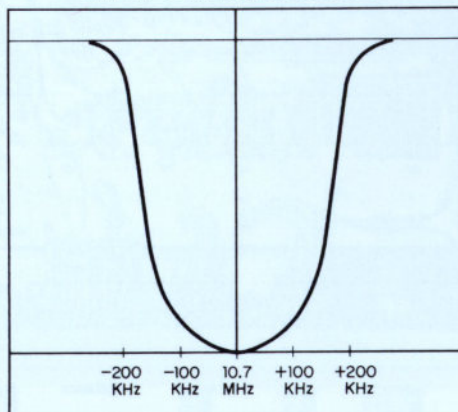
# ALIGNMENT

## FM ALIGNMENT PROCEDURE

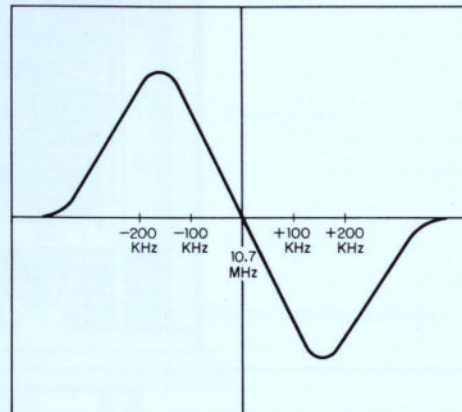
NOTE: To align, set the FM signal generator level to minimum, turn tuning gang fully, center carrier wave, and set pointer to reference mark.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF Transformer	10.7 MHz ±200 KHz	Sweep signal is sent to TP <sub>101</sub> via the 0.02pF ceramic capacitor	Oscilloscope is connected to TR <sub>202</sub> emitter, and then TR <sub>205</sub> collector to ground via the 0.05μF ceramic capacitor		Primary and secondary sides of L <sub>104</sub> T <sub>201</sub> , T <sub>202</sub> and T <sub>203</sub>	Best I.F.T. wave form
2.	Discriminator	10.7 MHz ±200 KHz	Sweep signal is sent to 2A via the 0.05μF ceramic capacitor	Oscilloscope is connected to 2K via the 0.05μF capacitor		FM Discriminator transformer T <sub>204</sub> primary and secondary	S curve
3.	O.S.C.	88 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	88 MHz	O.S.C. coil L <sub>105</sub>	Maximum
4.	O.S.C.	108 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	108 MHz	O.S.C. trimmer TC <sub>104</sub>	Maximum
5.	Repeat 3 & 4						
6.	RF Amp. Circuit	90 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	90 MHz	Antenna coil L <sub>101</sub> , L <sub>102</sub> and L <sub>103</sub>	Maximum
7.	RF Amp. Circuit	106 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	106 MHz	Trimmer TC <sub>101</sub> , TC <sub>102</sub> and TC <sub>103</sub>	Maximum
8.	Repeat 6 & 7						

FM IF CHARACTERISTIC



FM DISCRIMINATOR CHARACTERISTIC



# FM M.P.X. ALIGNMENT PROCEDURE

1. Do not attempt to align the Multiplex Circuit unless the following equipment is available:

a. Multiplex Stereo Generator b. Oscilloscope c. AC. V.T.V.M. d. Audio Oscillator e. FM Signal Generator

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	ADJUST	ADJUST FOR
1.	67 KHz Trap	67 KHz Audio Signal	Connect to TP <sub>4A</sub>	V.T.V.M. at TP <sub>4</sub>	L <sub>401</sub> (MFC-A)	Minimum
2.	71 KHz Trap	71 KHz Audio Signal	Connect to TP <sub>4A</sub>	V.T.V.M. at TP <sub>4</sub>	L <sub>402</sub> (MFC-B)	Minimum
3.	19 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at TP <sub>1</sub>	T <sub>401</sub> (MPT-20A)	Minimum
4.	19 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at TP <sub>3</sub>	T <sub>402</sub> (MPT-20B)	Smaller peak value of two peak values
5.	38 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at TP <sub>3</sub>	T <sub>403</sub> (MPT-20B)	Smaller peak value of two peak values
6.	38 KHz Transformer and Separation VR	FM Signal Gen. Modulated 30% by STEREO Signal Gen. channel-L	Antenna terminals Tune to signal	V.T.V.M. and Oscilloscope at output load channel-R	T <sub>403</sub> (MPT-20B) within 1/4 turn and Separation VR(VR <sub>601</sub> )	Channel-R Minimum