



PARTS LIST

IM-13

From manual 295-629 Dated 12/10/65

<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>	<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>
<u>Resistors</u>			<u>Capacitors</u>		
1-3	1	100 Ω 1/2 watt (brown-black-brown)	21-27	2	005 μ fd disc ceramic
1-20	1	10 K Ω 1/2 watt (brown-black-orange)	23-91	1	.047 μ fd 1600 V tubular
1-23	1	27 K Ω 1/2 watt (red-violet-orange)	23-61	2	.05 μ fd 400 V tubular
1-27	3	150 K Ω 1/2 watt (brown-green-yellow)	25-19	1	20 μ fd 150 V electrolytic
1-126	1	180 K Ω 1/2 watt (brown-gray-yellow)	<u>Controls-Switches</u>		
1-35	1	1 megohm 1/2 watt (brown-black-green)	10-57	3	10 K Ω tab-mounting control
1-38	1	3.3 megohm 1/2 watt (orange-orange-green)	10-142	2	10 K Ω vernier control
1-40	1	10 megohm 1/2 watt (brown-black-blue)	63-79	1	Range switch
1-70	6	22 megohm 1/2 watt (red-red-blue)	63-80	1	Selector switch
2-24	1	90 Ω 1/2 watt precision	<u>Tubes-Lamp-Diode</u>		
2-29	1	900 Ω 1/2 watt precision	411-25	1	12AU7 tube
2-35	1	9 K Ω 1/2 watt precision	411-40	1	6AL5 tube
2-50	1	10 K Ω 1/2 watt precision	412-12	1	Neon lamp
2-39	1	21.62 K Ω 1/2 watt precision	57-27	1	Silicon diode
2-40	1	68.38 K Ω 1/2 watt precision	<u>Terminal Strips-Sockets-Jack-Plug</u>		
2-41	1	90 K Ω 1/2 watt precision	431-50	1	1-lug terminal strip
2-86	1	150 K Ω 1/2 watt precision	431-5	1	4-lug terminal strip
2-42	1	216.2 K Ω 1/2 watt precision	431-12	2	4-lug terminal strip
2-138	1	400 K Ω 1/2 watt precision	431-40	1	4-lug terminal strip
2-45	1	683.8 K Ω 1/2 watt precision	434-15	1	7-pin tube socket
2-123	1	800 K Ω 1/2 watt precision	434-16	1	9-pin tube socket
2-51	1	900 K Ω 1/2 watt precision	436-20	1	Phone jack
2-146	1	2.162 megohm 1/2 watt precision	438-28	1	Phone plug
2-147	1	6.838 megohm 1/2 watt precision	<u>Probe Parts</u>		
2-52	1	9 megohm $\frac{1}{2}$ precision	253-51	1	E washer
3-B4	1	9.1 Ω 2 watt precision (white-brown-gold)	256-15	2	1/16" x 1/8" rivet
			258-53	1	Probe contact loading spring
			459-6	1	Probe switch lever
			459-7	1	Probe insert insulator
			459-13	1	Front section of probe body
			459-14	1	Center section of probe body
			459-15	1	Rear section of probe body
			477-6	1	Probe spike
			346-12	1	Probe spike rubber sleeve

<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>
<u>Wire-Sleeving</u>		
340-2	1	Bare wire
341-1	1	Black test lead
343-6	1	Shielded test lead
344-59	1	Hookup wire
346-1	1	Sleeving
<u>Metal Parts</u>		
90-M262F	1	Cabinet
200-M381	1	Chassis
203-M351F	913, 914, 915	
	1	Front panel
204-M254	1	Battery bracket
204-M542F	1	Gimbal bracket
214-2	1	Battery housing cup
258-7	1	Battery spring
<u>Hardware</u>		
250-49	4	3-48 x 1/4" screw
250-116	1	6-32 x 1/4" screw (black)
250-89	7	6-32 x 3/8" screw
250-54	2	10-32 x 5/8" screw
250-155	12	#6 sheet metal screw (black)
250-68	3	#7 x 3/4" wood screw
252-1	4	3-48 nut
252-3	8	6-32 nut
252-7	5	Control nut
252-32	1	Push-on speednut
252-49	2	Thumbnut

<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>
<u>Hardware</u>		
253-2	3	#6 fiber shoulder washer
253-10	5	Control flat washer
253-19	4	#10 flat washer
254-7	4	#3 lockwasher
254-1	13	#6 lockwasher
254-4	5	Control lockwasher
255-44	2	Threaded spacer
259-1	1	#6 solder lug
<u>Miscellaneous</u>		
54-2	1	Power transformer
75-24	1	Line cord strain relief,
89-1	1	Line cord
260-1	1	Alligator clip
263-7	4	Felt feet
407-75	1	Meter
462-187	2	Knob
490-5	1	Nut starter
331-6		Solder
595-629	1	Manual

NOTE: One size C 1.5 volt flashlight battery will also be needed before the ohmmeter function of your VTVM can be used. By purchasing the battery now, you will be able to use your VTVM as soon as assembly is completed.

IM-32 to IM-13 Parts Changes

<u>IM-32 Parts Changed or Not Used</u>			<u>New and Changed Parts in IM-13</u>		
Part #	#	Description	Part #	#	Description
2-84	1	9.1Ω 1/2 watt 5% wirewound	3B-4	1	9.1Ω 2 watt precision
10-113	2	10 KΩ miniature control	10-142	2	10 KΩ vernier control
412-1	1	#47 pilot light	412-12	1	Neon lamp assembly
57-22	1	Selenium rectifier	47-27	1	Silicon diode
431-10	1	3-lug terminal strip	431-5	1	4-lug terminal strip
431-11	2	5-lug terminal strip	431-12	2	4-lug terminal strip
431-14	2	2-lug terminal strip	431-40	1	4-lug terminal strip
		(Not used on IM-32)	431-50	1	1-lug terminal strip
436-1	1	Phone jack (DC)	436-20	1	Phone jack
438-3	1	Phone plug	438-28	1	Phone plug
		(Probe part - not used on IM-32)	253-51	1	E washer
		(Probe part - not used on IM-32)	256-15	2	1/16" x 1/8" rivet
		(Probe part - not used on IM-32)	258-53	1	Probe contact loading spring
		(Probe part - not used on IM-32)	459-6	1	Probe switch lever
		(Probe part - not used on IM-32)	459-7	1	Probe insert insulator
		(Probe part - not used on IM-32)	459-13	1	Front section of probe body
		(Probe part - not used on IM-32)	459-14	1	Center section of probe body
		(Probe part - not used on IM-32)	459-15	1	Rear section of probe body
		(Probe part - not used on IM-32)	477-6	1	Probe spike
		(Probe part - not used on IM-32)	346-12	1	Probe spike rubber insulator
73-4	4	3/8" rubber grommets			(Not used on IM-13)
134-26	1	8 wire harness			(Not used on IM-13)
134-28	1	4 wire harness			(Not used on IM-13)
341-2	1	Length red test lead			(Not used on IM-13)
343-3	1	Length shielded test lead	343-6	1	Length shielded test lead
344-1	1	Length hookup wire	344-59	1	Length hookup wire
343-6	1	Length 3/8" sleeving (for lamp)	343-1	1	Length sleeving (for insulation)
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IM-32 to IM-13 Parts Changes

<u>IM-32 Parts Changed</u>			<u>New and Changed Parts in IM-13</u>		
Part #	#	Description	Part #	#	Description
462-140	2	Large knob	462-187	2	Knob
463-27	2	Knob pointer			
90-238	1	Cabinet	90-M262F	1	Cabinet
200-M278F410			200-M381		
	1	Chassis		1	Chassis
203-215F761, 762, 763			203-M351F913, 914, 915		
	1	Front Panel		1	Front Panel
		(not used on IM-32)	204-M542F		
				1	Gimbal bracket
250-49	5	3-48 x 1/4" screw	250-49	4	(Quantity Change)
250-83	2	#10 x 1/2" sheet metal screw	250-54	2	#10 x 5/8" screw
250-48	4	6-32 x 1/2" round head screw			(Not used on IM-13)
250-89	16	6-32 x 3/8" screw	250-89	7	(Quantity Change)
		(not used on IM-32)	250-116	1	6-32 x 1/4" screw (black)
		(not used on IM-32)	250-155	12	#6 sheet metal screw (black)
		(not used on IM-32)	250-68	3	#7 x 3/4" wood crew
252-1	5	3-48 nut	252-1	4	(Quantity Change)
252-3	18	6-32 nut	252-3	8	(Quantity Change)
252-7	3	Control nut	252-7	5	(Quantity Change)
252-9	2	Large speednut			(Not used on IM-13)
252-22	2	#6 speednut	252-32	1	Push-on speednut
252-37	1	9/32" nut			(Not used on IM-13)
252-39	2	1/4" nut (control)			(Not used on IM-13)
253-9	4	#8 flat washers			(Not used on IM-13)
		(not used on IM-32)	252-49	2	Thumbnut
253-10	3	3/8" control flat washer	253-10	5	(Quantity Change)
		(not used on IM-32)	253-19	4	#10 flat washer

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IM-32 to IM-13 Parts Changes

<u>IM-32 Parts Changed</u>			<u>New and Changed Parts in IM-13</u>		
Part #	#	Description	Part #	#	Description
254-1	20	#6 Lockwasher	254-1	13	(Quantity Change)
254-4	2	3/8" control lockwasher	254-4	5	(Quantity Change)
254-5	1	3/8" lockwasher, thin			(Not used on IM-13)
		(not used on IM-32)	254-7	4	#3 lockwasher
254-14	2	1/4" lockwasher			(Not used on IM-13)
		(not used on IM-32)	255-44	2	Threaded spacer
259-1	3	#6 solder lug	259-1	1	(Quantity Change)
70-5	1	Banana plug insulator (black)			(Not used on IM-13)
70-6	1	Banana plug insulator (red)			(Not used on IM-13)
211-15	1	Handle			(Not used on IM-13)
261-9	4	Rubber feet	263-7	4	Felt feet
413-4	1	Pilot lamp jewel, red			(Not used on IM-13)
421-26	1	1/8 ampere slow blow fuse			(Not used on IM-13)
422-1	1	Fuse holder			(Not used on IM-13)
436-2	1	Banana jack, black			(Not used on IM-13)
436-3	1	Banana jack, red			(Not used on IM-13)
437-1	2	Banana jack insert			(Not used on IM-13)
438-13	2	Banana plug			(Not used on IM-13)
439-1	1	Test probe, red			(Not used on IM-13)
439-2	1	Test probe, black			(Not used on IM-13)
		(not supplied with IM-32)	490-5	1	Nut starter
490-23	1	Allen wrench			(Not used on IM-13)
595-562	1	Manual	595-629	1	Manual
(End)					