

MODEL

IG-37 FM Stereo Generator

HEATHKIT[®] ASSEMBLY MANUAL



Copyright © 1967
Heath Company
All rights reserved

RICE \$2.00

595-1204-05

INTRODUCTION

The Heathkit Model IG-37 FM Stereo Generator provides "on-the-air-type" signals for aligning monophonic and stereophonic FM receivers. It is a compact, accurate instrument which will produce the following output signals:

- A composite stereo signal for either left or right channel alignment.
- A phase test signal (left plus right channel) for accurate adjustment of subcarrier transformers.
- A pilot signal with adjustable output level for checking the lock-in range of stereo receivers.
- A monophonic FM signal that may be modulated by any one of three modulation frequencies.
- A variable RF oscillator signal with adjustable sweep width and a nominal frequency of 100 MHz.
- Four marker frequencies for RF alignment checks.
- Two SCA (Subsidiary communications authorization) signal frequencies for SCA filter adjustments.
- Completely shielded and selective RF attenuation.

The pilot signal and marker frequencies are crystal controlled for maximum accuracy and minimum frequency drift.

The IG-37 FM Stereo Generator is a precision instrument for service or engineering personnel and other individuals who need an accurate source of signals for the complete alignment of monophonic or stereophonic FM receiving equipment. The Generator is attractive, small in size, and ruggedly built, and it should provide you with many years of trouble-free operation.

Refer to the "Kit Builders Guide" for complete information on unpacking, parts identification, tools, wiring, soldering, and step-by-step assembly procedures.

PARTS LIST

The numbers in parentheses are keyed to the numbers in the Parts Pictorial (fold-out from Pages 3, 4, and 5). NOTE: When more than one number is on a package, disregard all but the part number, as listed below.

To order a replacement part, refer to the Replacement Parts Price List and use the Parts Order Form furnished with this kit. If a Parts Order Form is not available, refer to "Replacement Parts" inside the rear cover of the Manual.

PART No.	PARTS Per Kit	DESCRIPTION
----------	---------------	-------------

PART No.	PARTS Per Kit	DESCRIPTION
----------	---------------	-------------

RESISTORS

1/2 Watt

(1)1-123	8	100 Ω (brown-black-brown-gold)
1-66	2	150 Ω (brown-green-brown)
1-48	2	390 Ω (orange-white-brown)
1-63	3	510 Ω (green-brown-brown-gold)
1-8	2	820 Ω (gray-red-brown)
1-11	4	1500 Ω (brown-green-red)
1-14	2	3300 Ω (orange-orange-red)
1-43	6	4700 Ω (yellow-violet-red-gold)
1-20	3	10 KΩ (brown-black-orange)
1-69	1	18 KΩ (brown-gray-orange)
1-22	1	22 KΩ (red-red-orange)
1-25	2	47 KΩ (yellow-violet-orange)
1-60	1	68 KΩ (blue-gray-orange)
1-26	2	100 KΩ (brown-black-yellow)
1-27	3	150 KΩ (brown-green-yellow)
1-35	4	1 megohm (brown-black-green)
1-40	1	10 megohm (brown-black-blue)

1/2 Watt Precision 1%

(2)2-141	1	166 Ω
2-178	1	1470 Ω (1.47 K)
2-67	1	2725 Ω (2,725 K)
2-180	1	2940 Ω (2,94 K)
2-69	1	4590 Ω (4,59 K)
2-181	1	5490 Ω (5,49 K)
2-155	1	13.5 KΩ
2-182	1	22.1 KΩ
2-183	1	44.2 KΩ
2-184	1	110 KΩ
2-185	1	222 KΩ
2-186	1	280 KΩ
2-187	1	536 KΩ

2 Watt

(3)1-16-2	1	330 Ω (orange-orange-brown)
-----------	---	-----------------------------

CAPACITORS

Disc		
(4)21-3	1	10 pf

Disc (cont'd.)

21-6	2	27 pf
21-75	1	100 pf
21-22	1	220 pf
21-140	5	.001 μfd
21-35	2	.005 μfd, 1600 V (1.6 KV)
21-95	1	.1 μfd
21-99	1	.2 μfd

Molded Mica

NOTE: These capacitors may be color coded, or the value may be printed on them. If necessary, refer to the capacitor color code chart and example to help identify these capacitors. Capacitors with the value stamped on them may have a body that is any color.

(5)20-39	1	220 pf (red-red-brown)
20-43	1	390 pf (orange-white-brown)
20-89	2	817 pf
20-74	2	4000 pf (yellow-black-red)

Silver Mica

(6)20-133	2	430 pf
20-134	1	680 pf
20-122	1	1000 pf
20-137	2	1800 pf

Mylar*

(7)27-27	5	.022 μfd
27-28	2	.1 μfd

Electrolytic

(8)25-39	1	2 μfd, 150 V
25-20	2	40 μfd, 150 V
(9)25-178	1	100/40/40 μfd, tab mount

Other Capacitors

(10)26-115	1	6.2 pf, variable
(11)31-9	1	Ceramic trimmer
(12)31-18	1	Dual ceramic trimmer
(13)21-142	1	100 pf (brown-black-brown) feedthrough
21-53	2	1000 pf (brown-black-red) feedthrough
(14)23-74	1	.04 μfd tubular
(15)28-2	1	1 pf phenolic (brown-black-white-silver)

*DuPont Registered Trademark

<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>	<u>PART No.</u>	<u>PARTS Per Kit</u>	<u>DESCRIPTION</u>
CONTROLS			CONNECTORS-PLUG-SOCKETS-STRIPS		
(16)10-214	1	5000 Ω	(32)432-1	1	Female connector
(17)19-109	1	5000 Ω control with SPST switch	(33)432-3	2	Male chassis connector
(18)10-52	1	2000 Ω tab mount	(34)438-10	1	300 Ω twin lead plug
10-57	2	10 K Ω tab mount	(35)434-77	5	Wafer 9-pin tube socket
			(36)434-36	1	Ceramic 9-pin tube socket
			(37)434-74	2	Crystal socket
			(38)434-38	1	Output socket
			434-23	1	Lamp socket
			(39)431-15	3	1-lug terminal strip
			(40)431-50	1	1-lug terminal strip
			431-14	1	2-lug terminal strip
			(41)431-12	1	4-lug terminal strip
			(42)431-40	1	4-lug terminal strip
			431-11	1	5-lug terminal strip
			431-55	2	6-lug terminal strip
SWITCHES			CRYSTALS-DIODES-LAMPS-TUBES		
(19)60-1	1	SPST slide	(43)404-245	1	5.35 MHz crystal
60-2	3	DPDT slide	(44)404-244	1	19 kHz crystal
(20)63-445	1	5-position 1-wafer rotary	(45)56-26	2	Crystal diode
(21)63-446	1	6-position 2-wafer rotary	(46)57-27	1	Silicon diode
			412-2	1	120 volt 3-watt lamp
			(47)412-15	1	Neon pilot lamp (NE-2H)
			411-68	1	6AN8 tube
			411-114	1	6AU8 tube
			411-25	3	12AU7 tube
			411-24	1	12AT7 tube
COILS-TRANSFORMERS			CABLE-SLEEVING-WIRE		
Coils			347-2	1	300 Ω twin lead
(22)45-39	1	RF choke	343-2	1	Coaxial cable
(23)40-607	1	19 kHz oscillator	89-23	1	Line cord with plug
40-608	2	38 kHz doubler and buffer	346-1	1	Sleeving
40-610	2	Low-pass input and output filter	340-8	1	Bare wire
40-611	1	Low-pass center-leg filter	344-52	1	Red wire
40-612	1	100 MHz oscillator	344-53	1	Orange wire
(24)40-609	1	19 kHz phasing	344-55	1	Green wire
			344-59	1	White wire
			344-56	1	Blue wire
			344-54	1	Yellow wire
			344-50	1	Black wire
Transformers			NOTE: The black wire is extra and is to be used if additional wire is needed. For instance, you may possibly cut one of the lengths too short. If this should occur, use the black wire for this entire length instead of splicing two pieces together.		
(25)52-80	2	38 kHz balanced modulator			
54-117-24	1	Power			
GROMMETS-INSULATORS-CLAMPS-CLIPS					
(26)73-43	2	3/8" plastic grommet			
73-45	1	1/2" plastic grommet			
(27)73-20	1	Red test clip insulator			
73-21	1	Black test clip insulator			
(28)75-71	1	Line cord strain relief			
75-30	1	Line cord strain relief *(for round line cord)			
(29)260-1	4	Alligator clip			
(30)260-7	1	Coil mounting clip			
260-8	1	Clothespin antenna clip			
(31)260-29	2	Crystal clip			

*This strain relief is to be used in areas, mainly outside of the U.S.A., where 2 or 3-wire round line cords are required.

