

# REPLACEMENT PARTS PRICE LIST

To order parts, use the Parts Order Form furnished with this kit. If a Parts Order Form is not available, refer to Replacement Parts in the Kit Builders Guide.

The following prices apply only on purchases from the Heath Company where shipment is to a

U.S.A. destination. Add 10% (minimum 25 cents) to the price when ordering from an authorized Service Center or Heathkit Electronic Center to cover local sales tax, postage and handling. Outside the U.S.A. parts and service are available from your local Heathkit source and will reflect additional transportation taxes, duties and rates of exchange.

## MANUAL PACK

The Manual Pack for this Radio Control System, Model GD-19, includes the following parts:

<u>PART No.</u>	<u>PRICE Each</u>	<u>DESCRIPTION</u>
597-260 } 597-308 }	2.00	{ Assembly Manual (See front cover for part number.) { Parts Order Form { Kit Builders Guide

## TRANSMITTER

PART No.	PRICE Each	DESCRIPTION
-------------	---------------	-------------

PART No.	PRICE Each	DESCRIPTION
-------------	---------------	-------------

### RESISTORS

### LINE CORD-WIRE

#### 1/4 Watt

1-2-12	.10	1000 $\Omega$
1-4-12	.10	2200 $\Omega$
1-8-12	.10	4700 $\Omega$
1-46-12	.10	27 k $\Omega$
1-11-12	.10	47 k $\Omega$
1-47-12	.10	150 k $\Omega$

89-38	.40	Line cord
134-189	1.60	Wire harness
344-50	.05/ft	Black solid wire
344-52	.05/ft	Red solid wire
344-90	.05/ft	Black stranded wire
344-92	.05/ft	Red stranded wire
346-35	.05/ft	Small black sleeving
346-20	.15/ft	Medium-size black sleeving
346-3	.05/ft	Large black sleeving

#### Other Resistors

1-10	.10	1200 $\Omega$ 1/2 watt
1-21	.10	15 k $\Omega$ 1/2 watt
1-102	.10	82 k $\Omega$ 1/2 watt
2-208	.25	111 k $\Omega$ 1/2 watt 1%
3-15-7	.15	1000 $\Omega$ 7 watt

### METAL PARTS

90-427	.90	Cabinet back
90-428	1.35	Cabinet front
100-801	.40	Side bracket
204-102	.10	Support bracket
204-920	.10	Control mounting bracket
204-922	.10	Meter mounting bracket
205-729	.40	Cabinet bottom plate

### CAPACITORS

20-102	.15	100 pF mica
21-140	.10	.001 $\mu$ F disc
21-46	.10	.005 $\mu$ F disc
27-74	.10	.01 $\mu$ F Mylar
27-63	.10	.022 $\mu$ F Mylar (small)
27-88	.15	.022 $\mu$ F Mylar (large)
27-77	.10	.1 $\mu$ F Mylar
25-116	.50	50 $\mu$ F electrolytic

### TRANSMITTER RF CIRCUIT BOARD ASSEMBLY

### DIODES-TRANSISTORS

56-27	.25	Silicon diode (GES160)
57-27	.50	Silicon rectifier (1N2079)
417-118	.40	2N3393 transistor
417-201	.50	X29A829 transistor
417-91	.85	2N5232A/2N3391A transistor

181-26	9.60	26.995
181-27	9.60	27.045
181-28	9.60	27.095
181-29	9.60	27.145
181-30	9.60	27.195
181-430	12.00	53.100
181-431	12.00	53.200
181-432	12.00	53.300
181-433	12.00	53.400
181-434	12.00	53.500
181-435	12.00	72.080
181-436	12.00	72.240
181-437	12.00	72.400
181-438	12.00	72.960
181-439	12.00	75.640

### SWITCH-SOCKETS-CONNECTORS

60-35	1.15	Slide switch
434-88	.15	Pilot lamp socket
432-101	.70	4-terminal socket
432-106	1.00	4-pin plug with cap
432-104	.70	4-pin flat connector



## RECEIVER

PART No.	PRICE Each	DESCRIPTION
-------------	---------------	-------------

### RESISTORS

#### 1/4 Watt

1-1-12	.10	100 $\Omega$
1-35-12	.10	470 $\Omega$
1-24-12	.10	820 $\Omega$
1-2-12	.10	1000 $\Omega$
1-36-12	.10	1500 $\Omega$
1-4-12	.10	2200 $\Omega$
1-5-12	.10	2700 $\Omega$
1-8-12	.10	4700 $\Omega$
1-26-12	.10	5600 $\Omega$
1-27-12	.10	6800 $\Omega$
1-9-12	.10	10 k $\Omega$
1-10-12	.10	15 k $\Omega$
1-52-12	.10	18 k $\Omega$
1-45-12	.10	22 k $\Omega$
1-46-12	.10	27 k $\Omega$
1-11-12	.10	47 k $\Omega$
1-32-12	.10	100 k $\Omega$
1-41-12	.10	33 k $\Omega$

### CAPACITORS

#### Disc

21-6	.10	27 pF
21-147	.10	47 pF
21-148	.10	75 pF
21-140	.10	.001 $\mu$ F
21-141	.10	.0033 $\mu$ F
21-27	.10	.005 $\mu$ F

#### Tubular Ceramics

21-174	.50	180 pF
21-175	.50	1000 pF

#### Tantalum

25-209	.75	.047 $\mu$ F
25-210	.75	.22 $\mu$ F
25-197	.70	1.0 $\mu$ F
25-195	.60	2.2 $\mu$ F
25-211	.85	33.0 $\mu$ F

#### Mylar

27-74	.10	.01 $\mu$ F
27-64	.15	.033 $\mu$ F

PART No.	PRICE Each	DESCRIPTION
-------------	---------------	-------------

### FILTERS-RF CHOKE

404-399	.85	Ceramic filter
45-73	.70	2.2 $\mu$ H RF choke
45-80	1.40	1000 $\mu$ H RF choke

### DIODES-TRANSISTORS

56-27	.25	Crystal diode
56-56	.20	1N4149 silicon diode
57-47	2.05	Silicon-controlled switch (SCS) (GE X13B615)
417-91	.85	2N5232A/2N3391A transistor
417-118	.40	2N3393 transistor
417-164	1.05	16G2349 transistor
417-228	.90	SE5055 transistor
417-200	.60	X29A826 transistor

### WIRE-SLEEVING

344-50	.05/ft	Black solid wire
344-125	.05/ft	Black stranded wire
344-126	.05/ft	Brown wire
344-127	.05/ft	Red wire
344-128	.05/ft	Orange wire
344-129	.05/ft	Yellow wire
344-130	.05/ft	Green wire
344-131	.05/ft	Blue wire
344-134	.05/ft	White wire
346-1	.05/ft	Black sleeving
346-21	.30/ft	White sleeving

### GENERAL

95-33	1.20	Case
95-34	.60	Case bottom
60-35	1.15	Slide switch
73-39	.10	Foam tape
73-73	.10	Rubber grommet
75-126	.10	Mylar insulator
85-412	.40	Receiver circuit board (large circuit board)
85-413	.40	Decoder circuit board (smaller circuit board)
205-559	.45	Switch plate
250-49	.05	Screw
390-244	.15	Heathkit decorative label
390-348	.15	FCC label
432-103	.70	4-lug socket
432-104	.70	4-pin plug
432-105	5.00	Large block connector
490-109	.10	Alignment tool
331-6	.15	Solder



<u>PART No.</u>	<u>PRICE Each</u>	<u>DESCRIPTION</u>
-----------------	-------------------	--------------------

<u>PART No.</u>	<u>PRICE Each</u>	<u>DESCRIPTION</u>
-----------------	-------------------	--------------------

**CRYSTAL**

		<u>Crystal Frequency In MHz</u>	<u>Transmitted Frequency In MHz</u>
404-384	4.00	26.542	26.995
404-385	4.00	26.592	27.045
404-386	4.00	26.642	27.095
404-387	4.00	26.692	27.145
404-388	4.00	26.742	27.195
404-389	4.00	26.3235	53.100
404-390	4.00	26.3735	53.200
404-391	4.00	26.4235	53.300
404-392	4.00	26.4735	53.400
404-393	4.00	26.5235	53.500
404-394	4.00	36.2665	72.080
404-395	4.00	36.3465	72.240
404-396	4.00	36.4265	72.400
404-397	4.00	36.7065	72.960
404-398	4.00	37.5935	75.640

**TRANSFORMERS**

**For 27 MHz Band Receivers (26.995, 27.045, 27.095, 27.145, and 27.195 MHz)**

40-913	1.15	4-lead variable transformer
40-914	1.15	5-lead variable transformer

**For 53 MHz Band Receivers (53.100, 53.200, 53.300, 53.400, and 53.500 MHz)**

40-915	1.25	4-lead variable transformer
40-916	1.25	5-lead variable transformer

**For 72 MHz Band Receivers (72.080, 72.240, 72.400, 72.960, and 75.640 MHz)**

40-917	1.25	4-lead variable transformer
40-918	1.25	5-lead variable transformer

## SERVO

PART No.	PRICE Each	DESCRIPTION
----------	------------	-------------

### RESISTORS

#### 1/4 Watt

1-20-12	.10	33 Ω
1-51-12	.10	47 Ω
1-17-12	.10	220 Ω
1-24-12	.10	820 Ω
1-3-12	.10	1200 Ω
1-4-12	.10	2200 Ω
1-6-12	.10	3300 Ω
1-8-12	.10	4700 Ω
1-28-12	.10	8200 Ω
1-9-12	.10	10 kΩ
1-45-12	.10	22 kΩ
1-11-12	.10	47 kΩ
1-50-12	.10	11 MΩ

### CAPACITORS

21-6	.10	27 pF disc
21-140	.10	.001 μF disc
21-141	.10	.0033 μF disc
21-94	.15	.05 μF disc
25-197	.70	1.0 μF electrolytic
26-121	1.65	2-section variable

### TRANSISTORS

417-91	.85	2N5232A/2N3391A
417-200	.60	X29A826
117-6	2.05	Transistor pair
Consisting of:		
1		2N2430
1		2N2431

### WIRE-SLEEVING

344-90	.05/ft	Black wire
344-92	.05/ft	Red wire
344-95	.05/ft	Green wire
344-99	.05/ft	White wire
344-110	.25/ft	Special flex wire (gray)
346-1	.05/ft	Small sleeving
346-20	.15/ft	Large sleeving

PART No.	PRICE Each	DESCRIPTION
----------	------------	-------------

### GENERAL

73-59	.10	Large rubber grommet
73-53	.10	Small rubber grommet
85-305	.40	Circuit board
420-56	5.00	Motor
432-104	.70	4-pin male connector
331-6	.15	Solder

### HARDWARE

250-355	.05	2-32 x 3/16" sheet metal screw
250-353	.05	2-56 x 7/16" screw
250-352	.05	2-56 x 11/16" screw
250-354	.05	3-56 x 1/8" screw
250-82	.05	#4 x 1/2" wood screw
452-19	.20	Gear pin

### MOLDED NYLON PARTS

266-111	.60	Linear output arm (with tabs)
266-100	.75	Linear output arm (without tabs)
266-102	.75	Rotary output arm
266-101	.75	Rotary output wheel
92-41	1.50	Case top section
451-59	.60	Right rack gear
451-54	.75	Left rack gear
266-99	1.50	Rack gear guide
451-53	.75	Capacitor drive gear
451-52	.75	Rack drive gear
451-51	.75	Idler gear
451-50	.75	Motor coupling gear
92-42	1.50	Case center section
262-14	.25	Pin
92-43	1.50	Case bottom section

# CUSTOMER SERVICE

## REPLACEMENT PARTS

If you need a replacement part, please fill in the Parts Order Form that is furnished and mail it to the Heath Company. Or, if you write a letter, include the:

- Part number and description as shown in the **Parts List**.
- Model number and Series number from the blue and white label.
- Date of purchase.
- Nature of the defect.

**Please do not return parts** to the factory unless they are requested. Parts that are damaged through carelessness or misuse by the kit builder will not be replaced without cost, and will not be considered in warranty.

Parts are also available at the Heathkit Electronic Centers listed in your catalog. Be sure to provide the Heath part number. Bring in the original part when you request a warranty replacement from a Heathkit Electronic Center.

NOTE: Replacement parts are maintained specifically to repair Heathkit products. Parts sales for other reasons will be declined.

## TECHNICAL CONSULTATION

Need help with your kit? . . . . Self-Service? . . . . Construction? . . . . Operation? . . . . Call or write for assistance. You'll find our Technical Consultants eager to help with just about any technical problem except "customizing" for unique applications.

The effectiveness of our consultation service depends on the information you furnish. Be sure to tell us:

- The Model number and Series number from the blue and white label.
- The date of purchase.
- An exact description of the difficulty.
- Everything you have done in attempting to correct the problem.

Also include switch positions, connections to other units, operating procedures, voltage readings, and any other information you think might be helpful.

**Please do not send parts for testing**, unless this is specifically requested by our Consultants.

Hints: Telephone traffic is lightest at midweek. . . please be sure your Manual and notes are on hand when you call.

Heathkit Electronic Center facilities are also available for telephone or "walk-in" personal assistance.

## REPAIR SERVICE

Service facilities are available, if they are needed, to repair your completed kit. (Kits that have been modified, soldered with paste flux or acid core solder, cannot be accepted for repair.)

**If it is convenient, personally deliver your kit to a Heathkit Electronic Center. For warranty parts replacement, supply a copy of the invoice or sales slip.**

If you prefer to ship your kit to the factory, attach a letter containing the following information directly to the unit:

- Your name and address.
- Date of purchase.
- Copies of all correspondence relevant to the service of the kit.
- A brief description of the difficulty.
- Authorization to return your kit C.O.D. for the service and shipping charges. (This will reduce the possibility of delay.)

Check the equipment to see that all screws and parts are secured. (Do not include any wooden cabinets or color television picture tubes, as these are easily damaged in shipment.) Place the equipment in a strong carton with at least **THREE INCHES** of *resilient* packing material (shredded paper, excelsior, etc.) on all sides. Use additional packing material where there are protrusions (control sticks, large knobs, etc.). If the unit weighs over 15 lbs., place this carton in another one with 3/4" of packing material between the two.

Seal the carton with reinforced gummed tape, tie it with a strong cord, and mark it "Fragile" on at least two sides. Remember, the carrier will not accept liability for shipping damage if the unit is insufficiently packed. Ship by prepaid express, United Parcel Service, or insured Parcel Post to:

Heath Company  
Service Department  
Benton Harbor, Michigan 49022

HEATH

**Schlumberger**

**HEATH COMPANY • BENTON HARBOR, MICHIGAN**  
***THE WORLD'S FINEST ELECTRONIC EQUIPMENT IN KIT FORM***

LITHO IN U.S.A.