

# SWEEP/FUNCTION GENERATOR

SCHEMATIC SYMBOL	DESCRIPTION	DYNASCAN PART NUMBER
<b>RESISTORS</b>		
Unlisted resistors are $\pm 5\%$ , 1/4 W. See schematic diagram for value.		
R2, 3, 4, 5, 6	10 k $\Omega$ Trimpot .....	010-007-9-007
R8	10 k $\Omega$ $\pm 10\%$ , 2 W Potentiometer .....	008-369-9-001
R9, 11, 18, 34, 39	1 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-1-001
R10	10 k $\Omega$ $\pm 10\%$ , 1/4 W Potentiometer w/Switch..	008-338-9-001
R13, 15	200 $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-2-000
R14, 88	100 $\Omega$ Trimpot .....	010-007-9-001
R19, 25, 26	25 k $\Omega$ Trimpot .....	010-007-9-008
R21, 22	2.49 k $\Omega$ $\pm 1/4\%$ , 1/4 W Metal Film .....	011-148-9-001
R23	50 k $\Omega$ $\pm 10\%$ , 1/4 W Potentiometer w/Switch..	008-337-9-001
R24	4.99 k $\Omega$ $\pm 1/4\%$ , 1/4 W Metal Film .....	011-213-9-001
R29	187 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-1-873
R30	1.87 k $\Omega$ $\pm 1/4\%$ , 1/4 W Metal Film .....	011-147-9-001
R31	374 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-3-743
R32	3.74 k $\Omega$ $\pm 1/4\%$ , 1/4 W Metal Film .....	011-146-9-001
R33, 38	14 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-1-402
R43, 44	221 $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-2-210
R45	1.91 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-1-911
R46, 86 100, 235	1 k $\Omega$ Trimpot .....	010-007-9-004
R49	2.15 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-2-151
R56, 64, 102, 105, 210	10 k $\Omega$ $\pm 10\%$ , 1/4 W Potentiometer .....	008-335-9-001
R81	5 k $\Omega$ Trimpot .....	010-007-9-006
R84	1.74 k $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-1-741
R85	332 $\Omega$ $\pm 1\%$ , 1/4 W Metal Film .....	015-141-3-320
R94, 239	100 k $\Omega$ Trimpot .....	010-007-9-010

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<b>RESISTORS (continued)</b>		
R106, 109	10 $\Omega$ $\pm$ 5%, 1/2 W Flameproof Carbon Film....	005-102-5-100
R107	75 $\Omega$ $\pm$ 5%, 2 W Carbon Film .....	002-002-8-750
R108	330 $\Omega$ $\pm$ 5%, 1/2 W Carbon Film .....	002-102-8-331
R111, 112 114, 115	10 k $\Omega$ $\pm$ 1%, 1/4 W Metal Film .....	015-141-1-002
R201	2 k $\Omega$ $\pm$ 10%, 1/4 W Potentiometer .....	008-336-9-001
R211, 215	47 $\Omega$ $\pm$ 5%, 1/2 W Carbon Film .....	002-102-8-470
R212, 213	10 $\Omega$ $\pm$ 5%, 1/2 W Carbon .....	002-102-8-100
R214	1 k $\pm$ 5%, 1 W Carbon Film .....	002-001-8-102
R216, 217	100 $\Omega$ $\pm$ 5%, 1/2 W Carbon Film .....	002-102-8-101
R218, 222	71.15 $\Omega$ $\pm$ 1%, 1/2 W Metal Film .....	011-207-9-001
R219, 220, 221, 223	96.25 $\Omega$ $\pm$ 1%, 1/2 W Metal Film .....	011-208-9-001
R224, 226	61.11 $\Omega$ $\pm$ 1%, 1/2 W Metal Film .....	011-206-9-001
R225	247.5 $\Omega$ $\pm$ 1%, 1/2 W Metal Film .....	011-209-9-001
<b>CAPACITORS</b>		
C1, 2, 3, 4, 13, 15, 16, 17, 31, 201, 203, 205, 207	.01 $\mu$ F, 100 V Disc Ceramic .....	020-101-9-001
C5	.33 $\mu$ F $\pm$ 10%, 100 V Polycarbonate Film .....	033-041-9-001
C6	3.3 $\mu$ F $\pm$ 10%, 100 V Polycarbonate Film .....	033-036-9-001
C7	.033 $\mu$ F $\pm$ 10%, 100 V Polypropylene Film .....	033-034-9-001
C8	3000 pF $\pm$ 5%, 100 V Polypropylene Film .....	030-067-9-001
C9	220 pF $\pm$ 10%, 400 V Polypropylene Film .....	033-040-9-001
C10, 11, 25, 26	47 $\mu$ F $\pm$ 20%, 10 V Low Leakage Electrolytic ..	036-005-9-019
C12, 206	10 pF $\pm$ 10%, 500 V Disc Ceramic .....	031-001-9-001
C14	.33 $\mu$ F $\pm$ 10%, 100 V Polyester .....	025-114-9-001
C18, 19	1000 $\mu$ F, $\pm$ 15/-10%, 25 V Electrolytic .....	022-101-9-001
C20, 21, 22, 24, 27, 202, 204	10 $\mu$ F $\pm$ 20%, 35 V Low Leakage Electrolytic ..	036-005-9-018
C23	10 $\mu$ F, 35 V, Tantalum .....	027-015-9-001
C28, 29	100 pF $\pm$ 10%, 500 V Disc Ceramic .....	020-044-9-001
C30	0.1 $\mu$ F $\pm$ 80/-20%, 50 V Monolithic Ceramic...	020-261-9-001
C210	330 pF, 500 V, Disc Ceramic .....	020-151-9-001
<b>TRANSISTORS &amp; DIODES</b>		
D1, 2, 3	1N749A (4.3V) Zener Diode .....	152-062-9-001
D4, 5, 6, 7, 8, 10, 11, 16, 201, 202	1N4148 Silicon Diode .....	151-038-9-001
D9	1N60 Germanium Diode .....	150-001-9-005
D12, 13, 14, 15	1A, 600 V Silicon Diode .....	151-050-9-001
Q1, 2	2N5087 PNP Silicon Transistor .....	177-034-9-001
Q3, 5	2N5950 N-Channel FET .....	182-031-9-001
Q4	J271 P-Channel FET .....	182-052-9-001
Q6	FET, Dual N-Channel .....	182-024-9-001

**SCHEMATIC  
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PART NUMBER****TRANSISTORS (continued)**

Q7, 201	2N3904 NPN Silicon Transistor .....	176-084-9-001
202, 207		
Q8, 11	MPS3640 PNP Silicon Transistor .....	177-014-9-001
Q9, 203, 206	2N3906 PNP Silicon Transistor .....	177-035-9-001
Q10	SD213 MOS-FET .....	182-053-9-001
Q12, 13	PNP Silicon Transistor .....	177-017-9-001
Q204	2N2219 NPN Silicon Transistor .....	172-045-9-001
Q205	2N2905 PNP Silicon Transistor .....	173-005-9-001

**INTEGRATED CIRCUITS**

IC1, 7	324 Quad Op Amp .....	307-060-9-001
IC2, 3, 4	LF356, FET Input Op Amp .....	307-126-9-001
IC5, 10	75107 Dual Line Receiver .....	307-127-9-001
IC6	7400 2-Input Nand Gate .....	307-015-9-001
IC8, 16	358 Dual Op Amp .....	307-134-9-001
IC9, 13	3086 Transistor Array .....	307-087-9-001
IC11	7426, Quad 2-Input Nand Gate .....	307-136-9-001
IC12	74LS74 Dual "D" Flip-Flop .....	307-119-9-001
IC14	7815, +15 V Regulator .....	307-081-9-001
IC15	7805 +5 V Regulator .....	307-080-9-001
IC201	XR-2208 Multiplier .....	307-138-9-001

**TRANSFORMERS & SWITCHES**

T1	Power Transformer 105/130 V, 60 Hz .....	065-140-9-001
T1 (Export Unit)	Power Transformer 105-130/210-260 V, 50-60 Hz .....	065-140-9-002
S1	Rotary Switch, Range .....	083-233-9-001
S2	Push Button Switch Ass'y, 3 Station .....	088-044-9-001
S3	Push Button Switch Ass'y, 4 Station .....	088-045-9-001
S201	Push Button Switch Ass'y, 3 Station .....	088-043-9-001

**MISCELLANEOUS**

Fuse, 3/16 A-250 V, Slow-Blow (105-130 V and 105-130/210-260 V units) .....	190-251-3-316
Bracket, Transformer Mounting .....	251-202-9-902
Bracket, Front Panel Controls .....	251-349-9-001
Front Panel Decorative Inlay .....	255-166-9-001
Phono Jack & Bracket Assembly .....	523-223-9-001
Jack Identification Plate (Rear) .....	260-145-9-001
Case, Front (Plastic) .....	271-064-9-001
Case, Rear (Plastic) .....	271-065-9-001
Handle, Plastic .....	380-279-9-001
Decorative Screw, Handle Pivot .....	634-085-9-001
Spring, Compression (Handle Pivot) .....	767-049-9-001
Pad, Anti Skid (Rear Foot) .....	381-080-9-001
Switch Button ,Black .....	384-072-9-001
Switch Button ,Bright Ochre .....	384-072-9-020
10 Conductor Jumper Cable .....	427-014-9-001
PC Fuse Clip (2 required) .....	741-058-9-001
Knob, 1/2" Dia. .....	751-158-9-001
Knob, Range .....	751-165-9-001
Knob, Frequency .....	751-166-9-001

**SCHEMATIC  
SYMBOL**

**DESCRIPTION**

**DYNASCAN  
PART NUMBER**

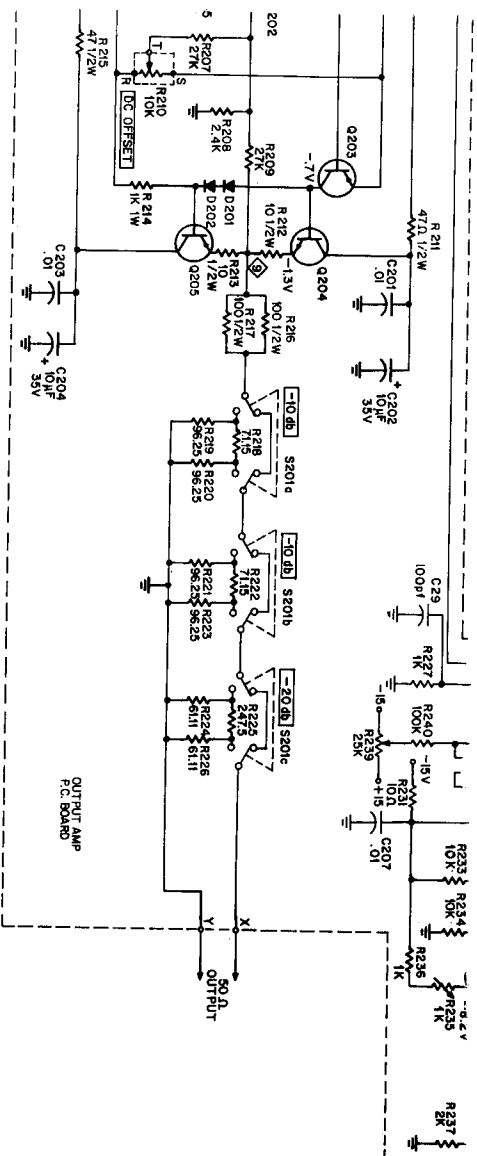
**MISCELLANEOUS (continued)**

Receptacle, AC .....	770-018-9-001
AC Power Cord .....	420-022-9-001
BNC Jack .....	772-024-9-001
Lockwasher Lug BNC .....	740-014-9-001

**PARTS ORDERING INFORMATION**

There is a minimum charge for each invoice. Orders will be shipped C.O.D. unless previous open account arrangements have been made or remittance accompanies order. Advance remittance must cover handling, postage or express charges. Specify model and serial number when ordering replacement parts.

**B & K-Precision, Dynascan Corporation**  
Factory Service Operations  
6460 West Cortland Street  
Chicago, Illinois 60635  
Tel (312) 889-8870  
Telex: 25-3475



NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL DC VOLTAGES AND WAVEFORMS WERE OBSERVED WITH THE MODE CONTROLS SET AS FOLLOWS:
- FREQUENCY DIAL..... 1.0
- RANGE..... X1K
- FUNCTION..... SINEWAVE
- AMPLITUDE..... 10V-P ACROSS 50 Ω
- DC OFFSET..... 0
- 50 Ω OUTPUT..... TERMINATED
- ALL OTHER CONTROLS..... MAX CCW
2. ALL VOLTAGES OBSERVED WITH SWEEP RATE CONTROL AT MAX CW.
3. WAVEFORMS TO-15 WERE OBSERVED WITH SWEEP RATE CONTROL AT MAX CW.
4. UNLESS SPECIFIED ALL RESISTORS ARE 1/4W ±5%.
5. UNLESS SPECIFIED ALL CAPACITORS ARE 5%.
6. RANGE SWITCH SHOWN IN CCM POSITION. PUSHBUTTON SWITCHES SHOWN IN "OUT" POSITION.
7. SCHEMATIC SUBJECT TO CHANGE WITHOUT NOTICE.

