

SERVICING INFORMATION



BK PRECISION
DYNASCAN CORPORATION

MODEL 1822

175 MHz UNIVERSAL COUNTER

PARTS LIST 488-290-9-003C

| SCHEMATIC SYMBOL | DESCRIPTION | B & K-PRECISION PART NO. |
|---------------------|-------------|-----------------------------|
|---------------------|-------------|-----------------------------|

RESISTORS

Unlisted resistors are $\pm 5\%$, 1/4 W. See schematic diagram for value.

| | | |
|------------------------|--|---------------|
| R25 | 130 Ω $\pm 5\%$, 1/2 W Deposited Carbon | 002-102-8-131 |
| R26 | 62 Ω $\pm 5\%$, 1 W Deposited Carbon | 002-001-8-620 |
| R27 | 82 Ω $\pm 5\%$, 1/2 W Deposited Carbon | 002-102-8-820 |
| R28 | 130 Ω $\pm 5\%$ 1 W Deposited Carbon | 002-001-8-131 |
| R29 | 56 Ω $\pm 5\%$, 1/2 W Deposited Carbon | 002-102-8-560 |
| R102 | 1.10 M Ω $\pm 1\%$, 1/4 W Metal Film | 015-141-1-104 |
| R103 | 121 k Ω $\pm 1\%$, 1/4 W Metal Film | 015-141-1-213 |
| R104, 105, 153, 154 | 20 k Ω $\pm 5\%$, 1/2 W Deposited Carbon | 002-102-8-203 |
| R112 | 2.5 k Ω Trimmer Pot | 008-236-9-001 |
| R125/S103 | 2 k Ω Potentiometer with Switch | 008-461-9-001 |
| R128, 159 | 3.24 k Ω $\pm 1\%$, 1/4 W Metal Film | 015-141-3-241 |
| R129, 130, 160, 162 | 47.5 k Ω $\pm 1\%$, 1/4 W Metal Film | 015-141-4-752 |
| R136, 161 | 3.65 k Ω $\pm 1\%$, 1/4 W Metal Film | 015-141-3-651 |

**COMPOSITE
499-271-9-001C**

SCHEMATIC
SYMBOL

DESCRIPTION

B & K-PRECISION
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CAPACITORS

| | | |
|---|--|---------------|
| C1 | 10-40 pF Trimmer | 028-064-9-001 |
| C2 | 20 pF $\pm 10\%$, 500 V NPO Disc Ceramic | 031-010-9-001 |
| C3 | 30 pF $\pm 10\%$, 500 V NPO Disc Ceramic | 031-014-9-001 |
| C4, 16, 118, 119, 124, 126, 147, 150, 152 | 47 μ F $\pm 20\%$, 10 V Low-Leakage Electrolytic | 036-001-9-019 |
| C5, 105, 106, 107, 109, 110, 112, 113, 114, 120, 121, 122, 123, 125, 127, 128, 130, 136, 146, 148, 151, 153 | 0.01 μ F +80/-20%, 25 V Disc Ceramic | 020-139-9-001 |
| C6 | 220 pF $\pm 10\%$, 500 V Disc Ceramic | 020-015-9-001 |
| C7, 8, 9, 14, 15, 17, 18, 19, 20 | 0.1 μ F $\pm 20\%$, 16 V Disc Ceramic | 020-065-9-001 |
| C10, 11 | 470 μ F, 25 V Electrolytic | 022-284-9-001 |
| C12 | 3300 μ F +50/-10%, 25 V Electrolytic..... | 022-207-9-001 |
| C13 | 4.7 μ F $\pm 20\%$, 25 V Low-Leakage Electrolytic.... | 036-001-9-008 |
| C21 | 39 pF $\pm 10\%$, 500 V NPO Disc Ceramic | 031-011-9-001 |
| C101 | .047 μ F $\pm 10\%$, 630 V Polyester | 025-202-9-001 |
| C102 | 2 pF $\pm 1/2$ pF, 500 V Silver Mica | 023-070-9-001 |
| C103 | 12 pF $\pm 5\%$, 500 V Silver Mica | 023-072-9-001 |
| C104 | 130 pF $\pm 5\%$, 500 V Silver Mica..... | 023-041-9-001 |
| C108, 143 | 10 pF $\pm 10\%$, 500 V NPO Disc Ceramic | 031-001-9-001 |
| C111 | 62 pF $\pm 5\%$, 100 V NPO Disc Ceramic..... | 031-048-9-001 |
| C115 | 100 pF $\pm 10\%$, 500 V Disc Ceramic..... | 020-288-9-001 |
| C116 | 0.1 μ F +80/-20%, 100 V Monolithic Ceramic.... | 020-298-9-001 |
| C117, 132, 133, 134, 135 | 3.3 μ F $\pm 20\%$, 63 V Low-Leakage Electrolytic.... | 036-001-9-007 |
| C129, 131 | .001 μ F $\pm 10\%$, 500 V Disc Ceramic..... | 020-155-9-001 |
| C141 | 0.22 μ F $\pm 20\%$, 250 V Polyester | 025-113-9-001 |
| C142 | 2.2 pF $\pm 10\%$, 500 V NPO Disc Ceramic..... | 031-013-9-001 |
| C145 | 15 μ F $\pm 20\%$, 25 V Low-Leakage Electrolytic | 036-001-9-020 |

DIODES

| | | |
|--|---|---------------|
| D1, 2, 3, 15, 19, 20, 21, 22, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, 113, 114, 115 | 1N4148 Silicon Diode..... | 151-038-9-001 |
| D4, 5, 6, 7, 8, 9 | 1 A, 600 V Silicon Diode | 151-050-9-001 |
| D10, 11 | 1N4740A (10 V $\pm 5\%$, 1 W) Zener Diode | 152-080-9-001 |
| D12 | 1N4734A (5.6 V $\pm 5\%$, 1 W) Zener Diode | 152-036-9-001 |
| D13, 14 | 1N4735A (6.2 V $\pm 5\%$, 1 W) Zener Diode | 152-037-9-001 |
| D16, 17, 18 | LED, Red, High Efficiency..... | 158-040-9-001 |

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TRANSISTORS

| | | |
|-----------------------------|--------------------------------------|---------------|
| Q1 | 2N3055 NPN Power Transistor..... | 172-033-9-001 |
| Q2 | MPS2369 NPN Silicon Transistor | 176-049-9-001 |
| Q3 | 2N3906 PNP Silicon Transistor | 177-035-9-001 |
| Q101, 102, 111 | 2N5950 FET | 182-031-9-001 |
| Q103 | MRF-502 NPN Silicon Transistor | 176-032-9-001 |
| Q104, 105, 112, 113, 114 | MPS3640 PNP Silicon Transistor..... | 177-014-9-001 |

INTEGRATED CIRCUITS

| | | |
|------------|----------------|---------------|
| IC1 | 74LS11..... | 307-159-9-001 |
| IC2 | 74LS74..... | 307-119-9-001 |
| IC3 | 4049B | 308-177-9-001 |
| IC4 | 74LS00..... | 307-100-9-001 |
| IC5 | 74LS32..... | 307-329-9-001 |
| IC6 | ICM7226A | 308-309-9-001 |
| IC7 | 4016..... | 308-076-9-001 |
| IC8 | 74LS86..... | 307-225-9-001 |
| IC9 | 4011B | 308-114-9-001 |
| IC101 | CA3102 | 307-318-9-001 |
| IC102, 105 | 10216 | 307-096-9-001 |
| IC104 | SP8660..... | 307-332-9-001 |

MISCELLANEOUS

| | | |
|-----------------------------|--|---------------|
| DS1-DS8 | 7 Segment LED Display | 238-021-9-001 |
| F1 (100 V, 120 V) | Fuse, 3/16 A 250 V, 3AG Slow Blow | 190-251-3-316 |
| F1 (220 V, 240 V) | Fuse, 0.1 A, 250 V, 3AG Slow Blow..... | 190-006-9-001 |
| J2* | Phono Jack | 773-085-9-001 |
| J2*, 101, 102 | BNC Jack | 772-024-9-001 |
| P101, 102 | 8 Pin, 90° PCB Connector | 757-082-9-001 |
| S1-12, 14 | 13 Station Pushbutton Switch Assembly..... | 088-100-9-001 |
| S15 | SPST Momentary Pushbutton Switch | 088-066-9-001 |
| S101, 102, 104, 105, 106 | 5 Station Pushbutton Switch Assembly | 088-096-9-001 |
| T1 | Power Transformer..... | 065-179-9-001 |
| X1 | 10 MHz Quartz Crystal | 132-010-9-001 |
| | Window, Display (Red) | 380-452-9-001 |
| | Display Board Bracket | 251-562-9-001 |
| | "L" Bracket..... | 251-544-9-001 |
| | Front Panel to PCB Bracket | 251-564-9-001 |
| | PCB Mounting Bracket..... | 251-565-9-001 |
| | 20 Lead Jumper | 427-046-9-001 |
| | Cover, Top & Bottom | 253-107-9-001 |
| | Front Panel..... | 255-223-9-001 |
| | Rear Panel..... | 262-047-9-001 |

*On earlier units, J2 is a phono jack; later models use a BNC jack. Check your unit for certainty when ordering.

**SCHEMATIC
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MISCELLANEOUS (cont.)

| | | |
|------------------|--|---------------|
| | Side Case Assembly | 523-479-9-001 |
| | Bezel Assembly..... | 523-527-9-001 |
| (Bezel mount) | #6 x 3/8 Type AB, Bronze Plate Screw | 706-812-1-801 |
| | Handle Assembly | 539-113-0-000 |
| (Handle mount) | #6 x 1/2 Screw | 706-916-1-901 |
| (Handle mount) | Washer..... | 725-040-3-210 |
| (Handle mount) | Spring..... | 767-118-9-001 |
| | PCB Electrical Shield | 256-175-9-001 |
| (Shield mount) | Spacer, Aluminum (.562") | 759-149-9-001 |
| (For Q1) | Top (Black plastic) Insulator | 346-024-9-001 |
| (For Q1) | Mica Insulator | 347-002-9-001 |
| (For Q1) | Shoulder Washer (2 req'd) | 347-004-9-001 |
| | Power Cord (USA/CSA) | 420-013-9-001 |
| | Power Cord (Export) | 420-070-9-001 |
| (For power cord) | Strain Relief..... | 380-001-9-001 |
| | Foot, Rubber | 381-061-9-001 |
| | Switch Button, Brown | 384-072-9-021 |
| | Switch Button, Tan..... | 384-072-9-017 |
| | Switch Button, Ochre | 384-072-9-020 |
| | Knob, Tan..... | 751-231-9-001 |
| | Instruction Manual | 480-385-9-001 |

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.

ORDER REPLACEMENT PARTS FROM:

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



BK PRECISION
 DYNASCAN CORPORATION

6460 W. Cortland St. • Chicago, IL 60635
 312-889-8870