

**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:

**BK PRECISION®**  
 22820 Savi Ranch Parkway  
 Yorba Linda, CA 92887-4604



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 22820 Savi Ranch Parkway  
 Yorba Linda, CA 92887-4604

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**SERVICING INFORMATION**  
  
**MODEL 490**

**CRT TESTER/REJUVENATOR**

**PARTS LIST**  
 488-318-9-002C

SCHEMATIC SYMBOL	DESCRIPTION	B & K-PRECISION PART NO.
<b>RESISTORS</b>		
Unlisted resistors are ±5%, 1/4W. See schematic diagram for value.		
R7-9	2.4Ω ±5%, 1/4W, Carbon	002-104-8-249
R10-12	316Ω ±1/2%, 1/2W, Metal Film	011-217-9-001
R16	10kΩ Trimmer Pot	008-058-9-001
R19	499kΩ ±10%, 1/2W, Carbon	002-032-9-001
R20	50kΩ Trimmer Pot	008-093-9-001
R22	50kΩ Potentiometer (TRACKING Control)	008-135-9-001
R23	250kΩ Trimmer Pot	008-071-9-001
R33	50kΩ Potentiometer (SET G1 Control)	008-135-9-001
R37	51kΩ 5%, 1W, Carbon	001-001-8-513
R38	3.3kΩ ±5%, 1W, Carbon	001-001-8-332
R39	4.7Ω ±10%, 1/2W, Wire Wound	006-102-9-479
R40,41	470kΩ ±10%, 1/2W, Carbon	001-102-9-474
R43	30kΩ ±10%, 10W, Glass	003-010-6-303
R44	100kΩ ±5%, 2W, Carbon	001-002-9-104
R46-48	620kΩ ±5%, 2W, Metal Film	011-221-9-001
R49-51	50kΩ Potentiometer (G2 Controls)	008-135-9-001
R58	82Ω ±5%, 1W, Carbon	001-001-8-820
R65,66	2.4Ω ±5%, 1/4W, Carbon	002-104-8-249
R67	3Ω 12-1/2W, Wire Wound Pot (HTR ADJ Control)	009-038-9-001
R70	470 kΩ ±5%, 2W, Metal Film	011-220-9-001
R71 (120V)	1MΩ ±10%, 1/2W, Carbon	002-102-5-105
R71 (110/220V)	2.2MΩ ±5%, 1/2W, Carbon	002-102-5-225

**CAPACITORS**

C1-3	220μF, 10V, PC Electrolytic	022-109-9-001
C4	Not Used	
C5-8	.01μF +80/-20%, 100V, Ceramic Disc	020-101-9-001

**COMPOSITE**  
 499-380-9-001C

SCHEMATIC SYMBOL	DESCRIPTION	B & K-PRECISION PART NO.	SCHEMATIC SYMBOL	DESCRIPTION	B & K-PRECISION PART NO.
<b>CAPACITORS (Continued)</b>					
C9	.001µF ±20%, 1kV, Ceramic Disc	020-133-9-001	S1	5-position Rotary Switch (Function)	083-165-9-001
C10	.001µF ±10%, 500V, Ceramic Disc	020-072-9-001	S2	6-position Rotary Switch (Htr. Range)	083-091-9-001
C11,12	50µF, 450V, Axial Lead Electrolytic	021-056-9-001	S3,4,5,9	4-Station Pushbutton Assembly*	088-020-9-001
C13,14	1000µF, 16V, PC Electrolytic	022-283-9-001	S6,7,8	(or) (ALT)	088-187-9-001
C15	.005µF ±20%, 500V, Ceramic Disc	020-064-9-001		Pushbutton Switch, DPDT Momentary*	088-026-9-001
C16	.50µF +80/-20%, 100V, Ceramic Disc	020-102-9-001	S10	(or) (ALT)	088-189-9-001
C17	0.1µF ±20%, 16V, Ceramic Disc	020-065-9-001	S11	SPDT Slide Switch	084-001-9-001
C18	.05µF +80/-20%, 100V, Ceramic Disc	020-102-9-001		DPDT Slide Switch	084-001-9-003
C19,20	10µF, 250V, PC Electrolytic	021-040-9-001	<b>MISCELLANEOUS</b>		
C21	0.47µF ±10%, 200V, Mylar	025-044-9-001	F1	Fuse, 3/10A, 250V, 3AG, Slow Blow	190-004-9-001
C22	0.1µF ±20%, 16V, Ceramic Disc	020-065-9-001	F2	Fuse, 3/8A, 250V, 3AG, Slow Blow	190-251-3-308
C23	0.1µF ±20%, 500V, Ceramic Disc (Export Version)	020-025-9-001	I1,2	Bulb, 230V, 10W	400-034-9-001
<b>DIODES</b>					
D1-15	1 Amp, 600 PIV Diode	151-050-9-001	M1	Lamp Socket	752-007-9-001
D16	Not Used		M2	Meter, Heater Volts	320-059-9-001
D17-19	1 Amp, 600 PIV Diode	151-050-9-001	M3	Meter, G1 Volts	320-060-9-001
D20-25	1N4148 Silicon Diode	151-038-9-001	N1-8	Meter, Line Volts	320-058-9-001
D26-28	1 Amp, 600 PIV Diode	151-050-9-001	V1	Neon Bulb, with 7" Leads	401-016-9-001
D29	1N4148 Silicon Diode	151-038-9-001		12BH7A Vacuum Tube	236-120-2-087
D30	1N67(A) Germanium Diode	150-008-9-001		Tube Socket, 9-pin Miniature	749-001-9-001
D31	1N4758, Zener Diode, 56V ±10%, 1W	152-056-9-001		Line Cord (U.S./CSA Version)	420-013-9-001
D32	1N4749A, Zener Diode, 24V ±5%, 1W	152-014-9-001		Line Cord (European Version)	420-070-9-001
D33	1N4739A, Zener Diode, 5.1V ±5%, 1W	152-030-9-001		Case Assembly (Complete)	524-031-9-001
D34,35	Zener Diode, 91V ±10%, 1W	152-058-9-001		Case Top (Only)	271-487-9-001
D36,37	1N4758, Zener Diode, 56V ±10%, 1W	152-056-9-001		Case Bottom (Only)	271-488-9-001
<b>TRANSISTORS</b>					
Q1-7	2N5550, NPN Silicon Transistor	176-033-9-001		Case Latch (Only (2 Rq'd)	754-008-9-001
Q8-10	NPN Medium Power Transistor	176-052-9-001		Case Nameplate (Only)	600-197-9-001
<b>INTEGRATED CIRCUITS</b>					
IC1	7473 Dual J-K Flip-Flop	307-010-9-001		Front Panel	255-272-9-001
IC2	7400 Quad 2-Input NAND Gate	307-015-9-001		Knob, Function	751-353-9-001
<b>TRANSFORMERS</b>					
T1	Power Transformer, 117V	065-098-9-001		Knob, Heater Range	751-352-9-001
T1	Power Transformer, 220V	065-098-9-002		Knob, Small	751-351-9-001
T2	Filament Transformer	062-004-9-001		Pushbutton Cap, Black (Used with "" Switches)	384-016-9-006
				Pushbutton Cap, Black (for ALT Sw's)	384-128-9-001
				Lens Cap, Red	750-003-9-001
				Lens Cap, Amber	750-003-9-003
				Insert, Plastic (for chassis)	380-627-9-001
				Adaptor Storage Assy	524-030-9-001
				Foam Pad (Adaptor Storage)	388-131-9-001
				Output Cable	427-013-9-001
				Instruction Manual	480-640-9-001
				Setup Chart	497-022-0-000

# **BK PRECISION®**

2282- Savi Ranch Parkway  
Yorba Linda, CA 92887-4604  
(714) 237-9220 – telephone  
(714) 237-9214 – facsimile  
[www.bkprecision.com](http://www.bkprecision.com)

## **FACTORY AUTHORIZED PARTS & SERVICE CENTERS**

### **NOTE**

This list is subject to change without notice.  
Please contact the Service Center BEFORE forwarding equipment for repair.

The following Authorized Service Centers will handle any parts and/or service problems, wither in or out of warranty. Each facility has been selected for the quality and promptness of its service. We urge you to take advantage of these excellent service facilities, which have been established to serve your needs.

Effective Date: FEBRUARY, 2002

#### **CALIFORNIA**

Shafer Engineering  
15858 Business Center Drive  
Irwindale, CA 91706  
(818) 960-5402

#### **OKLAHOMA**

Central Instrument Laboratory  
5147 S. 94<sup>th</sup> E. Avenue  
Tulsa, OK 74145  
(918) 822-1140

#### **KANSAS**

K.C. Calibration Laboratory, Inc.  
8391 Melrose Drive  
Lanexa, KS 66214  
(913) 541-0629

#### **MISSOURI**

Scherrer Instruments  
7170 Manchester  
St Louis, MO 6343  
(314) 644-5362

#### **NEW YORK**

E.I.C. Electronics, Inc.  
85 Avenue E  
Rochester, NY 14621  
(718) 544-4392

Technimart  
79-50 212<sup>th</sup> Street  
Bayside, NY 11364  
(718) 479-1890

#### **CANADA**

All In One Electronics  
50 Wingold Avenue  
Toronto, Ontario M6B 1P7  
Canada  
(416) 789-0668

Shephard Instruments & Controls Ltd.  
5595 Roy Street  
Burnaby, BC V5B 3A5  
Canada  
(604) 299-6300

**ADDENDUM**  
**to**  
**INSTRUCTION MANUAL**  
**for**  
**MODEL 490**  
**CRT TESTER**

The Model 490 CRT Tester includes a universal CRT adapter which has replaced previously supplied adapters.

CR-XA



**REGISTRATION CARD**

To insure efficient and satisfactory warranty service, should the need arise, this card must be filled in and returned to B&K Precision Corp. The additional information requested will help us to provide your test instrument needs more effectively in the future. Or, register on our web site at [www.bkprecision.com](http://www.bkprecision.com).

**Please type or print clearly.**

Date Purchased

MODEL NUMBER SERIAL NUMBER MONTH DAY YEAR

FIRST AND LAST NAME

COMPANY

DEPARTMENT/DIVISION/MAIL STOP

ADDRESS

CITY STATE ZIP CODE

COUNTRY ( AREA CODE ) TELEPHONE NUMBER EXTENSION

— Please Complete by Filling in Corresponding  —

**1. Where do you buy most of your test instruments?**

- A.  Storefront Distributor
- B.  From Manufacturer
- C.  Distributor Catalog (Mail Order)
- D.  Other

**2. Where was this instrument purchased (name of seller)?**

**3. Why did you select this B&K PRECISION test instrument?**

- A.  Recommended by an associate
- B.  Recommended by my distributor
- C.  Satisfied with other B+K products
- D.  Read a magazine article
- E.  Advertisement
- F.  Prior use in school
- G.  Selected from B&K Precision catalog
- H.  Price / Performance
- I.  Features required
- J.  Other

**4. What industry magazines do you read?**

- 1.
- 2.

(See Reverse Side)

**5. Where will this instrument be used?**

- A.  Consulting
- B.  Depot repair
- C.  Engineering, R & D
- D.  Field service, electronic
- E.  Field service, electrical
- F.  Hobby
- G.  Incoming inspection, quality control
- H.  Plant & equipment maintenance
- I.  Production test, analyze, repair
- J.  Education
- K.  Other

**6. Industry Classification?**

- A.  Automotive
- B.  Broadcast
- C.  Cable
- D.  Communication systems & equipment
- E.  Computers, systems & peripherals
- F.  Consumer electronics & appliances
- G.  Education
- H.  Government & military
- I.  Industrial controls, systems & equipment
- J.  Medical electronics & systems
- K.  Satellite
- L.  Utilities
- M.  Other

**7. Do you use the internet to research test equipment?**

- Yes
- No
- Probably in the future

**8. Would you use the internet to purchase test equipment?**

- Yes
- No
- Maybe in the future

FOLD HERE TO MAIL



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
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POSTAGE WILL BE PAID BY ADDRESSEE

B & K PRECISION CORP  
22820 SAVI RANCH PARKWAY  
YORBA LINDA, CA 92887



(TAPE ONLY)