

# INSTRUCTION MANUAL

MODIFICATION INSERT

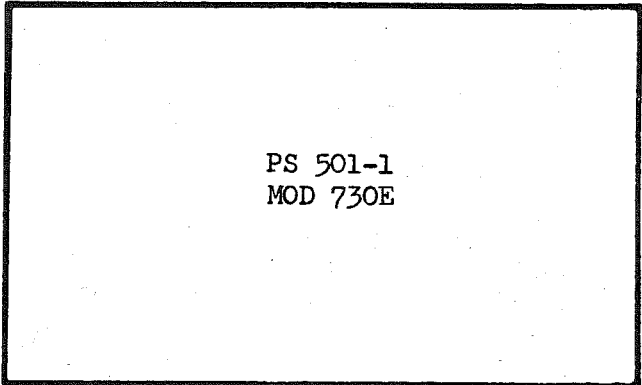
Serial Number \_\_\_\_\_

PS 501-1  
MOD 730E

This insert is provided as a supplement to the instruction manual furnished with this modified instrument. The information given in this insert supersedes that given in the manual.

This insert material Copyright © 1973 by Tektronix, Inc., Beaverton, Oregon. Printed in the United States of America. All rights reserved. Contents of this insert may not be reproduced in any form without permission of the copyright owner.

U.S.A. and foreign Tektronix products covered by U.S. and foreign patents and/or patents pending.



PS 501-1  
MOD 730E



PS 501-1  
MOD 730E

This manual insert describes the features of MOD 730E as it applies to the PS 501-1 Power Supply plug-in unit.

+5 V DC SUPPLY. The output connectors and associated circuits have been deleted.

TRANSDUCER FACILITIES. The 0-20V supply has been adapted for powering an external strain-gage bridge as follows:

TRANSDUCER INPUT. A six-pin female connector, installed in the left side of the front panel, has input connections as follows:

<u>CONNECTOR CONTACT</u>	<u>FUNCTION</u>
A	Power Supply +
B	Transducer Output + and BAL
C	Transducer Output -
D	Power Supply
E	} CAL Switch
F	

TRANSDUCER OUTPUT. The 0-20V binding posts have been deleted. Two BNC connectors and two 5-way insulated binding posts have been installed in the right side of the front panel, connected to contacts B and C of the Transducer Input connector as follows:

<u>CONNECTOR</u>	<u>POSITION IN PATTERN</u>	<u>FUNCTION</u>
BNC	Upper Left	Transducer Output -
Binding Post (Dark Gray)	Lower Left	Transducer Output -
BNC	Upper Right	Transducer Output +
Binding Post (Red)	Lower Right	Transducer Output +

CAL PUSHBUTTON. A normally-open momentary-action CAL pushbutton is installed in the front panel above the TRANSDUCER INPUT connector. This switch provides a closure between contacts F and E of the connector for use with transducers equipped with a calibrating resistor.

TRANSDUCER BAL. A front-panel screwdriver TRANSDUCER BAL adjustment has been added to the front panel above the CAL pushbutton. This screwdriver adjustment provides up to  $\pm 40 \text{ k}\Omega$  shunt imbalance on the Transducer Output + side of the transducer bridge.

CURRENT LIMIT. This control has been changed from a front panel to an internal adjustment, and preset to 75 mA.

CHARACTERISTICS

APPLICATION. This plug-in unit is intended for use with strain-gage-bridge transducers having all four bridge arms and the full calibrating resistance incorporated in the transducer. For transducers not incorporating all bridge elements, the strain-gage adapter (Tektronix Part Number 015-0169-00 - not furnished) is recommended. Compatible transducers include:

PRESSURE.	0-3000 psig	Tektronix Part Number 119-0246-00
	0-300 psig	Tektronix Part Number 119-0245-00
FORCE.	3000 lb	Tektronix Part Number 119-0243-00*
	50 gram/50 lb	Tektronix Part Number 119-0250-00*

\*Additional accessories required - see current Tektronix catalog for complete packages and adapter lists.

CURRENT LIMIT. The 75 mA preset current limit is intended for use with 350 $\Omega$  transducers such as those listed above. Normal and maximum bridge-volts settings for lower impedance transducers are as follows:

<u>TRANSDUCER</u> <u>IMPEDANCE</u>	<u>VOLTS SETTING</u>	
	<u>NOMINAL</u>	<u>MAX</u>
50 $\Omega$	0-3 V	3.6
100 $\Omega$	0-6 V	7.1
120 $\Omega$	0-7 V	8.4
200 $\Omega$	0-12 V	13.5
$\geq 350 \Omega$	0-20 V	20

The current limit may be reset internally to other values up to 400 mA (390 mA at 20 V) if required.

POLARITIES. Polarity marking on the front panel TRANSDUCER OUTPUT are for an external transducer wired to provide an increase of resistance between connector pins A and C or between pins B and D, and/or a decrease of resistance between pins A and B or between pins C and D for a positive-going change in the parameter being studied.

GROUNDING. The shell of the TRANSDUCER INPUT connector is connected to chassis ground. Either pin A or pin D (but not both) may be grounded to the connector shell externally in the transducer. If no bridge connection is grounded, centering resistors which have been added in the power supply (1 k $\Omega$  each side) set the + and - outputs near 0 V with respect to chassis ground.

CALIBRATION

NOTE

The +5V supply has been deleted. Transducer input and output connectors and balance and calibrate facilities for use with strain-gage-bridge type transducers has been added. The Current Limit control is now an internal adjustment.

Calibration will be similar to standard.

1. +5V DC supply is deleted.
2. Current limit control is to be preset at 75 mA.
3. The 0-20V supply has been adapted for powering an external strain-gage-bridge.
4. Transducer input connector.

<u>Connector Contact</u>	<u>Function</u>
A	Power +
B	Transducer Output + and Bal
C	Transducer Output -
D	Power Supply -
E	Cal Switch*
F	Cal Switch*

\*A CAL pushbutton has been installed to provide a closure between contacts F and E for use with transducers equipped with a calibrating resistor.

5. The transducer bal control has been added to provide up to  $\pm 40$  k $\Omega$  shunt imbalance on the transducer output + side of the transducer bridge.

PARTS LIST  
Electrical

CAPACITORS

C2 Delete  
C3 Delete

RESISTORS

R3 Delete  
R65 Delete  
R70 Add 311-0467-00 100 k $\Omega$ ,  $\pm 10\%$ , Var  
R71 Add 321-0347-00 40.2 k $\Omega$ , 1/8 W, 1%  
R72 Add 315-0102-00 1 k $\Omega$ , 1/4 W, 5%  
R73 Add 315-0102-00 1 k $\Omega$ , 1/4 W, 5%

SWITCHES

S70 Add 260-0735-00 CAL

INTEGRATED CIRCUITS

U2 Delete

Mechanical

- Shield, electrical, rear subpanel
- Subpanel, front
- Panel, front, film #7407-1
- Post, standoff
- Connector, 6-pin, female
- Connector, BNC, 3/8" mounting
- Washer, internal lock, 1/4"
- Post, metallic, 1/4-32 x .594" long
- Nut, hex, 1/4-32 x .312
- Washer, flat, 1/4"
- Nut, hex, .562-24 x .688
- Nut, plain knurled, 1/4-28
- Stud, binding post
- Bushing, .312 aluminum, .250 x 32 x .352" long
- Binding post, red
- Binding post, white
- Post, terminal
- Socket, transistor
- Socket, pin terminal
- Heat Sink

Change	1	030-0787-03
Change	1	030-0788-03
Change	1	034-0590-00
Add	2	131-0403-00
Add	1	131-0609-00
Add	2	131-0955-00
Add	2	210-0046-00
Add	1	210-0471-00
Add	1	210-0583-00
Add	1	210-0940-00
Add	1	220-0504-00
Add	1	220-0633-00
Add	1	355-0170-00
Add	1	358-0342-00
Delete	1	129-0064-01
Delete	1	129-0064-02
Delete	2	131-0847-00
Delete	1	136-0361-00
Delete	2	136-0384-00
Delete	1	214-1713-00

