

# **K4XL's** **BAMA**

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# INSTRUCTION MANUAL

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

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**IN-OUT PANEL**  
**015-0139-00**

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070-0972-00

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INSTRUCTION  
MANUAL



# IN-OUT PANEL 015-0139-00

## Introduction

The 015-0139-00 In-Out Panel shown in the frontispiece provides front-panel access to rear-panel connectors of the instruments in Tektronix S-3110 series digital measurement systems. The panel also provides a system power status (off-on) lamp and a system power switch. As shown in the frontispiece, a foot-operated advance/reset switch is supplied with the panel. Except for the switches and power status lamp, the panel is passive.

## Connector Functions

**VERTICAL PLUG-IN HEADS Connectors.** The In-Out Panel has two mounting cells (CHANNEL A and CHANNEL B) that accept S-series sampling heads. If these cells are to be used, it is necessary to mount connectors at the rear of the cells. The proper connectors are supplied with the Tektronix Type 3S6 Sampling Unit and can be easily mounted in the cells.

**PROBE POWER Connectors.** These connectors are designed for use with P6045 Probes and 015-0073-00 Accessory Power Supplies. The power supplies can be mounted within the system cabinet and the connections to the probes made at the front of the In-Out Panel.

**PULSE GENERATORS Connectors.** These connectors provide access to the pulse and pretrigger outputs of two pulse generators. The TRIGGER IN connectors permit the application of an external trigger signal to the pulse generators.

**POWER SUPPLIES Connectors.** The POWER SUPPLIES connectors accept banana plugs, spade lugs or pin connectors. Voltage to the connectors should be limited to 500 volts and current should be limited to 1 ampere.

**TIME BASE—TRIGGER Connector.** This connector provides access to the rear-panel External Trigger In connector on the sampling sweep or time-base unit.

**CHOPPERS Connectors.** The CHOPPERS connectors accept the 36-pin plug on the 015-0128-00 or 015-0129-00 Signal Choppers. There are two CHOPPERS connectors, one on the front of the panel, the other on the rear. The two connectors are wired in parallel. The wiring to the

CHOPPERS connectors consists of only those lines necessary for chopper operation and are wired to the pins assigned for chopper operation on the PROGRAMMING connector.

**ADVANCE/RESET Connectors.** There are two of these connectors also, one on the front panel and one on the rear panel. The two connectors are wired in parallel. The wiring to the ADVANCE/RESET connectors consists of only those lines necessary for advance/reset control of a Tektronix Type R241; the connectors are wired to the pins assigned to this function in the PROGRAMMING connector. The ADVANCE/RESET connectors accept the 36-pin plug of the advance/reset foot switch assembly.

**PROGRAMMING Connectors.** The rear PROGRAMMING connector accepts the 36-pin plug on the interconnecting cable from connector J303 on the Type R241 rear panel. The rear-panel PROGRAMMING connector is wired in parallel with the front-panel PROGRAMMING connector, permitting the Type R241 to be programmed externally at a front-panel connector. As previously described, certain pins on the PROGRAMMING connectors are wired in parallel with corresponding pins in the CHOPPERS connectors and ADVANCE/RESET connectors.

## Installation

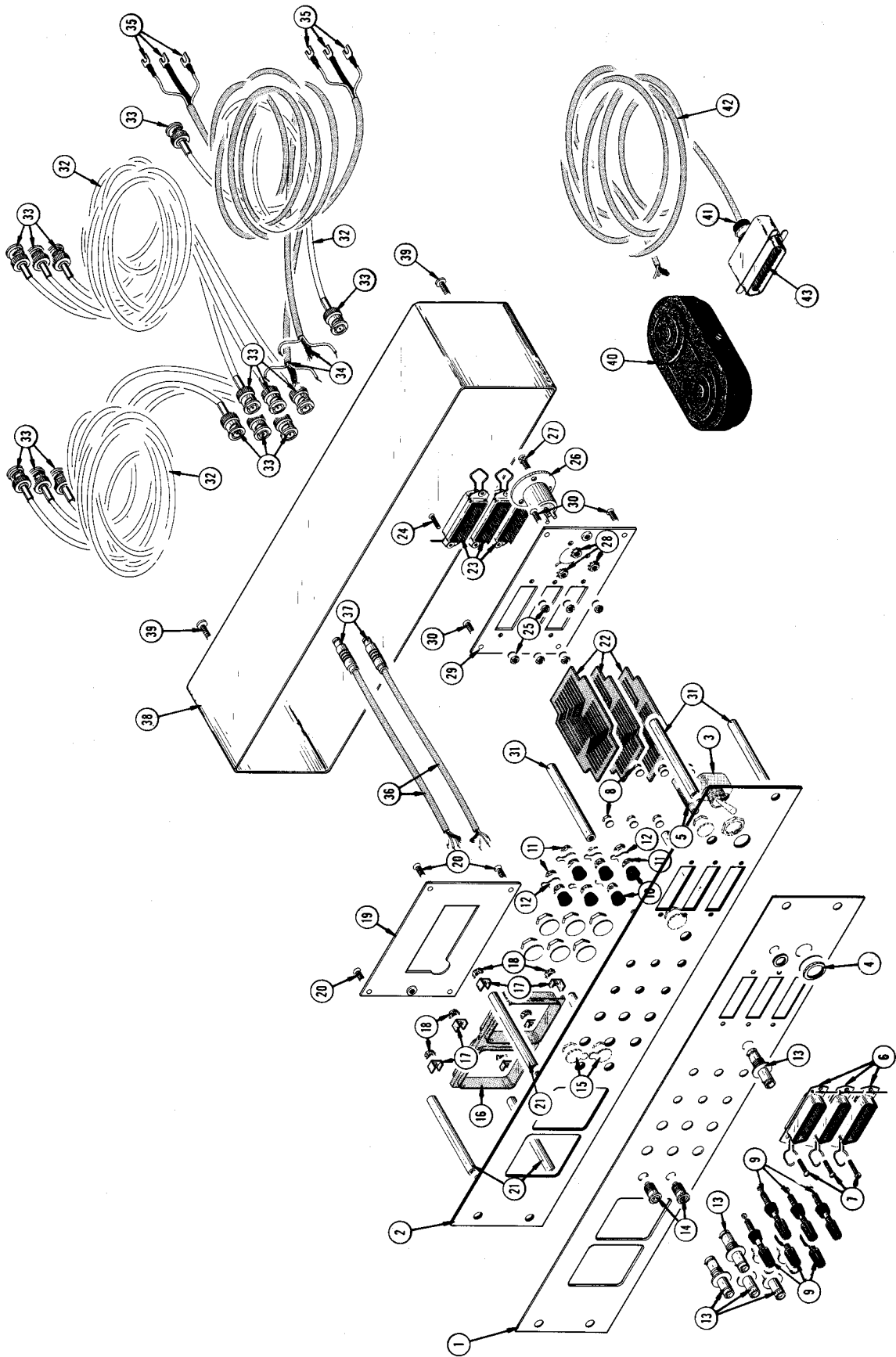
Install the In-Out Panel in the system equipment rack. Wire the POWER ON switch in accordance with the wiring diagram at the rear of this manual. Connect the cables leading from the rear of the In-Out Panel to their corresponding connectors on the rear panels of the systems instruments. Connect the sampling head connectors from the interconnecting cable at the rear of the R568 to the In-Out Panel, using the four screws already installed in the connectors. Install the desired S-series sampling heads in their appropriate cells. All front-panel connectors are now ready for use.

## Maintenance

Refer to the maintenance instructions in the system instruction manual for general maintenance procedures.

## Calibration

The In-Out Panel contains no calibration adjustments.



## EXPLODED VIEW

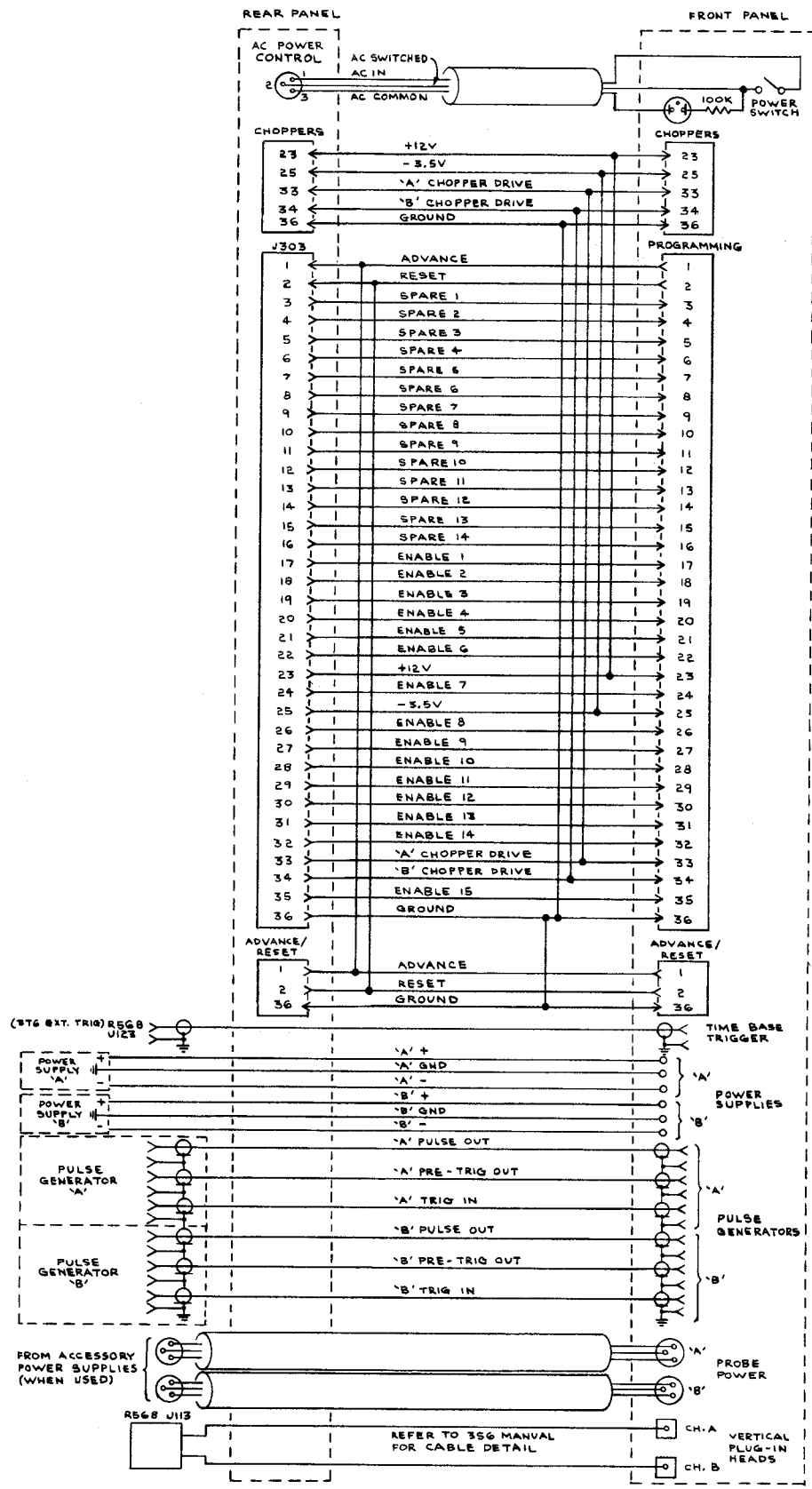
| Fig. &<br>Index<br>No. | Tektronix<br>Part No. | Serial/Model No. |      | Q<br>t<br>y | Description  |
|------------------------|-----------------------|------------------|------|-------------|--|
|                        |                       | Eff              | Disc |             |  |
| 1                      | 333-1219-00           |                  |      | 1           | PANEL, front   |
| 2                      | 386-1504-00           |                  |      | 1           | SUB-PANEL, front                                       |
| 3                      | 260-0134-00           |                  |      | 1           | SWITCH, toggle, w/hardware--POWER                      |
|                        | - - - - -             |                  |      | -           | mounting hardware: (not included w/switch)             |
|                        | 210-0902-00           |                  |      | 1           | WASHER, flat, 0.470 ID x 21/32 inch OD                 |
| 4                      | 210-0473-00           |                  |      | 1           | NUT, 12 sided, 15/32-32 x 0.634 inch                   |
| 5                      | - - - - -             |                  |      | 1           | BULB ASSEMBLY, neon, w/hardware                        |
| 6                      | 131-0294-00           |                  |      | 3           | CONNECTOR, 36 pin, female                              |
|                        | - - - - -             |                  |      | -           | mounting hardware for each: (not included w/connector) |
| 7                      | 211-0034-00           |                  |      | 2           | SCREW, 2-56 x 1/2 inch, RHS                            |
|                        | 210-0001-00           |                  |      | 2           | LOCKWASHER, internal, #2                               |
| 8                      | 210-0405-00           |                  |      | 2           | NUT, hex., 2-56 x 3/16 inch                            |
| 9                      | 129-0064-00           |                  |      | 6           | POST, binding  |
|                        | - - - - -             |                  |      | -           | mounting hardware for each: (not included w/post)      |
| 10                     | 358-0181-00           |                  |      | 1           | BUSHING, binding post                                  |
| 11                     | 210-0457-00           |                  |      | 2           | NUT, keps, 6-32 x 5/16 inch                            |
| 12                     | 210-0227-00           |                  |      | 1           | LUG, solder, SE #6                                     |
| 13                     | 131-0772-00           |                  |      | 7           | CONNECTOR, feedthru, BNC, w/hardware                   |
| 14                     | 131-0438-00           |                  |      | 2           | CONNECTOR, 3 contact, female, w/hardware               |
|                        | - - - - -             |                  |      | -           | mounting hardware for each: (not included w/connector) |
| 15                     | 210-0255-00           |                  |      | 1           | LUG, solder, 3/8 inch ID                               |
| 16                     | 200-0820-00           |                  |      | 1           | BEZEL, dual sampling head                              |
|                        | - - - - -             |                  |      | -           | mounting hardware: (not included w/bezel)              |
| 17                     | 343-0153-00           |                  |      | 6           | CLAMP, rim clenching                                   |
| 18                     | 210-0586-00           |                  |      | 6           | NUT, keps, 4-40 x 1/4 inch                             |
| 19                     | 386-1503-00           |                  |      | 1           | PLATE  |
|                        | - - - - -             |                  |      | -           | mounting hardware: (not included w/plate)              |
| 20                     | 211-0559-00           |                  |      | 4           | SCREW, 6-32 x 5/8 inch, 100° csk, FHS                  |
| 21                     | 384-0518-00           |                  |      | 4           | ROD, spacer, 3 1/4 inches long                         |
| 22                     | 388-1310-00           |                  |      | 3           | BOARD, circuit   |
| 23                     | 131-0294-00           |                  |      | 3           | CONNECTOR, 36 pin, female                              |
|                        | - - - - -             |                  |      | -           | mounting hardware for each: (not included w/connector) |
| 24                     | 211-0062-00           |                  |      | 2           | SCREW, 2-56 x 5/16 inch, RHS                           |
|                        | 210-0001-00           |                  |      | 2           | LOCKWASHER, internal, #2                               |
| 25                     | 210-0405-00           |                  |      | 2           | NUT, hex., 2-56 x 3/16 inch                            |

## EXPLODED VIEW (CONT)

| Fig. &<br>Index<br>No. | Tektronix<br>Part No. | Serial/Model No. |      | Q |   |   |   |   | Description |   |
|------------------------|-----------------------|------------------|------|---|---|---|---|---|-------------|---|
|                        |                       | Eff              | Disc | t | y | 1 | 2 | 3 |             | 4   |
| 26                     | 131-0014-00           |                  |      |   |   |   |   |   |             | 1 CONNECTOR, 3 pin, male                          |
|                        | - - - - -             |                  |      |   |   |   |   |   |             | - mounting hardware: (not included w/connector)   |
| 27                     | 211-0033-00           |                  |      |   |   |   |   |   |             | 3 SCREW, sems, 4-40 x 5/16 inch, PHS              |
| 28                     | 210-0586-00           |                  |      |   |   |   |   |   |             | 3 NUT, keps, 4-40 x 1/4 inch                      |
| 29                     | 386-1592-00           |                  |      |   |   |   |   |   |             | 1 PLATE   |
|                        | - - - - -             |                  |      |   |   |   |   |   |             | - mounting hardware: (not included w/plate)       |
| 30                     | 211-0559-00           |                  |      |   |   |   |   |   |             | 4 SCREW, 6-32 x 5/8 inch, 100° csk, FHS           |
| 31                     | 384-0518-00           |                  |      |   |   |   |   |   |             | 4 ROD, spacer, 3 1/4 inches long                  |
|                        | 175-1047-00           |                  |      |   |   |   |   |   |             | 7 CABLE, special purpose                          |
|                        | - - - - -             |                  |      |   |   |   |   |   |             | - each cable includes:                            |
| 32                     | 175-0300-00           |                  |      |   |   |   |   |   |             | FT CABLE, coaxial, 50 Ω, 8 feet long              |
| 33                     | 131-0442-00           |                  |      |   |   |   |   |   |             | 2 CONNECTOR, BNC, male                            |
| 34                     | 175-0330-00           |                  |      |   |   |   |   |   |             | FT CABLE, 3 conductor (two 7 foot lengths)        |
| 35                     | 210-0230-00           |                  |      |   |   |   |   |   |             | 6 LUG, solderless spade                           |
| 36                     | 175-0076-00           |                  |      |   |   |   |   |   |             | FT CABLE, coaxial, (two 1 foot lengths)           |
| 37                     | 131-0440-00           |                  |      |   |   |   |   |   |             | 2 CONNECTOR, 3 contact, male                      |
| 38                     | 426-0479-00           |                  |      |   |   |   |   |   |             | 1 FRAME-PANEL, rear                               |
|                        | - - - - -             |                  |      |   |   |   |   |   |             | - mounting hardware: (not included w/frame-panel) |
| 39                     | 211-0542-00           |                  |      |   |   |   |   |   |             | 2 SCREW, 6-32 x 5/16 inch, THS                    |
|                        | 262-0875-00           |                  |      |   |   |   |   |   |             | 1 SWITCH, wired--ADVANCE/RESET                    |
|                        | - - - - -             |                  |      |   |   |   |   |   |             | - switch includes:                                |
| 40                     | 260-1079-00           |                  |      |   |   |   |   |   |             | 1 SWITCH, unwired                                 |
| 41                     | 348-0066-00           |                  |      |   |   |   |   |   |             | 1 GROMMET, plastic, 0.550 ID x 0.400 inch long    |
| 42                     | 175-0330-00           |                  |      |   |   |   |   |   |             | FT CABLE, 3 conductor, 10 feet long               |
| 43                     | 131-0293-00           |                  |      |   |   |   |   |   |             | 1 CONNECTOR, 36 pin, male                         |

| Ckt. No. | Tektronix Part No. | Serial/Model No. Eff | No. Disc | Description          |       |    |
|----------|--------------------|----------------------|----------|----------------------|-------|----|
|          |                    |                      |          | Bulb                 |       |    |
| B1       | 150-0040-00        |                      |          | Neon NE 2H, Assembly |       |    |
|          |                    |                      |          | Resistor             |       |    |
| R1       | 301-0104-00        |                      |          | 100 k $\Omega$       | 1/2 W | 5% |
|          |                    |                      |          | Switch               |       |    |
| SW1      | 260-0134-00        |                      |          | Toggle               | POWER |    |





IN/OUT PANEL  
S-3110

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