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PAS 9420/AOT
ENGINEERING SPECIFICATION

ANALOG OUTPUT TEST FIXTURE

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Analog Output Card Test Fixture

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I. INTRODUCTION

GENERAL DESCRIPTION

The **Analog Output Test Fixture** (PAS 9420/AOT) is useful for testing and calibrating Four Channel Analog Output Cards (RTP7455/30 Series). The fixture plugs onto the edge of the Analog Output Card under test, and provides binding posts for connecting a power supply and voltmeter, and a four position switch for selecting one of the four channels. Both voltage and current output cards can be calibrated with this fixture by using the on board current to voltage, (I to V), conversion resistor. A toggle switch is provided for switching in an external power supply when current output cards are being adjusted.

DEFINITION OF SWITCHES AND CONNECTION POINTS

A **four position interlocked push button switch** is located at the top of the fixture, and is used to select the channel under test. The switch is labeled CH 0, CH 1, CH 2, CH 3, to identify which channel is selected.

Four binding posts are provided for meter and power supply connections, and are labeled BP 1, BP 2, BP 3, BP 4.

Binding Post 1 is used for the positive connection of the voltmeter.

Binding Post 2 is used for the negative connection of the voltmeter when current output cards are being calibrated.

Binding Post 3 is used for the positive connection of the power supply when current output cards are being calibrated.

Binding Post 4 is the ground connection. It is used for the negative connection of the voltmeter for voltage output cards, and the negative connection of the power supply for current output cards.

The **toggle switch** is used to switch the external power supply in series with the output, when current output cards are being calibrated. When it is switched to the right the current to voltage conversion resistor is grounded. When it is switched to the left, the resistor is put in series with the external supply. This allows the output impedance potentiometers on the Analog Output card to be adjusted.

When voltage output cards are being calibrated the switch should always be to the left, with no external supply connected.

A **four position terminal strip** is also provided, and it parallels the binding post connections.

The value of the **current to voltage conversion resistor** is 100 ohms, and it will convert a 20 mA output current signal into a two volt signal that can be monitored with the voltmeter.

CONNECTIONS FOR VOLTAGE OUTPUT CARD ADJUSTMENT

Connect the positive side of the voltmeter to BP 1, and the negative side of the voltmeter to BP 4. Switch the toggle switch to the left, and do not connect an external power supply.

Follow the procedures in the training reference manual or in the Analog Output card technical manual, (980-0021-161).

CONNECTIONS FOR CURRENT OUTPUT CARD ADJUSTMENT

Connect the positive side of the voltmeter to BP 1, and the negative side of the voltmeter to BP 2. Connect the positive side of the external power supply to BP 3, and the negative side of the power supply to BP 4, if the output impedance potentiometers are to be adjusted. The toggle switch is used to put the external power supply in series with the output when it is switched to the left, and to ground the low side of the I to V resistor when switched to the right. The 100 ohm I to V resistor will convert the output current into a voltage that can be measured with the voltmeter. The conversion ratio is 20 mAmps will produce 2 Volts across the resistor.

Follow the procedures in the training reference manual or in the Analog Output card technical manual, (980-0021-161).