DESCRIPTION

START-UP/CHECKOUT

TROUBLESHOOTING

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser’s purposes, the matter should be referred to General Electric Company.
WARNING

ALWAYS DISCONNECT ALL POWER TO THE DRIVE BEFORE REMOVING OR INSERTING A PRINTED CIRCUIT CARD. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY TO PERSONNEL AND DAMAGE TO THE DRIVE OR DRIVEN MACHINERY.

GENERAL

This instruction provides the basic information required to start-up and troubleshoot the Amplifier Card. Refer to the system diagrams to determine how the card is used in the overall system.

DESCRIPTION

This card contains six (6) operational amplifiers, OA1-OA6 for general purpose use.

Two diode networks are also provided.

START-UP/CHECK-OUT

Refer to systems diagrams for amplifier connections.

TROUBLESHOOTING

As an aid to troubleshooting a brief description of an operational amplifier follows:

The output voltage is approximately 20,000 times the difference between the voltage on the non-inverting input and the inverting input, i.e., \( VO = 20,000 \times (VN - VI) \). As long as the output voltage is not in clamp (or saturation), the difference between VN and VI is essentially zero. It should be noted that the voltage to common of the inputs has no affect on the output.

A bias current will flow into each input. This current is constant and is approximately 1/2 micro amp. Each input must be connected to provide a path for this current. For an operational amplifier connected as shown below:

The output of an operational amplifier is short circuit proof and will swing a minimum of ±10 volts with a 2K ohm resistive load. Capacitive loads will cause oscillation unless driven by the buffered output of OA3 or OA4 (Tabs 12 and 9X).

Check that ±20 volts and common are applied to this card.

Check that the connected load is not less than 2000 ohms.

Analyze the input/output to determine if the input signal is improper or if the amplifier is defective.