AEROFLEX

OPERATION MANUAL

T1204

RDMI, RMI, DDI, RAI
DISCRETE FUNCTION INTERFACE UNIT

MANUAL NUMBER: 06-1204-0A
E6-1204-0A
REVISION: 0
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WARNING: INFORMATION SUBJECT TO EXPORT CONTROL LAWS

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400 New Century Parkway – New Century, Kansas – 66031
Telephone: (800) 237-2831 / (913) 764-2452 Fax: (913) 782-5104
www.aeroflex.com

ELECTROSTATIC DISCHARGE GENERAL WARNINGS FOR ALL EQUIPMENT

CAUTION: THIS EQUIPMENT MAY CONTAIN ELECTROSTATIC DISCHARGE (ESD) SENSITIVE COMPONENTS. TO PREVENT ESD SENSITIVE EQUIPMENT FROM POSSIBLE DAMAGE, OBSERVE THE FOLLOWING PRECAUTIONS WHEN HANDLING ANY ESD SENSITIVE COMPONENTS, OR UNITS CONTAINING ESD SENSITIVE COMPONENTS:

a. Maintenance or service personnel must be grounded though a conductive wrist strap, or a similar grounding device, using a 1 MΩ series resistor for equipment protection against static discharge, and personal protection against electrical shock.

b. All tools must be grounded (including soldering tools) that may come into contact with the equipment. Hand contact will provide sufficient grounding for tools that are not otherwise grounded, provided the operator is grounded through an acceptable grounding device such as a wrist strap.

c. Maintenance or service of the unit must be done at a grounded, ESD workstation.

d. Before maintenance or service of the equipment, disconnect all power sources, signal sources, and loads connected to the unit.

e. If maintenance or service must be performed with power applied, take precautions against accidental disconnection of equipment components. Specifically, do not remove integrated circuits or printed circuit boards from equipment while the equipment has power applied.

f. All ESD sensitive components are shipped in protective tubes or electrically conductive foam. The components should be stored using the original container/package when not being used or tested. If the original storage material is not available, use similar or equivalent protective storage material.

g. When ESD sensitive components are removed from a unit, the components must be placed on a conductive surface, or in an electrically conductive container.

h. When in storage or not being repaired, all printed circuits boards must be kept in electrically conductive bags, or other electrically conductive containers.

i. Do not unnecessarily pick up, hold, or directly carry ESD sensitive devices.

Failure to comply with these precautions may cause permanent damage to ESD sensitive devices. This damage can cause devices to fail immediately, or at a later time without apparent cause.

REVISION HISTORY BY DRAWING NUMBER

MANUAL: T1204 RDMI, RMI, DDI, RAI Discrete Function Interface Unit

REVISION: 0 – June 2, 2007

DRAWING NO.	REV. LEVEL	DRAWING NO.	REV. LEVEL
Section I	00		
Section II	00		
Section III	00		

SECTION I
GENERAL INFORMATION

1.1 INTRODUCTION

This manual contains information relative to the operation of the Aeroflex Model T1204 Discrete Function Interface Unit, (DFIU) PN: 01-1204-00.

The T1204 discrete function interface unit is designed to allow for the testing of 700 series indicators and line replaceable units (LRUs). The test panel provides power and breakout of necessary signals for calibration and performance testing of the LRUs. The T1204 interfaces to the T1200 via the DFIU interface connection on the rear of the test panel.

1.2 UNITS AND ACCESSORIES SUPPLIED

The Aeroflex Model T1204 DFIU, PN: 01-1204-00, consists of the main test panel and the following accessories:

ITEM	DESCRIPTION	P/N
1	T1204 CD Operation Manual	E6-1204-0A
2	115V/400Hz Power Cable	55-2406-00

1.3 OPTIONAL EQUIPMENT

The following items are available as optional equipment with the T1201 DFIU. They must be ordered separately.

P/N	DESCRIPTION
55-1204-00	T1204, Power Cable
55-1204-01	T1204-01, RDMI-743 Interface Cable
55-1204-02	T1204-02, RDMI -743/743A Interface Cable
55-1204-03	T1204-03, RMI-733 Interface Cable
55-1204-04	T1204-04, RAI-742 Interface Cable
55-1204-05	T1204-05, VS-800 Interface Cable
55-1204-06	T1204-06, BA-800 Interface Cable
55-1204-07	T1204-07, SI-800 Interface Cable
55-1204-08	T1204-08, RMI-733A Interface Cable
55-1204-11	T1204-11, DDI-713 Interface Cable
55-1204-12	T1204-12, RDMI-743 Interface Cable

SECTION II
OPERATION

2.1 GENERAL INFORMATION

This section contains information relating to the unpacking, inspection and setup of the T1204 DFIU.

2.2 UNPACKING AND INSPECTION EQUIPMENT

Carefully remove the T1204 DFIU and accessories from the packing box. Make a visual inspection of the unit for evidence of damage incurred during shipment. If a claim for damage is to be made, save the shipping container to substantiate the claim. When all equipment has been unpacked, return the packing material to the container for future use in storing or shipping the equipment.

2.3 EQUIPMENT SETUP

The T1204 DFIU may be installed free standing on a workbench table top or mounted in a 19-inch equipment rack using the integral rack mounting ears.

The T1204 interfaces to the T1200 via the DFIU interface connection on the rear of the test panel. Input power is connected to the T1204 via the 115VAC inlet located on the rear of the test panel. Interface to the LRU being tested is through the 96 pin ZIF (zero insertion force) connector located on the front panel. Interfacing to the LRU is provided via the individual adapter cables sold separately.

IMPORTANT

Refer to the appropriate Component Maintenance Manual (CMM) to test procedure for additional test equipment set up procedures.

2.4 CONTROLS – FRONT PANEL (Refer to Figure 2-1)

5VAC ADJ	Adjust power supplied to the LRU 5VAC lighting bus.
115VAC ADJ	Adjusts the voltage level of the power supplied to the LRU main power input.
115VAC On/Off Switch	Controls the 115VAC supplied to the test panel and to the LRU.
5VAC On/Off Switch	Controls the power being supplied to the 5VAC LRU lighting bus.
115VAC Fuse	1 amp for LRU and test panel protection from short circuit damage.
5VAC Fuse	2 amp for lighting bus power supply protection.
DVM +/- test points	Connection for DVM. Output is determined by the position of the DVM select switch.
S1-S11	Switches for controlling the status of LRU discrete inputs. Can be configured for either active high or active low. Configuration is determined by the LRU interface cable.
TP1-TP11	Test points for monitoring the status of discretes configured by the LRU interface cable.

DVM Select	Selects the signal to be connected to the DVM output test points.
429 Bus Monitor A-D	External connections for monitoring the 429 busses after signal conditioning.
Speaker	Allows the operator to monitor the audio output of the LRU.
LRU Connection	96 pin ZIF connector for the connection of the LRU interface cables.
Bus Condition Switch	Used for creating non standard test signals on the 429 bus for testing the LRU receiver's performance.

Normal	No 429 bus conditioning
31 pulses	Causes the 429 data to have 31 pulses instead of the normal 32
33 pulses	Causes the 429 data to have 33 pulses on each data word instead of 32
Open hi side	Causes the hi side of the 429 bus to be an open to the 429 source
GND hi side	Connects the 429 bus hi side to chassis ground
Open lo	Opens the lo side connection to the 429 bus source
GND low	Connects the lo side of the 429 bus to chassis ground

Pulse Amplitude	Adjusts the peak to peak amplitude of the 429 bus signal being supplied to the LRU.
Bus Selection Switch	Selects which bus is to be conditioned before being supplied to the LRU. N=none, A=A 429 data bus, B=B429 data bus, C=C 429 data bus, D=D 429 data bus.

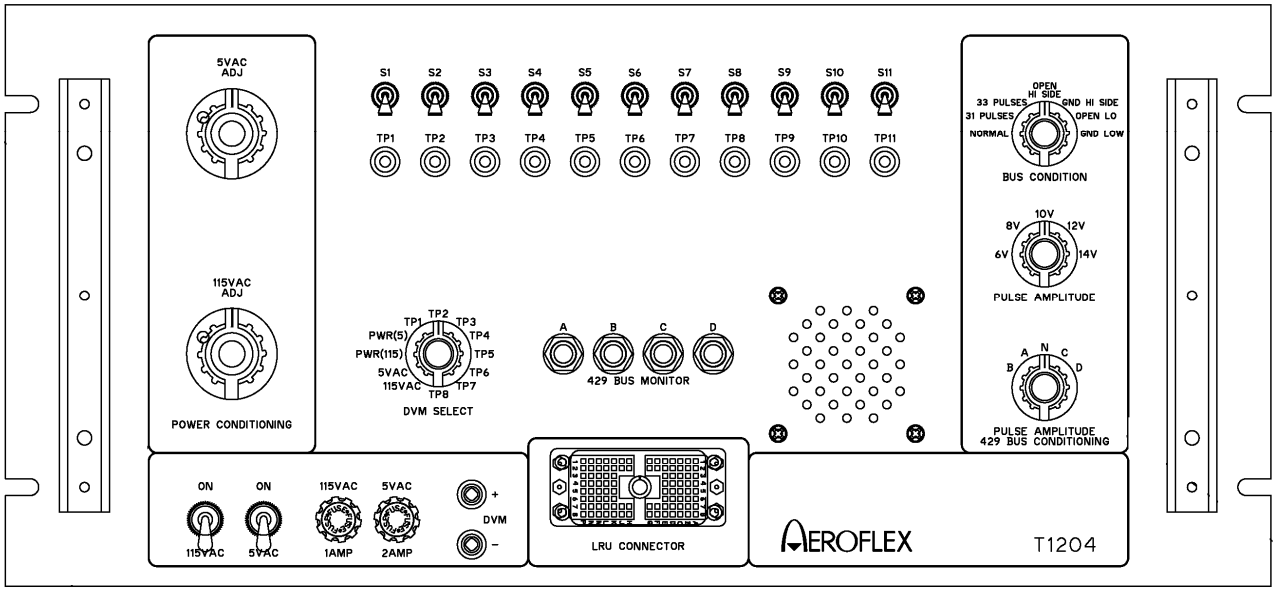

Figure 2-1. T1204 Front Panel

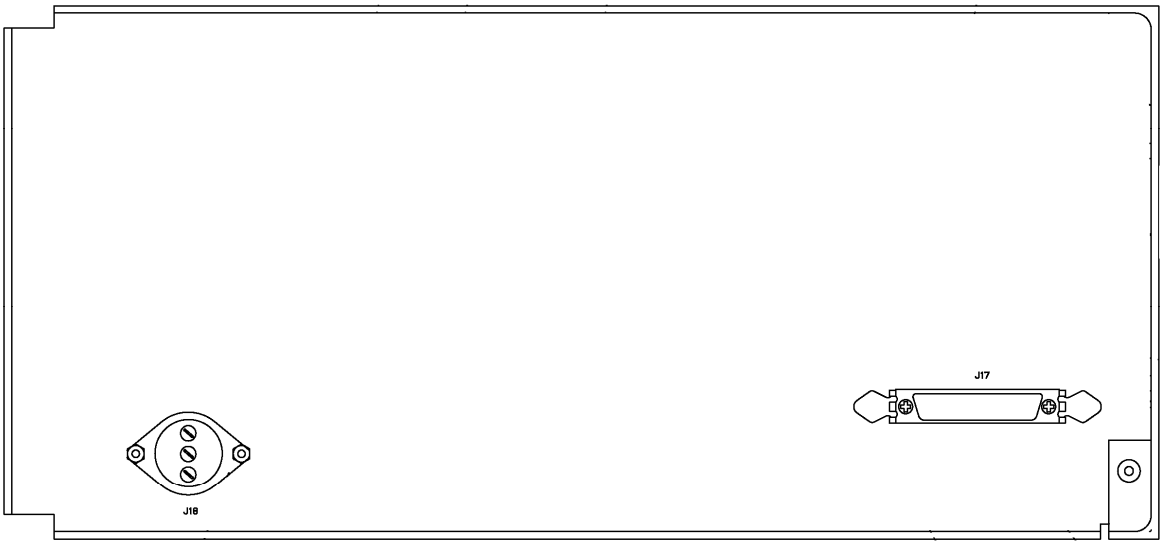

Figure 2-1. T1204 Rear Panel

SECTION III
MAINTENANCE

3.1 MAINTENANCE INFORMATION

To assist in the maintenance of the Aeroflex Model T1204 Discrete Function Interface Unit, bills of material, assembly drawings, schematics and a test procedure are included in the T1204 Maintenance Manual (P/N 06-1204-00 for hard copy, E6-1204-00 for CD) available separately from Aeroflex.