INSTRUCTION MANUAL

COUPLING/DECOUPLING

NETWORK S15

MODEL EM-7806-3

INSTRUCTION MANUAL

COUPLING/DECOUPLING NETWORK S-15

ELECTRO-METRICS

MODEL EM-7806-3

SERIAL NO: N/A

ELECTRO-METRICS CORPORATION

231 Enterprise Road, Johnstown, New York 12095
Phone: (518) 762-2600 Fax: (518) 762-2812

EMAIL: info@emihq.com **WEB: http://www.electro-metrics.com**

MANUAL REV. NO: EM78063-0796 **ISSUE DATE: JULY 01 1996**

WARRANTY

This Model EM-7806-3 S-15 Coupling/Decoupling Network AF-4 is warranted for a period of 12 months (USA only) from date of shipment against defective materials and workmanship. This warranty is limited to the repair of or replacement of defective parts and is void if unauthorized repair or modification is attempted. Repairs for damage due to misuse or abnormal operating conditions will be performed at the factory and will be billed at our commercial hourly rates. Our estimate will be provided before the work is started.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

APPENDIX 1
EM-7806-3 ACCESSORIES

The following accessories are standard with the **EM-7806-3 Coupling/Decoupling Network S15**.

a. 50-ohm Termination, BNC Connector.

b. 50/150-ohm Impedance Matching Network.

Quantity: 2

c. 6 dB Attenuator.

d. 15-pin subminiature D connectors with covers.

Quantity: 2

1 male, 1 female.

DESCRIPTION AND USE
COUPLING/DECOUPLING NETWORK S15
ELECTRO-METRICS MODEL EM-7806-3

1.0 Introduction

The EM-7806-3 Coupling/Decoupling Network S15 is a low pass filter network that allows coupling of RF signals onto shielded cables being tested to IEC-1000-4-6 (formerly IEC 801.6).

The EM-7806-3 is used for conducted susceptibility testing of shielded 15-line cables. The network is designed to be fully compliant with IEC-1000-4-6.

Included with each unit, as required by IEC-1000-4-6:

a. High power 6 dB attenuator, quantity: 1,

b. 50/150-ohm matching networks, quantity: 2.

2.0 Specifications

2.1 Electrical

Injection Frequency Range:		150 kHz-80 MHz.
Current:		1 Ampere AC/DC.
Voltage:		50 VAC/DCs.
Injection Port Voltage:		20 Vrms.
Connectors:	Injection Port:	BNC
	Input:	15-pin Subminiature D, male.
	Output:	15-pin Subminiature D, female.
Grounding Connector:		Threaded Stud.

2.2 Mechanical

Height:		100 mm (3.95")
Length:		218 mm (8.6")
	Over Ground Stud:	239 mm (9.4")
Width:		171 mm (6.75")
Weight:		1.5 kg (3.25 lbs)

3.0 Description EM-7806-3

The two end panels for the EM-7806-3 Network are marked:

a. Auxiliary Equipment (AE),

b. Equipment Under Test (EUT).

3.1 Auxiliary Equipment Panel

a. Input Connector

Type: 15-pin Subminiature D connector, male.

Quantity: 1.

Function: To connect to the shielded 15-line cable source.

b. Ground Connector

Type: Brass Stud.

Quantity: 1.

Function: To connect to the ground plane or shielded enclosure.

3.2 Equipment Under Test Panel

a. Output Connector

Type: 15-pin Subminiature D connector, female.

Quantity: 1.

Function: To connect to the Equipment Under Test shielded 15-line cable input.

4.0 Operating Instructions

The AE (Auxiliary Equipment) panel of the network is connected to the shielded 15-line cable through the AE 15-pin Subminiature D connector.

The ground connection should be made through the brass stud (marked GND) on the AE panel.

NOTE

A BRASS RF GROUND STUD IS PROVIDED ON THE AE PANEL FOR CONNECTION TO THE GROUND PLANE.

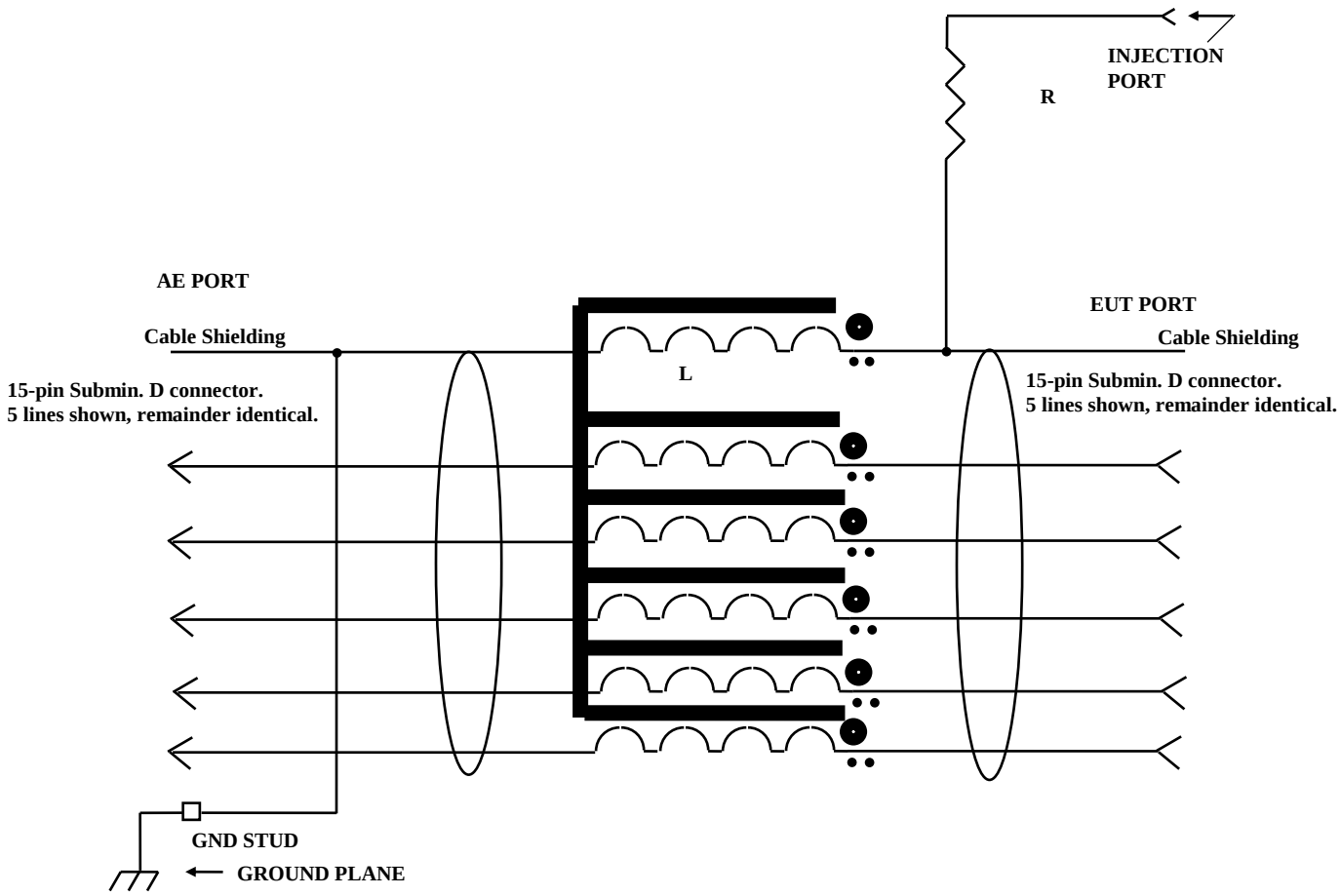
The EUT (Equipment Under Test) panel of the network is connected to the shielded 15-line cable through the EUT 15-pin Subminiature D connector.

The RF test signal at the required level is applied to the BNC connector (top panel) on the EUT end of the network. The signal is normally applied through the 6 dB attenuator (supplied).

5.0 Reference Information

The design of the EM-7806-3 Coupling/Decoupling Network S15 is based on the information contained in International Electrotechnical Commission Publication IEC 1000-4-6 (Para. 6.2).

The application and verification of the coupling/decoupling network is explained in detail by the IEC publication. For any questions concerning the use of the network, 50/150-ohm impedance matching network, or procedures to be followed refer to the IEC publication.



NOTE: **R = 100 Ω, L ≥ 280 µH**
Ferrite Beads - as required.

Figure 1

Schematic Diagram EM-7806-3 Coupling/Decoupling Network S15