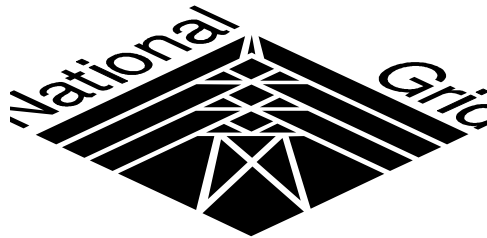

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Schedule of Site
Commissioning Tests
SCT 16.6
Issue 4
June 1998

**Commissioning Schedule
for MATROSE Monitoring
Equipment supplied by
Hathaway Power
Instrumentation Ltd**

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SCHEDULE OF SITE COMMISSIONING TESTS

**SCT 16.6 COMMISSIONING SCHEDULE FOR MATROSE MONITORING
EQUIPMENT SUPPLIED BY HATHAWAY POWER INSTRUMENTATION
LTD**

Station:

Circuit:

Manufacturer's Contract No:

Contractor's Signature:

NGC Contract No:

**Accepted by:
(Engineer's Signature)**

Contractor:

Date:

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COMMISSIONING SCHEDULE FOR MATROSE MONITORING EQUIPMENT SUPPLIED BY HATHAWAY POWER INSTRUMENTATION LTD

1 INTRODUCTION

This Schedule states The National Grid Company plc (NGC) requirements for commissioning MATROSE Monitoring Equipment supplied by Hathaway Power Instrumentation.

Reference should be made to the MATROSE operating manual when carrying out commissioning.

2 SCOPE

This schedule deals with the following:

- (i) Commissioning of the MATROSE equipment.
- (ii) Verification of input signal wiring, external communications and alarm outputs.

This schedule specifically does not include for commissioning of any associated transducers.

3 EQUIPMENT REQUIRED

3.1 Calibrated Test Equipment

A good quality digital multimeter offering 0.001 mA D.C. resolution/accuracy (such as a Fluke 8060 A) is required for the calibration of the analogue injection test source, the details of which should be recorded below.

Digital Multimeter

Others (state function)

<u>Manufacturer and Type</u>	<u>Serial No.</u>	<u>Calibration Date</u>	<u>Date next Calibration due</u>

3.2 D.C. Injection Source

A stable D.C. mA injection source having an output range of 0 to 10 mA and a setting resolution of 0.001 mA is required. This instrument need not be "calibrated" as the output is to be monitored using the above Digital Multimeter whilst in use.

3.3 MATROSE Replay System

A MATROSE replay system, complete with modem is required to enable local interrogation of the MATROSE. Alternatively arrangements can be made with Engineering & Technology (ET), Protection & Measurements group for the interrogation to be performed remotely.

4 GENERAL INFORMATION

MATROSE Telephone Number

Site CTN Code

Network Services Area Contact and Telephone Number

5 VISUAL INSPECTION

Is cubicle secured to floor and are fixings adequate?

Is all packaging material removed from within subracks and cubicle?

Record equipment drawing reference

Is equipment supplied in conformance with above drawing including: items of equipment supplied, fuse ratings and removable links?

Has cubicle been bonded to the substation earth?

Does equipment appear sound and in good condition?

Have the following keys been provided?

Door keys x 2

Removable disc keys x 2

MATROSE recorder panel keys x 2

Have the following been provided?

3U Extender card x 1

6U Extender card x 1

Connecting lead kit (2 items)

Has an external keyboard been provided?

Is a radio clock fitted and has an aerial and manual been provided?

Has a MATROSE manual been provided?

6 APPLICATION OF POWER

Apply power to the MATROSE and observe correct start up in accordance with the manual (Section 4).

Record the following as obtained from the screen start up display:

Software version number

Machine number (M/C on banner of display)

7 COMMISSIONING OF RADIO CLOCK INPUT

The radio clock should be commissioned in accordance with the manufacturers handbook (including the setting of Rugby signal propagation delay compensation) and the aerial located and fixed in a suitable location. In most instances siting of the aerial on the top of the cubicle should allow a suitable signal to be obtained. Once the radio clock has been commissioned the alarms should be reset and a check made to ensure that the RCC alarm can be cleared and remains off.

Note: The clock is supplied with the serial port set as follows:

Baud rate	1200
Start bit	1
Data bits	7
Stop bits	2
Parity bits	Even

Has clock been commissioned in accordance with manufactures handbook, including setting of the Rugby signal propagation delay compensation and has the MATROSE alarm been reset successfully?

8 CALIBRATION OF INJECTION TEST SOURCE AND ANALOGUE INPUTS

Calibration of the analogue input channels should be performed using the internal MATROSE calibration test source. In order to enter Calibration Mode, Engineering Mode must first be enabled requiring the entry of a password. The password may be obtained from the ET Protection & Measurements group.

8.1 Verification of the MATROSE INTERNAL Calibration Test Sources

Using a suitable, calibrated test instrument (Section 3.1) verify the calibration of the internal current calibration source in accordance with the manual Section 8.1.1. The output of the current calibration source should be adjusted as necessary to be in the range 6.000 mA D.C +/-0.002 mA.

Record final value of current test source output to a resolution of 0.001 mA

Using a suitable, calibrated test instrument (Section 3.1) verify the calibration of the internal voltage calibration source in accordance with the manual, Section 8.1.2. The output of the voltage calibration source should be adjusted as necessary to be in the range 1.980 V d.c. +/-0.002 V. Record final value of voltage test source output to a resolution of 0.001 V.

8.2 Calibration of Analogue Input Channels

Calibration of the analogue channels should be carried out in accordance with Section 8.2 of the manual