

C1900 Troubleshooting Guide

1 Introduction

This publication is a guide to troubleshooting the most common problems experienced with both the Mk. I and Mk. II C1900 circular chart recorders.

2 Error Messages

The following error message applies to C1900 recorders manufactured before May 1998:

Error Message	Possible Cause
<i>RdFR IL</i> (Ad.FAIL)	The processor frequency stored in the configuration does not match the frequency of the crystal on the main board. For example, a 12MHz crystal is fitted but 8MHz has been selected in the Commissioning level.
	The oscillator circuit for the ADC section has failed due to rapid aging of the BADC chips caused by very high temperature operation.
	Other faults, such as resonator not working or 10V power supply rail for input circuitry missing or low.

Recorders manufactured between June 1998 and March 2005 use C1900/2100 Issue 1 software that does not include the *RdFR IL* (Ad.FAIL) message. These recorders display the following messages:

Error Message	Possible Cause
<i>Err 1</i> (Err1)	Miscellaneous ADC failure
<i>Err 2</i> (Err2)	Corrupted data from ADC
<i>Err 3</i> (Err3) *	No reply from ADC

* Typically displayed where previously the *RdFR IL* (Ad.FAIL) message was displayed.

Recorders manufactured from April 2005 use C1900/2201 Issue 4 software that does not include the *Err 1*, *Err 2* or *Err 3* messages. This software displays a *F- INPt -999* (F-INPt -999) message.

For recorders manufactured before April 2005, the following faults may occur:

Symptom	Cause
Dim display	I/O module inserted incorrectly. The dual rail connector at the top of the board is offset to one side and not all the pins are in the socket.
<i>L INE FR ILed</i> (line failed) displayed instead of the process variable	
<i>CONF IG FR IL</i> or <i>CAL FR IL</i> (Configuration or calibration failure) displayed during the start-up sequence	

For recorders manufactured after April 2005 this problem manifests itself in the following way:

During the instrument start-up, *TEST* (Instrument Test) incorrectly identifies the recorder as type '1911J', regardless of its preset type.

Upon entering the *INST TYPE* (instrument type) page in the commissioning level, the recorder reverts to a '1912R' type controller configuration.

Upon entering the *OPT IDN PAGE* (option page) in the commissioning level, the recorder is identified as non-upgradeable.

Note. The incorrectly inserted I/O board fault description applies also to the C1300 as this uses the same Mainboard.

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