

INTERNAL USE ONLY

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ELE1,Optical-to-Electrical Convertor Sub-module:

User Guide

WJ Brewerton

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Distribution: K Fullard, SE Dorling, R Johnson, WJ Brewerton K1/0/40 file(s)

1. Introduction

There are 3 types of CODAS optical/electrical converter sub-modules, ELE2, EEL1 for inclusion in user equipment. It is envisaged that they be used for triggering and driving local equipment from CTS signals.

2. Module Functions

The ELE1 is a dual optical-electrical convertor sub-module. It has two independent optical inputs which are converted to two TTL output signals. (The electrical outputs can be "open collector" by fitting 7407 units in place of 7404 for IC1 A/B).

3. Construction

The sub-module takes the form of a Printed Circuit Board 100 x 160MM. The module width is 17mm. Power inputs and electrical outputs are connected through solder spill connections or through a F-connector, which can be mounted by the user on the rear of the card. The optical inputs are through a flexible fibre-optic pigtail fixed to the board at one end with SMA compatible connectors at the front of the board. The SMA connectors must be securely mounted by the user on a bulkhead or panel.

4. Specification

Signal standards:

Optical input: CODAS type 23. (820 nm)	Light = Logic 1 Dark = Logic '0'
Electrical output: (CODAS type 33: (TTL)	Logic 1 is a low voltage output

CODAS type signals are specified in the CODAS Handbook JCH 7.6

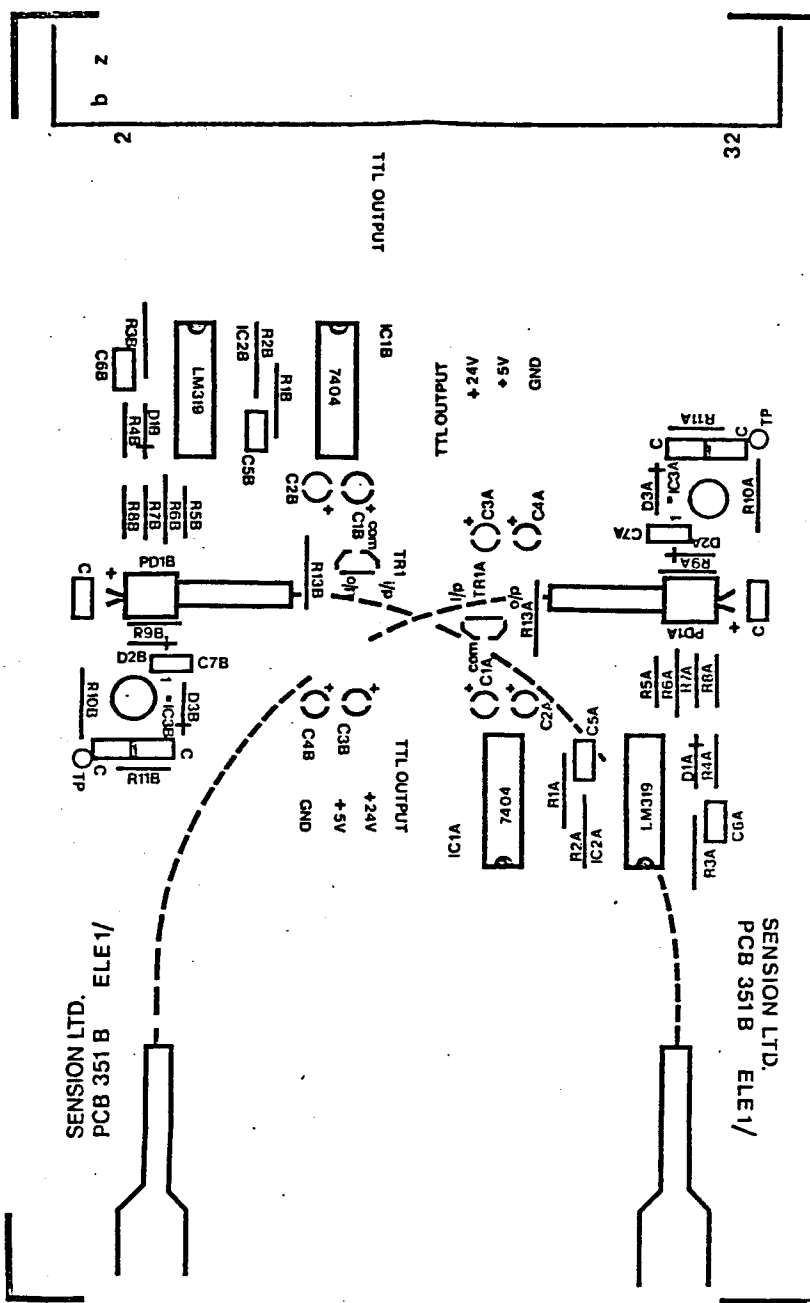
Power supply

+24V \pm 5% at 160mA
+ 5V \pm 5%

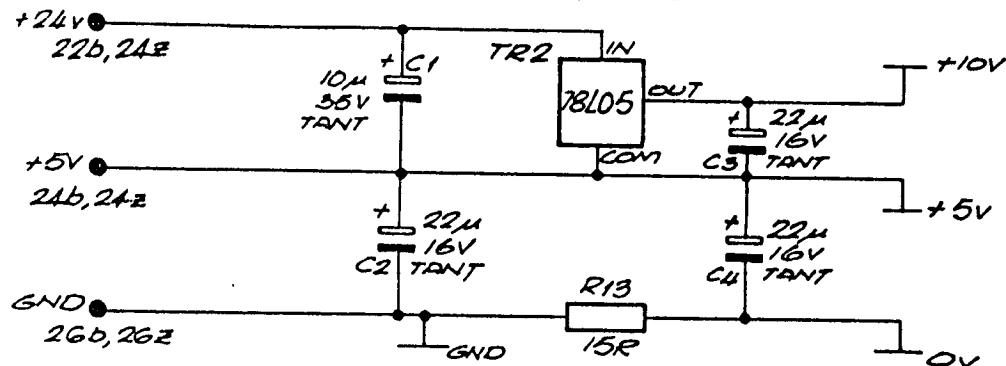
5. Drawings

[1704](#) Circuit diagram

[1735](#) Component overlay

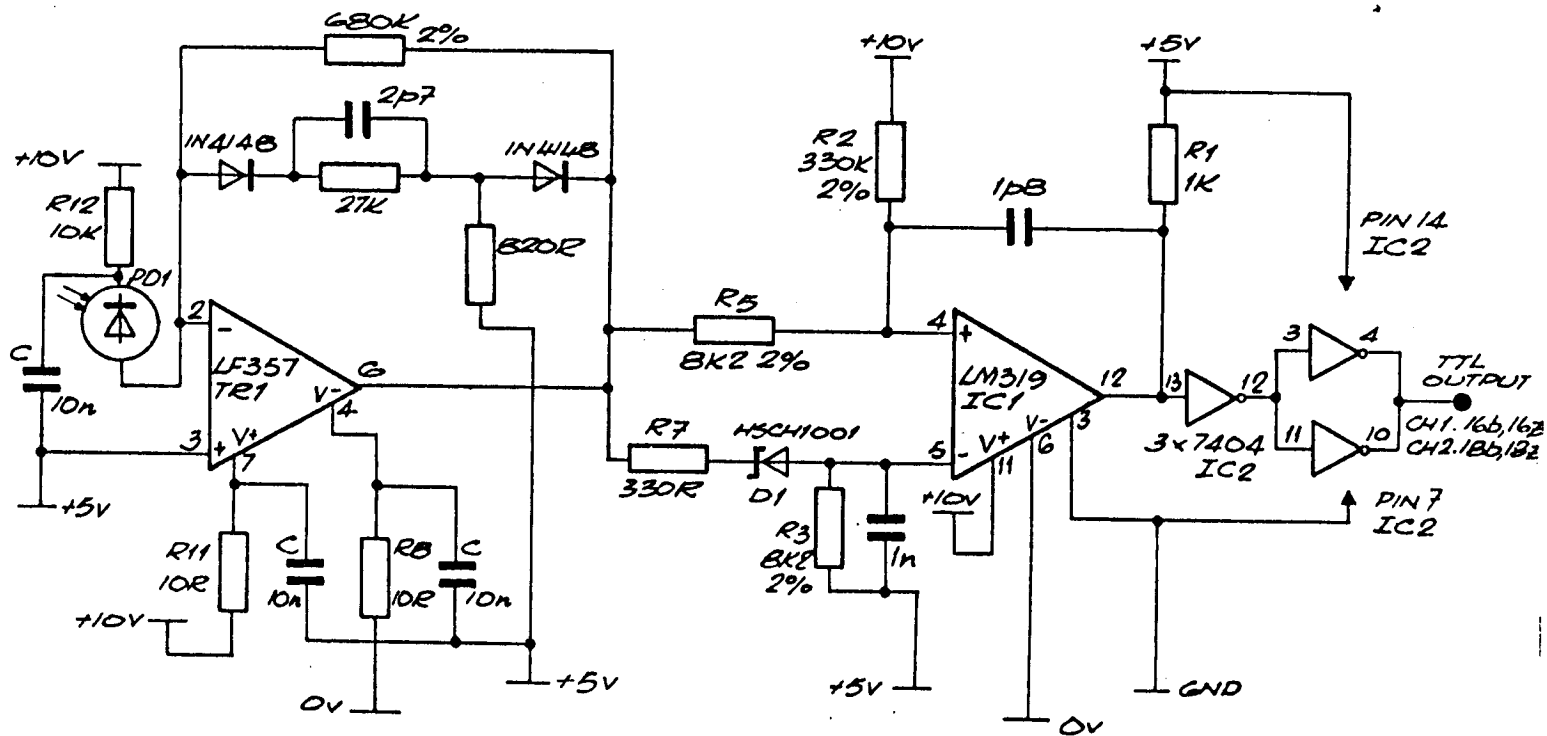


JOINT EUROPEAN TORUS							CODAS	
TITLE ELE1 COMPONENT OVERLAY								
DATE	5-3-85	CODAS	Y 2	A C A 4	1	7	3	5
ISSUE	A							



NOTE:

THERE ARE 2 CIRCUITS
ON EACH BOARD.



JOINT EUROPEAN TORUS

TITLE DUAL OPTO-ELECTRICAL
CONVERTOR-ELE1

DATE	5.2.85
ISSUE	A
CODAS	Y2
ACA4	1704