

# CENTRAL UNIT CARD CAGE

	ORDER	JOB #	
13		7 CHANNEL MULTIPLEXER 1	15
12		L.S.I. TERMINAL 3	11
11		L.S.I. TERMINAL 1	7
10	4	IBM 3780 COMMUNICATIONS (MAP)	L.S.I. TERMINAL 2 6
9		7 CHANNEL MULTIPLEXER 2	8
8			
7	13	SPECTRALOGIC DISK CONTROLLER (16, 26 OR 46)	13
6			
5			
4			
3			
2	14	TEN X 99 COBOL ACCELERATOR (IF FITTED)	
1		990/10A CPU T.I.	
		INTERRUPT CARD	

SLOT  
INTERRUPT  
LEVELS

INTERRUPT  
LEVELS

# CARD CAGE (REAR)

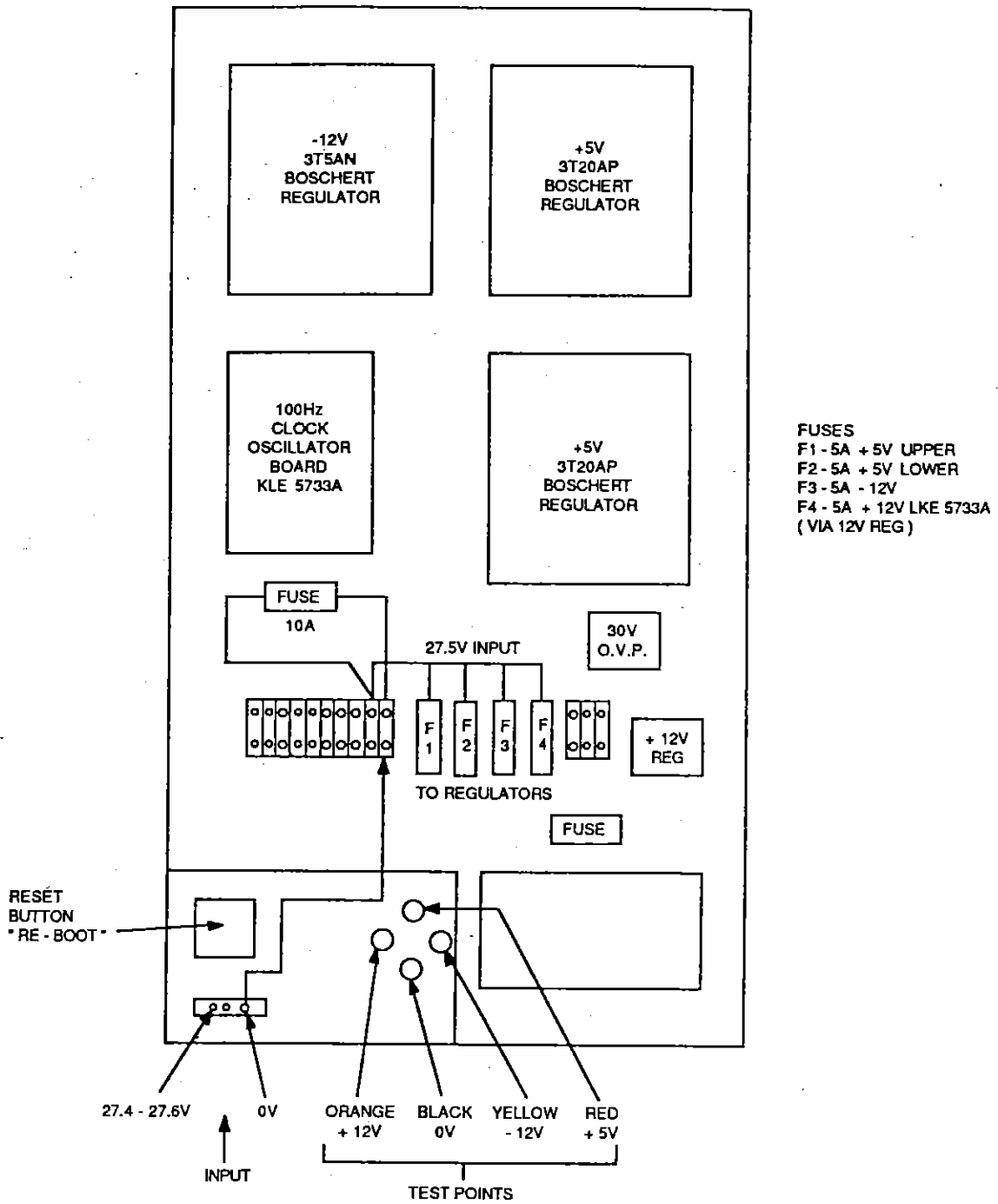


FIG 2

## 2.3 Central Card Cage

### 2.3.1 Introduction

The card cage houses the central unit processor, disk controller interfaces and multiplexer boards.

Three Boschert switching regulators, a KLE 5733A 100Hz clock oscillator board and separate 12V regulator are used to derive the voltage supply levels of +5V, +12V and -12V d.c.

### 2.3.2 Description and Operation

The card cage houses the central unit printed circuit boards in dedicated slots.

The boards and their functions are listed below:

- (1) Texas Instruments 990/10A Processor Board

This is the central processor for the DART system and contains up to 2MB of memory.

- (2) Spectra Logic 16 Disk Controller Board

Used to transfer data between the disk drive and the central processor.

- (3) Seven Channel Multiplexer KLE 5721 MUX Board

Multiplexes data between the ~~disk drive~~ <sup>SYSTEM</sup> and the printer and display peripherals.

- (4) Texas Instruments IBM 3780 Communications Board (REMOVED 1992)

Interfaces to Terminal Automation System (TAS) and the Marketing Administration Processor (MAP).

- (5) Local System Interface (LSI) Board

Used for communication between the Central System and Plant System.

One or more boards may be fitted dependent upon the number of RAMs and PCIs required by the Plant System.

All the boards in the card cage interfacing with the 990/10A processor are assigned an interrupt priority level.

These levels are set on a Texas Instruments Interrupt address board, located in the central card cage.

Refer to Fig. 1 for board locations and interrupt levels allocated.

The central card cage receives its power from the DART I O/P of the main power supply unit (27.4-27.6V d.c.) (PJ3).

Connection to the central card cage is via a 3 pin flat plug at the rear of the unit and to fuses F1 to F4. This supply is also used for charging the battery back-up cells and should be monitored when the system is switched on and with all the cards plugged into the card cage.

To ensure that the back-up battery is not overcharged the voltage should not exceed the parameters specified above.

#### Fuses

Fuses F1 and F2 supply +27V d.c. to the two 3T20AP Boschert regulators, fitted at the rear R/H side of the central card cage.

Both of these outputs (+5V d.c.) are connected to the card cage motherboard and used for +5V d.c. logic levels to the cards.

Fuse F3 supplies +27V d.c. to Boschert regulator 3T5AN located at the rear (upper) L/H side of the central card cage and also the KLE 5733A 100Hz clock oscillator board, situated immediately below the 3T5AN regulator Ref. Fig. 2.

Fuse F4 supplies 27V d.c. to the +12V regulator located at the bottom right hand side rear of the central card cage. Connection to the motherboard is via socket J1 of the KLE5733A 100Hz clock oscillator board, which plugs into the rear of the central card cage motherboard.

The KLE 5733A 100Hz clock oscillator board performs several functions:

- (a) Socket J2 is used to connect the +5V, +12V, -12V d.c. and clock pulse O/P to the motherboard or backplane.
- (b) Plugs J2 and J3 on KLE5733A are used for routing the input and output voltage levels specified above and for connections to the CPU re-boot pushbutton at the rear of the central card cage Ref. Fig. 3.

### 2.3.3 Indications, Switches and Links

(a) Reset Switch (DO NOT USE)

The Reset switch is situated at the bottom rear of the central card and illuminates white when the card cage is powered up.

(No longer used with 2MB CPU.) See paragraph (b) 2.3.2.

(b) Links

Link E11 situated at the top left of the edge connector P7, is no longer fitted when using the later Spectra Logic Disk Controller Board.

### 2.3.4 Input/Output Connections

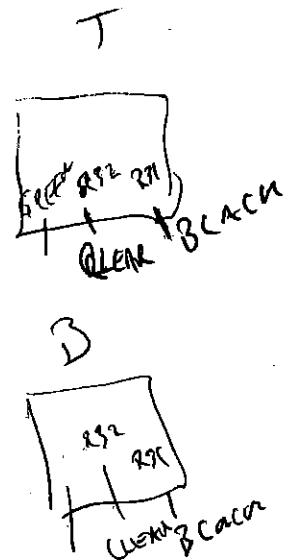
The d.c. supply is connected to the central card cage via the flat three pin connector at the rear bottom left of the central card cage. Ref. Fig. 2.

### 2.3.5 Calibration and Adjustment

Adjustment of the output voltage levels of the three Boschert regulators is via R13, on the edge of the appropriate regulator.

To adjust the output of the +5V regulators, one regulator must be disconnected, whilst the other is adjusted. The +12V output is fixed and cannot be adjusted.

NB: A digital voltmeter with impedance in excess of 20K ohms should be used when monitoring the voltage levels. Refer to paragraph (c) 2.3.2.



# KLE 5733A 100 Hz CLOCK OSCILLATOR BOARD

