

3547860 FERRANTI ELECTRIC INC

95D 04877 D

T-75-11-29

## TELECOMMUNICATIONS CIRCUITS

### ADVANCE INFORMATION 2MBIT PCM SIGNALLING CIRCUIT: HDB3 ENCODER/DECODER

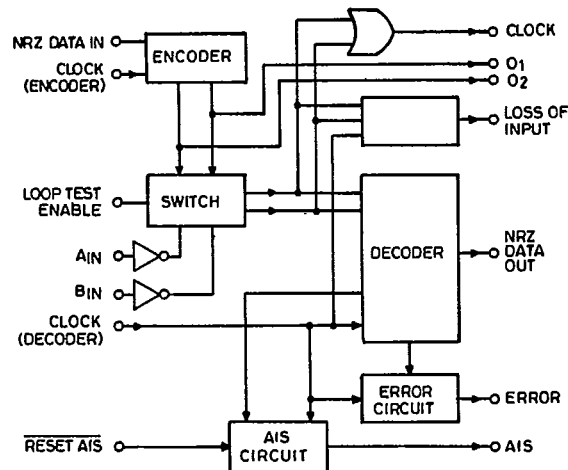
ZN1440E

The 2MBit PCM signalling circuits are a group of I.C.'s. performing the common signalling and error detection functions required of a 2.048MBit 30 channel PCM transmission link operating to the appropriate CCITT recommendations. The circuits are fabricated using the Ferranti FAB-2 CDI process, operate from a single 5 volt supply and have TTL compatible inputs and outputs.

The ZN1440E is an encoder/decoder for the pseudo-ternary transmission code HDB3 as defined in the annex to CCITT recommendation G703. The device encodes and decodes simultaneously and asynchronously. Error monitoring functions are provided to detect violations of HDB3 coding, all ones detection and loss of input (all zeroes detection). In addition a loop back function is provided for terminal testing.

#### FEATURES

- HDB3 encoding and decoding to CCITT recommendation G703
- Asynchronous operation
- Decode data in NRZ
- Loop back control
- Simultaneous encoding and decoding
- Clock recovery signal generated from incoming HDB3 data
- HDB3 error monitor
- 5 volt operation
- Loss of input alarm (all zeroes detector)
- Low cost 16-lead plastic DIL package



System Diagram