Automatic Error Detection and Correction Equipment HU 20 Series 'AUTOPLEX'

IN increasing the traffic capacity and efficiency of busy HF telegraph circuits a guaranteed standard of accuracy must be maintained. This demands an automatic system of error correction.

The Type HU 20 system uses the 7-unit code recommended by the C.C.I.T., in which every character is composed of 3 mark and 4 space elements. Mutilated characters are detected by counting the number of marks in each received character. Upon reception of an error, repetition of the incorrect character is automatically requested, and this is continued if necessary until the character is correctly received.

The system caters for two teleprinter channels (five-unit simultaneous input) in time-division multiplex with character interleaving. Two equipments can readily be combined for four-channel operation. The five-unit simultaneously-presented input is derived from a multi-wire tape reader or similar device which is pulsed at character rate by the equipment. The input is translated in the equipment to seven-unit code. As each character is transmitted it is stored for a period depending on loop propagation times.

The message protection facilities are:

(1) *Error indication without repetition*
Errors when detected are indicated by the printing of a special symbol on the copy.

(2) *Automatic repetition (ARQ)*
In this condition repetition of any erroneous character is obtained automatically. Additional protection is afforded by a 'tested RQ' circuit.

Features

Cold-cathode valves ensure operational stability, long life, low power consumption and low heat dissipation. They also give visual indication of circuit on/off conditions.

Channel storage capacity of 2, 3 or 4 characters accommodates long loop-propagation times.

Automatic or manual phasing can be incorporated.

Selection of aggregate signal speed and start/stop channel output speed by a switch.

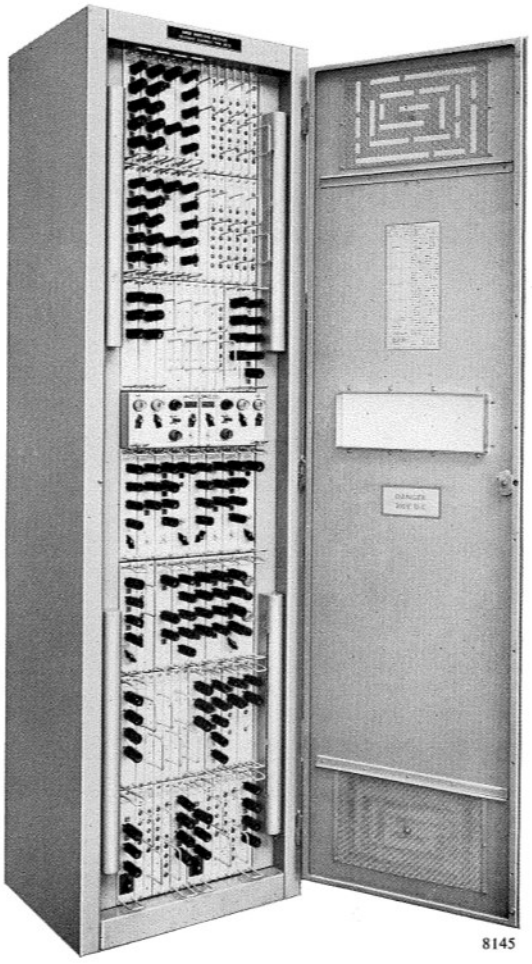
Supervisory signals can be made without causing mutilation of traffic characters.

Single idle-alpha rejection prevents misoperation due to a spurious idle-alpha signal.

Synchronizing integrator ensures accurate synchronization under all conditions.

Etched wiring techniques and plug-in construction promote ease of maintenance.

A 7-unit monitor, with printer, can be provided.



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Data Summary

	7-unit aggregate signal		*5-unit signal*
	2-channel	*4-channel*	
Speed (bauds):			
	100	200	50
	96	192	50
	85⅝	171⅜	50 or 45·5
Input:			
	±80 V double current Sensitivity ±15 V		5-wire from tape reader pulsed at character rate.
Output:			
	±80 V double current		±80 V double current start/stop.
Output distortion:	< ±3%		< ±3%
Input margin:	±45%		—

Storage: One store per channel; capacity 2, 3 or 4 characters.

Power supplies: 110–120 or 200–250 V, single-phase AC.

Power consumption: 770 W at 0·95 power factor.

Dimensions: Height 7 ft 0¼ in. (214 cm)
Width 1 ft 11½ in. (59 cm)
Depth 2 ft 1 in. (64 cm)
Weight 700 lb (318 kg)

Marconi

Marconi's Wireless Telegraph Company Limited
Marconi House, Chelmsford, Essex
Telephone: Chelmsford 3221 · Telex: 1953
Telegrams: Expanse Chelmsford Telex