

TECHNICAL SPECIFICATIONS OF

PCM MULTIPLEX VF TESTER MAC-300A

ANALOG TRANSMITTER :

OUTPUT SIGNAL :

Sine wave :	
Frequency range :	200 Hz to 4000 Hz.
Frequency resolution :	10 Hz.
Frequency accuracy :	$\pm 0.1\% \pm 0.1$ Hz
Distortion :	0.1%
Level range :	-80 to +13 dBm
Level resolution :	0.1 dB
Level accuracy :	± 0.20 dB
Frequency response :	± 0.1 dB (Ref. 1KHz)

NOISE SIGNAL : (As per CCITT Rec. O.131)

OUTPUT INTERFACE :

Impedance :	600 Ohms balanced
Connector :	3-pole CF
Relative level :	-20 to +10 dB, 0.1dB step
Return loss :	Better than 36dB (200-4000 Hz)
Balance :	>60dB (200-3600 Hz), >50dB (3600-4000Hz)

ANALOG RECEIVER :

FILTERS :

Psophometric filter :	Conforms to CCITT Rec. O.41
3KHz flat filter :	300 to 3400 Hz
Bandpass filter :	820, 1010 Hz selectable, 200-4000Hz BPF, 10Hz step.
Notch filter :	820, 1010 Hz selectable
15KHz Low pass filter	
Filter for S/N ratio :	As per CCITT Rec. O.131

VARIATION OF GAIN WITH INPUT LEVEL

(AUTOMATIC and MANUAL mode)

Frequency :	820Hz/1010Hz
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Input level range :	-70 to +12 dBm
Level accuracy :	± 0.20 dB at 0dBmO
Frequency response :	± 0.1 dB (300-3400 Hz) with ref. to 0dBm at 1KHz

VARIATION OF GAIN WITH FREQUENCY

(AUTOMATIC and MANUAL mode)

Input level :	0 dBm
Frequency range :	300 - 3400Hz
Level accuracy :	± 0.20 dB at 0dBmO
Frequency response :	± 0.1 dB (300-3400 Hz)

IDLE CHANNEL NOISE :

Input level range :	-90 to 0 dBm
Accuracy :	± 1 dB
Receiving filter :	Psophometric (CCITT O.41)

CROSS TALK :

Frequency :	820/1010 Hz selectable
Measuring range :	-90 to 0 dBm
Accuracy :	± 0.5 dB

QUANTIZATION DISTORTION (Sine) :

(Also meets CCITT Rec. O.132)

(AUTOMATIC and MANUAL mode)

(Measured using 820/1010Hz BSF and Psophometric filter)

Measurement range :	0 to -45 dB
Accuracy :	+/- 0.5dB
Distortion :	-60dB down at +10dBm
Absolute distortion level :	Not less than -72dBmO

QUANTIZATION DISTORTION (Noise)

(Both AUTOMATIC and MANUAL mode)

(Measured using Band-limited pseudo-random noise as per CCITT Rec. O.131)

Measurement range :	0 to -45 dB
Accuracy :	+/- 0.5dB

RETURN LOSS MEASUREMENT (Tx & Rx Port)

(Both AUTOMATIC and MANUAL mode)

Measuring range	: -70 to 0 dB
Accuracy	: ± 1 dB
Frequency range	: 300 Hz to 3400 Hz

INPUT INTERFACE

: same as given in Output interface section.

SIGNALLING :

Signalling modes	: LOOP and E&M, DTMF **
Input/Output	: Limb A & Limb B for LOOP signalling, Limb M & Limb E for E&M signalling.
Pulse frequency	: 10 to 20 pps selectable
Make ratio	: 10 to 90%, 1% step. Also, standard output of 33.3%:66.6% is present.

OTHER FEATURES :

- Simulation of IDLE, LOOP, ANSWER BACK conditions.
- Loop holding circuit provided.
- Measurement of dial pulse distortion. (Accuracy : +/-0.2ms)
- In-built printer optional. Parallel (Centronix) Printer port for printing results of various tests is provided

GENERAL SPECIFICATIONS :

(a) A.C. Mains range	: 160V-270V A.C., 50Hz
(b) D.C working	: provision of working from -48V exchange battery. Range : -40 to -60V (Optional)
(c) Environment of operation	: As per QM333, Category B including Drop and Fall tests.
(d) Power consumption	: 50VA
(e) Dimensions and Weight	: 110H, 386W, 470D mm and 5Kgs.

NOTE : ** indicates parameters that are optional