

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

O.173

Amendment 1
(07/2010)

SERIES O: SPECIFICATIONS OF MEASURING
EQUIPMENT

Equipment for the measurement of digital and
analogue/digital parameters

Jitter measuring equipment for digital systems
which are based on the Optical Transport Network
(OTN)

**Amendment 1: Correction of jitter frequency
breakpoints and clarification of jitter transfer
measurement accuracy**

Recommendation ITU-T O.173 (2007) – Amendment 1



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Recommendation ITU-T O.173

Jitter measuring equipment for digital systems which are based on the Optical Transport Network (OTN)

Amendment 1

Correction of jitter frequency breakpoints and clarification of jitter transfer measurement accuracy

Summary

Amendment 1 to Recommendation ITU-T O.173 contains a change of the frequency breakpoint f_2 for OTU3 and an additional comment in the jitter transfer measurement accuracy.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T O.173	2003-03-29	4
2.0	ITU-T O.173	2007-03-16	4
2.1	ITU-T O.173 (2007) Amend. 1	2010-07-29	15

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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Recommendation ITU-T O.173

Jitter measuring equipment for digital systems which are based on the Optical Transport Network (OTN)

Amendment 1

Correction of jitter frequency breakpoints and clarification of jitter transfer measurement accuracy

1) Minimum amplitude for generated jitter amplitude for OTU3

Change the frequency breakpoint f_2 (see underline) for OTU3 in Table 1 which is according to the modification of Table 4 of Corrigendum 2 to [ITU-T G.8251]:

Table 1 – Minimum amplitude of adjustable generated jitter amplitude versus jitter frequency for OTUk signals

Signal	Minimum peak-to-peak jitter amplitude (UIpp)			Jitter frequency breakpoints (Hz)				
	A ₁	A ₂	A ₃	f ₀	f ₁	f ₂	f ₃	f ₄
OTU1	20	2	0.2	500	5 k	100 k	1 M	20 M
OTU2	20	2	0.2	2 k	20 k	400 k	4 M	80 M
OTU3	20	8	0.2	8 k	20 k	400 k 480 k	16 M	320 M

2) Jitter transfer measurement accuracy

Add a comment (see underline) to clause 8.6 to explain the source of the mentioned jitter transfer parameters:

8.6 Jitter transfer measurement accuracy

...

The total measurement error in the jitter frequency range $f_L = 0.01 \cdot f_C$ and $f_H = 100 \cdot f_C$ or f_4 , if f_4 is lower than $100 \cdot f_C$ when using input jitter amplitude equal to the applicable jitter tolerance masks, shall be less than:

$$\pm 0.05 \text{ dB} \pm 0.12 \cdot g$$

where g is the measured jitter transfer gain at the jitter frequency f_m in dB, and f_L , f_C , and f_H are according to Table A.5 of [ITU-T G.8251]. This measurement error applies for g greater than or equal to -45 dB. No accuracy is specified for g less than -45 dB.

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