INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Series E.300

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Supplement 3
(11/1988)

SERIES E: OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

Operation of the international service

North American precise audible tone plan

ITU-T E.300-series Recommendations – Supplement 3

(Formerly CCITT Recommendations)

ITU-T E-SERIES RECOMMENDATIONS

OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

INTERNATIONAL OPERATION	
Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139
Operation of international telephone services	E.140–E.159
Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.189
Numbering plan of the international telephone service	E.190–E.199
Maritime mobile service and public land mobile service	E.200–E.229
OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE	
Charging in the international telephone service	E.230–E.249
Measuring and recording call durations for accounting purposes	E.260–E.269
UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS	
General	**E.300–E.319**
Phototelegraphy	E.320–E.329
ISDN PROVISIONS CONCERNING USERS	E.330–E.349
INTERNATIONAL ROUTING PLAN	E.350–E.399
NETWORK MANAGEMENT	
International service statistics	E.400–E.409
International network management	E.410–E.419
Checking the quality of the international telephone service	E.420–E.489
TRAFFIC ENGINEERING	
Measurement and recording of traffic	E.490–E.505
Forecasting of traffic	E.506–E.509
Determination of the number of circuits in manual operation	E.510–E.519
Determination of the number of circuits in automatic and semi-automatic operation	E.520–E.539
Grade of service	E.540–E.599
Definitions	E.600–E.649
Traffic engineering for IP-networks	E.650–E.699
ISDN traffic engineering	E.700–E.749
Mobile network traffic engineering	E.750–E.799
QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING	
Terms and definitions related to the quality of telecommunication services	E.800–E.809
Models for telecommunication services	E.810–E.844
Objectives for quality of service and related concepts of telecommunication services	E.845–E.859
Use of quality of service objectives for planning of telecommunication networks	E.860–E.879
Field data collection and evaluation on the performance of equipment, networks and services	E.880–E.899

For further details, please refer to the list of ITU-T Recommendations.

Supplement 3 to ITU-T E.300-series Recommendations

North American precise audible tone plan

Source

Suplement 3 was approved in Melbourne (1988) and originally published in Blue Book, Fascicle II.2.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSC Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this publication, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Supplement 3 to ITU-T E.300-series Recommendations

North American precise audible tone plan

Table 1 is a description of the audible tone plan in operation in the North American network to:

1) achieve uniformity in the quality of audible tones;

2) minimize customer and operator confusion as to meaning of audible tones;

3) enable machine recognition of audible tones for purposes of service observing, etc.

Basically, the plan provides four frequencies that are used, singly or in combination with particular cadences, to form the audible tone signals shown in Table 1 as well as some other special purpose, limited use signals.

TABLE 1

Tones	Frequencies [a] (Hz)				Power per frequency at exchange [b] where tone is applied [c]	Cadence
	350	440	480	620		
Dial tone	●	●			– 13 dBm0	Continuous tone
Dial tone – Modern PABX only	●	●			– 16 dBm0 [d]	Continuous tone
Recall dial tone	●	●			– 13 dBm0	3 bursts of 0.1 s followed by a continuous tone [e]
Recall dial tone – Modern PABX only [g]	●	●			– 16 dBm0	3 bursts of 0.1 s followed by a continuous tone [e]
Busy tone			●	●	– 24 dBm0	Burst 0.5 s/silence 0.5 s
Busy tone – Modern PABX only			●	●	– 21 dBm0	Burst 0.5 s/silence 0.5 s
Reorder tone			●	●	– 24 dBm0	Burst 0.25 s/silence 0.25 s
Reorder tone – Modern PABX only			●	●	– 21 dBm0	Burst 0.25 s/silence 0.25 s
Audible ringing tone		●	●		– 19 dBm0	Burst 2 s/silence 4 s
Audible ringing tone – Modern PABX only		●	●		– 16 dBm0	Burst 1 s/silence 3 s
Call waiting tone		●			– 13 dBm0	Burst of 0.3 s every 10 s
Call waiting tone – Modern PABX only [g]		●			– 16 dBm0	A burst of 0.3 s Station call waiting
					– 16 dBm0	2 bursts of 0.1 s [e] Outside call waiting
					– 16 dBm0	3 bursts of 0.1 s [e] Urgent call waiting
Busy verification		●			– 13 dBm0	A 2.0 s burst followed by 0.5 s bursts every 10 s
Busy verification – Modern PABX only [g]		●			– 14 dBm0	Burst of 1.5 to 2.0 s followed by ... [f]
Executive override – Modern PABX only [g]		●			– 14 dBm0	Burst of 3.0 s
Confirmation tone	●	●			– 13 dBm0	Burst 0.1 s/silence 0.1 s/Burst 0.3 s
Confirmation tone – Modern PABX only [g]	●	●			– 16 dBm0	3 bursts 0.1 s [e]

a) Frequency limits are ± 0.5% of the nominal frequency.
b) PABX tone levels are measured at the PABX interfaces (typically at customer premises). Power levels are 2 dB lower for private line interfaces.
c) Power level tolerances are + 1.5 dB.
d) Tolerance level for PABX dial tone is + 0.75 dB.
e) Bursts are separated by 0.1 s.
f) Burst of 1.5 to 2.0 s before attendant intervenes, followed by repeated bursts of 0.5 to 0.8 s, 8 to 20 s apart.
g) Tones applied at PABX station or private interfaces and not at the exchange interfaces.

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	**Overall network operation, telephone service, service operation and human factors**
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure and Internet protocol aspects
Series Z	Languages and general software aspects for telecommunication systems

Geneva, 2002