

3. Proposed amendments to Recommendation 0.41

PSOPHOMETERS FOR USE AS TELEPHONE-TYPE CIRCUITS

Amend second part of section 3.5.1 as follows:

For the measurement of AC hum interference on telephone-type circuits an optional low pass filter with a cut-off frequency at approximately 250 Hz and an attenuation of ≥ 50 dB at 300 Hz may be provided."

Replace section 3.7 by the following text:

"3.7 Detector and display dynamics (measurement averaging time)

The response time for the detector and indicating means shall meet one or both of the following requirements:

3.7.1 Instrumentation with continuous signal monitoring

The application of an 800 Hz sinusoidal signal with a duration of 150 to 250 ms should produce an output indication which is the same as that produced by the application of a continuous 800 Hz signal of the same amplitude. Applied signals of shorter duration should produce lower readings on the output indicator.

When performing this test the reading error shall be less than ± 0.2 dB.

3.7.2 Instrumentation with non-continuous signal monitoring

With the application of bursts of 800 Hz tone to the input of the psophometer, gated at a duty cycle of

50%, with half the cycle at full amplitude and the other half down 8.4 dB from full amplitude, the output device shall indicate a variation as shown below. The levels should be chosen to avoid autoranging points.

		Grating Frequency	Peak-to-Peak Indicator Variation
25 Hz	≤ 1 dB		
5 Hz	≥ 3 dB		

It is permissible to adjust the total input power with a 1 dB vernier control to a point where the display does not change so as to pass the less than 1 dB requirement."

Add the following text to the existing Annex A of the Recommendation:

"Another weighting frequently used for measuring telephone circuit noise impairment within the North American domestic telephone networks is referred to as "3 kHz flat" weighting [1]. This weighting is intended for the investigation of the presence of low-frequency noise (power induction, etc.) on the circuit under test. It is characterized as a 3 kHz low-pass weighting of Butterworth shape attenuating above 3 kHz at 12 dB per octave. The specification for this weighting is given in Table A-2/0.41".

TABLE A-2/O.41

3 kHz flat weighting characteristic