Attachment Technical Standards and Specifications of Dedicated Taxi Telecommunications Network

I. Purpose:

The Specifications are stipulated to specify the necessary functions of telecommunications network and maintain the quality thereof as prescribed in the competent authority's "Administrative Regulations on the Establishment and Operation of the Dedicated Taxi Telecommunications Network".

II. Operating Requirements

(I) Requirements for used frequency:

1. The transceiver shall transmit and receive signals based on different frequencies using one single channel. There must not be any external device that changes the channel.
2. Range of frequencies:
   139.20875 to 139.84625MHz;
   506.49375 to 507.11875MHz;
   522.99375 to 523.61875MHz.
3. Channel spacing: 12.5kHz

(II) Base Station and Car Station components:

1. Car Station shall be equipped with components that can transmit Car Station specific signals;
2. The Base Station shall be equipped with a Car Station identification system that can automatically receive abovementioned signals and, through the computer and its program, connect to Car Stations of the fleet. Furthermore, the Base Station shall be able to identify the Car Station that are transmitting the signal and display its relevant data.

(III) Base Station and Car Station control system:

1. The Car Station may be equipped with the functions of emergency call identification system, whereas the Base Station shall be able to identify emergency Car Stations;
2. The Base Station shall be equipped with an additional auto call disconnection system; the Car Station shall be equipped with a timing automatic failure device to prevent the Car Station from being misused if stolen;
3. The Car Station shall be equipped with an auto system that disconnects the transmission within 30 seconds and prevents interposition or interference in order to maintain the order of communication;
4. A Continuous Tone-Coded Squelch System (CTCSS) shall be installed between the Base Station and Car Station to prevent interference.

III. Specifications of the transmitter:

(I) Transmission power
Car Station: within 10W+10% to - 30%;
Base Station: within 25W+10% to - 30%.

Those whose transmission power exceeds the standards shall submit an application for special permission.

(II) Carrier frequency stability: with the assigned frequency, the maximum allowable deviation shall be within ±0.0003%.

(III) Rated system deviation: within ±2.5 kHz .

(IV) Spurious emission: spurious attenuation (dB) ≧43+10log10 (transmission power).

(V) Audio frequency response: the minimum standard (refer to Diagram 1) shall be based on 1,000 Hz.

1. the difference of the audio frequency response from 300Hz to 3,000Hz and phoneme 6dB/octave slope pre-emphasis curve shall be higher than +1dB or less than -3dB (but the minimum shall not be applicable to the range from 500Hz to 3,000Hz);
2. When exceeding 3,000Hz, the audio frequency response attenuation volume shall be greater than the volume of following curves:
   - The curve from 3,000Hz to 12,000Hz shall be phoneme 24dB/octave slope de-emphasis curve;
   - The curve from 12,000Hz to 30,000Hz shall be phoneme 6dB/octave slope pre-emphasis curve.

(VI) Recognized bandwidth

11kHz (100% modulation);

8.5kHz (50% modulation).

(VII) Sideband spectrum of adjacent channel: shall attenuate more than 60 dB.

(VIII) Audio frequency harmonic distortion: within 10%.

VI. Specifications of the receiver:

(I) Basic sensitivity: below 0.5μV .

(II) Acceptable frequency deviation: the rated system deviation shall be more than 40%.

(III) Spurious response resistance: more than 60dB

(IV) Adjacent channel selectivity: more than 70dB

(V) Intermodulation resistance: more than 60dB

(VI) Local oscillation frequency stability: within ±0.003%

(VII) Conductive spurious emission: within 1,000μV (load of 50Ω)

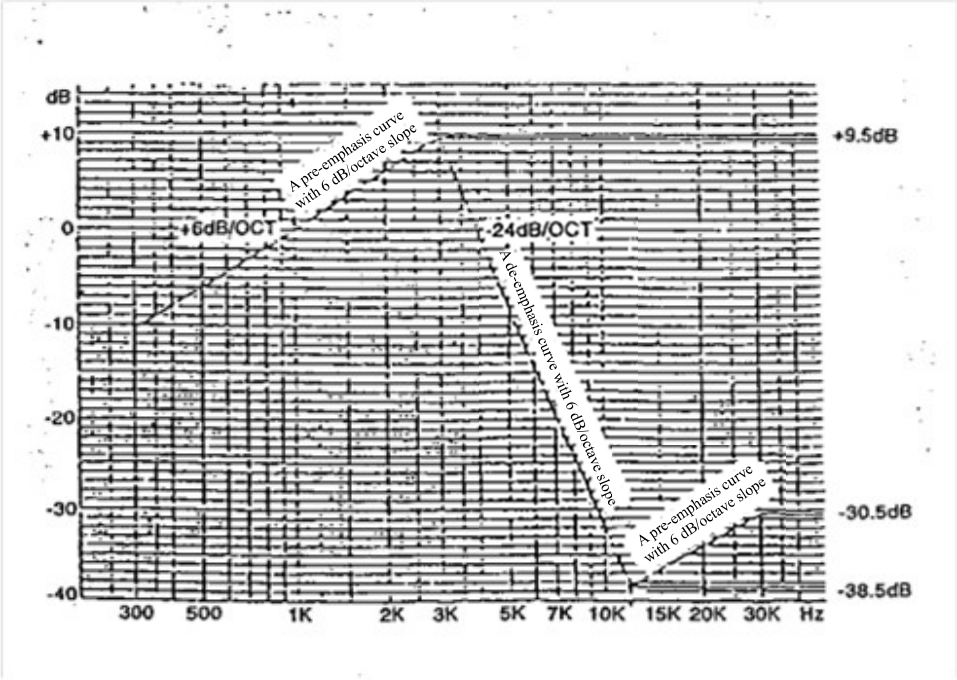
(VIII) Muting sensitivity:

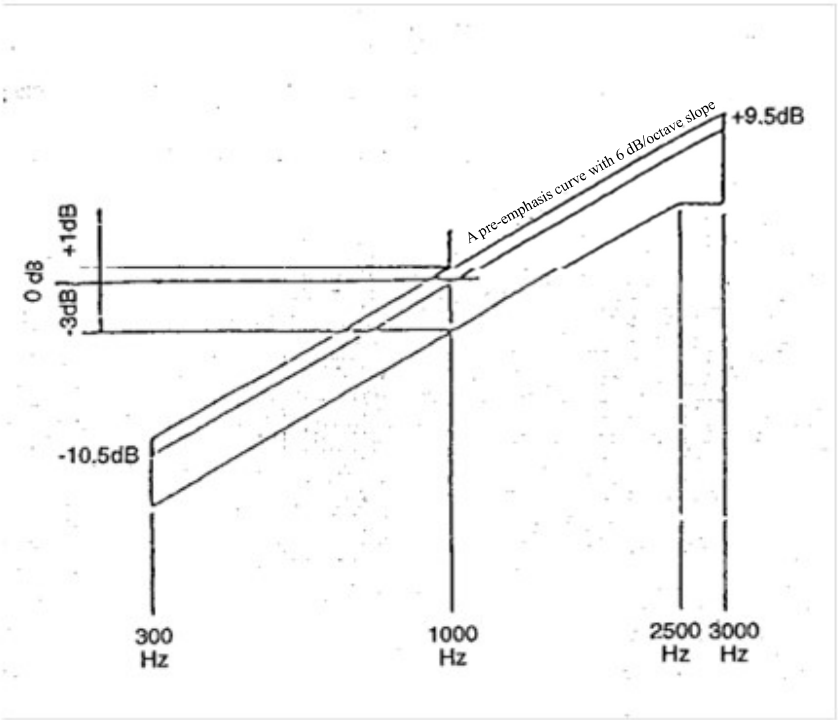
Threshold in muting sensitivity: below 0.25μV

Tight muting sensitivity: below 20dB

(IX) Audio frequency sensitivity: rated system deviation shall be within 40%

Diagram 1


dB
+10
0
-10
-20
-30
-40
+9.5dB
-30.5dB
-38.5dB
+6dB/OCT
-24dB/OCT
A pre-emphasis curve with 6 dB/octave slope
A de-emphasis curve with 6 dB/octave slope
A pre-emphasis curve with 6 dB/octave slope
300
500
1K
2K
3K
5K
7K
10K
15K
20K
30K
Hz


+9.5dB
A pre-emphasis curve with 6 dB/octave slope
+1dB
0 dB
-3dB
-10.5dB
300
Hz
1000
Hz
2500
Hz
3000
Hz