

NOISE Pollution



Noise pollution is a **global problem.**

That is why you need to know some important facts or you end up **becoming deaf !!!**



noise hurts

The Truth behind Noise Pollution

Objective : To create awareness about Noise Pollution, health effects, existing laws, rules, regulations and judicial decisions.



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A What is Noise Pollution ?

Noise pollution or noise disturbance is the disturbing or excessive noise that may harm the activity or balance of human or animal life. The source of most outdoor noise worldwide is mainly caused by machines and transportation systems, motor vehicles, aircraft, and trains. Outdoor noise is summarized by the word environmental noise. Poor urban planning may give rise to noise pollution, since side-by-side industrial and residential buildings can result in noise pollution in the residential areas.

If the Noise is 10 decibels more than the below mentioned air quality standards, it will be treated as Noise Pollution.

B What is the AMBIENT AIR QUALITY standards in respect of Noise ?

AS PER THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000 SCHEDULE (see rule 3(1) and 4(1))

Area Code	Category of Area / Zone	Limits in dB(A) Leq	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day time shall mean from 6.00 a.m. To 10.00 p.m.
2. Night time shall mean from 10.00 p.m. To 6.00 p.m.
3. Silence zone is an area comprising not less than 100 metres around hospital, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
4. Mixed categorizes of areas may be declared as one of the four above mentioned categories by the competent authority. The intensity of sound is measured according to the above decibels.

Therefore, as per government norms noise levels should be maintained as shown above. Any sound in excess of the above decibels will be treated as noise pollution.

C What are the different kinds of sounds and their measurement in decibels ?

Various Equipments & Sounds	Sound In Decibels
Grenade	160
Gun shot / Big Temple Bells	140
Threshold of Pain	130
Large Jet Airplane on take off	120
Rock Band	110
Jackhammer / Small Temple Bells	100
Heavy Truck	90
Medium Truck	80
Passenger Car	70
Normal Conversation	60
Suburban residential neighborhood	50
Quite living room	40
Quite rural setting	30
Whisper	20-10

D What is the maximum permissible time our ears can be exposed to sound pollution?

God has given us the opportunity to listen through our ears which has some limits. When our ears are exposed to sounds beyond the ambient levels we need to take precautions. The maximum time our ears can be exposed to noise pollution is given below.

Noise Level (dBA)	Maximum Exposure Time per 24 Hours
85	8 Hours
88	4 Hours
91	2 Hours
94	1 Hour
97	30 Minutes
100	15 Minutes
103	7.5 Minutes
106	3.7 Minutes
109	112 Seconds
112	56 Seconds
115	28 Seconds
118	14 Seconds
121	7 Seconds
124	3 Seconds
127	1 Second
130-140	Less than 1 Second
140	NO EXPOSURE



E What are the effects of noise pollution ?

The negative consequences of the damage caused by noise pollution Noise pollution cannot be ignored. According to **World Health Organization (WHO)** noise pollution has the following effects on human beings:

1. Interferences with social behavior (aggressiveness, protest and helplessness).
2. Interference with speech communication.
3. Affects performance at work/school.
4. Pain and hearing fatigue.
5. Hearing impairment including tinnitus (the feeling of ringing or buzzing in the ears when actually there is no sound of any kind).
6. Annoyance.
7. Sleep disturbance and other consequences on al long and short term basis.
8. Cardiovascular effects.
9. Hormonal responses (stress hormones) and their possible consequences on human metabolism (nutrition) and immune system.

Based on the duration of exposure, noise can have multiple effects on human beings. Some of which are listed below:

- ♦ Eardrum is damaged when exposed to very loud and sudden noises. The hair cells in the inner ear are chronically damaged. Prolonged exposure to noise of certain frequency pattern leads to hearing loss.
- ♦ According to Kryter in 1970, noise causes heart beat to decrease with fluctuations in artrail blood pressure and vasoconstriction (decrease in the diameter) of peripheral blood vessels.
- ♦ Studies indicate the blood is thickened by excessive noise. Eosinophilia (a symptom of allergy), hyperglycemia (Abnormally high blood sugar), hypokalaemia (Abnormally law level potassium in the circulating blood leading to weakness and heart abnormalities) and hypoglycemia (Abnormally low blood sugar) are caused by alteration in the blood due to noise.
- ♦ Noise affects professional performance including the ability to concentrate especially of those who require precision and attention in their work.
- ♦ Exposure to high noise levels for short period of time can result in temporary loss of hearing.



Exposure for long periods of time can result in permanent loss of hearing. High noise levels are dangerous for foetus and can cause behavioral changes in babies.

F What are the established Laws in India on Noise Pollution?

1) Article 21 in The Constitution Of India 1949 :

Protection of life and personal liberty. No person shall be deprived of his life or personal liberty except according to procedure established by law.

So any person who wants to live calm, comfortable and quiet living can restrict and take measures for controlling and avoiding Noise Pollution. Any person can practice any religion. However, he can not create the noise pollution by loud speakers and electronic equipments.

2) Section 133 in The Code Of Criminal Procedure, 1973 :

Conditional order for removal of nuisance. Whenever a District Magistrate or a Sub- divisional Magistrate or any other Executive Magistrate specially empowered in this of behalf by the State Government, on receiving the report of a police officer or other information and on taking such evidence (if any) as he thinks fit, considers - that any unlawful obstruction or nuisance should be removed from any public place or from any way, river or channel which is or may be lawfully used by the public.





3) Section 268 in The Indian Penal Code :

Public nuisance: A person is guilty of a public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right. A common nuisance is not excused on the ground that it causes some convenience or advantage.

4) Section 290 in The Indian Penal Code :

Punishment for public nuisance in cases not otherwise provided for : Whoever commits a public nuisance in any case not otherwise punishable by this Code, shall be punished with fine which may extend to two hundred rupees.

5) Section 291 in The Indian Penal Code :

Continuance of nuisance after injunction to discontinue. Whoever repeats or continues a public nuisance, having been enjoined by any public servant who has lawful authority to issue such injunction not to repeat or continue such nuisance, shall be punished with simple imprisonment for a term which may extend to six months, or with fine, or with both.

6. The Noise Pollution (Regulation and Control) Rules, 2000. The essence of the rules are given below :

- A loud speaker or a public address system shall not be used except after obtaining written permission from the authority.
- A loud speaker or a public address system or any sound producing instrument or a musical instrument or a sound amplifier shall not be used at night time except in closed premises for communication within, like auditoria, conference rooms, community halls, banquet halls or during a public emergency.
- The noise level at the boundary of the public place, where loudspeaker or public address system or any other noise source is being used shall not exceed 10 dB (A) above the ambient

noise standards for the area or 75 dB (A) whichever is lower;

- Restrictions on the use of horns, sound emitting construction equipments and bursting of fire crackers:-

- ♦ No horn shall be used in silence zones or during night time in residential areas except during a public emergency.
- ♦ Sound emitting fire crackers shall not be burst in silence zone or during night time.
- ♦ Sound emitting construction equipments shall not be used or operated during night time in residential areas and silence zones.

7. Consequences of any violation in silence zone / area :

Whoever, in any place covered under the silence zone / area commits any of the following offence, he shall be liable for penalty under the provisions of the Act :

- whoever, plays any music or uses any sound amplifiers.
- whoever, beats a drum or tom-tom or blows a horn either musical or pressure, or trumpet or beats or sounds any instrument, or
- whoever, exhibits any mimetic, musical or other performances of a nature to attract crowds.
- whoever, bursts sound emitting fire crackers; or
- whoever, uses a loud speaker or a public address system.

8. Complaints to be made to the authority :

- ♦ A person may, if the noise level exceeds the ambient noise standards by 10 dB (A) or more given in the corresponding columns against any area / zone or, if there is a violation of any provision of these rules regarding restrictions imposed during night time, make a complaint to the authority.
- ♦ The authority shall act on the complaint and take action against the violator in accordance with the provisions of these rules and any other law in force.

G What are the GO's released by State Government of Noise Pollution ?

- In accordance with the Central Government Rules on Noise Pollution the State Government has issued G.O.M.S.No. 172, Dated: 12-10-2010 to prevent noise pollution. Apart from implementing all the terms and conditions given in Central Rules, Levy of Penalty has been prescribed.



An amount of Rs. 2,000/- for First offence and Rs. 4,000/- for subsequent offence will be levied if the source of Noise Pollution is stationary at one place resulting in accumulative damage to the Nervous System causing blood pressure.

- B) Under Section 15 of Environment Protection Act, 1986 a proven offender can be punished with imprisonment for a term upto 5 years with fine, upto One Lakh rupees or with both. In case the contravention continues a fine upto Rs. 5000/- for every day may be levied.

Under the same rules if the failure or contravention continues beyond a period of 1 year and after the date of conviction, the offender shall be punishable with imprisonment for a term, which may extend to 7 years.

H Should we take mike permission and what are the rules ?

Mike permission is must for operating Sound system and should be applied paying a fees of Rs. 100/- per day in Mee Seva Center.

Commissioner of Police concerned, Dy. Commissioner of Police of the jurisdiction and Asst. Commissioner of Police of the area are the competent authority to grant "Mike Permission" under rule 22(1) (a) to (f) and 22 (2) (a) and (b) of Hyderabad City Police Act R/w Rule 7 of Cyberabad Metropolitan Police Act 2004.

Terms & Conditions :

(being imposed for usage of Mike/PA System).

The applicant shall use two box type speakers only. The public addressing system shall not be used in the night in between 10 P.M. and 6 A.M. in accordance with the directions of the Hon'ble Supreme Court of India, New Delhi as per the noise levels prescribed for different areas shown in the table given in point "B".

The volume/sound of the speaker shall be kept low as stipulated in the G.O. Rt. No. 227, Environment, Forests, Sciences and Technology (ENV) Department, dt. 11-07-2005.

1. DJ is strictly prohibited as directed by the Hon'ble Supreme Court of India.
2. The programme is strictly restricted in other than the specified place.
3. Organizer should not cause any inconvenience to the traffic.
4. Should not cause any disturbance to the public peace and tranquillity and traffic.
5. Should not cause any disturbance to the neighbors.

6. No film songs or music should be played.
7. Should not cause sound pollution.
8. No crackers should be used/burst in the premises.
9. No derogatory, inflammatory words should be uttered against any individuals/ parties/ religion, particular sections or society.
10. It should be the responsibility of the organizer/ applicant to ensure that the above conditions are strictly implemented. Violation of conditions or any grounds in public interest would entail cancellation of the permission apart from prosecution under the Hyderabad City Police act, 1348 fasli (No.IX) r/w rule 7 of Cyberabad metropolitan police act 2004 & 188 IPC.



I What is the Judicial opinion in India on Noise Pollution ?

Inspite of Several Acts and Rules, people are continuously in violation and causing Noise Pollution. Many victims to Noise Pollution have approached High Courts and Supreme Courts to get Justice and were successful in doing so. Some of the Important judgements in various High Courts and Supreme Court have been given for clear understanding.

- ♦ **Case-I : The Supreme Court in Church of God (Full Gospel) in India Vs. K.K.R. Majestic Colony Welfare Assn. MANU/SC/0537/2000** held that the Court may issue directions in respect of controlling noise pollution even if such noise was a direct result of and was connected with religious activities. It was further held:-

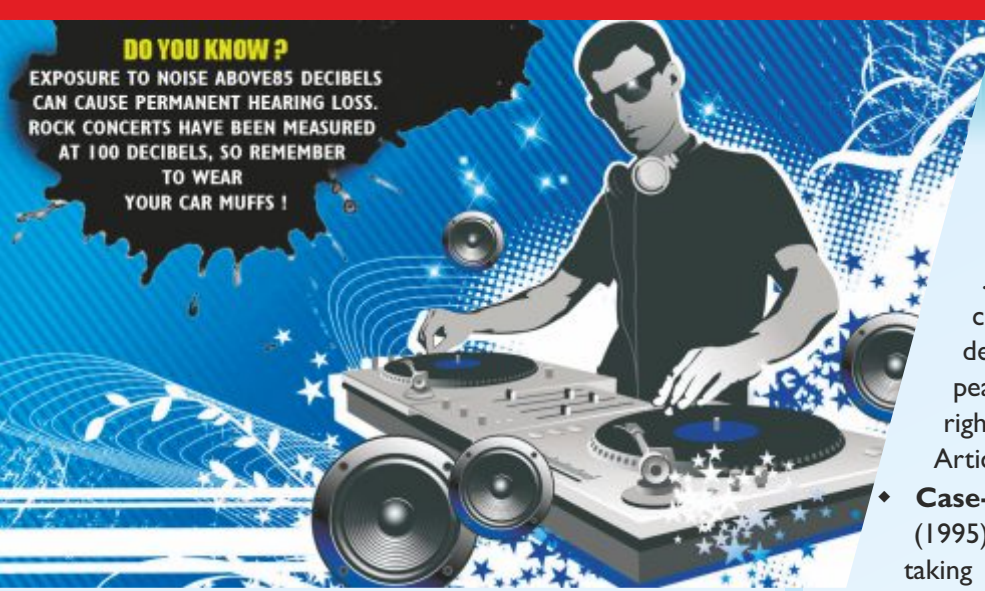
"Undisputedly, no religion prescribes that prayers should be performed by disturbing the peace of others nor does it preach that they should be through voice amplifiers or beating of drums. In our view, in a civilized society in the name of religion, activities which disturb old or infirm persons, students or children having their sleep in the early hours or during daytime or other persons carrying on other activities cannot be permitted."

"It should not be forgotten that young babies in the neighbourhood are also entitled to enjoy their natural right of sleeping in a peaceful atmosphere. A student preparing for his examination is entitled to concentrate on his studies without their being any unnecessary disturbance by the neighbours. Similarly, the old and the infirm are entitled to enjoy reasonable quietness during their leisure hours without there being any nuisance of noise pollution. Aged, sick, people afflicted with psychic disturbances as well as children up to 6 years of age are considered to be very .sensible (sic sensitive) to noise. Their rights are also required to be honoured."



DO YOU KNOW ?

EXPOSURE TO NOISE ABOVE 85 DECIBELS CAN CAUSE PERMANENT HEARING LOSS. ROCK CONCERTS HAVE BEEN MEASURED AT 100 DECIBELS, SO REMEMBER TO WEAR YOUR CAR MUFFS !



- ♦ **Case-II : In Kirori Mai Bishambar Dayal Vs. The State MANU/PH/0003/1958.** accused/petitioner was convicted and sentenced under Section 20.0 of Indian Penal Code 1860 and was fined Rs. 50 for causing noise and emitting smoke and vibrations by operating of heavy machinery in the residential area.
- ♦ **Case-III : Bhuban Ram and On. Vs. Bibhuti Bhushan Biswas AIR 1919 Calcutta 539,** it was held that working of a paddy husking machine at night causes nuisance by noise and the occupier was held liable to be punished under Section 290 IPC.
- ♦ **Case-IV : In Rabin Mukherjee Vs. State of West Bengal MANU/WB/0058/1985** the use of air horns was prohibited by the court to prevent noise pollution. The Court observed:
"...it is found that the atmosphere and the environment is very much polluted from indiscriminating noise emitted from different quarters and on research it was found that persons who are staying near the Airport, are becoming victim of various ailments. Such persons even become victim of mental disease. On such research it was also found that workers in various factories even become deaf and hard of hearing. It was further found on such research that as a result of this excessive noise pollution, people suffer from loss of appetite, depression, mental restlessness and insomnia. People also suffer from complain of excessive blood pressure and heart trouble.
- ♦ **Case-V : In Burrabazar Fireworks Dealers Association Vs. Commissioner of Police. Calcutta. MANU/WB/ 00078/1997** it has been held
"Article 19 of the Constitution of India does not guarantee the fundamental right to cam- on trade or business which creates pollution or which takes away that communities safety, health and peace. A citizen or people cannot be made a captive listener to hear the tremendous sounds caused by bursting out from a noisy fireworks. It may give pleasure to one or two persons who burst it but others have to

be a captive listener whose fundamental rights guaranteed under Article 19 and other provisions of the Constitution are taken away, suspended and made meaningless. ...Under Article 19, read with Article 21 of the constitution of India, the citizens have a right of decent environment and they have a right to live peacefully, right to sleep at night and to have a right to leisure which are all necessary under Article 21 of the Constitution."

- ♦ **Case-VI : In Appa Rao. M.S. Vs. Govt, of T.N. (1995) 1 LW 319 (Mad),** the Madras High Court taking a note of the serious health hazard and disturbance to public order and tranquility caused by the uncontrolled noise pollution prevailing in the State, issued a writ of mandamus for directing State Government to impose strict conditions for issue of license for the use of amplifiers and loudspeakers and for directing Director-General, Police (Law and Order) to impose total ban on use of horn type loudspeakers and amplifiers and air horns of automobiles.
- ♦ **Case-VII : In PA. Jacob Vs. the Superintendent of Police. MANU/KE/0001/1993.** it was said - "The right to speech implies, the right to silence. It implies freedom, not to listen, and not to be forced to listen. The right comprehends freedom to be free from what one desires to be free from. Free speech is not to be treated as a promise to everyone with opinions and beliefs, to gather at any place and at any time and express their views in any manner. The right is subordinate to peace and order. A person can decline to read a publication, or switch off a radio or a television set. But, he cannot prevent the sound from a loudspeaker reaching him. He could be forced to hear what, he wishes not, to hear. That will be an invasion of his right to be let alone, to hear what he wants to hear, or not to hear, what he does not wish to hear."
- ♦ **Case-VIII : In Free Legal Aid Cell Shri Suqan Chand Apaarwal alias Bhaatii Vs. Govt. of NCT of Delhi and Ors. MANU/DE/ 06W2001.** it was said that "Pollution being wrongful contamination of the environment which causes material injury to the right of an individual, noise can well be regarded as a pollutant because it contaminates environment, causes nuisance and affects the health of a person and would therefore, offend Article 21, if it exceeds a reasonable limit."
- ♦ **Case-IX : In Charan Lai Sahu Vs. Union of India MANU/ SC/0285/1990** the Supreme Court reiterated the need to create separate tribunals and asserted the need to appoint a body of experts to advice the Government on environmental issues.
- ♦ **Case-X : In M.C. Mehta Vs Union of India MANU/SC/ 1081/2003** this Court has emphasized the need for creating environmental awareness amongst students through education.

సాండు చేయకు



ఈనాడు, హైదరాబాద్

చెవలు హోరెత్తేరా శబ్దం... తలుపలు గట్టిగా వేసుకున్న పడకగదుల్లోకి వినిపించేలా సంగీత హోరు... కునుకుపడుతుండగా రౌడీస్మిత్తలలోంచి వచ్చే ప్రసంగాలు... జంట కమిషనరేట్ల పరిధుల్లో రాత్రివేళల్లో కొనసాగుతున్న ప్రసంగం... సంగీతహోరు... పోలీసుల నుంచి అనుమతి తీసుకున్నామని అంటూ డీజే సంగీతం పెడుతున్నారు. అర్ధరాత్రి దాటాక బహిరంగసభలు నిర్వహిస్తున్నారు. మీటింగులు పలు ఫిర్యాదులు వస్తుండడంతో పోలీసులు స్పందించారు. ఇకపై అతిగా ప్రవర్తిస్తే ఐటీసీ సెక్షన్ల కింద కేసు నమోదు చేసి అరెస్టు చేస్తామని స్పష్టం చేస్తున్నారు.

సుప్రీంకోర్టు ఆదేశాలున్నా....

వగలా, రాత్రి ఎక్కడైనా సరే... పరిమితికి మించి శబ్దాన్ని విని యోగించినా... ప్రచార సభల్లో మైకుల ద్వారా ప్రసంగాలను ప్రసారం చేసినా కఠిన చర్యలు తీసుకోవాలంటూ సుప్రీంకోర్టు కొద్ది నెలల త్రితం కేంద్ర, రాష్ట్ర ప్రభుత్వాలకు ఆదేశాలు జారీ చేసింది. విందులు, విశోదాలు, బహిరంగ సభల్లో పరిమితికి మించి సౌండ్ పెడితే పోలీసులు అరెస్ట్ చేయాలని పేర్కొంది. అప్పటి నుంచి పోలీస్ అధికారులు వగలలోని ఫంక్షన్ హాల్లు, వివాహవేదికలు, జనావా సాలున్న ప్రాంతాల్లో బహిరంగ సభలు, సమావేశాలపై దృష్టి సారించారు. ముందుగా అనుమతి తీసుకోవాలంటూ ఉత్తర్వులు జారీ చేశారు. కొందరు నిర్వాహకులు అనుమతి తీసుకుంటున్నా... డీజేలు, ఎక్కువ శబ్దం వచ్చే సంగీత పరికరాలు, దూరానికి వినబడాలన్న బావనతో మైకుల్లో ఎక్కువగా సౌండ్ వచ్చేలా చేస్తున్నారు. ఊరేగింపుల్లోనూ బ్యాండ్ మేళంతో ఇలాగే చేస్తున్నారు. పోలీసులు కూడా చూసినమాదనట్టు వ్యవహరిస్తుండడంతో రోజురోజుకూ ద్వంద్వ కాలుష్యం పెరిగిపోతోంది.

- మైకులు, సంగీత కచేరీలు, ఇతర కార్యక్రమాలకు ప్రాంతాల ఆధారంగా 10 డెసిబుల్స్ నుంచి 75 డెసిబుల్స్ లోప మూత్రమే ఉండాలి.
- ఎవరైనా సరే డీజే వినియోగిస్తే వారిపై చట్టపరంగా చర్యలు తీసుకోవడంతో పాటు సంగీత పరికరాలను స్వాధీనం చేసుకుంటారు.
- నిలువదనలు ఉల్లంఘించిన వారిపై ఐటీసీ 188 సెక్షన్ లో పాటు సిటిపోలీస్ చట్టం 78 సెక్షన్ ప్రకారం కేసులు నమోదు చేస్తారు.

అంతే..!



● వివిధ సంస్థలకు పోలీసుల హెచ్చరికలు

● శబ్దరహిత పరికరాలుంచు కోవాలంటూ తాఖీదులు

ఇలా ఫిర్యాదు చేయండి....

డయల్

100

హైదరాబాద్

కంట్రోల్ రూం

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మొబైల్ యాప్

హోక్వి

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వాట్సాప్ నంబర్

9490617444

ప్రతి పోలీస్ రాజాకూ వాయిస్ మీటర్లు..

-ఎం.కుమార్ రెడ్డి, హైదరాబాద్ పోలీస్ కమిషనర్

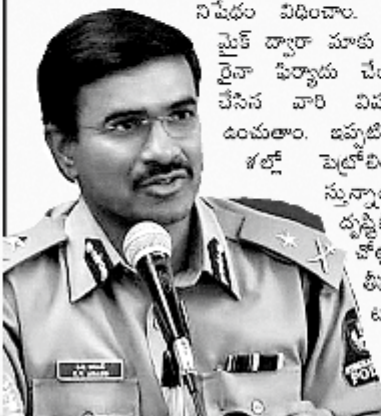
వగలలోని అన్ని ప్రాంతాల్లో రాత్రివేళల్లో బోటుచేసుకుంటున్న ద్వంద్వకాలుష్యాన్ని నియంత్రించేందుకు పడకగదుల్లో చర్యలు తీసుకుంటున్నాం. కాలనీల్లోని ప్రజలు, పరిసర ప్రాంతాల్లో వారికి ఆసౌకర్యం కలిగించేవారిని అరెస్ట్ చేసేందుకు ప్రయత్నాలు చేస్తున్నాం. శబ్దపరిమితులు దాటారని సాక్షులను సేకరించేందుకు వీలుగా ప్రతి పోలీస్ థానాకు వాయిస్ మీటర్లను అందజేస్తున్నాం. పోలీసులకు ఫిర్యాదు రాగానే అక్కడికి వెళ్లి సంగీతం, ప్రసంగం ఏ స్థాయిలో ఉందో మీటర్ రికార్డు చేస్తుంది. వెంటనే వారిని అరెస్ట్ చేసి తప్పించుకోకుండా కోర్టులో ఈ సాక్షులను సమర్పించనున్నాం. దీంతో పాటు... పంక్తినహాల్నిపబ్బలు, రెస్టారెంట్లు, కమ్యూనిటీ హాల్స్ సహా వేడుకలను నిర్వహించే సహవేళ ముందిరాల యజమానులకు శబ్దరహిత(సౌండ్ ఫ్రీ)పరికరాలను విని యోగించాలని తాఖీదులు జారీ చేయనున్నాం.



వందకు డయల్ చేయండి

- సీవీ ఆనంద్, కమిషనర్, సైబరాబాద్

సైబరాబాద్ పరిధిలో ఎక్కడైనా సరే... పరిమితికి మించిన శబ్దాన్ని ప్రయోగించిన వారిపై సమీప పోలీస్ స్టేషన్ లో ఫిర్యాదు చేయండి. రాత్రివేళల్లో వందకు డయల్ చేయండి... వాట్సాప్ పోలోలు, వాయిస్, సందేశం ఈ మూడు పంపండి. పది నిమిషాల్లో మేం అక్కడికి చేరుకుంటాం. మైకులు, సంగీతపరికరాలు స్వాధీనం చేసుకుని నిర్వాహకులపై కేసు నమోదు చేస్తాం. సైబరాబాద్ పరిధిలో ఇప్పటికే డీజేలపై నిషేధం విధించాం. ఫలానా సంగీతం, మైక్ ద్వారా మాకు ఇబ్బంది అని ఎవరైనా ఫిర్యాదు చేయవచ్చు. ఫిర్యాదు చేసిన వారి వివరాలు గోప్యంగా ఉంటాయి. ఇప్పటికే మేం రాత్రివేళల్లో పెట్రోలింగ్ నిర్వహిస్తున్నాం. మా దృష్టికి వచ్చిన చోట్ల చర్యలు తీసుకుంటున్నాం.



Noise pollution can be effectively controlled by taking the following measures:

1. Control at Receiver's End:

For people working in noisy installations, ear-protection aids like ear-plugs, ear-muffs, noise helmets, headphones etc. must be provided to reduce occupational exposure.



2. Suppression of Noise at Source:

This is possible if working methods are improved by:

- ♦ Designing, fabricating and using quieter machines to replace the noisy ones.
- ♦ Proper lubrication and better maintenance of machines.
- ♦ Installing noisy machines in soundproof chambers.
- ♦ Covering noise-producing machine parts with sound-absorbing materials to check noise production.
- ♦ Reducing the noise produced from a vibrating machine by vibration damping i.e. making a layer of damping material (rubber, neoprene, cork or plastic) beneath the machine.
- ♦ Using silencers to control noise from automobiles, ducts, exhausts etc. and convey systems with ends opening into the atmosphere.
- ♦ Using glass wool or mineral wool covered with a sheet of perforated metal for the purpose of mechanical protection.
- ♦ Regular servicing and tuning of Automobiles can effectively reduce the noise pollution.



3. Acoustic Zoning:

Increased distance between source and receiver by zoning of noisy industrial areas, bus terminals and railway stations, aerodromes etc. away from the residential areas would go a long way in minimising noise pollution. There should be silence zones near the residential areas, educational institutions and above all, near hospitals.

4. Sound Insulation at Construction Stages:

- ♦ Sound travels through the cracks that get left between the door and the wall. For reducing noise, this space (jamb frame gap) should be packed with sound absorbing material.

- ♦ Sound insulation can be done by constructing windows with double or triple panes of glass and filling the gaps with sound absorbing materials.



- ♦ Acoustical tiles, hair felt, perforated plywood etc. can be fixed on walls, ceilings, floors etc. to reduce noise (especially for soundproof recording rooms etc.)

5. Planting of Trees:

Planting green trees and shrubs along roads, hospitals, educational institutions etc. help in noise reduction to a considerable extent.



6. Legislative Measures:

Strict legislative measures need to be enforced to curb the menace of noise pollution. Some of these measures could be:

- ### 7. Reduction of Sound Pollution in Temples :
- Of late there is considerable extent of sound emanating from Temples causing Noise Pollution. The below mentioned solutions can be implemented for controlling the Noise pollution.

a) TEMPLE BELLS : In olden days the temple bell which is made of Copper/Five metals had the clapper made of Moduga, Maredu or Devadaru Tree. Due to this, the sound from the bell will be very slow and soothing thus avoiding noise pollution.



b) SOUND SYSTEM : Only Announcements regarding programmes in temple should be done through Horn speakers. At the same time, for cultural activities in temple sound system should be restricted to the place where programme is taking place.

Finally the sound level in temples should stay below 50 decibels during daytime and 40 decibels in night (Silence Zone Area) as prescribed in Govt. rules.

Besides all the above measures, following steps should be followed to prevent noise pollution.

- ♦ Raising public awareness about the effects of noise pollution.
- ♦ Distributing up-to-date information regarding noise pollution.
- ♦ Strengthening laws and governmental efforts to control noise pollution.