**[BASIC RADIO PRODUCTION](http://0305radioproduction.blogspot.com/2013/05/basic-radio-production-lecture-note-2.html)**

**RADIO STUDIO**

Radio studio is a special room where radio signals are originated. It affords various production activities including recording, transmission, and other performances of the radio personals.

The studio is therefore specially built with certain features to make it a quiet place, and to prevent unwanted sound from without: heavy door with air tight-luck; well-treated walls with acoustic treatment; shaped ceiling; double glass window with corridor between them; noiseless air-conditioner and suitable lightings.

Radio studio is up two parts: studio floor or performance area and studio control room which houses technical equipment.

Radio stations have two types of studios:

*1.*      ***On-Air Studio:***this type is normally meant for live programmes like news, discussion, talks, continuity announcement and other programmes that have a call-in segment.

*2.*      ***Production Studio:*** this type is for the purpose of producing pre-recorded programmes like drama, documentary, magazines, commercials, etc. it is also used for a rehearsal and voice testing.

Some stations may have a broader categorization based on microphone placement and type, size and activities performed thereof:  drama studio; music studio; announcing studio, auditorium studio; and general purpose studio.

**Studio Equipment:**

* The studio equipment are many but the most common type includes the console boards,  microphones, recording devices, and loud speakers,
* ***The Console Board:***radio programmes are channeled to pass through the console board which serves as the converging point of all signals sourced in the studio. It is design to perform the following functions:
* ***Selection:***it can select from different audio sources on which one to go on air.
* ***Mixing:***It mixes and balances two or more sound signals or inputs
* ***Amplifying:***it amplifies to desired level, all the signals coming in its weaker form
* ***Traducing:***it converts sound energy into electrical impulse and moves it to boaster.
* ***Shaping:***it shapes sound to produce echo or thin pitch sound.
* ***Measuring:***measures the intensity of sound to detect over or under modulation*.*
* ***Channeling:***various sound inputs are attached to produce a needed programme**.**

·         ***Microphone:***has two basic components: the diaphragm, which is a flexible device and very sensitive to air pressure variation of a sound wave; and the generating element attached to the diaphragm and it converts the diaphragm’s vibration into electrical energy. The more you talk the more the diaphragm vibrates.

**Types of Microphones**

Microphones can be broadly categorized into three:

**1)**      **According to their internal construction and under this categories we have:**

Ø  **Dynamic Microphones:**This type of Microphone is capable of producing excellent sound fidelity; it is rugged in construction which makes it relatively insensitive to harsh handling.

Ø  **Ribbon/Velocity Microphones:**This Microphone is similar to a dynamic microphone but tend to be more fragile. It produces a very warm, rich and mellow sound which is often desirable for announcers, singers and musical instruments.

Ø  **Condenser Microphones:**This type of Microphone offers excellent audio response characteristics but it requires a power supply to both charge the capacitor and to amplify the tiny out-put current.

**2)**      **According to how they are used**

Ø  **Lavalieres**: tiny microphones attached to the shirt or blouse during production.

Ø  **Boom Microphones**: these are larger ones and desirable for drama production.

Ø  **Hand-Held microphones**: handled close to the mouse and mostly unidirectional. It is used by musicians and outside interviews.

**3)**      **According to their pick up patterns:**

Ø  **Omni-Directional Microphones:** pick sound from all directions, mostly used in round-table discussion.

Ø  **Bi-Directional Microphones:** Pick sound from two angles and are desirable for two- person interview.

Ø  **Unidirectional Microphones:** pick sound from one direction and are used for announcement and news casting.

**Recording Devices:**these are the audio sources used to record and play recorded audio or sound in the studio:

Ø  ***Tape recorder:***records and plays music and other documented audio with tape.

Ø  ***Compact disc (CD) Player:***functions like tape recorder but using CD plate.

Ø  ***Reel-to-Real Machine:***used for recording and playback music.

Ø  ***Turn Table:***an outcast device used for backup on which the record turns.

Ø  ***Loud Speaker:***broadcast what is on the air. It houses a magnet, coil and woofer. The magnet creates reaction. The reaction passes through the coil to the woofer which vibrates and produces sound.

**4)**       **RADIO FREQUENCIES**

Radio frequency (RF) is a rate of oscillation in the range of about 3 kHz to 300 GHz, which corresponds to the frequency of radio waves, and the alternating currents which carry radio signals. RF usually refers to electrical rather than mechanical oscillations; however, mechanical RF systems do exist.

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| [**Frequency**](http://en.wikipedia.org/wiki/Frequency) | [**Wavelength**](http://en.wikipedia.org/wiki/Wavelength) | **Designation** | **Abbreviation** |
| 3 – 30 Hz | 104 – 105 km | [Extremely low frequency](http://en.wikipedia.org/wiki/Extremely_low_frequency) | ELF |
| 30 – 300 Hz | 103 – 104 km | [Super low frequency](http://en.wikipedia.org/wiki/Super_low_frequency) | SLF |
| 300 – 3000 Hz | 100 – 103 km | [Ultra low frequency](http://en.wikipedia.org/wiki/Ultra_low_frequency) | ULF |
| 3 – 30 kHz | 10 – 100 km | [Very low frequency](http://en.wikipedia.org/wiki/Very_low_frequency) | VLF |
| 30 – 300 kHz | 1 – 10 km | [Low frequency](http://en.wikipedia.org/wiki/Low_frequency) | LF |
| 300 kHz – 3 MHz | 100 m – 1 km | [Medium frequency](http://en.wikipedia.org/wiki/Medium_frequency) | MF |
| 3 – 30 MHz | 10 – 100 m | [High frequency](http://en.wikipedia.org/wiki/High_frequency) | HF |
| 30 – 300 MHz | 1 – 10 m | [Very high frequency](http://en.wikipedia.org/wiki/Very_high_frequency) | VHF |
| 300 MHz – 3 GHz | 10 cm – 1 m | [Ultra high frequency](http://en.wikipedia.org/wiki/Ultra_high_frequency) | UHF |
| 3 – 30 GHz | 1 – 10 cm | [Super high frequency](http://en.wikipedia.org/wiki/Super_high_frequency) | SHF |
| 30 – 300 GHz | 1 mm – 1 cm | [Extremely high frequency](http://en.wikipedia.org/wiki/Extremely_high_frequency) | EHF |
| 300 GHz - 3000 GHz | 0.1 mm - 1 mm | [Tremendously high frequency](http://en.wikipedia.org/wiki/Tremendously_high_frequency) | THF |

**5)**       **RADIO PRODUCTION TEAM**

Radio production team or crew are the group of skilled and unskilled personnel that make production possible; some of the radio production team include:

1)      **Station Manager:** Station Managers are responsible for the day-to-day running of Radio stations - leading the management team to ensure they meet the key objectives of the station in terms of output, audience, or revenue. In Commercial radio the job title Station Director may also be used in reference to the manager of a local or national station. In some organisations a Regional Director may have responsibility for more than one station. Most stations also have a Programme Controller (link) or Programme Director.

2)      **Programme Director:** the responsibility of a programme Director in any radio station is to direct and coordinate daily radio station operations. She/he also develops, schedules and supervises production, recording, and airing of all programs. Additional information available includes essential job functions, additional responsibilities, and education and experience requirements.

**3)**      **Programme Manager:**In radio, a program manager/director or director of programming is the person who develops or selects some or all of the content that will be broadcast. A program director's selections’ are based upon expertise in the media as well as knowledge of the target demographic. Typically, a program director decides what radio program will be broadcast and when.

**Studio Manager:**In a broadcasting context, a **studio manager**, or *SM*, fulfills an operational role in radio broadcasting to enable and ensure programmes are produced to a high technical standard. The following are some of the responsibilities of a studio manager:

* Workload dispatch
* Compiling studio schedules for senior management meetings
* Compiling Road map for projects
* Constant update of Studio schedules
* Designer’s annual leaves coordination
* Prompt timesheet collection
* Understanding of how deadlines work

4)      **Executive Producer:**An executive producer is the head producer who oversees the creation of a radio broadcast, music album or theater performance. An executive producer usually works for a production company, but may work independently. Executive producers work on the business side of production. They ensure that a production meets goals, such as helping the station to remain competitive, projecting the intended brand image of a company and introducing new concepts or ideas.

**5)**      **Producer:**Radio Producers work in both speech-based and music Radio. Although they play a key role in creating what is heard by listeners, they are not usually heard on air themselves. They are responsible for creating and co-ordinating the content of Radio programmes, and may also have responsibility for the content of related websites or other mobile platforms. As well as managing the creative process they are often closely involved with the business and technical aspects of programmes.

6)      **Microphone Operator:**Set up, operates, and maintains the electronic equipment used to transmit radio programs. Control audio equipment to regulate volume level and quality of sound during radio and television broadcasts. Some of the responsibilities of microphone operators include:

Ø  Report equipment problems, ensure that repairs are made, and make emergency repairs to equipment when necessary and possible.

Ø  Observe monitors and converse with station personnel to determine audio levels and to ascertain that programs are airing.

Ø  Monitor strength, clarity, and reliability of incoming and outgoing signals, and adjust equipment as necessary to maintain quality broadcasts.

Ø  Control audio equipment to regulate the volume and sound quality during radio broadcasts.

Ø  Monitor and log transmitter readings.

7)      **Artists/Characters:** Performers entertain audiences. They may inform or educate them, move them to laughter, or to tears. They contribute their various skills and talents to a variety of genres, including Television, Film, Theatre, Radio and other media. Professional Performers are trained, paid for their work, and must fulfil their contractual obligations, as opposed to amateur performers who take part for fun, and without payment. Personality is central to Performers' roles; they need to be able to relate to their audiences, and involve them in their performances.

**8)**      **Continuity Announcer:**a person on radio who makes linking announcements between programmes to give continuity to a radio broadcast channel. continuity announcers are people who are employed to introduce programmes on radio network, to promote forthcoming programmes on the station, to cross-promote programmes on the broadcaster's other stations where applicable and, sometimes, to provide information relating to the programme just broadcast.

9)      **Newscaster:**  A news presenter (also known as newsreader,  newscaster,  anchorman  or anchorwoman, news anchor or simply anchor) is a person who presents news during a news program on the radio. A newscaster (short for "news broadcaster") is a presenter of news bulletins. This person may be working in the field of broadcast journalism as a journalist and electronic news gathering (ENG).

10)  **Editor:**A person who edits is called an editor. By editing, we mean preparing a news report for publication, telecast or broadcast. Editing is a process by which a report is read, corrected, modified, value-added, polished, improved and made better for publication. Condensation is also part of editing.