Overview

Overview: Sound Recording & Audio engineering / Electronic music production

The sound recording artist is responsible for all sounds or audio effects that accompany visual images. The work includes recording, dubbing, and mixing music, dialogues, and other sound effects. As a sound recording artist, one will be responsible for putting together the various elements of the sound track and edit it to give it a final shape.

Participants attending this course will learn both technical and creative aspects of the recording process. They will learn how to work in a studio environment and how to accomplish complex recording projects. The course involves learning how to set up a recording studio with mixing consoles, microphones, amplifiers, speakers, and cables. The emphasis is on developing the abilities of students to rapidly adapt to new technologies, systems, and conditions.

The Indian music recording industry is the backbone of the feature film industry. The role of the sound recording artist is now recognized as a significant musical element in recording projects, with the recording studio itself regarded as a musical instrument.

The audio business is like any other business. It is not just what you know, but also who do you know ? CRAFT is a community where students will build lasting business relationships. Our teachers will frequently invite students to assist in the real-world work which they do. Whether it is networking with industry professionals and other students, or dealing with writers, producers, and managers, our students receive unmatched insight into the music business.

At CRAFT, we are committed to educating upcoming audio professionals. The program is designed by a group of professionals from the Mumbai film industry who not only have an FTII background but are also authorities in audiography with years of experience in music recording and sound design. The focus of the program is to provide the maximum amount of hands-on time for each participant.

Job Opportunities :

CRAFT graduates from the sound recording program may begin a career in the movie, television, music or video game industries. Some possible entry-level positions may include :

1) Feature films: There are many specialized roles within sound teams including boom operators, sound assistants, dialogue editor, dubbing mixer, foley editor, and sound editor.

2) Music Producer :

The producer functions as a creative leader of any studio, film, television, or radio recording project. Producers work mainly with recording acts and record labels to produce records. They also work with composers and produce sound recordings for film, TV and other forms of multimedia as well. The producer supervises all aspects of the recording process, including contracting session players and overseeing the recording budget. A producer may also help the artist select songs to be recorded. Preferably, a producer should be an excellent musician with a lot of performing experience and a great depth of musical, acoustical, and studio technical understanding.

3) Audio Engineer in recording studio :

The recording engineer operates the soundboard and other electrical equipment during the recording of music. Recording engineers run the recording session with oversight from the producer. They may also be responsible for setting up equipment in the studio prior to the session, and discussing with the producer or musical act what they want the end product to sound like. It is the engineer's subsequent responsibility to craft a recording that meets the producer's, artist's, or band's desires. The engineer may also be responsible for mixing down the recorded tracks into the finished product.

4) Assistant Engineer

The assistant engineer works in the recording studio and is responsible for assisting the recording engineer with setup, recording tracks, and mixing. He works as directed by the recording engineer.

5) Studio Manager/Owner

The studio manager/owner is the person responsible for running the business of the recording studio and may be a sole or partial owner of the business. Studio managers are responsible for booking acts to record at the studio, scheduling engineers, marketing the studio, and budgeting and providing for all the needs of a professional recording studio.

6) Live Sound Engineer

This engineer's primary responsibility is to operate the soundboard during a live performance. The live sound engineer is also involved in sound check and the placement of equipment in preparation for a live performance.

7) Acoustic Consultant

Acoustic consultants provide complete audio, video, and

acoustic design services for performance spaces such as concert halls, arenas, stadiums, studios, convention facilities, clubs, churches, and synagogues. Acoustical consultants can provide an acoustical analysis of a particular venue, identify acoustical problems, and make suggestions for equipment or interior design changes for fixing any problems.

8) Recording equipment manufacturer's representative / Customer service

A recording equipment manufacturer's representative will usually work at the company's headquarters in a customer service/tech support role. They will also represent the company at trade shows or conferences and potentially serve as a product demonstrator. Usually, someone with strong playing ability as a musician is selected for this role.

9) Mastering Engineer (Post-Production Engineer)

This engineer is responsible for taking the final mixes of recordings that have been sent by a studio, band, or artist for finishing touches such as EQ (equalization), overall effects, and possibly compression.

10) Multimedia developer (Interactive multimedia specialist)

Multimedia developers specialize in formatting and producing audio content for CDs and websites. They primarily combine two or more of the following formats—text, still images, video, animation, or sound—and prepare them as part of an interactive software package.

11) Recording studio setup executive

This person is generally charged with the responsibilities of setting up a recording session by arriving early before the session, musicians, artist, or band and setting up any necessary musical equipment, such as amplifiers, drum set, microphones, running microphone cords, music stands, etc. This person is also generally the last person to leave, since he/she is left with the responsibility of ensuring that all equipment is returned to its proper place.

12) Studio Designer

Studio designers provide complete audio, video, and acoustic design services for recording facilities. Studio designers can serve as consultants for designing or renovating studios for select and distinct purposes.

13) Studio equipment Maintenance

The studio technician is extremely knowledgeable in the field of electrical engineering, circuitry, and audio electronics. This person may work within the audio manufacturer's headquarters and/or conduct fieldwork, such as visiting a client's studio for customer service–related issues or product repair.

14) Television Stations: Many television shows and commercials also require audio engineers in various departments prior to the final airing.

15) Corporate Meetings: Big corporate companies require audio engineers for managing audio equipment in seminars, meetings and lectures.

16) Sports: They handle live telecasts, commentaries and many other functions.

17) Schools: They may also find jobs in schools while managing audio in sports functions, dances, student gatherings and in lectures also, if the class is big and requires additional audio equipment.

Fee :

The total fee in lump sum mode is Rs 95,000.In
installment method, it becomes Rs,1,00,000/-.
50% of the fee has to be paid at the time of Admission
and balance after gap of one month in two Installment

Class Timing & Duration:

Classes takes place 5 days a week from 10:00 a.m.-1:00 pm with 30 minutes Tea Break. We have a studio where we conduct daily theory and practice classes. Sound Recording & Audio Engineering is a one year program. 1st semester (of 6-months duration) is a class room training semester along with practical class held every day. In 2nd semester (of 6- months duration) you will have to do sound for Direction students which include projects like 1.dialogue exercise, 2.public service advertising film, 3.fiction film project.

Syllabus

Module 1 : Introduction to basics of Sound & Music

1) Basics of sound (Physics of sound and its terminology, Audible freq response of human ear, Units of sound, Sound pressure, dynamic range etc.)2) Difference between sound and music (Tones, timbres and texture) 3) Acoustic sound and synthetic sounds (Concept of synthesizers, Oscillators, filters etc.) 4) Analog and digital theory (basic discussion, pros and cons of each) 5) Audio formats and conversion tools (mono & stereo, Diff between channels & tracks, Wav, mp3, AIFF file types) 6) Concept of a Transducer as musical instrument and microphone (Explanation of how sound travels and in what form it is present in atmosphere etc.) 7) Bit rate and sample rate 8) Audio compression (introduction to file size compression and dynamic range compression) 9) Compressed and uncompressed file formats. 10) Sampling theory – Hardware samplers and software

samplers Hearing Principle/Internal Ear Construction/Working 11) Threshold of Hearing/Pain/Loudness/Pitch Vs Frequency, Localization of sound/Binaural Sound/Masking 12)Wave/Particle Velocity/Fidelity /Bandwidth/Propagation /General. representation of waves/Harmonics/Wave length Vs frequency/Reflection(Echo/Reverberation/Delay) 13) Haas Effect/ White/Pink noise/Simple/Complex waves 14)Decibels-Pressure Voltage/Current/Different References and Derivation of Equations. 15) dB-Measurements on a scale and Calibrations/Construction of VU Meter/SPL (Sound Pressure Level) 16) Inverse Square Law/ Propagation of Sound in Air/Liquid/Solid/ Indoors & Outdoors. 17)Magnetic Recording-Tape Width/Head Gap/O/P Vs Playback Response at different Speeds. 18)

Module 2 : Computer Fundamentals and ANALOG/DIGITAL

1) Basics of a computer (CPU, RAM, Motherboard, Hard drives and types)

2) Digital audio (A-D, D-A, D-D conversions and its chain, protocols and formats)

3) The sound card (basic configuration, specifications and types like PCI, USB 2.0 and Firewire etc) LP Records –Construction General Overview/ RPM/ Grooves etc.

4) Tapes-Bias/Head gap/Magnetic flux/Amplifiers

5) Dynamic Range/Margin/Speed/Signal to Noise Ratio/Frequency Response

6) Concept Of Distortion /Distinguishing b/w Distorted Sound/Effect of Distortion On the Frequency Bandwidth

7) General Digital Concept- Sampling/Over Sampling/A-D and D-A conversion- Nyquist's theorem

8) Advantages over Analog Systems/Concept Of data Rate/ No. of Bits etc.

9) Concept of Interleaving/ Multiplexing in Relation to CD Basics (CLV-Constant Linear Velocity Vs Constant Angular Velocity)/Channel Encoding.

10) Error codes/Random Access of Files.

11)DAT DVC Pro/1inch,2inch,ADAT-Serial/parallel Mode of Digital Recording/CD/Optical & Magneto Optical Sound System

12) Sound Synthesis/MIDI

Module 3 : Introduction to Cubase (editing two channel audio)

1) Basic introduction of Cubase

2) Editing overviews and processing tools

3) Editing a two channel audio

4) Creation of loops, custom samples, medleys

5) Track restoration and sweetening

6) Introduction to DSP plugins (reverb,delay, chorus , flanger,echo etc) and their application.

7) Merging of two tracks and creating minus ones using advanced editing techniques.

Module 4 : Basic Music theory

1) Basic concepts of music notation

2) Treble clef, bass clef and the grand staff

3) Sharp and flat notes, naturals, tones and semitones

4) Scales and key signatures

5) Chords and triads

6) Duration of notes and rests, dotted notes

7) Bars and beats, time signatures

8) Concept of quantization using note values e.g ,1/8, 1/16.....

Module 5 : Introduction to Operating systems (MAC & PC) and DAW (Digital audio workstation)

1) Introduction to operating systems (Windows XP and Mac OS X), key commands and features, stability etc.

2) Comparison between hardware and software

3) Introduction to DAW's (Nuendo & Pro tools) , Their applications, features, Pros & cons etc.

4) Managing sessions and library content (How to correctly approach towards creating a session and maintaining the workflow)

Module 6 : Introduction to Song structures, Radio & TV jingles, Film background scores

1) How to approach while creating a basic radio jingle and its structure

2) Creating a jingle for a TV AD while keeping reference visual in mind, its emotion and theme

3) Creating Background scores for TV serials and films

4) Creating a song for a private album or a film song according to situation.

5) Recreating a film song (minus one) entirely using electronic music sequencing

6) * Practical will include listening sessions including various songs, jingles and background scores, Study of various layers of musical instruments and fx used in programming, tone selection and timbre etc. Special screenings will also be conducted.

7) Assignments : a) create a jingle for radio or tv of your own choice

b) Create a song of at least 4 min duration

c) Do the BGM of the given visual

Module 7 : Advanced DAW concepts

1) Introduction to ASIO and optimizing the sound card with a DAW

2) Buffer setting and latency

3) Troubleshooting and data backups

4) Editing tools and techniques, navigation windows and menus, recording modes and tools

Module 8 : MIDI and its applications

1) Introduction to MIDI and its basic applications in music production and film scoring

2) How to setup various MIDI interfaces, daisy chaining concepts

3) Software and hardware based sequencing, difference between the two and pros & cons of each.

4) Introduction to Virtual Studio Technology (VST and VSTi), VST compatible DSP plugins and Softsynths (VST instruments)

Module 9 : Microphone concepts and techniques

1) Microphone as a transducer.

2) Types of microphones (dynamic and condenser).

3) Phantom power.

4) Directional responses of various microphones (shot gun , omni, bi directional, cardioid , hypercardioid etc).

5) Cables and connectors and their types, line and mic level connections, High Z connections.

6) Choosing and setting up a microphone for recording.

7) Recording vocals and live instruments PressureVs Velocity/SPL Vs Output.

8) Types –Carbon/Electret/Condensor/Dynamic. Mikes/Ribbon- Construction/Working/Polar Patterns, Directional Properties/Impedances/Access.

9) Different Associated Cable Connections- Balanced/Unbalanced –Their Effect on Signal Flow, Construction of Balanced & Unbalanced Cables & Demonstration.

10)Mic Stands/Boom Operation/Handling.

11)MONO/STEREO/Proximity Effect/Sensitivity/Overloading/Handling Of Various Mics.

12) Concept Of PHANTOM POWER /Phasing & Their Effect On the Signal.

Module 10 : Advanced Music production concepts in a DAW

1) Channels, tracks , busses, inserts and sends

2) Auxes and grouping of tracks

3) Digital sound processing plugins (DSP), Waves plugins and others.

4) Advanced mixing techniques and applications

5) Tracking a song and mixing practicals

6) Digital and analog consoles and their types

7) Signal chains and routing

Module 11 : Surround formats, Frame rates for films and TV

1) Frame rates, film and tv formats

2) Introduction to various surround sound formats like DTS, Dolby digital & Dolby digital EX, SDDS etc

3) Importance of frame rates while tracking for film background scores and scoring for tv

4) Location Sound/Pilot/Dubbing/Transfer/FX/Alignment/ Optical/Magnetical

5) Need for Dubbing/Re Recording

6) 16mm 35mm 70mm IMAX/Optical/Magnetical/Basic Formats in terms of Track placement-MONO/STEREO

7) Editing Concept w.r.t. Stripped Magnetic Tape Along with 16mm/35mm/70mm etc. Optical (Picture). Making a Audio Splice/Cross fades.

8) NAGRA Recorder Descriptions □ inch tape /Velocity of Tape etc.

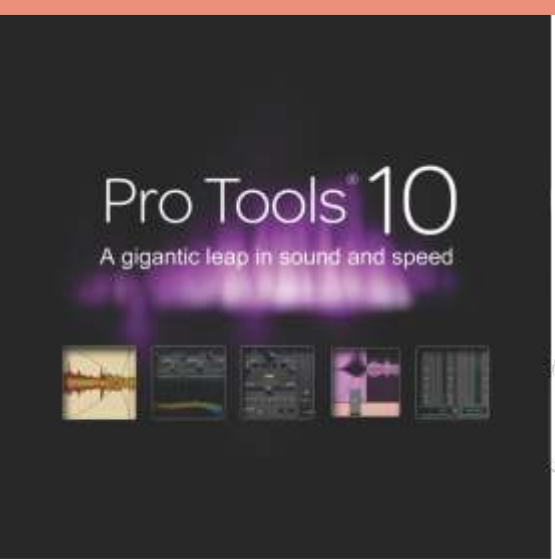
9) Concept of Talkback/Fold back/Feedback-Acoustic AS well as Electrical

10) Live Sound—Multi Track Concept/ Music tracks

11) LP,1/4 inch , 1inch , 2inch tapes And Multi Track Recorders

12) Synchronization (Time Code)

13) Dolby A,B,SR, Surround, DTS,Dolby Digital,SDDS(Sony Digital Dynamic Sound)



Sound Recording Course

Module 12 : Virtual instruments and their application

1) Spectrasonics Atmosphere, Trilogy and Stylus RMX

2) Reason 4.0

3) Xphraze

4) Linplug albino, predator, blue

5) Vanguard

6) Nexus

7) Virtual guitarist

8) Real guitar

9) Miroslav philharmonik

10) Plug sound collection

Module 13: LOUDSPEAKERS/HEADPHONES

• Basic Construction & Operation Principle.

• Impedances/Enclosures/Phase Effect/Axis/THD-(Total Harmonic Distortion)

• Need For Tweeters/Woofers/Headphones Diaphragm Materials/Size/Profiles

Module: 14. SIGNAL PROCESSING

• Filters/Equalizers(BandWidth,QualityFactor,Cut-off Frequency)

• Noise Reduction Principles(Digital Noise Reduction Soft wares)

• Echo/Reverb/Compressors/Limiters/Noise Gates(Attack Time, Release Time and there Effect on Output)

• Patch Base –Concept, Signal Routing

• Mixers(Analog/Digital)

Module: 15: ACOUSTICS

• General Concept – Propagation of Sound Indoors

• Reflection/Absorption /Standing Waves-Live/Dead Studios /Room Modes

• Detailed Process of Control Room/Studio Design

• Various Stages Stats Involved in Design &Tools Required (Spectrum Analyzer, SPL Meter etc.)/ Noise Figure/Reverberation Time (RT)

• Isolation- Concept of Floating Floors/Ceiling etc.

• Different Absorptions Coefficient For Materials And Their Use In The Treatment of Surfaces

Module 16. DIGITAL AUDIO WORK STATIONS

• General Concept-Advantage Over Analog Process

• Concept Of virtual Tracks –Clip Manager/Concept Of Cut & Paste/ Wave Form Editor-Principles of Operation/Plug-ins

• Different Exercises for Balancing Audio & using Different Softwares

• Making a PROJECT FILE Using The SOFTWARES

• Importing/Exporting Audio Files Into The Particular Project

Module 17 – Pro tools 10

- Introduction to the interface
- Basic commands
- Workspace window and Mixer window
- Workflow in pro tools (Creating and managing session and Tracks)
- Recording and gain staging in pro tools
- Mixing workflow in pro tools (Inserts , sends, how to patch internal busses)
- MIDI programming in pro tools
- Sound designing and BG scoring for Film

Module 18 – Logic pro 9

- Introduction
- Basic commands and workflow
- Managing tracks and busses
- Working with MIDI
- Working with loops and FX
- Sequencing music in Logic pro
- Recording audio and comping takes
- Editing audio in logic
- Mixing music in logic pro

 # please note that this is tentative syllabus. We keep updating syllabus every semester. The latest Updated Syllabus will be emailed to you along with the selection letter.

Studio Infrastructure

S.No.	Product	Product Name	Company		Product	Product Name	Company
1	Audio Interface	ProjectMix I/O	M-Audio	6	Headphones	DT - 880	Beyerdynamics
		samsung monitor-21 inch	samsung			HD-380-PRO	SENZINEZER
		I-MAC-28 INCH	APPLE			MDR	Sony
	Digital Recorder	H-4-N	zoom	7	Accessories	Mike Stand	GS
2	Studio Monitors	M-Audio BX5a	M-Audio				
		M-Audio BX5a	M-Audio				
		Tascam DR-1				Boom Rod	
3	Microphones	SM-58	Shure			Repairing kit-	MAS-830
		SM - 57	Shure			Multi Meter.	
		NT - 2A	Rode			Solderting Iron.	
		EM-820E	Easun	8	Convertor Jacks	35mm jack to Phono	
		EM-81L	Easun	9	High end Shotsun mike	me-66+k-6	SENNHEISER
		E-845-S	SENNHEISER		Wind Jammer		Rycote
4	Keyboard controller	A-800-pro	ROLAND	10	Softwares	PROTOOL-M.8.4	Degi-design
5	Cables/Connectors	XLR -> XLR				Nuedo-4.0	
		XLR -> Phono				LOGIC	
		XLR -> Phono				CUBASE-6	
		Phono -> Phono				Sound Forge	
		TRS Male to TRS Female	Sony	11	Studio-Dimentions	8x10 feet	Dubbing Room.
		Older Cables				9x10 feet	Console Room

Student's Testimonial

Gmail

Naresh Sharma <naresh.sharma@log2craft.org>

Info

Pankaj Sharma <musicianpankaj@gmail.com> Fri, Feb 27, 2015 at 6:41 PM
To: Naresh Sharma <naresh.sharma@log2craft.org>

Dear Sir,

It it my pleasure to express the Knowledge and Expertise provided by the Craft Institute in teaching me the Sound Engineering technicalities that helped me excel in my field.
After Pursuing PG Diploma in Sound Engineering from CRAFT my Journey in the Field of Audio has been really Creative and has helped me earn my name in the Industry.
I worked with Multiple Production houses such as Radio Mirchi 98.3 fm, What NXT Pictures etc helping me work with various clients such as UTV Disney, Pepsi, Kurkure, Vodafone, Airtel, Blackberry, Videocon, American Express, Dr lal Path Labs Cadbury, etc
I have also Worked on few TVCs, Documentarys and Feature Films such as:
PSI Condom TVC (Parivar Niyojan), Income Tax Raid TVC, Pratishruti (Documentary), IKKA IKKA (Oriya Movie), Pranam Wallekum (with Mr Sanjay MIshra), 22g tussi Gainth ho (a punjabi Film) etc.

My Productions at various levels has undoubtly won Golden and Silver awards, Golden Mic Award (Top most award in the Radio Industry), In the past i have also freelanced at few Institutes in the country for teaching Sound Engineering and Music Production e.g Natya Vidyalaya Bhopal etc.

Currently i am into teaching, freelancing Audio Services with multiple Indian and International clients and performing Live Shows. I am also associated with an online youtube channel "HOME Remedies".

Apart from this I Own a Production house as "House of Electronic Media and Pictures" helping me expand my horizon and moving onwards to greater Discoveries.

I am really thankful to CRAFT and the Faculty for helping me excel in the field of Audio.

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Thanks & Regards
Pankaj Sharma
Music Producer/Sound Engineer
Mixing and Mastering Engineer
House Of Electronic Media and Pictures (HEMP Records)
Mobile : +91-9999298182

Naresh Sharma <naresh.sharma@log2craft.org>

Testimonial Letter to Naresh Sharma Sir

Akhil Agarwal <akhilaran@gmail.com> Thu, Feb 26, 2015 at 3:11 PM
To: naresh.sharma@log2craft.org

Dear Sir,

I'll like to take this opportunity to thank you for your wonderful support in 2009, especially in the area of Audio Recording & Mixing.
Your good Oceanic Knowledge of Film & Television Industry helped me to build my carrer in Audio Industry. I just wanted to let you know that currently i am working with KINGDOM OF DREAMS,GURGAON as an Audio Engineer.

Thanks With Regards

Akhil AGARWAL
AUDIO ENGINEER
KINGDOM OF DREAMS THE GREAT INDIAN NAUTANKI COMPANY.

Director Craft <naresh.sharma@log2craft.org>

THANKS TO CRAFT INSTITUTE

Alano Tungoe <alanot06@gmail.com> Fri, Sep 7, 2012 at 3:01 PM
To: naresh.sharma@log2craft.org

Dear sir,
i would like to take this opportunity to express my heartfelt thanks to you, i successfully completed my course on radio jockey and sound engineering from CRAFT institute.
now due to assistance and support provided by CRAFT institute.
I'm working with All India radio as radio jockey at yuwani western section and sound engineer in PCTI .
I'm thankful for the efforts invested in getting me this suitable jobs.
because of your right guidance and direction, now I'm able to pursue my dreams. keep supporting me.
once again my sincere thanks to CRAFT institute .

cheers
Alano Tungoe
CRAFT INSTITUTE

Naresh Sharma <naresh.sharma@log2craft.org>

Harpreet singh

Honey Channa <honey.channa15@gmail.com> Wed, Feb 25, 2015 at 1:14 PM
To: Director Craft <naresh.sharma@log2craft.org>

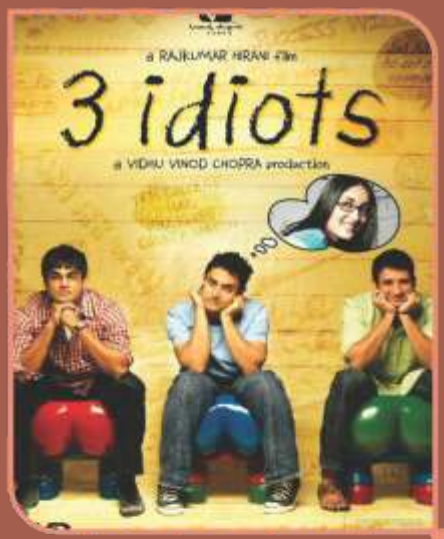
I have completed my "Sound Recording and Audio Engineering" PG diploma from CRAFT and it help me alot in getting into the Industry. I think CRAFT is the best platform to learn and execute . CRAFT provided us the same "work environment" as real industry. Now a days , I m owning my own music production house "THE SWAG PRODUCTIONS". With god's grace we doing well in gingles , tv commercials , songs , background scores, etc
Big up and thanks to CRAFT

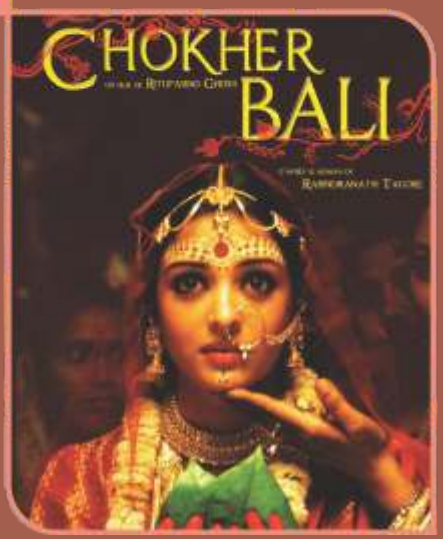
HARPREET SINGH
(Owner @ THE SWAG PRODUCTIONS)
(Audio Engineer and Music Composer)

Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

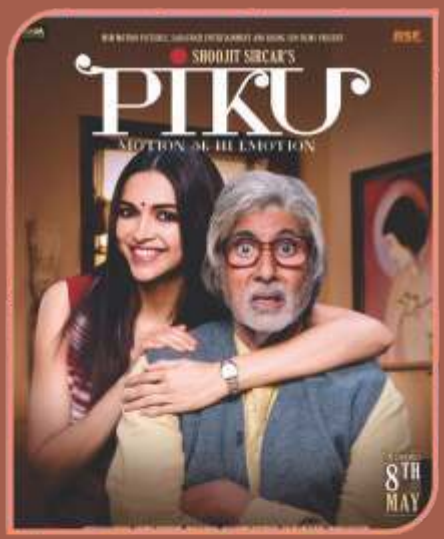
Important Films of Bishwadeep Chatterjee

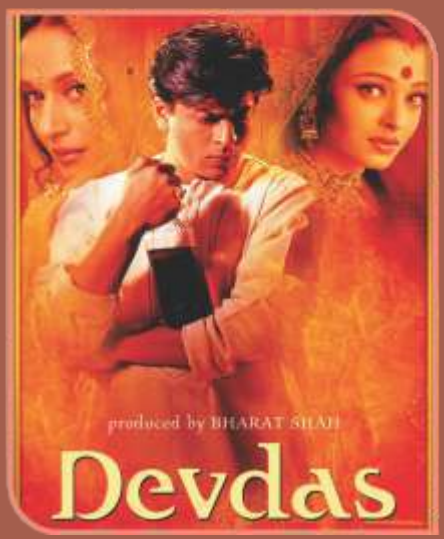




Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

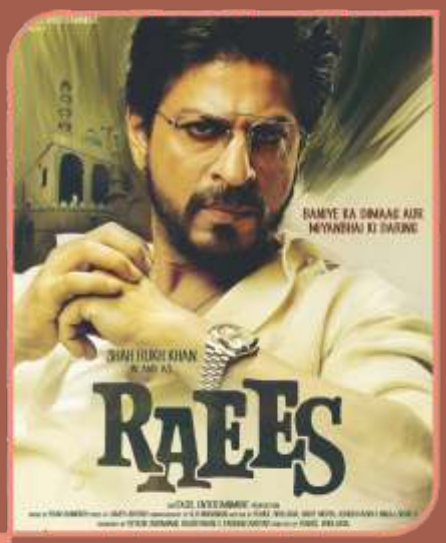

Eros International & Bhansali Productions Present
THE LOVE STORY OF A WARRIOR
BAJIRAO MASTANI
Directed by Sanjay Leela Bhansali
बाजीरा
मस्तान

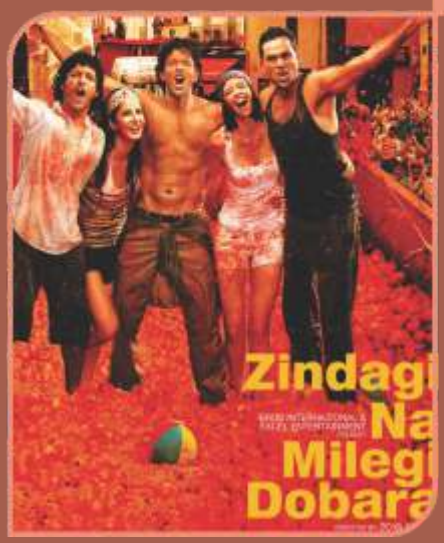

SHOOJIT SIRCAR'S
PIKU
8TH
MAY

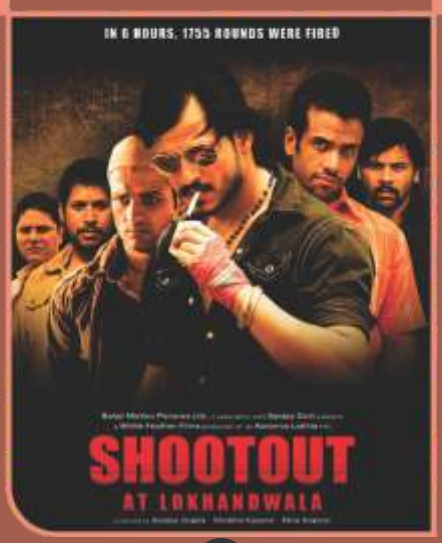

produced by BHARAT SHAH
Devdas

Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

Important Films of Baylon Fonseca as Sound Designer

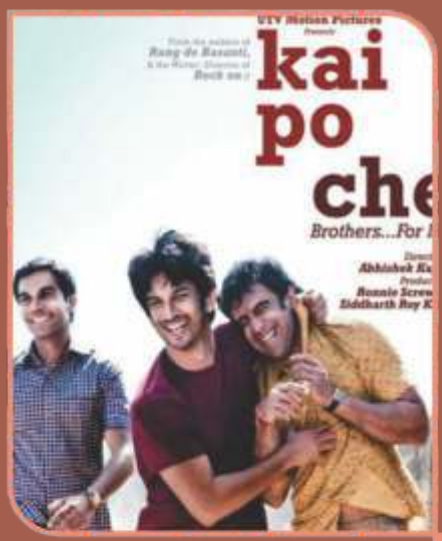






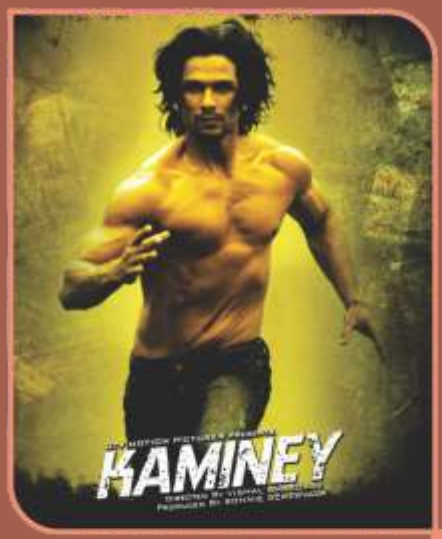
Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

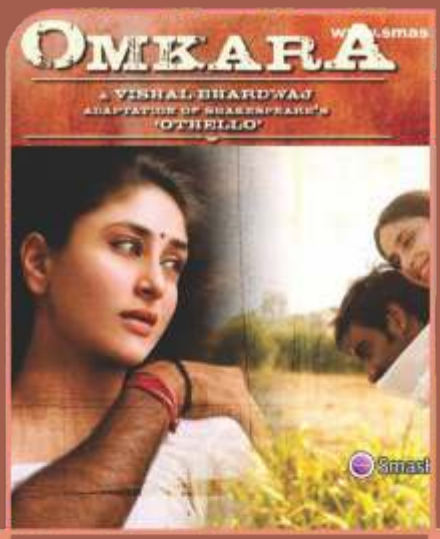
Important Films of Baylon Fonseca as Sound Designer

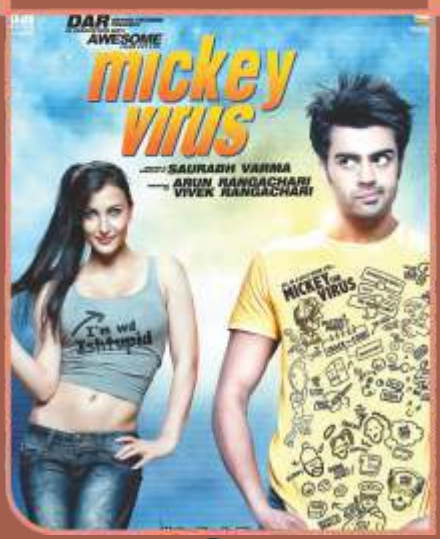


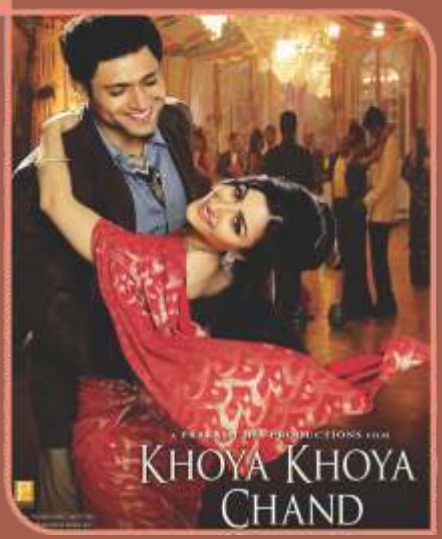
Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

Important Films of Subash Sahoo as Sound Designer



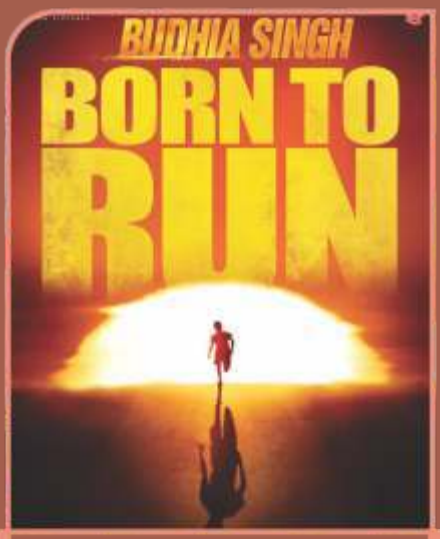


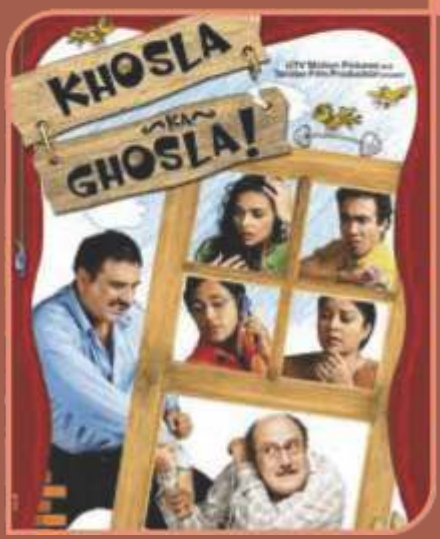


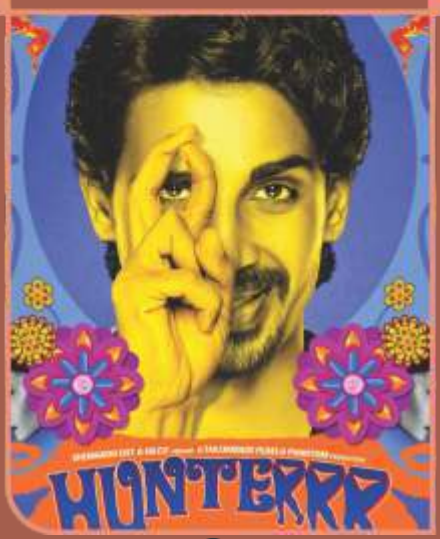


Sound Recording & Audio Engg. (Spl. Electronic Music Prod.)

Important Films of Subash Sahoo as Sound Designer







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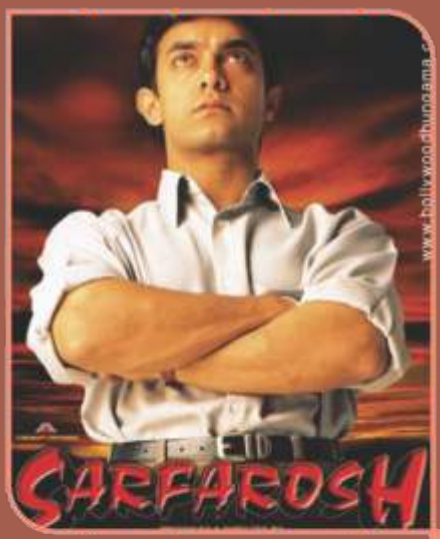
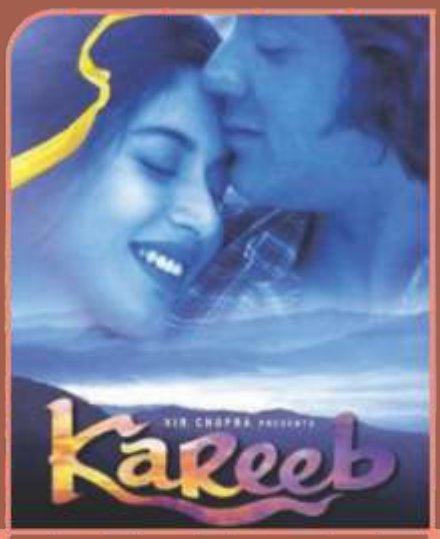
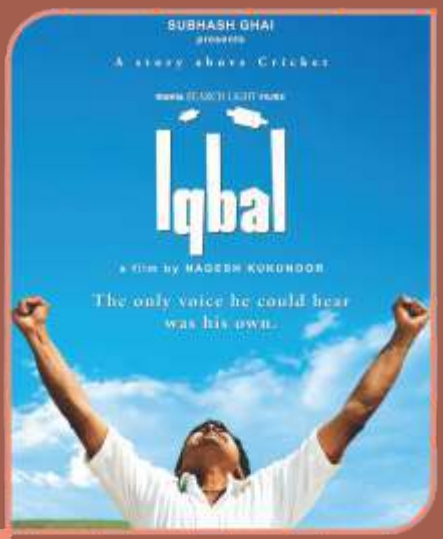
Important Films of Namita Nayak as Sound Designer







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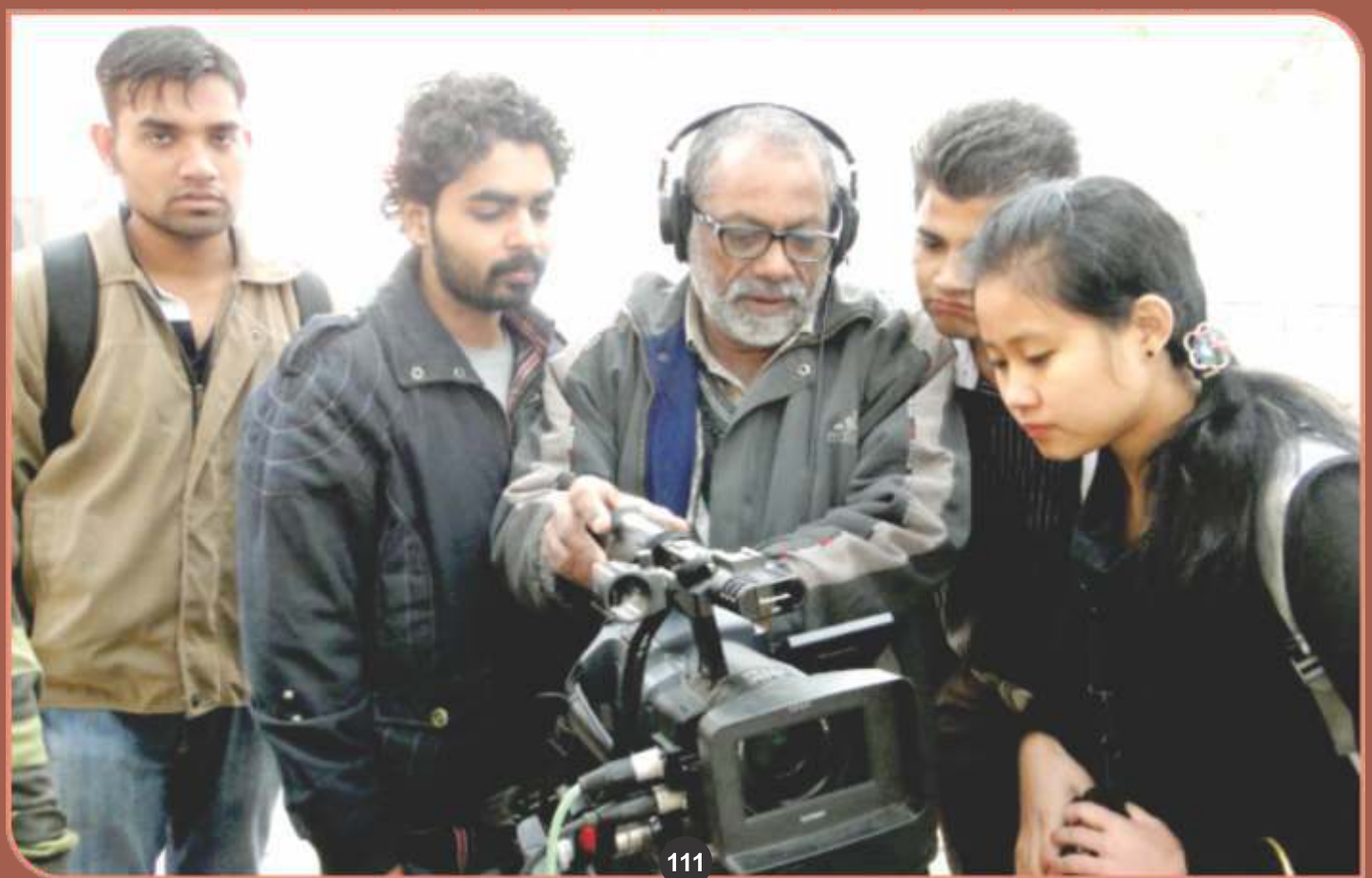

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