THE

REPORT

OF THE

U. G. C. MAJOR RESEARCH PROJECT
No. F. 5-274/2005 (HRP)

A SPECTROGRAPHIC STUDY OF BENGALI ENGLISH

Principal Investigator

DR. PAULOSE V.D.

(Selection Grade Lecturer)

N. C. College, Badarpur

Project Fellow

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From data collection to the preparation of the report of this Major Research Project, I received invaluable assistance from several people and institutions because of which I could complete this research project. I feel it is my duty to acknowledge my gratitude to them on this page. Such persons and institutions are:-

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ABSTRACT

The English language which has the widest geographical spreading and which has been used more than any other language in the world for international communication is learned as a foreign language by hundreds of language communities all over the world. It is natural that in this process of learning a second or foreign language the influence of mother tongue causes variations in the target language. It is because of this fact that there are verities of English. The English spoken by the various language communities in India is, therefore, not the same. This causes much unintelligibility in communication. The characteristics of the English spoken by the Bengalese (Bengali English) are analysed using a scientific method, that is, with the help of a spectrograph. Features which are special to Bengali English such as the merging of two sibilants into one, the loss of length difference among some pairs of vowels, difference in the quality of vowels, the difference in syllable structure arising out of the pronouncing of the silent letters, particularly in the coda slot of the syllable, the producing of fricatives as affricates and plosives etc. are scientifically examined. The conventional kind of data is also collected and analysed to supplement the conclusions derived from the spectrographic analysis. Remedial measures are suggested so as to improve the pronunciation and thus to minimise the unintelligibility problem in communication.

CONTENTS

1.INTRODUCTION

Though Chinese tops the list of languages in terms of number of speakers, English has the widest geographical spreading. It is used more than any other language as the official language of countries and states. In matters of acquiring scientific knowledge, securing employment in other states and abroad, interstate and international communication and in several other areas, English is increasingly becoming the most important language in the world. The learning of this unique language has become almost an imperative in modern times.

When a language is spoken over a vast area, it is bound to have variations in different geographical areas. These variations are called dialects. Secondly, when one language is learned as second or foreign language by different linguistic communities (as in the case of English being learned by the Assamese, Hindi, Bengali, Tamil etc. speakers), it is bound to have differences because of the pull of L1 or mother tongue. Thus we have Gujarati English, Tamil English, Assamese English, Bengali English etc. The features which are peculiar to each variety cause unintelligibility. The English spoken by the Bengali speakers has the same unintelligibility problem. It is a great hindrance in times of interviews for jobs, admission to various courses of study and at various other occasions. The members of this community, like

other linguistic communities in India, are often deprived of wonderful opportunities just because of this problem.

The present work, that is, 'A Spectrographic Study of Bengali English' makes an attempt to study the pronunciation of Bengali English. It is a study of their accurate pronunciation with the help of spectrographic analysis. The principal investigator, out of his own experience and knowledge gathered from the literature available on the subject, has identified the problem areas in pronunciation of these people. A list of words containing these sounds was prepared and the pronunciation of these words by the Bengali speakers living in different regions of West Bengal, Tripura and Assam was recorded. These utterances were fed into a spectrograph in the C.I.E.F.L. Phonetics Laboratory and the voice prints thus produced were used for a scientific study. On the basis of the analysis of the spectrograms, to what extend the pronunciation of these people is different from that of the native people of English is given. This report has made appropriate remedial measures so that greater intelligibility can be achieved. Such a scientific study of Bengali English has not yet been done so far except a few fricatives of this variety were spectrographically analysed by the present researcher at the same language laboratory.

The inter-disciplinary relevance of this research lies in the fact that the understanding and speaking of English with correct accent and rhythm

will benefit students of every discipline. Students of English literature will have a better understanding of the poems, plays etc. that are broadcast over radio and television. Students of every discipline can benefit from the lectures delivered by experts from India and abroad at seminars. Similarly, their doubts can be clarified and their store of knowledge enriched by talking to experts anywhere in the world. To be successful in these activities one must have considerable command over the accent pattern and rhythm of Standard English. In all these and many other aspects this research is intended to throw light.

This research has scientifically demonstrated to what extent a target language varies from that of the native speakers because of the pull of the mother tongue. This study will make every linguistic community in the world realise that such variations take place in every such case. This will open up vistas for similar research work particularly on English spoken by various linguistic communities. All such efforts all over the world will result in greater intelligibility of English.

Secondly, if the findings of the research are published or made part of the syllabus of college and university studies and if the remedial measures suggested in this report are adopted, the community under consideration will definitely improve its pronunciation of English. This community will then reap the benefits of better employment opportunities and chances of admission to various courses of studies abroad. International communication will also be on a better footing.

Once the results of this research are known, more and more Bengali speakers will speak better English and this will facilitate better communication with the other linguistic groups within India . This will contribute to national integration. People will have more confidence in communication at interviews and in securing jobs in the rest of the country. Students of this community will be made aware of their deviations in pronunciation from that of Standard English. If these are placed along with that of Standard English, interested learners can make an attempt to correct or modify their wrong utterances and achieve greater levels of intelligibility. When people realise the fact that correct pronunciation of English speech sounds will equip them better in matters of admissions and employment they are bound to go in for improvement. Secondly, if the research findings are made part of the college and university syllabus, students will be bound to improve English. All this will set a new trend in learning English in a new way.

This study will have significant relevance to the quality of higher education. The old age methods of lecture mode of imparting knowledge are gradually relegated to the background and modern ways are taking their place. Classes are conducted through television, CDs.audio cassettes etc. In most cases the programmes are prepared by foreign or Indian experts who have near perfect Standard English accent .Familiarity with this accent is a must if one has to benefit from

this kind of classes. Seminars, workshops, guest lectures etc. have become an essential part of higher education. Here too, tuning our ears to correct pronunciation and the ability to interact in English with correct accent is very essential. If the people of this linguistic community, most of whom live in comparatively backward areas, have to make full advantage of modern higher education, they have to significantly change their listening and speaking skills of English. Herein lies the significance of this study as it intends to improve both these which will gain for them an edge over others in matters of admission, jobs and international communication.

1.1.OBJECTIVES

The objective of this research is to ascertain the accurate pronunciation of Bengali English with the help of scientific instruments in order to help the foreign and second language learners so that effective language communication can take place. It may be noted that Bengali people find it most difficult to pronounce some vowel and consonant sounds correctly. They have the problem of turning single consonants into sequences or clusters also.

It is aimed at teaching the young generations the correct speech sounds of English. It is hoped that some innovations in this regard on the basis of the research findings and the remedial measures will be

incorporated in the English syllabus of college and university. This will go a long way in enhancing the quality of education at all levels.

It is aimed at improving the results of college and university examination. One of the subjects in which maximum students fail in this linguistic community is English. One of the reasons for this is that many students have developed a dislike for English mainly because of the old methods of teaching. If English can be taught in a scientific way, the learning will be easier and more interesting and thereby much improvement can be expected.

It is aimed at improving the standard of communication. Today, the whole world is increasingly becoming a global village. Oral communication through telephone is encroaching upon the fields of written communication. In this context oral communication between different linguistic communities is a must today.

It is at aimed at improving the listening skills and understanding abilities of the Bengali linguistic community. This will help the members of this community in better acquisition of information that reaches us through various news channels and other programmes broadcast over television.

It is at aimed at equipping the youth, particularly those who are seeking admission and employment with knowledge and practice of

Standard English. It will provide them an edge over others in these matters.

1.2. SPECTROGRAPH

The sound spectrograph was probably the single most useful device for the quantitative analysis of speech. It was developed at the Bell Telephone Laboratories in connection with work on analysis, synthesis and speech transmission systems like the Vocoder. The utterance of persons is fed into the sound spectrograph which in turn produces voice prints or spectrograms. The acoustic signals are converted into visible patterns which can be used to study the various features of sound units.

The spectrogram is useful in studying various kinds of phonetic problems. Wide band spectrograms are very accurate in the time dimension. They show each vibration of the vocal cords as a separate vertical line and indicate the precise moments of a stop burst with vertical spike. Through spectrograms, one can know fairly and precisely when a sound occurs and also to a comparable degree of accuracy, what its frequency is. Narrow–band spectrograms are more accurate in the frequency dimensions.

From spectrograms it is also possible to specify many other features about the manner of articulation. For example, one can usually see

whether a stop has been weakened to a fricative, or even to an approximant. Affrication of a stop can be seen on most occasions. Voiced sounds can be distinguished from voiceless sounds. One can also observe the relative rates of movement of different articulators.

The quality of a vowel sound depends on the frequencies of the formants. But the pitch depends on the rate of vibrations of the vocal cords. Spectrograms are usually fairly reliable indication of relative vowel quality. The frequency of the first formant certainly shows the height of the tongue at the time of utterance quite accurately. The distance between the first and second formant reflects the degree of back or front feature quite well, but there may be confusions due to variations in the degree of lip rounding.

"A spectrograph converts a two dimensional speech wave-from (amplitude/ time) into a three dimensional pattern (amplitude/frequency/ time). With time and frequency on the horizontal and vertical axis respectively, amplitude is noted by the darkness of the display. Peaks in the spectrum appear as dark horizontal bands. Voiced sounds cause vertical striations in the spectrograms due to an increase in speech amplitude each time the vocal folds close. The noise in unvoiced sounds causes dark patterns, randomly punctuated with light spots due to instantaneous variation in energy".(see Douglas O' Shaughnessy 2001-56)

Spectrograms provide much information relevant to acoustic phonetics, the time taken for various acoustic segments, whether speech is periodic and the detailed motion of formants. Wide Band spectrograms employ 300Hz band pass filters with response times of a few milli-seconds, which yield good time resolutions.

1.3. THE NECESSITY OF SCIENTIFIC STUDY

The Bengali people have many problems in the pronunciation of English speech sounds. Among them the most important ones are the lack of difference in vowel length, substitution of diphthongs by pure vowels, lack of accent, and substitution of one phoneme by another. Besides these, there are other minor problems such as pronunciation of silent consonants and interchange of consonants in consonant sequences and clusters. To analyse these utterances we need a scientific method. One of the best scientific methods is the use of spectrograms. It will show us to what extent the English pronunciation of the Bengalese is different from that of the native speakers of English. The voice prints will give us an exact and scientific description of the utterance of Bengali people.

Spectrograms will give us information about the Bengali people's problems in pronunciation. For example, the Bengali people produce the phoneme /i/ in place of /i:/. They do not differentiate the one from the other. So most of the Bengali people do not find

difference between the words 'feel' and 'fill', 'feet' and 'fit'etc. Actually, there is approximately 60 milliseconds difference in the pronunciation of a native speaker between /i/ and /i:/ sounds. Similarly, this community has many problems in the pronunciation of some other phonemes. It has the problem with /u/ and /u:/ phonemes. The members of this community utter the words 'fool' /fu:l/ and 'full' /ful/ in the same manner. The utterances of /v/ and /b/ cannot be differentiated. There might be differences between the lengths of the vowel in question but our naked ears can not guess these differences. Therefore we need a scientific method to see whether there is any difference at all. So we make use of spectrograms to find the differences of Bengali English pronunciation. The spectrographic analysis of the speech sounds of the English spoken by members of the Bengali community will make them aware of their own problems and to what extend their utterances are deviations from those of Standard English. As the voice prints of their utterances are compared with those of Standard English, interested learners will be able to correct or modify their wrong utterances and achieve greater levels of intelligibility.

1.4. DATA COLLECTION

Two types of data collection were done for this project. First, a list of words containing the speech sounds required for spectrographic analysis was prepared. I visited the three Bengali dominated districts

of Assam namely Cachar, Hailakhandi and Karimganj, West Bengal and Tripura. The Bengali people living in these areas were asked to pronounce these words. Their utterances were recorded and these were fed into a spectrograph and the voice prints were taken out for the study. Secondly, another two lists of words which are believed to have problems for the Bengali people were prepared. These hand sheets were supplied to the students of Classes X and XI in various schools and colleges of Barak Valley districts of Assam. In one of these sheets a few pairs of words like sheet-shit, feet-fit, our-hour etc. were printed. The students were asked to state whether both the words of the pairs were same or different in pronunciation. In the second case another list was given to one student to call out the words in it and the rest of the students were asked to write them down.

1.5. LITERATURE REVIEW

Though there are a few books on the phonetics and phonology of the Bengali language like The Origin and Development of the Bengali Language by Suniti Kr. Chatterji, Bhasar Itibritta by Sukumar Sen, A Bengali Phonetic Reader by Suniti Kr. Chatterji Bengali and Other Related Dialects of South Assam by S. S. Tunga, A short Outline of Bengali Phonetics" by D. Jordje Kostic and Rhea S. Das, Bengali Language Historical Grammar" by Atindra Mojumder etc. there isn't any detailed scientific study on the Bengali English. There are however, occasional observations made on the geographical variation

in the English utterances of the different linguistic communities of India in R. K. Bansal's "The Intelligibility of Indian English". A few English words uttered by the Bengali speakers are spectrographically analysed and the results incorporated by the present researcher in his Ph.D thesis entitled "A Contrastive Study of Fricatives in Assamese, Bengali, English and Malayalam".

1.6. THE ORIGIN OF BENGALI LANGUAGE

Bengali is one of the Indo Aryan languages. By the middle of the 10^{th} century to which period the earliest extant specimens of Bengali can be referred, the Bengali language may be said to have become distinctive, as the expression of the life and religious aspirations of Bengal with the nucleus of a literature uniting the various dialectal areas. A new speech came into being to give expression to some of the highest flights of the human spirit in the regions of poetic imagination and perception. The Indo Aryan speech took over a thousand years to be transformed into Bengali, after it came to Bengal during the first M.I.A. period, that is, 400 B.C. – 900 A.D.

The Bengali language in its history may be conveniently divided into three periods.

1) The Formative or Old Bengali Period: 10^{th} -13^{th} century (i.e. 950 – 1200 A.D.) This period may, in the Proto – Bengali satge, have gone

beyond 900 A.D. : in any case, it may be said to have overlapped the late MIA (Apabhramsa) stage. The sound system is practically the same as that of late MIA, only there has been simplification of double consonants and transformation of a nasal preceding a stop to a mere nasalization (often expressed in writing by leaving the nasal letter untouched) with compensatory lengthening of the preceding vowel). The vocabulary is mainly Tadbhava but Tatsama words also figure lightly. Literature is just at its beginning.

2. Middle Bengali Period: (1200-1800 A.D.) This is further divided into three stages:

a) Transitional Middle Bengali Period: (1200-1300 A.D.)
The language had its entire Bengali characteristics fully established during this period, so that from the speech of the Caryas it was transformed into that of the 'Sri Krisna Kirttana'. The conjugation became active in the past and future forms of the transitive verb, and the system of pronominal affixation to the past and future bases came in though it was not fully established till the 15th century.

b) Early Middle Bengali Period: (1300-1500 A.D.)
Bengali literature became fully established by the end of the 15th century, with a number of important works in Sanskrit like the Ramayana, Mahabharata, the Puranas etc. being adopted into Bengali.

c) Late Middle Bengali Period:(1500-1800 A.D.)

The earlier part of this period, during the 16th century, witnessed the development of Vaisnava literature through the influences of Chaitanya (1485-1533) and his disciples. Biography as a genre was added to Bengali literature. There was a great influence of Sanskrit, and of Maithili and a restricted one of Western Hindi (Braj Bhasha) on both language and literature. The artificial literary dialect 'Braj-buli' grew up. In the west Central Bengal , along the Hoogli river, the habit of vowel-mutation and general contraction of syllable began and this invaded other dialects as well.

3) Modern or New Bengali Period (1800---)

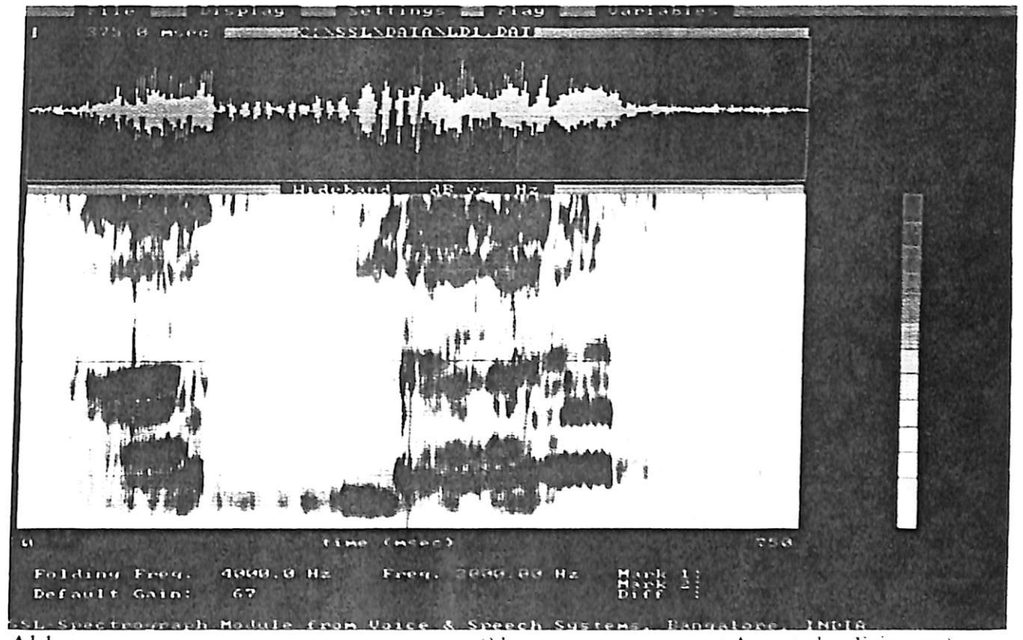
During this period, for the first time, prose was written seriously but for fifty years or so the literary language was under the tyranny of Sanskrit. Out of the large number of forms, dialectal and archaic, which prevailed in the Middle Bengali, specially in the three centuries (1500-1800) a standard language evolved for prose, in which only a few recognised forms were used; and this documentary and epistolary Bengali, based as it was on the speech of the 15th century was adopted as the language of ordinary prose style. This literary form for prose became the standard and the growth of the printing press established the grammar and the orthography.

2. SPECTROGRAPHIC ANALYSIS

As already stated in the Introduction to this Report a list of forty words containing problematic sounds for the Bengalese was prepared and the pronunciation of these words by Bengalese living in the states of Assam, West Bengal and Tripura was recorded. Though the voice of many people were recorded from each place for the purpose of this research, only four recordings were ultimately selected for spectrographic study. These four come from Barak Valley (Assam), Malda (West Bengal), Kolkata (West Bengal) and Agartala (Tripura). These one hundred and sixty (4x40=160) voice recordings were fed into the spectrograph in the Central Institute of English and Foreign Languages at Hyderabad and the 160 spectrograms were produced. Each word has, therefore, four spectrograms. Spectrograms numbering 1, 41, 81 and 121 (and all numbers with a gap of 40) are the spectrograms of the same word pronounced by four native speakers of Bengali living in the four regions mentioned above. The word of which the spectrogram is produced and the place at which the word is recorded are given below each spectrogram. The analysis is written on the basis of a comparative study of all the four spectrograms of each word. The spectrograms are placed after the following page. The most problematic areas like vowel duration, quality of vowels, change of fricative into plosive and affricate, sequences and clusters in Bengali English etc. are looked into and the findings are entered after the spectrograms.

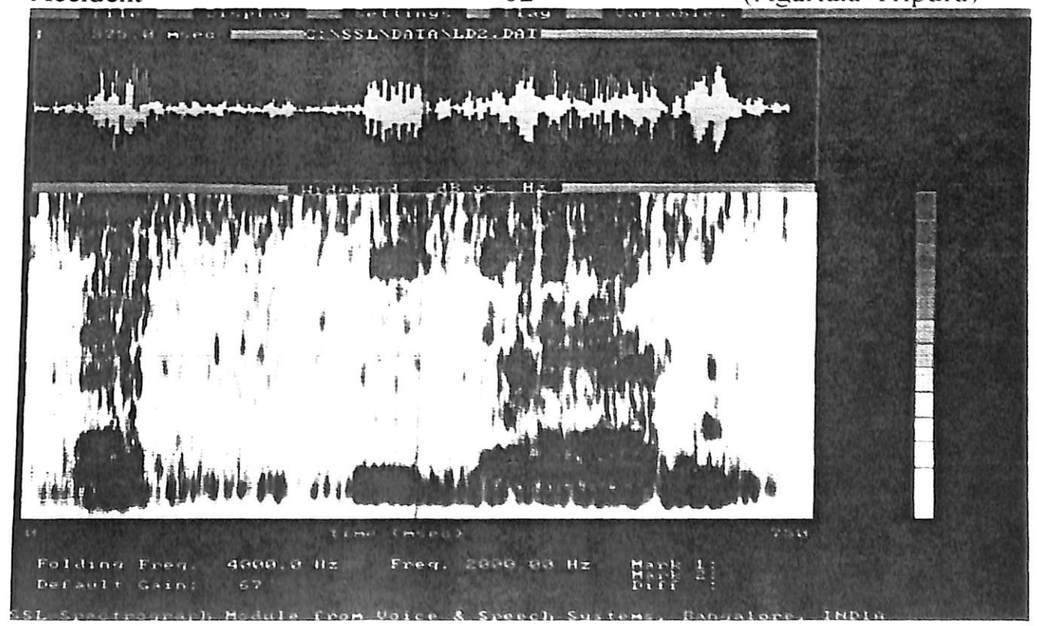
The list of the forty words

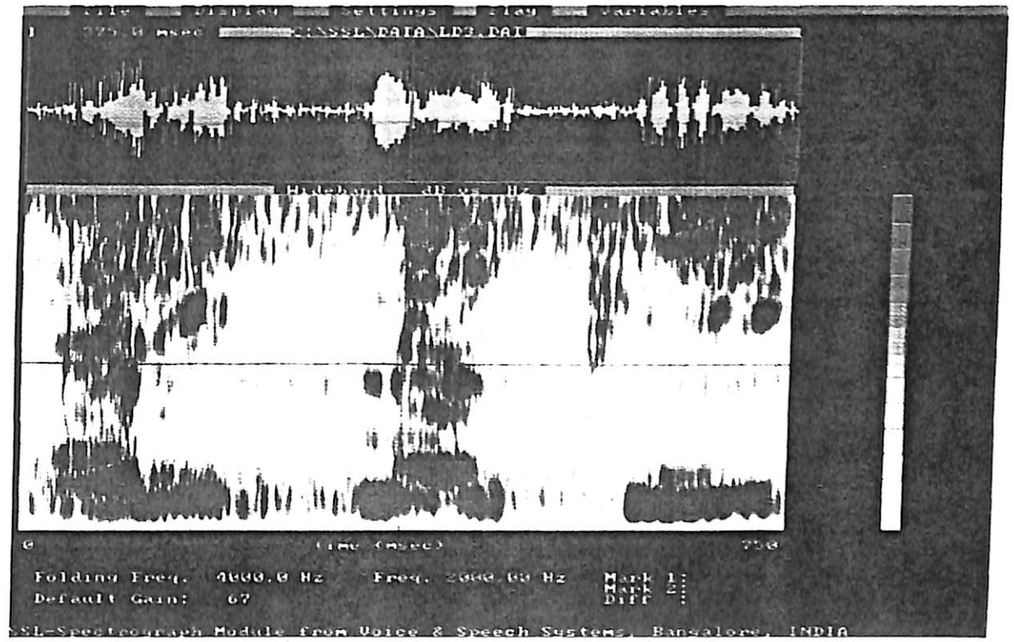
1	Abler	21	judge
2	Accident	22	major
3	Arithmetic	23	mother
4	Army	24	measure
5	Bard	25	peer
6	Boy	26	pair
7	Bowel	27	poor
8	Bird	28	pine
9	Blur	29	park
10	Cart	30	risk
11	Cow	31	rickshaw
12	Cut	32	sell
13	Feel	33	shot
14	Full	34	shell
15	Fill	35	short
16	Fool	36	vowel
17	Gate	37	war
18	Go	38	without
19	Get	39	yellow
20	Jealous	40	zealous



Abler 01 (Agartala-Tripura)

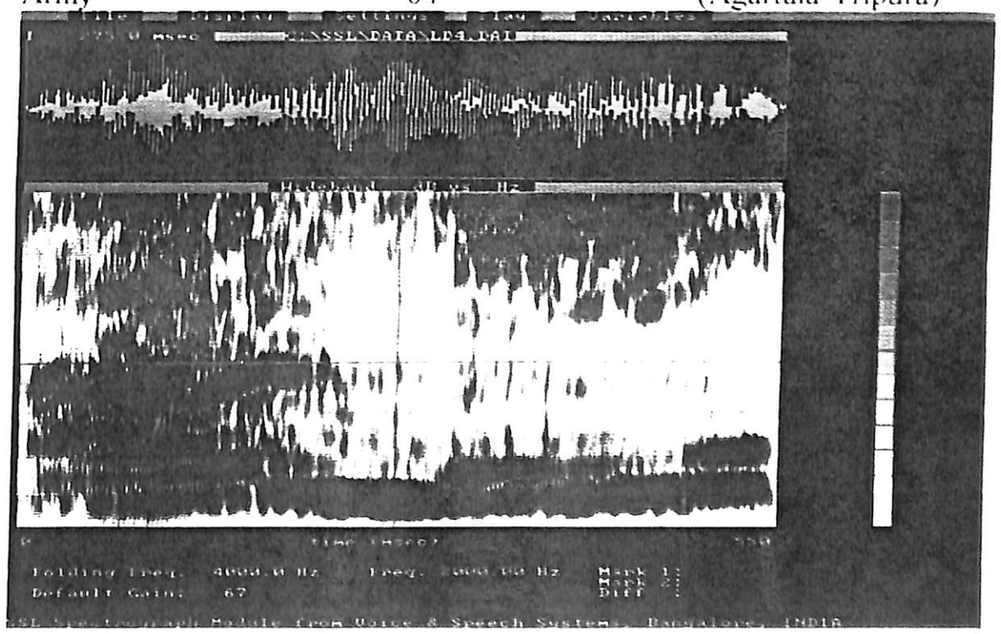
Accident 02 (Agartala-Tripura)

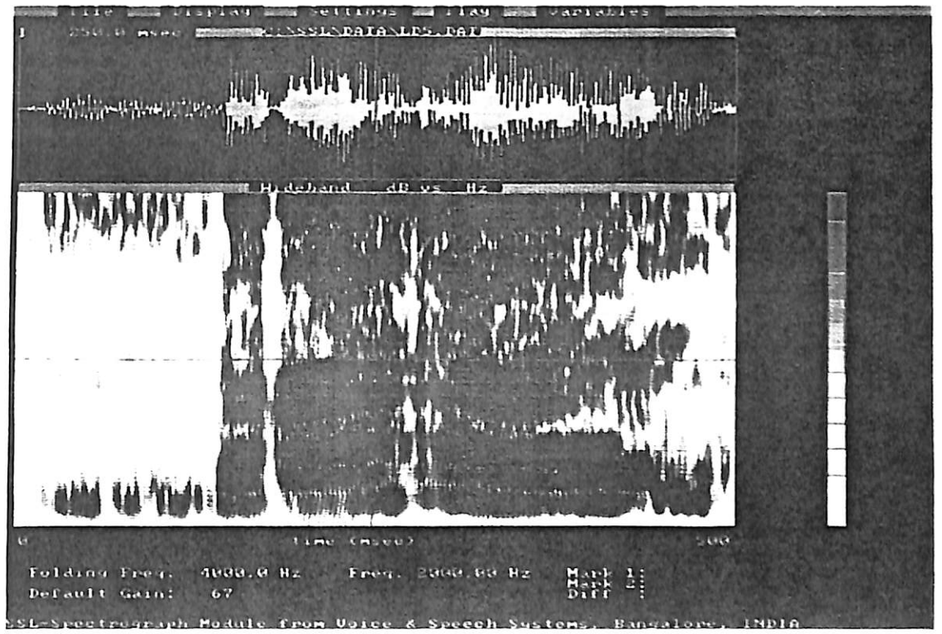




Arithmetic 03 (Agartala-Tripura)

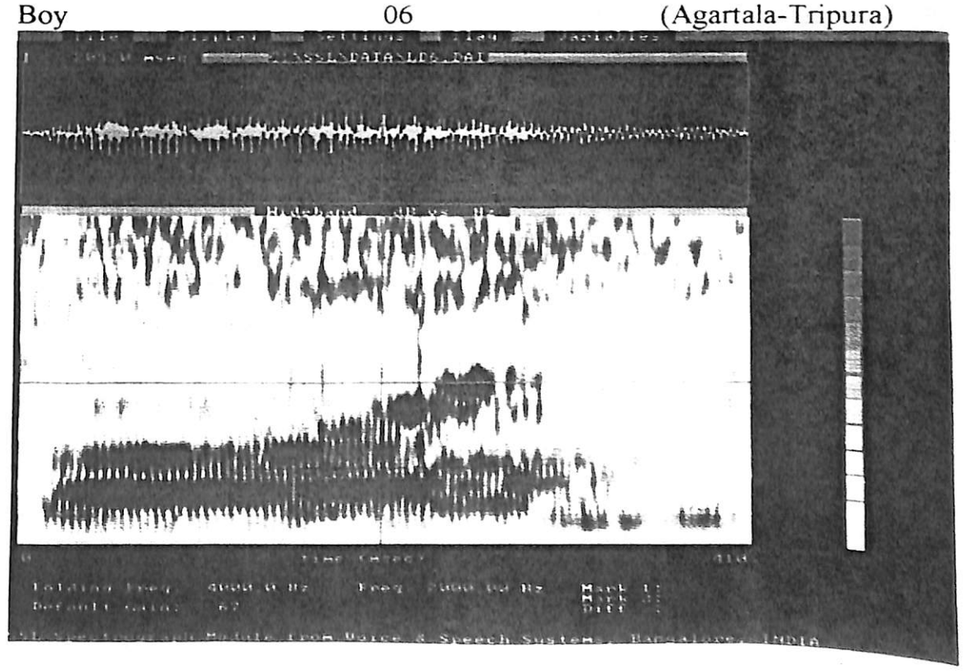
Army 04 (Agartala-Tripura)

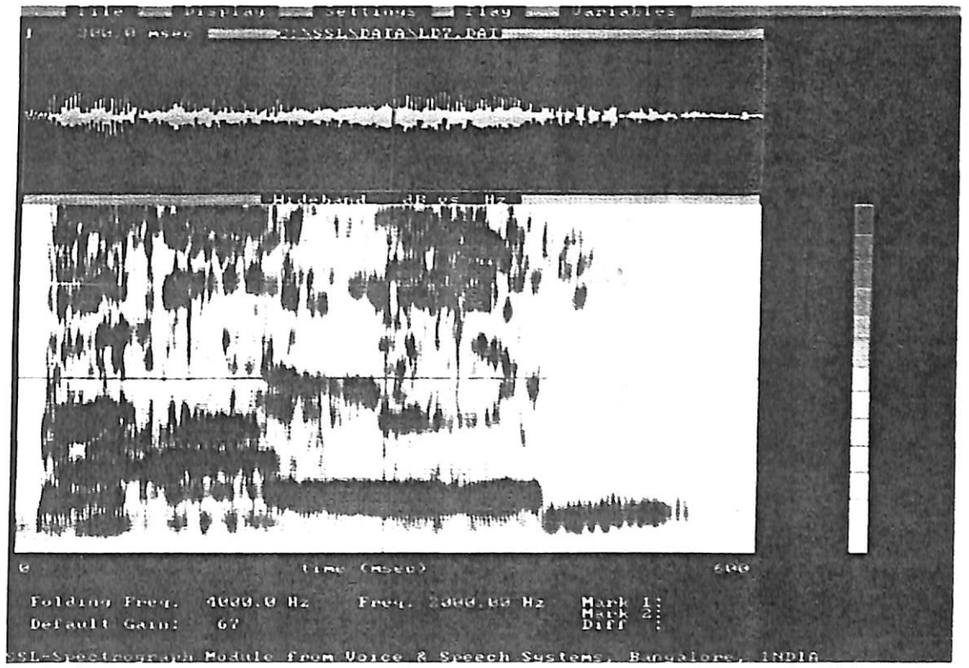




Bard 05 (Agartala-Tripura)

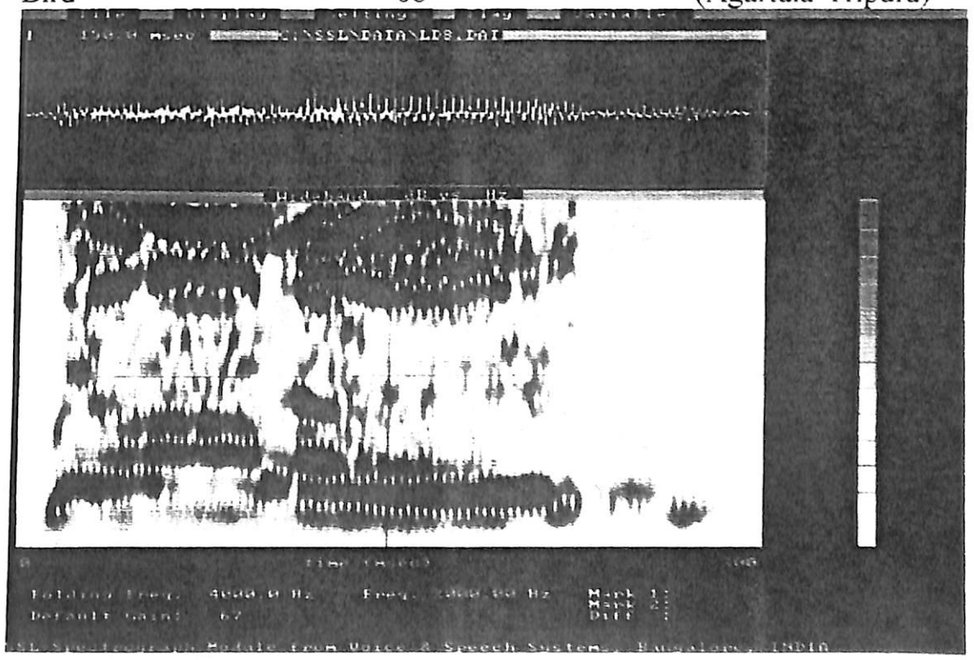
Boy 06 (Agartala-Tripura)

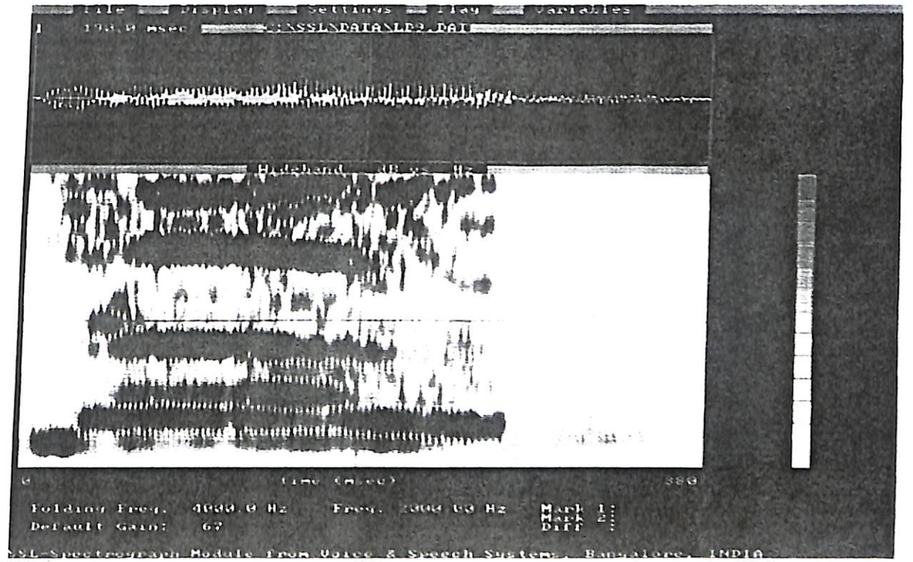




Bowel 07 (Agartala-Tripura)

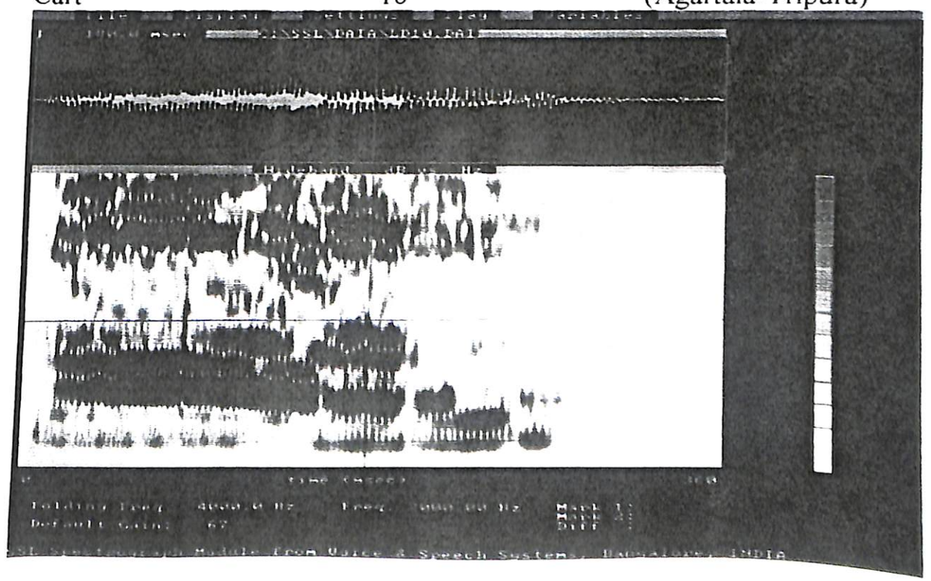
Bird 08 (Agartala-Tripura)

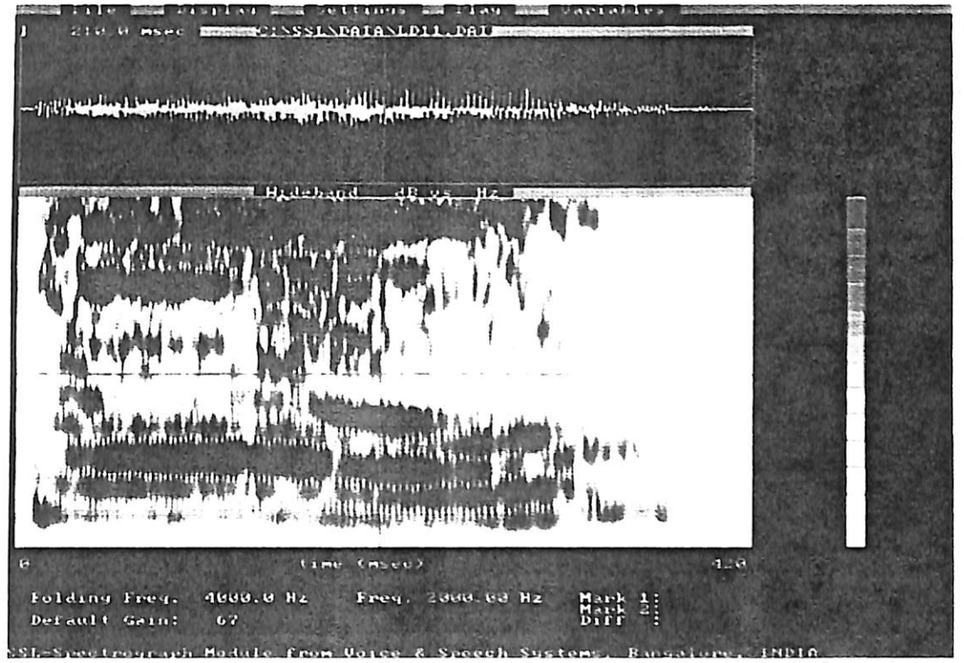




Blur 09 (Agartala-Tripura)

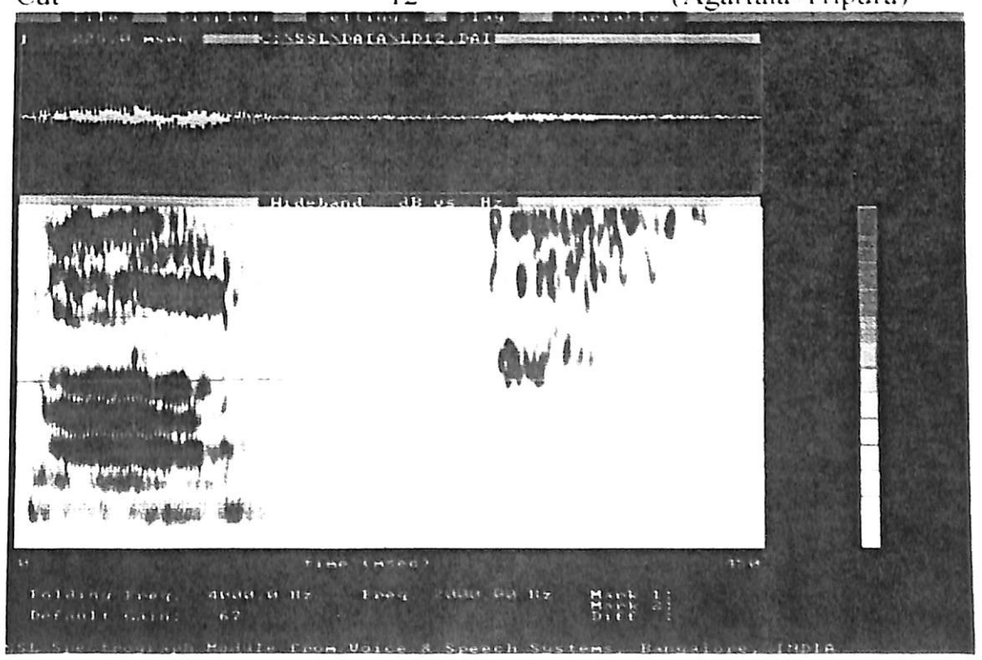
Cart 10 (Agartala-Tripura)

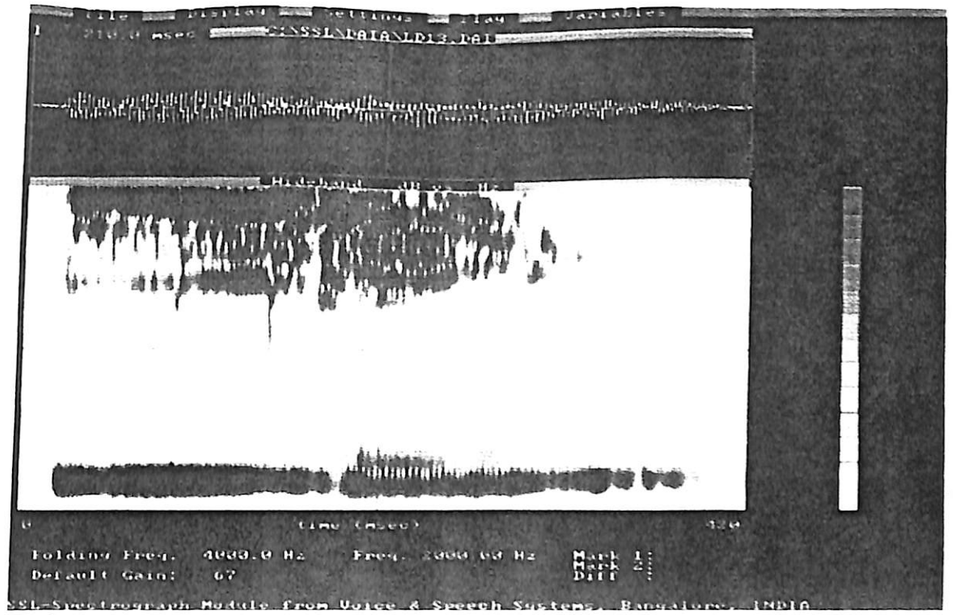




Cow 11 (Agartala-Tripura)

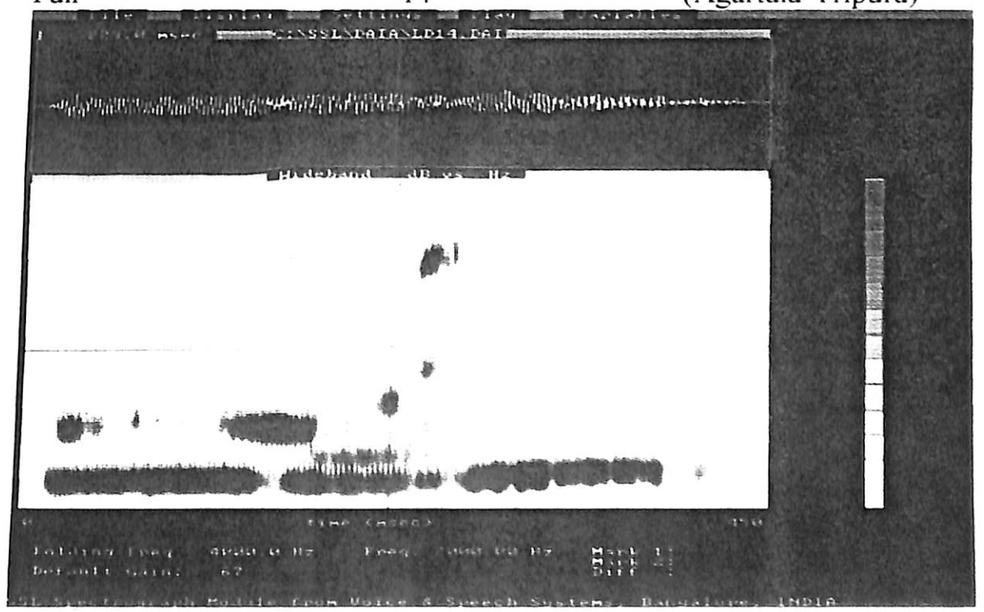
Cut 12 (Agartala-Tripura)

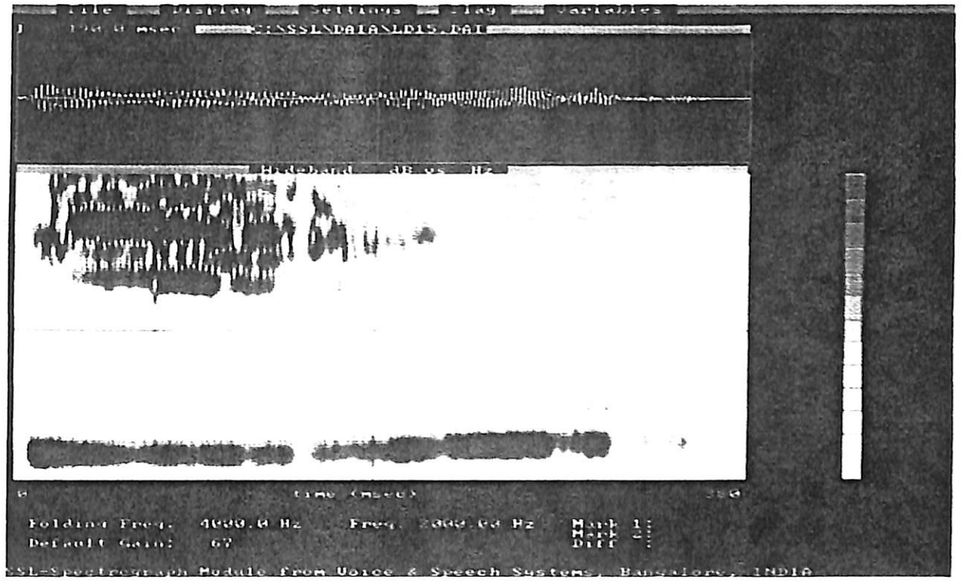




Feel 13 (Agartala-Tripura)

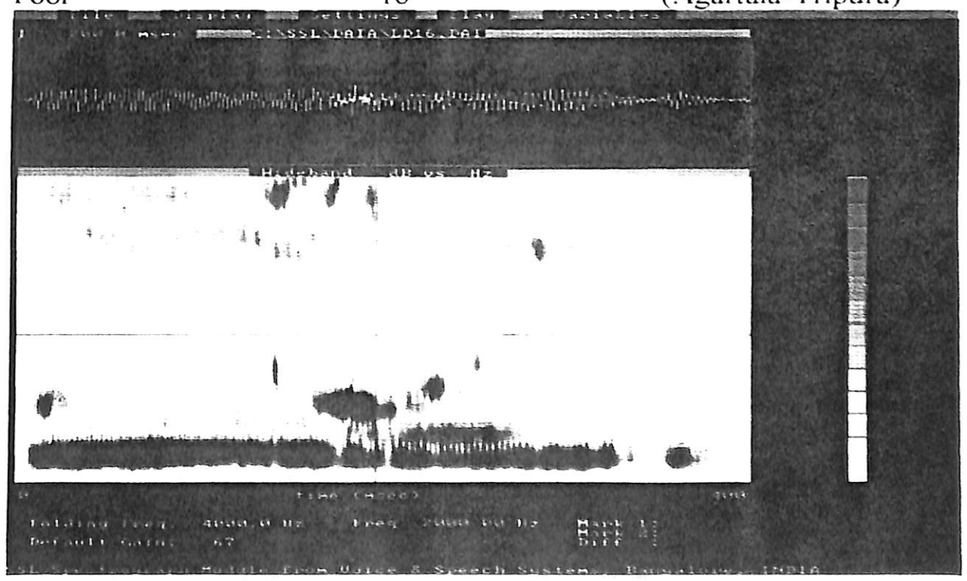
Full 14 (Agartala-Tripura)

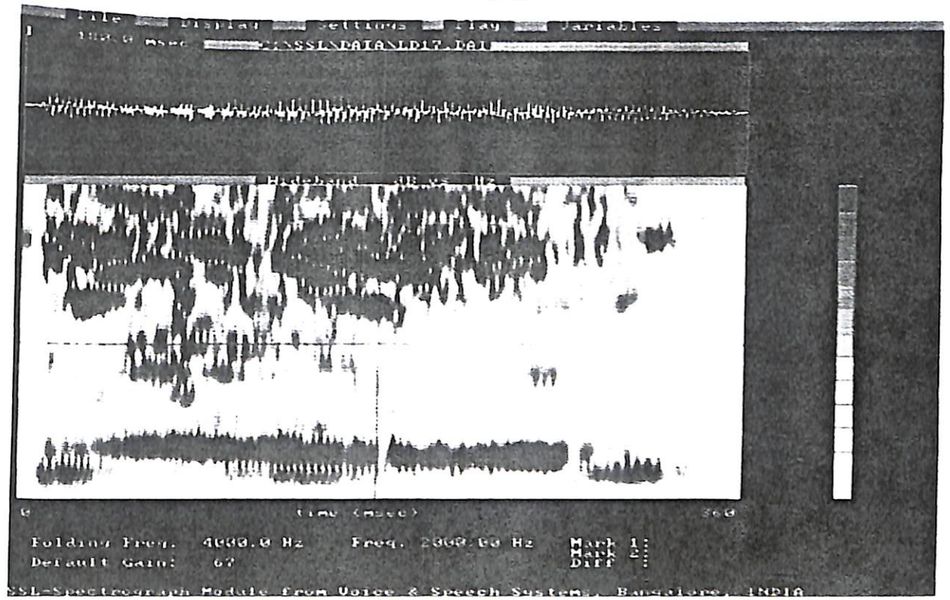




Fill 15 (Agartala-Tripura)

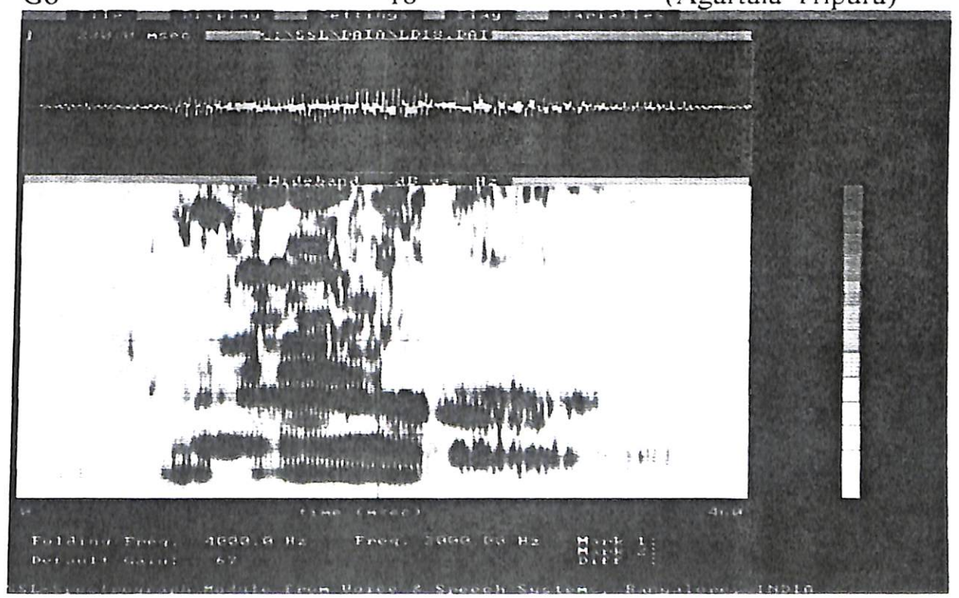
Fool 16 (Agartala-Tripura)

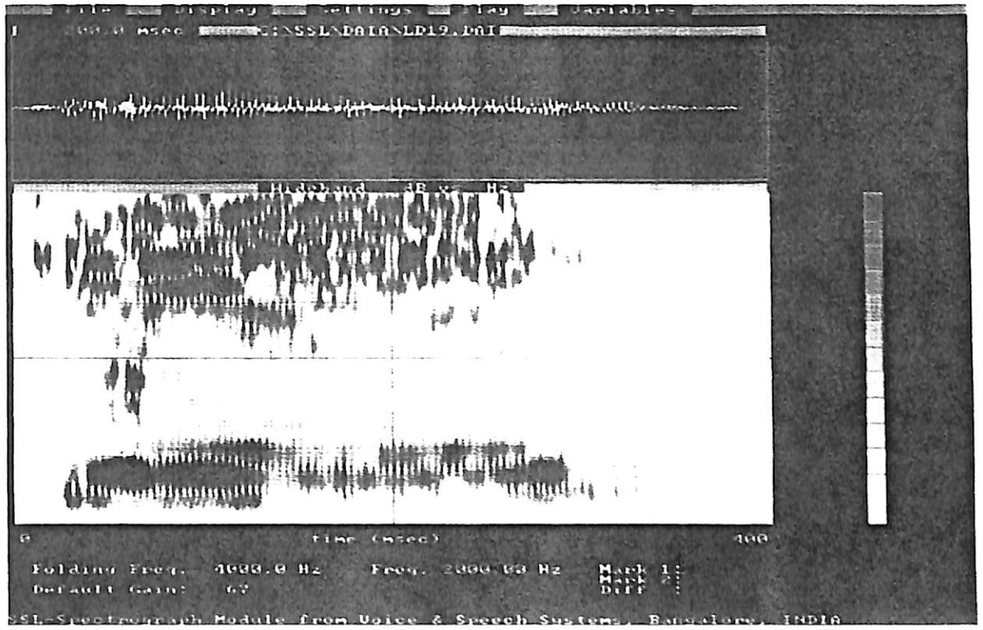




Gate 17 (Agartala-Tripura)

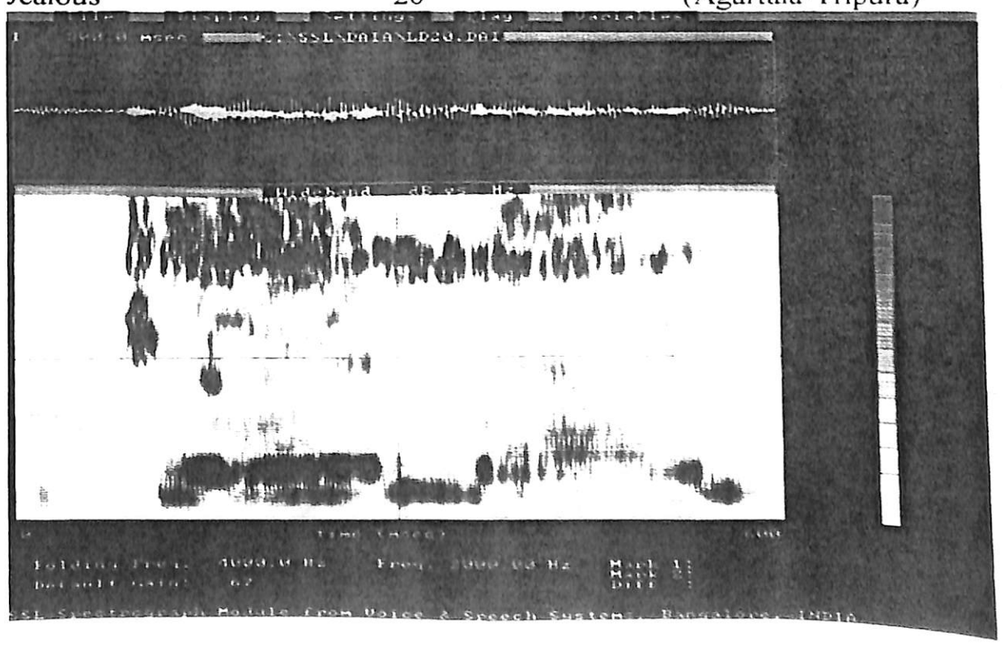
Go 18 (Agartala-Tripura)

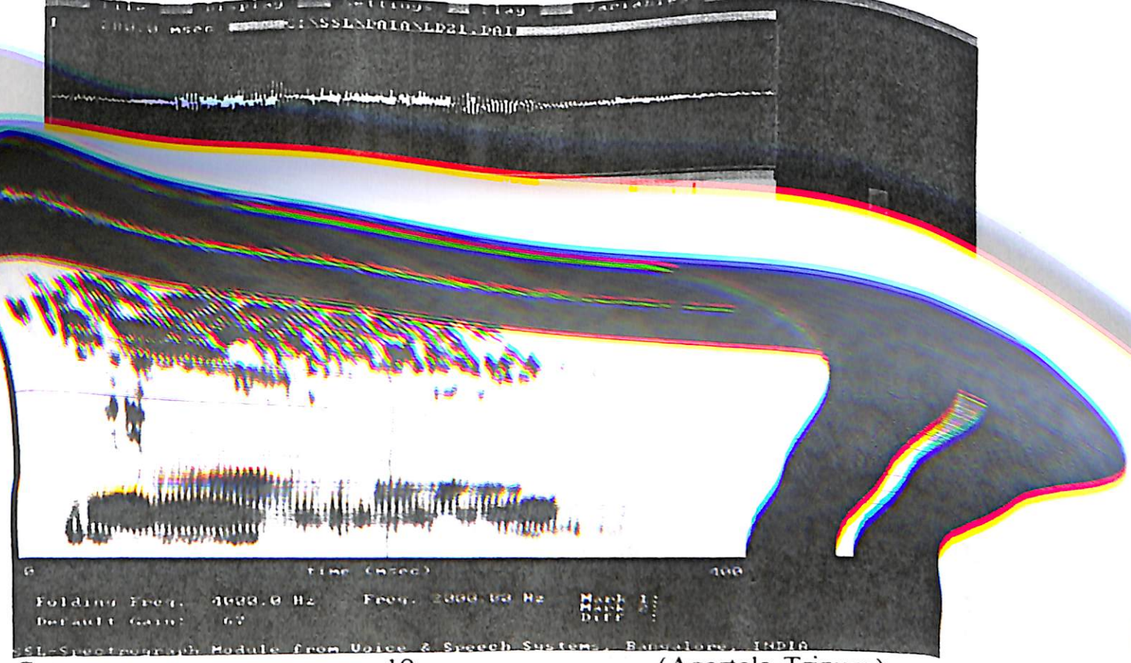




Get 19 (Agartala-Tripura)

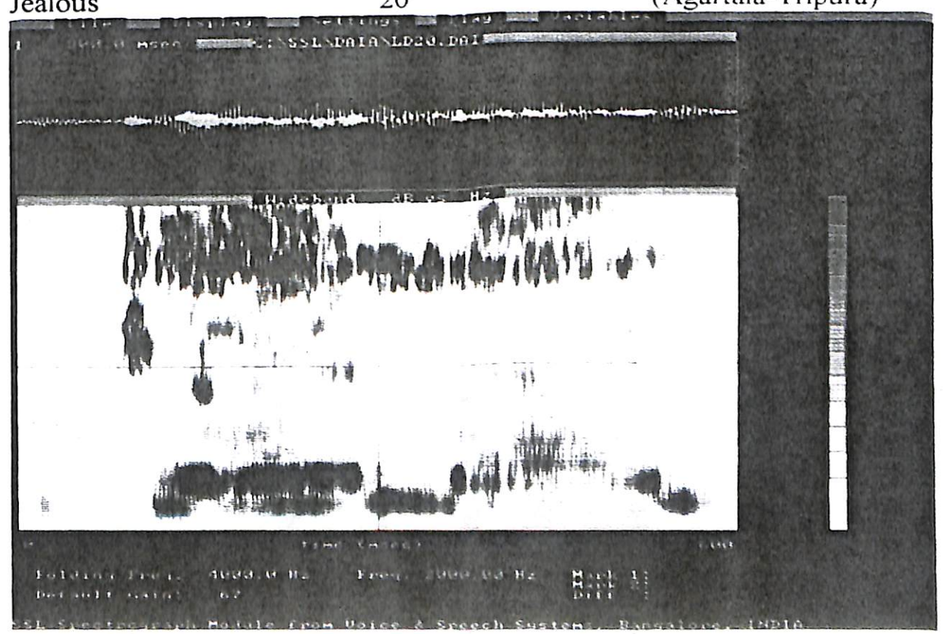
Jealous 20 (Agartala-Tripura)

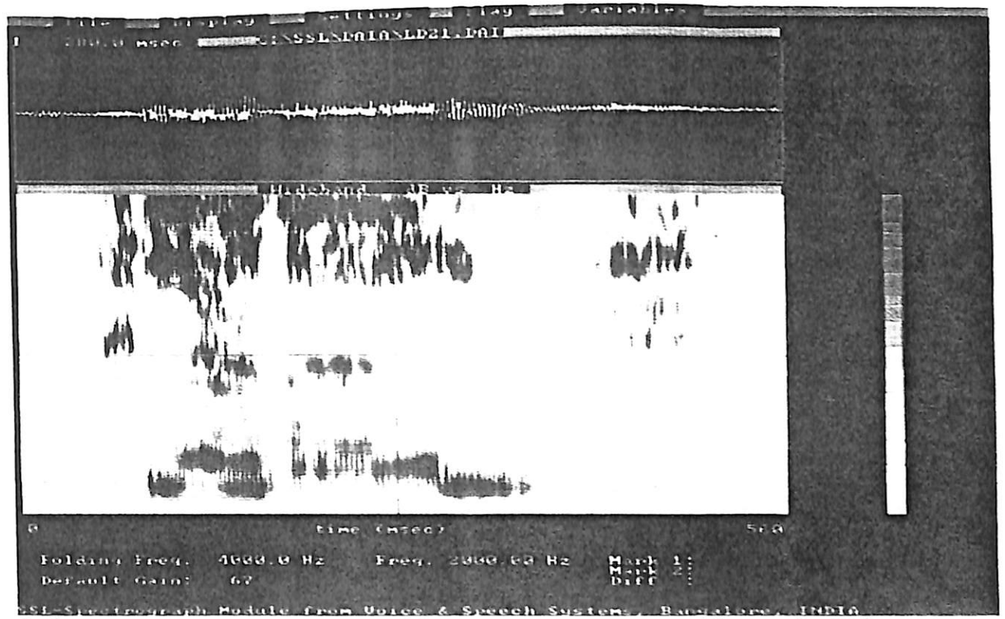




Get 19 (Agartala-Tripura)

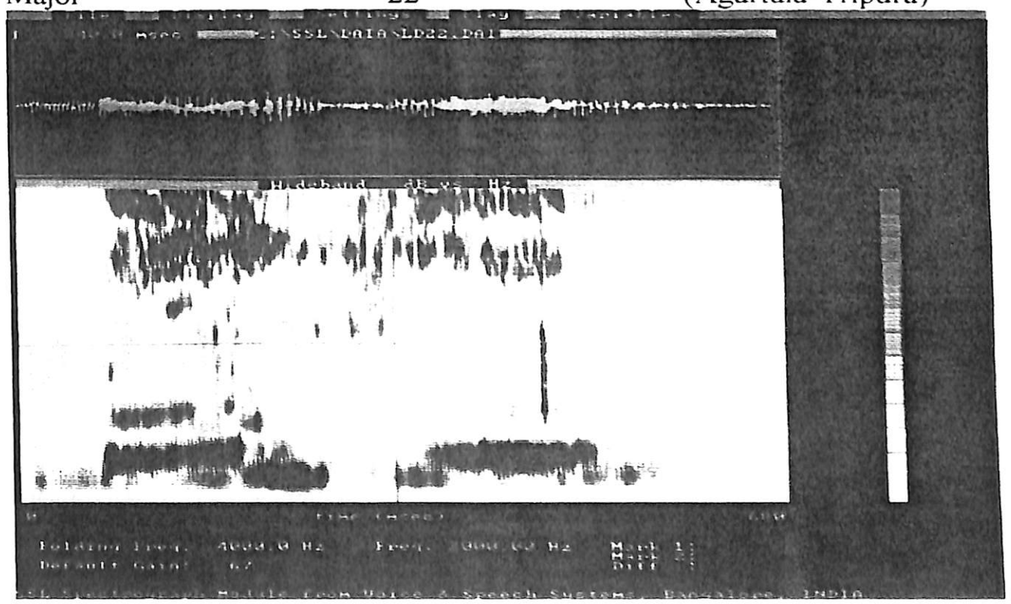
Jealous 20 (Agartala-Tripura)

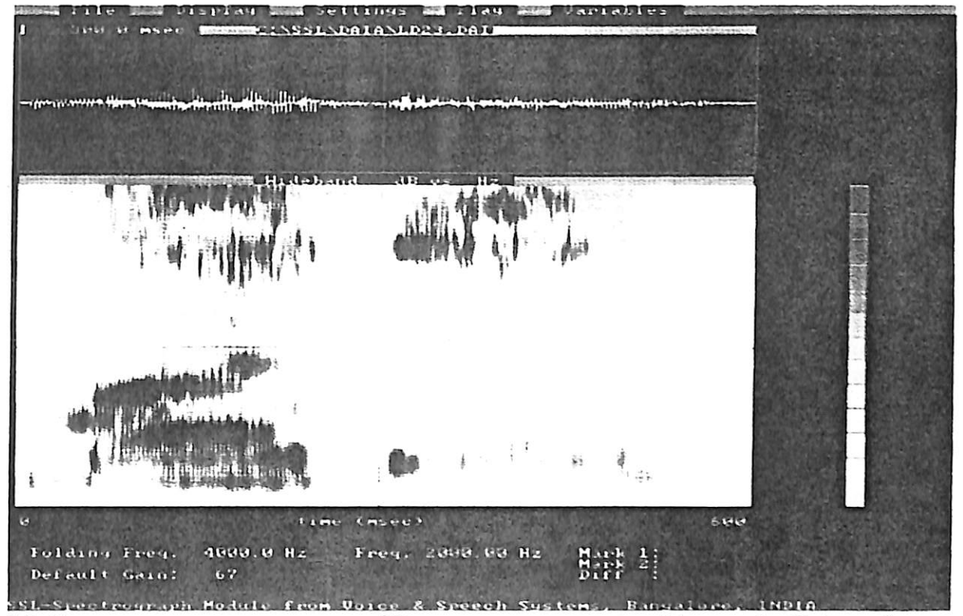




Judge 21 (Agartala-Tripura)

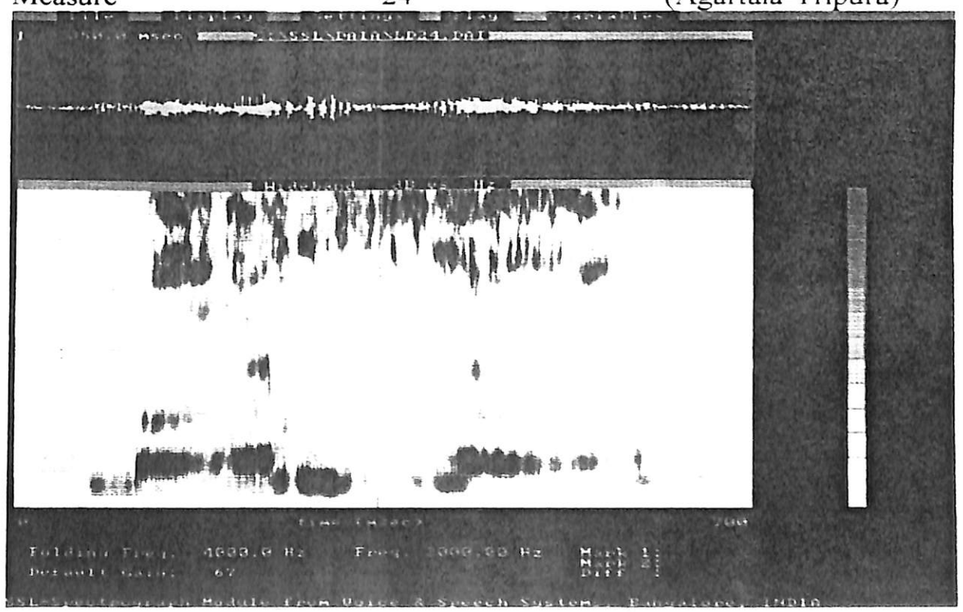
Major 22 (Agartala-Tripura)

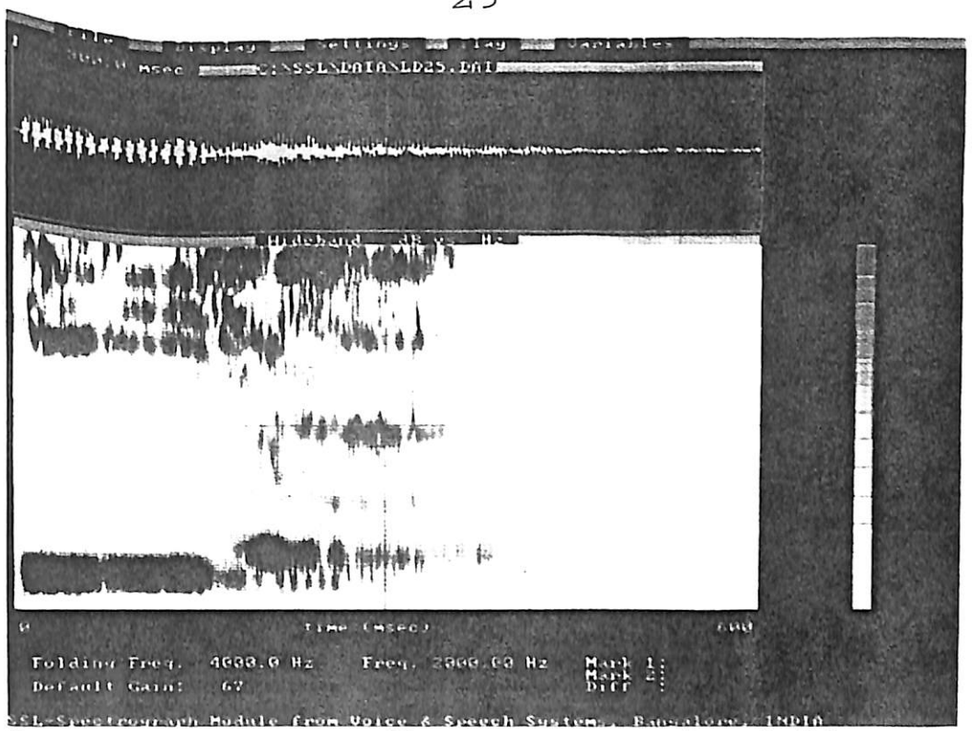




Mother 23 (Agartala-Tripura)

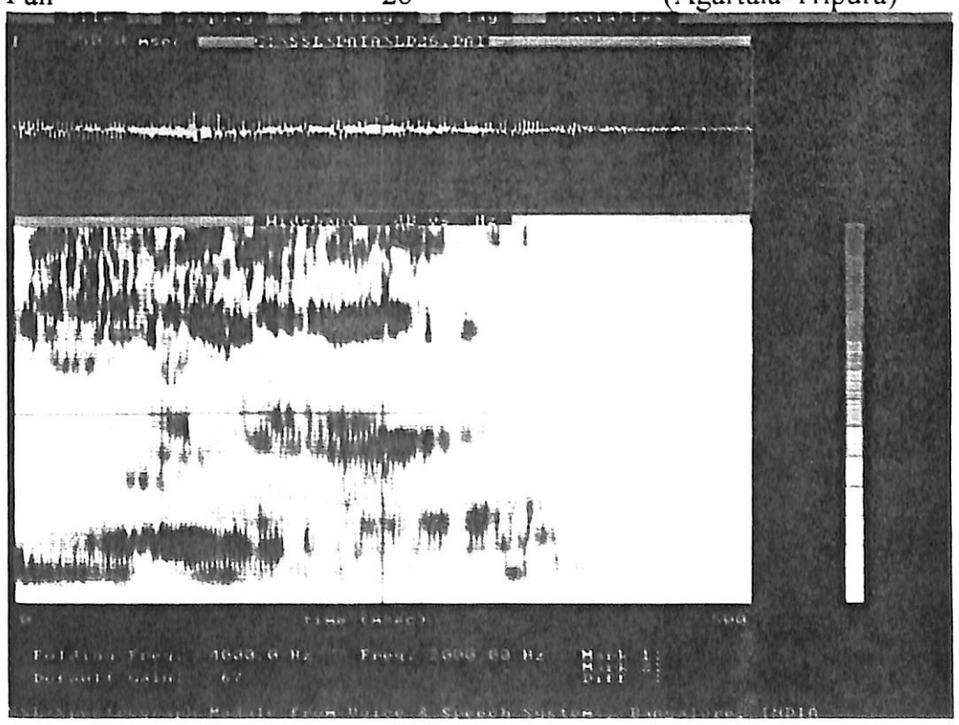
Measure 24 (Agartala-Tripura)

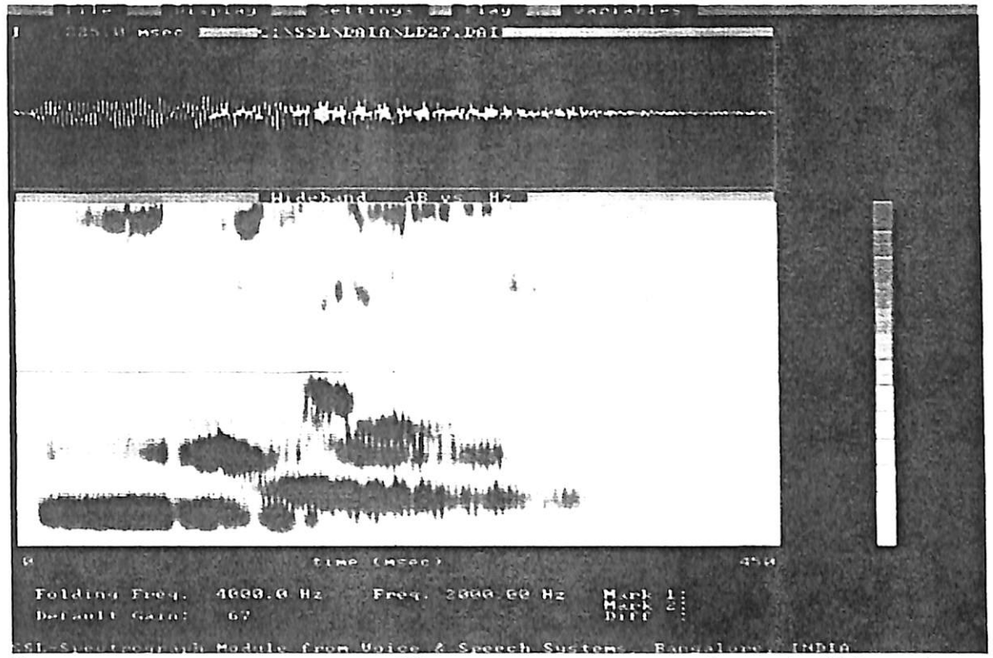




Peer 25 (Agartala-Tripura)

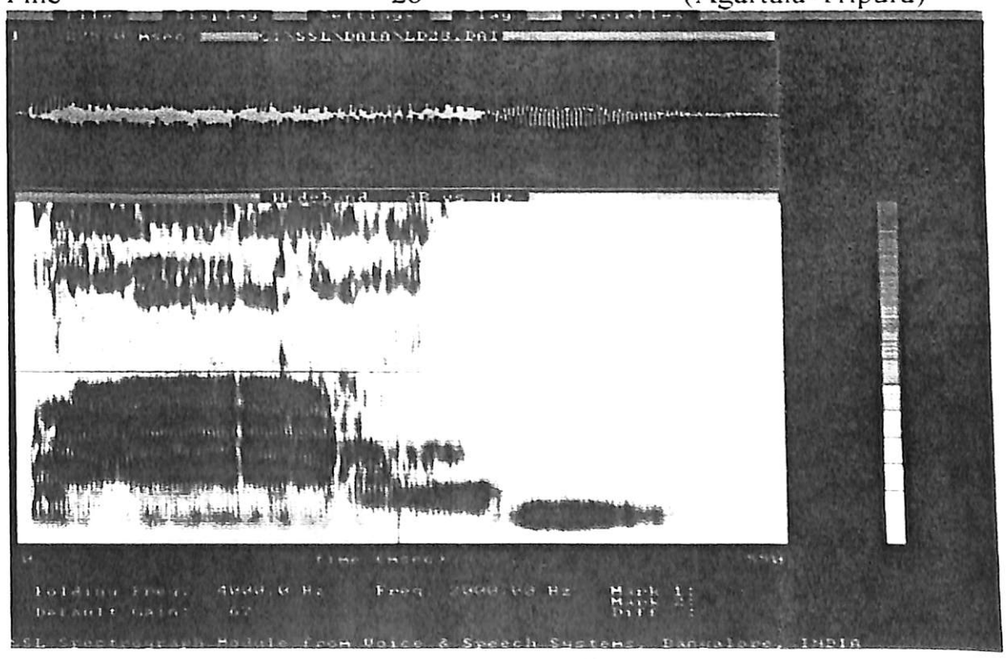
Pair 26 (Agartala-Tripura)

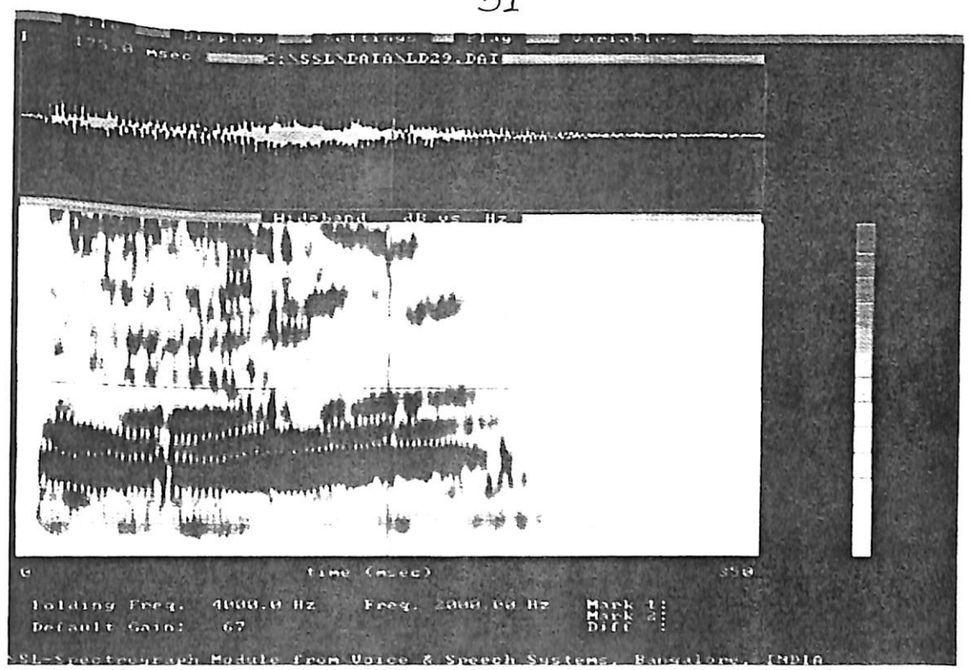




Poor 27 (Agartala-Tripura)

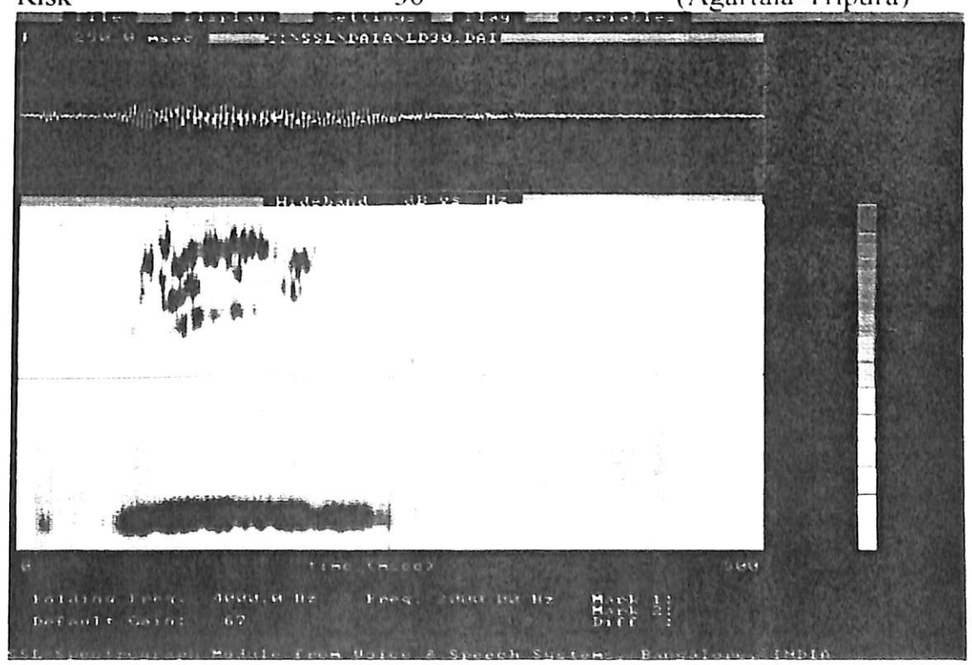
Pine 28 (Agartala-Tripura)

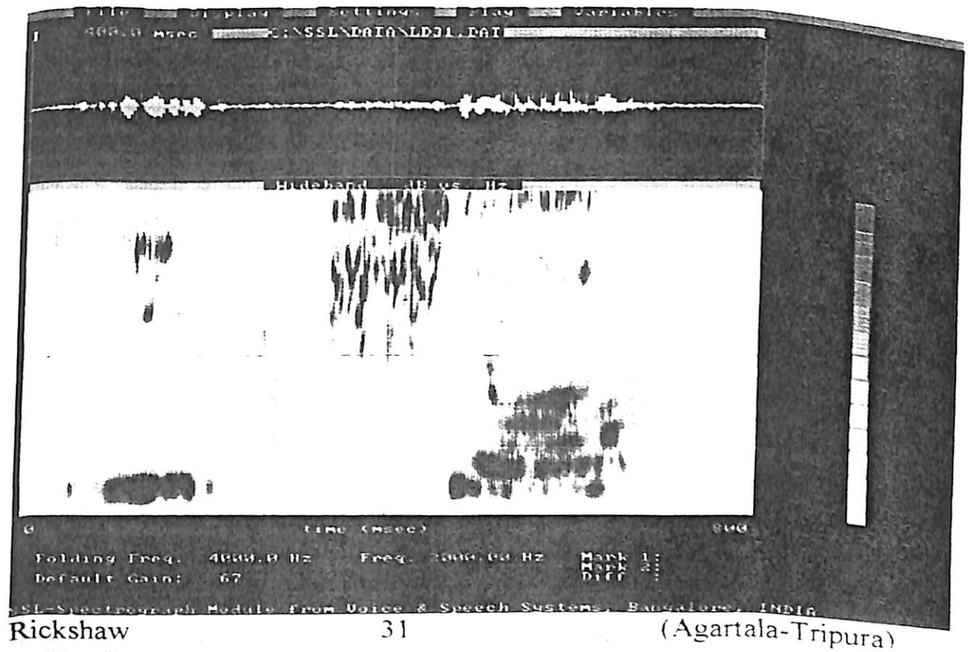




Park 29 (Agartala-Tripura)

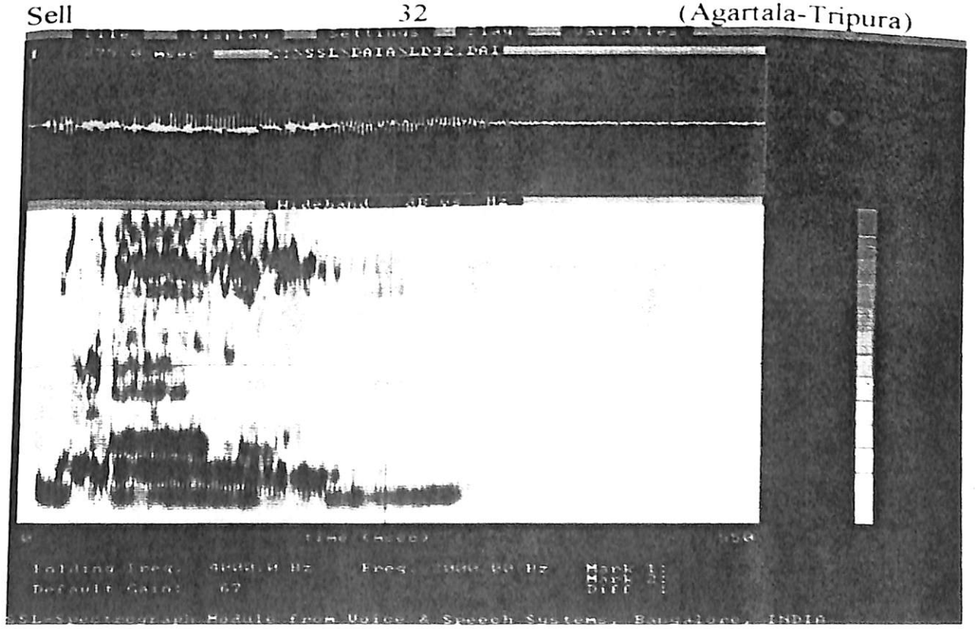
Risk 30 (Agartala-Tripura)



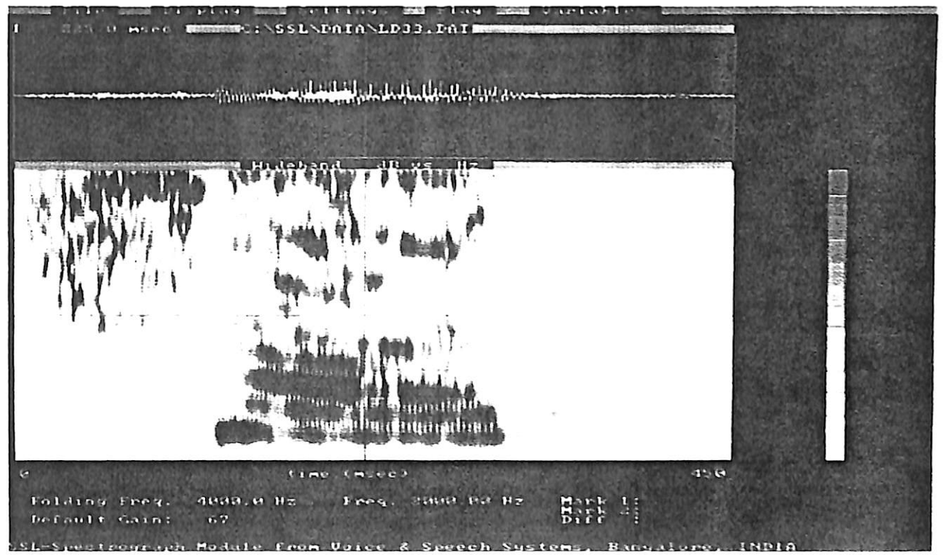


Rickshaw 31 (Agartala-Tripura)

Sell 32 (Agartala-Tripura)

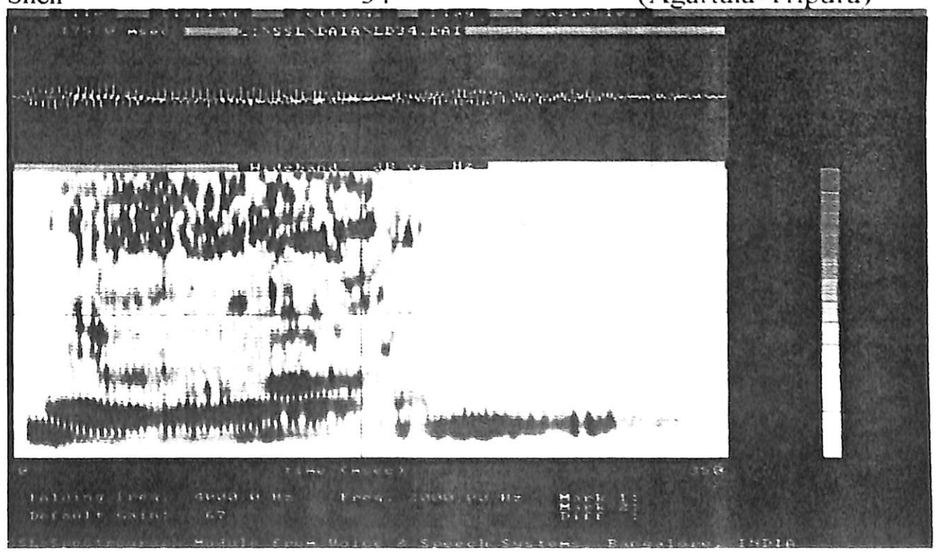


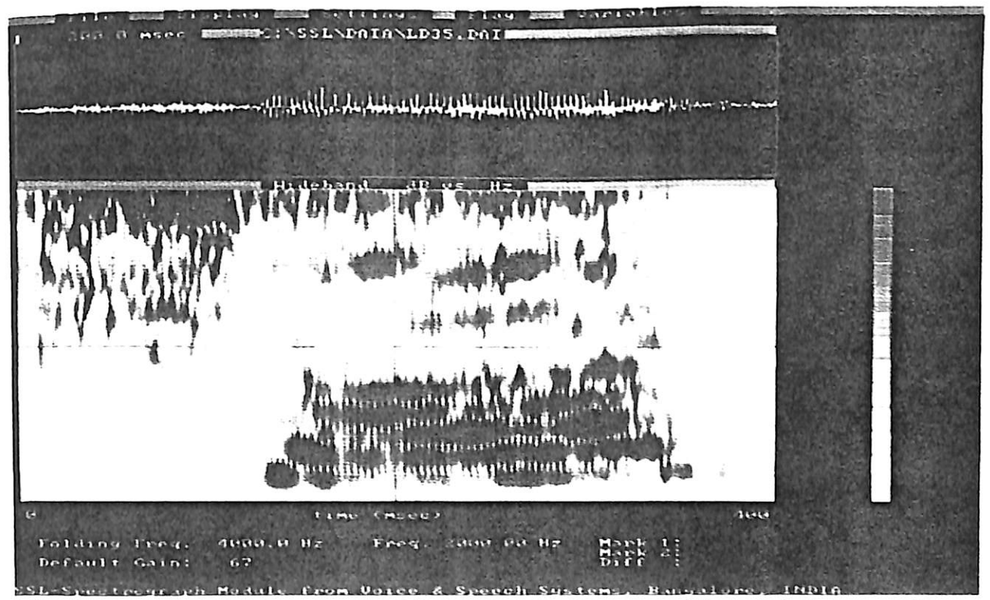
33



Shot 33 (Agartala-Tripura)

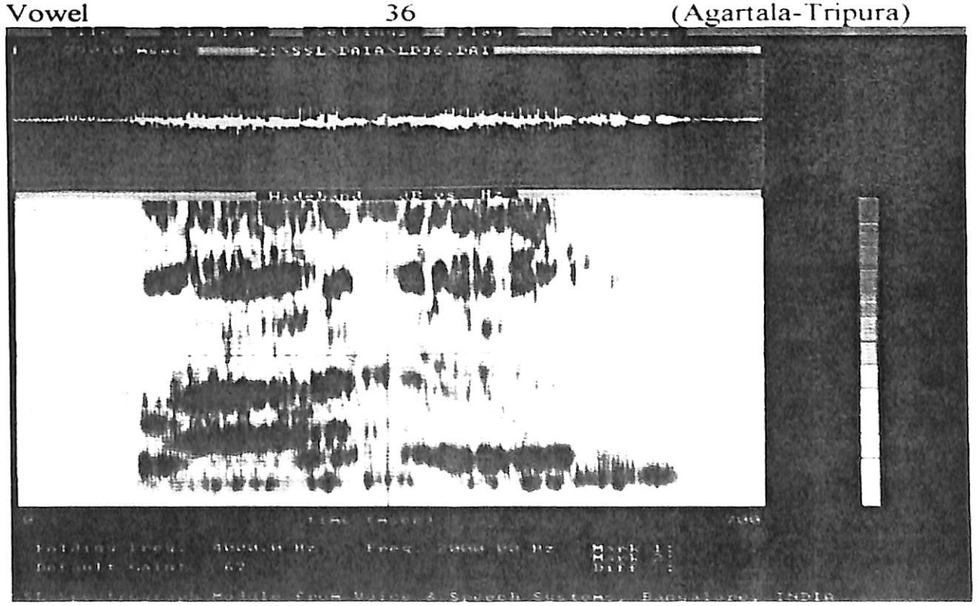
Shell 34 (Agartala-Tripura)

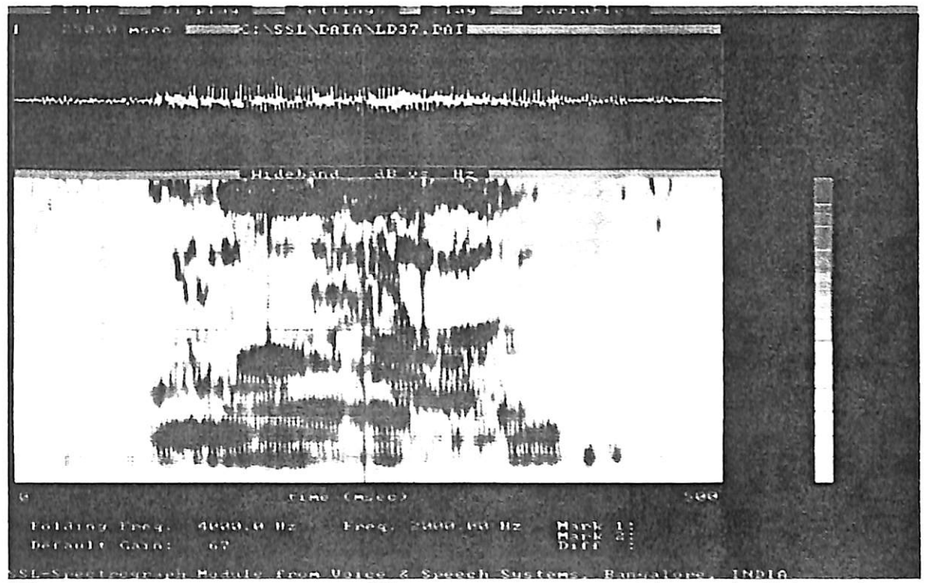




Short 35 (Agartala-Tripura)

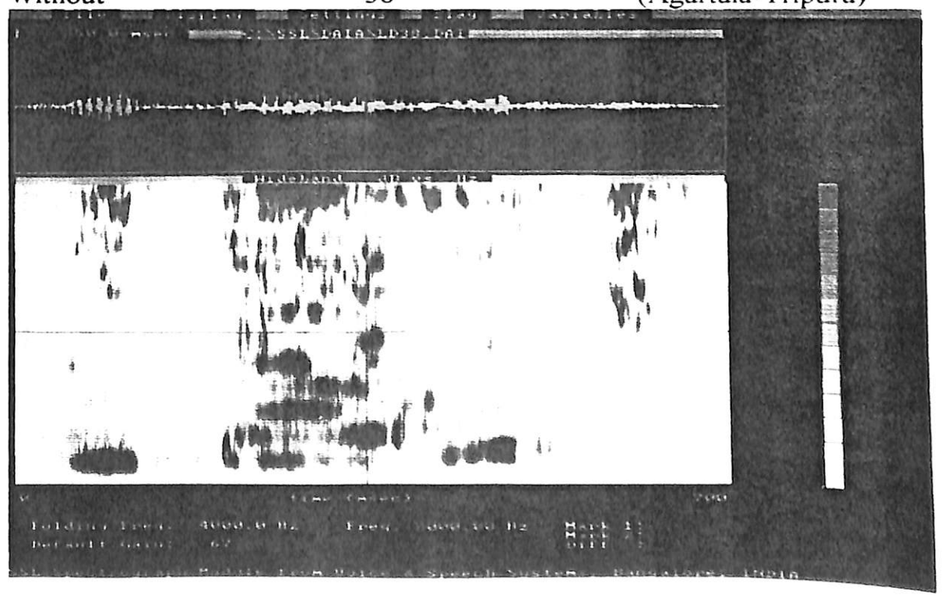
Vowel 36 (Agartala-Tripura)

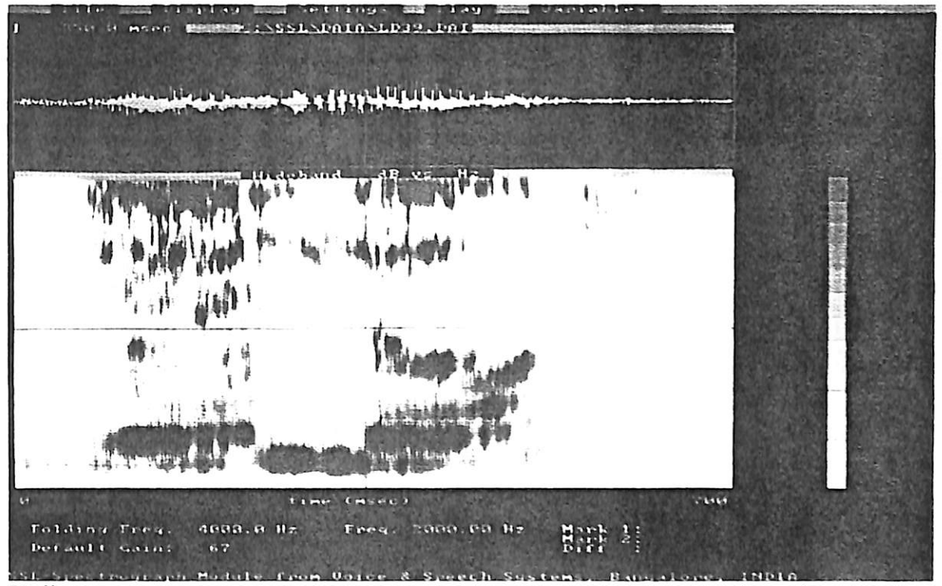




War 37 (Agartala-Tripura)

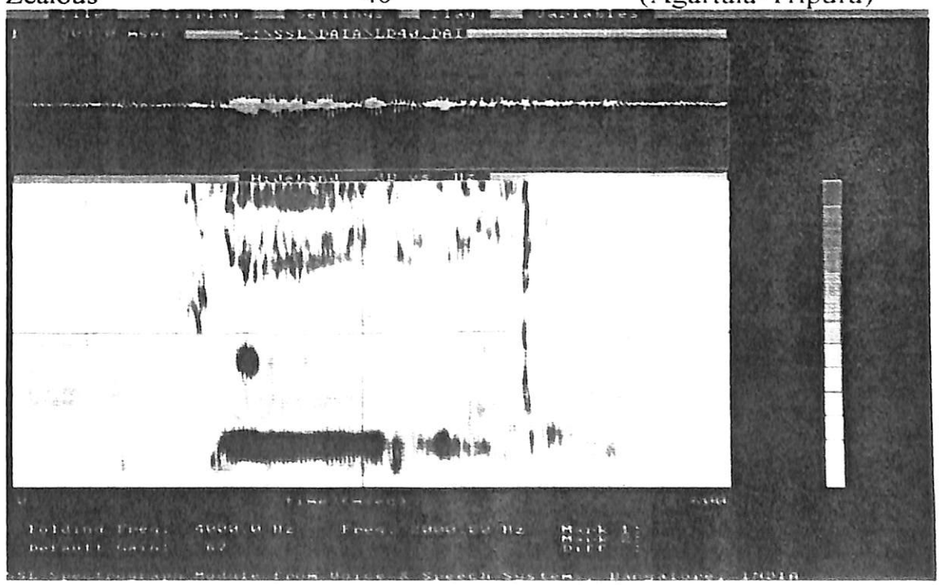
Without 38 (Agartala-Tripura)

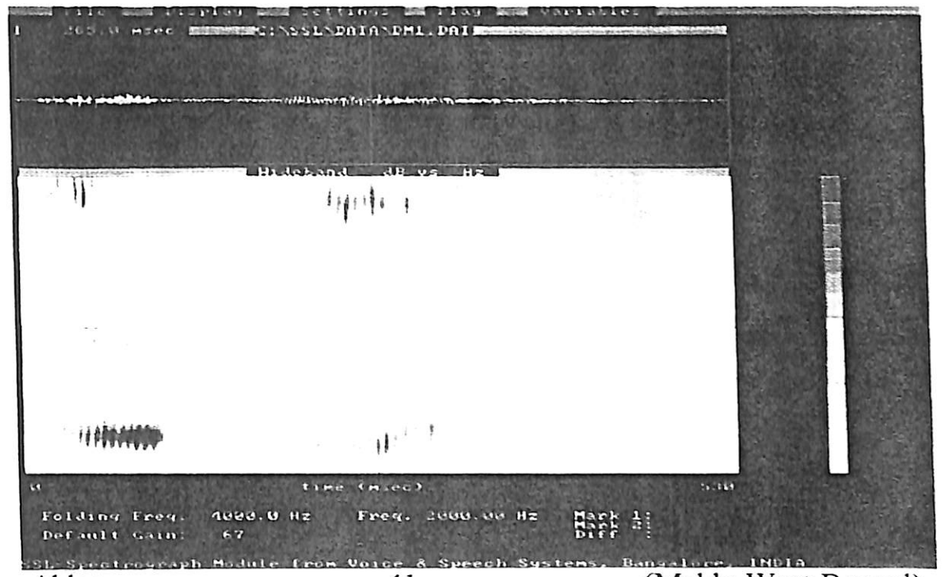




Yellow 39 (Agartala-Tripura)

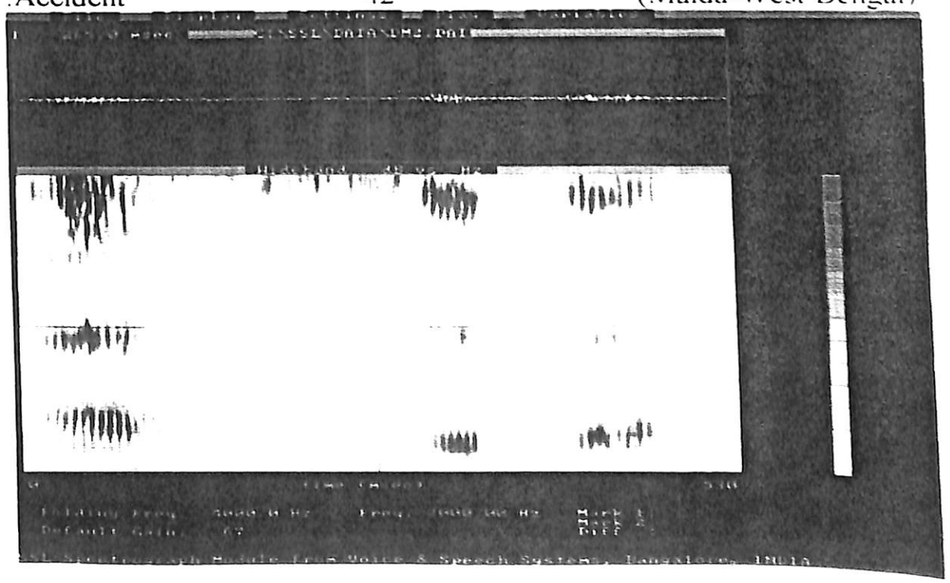
Zealous 40 (Agartala-Tripura)

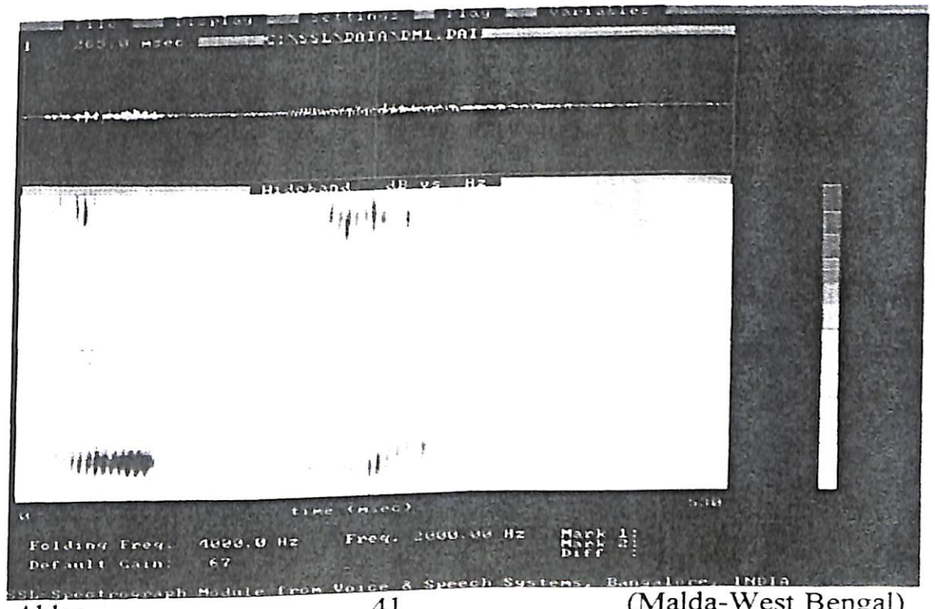




.Abler 41 (Malda-West Bengal)

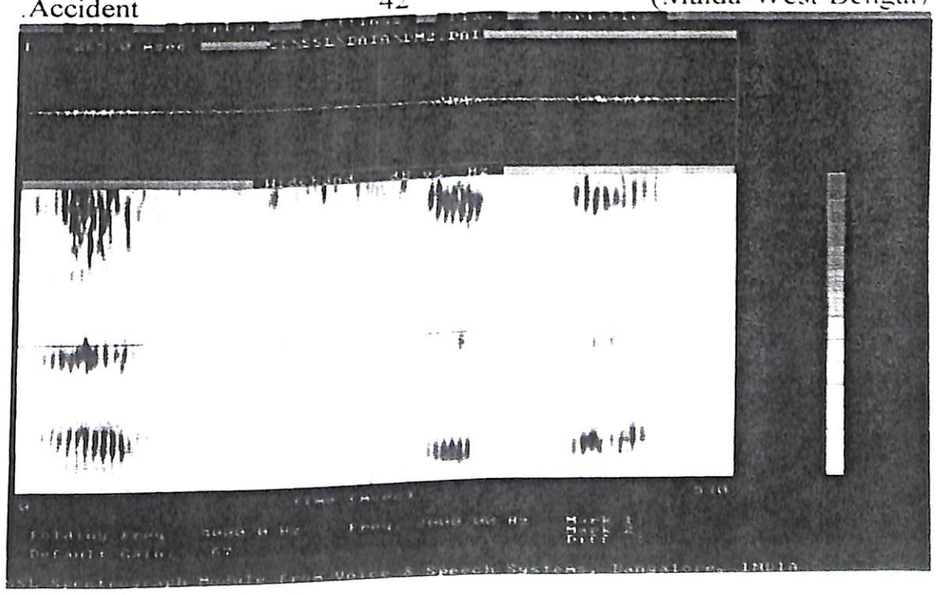
.Accident 42 (Malda-West Bengal)

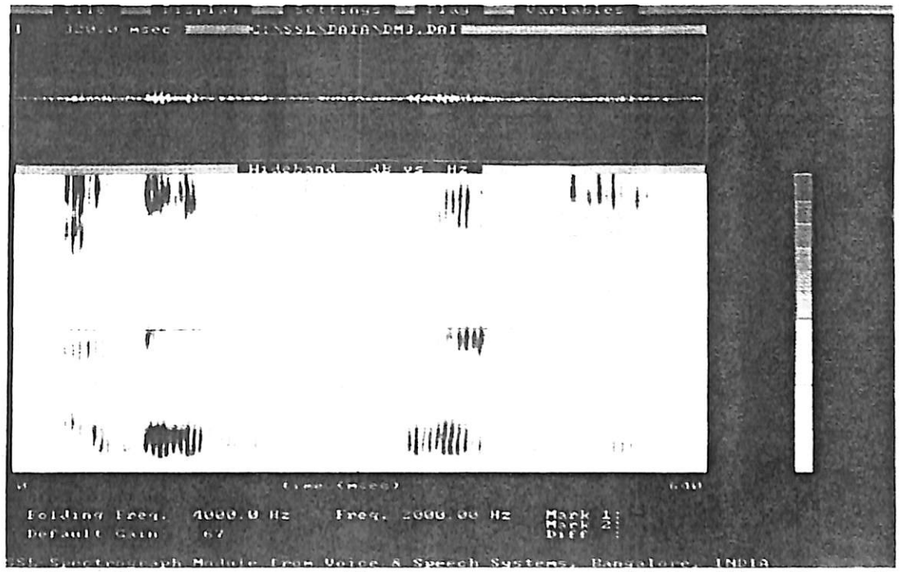




.Abler 41 (Malda-West Bengal)

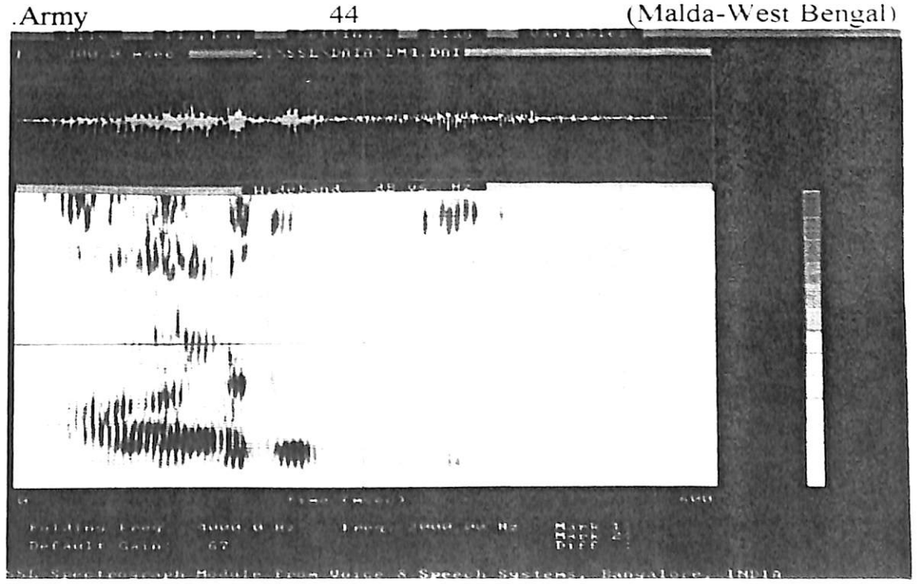
.Accident 42 (Malda-West Bengal)



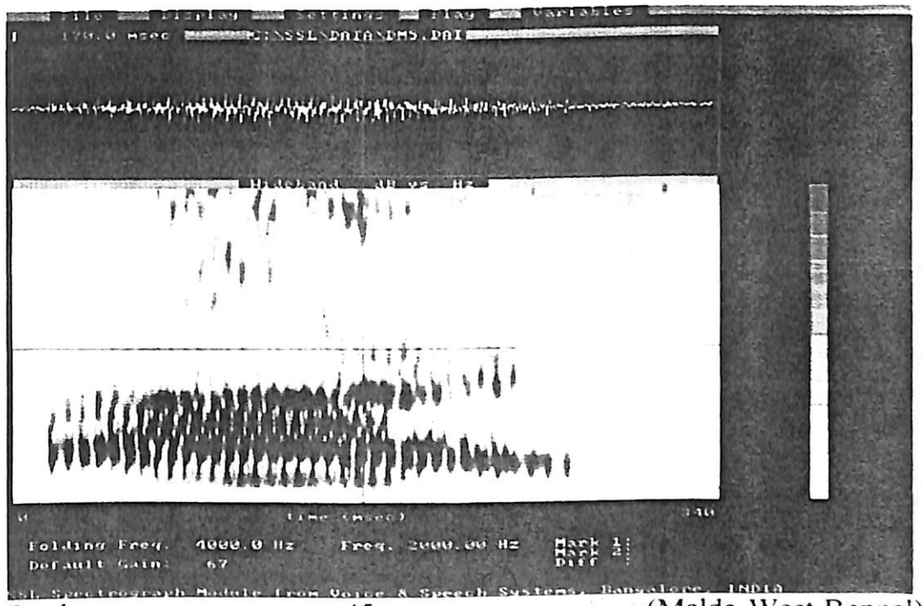


.Arithmetic 43 (Malda-West Bengal)

.Army 44 (Malda-West Bengal)

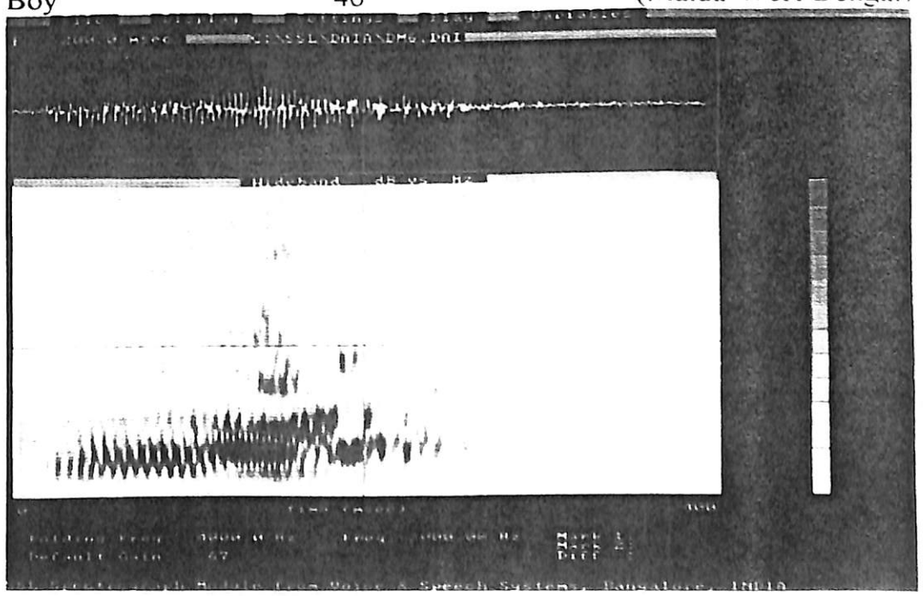


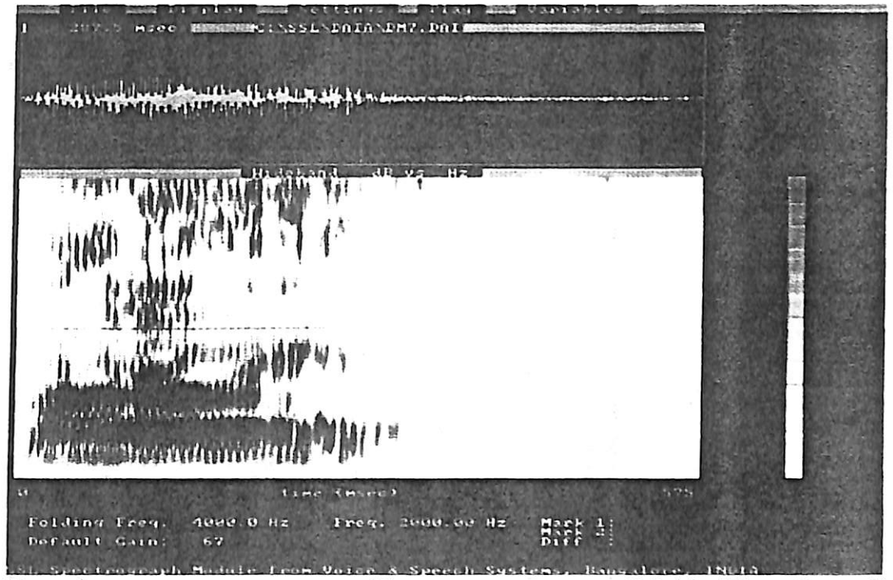
39



Bard 45 (Malda-West Bengal)

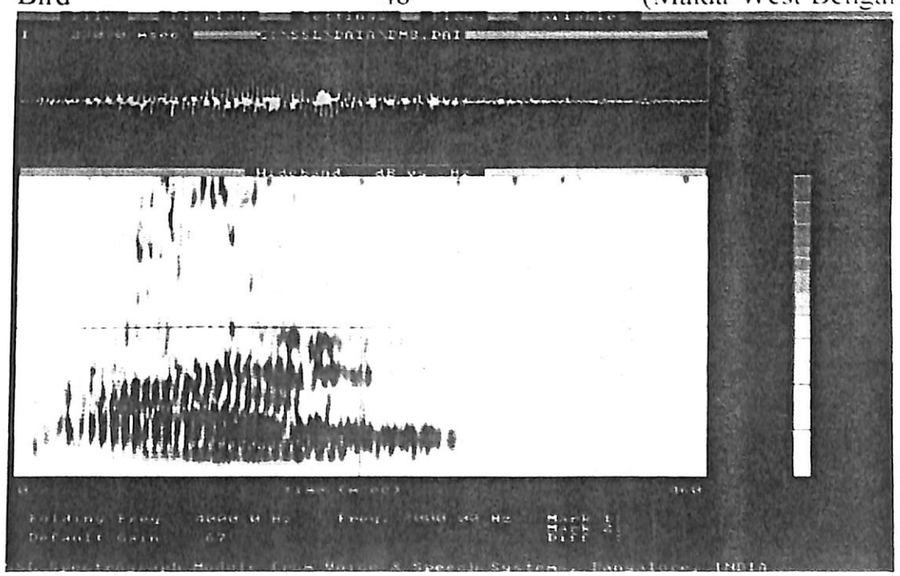
Boy 46 (Malda-West Bengal)

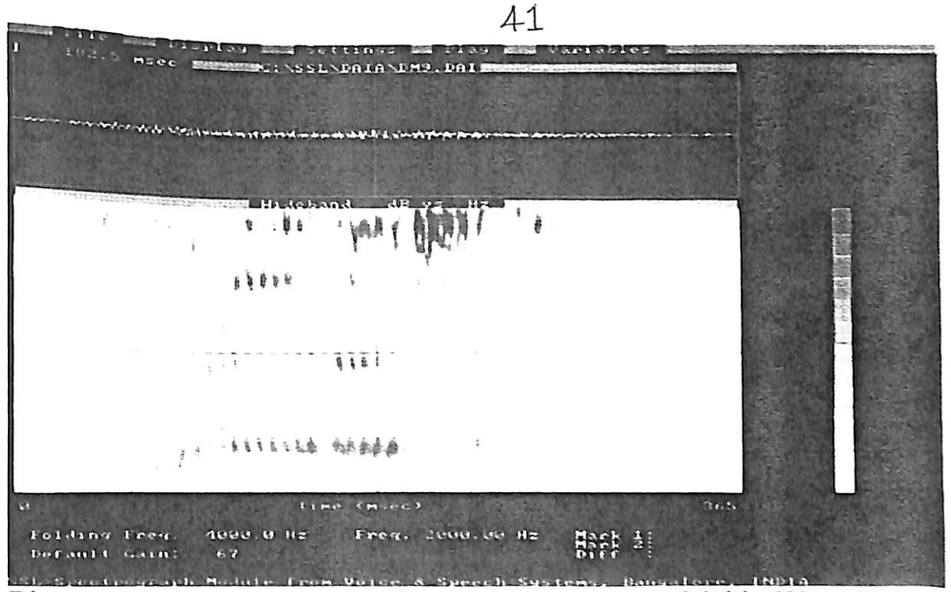




Bowel 47 (Malda-West Bengal)

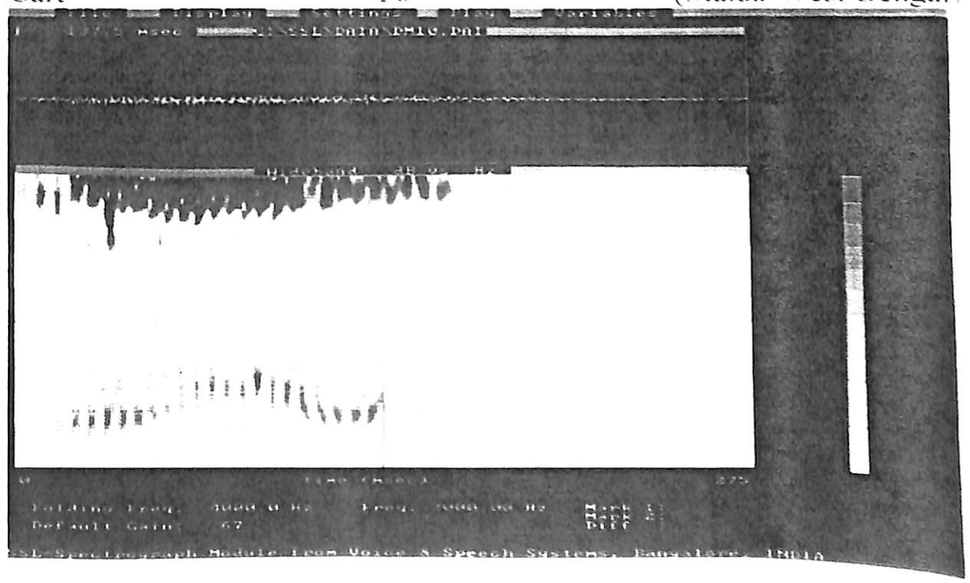
Bird 48 (Malda-West Bengal)

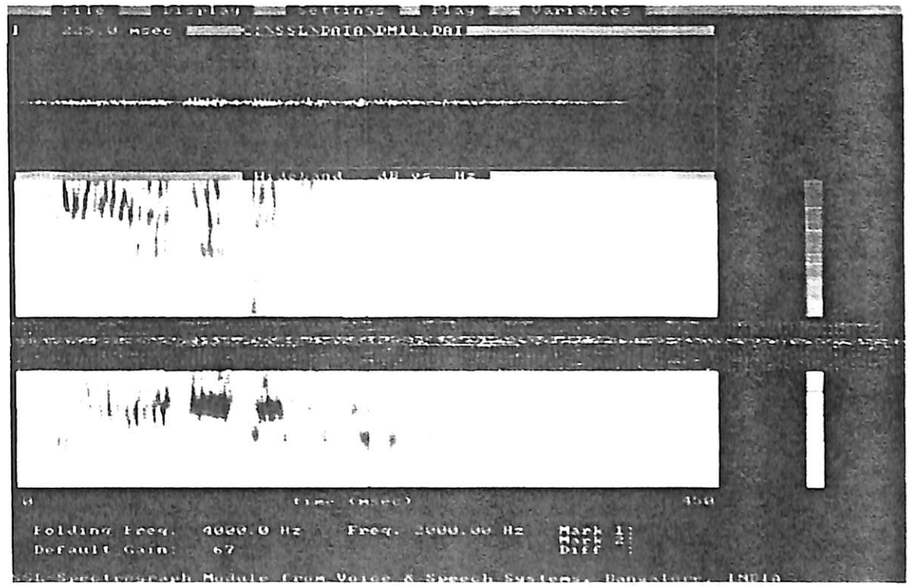




Blur 49 (Malda-West Bengal)

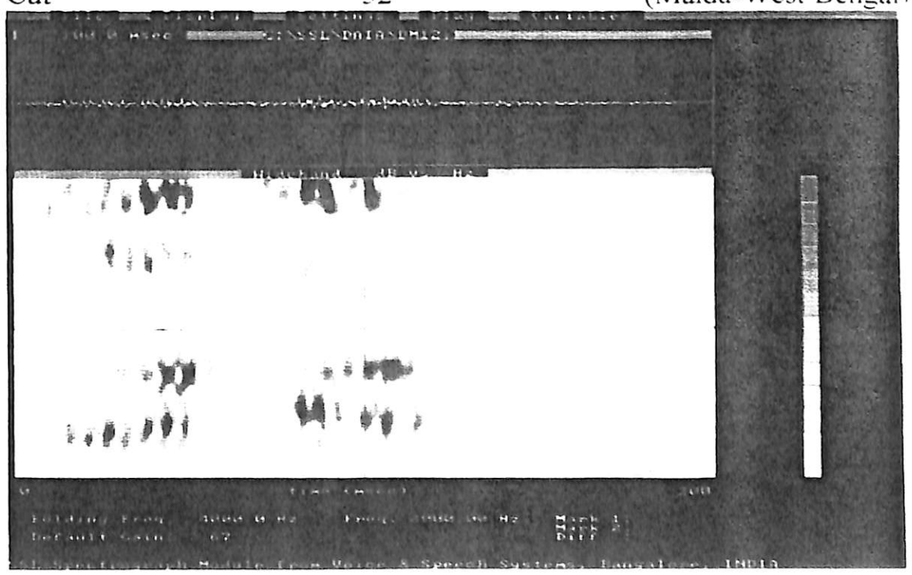
Cart 50 (Malda-West Bengal)

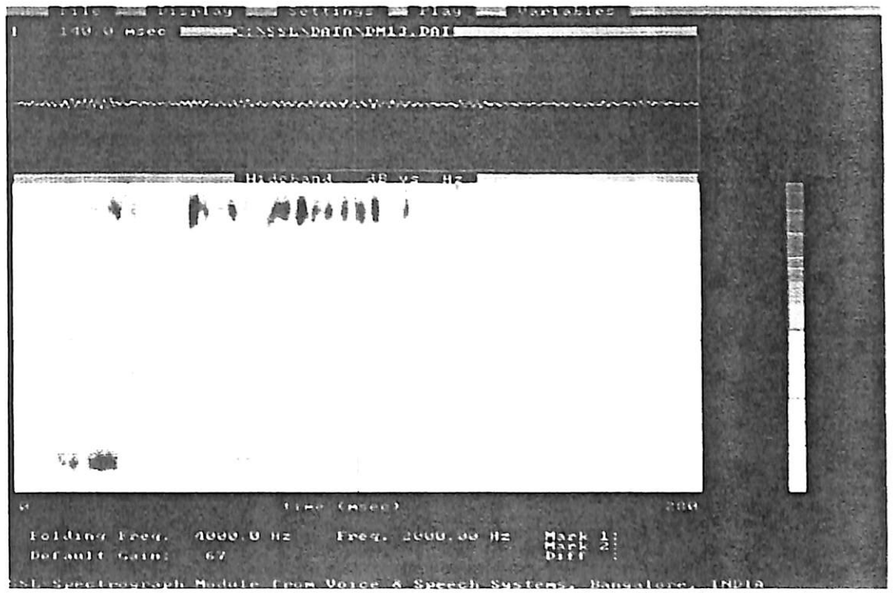




Cow 51 (Malda-West Bengal)

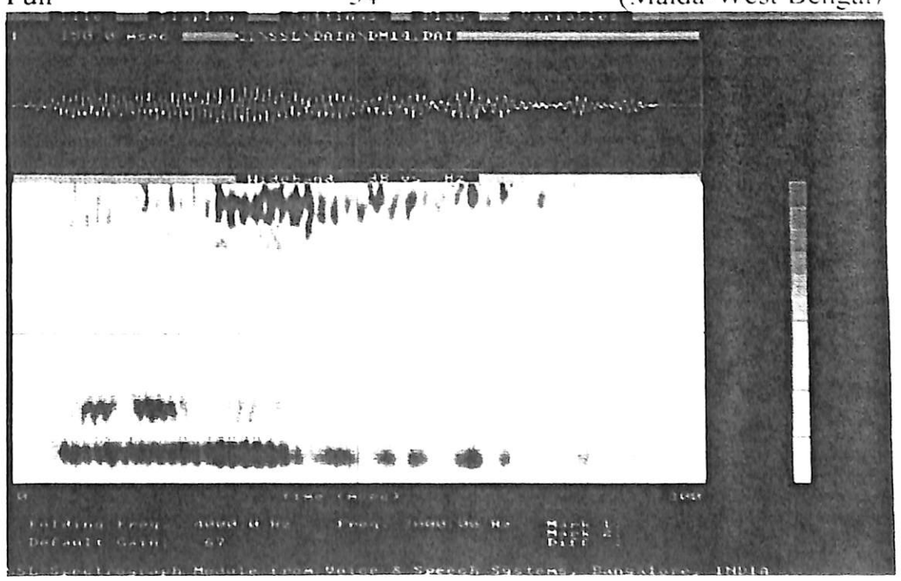
Cut 52 (Malda-West Bengal)

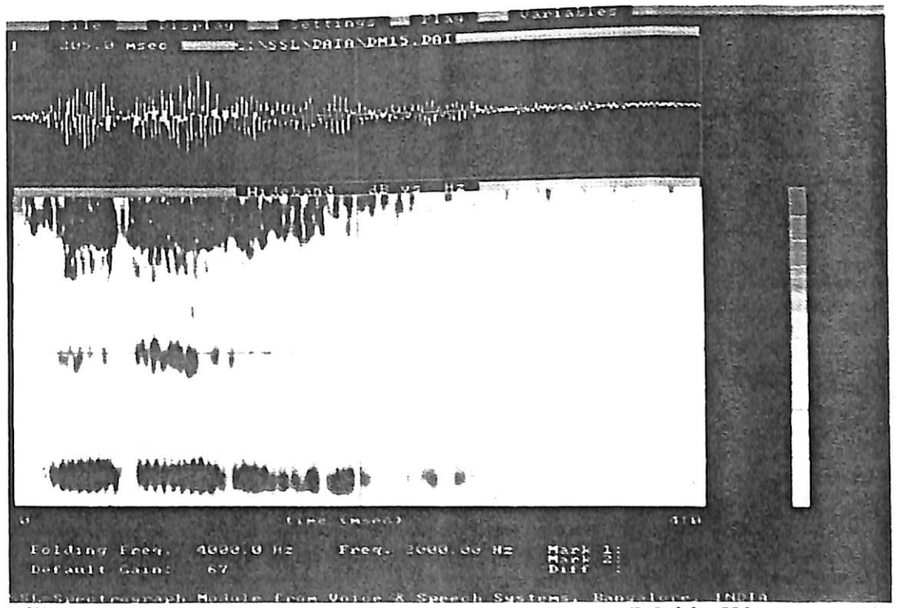




Feel 53 (Malda-West Bengal)

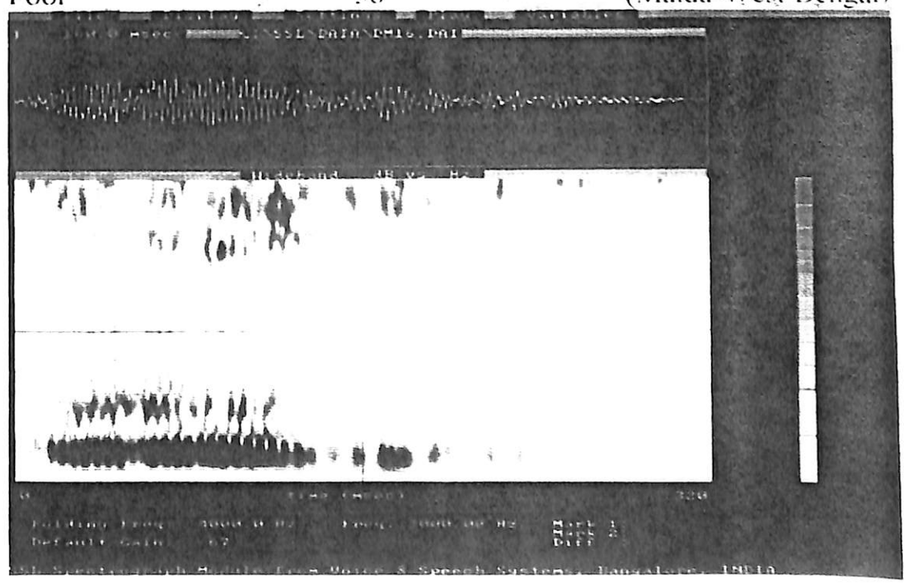
Full 54 (Malda-West Bengal)

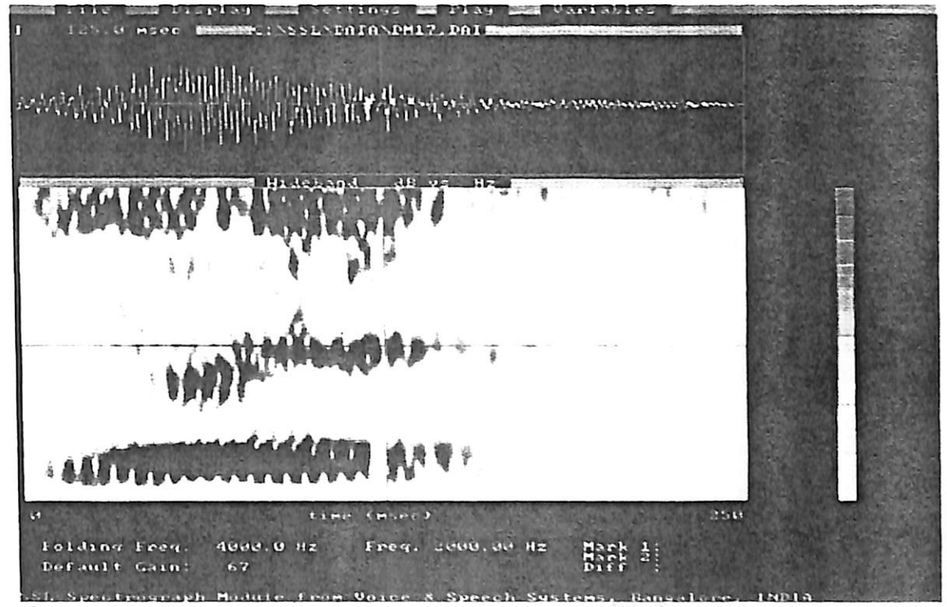




Fill 55 (Malda-West Bengal)

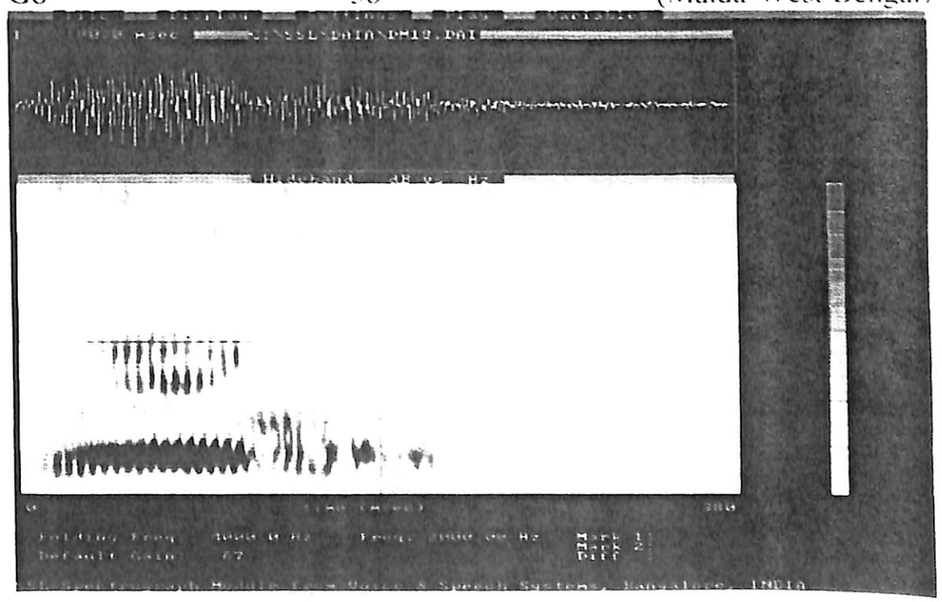
Fool 56 (Malda-West Bengal)

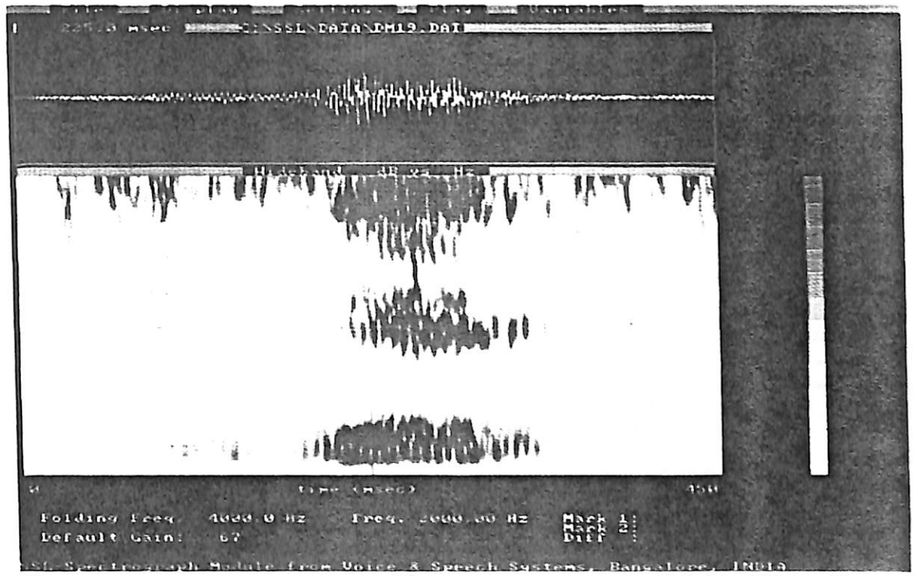




Gate 57 (Malda-West Bengal)

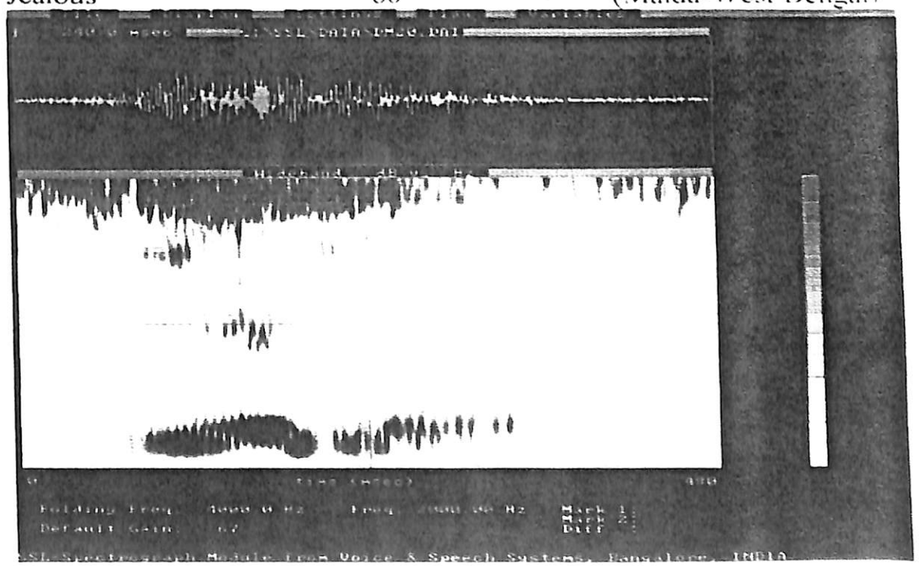
Go 58 (Malda-West Bengal)

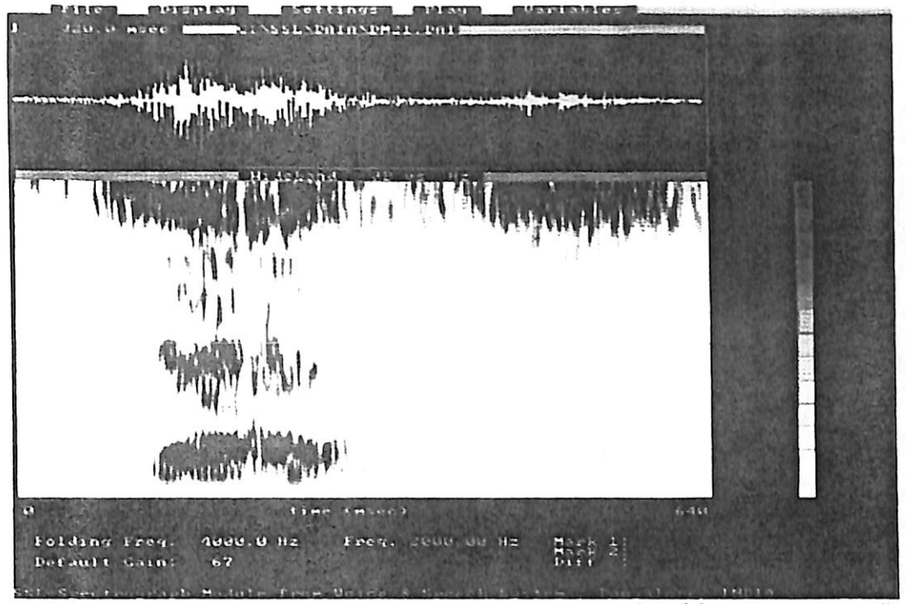




Get 59 (Malda-West Bengal)

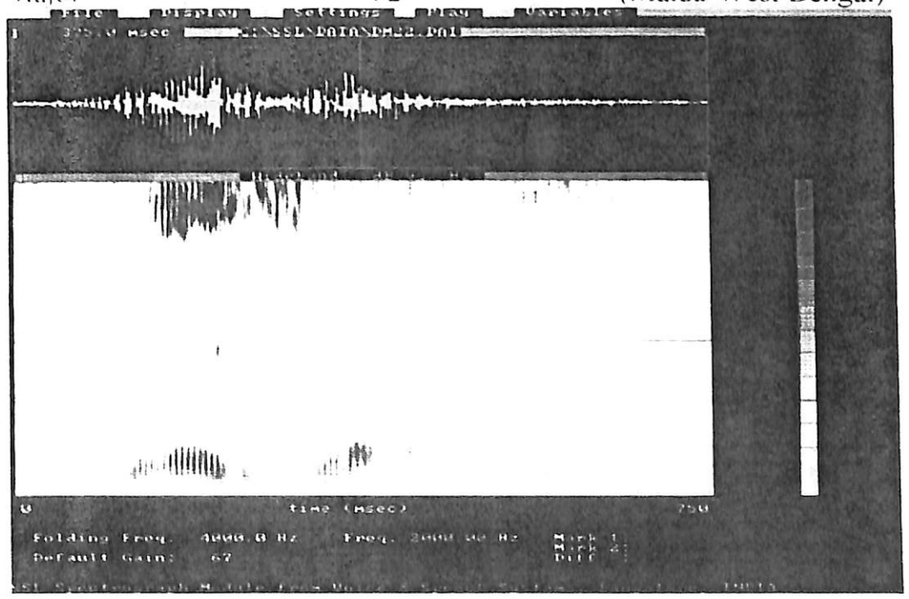
Jealous 60 (Malda-West Bengal)

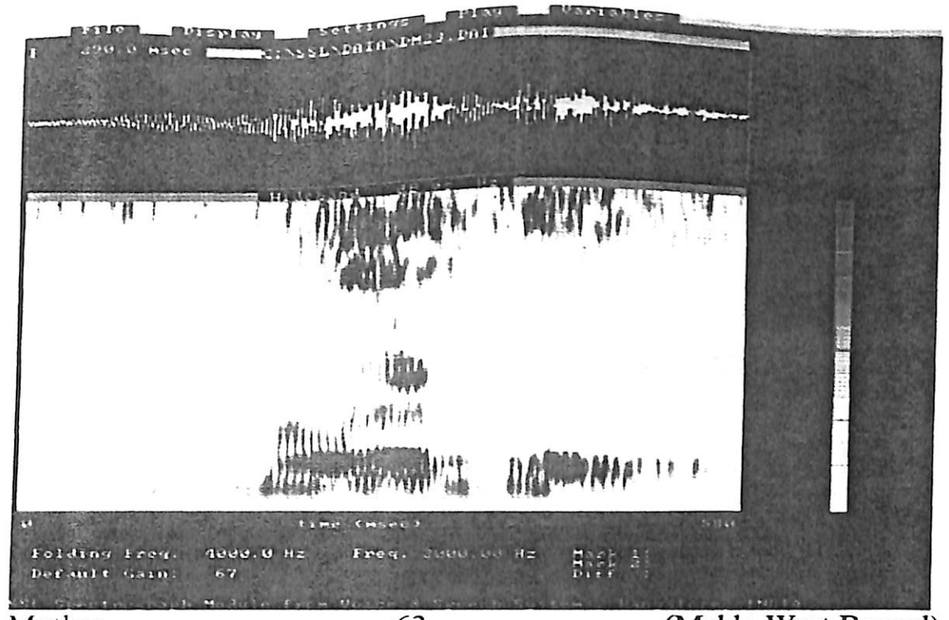




Judge 61 **(Malda-West Bengal)**

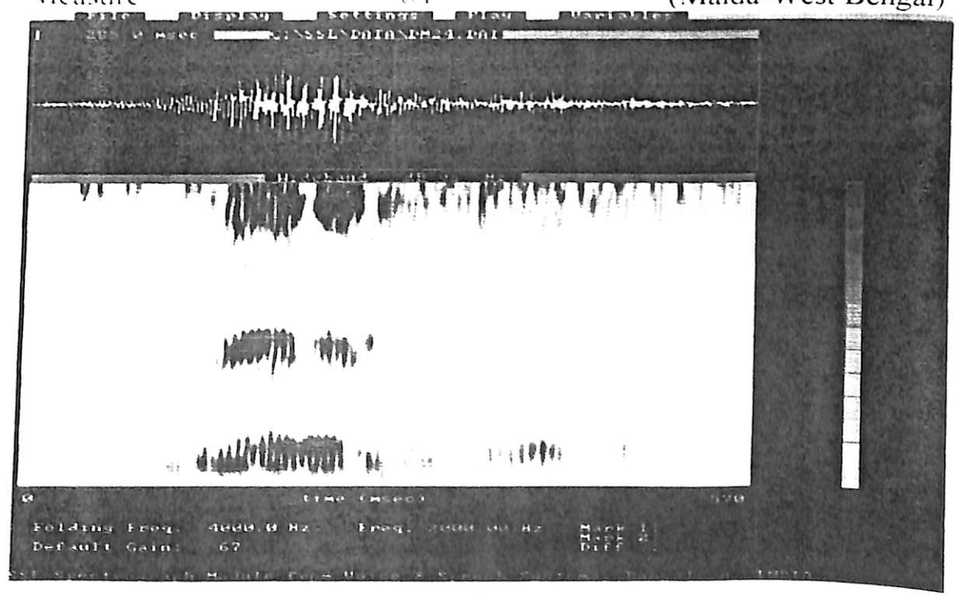
Major 62 (Malda-West Bengal)

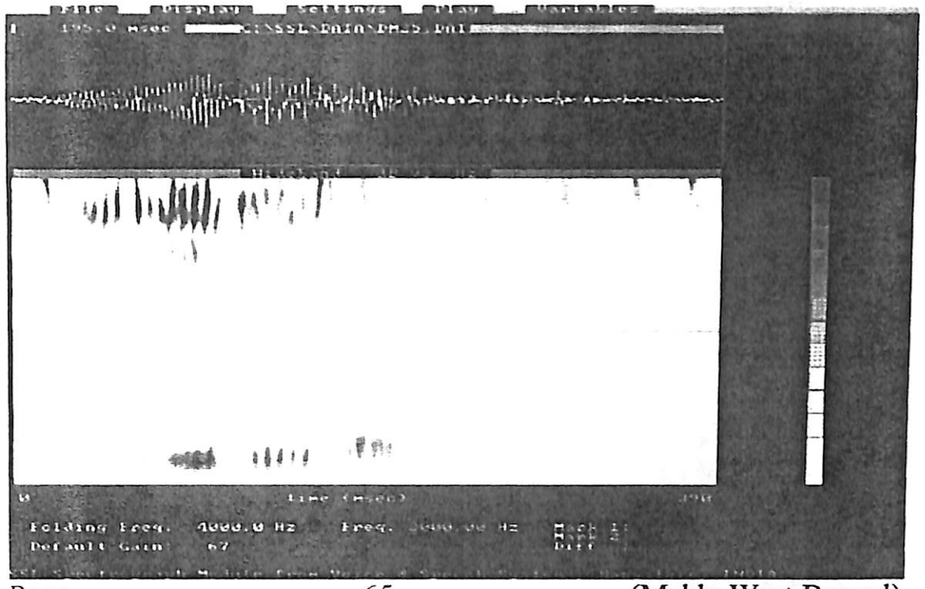




Mother 63 **(Malda-West Bengal)**

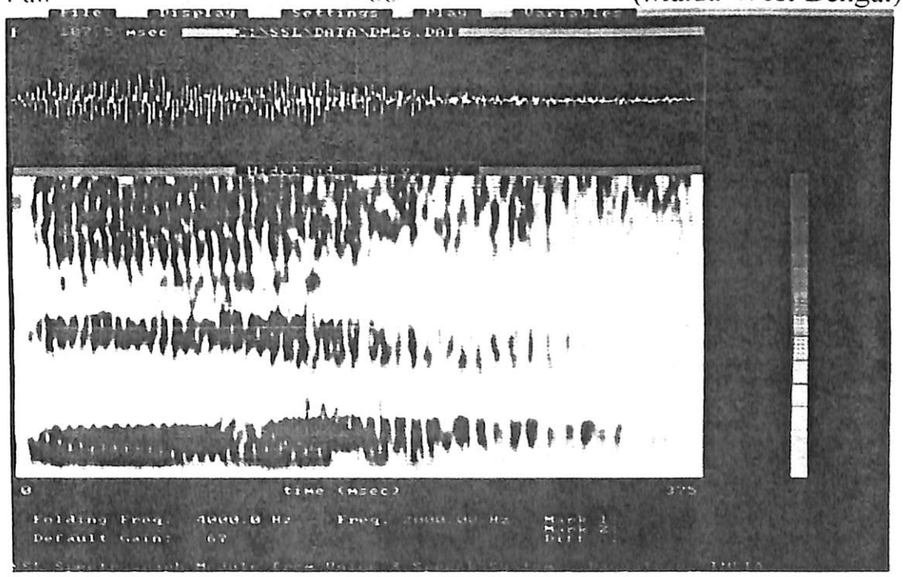
Measure 64 (Malda-West Bengal)

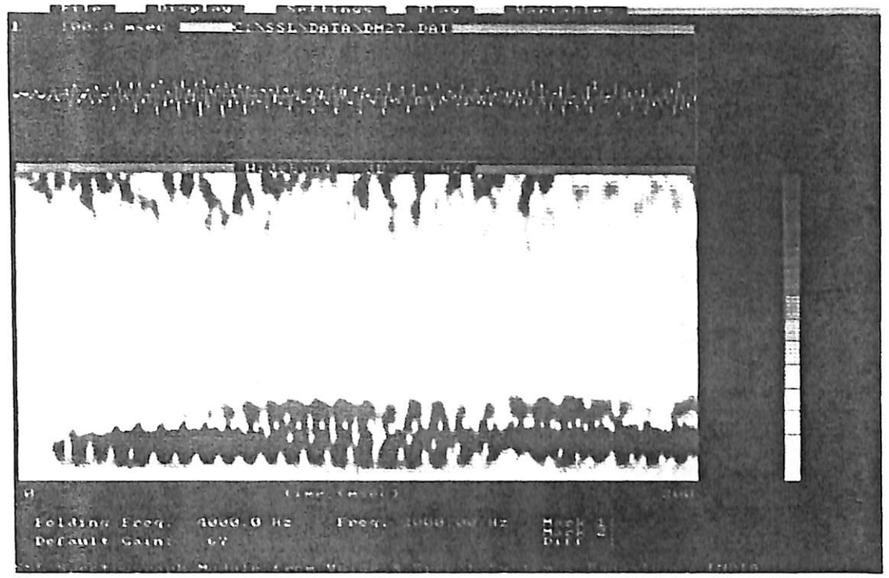




Peer 65 **(Malda-West Bengal)**

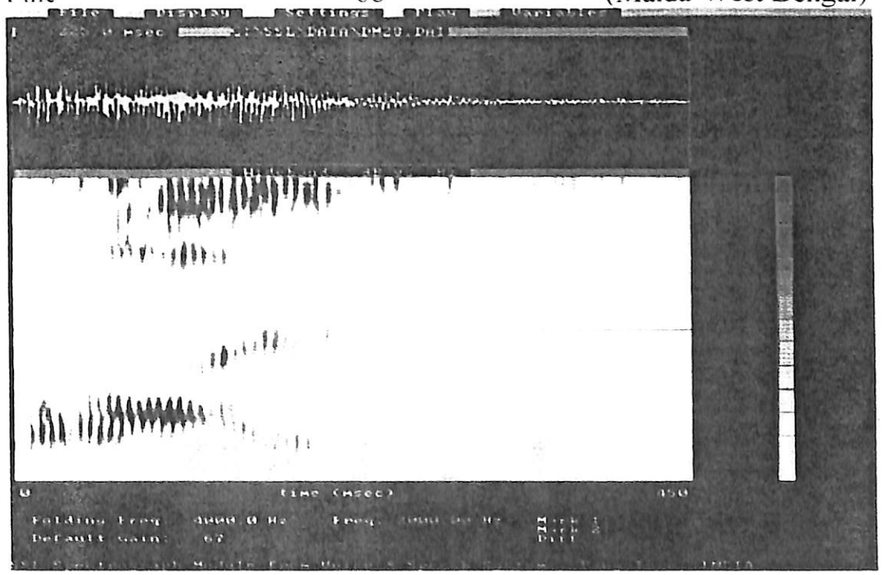
Pair 66 (Malda-West Bengal)

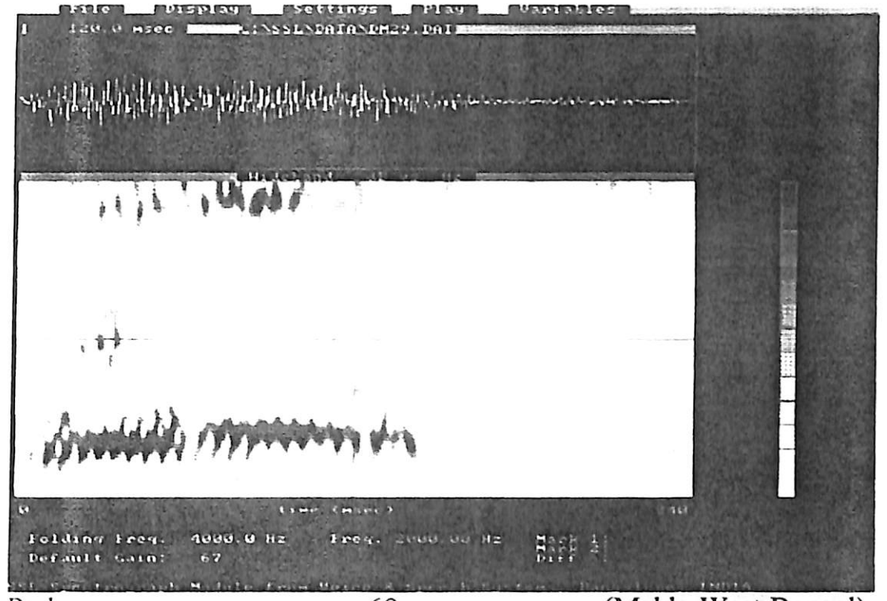




Poor 67 (Malda-West Bengal)

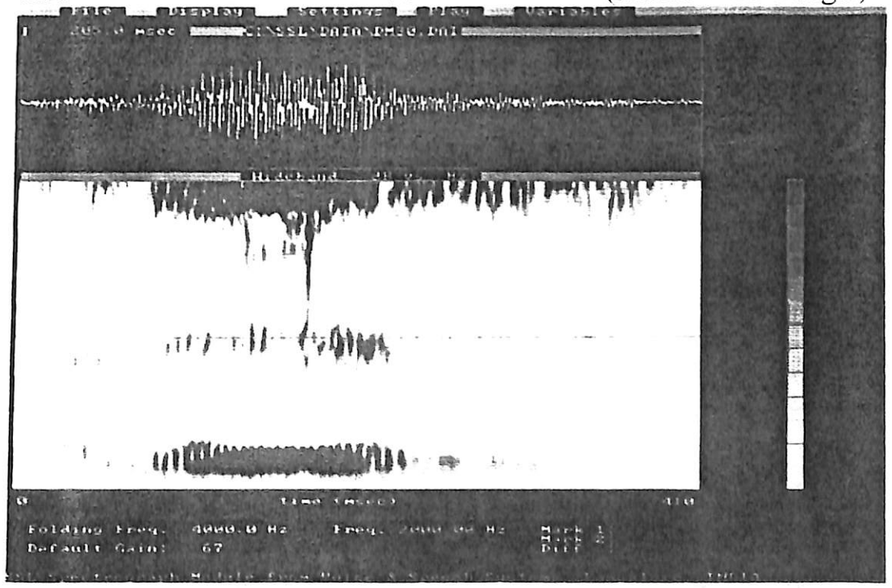
Pine 68 (Malda-West Bengal)

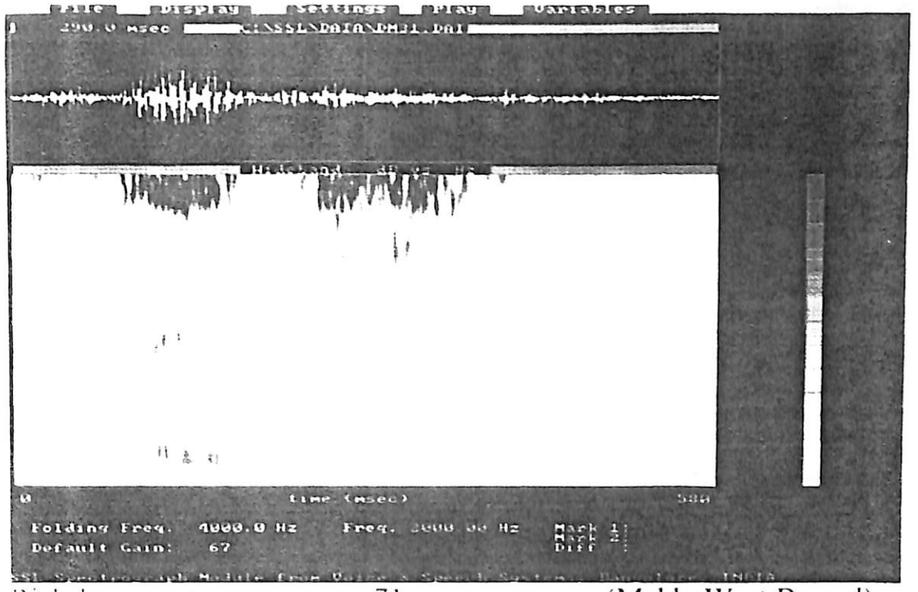




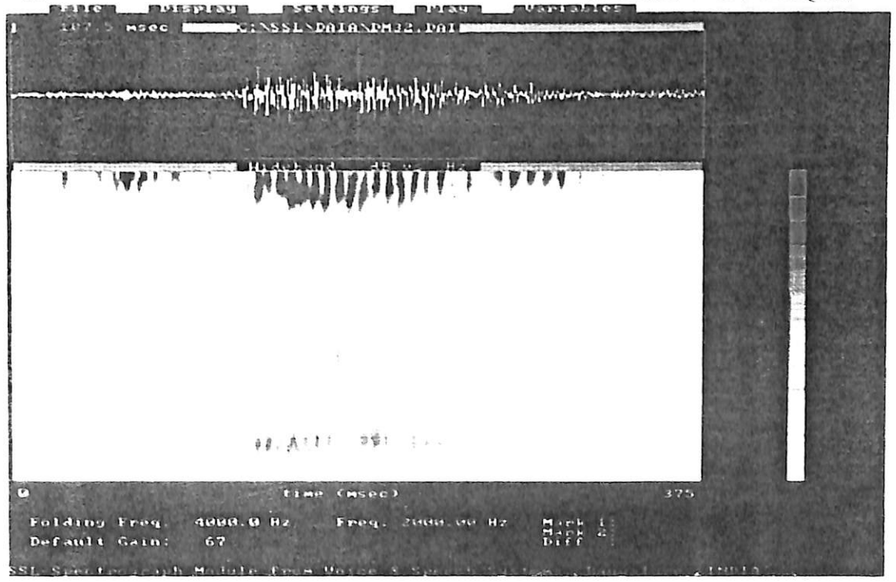
Park 69 (Malda-West Bengal)

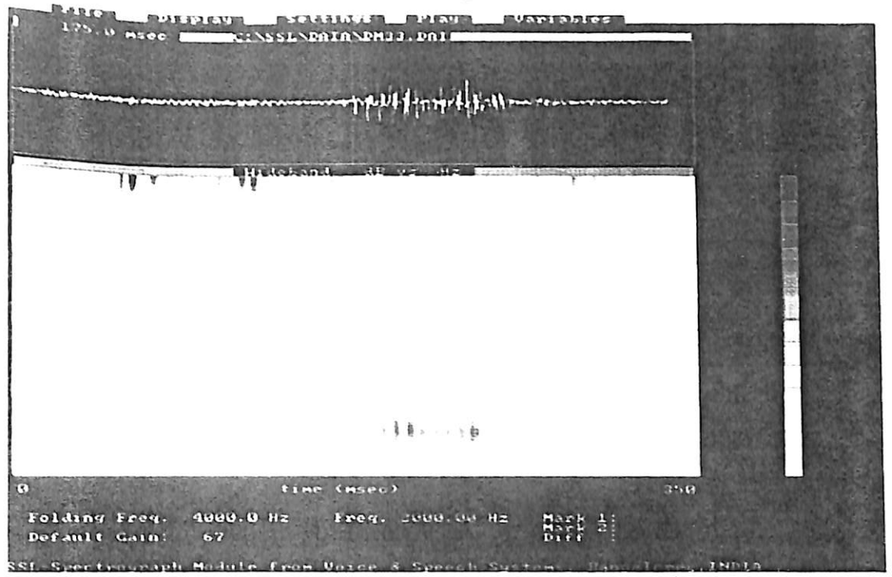
Risk 70 (Malda-West Bengal)





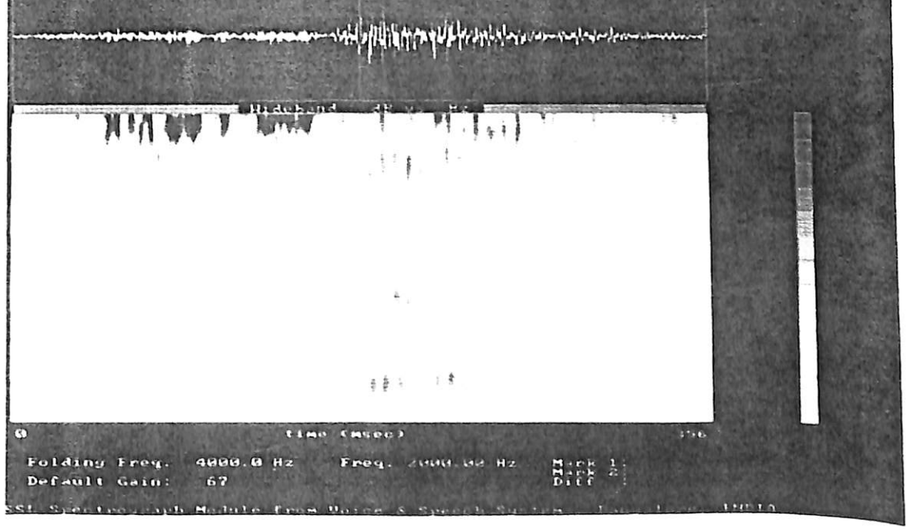
Rickshaw 71 (Malda-West Bengal)

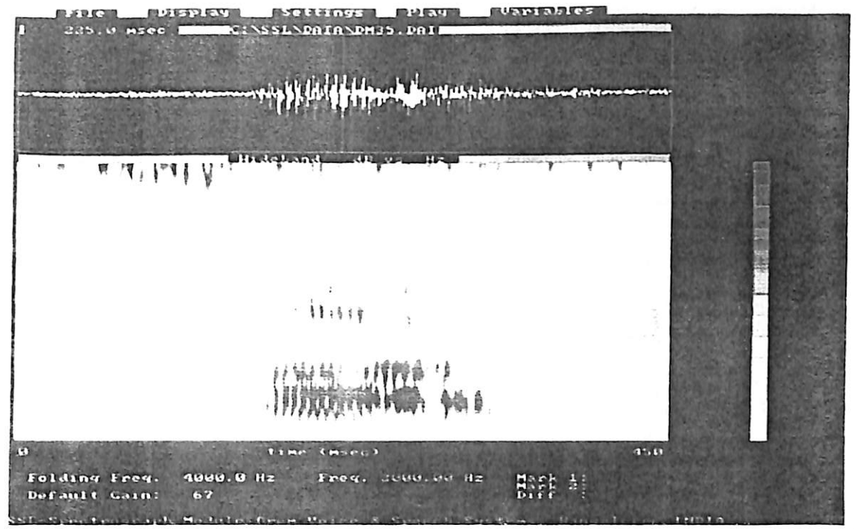




Shot 73 (Malda-West Bengal)

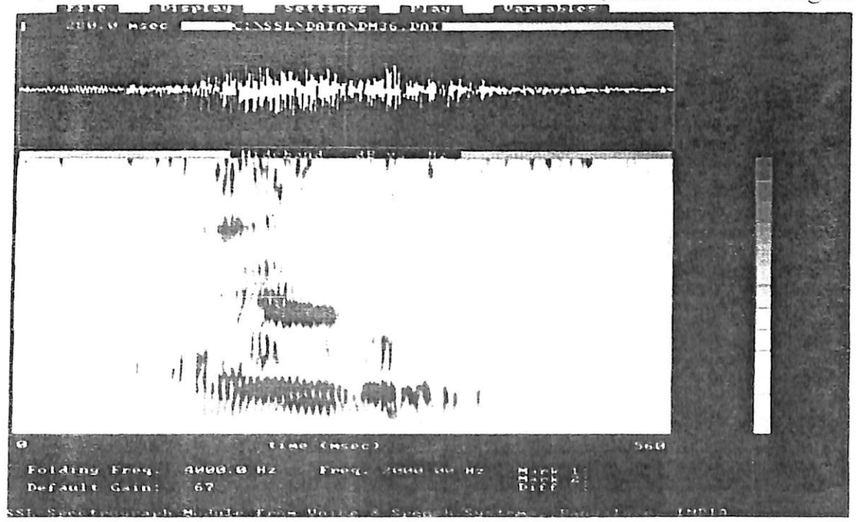
Shot (Malda-West Bengal)

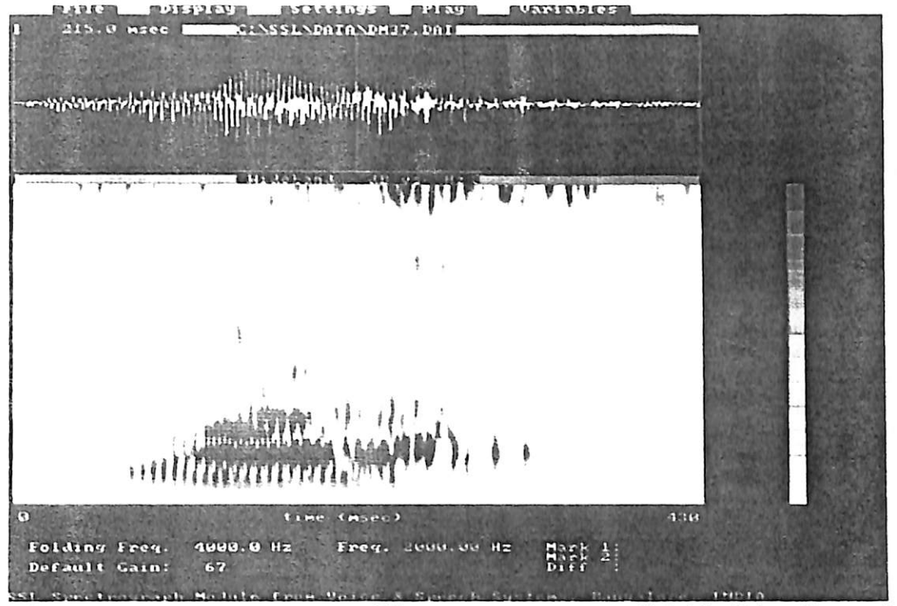




Short 75 (Malda-West Bengal)

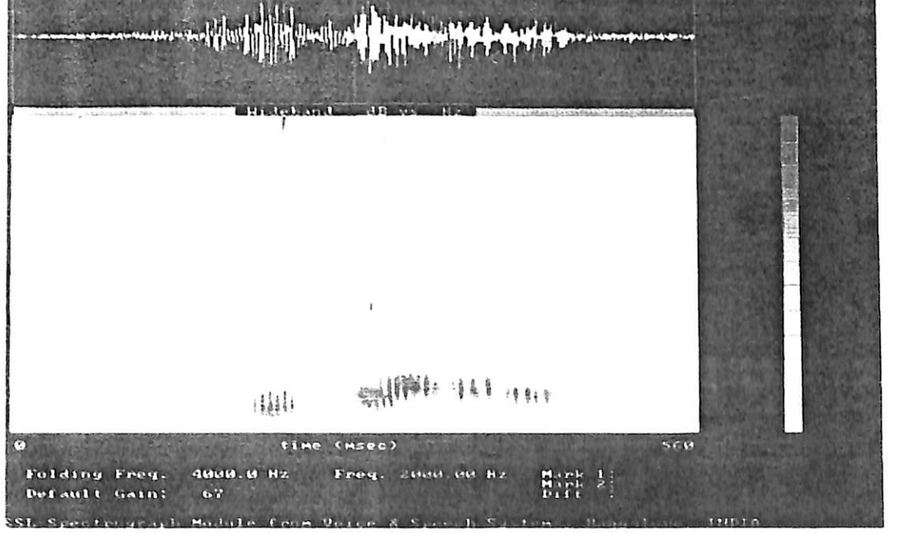
Vowel 76 (Malda-West Bengal)

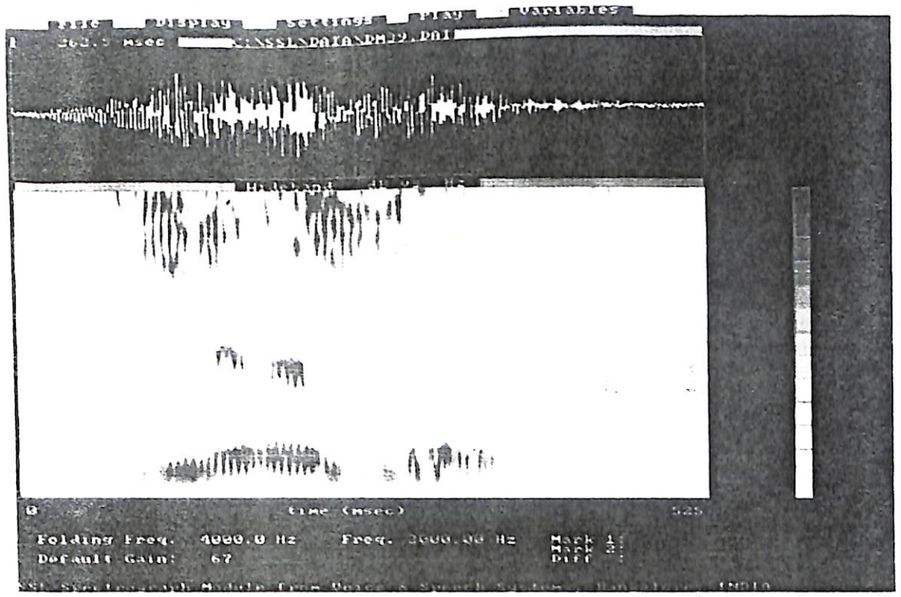




War 77 (Malda-West Bengal)

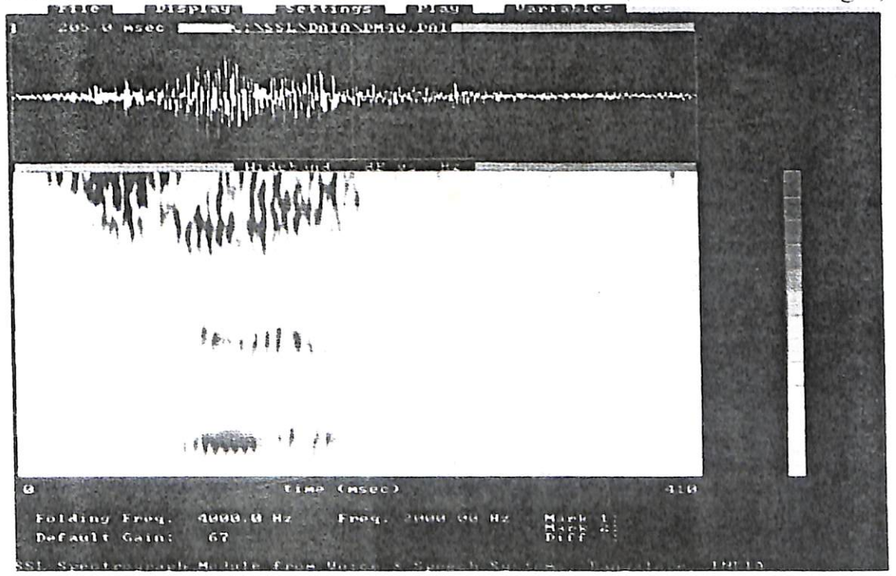
(Malda-West Bengal)

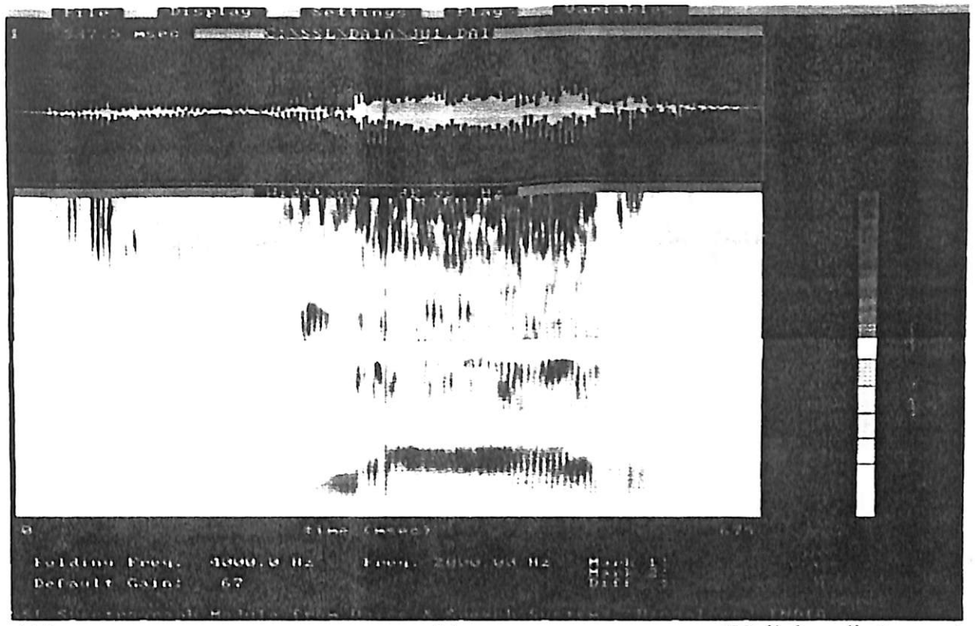




Yellow 79 (Malda-West Bengal)

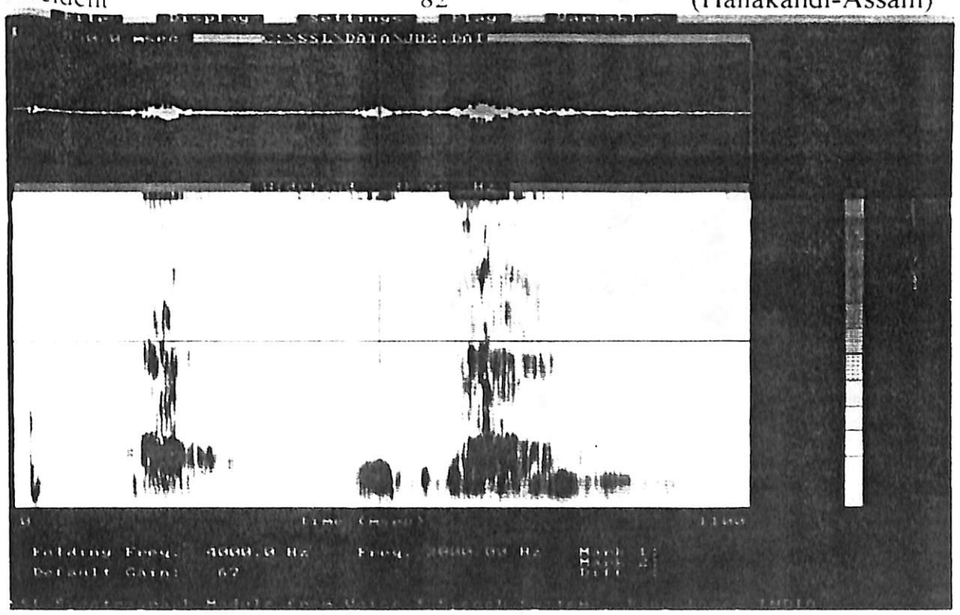
Reddish 80 (Malda-West Bengal)

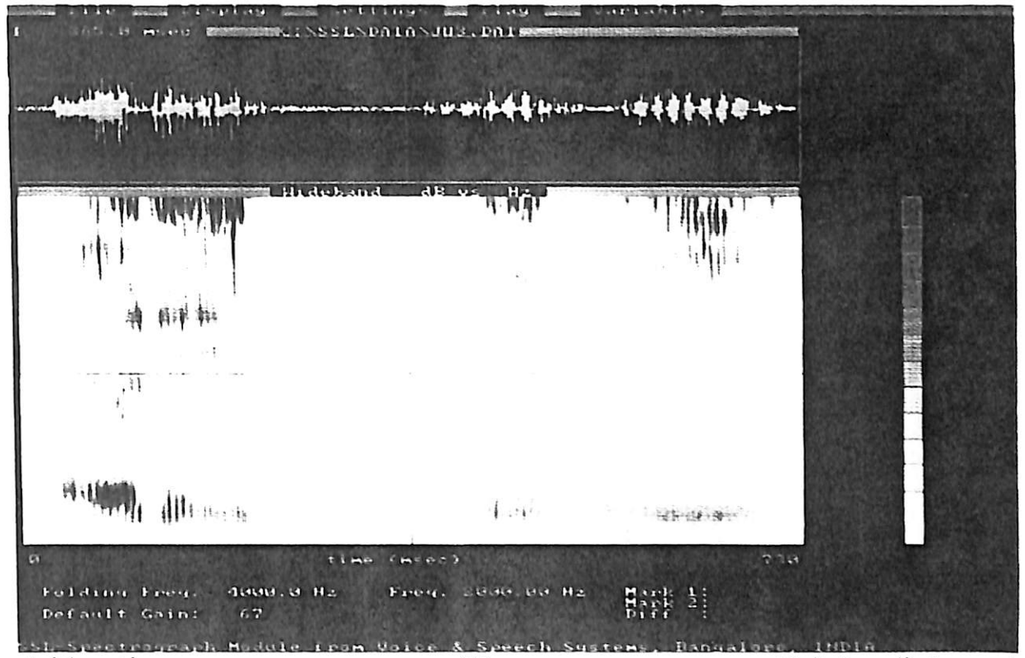




Abler 81 (Hailakandi-Assam)

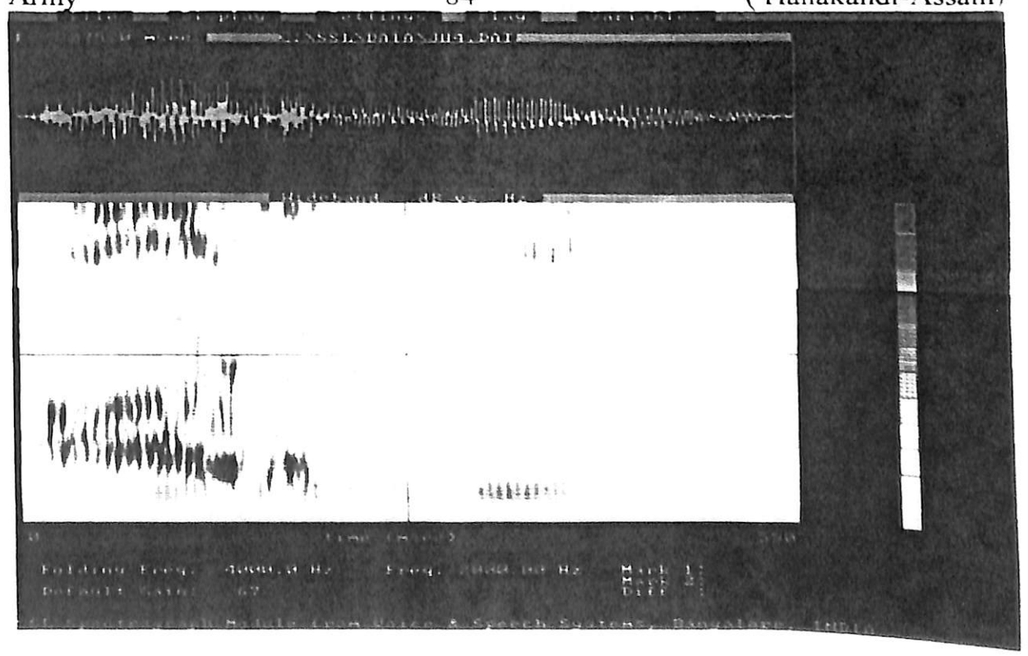
Accident 82 (Hailakandi-Assam)



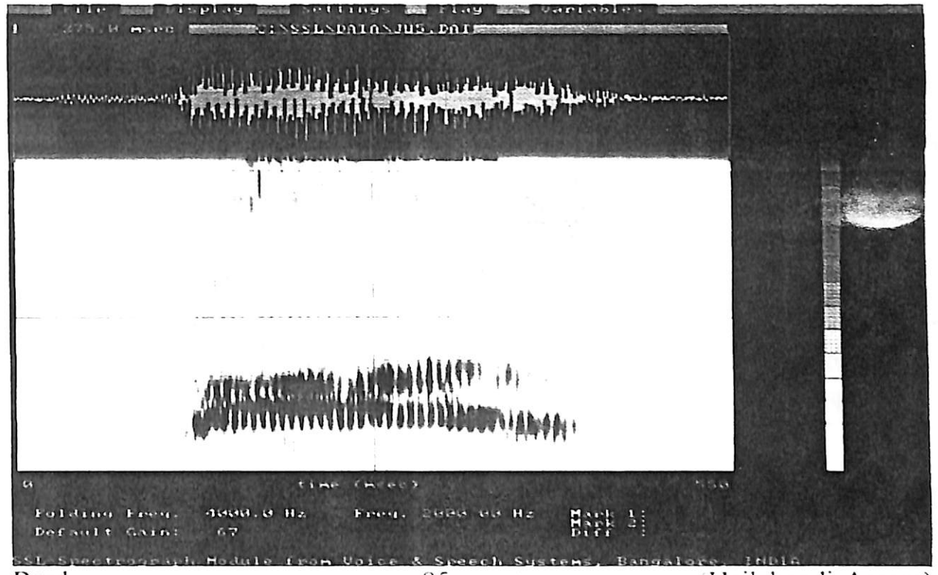


Arithmetic 83 (Hailakandi-Assam)

Army 84 (Hailakandi-Assam)

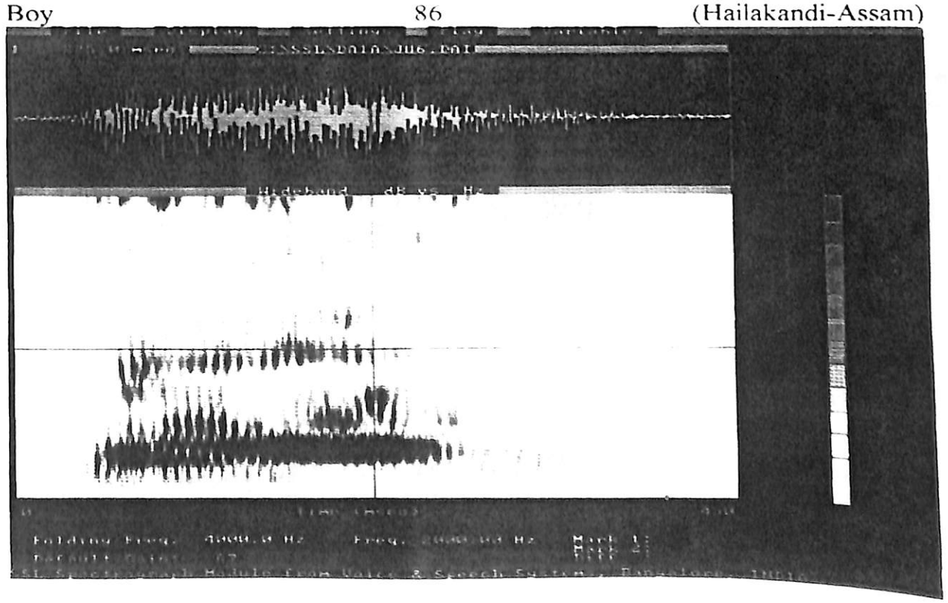


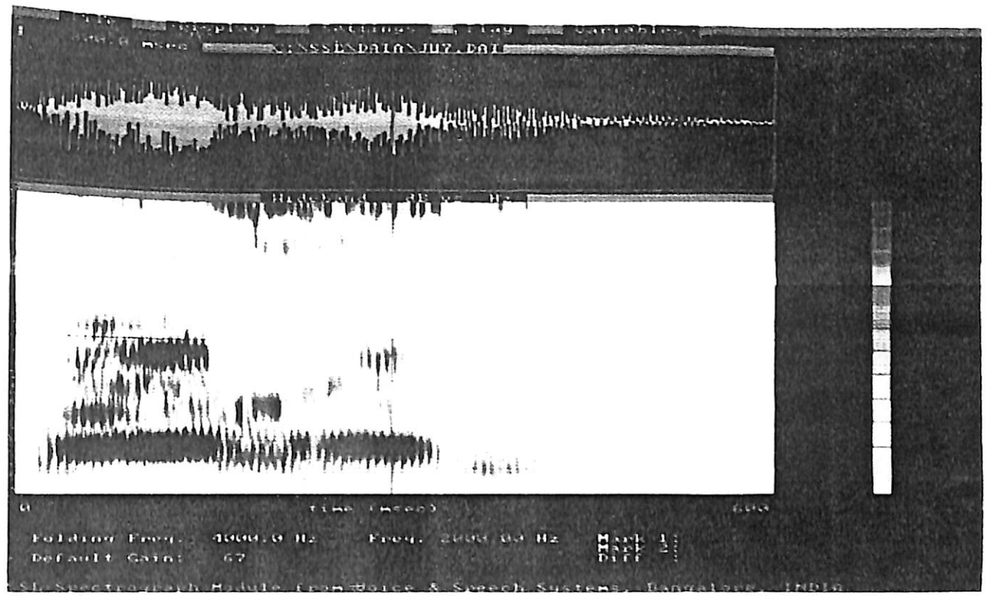
59



Bard 85 (Hailakandi-Assam)

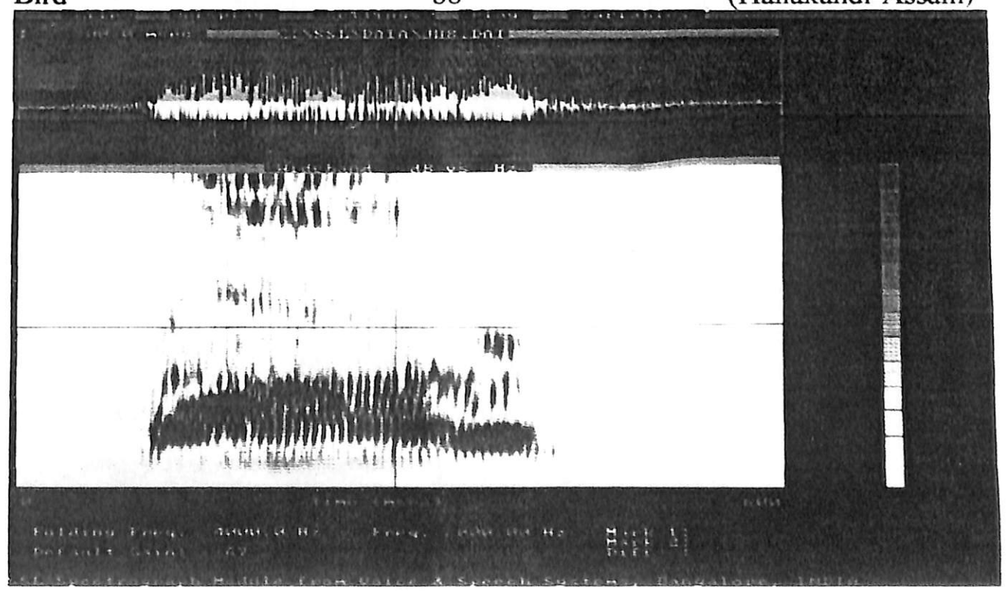
Boy 86 (Hailakandi-Assam)

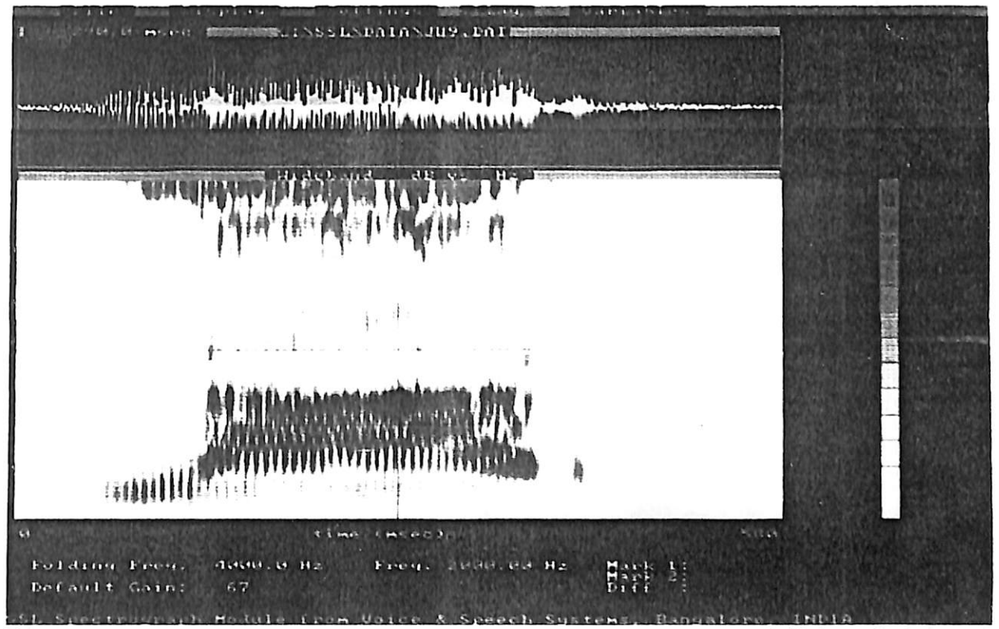




Bowel 87 (Hailakandi-Assam)

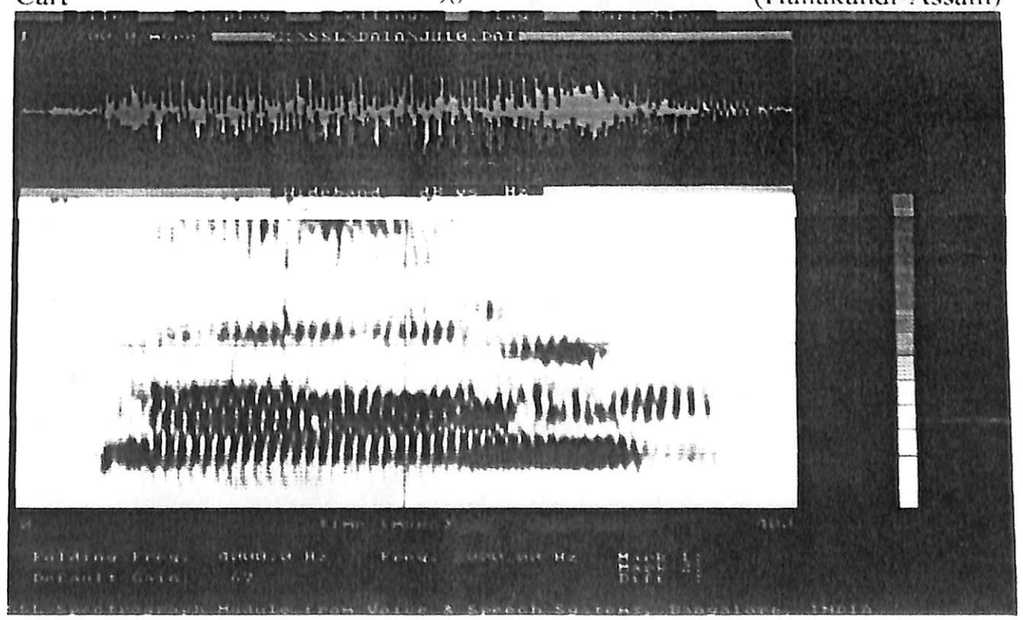
Bird 88 (Hailakandi-Assam)



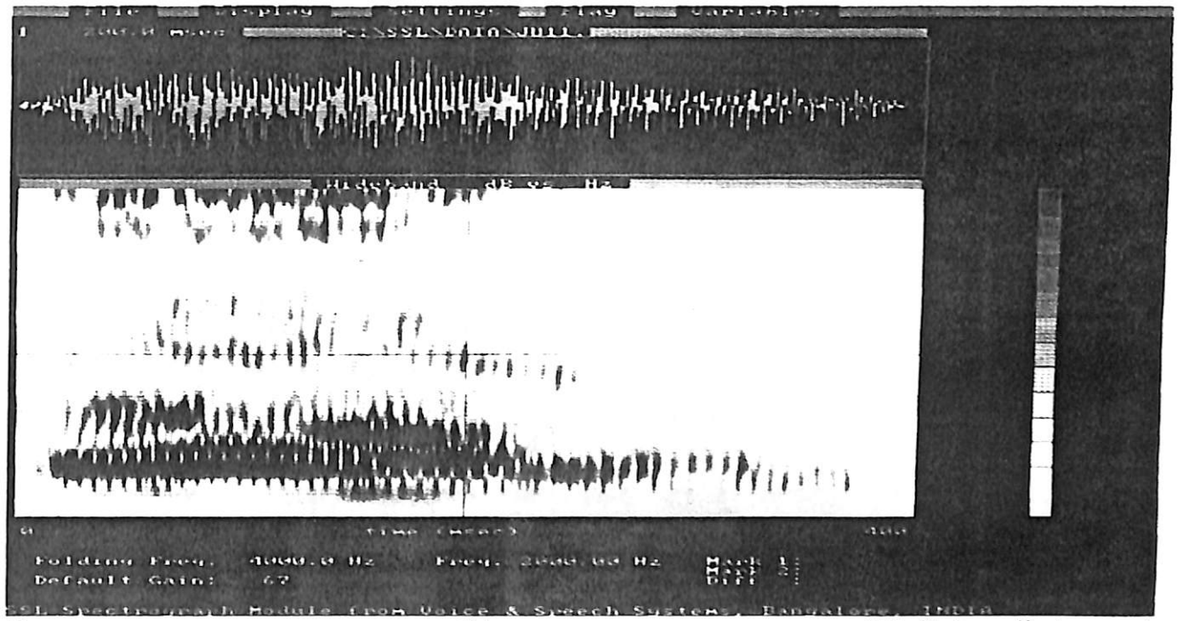


Blur 89 (Hailakandi-Assam)

Cart 90 (Hailakandi-Assam)

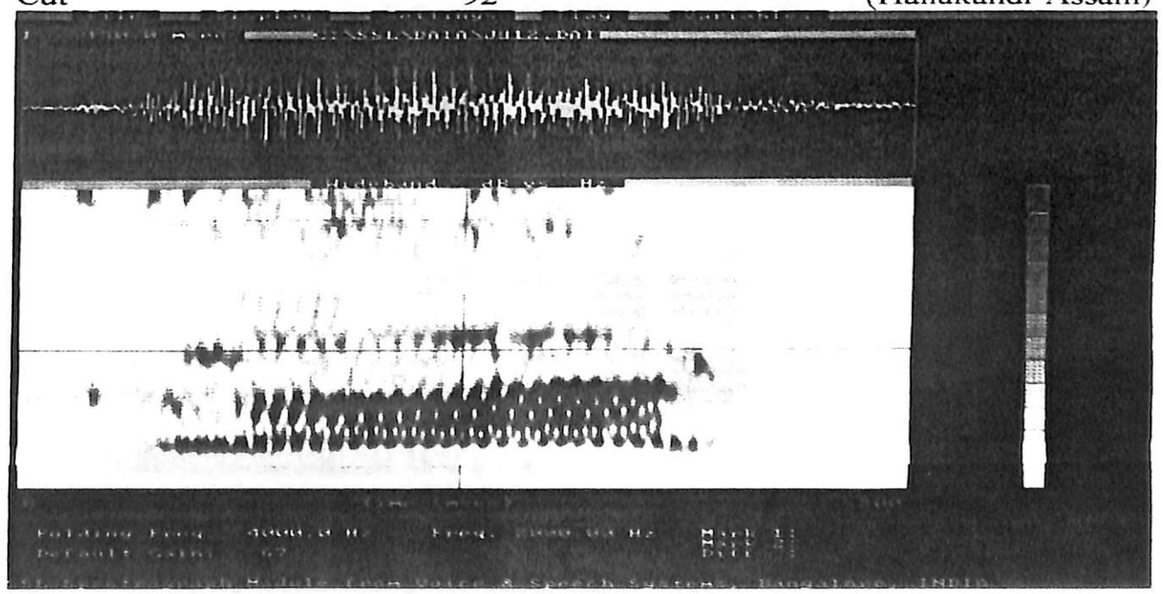


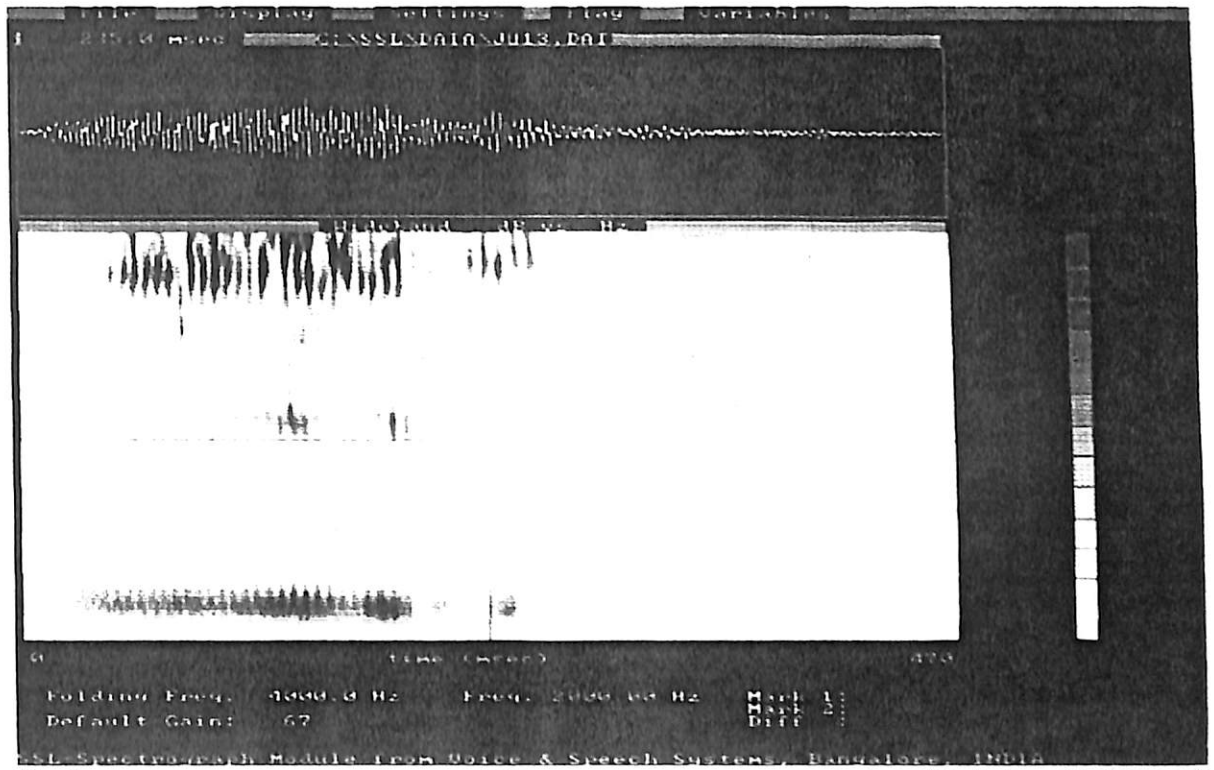
62



Cow 91 (Hailakandi-Assam)

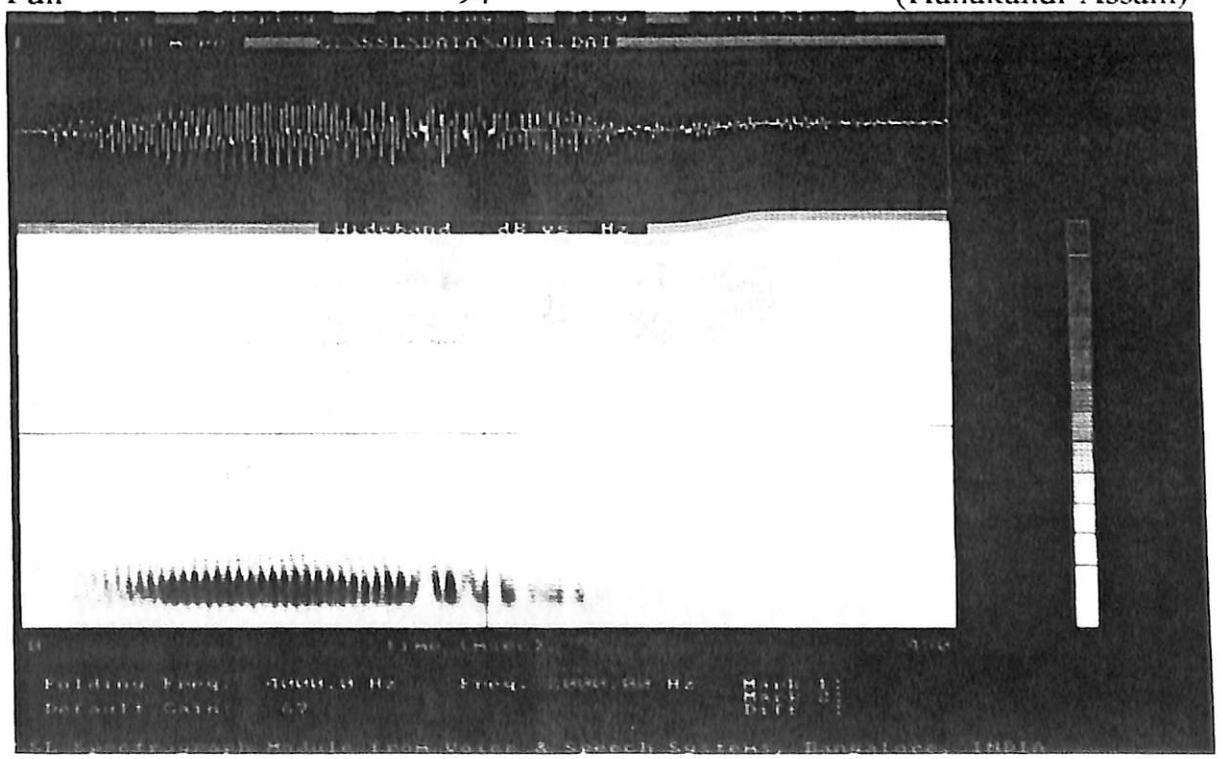
Cut 92 (Hailakandi-Assam)

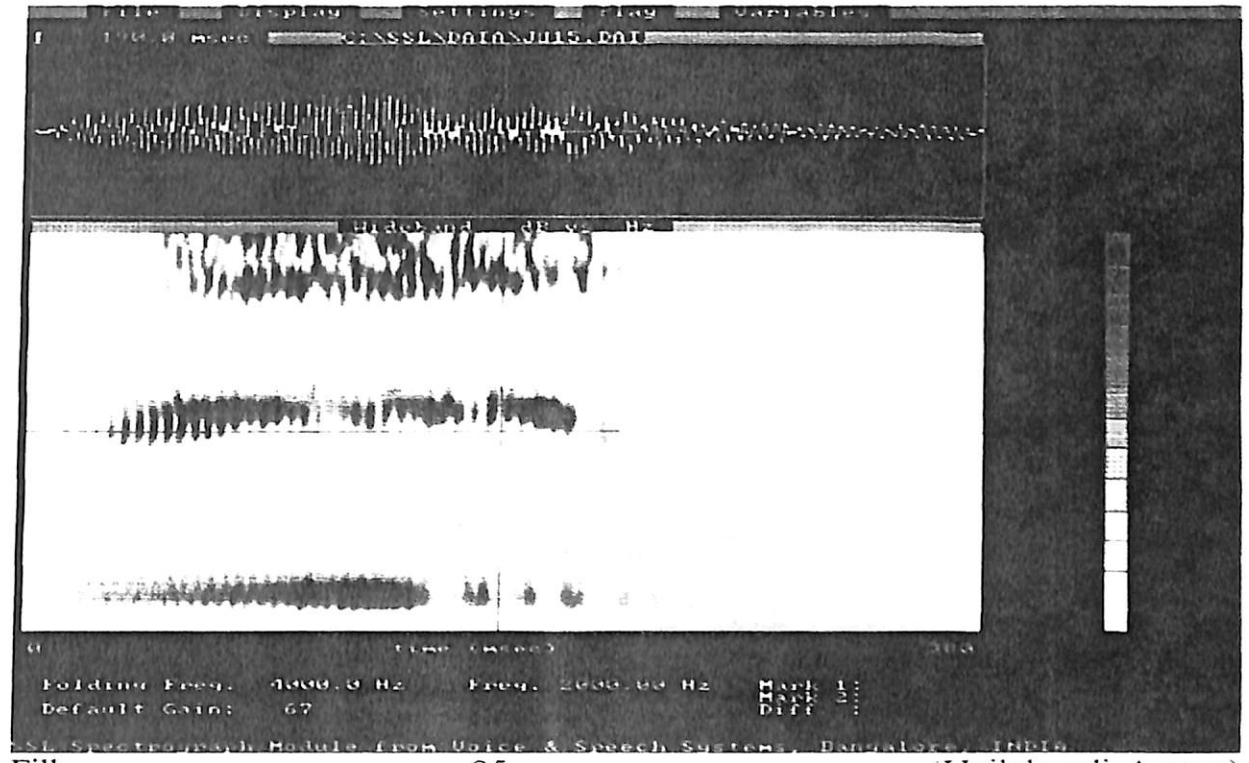




Feel 93 (Hailakandi-Assam)

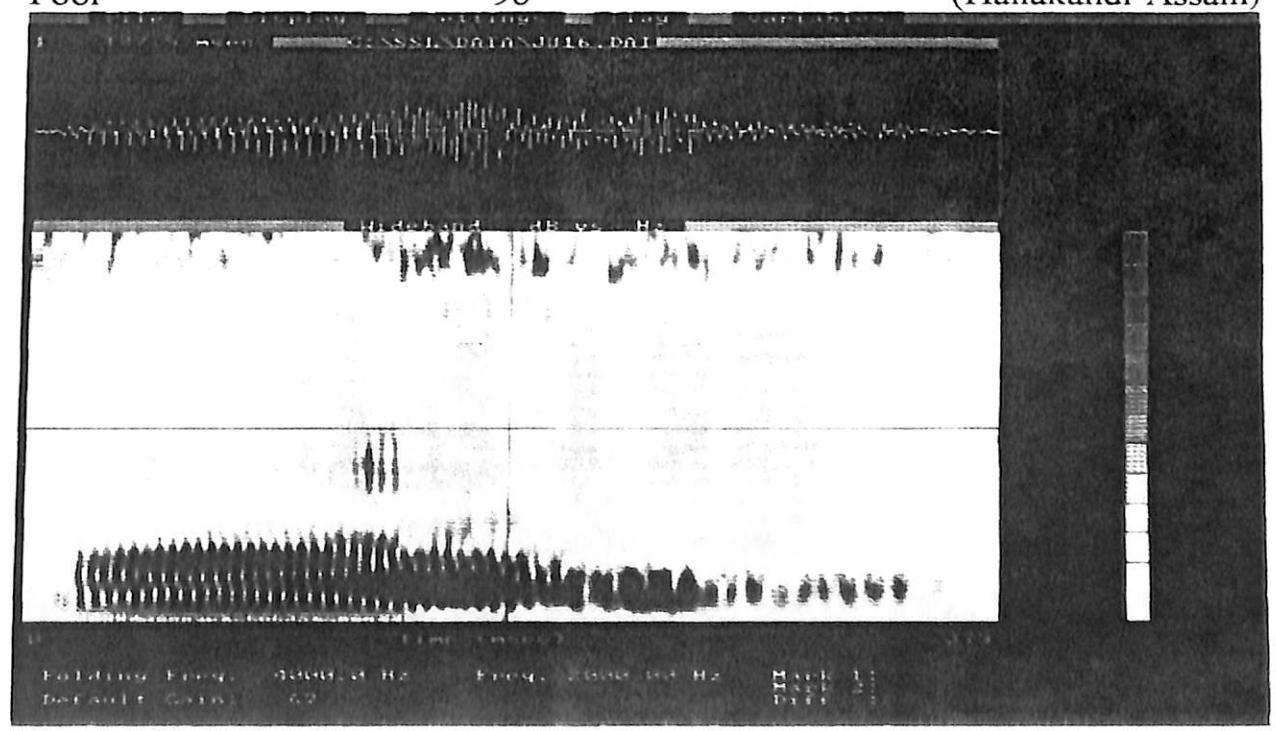
Full 94 (Hailakandi-Assam)

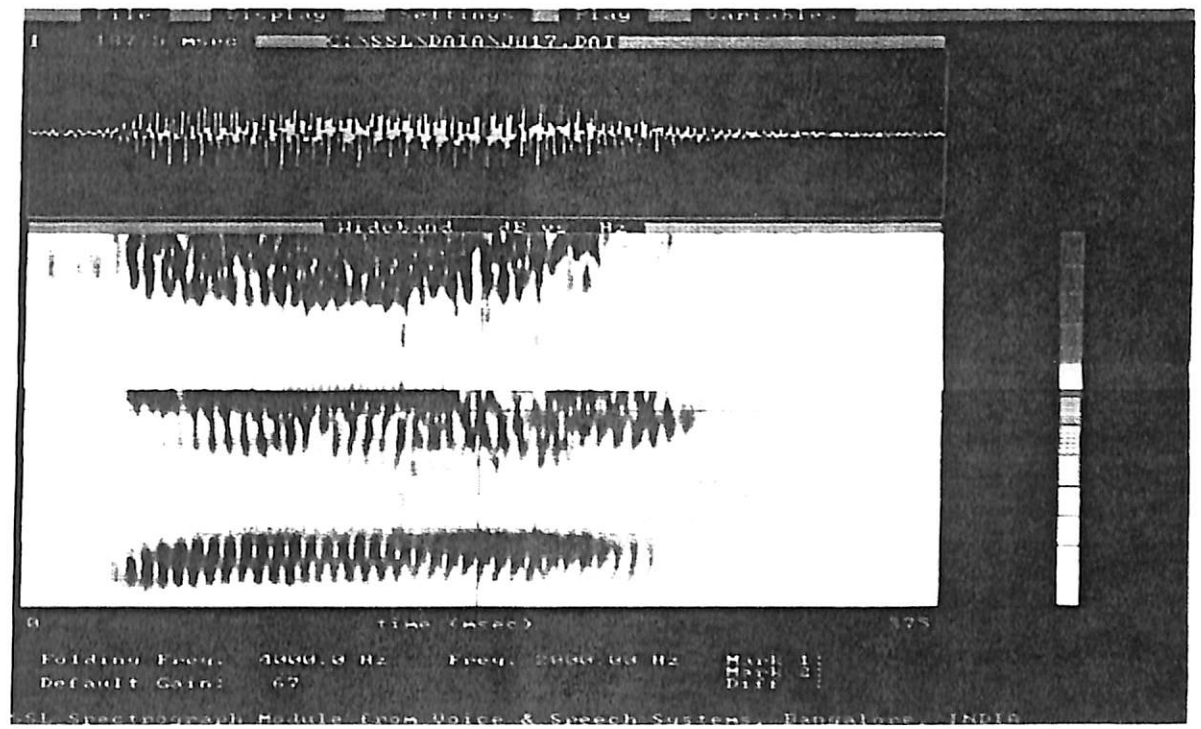




Fill 95 (Hailakandi-Assam)

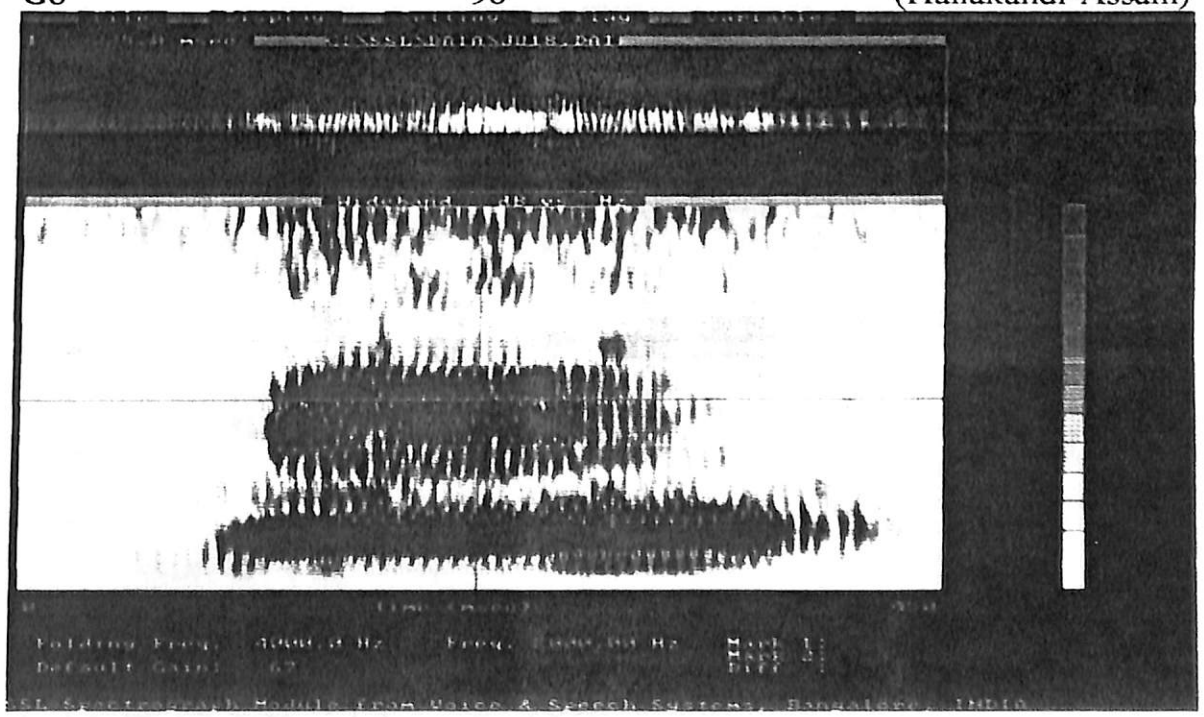
Fool 96 (Hailakandi-Assam)

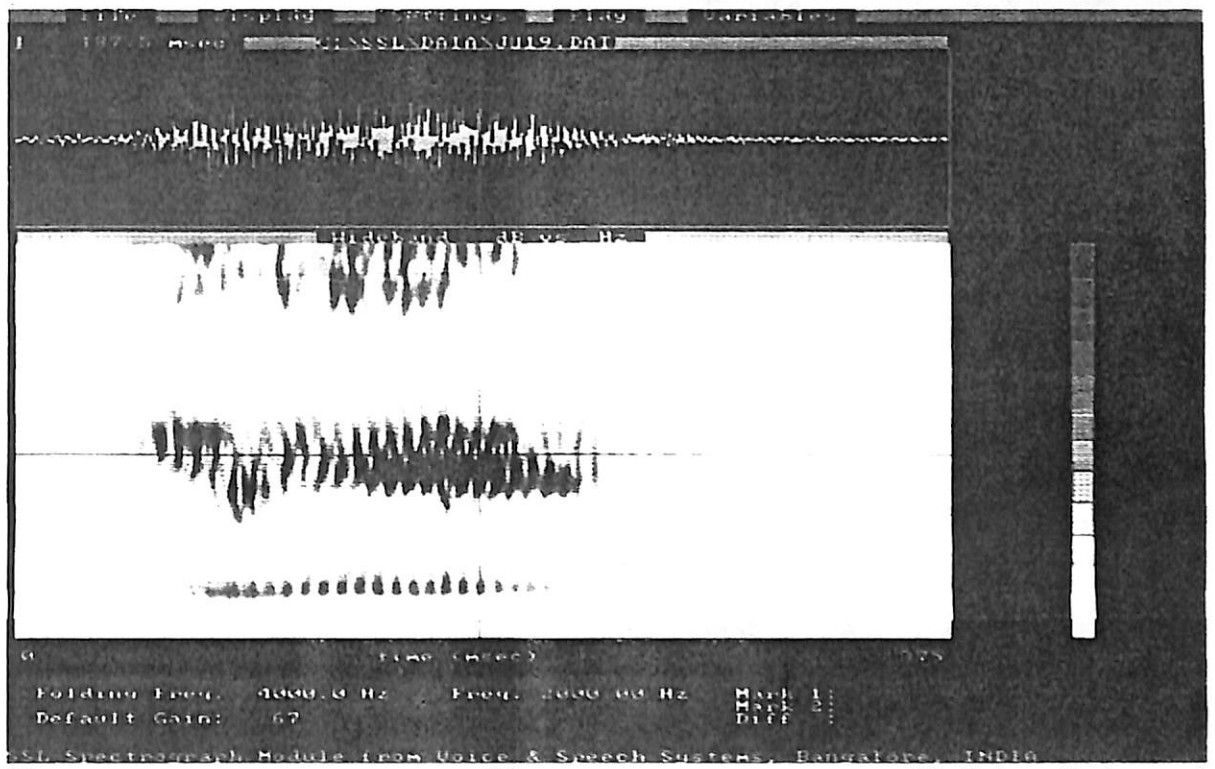




Gate 97 (Hailakandi-Assam)

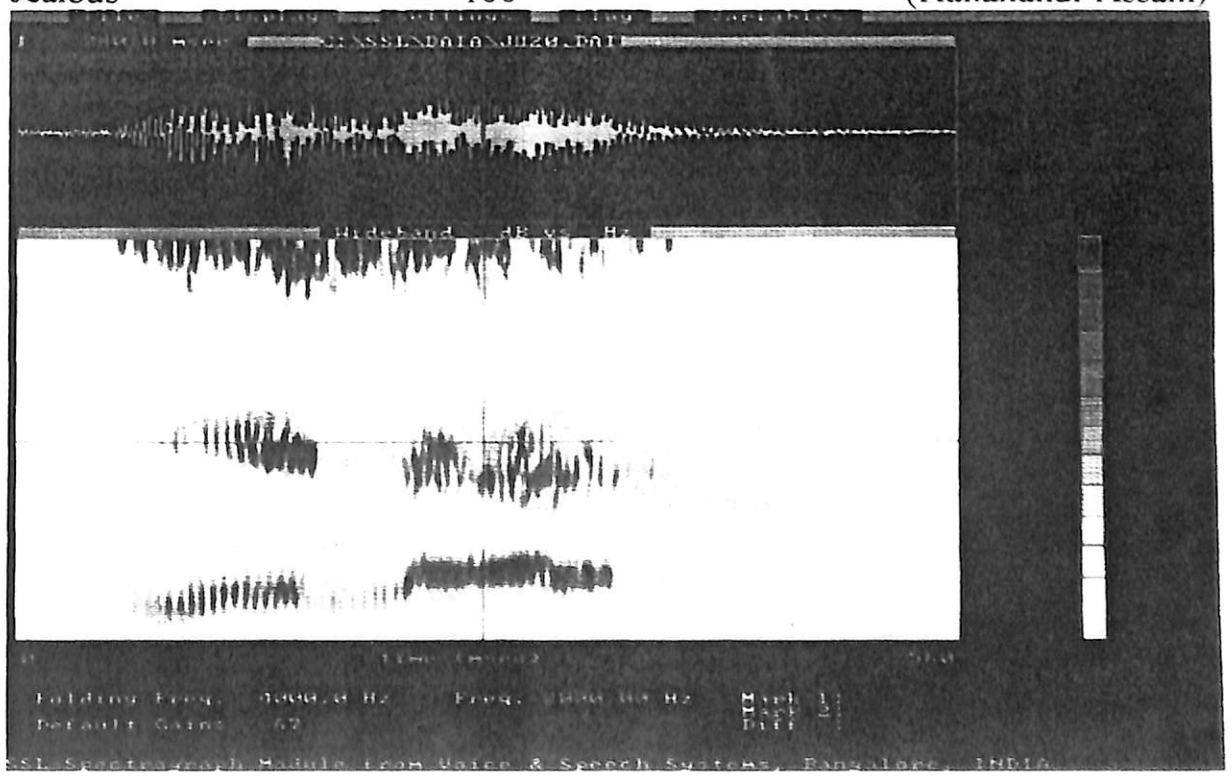
Go 98 (Hailakandi-Assam)

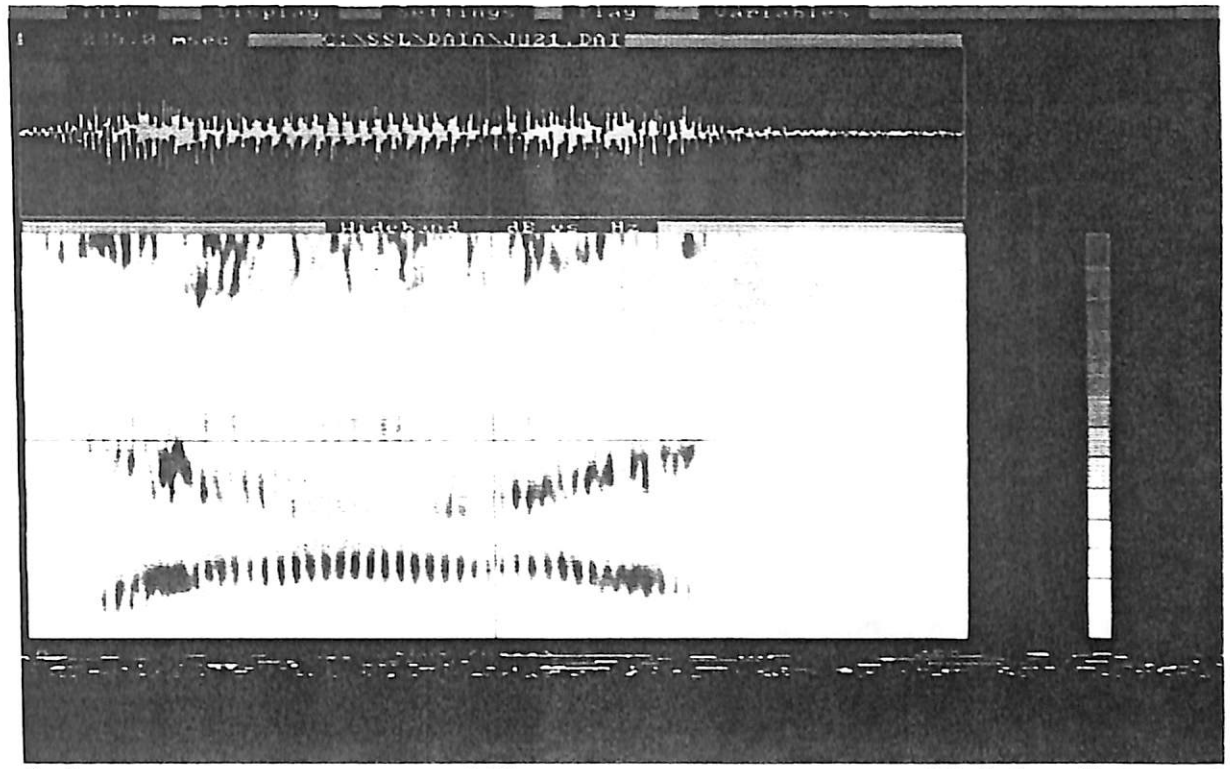




Get 99 (Hailakandi-Assam)

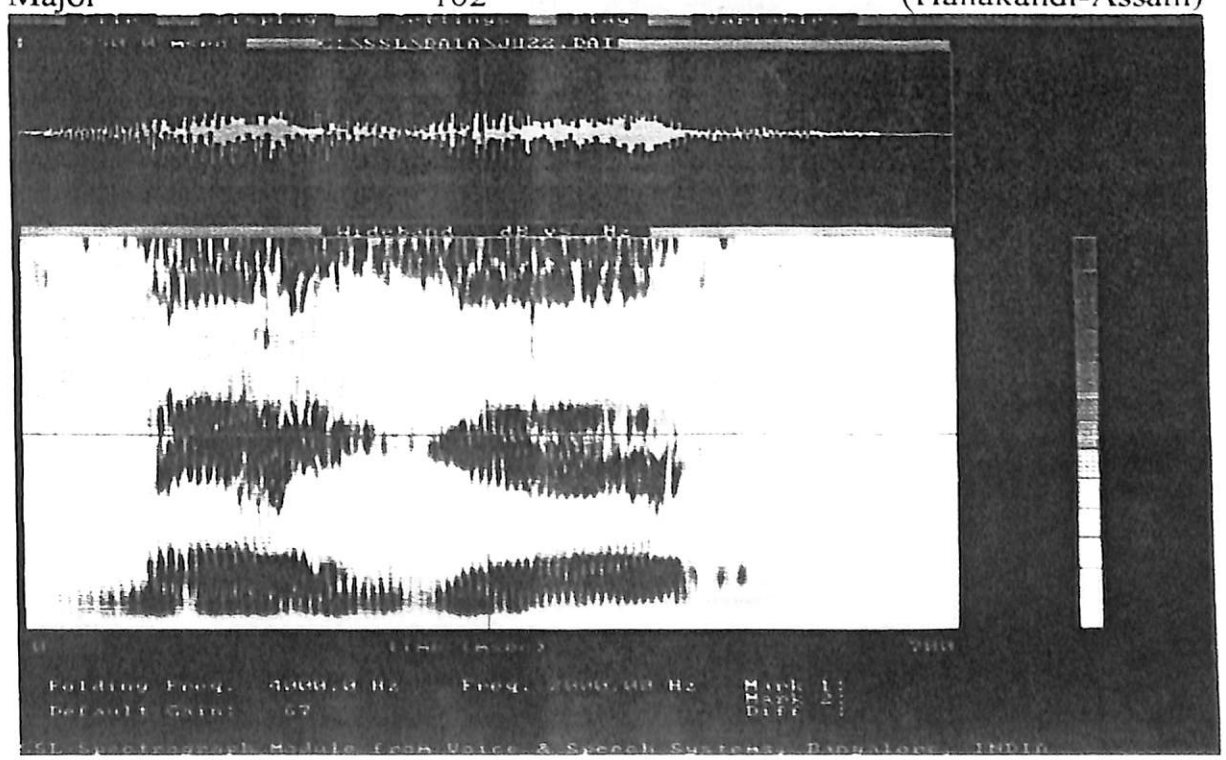
Jealous 100 (Hailakandi-Assam)

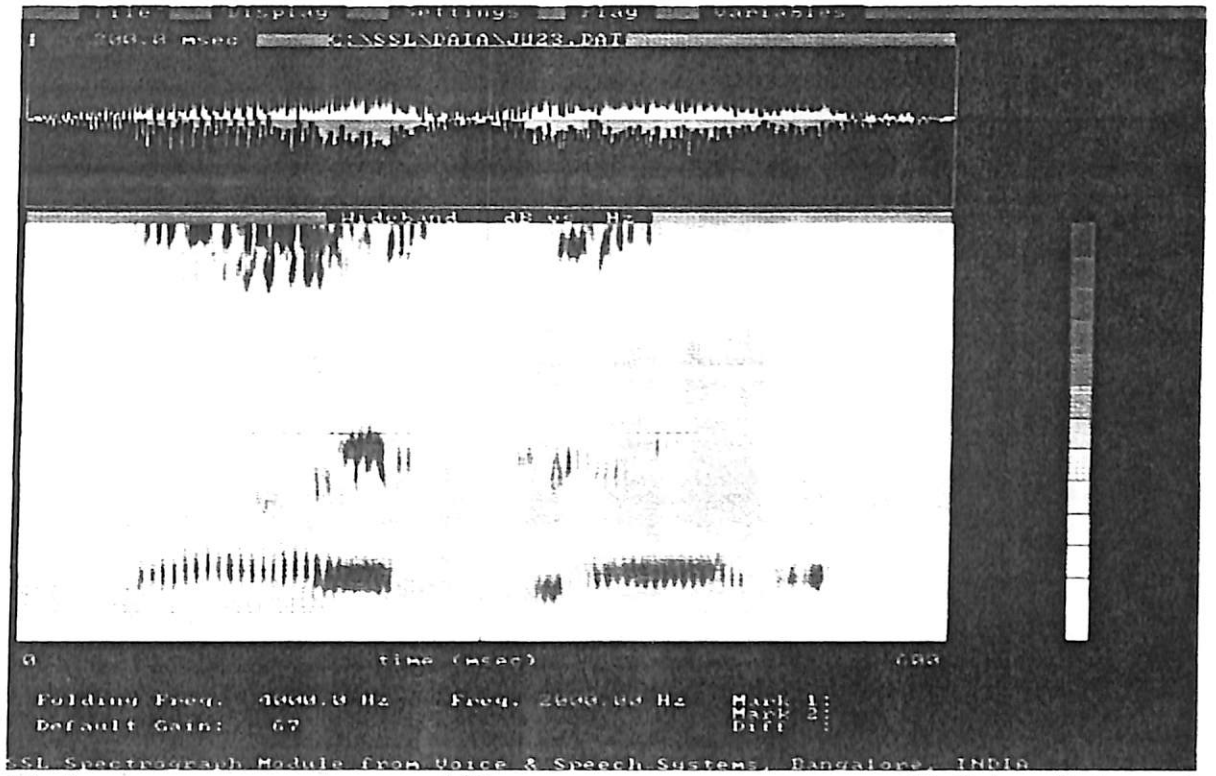




Judge 101 (Hailakandi-Assam)

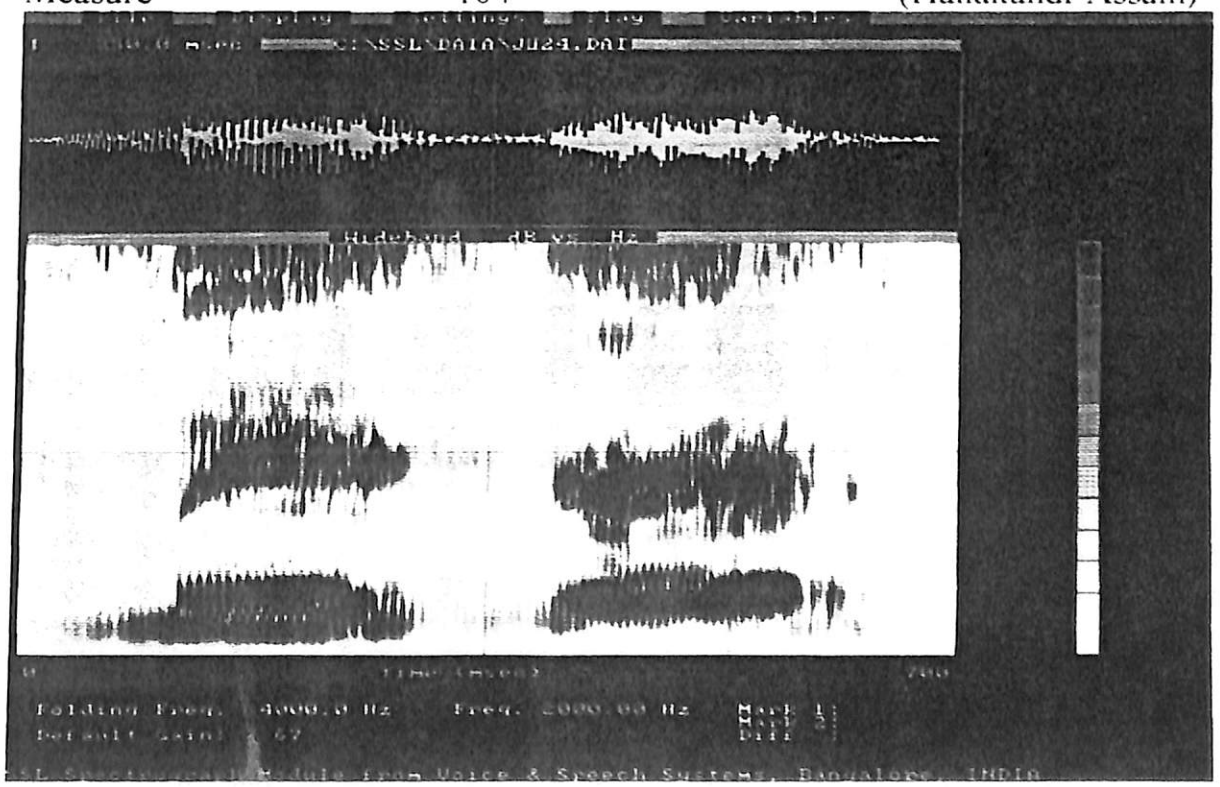
Major 102 (Hailakandi-Assam)



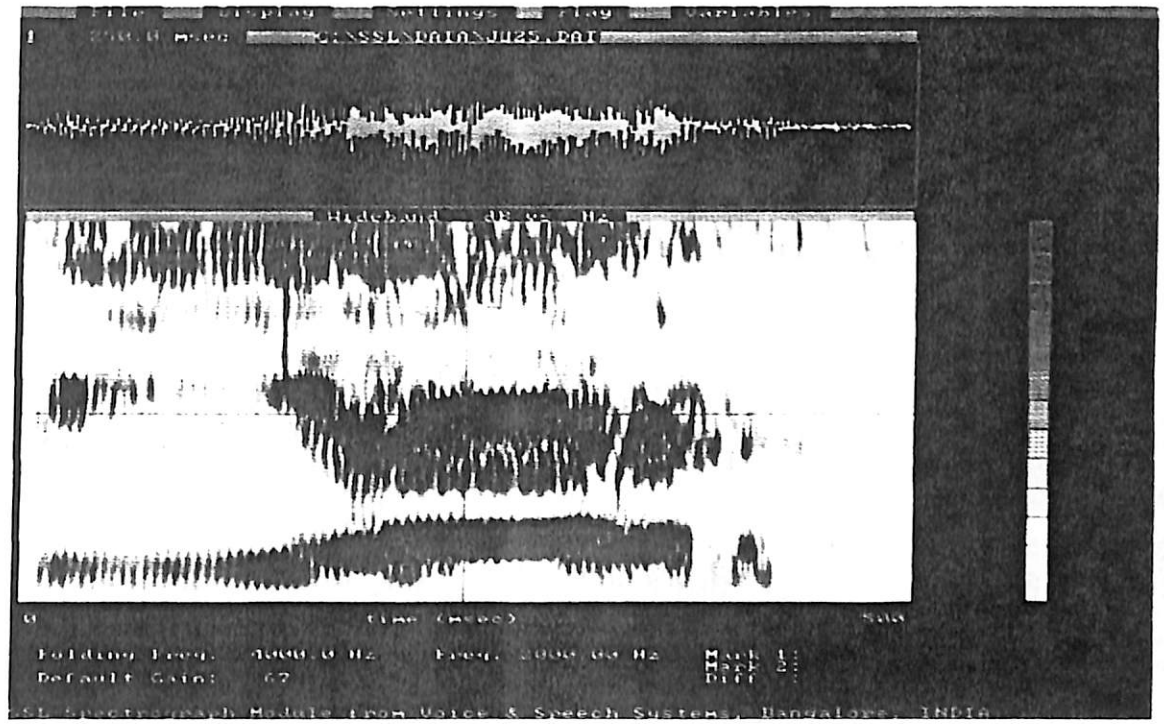


Mother 103 (Hailakandi-Assam)

Measure 104 (Hailakandi-Assam)

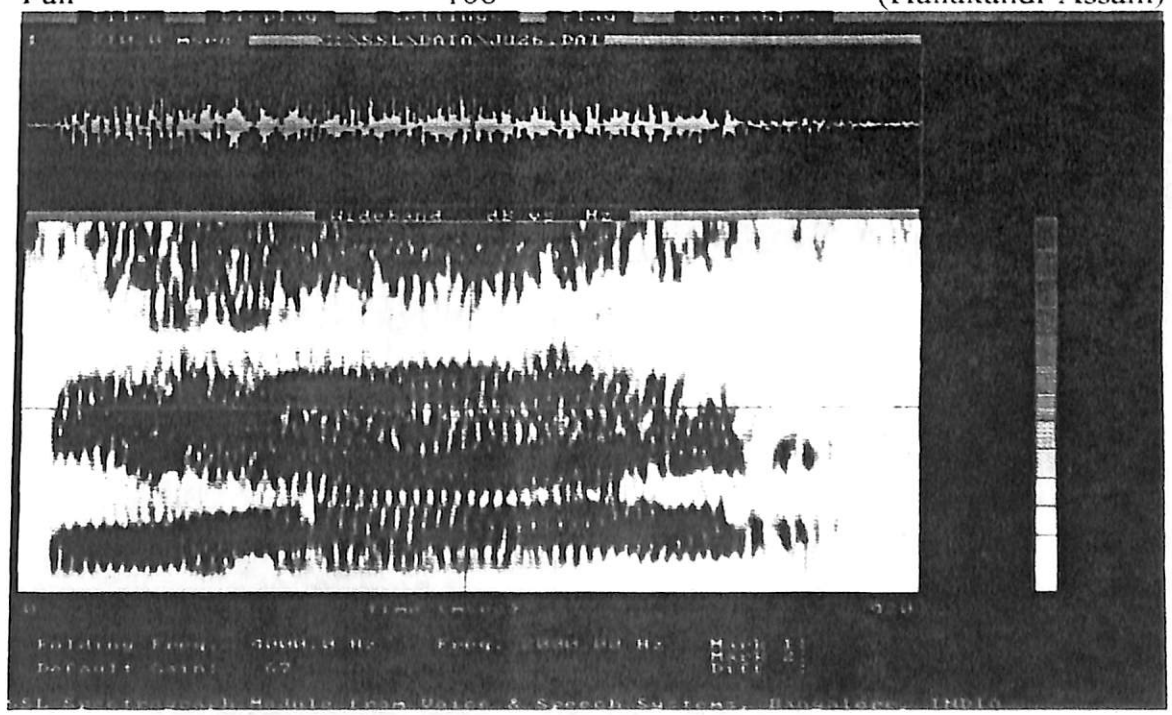


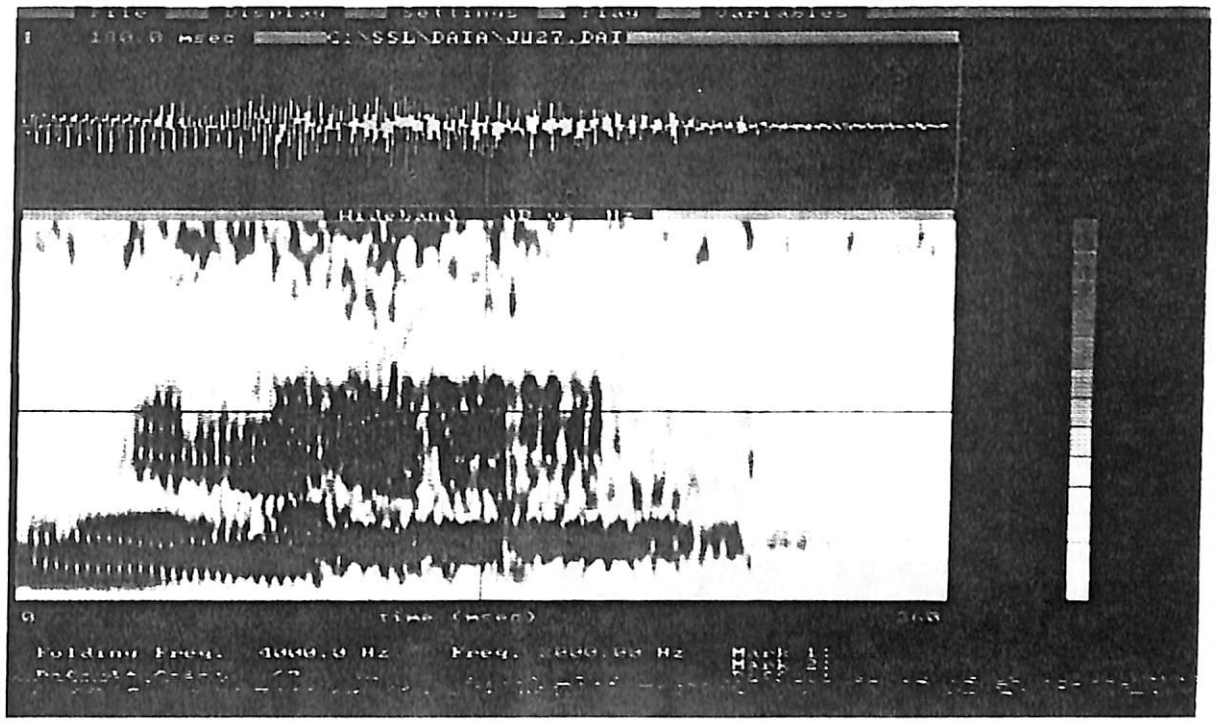
Measure 104 (Hailakandi-Assam)



Peer 105 (Hailakandi-Assam)

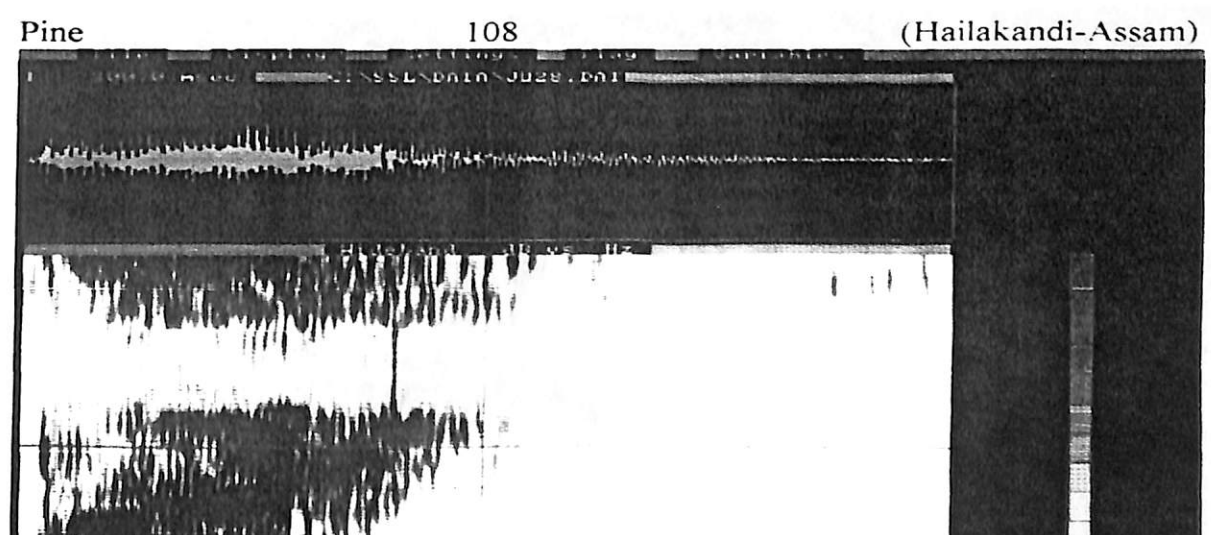
Pair 106 (Hailakandi-Assam)

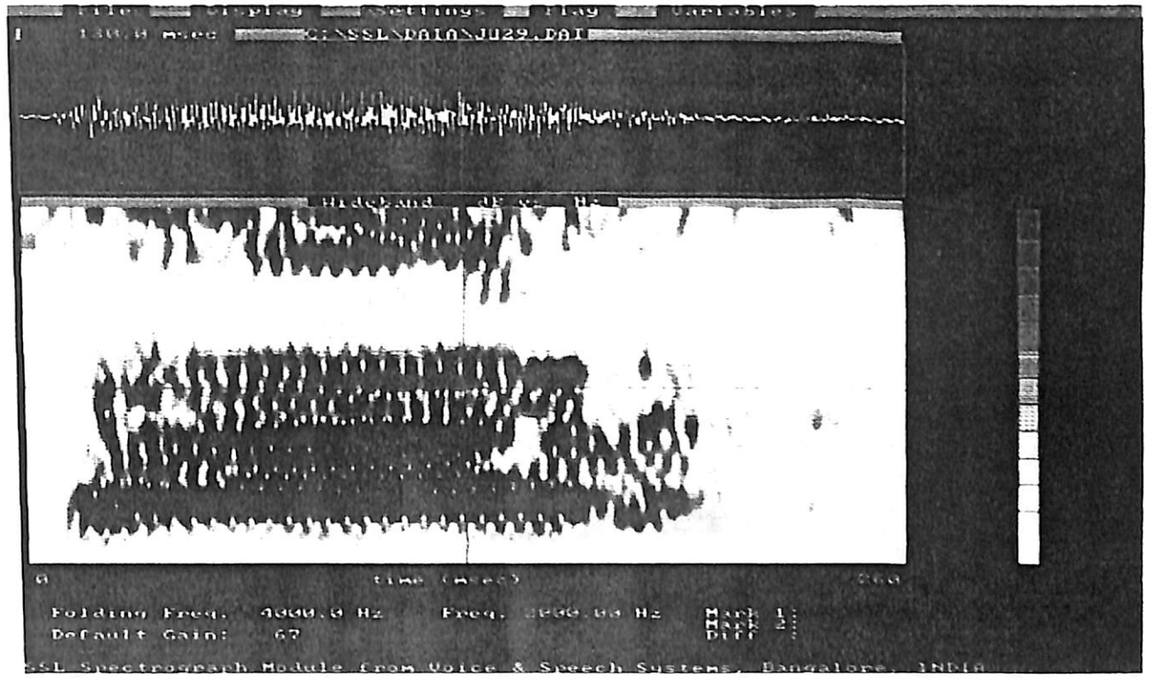




Poor 107 (Hailakandi-Assam)

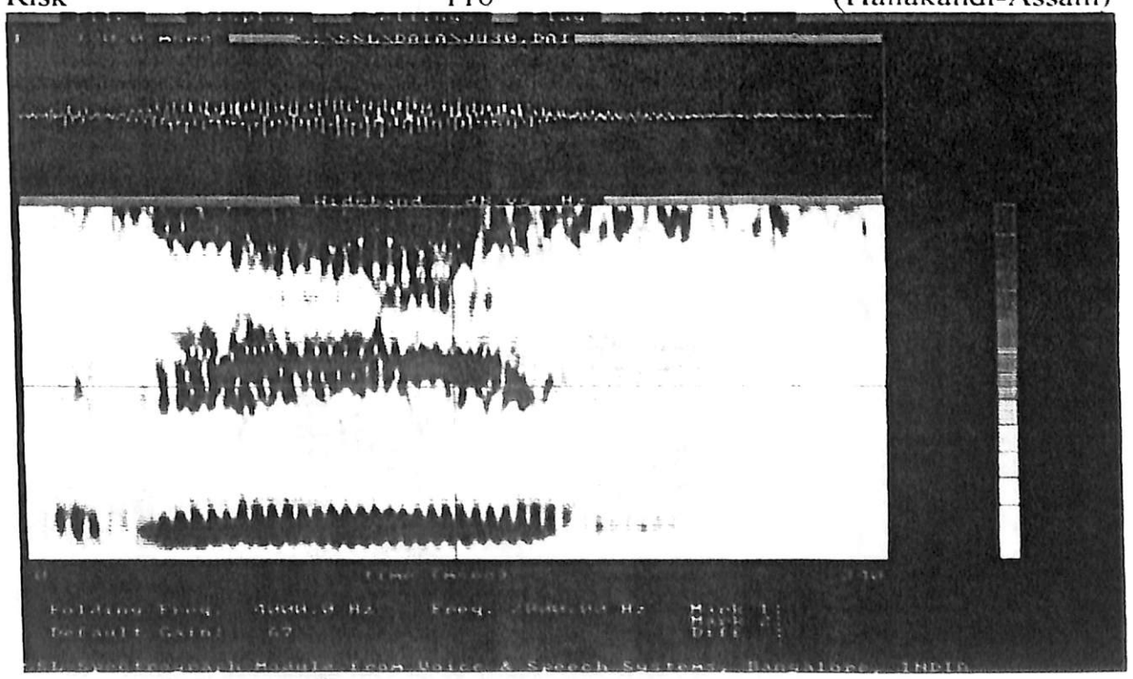
Pine 108 (Hailakandi-Assam)

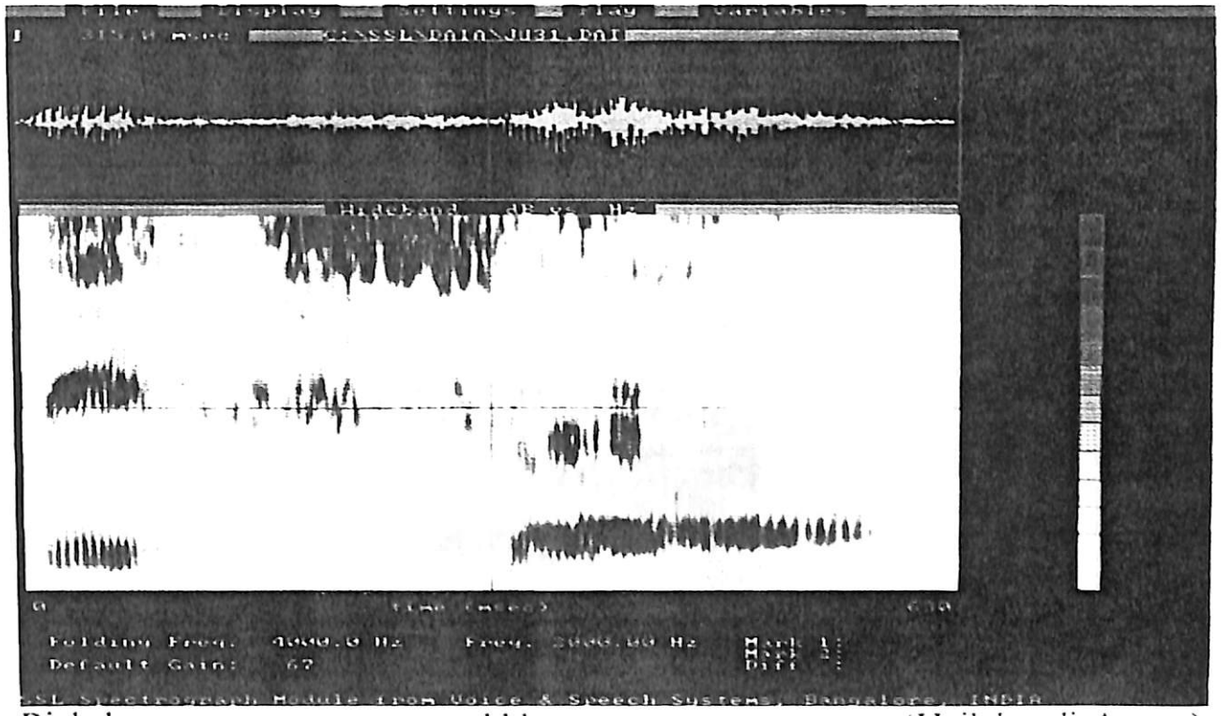




Park 109 (Hailakandi-Assam)

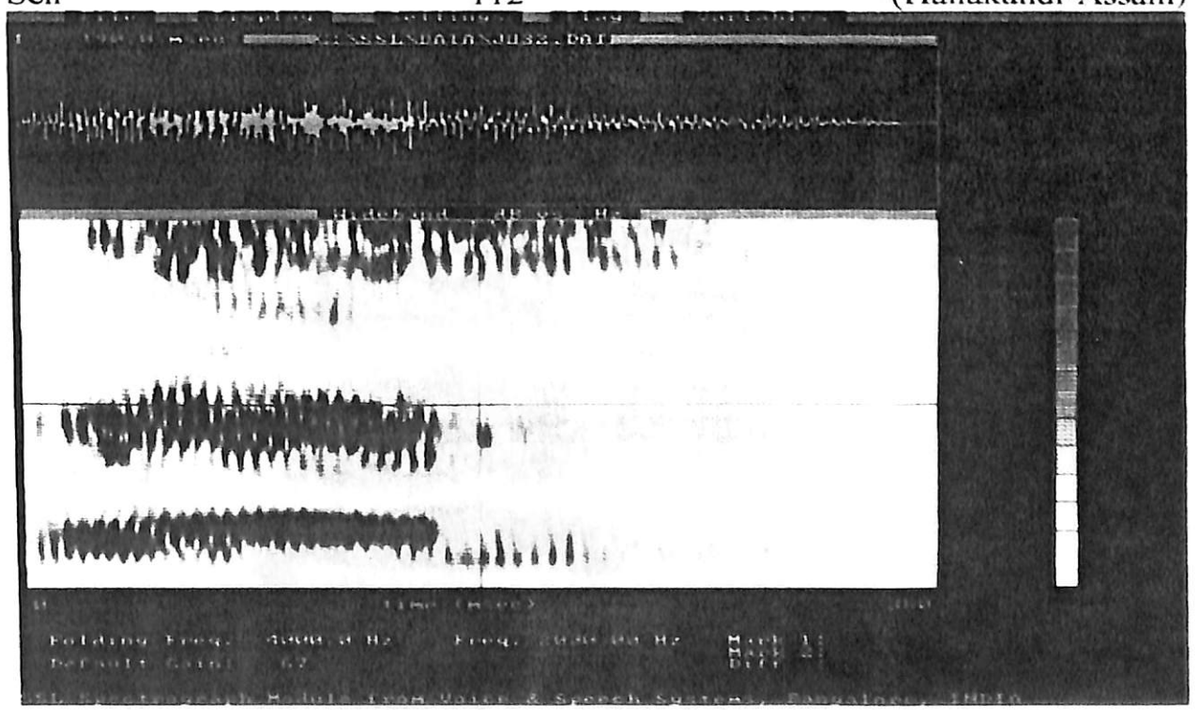
Risk 110 (Hailakandi-Assam)

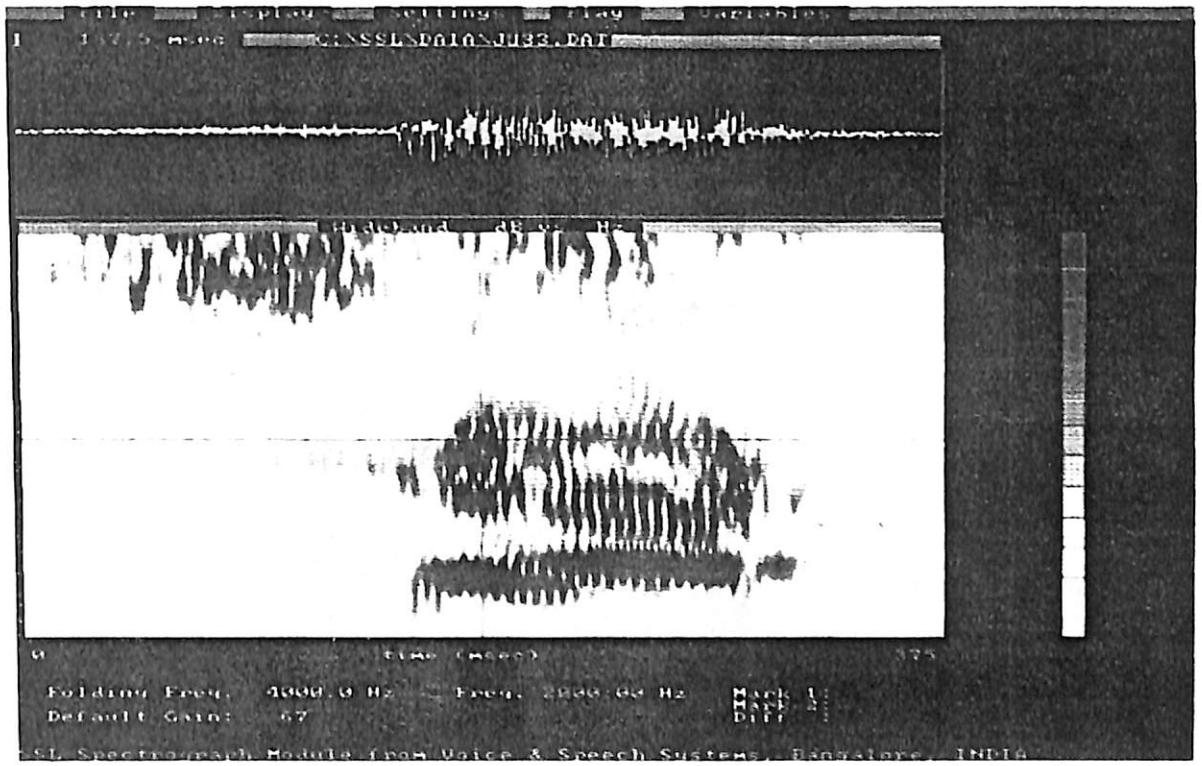




Rickshaw 111 (Hailakandi-Assam)

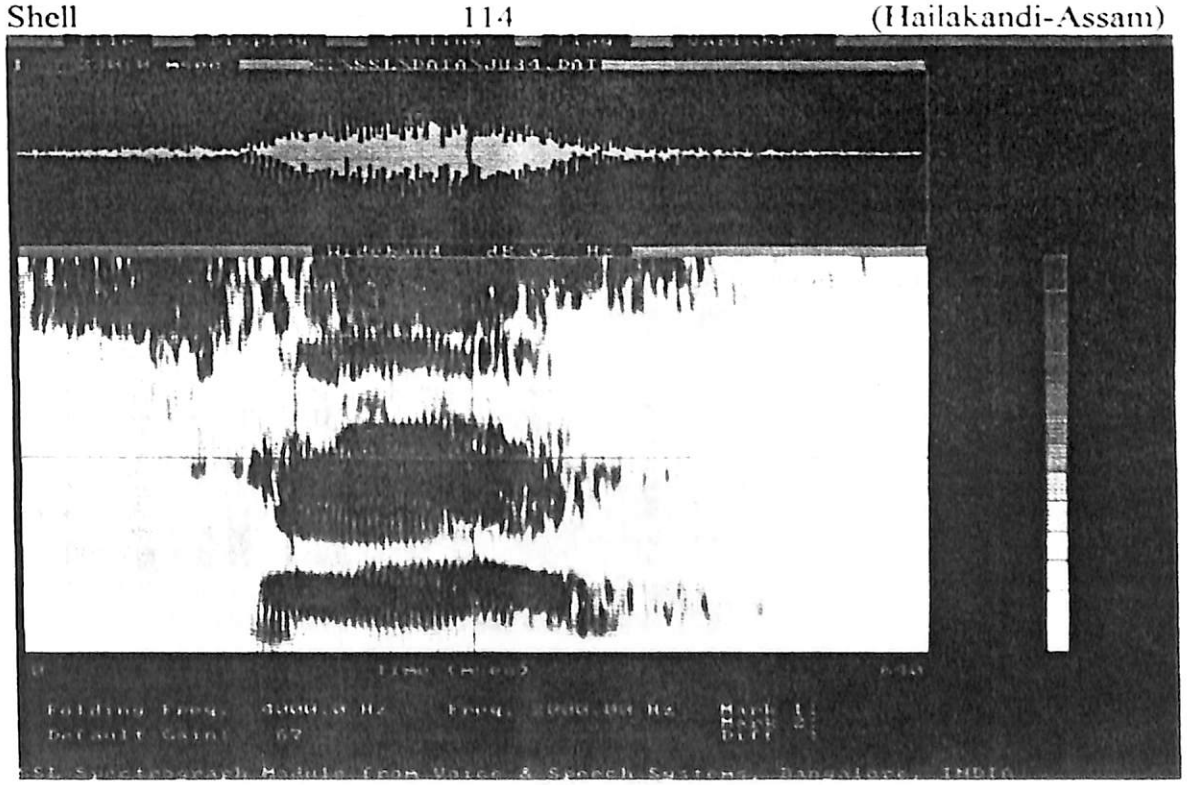
Sell 112 (Hailakandi-Assam)

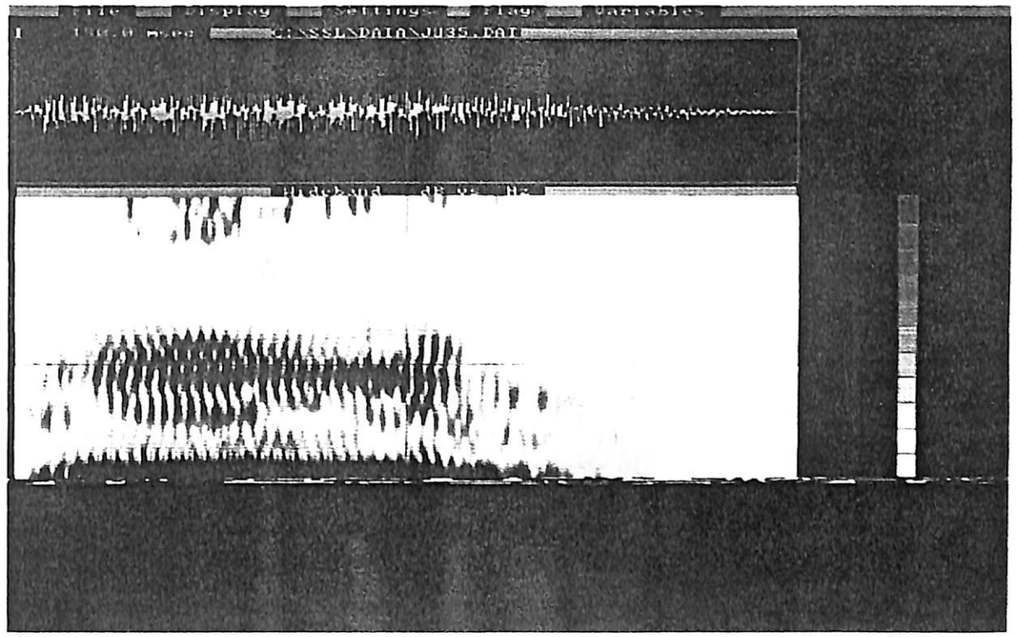




Shot 113 (Hailakandi-Assam)

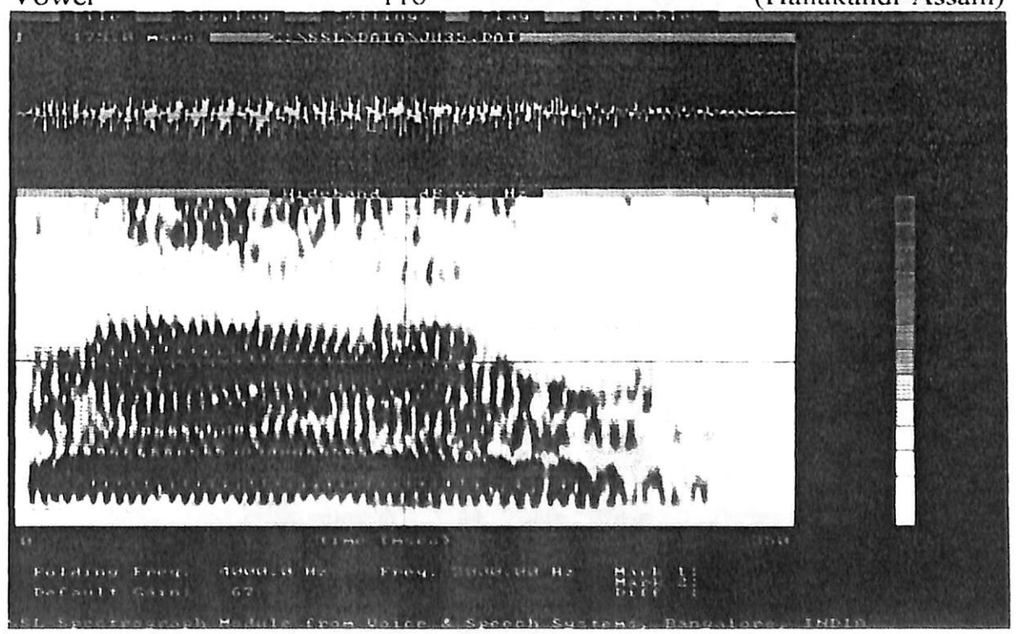
Shell 114 (Hailakandi-Assam)

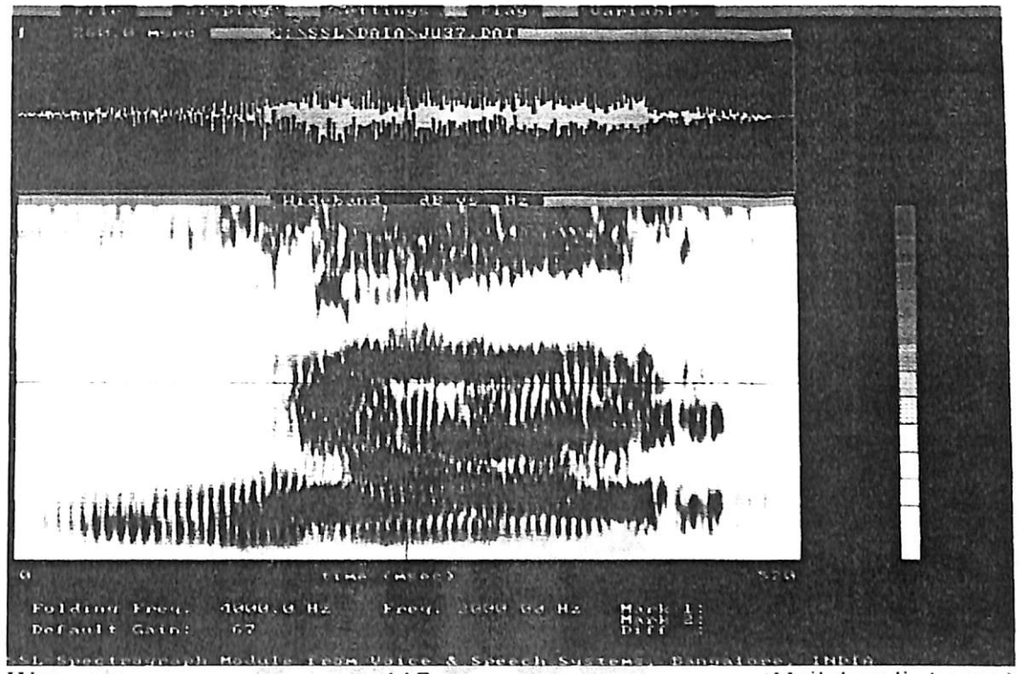




Short 115 (Hailakandi-Assam)

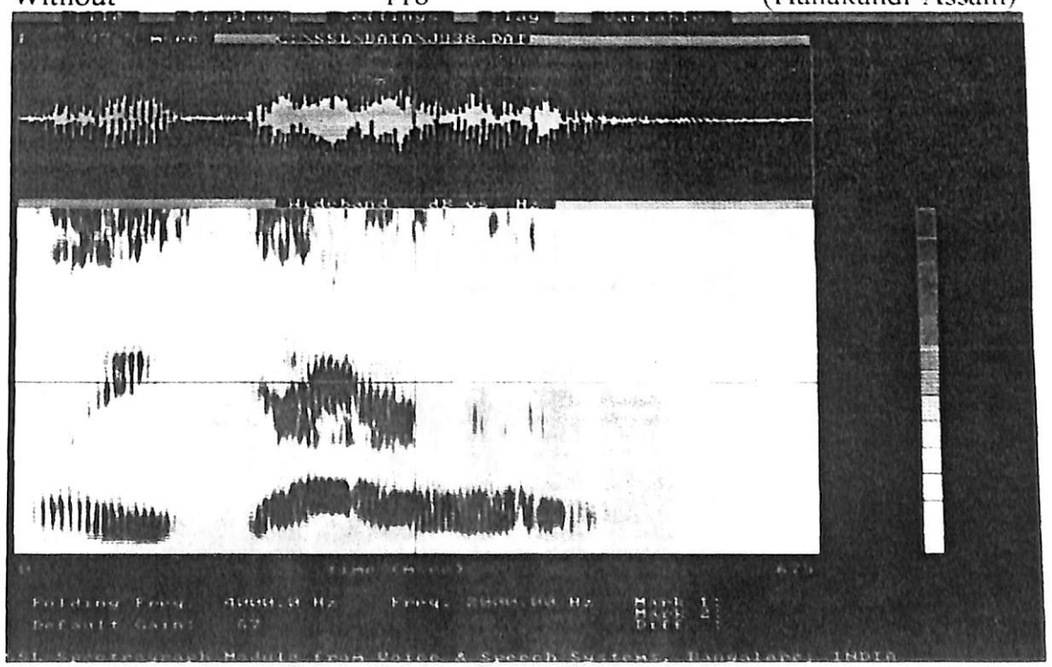
Vowel 116 (Hailakandi-Assam)

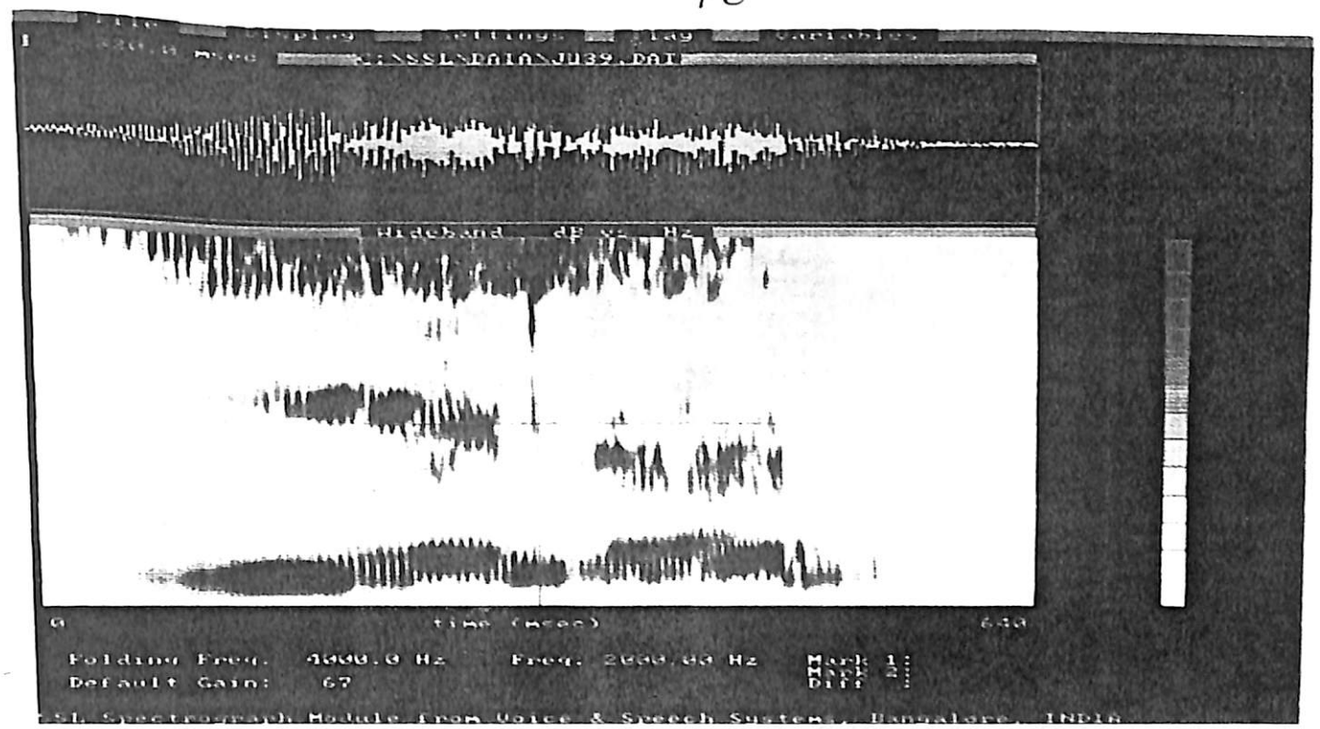




War 117 (Hailakandi-Assam)

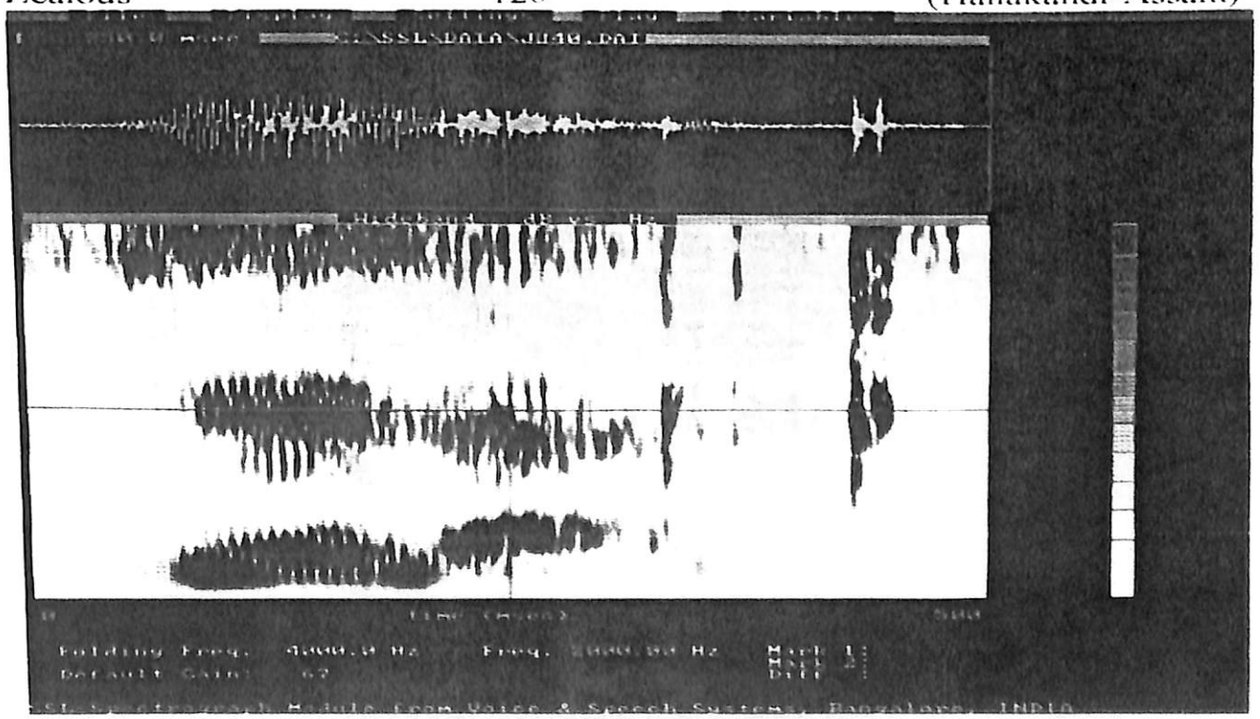
Without 118 (Hailakandi-Assam)

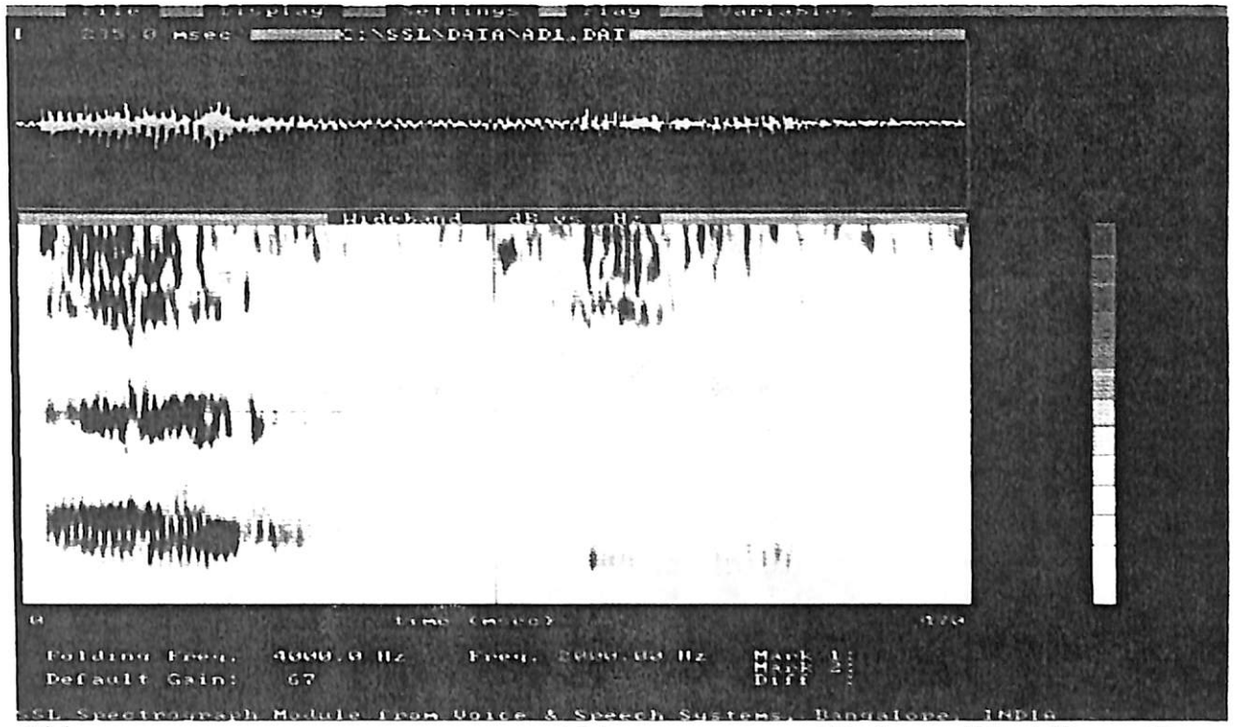




Yellow 119 (Hailakandi-Assam)

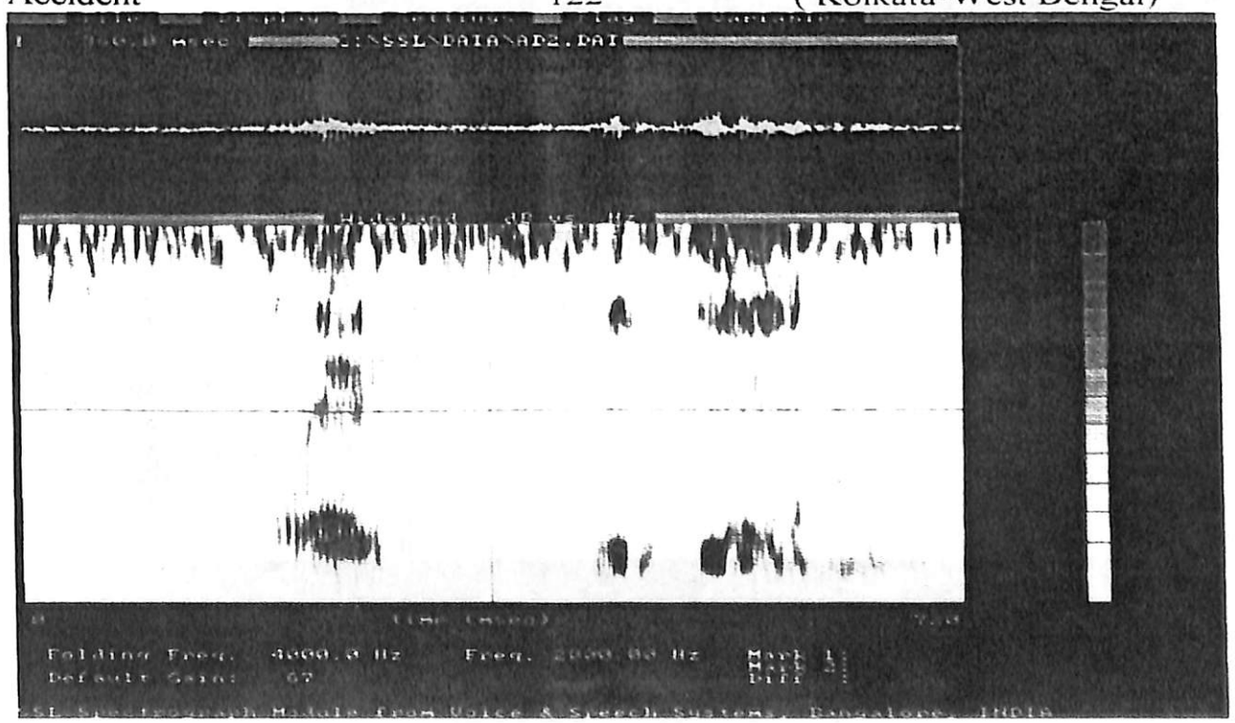
Zealous 120 (Hailakandi-Assam)

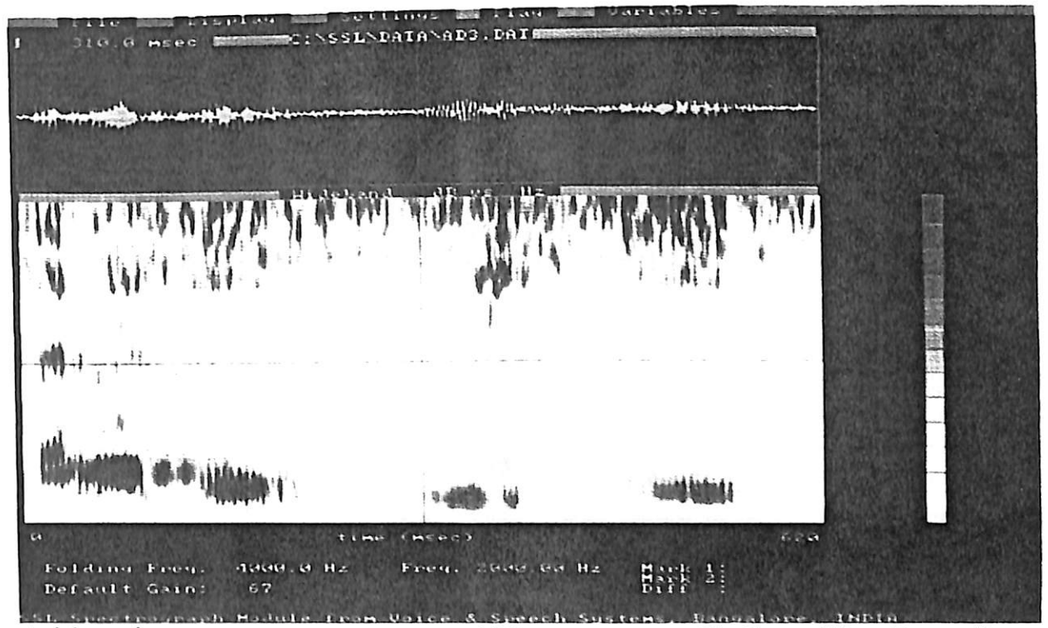




Abler 121 (Kolkata-West Bengal)

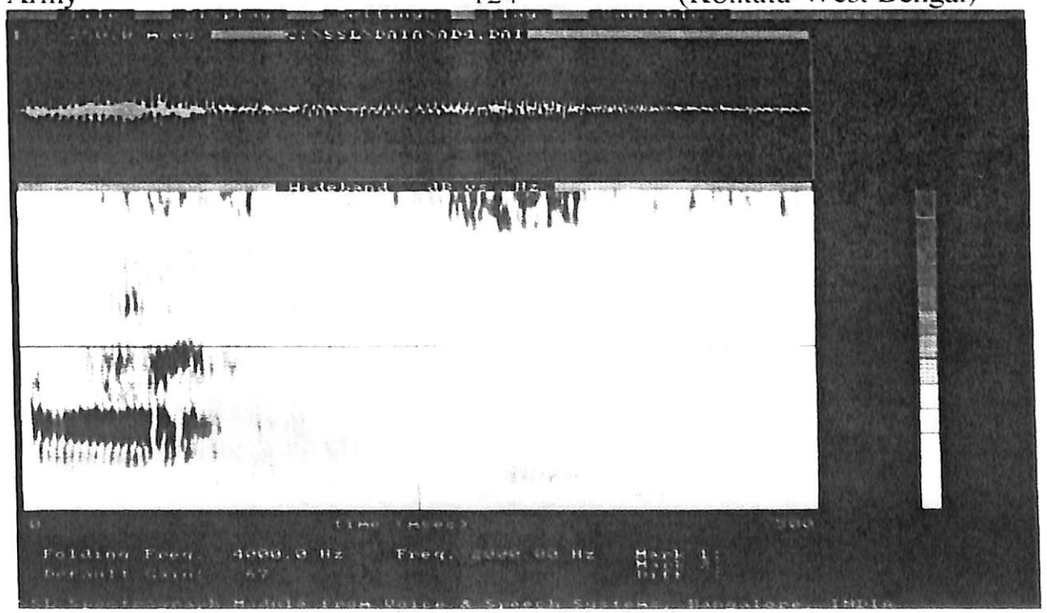
Accident 122 (Kolkata-West Bengal)

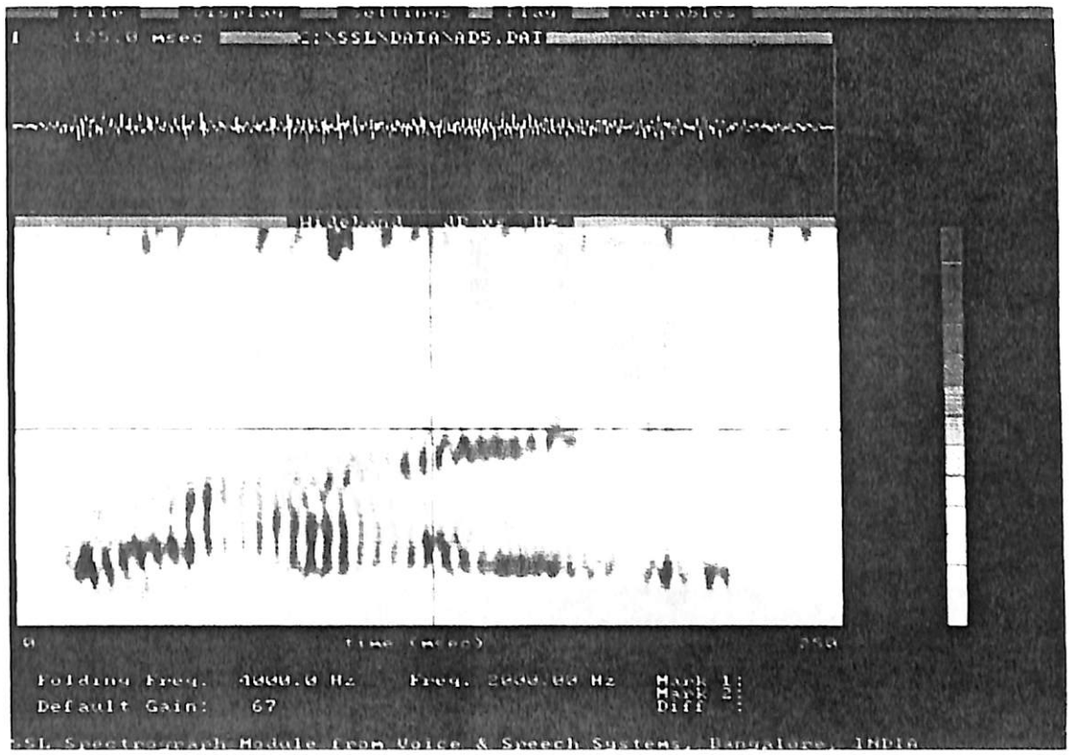




Arithmetic 123 (Kolkata-West Bengal)

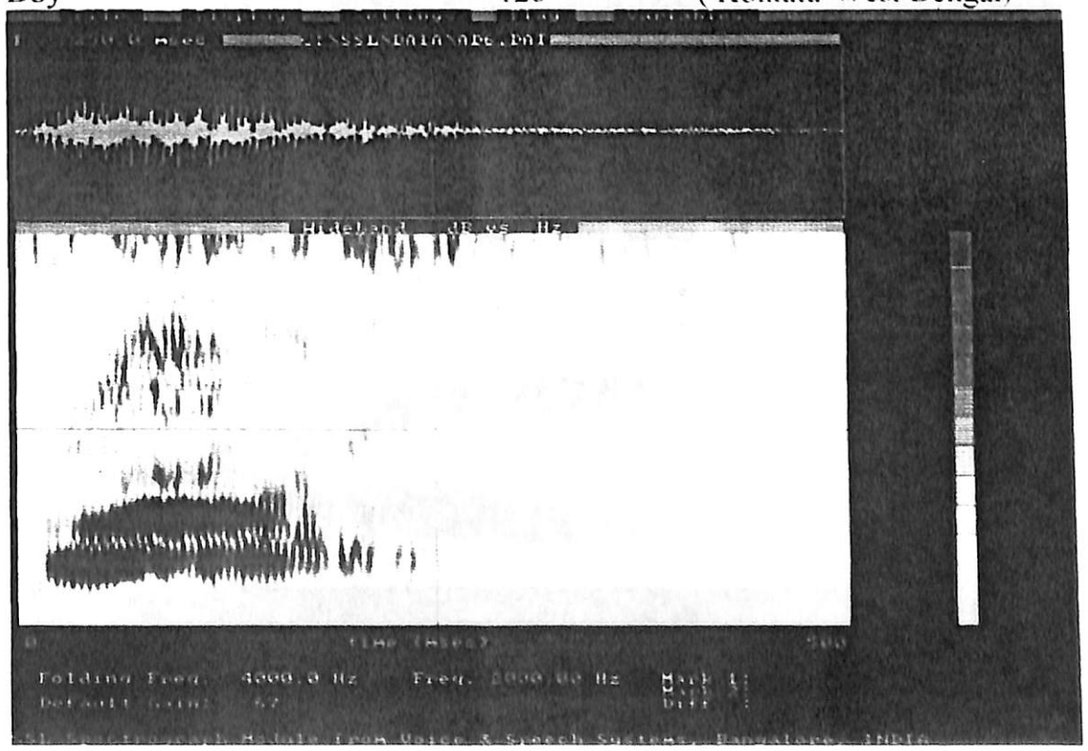
Army 124 (Kolkata-West Bengal)

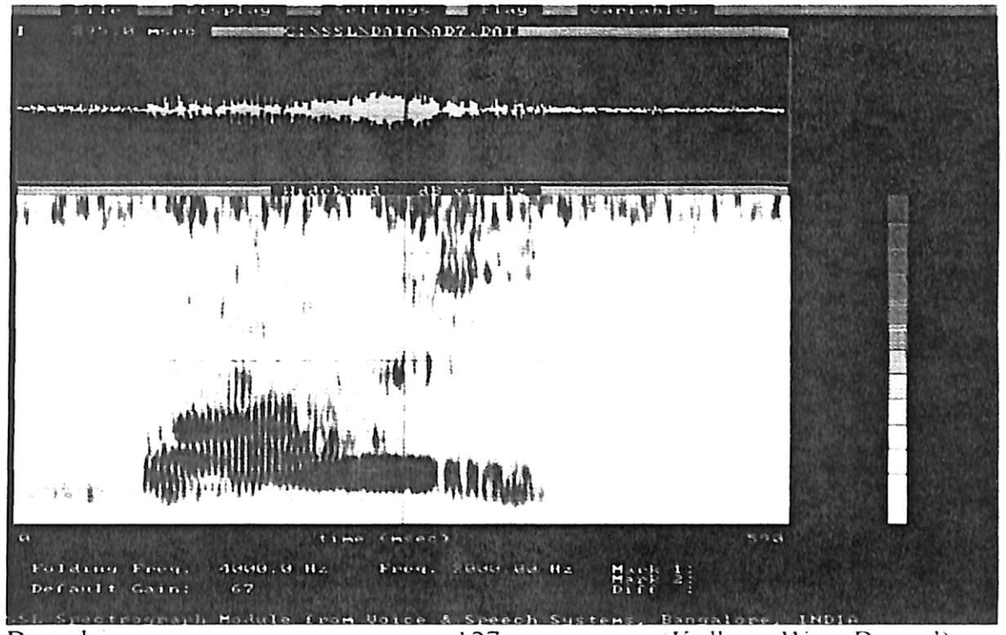




Bard 125 (Kolkata-West Bengal)

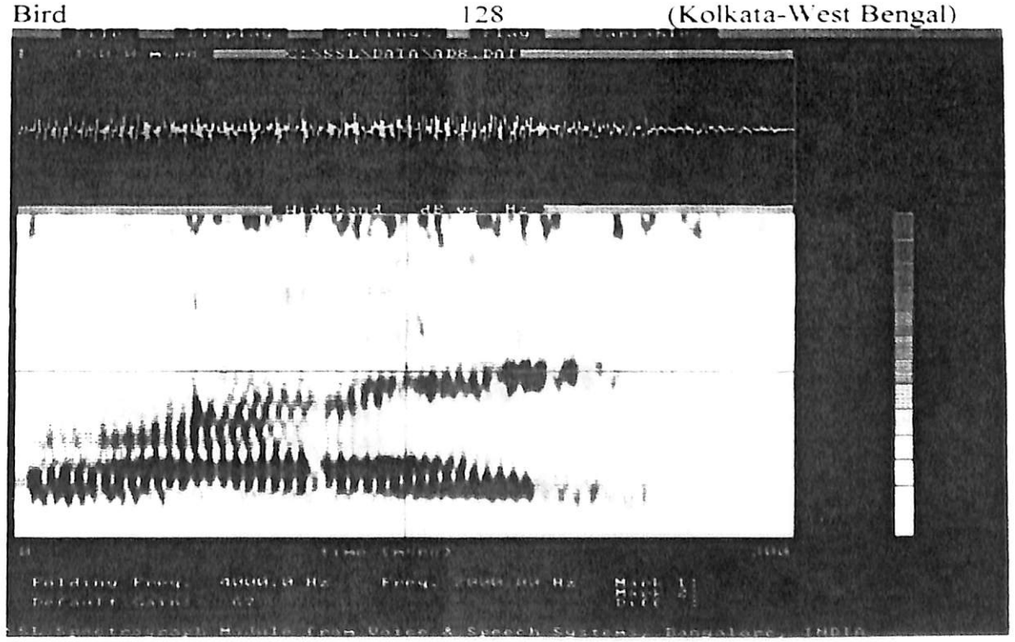
Boy 126 (Kolkata-West Bengal)

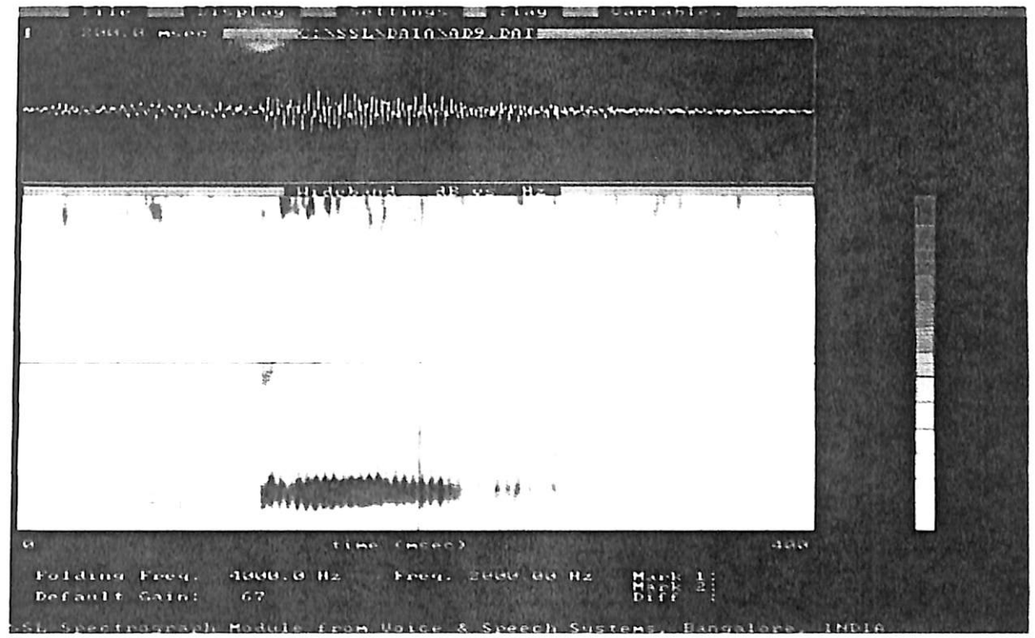




Bowel 127 (Kolkata-West Bengal)

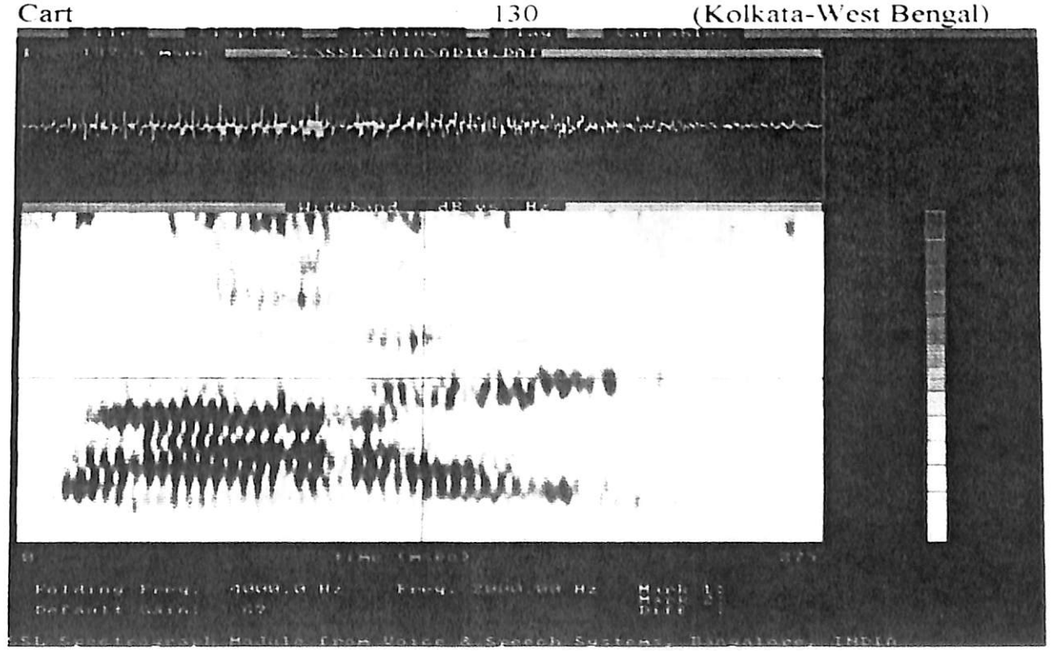
Bird 128 (Kolkata-West Bengal)

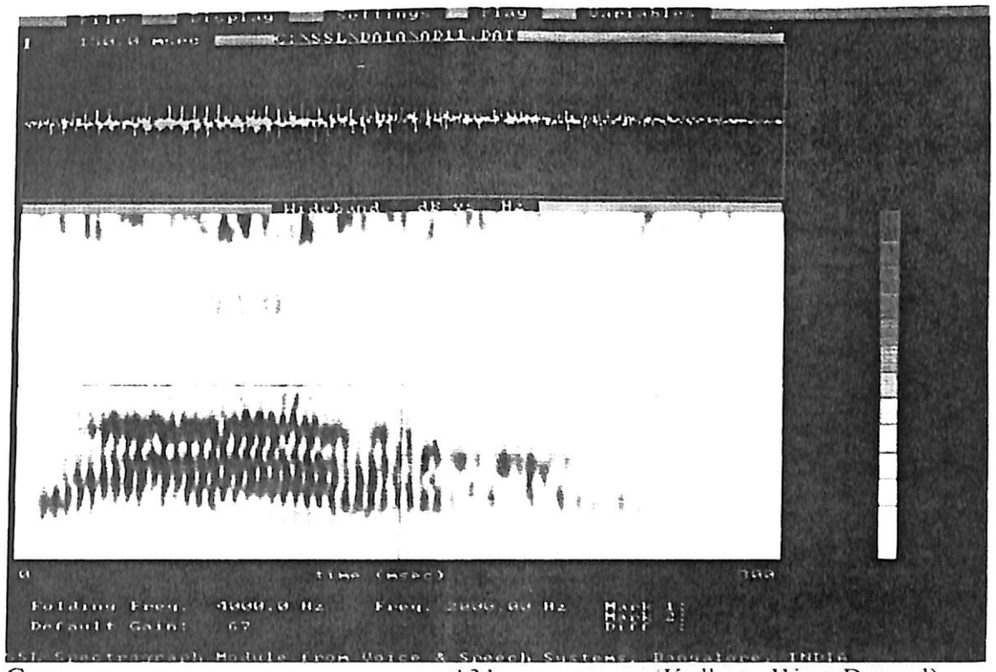




Blur 129 (Kolkata-West Bengal)

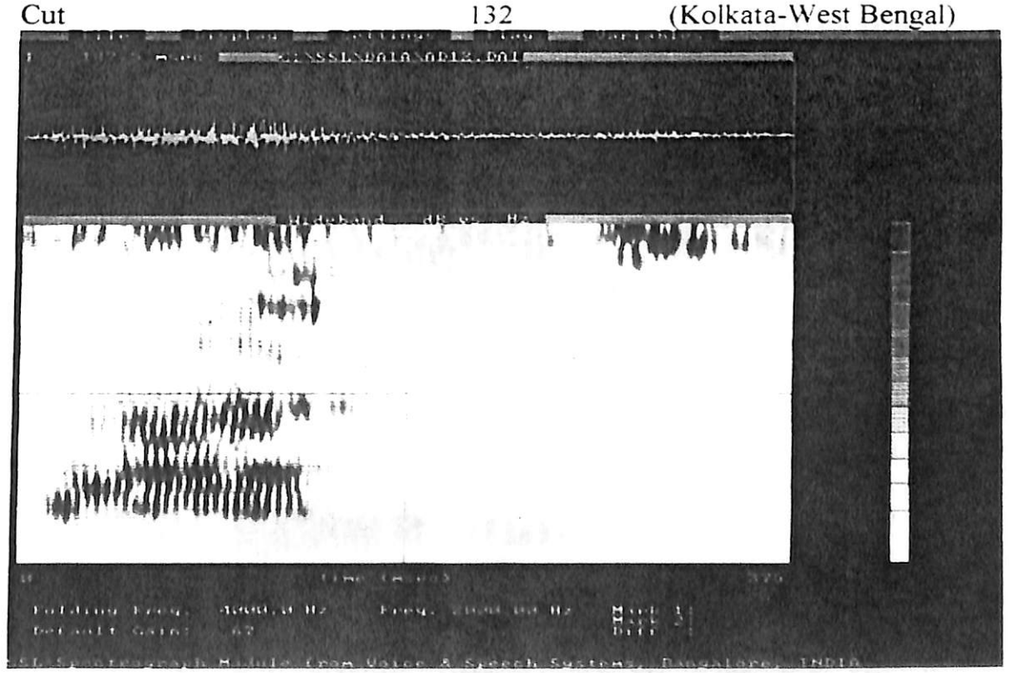
Cart 130 (Kolkata-West Bengal)

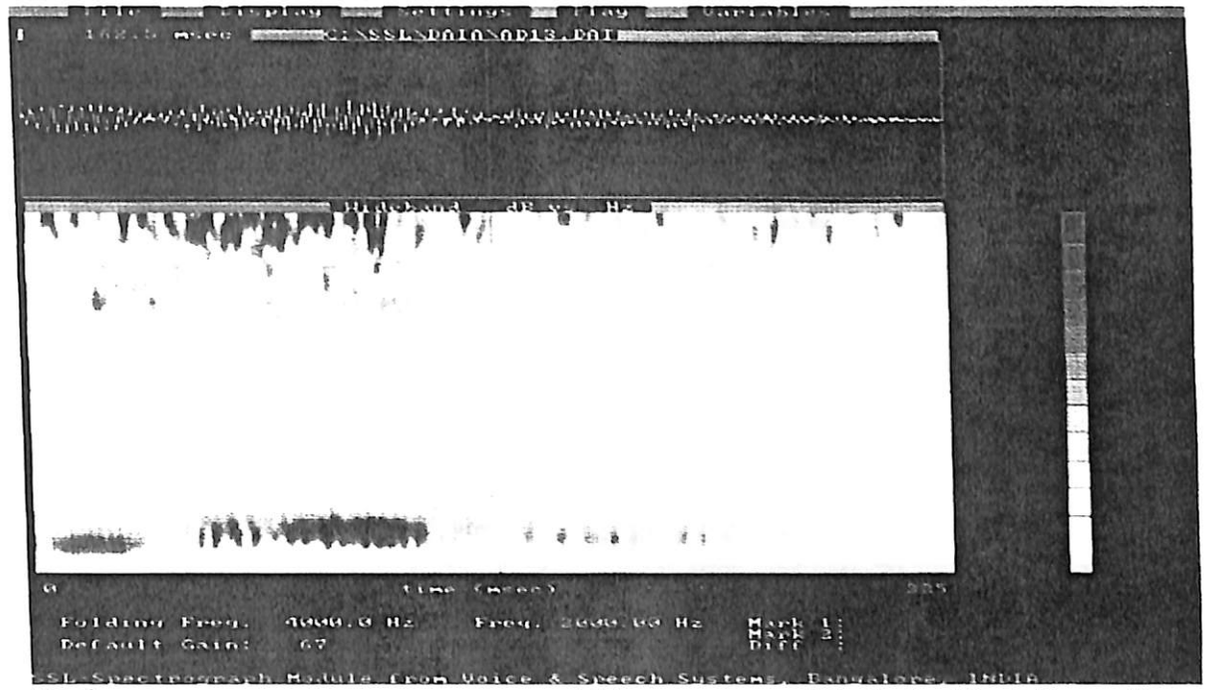




Cow 131 (Kolkata-West Bengal)

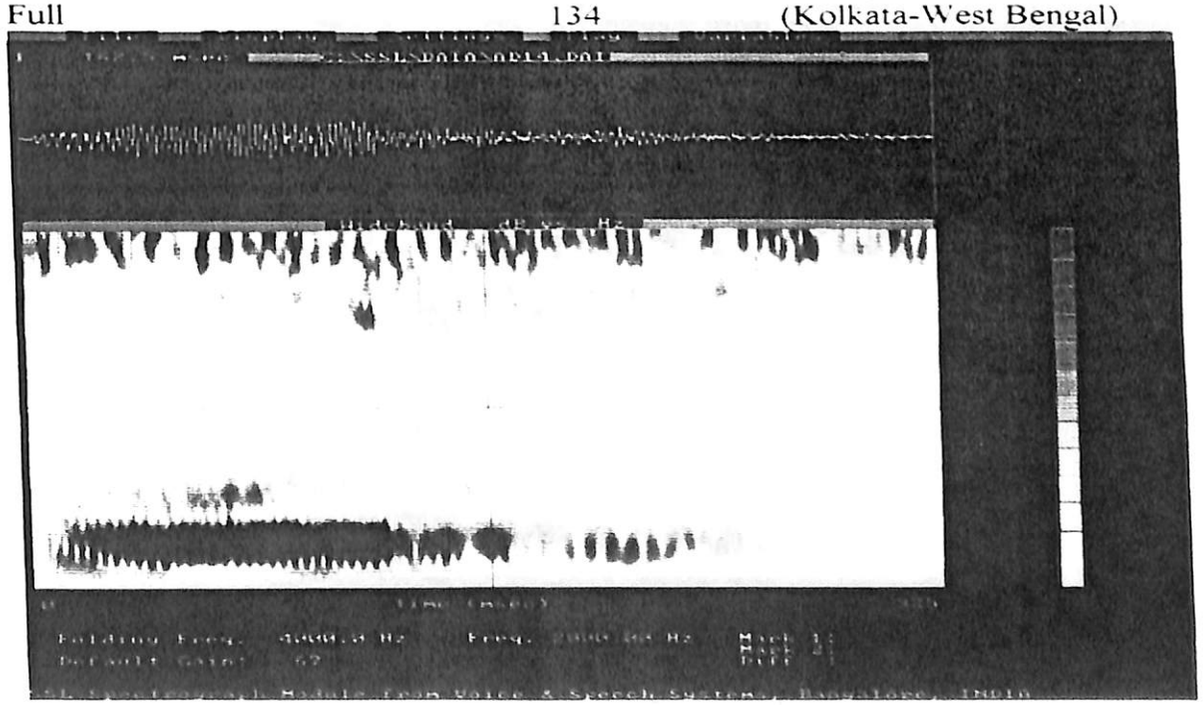
Cut 132 (Kolkata-West Bengal)

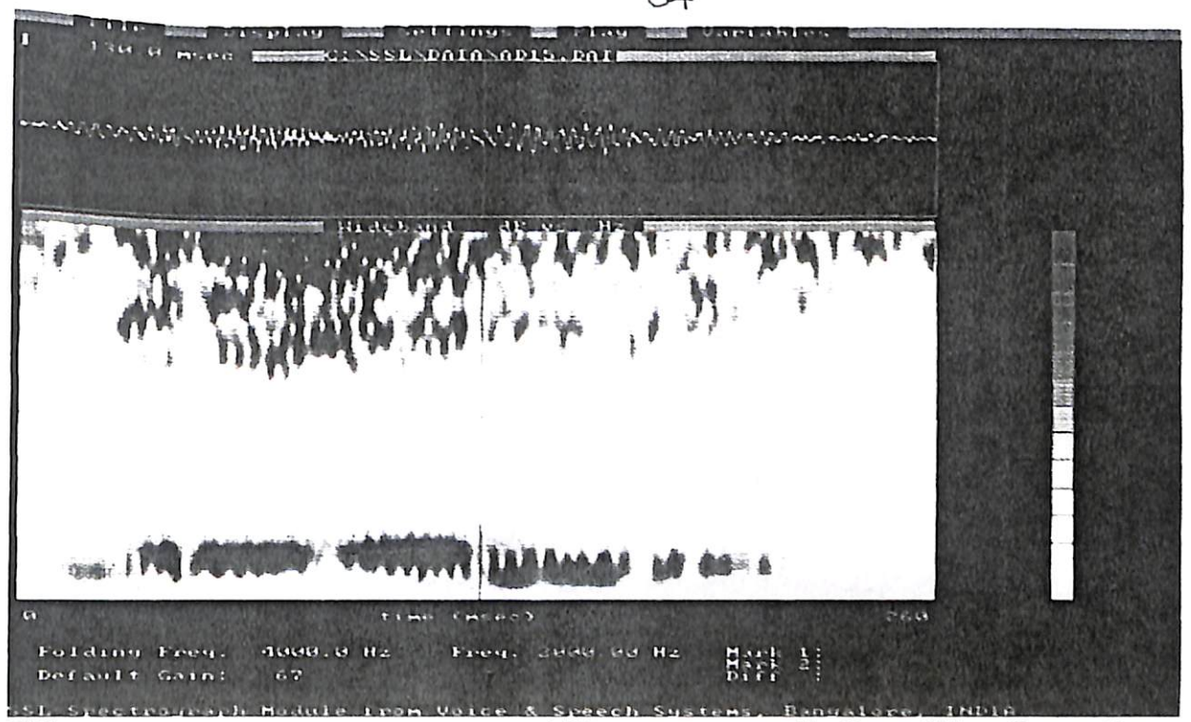




Feel 133 (Kolkata-West Bengal)

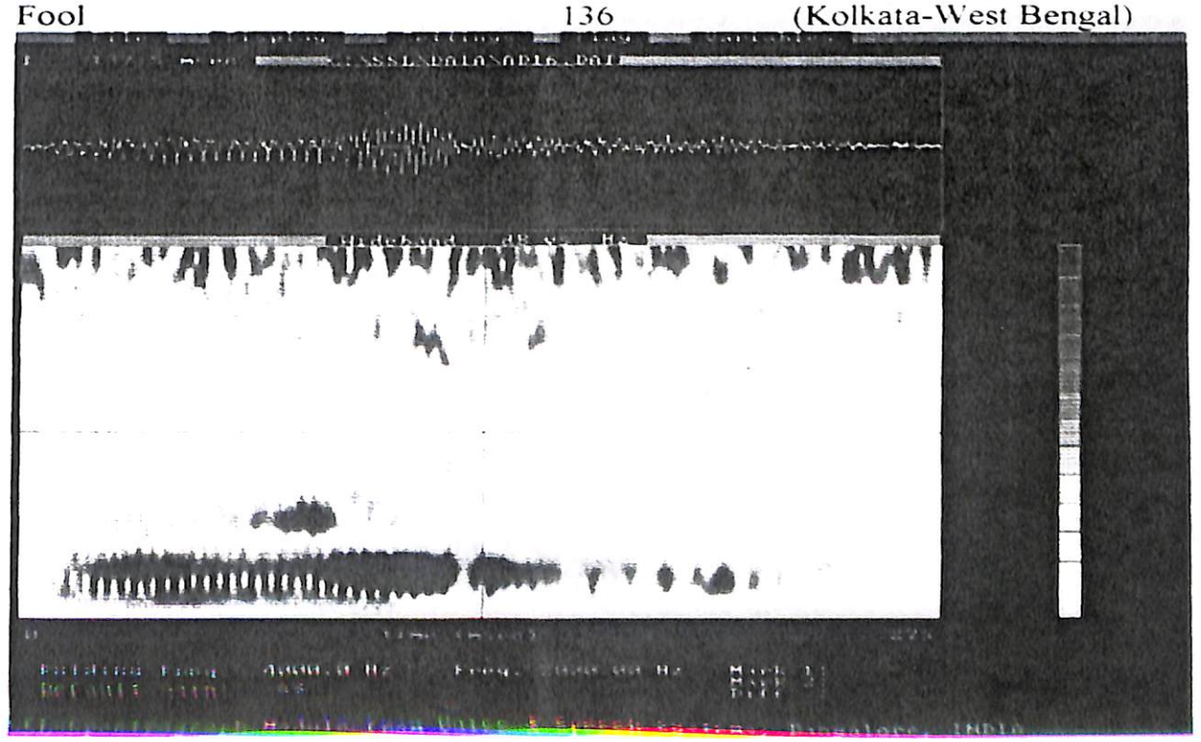
Full 134 (Kolkata-West Bengal)

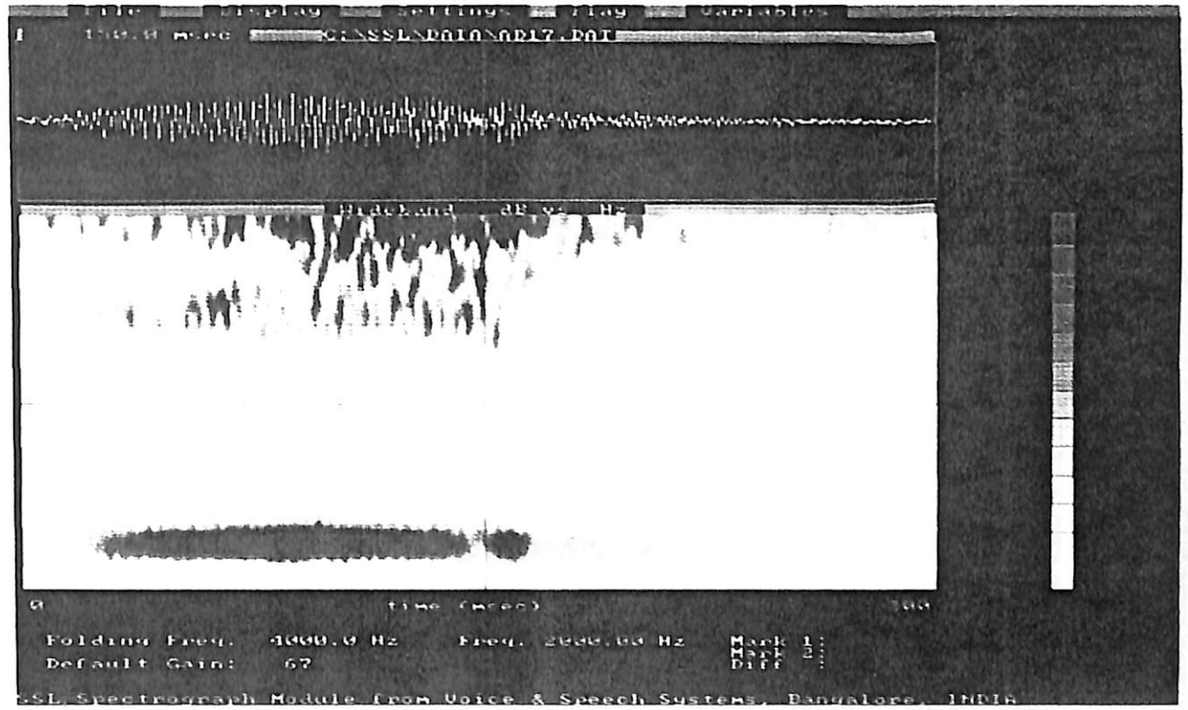




Fill 135 (Kolkata-West Bengal)

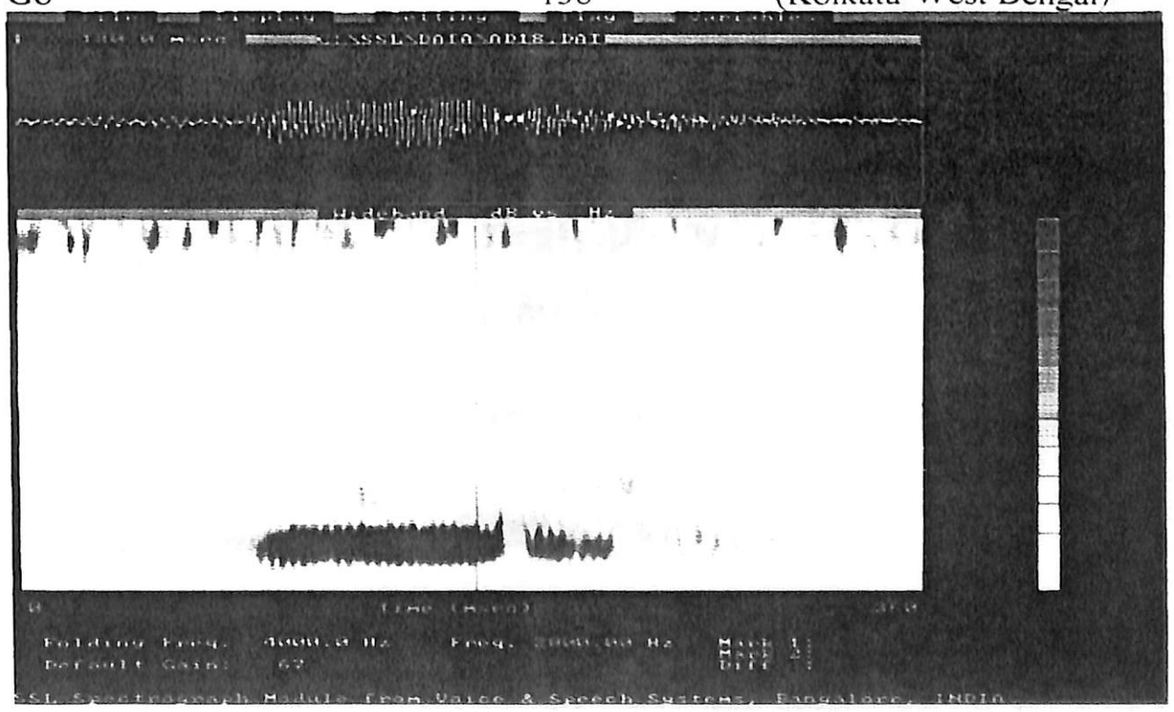
Fool 136 (Kolkata-West Bengal)

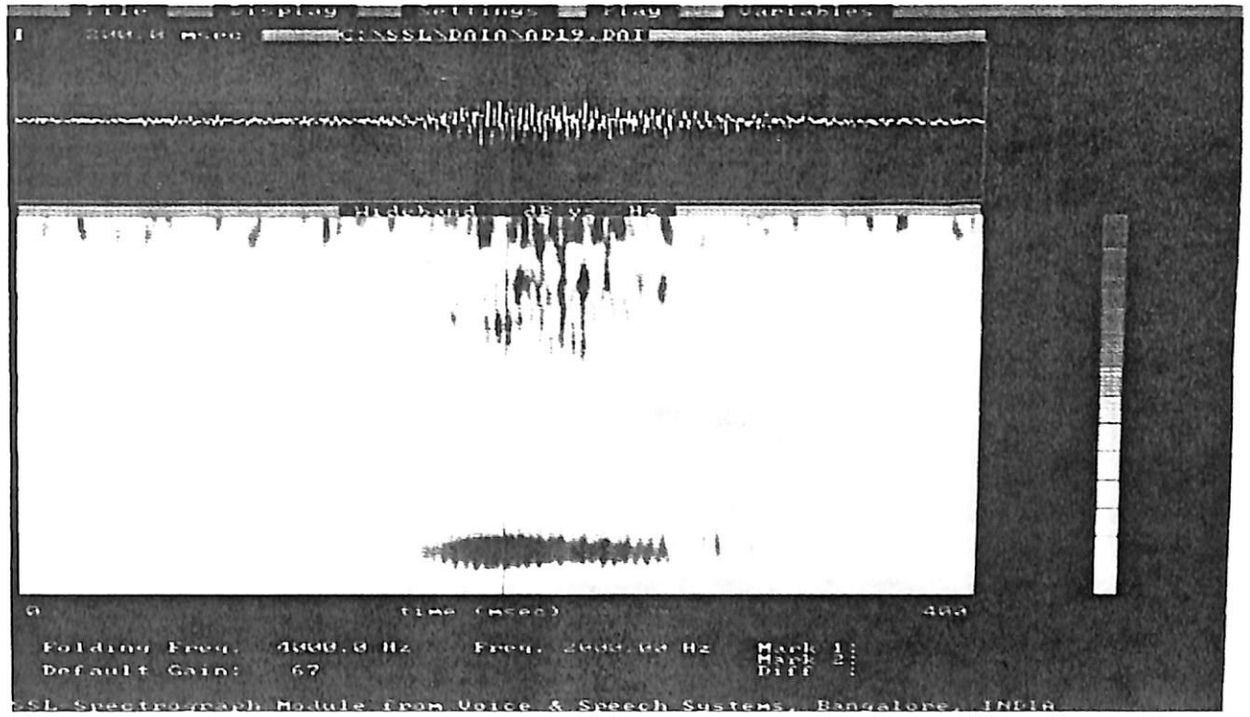




Gate 137 (Kolkata-West Bengal)

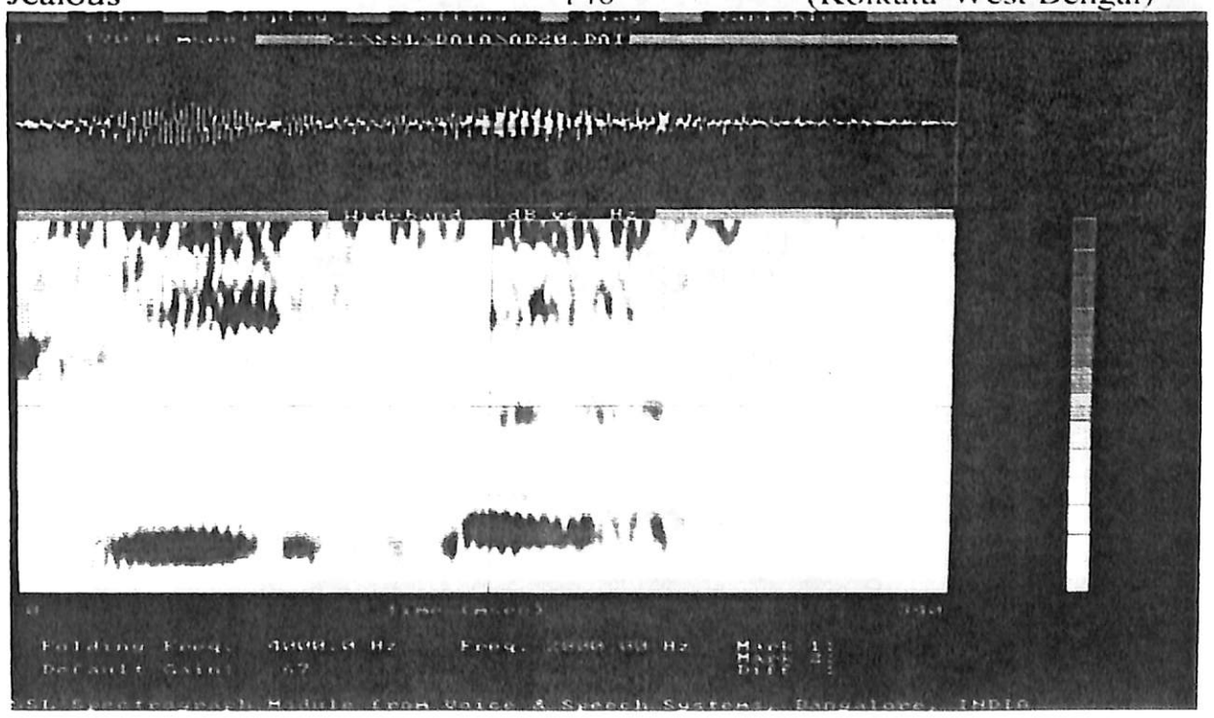
Go 138 (Kolkata-West Bengal)

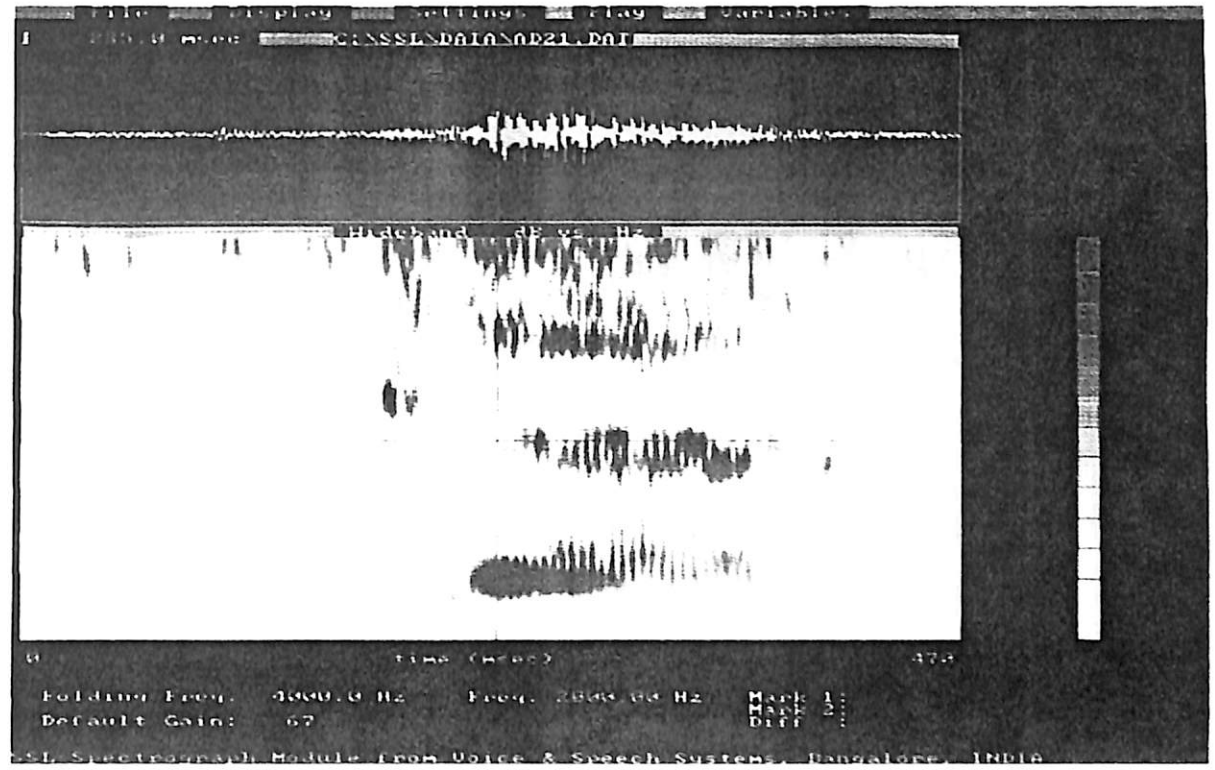




Get 139 (Kolkata-West Bengal)

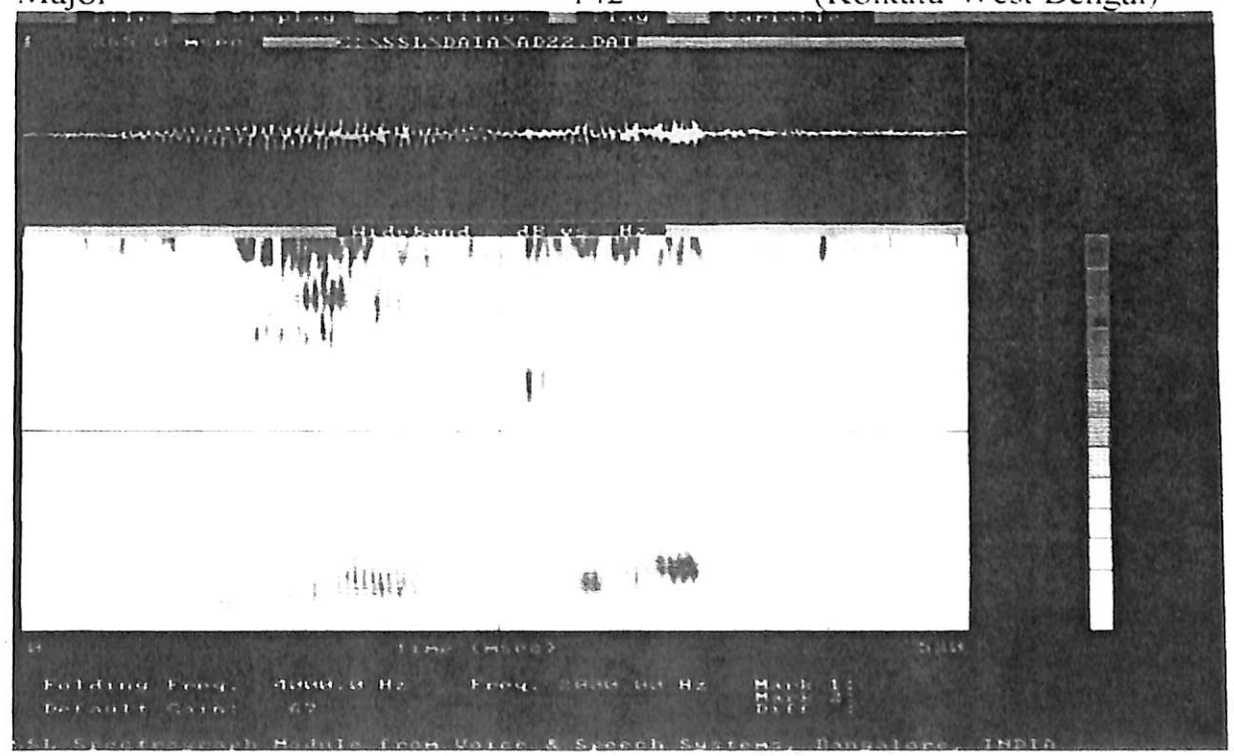
Jealous 140 (Kolkata-West Bengal)

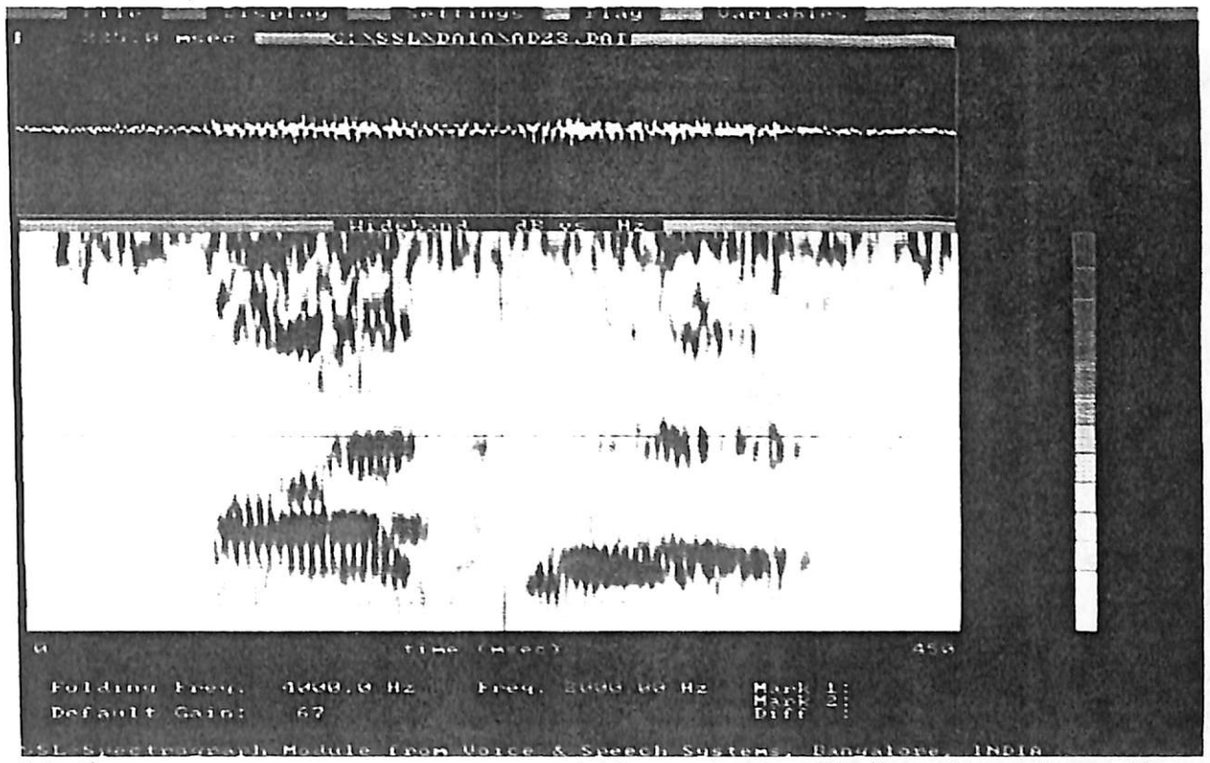




Judge 141 (Kolkata-West Bengal)

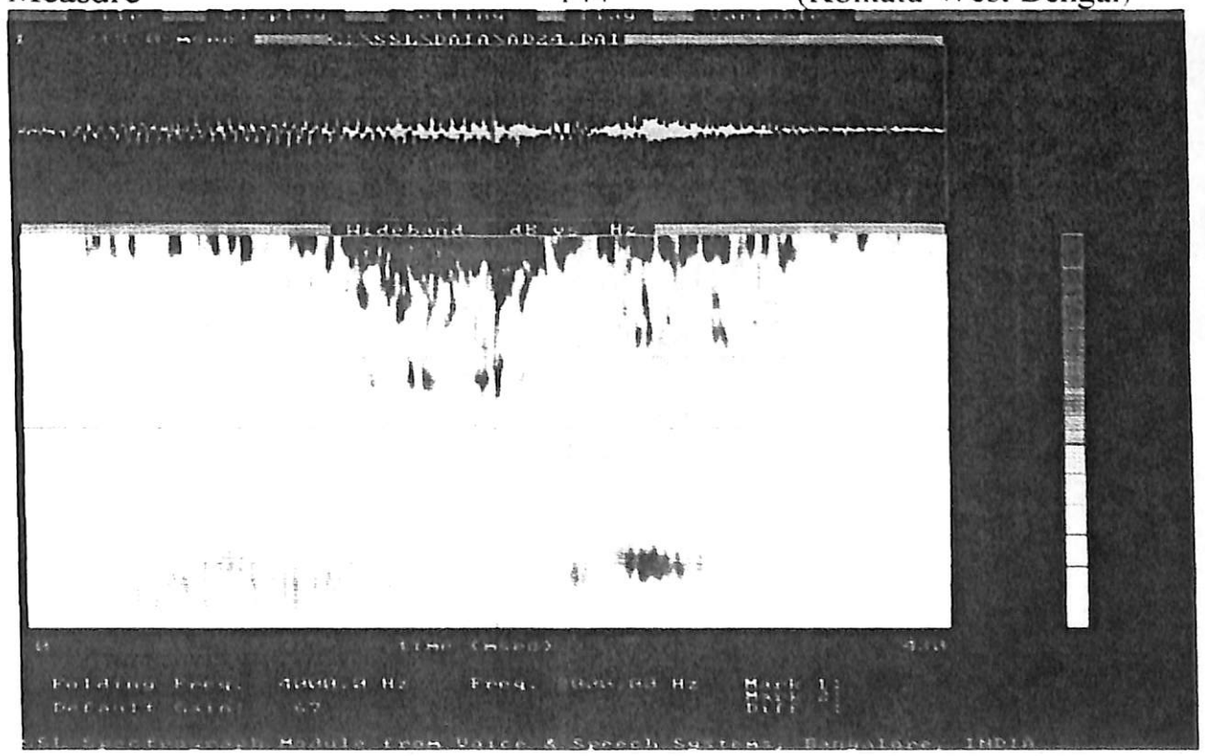
Major 142 (Kolkata-West Bengal)

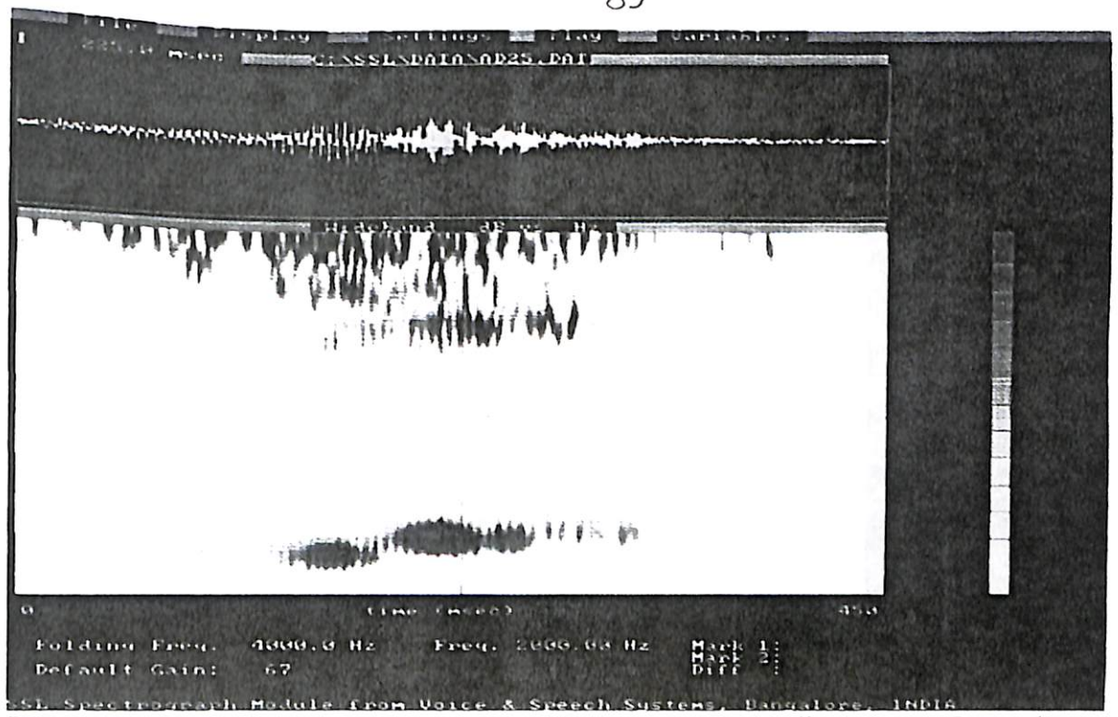




Mother 143 (Kolkata-West Bengal)

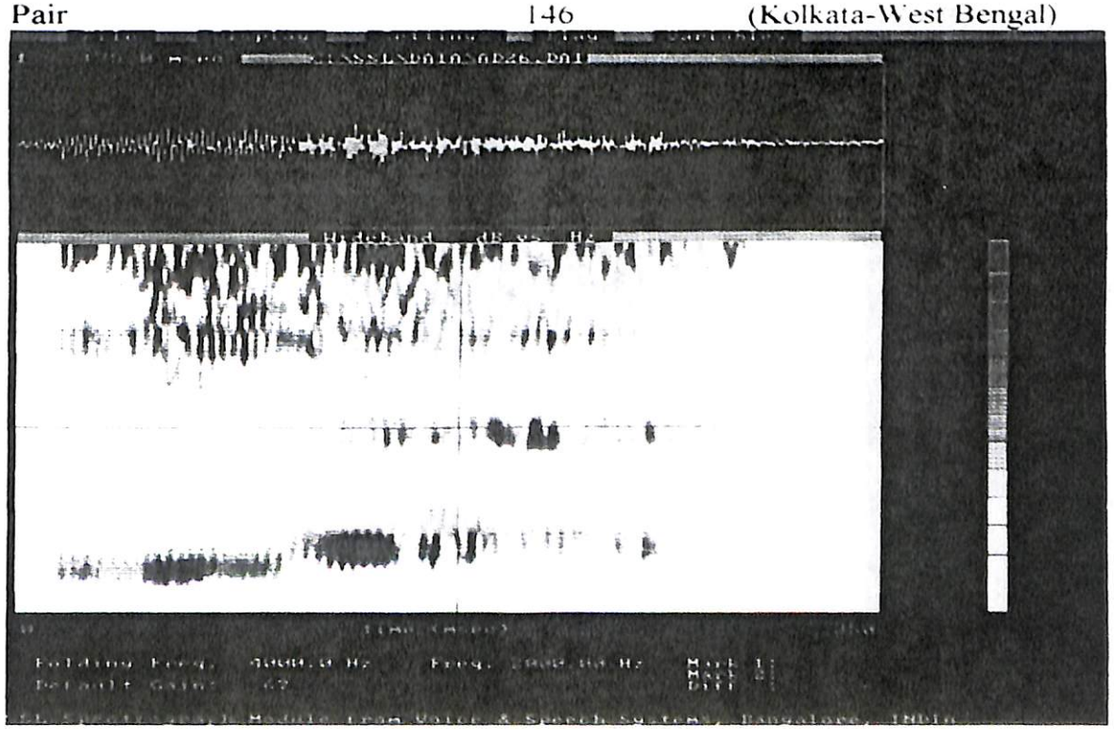
Measure 144 (Kolkata-West Bengal)

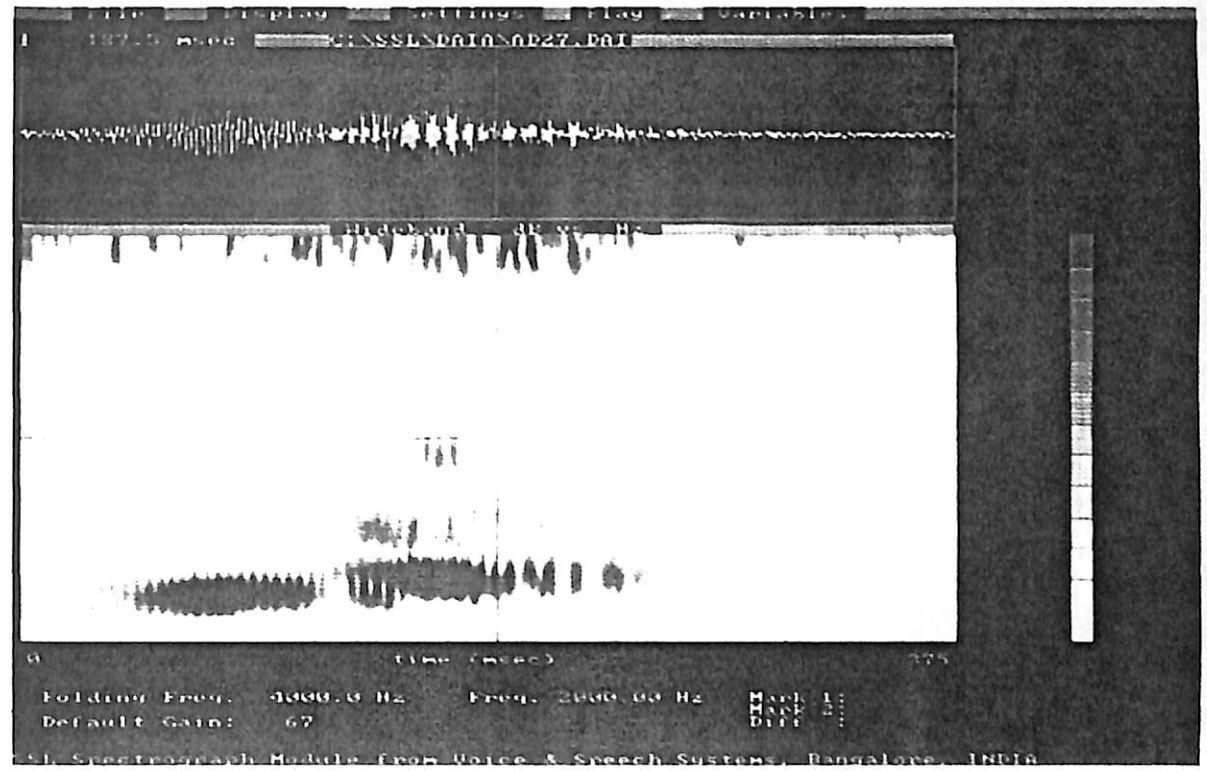




Peer 145 (Kolkata-West Bengal)

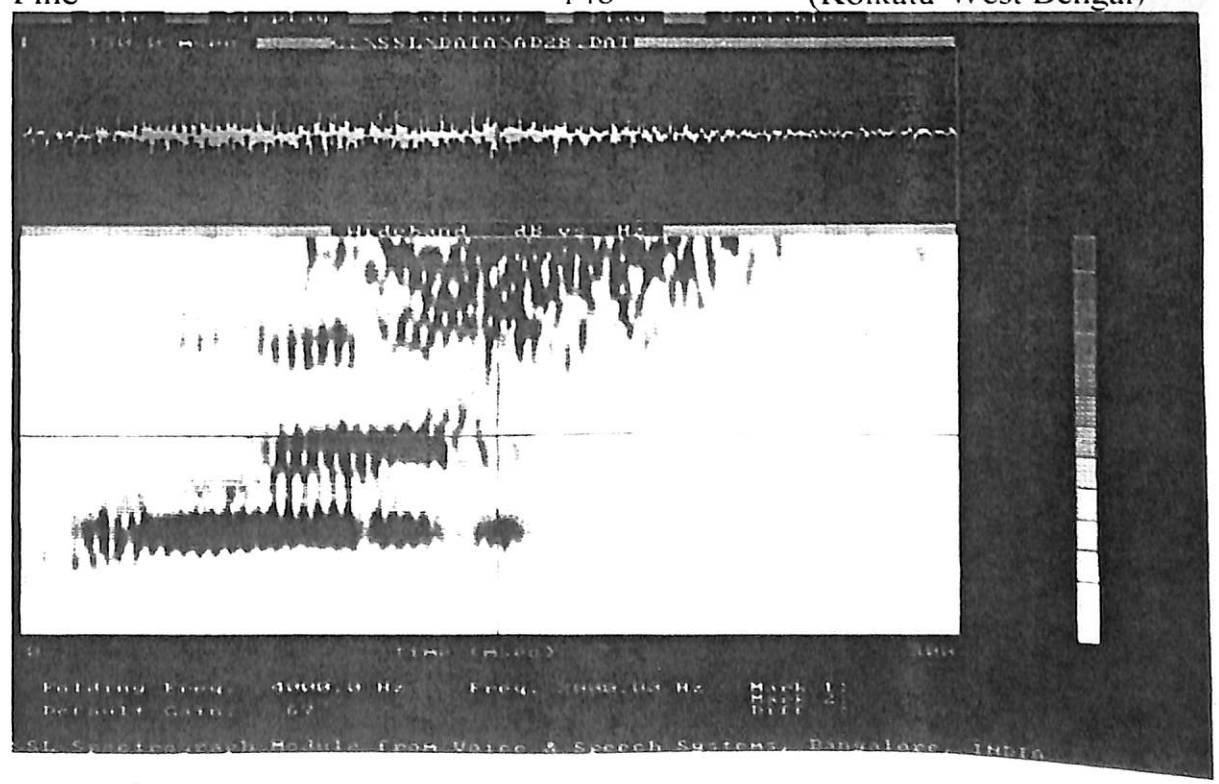
Pair 146 (Kolkata-West Bengal)

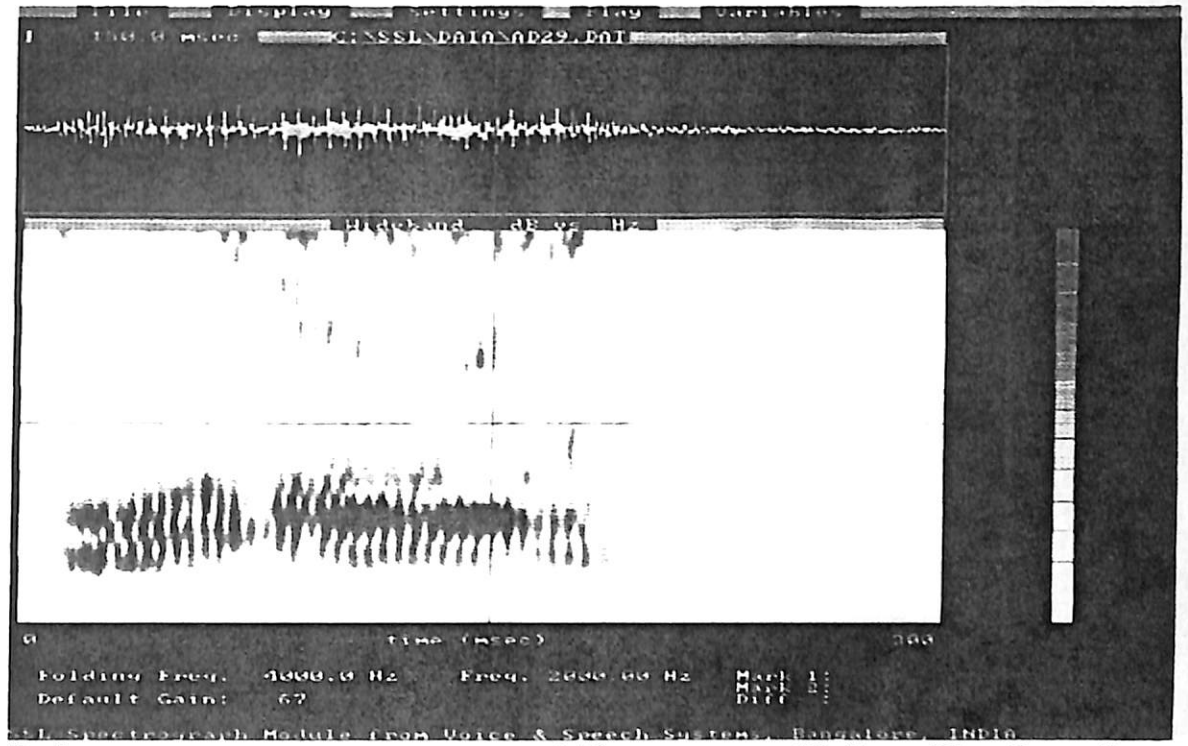




Poor 147 (Kolkata-West Bengal)

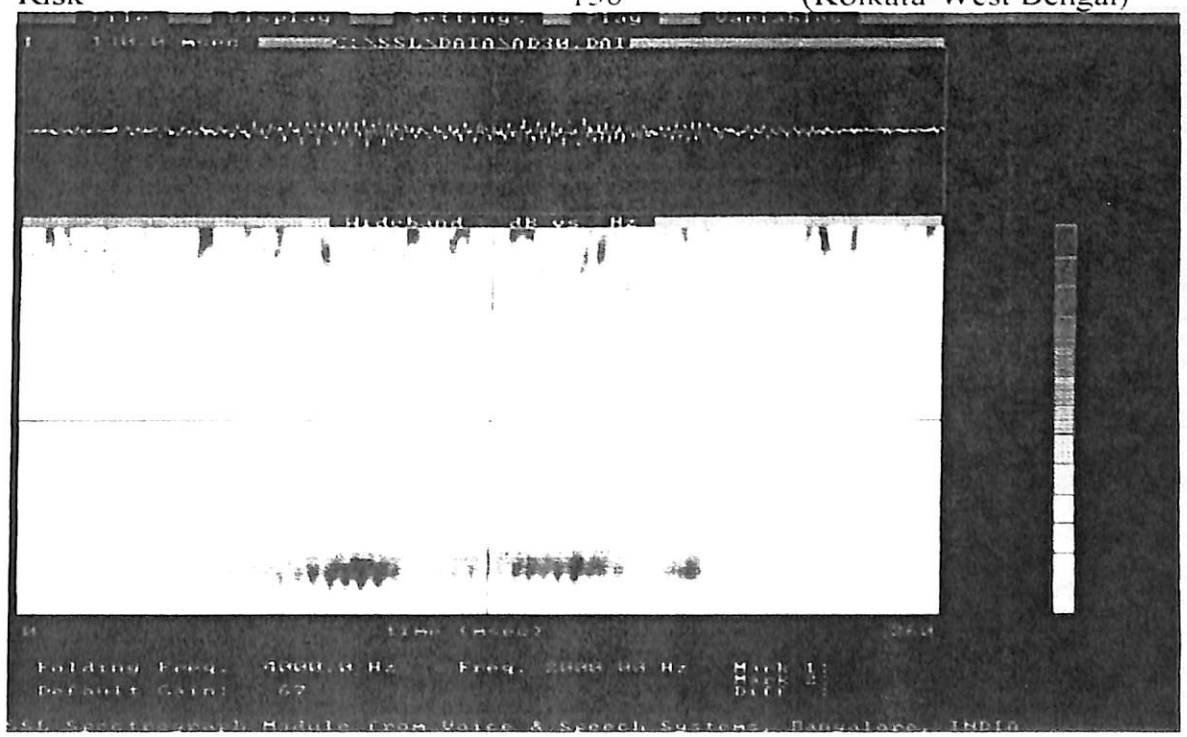
Pine 148 (Kolkata-West Bengal)

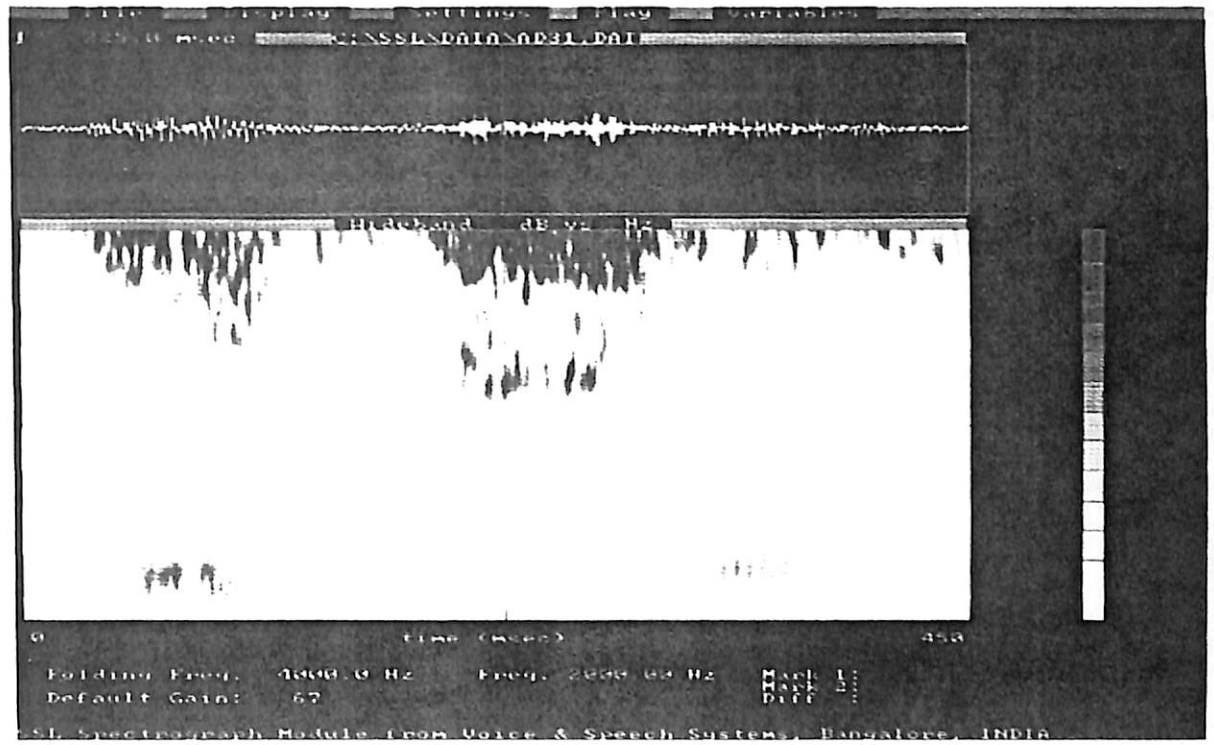




Park 149 (Kolkata-West Bengal)

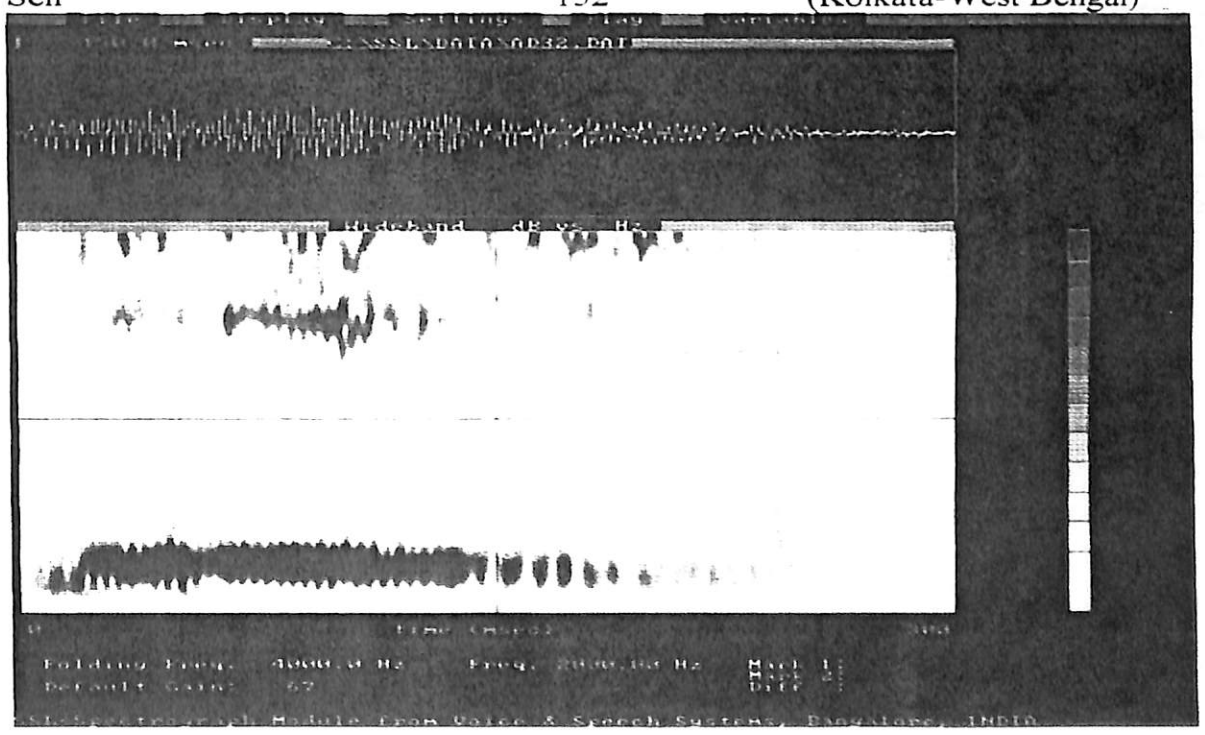
Risk 150 (Kolkata-West Bengal)

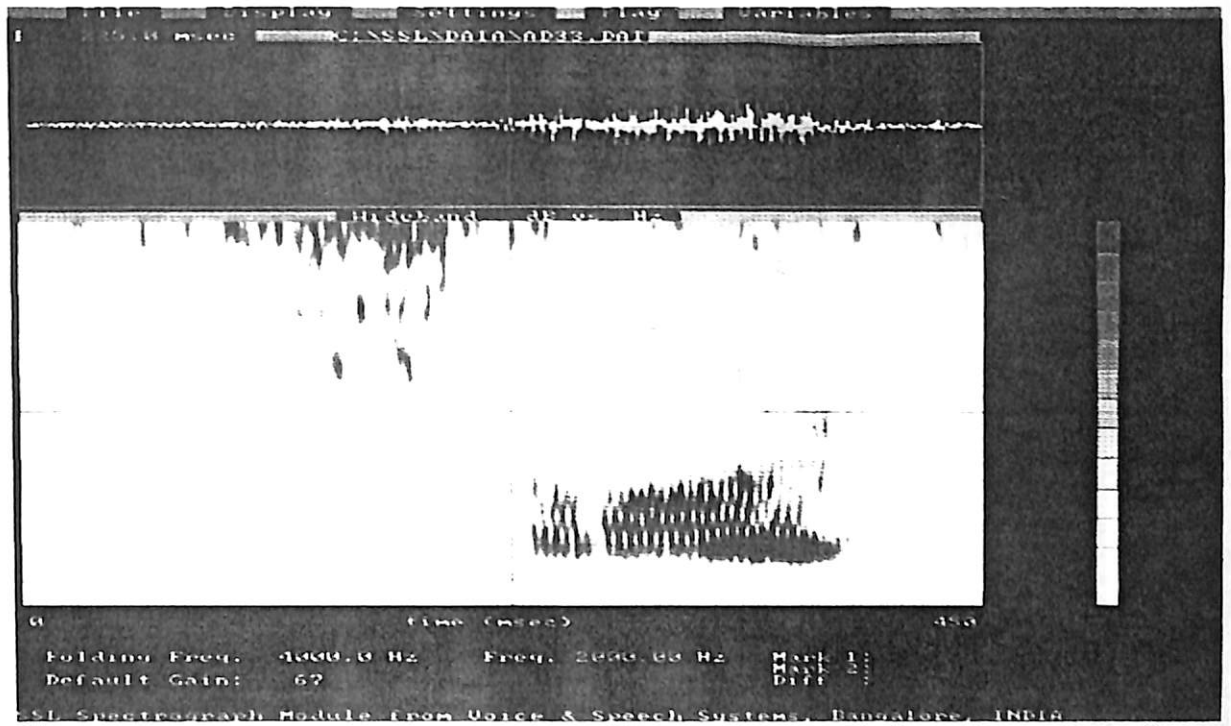




Rickshaw 151 (Kolkata-West Bengal)

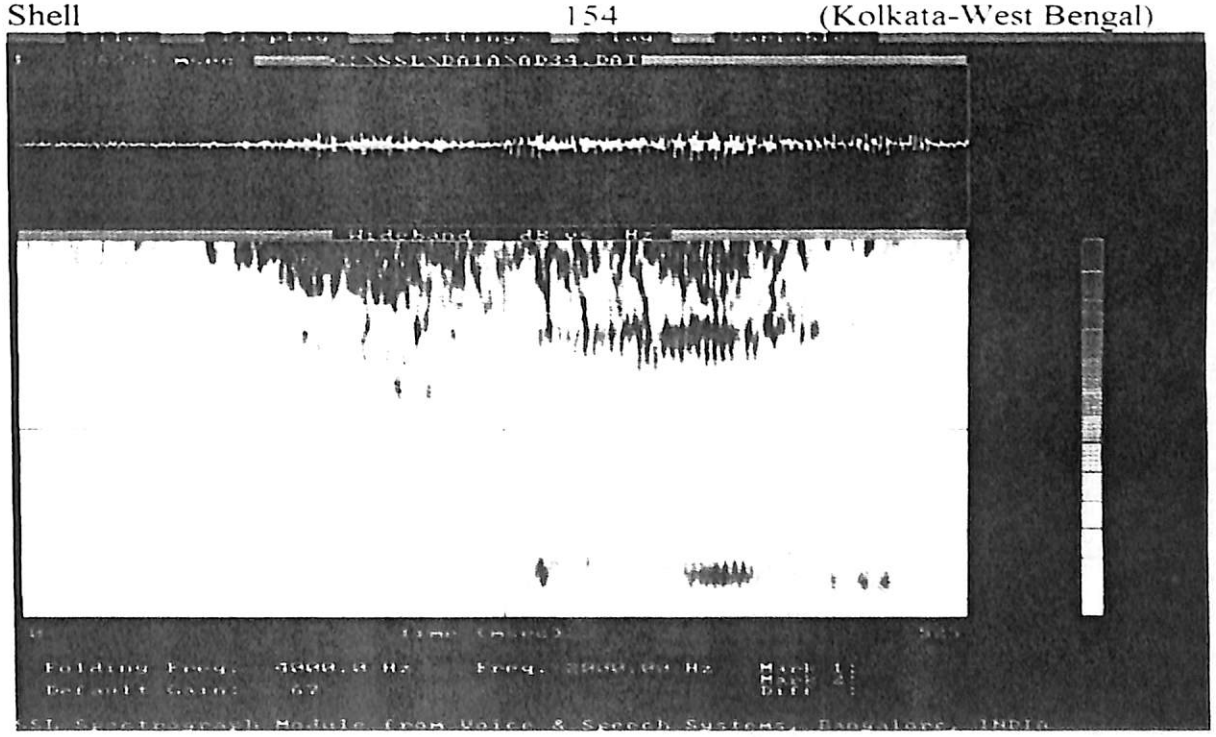
Sell 152 (Kolkata-West Bengal)

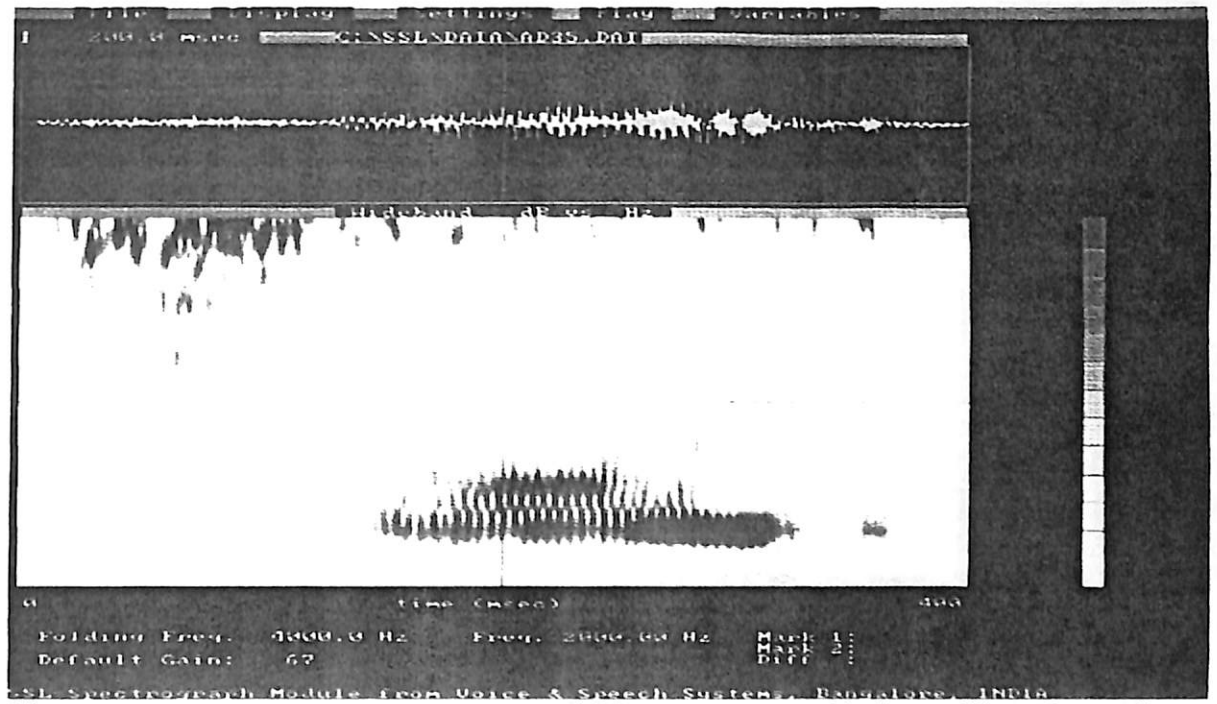




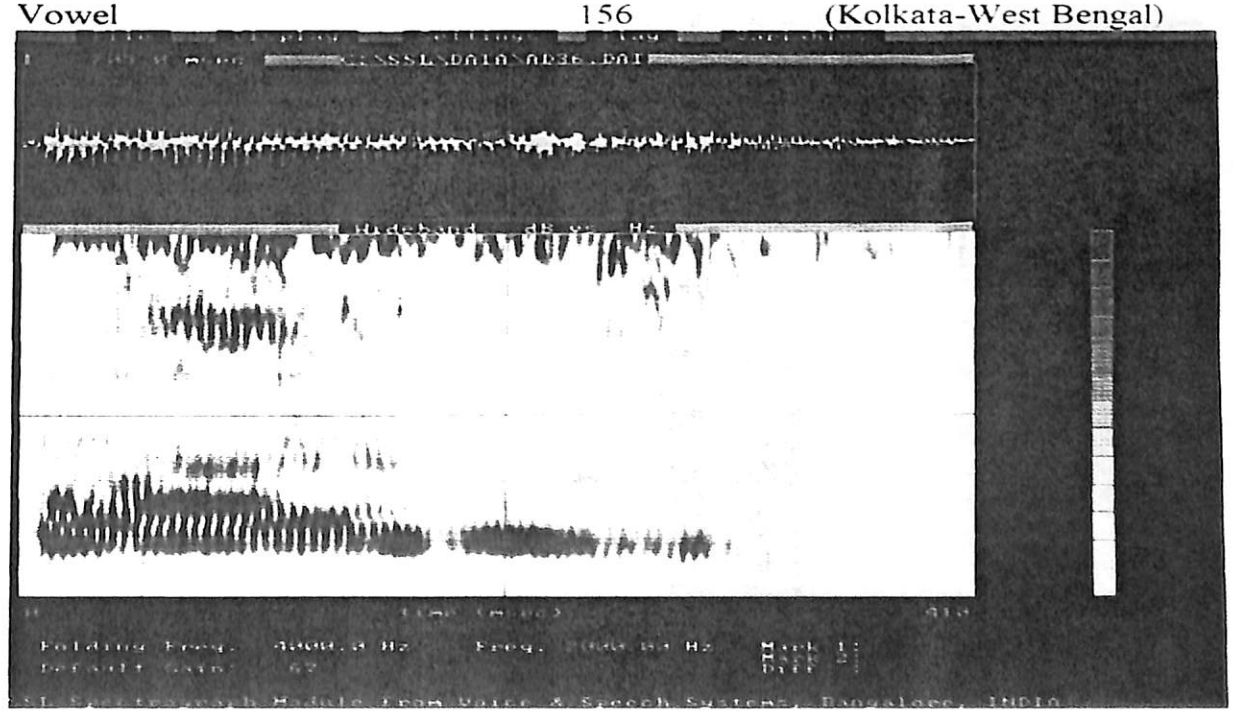
Shot 153 (Kolkata-West Bengal)

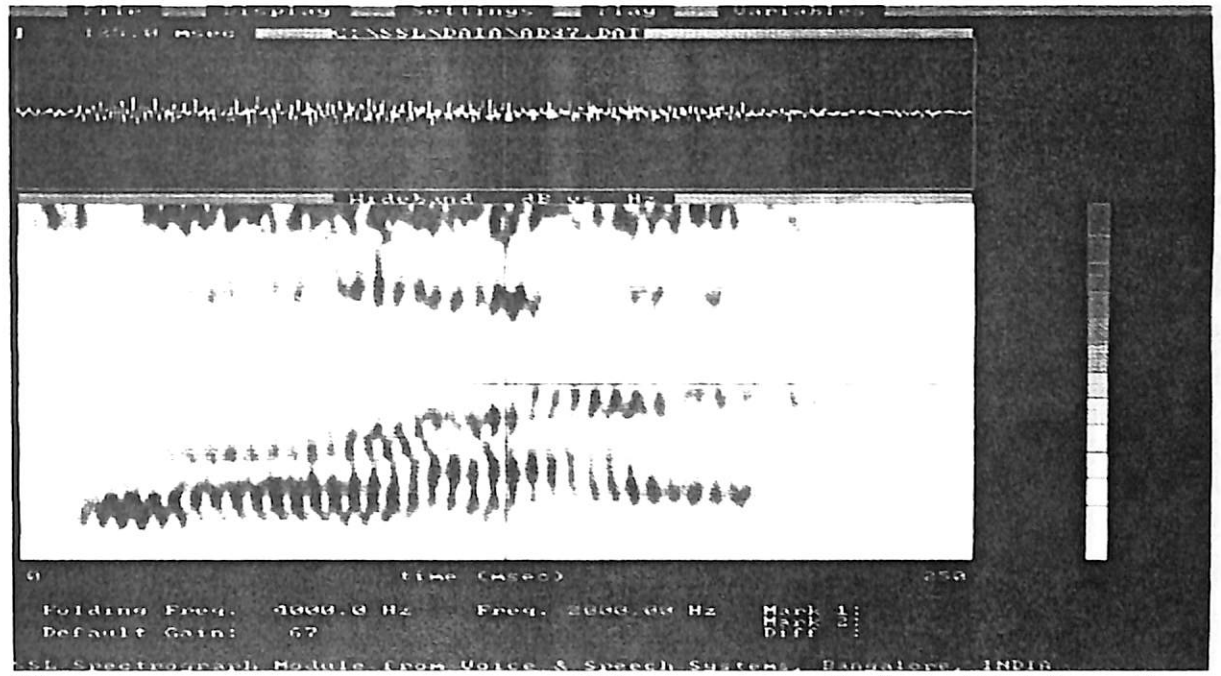
Shell 154 (Kolkata-West Bengal)





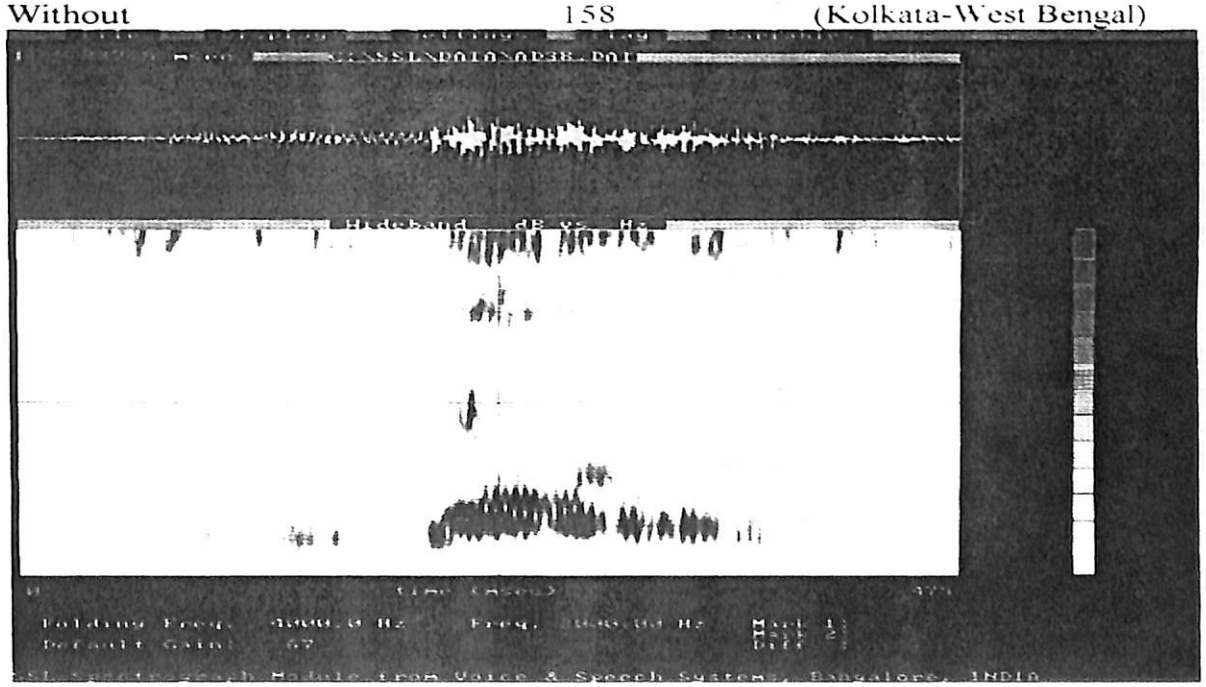
Short	155	(Kolkata-West Bengal)
Vowel	156	(Kolkata-West Bengal)

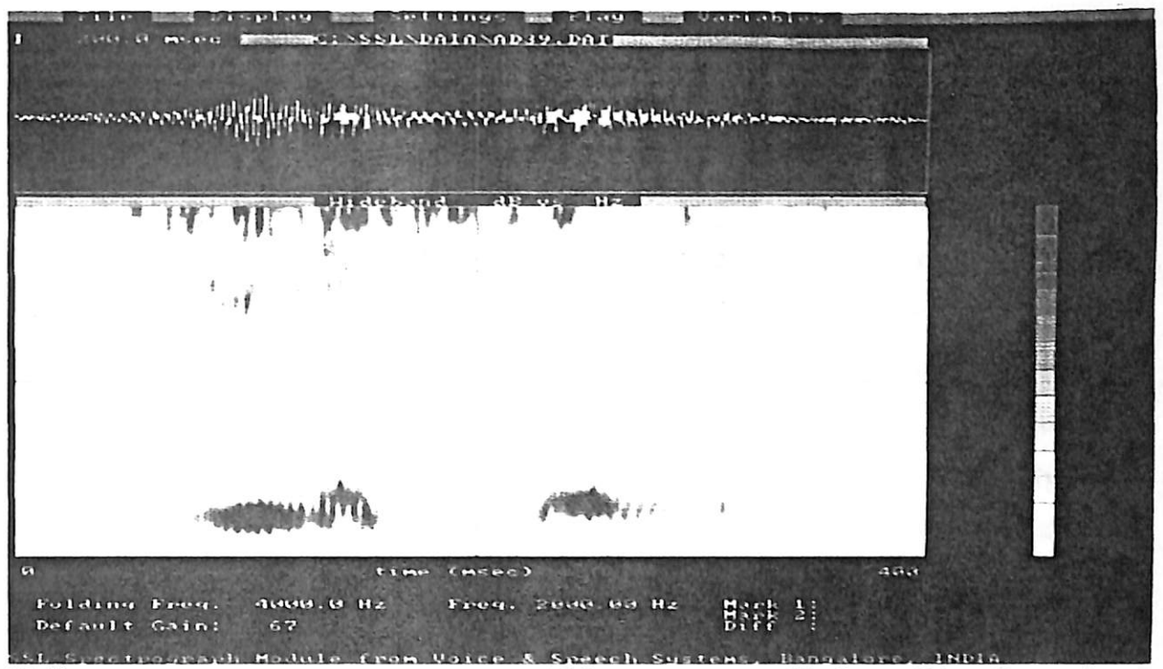




War 157 (Kolkata-West Bengal)

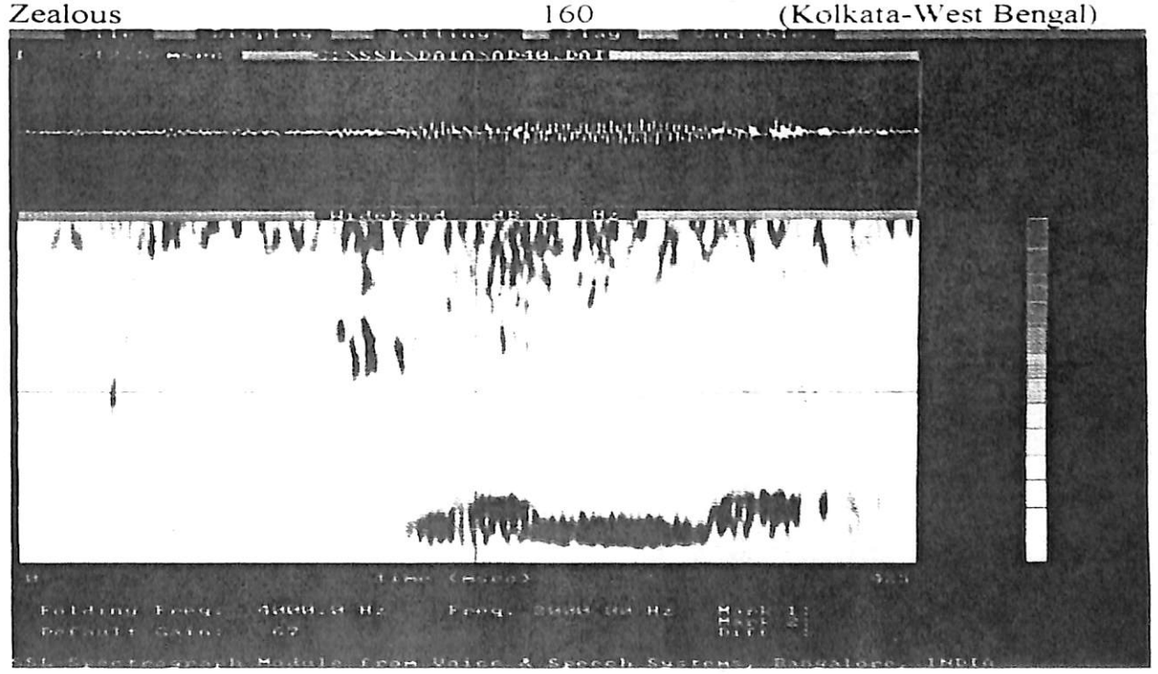
Without 158 (Kolkata-West Bengal)





Yellow 159 (Kolkata-West Bengal)

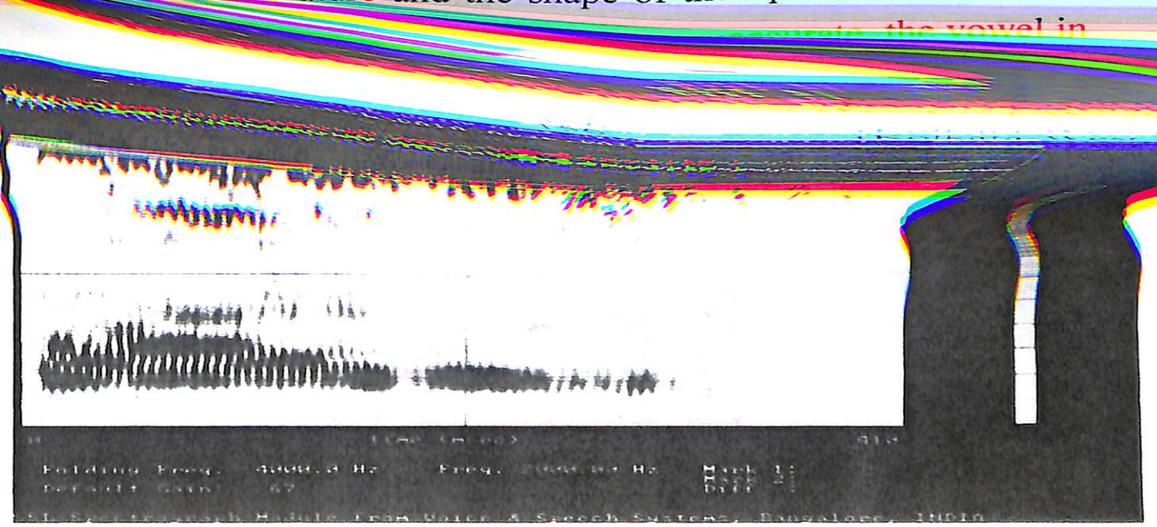
Zealous 160 (Kolkata-West Bengal)



2.1. VOWELS

The study of vowels is significant in phonetics for various reasons. First, it is the vowels that consume the maximum time of human speech. The consonants take only a negligible part of the time. There are words which consist of only vowel sound but there are no words consisting of only consonants sounds. This also adds to the fact that in human speech vowels take much more time than consonants. Secondly, if we look at the structure of the syllable we can see that the vowels occupy the most important and unavoidable slots of the syllable whereas consonants occupy only the marginal slots. Without a vowel or a syllabic consonant, a syllable can't exist, whereas without consonants there are thousands of syllables.

The three features by which we measure a vowel are the height of the [illegible] front feature and the shape of the lip formation. While [illegible] the vowel in



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The three features by which we measure a vowel are the height of the tongue, back-front feature and the shape of the lip formation. While articulating a vowel if these three features are accurate the vowel in question will also be of the best quality, if not the message may be misunderstood. For instance, someone may be saying the word 'bit' but the listener may understand it as 'bet' if it was articulated as a medial vowel between half-open and half-close position with neutral lips, instead of as a high front vowel with spread lips.

Secondly the quality of diphthongs will have to be maintained in such a way that they do not get mixed up with the pure vowels. It is a

known fact that the Indian languages have less number of diphthongs than English. Indian learners of English pronounce some of the English diphthongs as pure vowels. These factors contribute to unintelligibility. The problem of unintelligibility can also be caused by difference in time duration. Thus leaving aside some very minor features /i/ and /i:/ are same except for the difference in time duration, that is, /i:/ takes about 60 milli-seconds more than /i/. It is this difference that makes a difference in meaning between 'bit' and 'beat'. Therefore these two issues, quality of vowels and vowel duration are of utmost importance while studying vowels. These two topics are dealt separately in the following pages.

2.1.1. VOWEL DURATION

The study of vowel duration is also significant as the duration of vowel can determine the meaning of words or bring about a change in meaning. Thus the pronunciations of the words 'fill' and 'feel' are different only in terms of the duration of the mid vowel. It is, as mentioned above, 60 milli-seconds shorter in 'fill' than it is in 'feel' and this brings about the difference in meaning between these two words. The inability to differentiate the one from the other will bring about unintelligibility in speech communication. Though there are letters in the Bengali alphabet that correspond to /i/ and /i:/ on the one hand and /u/ and /u:/ on the other, both the letters in each pair are pronounced alike or they have lost the length difference over time.

This feature in Bengali language has influenced the learning of English by the Bengali people and this fact has been proved true by the spectrographic analysis. The problem of unintelligibility can arise with the following pairs and many others which are not listed here. The words in the following pairs are pronounced almost alike by the Bengalese.

/ i /	/ i: /	/ɔ /	/ɔ: /	/ u /	/ u: /
Fill	feel	shot	short	full	fool
It	eat	pot	port	should	shooed
Sit	seat	cot	court	could	cooed
Hit	heat	fought	fort		
Chit	cheat	sought	sort		
Mill	meal				
Kill	keel				
Rid	read				
Pill	peel				
Hill	heal/heel				
Din	dean				
Fit	feet				
Hip	heap				
Bit	beat				
Bin	bean				
Sin	seen				
Dip	deep				

Rich	reach	lick	leak
Pitch	peach	lip	leap
Pick	peak	nil	kneel
Knit	neat	pit	peat

There are many more pairs of words of this type. This points out the importance of the study of vowel duration, that is, one who does not pay heed to this difference in duration will not be able to find difference between the two words in each pair and this will result in unintelligibility. Under such circumstances no effective communication can take place.

The common assumption that there is no difference in the length of vowels such as fill and feel, full and fool etc in Bengali English has been proved almost true. There is a difference of 18 milli-seconds between /i/ and /i:/ and 13 milli-seconds. between /u/ and /u:/ . This difference is insignificant.

It is to be noted that the length of all the vowels in Bengali English is not the same. The vowel / ɑ: / in the word 'park' is as long as 296 milli-seconds while the vowel /u/ in 'full' is only 159 milli-seconds long. The vowels /ɑ: / as in 'park' and the vowel /ə: / as in the word 'bird' are the longest in Bengali English. The average duration of these two pure vowels is 290 milli-seconds. The average duration of all other 10 pure vowels is 179 milli-seconds. The difference (111

milli-seconds) is really significant and it can not be overlooked. Words like 'bud' and 'bard', and 'cud' and 'card' are definitely pronounced differently by the Bengali people. Hence there is no problem with / ʌ / and /ɑ:/ in matters of length. However there are problems in this connection with the pairs /i/ and /i:/, /u/ and /u:/ and finally /ɔ/ and /ɔ: /.

The difference in length between /i/ and /i:/ is 18 milli-seconds.
The difference in length between /u/ and /u:/ is 13 milli-seconds.
The difference in length between /ɔ / and /ɔ :/ is 37 milli-seconds.
The average difference of these three pairs is 23 milli-seconds. This difference is not enough to distinguish between words like fill and feel, full and fool, shot and short etc. Therefore, the Bengalese who speak English need to prolong the vowel in words like feel, fool, short, court etc. May be in the initial stage they have to prolong it more than the required time. After several months of practice they will be able to raise the difference to about 60m sec which is the average difference between /i/ and /i:/, /u/and /u:/ and /ɔ / and /ɔ: / among the native speakers of English.

The duration of the twenty vowels in standard English when pronounced by the Bengalese as reflected in the spectrograms are given below. The time duration given here is the average of four persons living at Agartala, Barak Valley (Assam), Siliguri and Koljata. The time is given in milli-seconds.

Vowel duration in Bengali English in milli-seconds.

/i/ as in fill	=	168
/i:/ as in feel	=	186
/e/ as in get	=	208
/æ/ as in accident	=	164
/ʌ/ as in cut	=	170
/ɑ :/ as in park	=	296
/ɔ / as in shot	=	165
/ɔ :/ as in short	=	202
/u/ as in full	=	159
/u:/ as in fool	=	172
/ə / as in jealous	=	193
/ ə :/ as in blur	=	283
/ai/ as in pine	=	264
/ei/ as in gate	=	223
/ɔi/ as in boy	=	263
/ɪə / as in peer	=	306
/eə / as in pair	=	285
/uə / as in poor	=	273
/ə u/ as in cow	=	292
/ə u/ as in go	=	251

2.1.2. QUALITY OF VOWELS

There are factors other than duration which cause unintelligibility. One such factor is the open-close parameter or the size of the mouth cavity. For instance the vowel / ə: / which is near the half–close position in standard English is uttered by the Bengalese with a cavity which can be described as 'half-open'. This makes it difficult to distinguish between the pronunciations of the words 'bird' and 'bard'. Both these words are pronounced alike. When these words were given for dictation several students wrote 'bard' for 'bird, and 'bird' for 'bard' proving the fact that they pronounce /ə:/ and /ɑ:/ in the same way. This can cause unintelligibility with regard to the following pairs of words.

Bird	bard	heard	hard
Curd	card	burn	barn
Fur	far	hurt	heart
Err	are	perk	park
Firm	farm	lurk	lark
Dirt	dart	gird	guard

When we analyse the spectrograms of the words 'blur' and 'cart' we can see that the first, second and third harmonics are more or less at the same frequencies. It is because the Bengalese open their mouth less than that of the Englishmen for the sound / ɑ :/ and they open

more than the Englishmen for the sound /ə:/. Thus the cavity of the mouth for /ə:/ and /ɑ:/ is almost same for the Bengalese resulting in the formants being located almost at the same frequency. To have distinct vowels in words like 'hurt' and 'heart', one has to practise these words in such a way that there is not more than one finger gap for /ə:/. A regular practice in this manner will help the Bengalese to get these vowels /ə:/ and /ɑ:/ correctly. This will avoid confusion between the pairs of words given above.

Among the diphthongs /əu/ and /ei/ are articulated as pure vowels by the Bengali people. This is clear from the formants for the vowels in 'go' and 'gate'. Here the formants are seen as clear horizontal bars. For the diphthongs, the formants are to be seen either in opening or closing manner depending which diphthong is uttered. For instance, the first and the second harmonics for the diphthong are a combination of two pure vowels having different opening of the mouth. In the course of utterance of the diphthong the cavity changes either from large to small or from small to large. Accordingly, the dark bars in the spectrograms show the variations. Dark bars seen in a [illegible] that the vowels in question are uttered [illegible] the tongue in the same position. This is what takes [illegible]

sound /əu/ and /ei/. The diphthongs are articulated as pure vowels.

The spectrograms marked 26, 66, 106, 146 are the spectrograms of the word 'pair'. In three of them, that is, Nos. 26,66 and 146 the

more than the Englishmen for the sound /ə:/. Thus the cavity of the mouth for /ə :/ and /ɑ: / is almost same for the Bengalese resulting in the formants being located almost at the same frequency. To have distinct vowels in words like 'hurt' and 'heart', one has to practise these words in such a way that there is not more than one finger gap for /ə:/. A regular practice in this manner will help the Bengalese to get these vowels /ə: / and /ɑ :/ correctly. This will avoid confusion between the pairs of words given above.

Among the diphthongs / əu/ and /ei/ are articulated as pure vowels by the Bengali people. This is clear from the formants for the vowels in 'go' and 'gate'. Here the formants are seen as clear horizontal bars. For the diphthongs, the formants are to be seen either in opening or closing manner depending which diphthong is uttered. For instance, the first and the second harmonics for the diphthong are a combination of two pure vowels having different opening of the mouth. In the course of utterance of the diphthong the cavity changes either from large to small or from small to large. Accordingly, the dark bars in the spectrograms show the variations. Dark bars seen in a horizontal manner show that the vowels in question are uttered without any change in the mouth cavity or keeping the tongue in the same position. This is what takes place when Bengalese utter the sound /ə u/ and /ei/. The diphthongs are articulated as pure vowels. The spectrograms marked 26, 66, 106, 146 are the spectrograms of the word 'pair'. In three of them, that is, Nos. 26,66 and 146 the

formants are formed in a horizontal manner showing the vowel as a pure vowel. In 106 there is a narrowing of the dark concentrations. It is also observable from the speech of the Bengali people that a good number of them do not render the vowel in the words like share, pare, care etc. as a diphthong, but as a pure vowel. The above mentioned spectrograms prove this point.

In case of /iə / in the word 'peer' (Nos. 25, 65, 105 and 145) we can see the diphthong quality. The formation of the formants shows the variation as is required for this vowel in Standard English.

The vowel /uə / as shown in spectrograms 27, 67, 107 and 147 shows very little diphthong quality. The movement of the tongue from high back position to central position between half open and half close is not clearly reflected in the formants for this diphthong. The almost horizontal dark bars clearly indicate that this diphthong is losing its diphthong quality and is on its way to become a pure vowel.

It may be noted that Indian languages have less number of diphthongs in comparison to English. Some of the English diphthongs (/ei/ and /əu/) are produced as pure vowels by most of the Bengali people.

Some others /uə / and /eə / are half way between a pure vowel and a diphthong. Prof. Peter J. Roach, Emeritus Professor of phonetics, University of Reading, U. K. and editor of Cambridge English

Pronouncing Dictionary (16th edition) in his personal letter to me wrote that some of the diphthongs in English are rendered as pure vowels by the Englishmen. All these point out the fact that economy of utterance is at work. It indicates that at least some diphthongs will lose its diphthong quality and become pure vowels.

The diphthongs in Standard English when pronounced by the Bengalese have undergone some changes. The status of these diphthongs is shown below.

/ei/ as in late is pronounced as a pure vowel.
/ai/ as in my is pronounced as a diphthong.
/ɔi/ as in boy is pronounced as a diphthong.
/eə/ as in hare has very little diphthong quality.
/uə/ as in poor has very little diphthong quality.
/ɪə / as in here is pronounced as a diphthong.
/au/ as sin how is pronounced as a diphthong.
/əu/ as in go is pronounced as a pure vowel.

From the above findings it is clear that the number of diphthongs in Bengali English is less than the number of diphthongs in Standard English. As every change in language is gradual this change too is very slow. The trend points out that some more diphthongs will become pure vowels over the years.

2.2. CONSONANTS

The correct pronunciation of the consonants depends mainly on the three features such as place of articulation, manner of articulation and voice feature. If any one is not correctly maintained the quality of the consonants will change resulting in the change of meaning of the message. Thus /v/ which is a voiced labio-dental fricative is produced as a voiced bi-labial plosive by the Bengalese and this causes confusion between the words 'bowel' and 'vowel'.

Secondly there are many consonants in English which are orthographically represented in the word but do not surface at the phonetic level. The letter 'r' is one of the most known examples of this type in English. The pronouncing of these silent letters can cause unintelligibility problem. Similarly there are several sequences and clusters where the pronunciation of all the members of the sequences or clusters are essential for the correct communication of message.

2.2.1. THE MERGING OF THE SIBILANTS /s/ AND /ʃ/

One class of sounds with which the Bengali people find problem in pronunciation is the fricatives. It is because of the fact that the pattern of the Sanskrit alphabet is maintained almost intact while some of the sounds representing the letters of the alphabet have lost their individual characteristics. This is particularly true with regard to

sibilants which fall within the fricatives. There are three letters in the Bengali alphabet which at one time represented three separate sibilants. Now there is only one sibilant sound for these three letters. Consequently this has affected the learning of English too. The majority of Bengalese do not find any difference between the sounds /s/ and /ʃ/or pronounce the words 'sell' and 'shell' in the same way. This causes much unintelligibility. Before looking into the spectrograms a brief look at the problem of sound change in fricatives in general will be of use.

The whole line of change that has been attested in various languages all over the world is like this. The affricate /tʃ / is changed to /s/. /s/ is changed to /h/ and this in turn is changed to null ϕ. The changes /tʃ/ to /s/ and /s/ to /(h/x)/ are attested in Assamese language. There are several examples in the Bengali language to show the changes of /s/ to /h/ and /h/ to ϕ. The following examples could be used to illustrate this.

/gosala/ > /gohala/ > /gohali/ > /goal/ = cowshed
/nasti/ > /natthi/ > /nahi/ > /nai/ =is not

Besides this, there are many instances of independent /h/ dropping in Bengali. /h/ is dropped from OIA conjuncts /-hm-/, /-hl-/, /-hn-/ and /-hr-/; and the second member is usually doubled. This is clear from the following examples.

Brahman> bramman
Ahladh> alladh
Chihna> chinno
Hṛidoi>ridoi (See Mojumder 1973:128)

/h/ is also dropped in numerals from eleven to eighteen as can be seen below.

Egaraha> egaro
Baraha>baro
Teraha>tero
Choudhaha>choudho (see Chatterji 1926:552)

The major problem with regard to unintelligibility lies with the difficulty of the Bengalese to distinguish between /s/ and /ʃ/. Linguists including Chatterji have problems regarding the status of /s/ in Bengali. They have not given any minimal pair to show that these two as separate phonemes. Chatterji, however, admits that there is only one sibilant phoneme in Bengali. He says, " Bengali has one sibilant phoneme, the palato-alveolar /ʃ/ and the dental or alveolar /s/ is only a subsidiary form of it--/ʃ/ normally becoming /s/ when occurring before /t/, /d/, /n/, /r/, /l/."(see Chatterji1926 546)

This change can be shown by the following rule:-

$$/\int/ \rightarrow /s/ \; /- \begin{bmatrix} t \\ d \\ n \\ r \\ l \end{bmatrix}$$

The /ʃ/ and /s/ in Bengali are therefore to be treated as allophones of /ʃ/. Speaking about the differences of these two phonemes Kostic and Das say: "The difference between Bengali fricative /s/ and Bengali fricative /ʃ/ is the lowering of friction by at least 500 Cps so that the main fricative concentrations of acoustic energy is situated between 500 Cps instead of 2000 Cps to 4000Cps as was characteristic for the /s/ fricative. In the upper region the concentration is the same for /s/ and for /ʃ/, that is, up to about 5000 Cps". (see Kostic and Das 1972: 134-135) The present researcher's spectrographic analysis of these two sounds /s/ and /ʃ/ yielded the same results. The spectrograms marked 32,72, 112 and 152 are the spectrographic representations of the word 'sell' and the ones marked 34, 74, 114 and 154 are the spectrographic representations of the word 'shell'. The frequency range for both these sibilant fricatives are almost the same while that of /s/ in Standard English is from 3000 Hz

to 7000Hz and that of /ʃ / is from 2000 Hz to 6000Hz. The dark formation representing the formants are also the same for these two sounds in Bengali English. The pronouncing of these two phonemes in the same manner causes much unintelligibility problem. There are a large number of words in English in which the substitution of one of these sounds by the other can bring about a change in meaning.

The following pairs of words cause problem because of this.

Sort	short	sign	shine
Sea	she	sift	shift
Cell	shell	sealed	shield
Seen	sheen	single	shingle
Socks	shocks	simmer	shimmer
Sin	shin	sit	shit
Seat	sheet	soul	shoal
Sake	shake	sod	shod
Sore	shore	soot	shoot
Sop	shop	sow	show
Sip	ship	sour	shower
Seer	sheer/shear	sown	shown
Sire	shire	sun/son	shun
Sale	shale	sigh	shy
Same	shame	sad	shad
Sank	shank	said	shed
Save	shave	self	shelf

2.2.2. FRICATIVES PRODUCED AS PLOSIVES

Besides the sibilants another major area where there is problem in communication is with the phoneme /v/. It is pronounced just like /b/. In the spectrograms of 'vowel' and 'bowel' 'v' and 'b' have similar frequency range. The characteristics of a plosive are shown for the fricative /v/. /v/ is bi-labial for the Bengalese. The absence of any difference between /v/ and /b/ at the phonetic level makes it difficult to differentiate 'vowel' from 'bowel'. When a Bengali person says, '/mai bauəlz ɑ: kliə /', the listener should not take it for granted that what he means is "My bowels are clear". It could be, "My vowels are clear". The articulation of the labio-dental fricative as a bi-labial plosive can create many more such unintelligibility problems with the following pairs of words.

Bale	vale	ban	van
Bane	vain	banish	vanish
Bat	vat	bend	vend
Bent	vent	best	vest
Bet	vet	buy	vie
Bile	vile	bine	vine
Bolt	volt	boat	vote
Bow	vow	bowel	vowel
Box	vox		

The spectrograms of the words 'mother' and 'without' show light formants in the place of the fricatives / ð / and /θ/. It could be noise that entered while recording because these fricatives are produced like plosives by the Bengalese. The rendering of the dental fricatives /θ/ and / ð / as plosives can cause unintelligibility problem with regard to the following pairs of words.

Thin	tin
Thought	taught
Thick	tick
Through	true
Thicket	ticket
Thigh	tie
Thong	tong
They	day
Thence	dense
There	dare
Thy	die

2.2.3. FRICATIVES PRODUCED AS AFFRICATES

The habit of pronouncing /z/ and /dʒ/ in the same way by the Bengalese and the consequent unintelligibility problem is quiet known. The pronunciations of the words 'zealous' and 'jealous' were spectrographically analysed. The formants in the place for /z/ and /dʒ /

are similar. Both are released like an affricate. The formants are not dark enough to match the corresponding ones in the case of /z/ as produced by the English people. This can cause confusion between the following pairs.

Zealous	jealous
Zest	jest
Zoo	Jew

/ʒ/ , the voiced counterpart of /ʃ/ is also produced as an affricate by the Bengalese. The spectrograms marked 24, 64, 104 and 144 are the voice prints of the word 'measure' which has /ʒ /as medial consonant. The frequency range and the formant formation for this sound and those for the affricate in the words 'jealous' and major are of similar type. This makes it difficult to distinguish between the following pairs of words.

Measure	major
Genre	jar

2.2.4. SPECTROGRAPHIC ANALYSIS OF ENGLISH FRICATIVES

The results of the spectrographic analysis done by me on the spectrograms of English fricatives given in other books are listed

below for the convenient comparison with the results of the spectrographic analysis done on the fricatives in Bengali English.

In the voice print of /f / there are very light formants between 1000 Hz to 7000 Hz. The time duration is approximately 200 milli-seconds. Below this there are no vertical striations indicating /f/ is a voiceless sound.

The frequency range for /v/ is like that of /f/ but the formants are hardly visible. However, its duration can be considered from the vertical striations at the bottom. It is about 150 milli-seconds. The vertical striations at the bottom indicate that /v/ is a voiced sound.

The spectrogram of /θ/shows the frequency range between 2500 Hz to 7000 Hz. The duration is about 150 milli-seconds. The formants are very light showing the energy spent on this fricative is much less in comparison with the energy spent on the sibilants. The absence of vertical striations for/θ/shows it is a voiceless sound.

The frequency range of /ð / is like that of /θ/ but the formants are extremely light that they are hardly visible. The vertical striations, however, are clear enough to indicate the voice feature of this sound.

The spectrogram of /s/ indicates a frequency range from 3000 Hz to 7000 Hz. The duration is about 200 milli-seconds. At the bottom there

is no vertical striation indicating /s/ is a voiceless sound. The formants are thick enough to indicate the great amount of energy spent on this fricative.

The spectrogram of /z/ has a frequency range between 3500 Hz. and 7000 Hz. The duration is about 200 milli-seconds. The formants are dark enough to show that much energy is spent on this fricative. The voice feature is shown by the vertical striations below.

The frequency range of /ʃ/ is between 2000 Hz to 6000 Hz. The time duration is about 200 milli-seconds. The formants are lighter than those of /s/. /ʃ/ is a voiceless sound as there is no vertical striation below.

The frequency range of /ʒ/ is from 2000 Hz to 7000 Hz. The time duration is about 200 milli-seconds. The formants are clearly visible indication the energy spent on this fricative. At the bottom there is vertical striation to indicate this sound is a voiced sound.

The formants f /h/ are hardly visible in the spectrogram. Its strongest part of the frequency is around 1000 Hz. The duration is about 200 milli-seconds. There is no vertical striation indicating this sound is a voiceless one.

When the findings of the analysis of the Bengali English are placed along the corresponding ones of the Standard English the differences are clear. The most glaring ones are the merging of /s/ and/ʃ/, the pronouncing of some fricatives as plosives and affricates in Bengali English. In all this analysis differences arising out of allophonic variations are not looked into. For instance, the /p/ in 'pin' is different from that of /p/ in 'spin'. These two variations are represented as [pʰ]and [p]. The absence of difference between these two verities also can cause unintelligibility problem.

2.2.5. SEQUENCES AND CLUSTERS IN BENGALI ENGLISH

It has been observed that the sequences and clusters in Bengali language have been undergoing gradual changes. As a result some formations which were once sequences or clusters are no more these now. The evidence to this fact can be traced to the orthographic form in Bengali language itself and also to the pronunciations of their corresponding forms in other languages descended from Sanskrit and even from the Sanskrit words which crept into Dravidian languages. Before going into this detail and its influence in Bengali English it is essential to see what the terms sequence and cluster mean.

f two or more consonants in a word is

rence of two or more

same syllable is

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The contiguous occurrence of two or more consonants in a word is called a sequence. The contiguous occurrence of two or more consonants either before or after a vowel within the same syllable is

called a consonant cluster. The word sequence is, therefore, not synonymous with cluster. Every cluster is a sequence but every sequence is not a cluster. The requirement of a sequence is the contiguous occurrence of two or more consonants. In a cluster this sequence must occur within the same syllable.

In order to understand this the notion of syllable structure is to be explained. The unavoidable and the most significant part of a syllable is the vowel in it. It is called the nucleus. Every syllable has a vowel or a syllabic consonant like /l/ and /n/ in it as in words like bottle and cotton.. A syllable can be constituted of the nucleus alone as in 'eye'(/ai/). In most cases, however, the vowel is either preceded or followed by consonants. In some cases there are consonants on both sides. These are marginal elements in a syllable. To show the structure of a syllable we can break the syllable into onset and rhyme. The part of the syllable that comes before the nucleus is called onset. The vowel along with the consonants (if there be any) that follow the vowel taken together is called rhyme. The consonant or consonants after the vowel can be called coda.

The consonant or consonant cluster occupies the slots of onset or coda in a syllable. As stated earlier, in order that a sequence be a cluster, all the members of the sequence must fall within the same syllable, that is, they must be part of a single onset or a single coda. A cluster

cannot spread into the coda of the first syllable and the onset of the second syllable.

Going back to the matter of loss of sequences and clusters in Bengali language some examples are cited below to substantiate it.

Prahlad ---------→ prallad
Podhmo---------→ poddho
Brhmon---------→ brammon
Lakshmi--------→ loki
Smoron---------→ soron
Ahlad----------→ allad
Swami----------→ sami
Shyam----------→ sham
Mahatma-------→ mahata
Hridoi----------→ ridoi
Chihno---------→ chinno

The loss of consonants in the sequences or clusters as is found in the Bengali language has not been attested in the spectrograms of the words in Bengali English. Rather an opposite tendency is found, that is, a cluster is pronounced where there is no cluster. This is particularly true with regard to words containing the letter 'r' followed by a consonant as in 'part', 'cart' etc. Here the 'r' is pronounced whereby there is a cluster in this word.

There are many letters that remain silent in English in certain phonetic environments. Thus 'b' is silent in 'comb', 't' is silent in listen, 's' is silent in 'island' 'g' is silent in 'gnat', 'h' is silent in 'honour' etc. It can happen the other way as well, that is, without the presence of a letter in the word its pronunciation can be heard. Thus without the letter 'f' it is pronounced in the words lieutenant, enough, cough etc. The two letters that remain silent in certain phonetic environments in most cases in English are 'r' and 'l'. There are similarities and differences with regard to their behaviour. When these two letters come as part of the onset in the syllable they are pronounced without exception as in 'pray', 'play' etc. When these letters become the members of the coda in a syllable, 'r' is not pronounced as in 'part' /pɑ:t/, 'arm'/ ɑ:m/ etc. but 'l' is pronounced in some cases and not pronounced in some other cases. Thus 'l' is pronounced in 'bolt' /bəult/, 'cult'/kʌlt/ etc. while it remains silent in words like 'calm' /kɑ:m/, 'palm'/pɑ:m/ etc.

The spectrographic analysis of the words having 'r' in the coda position in Bengali English shows 'r' in the pronunciation. It clearly shows that the word 'part' has the pronunciation /pɑ:rt /. Thus the words 'shot' and 'short' are phonetically different for the English people just for the difference in length of the vowels in these words. As the difference in length of the vowels in these words uttered by the Bengalese is not distinguishable by the ears, these words are phonetically different for the reason that in the first word 'r' is not

pronounced while in the second word 'r' is pronounced. This shows that thousands of syllables which have 'r' in the orthographic form but no realisation at the phonetic level are pronounced by the Bengalese whereby a single consonant is treated as a cluster. It can create unintelligibility problem.

It may be noted that there are many instances of silent letters in Bengali language too. The words 'mahatma', 'atma', 'podhmo', 'smoron', 'hridhoi', 'brahmon', 'ahladh' and many more words have silent letters in them. In spite of this, when Bengalese pronounce English words they try to pronounce almost every letter that is present in the word and this makes the pronunciation of the word go wrong. This is particularly true in the case of 'r' in the coda position of syllables as in 'part', 'arm', 'park', 'perk', 'church' etc.

The clusters with the semi vowels /j/ and /w/ are problem areas for the Bengalese. In the supplementary data attached in chapter 3, it is found that in the clusters mentioned above these semi vowels are dropped whereby these clusters are pronounced as single consonants. Thus the Bengali words 'swami' 'shyam' and many others have a single consonant in the onset. If this tendency creeps into English, the following pairs of words could be confused.

Sag-swag sank-swank sot-swat say-sway set-sweat seep-sweep seed-swede seat-sweet sell-swell serve-swerve sift-swift sing-swing soup-swoop sop-swop

3. ANALYSIS OF SUPPLEMENTARY DATA

In addition to the data collected for the spectrographic analysis in the form of audio tapes, other forms of data were collected in papers from the students of class X and class XI. This is done to supplement the findings of the spectrographic analysis and to make the results of this research work useful to a wider reading public. The analysis of the spectrograms may be understood only by a selected few people. The vast majority of people will not understand nor will they be convinced by the results of such analysis. It is to solve this problem that I thought of a more tangible conventional kind of data collection and its analysis.

From the literature available and the experience I have had in the Bengali speaking areas I have identified the problem areas in pronunciation among the Bengali people and accordingly I have selected a list of forty four words. These words are listed in pairs on the basis of their similarities in pronunciation. These papers were given to the students of various schools and colleges and they were asked to tick mark whether the words in pairs were same or different in pronunciation. The same students were given a blank paper each for writing these words dictated by one of the students of the same class. In this part of data collection a student whose mother tongue is Bengali dictated these words and the others whose mother tongue is also Bengali wrote down the words.

The list of forty four words given for supplementary data

1	bird	23	bard
2	fill	24	feel
3	fit	25	feet
4	full	26	fool
5	zealous	27	jealous
6	sea	28	she
7	shot	29	short
8	major	30	measure
9	get	31	gate
10	vowel	32	bowel
11	pat	33	part
12	cut	34	cart
13	rain	35	reign
14	heir	36	air
15	hour	37	our
16	fair	38	fare
17	dwell	39	dell
18	quake	40	cake
19	qualm	41	calm
20	cue	42	coo
21	mute	43	moot
22	pure	44	poor

Two specimens each of the data collected from ten institutions are attached after this page.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes ✓	no	
b)	fill	and	feel	yes ✓	no	
c)	fit	and	feet	yes	no ✓	
d)	full	and	fool	yes	no ✓	
e)	zealous	and	jealous	yes	no	
f)	sea	and	she	yes	no ✓	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	✓
m)	rain	and	reign	yes	no	✓
n)	heir	and	air	yes	no	
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	✓
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	✓
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

15/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

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QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no
b)	fill	and	feel	yes	no
c)	fit	and	feet	yes	no
d)	full	and	fool	yes	no
e)	[illegible]	and	[illegible]	yes	no
f)	[illegible]	and	[illegible]	yes	no
g)	[illegible]	and	[illegible]	yes	no
h)	[illegible]	and	[illegible]	yes	no
i)	[illegible]	and	[illegible]	yes	no
j)	[illegible]	and	[illegible]	yes	no
k)	[illegible]	and	[illegible]	yes	no
l)	[illegible]	and	[illegible]	yes	no
m)	[illegible]	and	[illegible]	yes	no
n)	[illegible]	and	[illegible]	yes	no
o)	[illegible]	and	[illegible]	yes	no
p)	fair	and	air	yes	no
q)	dwell	and	dell	yes	no
r)	quake	and	cake	yes	no
s)	qualm	and	calm	yes	no
t)	cue	and	coo	yes	no
u)	mute	and	moot	yes	no
v)	pure	and	poor	yes	no

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1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✗
b)	fill	and	feel	yes	no	
c)	fit	and	feet	yes	no	
d)	full	and	fool	yes	no	✗
e)	zealous	and	jealous	yes	no	
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	✗
k)	pat	and	part	yes	no	✗
l)	cut	and	cart	yes	no	✗
m)	rain	and	reign	yes	no	
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	✗
t)	cue	and	coo	yes	no	✗
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

14/22

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DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird	17. dwell.	33. Part.
2. Fill	18. quake	34. Cart.
3. Fit	19. Comme	35. ~~[illegible]~~ reign
4. ~~[illegible]~~ Full	20. que	36. air.
5. Zealous	21. mute	37. are.
6. Sea	22. pure	38. Fair.
7. Shot	23. bard.	39. dell.
8. Major	24. Feel.	40. cake.
9. get	25. Feet.	41. Come.
10. vowel	26. Fool.	42. coo.
11. Pat	27. Jealous	43. moot
12. Cut	28. she.	44. poor.
13. reign	29. Short	
14. heir	30. measure	
15. are	31. gate	
16. Fair.	32. bowel.	

39/44

Name: BISHAL SAHA.

Address: CLASS-X
SAINT JOESEPH'S SCHOOL
BADARPUR.

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird
2. Fill
3. Fit
4. Fool
5. Jealous
6. Sea
7. Short
8. Major
9. Gret
10. Vowel
11. Pat
12. Cut
13. Rain
14. Heir
15. Are
16. Fare
17. Duell
18. Quake
19. Calm
20. Queue Quaque
21. Mute
22. Pure
23. Ward
24. Filt Feel
25. Feel
26. Foot Full
27. Jealous
28. She
29. Shot
30. Measure
31. Crake
32. Bowl
33. Part
34. Cart
35. Reign
36. Hair
37. Her
38. Pair
39. Dell
40. Cake
41. Come
42. Coo
43. Moot
44. Poor

32/44

Name: Masud Karim Laskar.

Address: Class X, St. Joseph's school.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	
b)	fill	and	feel	yes	no	✗
c)	fit	and	feet	yes	no	✗
d)	full	and	fool	yes	no	✗
e)	zealous	and	jealous	yes	no	✗
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	✗
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	✗
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	✗
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

14/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Sompita Seal.

Address: Class-X B.
Kendriya Vidhalaya
Panchgram.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes ✓ no
b)	fill	and	feel	yes ✓ no
c)	fit	and	feet	yes no ✓ ✗
d)	full	and	fool	yes ✓ no
e)	zealous	and	jealous	yes no ✓ ✗
f)	sea	and	she	yes ✓ no
g)	shot	and	short	yes ✓ no
h)	major	and	measure	yes ✓ no
i)	get	and	gate	yes ✓ no
j)	vowel	and	bowel	yes ✓ no
k)	pat	and	part	yes ✓ no
l)	cut	and	cart	yes ✓ no
m)	rain	and	reign	yes ✓ no ✗
n)	heir	and	air	yes ✓ no ✗
o)	hour	and	our	yes ✓ no ✗
p)	fair	and	fare	yes ✓ no ✗
q)	dwell	and	dell	yes ✓ no
r)	quake	and	cake	yes ✓ no
s)	qualm	and	calm	yes no ✓ ✗
t)	cue	and	coo	yes ✓ no
u)	mute	and	moot	yes ✓ no ✓ ✗
v)	pure	and	poor	yes ✓ no

14/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Moushmi Dey
Class - X AO

Address: Kendriya Vidyalaya
Panchgram

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bard	17. duell	33. pāul
2. feel	18. quake	34. Caul
3. fit	19 Caum	35. Rain
4. foul	20. que	36. aur
5 zealous	21. mūle	37. heart
6. Sea	22. pure	38. fair
7. Saul	23. bayd	39. dell
8. major	24. feel	40. Come
9. gel	25. fit	41. Calm
10. Vowl Vowl	26. fool	42. Coo
11. pel	27. jealous	43. mode.
12. Cut	28. See	44. proh
13. Rain	29. Shaul	
14. heave	30. measure	
15. aul	31. gile	
16. fair	32. baud	

32/44

Name: Somnath Ghosh - X B

Address: Kendriya Vidalaya, panchgram

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bird
2. fill
3. feet
4. full
5. zealous
6. see
7. shocked
8. major
9. get
10. vowel
11. pal
12. cut
13. main
14. have
15. ave
16. felt
17. dwell
18. quake
19. qualm
20. que
21. mulp
22. pure
23. bud
24. feel
25. feet
26. feal
27. jealous
28. she
29. shoot
30. measure
31. gale
32. bowel
33. part
34. cart
35. rain
36. air
37. ave
38. fain
39. dell
40. cake
41. calm
42. coo
43. mool
44. poor

37/44

Name: Agnishwar chakraborty

Address: Student class X
kendriya vidyalaya
Panchgram.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes ✓	no ✓	
b)	fill	and	feel	yes ✓	no ✓	
c)	fit	and	feet	yes ✓	no ✓	
d)	full	and	fool	yes ✓	no ✓	
e)	zealous	and	jealous	yes	no ✓	✗
f)	sea	and	she	yes ✓	no ✓	
g)	shot	and	short	yes ✓	no ✓	
h)	major	and	measure	yes	no ✓	✗
i)	get	and	gate	yes ✓	no ✓	
j)	vowel	and	bowel	yes	no ✓	✗
k)	pat	and	part	yes ✓	no ✓	
l)	cut	and	cart	yes	no ✓	
m)	rain	and	reign	yes	no ✓	
n)	heir	and	air	yes ✓	no	✗
o)	hour	and	our	yes ✓	no	✗
p)	fair	and	fare	yes	no ✓	
q)	dwell	and	dell	yes	no ✓	✗
r)	quake	and	cake	yes ✓	no	
s)	qualm	and	calm	yes	no ✓	✗
t)	cue	and	coo	yes	no ✓	✗
u)	mute	and	moot	yes	no ✓	✗
v)	pure	and	poor	yes ✓	no	

13/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Shahana Begom.

Address: Shah Bodar uddin high School.
Class - X.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✗
b)	fill	and	feel	yes	no ✓	✗
c)	fit	and	feet	yes	no ✓	✗
d)	full	and	fool	yes	no ✓	✗
e)	zealous	and	jealous	yes	no ✓	✗
f)	sea	and	she	yes	no ✓	✗
g)	shot	and	short	yes ✓	no	
h)	major	and	measure	yes ✓	no ✓	
i)	get	and	gate	yes	no ✓	✗
j)	vowel	and	bowel	yes	no ✓	✗
k)	pat	and	part	yes ✓	no	
l)	cut	and	cart	yes ✓	no	
m)	rain	and	reign	yes	no ✓	
n)	heir	and	air	yes ✓	no	✗
o)	hour	and	our	yes ✓	no	✗
p)	fair	and	fare	yes	no ✓	
q)	dwell	and	dell	yes	no ✓	✗
r)	quake	and	cake	yes	no ✓	✗
s)	qualm	and	calm	yes ✓	no	
t)	cue	and	coo	yes	no ✓	✗
u)	mute	and	moot	yes ✓	no	
v)	pure	and	poor	yes	no ✓	✗

8/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Begom Sultana Sabiha

Address: ✗ Shah Bodin Abbin High School

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Baid
2. Feel
3. ~~Fat~~ Feet
4. Full
5. Jalas
6. See
7. shast
8. Mogar
9. Bet
10. veull
11. Patt
12. cut
13. Bain
14. ~~hair~~ Hein
15. Our
16. Fair
17. Doul
18. quiet
19. coulp
20. cou
21. Moaft
22. Feeur
23. Baird
24. Feel
25. Feet
26. Fool
27. Zealase
28. She
29. Shart
30. Masure
31. Gaet
32. Vaule
33. Part
34. cut
35. Rain
36. Air
37. Our
38. Pabyer
39. Delk
40. cuke
41. culp
42. ca cou
43. Mood
44. ~~Poour~~ Poar

17/44

Name: Razy Khanam

Address: X, Shah Badaruddin High School

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bind	17. Dowel	33. Pond
2. Tree	18. Kake	34. Scord
3. Picked	19. Cald	35. Rain
4. Full	20. Cnocs	36. air
5. Jealous	21. Moot	37. our
6. Sea	22. Pure	38. Pare
7. Short	23. Bind	39. Deal
8. mesome	24. Peal	40. Bake
9. Geat	25. Feet	41 cald
10. vowel	26. Fowel	42. coo
11. Part	27. joulous	43. moot
12. Scrat	28. She	44. pore
13. Rain	29. Shot	
14. Heir	30. Measows	
15. Hour	31. Grate	
16. Fair	32. bowel	

18/44

Name: Monzur Ahmed Choudhury.

Address: class X
Shah Badar uddin high
School.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	
b)	fill	and	feel	yes	no	✗
c)	fit	and	feet	yes	no	✗
d)	full	and	fool	yes	no	
e)	zealous	and	jealous	yes	no	✗
f)	sea	and	she	yes	no	✗
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	✗
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	✗
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	✗
q)	dwell	and	dell	yes	no	✗
r)	quake	and	cake	yes	no	✗
s)	qualm	and	calm	yes	no	✗
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	✗
v)	pure	and	poor	yes	no	

10/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Murshida Khanom

Address: Srirgouri high school

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✗
b)	fill	and	feel	yes	no	
c)	fit	and	feet	yes	no	
d)	full	and	fool	yes	no	✗
e)	zealous	and	jealous	yes	no	
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	✗
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	
n)	heir	and	air	yes	no	
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	✗
s)	qualm	and	calm	yes	no	✗
t)	cue	and	coo	yes	no	✗
u)	mute	and	moot	yes	no	✗
v)	pure	and	poor	yes	no	

14/21

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Sri Biplu Nath = X

Address: Srigouri high school

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. ~~b~~ Bird
2. Feel
3. Ket
4. Full
5. Jelowsco.
6. ~~Sb~~ sea
7. ~~Short~~. Shot
8. Mejowr.
9. get.
10. ~~Fi~~ vowel.
11. Pat.
12. ~~Cart~~. cut
13. ~~o~~ Rain
14. Fear.
15. HOwr.
16. Favr
17. Dull.
18. ~~Break~~. Quick
19. Cram.
20. coo
21. Mhaol.
22. ~~pearl~~. boor.
23. ~~Bird~~ Bord
24. ~~Fld~~. Fill
25. Fit
26. Full.
27. Zealaus.
28. She.
29. Short
30. Measure.
31. Jeat.
32. Bowel.
33. Part
34. ~~cat~~ ~~cart~~. crut.
35. Rain
36. ~~ho~~ Air
37. owr.
38. Fear.
39. Dell.
40. cake
41. clame
42. ~~Boor~~ crow.
43. ~~Moot~~ mout.
44. ~~Powr.~~ Powr.

24/44

Name: Md Mamnun Islam.

Address: Sri Gouri High School

Class - X

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1.	bird	17.	Dal	33.	part
2.	Fill	18.	[illegible]	34.	curet
3.	Feet	19.	clam	35.	ragin
4.	Full	20.	quar	36.	air
5.	Jalous	21.	Meat	37.	aur
6.	Sea	22.	Pear	38.	Fear
7.	shot	23.	bird	39.	Dal
8.	meajour	24.	Fell	40.	cate
9.	get	25.	Feet	41.	clam
10.	vowel	26.	Full	42.	cut
11.	pat	27.	Jalary	43.	mut
12.	Cut	28.	Sea	44.	peore.
13.	Rain	29.	shot		
14.	hear	30.	mesure		
15.	our	31.	gate		
16.	Fear	32.	vowel		

16/44

Name: Md. Sayefuddin

Address: Class-X
Srigouri High school

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no
b)	fill	and	feel	yes	no
c)	fit	and	feet	yes	no
d)	full	and	fool	yes	no
e)	zealous	and	jealous	yes	no
f)	sea	and	she	yes	no
g)	shot	and	short	yes	no
h)	major	and	measure	yes	no
i)	get	and	gate	yes	no
j)	vowel	and	bowel	yes	no
k)	pat	and	part	yes	no
l)	cut	and	cart	yes	no
m)	rain	and	reign	yes	no
n)	heir	and	air	yes	no
o)	hour	and	our	yes	no
p)	fair	and	fare	yes	no
q)	dwell	and	dell	yes	no
r)	quake	and	cake	yes	no
s)	qualm	and	calm	yes	no
t)	cue	and	coo	yes	no
u)	mute	and	moot	yes	no
v)	pure	and	poor	yes	no

9/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Rena Begom

Address: B. Bhangra Higher Secondary School class — X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	~~yes~~	~~no~~	✗
b)	fill	and	feel	~~yes~~	no	
c)	fit	and	feet	yes	~~no~~	✗
d)	full	and	fool	yes	~~no~~	✗
e)	zealous	and	jealous	yes	~~no~~	✗
f)	sea	and	she	~~yes~~	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	~~no~~	✗
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	~~no~~	✗
k)	pat	and	part	yes	~~no~~	✗
l)	cut	and	cart	yes	~~no~~	✗
m)	rain	and	reign	~~yes~~	no	✗
n)	heir	and	air	yes	no	
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	~~yes~~	no	
s)	qualm	and	calm	yes	~~no~~	✗
t)	cue	and	coo	~~yes~~	no	
u)	mute	and	moot	~~yes~~	~~no~~	✗
v)	pure	and	poor	yes	~~no~~	✗

4/16

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Sankari Nath

Address: Bhanga Higher secondary School.
Class=X

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bird
2. Fèll
3. Feet
4. Ful
5. jahas sec
6. See
7. Short
8. Mazar
9. ~~B~~ Hit
10. Vowle
11. Pat
12. ~~Cut~~ Cut
13. Rain
14. heir
15. hour
16. Fair
17. rwel
18. qvet
19. qveil
20. ~~Q~~ qvec
21. Mat
22. Poar
23. ~~bread~~ brad ~~bard~~
24. Felt
25. Feet
26. Fule
27. Jaleses
28. She
29. Shat
30. Mazear
31. geat
32. bowle
33. bard
34. cunt
35.
36. air
37. our
38. Foer
39.
40. cake
41. clab
42. ~~Mat~~ Coo
43. Mart
44. poar

17/42

Name: Nazma Begom

Address: class – X Bhonga H.S. School

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bird
2. fill
3. feet
4. full
5. zealash
6. See
7. Shart
8. mazar
9. Eat
10. vowell
11. capt
12. cut
13. Rain
14. Bear
15. ~~ea~~our
16. fair
17. whill
18. quite
19. clame
20. quine
21. marlk
22. pogle
23. Bard
24. fike
25. feet
26. ~~FH~~ Pool
27. jalars
28. Seem
29. Sart
30. Masar.
31. grake
32. Bill
33. cart
34. carke
35. missle
36. Hair
37. ware
38. fair
39. hill
40. Take
41. Halp
42. coo
43. molk
44. pare.

13/44

Name: Swdipa Das.

Address: Bhanga H·S School.

class-X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no ✓	✗
b)	fill	and	feel	yes ✓	no	
c)	fit	and	feet	yes	no ✓	✗
d)	full	and	fool	yes	no ✓	✗
e)	zealous	and	jealous	yes	no ✓	✗
f)	sea	and	she	yes ✓	no	
g)	shot	and	short	yes	no ✓	✗
h)	major	and	measure	yes ✓	no	
i)	get	and	gate	yes	no ✓	✗
j)	vowel	and	bowel	yes	no ✓	✗
k)	pat	and	part	yes	no ✓	✗
l)	cut	and	cart	yes	no ✓	✗
m)	rain	and	reign	yes ✓	no	✗
n)	heir	and	air	yes ✓	no	✗
o)	hour	and	our	yes	no ✓	✗
p)	fair	and	fare	yes ✓	no	
q)	dwell	and	dell	yes	no ✓	✗
r)	quake	and	cake	yes	no ✓	✗
s)	qualm	and	calm	yes	no ✓	✗
t)	cue	and	coo	yes	no ✓	✗
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no ✓	✗

8/21

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Priyanka Sukhabaidya

Address: Class - X

Rly Higher Secondary School

Badarpur.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no ✓	✗
b)	fill	and	feel	yes ✓	no	
c)	fit	and	feet	yes ✓	no	
d)	full	and	fool	yes	no	
e)	zealous	and	jealous	yes	no ✓	✗
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no ✓	✗
h)	major	and	measure	yes	no ✓	✗
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no ✓	✗
k)	pat	and	part	yes	no ✓	✗
l)	cut	and	cart	yes	no ✓	✗
m)	rain	and	reign	yes	no ✓	
n)	heir	and	air	yes	no ✓	
o)	hour	and	our	yes ✓	no	✗
p)	fair	and	fare	yes ✓	no	✗
q)	dwell	and	dell	yes ✓	no	
r)	quake	and	cake	yes	no ✓	✗
s)	qualm	and	calm	yes	no ✓	✗
t)	cue	and	coo	yes	no ✓	✗
u)	mute	and	moot	yes ✓	no	
v)	pure	and	poor	yes	no ✓	

10/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Juhin Sutradhar -

Address: Class X - C.
Railway H.S. School.

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird	17. dewel	33. Part
2. Feel	18. Que	34. cunt
3. Feet	19. Guam	35. Rain
4. Fool	20. ~~cock~~ Que	36. heir
5. Jealous	21. moot	37. Our
6. See	22. Pure	38. Fare
7. Shot	23. Bard	39. Del
8. Measour	24. Fill	40. Cak
9. Get	25. Fit	41. Come
10. vowel	26. Full	42. Coo
11. Part	27. zealous	43. mute
12. Cut	28. She	44. Poor
13. Rain	29. Short	
14. air	30. Measure	
15. hour	31. Grate	
16. Fair	32. bowel	

23/44

Name: Sumita Ghose

Address: Railway H.S. School
B.P.B.

12

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bird	17. dauel	33. Part
2. heel	18. Black	34. ~~coat~~ cut
3. hit	19. due	35. nain
4. hul	20. Mute	36. hain
5. Jealies	21. Pure	37. hour
6. Sea	22. beand	38. haire
7. Short	23. hi?	39. deel
8. majoin	24. bear	40. cake
9. get	25. heet	41. come
10. vowel	26. hoal	42. coo
11. Part	27. zealus	43. ~~B~~oot
12. cart	28. She	44. POOR
13. nain	29. shoat	
14. air	30. measure	
15. our	31. gate	
16. hain	32. bower	

23/44

Name: Biki ch. Ghosh. Sec (c) (X)

Address: Rly H.S School.

F

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no ✓
b)	fill	and	feel	yes	no ✗
c)	fit	and	feet	yes	no ✗
d)	full	and	fool	yes	no ✗
e)	zealous	and	jealous	yes	no ✗
f)	sea	and	she	~~yes~~	no
g)	shot	and	short	~~yes~~	no
h)	major	and	measure	~~yes~~	no
i)	get	and	gate	~~yes~~	no
j)	vowel	and	bowel	~~yes~~	no
k)	pat	and	part	~~yes~~	no
l)	cut	and	cart	~~yes~~	no
m)	rain	and	reign	yes	no
n)	heir	and	air	~~yes~~	no ✗
o)	hour	and	our	~~yes~~	no ✗
p)	fair	and	fare	yes	no
q)	dwell	and	dell	~~yes~~	no
r)	quake	and	cake	~~yes~~	no
s)	qualm	and	calm	~~yes~~	no
t)	cue	and	coo	~~yes~~	no
u)	mute	and	moot	~~yes~~	no
v)	pure	and	poor	~~yes~~	no

15/22

~~Janaki Charan Higher Secondary School kalinagar~~

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Pinaki Dhar

Address: Janaki Charan Higher Secondary School kalinagar

class - X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	~~no~~	✗
b)	fill	and	feel	yes	~~no~~	✗
c)	fit	and	feet	yes	~~no~~	✗
d)	full	and	fool	yes	~~no~~	✗
e)	zealous	and	jealous	yes	~~no~~	✗
f)	sea	and	she	~~yes~~	no	
g)	shot	and	short	~~yes~~	no	
h)	major	and	measure	~~yes~~	no	
i)	get	and	gate	yes	~~no~~	✗
j)	vowel	and	bowel	~~yes~~	no	
k)	pat	and	part	~~yes~~	no	
l)	cut	and	cart	~~yes~~	no	
m)	rain	and	reign	~~yes~~	~~no~~	
n)	heir	and	air	~~yes~~	no	✓
o)	hour	and	our	~~yes~~	no	✓
p)	fair	and	fare	yes	~~no~~	
q)	dwell	and	dell	~~yes~~	no	
r)	quake	and	cake	~~yes~~	no	
s)	qualm	and	calm	~~yes~~	no	
t)	cue	and	coo	~~yes~~	no	
u)	mute	and	moot	~~yes~~	no	
v)	pure	and	poor	~~yes~~	no	

14/22

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Rakhi Rani Das.

Address: J. C. H. S. School. (Kalinggar)

class - X - A

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Brid	17. Zall	33. Prid
2. Pill	18. Suit	34. Cird
3. eall	19 Kalim	35. Dirin
4. Will	20. Done	36. eair
5. Jalis	21. moutmuit	37. our
6. See	22. P	38. Pair
7. Short	23. bird	39. Zeel
8. Major	24. Deel	40. Kike
9. gat	25. Deet	41 Plam
10. voul	26. Soal	42. Coo
11. Pat	27. Jalis	43. Mobd
12. cist	28. She	44. Pare
13. Rain	29. Chard	
14. hear	30. Masir	
15. our	31. Dact	
16. Teatur	32. voul	

Name: Rashna Sultana Choudhury

Address: class = X.

Janaki Charan higher Secondary School Kalinagar

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bains
2. Piell
3. fit
4. Full
5. Jalans
6. She
7. Shoo
8. mooJ
9. gat
10. Bevll
11. Pat
12. catt
13. neat
14. ane
15. Haun
16. pane
17. Jule
18. kguke
19. Kalam
20. ggov
21. met
22. Pne
23. Biord
24. Fell
25. Fat
26. Foll
27. Jalla
28. She
29. Soal
30. majen
31. Jat
32. Vevll
33. Pnatt
34. cont
35. Righ
36. ane
37. hen
38. Fan
39. del
40. cap
41. call
42. con
43. moll
44. Penp

Name: Pampa Das

Address: X – B

Jankhi chann Highen secande

Skhool.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✗
b)	fill	and	feel	yes	no	✗
c)	fit	and	feet	yes	no	✗
d)	full	and	fool	yes	no	✗
e)	zealous	and	jealous	yes	no	✗
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	✗
n)	hoir	and	air	yes	no	✗
o)	hour	and	our	yes	no	✗
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Keshab Paul

Address: Sidd.heswar Higher Secondary School

Class - X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✓
b)	fill	and	feel	yes	no	✓
c)	fit	and	feet	yes	no	✓
d)	full	and	fool	yes	no	✓
e)	zealous	and	jealous	yes	no	
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	✗
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Hirok Dutta

Address: Kating Siddheswar H. S. School.

class = X

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bard
2. Bill
3. Fit
4. Full
5. joules
6. cec
7. short
8. macher
9. set
10. vowel
11. sat
12. cut
13. sing
14. here
15. our
16. Fare
17. real
18. wet
19. Wate
20. kite arrick
21. mate
22. Pair
23. bard bird
24. Bill
25. Fit
26. Foul
27. joules
28. Sec
29. shirt
30. misure
31. Feet
32. vowelvoul
33. Part
34. court
35. complain
36. here Are
37. Other
38. Fare
39. deel
40. Kake
41. come
42. Koo
43. made
44. Pure

Name: Sourav. Bhattacharjee

Address: Siddheswar. Higher Secondary School (Kaligorah)

class = X

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird
2. Fill
3. Fit
4. Full
5. Jealous
6. See
7. Shot
8. Major
9. Get
10. vowel
11. pet
12. cut
13. Rain
14. Hair
15. ~~Hour~~ our
16. Fear
17. Rule
18. Quack
19. Qualm
20. Quick
21. Mute
22. Pure
23. Bird
24. Feel
25. Feet
26. Fool
27. Zealous
28. She
29. Short
30. Measure
31. ~~Goat~~ Get
32. Bowel
33. Part
34. Curt
35. Rain
36. Air
37. Hour
38. Fear
39. Dull
40. Cack
41. Come
42. Coo
43. ~~Route~~ Moot
44. Poor

Name: Nirupam Deb.

Address: Siddheswar Higher Secondary School. (Kaligorah.)
class - X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	**bird**	and	bard	yes	✓no	✗
b)	**fill**	and	feel	✓yes	no	
c)	**fit**	and	feet	✓yes	no	
d)	**full**	and	fool	yes	✓no	✗
e)	**zealous**	and	jealous	✓yes	no	
f)	**sea**	and	she	yes	✓no	✗
g)	**shot**	and	short	yes	✓no	✗
h)	**major**	and	measure	✓yes	no	
i)	**get**	and	gate	✓yes	no	
j)	**vowel**	and	bowel	yes	✓no	✗
k)	**pat**	and	part	✓yes	no	
l)	**cut**	and	cart	✓yes	no	
m)	**rain**	and	reign	✓yes	no	✗
n)	**heir**	and	air	✓yes	no	✗
o)	**hour**	and	our	yes	✓no	
p)	**fair**	and	fare	yes	✓no	
q)	**dwell**	and	dell	✓yes	no	
r)	**quake**	and	cake	✓yes	no	
s)	**qualm**	and	calm	✓yes	no	
t)	**cue**	and	coo	✓yes	no	
u)	**mute**	and	moot	yes	✓no	✗
v)	**pure**	and	poor	✓yes	no	

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Nazrin Sultana Laskar.

Address: Badarpur Girls' High School.

class:- X.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes ✓	no
b)	fill	and	feel	yes	no ✗
c)	fit	and	feet	yes	no ✗
d)	full	and	fool	yes	no ✗
e)	zealous	and	jealous	yes	no ✗
f)	sea	and	she	yes	no
g)	shot	and	short	yes	no ✗
h)	major	and	measure	yes	no
i)	get	and	gate	yes	no ✗
j)	vowel	and	bowel	yes	no
k)	pat	and	part	yes	no ✗
l)	cut	and	cart	yes	no
m)	rain	and	reign	yes	no ✗
n)	heir	and	air	yes	no
o)	hour	and	our	yes	no
p)	fair	and	fare	yes	no
q)	dwell	and	dell	yes	no
r)	quake	and	cake	yes	no
s)	qualm	and	calm	yes	no
t)	cue	and	coo	yes	no
u)	mute	and	moot	yes	no ✓ ✗
v)	pure	and	poor	yes	no ✓ ✗

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Bhabani Rani Das

Address: Badarpur Girl's High school class - X.

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird
2. Fill
3. Fit
4. Full
5. Zeluius
6. See
7. short
8. measur
9. get
10. vowd
11. pat
12. cut
13. Rain
14. heir
15. Our
16. Fair
17. Dealth
18. Queak
19. gulam
20. ~~Shok~~ res
21. mool
22. pure
23. Bard
24. zeel
25. geet
26. zoul
27. zelous
28. ~~See~~ she
29. sat
30. mesur
31. geet
32. owel
33. part
34. cart
35. regain
36. hare
37. hour
38. gear
39. ~~Dealth~~ Deal
40. cake
41. Clum
42. coo
43. moot
44. poor

Name: Choudhury usmana Tahrin

Address: Class X Badarpur Girls High school.

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. bird
2. fall
3. feet
4. full
5. Jealious
6. Sea
7. Shot
8. measure
9. gat
10. Yellow
11. pat
12. cut
13. Hair
14. here
15. hour
16. fair
17. Deal
18. Queek
19. qualm
20. Que
21. moot
22. Pure
23. hard
24. feel
25. fet
26. fool
27. Jealeous
28. She
29. short
30. meagure
31. gate
32. bollocs
33. part
34. cart
35. rogin
36. air
37. our
38. fare
39. Doll
40. cake
41. clam
42. Coo
43. met
44. poor

Name: Susma Das Gupta

Address: Badarpur Girls High School

Class – X

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	
b)	fill	and	feel	yes	no	✗
c)	fit	and	feet	yes	no	✗
d)	full	and	fool	yes	no	✗
e)	zealous	and	jealous	yes	no	
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	✗
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	✗
p)	fair	and	fare	yes	no	✗
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Pushpa Nath.

Address: N.C. College.

QUESTIONNAIRE IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Is there any difference between the pronunciations of:-

a)	bird	and	bard	yes	no	✗
b)	fill	and	feel	yes	no	
c)	fit	and	feet	yes	no	✗
d)	full	and	fool	yes	no	
e)	zealous	and	jealous	yes	no	✗
f)	sea	and	she	yes	no	
g)	shot	and	short	yes	no	
h)	major	and	measure	yes	no	
i)	get	and	gate	yes	no	✗
j)	vowel	and	bowel	yes	no	
k)	pat	and	part	yes	no	
l)	cut	and	cart	yes	no	
m)	rain	and	reign	yes	no	✗
n)	heir	and	air	yes	no	✗
o)	hour	and	our	yes	no	
p)	fair	and	fare	yes	no	✗
q)	dwell	and	dell	yes	no	
r)	quake	and	cake	yes	no	
s)	qualm	and	calm	yes	no	
t)	cue	and	coo	yes	no	
u)	mute	and	moot	yes	no	
v)	pure	and	poor	yes	no	

DR.PAULOSE V.D.(N.C.COLLEGE)

GUNAJIT KALITA

Name: Amit Roy.

Address: N.C. College, H.S. 1st year (Com)
Roll No - 1653

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird
2. Fell
3. Feet
4. Full
5. Zelious
6. Sea
7. Shot
8. Major
9. Get
10. Vowel
11. Pat
12. Cut
13. Rain
14. Hein
15. Our
16. Fair
17. Gaven
18. Quake
19. Cunalm
20. Cue
21. M
22. Pure
23. Bard
24. Kill
25. Ket
26. Fut
27. Jealious
28. She
29. Short
30. Measure
31. Creat
32. Bowel
33. Pant
34. Cant
35. Reing
36. Air
37. Haur
38. Kare
39. Kneel
40. Cake
41. Carlm
42. Coo
43. Moot
44. Poor

Name: Sahana Sultana

Address: H.S. 1st yr N. E. College Badarpur

DICTATION IN CONNECTION WITH MAJOR RESEARCH PROJECT

1. Bird	17. She	33. Part
2. ~~Feet~~ Fill	18. Neake	34. Cerve
3. Fet	19. Heself	35. Rain
4. Fiell	20. Co	36. Hair
5. Zen	21.	37. Oler
6. Sea	22. Poor	38. Fair
7. Shot	23. Bye	39. Shen
8. Major	24. Feel	40. ~~Coat~~ Cot
9. Got.	25. Feet	41. Calb
10. Bevoce	26. Foot	42. Coo
11. ~~Ben~~ Pet	27. Sholeoues	43. ~~Met~~ Moot
12. Cat	28. Sea	44. Poor
13. Rain	29. Short.	
14. Hair	30. ~~Pha~~ Pshar	
15. hower	31. Gate	
16. Fair	32. Bevocel	

Name: Rehana Begom

Address: N.C College Badarpur

3.1. ST. JOSEPH'S SCHOOL, BADARPUR.
NUMBER OF STUDENTS- THIRTY-TWO

From the data, it is found that fourteen students could not find any difference between the pronunciations of the words 'bird' /bəːd/ and 'bard' /bɑːd/. They are unable to find the difference between /əː/ and /ɑː/ sounds.

Fourteen students treated the pronunciations of the words 'fill' /fil/ and 'feel' /fiːl/ in the same way while seventeen students could not differentiate /fit/ from /fiːt/. In the above two pairs, they were unable to find the difference between /i/ and /iː/ sounds.

For eighteen students the pronunciations of 'full' /ful/ and 'fool' /fuːl/ were the same. In this pair they were unable to find the difference between /u/ and /uː/ sounds.

Six students could not differentiate the pronunciation of 'zealous' /zelə s/ from that of 'jealous' /ʤeləs/. In this pair, they were unable to find the difference between /z/ and /ʤ/ sounds.

The pronunciations of 'sea' /siː/ and 'she' /ʃiː/ were the same for two students. In this pair, they were unable to find the difference between /s/ and /ʃ/ sounds.

Two students could not find any difference between the pronunciation of the words 'shot' /ʃɔ t/ and 'short' /ʃɔ: t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

One student treated the words 'major' /meidʒə / and 'measure' /meʒə/ as having same pronunciations. In this pair, he was unable to find the difference between / dʒ / and /ʒ / sounds.

Five students could not find any difference between the pronunciations of the words 'vowel' /v ə͡ʊ əl/ and 'bowel' /b ə͡ʊ əl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Four students could not find any difference between the pronunciations of the words 'pat' /pæt/ and 'part' /pɑ: t/. In this pair, they were unable to find the difference between /æ / and /ɑ: / sounds.

Eight students could not differentiate the pronunciation of 'cut' /k ʌ t/ from 'cart' /kɑ: t/. In this pair, they were unable to find the difference between /ʌ / and /ɑ: / sounds.

Three students found the pronunciations of the words 'dwell' /dwel/ and 'dell' /del/ the same. In this pair, they pronounced the consonant cluster /dw/ in 'dwell' and /d/ in 'dell' in the same manner.

One student could not find any difference between the pronunciations of the words 'quake' /kweik/ and 'cake' /keik/. In this pair, /kw/, a consonant cluster, is treated as /k/. The same mistake was committed by ten students when the words 'qualm' /kwɑ:m/ and 'calm' /kɑ:m/ were given.

Thirteen students could not find any difference between the pronunciations of 'cue' /kju:/ and 'coo' /ku: /. This means that these students pronounce the consonant cluster /kj/ as /k/.In the same way, for two students the pronunciations of the words 'mute' /mju:t/ and 'moot' /mu:t/were the same. It means they pronounce the consonant cluster /mj/ and /m/ in the same way.

One student could not differentiate 'pure' /pjuə/ from 'poor' /puə/. It indicates he pronounces the consonant cluster /pj/ as /p/. The people like this boy do not pronounce the phoneme /j/ after a consonant.

Ten students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciations between the words 'rain' and 'reign'.

Eleven students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Five students found difference in pronunciations between the words 'hour' /aʊə/ and 'our' /aʊə/. There is no difference in pronunciations between the words 'hour' and 'our'.

Eight students found difference in pronunciations between the words 'fare' /feə/ and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

Again, they were given a blank paper where they were asked to write forty-four words which were dictated by one of the boys in the same class. From data, it is found that five students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Four students wrote the word 'feel' /fi:l/ for 'fill' /fil/. Eleven students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Four students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Six students wrote the word 'full' /ful/ for 'fool' /fu:l/. Three students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Three students wrote the word 'zealous' /zeləs/ for 'jealous' /dʒelə s/. One student wrote the word 'jealous' /dʒelə s/ for 'zealous' /zelə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ /.

Six students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Three students wrote the word 'short' /ʃɔ:t/ for 'shot' /ʃɔ t/. Here they are unable to find the difference between the vowel phonemes /ɔ / and /ɔ:/.

One student wrote the word 'major' /meidʒə / for 'measure' /meʒə/. Here he was unable to find the difference between the phonemes /dʒ / and /ʒ /.

Three students wrote the word 'vowel' /vɐ uəl/ for 'bowel' /bɐuəl/. Here they were unable to find the difference between the phonemes /v/ and /b/.

One student wrote the word 'cut' /kʌt/ for 'cart' /kɑ:t/. Again one student wrote the word 'cart' /kɑ:t/ for 'cut' /kʌt/. Here they were unable to find the difference between the phonemes /ɑ: / and /ʌ/.

Twenty-four students wrote the word 'qualm' /kwɑ: m/ for 'calm' /kɑ: m/. Four students wrote the word 'calm' /kɑ: m/ for 'qualm' /kwɑ:m/. Here, they wrote the consonant cluster /kw/ as /k/.

3.2. KENDRIYA VIDYALAYA, PANCHGRAM
NUMBER OF STUDENTS- THIRTY-THREE

From the data collected from this school, it is found that two students could not find any difference between the pronunciations of the words 'bird' /bəːd/ and 'bard' /bɑːd/. The vowels in these words were same for them.

Eight students marked 'yes' to indicate that the words 'fill' /fil/ and 'feel' /fiːl/ have the same pronunciation and nine students treated the words 'fit' /fit/ and 'feet' /fiːt/ as having the same pronunciation. In the above two pairs, they were unable to understand the difference between /i/ and /iː/ sounds.

Seven students marked in such a way as to indicate same pronunciations for the words 'full' /ful/ and 'fool' /fuːl/. In this pair they were unable to find the difference between /u/ and /uː/ sounds.

Eight students indicated that the two words "zealous" /zel ə s/ and jealous /dʒ el ə s/ have the same pronunciation. These students pronounce the fricative /z/ as the affricate /dʒ / In this pair, they were unable to find the difference between /z/ and /dʒ / sounds.

One student could not differentiate 'sea' /siː/ from 'she' /ʃ iː/. In this pair, he was unable to find the difference between /s/ and /ʃ / sounds.

Five students could not differentiate the pronunciation of shot' /ʃɔ t/ from that of 'short' /ʃɔ: t/. In this pair, they were unable to find the difference between the vowel sounds /ɔ / and /ɔ:/.

One student could not find any difference between the pronunciations of the words 'major' /meidʒə/ and 'measure' /meʒə /. In this pair he was unable to find the difference between the medial consonants /dʒ / and /ʒ / sounds, and also between the vowel sounds / ei / and /e/.

One student tick-marked the words 'get' /ɡ et/ and 'gate' /ɡ eit/ as having the same pronunciation. In this pair he was unable to find the difference between /e/ and /ei/ sounds.

For one student the pronunciations of the two words 'vowel' /vəuəl/ and 'bowel' /bəuə l/ are the same. In this pair, he was unable to find the difference between the labio-dental consonant /v/ and the bi-labial consonant /b/.

Two students treated the words 'pat' /pæt/ and 'part' /pɑ:t/ as having the same pronunciation. In this pair, they were unable to find the difference between /æ/ and /ɑ: / vowels.

Three students could not differentiate the pronunciation of 'cut' /kʌt/ from that of 'cart' /kɑ: t/. In this pair, they were unable to find the difference between the vowels / ʌ / and /ɑ: /

One student could not differentiate the pronunciation of 'dwell' /dwel/ from that of 'dell' /del/. He could not differentiate the consonant cluster /dw/ from /d/, a single consonant.

One student treated the words 'quake' /kweik/ and 'cake' /keik/ in the same way. In this pair, the consonant cluster /kw/ and the single consonant /k/ were treated as the same.

Six students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they treated the consonant cluster /kw/ as /k/.

Four students could not differentiate the pronunciation of the word word 'cue' /kju:/ from 'coo' /ku:/. Here the consonant cluster /kj/ and the single consonant /k/ were considered to have the same pronunciation. The same problem was found with the pair 'mute' /mju:t/ and 'moot' /mu:t/. For seven students, the consonant cluster /mj/ and the single consonant /m/ were the same. One student had the same problem with the pair 'pure' /pjuə/ and 'poor' /puə/. These students do not pronounce the phoneme /j/ after a consonant.

Fourteen students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciations between the words 'rain' and 'reign'.

Thirteen students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'.

Six students found difference in pronunciations between the words 'hour' /ɑ uə / and 'our' /ɑ uə /.

Eight students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

In the paper given for dictation, it is found that five students wrote the word 'fill' /fil/ for ' feel' /fi:l/ and four students wrote the word 'feel' /fi:l/ for 'fill' /fil/. Six students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Three students wrote the word 'feet' /fi:t/ for 'fit' /fit/. It is a clear indication that these students do not find the difference between the phonemes /i/ and /i:/.

Two students have written the word 'full' /ful/ for 'fool' /fu:l/. One student has written the word 'fool' /fu:l/ for 'full' /ful/. Here they are unable to find the difference between the phonemes /u/ and /u:/.

Three students wrote the word 'zealous' /zeləs/ for 'jealous' /ʤeləs/. Two students wrote the word 'jealous' /ʤeləs/ for 'zealous' /zeləs/.

Here they were unable to find the difference between the phonemes /z / and /dʒ /.

One student wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. He was unable to find the difference between the phonemes /ɔ / and /ɔ: /.

One student wrote the word 'major' /meidʒə/ for 'measure' /meʒə /.
One student wrote the word 'measure' /meʒə / for 'major' /meidʒə /.
Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

One student wrote the word 'vowel' /vauəl/ for 'bowel' /bauəl/. Here he was unable to find the difference between the phonemes /v/ and /b/.

One student wrote the word 'dell' /del/ instead of 'dwell' /dwel/. Here he has used the single consonant /d/ in place of the consonant cluster /dw/.

One student wrote the word 'cake' /keik/ for 'quake' /kweik/. Here he used the single consonant /k/ in place of the consonant cluster /kw/.

Three students wrote the word 'calm' /kɑ: m/ in place of 'qualm' /kwɑ: m/. Here they used the single consonant /k/ in place of the consonant cluster /kw/.

Two students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here they understood the consonant cluster /mj/ as /m/.

3.3. SHAH BADARUDDIN HIGH SCHOOL.
NUMBER OF STUDENTS- FORTY-SEVEN

From the data collected from this school, it is found that sixteen students could not find any difference between the pronunciations of the words 'bird' /bəːd/ and 'bard' /bɑːd/. They were unable to find the difference between /əː / and /ɑː / sounds.

Twenty-one students could not find any difference between the pronunciations of the words 'fill' /fil/ and 'feel' /fi:l/ and twenty-seven students could not differentiate the word 'fit' /fit/ from 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

For seventeen students, the words 'full' /ful/ and 'fool' /fu:l/ have the same pronunciation. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Twenty-five students treated the words "zealous" /zelə s/ and jealous /ʤeləs/ in the same manner with regard to their pronunciation. In this pair, they were unable to find the difference between /z/ and /ʤ / sounds.

Fifteen students treated the words 'sea' /si:/ and 'she' /ʃi:/ as having the same pronunciation. In this pair, they were unable to find out the difference between /s/ and /ʃ / sounds.

Fifteen students could not find any difference between the pronunciations of the words 'shot' /ʃɔt/ and 'short' /ʃɔ: t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ:/ sounds.

Sixteen students tick-marked 'yes' to indicate the words 'major' /meidʒə/ and 'measure' /meʒə/ have the same pronunciation. In this pair they were unable to find the difference between /dʒ / and /ʒ / sounds.

Twenty students could not find any difference between the words 'get' /get/ and 'gate' /geit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Twenty students could not find any difference between the pronunciations of the words 'vowel' /vəuəl/ and 'bowel' /bəuəl/. In this pair, they were unable to find the difference between /v/, the labio-dental sound and /b/, the bi-labial sound.

For twelve students the words 'pat' /pæt/ and 'part' /pɑ: t/ were the same with regard to their pronunciations. In this pair, they were unable to find the difference between /æ/ and /ɑ:/ sounds.

Eighteen students could not find any difference between the words 'cut' /kʌt/ and 'cart' /kɑ:t/. In this pair, they were unable to find the difference between /ʌ/ and /ɑ:/ sounds.

Twenty students could not differentiate the pronunciation of the word 'dwell' /dwel/ from that of 'dell' /del/. In this pair they treated the consonant cluster /dw/ and the single consonant /d/ in the same manner.

Sixteen students could not find any difference between the pronunciations of the words 'quake' /kweik/ and 'cake' /keik/. In this pair, the consonant cluster /kw/ and the single consonant /k/are treated alike.

Twenty-three students tick-marked 'yes' to indicate same pronunciation for the words 'qualm' /kwɑ:m/ and 'calm' /kɑ:m/. In this pair, they could not differentiate consonant cluster /kw/ from the single consonant /k/.

Twenty-eight students could not differentiate the word 'cue' /kju:/ from 'coo' /ku:/. In this pair, they treated the consonant cluster /kj/ just like the single consonant /k/.

Fifteen students tick-marked 'yes' to indicate same pronunciation for the words 'mute' /mju:t/ and 'moot' /mu:t/. These students could not

find any difference between the consonant cluster /mj/ and the single consonant /m/. Seventeen students had the same problem with the pair 'pure' /pjuə/ and 'poor' /puə/. In this pair, their pronunciations for the consonant cluster /pj/ and the single consonant /p/ were the same.

Twenty-seven students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciation between the words 'rain' and 'reign'.

Thirty-five students indicated difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Twenty-five students found difference in pronunciation between the words 'hour' /auə/ and 'our' /auə/.

Thirty students found difference in pronunciation between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciation between the words 'fare' and 'fair'.

When the words were dictated six students wrote the word 'bird' /bəːd/ for 'bard' /baːd/ and twenty-three students wrote the word

'bard' /bɑ:d/ for 'bird' /bə:d/. Here they were unable to find the difference between the phonemes /ə:/ and /ɑ:/.

Twenty-seven students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Thirty-four students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Thirty-three students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Nineteen students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Fourteen students wrote the word 'full' /ful/ for 'fool' /fu:l/. Twenty-six students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Thirty-eight students wrote the word 'zealous' /zelə s/ for 'jealous' /dʒelə s/. Thirty eight students wrote the word 'jealous' /dʒelə s/ for 'zealous' /zel ə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ /.

Four students wrote the word 'sea' /si:/ for 'she' /ʃi:/. Seven students wrote the word 'she' for 'sea'. Here they were unable to find the difference between /ʃ/ and /s/ sounds.

Forty-one students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Fourteen students wrote 'short' /ʃɔ: t/ for 'shot'/ʃɔ t/. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ:/.

Thirty-two students wrote the word 'major' /meidʒə / for 'measure' /meʒə /. Thirty-one students wrote the word 'measure' /meʒə / for 'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ/ and /ʒ /.

Fourteen students wrote the word 'get' / g et/ for 'gate' / g eit/. Twenty-four students wrote the word 'gate' /g eit/ for 'get' / g et/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Twenty-seven students wrote the word 'vowel' /va u ə l/ for 'bowel' /bauəl/. Thirty-one students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Thirty-nine students wrote the word 'pat' /p æ t/ for 'part' /p ɑ: t/. Twelve students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ/ and /ɑ: /.

Twenty-three students wrote the word 'cut' /k ʌ t/ for 'cart' /k ɑ:t/. Twenty-two students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ:/.

Forty-one students wrote the word 'dwell' /dwel/ for 'dell' /del/. Thirty-two students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here they confused between the consonant cluster /dw/ and the single consonant /d/.

Thirty-nine students wrote the word 'quake' /kweik/ for 'cake' /keik/. Twenty-even students wrote the word 'cake' for 'quake'. Here they could not differentiate /k/ from /kw/.

Forty-four students wrote the word 'qualm' /kwɑ: m/ for 'calm' /kɑ: m/. Forty-two students wrote the word 'calm' for 'qualm'. Here again the confusion between /k/ and /kw/ persisted.

Forty-four students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Twenty-nine students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here the confusion is between the consonant cluster /kj/ and the single consonant /k/.

Forty-one students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Twenty-four students wrote the word 'moot' /mu:t/ for 'mute' /mju:/.

A similar mistake with regard to the words 'pure' /pjuə/ and 'poor' /puə/ was committed. Ten students wrote the word 'poor' /puə / for 'pure' /pjuə/. Thirty-four students wrote 'pure' /pjuə / for 'poor'.

3.4. SRI GOURI HIGH SCHOOL.
NUMBER OF STUDENTS- THIRTY-NINE

From the data collected from this school, it is found that eight students could not differentiate the word 'bird' /bə:d/ from 'bard' /bɑ:d/. They were unable to find the difference between /ə:/ and /ɑ: /.

Twenty-six students tick-marked 'yes' to indicate same pronunciation for the words 'fill' /fil/ and 'feel' /fi:l/ and nineteen students did the same for the words 'fit' /fit/ and 'feet' /fi:t/. In the above two pairs, they were unable to find the difference /i/ and /i:/ sounds.

Twelve students treated the words 'full' /ful/ and 'fool' /fu:l/ as having the same pronunciation. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Seventeen students could not differentiate the word "zealous" /zel ə s/ from jealous /dʒ el ə s/. In this pair, they were unable to find the difference between /z/ and /dʒ / sounds.

Seven students could not differentiate the pronunciation of the word 'sea' /si:/ from that of 'she' /ʃ i:/. In this pair, they were unable to find out the difference between /s/ and /ʃ / sounds.

Ten students considered the words 'shot' /ʃɔ t/ and 'short' /ʃɔ:t/ as having the same pronunciation . In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

Seven students could not find any difference between the pronunciation of the words 'major' /meidʒə / and 'measure' /meʒə/. In this pair they were unable to find the difference between /dʒ / and /ʒ / sounds.

Eight students treated the words 'get' /get/ and 'gate' /geit/ in the same manner with regard to pronunciation. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Thirteen students could not differentiate the word 'vowel' /vəuəl/ from 'bowel' /bəuəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Eight students could not find any difference between the words 'pat' /pæ t/ and 'part' /pɑ:t/. In this pair, they were unable to find the difference between /æ / and /ɑ:/ sounds.

Six students could not differentiate the pronunciation of the word 'cut' /kʌt/ from 'cart' /kɑ:t/. In this pair, they were unable to find the difference between /ʌ/ and /ɑ:/ sounds.

Six students could not differentiate the pronunciation of the word 'dwell' /dwel/ from that of 'dell' /del/. In this pair the consonant cluster /dw/ and the single consonant /d/ were treated as the same.

Eleven students could not differentiate the pronunciation of the word 'quake' /kweik/ from that of 'cake' /keik/. In this pair, they could not find any difference between the consonant cluster /kw/ and the single consonant /k/.

Seventeen students had the same problem with regard to the words 'qualm' /kwɑ:m/ and 'calm' /kɑ:m/. In this pair, they treated the consonant cluster /kw/ as /k/.

Eighteen students could not find any difference between the pronunciations of the words 'cue' /kju:/ and 'coo' /ku:/. In this pair, they treated the consonant cluster /kj/ as /k/.

Twenty students could not find any difference between the pronunciations of the words 'mute' /mju:t/ and 'moot' /mu:t/. In this pair, they treated the consonant cluster /mj/ as /m/.

Fourteen students could not find any difference between the pronunciations of the words 'pure' /pjuə/ and 'poor' /puə/. These students pronounce the consonant cluster /pj/ and /p/ in the same manner. They do not pronounce the phoneme /j/ after a consonant.

Seventeen students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/ when there is no difference in pronunciations between these words.

Twenty-three students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'.

Eleven students found difference in pronunciations between the words 'hour' /aʊə/ and 'our' /aʊə/.

Sixteen students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

In the paper given for dictation, one student wrote the word 'bird' /bə:d/ for 'bard' /bɑ:d/ and twenty students wrote the word 'bard' /bɑ:d/ for 'bird' /bə:d/. Here they were unable to find the difference between the phonemes /ə:/ and /ɑ:/.

Fourteen students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Seventeen students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Thirty-one students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Fifteen students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Eleven students wrote the word 'full' /ful/ for 'fool' /fu:l/. Twenty eight students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u / and /u:/.

Twenty-eight students wrote the word 'zealous' /zelə s/ for 'jealous' /dʒelə s/. Thirty-three students wrote the word 'jealous' /dʒelə s/ for 'zealous' /zel ə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ /.

Four students wrote the 'sea' /si:/ for 'she' /ʃi:/. Four students wrote the word 'she' for 'sea'. Here they were unable to find the difference between the /ʃ/ and /s/ sound.

Twenty-seven students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Five students wrote the word 'short' /ʃɔ: t/ for 'shot' /ʃɔ t/. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ:/.

Twenty-five students wrote the word 'major' /meidʒə/ for 'measure' /meʒə /. Twenty-four students wrote the word 'measure' /meʒə / for 'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Nine students wrote the word 'get' /get/ for 'gate' /geit/. Twelve students wrote the word 'gate' /geit/ for 'get' /get/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Seventeen students wrote the word 'vowel' /vəuəl/ for 'bowel' /bəuəl/. Twenty-one students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Nineteen students wrote the word 'pat' /pæt/ for 'part' /pɑ:t/. Seven students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ / and /ɑ : /.

Sixteen students wrote the word 'cut' /k ʌ t/ for 'cart' /k ɑ: t/. Ten students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ:/.

Thirty-five students wrote the word 'dwell' /dwel/ for 'dell' /del/. Thirty-three students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here they wrote the consonant cluster /dw/ as /d/.

Thirty-seven students wrote the word 'quake' /kweik/ for 'cake' /keik/. Twenty-five students wrote the word 'cake' for 'quake'. Here they wrote the consonant cluster /kw/ as /k/. Thirty-five students wrote the word 'qualm' /kwɑ:m/ for 'calm' /kɑ:m/. Thirty-three students wrote the word 'calm' for 'qualm'. Here they wrote the consonant cluster /kw/ as /k/.

Thirty-three students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Twenty-two students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they wrote the consonant cluster /kj/ as /k/. Thirty-two students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Sixteen students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here they wrote the consonant cluster /mj/ as /m/. Thirty-three students wrote 'pure' /pjuə/ for 'poor' /puə/. Eleven students wrote the word 'poor' /puə/ for 'pure' /pjuə/. Here they wrote the consonant cluster /pj/ as /p/.

3. 5. BHANGA HIGHER SECONDARY SCHOOL.
NUMBER OF STUDENTS- FOURTY-THREE

From the data collected from this school, it is found that eleven students could not find any difference between the pronunciations of the words 'bird' /bə:d/ and 'bard' /bɑ:d/. They were unable to find the difference between /ə:/ and /ɑ:/.

Twenty-two students could not differentiate the pronunciation of the word 'fill' /fil/ from that of 'feel' /fi:l/ and eleven students could not differentiate the same with regard to 'fit' /fit/ and 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

Eleven students could not differentiate the pronunciation of the word 'full' /ful/ from that of 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Nineteen students could not find any difference between the pronunciations of the words "zealous" /zelə s/ and jealous /dʒ elə s/. In this pair, they were unable to find the difference between /z/ and /dʒ / sounds.

Eleven students could not differentiate the pronunciation of the word 'sea' /si:/ from 'she' /ʃ i:/. In this pair, they were unable to find out the difference between /s/ and /ʃ / sounds.

Seven students could not differentiate between the word 'shot' /ʃɔ t/ from 'short' /ʃɔ:t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

Eighteen students could not differentiate the pronunciation of the word 'major' /meidʒə / from that of 'measure' /meʒə /. In this pair they were unable to find the difference between /dʒ/ and /ʒ/ sounds.

Ten students found no difference between the pronunciations of the words 'get' /ɡet/ and 'gate' /ɡeit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Fifteen students found no difference between the pronunciations of the words 'vowel' /vɑ u ə l/ and 'bowel' /bɑ u əl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Sixteen students treated the pronunciations of the words 'pat' /pæt/ and 'part' /pɑ:t/ as same. In this pair, they were unable to find the difference between /æ / and /ɑ:/ sounds.

Thirteen students could not differentiate the pronunciation of the word 'cut' /kʌ t/ from that of 'cart' /kɑ: t/. In this pair, they were unable to find the difference between /ʌ / and /ɑ:/ sounds.

Twenty-one students found no difference between the pronunciations of the words 'dwell' /dwel/ and 'dell' /del/. In this pair they made no difference between the consonant cluster /dw/ and the single consonant /d/.

Seventeen students could not differentiate the pronunciation of the word 'quake' /kweik/ from that of 'cake' /keik/. In this pair, they treated the consonant cluster /kw/ and the single consonant /k/ in the same manner.

Eighteen students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they found no difference between the consonant cluster /kw/ and the single consonant /k/.

Eleven students could not differentiate the pronunciation of the word 'cue' /kju:/ from that of 'coo' /ku:/. In this pair, they treated the consonant cluster /kj/ just like the single consonant /k/.

Twenty-four students found no difference between the pronunciations of the words 'mute' /mju:t/ and 'moot' /mu:t/. In this pair, the consonant cluster /mj/ and the single consonant /m/ are treated alike.

Eleven students found no difference between the pronunciations of the words 'pure' /pjuə/ and 'poor' /puə/. In this pair, the consonant cluster /pj/ and the single consonant /p/ are treated alike . These students do not pronounce the phoneme /j/ after a consonant.

Twenty students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/ when there is no such difference in pronunciations between these words.

Twenty-seven students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Twenty three students found difference in pronunciations between the words 'hour' /ɑuɔ / and 'our' /ɑuə/.

Twenty-five students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

The analysis done on the dictation paper showed almost the same result. From data, it is found that five students wrote the word 'bird' /bə: d/ for 'bard' /bɑ: d/ and twenty students wrote the word 'bard' /bɑ: d/ for 'bird' /b ə: d/. Here they were unable to find the difference between the phonemes /ə: / and /ɑ: /.

Twenty students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Thirty students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Twenty students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/ when there is no such difference in pronunciations between these words.

Twenty-seven students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Twenty three students found difference in pronunciations between the words 'hour' /ɑuɔ/ and 'our' /ɑuə/.

Twenty-five students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

The analysis done on the dictation paper showed almost the same result. From data, it is found that five students wrote the word 'bird' /bə: d/ for 'bard' /bɑ: d/ and twenty students wrote the word 'bard' /bɑ: d/ for 'bird' /b ə: d/. Here they were unable to find the difference between the phonemes /ə: / and /ɑ: /.

Twenty students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Thirty students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Twenty-six students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Twenty-eight students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference in length between the phonemes /i/ and /i:/.

Seven students wrote the word 'full' /ful/ for 'fool' /fu:l/. Thirty-four students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Thirty-seven students wrote the word 'zealous' /zeləs/ for 'jealous' /dʒ el ə s/. Thirty-six students wrote the word 'jealous' /dʒ elə s/ for 'zealous' /zel ə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ /.

Two students wrote the word 'sea' /si:/ for 'she' /ʃ i:/. Ten students wrote the word 'she' for 'sea'. Here they were unable to find the difference between the /ʃ/ and /s/ sounds.

Twenty-nine students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Five students wrote the word 'short' /ʃɔ: t/ for 'shot' /ʃɔ t/. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ: /.

Twenty-eight students wrote the word 'major' /meidʒə/ for 'measure' /meʒə/. Twenty-nine students wrote the word 'measure' /meʒə / for

'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Twenty-seven students wrote the word 'get' /ɡet/ for 'gate' /ɡeit/. Thirty-two students wrote the word 'gate' /ɡeit/ for 'get' /ɡet/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Thirty-seven students wrote the word 'vowel' /vɑ u ə l/ for 'bowel' /bɑ uə l/. Thirty-eight students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Twenty-two students wrote the word 'pat' /pæt/ for 'part' /pɑ: t/. Nineteen students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ/ and /ɑ : /.

Forty students wrote the word 'cut' /k ʌ t/ for 'cart' /kɑ:t/. Twenty four students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ: /.

Forty-one students wrote the word 'dwell' /dwel/ for 'dell' /del/. Thirty-seven students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here the confusion is between the consonant cluster /dw/ and the single consonant /d/.

Forty-one students wrote the word 'quake' /kweik/ for 'cake' /keik/. Thirty-one students wrote the word 'cake' for 'quake'. Here they interchanged the consonant cluster /kw/ and /k/.

Forty-two students wrote the word 'qualm' /kwɑ: m/ for 'calm' /kɑ: m/. Thirty-eight students wrote the word 'calm' for 'qualm'. Here these students could not differentiate the consonant cluster /kw/ from the single consonant /k/.

Thirty-eight students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Nineteen students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they couldn't find the difference between the consonant cluster /kj/ and the single consonant /k/.

Thirty-seven students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Thirty-one students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here /m/ was understood for /mj/ and vice versa.

Thirty-nine students wrote the word 'pure' /pjuə / for 'poor' /puə /. Twenty students wrote the word 'poor' /puə / for 'pure' /pjuə /. Here the wrong use was between the cluster the /pj/ and the single consonant /p/. There are many instances of omitting /j/ after a plosive.

3.6.RAILWAY HIGHER SECONDARY SCHOOL, BADARPUR
NUMBER OF STUDENTS- NINETY SIX

From the data collected from this school, it is found that four students could not differentiate between the word 'bird' /bəːd/ from 'bard' /bɑːd/. They were unable to find the difference between /əː / and /ɑː /.

Thirty-nine students could not find any difference between the pronunciations of the words 'fill' /fil/ and 'feel' /fi:l/ and eleven students could not differentiate the pronunciation of the word 'fit' /fit/ from that of 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

Fifty-one students could not differentiate the pronunciation of the word 'full' /ful/ from that of 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Thirty-seven students found the pronunciations of the words 'zealous' /zelə s/ and 'jealous' /ʤ eləs / to be the same. In this pair, they were unable to find the difference between /z/ and /ʤ / sounds.

Forty-two students do not differentiate the pronunciation of the word 'sea' /si:/ from that of 'she' /ʃi:/. In this pair, they were unable to find out the difference between /s/ and /ʃ / sounds.

Forty-seven students could not find any difference between the pronunciations of the words 'shot' /ʃɔt/ and 'short' /ʃɔ:t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

Forty-three students could not find any difference between the pronunciations of the words 'major' /meidʒə/ and 'measure' /meʒə /. In this pair they were unable to find the difference between /dʒ / and /ʒ / sounds.

Forty-eight students could not differentiate the pronunciation of the word 'get' /ɡet/ from that of 'gate' / ɡeit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Thirty-eight students could not differentiate the pronunciation of the word 'vowel' /vəuəl/ from that of 'bowel' /bəuəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Forty-two students could not find differentiate between the pronunciation of the word 'pat' /pæt/ from that of 'part' /pɑ:t/. In this pair, they were unable to find the difference between / æ / and /ɑ: / sounds.

Thirty-nine students could not differentiate the pronunciation of the word 'cut' /k ʌ t/ from that of 'cart' /k ɑ: t/. In this pair, they were unable to find the difference between /ʌ / and /ɑ:/ sounds.

Thirty-five students could not differentiate the pronunciation of the word 'dwell' /dwel/ from that of 'dell' /del/. In this pair they treated the consonant cluster /dw/ and the single consonant /d/ in the same manner.

Forty-nine students could not differentiate between the pronunciation of the word 'quake' /kweik/ from that of 'cake' /keik/. In this pair, they found no difference between the consonant cluster /kw/ and the single consonant /k/.

Forty-four students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they treated the consonant cluster /kw/ and the single consonant /k/ in the same manner.

Thirty-four students found no difference between the pronunciations of the words 'cue' /kju:/ and 'coo' /ku:/. In this pair, they found no difference between the consonant cluster /kj/ and /k/.

Forty-five students could not differentiate the pronunciation of the word 'mute' /mju:t/ from that of 'moot' /mu:t/. In this pair, they could not differentiate /mj/ from /m/.

Forty-three students could not differentiate the pronunciation of the word 'pure' /pjuə/ from that of 'poor' /puə/. In this pair, they treated

the consonant cluster /pj/ and the single consonant /p/ in the same manner. They do not pronounce the phoneme /j/ after a consonant.

Forty students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciations between the words 'rain' and 'reign'.

Thirty-eight students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Fifty-three students found difference in pronunciations between the words 'hour' /auə/ and 'our' /auə /.

Fifty students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

In the paper given for dictation, ten students wrote the word 'bird' /bə:d/ for 'bard' /bɑ:d/ and forty-four students wrote the word 'bard' /bɑ:d/ for 'bird' /bə:d/. Here they were unable to find the difference between the phonemes /ə: / and /ɑ: /.

Sixty-four students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Sixty-five students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Fifty students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Fifty-one students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Seventeen students wrote the word 'full' /ful/ for 'fool' /fu:l/. Fifty students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Eighty-five students wrote the word 'zealous' /zelə s/ for 'jealous' /ʤ el ə s/. Forty-four students wrote the word 'jealous' /ʤ el ə s/ for 'zealous' /zel ə s/. Here they were unable to find the difference between the phonemes /z/ and /ʤ /.

Sixteen students wrote the word 'sea' /si:/ for 'she' /ʃi:/. Twenty-one students wrote the word 'she' for 'sea'. Here they were unable to find the difference between /ʃ/ and /s/ sounds.

Sixty-six students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Thirty-eight students wrote the word 'short' /ʃɔ:t/ for 'shot' /ʃɔt/. Here they were unable to find the difference between the phonemes /ɔ/ and /ɔ: /.

Fifty-four students wrote the word 'major' /meiʤə / for 'measure' /me ʒə /. Eighty-one students wrote the word 'measure' /meʒə / for

'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Fifty-seven students wrote the word 'get' / ɡet/ for 'gate' / ɡeit/. Seventy-two students wrote the word 'gate' /ɡeit/ for 'get' /ɡet/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Thirty-two students wrote the word 'vowel' /vəuəl/ for 'bowel' /bəuəl/. Forty-four students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Seventy-eight students wrote the word 'pat' /pæt/ for 'part' /pɑ:t/. Thirty students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ / and /ɑ: /.

Thirty-four students wrote the word 'cut' /k ʌ t/ for 'cart' /kɑ: t/. Thirty-nine students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ:/.

Ninety-one students wrote the word 'dwell' /dwel/ for 'dell' /del/. Fifty-five students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here they mistook the consonant cluster /dw/ for /d/.

Eighty-eight students wrote the word ‘quake’ /kweik/ for ‘cake’ /keik/. Thirty-three students wrote the word ‘cake’ for ‘quake’. Here they confused between the consonant cluster /kw/ and the single consonant /k/.

Eighty-nine students wrote the word ‘qualm’ /kwɑ:m/ for ‘calm’ /kɑ:m/. Eighty-eight students wrote the word ‘calm’ for ‘qualm’. Here they could not differentiate the consonant cluster /kw/ from that of the single consonant /k/ and vice versa.

Seventy-six students wrote the word ‘cue’ /kju:/ for ‘coo’ /ku:/. Forty-seven students wrote the word ‘coo’ /ku:/ for ‘cue’ /kju:/. Here they confused between the consonant cluster /kj/ and the single consonant /k/.

Seventy-eight students wrote the word ‘mute’ /mju:t/ for ‘moot’ /mu:t/. Seventy-seven students wrote the word ‘moot’ /mu:t/ for ‘mute’ /mju:/. Here they made the same mistake of confusing between a consonant cluster (/mj/) and a single consonant (/m/).

Thirty-seven students wrote the word ‘pure’ /pjuə/ for ‘poor’ /puə/. Twenty-three students wrote the word ‘poor’ /puə/ for ‘pure’ /pjuə/. Here /pj/ is used for /p/ and /p/ is used for /pj/.

3.7. JANAKI CHARAN HIGHER SECONDARY SCHOOL. NUMBER OF STUDENTS- EIGHTY-FIVE

From the data from this school, it is found that thirty-seven students could not differentiate the pronunciation of the word 'bird' /bəːd/ from that of 'bard' /bɑːd/. They were unable to find the difference between /əː/ and /ɑː/.

Forty-eight students could not differentiate the pronunciation of the word 'fill' /fil/ from that of 'feel' /fi:l/ and thirty-five students could not differentiate the pronunciation of the word 'fit' /fit/ from that of 'feet' /fi:t/. In the above two pairs, they we re unable to find the difference between /i/ and /i:/ sounds.

Thirty-one students found no difference in pronunciations between the words 'full' /ful/ and 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Twenty-nine students found no difference between the pronunciations of the words "zealous" /zelə s/ and jealous /dʒelə s/. In this pair, they were unable to find the difference between /z/ and /dʒ / sounds.

Sixteen students could not differentiate the pronunciation of the word 'sea' /si:/ from that of 'she' /ʃi:/. In this pair, they were unable to find out the difference between /s/ and /ʃ/ sounds.

Twenty-one students found on difference between the pronunciations of the words 'shot' /ʃɔ t/ and 'short' /ʃɔ:t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ:/ sounds.

Nineteen students could not differentiate the pronunciation of the word 'major' /meidʒə / from that of 'measure' /meʒə /. In this pair they were unable to find the difference between /dʒ/ and /ʒ / sounds.

Twenty-one students found no difference between the pronunciations of the words 'get' /get/ and 'gate' /geit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Sixteen students found no difference between the pronunciations of the words 'vowel' /vaʊəl/ and 'bowel' /baʊəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Twenty-one students could not differentiate the pronunciation of the word 'pat' /paæt/ from that of 'part' /pɑ:t/. In this pair, they were unable to find the difference between /æ / and /ɑ:/ sounds.

Sixteen students could not differentiate the pronunciation of the word 'cut' /kʌt/ from that of 'cart' /kɑ:t/. In this pair, they were unable to find the difference between /ʌ / and /ɑ: / sounds.

Twenty-three students found no difference between the pronunciations of the words 'dwell' /dwel/ and 'dell' /del/. In this pair they treated the consonant cluster /dw/ and the single consonant /d/ in the same manner.

Eighteen students found no difference between the pronunciations of the words 'quake' /kweik/ and 'cake' /keik/. In this pair, they could not find the difference between the consonant cluster /kw/ and /k/.

Twenty-three students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they found no difference between the pronunciations of the consonant cluster /kw/ and the single consonant /k/.

Twenty-nine students could not differentiate the pronunciation of the word 'cue' /kju:/ from that of 'coo' /ku:/. In this pair, they treated the consonant cluster /kj/ and the single consonant /k/ in the same manner.

Seventeen students found no difference between the pronunciations of the words 'mute' /mju:t/ and 'moot' /mu:t/. In this pair, they could not differentiate the consonant cluster /mj/ from /m/ and vice versa.

Ten students found no difference between the pronunciations of the words 'pure' /pjuə / and 'poor' /puə /. In this pair, they treated the

consonant cluster /pj/ and the single consonant /p/ in the same manner. They do not pronounce the phoneme /j/ after a consonant.

Forty-seven students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciations between the words 'rain' and 'reign'.

Fifty-one students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Forty-seven students found difference in pronunciations between the words 'hour' /auə / and 'our' /auə / when there is no such difference.

Twenty-eight students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

In the paper given for dictation, twenty-seven students wrote the word 'bird' /bə: d/ for 'bard' /bɑ: d/ and forty-five students wrote the word 'bard' /bɑ: d/ for 'bird' /bə: d/. Here they were unable to find the difference between the phonemes /ə: / and /ɑ: /.

Twenty-four students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Fifty-two students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Fifty students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Forty-one students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Twenty students wrote the word 'full' /ful/ for 'fool' /fu:l/. Fifty-five students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Seventy-six students wrote the word 'zealous' /zelə s/ for 'jealous' /dʒelə s/. Seventy-eight students wrote the word 'jealous' /dʒeləs/ for 'zealous' /zelə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ/.

Nineteen students wrote the word 'sea' /si:/ for 'she' /ʃi:/. Twenty-seven students wrote the word 'she' for 'sea' /si:/. Here they were unable to find the difference between /ʃ/ and /s/ sounds.

Fifty-nine students wrote the word 'shot' /ʃɔt/ for 'short' /ʃɔ:t/. Forty-three students wrote the word 'short' /ʃɔ: t/ for 'shot' /ʃɔ t/. Here they were unable to find difference between the phonemes /ɔ/ and /ɔ: /.

Fifty students wrote the word 'major' /meidʒə/ for 'measure' /meʒə/. Sixty-seven students wrote the word 'measure' /meʒə/ for 'major' /meidʒə/. Here they were unable to find the difference between the phonemes /dʒ/ and /ʒ/.

Thirty-six students wrote the word 'get' /get/ for 'gate' /geit/. Forty-four students wrote the word 'gate' /geit/ for 'get' /get/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Fifty-five students wrote the word 'vowel' /vəuəl/ for 'bowel' /bəuəl/. Sixty-four students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Forty-one students wrote the word 'pat' /pæt/ for 'part' /pɑ:t/. Twenty-eight students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ/ and /ɑ:/.

Thirty-five students wrote the word 'cut' /kʌt/ for 'cart' /kɑ:t/. Forty-seven students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ/ and /ɑ:/.

Seventy-four students wrote the word 'dwell' /dwel/ for 'dell' /del/. Seventy-six students wrote the word 'dell' /del/ for 'dwell' /dwel/.

Here they confused the consonant cluster /dw/ for /d/ and /d/ for /dw/.

Seventy-two students wrote the word 'quake' /kweik/ for 'cake' /keik/. Forty-five students wrote the word 'cake' for 'quake'. Here the consonant cluster /kw/ was mistaken for /k/ and vice versa.

Eighty students wrote the word 'qualm' /kwɑ:m/ for 'calm' /kɑ:m/. Seventy-nine students wrote the word 'calm' for 'qualm'. Here they used the consonant cluster /kw/ in place of /k/ and vice versa.

Sixty-five students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Forty-four students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they wrote the consonant cluster /kj/ in place of /k/ and /k/ in place of /kw/.

Sixty-eight students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Thirty-nine students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here they mistook /mj/ for /m/ and /m/ for /mj/.

Fifty-eight students wrote the word 'pure' /pjuə/ for 'poor' /puə/. Thirty-six students wrote the word 'poor' /puə/ for 'pure' /pjuə/. Here they used the consonant cluster /pj/ instead of /p/ and /p/ instead of /pj/.

3.8. SIDHESWAR HIGHER SECONDARY SCHOOL NUMBER OF STUDENTS- SIXTY

From the data collected from this school, it is found that thirty students could not differentiate the pronunciation of the word 'bird' /bəːd/ from that of 'bard' /bɑːd/. They were unable to find the difference between /əː/ and /ɑː/.

Twenty-five students could not find any difference between the pronunciations of the words 'fill' /fil/ and 'feel' /fi:l/ and thirty-nine students could not differentiate the pronunciation of the word 'fit' /fit/ from that of 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

differentiate the pronunciation of the

Thirty-two students could not differentiate the pronunciation of the word 'full' /ful/ from that of 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Thirty-two students could not differentiate the pronunciation of word "zealous" /zelə s/ from that of jealous /dʒ elə s/. In this pair, they were unable to find the difference between /z/ and /dʒ / sounds.

Nine students could not find any difference between the pronunciations of the words 'sea' /si:/ and 'she' /ʃi:/. In this pair,

they were unable to find out the difference between /s/ and / ʃ / sounds.

Eight students could not find any difference between the pronunciations of the words 'shot' / ʃɔ t/ and 'short' / ʃɔ: t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

Eight students could not differentiate the pronunciation of the word 'major' /meidʒə/ from that of 'measure' /meʒə /. In this pair they were unable to find the difference between /dʒ / and /ʒ / sounds.

Sixteen students could not differentiate the pronunciation of the word 'get' /get/ from that of 'gate' / g eit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Fourteen students could not find any difference between the words 'vowel' /vəuəl/ and 'bowel' /bəuəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Six students could not differentiate the pronunciation of the word 'pat' /pæ t/ from that of 'part' /pɑ:t/. In this pair, they were unable to find the difference between /æ / and /ɑ:/ sounds.

Ten students could not differentiate the pronunciation of the word 'cut' /kʌt/ from that of 'cart' /kɑ:t/. In this pair, they were unable to find the difference between /ʌ/ and /ɑ:/ sounds.

Fourteen students could not differentiate the pronunciation of the word 'dwell' /dwel/ from that of 'dell' /del/. In this pair they made no difference between the consonant cluster /dw/ and the single consonant /d/.

Ten students could not find any difference between the words 'quake' /kweik/ and 'cake' /keik/. In this pair, they treated the consonant cluster /kw/ as /k/.

Twelve students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they treated the consonant cluster /kw/ and the single consonant /k/ in the same manner.

Sixteen students could not differentiate the pronunciation of the word 'cue' /kju:/ from that of 'coo' /ku:/. In this pair, they found no difference between the consonant cluster /kj/ and the single consonant /k/.

Twenty-three students could not find any difference between the pronunciations of the words 'mute' /mju:t/ and 'moot' /mu:t/. In this

pair, they found no difference between the consonant cluster /mj/ and the single consonant /m/.

Twelve students could not differentiate the pronunciation of the word 'pure' /pjuə / from that of 'poor' /puə /. In this pair, they treated the consonant cluster /pj/ and the single consonant /p/ in the same manner. They could not pronounce the phoneme /j/ after the consonant /p/.

Forty-two students found difference in pronunciation between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciation between the words 'rain' and 'reign'.

Forty-three students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciation between the words 'heir' and 'air'.

Twenty-eight students found difference in pronunciations between the words 'hour' /ɑuə / and 'our' /ɑuə/.

Twenty-nine students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciations between the words 'fare' and 'fair'.

The data collected from the dictation paper we got similar results. From data, it is found that three students wrote the word 'bird' /bəːd/ for 'bard' /bɑː d/ and twenty-five students wrote the word 'bard' /bɑː d/ for 'bird' /bɔːd/. Here they were unable to find the difference between the phonemes /əː/ and /ɑː/.

Twenty-four students wrote the word 'fill' /fil/ for ' feel' /fi:l/. Thirty-five students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Thirty-eight students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Twenty-six students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Twenty-four students wrote the word 'full' /ful/ for 'fool' /fu:l/. Twenty-two students wrote 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Thirty-five students wrote the word 'zealous' /zelə s/ for 'jealous' /dʒ elə s/. Forty-nine students wrote the word 'jealous' /d el s/ for 'zealous' /zel s/. Here they are unable to find the difference between the phonemes /z/ and /d /.

Five students wrote the word 'sea' /si:/ for 'she' /ʃ i:/. Thirteen students wrote the word 'she' for 'sea'. Here they were unable to find the difference between /ʃ / and /s/ sounds.

Thirty-nine students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Twenty-three students wrote the word 'short' /ʃɔ: t/ for 'shot' /ʃɔ t/. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ: /.

Thirty-five students wrote the word 'major' /meidʒə/ for 'measure' /meʒə /. Forty-two students wrote the word 'measure' /meʒə / for 'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Twenty-four students wrote the word 'get' / ɡet/ for 'gate' / ɡeit/. Thirty-four students wrote the word 'gate' / eit/ for 'get' / et/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Twenty-eight students wrote the word 'vowel' /vəuəl/ for 'bowel' /bəuəl/. Thirty-one students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Forty-one students wrote the word 'pat' /p æ t/ for 'part' /p ɑ: t/. Twenty-one students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes / æ / and /ɑ: /.

Four students wrote the word 'cut' /kʌt/ for 'cart' /kɑ:t/. Thirty-eight students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes / ʌ / and / ɑ:. /.

Fifty-one students wrote the word 'dwell' /dwel/ for 'dell' /del/. Forty-three students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here they could not distinguish between the consonant cluster /dw/ and the single consonant /d/.

Fifty-three students wrote the word 'quake' /kweik/ for 'cake' /keik/. Thirty-two students wrote the word 'cake' for 'quake'. Here they could not differentiate the consonant cluster /kw/ from the single consonant /k/.

Forty-nine students wrote the word 'qualm' /kw ɑ:m/ for 'calm' /kɑ:m/. Forty-four students wrote the word 'calm' for 'qualm'. Here they committed the same mistake of interchanging the consonant cluster /kw/ for the single consonant /k/ and vice versa..

Fifty-two students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Thirty-nine students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they interchanged the consonant cluster /kj/ for /k/ and vice versa.

Forty-one students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Thirty-two students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here the consonant cluster /mj/ was mistaken for /m/.

Thirty-seven students wrote the word 'pure' /pjuə/ for 'poor' /puə/. Eighteen students wrote the word 'poor' /puə/ for 'pure' /pjuə/. Here they could not distinguish between the consonant cluster /pj/ and /p/.

3.9. BADARPUR GIRL'S HIGH SCHOOL
NUMBER OF STUDENTS- TWENTY

From the data collected from this school, it is found that fourteen students could not differentiate the pronunciation of the word 'bird' /bə:d/ from that of 'bard' /bɑ:d/. They were unable to find the difference between /ə:/ and /ɑ:/.

Nine students could not find any difference between the pronunciations of the words 'fill' /fil/ and 'feel' /fi:l/ and fourteen students could not differentiate the pronunciation of the word 'fit' /fit/ from that of 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

Twelve students could not differentiate the pronunciation of the word 'full' /ful/ from that of 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Eleven students could not differentiate the pronunciation of the word "zealous" /zel ə s/ from that of jealous /dʒ el ə s/. In this pair, they were unable to find the difference between /z/ and /dʒ/ sounds.

Two students could not differentiate the pronunciation of the word 'sea' /si:/ from that of 'she' /ʃi:/. In this pair, they were unable to find out the difference between /s/ and /ʃ/ sounds.

Four students could not differentiate the pronunciation of the word 'shot' /ʃɔt/ from that of 'short' /ʃɔ:t/. In this pair, they were unable to find the difference between /ɔ/ and /ɔ:/ sounds.

Three students could not find any difference between the pronunciations of the words 'major' /meidʒə/ and 'measure' /meʒə /. In this pair they were unable to find the difference between /dʒ / and /ʒ / sounds.

Four students could not find any difference between the pronunciations of the words 'get' /ɡet/ and 'gate' / ɡeit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Six students could not differentiate the pronunciation of the word 'vowel' /vaʊəl/ from that of 'bowel' /baʊəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Two students could not differentiate the pronunciation of the word 'pat' /pæ t/ from that of and 'part' /pɑ: t/. In this pair, they were unable to find the difference between / æ / and / ɑ:/ sounds.

Four students could not differentiate the pronunciation of the word 'cut' /kʌt/ from that of 'cart' /kɑ: t/. In this pair, they were unable to find the difference between / ʌ / and /ɑ:/ sounds.

Three students could not find any difference between the pronunciations of the words 'dwell' /dwel/ and 'dell' /del/. In this pair they could not distinguish between the consonant cluster /dw/ and the single consonant /d/.

Six students could not differentiate the pronunciation of the word 'quake' /kweik/ from that of 'cake' /keik/. In this pair, the consonant cluster /kw/ and the single consonant /k/ are interchanged.

Three students could not differentiate the pronunciation of the word 'qualm' /kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they used the consonant cluster /kw/ in place of /k/ and vice versa.

Five students could not differentiate the pronunciation of the word 'cue' /kju:/ from that of 'coo' /ku:/. In this pair, they treated the consonant cluster /kj/ and the single consonant /k/ in the same manner.

Six students found no difference between the words 'mute' /mju:t/ and 'moot' /mu:t/. In this pair, they found no difference between the consonant cluster /mj/ and /m/, a single consonant.

Six students found no difference between the words 'pure' /pjuə/ and 'poor' /puə /. In this pair, they treated the consonant cluster /pj/ and the single consonant /p/ in the same manner.

Seventeen students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciation between the words 'rain' and 'reign'.

Fifteen students found difference in pronunciations between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciations between the words 'heir' and 'air'

Nine students found difference in pronunciations between the words 'hour' /aʊə / and 'our' /aʊə /.

Six students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciation between the words 'fare' and 'fair'.

In the dictation paper, it is found that three students wrote the word 'bird' /bəːd/ for 'bard' /bɑːd/ and four students wrote the word 'bard' /bɑː d/ for 'bird' /bəː d/. Here they were unable to find the difference between the phonemes /əː/ and /ɑː/.

Eleven students wrote the word 'fill' /fil/ for 'feel' /fi:l/. Ten students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Fourteen students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Eleven students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Six students wrote the word 'full' /ful/ for 'fool' /fu:l/. Seven students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Fifteen students wrote the word 'zealous' /zelə s/ for 'jealous' /ʤelə s/. Fourteen students wrote the word 'jealous' /ʤelə s/ for 'zealous' /zelə s/. Here they were unable to find the difference between the phonemes /z/ and /ʤ /.

Two students wrote the word 'sea' /si:/ for 'she' /ʃi:/. Two students wrote the word 'she' for 'sea' /si:/. Here they were unable to find the difference between /ʃ/ and /s/ sounds.

Twelve students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ:t/. Six students wrote the word 'short' /ʃɔ:t/ for 'shot' /ʃɔt/. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ:/.

Sixteen students wrote the word 'major' /meidʒə / for 'measure' /meʒə/. Ten students wrote the word 'measure' /meʒə / for 'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Eight students wrote the word 'get' / get/ for 'gate' / geit/. Nine students wrote the word 'gate' /geit/ for 'get' /get/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Thirteen students wrote the word 'vowel' /v ə u ə l/ for 'bowel' /bəu ə l/. Fifteen students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Ten students wrote the word 'pat' /p æ t/ for 'part' /p ɑ: t/. Three students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ/ and /ɑ: /.

Two students wrote the word 'cut' /k ʌt/ for 'cart' /kɑ:t/. Six students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ: /.

Nineteen students wrote the word 'dwell' /dwel/ for 'dell' /del/. Sixteen students written the word 'dell' /del/ for 'dwell' /dwel/. Here they treated the consonant cluster /dw/ and the single consonant /d/ in the same manner.

Seventeen students wrote the word 'quake' /kweik/ for 'cake' /keik/. Eleven students wrote the word 'cake' for 'quake'. Here they could not distinguish between the consonant cluster /kw/ and the single consonant /k/.

Ten students wrote the word 'qualm' /kwɑ:m/ for 'calm' /kɑ:m/. Eighteen students wrote the word 'calm' for 'qualm'. Here they mistook the consonant cluster /kw/ for /k/ and vice versa.

Nineteen students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Ten students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they interchanged the consonant cluster /kj/ and /k/.

3.10. NABIN CHANDRA COLLEGE, BADARPUR.
NUMBER OF STUDENTS- SEVENTY EIGHT

From the data collected from N.C.College, it is found that forty-six students could not differentiate the pronunciation of the word 'bird' /bə:d/ from that of 'bard' /bɑ:d/. They were unable to find the difference between /ə:/ and /ɑ:/.

Thirty-three students could not find any difference between the pronunciations of words 'fill' /fil/ and 'feel' /fi:l/ and fifty-two students could not find any difference between the pronunciations of the words 'fit' /fit/ and 'feet' /fi:t/. In the above two pairs, they were unable to find the difference between /i/ and /i:/ sounds.

Forty students could not differentiate the pronunciation of the word 'full' /ful/ from that of 'fool' /fu:l/. In this pair, they were unable to find the difference between /u/ and /u:/ sounds.

Thirty students could not differentiate the pronunciation of the word "zealous" /zelə s/ from that of jealous /ʤelə s/. In this pair, they were unable to find the difference between /z/ and /ʤ / sounds.

Twenty-nine students could not differentiate the pronunciation of the word 'sea' /si:/ from that of 'she' /ʃi:/. In this pair, they were unable to find out the difference between /s/ and /ʃ / sounds.

Twenty-four students could not find any difference between the pronunciations of the words 'shot' /ʃɔt/ and 'short' /ʃɔ:t/. In this pair, they were unable to find the difference between /ɔ / and /ɔ: / sounds.

Twenty-six students do not differentiate the pronunciation of the word 'major' /meiʤə / from that of 'measure' /meʒə /. In this pair they were unable to find the difference between /ʤ / and /ʒ / sounds.

Twenty-three students could not differentiate the pronunciation of the word 'get' /get/ from that of 'gate' /geit/. In this pair they were unable to find the difference between /e/ and /ei/ sounds.

Twenty-eight students could not find any difference between the pronunciations of the words 'vowel' /vɑuəl/ and 'bowel' /bɑuəl/. In this pair, they were unable to find the difference between /v/ and /b/ sounds.

Twenty-two students could not find any difference between the pronunciations of the words 'pat' /pæt/ and 'part' /pɑ:t/. In this pair, they are unable to find the difference between /æ/ and /ɑ:/ sounds.

Twenty-one students could not differentiate the pronunciation of the word 'cut' /kʌt/ from 'cart' /kɑ:t/. In this pair, they were unable to find the difference between /ʌ/ and /ɑ:/ sounds.

Twenty-five students could not differentiate the pronunciation of the word 'dwell' /dwel/ from that of 'dell' /del/. In this pair they could not distinguish between the consonant cluster /dw/ and the single consonant /d/.

Twenty students could not differentiate the pronunciation of the word 'quake' /kweik/ from that of 'cake' /keik/. In this pair, they treated

the consonant cluster /kw/ and the single consonant /k/ in the same manner.

Twenty-eight students could not differentiate the pronunciation of the word 'qualm' kwɑ:m/ from that of 'calm' /kɑ:m/. In this pair, they found no difference between the consonant cluster /kw/ and the single consonant /k/.

Thirty-two students could not differentiate the pronunciation of the word 'cue' /kju:/ from that of 'coo' /ku:/. In this pair, they found no difference between the consonant cluster /kj/ and the single cosonant /k/.

Twenty-five students could not differentiate between the pronunciation of the word 'mute' /mju:t/ from that of 'moot' /mu:t/. In this pair, they treated the consonant cluster /mj/ and the single consonant /m/ in the same manner.

Fourteen students found no difference between the pronunciations of the words 'pure' /pjuə/ and 'poor' /puə/. In this pair, they found no difference between the consonant cluster /pj/ and the single consonant /p/.

Fifty-three students found difference in pronunciations between the words 'rain' /rein/ and 'reign' /rein/. Actually there is no difference in pronunciations between the words 'rain' and 'reign'.

Fifty students found difference in pronunciation between the words 'heir' /eə / and 'air' /eə /. There is no difference in pronunciation between the words 'heir' and 'air'.

Forty-four students found difference in pronunciations between the words 'hour' /auə / and 'our' /ɑuə /.

Forty-nine students found difference in pronunciations between the words 'fare' /feə / and 'fair' /feə /. There is no difference in pronunciation between the words 'fare' and 'fair'.

In the dictation paper, it is found that five students wrote the word 'bird' /bə:d/ for 'bard' /b ɑ:d/ and thirty-three students wrote the word 'bard' /bɑ:d/ for 'bird' /bə: d/. Here they were unable to find the difference between the phonemes /ə: / and /ɑ: /.

Thirty-one students wrote the word 'fill' /fil/ for 'feel' /fi:l/. Forty-one students wrote the word 'feel' /fi:l/ for 'fill' /fil/.

Thirty-seven students wrote the word 'fit' /fit/ for 'feet' /fi:t/. Thirty students wrote the word 'feet' /fi:t/ for 'fit' /fit/. Here they were unable to find the difference between the phonemes /i/ and /i:/.

Twenty students wrote the word 'full' /ful/ for 'fool' /fu:l/. Thirty-eight students wrote the word 'fool' /fu:l/ for 'full' /ful/. Here they were unable to find the difference between the phonemes /u/ and /u:/.

Forty-seven students wrote the word 'zealous' /zel s/ for 'jealous' /dʒ el ə s/. Forty-nine students wrote the word 'jealous' /dʒ elə s/ for 'zealous' /zelə s/. Here they were unable to find the difference between the phonemes /z/ and /dʒ /.

Six students wrote the word 'sea' /si:/ for 'she' /ʃ i:/. Eleven students wrote the word 'she' for 'sea'. Here they were unable to find the difference between the /ʃ / and /s/ sounds.

Forty-eight students wrote the word 'shot' /ʃɔ t/ for 'short' /ʃɔ: t/. Sixteen students wrote the word 'short' /ʃɔ: t/ for 'shot' /ʃɔ t /. Here they were unable to find the difference between the phonemes /ɔ / and /ɔ: /.

Ten students wrote the word 'major' /meidʒə / for 'measure' /meʒə /. Twenty-eight students wrote the word 'measure' /meʒə/ for

'major' /meidʒə /. Here they were unable to find the difference between the phonemes /dʒ / and /ʒ /.

Eight students wrote the word 'get' /ɡet/ for 'gate' /ɡeit/. Thirty-two students wrote the word 'gate' /ɡeit/ for 'get' /ɡet/. Here they were unable to find the difference between the phonemes /e/ and /ei/.

Nineteen students wrote the word 'vowel' /vəuəl/ for 'bowel' /bauəl/. Thirty-five students wrote the word 'bowel' for 'vowel'. Here they were unable to find the difference between the phonemes /v/ and /b/.

Twenty-two students wrote the word 'pat' /pæt/ for 'part' /pɑ:t/. Six students wrote the word 'part' for 'pat'. Here they were unable to find the difference between the phonemes /æ / and /ɑ:/.

Five students wrote the word 'cut' /kʌt/ for 'cart' /kɑ:t/. Thirty-four students wrote the word 'cart' for 'cut'. Here they were unable to find the difference between the phonemes /ʌ / and /ɑ: /.

Sixty-two students wrote the word 'dwell' /dwel/ for 'dell' /del/. Forty-five students wrote the word 'dell' /del/ for 'dwell' /dwel/. Here they mistook the consonant cluster /dw/ for /d/ and vice versa.

Fifty-two students wrote the word 'quake' /kweik/ for 'cake' /keik/. Twenty four students wrote the word 'cake' for 'quake'. Here they used the consonant cluster /kw/ in place of /k/.

Forty-eight students wrote the word 'qualm' /kwɑ:m/ for 'calm' /kɑ:m/. Forty-five students wrote the word 'calm' for 'qualm'. Here they used the consonant cluster /kw/ in place of the single consonant /k/.

Fifty students wrote the word 'cue' /kju:/ for 'coo' /ku:/. Forty students wrote the word 'coo' /ku:/ for 'cue' /kju:/. Here they could not distinguish between the consonant cluster /kj/ and the single consonant /k/.

Thirty-one students wrote the word 'mute' /mju:t/ for 'moot' /mu:t/. Twenty-five students wrote the word 'moot' /mu:t/ for 'mute' /mju:/. Here they used the consonant cluster /mj/ in place of /m/.

Sixty-two students wrote the word 'pure' /pjuə / for 'poor' /puə /. Thirty-three students wrote the word 'poor' /puə/ for 'pure' /pjuə/. Here they wrote the consonant cluster /pj/ as /p/.

4. PEDAGOGICAL IMPLICATIONS

In the twenty-first century, a lot of importance is assigned to national integration, cultural exchange and scholastic sophistication. Moreover everyone talks of the world as a global village. In times such as this, the knowledge of languages other than one's own mother tongue is surely an added advantage. Therefore, people learn many second languages for communication within the country and some foreign languages for communication with people living in other countries. Faster means of transport facilities and instant communication have mace these things possible. Hence the learning of some foreign languages has become almost an imperative. Such necessities demand the teaching and learning of second and foreign languages. Keeping this in mind the syllabus is prepared. In India we have the three language formula- mother tongue, one second language and one foreign language. Most of the states in India follow this pattern. In such learning and teaching situations and particularly in classroom situations, what problems arise and how these can be solved is the subject of discussion in this chapter.

It is quite natural that when a person learns a second or a foreign language he comes across certain speech sounds which have no equivalents in his mother tongue. In such situations what he does is to pronounce such sounds just like the nearest sound available in his mother tongue. For instance the English fricative /z/ is not available in many Indian languages. It is found that the people of

West Bengal and Assam pronounce this sound as the affricate /dʒ/ and the people of Kerala pronounce it as the voiceless alveolar fricative /s/. This problem has to be handled by the language teacher in the classroom. He can explain that the sounds /z / and /dʒ / are different and show some of the minimal pairs such as the words 'zealous' and 'jealous'. These words are different not only in spelling but also in pronunciation. These words have different meanings too. The students of higher classes can be told of the differences in the spectrograms of these two sounds. The teacher can suggest remedial measures as to get the correct pronunciation of this sound by telling him to articulate /z/ without touching the alveolar ridge with his tongue but by keeping the tongue very close to the alveolar ridge.

In the same way the pronunciation of the voiced labio-dental fricative /v/ as bi- labial fricative /b/ by the Bengali students can be remedied by the teacher. In this case the student should be told not to touch the upper lip with the lower lip but to keep the upper lip close to the lower teeth to create the necessary friction needed for the fricative /v/. The gap in the place for /b/ in a word containing /b/ in the spectrogram shows that it is a plosive while the dark formations in the same place for /v/ shows it is a fricative. This will help the students distinguish between words like 'vowel' and 'bowel', 'vane' and 'bane' 'veil' and 'bale' etc. which will result in better communication.

Similar problems arising out of the confusion between /s/ and /ʃ/ can easily be solved by the language teacher. The teacher can understand the differences in frequency range of these two phonemes. Though the students may not understand this, the teacher can explain the difference between these sounds by pin-pointing the difference in place of articulation. Regular practice can bring about the required difference and this will enable the students distinguish the words like sin and shin, seat and sheet, sop and shop etc.

In the pronunciation of the dental fricatives the Bengali students utter them as plosives causing much confusion between 'thin' and 'tin', 'thought' and 'taught' 'then' and 'den' etc. The complete contact between the tongue and the alveolar ridge creates this problem. The students are to be told not to make such contact but leave a little gap between the articulators so that the friction is possible and that the correct sound is produced. They should be told not to build air pressure behind the place of contact and explode like a plosive. The air should be allowed to pass continuously causing friction.

One of the great problems that Indian students face while learning English is they pronounce the words as the sum total of the letters in the words. This is because most of the words in Indian languages can be pronounced that way without making mistakes. Such a method is likely to lead one to wrong pronunciations. The spelling pattern– a consonant letter, the vowel 'a', a consonant letter and

the vowel 'e' as in 'take', 'late', 'cake' etc. has the vowel /ei/ In most of the English words of this pattern the vowel is /ei/. But the word 'have' with the same pattern has the vowel /æ/ in it. In the same way the letter 'l' in the coda position is pronounced in nearly fifty percent of words while in others it remains silent. It is often heard from students and teachers that English has too many arbitrary features or there is a total chaos with regard to rules in English. It is for the language teacher to understand and explain to his students that all languages have arbitrary features. There may not be a one to one relation between letter and sound in all the languages. The example of 'but' and 'put' is well known. In this pair we have 't' in the word-final position in both the words. There is a bi-labial plosive in the word initial position in both the words, though in one case it is a voiceless one and in the other it is a voiced sound. The 'u' in 'but' is produced as /ʌ / and the 'u' in 'put' is produced as /u/. A large number of similar examples can be cited from other languages. For instance, the Hindi letters corresponding to 'k', 'l' and 'm' and pronounced as 'ka', 'la', and 'ma' independently and written together as a word read 'kalam' and not 'kalama'. The Bengali letters corresponding to 's', 'r' and 'l' read 'sorol' but the same pattern with the letters 'k', 'r' and 'l' read 'korlo' and not 'korol' as in the pattern of 'sorol'. There are three letters in the Assamese alphabet for which there is a sibilant phonetic realisation in some phonetic environment and a non-sibilant phonetic realisation in other environments.To be precise, the letter named dental 's' is sibilant dental fricative /s/ when followed by a consonant and it is non-sibilant velar fricative /x/

when followed by a vowel or when it occurs in word-final position. Such examples from the mother tongue of the students will make them understand that the foreign language is not an untouchable but a language like his own language. This attitude will create the necessary ambience for learning the foreign language and this will make the language learning process easier.

Secondly, it is for him to explain that there are certain rules that are universally applicable to all languages and some rules that are specific to each individual language. The rules regarding pronunciation too are no exception. The specific rules related to pronunciation in English are to be taught to students instead of making fun at other languages. This research has taken up the problem areas in pronunciation for the Bengalese in a scientific manner and therefore the findings are to be relied upon. The teacher and the students can easily be convinced of the correct pronunciation of English speech sounds which will add to better communication.

It is a known fact that language acquisition starts with listening and speaking. Reading and writing come much later. While preparing syllabus this chronology in learning the various skills is often forgotten. School education begins with reading and writing. The children are not taught the basic sound system of the second or foreign language. There are school and college teachers of English who cannot read the pronunciation encoded against each word in the dictionary because they were not taught the International

Phonetic Alphabet. If attempts are made to incorporate some basic lessons in Phonetics in the school syllabus, the students will not be facing the problems they face now.

Interested school and college authorities can organise seminars or simply awareness class to make their students aware of the areas they commit mistakes with regard to pronunciation and provide necessary help to overcome them on the basis of the findings of this research. They can, if required, invite qualified persons to throw light on this subject. If the above said authorities can send their teachers for training to recognized institutions the students of their schools and colleges will definitely benefit from this. All this will make the teaching and learning process easier and more fruitful.

The supplementary data and the analysis placed in the third chapter also clearly indicate the areas where Bengalese make mistakes with regard to pronunciation. Teachers can take special care when they teach these areas and guide the students so as to get their pronunciation correct. It is difficult to acquire the correct pronunciation of English speech sounds. It is more difficult to unlearn the wrong pronunciation. Therefore utmost care is to be taken by the teachers and the students to acquire the correct pronunciation of the second or foreign language. This research is intended to throw light in this direction.

5. CONCLUSIONS

The data required for the Major Research Project entitled **A Spectrographic Study of Bengali English** were collected from the length and breadth of the Bengali inhabited areas. These were fed into the spectrograph and the required spectrograms were produced in the Phonetics laboratory at the Central Institute of English and Foreign Languages in Hyderabad. These are analysed and the most important findings are incorporated below.

Besides collecting data for the spectrographic analysis, other type of data was also collected. For this purpose I along with the Project Fellow visited ten educational institutions in the Barak Valley region of Assam. The pronunciation of English speech sounds by the students of these institutions was found to be of very poor quality. There is no proper guidance or inclusion of lessons in Phonetics in their syllabus.

Most of the people in this Valley live in rural areas. There is no facility for getting training in Spoken English. People in general do not show much interest in this subject.

1. Most of the remarks made by the linguists regarding the pronunciation of English speech sounds by the Bengalese are found to be true after the scientific analysis. The spectrographic analysis gave an accurate and more reliable account of the actual pronunciation of English speech sounds by the Bengalese.

2. The supplementary data supported the findings of the spectrographic analysis.

3. /s/ and /ʃ/ are merged into one when the majority of Bengalese produce these sounds. This certainly creates communication problem particularly when they interact with people of other language communities.

4.Almost every member of this community produces the voiced labio-dental fricative /v/ as voiced bi-labial plosive /b/.

5.The difference in length between /i/ and /i:/, /u/ and /u:/ and /ɔ/ and /ɔ:/ is too little to differentiate the one from the other and this causes unintelligibility problem.

6. Producing fricatives as plosives is not limited to /v/ but extends to /θ/ and /ð/.

7. Pronouncing the silent 'r' in the coda slot of the syllable may not be a problem while interacting with the Indians as most of the Indians pronounce it, but it will create problem while communicating with the foreigners.

8. The above problem, that is, pronouncing the silent 'r' produces a cluster in the coda where there is no cluster in the speech of the English men.

9. Some diphthongs are produced as pure vowels while some others are on their way to become pure vowels. The principle of economy of utterance is at work in Bengali English too.

10. With proper attitude and hard work all these problems can be got rid of. Some suggestions towards this end are listed below.

Suggestions

a) Some basic lessons in phonetics may be included in the school and college syllabus.

b) A teacher, trained in this subject, may be appointed in every high school and college.

c) Audio cassettes with the voice of the native speakers of English may be played on a regular basis in these institutions.

d) Students may be encouraged to listen to English programmes broadcast over radio and television, particularly those by the English speaking countries.

e) The training given to teachers in every district may be extended to other interested people as well.

f) Seminars and workshops may be arranged in every district once or twice a year.

g) Appropriate prizes may be offered to the students who make good progress in this subject.

h) Teachers who render excellent service may be amply rewarded.

i) Phonetics and Spoken English may be offered as an optional subject at the High school level.

j) Government may distribute free or cheap textbooks on this subject to the students of schools and colleges.

k) Guest lectures may be arranged in these institutions as and when needed.

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