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COMPRESSION OF GROUND MOTION DATA

Jerald W. Long, 1111

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COMPRESSION OF GROUND MOTION DATA

Jerald W. Long
Ground Motion & Seismic Division, 1111
Sandia National Laboratories
Albuquerque, New Mexico 87185

ABSTRACT

Ground motion data has been recorded for many years at Nevada Test Site and is now stored on thousands of digital tapes. The recording format is very inefficient in terms of space on tape. This report outlines a method to compress the data onto a few hundred tapes while maintaining the accuracy of the recording and allowing restoration of any file to the original format for future use. For future digitizing a more efficient format is described and suggested.

COMPRESSION OF GROUND MOTION DATA

BACKGROUND

Sandia National Laboratories has been recording ground motion data at Nevada Test Site for many years. This activity is providing a large bank of data for purposes such as containment failure evaluation, analysis of suspected peaceful nuclear explosion treaty violations, and evaluation of sites for a nuclear waste storage facility at NTS.

When data acquisition first began, each canister contained three gages, one for measuring vertical motion and two for measuring orthogonal horizontal motion. Canisters were installed in triangular arrays around the shot point, with a fourth canister buried at approximately surface ground zero. Later, as objectives changed, the canisters were installed in a straight line away from surface ground zero with the closest gage still being within fifty feet of surface ground zero and the more distant gages being up to eight shot depths away. For most events the horizontal radial gage was oriented so that a positive acceleration would indicate motion away from the shot and the tangential gage would record positive acceleration in a clockwise direction about ground zero.

With the advent of the Nevada Nuclear Waste Storage Investigations (NNWSI), permanent gages were installed at several locations with one component oriented to record positive motion for movement due north and the other component to record positive motion for movement due west. Except for a few stations in some of the very early tests, all of the gages had been buried approximately three feet below the surface; now at seven locations canisters were installed at the bottom of drill

holes or in tunnels with companion canisters installed near the surface.

Early data from some of these stations indicated an anomalous high acceleration area near the NRDS facility. Therefore four canisters were installed near the surface on several tests with the radial gages oriented to record positive motion away from shotpoint, much as had been done for years. These four canisters were positioned about 1.8 kilometers apart and about 3.6 kilometers beyond the aeromagnetic high, all on a line perpendicular to the line from shotpoint.

For many years the data from these shots was processed through Sandia's Data Reduction Group. Data processing was a tedious process involving individual judgment concerning adjustments needed to make the acceleration and velocity return to zero and the displacement maintain a constant residual. In the early 1970's a special program (ALT)[1] was written to process the data, but it still involved individual judgment.

With the beginning of the NNWSI it became evident that new methods would have to be devised to process such large amounts of data and a program named SAM (Stearns Automated Method) was created to automatically bandpass filter the data and output acceleration, velocity, and displacement with properly adjusted baselines. This not only facilitated the processing of large amounts of data but eliminated, to a great extent, the human judgment factor in data baseline adjustment. Other programs were subsequently developed to aid in the processing and analysis of the data. One was a program written by Lori Voorhees of EG&G to rotate the data obtained from the horizontal components with north and west positive orientation to a radial-tangential orientation so that the entire data bank would be related to the shot point. All of these programs were written to accept data in a standard data reduction format developed many years before.

With the large number of tests for which data has been recorded in the past five years, and more to be recorded in the future, there is too much data for it to be easily handled in the data reduction format, even with today's mass computer storage facilities. In the past sixteen years, Sandia National Laboratories has recorded over 8000 measurements of earth motion from various nuclear events. Digitizing the average measurement at 500 points per second for two minutes has created a data bank containing nearly 250 billion data points. In recent years, we have gone to a system where we use amplifiers and we are now recording two or more amplification levels for each transducer.

All of these thousands of discrete files of data are in the standard data reduction format where two computer words are used to store the information for each data point. One word is used for time and a second for amplitude, thus filling hundreds of magnetic tapes with the information derived.

REASONS FOR A CHANGE

When analyzing data for a particular event, the format described above is adequate. When it is desired to analyze data over several events, it becomes difficult to gather all the necessary data together at one time because it may be stored on many different magnetic tapes. Some method is required to make all of the data easily available in the data reduction format, because all existing programs for analysis utilize this format for their basic input. We cannot, however, tie up enough space to store all necessary data on the computer permanently in the desired format. Due to the problems we have had over the years with tape parities, it is not feasible to recopy the data into the computer whenever needed. Also, the sheer number of tapes involved have made it

necessary for us to archive many of our tapes, thereby making access to them even more inconvenient.

We have now arrived at the point where we need to access these data over several events in order to accomplish our goals in the coming years. For all of the reasons enumerated above, the pair of programs, "COMPRES" (to convert the data to the more compressed format) and "EXPAND" (to restore particular needed files to the standard data reduction format) were written.

PROGRAM COMPRES

The requirements for this program were to compress the data to the maximum extent commensurate with accuracy, insure the accurate reproducibility of the data in the original format, and to do this with a method that would be economical of computer time and simple to operate in both the storage and access process.

The most obvious way to save space was to eliminate the need to store the time related to each data amplitude. This was easily accomplished by storing the start time of each file and the delta time for that file in the file identification record. The data is digitized at standard intervals so the time word can easily be regenerated when the file is recreated.

A second savings can be made by normalizing each data amplitude to 4096 so it can be expressed as a twelve-bit integer in the computer and then stored with five data amplitudes in each sixty-bit computer word. Since the data was originally digitized using a maximum amplitude resolution of 4096 counts, no loss in accuracy results from this process. The procedure used is to determine the minimum and maximum data

amplitude, store them in the identification record, and then subtract the minimum amplitude from each value, divide by the maximum-minimum amplitude, and then multiply by 4095.

These two changes reduce the storage required to 10% of what it was. By storing only acceleration and writing into the access program the ability to create velocity and displacement from the stored acceleration we can cut this further to 3.3%. With a further savings by storing only data between -10 and 75 seconds, we can now store the output data from the ROTATE program in 2.36% of the space it once took, a factor of 42 to 1. Since we have already made a reduction of more than 2 to 1 in our data processing sequence, we end up with a final reduction of about 90 to 1 from the raw digitized data.

Thus, for the data we select for compression, we have a file for each piece of information that consists of a 100-word identification record and seven records of data. At this rate of compression we can put approximately 600 files of information on one 2400 foot reel of magnetic tape, or catalog approximately 1000 files of information on one permanent disc file. This makes it possible to store data from many tests on the permanent discs for easy direct access.

The data that has been included in our compressed data bank includes final data (SAM program output) for vertical gages and rotated final data (ROTATE program output) for the horizontal component gages. In some cases hand adjusted data from some of the older shots may eventually also be included. An index of the data included at the time of publication of this report is included as Appendix A.

The standard identification record contains such information as test name, station name, gage orientation, etc. In addition, the identification record contains the following information necessary to restore the data to its original expanded format.

1. Word 24 is used for storage of the minimum value in the file -- the amount that has been subtracted from each amplitude (in meters per second squared).
2. Word 25 is used to store the multiplier to be used in restoring the data to its original amplitude (maximum-minimum times 4095).
3. Word 26 is used to store the time detla -- for our data, .005 seconds.
4. Word 27 is used to store the start time of the data relative to shot time, usually -10 seconds.

For convenience in identifying the source of the compressed data, word 10 of the identification record is used to store the number of the tape that was the source of the file. Word 2 of the identification record is normally used to store a run number but, for the compressed data, word 2 has been modified so that the last four digits contain the file number location of the data on the compressed master file. No other changes are made in the identification record at this point.

Operation of the COMPRES program has been kept as simple as possible because of the large volumes of data we have to process into the system. Input tape for the program is the third program parameter (tape 1), and output tape for the program is the fourth program parameter (tape 2). Required data cards are the TAPE card which has 4HTAPE in columns 1-4 with the tape number in columns 11-20 in A10 format, and the

END card which has 3HEND in columns 1-3. Optional data cards are the TIME card which has 4HTIME in columns 1-4 and the start time and end time in columns 21-30 and 31-40 respectively in F10.0 format, and the FILES card which has 5HFILES in columns 1-5 and up to 17 file numbers in columns 11-78 in 17I4 format. If no time card is included in the data deck, all data between -10 and +75 seconds will be included in the compressed data file. If no FILES card is included in the data deck, the program is presently set up to process all vertical acceleration data that is output from the SAM filter program. For horizontal data, the program is set to select only that data which has been through the rotation process or was obtained from a station where the radial component was directed away from shot point. If other data is desired to be compressed, either the program must be modified or a FILES card must be used to specify the file numbers of the data desired.

Printed output from COMPRES is a listing of the first ten words of the identification record for each accepted file. Tape output from COMPRES is a 100-word identification record and some number of 500-word data records on tape 2. The last record of data may be shorter than 500 words if necessary but there is no fillword. Each word of a data record contains five twelve-bit integers representing five data point amplitudes so that each 500-word record contains 2500 data points. Each file is followed by a standard end of file and at the end of all files a trailer consisting of ten words of all F's is written.

PROGRAM EXPAND

The requirements of the program were to identify the files that are or are <u>not</u> to be expanded for use by other programs, restore the acceleration to engineering units, regenerate times, integrate to get

velocity if desired, integrate a second time to get displacement if desired, and write the data on from one to three tapes as required.

To make identification as simple as possible and yet make the program versatile enough to enable the user to readily retrieve many sets of data, a coding system was incorporated into the program. The user designates the word number of the identification record and the word images that he wishes to match with that word in order to specify the files to be accepted. In the same manner, the user can describe files to be rejected if that is easier. Up to one hundred different tests may be made on any number of different words and any number of different images for each word for either rejection or acceptance of a particular file.

The user may specify that any combination of acceleration, velocity, and/or displacement be placed on the output tape or tapes. To accomplish creation of velocity and displacement files without introducing low-frequency waves in the displacement, the acceleration is high-pass filtered at .15 hertz using a finite impulse response filter identical to that employed in the data processing sequence by the SAM program. This results in the loss of 1000 data points at the beginning and end of the data file. A frequency-domain integration scheme is employed to create both the velocity and displacement files with velocity having zero slope and displacement having any parabolic trend removed, based on the assumption that the motion was such that no residual displacement exists.

Input tape for the EXPAND program is the third program parameter (tape 1) and must be in the format created by the COMPRES program. Output from the program will be in the standard data reduction format on tape 2, the fourth program parameter. If no instruction is made to

the contrary, tape 2 will contain a file each for acceleration, velocity, and displacement for each file identified by the criteria on the input data cards. However, instruction cards may be used to specify that only acceleration, only velocity, only displacement, or any combination of two of them be produced. Also, input cards may be used to instruct the program to put the velocity and displacement on tapes 3 and 4 respectively, the fifth and sixth program parameters. Acceleration is in meters per second squared, velocity is in meters per second, and displacement is converted to centimeters.

Each file produced will have the following changes in the identification record in addition to those made at the time the data was processed through the COMPRES program:

1. Word 1 will be changed to read "COMPRESS" for acceleration, "INTEG" for velocity, and "INTEG2" for displacement.
2. Word 25 will contain the maximum data value in E10.4 format.

Words 24, 26, and 27 will still contain the minimum data value, time delta, and start time of the data respectively, each in E10.4 format. Note that these times are in microseconds.

Printout from EXPAND consists of a listing of the first ten words of the identification record for each file retrieved. Note that, in the printer listing, word 1 will not yet have been changed, but it will be changed on the output tape(s).

Control cards for EXPAND are as follows:

1. ALL card. Format, 3HALL. Use of this card will cause all data to be expanded and put onto tape. This feature should

1. not be used unless the input tape is known to contain a small number of files -- our masterfile is too large to allow its use.

2. FILES card. Format, 5HFILES, 5X, 17I4. File numbers as found in word 2 of the masterfile listing (see Appendix A) may be specified in the I4 fields of this card. Additional cards of this type may be used if more than 17 files are to be specified.

3. SEARCH card. Format, 6HSEARCH, 4X, 2I4, 2X, 6A10. This control card is used to set up criteria for selecting sets of data to be expanded. Columns 11-14 are used to specify which word of the identification record is to be searched on and matched with the word images contained in the remainder of the card. Examples of how to use this card may be found in Appendix B. The SEARCH card is designed to allow the user to find all files which fit a particular set of criteria. For example, one might wish to retrieve all radial data recorded at station W10. This could be done using the first two SEARCH cards shown in Example 1 of Appendix B. The 0003 in columns 11-14 specifies word 3 of the identification record as the word to be searched on first. Columns 15-18 designate a group code of 0001 to set the first two cards apart from the others as one set of criteria. Columns 21-50 contain three word images to be searched for in word 3 of each identification record. If any of these word images are found, a further check is then made to see if an "AR", as specified in the second SEARCH card, is found in word 4. If a match is found for this word, the file is accepted and processed onto the output tape. If either word 3 or word 4 fail to match, the second set of

3. criteria designated by group code -002 is checked. The negative sign on the group code means that if a match is found for the criteria specified the file will be rejected and no further checks will be made. If no match is made with either set of criteria for groups 0001 and -002, the criteria designated by the next group is checked. In this way the user can retrieve all vertical and tangential data recorded at station W11 TOP at the same time the radial data for station W10 is being retrieved. Note that because group -002 eliminates the tangential data for the Farm event before group 0003 is checked, that data would not be processed onto the output tape. Another example of how to use this option is found in Example 2 of Appendix B and is explained there.

4. SELECT card. Format, 6HSELECT, 4X, 3A10. The three alpha fields must contain the images of words 3, 4, and 5 of the identification record of the file desired. This option should be used only when only one file is desired since searching will terminate as soon as the desired file is located.

5. ACCELERATION card. Format, 10HACCELERATI. Use of this option will cause only acceleration to be put on the output tape unless VELOCITY or DISPLACEMENT cards are used.

6. VELOCITY card. Format, 8HVELOCITY. Use of this option will cause only velocity to be put on the output tape unless ACCELERATION or DISPLACEMENT cards are used.

7. DISPLACEMENT card. Format, 10HDISPLACEME. Use of this option will cause only displacement to be put on the output tape unless ACCELERATION or VELOCITY cards are used.

8. SEPARATE card. Format, 8HSEPARATE. Use of this option will cause the output data to be put on up to three separate tapes, depending on which of options 5, 6, and 7 are used.

9. END card. Format, 3HEND. This card is used to signal that all data cards have been read in and processing may begin. If this is the only data card read in, all data will be processed, the same as if an ALL card had been read.

A printout of programs COMPRES and EXPAND are included as Appendix C and Appendix D respectively.

CONCLUSIONS AND RECOMMENDATIONS

Although it might seem at first that we should have converted many years ago to a tape format similar to the one employed in this data-compression technique, there are several reasons why this could not have been done. First, only in the last few years have we had the core memory necessary to perform some of the functions required to compress and expand the data in the manner that these two programs do. Second, we did not have the manpower to convert all of our previously recorded data to a new format. Third, problems with tape parities made it desirable to have a time recorded for every data point to insure that if data was lost its loss would be evident.

We now have the computer storage to do the job and the programs written to do the conversion. The supervisor in charge of Sandia's tape library has advised us that any tape which has not been read in over a year is very likely to have parities and that the longer they are stored the more likely there will be problems reading them. He further suggested

that every tape should be read through at least once per year to avoid problems. With the number of tapes we now have this would be a full-time job for one person for about three months every year, and would create an excessive workload on the people in the computer center. We have some tapes in archives which have not been read in nearly ten years.

New tape drives are now available on the NOS system which are advertised to be 100% reliable (no parities) and can write on a new type of tape at 6250 characters per inch. In addition to the fact that we could write nearly six times as much data on these new tapes, the new tapes can be stored longer with less chance of deterioration -- according to the manufacturer.

Unfortunately, these new tapes and tape drives are not yet available on the 7600 network but are scheduled to come on line in late 1981.

Even if they were now available on the 7600 network, we still do not have the personnel to compress the data from past tests. Therefore, I make the following recommendations:

1. Any new programs should be written so they use the new compressed data format as a direct input.

2. As soon as possible, all of our processing programs should be modified to take the new compressed data format as direct input. Copies of the old programs as they now exist can be kept active but not updated.

3. As soon as 2 above has been accomplished, all newly digitized data should be processed directly into the compressed data format.

4. One or more summer hires should be employed for the summer of 1982 to convert all of our present data to the new compressed data format and write it on the new tapes (which should be available by then) at 6250 BPI. This would store the same amount of data in 1/100th the space and virtually eliminate the need to archive tapes.

REFERENCES

[1] L. J. Vortman and J. W. Long, SC-RR-72-0634, "Methods of Processing, Evaluating and Recovering Airblast Data," Sandia National Laboratories, 1972, Albuquerque, NM.

Appendix A

Masterfile Listing

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1	CAD	1	417	W-3	BOTTOMAV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C6,	7.35 KHZ,	16127
2	AUTO	2	308	W-3	BOTTOMAT	BACCARAT	72.R- 72. AMP X 20.5,	TRACK C6,	3.9 KHZ,	17155
3	AUTO	2	303	W-3	BOTTOMAR	BACCARAT	72.R-342. AMP X 20.5,	TRACK C6,	5.4 KHZ,	17155
4	AUTO	1	419	W-9	TOP AV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C3,	22. KHZ,	16127
5	AUTO	2	309	W-9	TOP AT	BACCARAT	23.R- 23. AMP X 20.5,	TRACK C3,	10.5 KHZ,	17155
6	AUTO	2	304	W-9	TOP AR	BACCARAT	23.R-293. AMP X 20.5,	TRACK C3,	14.5 KHZ,	17155
7	CAD	1	418	W-9	BOTTOMAV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C3,	7.35 KHZ,	16127
8	CAD	3	312	W-9	BOTTOMAT	BACCARAT	23.R- 23. AMP X 20.5,	TRACK C3,	3.9 KHZ,	17155
9	AUTO	3	305	W-9	BOTTOMAR	BACCARAT	23.R-293. AMP X 20.5,	TRACK C3,	5.4 KHZ,	17155
10	AUTO	1	420	W11	TOP AV	BACCARAT	20549/T1 AMP X 42. ,	TRACK C1,	7.35 KHZ,	16127
11	AUTO	3	311	W11	TOP AT	BACCARAT	351.R-351. AMP X 42. ,	TRACK C1,	2.3 KHZ,	17155
12	CAD	3	306	W11	TOP AR	BACCARAT	351.R-261. AMP X 42. ,	TRACK C1,	3.9 KHZ,	17155
13	AUTO	1	216	W11	BOTTOMAV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C1,	52.5 KHZ,	16607
14	AUTO	2	312	W11	BOTTOMAT	BACCARAT	54.R-351. AMP X 20.5,	TRACK C1,	14.5 KHZ,	17155
15	AUTO	2	307	W11	BOTTOMAR	BACCARAT	54.R-261. AMP X 20.5,	TRACK C1,	30. KHZ,	17155
16	AUTO	2	407	PNE-9	AV	BACCARAT	20548/T1 AMP X 1. ,	TRACK C9,	7.35 KHZ,	13896
17	AUTO	2	405	PNE-9	AV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C9,	70. KHZ,	13896
18	AUTO	2	406	PNE-9	AV	BACCARAT	20548/T1 AMP X 20.5,	TRACK C9,	30. KHZ,	13896
19	ROTATE	3	411	PNE-9	AT	BACCARAT	343.44R AMP X 20.5,	TRACK C9,	14.5 KHZ,	14052
20	ROTATE	3	410	PNE-9	AT	BACCARAT	343.44R AMP X 20.5,	TRACK C9,	40. KHZ,	14052
21	ROTATE	3	409	PNE-9	AR	BACCARAT	343.44R AMP X 20.5,	TRACK C9,	22. KHZ,	14052
22	ROTATE	3	408	PNE-9	AR	BACCARAT	343.44R AMP X 20.5,	TRACK C9,	52.5 KHZ,	14052
23	AUTO	1	473	W-3	TOP AV	BACKBEACH	220548/T1 AMP X 5. ,	TRACK C8,	22. KHZ,	14151
24	AUTO	2	463	W-3	TOP AT	BACKBEACH	182.R-182. AMP X 5. ,	TRACK C8,	10.5 KHZ,	13386
25	AUTO	2	459	W-3	TOP AR	BACKBEACH	182.R- 92. AMP X 5. ,	TRACK C8,	14.5 KHZ,	13386
26	AUTO	1	474	W-3	BOTTOMAV	BACKBEACH	220548/T1 AMP X 4.2 ,	TRACK C8,	52.5 KHZ,	14151
27	AUTO	2	464	W-3	BOTTOMAT	BACKBEACH	182.R-182. AMP X 4.2 ,	TRACK C8,	30. KHZ,	13386
28	AUTO	2	460	W-3	BOTTOMAR	BACKBEACH	182.R- 92. AMP X 4.2 ,	TRACK C8,	40. KHZ,	13386
29	AUTO	3	485	W-4	TOP AT	BACKBEACH	318.R-226. AMP X 5. ,	TRACK C1,	2.3 KHZ,	17713
30	AUTO	2	483	W-4	TOP AR	BACKBEACH	318.R-136. AMP X 5. ,	TRACK C1,	3.9 KHZ,	17713
31	AUTO	3	484	W-4	BOTTOMAT	BACKBEACH	318.R-226. AMP X 5. ,	TRACK C1,	14.5 KHZ,	17713
32	AUTO	3	482	W-4	BOTTOMAR	BACKBEACH	318.R-136. AMP X 5. ,	TRACK C1,	30. KHZ,	17713
33	AUTO	1	475	W-5	AV	BACKBEACH	NRDS/VAN AMP X 10. ,	TRACK C6,	52.5 KHZ,	14151
34	AUTO	2	465	W-5	AT	BACKBEACH	254.R-254. AMP X 10. ,	TRACK C6,	30. KHZ,	13386
35	AUTO	2	461	W-5	AR	BACKBEACH	254.R-164. AMP X 10. ,	TRACK C6,	40. KHZ,	13386
36	AUTO	1	476	W-6	AV	BACKBEACH	NRDS/VAN AMP X 10. ,	TRACK C2,	52.5 KHZ,	14151
37	AUTO	2	466	W-6	AT	BACKBEACH	263.R-263. AMP X 10. ,	TRACK C2,	30. KHZ,	13386
38	AUTO	2	462	W-6	AR	BACKBEACH	263.R-173. AMP X 10. ,	TRACK C2,	40. KHZ,	13386
39	AUTO	3	456	W-7	AV	BACKBEACH	NRDS/VAN AMP X 5.11,	TRACK C5,	52.5 KHZ,	13386
40	AUTO	4	472	W-7	AT	BACKBEACH	261.R-261. AMP X 5.11,	TRACK C5,	30. KHZ,	13386
41	AUTO	4	469	W-7	AR	BACKBEACH	261.R-171. AMP X 5.11,	TRACK C5,	40. KHZ,	13386
42	AUTO	2	481	W-8	TOP AV	BACKBEACH	220548/T1 AMP X 5. ,	TRACK C3,	52.5 KHZ,	17713
43	AUTO	3	489	W-8	TOP AT	BACKBEACH	225.R-225. AMP X 5. ,	TRACK C3,	30. KHZ,	17713
44	AUTO	3	487	W-8	TOP AR	BACKBEACH	225.R-135. AMP X 5. ,	TRACK C3,	40. KHZ,	17713
45	AUTO	1	416	W-8	BOTTOMAV	BACKBEACH	220548/T1 AMP X 100.,	TRACK C6,	7.35 KHZ,	12912
46	AUTO	2	488	W-8	BOTTOMAT	BACKBEACH	147.R-225. AMP X 100.,	TRACK C6,	3.9 KHZ,	17713
47	AUTO	2	486	W-8	BOTTOMAR	BACKBEACH	147.R-135. AMP X 100.,	TRACK C6,	5.4 KHZ,	17713
48	AUTO	4	473	W-9	TOP AV	BACKBEACH	220548/T1 AMP X 2.05,	TRACK C4,	22. KHZ,	15586
49	AUTO	4	477	W-9	BOTTOMAV	BACKBEACH	220548/T1 AMP X 2.05,	TRACK C4,	52.5 KHZ,	15586
50	AUTO	3	412	W10	AV	BACKBEACH	NRDS/VAN AMP X 10. ,	TRACK C7,	52.5 KHZ,	12912

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
51	AUTO	1	414	W10	AV		BACKBEACH NRDS/VAN	AMP X 205.,	TRACK C4,	7.35 KHZ,	12912
52	AUTO	7	470	W10	AT		BACKBEACH 349.R-261.	AMP X-10. ,	TRACK C7,	14.5 KHZ,	13386
53	AUTO	5	467	W10	AR		BACKBEACH 349.R-171.	AMP X 10. ,	TRACK C7,	30. KHZ,	13386
54	AUTO	2	413	W10 TOP	AV		BACKBEACH NRDS/VAN	AMP X 10. ,	TRACK C7,	7.35 KHZ,	12912
55	AUTO	3	471	W10 TOP	AT		BACKBEACH 261.R-261.	AMP X 10. ,	TRACK C7,	2.3 KHZ,	13386
56	AUTO	4	468	W10 TOP	AR		BACKBEACH 261.R-171.	AMP X 10. ,	TRACK C7,	3.9 KHZ,	13386
57	AUTO	1	415	W10 BOTTOM	AV		BACKBEACH NRDS/VAN	AMP X 10. ,	TRACK C7,	52.5 KHZ,	12912
58	AUTO	2	495	W10 BOTTOM	AV		BACKBEACH MULT X -1.	AMP X 20.5,	TRACK C4,	22. KHZ,	18241
59	AUTO	3	458	W10 BOTTOM	AT		BACKBEACH 190.R-261.	AMP X 20.5,	TRACK C4,	10.5 KHZ,	13386
60	AUTO	3	457	W10 BOTTOM	AR		BACKBEACH 190.R-171.	AMP X 20.5,	TRACK C4,	14.5 KHZ,	13386
61	AUTO	3	480	W11 TOP	AV		BACKBEACH 220540/T1	AMP X 42. ,	TRACK C2,	7.35 KHZ,	15586
62	AUTO	3	479	W11 BOTTOM	AV		BACKBEACH 220540/T1	AMP X 10. ,	TRACK C2,	52.5 KHZ,	15586
63	AUTO	2	455	PNE-9	AV		BACKBEACH 14G/861/1	AMP X 420.,	TRACK C8,	52.5 KHZ,	13355
64	AUTO	3	454	PNE-8	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C8,	52.5 KHZ,	13355
65	AUTO	1	453	PNE-7	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C7,	52.5 KHZ,	13355
66	AUTO	1	452	PNE-4	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C4,	52.5 KHZ,	13331
67	AUTO	1	451	PNE-3	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C3,	52.5 KHZ,	13331
68	AUTO	1	457	PNE-2	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C2,	52.5 KHZ,	13331
69	AUTO	1	449	PNE-1	AV		BACKBEACH 14G-865T3	AMP X 420.,	TRACK C1,	52.5 KHZ,	13331
70	AUTO	1	1494	W-3 TOP	AV		BONARDA 220540/2	AMP X 100.,	TRACK C5,	10.5 KHZ,	13787
71	AUTO	2	1529	W-3 TOP	AT		BONARDA 87.R- 87.	AMP X 100.,	TRACK C5,	5.4 KHZ,	13487
72	AUTO	2	1528	W-3 TOP	AR		BONARDA 87.R-357.	AMP X 100.,	TRACK C5,	7.35 KHZ,	13487
73	AUTO	1	1495	W-3 BOTTOM	AV		BONARDA 220540/2	AMP X 100.,	TRACK C3,	30.5 KHZ,	13787
74	AUTO	2	1533	W-3 BOTTOM	AT		BONARDA 87.R- 87.	AMP X 100.,	TRACK C3,	5.4 KHZ,	13487
75	AUTO	2	1530	W-3 BOTTOM	AR		BONARDA 87.R-357.	AMP X 100.,	TRACK C3,	7.35 KHZ,	13487
76	AUTO	1	1496	W-9 TOP	AV		BONARDA 220540/2	AMP X 42. ,	TRACK C4,	30. KHZ,	13787
77	AUTO	2	1534	W-9 TOP	AT		BONARDA 42.R- 42.	AMP X 42. ,	TRACK C4,	14.5 KHZ,	13487
78	AUTO	2	1531	W-9 TOP	AR		BONARDA 42.R-312.	AMP X 42. ,	TRACK C4,	22. KHZ,	13487
79	AUTO	1	1497	W-9 BOTTOM	AV		BONARDA 220540/2	AMP X 42. ,	TRACK C4,	3.9 KHZ,	13787
80	AUTO	2	1535	W-9 BOTTOM	AT		BONARDA 42.R- 42.	AMP X 42. ,	TRACK C4,	2.3 KHZ,	13487
81	AUTO	3	1532	W-9 BOTTOM	AR		BONARDA 42.R-312.	AMP X 42. ,	TRACK C4,	3.0 KHZ,	13487
82	AUTO	1	1492	W11 TOP	AV		BONARDA 220540/2	AMP X 5.11,	TRACK C2,	30. KHZ,	13837
83	AUTO	2	1537	W11 TOP	AT		BONARDA 46.R- 46.	AMP X 5.11,	TRACK C2,	14.5 KHZ,	13487
84	AUTO	2	1536	W11 TOP	AR		BONARDA 46.R-316.	AMP X 5.11,	TRACK C2,	22. KHZ,	13487
85	CAD	3	1493	W11 BOTTOM	AV		BONARDA 220540/2	AMP X 42. ,	TRACK C2,	3.9 KHZ,	13837
86	AUTO	3	1539	W11 BOTTOM	AT		BONARDA 109.R- 46.	AMP X 42. ,	TRACK C2,	2.3 KHZ,	13487
87	AUTO	3	1538	W11 BOTTOM	AR		BONARDA 109.R-316.	AMP X 42. ,	TRACK C2,	3. KHZ,	13487
88	AUTO	1	10	W-3 TOP	AV		BURZET 20548	AMP X 20.5,	TRACK C6,	22. KHZ,	13895
89	ROTATE	1	9	W-3 TOP	AT		BURZET 93.30R	AMP X 20.5,	TRACK C6,	10.5 KHZ,	19456
90	ROTATE	1	5	W-3 TOP	AR		BURZET 93.30R	AMP X 20.5,	TRACK C6,	14.5 KHZ,	19456
91	AUTO	2	13	W-3 BOTTOM	AV		BURZET 20548	AMP X 20.5,	TRACK C6,	7.35 KHZ,	13895
92	ROTATE	1	8	W-3 BOTTOM	AT		BURZET 93.30R	AMP X 20.5,	TRACK C6,	3.9 KHZ,	19456
93	ROTATE	1	4	W-3 BOTTOM	AR		BURZET 93.30R	AMP X 20.5,	TRACK C6,	5.4 KHZ,	19456
94	AUTO	1	491	W-6	AV		BURZET RDS	AMP X 42. ,	TRACK C4,	7.35 KHZ,	13723
95	ROTATE	1	2	W-6	AT		BURZET 307.11R	AMP X 42. ,	TRACK C4,	3.9 KHZ,	19456
96	ROTATE	1	157	W-6	AR		BURZET 307.11R	AMP X 42. ,	TRACK C4,	5.4 KHZ,	19456
97	AUTO	1	492	W-7	AV		BURZET RDS	AMP X 42. ,	TRACK C1,	52.5 KHZ,	13723
98	ROTATE	1	3	W-7	AT		BURZET 310.23R	AMP X 42. ,	TRACK C1,	30. KHZ,	19456
99	ROTATE	1	1	W-7	AR		BURZET 310.23R	AMP X 42. ,	TRACK C1,	40. KHZ,	19456
100	AUTO	1	11	W-9 TOP	AV		BURZET 20548	AMP X 10. ,	TRACK C3,	22. KHZ,	13895

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
101	ROTATE	1	14	W-9 TOP		AT	BURZET	38.19R AMP X 10.	,TRACK 03,	10.5 KHZ,	13943
102	ROTATE	1	6	W-9 TOP		AR	BURZET	38.19R AMP X 10.	,TRACK 03,	14.5 KHZ,	19456
103	AUTO	1	12	W-9 BOTTOM		AV	BURZET	20548 AMP X 10.	,TRACK 03,	7.35 KHZ,	13895
104	ROTATE	2	15	W-9 BOTTOM		AT	BURZET	38.19R AMP X 10.	,TRACK 03,	3.9 KHZ,	13943
105	ROTATE	1	7	W-9 BOTTOM		AR	BURZET	38.19R AMP X 10.	,TRACK 03,	5.4 KHZ,	19456
106	AUTO	1	24	W10		AV	BURZET	RDS AMP X 50.1	,TRACK 05,	30. KHZ,	14087
107	DIFF	5	539	W10		AT	BURZET	179.R-300. AMP X 50.1	,TRACK 05,	22. KHZ,	19273
108	DIFF	5	527	W10		AR	BURZET	179.R-210. AMP X 50.1	,TRACK 05,	14.5 KHZ,	19273
109	AUTO	1	29	W10 TOP		AV	BURZET	RDS AMP X 1.	,TRACK 05,	2.3 KHZ,	14087
110	AUTO	1	28	W10 TOP		AV	BURZET	RDS AMP X 50.1	,TRACK 05,	70. KHZ,	14087
111	ROTATE	2	17	W10 TOP		AT	BURZET	299.73R AMP X 50.1	,TRACK 05,	40. KHZ,	13943
112	ROTATE	2	16	W10 TOP		AR	BURZET	299.73R AMP X 50.1	,TRACK 05,	52.5 KHZ,	13943
113	AUTO	1	25	W10 BOTTOM		AV	BURZET	RDS AMP X 50.1	,TRACK 05,	10.5 KHZ,	14087
114	AUTO	1	27	W10 BOTTOM		AT	BURZET	RDS AMP X 50.1	,TRACK 05,	5.4 KHZ,	14087
115	AUTO	1	26	W10 BOTTOM		AR	BURZET	RDS AMP X 50.1	,TRACK 05,	7.35 KHZ,	14087
116	AUTO	1	32	W11 TOP		AV	BURZET	20548 AMP X 2.05	,TRACK 01,	7.35 KHZ,	06407
117	ROTATE	2	23	W11 TOP		AT	BURZET	29.20R AMP X 1.	,TRACK 01,	3. KHZ,	13943
118	ROTATE	2	22	W11 TOP		AR	BURZET	29.20R AMP X 2.05	,TRACK 01,	3.9 KHZ,	13943
119	AUTO	1	34	W11 BOTTOM		AV	BURZET	20548 AMP X 1.	,TRACK 01,	70. KHZ,	06407
120	AUTO	2	35	W11 BOTTOM		AV	BURZET	20548 AMP X 2.05	,TRACK 01,	52.5 KHZ,	06407
121	ROTATE	2	21	W11 BOTTOM		AT	BURZET	92.70R AMP X 1.	,TRACK 01,	22. KHZ,	13943
122	ROTATE	2	20	W11 BOTTOM		AR	BURZET	92.70R AMP X 1.	,TRACK 01,	40. KHZ,	13943
123	AUTO	1	1080	W13 TOP		AV	BURZET	20548 AMP X 42.	,TRACK 05,	7.35 KHZ,	13257
124	ROTATE	2	1051	W13 TOP		AT	BURZET	9.36R AMP X 42.	,TRACK 05,	2.3 KHZ,	16849
125	ROTATE	2	1048	W13 TOP		AR	BURZET	9.36R AMP X 42.	,TRACK 05,	3.9 KHZ,	16849
126	AUTO	1	1079	W13 BOTTOM		AV	BURZET	20548 AMP X 42.	,TRACK 05,	52.5 KHZ,	13257
127	AUTO	1	1082	W14		AV	BURZET	RDS AMP X 51.1	,TRACK 07,	5.4 KHZ,	13257
128	ROTATE	2	1053	W14		AT	BURZET	321.13R AMP X 51.1	,TRACK 07,	3. KHZ,	16849
129	ROTATE	2	1050	W14		AR	BURZET	321.13R AMP X 51.1	,TRACK 07,	3.9 KHZ,	16849
130	AUTO	1	1081	W15		AV	BURZET	20548 AMP X 42.	,TRACK 12,	30. KHZ,	13257
131	ROTATE	2	1052	W15		AT	BURZET	339.03R AMP X 42.	,TRACK 12,	14.5 KHZ,	16849
132	ROTATE	2	1049	W15		AR	BURZET	339.03R AMP X 42.	,TRACK 12,	22. KHZ,	16849
133	AUTO	1	31	W17		AV	BURZET	20548 AMP X 51.1	,TRACK 10,	10.5 KHZ,	06407
134	ROTATE	2	19	W17		AT	BURZET	.36R AMP X 51.1	,TRACK 10,	5.4 KHZ,	13943
135	ROTATE	2	18	W17		AR	BURZET	.36R AMP X 51.1	,TRACK 10,	7.35 KHZ,	13943
136	AUTO	1	30	W18		AV	BURZET	20548 AMP X 51.1	,TRACK 11,	10.5 KHZ,	14087
137	ROTATE	2	1056	W18		AT	BURZET	352.10R AMP X 51.1	,TRACK 11,	5.4 KHZ,	16849
138	ROTATE	2	1054	W18		AR	BURZET	352.10R AMP X 51.1	,TRACK 11,	7.35 KHZ,	16849
139	AUTO	1	33	MINE MOUN		AV	BURZET	20548 AMP X 617.	,TRACK 09,	5.4 KHZ,	06407
140	ROTATE	2	1057	MINE MOUN		AT	BURZET	302.39R AMP X 617.	,TRACK 09,	10.5 KHZ,	16849
141	ROTATE	2	1055	MINE MOUN		AR	BURZET	302.39R AMP X 617.	,TRACK 09,	7.35 KHZ,	16849
142	AUTO	1	1489	W-3 TOP		AV	CANFIELD	20548/TP1 AMP X 205.	,TRACK 06,	30. KHZ,	14998
143	AUTO	2	1521	W-3 TOP		AT	CANFIELD	80.R- 80. AMP X 205.	,TRACK 06,	14.5 KHZ,	14261
144	AUTO	2	1518	W-3 TOP		AR	CANFIELD	80.R-350. AMP X 205.	,TRACK 06,	22. KHZ,	14261
145	AUTO	1	1490	W-3 BOTTOM		AV	CANFIELD	20548/TP1 AMP X 205.	,TRACK 06,	10.5 KHZ,	14998
146	AUTO	2	1522	W-3 BOTTOM		AT	CANFIELD	80.R- 80. AMP X 205.	,TRACK 06,	5.4 KHZ,	14261
147	AUTO	2	1519	W-3 BOTTOM		AR	CANFIELD	80.R-350. AMP X 205.	,TRACK 06,	7.35 KHZ,	14261
148	AUTO	1	1491	W-9 TOP		AV	CANFIELD	20548/TP1 AMP X 51.1	,TRACK 03,	30. KHZ,	14998
149	AUTO	2	1523	W-9 TOP		AT	CANFIELD	46.R- 46. AMP X 51.1	,TRACK 03,	14.5 KHZ,	14261
150	AUTO	2	1520	W-9 TOP		AR	CANFIELD	46.R-316. AMP X 51.1	,TRACK 03,	22. KHZ,	14261

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
151	CAD	3	1486	W-9 BOTTOMAV		CANFIELD	20549/TP1 AMP X 104.,	TRACK C3,	10.5 KHZ,	16649
152	AUTO	3	1517	W-9 BOTTOMAT		CANFIELD	46.R- 46.AMP X 104.,	TRACK C3,	5.4 KHZ,	16711
153	AUTO	2	1516	W-9 BOTTOMAR		CANFIELD	46.R-316.AMP X 104.,	TRACK C3,	7.35 KHZ,	16711
154	AUTO	1	1484	W11 TOP AV		CANFIELD	20549/TP1 AMP X 26.1,	TRACK C1,	30. KHZ,	16649
155	AUTO	2	1511	W11 TOP AT		CANFIELD	53.R- 53.AMP X 26.1,	TRACK C1,	14.5 KHZ,	16711
156	AUTO	2	1509	W11 TOP AR		CANFIELD	53.R-323.AMP X 26.1,	TRACK C1,	22. KHZ,	16711
157	AUTO	1	1485	W11 BOTTOMAV		CANFIELD	20549/TP1 AMP X 420.,	TRACK C1,	3.9 KHZ,	16649
158	AUTO	3	1512	W11 BOTTOMAT		CANFIELD	116.R- 53.AMP X 420.,	TRACK C1,	2.3 KHZ,	16711
159	AUTO	2	1510	W11 BOTTOMAR		CANFIELD	116.R-323.AMP X 420.,	TRACK C1,	3. KHZ,	16711
160	AUTO	1	1487	W13 TOP AV		CANFIELD	20549/TP1 AMP X 499.,	TRACK C5,	30. KHZ,	10341
161	AUTO	2	1526	W13 TOP AT		CANFIELD	20.R- 20.AMP X 499.,	TRACK C5,	14.5 KHZ,	14261
162	AUTO	2	1524	W13 TOP AR		CANFIELD	20.R-290.AMP X 499.,	TRACK C5,	22. KHZ,	14261
163	AUTO	1	1488	W13 BOTTOMAV		CANFIELD	20549/TP1 AMP X 499.,	TRACK C5,	3.9 KHZ,	10341
164	AUTO	2	1527	W13 BOTTOMAT		CANFIELD	304.R- 20.AMP X 499.,	TRACK C5,	2.3 KHZ,	14261
165	AUTO	2	1525	W13 BOTTOMAR		CANFIELD	304.R-290.AMP X 499.,	TRACK C5,	3. KHZ,	14261
166	AUTO	1	1513	MINE MOUN AV		CANFIELD	20548/TP1 AMP X 617.,	TRACK C4,	10.5 KHZ,	16711
167	AUTO	2	1515	MINE MOUN AT		CANFIELD	351.R-351.AMP X 617.,	TRACK C4,	5.4 KHZ,	16711
168	AUTO	2	1514	MINE MOUN AR		CANFIELD	351.R-261.AMP X 617.,	TRACK C4,	7.35 KHZ,	16711
169	CAV	2	404	W-3 TOP AV		CHESS	20548/T1 AMP X 420.,	TRACK C6,	22. KHZ,	14386
170	ROTATE	2	398	W-3 TOP AT		CHESS	72.95R AMP X 420.,	TRACK C6,	10.5 KHZ,	14736
171	ROTATE	2	392	W-3 TOP AR		CHESS	72.95R AMP X 420.,	TRACK C6,	14.5 KHZ,	14736
172	ROTATE	2	400	W-9 TOP AT		CHESS	22.39R AMP X 205.,	TRACK C3,	10.5 KHZ,	14736
173	ROTATE	2	394	W-9 TOP AR		CHESS	22.39R AMP X 205.,	TRACK C3,	14.5 KHZ,	14736
174	ROTATE	2	399	W-9 BOTTOMAT		CHESS	22.39R AMP X 205.,	TRACK C3,	3.9 KHZ,	14736
175	ROTATE	2	393	W-9 BOTTOMAR		CHESS	22.39R AMP X 205.,	TRACK C3,	5.4 KHZ,	14736
176	ROTATE	2	401	W11 BOTTOMAT		CHESS	52.16R AMP X 420.,	TRACK C1,	14.5 KHZ,	14736
177	ROTATE	2	395	W11 BOTTOMAR		CHESS	52.16R AMP X 420.,	TRACK C1,	30. KHZ,	14736
178	AUTO	1	496	MINE MOUN AV		CHESS	20548/T1 AMP X 24.7,	TRACK C9,	14.5 KHZ,	14399
179	AUTO	1	494	MINE MOUN AV		CHESS	20548/T1 AMP X 5. ,	TRACK C8,	22. KHZ,	14399
180	AUTO	1	497	MINE MOUN AV		CHESS	20548/T1 AMP X 5. ,	TRACK C8,	40. KHZ,	14399
181	AUTO	1	495	MINE MOUN AV		CHESS	20548/T1 AMP X 610.,	TRACK C8,	14.5 KHZ,	14399
182	AUTO	1	493	MINE MOUN AV		CHESS	20548/T1 AMP X 610.,	TRACK C9,	5.4 KHZ,	14399
183	ROTATE	2	402	MINE MOUN AT		CHESS	311.11R AMP X 24.7,	TRACK C9,	30. KHZ,	14736
184	ROTATE	2	498	MINE MOUN AT		CHESS	311.11R AMP X 5. ,	TRACK C8,	70. KHZ,	14777
185	ROTATE	2	403	MINE MOUN AT		CHESS	311.11R AMP X 610.,	TRACK C9,	10.5 KHZ,	14736
186	ROTATE	2	396	MINE MOUN AR		CHESS	311.11R AMP X 24.7,	TRACK C9,	22. KHZ,	14736
187	ROTATE	2	1544	MINE MOUN AR		CHESS	311.11R AMP X 24.7,	TRACK C9,	22. KHZ,	14736
188	ROTATE	2	1545	MINE MOUN AR		CHESS	311.11R AMP X 5. ,	TRACK C8,	52.5 KHZ,	14736
189	ROTATE	2	397	MINE MOUN AR		CHESS	311.11R AMP X 5. ,	TRACK C8,	52.5 KHZ,	14736
190	AUTO	3	1259	W-10 CASINAT		COLWICK	78.R-168.AMP X 42. ,	TRACK 12,	14.5 KHZ,	12375
191	AUTO	3	1258	W-10 CASINAR		COLWICK	78.R- 78.AMP X 42. ,	TRACK 12,	22. KHZ,	12375
192	AUTO	1	1206	W-3 TOP AV		COLWICK	20548/T1 AMP X 10.4,	TRACK C6,	30. KHZ,	012375
193	AUTO	2	1328	W-3 TOP AT		COLWICK	185.R-185.AMP X 10.4,	TRACK C6,	14.5 KHZ,	17492
194	AUTO	2	1324	W-3 TOP AR		COLWICK	185.R- 95.AMP X 10.4,	TRACK C6,	22. KHZ,	17492
195	AUTO	1	1194	W-3 BOTTOMAV		COLWICK	20548/T1 AMP X 10. ,	TRACK C6,	10.5 KHZ,	012375
196	AUTO	1	1207	W-3 BOTTOMAV		COLWICK	20548/T1 AMP X 20.5,	TRACK C6,	3.9 KHZ,	012375
197	AUTO	2	1267	W-3 BOTTOMAT		COLWICK	185.R-185.AMP X 10. ,	TRACK C6,	5.4 KHZ,	12375
198	AUTO	2	1329	W-3 BOTTOMAT		COLWICK	185.R-185.AMP X 20.5,	TRACK C6,	2.3 KHZ,	17492
199	AUTO	2	1266	W-3 BOTTOMAR		COLWICK	185.R- 95.AMP X 10. ,	TRACK C6,	7.35 KHZ,	12375
200	AUTO	2	1325	W-3 BOTTOMAR		COLWICK	185.R- 95.AMP X 20.5,	TRACK C6,	3. KHZ,	17492

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION TRACK	FREQUENCY	TAPE OF ORIGIN
201	AUTO	1	1205	W-5	AV	COLWICK	RDS AMP X 51.1,TRACK 02,	30. KHZ,	012375
202	AUTO	2	1246	W-5	AT	COLWICK	249.R-249.AMP X 51.1,TRACK 02,	14.5 KHZ,	10499
203	AUTO	2	1241	W-5	AR	COLWICK	249.R-159.AMP X 51.1,TRACK 02,	22. KHZ,	10499
204	AUTO	1	1208	W-6	AV	COLWICK	RDS AMP X 10. ,TRACK 04,	30. KHZ,	012375
205	AUTO	2	1330	W-6	AT	COLWICK	258.R-258.AMP X 10. ,TRACK 04,	14.5 KHZ,	17492
206	AUTO	2	1326	W-6	AR	COLWICK	258.R-168.AMP X 10. ,TRACK 04,	22. KHZ,	17492
207	AUTO	1	1202	W-7	AV	COLWICK	RDS AMP X 26.1,TRACK 01,	30. KHZ,	012375
208	AUTO	3	1243	W-7	AT	COLWICK	255.R-255.AMP X 26.1,TRACK 01,	14.5 KHZ,	10499
209	AUTO	2	1238	W-7	AR	COLWICK	255.R-165.AMP X 26.1,TRACK 01,	22. KHZ,	10499
210	AUTO	1	1199	W-9 TOP	AV	COLWICK	20548/T1 AMP X 10. ,TRACK 03,	30. KHZ,	012375
211	AUTO	2	1254	W-9 TOP	AT	COLWICK	204.R-204.AMP X 10. ,TRACK 03,	14.5 KHZ,	12235
212	AUTO	2	1249	W-9 TOP	AR	COLWICK	204.R-114.AMP X 10. ,TRACK 03,	22. KHZ,	12235
213	AUTO	1	1198	W-9 BOTTOM	AV	COLWICK	20548/T1 AMP X 20.5,TRACK 03,	10.5 KHZ,	012375
214	AUTO	2	1253	W-9 BOTTOM	AT	COLWICK	204.R-204.AMP X 20.5,TRACK 03,	5.4 KHZ,	12235
215	AUTO	2	1248	W-9 BOTTOM	AR	COLWICK	204.R-114.AMP X 20.5,TRACK 03,	7.35 KHZ,	12235
216	AUTO	2	1407	W10	AV	COLWICK	RDS AMP X 1. ,TRACK 03,	10.5 KHZ,	**SCPEP
217	AUTO	3	1264	W10	AT	COLWICK	344.R-256.AMP X 1. ,TRACK 03,	5.4 KHZ,	12375
218	AUTO	3	1262	W10	AR	COLWICK	344.R-166.AMP X 1. ,TRACK 03,	7.35 KHZ,	12375
219	AUTO	2	1406	W10 TOP	AV	COLWICK	RDS AMP X 42. ,TRACK 03,	30. KHZ,	**SCPEP
220	AUTO	3	1261	W10 TOP	AT	COLWICK	256.R-256.AMP X 42. ,TRACK 03,	14.5 KHZ,	12375
221	AUTO	3	1260	W10 TOP	AR	COLWICK	256.R-166.AMP X 42. ,TRACK 03,	22. KHZ,	12375
222	AUTO	3	1405	W10 CASING	AV	COLWICK	RDS AMP X 42. ,TRACK 12,	30. KHZ,	**SCPEP
223	AUTO	1	1408	W10 BOTTOM	AV	COLWICK	RDS AMP X 51.1,TRACK 05,	10.5 KHZ,	**SCPEP
224	AUTO	2	1265	W10 BOTTOM	AT	COLWICK	185.R-256.AMP X 51.1,TRACK 05,	5.4 KHZ,	12375
225	AUTO	2	1263	W10 BOTTOM	AR	COLWICK	185.R-166.AMP X 51.1,TRACK 05,	7.35 KHZ,	12375
226	AUTO	1	1200	W11 TOP	AV	COLWICK	20548/T1 AMP X 26.1,TRACK 01,	30. KHZ,	012375
227	AUTO	2	1255	W11 TOP	AT	COLWICK	210.R-210.AMP X 26.1,TRACK 01,	14.5 KHZ,	12235
228	AUTO	2	1250	W11 TOP	AR	COLWICK	210.R-120.AMP X 26.1,TRACK 01,	22. KHZ,	12235
229	AUTO	1	1195	W11 BOTTOM	AV	COLWICK	20548/T1 AMP X 104.,TRACK 01,	3.9 KHZ,	012375
230	AUTO	3	1269	W11 BOTTOM	AT	COLWICK	274.R-210.AMP X 104.,TRACK 01,	2.3 KHZ,	12375
231	AUTO	2	1268	W11 BOTTOM	AR	COLWICK	274.R-120.AMP X 104.,TRACK 01,	3. KHZ,	12375
232	AUTO	1	1209	W13 TOP	AV	COLWICK	20548/T1 AMP X 5.04,TRACK 05,	70. KHZ,	012375
233	AUTO	2	1331	W13 TOP	AT	COLWICK	279.R-279.AMP X 5.04,TRACK 05,	40. KHZ,	17492
234	AUTO	2	1327	W13 TOP	AR	COLWICK	279.R-189.AMP X 5.04,TRACK 05,	52.5 KHZ,	17492
235	AUTO	1	1210	W13 BOTTOM	AV	COLWICK	20548/T1 AMP X 24.4,TRACK 05,	10.5 KHZ,	012375
236	AUTO	2	1247	W13 BOTTOM	AT	COLWICK	203.R-279.AMP X 24.4,TRACK 05,	5.4 KHZ,	10499
237	AUTO	2	1242	W13 BOTTOM	AR	COLWICK	203.R-189.AMP X 24.4,TRACK 05,	7.35 KHZ,	10499
238	AUTO	1	1196	W14	AV	COLWICK	RDS AMP X 20.5,TRACK 07,	30. KHZ,	012375
239	AUTO	2	1323	W14	AT	COLWICK	271.R-271.AMP X 20.5,TRACK 07,	14.5 KHZ,	17199
240	AUTO	2	1322	W14	AR	COLWICK	271.R-181.AMP X 20.5,TRACK 07,	22. KHZ,	17199
241	AUTO	1	1201	W15	AV	COLWICK	20548/T1 AMP X 10. ,TRACK 12,	30. KHZ,	012375
242	AUTO	2	1256	W15	AT	COLWICK	265.R-265.AMP X 10. ,TRACK 12,	14.5 KHZ,	12235
243	AUTO	2	1251	W15	AR	COLWICK	265.R-175.AMP X 10. ,TRACK 12,	22. KHZ,	12235
244	AUTO	1	1197	W16	AV	COLWICK	20548/T1 AMP X 26.1,TRACK 12,	10.5 KHZ,	012375
245	AUTO	2	1257	W16	AT	COLWICK	262.R-262.AMP X 26.1,TRACK 12,	5.4 KHZ,	12235
246	AUTO	2	1252	W16	AR	COLWICK	262.R-172.AMP X 26.1,TRACK 12,	7.35 KHZ,	12235
247	AUTO	1	1203	W17	AV	COLWICK	20548/T1 AMP X 4.2 ,TRACK 10,	10.5 KHZ,	012375
248	AUTO	2	1244	W17	AT	COLWICK	281.R-281.AMP X 4.2 ,TRACK 10,	5.4 KHZ,	10499
249	AUTO	2	1239	W17	AR	COLWICK	281.R-191.AMP X 4.2 ,TRACK 10,	7.35 KHZ,	10499
250	AUTO	1	1204	W18	AV	COLWICK	20548/T1 AMP X 5.11,TRACK 11,	10.5 KHZ,	012375

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
251	AUTO	2	1245	W18	AT		COLWICK	280.P-280.	AMP X 5.11,	TRACK 11, 5.4 KHZ,	10499
252	AUTO	2	1240	W18	AR		COLWICK	280.P-190.	AMP X 5.11,	TRACK 11, 7.35 KHZ,	10499
253	AUTO	1	1213	MINE MOUN	AV		COLWICK	20548/T1	AMP X 617.,	TRACK C4, 10.5 KHZ,	012375
254	AUTO	1	1212	MINE MOUN	AV		COLWICK	20548/T1	AMP X 617.,	TRACK C8, 10.5 KHZ,	012375
255	AUTO	1	1211	MINE MOUN	AV		COLWICK	20548/T1	AMP X 617.,	TRACK C2, 10.5 KHZ,	012375
256	AUTO	2	1319	MINE MOUN	AT		COLWICK	229.P-229.	AMP X 617.,	TRACK C2, 5.4 KHZ,	17199
257	AUTO	2	1320	MINE MOUN	AT		COLWICK	229.P-229.	AMP X 617.,	TRACK C8, 5.4 KHZ,	17199
258	AUTO	2	1321	MINE MOUN	AT		COLWICK	229.P-229.	AMP X 617.,	TRACK C4, 5.4 KHZ,	17199
259	AUTO	2	1316	MINE MOUN	AR		COLWICK	229.P-139.	AMP X 617.,	TRACK C2, 7.35 KHZ,	17199
260	AUTO	2	1318	MINE MOUN	AR		COLWICK	229.P-139.	AMP X 617.,	TRACK C4, 7.35 KHZ,	17199
261	AUTO	2	1317	MINE MOUN	AR		COLWICK	229.P-139.	AMP X 617.,	TRACK C8, 7.35 KHZ,	17199
262	AUTO	1	503	W-1	AV-HI		COULOMMIERS	220548/1			12972
263	AUTO	1	1132	W-1	AT-HI		COULOMMIERS	220548/1			12972
264	AUTO	1	1131	W-1	AR-HI		COULOMMIERS	220548/1			12972
265	AUTO	1	504	W-2	AV-LO		COULOMMIERS	220548/1			12972
266	AUTO	1	499	W-3	AV-LO		COULOMMIERS	220548/1			12184
267	AUTO	1	502	W-6 TOP	AV-LO		COULOMMIERS	220548/1			12971
268	AUTO	1	500	W-6 BOTTOM	AV-LO		COULOMMIERS	220548/1			12184
269	AUTO	1	501	W-6 BOTTOM	AV-HI		COULOMMIERS	220548/1			12184
270	AUTO	2	1095	W-3 TOP	AV		EMMENTHAL	20548/T1	AMP X 5.	,TRACK C8, 22. KHZ,	12437
271	ROTATE	2	520	W-3 TOP	AT		EMMENTHAL	198.18P	AMP X 5.	,TRACK C8, 10.5 KHZ,	10400
272	ROTATE	2	506	W-3 TOP	AR		EMMENTHAL	198.18R	AMP X 5.	,TRACK C8, 14.5 KHZ,	10396
273	AUTO	2	1094	W-3 BOTTOM	AV		EMMENTHAL	20548/T1	AMP X 10.	,TRACK C8, 52.5 KHZ,	12437
274	ROTATE	2	519	W-3 BOTTOM	AT		EMMENTHAL	198.18R	AMP X 10.	,TRACK C8, 30. KHZ,	10400
275	ROTATE	2	505	W-3 BOTTOM	AR		EMMENTHAL	198.18P	AMP X 10.	,TRACK C8, 40. KHZ,	10396
276	AUTO	3	1096	W-5	AV		EMMENTHAL	180693	AMP X 51.1,	TRACK C4, 22. KHZ,	12437
277	ROTATE	2	521	W-5	AT		EMMENTHAL	261.86R	AMP X 1.	,TRACK C4, 30. KHZ,	10400
278	ROTATE	3	507	W-5	AR		EMMENTHAL	261.86R	AMP X 51.1,	TRACK C4, 14.5 KHZ,	10396
279	AUTO	3	1097	W-5	AV		EMMENTHAL	180693	AMP X 51.1,	TRACK C2, 52.5 KHZ,	12437
280	ROTATE	3	1083	W-6	AT		EMMENTHAL	271.01P	AMP X 51.1,	TRACK C2, 30. KHZ,	10400
281	ROTATE	4	508	W-6	AR		EMMENTHAL	271.01R	AMP X 51.1,	TRACK C2, 40. KHZ,	10396
282	AUTO	4	1098	W-7	AV		EMMENTHAL	180693	AMP X 51.1,	TRACK C3, 52.5 KHZ,	12437
283	ROTATE	4	1084	W-7	AT		EMMENTHAL	270.11R	AMP X 51.1,	TRACK C3, 30. KHZ,	10400
284	ROTATE	4	509	W-7	AR		EMMENTHAL	270.11P	AMP X 51.1,	TRACK C3, 40. KHZ,	10396
285	AUTO	3	1099	W10	AV		EMMENTHAL	180693	AMP X 51.1,	TRACK C1, 52.5 KHZ,	12571
286	ROTATE	3	1085	W10	AT		EMMENTHAL	86.13R	AMP X 51.1,	TRACK C1, 30. KHZ,	10400
287	ROTATE	3	510	W10	AR		EMMENTHAL	86.13R	AMP X 51.1,	TRACK C1, 14.5 KHZ,	10396
288	AUTO	3	1126	W10 TOP	AV		EMMENTHAL	180693	AMP X 50.	,TRACK C1, 7.35 KHZ,	18397
289	ROTATE	3	1093	W10 TOP	AT		EMMENTHAL	268.63P	AMP X 50.	,TRACK C1, 2.3 KHZ,	10400
290	ROTATE	3	518	W10 TOP	AR		EMMENTHAL	268.63R	AMP X 50.	,TRACK C1, 3.9 KHZ,	10396
291	AUTO	2	1102	W11 TOP	AV		EMMENTHAL	20543/T2	AMP X 100.,	TRACK C1, 7.35 KHZ,	12571
292	ROTATE	2	1088	W11 TOP	AT		EMMENTHAL	223.63P	AMP X 100.,	TRACK C1, 2.3 KHZ,	10400
293	ROTATE	2	513	W11 TOP	AR		EMMENTHAL	223.63P	AMP X 100.,	TRACK C1, 3.9 KHZ,	10396
294	AUTO	3	1103	W11 BOTTOM	AV		EMMENTHAL	20549/T1	AMP X 51.1,	TRACK C1, 52.5 KHZ,	12660
295	ROTATE	3	1089	W11 BOTTOM	AT		EMMENTHAL	293.13P	AMP X 51.1,	TRACK C1, 14.5 KHZ,	10400
296	ROTATE	3	514	W11 BOTTOM	AR		EMMENTHAL	293.13R	AMP X 51.1,	TRACK C1, 30. KHZ,	10396
297	AUTO	2	1100	W13 TOP	AV		EMMENTHAL	140/865	AMP X 10.	,TRACK C8, 3.9 KHZ,	12571
298	ROTATE	2	1086	W13 TOP	AT		EMMENTHAL	307.37P	AMP X 10.	,TRACK C8, 2.3 KHZ,	10400
299	ROTATE	2	511	W13 TOP	AR		EMMENTHAL	307.37P	AMP X 10.	,TRACK C8, 3. KHZ,	10396
300	AUTO	3	1101	W14	AV		EMMENTHAL	180693	AMP X 51.1,	TRACK C9, 5.4 KHZ,	12571

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
301	ROTATE	2	1087	W14	AT	EMMENTHAL	283.77R AMP X 10.	,TRACK C9,	7.35 KHZ,	10400
302	ROTATE	3	512	W14	AR	EMMENTHAL	283.77R AMP X 51.1	,TRACK C9,	3.9 KHZ,	10396
303	AUTO	2	1104	W15	AV	EMMENTHAL	20548/T1 AMP X 20.5	,TRACK 12,	30. KHZ,	12660
304	ROTATE	2	1090	W15	AT	EMMENTHAL	284.25R AMP X 20.5	,TRACK 12,	14.5 KHZ,	10400
305	ROTATE	2	515	W15	AR	EMMENTHAL	284.25R AMP X 20.5	,TRACK 12,	22. KHZ,	10396
306	AUTO	2	1105	W17	AV	EMMENTHAL	20548/T1 AMP X 20.5	,TRACK 10,	10.5 KHZ,	12660
307	ROTATE	2	1091	W17	AT	EMMENTHAL	302.81R AMP X 20.5	,TRACK 10,	5.4 KHZ,	10400
308	ROTATE	2	516	W17	AR	EMMENTHAL	302.81R AMP X 20.5	,TRACK 10,	7.35 KHZ,	10396
309	AUTO	2	1106	W18	AV	EMMENTHAL	20548/T1 AMP X 20.5	,TRACK 11,	10.5 KHZ,	12660
310	ROTATE	2	1092	W18	AT	EMMENTHAL	298.79R AMP X 20.5	,TRACK 11,	5.4 KHZ,	10400
311	ROTATE	2	517	W18	AR	EMMENTHAL	298.79R AMP X 20.5	,TRACK 11,	7.35 KHZ,	10396
312	AUTO	1	1124	PNE-9	AV	EMMENTHAL	146/861 AMP X 1.	,TRACK C7,	7.35 KHZ,	18337
313	AUTO	1	1123	PNE-9	AV	EMMENTHAL	146/861 AMP X 20.5	,TRACK C7,	70. KHZ,	18337
314	AUTO	3	1114	PNE-9	AT	EMMENTHAL	3.R-259. AMP X 20.5	,TRACK C7,	40. KHZ,	17086
315	AUTO	2	1111	PNE-9	AR	EMMENTHAL	3.R-169. AMP X 1.	,TRACK C7,	5.4 KHZ,	17086
316	AUTO	1	1109	PNE-7	AV	EMMENTHAL	146/965 AMP X 10.	,TRACK C7,	22. KHZ,	13373
317	AUTO	2	1121	PNE-7	AT	EMMENTHAL	275.R- 8. AMP X 10.	,TRACK C7,	5.4 KHZ,	17086
318	AUTO	2	1118	PNE-7	AR	EMMENTHAL	275.R-278. AMP X 10.	,TRACK C7,	7.35 KHZ,	17086
319	AUTO	1	1108	PNE-5	AV	EMMENTHAL	146/865 AMP X 10.	,TRACK C3,	22. KHZ,	13373
320	AUTO	2	1120	PNE-5	AT	EMMENTHAL	11.R-288. AMP X 10.	,TRACK C3,	5.4 KHZ,	17086
321	AUTO	2	1117	PNE-5	AR	EMMENTHAL	11.R-198. AMP X 10.	,TRACK C3,	7.35 KHZ,	17086
322	AUTO	1	1110	PNE-4	AV	EMMENTHAL	146/865 AMP X 4.2	,TRACK C2,	14.5 KHZ,	13373
323	AUTO	2	1122	PNE-4	AT	EMMENTHAL	16.R-288. AMP X 4.2	,TRACK C2,	5.4 KHZ,	17086
324	AUTO	2	1119	PNE-4	AR	EMMENTHAL	16.R-198. AMP X 4.2	,TRACK C2,	7.35 KHZ,	17086
325	AUTO	1	1125	PNE-10	AV	EMMENTHAL	146/865 AMP X 10.	,TRACK C4,	22. KHZ,	18337
326	AUTO	2	1107	PNE-1	AV	EMMENTHAL	146/865 AMP X 2.05	,TRACK C1,	14.5 KHZ,	13373
327	AUTO	2	1115	PNE-10	AT	EMMENTHAL	18.R-335. AMP X 10.	,TRACK C4,	5.4 KHZ,	17086
328	AUTO	3	1116	PNE-1	AT	EMMENTHAL	336.R- 83. AMP X 2.05	,TRACK C1,	5.4 KHZ,	17086
329	AUTO	2	1112	PNE-10	AR	EMMENTHAL	18.R-245. AMP X 10.	,TRACK C4,	7.35 KHZ,	17086
330	AUTO	3	1113	PNE-1	AR	EMMENTHAL	336.R-353. AMP X 2.05	,TRACK C1,	7.35 KHZ,	17086
331	SPLINE	1	179	W-3 TOP	AV	FAJY	20548 AMP X 51.	,TRACK C6,	22. KHZ,	10338
332	ROTATE	1	175	W-3 TOP	AT	FAJY	105.54R AMP X 51.	,TRACK C6,	10.5 KHZ,	11769
333	ROTATE	1	165	W-3 TOP	AR	FAJY	105.54R AMP X 51.	,TRACK C6,	14.5 KHZ,	12906
334	AUTO	1	192	W-5	AV	FAJY	RDS AMP X 100.	,TRACK C3,	22. KHZ,	10339
335	AUTO	1	182	W-6	AV	FAJY	RDS AMP X 20.5	,TRACK C1,	7.35 KHZ,	13298
336	ROTATE	1	170	W-6	AT	FAJY	299.54R AMP X 10.	,TRACK C1,	10.5 KHZ,	11769
337	ROTATE	1	160	W-6	AR	FAJY	299.54R AMP X 20.5	,TRACK C1,	5.4 KHZ,	12906
338	AUTO	1	207	W-7	AV	FAJY	RDS AMP X 100.	,TRACK C2,	52.5 KHZ,	13294
339	ROTATE	1	193	W-7	AT	FAJY	301.50R AMP X 100.	,TRACK C2,	30. KHZ,	12019
340	ROTATE	1	198	W-7	AR	FAJY	301.50R AMP X 100.	,TRACK C2,	40. KHZ,	12019
341	AUTO	1	186	W-9 TOP	AV	FAJY	20548 AMP X 4.2	,TRACK C3,	22. KHZ,	13298
342	ROTATE	1	173	W-9 TOP	AT	FAJY	16.57R AMP X 4.2	,TRACK C3,	10.5 KHZ,	11769
343	ROTATE	1	163	W-9 TOP	AR	FAJY	16.57R AMP X 4.2	,TRACK C3,	14.5 KHZ,	12906
344	AUTO	1	185	W-9 BOTTOM	AV	FAJY	20548 AMP X 5.1	,TRACK C3,	7.35 KHZ,	13298
345	ROTATE	2	172	W-9 BOTTOM	AT	FAJY	16.57R AMP X 5.1	,TRACK C3,	3.9 KHZ,	11769
346	ROTATE	1	162	W-9 BOTTOM	AR	FAJY	16.57R AMP X 5.1	,TRACK C3,	5.4 KHZ,	12906
347	AUTO	1	187	W10	AV	FAJY	RDS AMP X 50.1	,TRACK C5,	30. KHZ,	10339
348	DIFF	6	538	W10	AT	FAJY	173.R-294. AMP X 50.1	,TRACK C5,	22. KHZ,	19273
349	DIFF	5	526	W10	AR	FAJY	173.R-204. AMP X 50.1	,TRACK C5,	14.5 KHZ,	19273
350	AUTO	1	184	W10 TOP	AV	FAJY	RDS AMP X 1.	,TRACK C5,	2.3 KHZ,	13298

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
351	AUTO	1	183	W10 TOP	AV		FAJY	RDS	AMP X 50.1,	TRACK C5, 70. KHZ,	13298
352	ROTATE	1	171	W10 TOP	AT		FAJY	293.55P	AMP X 50.1,	TRACK C5, 40. KHZ,	11769
353	ROTATE	1	161	W10 TOP	AR		FAJY	293.55P	AMP X 50.1,	TRACK C5, 52.5 KHZ,	12906
354	AUTO	1	189	W10 BOTTOM	AV		FAJY	RDS	AMP X 50.1,	TRACK C5, 10.5 KHZ,	10339
355	AUTO	1	191	W10 BOTTOM	AT		FAJY	RDS	AMP X 50.1,	TRACK C5, 5.4 KHZ,	10339
356	AUTO	1	190	W10 BOTTOM	AR		FAJY	RDS	AMP X 50.1,	TRACK C5, 7.35 KHZ,	10339
357	AUTO	1	204	W11 TOP	AV		FAJY	20548	AMP X 26.1,	TRACK C1, 7.35 KHZ,	13266
358	ROTATE	1	197	W11 TOP	AT		FAJY	276.56R	AMP X 26.1,	TRACK C1, 2.3 KHZ,	12019
359	ROTATE	1	202	W11 TOP	AR		FAJY	276.56R	AMP X 26.1,	TRACK C1, 3.9 KHZ,	12019
360	AUTO	1	203	W11 BOTTOM	AV		FAJY	20548	AMP X 10. ,	TRACK C1, 52.5 KHZ,	13266
361	ROTATE	1	196	W11 BOTTOM	AT		FAJY	340.06P	AMP X 10. ,	TRACK C1, 14.5 KHZ,	12019
362	ROTATE	1	201	W11 BOTTOM	AR		FAJY	340.06R	AMP X 10. ,	TRACK C1, 30. KHZ,	12019
363	AUTO	1	209	W13 TOP	AV		FAJY	20548	AMP X 100.,	TRACK C5, 7.35 KHZ,	13294
364	ROTATE	1	195	W13 TOP	AT		FAJY	358.07R	AMP X 100.,	TRACK C5, 2.3 KHZ,	12019
365	ROTATE	1	200	W13 TOP	AR		FAJY	358.07R	AMP X 100.,	TRACK C5, 3.9 KHZ,	12019
366	AUTO	1	208	W13 BOTTOM	AV		FAJY	20548	AMP X 100.,	TRACK C5, 52.5 KHZ,	13294
367	ROTATE	1	194	W13 BOTTOM	AT		FAJY	358.07R	AMP X 100.,	TRACK C5, 14.5 KHZ,	12019
368	ROTATE	1	199	W13 BOTTOM	AR		FAJY	358.07R	AMP X 100.,	TRACK C5, 30. KHZ,	12019
369	AUTO	1	188	W14	AV		FAJY	RDS	AMP X 104.,	TRACK C7, 5.4 KHZ,	10339
370	AUTO	1	180	W15	AV		FAJY	20548	AMP X 100.,	TRACK 12, 30. KHZ,	10338
371	ROTATE	1	176	W15	AT		FAJY	327.11P	AMP X 100.,	TRACK 12, 14.5 KHZ,	11769
372	ROTATE	1	166	W15	AR		FAJY	327.11P	AMP X 100.,	TRACK 12, 22. KHZ,	12906
373	AUTO	2	178	W16	AV		FAJY	20548	AMP X 100.,	TRACK 12, 10.5 KHZ,	10338
374	ROTATE	3	174	W16	AT		FAJY	323.48R	AMP X 100.,	TRACK 12, 5.4 KHZ,	11769
375	ROTATE	2	164	W16	AR		FAJY	323.48R	AMP X 100.,	TRACK 12, 7.35 KHZ,	12906
376	AUTO	1	181	W17	AV		FAJY	20548	AMP X 100.,	TRACK 10, 10.5 KHZ,	10338
377	ROTATE	1	177	W17	AT		FAJY	349.16R	AMP X 100.,	TRACK 10, 5.4 KHZ,	11769
378	ROTATE	1	167	W17	AR		FAJY	349.16R	AMP X 100.,	TRACK 10, 7.35 KHZ,	12906
379	AUTO	1	205	W18	AV		FAJY	20548	AMP X 100.,	TRACK 11, 10.5 KHZ,	13266
380	ROTATE	1	158	W18	AT		FAJY	341.25P	AMP X 100.,	TRACK 11, 5.4 KHZ,	11769
381	ROTATE	1	158	W18	AR		FAJY	341.25R	AMP X 100.,	TRACK 11, 7.35 KHZ,	12906
382	AUTO	2	1012	PNE-9	AV		FAJY	20548	AMP X 26.1,	TRACK C7, 7.35 KHZ,	13114
383	AUTO	1	206	MINE MOUN	AV		FAJY	20548	AMP X 617.,	TRACK C9, 5.4 KHZ,	13266
384	ROTATE	1	169	MINE MOUN	AT		FAJY	286.63R	AMP X 617.,	TRACK C9, 10.5 KHZ,	11769
385	ROTATE	1	159	MINE MOUN	AR		FAJY	286.63R	AMP X 617.,	TRACK C9, 7.35 KHZ,	12906
386	AUTO	2	424	W-3 TOP	AV		FARM	20548/T1	AMP X 50. ,	TRACK C6, 22. KHZ,	13372
387	ROTATE	2	446	W-3 TOP	AT		FARM	189.67R	AMP X 50. ,	TRACK C6, 10.5 KHZ,	12465
388	ROTATE	2	434	W-3 TOP	AR		FARM	189.67R	AMP X 50. ,	TRACK C6, 14.5 KHZ,	11768
389	AUTO	1	421	W-3 BOTTOM	AV		FARM	20548/T1	AMP X 50. ,	TRACK C6, 7.35 KHZ,	13372
390	ROTATE	1	443	W-3 BOTTOM	AT		FARM	189.67R	AMP X 50. ,	TRACK C6, 3.9 KHZ,	12465
391	ROTATE	1	431	W-3 BOTTOM	AR		FARM	189.67R	AMP X 50. ,	TRACK C6, 5.4 KHZ,	11768
392	AUTO	1	775	W-5	AV		FARM	RDS/693	AMP X 51.1,	TRACK C3, 22. KHZ,	17621
393	ROTATE	1	331	W-5	AT		FARM	251.47R	AMP X 51.1,	TRACK C3, 10.5 KHZ,	12064
394	ROTATE	1	327	W-5	AR		FARM	251.47R	AMP X 51.1,	TRACK C3, 14.5 KHZ,	12064
395	AUTO	2	773	W-6	AV		FARM	RDS/693	AMP X 20.5,	TRACK C1, 52.5 KHZ,	17621
396	ROTATE	2	447	W-6	AT		FARM	259.46R	AMP X 20.5,	TRACK C1, 30. KHZ,	12465
397	ROTATE	1	435	W-6	AR		FARM	259.46R	AMP X 20.5,	TRACK C1, 40. KHZ,	11768
398	AUTO	2	774	W-7	AV		FARM	RDS/693	AMP X 51.1,	TRACK C2, 52.5 KHZ,	17621
399	ROTATE	1	448	W-7	AT		FARM	257.59P	AMP X 1. ,	TRACK C2, 10.5 KHZ,	12465
400	ROTATE	1	436	W-7	AR		FARM	257.59R	AMP X 51.1,	TRACK C2, 40. KHZ,	11768

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
401	AUTO	2	313	W-9 TOP	AV		FARM	20548/T1 AMP X 10.	,TRACK 03,	22. KHZ,	17805
402	ROTATE	2	440	W-9 TOP	AT		FARM	211.84R AMP X 10.	,TRACK 03,	10.5 KHZ,	12465
403	ROTATE	2	428	W-9 TOP	AR		FARM	211.84R AMP X 20.5	,TRACK 03,	14.5 KHZ,	11768
404	AUTO	2	314	W-9 BOTTOM	AV		FARM	20548/T1 AMP X 10.	,TRACK 03,	7.35 KHZ,	17805
405	ROTATE	2	441	W-9 BOTTOM	AT		FARM	211.84R AMP X 10.	,TRACK 03,	7.9 KHZ,	12465
406	ROTATE	2	429	W-9 BOTTOM	AR		FARM	211.84R AMP X 10.	,TRACK 03,	5.4 KHZ,	11768
407	AUTO	1	335	W10	AV		FARM	RDS/693 AMP X 26.1	,TRACK 04,	52.5 KHZ,	19733
408	DIFF	5	534	W10	AT		FARM	138.R-258. AMP X 26.1	,TRACK 04,	30. KHZ,	19273
409	DIFF	5	522	W10	AR		FARM	138.R-168. AMP X 26.1	,TRACK 04,	14.5 KHZ,	19273
410	AUTO	1	319	W10 TOP	AV		FARM	RDS/693 AMP X 20.5	,TRACK 04,	7.35 KHZ,	16824
411	ROTATE	1	439	W10 TOP	AT		FARM	258.18R AMP X 20.5	,TRACK 04,	2.3 KHZ,	12465
412	ROTATE	1	427	W10 TOP	AR		FARM	258.18R AMP X 20.5	,TRACK 04,	3.9 KHZ,	11768
413	AUTO	1	326	W10 BOTTOM	AV		FARM	RDS/693 AMP X 5.	,TRACK 05,	30. KHZ,	16824
414	AUTO	2	341	W10 BOTTOM	AT		FARM	187.R-258. AMP X 24.4	,TRACK 05,	5.4 KHZ,	16634
415	AUTO	2	342	W10 BOTTOM	AR		FARM	187.R-168. AMP X 24.4	,TRACK 05,	7.35 KHZ,	16634
416	AUTO	2	337	W11 TOP	AV		FARM	20548/T1 AMP X 100.	,TRACK 01,	7.35 KHZ,	19733
417	ROTATE	2	334	W11 TOP	AT		FARM	214.96R AMP X 100.	,TRACK 01,	2.3 KHZ,	12064
418	ROTATE	2	330	W11 TOP	AR		FARM	214.96R AMP X 100.	,TRACK 01,	3.9 KHZ,	12064
419	AUTO	2	336	W11 BOTTOM	AV		FARM	20548/T1 AMP X 42.	,TRACK 01,	52.5 KHZ,	19733
420	ROTATE	2	333	W11 BOTTOM	AT		FARM	278.46R AMP X 42.	,TRACK 01,	14.5 KHZ,	12064
421	ROTATE	2	329	W11 BOTTOM	AR		FARM	278.46R AMP X 42.	,TRACK 01,	30. KHZ,	12064
422	AUTO	2	339	W13 TOP	AV		FARM	65 AMP X 2.05	,TRACK 03,	3.9 KHZ,	16634
423	ROTATE	2	438	W13 TOP	AT		FARM	281.09R AMP X 2.05	,TRACK 03,	2.3 KHZ,	12465
424	ROTATE	3	426	W13 TOP	AR		FARM	281.09R AMP X 2.05	,TRACK 03,	3. KHZ,	11768
425	AUTO	1	315	W14	AV		FARM	RDS/693 AMP X 26.1	,TRACK 07,	5.4 KHZ,	17805
426	ROTATE	3	442	W14	AT		FARM	272.31R AMP X -5.1	,TRACK 07,	7.35 KHZ,	12465
427	ROTATE	1	430	W14	AR		FARM	272.31R AMP X 26.1	,TRACK 07,	3.9 KHZ,	11768
428	AUTO	1	422	W15	AV		FARM	20548/T1 AMP X 10.	,TRACK 12,	30. KHZ,	13372
429	ROTATE	1	444	W15	AT		FARM	267.37R AMP X 10.	,TRACK 12,	14.5 KHZ,	12465
430	ROTATE	1	432	W15	AR		FARM	267.37R AMP X 10.	,TRACK 12,	22. KHZ,	11768
431	AUTO	1	423	W16	AV		FARM	20548/T1 AMP X 10.	,TRACK 12,	10.5 KHZ,	13372
432	ROTATE	1	445	W16	AT		FARM	264.22R AMP X 10.	,TRACK 12,	5.4 KHZ,	12465
433	ROTATE	1	433	W16	AR		FARM	264.22R AMP X 10.	,TRACK 12,	7.35 KHZ,	11768
434	AUTO	1	776	W17	AV		FARM	20548/T1 AMP X 5.11	,TRACK 10,	10.5 KHZ,	17621
435	ROTATE	1	332	W17	AT		FARM	281.99R AMP X 5.11	,TRACK 10,	5.4 KHZ,	12064
436	ROTATE	1	328	W17	AR		FARM	281.99R AMP X 5.11	,TRACK 10,	7.35 KHZ,	12064
437	AUTO	1	338	W18	AV		FARM	20548/T1 AMP X 4.2	,TRACK 11,	10.5 KHZ,	16634
438	ROTATE	1	437	W18	AT		FARM	281.16R AMP X 4.2	,TRACK 11,	5.4 KHZ,	12465
439	ROTATE	1	425	W18	AR		FARM	281.16R AMP X 4.2	,TRACK 11,	7.35 KHZ,	11768
440	AUTO	2	790	PNE-9	AV		FARM	20548/T1 AMP X 10.	,TRACK 09,	30. KHZ,	19664
441	AUTO	2	789	PNE-9	AV		FARM	20548/T1 AMP X 20.5	,TRACK 09,	70. KHZ,	19664
442	AUTO	2	771	JRB-8	AV		FARM	65 AMP X 2.05	,TRACK 11,	22. KHZ,	15313
443	AUTO	2	770	JRB-8	AT		FARM	65 AMP X 2.05	,TRACK 11,	3. KHZ,	15313
444	AUTO	2	769	JRB-8	AR		FARM	65 AMP X 2.05	,TRACK 11,	3.9 KHZ,	15313
445	SPLINE	1	782	JRB-7	AV		FARM	65 AMP X 2.05	,TRACK 10,	22. KHZ,	19663
446	SPLINE	2	779	JRB-7	AR		FARM	65 AMP X 2.05	,TRACK 10,	7.35 KHZ,	19663
447	SPLINE	2	788	JRB-6	AT		FARM	65 AMP X 1.	,TRACK 09,	30. KHZ,	19663
448	SPLINE	1	784	JRB-6	AT		FARM	65 AMP X 2.05	,TRACK 09,	5.4 KHZ,	19663
449	SPLINE	1	787	JRB-6	AR		FARM	65 AMP X 2.05	,TRACK 09,	7.35 KHZ,	19663
450	AUTO	2	768	JRB-4	AV		FARM	65 AMP X 1.	,TRACK 07,	52.5 KHZ,	15313

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT		AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
451	AUTO	2	772	JRB-4	AV		FARM	65	AMP X 2.05,	TRACK C7,	14.5 KHZ,	15313
452	AUTO	2	768	JRB-4	AT		FARM	65	AMP X 1. ,	TRACK C7,	22. KHZ,	15313
453	SPLINE	2	778	JRB-4	AT		FARM	65	AMP X 2.05,	TRACK C7,	5.4 KHZ,	19663
454	AUTO	2	767	JRB-4	AR		FARM	65	AMP X 1. ,	TRACK C7,	40. KHZ,	15313
455	SPLINE	2	777	JRB-4	AR		FARM	65	AMP X 2.05,	TRACK C7,	7.35 KHZ,	19663
456	SPLINE	1	781	JRB-3	AT		FARM	65	AMP X 2.05,	TRACK C5,	5.4 KHZ,	19663
457	SPLINE	1	787	JRB-3	AR		FARM	65	AMP X 1. ,	TRACK C5,	40. KHZ,	19663
458	SPLINE	1	786	JRB-3	AR		FARM	65	AMP X 2.05,	TRACK C5,	7.35 KHZ,	19663
459	SPLINE	1	780	JRB-1	AT		FARM	65	AMP X 1. ,	TRACK C4,	30. KHZ,	19663
460	SPLINE	1	785	JRB-1	AR		FARM	65	AMP X 1. ,	TRACK C4,	40. KHZ,	19663
461	AUTO	2	316	D	AV		FARM	RDS/693	AMP X 26.1,	TRACK C6,	5.4 KHZ,	17805
462	AUTO	1	318	D	AT		FARM	RDS/693	AMP X 26.1,	TRACK C6,	3. KHZ,	17805
463	AUTO	1	317	D	AR		FARM	RDS/693	AMP X 26.1,	TRACK C6,	3.9 KHZ,	17805
464	AUTO	1	324	B	AV		FARM	RDS/693	AMP X 26.1,	TRACK C9,	5.4 KHZ,	16824
465	AUTO	1	323	B	AT		FARM	RDS/693	AMP X 26.1,	TRACK C9,	3. KHZ,	16824
466	AUTO	1	325	B	AR		FARM	RDS/693	AMP X 26.1,	TRACK C9,	3.9 KHZ,	16824
467	AUTO	1	320	A	AV		FARM	RDS/693	AMP X 26.1,	TRACK C8,	22. KHZ,	16824
468	AUTO	1	322	A	AT		FARM	RDS/693	AMP X 26.1,	TRACK C8,	10.5 KHZ,	16824
469	AUTO	2	321	A	AR		FARM	RDS/693	AMP X -5.1,	TRACK C8,	14.5 KHZ,	16824
470	AUTO	2	1013	W-2	AV		FONDUTTA		AMP X 5. ,	TRACK C7,	52.5 KHZ,	01408
471	AUTO	3	908	W-2	AT		FONDUTTA	241.R-241.	AMP X 5. ,	TRACK C7,	30. KHZ,	17618
472	AUTO	3	904	W-2	AR		FONDUTTA	241.R-151.	AMP X 5. ,	TRACK C7,	40. KHZ,	17618
473	AUTO	3	1015	W-3 TOP	AV		FONDUTTA		AMP X 5. ,	TRACK C8,	22. KHZ,	01408
474	AUTO	5	910	W-3 TOP	AT		FONDUTTA	199.R-199.	AMP X 5. ,	TRACK C8,	10.5 KHZ,	17618
475	AUTO	5	906	W-3 TOP	AR		FONDUTTA	199.R-109.	AMP X 5. ,	TRACK C8,	14.5 KHZ,	17618
476	AUTO	3	1014	W-3 BOTTOM	AV		FONDUTTA		AMP X 4.2 ,	TRACK C8,	52.5 KHZ,	01408
477	AUTO	4	909	W-3 BOTTOM	AT		FONDUTTA	199.R-199.	AMP X 4.2 ,	TRACK C8,	30. KHZ,	17618
478	AUTO	4	905	W-3 BOTTOM	AR		FONDUTTA	199.R-109.	AMP X 4.2 ,	TRACK C8,	40. KHZ,	17618
479	AUTO	4	901	W-4 TOP	AV		FONDUTTA	20548/T1	AMP X 5. ,	TRACK C1,	7.35 KHZ,	17388
480	AUTO	5	1035	W-4 TOP	AT		FONDUTTA	329.R-236.	AMP X 5. ,	TRACK C1,	3.9 KHZ,	15362
481	AUTO	5	1033	W-4 TOP	AR		FONDUTTA	329.R-146.	AMP X 5. ,	TRACK C1,	2.3 KHZ,	15362
482	AUTO	3	1016	W-4 BOTTOM	AV		FONDUTTA		AMP X 5. ,	TRACK C1,	52.5 KHZ,	01408
483	AUTO	4	911	W-4 BOTTOM	AT		FONDUTTA	329.R-236.	AMP X 5. ,	TRACK C1,	30. KHZ,	17618
484	AUTO	4	907	W-4 BOTTOM	AR		FONDUTTA	329.R-146.	AMP X 5. ,	TRACK C1,	14.5 KHZ,	17618
485	DIFF	3	1036	W-5	AV		FONDUTTA		AMP X 10. ,	TRACK C6,	52.5 KHZ,	15362
486	AUTO	3	912	W-5	AT		FONDUTTA	259.R-259.	AMP X 10. ,	TRACK C6,	30. KHZ,	17618
487	AUTO	3	913	W-6	AT		FONDUTTA	268.R-268.	AMP X 10. ,	TRACK C2,	30. KHZ,	17618
488	AUTO	3	914	W-7	AT		FONDUTTA	267.R-267.	AMP X 10. ,	TRACK C5,	30. KHZ,	17618
489	AUTO	4	902	W-8 TOP	AV		FONDUTTA	20548/T1	AMP X 5. ,	TRACK C3,	52.5 KHZ,	17388
490	AUTO	6	1040	W-8 TOP	AT		FONDUTTA	239.R-239.	AMP X 5. ,	TRACK C3,	30. KHZ,	15362
491	AUTO	5	1039	W-8 TOP	AR		FONDUTTA	239.R-149.	AMP X 5. ,	TRACK C3,	40. KHZ,	15362
492	AUTO	3	903	W-8 BOTTOM	AV		FONDUTTA	AMP X 100.		TRACK C6,	7.35 KHZ,	17388
493	AUTO	4	1027	W-8 BOTTOM	AT		FONDUTTA	161.R-239.		TRACK C6,	3.9 KHZ,	12995
494	AUTO	•	1025	W-8 BOTTOM	AR		FONDUTTA	161.R-149.		TRACK C6,	5.4 KHZ,	12995
495	AUTO	2	1018	W-9 TOP	AV		FONDUTTA		AMP X 2.05,	TRACK C4,	22. KHZ,	03893
496	AUTO	3	897	W-9 TOP	AT		FONDUTTA	233.R-233.	AMP X 2.05,	TRACK C4,	10.5 KHZ,	17308
497	AUTO	3	893	W-9 TOP	AR		FONDUTTA	233.R-143.	AMP X 2.05,	TRACK C4,	14.5 KHZ,	17308
498	AUTO	2	1017	W-9 BOTTOM	AV		FONDUTTA		AMP X 2.05,	TRACK C4,	52.5 KHZ,	03893
499	AUTO	3	896	W-9 BOTTOM	AT		FONDUTTA	233.R-233.	AMP X 2.05,	TRACK C4,	30. KHZ,	17308
500	AUTO	3	892	W-9 BOTTOM	AR		FONDUTTA	233.R-143.	AMP X 2.05,	TRACK C4,	40. KHZ,	17308

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT		AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
501	AUTO	2	1019	W10	AV	FONDUTTA	RDS/VAN	AMP X 10.	,TRACK C7,	52.5 KHZ,	03893
502	AUTO	5	898	W10	AT	FONDUTTA	354,R-266,	AMP X-10.	,TRACK C7,	14.5 KHZ,	17308
503	AUTO	4	894	W10	AR	FONDUTTA	354,R-176,	AMP X 10.	,TRACK C7,	30. KHZ,	17308
504	AUTO	2	1020	W10 TOP	AV	FONDUTTA	RDS/VAN	AMP X 10.	,TRACK C7,	7.35 KHZ,	03893
505	AUTO	3	899	W10 TOP	AT	FONDUTTA	266,R-266,	AMP X 10.	,TRACK C7,	2.3 KHZ,	17308
506	AUTO	5	895	W10 TOP	AR	FONDUTTA	266,R-176,	AMP X 10.	,TRACK C7,	3.9 KHZ,	17308
507	AUTO	2	1022	W10 BOTTOM	AV	FONDUTTA	AMP X 205,	RDS/VAN	,TRACK C4,	7.35 KHZ	12995
508	AUTO	3	1023	W10 BOTTOM	AV	FONDUTTA	RDA/VAN	AMP X 1.	,TRACK C4,	52.5 KHZ,	12995
509	AUTO	2	1028	W10 BOTTOM	AV	FONDUTTA	AMP X 20.5	MLTD -1.	,TRACK C4,	22. KHZ	12995
510	AUTO	3	1026	W10 BOTTOM	AT	FONDUTTA	195,R-266,	MLTD -1.	,TRACK C4,	10.5 KHZ	12995
511	AUTO	3	1024	W10 BOTTOM	AR	FONDUTTA	195,R-176,	MLTD -1.	,TRACK C4,	14.5 KHZ	12995
512	AUTO	2	1021	W11 TOP	AV	FONDUTTA		AMP X 42.	,TRACK C2,	7.35 KHZ,	03893
513	AUTO	3	1038	W11 TOP	AT	FONDUTTA	227,R-227,	AMP X 1.	,TRACK C2,	3.0 KHZ,	15362
514	AUTO	3	1037	W11 TOP	AR	FONDUTTA	227,R-137,	AMP X 42.	,TRACK C2,	3.9 KHZ,	15362
515	AUTO	4	902	W11 BOTTOM	AV	FONDUTTA	20548/T1	AMP X 10.	,TRACK C2,	52.5 KHZ,	17388
516	AUTO	5	1034	W11 BOTTOM	AT	FONDUTTA	291,R-227,	AMP X 10.	,TRACK C2,	14.5 KHZ,	15362
517	AUTO	6	1032	W11 BOTTOM	AR	FONDUTTA	291,R-137,	AMP X 10.	,TRACK C2,	30. KHZ,	15362
518	AUTO	1	1030	PNE-9	AV-LO	FONDUTTA		20548/T1			13520
519	AUTO	3	1031	PNE-9	AT-HI	FONDUTTA	20548/T1	AMP X 1.	,TRACK ,	KHZ,	13520
520	AUTO	1	1029	PNE-9	AR-HI	FONDUTTA		20548/T1			13520
521	UNPACK	1	921	PNE-8	AV-HI	FONDUTTA		14G/865			17926
522	UNPACK	1	923	PNE-8	AT-HI	FONDUTTA		14G/865			17926
523	UNPACK	1	922	PNE-8	AR-HI	FONDUTTA		14G/865			17926
524	UNPACK	1	918	PNE-7	AV-LO	FONDUTTA		14G/865			17926
525	UNPACK	1	920	PNE-7	AT-HI	FONDUTTA		14G/865			17926
526	UNPACK	1	919	PNE-7	AR-HI	FONDUTTA		14G/865			17926
527	UNPACK	1	915	PNE-6	AV-HI	FONDUTTA		14G/865			17926
528	UNPACK	1	917	PNE-6	AT-HI	FONDUTTA		14G/865			17926
529	UNPACK	1	916	PNE-6	AR-HI	FONDUTTA		14G/865			17926
530	UNPACK	1	945	PNE-5	AV-LO	FONDUTTA		14G/865			18131
531	UNPACK	1	944	PNE-5	AT-HI	FONDUTTA		14G/865			18131
532	UNPACK	1	946	PNE-5	AR-LO	FONDUTTA		14G/865			18131
533	UNPACK	1	941	PNE-4	AV-HI	FONDUTTA		14G/865			18131
534	UNPACK	1	943	PNE-4	AT-HI	FONDUTTA		14G/865			18131
535	UNPACK	1	942	PNE-4	AR-HI	FONDUTTA		14G/865			18131
536	UNPACK	1	953	PNE-3	AV-LO	FONDUTTA		14G/865			18131
537	UNPACK	1	954	PNE-3	AT-HI	FONDUTTA		14G/865			18131
538	AUTO	1	949	PNE-2	AV-HI	FONDUTTA		14G/865			18131
539	UNPACK	1	948	PNE-2	AT-HI	FONDUTTA		14G/865			18131
540	UNPACK	1	947	PNE-2	AR-HI	FONDUTTA		14G/865			18131
541	UNPACK	1	950	PNE-1	AV-HI	FONDUTTA		14G/865			18131
542	UNPACK	1	952	PNE-1	AT-HI	FONDUTTA		14G/865			18131
543	UNPACK	1	951	PNE-1	AR-HI	FONDUTTA		14G/865			18131
544	UNPACK	1	889	CD-3	AV	FONDUTTA		14G/865			16298
545	UNPACK	1	891	CD-3	AT	FONDUTTA		14G/865			16298
546	UNPACK	1	890	CD-3	AR	FONDUTTA		14G/865			16298
547	DIFF	1	961	0-25NTS	UV	HANDLEY		NTS			15990
548	DIFF	1	962	0-25NTS	UT	HANDLEY		NTS			15990
549	DIFF	1	963	0-25NTS	UR	HANDLEY		NTS			15990
550	DIFF	1	959	CP-1 NTS	UV	HANDLEY		NTS			15990

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
551	DIFF	1	956	CP-1 NTS	UT		HANDLEY	NTS			15990
552	DIFF	1	957	CP-1 NTS	UR		HANDLEY	NTS			15990
553	DIFF	1	958	CP-17NTS	UV		HANDLEY	NTS			15990
554	DIFF	1	959	CP-17NTS	UT		HANDLEY	NTS			15990
555	DIFF	1	960	CP-17NTS	UR		HANDLEY	NTS			15990
556	AUTO	1	388	W-3 TOP	AV		HEARTS	20548/T1	AMP X 10.	,TRACK 06,	22. KHZ, 16993
557	ROTATE	2	378	W-3 TOP	AT		HEARTS	87.64R	AMP X 10.	,TRACK 06,	10.5 KHZ, 13440
558	ROTATE	2	371	W-3 TOP	AR		HEARTS	87.64R	AMP X 10.	,TRACK 06,	14.5 KHZ, 13440
559	AUTO	1	389	W-3 BOTTOM	AV		HEARTS	20548/T1	AMP X 10.	,TRACK 06,	7.35 KHZ, 16993
560	ROTATE	2	379	W-3 BOTTOM	AT		HEARTS	87.64R	AMP X 10.	,TRACK 06,	3.9 KHZ, 13440
561	ROTATE	2	372	W-3 BOTTOM	AR		HEARTS	87.64R	AMP X 10.	,TRACK 06,	5.4 KHZ, 13440
562	AUTO	2	714	W-5	AV		HEARTS	RDS/T1	AMP X 26.1	,TRACK 03,	22. KHZ, 12729
563	ROTATE	2	82	W-5	AT		HEARTS	293.09R	AMP X 26.1	,TRACK 03,	10.5 KHZ, 13170
564	ROTATE	3	78	W-5	AR		HEARTS	293.09R	AMP X 26.1	,TRACK 03,	14.5 KHZ, 13170
565	AUTO	1	715	W-6	AV		HEARTS	RDS/T1	AMP X 26.1	,TRACK 04,	7.35 KHZ, 12729
566	ROTATE	2	84	W-6	AT		HEARTS	308.57R	AMP X 26.1	,TRACK 04,	3.9 KHZ, 13170
567	ROTATE	2	79	W-6	AR		HEARTS	308.57R	AMP X 26.1	,TRACK 04,	5.4 KHZ, 13170
568	AUTO	2	717	W-7	AV		HEARTS	RDS/T1	AMP X 26.1	,TRACK 01,	52.5 KHZ, 12749
569	ROTATE	3	85	W-7	AT		HEARTS	311.71R	AMP X 26.1	,TRACK 01,	30. KHZ, 13170
570	ROTATE	3	81	W-7	AR		HEARTS	311.71R	AMP X 26.1	,TRACK 01,	40. KHZ, 13170
571	SPLINE	1	242	W-9 TOP	AV		HEARTS	20548/T1	AMP X 10.	,TRACK 03,	22. KHZ, 13309
572	ROTATE	2	73	W-9 TOP	AT		HEARTS	33.71R	AMP X 10.	,TRACK 03,	10.5 KHZ, 12721
573	ROTATE	2	69	W-9 TOP	AR		HEARTS	33.71R	AMP X 10.	,TRACK 03,	14.5 KHZ, 12721
574	AUTO	1	76	W-9 BOTTOM	AV		HEARTS	20548/T1	AMP X 10.	,TRACK 03,	7.35 KHZ, 12979
575	ROTATE	2	383	W-9 BOTTOM	AT		HEARTS	33.71R	AMP X 10.	,TRACK 03,	3.9 KHZ, 13440
576	ROTATE	2	376	W-9 BOTTOM	AR		HEARTS	33.71R	AMP X 10.	,TRACK 03,	5.4 KHZ, 13440
577	AUTO	2	241	W10	AV		HEARTS	RDS/T1	AMP X 50.1	,TRACK 05,	30. KHZ, 13309
578	DIFF	5	541	W10	AT		HEARTS	181.R-301.	AMP X 50.1	,TRACK 05,	22. KHZ, 19273
579	DIFF	5	529	W10	AR		HEARTS	181.R-211.	AMP X 50.1	,TRACK 05,	14.5 KHZ, 19273
580	AUTO	1	716	W10 TOP	AV		HEARTS	RDS/T1	AMP X 1.	,TRACK 05,	2.3 KHZ, 12749
581	AUTO	1	390	W10 TOP	AV		HEARTS	RDS/T1	AMP X 50.1	,TRACK 05,	70. KHZ, 16993
582	AUTO	3	83	W10 TOP	AT		HEARTS	301.R-301.	AMP X 50.1	,TRACK 05,	40. KHZ, 13170
583	AUTO	3	80	W10 TOP	AR		HEARTS	301.R-211.	AMP X 50.1	,TRACK 05,	52.5 KHZ, 13170
584	AUTO	1	92	W10 BOTTOM	AV		HEARTS	RDS/T1	AMP X 50.1	,TRACK 05,	10.5 KHZ, 13286
585	AUTO	1	240	W10 BOTTOM	AT		HEARTS	RDS/T1	AMP X 50.1	,TRACK 05,	5.4 KHZ, 13309
586	AUTO	1	239	W10 BOTTOM	AR		HEARTS	RDS/T1	AMP X 50.1	,TRACK 05,	7.35 KHZ, 13309
587	AUTO	2	88	W11 TOP	AV		HEARTS	20548/T1	AMP X 1.	,TRACK 01,	10.5 KHZ, 13286
588	ROTATE	3	70	W11 TOP	AT		HEARTS	11.63R	AMP X 1.	,TRACK 01,	3. KHZ, 12721
589	ROTATE	3	66	W11 TOP	AR		HEARTS	11.63R	AMP X 1.	,TRACK 01,	5.4 KHZ, 12721
590	AUTO	1	91	W11 BOTTOM	AV		HEARTS	20548/T1	AMP X 2.05	,TRACK 01,	52.5 KHZ, 13286
591	AUTO	3	87	W11 BOTTOM	AT		HEARTS	75.R- 12.	AMP X 2.05	,TRACK 01,	14.5 KHZ, 13170
592	AUTO	3	86	W11 BOTTOM	AR		HEARTS	75.R-282.	AMP X 2.05	,TRACK 01,	30. KHZ, 13170
593	AUTO	1	74	W13 TOP	AV		HEARTS	20548/T1	AMP X 26.1	,TRACK 05,	7.35 KHZ, 12979
594	ROTATE	2	381	W13 TOP	AT		HEARTS	8.20R	AMP X 26.1	,TRACK 05,	2.3 KHZ, 13440
595	ROTATE	2	374	W13 TOP	AR		HEARTS	8.20R	AMP X 26.1	,TRACK 05,	3.9 KHZ, 13440
596	AUTO	1	391	W13 BOTTOM	AV		HEARTS	20548/T1	AMP X 26.1	,TRACK 05,	52.5 KHZ, 16993
597	ROTATE	2	380	W13 BOTTOM	AT		HEARTS	292.20R	AMP X 26.1	,TRACK 05,	14.5 KHZ, 13440
598	ROTATE	2	373	W13 BOTTOM	AR		HEARTS	292.20R	AMP X 26.1	,TRACK 05,	30. KHZ, 13440
599	AUTO	1	75	W14	AV		HEARTS	RDS/T1	AMP X 20.5	,TRACK 07,	22. KHZ, 12979
600	ROTATE	2	382	W14	AT		HEARTS	321.91R	AMP X 20.5	,TRACK 07,	7.35 KHZ, 13440

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT		AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
601	ROTATE	2	375	W14	AR	HEARTS	321.91R	AMP X 20.5,	TRACK C7,	14.5 KHZ,	13440
602	CAV	3	765	W15	AV	HEARTS	20548/T1	AMP X 26.1,	TRACK 12,	30. KHZ,	15609
603	AUTO	1	89	W16	AV	HEARTS	20548/T1	AMP X 26.1,	TRACK 12,	10.5 KHZ,	13286
604	ROTATE	2	71	W16	AT	HEARTS	335.99R	AMP X 26.1,	TRACK 12,	5.4 KHZ,	12721
605	ROTATE	2	67	W16	AR	HEARTS	335.39R	AMP X 26.1,	TRACK 12,	7.35 KHZ,	12721
606	AUTO	1	90	W17	AV	HEARTS	20548/T1	AMP X 42. ,	TRACK 10,	10.5 KHZ,	13286
607	ROTATE	2	72	W17	AT	HEARTS	359.60R	AMP X 42. ,	TRACK 10,	5.4 KHZ,	12721
608	ROTATE	2	68	W17	AR	HEARTS	359.60R	AMP X 42. ,	TRACK 10,	7.35 KHZ,	12721
609	AUTO	1	77	W18	AV	HEARTS	20548/T1	AMP X 42. ,	TRACK 11,	10.5 KHZ,	12979
610	ROTATE	2	384	W18	AT	HEARTS	351.70R	AMP X 42. ,	TRACK 11,	5.4 KHZ,	13440
611	ROTATE	2	377	W18	AR	HEARTS	351.70R	AMP X 42. ,	TRACK 11,	7.35 KHZ,	13440
612	AUTO	1	972	PNE-3	AV	HEARTS	0548/T1	AMP X 1525,	TRACK C9,	2.3 KHZ,	01944
613	AUTO	1	966	PNE-3	AV	HEARTS	0548/T1	AMP X 1. ,	TRACK C9,	40. KHZ,	01944
614	AUTO	1	725	PNE-3	AV	HEARTS	69/M14G	AMP X 25. ,	TRACK C9,	14.5 KHZ,	13168
615	AUTO	1	969	PNE-3	AV	HEARTS	0548/T1	AMP X 617.,	TRACK C9,	5.4 KHZ,	01944
616	AUTO	1	970	PNE-3	AT	HEARTS	0548/T1	AMP X 1525,	TRACK C9,	3.9 KHZ,	01944
617	AUTO	1	964	PNE-3	AT	HEARTS	0548/T1	AMP X 1. ,	TRACK C9,	70. KHZ,	01944
618	AUTO	1	727	PNE-3	AT	HEARTS	69/M14G	AMP X 25. ,	TRACK C9,	30. KHZ,	13168
619	AUTO	1	967	PNE-3	AT	HEARTS	0548/T1	AMP X 617.,	TRACK C9,	10.5 KHZ,	01944
620	AUTO	1	971	PNE-3	AR	HEARTS	0548/T1	AMP X 1525,	TRACK C9,	3. KHZ,	01944
621	AUTO	1	965	PNE-3	AR	HEARTS	0548/T1	AMP X 1. ,	TRACK C9,	52.5 KHZ,	01944
622	AUTO	1	726	PNE-3	AR	HEARTS	69/M14G	AMP X 25. ,	TRACK C9,	22. KHZ,	13168
623	AUTO	1	968	PNE-3	AR	HEARTS	0548/T1	AMP X 617.,	TRACK C9,	7.35 KHZ,	01944
624	AUTO	1	722	PNE-2	AV	HEARTS	69/M14G	AMP X 25. ,	TRACK C8,	14.5 KHZ,	13168
625	SPLINE	2	724	PNE-2	AT	HEARTS	69/M14G	AMP X 25. ,	TRACK C8,	30. KHZ,	13168
626	AUTO	1	723	PNE-2	AR	HEARTS	69/M14G	AMP X 25. ,	TRACK C8,	22. KHZ,	13168
627	AUTO	1	719	PNE-1	AV	HEARTS	69/M14G	AMP X 25. ,	TRACK C7,	14.5 KHZ,	13168
628	AUTO	1	721	PNE-1	AT	HEARTS	69/M14G	AMP X 25. ,	TRACK C7,	30. KHZ,	13168
629	AUTO	1	720	PNE-1	AR	HEARTS	69/M14G	AMP X 25. ,	TRACK C7,	22. KHZ,	13168
630	AUTO	1	718	MINE MOUN	AV	HEARTS	69/M14G	AMP X 617.,	TRACK 12,	5.4 KHZ,	12749
631	AUTO	1	711	D	AV	HEARTS	RDS/T1	AMP X 26.1,	TRACK 02,	7.35 KHZ,	12729
632	AUTO	2	713	D	AT	HEARTS	RDS/T1	AMP X 26.1,	TRACK C2,	3.9 KHZ,	12729
633	AUTO	1	712	D	AR	HEARTS	RDS/T1	AMP X 26.1,	TRACK C2,	5.4 KHZ,	12729
634	AUTO	1	709	C	AV	HEARTS	RDS/T1	AMP X 26.1,	TRACK 10,	7.35 KHZ,	12729
635	AUTO	1	710	C	AT	HEARTS	RDS/T1	AMP X 26.1,	TRACK 10,	3.9 KHZ,	12729
636	AUTO	1	708	C	AR	HEARTS	RDS/T1	AMP X 26.1,	TRACK 10,	5.4 KHZ,	12729
637	AUTO	1	385	B	AV	HEARTS	RDS/T1	AMP X 26.1,	TRACK C9,	7.35 KHZ,	16993
638	AUTO	1	386	B	AT	HEARTS	RDS/T1	AMP X 26.1,	TRACK C9,	3.9 KHZ,	16993
639	AUTO	1	387	B	AR	HEARTS	RDS/T1	AMP X 26.1,	TRACK C9,	5.4 KHZ,	16993
640	AUTO	1	243	A	AV	HEARTS	RDS/T1	AMP X 26.1,	TRACK C8,	7.35 KHZ,	13309
641	AUTO	1	245	A	AT	HEARTS	RDS/T1	AMP X 1. ,	TRACK C8,	30. KHZ,	13309
642	AUTO	1	244	A	AR	HEARTS	RDS/T1	AMP X 26.1,	TRACK C8,	5.4 KHZ,	13309
643	AUTO	5	853	W-2	AV	ICEBERG	220548/T1	AMP X 1. ,	TRACK 10,	14.5 KHZ,	12292
644	ROTATE	5	861	W-2	AT	ICEBERG	338.12R	AMP X 1. ,	TRACK 10,	7.35 KHZ,	12292
645	ROTATE	5	857	W-2	AR	ICEBERG	338.12R	AMP X 1. ,	TRACK 10,	10.5 KHZ,	12292
646	AUTO	4	855	W-3 TOP	AV	ICEBERG	220548/T1	AMP X 5. ,	TRACK C8,	22.0 KHZ,	12292
647	ROTATE	5	863	W-3 TOP	AT	ICEBERG	86.81R	AMP X 5. ,	TRACK C8,	10.5 KHZ,	12292
648	ROTATE	5	859	W-3 TOP	AR	ICEBERG	86.81R	AMP X 5. ,	TRACK C8,	14.5 KHZ,	12292
649	AUTO	4	854	W-3 BOTTOM	AV	ICEBERG	220548/T1	AMP X 10.2,	TRACK C8,	52.5 KHZ,	12292
650	ROTATE	6	862	W-3 BOTTOM	AT	ICEBERG	86.81R	AMP X 10.2,	TRACK C8,	30.0 KHZ,	12292

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
651	ROTATE	5	858	W-3	BOTTOMAR	ICEBERG	86.81R AMP X 10.2	,TRACK C8,	40.0 KHZ,	12292
652	AUTO	4	829	W-4	TOP AV	ICEBERG	220548/T1 AMP X 1.	,TRACK C1,	10.5 KHZ,	06355
653	ROTATE	5	836	W-4	TOP AT	ICEBERG	3.79R AMP X 1.	,TRACK C1,	3.0 KHZ,	06355
654	ROTATE	5	833	W-4	TOP AR	ICEBERG	3.79R AMP X 1.	,TRACK C1,	5.4 KHZ,	06355
655	AUTO	4	856	W-4	BOTTOMAV	ICEBERG	220548/T1 AMP X 1.	,TRACK C1,	70.0 KHZ,	12292
656	ROTATE	5	864	W-4	BOTTOMAT	ICEBERG	3.79R AMP X 5.	,TRACK C1,	14.5 KHZ,	12292
657	ROTATE	5	862	W-4	BOTTOMAR	ICEBERG	3.79R AMP X 5.	,TRACK C1,	30.0 KHZ,	12292
658	AUTO	4	830	W-5	AV	ICEBERG	AR700 AMP X 26.1	,TRACK C6,	52.5 KHZ,	06355
659	ROTATE	5	837	W-5	AT	ICEBERG	292.36R AMP X 26.1	,TRACK C6,	30.0 KHZ,	06355
660	ROTATE	6	834	W-5	AR	ICEBERG	292.36R AMP X 26.1	,TRACK C6,	40.0 KHZ,	06355
661	AUTO	3	831	W-8	TOP AV	ICEBERG	AMP X 1.	,TRACK C3,	14.5 KHZ,	06355
662	ROTATE	4	838	W-8	TOP AT	ICEBERG	322.45R AMP X 5.	,TRACK C3,	30.0 KHZ,	06355
663	ROTATE	4	835	W-8	TOP AR	ICEBERG	322.45R AMP X 5.	,TRACK C3,	40.0 KHZ,	06355
664	AUTO	2	832	W-8	BOTTOMAV	ICEBERG	AMP X-10.	,TRACK C6,	22.0 KHZ,	06355
665	ROTATE	4	840	W-8	BOTTOMAT	ICEBERG	244.95R AMP X-10.	,TRACK C6,	10.5 KHZ,	06355
666	ROTATE	4	839	W-8	BOTTOMAR	ICEBERG	244.95R AMP X 1.	,TRACK C6,	40.0 KHZ,	06355
667	AUTO	4	842	W-9	TOP AV	ICEBERG	220548/T1 AMP X 5.11	,TRACK C4,	22.0 KHZ,	06449
668	ROTATE	5	849	W-9	TOP AT	ICEBERG	28.95R AMP X 5.11	,TRACK C4,	10.5 KHZ,	06449
669	ROTATE	5	846	W-9	TOP AR	ICEBERG	28.95R AMP X 5.11	,TRACK C4,	14.5 KHZ,	06449
670	AUTO	4	841	W-9	BOTTOMAV	ICEBERG	AMP X 5.11	,TRACK C4,	52.5 KHZ,	06449
671	ROTATE	6	848	W-9	BOTTOMAT	ICEBERG	28.95R AMP X 5.11	,TRACK C4,	30. KHZ,	06449
672	ROTATE	5	845	W-9	BOTTOMAR	ICEBERG	28.95R AMP X 5.11	,TRACK C4,	40.0 KHZ,	06449
673	AUTO	3	843	W10	AV	ICEBERG	AR700 AMP X 1.	,TRACK C7,	70.0 KHZ,	06449
674	ROTATE	5	852	W10	AT	ICEBERG	27.85R AMP X -1.	,TRACK C7,	22.0 KHZ,	06449
675	ROTATE	5	851	W10	AR	ICEBERG	27.85R AMP X 1.	,TRACK C7,	40.0 KHZ,	06449
676	AUTO	5	844	W10	TOP AV	ICEBERG	AR700 AMP X 26.1	,TRACK C7,	7.35 KHZ,	06449
677	ROTATE	5	850	W10	TOP AT	ICEBERG	300.36R AMP X 26.1	,TRACK C7,	2.3 KHZ,	06449
678	ROTATE	6	847	W10	TOP AR	ICEBERG	300.36R AMP X 26.1	,TRACK C7,	3.9 KHZ,	06449
679	AUTO	3	750	W11	TOP AV	ICEBERG	AMP X 4.2	,TRACK C2,	7.35 KHZ,	12978
680	AUTO	3	751	W11	BOTTOMAV	ICEBERG	AMP X 2.05	,TRACK C2,	52.5 KHZ,	12978
681	ROTATE	4	753	W11	BOTTOMAT	ICEBERG	52.56R AMP X 2.05	,TRACK C2,	14.5 KHZ,	12978
682	ROTATE	4	752	W11	BOTTOMAR	ICEBERG	52.56R AMP X 2.05	,TRACK C2,	30.0 KHZ,	12978
683	AUTO	1	1498	W-3	TOP AV	KASH	20548/T1 AMP X 51.1	,TRACK C6,	30. KHZ,	17304
684	AUTO	2	1418	W-3	TOP AT	KASH	190.R-190. AMP X 51.1	,TRACK C6,	14.5 KHZ,	06418
685	AUTO	2	1412	W-3	TOP AR	KASH	190.R-100. AMP X 51.1	,TRACK C6,	22. KHZ,	06418
686	AUTO	2	1503	W-3	BOTTOMAV	KASH	20548/T1 AMP X 51.1	,TRACK C6,	10.5 KHZ,	17341
687	AUTO	3	1435	W-3	BOTTOMAT	KASH	190.R-190. AMP X 51.1	,TRACK C6,	5.4 KHZ,	17274
688	AUTO	3	1432	W-3	BOTTOMAR	KASH	190.R-100. AMP X 51.1	,TRACK C6,	7.35 KHZ,	17274
689	AUTO	3	1564	W-7	AV	KASH	ROS/T1 AMP X 51.1	,TRACK C1,	30. KHZ,	13286
690	AUTO	4	1572	W-7	AT	KASH	253.R-253. AMP X 51.1	,TRACK C1,	14.5 KHZ,	13316
691	AUTO	4	1568	W-7	AR	KASH	253.R-163. AMP X 51.1	,TRACK C1,	22. KHZ,	13316
692	AUTO	2	1504	W-9	TOP AV	KASH	20548/T1 AMP X 10.	,TRACK C3,	30. KHZ,	17341
693	AUTO	3	1436	W-9	TOP AT	KASH	209.R-209. AMP X 10.	,TRACK C3,	14.5 KHZ,	12922
694	AUTO	3	1433	W-9	TOP AR	KASH	209.R-119. AMP X 10.	,TRACK C3,	22. KHZ,	17274
695	AUTO	2	1411	W-9	BOTTOMAV	KASH	20548/T1 AMP X 26.1	,TRACK C3,	10.5 KHZ,	18205
696	AUTO	3	1441	W-9	BOTTOMAT	KASH	209.R-209. AMP X 26.1	,TRACK C3,	5.4 KHZ,	12922
697	AUTO	3	1440	W-9	BOTTOMAR	KASH	209.R-119. AMP X 26.1	,TRACK C3,	7.35 KHZ,	12922
698	AUTO	2	1565	W10	AV	KASH	ROS/T1 AMP X 51.1	,TRACK C3,	3.9 KHZ,	13286
699	AUTO	3	1573	W10	AT	KASH	342.R-255. AMP X 51.1	,TRACK C3,	2.3 KHZ,	13316
700	AUTO	3	1569	W10	AR	KASH	342.R-165. AMP X 51.1	,TRACK C3,	3. KHZ,	13316

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
701	AUTO	1	1566	W10 TOP	AV		KASH	RDS/T1 AMP X 51.1,	TRACK C3,	30. KHZ,	13286
702	AUTO	2	1574	W10 TOP	AT		KASH	255.R-255.AMP X 51.1,	TRACK C3,	14.5 KHZ,	13316
703	AUTO	2	1570	W10 TOP	AR		KASH	255.R-165.AMP X 51.1,	TRACK C3,	22. KHZ,	13316
704	AUTO	2	1567	W10 BOTTOM	AV		KASH	RDS/T1 AMP X 51.1,	TRACK C5,	30. KHZ,	13286
705	AUTO	3	1575	W10 BOTTOM	AT		KASH	184.R-255.AMP X 51.1,	TRACK C5,	14.5 KHZ,	13316
706	AUTO	3	1571	W10 BOTTOM	AR		KASH	184.R-165.AMP X 51.1,	TRACK C5,	22. KHZ,	13316
707	AUTO	1	1502	W11 TOP	AV		KASH	20548/T1 AMP X 26.1,	TRACK C1,	30. KHZ,	17341
708	AUTO	2	1422	W11 TOP	AT		KASH	213.R-213.AMP X 26.1,	TRACK C1,	14.5 KHZ,	06418
709	AUTO	2	1416	W11 TOP	AR		KASH	213.R-123.AMP X 26.1,	TRACK C1,	22. KHZ,	06418
710	AUTO	3	1423	W11 BOTTOM	AT		KASH	276.R-213.AMP X 205.,	TRACK C1,	2.3 KHZ,	06418
711	AUTO	2	1417	W11 BOTTOM	AR		KASH	276.R-123.AMP X 205.,	TRACK C1,	3. KHZ,	06418
712	AUTO	1	1409	W13 TOP	AV		KASH	20548/T1 AMP X 10. ,	TRACK C5,	70. KHZ,	18205
713	AUTO	2	1437	W13 TOP	AT		KASH	267.R-267.AMP X 10. ,	TRACK C5,	40. KHZ,	12922
714	AUTO	2	1434	W13 TOP	AR		KASH	267.R-177.AMP X 10. ,	TRACK C5,	52.5 KHZ,	17274
715	AUTO	1	1410	W13 BOTTOM	AV		KASH	20548/T1 AMP X 24.4,	TRACK C5,	3.9 KHZ,	18205
716	AUTO	2	1439	W13 BOTTOM	AT		KASH	191.R-267.AMP X 24.4,	TRACK C5,	2.3 KHZ,	12922
717	AUTO	2	1438	W13 BOTTOM	AR		KASH	191.R-177.AMP X 24.4,	TRACK C5,	3. KHZ,	12922
718	CAD	1	1558	W14	AV		KASH	RDS/T1 AMP X 26.1,	TRACK C7,	10.5 KHZ,	12178
719	AUTO	2	1566	W14	AT		KASH	268.R-268.AMP X 26.1,	TRACK C7,	5.4 KHZ,	13320
720	AUTO	2	1559	W14	AR		KASH	268.R-178.AMP X 26.1,	TRACK C7,	7.35 KHZ,	13320
721	AUTO	2	1505	W15	AV		KASH	20548/T1 AMP X 26.1,	TRACK 12,	30. KHZ,	18129
722	AUTO	3	1428	W15	AT		KASH	261.R-261.AMP X 26.1,	TRACK 12,	14.5 KHZ,	17274
723	AUTO	3	1424	W15	AR		KASH	261.R-171.AMP X 26.1,	TRACK 12,	22. KHZ,	17274
724	AUTO	1	1499	W16	AV		KASH	20548/T1 AMP X 26.1,	TRACK 12,	10.5 KHZ,	17304
725	AUTO	2	1419	W16	AT		KASH	258.R-258.AMP X 26.1,	TRACK 12,	5.4 KHZ,	06418
726	AUTO	2	1413	W16	AR		KASH	258.R-168.AMP X 26.1,	TRACK 12,	7.35 KHZ,	06418
727	AUTO	1	1500	W17	AV		KASH	20548/T1 AMP X 10. ,	TRACK 10,	10.5 KHZ,	17304
728	AUTO	2	1420	W17	AT		KASH	271.R-271.AMP X 10. ,	TRACK 10,	5.4 KHZ,	06418
729	AUTO	2	1414	W17	AR		KASH	271.R-181.AMP X 10. ,	TRACK 10,	7.35 KHZ,	06418
730	AUTO	1	1501	W18	AV		KASH	20548/T1 AMP X 10. ,	TRACK 11,	10.5 KHZ,	17304
731	AUTO	2	1421	W18	AT		KASH	273.R-273.AMP X 10. ,	TRACK 11,	5.4 KHZ,	06418
732	AUTO	2	1415	W18	AR		KASH	273.R-183.AMP X 10. ,	TRACK 11,	7.35 KHZ,	06418
733	AUTO	2	1508	MINE MOUN	AV		KASH	20548/T1 AMP X 617.,	TRACK C2,	10.5 KHZ,	18129
734	AUTO	2	1507	MINE MOUN	AV		KASH	20548/T1 AMP X 617.,	TRACK C4,	10.5 KHZ,	18129
735	AUTO	2	1506	MINE MOUN	AV		KASH	20548/T1 AMP X 617.,	TRACK C8,	10.5 KHZ,	18129
736	AUTO	3	1430	MINE MOUN	AT		KASH	230.R-230.AMP X 617.,	TRACK C4,	5.4 KHZ,	17274
737	AUTO	3	1431	MINE MOUN	AT		KASH	230.R-230.AMP X 617.,	TRACK C2,	5.4 KHZ,	17274
738	AUTO	3	1429	MINE MOUN	AT		KASH	230.R-230.AMP X 617.,	TRACK C8,	5.4 KHZ,	17274
739	AUTO	3	1425	MINE MOUN	AR		KASH	230.R-140.AMP X 617.,	TRACK C8,	7.35 KHZ,	17274
740	AUTO	3	1426	MINE MOUN	AR		KASH	230.R-140.AMP X 617.,	TRACK C4,	7.35 KHZ,	17274
741	AUTO	3	1427	MINE MOUN	AR		KASH	230.R-140.AMP X 617.,	TRACK C2,	7.35 KHZ,	17274
742	AUTO	1	1555	D	AV		KASH	RDS/T1 AMP X 20.5,	TRACK 11,	30. KHZ,	13309
743	AUTO	1	1557	D	AT		KASH	RDS/T1 AMP X 20.5,	TRACK 11,	14.5 KHZ,	13309
744	AUTO	1	1556	D	AR		KASH	RDS/T1 AMP X 20.5,	TRACK 11,	22. KHZ,	13309
745	AUTO	1	1552	C	AV		KASH	RDS/T1 AMP X 20.5,	TRACK 10,	30. KHZ,	13309
746	AUTO	1	1554	C	AT		KASH	RDS/T1 AMP X 20.5,	TRACK 10,	14.5 KHZ,	13309
747	AUTO	1	1553	C	AR		KASH	RDS/T1 AMP X 20.5,	TRACK 10,	22. KHZ,	13309
748	AUTO	1	1549	B	AV		KASH	RDS/T1 AMP X 20.5,	TRACK 09,	30. KHZ,	13309
749	AUTO	1	1551	B	AT		KASH	RDS/T1 AMP X 20.5,	TRACK 09,	14.5 KHZ,	13309
750	AUTO	1	1550	B	AR		KASH	RDS/T1 AMP X 20.5,	TRACK 09,	22. KHZ,	13309

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
751	AUTO	1	1546	A	AV		KASH	RDS/T1	AMP X 20.5,	TRACK 08, 70. KHZ,	13709
752	AUTO	1	1548	A	AT		KASH	RDS/T1	AMP X 20.5,	TRACK 08, 14.5 KHZ,	13309
753	AUTO	1	1547	A	AR		KASH	RDS/T1	AMP X 20.5,	TRACK 08, 22. KHZ,	13309
754	AUTO	2	682	W-3 TOP	AV		KLOSTER	20548/T1	AMP X 4.2 ,	TRACK 06, 22. KHZ,	10393
755	ROTATE	1	673	W-3 TOP	AT		KLOSTER	97.93R	AMP X 4.2 ,	TRACK 06, 10.5 KHZ,	15770
756	ROTATE	1	666	W-3 TOP	AR		KLOSTER	97.93R	AMP X 4.2 ,	TRACK 06, 14.5 KHZ,	15770
757	AUTO	1	683	W-3 BOTTOM	AV		KLOSTER	20548/T1	AMP X 4.2 ,	TRACK 06, 7.35 KHZ,	10393
758	ROTATE	1	674	W-3 BOTTOM	AT		KLOSTER	97.93R	AMP X 4.2 ,	TRACK 06, 3.9 KHZ,	15770
759	ROTATE	1	667	W-3 BOTTOM	AR		KLOSTER	97.93R	AMP X 4.2 ,	TRACK 06, 5.4 KHZ,	15770
760	AUTO	1	254	W-5	AV		KLOSTER	RDS/T1	AMP X 51.1,	TRACK 03, 22. KHZ,	12708
761	ROTATE	1	701	W-5	AT		KLOSTER	287.07R	AMP X 51.1,	TRACK 03, 10.5 KHZ,	17182
762	ROTATE	1	691	W-5	AR		KLOSTER	287.07R	AMP X 51.1,	TRACK 03, 14.5 KHZ,	17743
763	AUTO	1	255	W-6	AV		KLOSTER	RDS/T1	AMP X 42. ,	TRACK 01, 52.5 KHZ,	12708
764	ROTATE	1	702	W-6	AT		KLOSTER	300.54R	AMP X 42. ,	TRACK 01, 30. KHZ,	17182
765	ROTATE	1	692	W-6	AR		KLOSTER	300.54R	AMP X 42. ,	TRACK 01, 40. KHZ,	17743
766	AUTO	1	246	W-7	AV		KLOSTER	RDS/T1	AMP X 42. ,	TRACK 02, 52.5 KHZ,	10458
767	ROTATE	1	698	W-7	AT		KLOSTER	302.51R	AMP X 42. ,	TRACK 02, 30. KHZ,	17182
768	ROTATE	1	688	W-7	AR		KLOSTER	302.51R	AMP X 42. ,	TRACK 02, 40. KHZ,	17743
769	AUTO	1	685	W-9 TOP	AV		KLOSTER	20548/T1	AMP X 10. ,	TRACK 03, 22. KHZ,	14124
770	ROTATE	1	678	W-9 TOP	AT		KLOSTER	10.35R	AMP X 10. ,	TRACK 03, 10.5 KHZ,	15770
771	ROTATE	1	669	W-9 TOP	AR		KLOSTER	10.35R	AMP X 10. ,	TRACK 03, 14.5 KHZ,	15770
772	AUTO	1	684	W-9 BOTTOM	AV		KLOSTER	20548/T1	AMP X 10. ,	TRACK 03, 7.35 KHZ,	14124
773	ROTATE	1	679	W-9 BOTTOM	AT		KLOSTER	10.35R	AMP X 10. ,	TRACK 03, 3.9 KHZ,	15770
774	ROTATE	1	668	W-9 BOTTOM	AR		KLOSTER	10.35R	AMP X 10. ,	TRACK 03, 5.4 KHZ,	15770
775	AUTO	1	250	W10	AV		KLOSTER	RDS/T1	AMP X 50. ,	TRACK 05, 30. KHZ,	08260
776	DIFF	5	536	W10	AT		KLOSTER	174.R-295.	AMP X 50. ,	TRACK 05, 22. KHZ,	19273
777	DIFF	5	524	W10	AR		KLOSTER	174.R-205.	AMP X 50. ,	TRACK 05, 14.5 KHZ,	19273
778	AUTO	1	247	W10 TOP	AV		KLOSTER	RDS/T1	AMP X 50. ,	TRACK 05, 70. KHZ,	10458
779	ROTATE	1	699	W10 TOP	AT		KLOSTER	294.70R	AMP X 50. ,	TRACK 05, 40. KHZ,	17182
780	ROTATE	1	689	W10 TOP	AR		KLOSTER	294.70R	AMP X 50. ,	TRACK 05, 52.5 KHZ,	17743
781	AUTO	1	257	W10 SPECIAL	AV		KLOSTER	RDS/T1	AMP X 24.7,	TRACK 06, 14.5 KHZ,	12708
782	AUTO	1	251	W10 BOTTOM	AV		KLOSTER	RDS/T1	AMP X 50. ,	TRACK 05, 10.5 KHZ,	08260
783	AUTO	2	689	W11 TOP	AV		KLOSTER	20548/T1	AMP X 10. ,	TRACK 01, 7.35 KHZ,	10393
784	ROTATE	2	704	W11 TOP	AT		KLOSTER	287.57R	AMP X 10. ,	TRACK 01, 2.3 KHZ,	17182
785	ROTATE	2	694	W11 TOP	AR		KLOSTER	287.57R	AMP X 10. ,	TRACK 01, 3.9 KHZ,	17743
786	AUTO	1	248	W11 BOTTOM	AV		KLOSTER	20548/T1	AMP X 5.11,	TRACK 01, 52.5 KHZ,	10458
787	ROTATE	1	703	W11 BOTTOM	AT		KLOSTER	351.07R	AMP X 5.11,	TRACK 01, 14.5 KHZ,	17182
788	ROTATE	1	693	W11 BOTTOM	AR		KLOSTER	351.07R	AMP X 5.11,	TRACK 01, 30. KHZ,	17743
789	AUTO	1	681	W13 TOP	AV		KLOSTER	20548/T1	AMP X 26.1,	TRACK 07, 3.9 KHZ,	10393
790	ROTATE	1	705	W13 TOP	AT		KLOSTER	33.45R	AMP X 26.1,	TRACK 07, 2.3 KHZ,	17182
791	ROTATE	1	695	W13 TOP	AR		KLOSTER	33.45R	AMP X 26.1,	TRACK 07, 3. KHZ,	17743
792	AUTO	1	253	W14	AV		KLOSTER	RDS/T1	AMP X 20.5,	TRACK 07, 22. KHZ,	08260
793	AUTO	1	252	W14	AV		KLOSTER	RDS/T1	AMP X 42. ,	TRACK 07, 5.4 KHZ,	08260
794	ROTATE	1	707	W14	AT		KLOSTER	313.67R	AMP X 20.5,	TRACK 07, 7.35 KHZ,	17182
795	ROTATE	1	706	W14	AT		KLOSTER	313.67R	AMP X 42. ,	TRACK 07, 3. KHZ,	17182
796	ROTATE	1	697	W14	AR		KLOSTER	313.67R	AMP X 20.5,	TRACK 07, 14.5 KHZ,	17743
797	ROTATE	1	696	W14	AR		KLOSTER	313.67R	AMP X 42. ,	TRACK 07, 3.9 KHZ,	17743
798	AUTO	1	535	W15	AV		KLOSTER	20548/T1	AMP X 26.1,	TRACK 12, 70. KHZ,	14124
799	ROTATE	1	677	W15	AT		KLOSTER	326.98R	AMP X 26.1,	TRACK 12, 14.5 KHZ,	15770
800	ROTATE	1	670	W15	AR		KLOSTER	326.98R	AMP X 26.1,	TRACK 12, 22. KHZ,	15770

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
801	AUTO	1	687	W16	AV	KLOSTER	20548/T1 AMP X 26.1,	TRACK 12,	10.5 KHZ,	14124
802	ROTATE	2	678	W16	AT	KLOSTER	323.53R AMP X 1. ,	TRACK 12,	5.4 KHZ,	15770
803	ROTATE	1	671	W16	AR	KLOSTER	323.53R AMP X 26.1,	TRACK 12,	7.35 KHZ,	15770
804	AUTO	1	249	W17	AV	KLOSTER	20548/T1 AMP X 26.1,	TRACK 10,	10.5 KHZ,	10458
805	ROTATE	1	679	W17	AT	KLOSTER	348.00R AMP X 26.1,	TRACK 10,	5.4 KHZ,	15770
806	ROTATE	1	672	W17	AR	KLOSTER	348.00R AMP X 26.1,	TRACK 10,	7.35 KHZ,	15770
807	AUTO	1	256	W18	AV	KLOSTER	20548/T1 AMP X 26.1,	TRACK 11,	10.5 KHZ,	12708
808	ROTATE	1	703	W18	AT	KLOSTER	340.49R AMP X 26.1,	TRACK 11,	5.4 KHZ,	17182
809	ROTATE	1	693	W18	AR	KLOSTER	340.49R AMP X 26.1,	TRACK 11,	7.35 KHZ,	17743
810	AUTO	1	1332	W-3 TOP	AV	LIPTAUER	20548/T1 AMP X 26.1,	TRACK 06,	30. KHZ,	08144
811	AUTO	2	1283	W-3 TOP	AT	LIPTAUER	104.R-104.AMP X 26.1,	TRACK 06,	14.5 KHZ,	11709
812	AUTO	2	1278	W-3 TOP	AR	LIPTAUER	104.R- 14.AMP X 26.1,	TRACK 06,	22. KHZ,	11709
813	AUTO	1	1351	W-3 BOTTOM	AV	LIPTAUER	20548/T1 AMP X 26.1,	TRACK 06,	3.9 KHZ,	10437
814	AUTO	2	1293	W-3 BOTTOM	AT	LIPTAUER	104.R-104.AMP X 26.1,	TRACK 06,	2.3 KHZ,	12561
815	AUTO	2	1288	W-3 BOTTOM	AR	LIPTAUER	104.R- 14.AMP X 26.1,	TRACK 06,	3. KHZ,	11709
816	AUTO	2	1339	W-7	AV	LIPTAUER	RDS AMP X 100.,	TRACK 01,	30. KHZ,	10420
817	AUTO	4	1297	W-7	AT	LIPTAUER	302.R-302.AMP X 100.,	TRACK 01,	14.5 KHZ,	12561
818	AUTO	3	1292	W-7	AR	LIPTAUER	302.R-212.AMP X 100.,	TRACK 01,	22. KHZ,	12561
819	AUTO	1	1345	W10	AV	LIPTAUER	RDS AMP X 100.,	TRACK 03,	3.9 KHZ,	13758
820	DIFF	6	543	W10	AT	LIPTAUER	173.R-294.AMP X 100.,	TRACK 03,	3. KHZ,	19273
821	DIFF	6	531	W10	AR	LIPTAUER	173.R-204.AMP X 100.,	TRACK 03,	2.3 KHZ,	19273
822	AUTO	1	1333	W10 TOP	AV	LIPTAUER	RDS AMP X 100.,	TRACK 03,	30. KHZ,	08144
823	AUTO	2	1305	W10 TOP	AT	LIPTAUER	294.R-294.AMP X 100.,	TRACK 03,	14.5 KHZ,	17860
824	AUTO	2	1303	W10 TOP	AR	LIPTAUER	294.R-204.AMP X 100.,	TRACK 03,	22. KHZ,	17860
825	AUTO	1	1336	W10 BOTTOM	AV	LIPTAUER	RDS AMP X 100.,	TRACK 05,	10.5 KHZ,	08144
826	AUTO	2	1287	W10 BOTTOM	AT	LIPTAUER	223.R-294.AMP X 100.,	TRACK 05,	5.4 KHZ,	11709
827	AUTO	1	1341	W10 BOTTOM	AT	LIPTAUER	RDS AMP X 100.,	TRACK 05,	5.4 KHZ,	10437
828	AUTO	2	1282	W10 BOTTOM	AR	LIPTAUER	223.R-204.AMP X 100.,	TRACK 05,	7.35 KHZ,	11709
829	AUTO	1	1340	W10 BOTTOM	AR	LIPTAUER	RDS AMP X 100.,	TRACK 05,	7.35 KHZ,	10437
830	AUTO	2	1338	W11 TOP	AV	LIPTAUER	20548/T1 AMP X 5.11,	TRACK 01,	30. KHZ,	10420
831	AUTO	4	1296	W11 TOP	AT	LIPTAUER	280.R-280.AMP X 1. ,	TRACK 01,	40. KHZ,	12561
832	AUTO	3	1291	W11 TOP	AR	LIPTAUER	280.R-190.AMP X 5.11,	TRACK 01,	22. KHZ,	11709
833	AUTO	1	1346	W11 BOTTOM	AV	LIPTAUER	20548/T1 AMP X 26.1,	TRACK 01,	3.9 KHZ,	14044
834	AUTO	2	1304	W11 BOTTOM	AT	LIPTAUER	344.R-280.AMP X 26.1,	TRACK 01,	2.3 KHZ,	17860
835	AUTO	2	1302	W11 BOTTOM	AR	LIPTAUER	344.R-190.AMP X 26.1,	TRACK 01,	3. KHZ,	17860
836	AUTO	1	1342	W13 TOP	AV	LIPTAUER	20548/T1 AMP X 50.1,	TRACK 05,	70. KHZ,	13758
837	AUTO	2	1300	W13 TOP	AT	LIPTAUER	357.R-357.AMP X 50.1,	TRACK 05,	40. KHZ,	17860
838	AUTO	2	1298	W13 TOP	AR	LIPTAUER	357.R-267.AMP X 50.1,	TRACK 05,	52.5 KHZ,	17860
839	AUTO	1	1343	W13 BOTTOM	AV	LIPTAUER	20548/T1 AMP X 50.1,	TRACK 05,	10.5 KHZ,	13758
840	AUTO	2	1301	W13 BOTTOM	AT	LIPTAUER	281.R-357.AMP X 24.4,	TRACK 05,	14.5 KHZ,	17860
841	AUTO	2	1299	W13 BOTTOM	AR	LIPTAUER	281.R-267.AMP X 50.1,	TRACK 05,	7.35 KHZ,	17860
842	AUTO	1	1335	W14	AV	LIPTAUER	RDS AMP X 104.,	TRACK 07,	10.5 KHZ,	08144
843	AUTO	2	1286	W14	AT	LIPTAUER	313.R-313.AMP X 104.,	TRACK 07,	5.4 KHZ,	11709
844	AUTO	2	1281	W14	AR	LIPTAUER	313.R-223.AMP X 104.,	TRACK 07,	7.35 KHZ,	11709
845	AUTO	1	1334	W15	AV	LIPTAUER	20548/T1 AMP X 100.,	TRACK 12,	30. KHZ,	08144
846	AUTO	2	1284	W15	AT	LIPTAUER	326.R-326.AMP X 100.,	TRACK 12,	14.5 KHZ,	11709
847	AUTO	2	1279	W15	AR	LIPTAUER	326.R-236.AMP X 100.,	TRACK 12,	22. KHZ,	11709
848	AUTO	1	1344	W16	AV	LIPTAUER	20548/T1 AMP X 100.,	TRACK 12,	10.5 KHZ,	13758
849	AUTO	2	1295	W16	AT	LIPTAUER	323.R-323.AMP X 100.,	TRACK 12,	5.4 KHZ,	11709
850	AUTO	2	1280	W16	AR	LIPTAUER	323.R-233.AMP X 100.,	TRACK 12,	7.35 KHZ,	11709

FILE	DIRECTORY	RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
851	AUTO	1	1352	W17	AV	LIPTAUER	20548/T1	AMP X 205.,TRACK 10,	10.5 KHZ,	10437
852	AUTO	2	1294	W17	AT	LIPTAUER	348.R-348.	AMP X 205.,TRACK 10,	5.4 KHZ,	12561
853	AUTO	2	1289	W17	AR	LIPTAUER	348.R-258.	AMP X 205.,TRACK 10,	7.35 KHZ,	11709
854	AUTO	1	1337	W18	AV	LIPTAUER	20548/T1	AMP X 205.,TRACK 11,	10.5 KHZ,	10420
855	AUTO	2	1295	W18	AT	LIPTAUER	340.R-340.	AMP X 205.,TRACK 11,	5.4 KHZ,	12561
856	AUTO	2	1290	W18	AR	LIPTAUER	340.R-250.	AMP X 205.,TRACK 11,	7.35 KHZ,	11709
857	AUTO	1	1349	MINE MOUN	AV	LIPTAUER	20548/T1	AMP X 25. ,TRACK 07,	30. KHZ,	10437
858	AUTO	1	1350	MINE MOUN	AV	LIPTAUER	20548/T1	AMP X 617.,TRACK 07,	10.5 KHZ,	10437
859	AUTO	2	1348	MINE MOUN	AT	LIPTAUER	287.R-287.	AMP X 25. ,TRACK 07,	14.5 KHZ,	10437
860	AUTO	2	1347	MINE MOUN	AR	LIPTAUER	287.R-197.	AMP X 25. ,TRACK 07,	22. KHZ,	10437
861	AUTO	2	735	W-3 TOP	AV X 5	LOWBALL		20548/TP1		19623
862	AUTO	2	734	W-3 BOTTOM	AV X 10	LOWBALL		20548/TP1		19623
863	AUTO	3	736	W-5	AV X 50	LOWBALL		R700T3		19623
864	AUTO	4	737	W-6	AV X 50	LOWBALL		R700T3		19623
865	AUTO	2	761	W-8 TOP	AV X 5	LOWBALL		20548/TP1		15920
866	AUTO	2	730	W-9 TOP	AV X 5	LOWBALL		20548/TP1		18974
867	AUTO	5	731	W10	AV X 50	LOWBALL		AMP X 51.1,TRACK 07,	52.5 KHZ,	18974
868	AUTO	3	732	W10 TOP	AV X 50	LOWBALL		R700T3		18974
869	AUTO	6	764	W10 BOTTOM	AV X 20.5	LOWBALL		AMPX-20.5 ,TRACK 04,	22. KHZ,	17064
870	AUTO	5	763	W10 BOTTOM	AV X 1	LOWBALL		AMP X 1. ,TRACK 04,	52.5 KHZ,	17064
871	AUTO	5	760	W10 BOTTOM	AV X 205	LOWBALL		AMP X 205.,TRACK 04,	3.9 KHZ,	15920
872	AUTO	2	759	W11 BOTTOM	AV X 5	LOWBALL		20548/TP1		15920
873	AUTO	3	733	W17	AV X 50	LOWBALL		20548/TP1		18974
874	AUTO	2	762	W18	AV X 50	LOWBALL		20548/TP1		15920
875	AUTO	1	754	PNE-9	AV-LO	LOWBALL		20548/TP1		12393
876	AUTO	2	757	PNE-9	AV-HI	LOWBALL		20548/TP1		14647
877	AUTO	1	756	PNE-9	AT-LO	LOWBALL		20548/TP1		12393
878	AUTO	1	755	PNE-9	AR-LO	LOWBALL		20548/TP1		12393
879	AUTO	2	758	PNE-9	AR-HI	LOWBALL		20548/TP1		14647
880	AUTO	2	225	W-3 TOP	AV	MEMORY	20548/T1	AMP X 26.1,TRACK 06,	22. KHZ,	10373
881	ROTATE	1	222	W-3 TOP	AT	MEMORY	85.21R	AMP X 26.1,TRACK 06,	10.5 KHZ,	10378
882	ROTATE	2	213	W-3 TOP	AR	MEMORY	85.21R	AMP X 26.1,TRACK 06,	14.5 KHZ,	10378
883	AUTO	1	224	W-3 BOTTOM	AV	MEMORY	20548/T1	AMP X 26.1,TRACK 06,	7.35 KHZ,	10373
884	ROTATE	1	221	W-3 BOTTOM	AT	MEMORY	85.21R	AMP X 26.1,TRACK 06,	3.9 KHZ,	10378
885	ROTATE	1	212	W-3 BOTTOM	AR	MEMORY	85.21R	AMP X 26.1,TRACK 06,	5.4 KHZ,	10378
886	AUTO	1	227	W-9 TOP	AV	MEMORY	20548/T1	AMP X 26.1,TRACK 03,	22. KHZ,	10373
887	ROTATE	1	229	W-9 TOP	AT	MEMORY	46.54R	AMP X 26.1,TRACK 03,	10.5 KHZ,	13998
888	ROTATE	1	215	W-9 TOP	AR	MEMORY	46.54R	AMP X 26.1,TRACK 03,	14.5 KHZ,	10378
889	AUTO	1	226	W-9 BOTTOM	AV	MEMORY	20548/T1	AMP X 26.1,TRACK 03,	7.35 KHZ,	10373
890	ROTATE	1	223	W-9 BOTTOM	AT	MEMORY	46.54R	AMP X 26.1,TRACK 03,	3.9 KHZ,	10378
891	ROTATE	1	214	W-9 BOTTOM	AR	MEMORY	46.54R	AMP X 26.1,TRACK 03,	5.4 KHZ,	10378
892	AUTO	1	235	W11 TOP	AV	MEMORY	20548/T1	AMP X 42. ,TRACK 01,	7.35 KHZ,	10375
893	ROTATE	1	231	W11 TOP	AT	MEMORY	56.46R	AMP X 42. ,TRACK 01,	2.3 KHZ,	13998
894	ROTATE	1	217	W11 TOP	AR	MEMORY	56.46R	AMP X 42. ,TRACK 01,	3.9 KHZ,	10378
895	AUTO	1	228	W11 BOTTOM	AV	MEMORY	20548/T1	AMP X 20.5,TRACK 01,	52.5 KHZ,	10373
896	ROTATE	1	230	W11 BOTTOM	AT	MEMORY	119.96R	AMP X 20.5,TRACK 01,	14.5 KHZ,	13998
897	ROTATE	1	216	W11 BOTTOM	AR	MEMORY	119.96R	AMP X 20.5,TRACK 01,	30. KHZ,	10378
898	AUTO	1	238	MINE MOUN	AV	MEMORY	20548/T1	AMP X 1. ,TRACK 09,	40. KHZ,	10375
899	AUTO	1	236	MINE MOUN	AV	MEMORY	20548/T1	AMP X 24.7,TRACK 09,	14.5 KHZ,	10375
900	AUTO	1	237	MINE MOUN	AV	MEMORY	20548/T1	AMP X 5. ,TRACK 08,	40. KHZ,	10375

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
901	ROTATE	1	233	MINE MOUN	AT	MEMORY	334.97R AMP X 1.	,TRACK C9,	70. KHZ,	13998
902	ROTATE	1	234	MINE MOUN	AT	MEMORY	334.97R AMP X 24.7	,TRACK C9,	30. KHZ,	13998
903	ROTATE	1	232	MINE MOUN	AT	MEMORY	334.97R AMP X 5.	,TRACK C8,	70. KHZ,	13998
904	ROTATE	1	219	MINE MOUN	AR	MEMORY	334.97R AMP X 1.	,TRACK C9,	52.5 KHZ,	10378
905	ROTATE	1	220	MINE MOUN	AR	MEMORY	334.97R AMP X 24.7	,TRACK C9,	22. KHZ,	10378
906	ROTATE	1	218	MINE MOUN	AR	MEMORY	334.97R AMP X 5.	,TRACK C8,	52.5 KHZ,	10378
907	ROTATE	2	102	W-3 BOTTOM	AT	NESSEL	93.15R AMP X 42.	,TRACK C6,	3.9 KHZ,	10495
908	ROTATE	2	96	W-3 BOTTOM	AR	NESSEL	93.15R AMP X 42.	,TRACK C6,	5.4 KHZ,	10495
909	AUTO	1	106	W-5	AV	NESSEL	DS/T1 AMP X 100.	,TRACK C3,	22. KHZ,	08345
910	ROTATE	2	104	W-5	AT	NESSEL	289.25R AMP X 100.	,TRACK C3,	10.5 KHZ,	10495
911	ROTATE	2	98	W-5	AR	NESSEL	289.25R AMP X 100.	,TRACK C3,	14.5 KHZ,	10495
912	AUTO	1	740	W-6	AV	NESSEL	DS/T1 AMP X 20.5	,TRACK C4,	7.35 KHZ,	06459
913	ROTATE	2	128	W-6	AT	NESSEL	303.73R AMP X 20.5	,TRACK C4,	3.9 KHZ,	13782
914	ROTATE	2	124	W-6	AR	NESSEL	303.73R AMP X 20.5	,TRACK C4,	5.4 KHZ,	13782
915	AUTO	1	736	W-7	AV	NESSEL	DS/T1 AMP X 51.1	,TRACK C1,	52.5 KHZ,	06459
916	ROTATE	2	127	W-7	AT	NESSEL	306.19R AMP X 51.1	,TRACK C1,	30. KHZ,	13782
917	ROTATE	2	123	W-7	AR	NESSEL	306.19R AMP X 51.1	,TRACK C1,	40. KHZ,	13782
918	AUTO	1	105	W-9 TOP	AV	NESSEL	0548/T1 AMP X 5.11	,TRACK C3,	22. KHZ,	08345
919	ROTATE	2	103	W-9 TOP	AT	NESSEL	23.96R AMP X 5.11	,TRACK C3,	10.5 KHZ,	10495
920	ROTATE	2	97	W-9 TOP	AR	NESSEL	23.96R AMP X 5.11	,TRACK C3,	14.5 KHZ,	10495
921	AUTO	1	122	W-9 BOTTOM	AV	NESSEL	0548/T1 AMP X 10.	,TRACK C3,	7.35 KHZ,	12203
922	AUTO	2	116	W-9 BOTTOM	AT	NESSEL	24.R- 24. AMP X 10.	,TRACK C3,	3.9 KHZ,	07709
923	AUTO	2	110	W-9 BOTTOM	AR	NESSEL	24.R-294. AMP X 10.	,TRACK C3,	5.4 KHZ,	07709
924	AUTO	1	133	W10	AV	NESSEL	DS/T1 AMP X 98.	,TRACK C5,	30. KHZ,	08011
925	DIFF	5	540	W10	AT	NESSEL	177.R-297. AMP X 98.	,TRACK C5,	22. KHZ,	19273
926	DIFF	5	528	W10	AR	NESSEL	177.R-207. AMP X 98.	,TRACK C5,	14.5 KHZ,	19273
927	AUTO	1	136	W10 TOP	AV	NESSEL	DS/T1 AMP X 1.	,TRACK C5,	2.3 KHZ,	08011
928	AUTO	1	131	W10 TOP	AV	NESSEL	DS/T1 AMP X 98.	,TRACK C5,	70. KHZ,	08011
929	ROTATE	2	130	W10 TOP	AT	NESSEL	297.21R AMP X 98.	,TRACK C5,	40. KHZ,	13782
930	ROTATE	2	126	W10 TOP	AR	NESSEL	297.21R AMP X 98.	,TRACK C5,	52.5 KHZ,	13782
931	AUTO	1	132	W10 BOTTOM	AV	NESSEL	DS/T1 AMP X 98.	,TRACK C5,	10.5 KHZ,	08011
932	AUTO	1	135	W10 BOTTOM	AT	NESSEL	DS/T1 AMP X 98.	,TRACK C5,	5.4 KHZ,	08011
933	AUTO	1	134	W10 BOTTOM	AR	NESSEL	DS/T1 AMP X 98.	,TRACK C5,	7.35 KHZ,	08011
934	AUTO	1	1561	W11 TOP	AV	NESSEL	0548/T1 AMP X 26.1	,TRACK C1,	7.35 KHZ,	13417
935	AUTO	2	1563	W11 TOP	AT	NESSEL	311.R-311. AMP X 26.1	,TRACK C1,	2.3 KHZ,	13417
936	AUTO	2	1562	W11 TOP	AR	NESSEL	311.R-221. AMP X 26.1	,TRACK C1,	3.9 KHZ,	13417
937	ROTATE	2	100	W11 BOTTOM	AT	NESSEL	14.14R AMP X 10.	,TRACK C1,	14.5 KHZ,	10495
938	ROTATE	2	94	W11 BOTTOM	AR	NESSEL	14.14R AMP X 10.	,TRACK C1,	30. KHZ,	10495
939	AUTO	1	119	W13 TOP	AV	NESSEL	0548/T1 AMP X 51.1	,TRACK C5,	7.35 KHZ,	12203
940	AUTO	2	113	W13 TOP	AT	NESSEL	2.R- 2. AMP X 51.1	,TRACK C5,	2.3 KHZ,	07709
941	AUTO	2	107	W13 TOP	AR	NESSEL	2.R-272. AMP X 51.1	,TRACK C5,	3.9 KHZ,	07709
942	AUTO	1	739	W13 BOTTOM	AV	NESSEL	0548/T1 AMP X 51.1	,TRACK C5,	52.5 KHZ,	06459
943	ROTATE	2	99	W13 BOTTOM	AT	NESSEL	286.31R AMP X 51.1	,TRACK C5,	14.5 KHZ,	10495
944	ROTATE	2	93	W13 BOTTOM	AR	NESSEL	286.31R AMP X 51.1	,TRACK C5,	30. KHZ,	10495
945	ROTATE	2	129	W14	AT	NESSEL	317.18R AMP X 100.	,TRACK C7,	3. KHZ,	13782
946	ROTATE	2	125	W14	AR	NESSEL	317.18R AMP X 100.	,TRACK C7,	3.9 KHZ,	13782
947	AUTO	2	117	W15	AT	NESSEL	332.R-332. AMP X 51.1	,TRACK 12,	14.5 KHZ,	07709
948	AUTO	2	111	W15	AR	NESSEL	332.R-242. AMP X 51.1	,TRACK 12,	22. KHZ,	07709
949	AUTO	1	120	W16	AV	NESSEL	0548/T1 AMP X 51.	,TRACK 12,	10.5 KHZ,	12203
950	AUTO	2	114	W16	AT	NESSEL	329.R-329. AMP X 51.	,TRACK 12,	5.4 KHZ,	07709

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION TRACK FREQUENCY	TAPE OF ORIGIN
951	AUTO	2	108	W16	AR	NESSEL	329.R-239.AMP X 51. ,TRACK 12, 7.35 KHZ,	07709
952	AUTO	2	121	W17	AV	NESSEL	0548/T1 AMP X 51.1,TRACK 10, 10.5 KHZ,	12203
953	AUTO	2	115	W17	AT	NESSEL	354.R-354.AMP X 51.1,TRACK 10, 5.4 KHZ,	07709
954	AUTO	3	109	W17	AR	NESSEL	354.R-264.AMP X 51.1,TRACK 10, 7.35 KHZ,	07709
955	AUTO	2	118	W18	AT	NESSEL	346.R-346.AMP X 51.1,TRACK 11, 5.4 KHZ,	07709
956	AUTO	2	112	W18	AR	NESSEL	346.R-256.AMP X 51.1,TRACK 11, 7.35 KHZ,	07709
957	AUTO	1	747	PNE-3	AV	NESSEL	0548/T1 AMP X 617.,TRACK 09, 5.4 KHZ,	08043
958	AUTO	1	749	PNE-3	AT	NESSEL	0548/T1 AMP X 617.,TRACK 09, 10.5 KHZ,	08043
959	AUTO	1	748	PNE-3	AR	NESSEL	0548/T1 AMP X 617.,TRACK 09, 7.35 KHZ,	08043
960	AUTO	1	745	PNE-2	AV	NESSEL	0548/T1 AMP X 25. ,TRACK 08, 14.5 KHZ,	08043
961	AUTO	1	744	PNE-2	AT	NESSEL	0548/T1 AMP X 617.,TRACK 08, 10.5 KHZ,	08043
962	AUTO	1	746	PNE-2	AR	NESSEL	0548/T1 AMP X 617.,TRACK 08, 7.35 KHZ,	08043
963	CAD	1	741	PNE-1	AV	NESSEL	0548/T1 AMP X 25. ,TRACK 07, 14.5 KHZ,	08043
964	AUTO	1	743	PNE-1	AT	NESSEL	0548/T1 AMP X 25. ,TRACK 07, 30. KHZ,	08043
965	CAD	1	742	PNE-1	AR	NESSEL	0548/T1 AMP X 25. ,TRACK 07, 22. KHZ,	08043
966	ROTATE	2	101	MINE MOUN	AT	NESSEL	295.40R AMP X 617.,TRACK 02, 10.5 KHZ,	10495
967	ROTATE	2	95	MINE MOUN	AR	NESSEL	295.40R AMP X 25. ,TRACK 02, 22. KHZ,	10495
968	CAD	1	875	W-2	AV-LO	N508E	AMP X 5. ,TRACK 10, 52.5 KHZ,	19109
969	CAD	2	876	W-2	AV-HI	N508E	AMP X 1. ,TRACK 10, 14.5 KHZ,	19109
970	UNPACK	1	878	W-3 TOP	AV-LO	N508E	AMP X 5. ,TRACK 08, 22. KHZ,	19109
971	CAD	1	877	W-3 BOTTOM	AV-LO	N508E	AMP X 26.1,TRACK 08, 52.5 KHZ,	19109
972	UNPACK	1	869	W-4 TOP	AV-LO	N508E	AMP X 5. ,TRACK 01, 7.35 KHZ,	18165
973	UNPACK	1	880	W-4 TOP	AV-HI	N508E	AMP X 1. ,TRACK 01, 10.5 KHZ,	19244
974	UNPACK	1	879	W-4 BOTTOM	AV-LO	N508E	AMP X 5. ,TRACK 01, 52.5 KHZ,	19244
975	UNPACK	1	868	W-4 BOTTOM	AV-HI	N508E	AMP X 1. ,TRACK 01, 70. KHZ,	18165
976	CAD	1	885	W-6	AV-LO	N508E	AMP X 205.,TRACK 02, 52.5 KHZ,	19270
977	UNPACK	1	886	W-6	AV-HI	N508E	AMP X 1. ,TRACK 02, 22. KHZ,	19270
978	UNPACK	1	887	W-7	AV-LO	N508E	AMP X 205.,TRACK 05, 52.5 KHZ,	19270
979	UNPACK	1	888	W-7	AV-HI	N508E	AMP X 1. ,TRACK 05, 22. KHZ,	19270
980	UNPACK	1	865	W-8	AV-LO	N508E	AMP X 5. ,TRACK 03, 52.5 KHZ,	17440
981	CAD	1	884	W-8	AV-HI	N508E	AMP X 1. ,TRACK 03, 14.5 KHZ,	19244
982	CAD	1	881	W-8 BOTTOM	AV	N508E	AMP X 1. ,TRACK 06, 52.5 KHZ,	19244
983	UNPACK	1	870	W-8 BOTTOM	AV-QFLEX3	N508E	AMP X 10. ,TRACK 06, 22. KHZ,	18165
984	CAD	1	883	W-8 BOTTOM	AV-QFLEX2	N508E	AMP X 1. ,TRACK 06, 30. KHZ,	19244
985	UNPACK	1	882	W-8 BOTTOM	AV-QFLEX1	N508E	AMP X 1. ,TRACK 06, 40. KHZ,	19244
986	UNPACK	1	872	W-8 BOTTOM	AV6	N508E	AMP X 100.,TRACK 06, 7.35 KHZ,	18165
987	UNPACK	1	871	W-8 BOTTOM	AV5	N508E	AMP X 10. ,TRACK 06, 10.5 KHZ,	18165
988	UNPACK	2	874	W-8 BOTTOM	AT	N508E	243.R-321.AMP X 100.,TRACK 06, 3.9 KHZ,	18165
989	UNPACK	2	873	W-8 BOTTOM	AR	N508E	243.R-231.AMP X 100.,TRACK 06, 5.4 KHZ,	18165
990	UNPACK	1	866	W-9 TOP	AV-LO	N508E	AMP X 26.1,TRACK 04, 22. KHZ,	17440
991	UNPACK	1	867	W-9 BOTTOM	AV-LO	N508E	AMP X 26.1,TRACK 04, 52.5 KHZ,	17440
992	AUTO	2	928	W-2	AV	N514E	20548/TP1 AMP X 5. ,TRACK 07, 52.5 KHZ,	18599
993	AUTO	2	924	W-3 TOP	AV	N514E	20548/TP1 AMP X 5. ,TRACK 08, 22. KHZ,	15330
994	AUTO	3	932	W-3 BOTTOM	AV	N514E	20548/TP1 AMP X 5.11,TRACK 08, 52.5 KHZ,	18599
995	AUTO	2	925	W-5	AV	N514E	RDS/TP3 AMP X 100.,TRACK 06, 52.5 KHZ,	15330
996	AUTO	2	926	W-6	AV	N514E	RDS/TP3 AMP X 100.,TRACK 02, 52.5 KHZ,	15330
997	AUTO	2	929	W-7	AV	N514E	RDS/TP3 AMP X 100.,TRACK 05, 52.5 KHZ,	18599
998	AUTO	2	927	W-8 TOP	AV	N514E	20548/TP1 AMP X 5. ,TRACK 03, 52.5 KHZ,	18599
999	AUTO	2	930	W-8 BOTTOM	AV	N514E	20548/TP1 AMP X 100.,TRACK 06, 7.35 KHZ,	18599
1000	AUTO	3	934	W-9 TOP	AV	N514E	20548/TP1 AMP X 5.11,TRACK 04, 22. KHZ,	19140

FILE	DIRECTORY	RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1001	AUTO	2	933	W11		AV	N514E	RDS/TP3 AMP X 205.,	TRACK 04,	7.35 KHZ,	19140
1002	AUTO	2	931	W11 TOP		AV	N514E	20548/TP1 AMP X 100.,	TRACK 02,	7.35 KHZ,	18599
1003	AUTO	2	935	W11 BOTTOM		AV	N514E	20548/TP1 AMP X 42. ,	TRACK 02,	52.5 KHZ,	19140
1004	AUTO	3	936	W-3 TOP		AV	N515E	20548/T1 AMP X 5. ,	TRACK 08,	22. KHZ,	06461
1005	AUTO	3	937	W-3 BOTTOM		AV	N515E	20548/T1 AMP X 20.5,	TRACK 08,	52.5 KHZ,	06461
1006	AUTO	2	810	W-5		AV	N515E	RDS/TP3 AMP X 100.,	TRACK 06,	22. KHZ,	14449
1007	AUTO	2	811	W-6		AV	N515E	RDS/TP3 AMP X 100.,	TRACK 02,	52.5 KHZ,	14449
1008	AUTO	2	812	W-7		AV	N515E	RDS/TP3 AMP X 100.,	TRACK 05,	52.5 KHZ,	14449
1009	AUTO	2	813	W-8 TOP		AV	N515E	20548/T1 AMP X 5. ,	TRACK 03,	52.5 KHZ,	14449
1010	AUTO	2	729	W-8 BOTTOM		AV	N515E	20548/T1 AMP X 100.,	TRACK 06,	7.35 KHZ,	19250
1011	AUTO	4	826	W-8 BOTTOM		AT	N515E	230.R-308. AMP X 100.,	TRACK 06,	3.9 KHZ,	18028
1012	AUTO	4	819	W-8 BOTTOM		AR	N515E	230.R-218. AMP X 100.,	TRACK 06,	5.4 KHZ,	18028
1013	AUTO	3	823	W-9 TOP		AT	N515E	30.R- 30. AMP X 10. ,	TRACK 04,	10.5 KHZ,	18028
1014	AUTO	3	816	W-9 TOP		AR	N515E	30.R-300. AMP X 10. ,	TRACK 04,	14.5 KHZ,	18028
1015	AUTO	3	824	W-9 BOTTOM		AT	N515E	30.R- 30. AMP X 10. ,	TRACK 04,	30. KHZ,	18028
1016	AUTO	3	817	W-9 BOTTOM		AR	N515E	30.R-300. AMP X 10. ,	TRACK 04,	40. KHZ,	18028
1017	AUTO	4	822	W10 TOP		AT	N515E	297.R-297. AMP X 100.,	TRACK 07,	2.3 KHZ,	18028
1018	AUTO	4	815	W10 TOP		AR	N515E	297.R-207. AMP X 100.,	TRACK 07,	3.9 KHZ,	18028
1019	AUTO	4	821	W10 BOTTOM		AT	N515E	305.R-297. AMP X 205.,	TRACK 04,	3.9 KHZ,	18028
1020	AUTO	4	814	W10 BOTTOM		AR	N515E	305.R-207. AMP X 205.,	TRACK 04,	5.4 KHZ,	18028
1021	AUTO	2	825	W11 TOP		AT	N515E	310.R-310. AMP X 1. ,	TRACK 02,	3. KHZ,	18028
1022	AUTO	3	818	W11 TOP		AR	N515E	310.R-220. AMP X 10. ,	TRACK 02,	3.9 KHZ,	18028
1023	AUTO	3	828	W11 BOTTOM		AV	N515E	20548/T1 AMP X 5.11,	TRACK 02,	52.5 KHZ,	19250
1024	AUTO	4	827	W11 BOTTOM		AT	N515E	14.R-310. AMP X 5.11,	TRACK 02,	14.5 KHZ,	18028
1025	AUTO	4	820	W11 BOTTOM		AR	N515E	14.R-220. AMP X 5.11,	TRACK 02,	30. KHZ,	18028
1026	AUTO	2	938	PNE-9		AV	N515E	20548/T1 AMP X 20.5,	TRACK 09,	70. KHZ,	13388
1027	AUTO	3	940	PNE-9		AT	N515E	51.R-306. AMP X 20.5,	TRACK 09,	40. KHZ,	13388
1028	AUTO	3	939	PNE-9		AR	N515E	51.R-216. AMP X 20.5,	TRACK 09,	52.5 KHZ,	13388
1029	AUTO	1	805	W-3 TOP		AV	N524E	20548/T1 AMP X 420.,	TRACK 08,	22. KHZ,	18464
1030	AUTO	3	582	W-3 TOP		AT	N524E	82.R- 82. AMP X 420.,	TRACK 08,	10.5 KHZ,	16108
1031	AUTO	3	577	W-3 TOP		AR	N524E	82.R-352. AMP X 420.,	TRACK 08,	14.5 KHZ,	16108
1032	CAD	1	806	W-3 BOTTOM		AV	N524E	20548/T1 AMP X 420.,	TRACK 08,	7.35 KHZ,	18464
1033	AUTO	3	583	W-3 BOTTOM		AT	N524E	82.R- 82. AMP X 420.,	TRACK 08,	3.9 KHZ,	16108
1034	AUTO	2	578	W-3 BOTTOM		AR	N524E	82.R-352. AMP X 420.,	TRACK 08,	5.4 KHZ,	16108
1035	AUTO	1	809	W-9 TOP		AV	N524E	20548/T1 AMP X 420.,	TRACK 03,	22. KHZ,	18517
1036	CAD	1	807	W-9 BOTTOM		AV	N524E	20548/T1 AMP X 420.,	TRACK 03,	7.35 KHZ,	18464
1037	CAD	3	584	W-9 BOTTOM		AT	N524E	44.R- 44. AMP X 420.,	TRACK 03,	3.9 KHZ,	16108
1038	CAD	3	579	W-9 BOTTOM		AR	N524E	44.R-314. AMP X 420.,	TRACK 03,	5.4 KHZ,	16108
1039	AUTO	1	808	W11 TOP		AV	N524E	20548/T1 AMP X 420.,	TRACK 01,	7.35 KHZ,	18464
1040	AUTO	2	585	W11 TOP		AT	N524E	49.R- 49. AMP X 420.,	TRACK 01,	2.3 KHZ,	16108
1041	AUTO	2	580	W11 TOP		AR	N524E	49.R-319. AMP X 420.,	TRACK 01,	3.9 KHZ,	16108
1042	AUTO	2	586	W11 BOTTOM		AT	N524E	112.R- 49. AMP X 420.,	TRACK 01,	14.5 KHZ,	16108
1043	AUTO	2	581	W11 BOTTOM		AR	N524E	112.R-319. AMP X 420.,	TRACK 01,	30. KHZ,	16108
1044	AUTO	1	800	PNE-9		AV	N524E	20548/T1 AMP X 1. ,	TRACK 07,	7.35 KHZ,	18140
1045	AUTO	1	798	PNE-9		AV	N524E	20548/T1 AMP X 420.,	TRACK 07,	70 KHZ,	18140
1046	AUTO	1	799	PNE-9		AV	N524E	20548/T1 AMP X 420.,	TRACK 07,	30. KHZ,	18140
1047	AUTO	2	803	PNE-9		AT	N524E	10.R- 10. AMP X 420.,	TRACK 07,	40. KHZ,	18140
1048	AUTO	2	804	PNE-9		AT	N524E	10.R- 10. AMP X 420.,	TRACK 07,	14.5 KHZ,	18140
1049	AUTO	2	801	PNE-9		AR	N524E	10.R-280. AMP X 420.,	TRACK 07,	52.5 KHZ,	18140
1050	AUTO	2	802	PNE-9		AR	N524E	10.R-280. AMP X 420.,	TRACK 07,	22. KHZ,	18140

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1051	ROTATE	1	587	W-3	TOP	AT	N530E	81.36R	AMP X 205.,	TRACK 06, 10.5 KHZ,	12682
1052	ROTATE	1	595	W-3	TOP	AR	N530E	81.36R	AMP X 205.,	TRACK 06, 14.5 KHZ,	12682
1053	ROTATE	1	589	W-9	TOP	AT	N530E	49.35R	AMP X 205.,	TRACK 03, 10.5 KHZ,	12682
1054	ROTATE	1	597	W-9	TOP	AR	N530E	49.35R	AMP X 205.,	TRACK 03, 14.5 KHZ,	12682
1055	ROTATE	1	588	W-9	BOTTOM	AT	N530E	48.35R	AMP X 205.,	TRACK 03, 3.9 KHZ,	12682
1056	ROTATE	1	596	W-9	BOTTOM	AR	N530E	48.35R	AMP X 205.,	TRACK 03, 5.4 KHZ,	12682
1057	AUTO	1	211	W11	TOP	AV	N530E	20548/T1	AMP X 420.,	TRACK 01, 7.35 KHZ,	19021
1058	ROTATE	1	591	W11	TOP	AT	N530E	57.17R	AMP X 420.,	TRACK 01, 2.3 KHZ,	12682
1059	ROTATE	1	599	W11	TOP	AR	N530E	57.17R	AMP X 420.,	TRACK 01, 3.9 KHZ,	18068
1060	ROTATE	1	590	W11	BOTTOM	AT	N530E	120.67R	AMP X 420.,	TRACK 01, 14.5 KHZ,	12682
1061	ROTATE	1	598	W11	BOTTOM	AR	N530E	120.67R	AMP X 420.,	TRACK 01, 30. KHZ,	12682
1062	DIFF	1	1043	MINE	MOUN	UV	N530E	20548/T1	AMP X 5. ,	TRACK 09, 30. KHZ,	13369
1063	AUTO	1	1041	MINE	MOUN	AV	N530E	20548/T1	AMP X 24.7,	TRACK 09, 14.5 KHZ,	13369
1064	AUTO	1	1042	MINE	MOUN	AV	N530E	20548/T1	AMP X 5. ,	TRACK 08, 40. KHZ,	13369
1065	ROTATE	1	592	MINE	MOUN	AT	N530E	354.30R	AMP X 24.7,	TRACK 09, 30. KHZ,	12682
1066	ROTATE	1	594	MINE	MOUN	AT	N530E	354.30R	AMP X 5. ,	TRACK 08, 70. KHZ,	12682
1067	ROTATE	1	593	MINE	MOUN	AT	N530E	354.30R	AMP X 610.,	TRACK 09, 10.5 KHZ,	12682
1068	ROTATE	1	600	MINE	MOUN	AR	N530E	354.30R	AMP X 24.7,	TRACK 09, 22. KHZ,	18068
1069	ROTATE	1	602	MINE	MOUN	AR	N530E	354.30R	AMP X 5. ,	TRACK 08, 52.5 KHZ,	18068
1070	ROTATE	1	601	MINE	MOUN	AR	N530E	354.30R	AMP X 610.,	TRACK 09, 7.35 KHZ,	18068
1071	AUTO	1	152	W-3	TOP	AV	OFF SHORE	20548	AMP X 420.,	TRACK 06, 22. KHZ,	19698
1072	ROTATE	1	145	W-3	TOP	AT	OFF SHORE	78.65R	AMP X 420.,	TRACK 06, 10.5 KHZ,	11717
1073	ROTATE	1	138	W-3	TOP	AR	OFF SHORE	78.65R	AMP X 420.,	TRACK 06, 14.5 KHZ,	11717
1074	ROTATE	1	150	W-3	BOTTOM	AT	OFF SHORE	78.65R	AMP X 420.,	TRACK 06, 3.9 KHZ,	11717
1075	ROTATE	1	143	W-3	BOTTOM	AR	OFF SHORE	78.65R	AMP X 420.,	TRACK 06, 5.4 KHZ,	11717
1076	AUTO	1	153	W-9	TOP	AV	OFF SHORE	20548	AMP X 100.,	TRACK 03, 22. KHZ,	19698
1077	ROTATE	1	146	W-9	TOP	AT	OFF SHORE	44.08R	AMP X 100.,	TRACK 03, 10.5 KHZ,	11717
1078	ROTATE	1	139	W-9	TOP	AR	OFF SHORE	44.08R	AMP X 100.,	TRACK 03, 14.5 KHZ,	11717
1079	AUTO	1	154	W-9	BOTTOM	AV	OFF SHORE	20548	AMP X 100.,	TRACK 03, 7.35 KHZ,	19698
1080	ROTATE	1	147	W-9	BOTTOM	AT	OFF SHORE	44.08R	AMP X 100.,	TRACK 03, 3.9 KHZ,	11717
1081	ROTATE	1	140	W-9	BOTTOM	AR	OFF SHORE	44.08R	AMP X 100.,	TRACK 03, 5.4 KHZ,	11717
1082	AUTO	1	151	W11	TOP	AV	OFF SHORE	20548	AMP X 205.,	TRACK 01, 7.35 KHZ,	19698
1083	ROTATE	1	144	W11	TOP	AT	OFF SHORE	48.81R	AMP X 205.,	TRACK 01, 2.3 KHZ,	11717
1084	ROTATE	1	137	W11	TOP	AR	OFF SHORE	48.81R	AMP X 205.,	TRACK 01, 3.9 KHZ,	11717
1085	AUTO	1	155	W11	BOTTOM	AV	OFF SHORE	20548	AMP X 100.,	TRACK 01, 52.5 KHZ,	08261
1086	ROTATE	1	148	W11	BOTTOM	AT	OFF SHORE	112.31R	AMP X 100.,	TRACK 01, 14.5 KHZ,	11717
1087	ROTATE	1	141	W11	BOTTOM	AR	OFF SHORE	112.31R	AMP X 100.,	TRACK 01, 30. KHZ,	11717
1088	AUTO	1	156	MINE	MOUN	AV	OFF SHORE	20548	AMP X 617.,	TRACK 09, 5.4 KHZ,	08261
1089	ROTATE	1	149	MINE	MOUN	AT	OFF SHORE	346.35R	AMP X 617.,	TRACK 09, 10.5 KHZ,	11717
1090	ROTATE	1	142	MINE	MOUN	AR	OFF SHORE	346.35R	AMP X 617.,	TRACK 09, 7.35 KHZ,	11717
1091	AUTO	2	992	W-3	TOP	AV	PANIR	20548/T1	AMP X 5. ,	TRACK 06, 22. KHZ,	10968
1092	ROTATE	2	626	W-3	TOP	AT	PANIR	191.95R	AMP X 5. ,	TRACK 06, 10.5 KHZ,	15610
1093	ROTATE	2	618	W-3	TOP	AR	PANIR	191.95R	AMP X 5. ,	TRACK 06, 14.5 KHZ,	15610
1094	AUTO	2	991	W-3	BOTTOM	AV	PANIR	20548/T1	AMP X 10. ,	TRACK 06, 52.5 KHZ,	10968
1095	ROTATE	2	625	W-3	BOTTOM	AT	PANIR	191.95R	AMP X 10. ,	TRACK 06, 30. KHZ,	15610
1096	ROTATE	2	617	W-3	BOTTOM	AR	PANIR	191.95R	AMP X 10. ,	TRACK 06, 40. KHZ,	15610
1097	AUTO	3	1006	W-6		AV	PANIR	RDS/T3	AMP X 51.1,	TRACK 06, 22. KHZ,	13391
1098	AUTO	3	1007	W-6		AV	PANIR	RDS/T3	AMP X 26.1,	TRACK 02, 52.5 KHZ,	13391
1099	ROTATE	3	999	W-6		AT	PANIR	264.88R	AMP X 26.1,	TRACK 02, 30. KHZ,	11881
1100	ROTATE	3	995	W-6		AR	PANIR	264.88R	AMP X 26.1,	TRACK 02, 40. KHZ,	11881

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT		AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1101	AUTO	4	1008	W-7	AV	PANIR	RDS/T3	AMP X 26.1,	TRACK 05,	52.5 KHZ,	13391
1102	ROTATE	4	1000	W-7	AT	PANIR	263.44R	AMP X 26.1,	TRACK 05,	30. KHZ,	11881
1103	ROTATE	4	996	W-7	AR	PANIR	263.44R	AMP X 26.1,	TRACK 05,	40. KHZ,	11881
1104	AUTO	2	994	W-9 TOP	AV	PANIR	20548/T1	AMP X 5. ,	TRACK 04,	22. KHZ,	10968
1105	ROTATE	2	546	W-9 TOP	AT	PANIR	220.84R	AMP X 5. ,	TRACK 04,	10.5 KHZ,	15610
1106	ROTATE	2	620	W-9 TOP	AR	PANIR	220.84R	AMP X 5. ,	TRACK 04,	14.5 KHZ,	15610
1107	AUTO	2	993	W-9 BOTTOM	AV	PANIR	20548/T1	AMP X 5. ,	TRACK 04,	52.5 KHZ,	10968
1108	ROTATE	2	627	W-9 BOTTOM	AT	PANIR	220.84R	AMP X 5. ,	TRACK 04,	30. KHZ,	15610
1109	ROTATE	2	619	W-9 BOTTOM	AR	PANIR	220.84R	AMP X 5. ,	TRACK 04,	40. KHZ,	15610
1110	AUTO	3	1010	W10	AV	PANIR	RDS/T3	AMP X 51.1,	TRACK 07,	52.5 KHZ,	13873
1111	ROTATE	3	1001	W10	AT	PANIR	83.55R	AMP X 51.1,	TRACK 07,	30. KHZ,	11881
1112	ROTATE	3	997	W10	AR	PANIR	83.55R	AMP X 51.1,	TRACK 07,	14.5 KHZ,	11881
1113	AUTO	3	1011	W10 TOP	AV	PANIR	RDS/T3	AMP X 51.1,	TRACK 07,	7.35 KHZ,	13873
1114	ROTATE	3	1002	W10 TOP	AT	PANIR	263.05R	AMP X 51.1,	TRACK 07,	2.3 KHZ,	11881
1115	ROTATE	3	998	W10 TOP	AR	PANIR	263.05R	AMP X 51.1,	TRACK 07,	3.9 KHZ,	11881
1116	AUTO	4	1009	W10 BOTTOM	AV	PANIR	20548/T1	AMP X-20.5,	TRACK 04,	22. KHZ,	13873
1117	ROTATE	4	977	W11 TOP	AT	PANIR	220.43R	AMP X 10. ,	TRACK 02,	2.3 KHZ,	17614
1118	ROTATE	3	624	W11 TOP	AR	PANIR	220.43R	AMP X 10. ,	TRACK 02,	3.9 KHZ,	15610
1119	AUTO	3	990	W11 BOTTOM	AV	PANIR	20548/T1	AMP X 5. ,	TRACK 02,	52.5 KHZ,	06460
1120	ROTATE	4	976	W11 BOTTOM	AT	PANIR	283.93R	AMP X 5. ,	TRACK 02,	14.5 KHZ,	17614
1121	ROTATE	3	623	W11 BOTTOM	AR	PANIR	283.93R	AMP X 5. ,	TRACK 02,	30. KHZ,	15610
1122	ROTATE	2	622	W17	AR	PANIR	293.43R	AMP X 1. ,	TRACK 10,	22. KHZ,	15610
1123	ROTATE	1	621	W18	AR	PANIR	290.55R	AMP X 10. ,	TRACK 11,	7.35 KHZ,	15610
1124	AUTO	1	975	PNE-9	AV	PANIR	20548/T1	AMP X 1. ,	TRACK 9 ,	7.35 KHZ,	15020
1125	AUTO	1	973	PNE-9	AV	PANIR	20548/T1	AMP X 20.5,	TRACK 9 ,	70. KHZ,	15020
1126	AUTO	1	980	PNE-7	AV	PANIR	146/865	AMP X 1. ,	TRACK 07,	52.5 KHZ,	19372
1127	AUTO	1	979	PNE-3	AV	PANIR	146/865	AMP X 1. ,	TRACK 03,	52.5 KHZ,	19372
1128	AUTO	2	978	PNE-2	AV	PANIR	146/865	AMP X 1. ,	TRACK 02,	52.5 KHZ,	19372
1129	AUTO	2	974	PNE-1	AV	PANIR	146/865	AMP X 1. ,	TRACK 01,	52.5 KHZ,	15020
1130	AUTO	2	985	D	AV	PANIR	RDS/T3	AMP X 25. ,	TRACK 03,	22. KHZ,	06460
1131	AUTO	2	987	D	AT	PANIR	RDS/T3	AMP X 25. ,	TRACK 03,	10.5 KHZ,	06460
1132	AUTO	2	986	D	AR	PANIR	RDS/T3	AMP X 25. ,	TRACK 03,	14.5 KHZ,	06460
1133	AUTO	5	1003	C	AV	PANIR	RDS/T3	AMP X 26.1,	TRACK 11,	22. KHZ,	13391
1134	AUTO	4	1005	C	AT	PANIR	RDS/T3	AMP X 26.1,	TRACK 11,	10.5 KHZ,	13391
1135	AUTO	5	1004	C	AR	PANIR	RDS/T3	AMP X-5.11,	TRACK 11,	14.5 KHZ,	13391
1136	AUTO	4	989	A	AT	PANIR	RDS/T3	AMP X 25. ,	TRACK 09,	10.5 KHZ,	06460
1137	AUTO	4	983	A	AR	PANIR	RDS/T3	AMP X 25. ,	TRACK 09,	14.5 KHZ,	06460
1138	ROTATE	1	612	W-3 TOP	AT	PEPATO	191.43R	AMP X 10. ,	TRACK 06,	10.5 KHZ,	13726
1139	ROTATE	1	605	W-3 TOP	AR	PEPATO	191.43R	AMP X 10. ,	TRACK 06,	14.5 KHZ,	13726
1140	ROTATE	1	614	W-9 TOP	AT	PEPATO	210.53R	AMP X 10. ,	TRACK 03,	10.5 KHZ,	13726
1141	ROTATE	1	607	W-9 TOP	AR	PEPATO	210.53R	AMP X 10. ,	TRACK 03,	14.5 KHZ,	13726
1142	ROTATE	1	613	W-9 BOTTOM	AT	PEPATO	210.53R	AMP X 10. ,	TRACK 03,	3.9 KHZ,	13726
1143	ROTATE	1	606	W-9 BOTTOM	AR	PEPATO	210.53R	AMP X 10. ,	TRACK 03,	5.4 KHZ,	13726
1144	DIFF	5	537	W10	AT	PEPATO	134.R-255.	AMP X 50.1,	TRACK 05,	22. KHZ,	19273
1145	DIFF	5	525	W10	AR	PEPATO	134.R-165.	AMP X 50.1,	TRACK 05,	14.5 KHZ,	19273
1146	ROTATE	1	610	W11 TOP	AT	PEPATO	213.75R	AMP X 100.,	TRACK 01,	2.3 KHZ,	13726
1147	ROTATE	1	603	W11 TOP	AR	PEPATO	213.75R	AMP X 100.,	TRACK 01,	3.9 KHZ,	13726
1148	ROTATE	1	616	W11 BOTTOM	AT	PEPATO	277.25R	AMP X 51. ,	TRACK 01,	14.5 KHZ,	13726
1149	ROTATE	1	609	W11 BOTTOM	AR	PEPATO	277.25R	AMP X 51. ,	TRACK 01,	30. KHZ,	13726
1150	ROTATE	1	611	W13 TOP	AT	PEPATO	266.75R	AMP X 4.2 ,	TRACK 05,	2.3 KHZ,	13726

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE EVENT		AMPLIFICATION TRACK	FREQUENCY	TAPE OF ORIGIN
1151	ROTATE	1	604	W13 TOP	AR	PEPATO	266.75R	AMP X 4.2 ,TRACK 05,	3.9 KHZ,	13726
1152	ROTATE	1	615	W14	AT	PEPATO	267.52R	AMP X 20.5,TRACK 07,	3. KHZ,	13726
1153	ROTATE	1	608	W14	AR	PEPATO	267.52R	AMP X 20.5,TRACK 07,	3.9 KHZ,	13726
1154	ROTATE	1	1139	W15	AT	PEPATO	260.81R	AMP X 10. ,TRACK 12,	14.5 KHZ,	13850
1155	ROTATE	1	1135	W15	AR	PEPATO	260.81R	AMP X 10. ,TRACK 12,	22. KHZ,	13850
1156	ROTATE	1	1138	W16	AT	PEPATO	258.11R	AMP X 10. ,TRACK 12,	5.4 KHZ,	13850
1157	ROTATE	1	1134	W16	AR	PEPATO	258.11R	AMP X 10. ,TRACK 12,	7.35 KHZ,	13850
1158	AUTO	1	981	W17	AV	PEPATO	P315/TP1	AMP X 5.1 ,TRACK 10,	10.5 KHZ,	10448
1159	AUTO	1	982	W18	AV	PEPATO	P315/TP1	AMP X 5.1 ,TRACK 11,	10.5 KHZ,	10448
1160	AUTO	1	1147	PNE-5	AV	PEPATO	TS/865	AMP X 5.1 ,TRACK 07,	7.35 KHZ,	16773
1161	AUTO	1	983	PNE-10	AV	PEPATO	TS/865	AMP X 1. ,TRACK 05,	52.5 KHZ,	10448
1162	AUTO	1	984	PNE-10	AV	PEPATO	TS/865	AMP X 1. ,TRACK 05,	22. KHZ,	10448
1163	ROTATE	1	1137	MINE MOUN	AT	PEPATO	230.39R	AMP X 24.7,TRACK 09,	30. KHZ,	13850
1164	ROTATE	1	1140	MINE MOUN	AT	PEPATO	230.39R	AMP X 5. ,TRACK 08,	70. KHZ,	13850
1165	ROTATE	1	1133	MINE MOUN	AR	PEPATO	230.39R	AMP X 24.7,TRACK 09,	22. KHZ,	13850
1166	ROTATE	1	1136	MINE MOUN	AR	PEPATO	230.39R	AMP X 5. ,TRACK 08,	52.5 KHZ,	13850
1167	AUTO	1	1144	D	AV	PEPATO	RDS/TP1	AMP X 26.1,TRACK 04,	7.35 KHZ,	16773
1168	AUTO	1	1145	D	AT	PEPATO	RDS/TP1	AMP X 26.1,TRACK 04,	3.9 KHZ,	16773
1169	AUTO	1	1146	D	AR	PEPATO	RDS/TP1	AMP X 26.1,TRACK 04,	5.4 KHZ,	16773
1170	AUTO	1	1142	C	AV	PEPATO	RDS/TP1	AMP X 20.5,TRACK 09,	7.35 KHZ,	16773
1171	AUTO	1	1141	C	AT	PEPATO	RDS/TP1	AMP X 20.5,TRACK 09,	3.9 KHZ,	16773
1172	AUTO	1	1143	C	AR	PEPATO	RDS/TP1	AMP X 20.5,TRACK 09,	5.4 KHZ,	16773
1173	AUTO	3	1363	W-3 TOP	AV	PYRAMID	20548/T1	AMP X 20.5,TRACK 06,	30. KHZ,	12722
1174	AUTO	3	1364	W-3 BOTTOM	AV	PYRAMID	20548/T1	AMP X 26.1,TRACK 06,	3.9 KHZ,	12722
1175	AUTO	2	1368	W-5	AV	PYRAMID	RDS	AMP X 42. ,TRACK 02,	30. KHZ,	10463
1176	AUTO	3	1237	W-5	AT	PYRAMID	295.R-295.	AMP X 42. ,TRACK 02,	14.5 KHZ,	13773
1177	AUTO	2	1236	W-5	AR	PYRAMID	295.R-205.	AMP X 42. ,TRACK 02,	22. KHZ,	13773
1178	AUTO	2	1356	W-6	AV	PYRAMID	RDS	AMP X 42. ,TRACK 04,	10.5 KHZ,	14040
1179	AUTO	2	1309	W-6	AT	PYRAMID	309.R-309.	AMP X 42. ,TRACK 04,	5.4 KHZ,	13660
1180	AUTO	2	1337	W-6	AR	PYRAMID	309.R-219.	AMP X 42. ,TRACK 04,	7.35 KHZ,	13660
1181	AUTO	2	1355	W-7	AV	PYRAMID	RDS	AMP X 26.1,TRACK 01,	30. KHZ,	14040
1182	AUTO	4	1308	W-7	AT	PYRAMID	313.R-313.	AMP X 26.1,TRACK 01,	14.5 KHZ,	13660
1183	AUTO	2	1306	W-7	AR	PYRAMID	313.R-223.	AMP X 26.1,TRACK 01,	22. KHZ,	13660
1184	AUTO	2	1229	W-9 TOP	AT	PYRAMID	26.R- 26.	AMP X 10. ,TRACK 03,	14.5 KHZ,	13773
1185	AUTO	2	1226	W-9 TOP	AR	PYRAMID	26.R-296.	AMP X 10. ,TRACK 03,	22. KHZ,	13773
1186	AUTO	3	1230	W-9 BOTTOM	AT	PYRAMID	26.R- 26.	AMP X 20.5,TRACK 03,	5.4 KHZ,	13773
1187	AUTO	3	1227	W-9 BOTTOM	AR	PYRAMID	26.R-296.	AMP X 20.5,TRACK 03,	7.35 KHZ,	13773
1188	DIFF	6	544	W10	AT	PYRAMID	182.R-303.	AMP X 51.1,TRACK 03,	3. KHZ,	19273
1189	DIFF	6	532	W10	AR	PYRAMID	182.R-213.	AMP X 51.1,TRACK 03,	2.3 KHZ,	19273
1190	CAD	2	1369	W10 TOP	AV	PYRAMID	RDS	AMP X 1. ,TRACK 03,	70. KHZ,	13504
1191	AUTO	2	1311	W10 TOP	AT	PYRAMID	303.R-303.	AMP X 51.1,TRACK 03,	14.5 KHZ,	13660
1192	AUTO	2	1310	W10 TOP	AR	PYRAMID	303.R-213.	AMP X 51.1,TRACK 03,	22. KHZ,	13660
1193	AUTO	2	1354	W11 TOP	AV	PYRAMID	20548/T1	AMP X 2.05,TRACK 01,	30. KHZ,	14040
1194	AUTO	3	1315	W11 TOP	AT	PYRAMID	353.R-353.	AMP X 1. ,TRACK 01,	46. KHZ,	13660
1195	AUTO	3	1313	W11 TOP	AR	PYRAMID	353.R-263.	AMP X 2.05,TRACK 01,	22. KHZ,	13660
1196	AUTO	2	1353	W11 BOTTOM	AV	PYRAMID	20548/T1	AMP X 10.4,TRACK 01,	3.9 KHZ,	14040
1197	AUTO	4	1314	W11 BOTTOM	AT	PYRAMID	57.R-353.	AMP X 10.4,TRACK 01,	2.3 KHZ,	13660
1198	AUTO	3	1312	W11 BOTTOM	AR	PYRAMID	57.R-263.	AMP X 10.4,TRACK 01,	3. KHZ,	13660
1199	AUTO	2	1361	W13 TOP	AV	PYRAMID	20548/T1	AMP X 24.4,TRACK 05,	70. KHZ,	12722
1200	AUTO	3	1234	W13 TOP	AT	PYRAMID	6.R- 6.	AMP X 24.4,TRACK 05,	40. KHZ,	13773

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1201	AUTO	2	1232	W13 TOP	AP	PYRAMID	6.R-276.AMP X 24.4,	TRACK 05,	52.5 KHZ,	13773
1202	AUTO	2	1362	W13 BOTTOM	AV	PYRAMID	20548/T1 AMP X 50.1,	TRACK 05,	10.5 KHZ,	12722
1203	AUTO	3	1235	W13 BOTTOM	AT	PYRAMID	290.R- 6.AMP X 50.1,	TRACK 05,	5.4 KHZ,	13773
1204	AUTO	3	1233	W13 BOTTOM	AR	PYRAMID	290.R-276.AMP X 50.1,	TRACK 05,	7.35 KHZ,	13773
1205	AUTO	2	1231	W14	AT	PYRAMID	322.R-322.AMP X 42. ,	TRACK 07,	5.4 KHZ,	13773
1206	AUTO	2	1228	W14	AR	PYRAMID	322.R-232.AMP X 42. ,	TRACK 07,	7.35 KHZ,	13773
1207	AUTO	2	1365	W15	AV	PYRAMID	20548/T1 AMP X 42. ,	TRACK 12,	30. KHZ,	10463
1208	AUTO	3	1223	W15	AT	PYRAMID	338.R-338.AMP X 42. ,	TRACK 12,	14.5 KHZ,	13662
1209	AUTO	3	1220	W15	AR	PYRAMID	338.R-248.AMP X 42. ,	TRACK 12,	22. KHZ,	13662
1210	AUTO	2	1366	W16	AV	PYRAMID	20548/T1 AMP X 42. ,	TRACK 12,	10.5 KHZ,	10463
1211	AUTO	3	1224	W16	AT	PYRAMID	335.R-335.AMP X 42. ,	TRACK 12,	5.4 KHZ,	13662
1212	AUTO	2	1221	W16	AR	PYRAMID	335.R-245.AMP X 42. ,	TRACK 12,	7.35 KHZ,	13662
1213	AUTO	2	1367	W17	AV	PYRAMID	20548/T1 AMP X 51.1,	TRACK 10,	10.5 KHZ,	10463
1214	AUTO	2	1225	W17	AT	PYRAMID	357.R-357.AMP X 51.1,	TRACK 10,	5.4 KHZ,	13662
1215	AUTO	2	1222	W17	AR	PYRAMID	357.R-267.AMP X 51.1,	TRACK 10,	7.35 KHZ,	13662
1216	AUTO	2	1360	MINE MOUN	AV	PYRAMID	20548/T1 AMP X 25. ,	TRACK 08,	30. KHZ,	11704
1217	AUTO	2	1357	MINE MOUN	AV	PYRAMID	20548/T1 AMP X 25. ,	TRACK 02,	30. KHZ,	11704
1218	AUTO	2	1358	MINE MOUN	AV	PYRAMID	20548/T1 AMP X 617.,	TRACK 04,	10.5 KHZ,	11704
1219	AUTO	2	1359	MINE MOUN	AV	PYRAMID	20548/T1 AMP X 617.,	TRACK 02,	10.5 KHZ,	11704
1220	AUTO	3	1219	MINE MOUN	AT	PYRAMID	309.R-309.AMP X 617.,	TRACK 08,	5.4 KHZ,	13662
1221	AUTO	2	1218	MINE MOUN	AR	PYRAMID	309.R-219.AMP X 617.,	TRACK 08,	7.35 KHZ,	13662
1222	AUTO	1	1156	W-3 TOP	AV	QUARGEL	20548/T1 AMP X 5. ,	TRACK 08,	22. KHZ,	19287
1223	ROTATE	1	560	W-3 TOP	AT	QUARGEL	101.34R AMP X 5. ,	TRACK 08,	10.5 KHZ,	13436
1224	ROTATE	1	548	W-3 TOP	AR	QUARGEL	101.34R AMP X 5. ,	TRACK 08,	14.5 KHZ,	13406
1225	AUTO	1	1155	W-3 BOTTOM	AV	QUARGEL	20548/T1 AMP X 5. ,	TRACK 08,	52.5 KHZ,	19287
1226	ROTATE	1	559	W-3 BOTTOM	AT	QUARGEL	101.34R AMP X 5. ,	TRACK 08,	30. KHZ,	13436
1227	ROTATE	1	547	W-3 BOTTOM	AR	QUARGEL	101.34R AMP X 5. ,	TRACK 08,	40. KHZ,	13406
1228	AUTO	1	1157	W-5	AV	QUARGEL	180693 AMP X 25. ,	TRACK 04,	22. KHZ,	19287
1229	ROTATE	1	561	W-5	AT	QUARGEL	286.80R AMP X 25. ,	TRACK 04,	10.5 KHZ,	13436
1230	ROTATE	1	549	W-5	AR	QUARGEL	286.80R AMP X 25. ,	TRACK 04,	14.5 KHZ,	13406
1231	AUTO	1	1158	W-6	AV	QUARGEL	180693 AMP X 25. ,	TRACK 02,	52.5 KHZ,	19287
1232	ROTATE	1	562	W-6	AT	QUARGEL	301.30R AMP X 25. ,	TRACK 02,	30. KHZ,	13436
1233	ROTATE	1	550	W-6	AR	QUARGEL	301.30R AMP X 25. ,	TRACK 02,	40. KHZ,	13406
1234	AUTO	1	1158	W-7	AV	QUARGEL	180693 AMP X 20.5,	TRACK 03,	52.5 KHZ,	19097
1235	ROTATE	1	563	W-7	AT	QUARGEL	303.53R AMP X 20.5,	TRACK 03,	30. KHZ,	13436
1236	ROTATE	2	551	W-7	AR	QUARGEL	303.53R AMP X 20.5,	TRACK 03,	40. KHZ,	13406
1237	AUTO	1	1059	W-9 TOP	AV	QUARGEL	20548/T1 AMP X 5. ,	TRACK 03,	22. KHZ,	19097
1238	ROTATE	1	564	W-9 TOP	AT	QUARGEL	24.25R AMP X 5. ,	TRACK 03,	10.5 KHZ,	13436
1239	ROTATE	1	552	W-9 TOP	AR	QUARGEL	24.25R AMP X 5. ,	TRACK 03,	14.5 KHZ,	13406
1240	AUTO	1	1060	W-9 BOTTOM	AV	QUARGEL	20548/T1 AMP X 5. ,	TRACK 03,	52.5 KHZ,	19097
1241	ROTATE	1	565	W-9 BOTTOM	AT	QUARGEL	24.25R AMP X 5. ,	TRACK 03,	30. KHZ,	13436
1242	ROTATE	1	553	W-9 BOTTOM	AR	QUARGEL	24.25R AMP X 5. ,	TRACK 03,	40. KHZ,	13406
1243	AUTO	2	1151	W10	AV	QUARGEL	180693 AMP X 25. ,	TRACK 01,	52.5 KHZ,	11984
1244	ROTATE	1	566	W10	AT	QUARGEL	112.50R AMP X 1. ,	TRACK 01,	40. KHZ,	13436
1245	ROTATE	1	554	W10	AR	QUARGEL	112.50R AMP X 25. ,	TRACK 01,	14.5 KHZ,	13406
1246	AUTO	1	1044	W10 TOP	AV	QUARGEL	180693 AMP X 25. ,	TRACK 01,	7.35 KHZ,	13934
1247	ROTATE	1	570	W10 TOP	AT	QUARGEL	295.00R AMP X 25. ,	TRACK 01,	2.3 KHZ,	13436
1248	ROTATE	1	558	W10 TOP	AR	QUARGEL	295.00R AMP X 25. ,	TRACK 01,	3.9 KHZ,	13406
1249	AUTO	2	1045	W10 BOTTOM	AV	QUARGEL	180693 AMP X 20.5,	TRACK 05,	22. KHZ,	13934
1250	ROTATE	1	576	W11 TOP	AT	QUARGEL	285.08R AMP X 5. ,	TRACK 01,	2.3 KHZ,	13798

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1251	ROTATE	1	573	W11 TOP	AR	QUARGEL	285.08R AMP X 1.	,TRACK C1,	5.4 KHZ,	13798
1252	AUTO	1	1046	W11 BOTTOM	AV	QUARGEL	20548/T1 AMP X 2.05	,TRACK C1,	52.5 KHZ,	13934
1253	ROTATE	1	574	W11 BOTTOM	AT	QUARGEL	348.58P AMP X 2.05	,TRACK C1,	14.5 KHZ,	13798
1254	ROTATE	1	571	W11 BOTTOM	AR	QUARGEL	348.58P AMP X 2.05	,TRACK C1,	30. KHZ,	13798
1255	AUTO	2	1152	W13 TOP	AV	QUARGEL	146/865 AMP X 20.5	,TRACK C3,	3.9 KHZ,	11984
1256	ROTATE	2	567	W13 TOP	AT	QUARGEL	1.32P AMP X 20.5	,TRACK C3,	2.3 KHZ,	13436
1257	ROTATE	2	555	W13 TOP	AR	QUARGEL	1.32P AMP X 20.5	,TRACK C3,	3. KHZ,	13406
1258	AUTO	1	1047	W14	AV	QUARGEL	180633 AMP X 20.5	,TRACK C7,	22. KHZ,	13934
1259	ROTATE	1	575	W14	AT	QUARGEL	315.21R AMP X 20.5	,TRACK C7,	7.35 KHZ,	13798
1260	ROTATE	1	572	W14	AR	QUARGEL	315.21P AMP X 20.5	,TRACK C7,	14.5 KHZ,	13798
1261	AUTO	3	1153	W15	AV	QUARGEL	20548/T1 AMP X 20.5	,TRACK 12,	30. KHZ,	11984
1262	ROTATE	1	568	W15	AT	QUARGEL	330.18R AMP X 20.5	,TRACK 12,	14.5 KHZ,	13436
1263	ROTATE	1	556	W15	AR	QUARGEL	330.18R AMP X 20.5	,TRACK 12,	22. KHZ,	13406
1264	AUTO	1	1154	W18	AV	QUARGEL	20548/T1 AMP X 20.5	,TRACK 11,	10.5 KHZ,	11984
1265	ROTATE	1	569	W18	AT	QUARGEL	344.19P AMP X 20.5	,TRACK 11,	5.4 KHZ,	13436
1266	ROTATE	1	557	W18	AR	QUARGEL	344.19P AMP X 20.5	,TRACK 11,	7.35 KHZ,	13406
1267	AUTO	1	1150	PNE-9	AV	QUARGEL	20548/1 AMP X 1.	,TRACK C7,	7.35 KHZ,	10965
1268	AUTO	1	1148	PNE-9	AV	QUARGEL	20548/1 AMP X 20.5	,TRACK C7,	70. KHZ,	10965
1269	AUTO	1	1149	PNE-9	AV	QUARGEL	20548/1 AMP X 42.	,TRACK C7,	30. KHZ,	10965
1270	AUTO	1	272	W-3 TOP	AV	QUINELLA	20548/T1 AMP X 5.11	,TRACK C6,	22. KHZ,	12380
1271	ROTATE	1	263	W-3 TOP	AT	QUINELLA	83.18R AMP X 5.11	,TRACK C6,	10.5 KHZ,	16578
1272	ROTATE	1	259	W-3 TOP	AR	QUINELLA	83.18R AMP X 5.11	,TRACK C6,	14.5 KHZ,	16578
1273	AUTO	1	271	W-3 BOTTOM	AV	QUINELLA	20548/T1 AMP X 5.11	,TRACK C6,	7.35 KHZ,	12380
1274	ROTATE	1	262	W-3 BOTTOM	AT	QUINELLA	88.18R AMP X 5.11	,TRACK C6,	3.9 KHZ,	16578
1275	ROTATE	1	258	W-3 BOTTOM	AR	QUINELLA	88.18R AMP X 5.11	,TRACK C6,	5.4 KHZ,	16578
1276	AUTO	2	1165	W-5	AV	QUINELLA	RDS/T1 AMP X 26.1	,TRACK 03,	22. KHZ,	14709
1277	ROTATE	2	281	W-5	AT	QUINELLA	291.85R AMP X 26.1	,TRACK 03,	10.5 KHZ,	14966
1278	ROTATE	2	278	W-5	AR	QUINELLA	291.85R AMP X 26.1	,TRACK C3,	14.5 KHZ,	14966
1279	AUTO	1	1166	W-6	AV	QUINELLA	RDS/T1 AMP X 26.1	,TRACK C1,	52.5 KHZ,	14709
1280	ROTATE	2	282	W-6	AT	QUINELLA	306.82R AMP X 26.1	,TRACK C1,	30. KHZ,	14966
1281	ROTATE	2	279	W-6	AR	QUINELLA	306.82P AMP X 26.1	,TRACK 01,	40. KHZ,	14966
1282	AUTO	1	1167	W-7	AV	QUINELLA	RDS/T1 AMP X 1.	,TRACK C2,	22. KHZ,	14709
1283	ROTATE	2	283	W-7	AT	QUINELLA	309.69R AMP X 26.1	,TRACK C2,	30. KHZ,	14966
1284	ROTATE	2	280	W-7	AR	QUINELLA	309.69P AMP X 26.1	,TRACK 02,	40. KHZ,	14966
1285	AUTO	1	274	W-9 TOP	AV	QUINELLA	20548/T1 AMP X 10.	,TRACK C3,	22. KHZ,	12380
1286	ROTATE	1	265	W-9 TOP	AT	QUINELLA	29.29R AMP X 10.	,TRACK 03,	10.5 KHZ,	16578
1287	ROTATE	1	261	W-9 TOP	AR	QUINELLA	29.29P AMP X 10.	,TRACK 03,	14.5 KHZ,	16578
1288	AUTO	1	273	W-9 BOTTOM	AV	QUINELLA	20548/T1 AMP X 10.	,TRACK C3,	7.35 KHZ,	12380
1289	ROTATE	1	264	W-9 BOTTOM	AT	QUINELLA	29.29R AMP X 10.	,TRACK C3,	3.9 KHZ,	16578
1290	ROTATE	1	260	W-9 BOTTOM	AR	QUINELLA	29.29R AMP X 10.	,TRACK C3,	5.4 KHZ,	16578
1291	AUTO	2	293	W10	AV	QUINELLA	RDS/T1 AMP X 24.4	,TRACK C5,	30. KHZ,	14195
1292	DIFF	6	535	W10	AT	QUINELLA	179.R-300. AMP X 24.4	,TRACK C5,	22. KHZ,	19273
1293	DIFF	5	523	W10	AR	QUINELLA	179.R-210. AMP X 24.4	,TRACK C5,	14.5 KHZ,	19273
1294	AUTO	1	292	W10 TOP	AV	QUINELLA	RDS/T1 AMP X 10.	,TRACK C4,	7.35 KHZ,	16776
1295	ROTATE	2	270	W10 TOP	AT	QUINELLA	299.91P AMP X 10.	,TRACK C4,	2.3 KHZ,	16578
1296	ROTATE	2	289	W10 TOP	AR	QUINELLA	299.91P AMP X 10.	,TRACK C4,	3.9 KHZ,	14966
1297	AUTO	1	294	W10 BOTTOM	AV	QUINELLA	RDS/T1 AMP X 24.4	,TRACK C5,	10.5 KHZ,	14195
1298	ROTATE	2	303	W10 BOTTOM	AT	QUINELLA	209.91R AMP X 24.4	,TRACK C5,	5.4 KHZ,	14195
1299	ROTATE	2	297	W10 BOTTOM	AR	QUINELLA	209.91P AMP X 24.4	,TRACK C5,	7.35 KHZ,	14195
1300	AUTO	1	275	W11 TOP	AV	QUINELLA	20548/T1 AMP X 10.	,TRACK C1,	7.35 KHZ,	12047

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1301	ROTATE	2	277	W11 TOP		AT	QUINELLA	346.90R AMP X 10.	,TRACK 01,	2.3 KHZ,	12047
1302	ROTATE	2	276	W11 TOP		AR	QUINELLA	346.90R AMP X 10.	,TRACK 01,	3.9 KHZ,	12047
1303	AUTO	1	296	W11 BOTTOM		AV	QUINELLA	20548/T1 AMP X 5.11	,TRACK 01,	52.5 KHZ,	14195
1304	ROTATE	2	302	W11 BOTTOM		AT	QUINELLA	50.40R AMP X 5.11	,TRACK 01,	14.5 KHZ,	14195
1305	ROTATE	2	299	W11 BOTTOM		AR	QUINELLA	50.40R AMP X 5.11	,TRACK 01,	30. KHZ,	14195
1306	AUTO	1	1127	W13 TOP		AV	QUINELLA	20548/T1 AMP X 1.	,TRACK 07,	10.5 KHZ,	16962
1307	ROTATE	2	290	W13 TOP		AT	QUINELLA	5.65R AMP X 26.1	,TRACK 07,	2.3 KHZ,	14966
1308	ROTATE	2	284	W13 TOP		AR	QUINELLA	5.65R AMP X 1.	,TRACK 07,	7.35 KHZ,	14966
1309	AUTO	1	295	W14		AV	QUINELLA	RDS/T1 AMP X 26.1	,TRACK 07,	5.4 KHZ,	14195
1310	ROTATE	2	301	W14		AT	QUINELLA	320.11R AMP X 26.1	,TRACK 07,	3. KHZ,	14195
1311	ROTATE	2	298	W14		AR	QUINELLA	320.11R AMP X 26.1	,TRACK 07,	3.9 KHZ,	14195
1312	AUTO	1	1128	W15		AV	QUINELLA	20548/T1 AMP X 26.1	,TRACK 12,	30. KHZ,	16962
1313	ROTATE	2	266	W15		AT	QUINELLA	336.50R AMP X 26.1	,TRACK 12,	14.5 KHZ,	16578
1314	ROTATE	2	285	W15		AR	QUINELLA	336.50R AMP X 26.1	,TRACK 12,	22. KHZ,	14966
1315	AUTO	1	1129	W16		AV	QUINELLA	20548/T1 AMP X 26.1	,TRACK 12,	10.5 KHZ,	16962
1316	ROTATE	2	267	W16		AT	QUINELLA	333.22R AMP X 26.1	,TRACK 12,	5.4 KHZ,	16578
1317	ROTATE	2	286	W16		AR	QUINELLA	333.22R AMP X 26.1	,TRACK 12,	7.35 KHZ,	14966
1318	AUTO	2	291	W17		AV	QUINELLA	20548/T1 AMP X 26.1	,TRACK 10,	10.5 KHZ,	16776
1319	ROTATE	2	268	W17		AT	QUINELLA	357.07R AMP X 26.1	,TRACK 10,	5.4 KHZ,	16578
1320	ROTATE	2	287	W17		AR	QUINELLA	357.07R AMP X 26.1	,TRACK 10,	7.35 KHZ,	14966
1321	CAV	2	1130	W18		AV	QUINELLA	20548/T1 AMP X 26.1	,TRACK 11,	10.5 KHZ,	16962
1322	ROTATE	2	269	W18		AT	QUINELLA	349.24R AMP X 26.1	,TRACK 11,	5.4 KHZ,	16578
1323	ROTATE	2	288	W18		AR	QUINELLA	349.24R AMP X 26.1	,TRACK 11,	7.35 KHZ,	14966
1324	AUTO	1	1159	PNE-9		AV	QUINELLA	20548/T1 AMP X 10.	,TRACK 09,	30. KHZ,	13892
1325	AUTO	1	1160	PNE-9		AV	QUINELLA	20548/T1 AMP X 20.5	,TRACK 09,	70. KHZ,	13892
1326	ROTATE	2	1163	PNE-9		AT	QUINELLA	340.58R AMP X 10.	,TRACK 09,	14.5 KHZ,	13922
1327	ROTATE	2	1164	PNE-9		AT	QUINELLA	340.58R AMP X 20.5	,TRACK 09,	40. KHZ,	13922
1328	ROTATE	2	1161	PNE-9		AR	QUINELLA	340.58R AMP X 10.	,TRACK 09,	22. KHZ,	13922
1329	ROTATE	2	1162	PNE-9		AR	QUINELLA	340.58R AMP X 20.5	,TRACK 09,	52.5 KHZ,	13922
1330	AUTO	1	648	W-3 TOP		AV	RUMMY	20548/T1 AMP X 5.	,TRACK 08,	22. KHZ,	14961
1331	ROTATE	1	655	W-3 TOP		AT	RUMMY	87.29R AMP X 5.	,TRACK 08,	10.5 KHZ,	15517
1332	ROTATE	1	651	W-3 TOP		AR	RUMMY	87.29R AMP X 5.	,TRACK 08,	14.5 KHZ,	15517
1333	AUTO	2	647	W-3 BOTTOM		AV	RUMMY	20548/T1 AMP X 5.11	,TRACK 08,	52.5 KHZ,	14961
1334	ROTATE	2	654	W-3 BOTTOM		AT	RUMMY	87.29R AMP X 5.11	,TRACK 08,	30. KHZ,	15517
1335	ROTATE	2	650	W-3 BOTTOM		AR	RUMMY	87.29R AMP X 5.11	,TRACK 08,	40. KHZ,	15517
1336	AUTO	2	649	W-5		AV	RUMMY	RDS/T3 AMP X 10.	,TRACK 04,	22. KHZ,	14961
1337	ROTATE	3	657	W-6		AT	RUMMY	309.65R AMP X 5.11	,TRACK 02,	30. KHZ,	15517
1338	ROTATE	3	653	W-6		AR	RUMMY	309.65R AMP X 5.11	,TRACK 02,	40. KHZ,	15517
1339	ROTATE	2	656	W-7		AT	RUMMY	312.98R AMP X 1.	,TRACK 03,	30. KHZ,	15517
1340	ROTATE	3	652	W-7		AR	RUMMY	312.98R AMP X 5.11	,TRACK 03,	40. KHZ,	15517
1341	AUTO	1	1187	W-9 TOP		AV	RUMMY	20548/T1 AMP X 5.	,TRACK 03,	22. KHZ,	18840
1342	AUTO	1	1186	W-9 BOTTOM		AV	RUMMY	20548/T1 AMP X 5.	,TRACK 03,	52.5 KHZ,	18840
1343	AUTO	2	636	W10		AV	RUMMY	RDS/T3 AMP X 10.	,TRACK 01,	52.5 KHZ,	14462
1344	AUTO	3	637	W10 TOP		AV	RUMMY	RDS/T3 AMP X 1.	,TRACK 01,	10.5 KHZ,	14462
1345	AUTO	2	638	W10 BOTTOM		AV	RUMMY	RDS/T3 AMP X 1.	,TRACK 05,	52.5 KHZ,	14462
1346	AUTO	3	639	W10 BOTTOM		AV	RUMMY	RDS/T3 AMP X-20.5	,TRACK 05,	22. KHZ,	14462
1347	AUTO	2	640	W11 TOP		AV	RUMMY	20548/T1 AMP X 4.2	,TRACK 01,	7.35 KHZ,	14462
1348	AUTO	3	632	W11 BOTTOM		AV	RUMMY	20548/T1 AMP X 2.05	,TRACK 01,	52.5 KHZ,	14336
1349	ROTATE	3	661	W11 BOTTOM		AT	RUMMY	87.08R AMP X 2.05	,TRACK 01,	14.5 KHZ,	15517
1350	ROTATE	3	658	W11 BOTTOM		AR	RUMMY	87.08R AMP X 2.05	,TRACK 01,	30. KHZ,	15517

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1351	AUTO	2	633	W13 TOP	AV	RUMMY	146/363/2 AMP X 10.	,TRACK 12,	3.9 KHZ,	14336
1352	ROTATE	2	662	W13 TOP	AT	RUMMY	9.649 AMP X 10.	,TRACK 12,	2.3 KHZ,	15517
1353	ROTATE	2	659	W13 TOP	AR	RUMMY	9.649 AMP X 10.	,TRACK 12,	3. KHZ,	15517
1354	AUTO	2	634	W17	AV	RUMMY	20548/T1 AMP X 10.	,TRACK 10,	10.5 KHZ,	14336
1355	ROTATE	2	663	W17	AT	RUMMY	1.069 AMP X 10.	,TRACK 10,	5.4 KHZ,	15517
1356	ROTATE	2	660	W17	AR	RUMMY	1.069 AMP X 10.	,TRACK 10,	7.35 KHZ,	15517
1357	AUTO	2	635	W18	AV	RUMMY	20548/T1 AMP X 10.	,TRACK 11,	10.5 KHZ,	14336
1358	AUTO	1	628	PNE-1	AV	RUMMY	146/865/1 AMP X 1.	,TRACK 01,	52.5 KHZ,	12598
1359	AUTO	1	629	PNE-0	AV	RUMMY	146/865/1 AMP X 1.	,TRACK 06,	52.5 KHZ,	12598
1360	DIFF	2	1182	JRB-7	UT	RUMMY	146/869/1 AMP X 1.	,TRACK 07,	14.5 KHZ,	18500
1361	DIFF	2	1181	JRB-7	UR	RUMMY	146/869/1 AMP X 1.	,TRACK 07,	22. KHZ,	18500
1362	AUTO	1	1190	JRB-7	AV	RUMMY	146/869/1 AMP X 1.	,TRACK 07,	52.5 KHZ,	18500
1363	CAD	2	631	JRB-7	AV	RUMMY	146/869/1 AMP X 1.	,TRACK 07,	40. KHZ,	14033
1364	DIFF	2	1177	JRB-5	UV	RUMMY	20548/T1 AMP X 1.	,TRACK 06,	40. KHZ,	18500
1365	DIFF	2	1179	JRB-5	UT	RUMMY	20548/T1 AMP X 1.	,TRACK 06,	22. KHZ,	18500
1366	DIFF	2	1178	JRB-5	UR	RUMMY	20548/T1 AMP X 1.	,TRACK 06,	30. KHZ,	18500
1367	CAD	2	630	JRB-5	AV	RUMMY	20548/T1 AMP X 1.	,TRACK 06,	52.5 KHZ,	14033
1368	DIFF	2	1168	JRB-4	UV	RUMMY	20548/T1 AMP X 1.	,TRACK 05,	40. KHZ,	18412
1369	DIFF	2	1170	JRB-4	UT	RUMMY	20548/T1 AMP X 1.	,TRACK 05,	22. KHZ,	18412
1370	DIFF	2	1169	JRB-4	UR	RUMMY	20548/T1 AMP X 1.	,TRACK 05,	30. KHZ,	18412
1371	AUTO	1	664	JRB-4	AV	RUMMY	20548/T1 AMP X 1.	,TRACK 05,	52.5 KHZ,	18412
1372	AUTO	1	665	JRB-4	AV	RUMMY	20548/T1 AMP X 1.	,TRACK 05,	70. KHZ,	18412
1373	DIFF	2	1174	JRB-3	UV	RUMMY	20548/T1 AMP X 1.	,TRACK 02,	40. KHZ,	18412
1374	DIFF	2	1176	JRB-3	UT	RUMMY	20548/T1 AMP X 1.	,TRACK 02,	22. KHZ,	18412
1375	DIFF	2	1175	JRB-3	UR	RUMMY	20548/T1 AMP X 1.	,TRACK 02,	30. KHZ,	18412
1376	DIFF	2	1171	JRB-2	UV	RUMMY	20548/T1 AMP X 1.	,TRACK 07,	40. KHZ,	18412
1377	DIFF	2	1173	JRB-2	UT	RUMMY	20548/T1 AMP X 1.	,TRACK 07,	22. KHZ,	18412
1378	DIFF	2	1172	JRB-2	UR	RUMMY	20548/T1 AMP X 1.	,TRACK 07,	30. KHZ,	18412
1379	DIFF	2	1183	JRB-1	UV	RUMMY	20548/T1 AMP X 1.	,TRACK 04,	40. KHZ,	18500
1380	DIFF	2	1185	JRB-1	UT	RUMMY	20548/T1 AMP X 1.	,TRACK 04,	22. KHZ,	18500
1381	DIFF	2	1184	JRB-1	UR	RUMMY	20548/T1 AMP X 1.	,TRACK 04,	30. KHZ,	18500
1382	AUTO	1	644	D	AV	RUMMY	RDS/T3 AMP X 10.	,TRACK 06,	22. KHZ,	14961
1383	AUTO	1	646	D	AT	RUMMY	RDS/T3 AMP X 10.	,TRACK 06,	10.5 KHZ,	14961
1384	AUTO	1	645	D	AR	RUMMY	RDS/T3 AMP X 10.	,TRACK 06,	14.5 KHZ,	14961
1385	AUTO	1	641	C	AV	RUMMY	RDS/T3 AMP X 10.	,TRACK 09,	22. KHZ,	14961
1386	AUTO	1	643	C	AT	RUMMY	RDS/T3 AMP X 10.	,TRACK 09,	10.5 KHZ,	14961
1387	AUTO	2	642	C	AR	RUMMY	RDS/T3 AMP X 10.	,TRACK 09,	14.5 KHZ,	14961
1388	AUTO	1	41	W-3 TOP	AV	SHEEPSHEAD0 548/T1	AMP X 42.	,TRACK 06,	22. KHZ,	12512
1389	AUTO	2	1541	W-3 TOP	AT	SHEEPSHEAD181.R-181.	AMP X 42.	,TRACK 06,	10.5 KHZ,	19715
1390	AUTO	2	1069	W-3 TOP	AR	SHEEPSHEAD181.R- 91.	AMP X 42.	,TRACK 06,	14.5 KHZ,	19715
1391	AUTO	1	42	W-3 BOTTOM	AV	SHEEPSHEAD0 548/T1	AMP X 42.	,TRACK 06,	7.35 KHZ,	14110
1392	AUTO	2	1542	W-3 BOTTOM	AT	SHEEPSHEAD181.R-181.	AMP X 42.	,TRACK 06,	3.9 KHZ,	19715
1393	AUTO	2	1069	W-3 BOTTOM	AR	SHEEPSHEAD181.R- 91.	AMP X 42.	,TRACK 06,	5.4 KHZ,	19715
1394	AUTO	1	57	W-5	AV	SHEEPSHEAD0 S	AMP X 100.	,TRACK 03,	22. KHZ,	18314
1395	AUTO	1	43	W-6	AV	SHEEPSHEAD0 SEEEEEE	AMP X 26.1	,TRACK 04,	7.35 KHZ,	14110
1396	AUTO	2	1073	W-6	AT	SHEEPSHEAD264.R-264.	AMP X 26.1	,TRACK 04,	3.9 KHZ,	14335
1397	AUTO	2	1070	W-6	AR	SHEEPSHEAD264.R-174.	AMP X 26.1	,TRACK 04,	5.4 KHZ,	19715
1398	AUTO	1	44	W-7	AV	SHEEPSHEAD0 SEEEEEE	AMP X 51.1	,TRACK 01,	52.5 KHZ,	14110
1399	AUTO	2	1074	W-7	AT	SHEEPSHEAD262.R-262.	AMP X 51.1	,TRACK 01,	30. KHZ,	14335
1400	AUTO	2	1071	W-7	AR	SHEEPSHEAD262.R-172.	AMP X 51.1	,TRACK 01,	40. KHZ,	19715

FILE	DIRECTORY	RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1401	AUTO	1	55	W-9 TOP	AV		SHEEPSHEAD2 C548/T1	AMP X 26.1,	TRACK C3,	22. KHZ,	18312
1402	AUTO	2	51	W-9 TOP	AT		SHEEPSHEAD204.R-204.	AMP X 26.1,	TRACK C3,	10.5 KHZ,	08013
1403	AUTO	2	48	W-9 TOP	AR		SHEEPSHEAD204.R-114.	AMP X 26.1,	TRACK C3,	14.5 KHZ,	08013
1404	AUTO	1	370	W-3 BOTTOM	AV		SHEEPSHEAD2 C548/T1	AMP X 26.1,	TRACK C3,	7.35 KHZ,	18126
1405	AUTO	2	50	W-9 BOTTOM	AT		SHEEPSHEAD204.R-204.	AMP X 26.1,	TRACK C3,	3.9 KHZ,	08013
1406	AUTO	2	47	W-9 BOTTOM	AR		SHEEPSHEAD204.R-114.	AMP X 26.1,	TRACK C3,	5.4 KHZ,	08013
1407	AUTO	1	36	W10	AV		SHEEPSHEAD0 S	AMP X 98. ,	TRACK C5,	30. KHZ,	12512
1408	DIFF	5	542	W10	AT		SHEEPSHEAD141.R-262.	AMP X 98. ,	TRACK C5,	22. KHZ,	19273
1409	DIFF	5	530	W10	AR		SHEEPSHEAD141.R-172.	AMP X 98. ,	TRACK C5,	14.5 KHZ,	19273
1410	AUTO	1	56	W10 TOP	AV		SHEEPSHEAD0 SEEEEEEE	AMP X 50.1,	TRACK C5,	70. KHZ,	18314
1411	AUTO	1	37	W10 BOTTOM	AV		SHEEPSHEAD0 S	AMP X 98. ,	TRACK C5,	10.5 KHZ,	12512
1412	AUTO	1	39	W10 BOTTOM	AT		SHEEPSHEAD0 S	AMP X 98. ,	TRACK C5,	5.4 KHZ,	12512
1413	AUTO	1	38	W10 BOTTOM	AR		SHEEPSHEAD0 S	AMP X 98. ,	TRACK C5,	7.35 KHZ,	12512
1414	SPLINE	1	54	W11 TOP	AV		SHEEPSHEAD0 548/T1	AMP X 420.,	TRACK C1,	7.35 KHZ,	18312
1415	SPLINE	2	46	W11 TOP	AT		SHEEPSHEAD212.R-212.	AMP X 420.,	TRACK C1,	2.3 KHZ,	08013
1416	SPLINE	2	45	W11 TOP	AR		SHEEPSHEAD212.R-122.	AMP X 420.,	TRACK C1,	3.9 KHZ,	08013
1417	AUTO	1	53	W11 BOTTOM	AV		SHEEPSHEAD2 C548/T1	AMP X 205.,	TRACK C1,	52.5 KHZ,	08013
1418	AUTO	3	52	W11 BOTTOM	AT		SHEEPSHEAD275.R-212.	AMP X 205.,	TRACK C1,	14.5 KHZ,	08013
1419	AUTO	3	49	W11 BOTTOM	AR		SHEEPSHEAD275.R-122.	AMP X 205.,	TRACK C1,	30. KHZ,	08013
1420	AUTO	1	369	W13 TOP	AV		SHEEPSHEAD0 548/T1	AMP X 1. ,	TRACK C5,	10.5 KHZ,	14209
1421	AUTO	2	360	W13 TOP	AT		SHEEPSHEAD304.R-304.	AMP X 1. ,	TRACK C5,	3. KHZ,	18465
1422	AUTO	2	355	W13 TOP	AR		SHEEPSHEAD304.R-214.	AMP X 1. ,	TRACK C5,	5.4 KHZ,	18465
1423	AUTO	1	368	W13 BOTTOM	AV		SHEEPSHEAD0 548/T1	AMP X 5.11,	TRACK C5,	52.5 KHZ,	14209
1424	AUTO	2	359	W13 BOTTOM	AT		SHEEPSHEAD228.R-304.	AMP X 5.11,	TRACK C5,	14.5 KHZ,	18465
1425	AUTO	3	354	W13 BOTTOM	AR		SHEEPSHEAD228.R-214.	AMP X 5.11,	TRACK C5,	30. KHZ,	18465
1426	AUTO	1	40	W14	AV		SHEEPSHEAD0 S	AMP X 10. ,	TRACK C7,	22. KHZ,	12512
1427	AUTO	2	1540	W14	AT		SHEEPSHEAD278.R-278.	AMP X 10. ,	TRACK C7,	7.35 KHZ,	19715
1428	AUTO	3	1067	W14	AR		SHEEPSHEAD278.R-188.	AMP X 10. ,	TRACK C7,	14.5 KHZ,	19715
1429	AUTO	2	361	W15	AT		SHEEPSHEAD276.R-276.	AMP X 26.1,	TRACK 12,	14.5 KHZ,	18465
1430	AUTO	2	356	W15	AR		SHEEPSHEAD276.R-186.	AMP X 26.1,	TRACK 12,	22. KHZ,	18465
1431	AUTO	1	1543	W16	AV		SHEEPSHEAD0 548/T1	AMP X 26.1,	TRACK 12,	10.5 KHZ,	14335
1432	AUTO	2	362	W16	AT		SHEEPSHEAD272.R-272.	AMP X 26.1,	TRACK 12,	5.4 KHZ,	18465
1433	AUTO	2	357	W16	AR		SHEEPSHEAD272.R-182.	AMP X 26.1,	TRACK 12,	7.35 KHZ,	18465
1434	AUTO	1	1072	W17	AV		SHEEPSHEAD0 548/T1	AMP X 5.11,	TRACK 10,	10.5 KHZ,	14335
1435	AUTO	2	363	W17	AT		SHEEPSHEAD298.R-298.	AMP X 5.11,	TRACK 10,	5.4 KHZ,	18465
1436	AUTO	3	358	W17	AR		SHEEPSHEAD298.R-208.	AMP X 5.11,	TRACK 10,	7.35 KHZ,	18465
1437	AUTO	2	1061	W18	AV		SHEEPSHEAD0 548/T1	AMP X 10. ,	TRACK 11,	10.5 KHZ,	19715
1438	AUTO	2	1065	W18	AT		SHEEPSHEAD294.R-294.	AMP X 10. ,	TRACK 11,	5.4 KHZ,	19715
1439	AUTO	2	1063	W18	AR		SHEEPSHEAD294.R-204.	AMP X 10. ,	TRACK 11,	7.35 KHZ,	19715
1440	AUTO	2	1190	PNE-3	AV		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK 10,	14.5 KHZ,	12569
1441	AUTO	2	1188	PNE-3	AT		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK 10,	30. KHZ,	12569
1442	AUTO	2	1189	PNE-3	AR		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK 10,	22. KHZ,	12569
1443	AUTO	2	1193	PNE-1	AV		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK C8,	14.5 KHZ,	12569
1444	AUTO	2	1191	PNE-1	AT		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK C8,	30. KHZ,	12569
1445	AUTO	2	1192	PNE-1	AR		SHEEPSHEAD4 G/865	AMP X 25. ,	TRACK C8,	22. KHZ,	12569
1446	AUTO	1	1062	MINE MOUN	AV		SHEEPSHEAD0 548/T1	AMP X 617.,	TRACK C7,	5.4 KHZ,	19715
1447	AUTO	2	1066	MINE MOUN	AT		SHEEPSHEAD234.R-234.	AMP X 617.,	TRACK C7,	10.5 KHZ,	19715
1448	AUTO	3	1064	MINE MOUN	AR		SHEEPSHEAD234.R-144.	AMP X 617.,	TRACK C7,	7.35 KHZ,	19715
1449	AUTO	1	58	D	AV		SHEEPSHEAD0 S	AMP X 26.1,	TRACK C2,	7.35 KHZ,	18314
1450	AUTO	1	59	D	AT		SHEEPSHEAD0 S	AMP X 26.1,	TRACK C2,	3.9 KHZ,	18314

FILE	DIRECTORY	RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE	EVENT	AMPLIFICATION	TRACK	FREQUENCY	TAPE OF ORIGIN
1451	AUTO	1	60	C	AP		SHEEPSHEADRDS	AMP X 26.1,	TRACK C2,	5.4 KHZ,	18314
1452	AUTO	1	365	C	AV		SHEEPSHEADD S	AMP X 5.1 ,	TRACK 10,	22. KHZ,	14209
1453	AUTO	1	367	C	AT		SHEEPSHEADD S	AMP X 26.1,	TRACK 10,	3.9 KHZ,	14209
1454	AUTO	1	366	C	AP		SHEEPSHEADD S	AMP X 26.1,	TRACK 10,	5.4 KHZ,	14209
1455	AUTO	1	64	B	AV		SHEEPSHEAD0543/T1	AMP X 26.1,	TRACK C9,	7.35 KHZ,	18314
1456	AUTO	1	65	B	AT		SHEEPSHEAD0548/T1	AMP X 26.1,	TRACK C9,	3.9 KHZ,	18314
1457	AUTO	1	364	B	AP		SHEEPSHEADD S	AMP X 26.1,	TRACK C9,	5.4 KHZ,	14209
1458	AUTO	1	63	A	AV		SHEEPSHEAD0548/T1	AMP X 1. ,	TRACK C8,	22. KHZ,	18314
1459	AUTO	1	62	A	AT		SHEEPSHEAD0548/T1	AMP X 26.1,	TRACK C8,	3.9 KHZ,	18314
1460	AUTO	1	61	A	AP		SHEEPSHEAD0548/T1	AMP X 26.1,	TRACK C8,	5.4 KHZ,	18314
1461	AUTO	1	1388	W-3 TOP	AV		TAFI 20548/T1	AMP X 617.,	TRACK C8,	10.5 KHZ,	10445
1462	AUTO	2	1449	W-3 TOP	AT		TAFI 185.R-185.	AMP X 617.,	TRACK C8,	5.4 KHZ,	14027
1463	AUTO	2	1446	W-3 TOP	AP		TAFI 185.R- 95.	AMP X 617.,	TRACK C8,	7.35 KHZ,	14027
1464	AUTO	1	1379	W-3 BOTTOM	AV		TAFI 20548/T1	AMP X 42. ,	TRACK C4,	10.5 KHZ,	10347
1465	AUTO	2	1475	W-3 BOTTOM	AT		TAFI 185.R-185.	AMP X 42. ,	TRACK C4,	5.4 KHZ,	12157
1466	AUTO	2	1474	W-3 BOTTOM	AP		TAFI 185.R- 95.	AMP X 42. ,	TRACK C4,	7.35 KHZ,	12157
1467	AUTO	1	1391	W-5	AV		TAFI RDS/T1	AMP X 51.1,	TRACK C2,	30. KHZ,	10301
1468	AUTO	2	1455	W-5	AT		TAFI 245.R-245.	AMP X 51.1,	TRACK C2,	14.5 KHZ,	13740
1469	AUTO	2	1452	W-5	AP		TAFI 245.R-155.	AMP X 51.1,	TRACK C2,	22. KHZ,	13740
1470	AUTO	1	1403	W-6	AV		TAFI RDS/T1	AMP X 10.4,	TRACK C4,	10.5 KHZ,	10442
1471	AUTO	2	1466	W-6	AT		TAFI 252.R-252.	AMP X 10.4,	TRACK C4,	5.4 KHZ,	12360
1472	AUTO	2	1463	W-6	AP		TAFI 252.R-162.	AMP X 10.4,	TRACK C4,	7.35 KHZ,	12360
1473	AUTO	1	1392	W-7	AV		TAFI RDS/T1	AMP X 26.1,	TRACK C1,	30. KHZ,	11896
1474	AUTO	3	1456	W-7	AT		TAFI 250.R-250.	AMP X 26.1,	TRACK C1,	14.5 KHZ,	13740
1475	AUTO	2	1453	W-7	AP		TAFI 250.R-160.	AMP X 26.1,	TRACK C1,	22. KHZ,	13740
1476	AUTO	1	1389	W-9 TOP	AV		TAFI 20548/T1	AMP X 10. ,	TRACK C3,	30. KHZ,	10301
1477	AUTO	2	1450	W-9 TOP	AT		TAFI 201.R-201.	AMP X 10. ,	TRACK C3,	14.5 KHZ,	14027
1478	AUTO	2	1447	W-9 TOP	AP		TAFI 201.R-111.	AMP X 10. ,	TRACK C3,	22. KHZ,	14027
1479	AUTO	6	1390	W20	AV		TAFI RDS/T2	AMP X 5.11,	TRACK C4,	30. KHZ,	10301
1480	AUTO	5	1451	W20	AT		TAFI 268.R-268.	AMP X 5.11,	TRACK C4,	14.5 KHZ,	14027
1481	AUTO	5	1448	W20	AP		TAFI 268.R-178.	AMP X 5.11,	TRACK C4,	22. KHZ,	14027
1482	AUTO	2	1382	W21	AV		TAFI RDS/T1	AMP X 5.11,	TRACK C8,	30. KHZ,	11705
1483	AUTO	3	1444	W21	AT		TAFI 269.R-269.	AMP X 5.11,	TRACK C8,	14.5 KHZ,	14027
1484	AUTO	3	1460	W21	AP		TAFI 269.R-179.	AMP X 5.11,	TRACK C8,	22. KHZ,	13740
1485	AUTO	2	1383	W23	AV		TAFI RDS/T1	AMP X 5.11,	TRACK 10,	30. KHZ,	11705
1486	AUTO	3	1445	W23	AT		TAFI 266.R-266.	AMP X 5.11,	TRACK 10,	14.5 KHZ,	14027
1487	AUTO	3	1461	W23	AP		TAFI 266.R-176.	AMP X 5.11,	TRACK 10,	22. KHZ,	13740
1488	AUTO	1	1394	W10	AV		TAFI RDS/T1	AMP X 42. ,	TRACK C3,	3.9 KHZ,	11896
1489	DIFF	5	545	W10	AT		TAFI 131.R-252.	AMP X 42. ,	TRACK C3,	3. KHZ,	19273
1490	DIFF	6	533	W10	AP		TAFI 131.R-162.	AMP X 42. ,	TRACK C3,	2.3 KHZ,	19273
1491	AUTO	1	1393	W10 TOP	AV		TAFI RDS/T1	AMP X 42. ,	TRACK C3,	30. KHZ,	11896
1492	AUTO	2	1457	W10 TOP	AT		TAFI 252.R-252.	AMP X 42. ,	TRACK C3,	14.5 KHZ,	13740
1493	AUTO	2	1454	W10 TOP	AP		TAFI 252.R-162.	AMP X 42. ,	TRACK C3,	22. KHZ,	13740
1494	AUTO	1	1399	W10 CASING	AV		TAFI RDS/T2	AMP X 42. ,	TRACK C3,	30. KHZ,	11767
1495	AUTO	2	1465	W10 CASING	AT		TAFI 79.R-169.	AMP X 42. ,	TRACK C3,	14.5 KHZ,	12360
1496	AUTO	2	1462	W10 CASING	AP		TAFI 79.R- 79.	AMP X 42. ,	TRACK C3,	22. KHZ,	12360
1497	AUTO	1	1404	W10 BOTTOM	AV		TAFI RDS/T1	AMP X 42. ,	TRACK C5,	10.5 KHZ,	10442
1498	AUTO	2	1467	W10 BOTTOM	AT		TAFI 181.R-252.	AMP X 42. ,	TRACK C5,	5.4 KHZ,	12360
1499	AUTO	2	1464	W10 BOTTOM	AP		TAFI 181.R-162.	AMP X 42. ,	TRACK C5,	7.35 KHZ,	12360
1500	AUTO	1	1395	W11 TOP	AV		TAFI 20548/T1	AMP X 26.1,	TRACK C6,	30. KHZ,	11896

DIRECTORY FILE		RUN	FILE NO. ON MASTER	STATION	GAGE	TYPE EVENT	AMPLIFICATION TRACK	FREQUENCY	TAPE OF ORIGIN
1501	AUTO	2	1481	W11 TOP	AT	TAFI	208.R-208.AMP X 26.1,TRACK 06,	14.5 KHZ,	12157
1502	AUTO	2	1476	W11 TOP	AR	TAFI	208.R-118.AMP X 26.1,TRACK 06,	22. KHZ,	12157
1503	AUTO	1	1396	W11 BOTTOM	AV	TAFI	20548/T1 AMP X 104.,TRACK 06,	3.9 KHZ,	11767
1504	AUTO	2	1481	W11 BOTTOM	AT	TAFI	271.R-208.AMP X 104.,TRACK 06,	2.3 KHZ,	12157
1505	AUTO	2	1477	W11 BOTTOM	AR	TAFI	271.R-118.AMP X 104.,TRACK 06,	3. KHZ,	12157
1506	AUTO	2	1396	W13 TOP	AV	TAFI	20548/T1 AMP X 5.04,TRACK 05,	30. KHZ,	11767
1507	AUTO	3	1483	W13 TOP	AT	TAFI	258.R-258.AMP X 5.04,TRACK 05,	14.5 KHZ,	12157
1508	AUTO	3	1479	W13 TOP	AR	TAFI	258.R-168.AMP X 5.04,TRACK 05,	22. KHZ,	12157
1509	AUTO	1	1397	W13 BOTTOM	AV	TAFI	20548/T1 AMP X 9.85,TRACK 05,	3.9 KHZ,	11767
1510	AUTO	2	1482	W13 BOTTOM	AT	TAFI	182.R-258.AMP X 9.85,TRACK 05,	2.3 KHZ,	12157
1511	AUTO	2	1478	W13 BOTTOM	AR	TAFI	182.R-168.AMP X 9.85,TRACK 05,	30. KHZ,	12157
1512	AUTO	1	1384	W14	AV	TAFI	RDS/T1 AMP X 20.5,TRACK 07,	10.5 KHZ,	11705
1513	AUTO	2	1471	W14	AT	TAFI	265.R-265.AMP X 20.5,TRACK 07,	5.4 KHZ,	12360
1514	AUTO	2	1468	W14	AR	TAFI	265.R-175.AMP X 20.5,TRACK 07,	7.35 KHZ,	12360
1515	AUTO	2	1385	W15	AV	TAFI	20548/T1 AMP X 5.11,TRACK 12,	30. KHZ,	10445
1516	AUTO	3	1472	W15	AT	TAFI	256.R-256.AMP X 5.11,TRACK 12,	14.5 KHZ,	12360
1517	AUTO	3	1469	W15	AR	TAFI	256.R-166.AMP X 5.11,TRACK 12,	22. KHZ,	12360
1518	AUTO	1	1387	W16	AV	TAFI	20548/T1 AMP X 10. ,TRACK 12,	3.9 KHZ,	10445
1519	AUTO	1	1386	W17	AV	TAFI	20548/T1 AMP X 5.11,TRACK 10,	10.5 KHZ,	10445
1520	AUTO	2	1473	W17	AT	TAFI	265.R-265.AMP X 5.11,TRACK 10,	5.4 KHZ,	12360
1521	AUTO	2	1470	W17	AR	TAFI	265.R-175.AMP X 5.11,TRACK 10,	7.35 KHZ,	12360
1522	AUTO	1	1388	W18	AV	TAFI	20548/T1 AMP X 10. ,TRACK 11,	10.5 KHZ,	10347
1523	AUTO	2	1442	W18	AT	TAFI	268.R-268.AMP X 10. ,TRACK 11,	5.4 KHZ,	14027
1524	AUTO	2	1458	W18	AR	TAFI	268.R-178.AMP X 10. ,TRACK 11,	7.35 KHZ,	13740
1525	AUTO	1	1381	MINE MOUN	AV	TAFI	20548/T1 AMP X 617.,TRACK 02,	10.5 KHZ,	11705
1526	AUTO	2	1443	MINE MOUN	AT	TAFI	225.R-225.AMP X 617.,TRACK 02,	5.4 KHZ,	14027
1527	AUTO	2	1459	MINE MOUN	AR	TAFI	225.R-135.AMP X 617.,TRACK 02,	7.35 KHZ,	13740
1528	AUTO	1	1377	D	A-270.	TAFI	RDS/T2 AMP X 5.11,TRACK 02,	22. KHZ,	10347
1529	AUTO	1	1378	D	A-0.	TAFI	RDS/T2 AMP X 5.11,TRACK 02,	14.5 KHZ,	10347
1530	AUTO	1	1376	D	AV	TAFI	RDS/T2 AMP X 5.11,TRACK 02,	30. KHZ,	10347
1531	AUTO	1	1401	C	A-270.	TAFI	RDS/T2 AMP X 5.11,TRACK 01,	22. KHZ,	10442
1532	AUTO	1	1402	C	A-0.	TAFI	RDS/T2 AMP X 5.11,TRACK 01,	14.5 KHZ,	10442
1533	AUTO	1	1400	C	AV	TAFI	RDS/T2 AMP X 5.11,TRACK 01,	30. KHZ,	10442
1534	AUTO	3	1374	B	A-270.	TAFI	RDS/T1 AMP X 5.11,TRACK 12,	22. KHZ,	10347
1535	AUTO	3	1375	B	A-0.	TAFI	RDS/T1 AMP X 5.11,TRACK 12,	14.5 KHZ,	10347
1536	AUTO	3	1373	B	AV	TAFI	RDS/T1 AMP X 5.11,TRACK 12,	30. KHZ,	10347
1537	AUTO	1	1371	A	A-270.	TAFI	RDS/T1 AMP X 5.11,TRACK 11,	22. KHZ,	10347
1538	AUTO	1	1372	A	A-0.	TAFI	RDS/T1 AMP X 5.11,TRACK 11,	14.5 KHZ,	10347
1539	AUTO	1	1370	A	AV	TAFI	RDS/T1 AMP X 5.11,TRACK 11,	30. KHZ,	TAPE10E BR
1540	AUTO	2	728	W-3 TOP	AV	TARKO	0545/T1 AMP X 10. ,TRACK 06,	70. KHZ,	12031
1541	AUTO	2	795	W-3 TOP	AV	TARKO	0546/T1 AMP X 51.1,TRACK 06,	30. KHZ,	12031
1542	AUTO	4	1271	W-3 TOP	AT	TARKO	103.R-103.AMP X 51.1,TRACK 06,	14.5 KHZ,	10410
1543	AUTO	3	1270	W-3 TOP	AR	TARKO	103.R- 13.AMP X 51.1,TRACK 06,	22. KHZ,	10410
1544	AUTO	1	796	W-3 BOTTOM	AV	TARKO	0548/T1 AMP X 104.,TRACK 06,	3.9 KHZ,	12031
1545	AUTO	1	797	W-3 BOTTOM	AV	TARKO	0548/T1 AMP X 20.5,TRACK 06,	10.5 KHZ,	12031
1546	AUTO	2	1273	W-3 BOTTOM	AT	TARKO	103.R-103.AMP X 104.,TRACK 06,	2.3 KHZ,	10410
1547	AUTO	2	1272	W-3 BOTTOM	AR	TARKO	103.R- 13.AMP X 104.,TRACK 06,	3. KHZ,	10410
1548	AUTO	2	1076	W-9 TOP	AV	TARKO	0548/T1 AMP X 5.11,TRACK 03,	30. KHZ,	13317
1549	AUTO	3	350	W-9 TOP	AT	TARKO	25.R- 25.AMP X 5.11,TRACK 03,	14.5 KHZ,	13460
1550	AUTO	3	344	W-9 TOP	AR	TARKO	25.R-295.AMP X 5.11,TRACK 03,	22. KHZ,	13460

FILE		RUN	FILE NO. ON MASTER	STATION	GAGE TYPE											OF ORIGIN
1551	AUTO	2	1075	W-9	BOTTOMAV	TARKO	0548/T1	AMP	X	10.	,TRACK	C3,	3.9	KHZ,		13317
1552	AUTO	3	349	W-9	BOTTOMAT	TARKO	25.R- 25.	AMP	X	10.	,TRACK	C3,	2.3	KHZ,		13460
1553	CAD	3	343	W-9	BOTTOMAR	TARKO	25.R-295.	AMP	X	10.	,TRACK	C3,	3.	KHZ,		13460
1554	AUTO	3	1077	W11	TOP AV	TARKO	0548/T1	AMP	X	1.	,TRACK	C1,	70.	KHZ,		13317
1555	AUTO	3	351	W11	TOP AT	TARKO	279.R-279.	AMP	X	1.	,TRACK	C1,	40.	KHZ,		13460
1556	AUTO	5	345	W11	TOP AR	TARKO	279.R-189.	AMP	X	1.	,TRACK	C1,	52.5	KHZ,		13460
1557	CAD	2	1078	W11	BOTTOMAV	TARKO	0548/T1	AMP	X	10.	,TRACK	C1,	3.9	KHZ,		13317
1558	AUTO	3	352	W11	BOTTOMAT	TARKO	342.R-279.	AMP	X	10.	,TRACK	C1,	2.3	KHZ,		13460
1559	CAD	3	346	W11	BOTTOMAR	TARKO	342.R-189.	AMP	X	10.	,TRACK	C1,	3.	KHZ,		13460
1560	AUTO	1	791	MINE	MOUN AV	TARKO	0548/T1	AMP	X	1525,	TRACK	C9,	3.9	KHZ,		10299
1561	AUTO	1	794	MINE	MOUN AV	TARKO	0548/T1	AMP	X	1525,	TRACK	C8,	3.9	KHZ,		10299
1562	AUTO	1	792	MINE	MOUN AV	TARKO	0548/T1	AMP	X	1525,	TRACK	C7,	3.9	KHZ,		10299
1563	AUTO	2	793	MINE	MOUN AV	TARKO	0548/T1	AMP	X	617.,	TRACK	C7,	10.5	KHZ,		10299
1564	AUTO	2	1274	MINE	MOUN AV	TARKO	0548/T1	AMP	X	617.,	TRACK	C9,	10.5	KHZ,		12421
1565	AUTO	2	1275	MINE	MOUN AV	TARKO	0548/T1	AMP	X	617.,	TRACK	C8,	10.5	KHZ,		12421
1566	AUTO	3	1277	MINE	MOUN AT	TARKO	288.R-288.	AMP	X	617.,	TRACK	C7,	5.4	KHZ,		12421
1567	AUTO	3	353	MINE	MOUN AT	TARKO	288.R-288.	AMP	X	617.,	TRACK	C8,	5.4	KHZ,		13460
1568	AUTO	3	348	MINE	MOUN AT	TARKO	288.R-288.	AMP	X	617.,	TRACK	C9,	5.4	KHZ,		13460
1569	AUTO	3	347	MINE	MOUN AR	TARKO	288.R-198.	AMP	X	617.,	TRACK	C8,	7.35	KHZ,		13460
1570	AUTO	3	342	MINE	MOUN AR	TARKO	288.R-198.	AMP	X	617.,	TRACK	C9,	7.35	KHZ,		13460
1571	AUTO	3	1276	MINE	MOUN AR	TARKO	288.R-198.	AMP	X	617.,	TRACK	C7,	7.35	KHZ,		12421
1572	AUTO	3	1216	W-3	TOP AT	PYRAMID	79.R- 79.	AMP	X	20.5,	TRACK	C6,	14.5	KHZ,		13662
1573	AUTO	3	1214	W-3	TOP AR	PYRAMID	79.R-349.	AMP	X	20.5,	TRACK	C6,	22.	KHZ,		13662
1574	AUTO	3	1217	W-3	BOTTOMAT	PYRAMID	79.R- 79.	AMP	X	26.1,	TRACK	C6,	2.3	KHZ,		13662
1575	AUTO	3	1215	W-3	BOTTOMAR	PYRAMID	79.R-349.	AMP	X	26.1,	TRACK	C6,	3.	KHZ,		13662

END OF FILE ON SORTED FILE

Appendix B

EXPAND Program Examples

APPENDIX B
EXAMPLES OF HOW TO USE THE EXPAND PROGRAM

(CARD COLUMN NUMBERS)

```
0         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890

ACCELERATION
SEARCH    00030001  W10 TOP   W10 BOTTOMW10
SEARCH    00040001  AR
SEARCH    0005-002  FARM
SEARCH    0004-002  AT
SEARCH    00030003  W11 TOP
SEARCH    00040003  AV        AT
END
```

THE ABOVE SET OF DATA CARDS WOULD RESULT IN A SINGLE TAPE OF ACCELERATION FOR ALL RADIAL GAGES FOR ALL TESTS WHERE A MEASUREMENT WAS MADE AT STATION W10. IN ADDITION, IT WOULD ALSO CONTAIN ALL TANGENTIAL ACCELERATION DATA RECORDED AT W11 TOP, EXCEPT FOR THE FARM EVENT, AND ALL VERTICAL ACCELERATION DATA RECORDED AT W11 TOP, INCLUDING THE FARM EVENT.

```
0         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890

VELOCITY
DISPLACEMENT
SEPARATE
SEARCH    0005      FARM      TARKO     LIPTAUER  PYRAMID   RIOLA     KASH
SEARCH    0005      FAJY      BACCARAT
SEARCH    00030001  W-9
END
```

THE ABOVE SET OF DATA CARDS WOULD RESULT IN CREATION OF TWO OUTPUT TAPES ON UNITS 3 AND 4 WITH TAPE 3 CONTAINING VELOCITY AND TAPE 4 CONTAINING DISPLACEMENT. FOR THE NAMED SHOTS DATA WOULD BE PRESENT FOR EVERY GAGE WHERE A RECORDING WAS MADE. IN ADDITION, DATA WOULD BE PRESENT FOR ALL EVENTS WHERE A RECORDING WAS MADE AT STATION W-9.

```
0         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890

SELECT    W10 TOP   AV        COLWICK
END
```

THE ABOVE SET OF DATA CARDS WOULD RESULT IN CREATION OF ONE OUTPUT TAPE ON UNIT 1 CONTAINING ACCELERATION, VELOCITY, AND DISPLACEMENT FOR ONE GAGE, THE GAGE SPECIFIED. THIS OPTION WOULD RUN FASTER THAN USING THE SEARCH OPTION TO ACCOMPLISH THE SAME PURPOSE.

Appendix C

COMPRES Program Printout

```
      PROGRAM COMPRES (INPUT,OUTPUT,TAPE1,TAPE2,TAPE3)

C                                PROGRAM TO COMPRESS DATA FROM SAM, CAD, OR
C                                CAV,  LEAVES DATA WITH 3.5 SIGNIFICANT
C                                DIGITS BY NORMALIZING ALL VALUES TO 4095
C  INPUT IS ON THIRD PARAMETER, TAPE 1.
C  OUTPUT ID BLOCK AND DATA IS ON FOURTH PARAMETER, TAPE 2.
C     ID BLOCK WORD 10 WILL CONTAIN THE INPUT TAPE NUMBER AS READ IN
C     ON THE TAPE CARD.
C  TAPE 3 HOLDS LIST OF REJECTED ACCELERATION FILES.
C  DATA IS PACKED FIVE VALUES PER WORD, 500 WORDS PER RECORD EXCEPT
C    LAST RECORD MAY BE SHORTER -- NO FILL WORD.
C  ID BLOCK IS STANDARD 100 WORDS.
C    WORD 24 CONTAINS MINIMUM DATA VALUE WHICH IS THE VALUE THAT HAS BEE
C      SUBTRACTED FROM EVERY POINT TO AVOID USING A SIGN BIT.
C    WORD 25 CONTAINS THE MAXIMUM DATA VALUE MINUS THE MINIMUM DATA
C      VALUE ALL DIVIDED BY 4095 -- THIS IS THE NUMBER THAT ALL DATA VAL
C      WERE DIVIDED BY AFTER SUBTRACTING THE MINIMUM DATA VALUE.
C    WORD 26 CONTAINS THE TIME DELTA IN MICROSECONDS.
C    WORD 27 CONTAINS THE TIME IN MICROSECONDS OF THE FIRST DATA POINT
C      STORED.
C  PROGRAM HAS BEEN TEMPORARILY  FIXED SO IT WILL NOT PROCESS
C     RADIAL OR TANGENTIAL DATA THAT HAS NOT BEEN ROTATED.
C     IF YOU WANT OTHER RADIAL AND TANGENTIAL FILES, USE THE FILES CARD.
C  FILES CARD MAY BE USED TO SPECIFY UP TO 17 PARTICULAR FILES TO BE
C    PROCESSED IF THE ENTIRE TAPE IS NOT NEEDED.  FORMAT IS 1-5 5HFILES,
C    6-10 BLANK,11-78 17I4. COLUMNS 11-13 MAY CONTAIN 3HALL IF ALL ACC-
C    ELERATION FILES ARE DESIRED, OR A BLANK OR END CARD WILL CAUSE
C    ALL ACCELERATION FILES TO BE PROCESSED.  AS WRITTEN THIS PROGRAM
C    WILL PROCESS ONLY ACCELERATION FILES.
C    TIME CARD MAY BE USED TO SPECIFY A START AND END TIME IN SECONDS FO
C     FILE TO BE PROCESSED.  DEFAULT IS -10. TO 75 SECONDS.  CARD FORMAT
C    IS 1-4 4HTIME,5-10 BLANK,11-20 START TIME,21-30 END TIME.
C  VERTICAL CARD MAY BE USED TO LIMIT DATA PROCESSED TO ONLY VERTICAL.
C     CARD FORMAT IS 8HVERTICAL.
C  TAPE CARD IS USED TO INDICATE INPUT TAPE NUMBER FOR OUTPUT INTO ID
C     BLOCK WORD 10. CARD FORMAT IS 1-4 4HTAPE, 11-16 A6.
C  AMAX -- MAXIMUM DATA VALUE -- LATER REDEFINED AS NORMALIZER FOR EACH
C      DATA POINT -- STORED IN WORD 25 OF ID BLOCK.
C  AMIN -- MINIMUM DATA VALUE -- STORED IN WORD 24 OF ID BLOCK
C  B -- ARRAY TO STORE DATA INPUT FOR LATER PROCESSING.
C  DATA -- ARRAY TO CONTAIN INPUT DATA RECORD.
C  DATOUT -- ARRAY TO CONTAIN OUTPUT DATA RECORD.
C  FILL -- FILLWORD = 3444444444444444444B.
C  GAGE -- 1ST 2 LETTERS OF GAGE DESIGNATION
C  I -- LOOP PARAMETER FOR GENERAL USE THROUGHOUT PROGRAM.
C  IALL -- ALL ACCELERATION FILES ARE TO BE PROCESSED.
C  ICARD -- ARRAY FOR STORAGE OF INPUT CARD IMAGES.
C  ID -- ARRAY FOR STORAGE OF ID BLOCK.
C  IOFIL -- COUNT OF FILES COMPRESSED AND OUTPUT
C  ISH -- INTEGER VALUE OF DATA POINT, 12 BITS OF WHICH ARE STORED IN
C      DATOUT FOR BUFFERING OUT.
C  I1 -- STARTING LOCATION FOR RECORD TO BE BUFFERED OUT OF DATOUT.
C  I2 -- ENDING LOCATION FOR RECORD TO BE BUFFERED OUT OF DATOUT.
C  IVERT -- FLAG TO INSTRUCT PROGRAM -- =0, PROCESS ALL ACCELERATION
C     DATA -- =1, PROCESS ONLY VERTICAL.
C  J -- LOOP PARAMETER -- NUMBER OF DATA RECORDS TO BUFFER OUT.
```

```
C   K -- LOOP PARAMETER WHEN PACKING FIVE VALUES IN EACH OUTPUT WORD.
C   KL -- LOCATION IN NFILE OF NUMBER OF NEXT FILE TO BE PROCESSED.
C   L -- NUMBER OF DATA POINTS PROCESSED.
C   LC -- LOCATION IN B ARRAY OF POINT TO BE SHIFTED IN DATOUT ARRAY.
C   LEN -- RECORD LENGTH -- SHOULD ALWAYS BE 500.
C   M -- NUMBER OF WORDS TO BE BUFFERED OUT.
C   NF -- NUMBER OF FILE BEING PROCESSED.
C   NFILE -- ARRAY FOR STORING FILE NUMBERS TO BE PROCESSED.
C   NREC -- NUMBER OF RECORD BEING PROCESSED.
C   SDEL -- TIME DELTA STORED IN WORD 26 OF OUTPUT ID BLOCK.
C   STIM -- TIME OF FIRST DATA POINT -- STORED IN WORD 27 OF OUTPUT ID.
C   STPT -- TIME OF LAST DATA POINT TO BE STORED.
C   STAR -- TIME OF FIRST DATA POINT TO BE STORED.
C   UGAGE -- 1ST LETTER OF GAGE DESIGNATION

      COMMON/A/ ICARD(8),DATA(512),DATOUT(4800),ID(100),B(24000)
      DIMENSION NFILE(17)
      DATA FILL/344444444444444444B/
      DATA (NFILE(I),I=1,17) /17*1H /

C                                INITIALIZE
      STAR=-1.E7
      IALL=0
      IOFIL = 0
      IVERT=0
      NF=0
      STPT=7.5E7
      PRINT 1
 0001 FORMAT(1H1,* *)
 0100 L=0
      KL=1
      READ 9600,(ICARD(I),I=1,8)
      PRINT 9601,(ICARD(I),I=1,8)
 9601 FORMAT(1X,8A10)
 9600 FORMAT(8A10)
      IF(ICARD.EQ.5HFILES) GO TO 110
      IF(ICARD.EQ.4HTIME) GO TO 6000
      IF(ICARD.EQ.8HVERTICAL) GO TO 6100
      IF(ICARD.EQ.4HTAPE) GO TO 6200
      IF(ICARD.EQ.3HEND) GO TO 7000
      GO TO 200
 0110 IF(ICARD(2).EQ.3HALL) GO TO 7000
      DECODE(68,111,ICARD(2)) NFILE
 0111 FORMAT(17I4)

C                                READ ID BLOCK
 0200 BUFFERIN(1,1)(ID(1),ID(100))
      NREC=0
      NF=NF+1
      IF(UNIT(1)) 300,8000

C                                PROCESS ONLY ACCELERATION
 0300 IF(ID(1).EQ.5HINTEG2.OR.ID(1).EQ.5HINTEG) GO TO 5000
      IF(ID(1).EQ.10HFFFFFFFFFF) GO TO 8000
      IF(IALL.NE.0) GO TO 320
      DECODE (1,9310,ID(4)) UGAGE
 9310 FORMAT (A1)
```

```
      IF (UGAGE.EQ.1HU .AND. ID(1).NE.4HDIFF) GO TO 5000
      IF (UGAGE.EQ.1HU) GO TO 310
      IF(NFILE.NE.1H ) GO TO 310
      DECODE (2,9200,ID(4)) GAGE
 9200 FORMAT (A2)
      IF (GAGE .EQ. 2HAV) GO TO 310
      IF (GAGE .EQ. 2HAR) GO TO 310
      IF (GAGE .EQ. 2HAT) GO TO 310
      GO TO 4000
 0310 IF(NFILE.EQ.1H ) GO TO 320
      IF(NF.NE.NFILE(KL)) GO TO 5000
      KL=KL+1
 0320 ID(10)=NTAPE

C                                 READ DATA RECORD
 0350 BUFFERIN(1,1)(DATA(1),DATA(512))
      NREC=NREC+1
      IF(UNIT(1)) 400,1000
 0400 LEN=LENGTH(1)

C                                 RECORD SHOULD ALWAYS BE 500 WORDS LONG
      IF(LEN.NE.500) PRINT 401,NREC,LEN
 0401 FORMAT(1X,*RECORD NUMBER *,I4,* IS *,I4,* WORDS LONG.*)
      IF(L.EQ.0) 500,600

C                                 INITIALIZE FOR PACKING
 0500 SDEL=(DATA(3)-DATA(1))
      IF (DATA(2) .GE. 1.E8) GO TO 4000
      IF(SDEL .LT. 4.E3) GO TO 4000
      AMAX=-1.E20
      AMIN=1.E20

C                                 FIND MIN AND MAX AND KEEP -10. TO 75. SEC
 0600 DO 700 I=2,LEN,2
      IF(DATA(I-1).GT.1.E20.OR.DATA(I-1).LT.-1.E20) GO TO 350
      IF(DATA(I).GT.1.E20.OR.DATA(I).LT.-1.E20) GO TO 350
      IF(DATA(I-1).EQ.FILL) GO TO 350
      IF(DATA(I-1).LT.STAR) GO TO 700
      IF(DATA(I-1).GT.STPJ) GO TO 350
      IF(L.EQ.0) STIM=DATA(I-1)
      L=L+1
      B(L)=DATA(I)
      AMAX=AMAX1(AMAX,B(L))
      AMIN=AMIN1(AMIN,B(L))
 0700 CONTINUE
      GO TO 350

C                                 NORMALIZE TO 4095 SO EACH VALUE WILL FIT
C                                 INTO 12 BITS
 1000 AMAX=(AMAX-AMIN)/4095.
      DO 1200 I=1,L
      B(I)=((B(I)-AMIN)/AMAX)+.5
 1200 CONTINUE

C                                 STORE 5 VALUES IN EACH WORD
      M=(L/5)+1
      DO 1400 I=1,M
```

```
      DATOUT(I)=0.
      DO 1300 K=1,5
      LC=5*(I-1)+K
      IF(LC.GT.L) GO TO 1400
      ISH=B(LC)
      DATOUT(I)=SHIFT(DATOUT(I),12).OR.ISH
 1300 CONTINUE
 1400 CONTINUE

C                                STORE PARAMETERS NEEDED TO RESTORE DATA
      ENCODE(10,9000,ID(24)) AMIN
      ENCODE(10,9000,ID(25)) AMAX
      ENCODE(10,9000,ID(26)) SDEL
      ENCODE(10,9000,ID(27)) STIM
 9000 FORMAT(E10.4)
      BUFFEROUT(2,1)(ID(1),ID(100))
      IF(UNIT(2)) 1500,1500
 1500 PRINT 9100,NF, (ID(I),I=1,10)
 9100 FORMAT (1X,I5,5X,9A10,5X,A10)
      I1=1
      I2=500

C                                BUFFEROUT DATA RECORDS
      J=(M/500)+1
      DO 1530 I=1,J
      BUFFEROUT(2,1)(DATOUT(I1),DATOUT(I2))
      IF(UNIT(2)) 1520,1520
 1520 I1=I1+500
      I2=I2+500
      IF(I2.GT.M) I2=M
      IF(I2.EQ.I1) GO TO 2100
 1530 CONTINUE
 2100 END FILE 2
      IF(KL.EQ.18) GO TO 100
      L=0
      IF(KL.EQ.1) GO TO 200
      IF(NFILE(KL).LE.0)   100,200
C                                REJECTED FILES
C
 4000 CONTINUE
 5000 BUFFERIN(1,1)(DATA(1),DATA(500))
      IF(UNIT(1)) 5000,200
 6001 FORMAT(2E10.2)
 6000 DECODE(20,6001,ICARD(3)) STAR,STPT
      STAR=STAR*1.E6
      STPT=STPT*1.E6
      GO TO 100
 6100 IVERT=1
      GO TO 100
 6200 DECODE(6,6201,ICARD(2)) NTAPE
 6201 FORMAT (A6)
      GO TO 200
 7000 IALL=1
      IF(NF.EQ.0) GO TO 100
 8000 CALL TRLRWR(2)
 8800 STOP
      END
```

Appendix D

EXPAND Program Printout

```
      PROGRAM EXPAND INPUT,OUTPUT,TAPE1,TAPE2,TAPE3,TAPE4)
C  ABORT -- DUMMY SUBROUTINE TO CAUSE JOB TO BOMB BECAUSE OF PROBLEMS.
C  AMAX -- WORD 25 FROM ID BLOCK -- MULTIPLIER TO BE APPLIED IN RESTORIN
C       DATA TO ITS ORIGINAL AMPLITUDE.
C  AMIN -- WORD 24 FROM ID BLOCK -- AMOUNT TO BE ADDED TO EACH DATA
C       VALUE TO RESTORE IT TO ORIGINAL AMPLITUDE.
C  BMAX -- MAXIMUM VALUE OF DATA -- STORED IN WORD 25 OF ID BLOCK.
C  DATA -- ARRAY FOR STORAGE OF INPUT DATA RECORD.
C  DATOUT -- ARRAY FOR STORAGE OF OUTPUT DATA.
C  F -- ARRAY FOR STORAGE OF ALL DATA FOR SUBSEQUENT INTEGRATION.
C  FILL -- FILL WORD = 344444444444444444B.
C  I -- LOOP PARAMETER FOR GENERAL USE THROUGHOUT PROGRAM.
C  IA -- FLAG TO SIGNAL FILE IS NOT WANTED (0) OR FILE IS WANTED (1).
C IAC -- FLAG TO INDICATE WHETHER OR NOT TO OUTPUT ACCELERATION,
C      IAC GE 1 MEANS OUTPUT  ACCELERATION, IAC=3 MEANS DO NOT OUTPUT.
C  ICARD -- ARRAY FOR READING IN CARD IMAGES.
C  ID -- ARRAY FOR STORAGE OF ID BLOCK.
C IDI -- FLAG TO INDICATE WHETHER OR NOT TO OUTPUT DISPLACEMENT.
C      IDI=0 MEANS DO NOT OUTPUT, IDI GE 1 MEANS OUTPUT DISPLACEMENT.
C  IER -- ERROR FLAG TO SHOW AN ERROR WAS MADE IN DETERMINING THE FILTER
C       TO BE APPLIED.  THIS SHOULD ALWAYS BE ZERO SINCE THE FILTER
C       NEVER CHANGES.  ALL DATA IS HIGH-PASS FILTERED WITH A FINITE
C       IMPULSE RESPONSE FILTER AT .2 HERTZ TO ELIMINATE LOW FREQUENCY
C       NOISE THAT MAY BE CAUSED BY THE COMPRESSION AND EXPANSION PRO-
C       CEDURE.  THIS FILTERING CAUSES 7.495 SECONDS (1499 DATA POINTS --
C       THE FILTER LENGTH-1 DIVIDED BY 2) TO BE LOST FROM EACH END OF THE
C       DATA RECORD.
C  II -- LOOP PARAMETER TO IDENTIFY WORD TO BE UNPACKED FROM DATA ARRAY.
C IM -- COUNTER USED FOR KEEPING TRACK OF HOW MANY TESTS ARE TO BE PASSE
C      FOR A GIVEN GROUP CODE.
C  INT -- INTEGRAL VALUE OF UNPACKED DATA VALUE -- BEFORE ADJUSTING.
C IS -- COUNTER USED TO KEEP TRACK OF WHERE TO PLACE WORD NUMBER AND
C      WORD IMAGE IN ARRAY NIDS.
C  ISEL -- FLAG TO DENOTE SEARCH IS TO BE MADE FOR ONE FILE ONLY AND
C       SEARCH WILL END WHEN DESIGNATED FILE IS FOUND.
C ISEP -- FLAG TO INDICATE WHETHER TO PUT OUTPUT ALL ON TAPE TWO OR
C      WHETHER TO PUT ACCELERATION ON TAPE 2, VELOCITY ON TAPE 3,
C      AND DISPLACEMENT ON TAPE4.  ISEP=0, ALL ON TAPE 2 -- ISEP=1,
C      SEPARATE OUTPUT ONTO THREE DIFFERENT TAPES.
C IVE -- FLAG TO INDICATE WHETHER OR NOT TO OUTPUT VELOCITY.  IVE GE 1
C      MEANS OUTPUT VELOCITY.  IVE=0 MEANS DO NOT OUTPUT VELOCITY.
C  IWORD -- ARRAY FOR TEMPORARY STORAGE OF WORD IMAGES TO BE SEARCHED ON
C  J -- NUMBER OF SEARCH VARIABLES.
C  K -- LOCATION IN DATOUT ARRAY FOR STORAGE OF CURRENT DATA VALUE.
C  KK -- LOOP PARAMETER USED TO IDENTIFY NEXT LOCATION FOR TIME WORD
C       WHEN BUILDING OUTPUT ACCELERATION RECORD.
C  KSH -- AMOUNT TO SHIFT DATA DUE TO SHIFT IN TIME IN THE FILTERING
C       PROCESS.  REMAINDER OF SHIFT IS COMPENSATED FOR BY ADJUSTING
C       STIM BY 5.29 SECONDS.
C  KWORD -- ARRAY TO STORE WORD IMAGES FOR SEARCHING.
C  L -- LOOP PARAMETER FOR UNPACKING FIVE VALUES FROM EACH INPUT WORD.
C  LEN -- LENGTH OF INPUT RECORD. SHOULD BE 500 WORDS OR LESS.
C  LI -- LOCATION IN F ARRAY FOR STORAGE OF CURRENT DATA VALUE.  ALSO
C       USED TO DETERMINE TIME FOR CURRENT DATA VALUE.  ALSO EVENTUALLY
C       TELLS NUMBER OF DATA POINTS PROCESSED.
C  LIP1 -- LI + 1.  USED AS LOCATION AT WHICH TO START ZERO FILL
C       BEFORE FILTERING AND FILLWORD BEFORE BUILDING OUTPUT RECORDS.
```

```
C  M -- LOCATION TO START LOOP FOR PROCESSING INPUT DATA.
C  N -- LOCATION OF FILE NUMBER DESIRED IN NFILE ARRAY.
C NC -- STORAGE FOR IMAGE OF CURRENT GROUP CODE BEING PROCESSED IN.
C  NCODE -- ARRAY TO STORE GROUP CODES TO MATCH SEARCH VARIABLES.
C  NF -- NUMBER OF FILE ON TAPE BEING PROCESSED.
C  NFILE -- ARRAY CONTAINING NUMBERS OF FILES TO BE PROCESSED.
C NIDS -- TWO-DIMENSIONAL ARRAY USED TO STORE GROUP CODE, WORD NUMBERS
C     TO BE CHECKED, AND WORD IMAGES TO BE CHECKED AGAINST.
C  NWORD -- ARRAY TO STORE WORD NUMBERS TO BE COMPARED.
C  SDEL -- TIME DELTA -- READ IN FROM ID BLOCK WORD 26
C  STIM -- START TIME IN MICROSECONDS.
C  STIM2 -- START TIME CONVERTED TO SECONDS. 0 TIME ON TAPE IS MICROSECO
C  T -- TIME DELTA CONVERTED TO SECONDS.
C  END CARD BEGINS RUN AND CAUSES ALL FILES TO BE PROCESSED UNLESS ANOTH
C     CARD HAS BEEN READ FIRST, THEN END CARD TERMINATES RUN.
C  FILES CARD MAY BE USED TO SPECIFY FILES TO BE PROCESSED.  FORMAT IS
C     1-5 5HFILES, 6-10 BLANK, 11-78 17I4.  COLUMNS 11-13 MAY CONTAIN
C     3HALL IF ALL FILES ARE DESIRED, OR A BLANK OR END CARD WILL CAUSE
C     ALL FILES TO BE PROCESSED.
C  SEARCH CARDS ARE USED TO SPECIFY GROUPS OF FILES TO BE EXPANDED.
C     FORMAT IS 1-5 5HSEARCH, 7-10 BLANK, 11-14 I4, WORD NUMBER TO BE
C     CHECKED, 15-18 I4, GROUP CODE -- IF NEGATIVE FILES WHICH MATCH
C     WILL BE REJECTED -- 19-20 BLANK, 21-80 6A10, IMAGES TO BE COMPARED
C  SELECT CARDS ARE USED TO SPECIFY A PARTICULAR STATION, DATA TYPE,
C      AND TEST TO BE FOUND.  ONCE A MATCH IS MADE SEARCHING WILL END
C      AND ONLY THE ONE FILE WILL BE PROCESSED.  SUCCESSIVE CARDS OF
C      THIS TYPE MAY BE USED BUT WILL CAUSE SEARCHING TO BEGIN AGAIN
C      FOR EACH SELECT CARD. FORMAT 11-40 3A8, WORD IMAGES OF ID WORDS
C        3, 4, AND 5.
      COMMON/A/DATA(512),ID(100),DATOUT(2500)
      COMMON/S/NIDS(10,100)
      COMMON/F/F(32772)
      COMMON/1/IVE,IAC,IDI,ISEP
      DIMENSION IWORD(6)
      DIMENSION ICARD(8),NFILE(17)
      DATA FILL/344444444444444444B/
      IVE=IAC=IDI=1
      ISEP=0
      NFILE=1H
      IS=0
      NC=10HAAAAAAAAAA
      J=0
C      WHEN FILTERING THE DATA AT .2 HERTZ, A FILTER OF LENGTH 2999 IS
C         USED.  THE FILTERING PROCESS CAUSES A SHIFT IN TIME OF ONE
C         HALF THE FILTER LENGTH -- (L-1)/2 --.  TO COMPENSATE FOR THIS,
C         A SHIFT IN TIME MUST BE MADE.  PART OF THIS IS ACCOMPLISHED
C         BY SHIFTING THE DATA BEFORE STARTING AND ZERO FILLING THE
C         BEGINNING OF THE RECORD.  THE REMAINDER IS COMPENSATED FOR BY
C         ADJUSTING THE START TIME.  IN THIS MANNER, APPROXIMATELY FIVE
C         SECONDS IS LOST FROM THE BEGINNING AND END OF THE FILE.  THIS
C         COULD BE AVOIDED BY MODIFYING THE PROGRAM TO FILTER THE FILE
C         IN TWO OR MORE PASSES BUT THE LOSS OF DATA IS NOT SUFFICIENT
C         TO JUSTIFY MODIFYING THE PROGRAM TO THAT EXTENT.
      LENFIL=4001
      LHALF=(LENFIL-1)/2
      KSH=LHALF-1000
      IF(KSH.LT.0) KSH=0
```

```
      LADJ=LHALF-KSH
      ISEL=0
      NF=0
      PRINT 1
 0001 FORMAT(1H1,* *)
      CALL FIRCOF(2,1,1,LENFIL,1,14,IER)
      IF(IER.NE.0) CALL ABORT
      N=1
      AMIN=AMAX=0.
C                                 READ CARDS
 0100 READ 9100,(ICARD(I),I=1,8)
 9100 FORMAT(8A10)
      PRINT 101,(ICARD(I),I=1,8)
 0101 FORMAT(1X,8A10)
      IF(ICARD(1).EQ.8HVELOCITY) GO TO 6000
      IF(ICARD(1).EQ.10HACCELERATI) GO TO 6100
      IF(ICARD(1).EQ.10HDISPLACEME) GO TO 6200
      IF(ICARD(1).EQ.8HSEPARATE) GO TO 6300
      IF(ICARD.EQ.5HFILES) GO TO 3000
      IF(ICARD.EQ.5HSEARCH) GO TO 4000
      IF(ICARD.EQ.5HSELECT) GO TO 4400
      IF(ICARD.EQ.3HEND) GO TO 7000
C                                 BUFFER IN ID BLOCK
 0200 BUFFERIN(1,1)(ID(1),ID(100))
      IF(UNIT(1)) 300,7000
 0300 NF=NF+1
C                                 DETERMINE IF FILE IS TO BE PROCESSED
      IF(ID(1).EQ.10HFFFFFFFFFFF) GO TO 8000
      IF(ISEL.NE.0) GO TO 320
      IF(NFILE.EQ.14 ) GO TO 310
      IF(J.NE.0) GO TO 305
      IF(NF.NE.NFILE(N)) GO TO 5000
      GO TO 307
 0305 CALL SEARCH(IA,J)
      IF(IA.EQ.0) 5000,307
C  TEST TO SEE IF THIS FILE IS SPECIFIED BY SELECT CARD OPTION
 0320 DO 330 I=3,5
      IF(ID(I).NE.ICARD(I-1)) GO TO 5000
 0330 CONTINUE
C  FILE ACCEPTED FOR PROCESSING
 0307 N=N+1
 0310 PRINT 9000,(ID(I),I=1,10)
      ID(1)=8HCOMPRESS
 9000 FORMAT(1X,10A10)
C                                 SET UP ADJUSTMENT VARIABLES FROM ID BLOCK
      DECODE(20,301,ID(24)) AMIN,AMAX
      BMAX=4095.*AMAX+AMIN
 0301 FORMAT(2E10.4)
C                                 INSERT MAXIMUM VALUE IN OUTPUT ID BLOCK
      ENCODE(10,9001,ID(25)) BMAX
 9001 FORMAT(E10.4)
C                                 BUFFER OUT ID BLOCK
      IF(IAC.LE.0) GO TO 400
      BUFFEROUT(2,1)(ID(1),ID(100))
      IF(UNIT(2)) 400,400
C  ZERO FILL F ARRAY FOR FILTERING.
 0400 LI=KSH
```

```
      IF(KSH.EQ.0) GO TO 440
      DO 410 I=1,KSH
      F(I)=0.
 0410 CONTINUE
C  DECODE START TIME AND DELTA TIME FROM ID BLOCK.
 0440 DECODE(20,301,ID(26)) SDEL,STIM
      TADJ=LADJ*SDEL
      STIM=STIM+TADJ
 0450 K=0
C                                BUFFER IN DATA RECORD
      BUFFERIN(1,1)(DATA(1),DATA(512))
      IF(UNIT(1)) 500,2000
 0500 LEN=LENGTH(1)
C                                EXPAND DATA
 0550 DO 700 II=1,LEN
      DO 600 L=1,5
      INT=SHIFT(DATA(II),12*L).AND.7777B
      K=K+1
      DATOUT(K)=INT
 0600 CONTINUE
 0700 CONTINUE
C                                APPLY ADJUSTMENTS TO RESTORE TO ENGINEER-
C                                ING UNITS
 1000 DO 1100 I=1,K
      LI=LI+1
      F(LI)=DATOUT(I)*AMAX+AMIN
 1100 CONTINUE
      GO TO 450
C  ZERO FILL UNUSED PORTION OF F ARRAY FOR FILTERING.
 2000 LIP1=LI+1
      IF(LIP1.GT.16386) GO TO 2110
      DO 2100 I=LIP1,16386
      F(I)=0.
 2100 CONTINUE
C  GO TO FILTER ROUTINE AND HIGH PASS DATA AT .2 HERTZ.
 2110 CALL FILT(LI)
 2150 LI=16384-LHALF
      LIP1=LI+1
      IF(IAC.LE.0) GO TO 2510
C  FILL TAIL END OF F ARRAY WITH FILLWORD TO PREPARE FOR BUFFERINT OUT
C    ACCELERATION.
      DO 2300 I=LIP1,32772
      F(I)=FILL
 2300 CONTINUE
C  CREATE AND BUFFEROUT ACCELERATION RECORDS.
      L=1
      K=0
 2310 DO 2500 I=1,1000
      DO 2350 KK=1,499,2
      DATOUT(KK)=STIM+K*SDEL
      K=K+1
      DATOUT(KK+1)=F(L)
      L=L+1
 2350 CONTINUE
      BUFFEROUT(2,1)(DATOUT(1),DATOUT(500))
      IF(UNIT(2)) 2400,2400
 2400 IF(K.GE.LIP1) GO TO 2502
```

```
 2500 CONTINUE
 2502 END FILE 2
C  ZERO FILL TAIL END OF F ARRAY SO AREA NOT USED WILL NOT AFFECT
C    INTEGRATION.
 2510 DO 2550 I=LIP1,32772
      F(I)=0.
 2550 CONTINUE
      T=SDEL/1.E6
      STIM2=STIM/1.E6
      IF(IVE.LE.0.AND.IDI.LE.0) GO TO 200
C                                CALL INTEGRATION ROUTINES
      CALL FRQINT(LI,T,STIM2)
      IF(ISEL.NE.0) 100,200
C                                DECODE AND STORE FILE NUMBERS TO BE PROCESS
C                                WHEN USING FILES OPTION
 3000 IF(ICARD(2).EQ.3HALL) GO TO 200
      DECODE(68,9200,ICARD(2)) NFILE
 9200 FORMAT(17I4)
      GO TO 200
C                                DECODE SEARCH CARDS AND STORE WORD,
C                                GROUP CODE, AND WORD IMAGES TO BE
C                                ACCEPTED OR REJECTED
 4000 DECODE(70,4001,ICARD(2)) NWORD,NCODE,(IWORD(I),I=1,6)
 4001 FORMAT(2I4,2X,6A10)
      IF(NCODE.EQ.NC) GO TO 4010
      J=J+1
      NC=NCODE
      IS=0
      IM=0
 4010 NIDS(J,1)=NCODE
      DO 4040 I=1,6
      IF(IWORD(I).EQ.1H ) GO TO 4100
      NIDS(J,2*(I+IS))=NWORD
      NIDS(J,2*(I+IS)+1)=IWORD(I)
      IM=IM+1
 4040 CONTINUE
 4100 IS=IS+I-1
 4200 NFILE=1H1
      NIDS(J,2*(IM+1))=1H
      GO TO 100
 4300 IDEBUG=1
      GO TO 100
C  SELECT CARD READ, SET ISEL FLAG.
 4400 ISEL=1
      GO TO 200
C                                SKIP FILE NOT WANTED
 5000 BUFFERIN(1,1)(DATA(1),DATA(2))
      IF(UNIT(1)) 5000,200
 6000 IVE=3
      IAC=IAC-1
      IDI=IDI-1
      GO TO 100
 6100 IAC=3
      IVE=IVE-1
      IDI=IDI-1
      GO TO 100
 6200 IDI=3
```

```
      IVE=IVE-1
      IAC=IAC-1
      GO TO 100
 6300 ISEP=1
      GO TO 100
 7000 CONTINUE
      IF(ISEL.NE.0) GO TO 8000
      IF(NF.EQ.0) GO TO 200
C                                   NORMAL TERMINATION
 8000 CALL TRLRWR(2)
      IF(ISEP.EQ.1.AND.IVE.GT.0) CALL TRLRWR(3)
      IF(ISEP.EQ.1.AND.IVE.GT.0) REWIND 3
      IF(ISEP.EQ.1.AND.IDI.GT.0) CALL TRLRWR(4)
      IF(ISEP.EQ.1.AND.IDI.GT.0) REWIND 4
      END
```



```
      SUBROUTINE FILT(N2)
      COMMON/F/F(16386),B(16386)
C  B -- ARRAY WHERE FILTER IS STORED FOR USE WHEN READ IN FROM EXTENDED
C       CORE.
C  F -- ARRAY CONTAINING DATA TO BE FILTERED.
C  I -- LOOP PARAMETER.
C  NAR -- 2**14 -- NUMBER OF POINTS TO BE USED FOR FOURIER TRANSFORM.
C  NARP1 -- NAR+1
C  REALPT -- TEMPORARY STORAGE FOR VALUE TO BE PUT INTO F(I) WHEN
C       CALCULATION OF F(I+1) IS COMPLETE.
C  W -- DUMMY VARIABLE FOR USE BY FOURTR AND FOURTH.
      NAR=16384
C  READ FILTER IN FROM EXTENDED CORE
      CALL READEC(B,1,16386)
C  CONVOLVE USING FREQUENCY PRODUCT.
      NARP1=NAR+1
      CALL FOURTR(F,NAR,-1,W)
      DO 610 I=1,NARP1,2
      REALPT=(F(I)*B(I)+F(I+1)*B(I+1))/FLOAT(NAR)
      F(I+1)=(F(I+1)*B(I)-F(I)*B(I+1))/FLOAT(NAR)
 0610 F(I)=REALPT
      CALL FOURTH(F,NAR,1,W)
      RETURN
      END
```

```
      SUBROUTINE FIRCOF(NT,N1,N,L,ITRANS,KK,IER)
C-ROUTINE FOR DETERMINING FIR FILTER COEFFICIENTS.
C-USE FOR DESIGNING LOWPASS OR HIGHPASS FREQUENCY-SAMPLING FILTERS.
C-                  =NOT 0 IF FFT OF IMPULSE RESPONSE IS DESIRED.
C-            ITRANS=0 IF FILTER IMPULSE IS DESIRED, OR
C-              (L MUST BE ODD).
C-            L=OVERALL FILTER LENGTH =NO. IMPULSE RESPONSE SAMPLES
C-            N/L=TRANSITION BANDWIDTH/SAMPLING FREQ. (1 TO 4).
C-                =STOPBAND FREQ./SAMPLING FREQ. FOR HIGHPASS.
C-            N1/L=CUTOFF FREQ./SAMPLING FREQ. FOR LOWPASS,OR
C-INPUTS ARE  NT=1 FOR LOWPASS, 2 FOR HIGHPASS.
C-            KK=LOG BASE 2 OF FFT SIZE, USED ONLY IF ITRANS IS NOT 0.
C-OUTPUT IS IN COF (COEFFICIENT) ARRAY.  IF ITRANS=0, OUTPUT IS THE L
C-FILTER COEFFICIENTS (IMPULSE RESPONSE VALUES) WHICH ARE SYMMETRIC
C-ABOUT THE CENTRAL VALUE, I.E. COF((L+1)/2).  IF ITRANS NOT =0,
C-OUTPUT IS 2**KK+2 FFT VALUES OBTAINED BY EXTENDING THE L IMPULSE
C-RESPONSE VALUES WITH ZEROS AND THEN TAKING THE FFT USING MATHLIB
C-SUBROUTINE FOURTR.  COF ARRAY SHOULD BE DIMENSIONED AT LEAST 2**KK+2.
C-IER IS THE ERROR INDICATOR.
C-     FOR IER=1 THROUGH 5 SEE COMMENTS IN SUBROUTINE FIRDES.
C-     IF IER=6, L HAS BEEN DESIGNATED GREATER THAN 8192.
C-     IF IER=7, ITRANS IS NOT 0 AND KK IS LESS THAN 3 OR OVER 13.
C-THIS ROUTINE USES THE SANDIA MATH LIBRARY AND ALSO SUBROUTINE
C-FIRDES, THE LATTER FOR DESIGNING AN OPTIMAL FIR FILTER.
      COMMON/F/COF(32772)
      DIMENSION H(5)
      CALL FIRDES(NT,N1,N,L,H,IER)
      IF(L.GT.16384) IER=6
      IF((ITRANS.NE.0).AND.(KK.LT.3.OR.KK.GT.14)) IER=7
      IF(IER.NE.0) RETURN
      DO 1 LN=1,16386
    1 COF(LN)=0.
      N2=N1+N+1
      B=((N1+1)/2.)*(1/NT)+(.5*((L-1)/2-N2))*(NT/2)
      C=(N1/2.)*(1/NT)+(.5*((L+1)/2-N2))*(NT/2)
      H0=1*(1/NT)
      D=(2*N1+1)*(1/NT)+(L+1-2*N2)*(NT/2)
      LNMAX=(L-1)/2
      DO 3 LN=1,LNMAX
      A=(2*(LN-1)-L+1)*3.14159265/L
      SUM=0.
      DO 2 K=1,N
    2 SUM=SUM+H(K)*COS((N1+K)*A)
      AN=(N2*A)*(NT/2)
      COF(LN)=(H0+2.*(COS(AN+B*A)*SIN(C*A)/SIN(A/2.)+SUM))/L
    3 COF(L+1-LN)=COF(LN)
      SUM=0.
      DO 4 K=1,N
    4 SUM=SUM+H(K)
      COF((L+1)/2)=(D+2.*SUM)/L
      IF(ITRANS.NE.0)CALL FOURTR(COF,2**KK,-1,WK)
      CALL WRITEC(COF,1,16386)
      RETURN
      END
```

```
      SUBROUTINE FIRDES(NT,N1,N,L,HOPT,IERR)
C-OPTIMAL LOW OR HIGHPASS FREQUENCY-SAMPLING DESIGN ROUTINE.
C-INPUTS ARE NT=1 FOR LOWPASS, 2 FOR HIGHPASS.
C-            N1/L=CUTOFF FREQ./SAMPLING FREQ. FOR LOWPASS, OR
C-                =STOPBAND FREQ./SAMPLING FREQ. FOR HIGHPASS.
C-            N/L=TRANSITION BANDWIDTH/SAMPLING FREQ. (1 TO 4).
C-            L=OVERALL FILTER LENGTH =NO. IMPULSE RESPONSE SAMPLES
C-              (L MUST BE ODD).
C-OUTPUTS ARE HOPT(1)---HOPT(N)=OPTIMAL TRANSITION BAND GAIN VALUES.
C-             HOPT(N+1)=MAXIMUM GAIN (DB) IN STOPBAND.
C-IERR INDICATES ERRORS AS FOLLOWS
C-IERR=0   NO ERRORS.
C-     1   L IS EVEN OR N IS NOT 1,2,3, OR 4.
C-     2   (N1+N) EXCEEDS (L-1)/2 (NOT A VALID FILTER).
C-     3   NT IS NEITHER 1 NOR 2.
C-     4   AMBIGUOUS SOLUTION FOR OPTIMAL H VALUES - FILTER MAY NOT
C-         BE OPTIMAL.
C-     5   N1 IS LESS THAN 1 (NOT A VALID FILTER).
C-THIS ROUTINE USES THE SANDIA MATH LIBRARY SAXBI AND ERXSET ROUTINES.
C-A MODIFIED SIMPLEX METHOD IS USED FOR ARRIVING AT THE OPTIMAL
C-H VALUES WHICH MINIMIZE THE MAXIMUM STOPBAND GAIN.
      DIMENSION H(4), HOPT(5), MI(5), TM(100), A(100,4), F(100)
      DIMENSION C(4,4), B(4), WK(4,5), IN(4), NFREQ(4), S(16,4)
      DATA NFREQ/100,24,16,12/
      P(K,F)=SIN(PI*(F+K))/(L*SIN(PI*(F+K)/L))
      PI=3.14159265
C-INITIALIZE AND TEST FOR BAD CALLING SEQUENCE.
      CALL ERXSET (0,0)
      IERR=0
      IF(2*(L/2).EQ.L) IERR=1
      IF ((N+3)/4.NE.1) IERR=1
      KK=N+1
      IF (N1.LT.1) IERR=5
      N2=N1+N+1
      IF (N2.GT.(L-1)/2) IERR=2
      IF ((NT+1)/2.NE.1) IERR=3
      IF (IERR.NE.0) RETURN
      NP=2**N
      DO 10 I=1,NP
      DO 10 J=1,N
   10 S(I,J)=(-1)**((I-1)/2**(J-1))
C-PICK A SET OF FREQUENCIES FOR GAIN EVALUATION.
      NL=((L-1)/2-N2)*(1/NT)+N1*(NT/2)
      K=MIN0(NFREQ(N)-10,NL-2-NT/2)
      MM=7+(4*((NL+1)/2))*(1/NT)+(3*(NL/2))*(NT/2)
      IF(NL.GE.3) MM=10+K
      INC=MAX0(1,(NL-2-NT/2)/(NFREQ(N)-10))
      DO 20 I=1,MM
      IF(NL.EQ.0) F(I)=N2+I/14.
      IF(NL.EQ.1) F(I)=N2*(1/NT)+(I+I/8)/8.
      IF(NL.EQ.2) F(I)=N2*(1/NT)+(I+I/6)/6.
      IF(NL.EQ.2.AND.NT.EQ.1.AND.I.GT.8) F(I)=N2+1.5+(I-8+I/10)/4.
      IST=N2*(1/NT)+N1*(NT/2)
      IF(NL.GE.3) F(I)=IST+SIGN((I+I/6)/6.,1.5-NT)
      IF(NL.GE.3.AND.I.GT.8) F(I)=IST+SIGN(1.+.75*(I-8),1.5-NT)
   20 IF(NL.GE.3.AND.I.GT.10) F(I)=IST+SIGN(2.5+(I-10)*INC,1.5-NT)
C-COMPUTE INVARIANT PART OF GAIN AND SLOPES.
```

```
      DO 70 M=1,MM
      TM(M)=P(0,F(M))*(1/NT)
      K1=1*(1/NT)+N2*(NT/2)
      K2=N1*(1/NT)+((L-1)/2)*(NT/2)
      DO 60 K=K1,K2
   60 TM(M)=TM(M)+P(-K,F(M))+P(K,F(M))
      DO 70 K=1,N
   70 A(M,K)=P(-K-N1,F(M))+P(K+N1,F(M))
      G0=1.
      DO 80 I=1,KK
   80 MI(I)=I
C-DO A SOLUTION FOR EACH SET OF SIGNS.
   90 DO 160 IP=1,NP
C-TEST FOR OPPOSITE SLOPES.
      DO 94 J=1,N
      DO 92 I=1,N
      IF(S(IP,I)*A(MI(I),J)*A(MI(KK),J).LT.0.) GO TO 94
 0092 CONTINUE
      GO TO 160
   94 CONTINUE
C-SET UP AND SOLVE FOR THE H'S.
      DO 110 I=1,N
      DO 100 J=1,N
  100 C(I,J)=S(IP,I)*A(MI(I),J)-A(MI(KK),J)
  110 B(I)=TM(MI(KK))-S(IP,I)*TM(MI(I))
      CALL SAXBI (4,N,1,C,B,H,0,RC,WK,IN,IER)
C-TEST FOR NO SOLUTION.
      IF (IER.NE.0) IERR=4
      IF (IER.NE.0) GO TO 160
      DO 120 I=1,N
      IF (H(I).LE.0..OR.H(I).GE.1.) GO TO 160
  120 CONTINUE
C-COMPUTE AND TEST THE GAINS AT THIS SOLUTION.
      G1=0.
      DO 140 M=1,MM
      G=TM(M)
      DO 130 K=1,N
  130 G=G+H(K)*A(M,K)
      IF (ABS(G).GT.G0) GO TO 160
  140 G1=AMAX1(G1,ABS(G))
      G0=G1
      DO 150 K=1,N
  150 HOPT(K)=H(K)
      HOPT(N+1)=20.*ALOG10(AMAX1(ABS(G0),1.E-20))
  160 CONTINUE
      I=KK
  170 IF (MI(I).GE.MM-KK+I) GO TO 190
      MI(I)=MI(I)+1
      IF (I.EQ.KK) GO TO 90
      J1=I+1
      DO 180 J=J1,KK
  180 MI(J)=MI(J-1)+1
      GO TO 90
  190 IF (I.EQ.1) RETURN
      I=I-1
      GO TO 170
      END
```

```
      SUBROUTINE SEARCH(IA,J)
      COMMON/A/DATA(512),ID(100),DATOUT(2500)
      COMMON/S/NIDS(10,100)
C DATA -- ARRAY FOR STORAGE OF INPUT DATA RECORD.
C DATOUT -- ARRAY FOR STORAGE OF OUTPUT DATA.
C IA -- FLAG TO INDICATE WHETHER OR NOT A MATCH HAS BEEN FOUND.  IA=1
C     MEANS A MATCH WAS FOUND.  IA=0 MEANS A MATCH WAS NOT FOUND.
C IB -- COUNTER TO INDICATE HOW MANY TESTS WERE PASSED.  SEE NT.
C ID -- ARRAY FOR STORAGE OF ID BLOCK.
C I1000 -- LOOP PARAMETER USED ONLY FOR DEBUGGING.
C I2 -- LOOP PARAMETER TO INDICATE WHICH TEST IS BEING MADE.
C I900 -- DUPLICATE OF I2 USED ONLY FOR DEBUGGING.
C J -- NUMBER OF DIFFERENT GROUP CODES TO BE CHECKED AGAINST.
C NEG -- FLAG TO DETERMINE WHETHER A MATCH MEANS ACCEPT OR REJECT.
C     NEG LT 0 MEANS REJECT IF A MATCH OCCURS.
C NIDS -- ARRAY IN WHICH GROUP CODE, WORD NUMBERS, AND WORD IMAGES ARE
C     STORED
C NNW -- NUMBER OF PREVIOUS WORD NUMBER CHECKED IN ID BLOCK.
C NT -- NUMBER OF TESTS MADE FOR A GROUP CODE.  IF NT AND IB ARE THE
C     SAME AT THE END OF CHECKING A GROUP CODE, THE MATCH IS MADE.
C NW -- NUMBER OF WORD IN ID BLOCK BEING CHECKED.
      IB=0
      NT=0
      NNW=10HAAAAAAAAAA
C                                 LOOP TO CHECK FORM 1 TO J GROUP CODES.
      DO 1000 I=1,J
      IA=0
      NEG=NIDS(I,1)
      IF(NEG.LT.0) IA=1
      I1000=I
C                                 LOOP TO CHECK UP TO 50 REQUIRED MATCHES
      DO 900 I2=2,100,2
      I900=I2
      NW=NIDS(I,I2)
      IF(NW.EQ.1H ) GO TO 700
C                                 CHECK TO SEE IF WE ARE CHECKING A NEW WORD
      IF(NW.EQ.NNW) GO TO 100
      NT=NT+1
      NNW=NW
C                                 CHECK TO SEE IF WORDS MATCH
 0100 IF(ID(NW).NE.NIDS(I,I2+1)) GO TO 800
      IB=IB+1
      GO TO 900
 0700 IF(IB.EQ.NT) GO TO 1100
      IB=NT=0
      NNW=10HAAAAAAAAAA
      GO TO 1000
 0800 NNW=NW
 0900 CONTINUE
      IF(IB.EQ.NT) GO TO 1100
 1000 CONTINUE
      GO TO 2000
 1100 IA=1
      IF(NEG.LT.0) IA=0
 2000 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE FRQINT(LI,T,STIM)
C       THIS SUBROUTINE IS DESIGNED TO PERFORM A DOUBLE INTEGRATION OF
C       THE ACCELERATION, PUTTING BOTH VELOCITY AND DISPLACEMENT OUT ON
C       TAPE 2.
C  DATA -- NOT USED IN THIS SUBROUTINE.
C  DATOUT -- ARRAY FOR COLLECTING OUTPUT DATA RECORD.
C  F -- ARRAY CONTAINING ENTIRE DATA FILE.
C  FILL -- FILLWORD USED TO FILL OUT LAST WORDS IN ANY FINAL INCOMPLETE
C       DATA RECORD.
C  ID -- ARRAY CONTAINING ID BLOCK.
C  IP -- LOCATION OF FIRST WORD IN F ARRAY WHICH DOES NOT CONTAIN DATA.
C       REMAINDER OF F ARRAY IS FILLED WITH 0. SO CALLS TO FOURIER
C       TRANSFORM WILL BE MADE WITH A NUMBER OF POINTS EQUAL TO A POWER O
C  J -- LOOP PARAMETER TO CONTROL PUTTING 250 DATA POINTS PER OUTPUT REC
C  K -- LOCATION IN WHICH TO PUT CURRENT DATA VALUE FOR BUILDING OUTPUT
C       DATA RECORD.
C  LI -- NUMBER OF DATA POINTS BEING PROCESSED.
C  LK -- COUNTER TO KEEP TRACK OF HOW MANY DATA POINTS HAVE BEEN PROCESS
C       WHEN LK EXCEEDS LI PROCESSING STOPS AND FILLWORD IS USED TO
C       COMPLETE THE RECORD IF NECESSARY.
C  N -- 2 TO 14TH POWER FOR USE AS NUMBER OF POINTS TO PUT THROUGH
C     FOURIER TRANSFORM.  IF MORE THAN 16384 POINTS MUST BE PROCESSED,
C     N IS RESET TO 32768.  N MUST BE A POWER OF 2.
C  NP -- LOCATION AT WHICH TO STOP 0. FILL IN F ARRAY.
C  NR -- NUMBER OF RECORDS TO BE PUT OUT ON TAPE 2 FOR EACH FILE.
C  STIM -- START TIME IN SECONDS.
C  STIM2 -- START TIME IN MICROSECONDS.
C  T -- DELTA TIME IN SECONDS.
C  T2 -- TIME AT WHICH TO STOP AVERAGING DATA FOR PURPOSES OF ZERO
C       ADJUSTING.  SET TO .1 -- IF DATA STARTS LATER THAN .1 SECONDS,
C  T5 -- END TIME OF ZERO ADJUST. SHOULD ALSO BE LAST DATA TIME IN SEC.
C       THIS MUST BE CHANGED.
C  T3 -- DELTA TIME IN MICROSECONDS.
C  T6 -- END TIME OF ZERO ADJUSTING.  SHOULD BE LAST DATA TIME IN
C       SECONDS ALSO.
      COMMON/A/DATA(512),ID(100),DATOUT(2500)
      COMMON/F/F(32772)
      COMMON/1/IVE,IAC,IDI,ISEP
      DATA FILL/344444444444444444B/
      NVT=NDT=2
      IF(ISEP.EQ.1) NVT=3
      IF(ISEP.EQ.1) NDT=4
      STIM2=STIM*1.E6
      T3=T*1.E6
      T2=STIM+.1
      T6=STIM+LI*T
      N=16384
      IF(LI.GT.16384) N=32768
      IP=LI+1
      NP=N+4
      DO 1050 I=IP,NP
      F(I)=0.
 1050 CONTINUE
C                                CALL FOR FIRST INTEGRATION, ZERO AVERAGE,
C                                AND REMOVE PARABOL
      CALL FDINT(N ,T)
      N1=1
```

```
      N2=1000
      CALL ZAVG(LI,N1,N2)
      CALL PARABOL(LI)
      ID(1)=5HINTEG
      IF(IVE.LE.0) GO TO 100
      BUFFEROUT(NVT,1)(ID(1),ID(100))
      IF(UNIT(NVT)) 100,100
C                                 SET UP TO BUFFEROUT VELOCITY DATA
 0100 NR=(LI/250)+1
      LK=0
      DO 1000 I=1,NR
      IF(LK.GE.LI) GO TO 1000
      K=0
      DO 500 J=1,250
      K=K+2
      LK=LK+1
      IF(LK.GT.LI) GO TO 400
      DATOUT(K-1)=STIM2+(LK-1)*T3
      DATOUT(K)=F(LK)
      GO TO 500
 0400 DATOUT(K)=FILL
 0500 CONTINUE
      IF(IVE.LE.0) GO TO 1000
      BUFFEROUT(NVT,1)(DATOUT(1),DATOUT(500))
      IF(UNIT(NVT)) 1000,1000
 1000 CONTINUE
      IF(IVE.GT.0) END FILE NVT
C                                 CALL FOR SECOND INTEGRTION, ZERO AVERAGE, A
C                                 REMOVE PARABOL
      IF(IDI.LE.0) GO TO 3000
      CALL FDINT(N ,T)
      CALL PARABOL(LI)
      N1=933
      N2=952
      CALL ZAVG(LI,N1,N2)
      ID(1)=6HINTEG2
      BUFFEROUT(NDT,1)(ID(1),ID(100))
      IF(UNIT(NDT)) 1100,1100
 1100 LK=0
C                                 SET UP TO BUFFEROUT DISPLACEMENT DATA
      DO 2000 I=1,NR
      IF(LK.GE.LI) GO TO 2000
      K=0
      DO 1500 J=1,250
      LK=LK+1
      K=K+2
      IF(LK.GT.LI) GO TO 1400
      DATOUT(K-1)=STIM2+(LK-1)*T3
      DATOUT(K)=F(LK)*100.
      GO TO 1500
 1400 DATOUT(K)=FILL
 1500 CONTINUE
      BUFFEROUT(NDT,1)(DATOUT(1),DATOUT(500))
      IF(UNIT(NDT)) 2000,2000
 2000 CONTINUE
      END FILE NDT
 3000 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE PARABOL(N)
      COMMON/F/F(32772)
      DT(A,B,C,P,Q,R,X,Y,Z)=A*(Q*Z-R*Y)-B*(P*Z-R*X)+C*(P*Y-Q*X)
      N2=N-1
      N1=1
      A=N2-N1+1
      B=FLOAT(N2*(N2+1)-N1*(N1-1))/2.
      D=FLOAT(N2*(N2+1)*(2*N2+1)-N1*(N1-1)*(2*N1-1))/6.
      E=G=P=Q=R=0.
      DO 1 I=N1,N2
      E=E+FLOAT(I)**3
      G=G+FLOAT(I)**4
      P=P+F(I)
      Q=Q+F(I)*FLOAT(I)
0001  R=R+F(I)*FLOAT(I)**2
      DD=DT(A,B,D,B,D,E,D,E,G)
      D0=DT(P,B,D,Q,D,E,R,E,G)
      D1=DT(A,P,D,B,Q,E,D,R,G)
      D2=DT(A,B,P,B,D,Q,D,E,R)
      C0=D0/DD
      C1=D1/DD
      C2=D2/DD
      DO 3 I=1,N
      SUB=(C2*FLOAT(I)+C1)*FLOAT(I)+C0
0003  F(I)=F(I)-SUB
      RETURN
      END
      SUBROUTINE ZAVG(N,N1,N2)
      COMMON/F/F(32772)
      S=0.
      DO 1 I=N1,N2
0001  S=S+F(I)
      S=S/FLOAT(N2-N1+1)
      DO 2 I=1,N
0002  F(I)=F(I)-S
      RETURN
      END
      SUBROUTINE TRLRWR(LOUT)
      DIMENSION TMRK(10)
      DATA TMRK/10*10HFFFFFFFFFF/
6     BUFFEROUT (LOUT,1) (TMRK,TMRK(10))
      IF(UNIT(LOUT)) 12,12
12    RETURN
      END
      SUBROUTINE FOINT(N,T)
      COMMON/F/F(32772)
      CALL FOURTR(F,N,-1,W)
      F0=F(1)
      F(1)=0.
      DO 1 M=2,N,2
      X=F(M+2)/FLOAT(M/2)
      F(M+2)=-F(M+1)/FLOAT(M/2)
0001  F(M+1)=X
      CALL FOURTH(F,N,1,W)
      DO 2 M=1,N
0002  F(N-M+1)=((F(N-M+1)-F(1))/6.283185+F0*FLOAT(N-M)/FLOAT(N))*T
      RETURN
      END
```

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