

LA VERSION FRANCAISE SUIVRA PROCHAINEMENT

DGRB/DGSE

**Technical Information Service
Catalog Item 20
Broadcast Data Extract (AM-FM-TV)**

**USER MANUAL
Version 3.0**

Revised September 1994

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Filename: M:\OPER\MANUALS\BDBS_EXT.WP**

BROADCAST DATA EXTRACT (AM-FM-TV)

USER MANUAL

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1.0 INTRODUCTION

The purpose of this manual is to describe the file organization and contents of the Broadcast Data Extract (AM-FM-TV). The data being provided is extracted from the Broadcast (AM-FM-TV) database system, commonly called BDBS. The Data Extract is sold to the Industry Canada (I.C.) clients on a yearly subscription basis by the Technical Information Service (DBC-E/TIS)

1.1 Changes

The BDBS extract is now provided in the same dBASEIII format that is used at Industry Canada.

The Consultant ASCII conversion program CONDUMP, is still provided but since it is no longer supported, it is now described in Appendix 1.

2.0 DISTRIBUTION AND MEDIA

The data extract is delivered as one complete copy of the data four times during the fiscal year.

The current media for distribution is DOS (Disk Operating System) formatted diskettes of 1.2 or 1.44 MB capacity. In the future, the data will be delivered on higher density media depending on demand (CD). Plans also call for the on-line BBS to be replaced by an Internet FTP site permitting easy access across Canada.

3.0 DATA AND FILE ORGANIZATION

The data comes from the Broadcast (AM-FM-TV) database system (BDBS) and is stored in dBASEIII format. The main index used to identify data is the station Call Sign. To uniquely identify stations, a two letter code (Banner) is added to the end of the Call Sign.

This Call Sign-Call Flag combination is used as the main index for Broadcast data.

3.1 Data Restrictions

Data on applications under consideration is confidential, and is not included in the data extract. In the contours data table, negative values may appear in some Grade A, Grade B, 3000mV/m and 500mV/m contours. They indicate that those values are realistic contours. These negative contour points were calculated with a method different than the use of F(50,50) curves for TV and FM. Methods like Bullington or other propagation calculation programs were used.

In the future, a decision will be made to store only realistic contours, or to store separately F(50,50) and realistic contours under different names. AM service contours are currently not included in the data extract.

AM contours are being digitized for Digital Radio Broadcast (DRB) planning and will be made available as they are stored in the BDBS.

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The BDBS and extract currently does not contain U.S. station contours. Negotiations are under way to see if they are available and can be included in the data extract.

As volume of data increases, it may become necessary to split the contours database table (CONTOURS.DBF) into three separate files for AM-FM-TV.

3.2 File Organization

The BDBS LAN system uses a standard dBASE storage format for the Broadcast data. The dBASE format of data storage was selected as being the most commonly used among PC users.

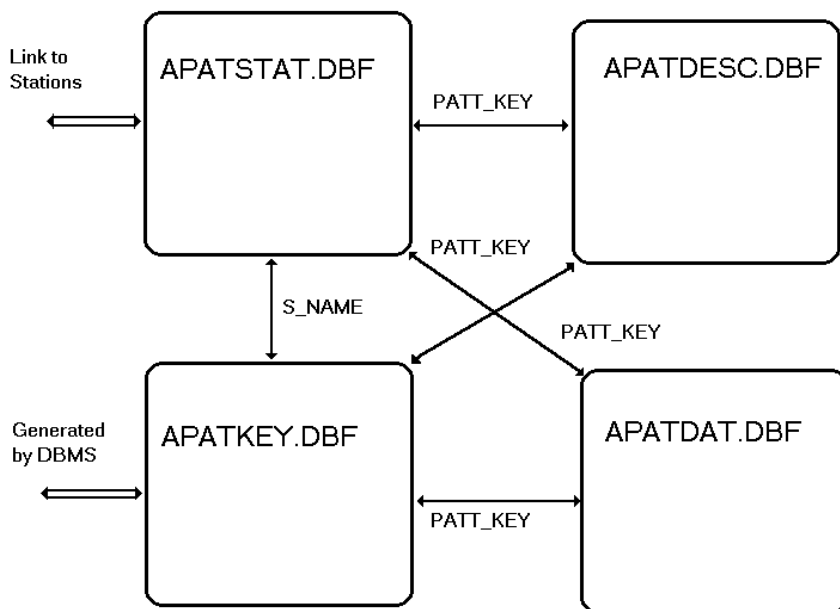
A file called BDBS_EXT.WP is provided with each full extract and provides descriptions of all the files produced.

FILE	DESCRIPTION
DBFPRINT.ZIP	Display utility for dBase files
DBSTP032.ZIP	Display/Write to a file the dBase structure
AMSTATIO.DBF	Main station information for AM stations
APATDAT.DBF	Data records for pattern points (FM, TV)
APATDESC.DBF	Description record of patterns
APATSTAT.DBF	Link of pattern keys to call sign/banners
APATSTA2.NTX	Index of pattern keys
AUGMENT.DBF	AM station augmentations
CITY.DBF	Lookup table for station locations
COMMENTS.DBF	Comments of all station types
COMMENTS.DBT	Memo fields of COMMENTS.DBF
CONTOURS.DBF	Station contours of FM and TV stations
EXTEND.DBF	AM stations extended hours of operation
FEEDS.DBF	Source of feed signals
FMSTATIO.DBF	Main station information for FM stations
PARAMS.DBF	AM stations parameters (towers information)
PROVINCE.DBF	Lookup table for all stations
REGION.DBF	Data that regional users supply
REGION1.NTX	Index of regional files by CALLS_BANR
TVSTATIO.DBF	Main station information for TV stations
BDBS.DD	Data Dictionary
CONDUMP.EXE	Program to create ASCII files
CONS_DEF.DBF	Controlling database file to govern processing
DB_2_ASC.BAT	Batch file for the CONDUMP conversion step
PKUNZIP.EXE	Program to unzip compressed files
BDBS_EXT.WP	This file
E-LIMFMC.TXT	English text describing limitations to FM stations in Canada
E-LIMFMU.TXT	English text describing limitations to FM stations in the United States
F-LIMFMC.TXT	French text describing limitations to FM stations in Canada
F-LIMFMU.TXT	French text describing limitations to FM stations in the United States
E_LIMITS.TXT	English text describing limitations to TV stations in Canada
F_LIMITS.TXT	French text describing limitations to TV stations in Canada
INDEXIT.EXE	Index dBase file
MAKENTX.BAT	Batch file to index files

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4.0 ANTENNA PATTERNS

More and more TV and FM stations are using directional antennas. For this reason, a TV/FM directional antenna pattern database has been implemented. This database contains data on horizontal and vertical antenna patterns.



TV/FM Antenna pattern data is stored as relational information in four data files, APATSTAT.DBF, APATDESC.DBF, APATDAT.DBF and APATKEY.DBF. The diagram above shows the four data files along with the relationship existing between them.

Each TV/FM antenna pattern when added to the database is assigned a unique integer value referred to as the antenna pattern key (PATT_KEY). The pattern key permits to quickly identify and locate the antenna pattern information specific to a given station.

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APATKEY Data Sample:

S_NAME	PATT_KEY
OMNI	1
BAY-01	2
BAY-02	3
BAY-03	4
BAY-04	5
BAY-05	6
BAY-06	7
LASTKUSED	2542

APATSTAT The APATSTAT.DBF file is basically a reference table providing 'station call sign' versus 'antenna pattern key' information. It permits to determine what antenna pattern key has been assigned to a given FM or TV station given the call sign and banner of the station.

Field #	Field Name	Type	Width	Description
1	CALLS_BANR	C	14	Station call sign (12 char.) concatenated with the station banner (2 char.).
2	PATT_KEY	N	6	Pattern key assigned to the station identified by the call sign and banner.

TABLE 2: APATSTAT.DBF data fields.

The associated indexing file APATSTA1.NTX indexed on the CALLS_BANR field permits to search for any given station call sign and banner combination. Another indexing file, APATSTA2.NTX has an index build on the file's two fields: CALLS_BANR + STR(PATT_KEY)

APATSTAT Data Sample:

CALLS_BANR	PATT_KEY
CBCQ-TV-1 OP	1794
CBCQ-TV-1 OP	2405
CBCT OP	92
CBCT OP	176
CBCT-1 OP	93
CBCT-1 OP	1765
CBCT-1 OP	2371

APATDESC The APATDESC file contains a single "header" type record describing the attributes of the antenna patterns. All the parameters describing the patterns are found in this file with the exception of the data points describing the actual patterns.

Field #	Field Name	Type	Width	Description
1	PATT_KEY	N	6	Pattern key.
2	HOR_VER	C	1	Orientation. "H" for horizontal and Date pattern added to system for vertical. "V"
3	PATT_NUM	N	1	*Future use.
4	PATT_TYPE	C	12	Type of pattern: 'PRECISE', 'BRIEF', 'THEORETICAL'.
5	PUNITS	N	1	*Future use.
6	NUMPOINTS	N	3	Number of points in the pattern.
7	PATT_DATE	D	8	Date pattern added to system

TABLE 3: APATDESC.DBF data fields.

Note that PATT_NUMB and PUNITS are currently not used, and should not be counted on to contain valid data.

The associated indexing file APATDES1.NTX indexed on the PATT_KEY field permits to do a search based on the pattern key.

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APATDESC Data Sample:

PATT_KEY	HOR_VER	PATT_NUMB	PATT_TYPE	PUNITS	NUMPOINTS	PATT_DATE
1	H	1	THEORETICAL	1	180	1/05/87
2	V	1	THEORETICAL	1	181	10/19/87
1794	H	0	PRECISE	1	65	01/07/94
2405	V	1	PRECISE	1	181	02/10/94
92	H	1	BRIEF	1	8	1/02/87
93	H	1	BRIEF	1	8	1/02/87
176	H	1	BRIEF	1	8	1/23/90
1765	H	0	PRECISE	1	45	01/31/94
2371	V	1	PRECISE	1	181	02/18/94

APATDAT This file contains the 'gains' versus 'angle' data points defining the patterns. The record format permits to store one data point per record, therefore the storage of one pattern requires as many records as there are data points.

Field #	Field Name	Type	Width	Description
1	PATT_KEY	N	6	Pattern key.
2	ANGLE	N	8	Pattern data point azimuth from true north (degrees).
3	GAIN	N	12	Pattern data point gain at the given angle (dB).

TABLE 4: APATDAT.DBF data fields.

Two indexing files are associated with APATDAT.DBF. APATDA1.NTX is indexed on the PATT_KEY field and APATDA2.NTX is indexed on a key derived from two fields: STR(PATT_KEY,6) + STR(ANGLE,8,4)

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Very often measured patterns are not available at the time of the brief's analysis. In such cases, the department uses theoretical vertical patterns based on the Cosine Law. They have names from BAY-2 to BAY-12, corresponding to the theoretical vertical patterns of a two bay antenna, up to that of a twelve bay antenna.

4.4 "BRIEF"/"PRECISE" Patterns

When pattern values are taken from a table in a technical brief, PATT_TYPE is set to "BRIEF". If the values are digitized from antenna diagrams, PATT_TYPE is set to "PRECISE".

5.0 FUTURE PLANS

BDBS is being converted to Oracle. The dBASE BDBS extract will continue to be produced under Oracle operations.

6.0 ALS DATA EXTRACT

This section refers to data obtained from the department's ALS (Automated Licensing System) database. This data is used in TV/LAND Mobile incompatibility studies and in non-ionizing radiation reports. The data is updated on a daily basis by the primary users. Complete extracts are obtained on a monthly basis. The data contains more than 240,000 records.

The Broadcast version resides in a 32MB dBASE file. At the present time, the ALS extract cannot list frequencies used by Police and other security agencies. Therefore, only records with divulgence code set to "1" will be released.

It is hoped that this data will be made available on CD media in the near future. Appendix 1 part D. describes ALS Data Extract record layouts.

7.0 SUPPORT UTILITIES

Other AM/FM/TV engineering analysis programs are available through the DGRB/DGSE Technical Information Service (DBC-E/TIS). These programs have been revised to operate on the dBASE format data as provided in the Data Extract. For these programs to operate correctly, they require data indexes to exist for the dBASE formatted data files.

For reasons of efficient data distribution, these indexes are not provided on diskette when the Extract is sent out. Instead, an index creation program and batch file are supplied. Refer to the Appendix for information on the use of this Indexing utility.

Note that all support utilities included with the Data Extract are Shareware programs or programs written by Industry Canada staff or contractors. They have been tested at Industry Canada and to the best of our knowledge operate as described. They are provided for your convenience. Industry Canada, its employees, and contractors assume no responsibility for any loss or damage resulting from the use of these products, however caused.

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8.0 CONTOURS ACCURACY

Note that the information stored in the CONTOURS.DBF file fields LAT_END and LONG_END are **decimal degrees** values representing the derived latitude and longitude for that contour point. The point is described by the azimuth and distance stored in the same record, as calculated from the station site.

Differences in the values between the Contour file LONG_END (for azimuth of 0) and the longitude for the station site are to be expected since the station site longitude is stored as **DDMMSS** values. While the two longitudes appear to be different, they represent the same value in their respective units of storage.

A.3 Program Outputs

Three ASCII files are produced ; AM_DUMP.ASC, FM_DUMP.ASC and TV_DUMP.ASC. They contain the dumped records for the three station types. These files are created in the current DOS directory where the CONDUMP program is executed.

The three major files, AM_DUMP.ASC, FM_DUMP.ASC and TV_DUMP.ASC provide information on stations in operation or authorized for operation.

The Record Layouts are listed in order of increasing number.

- Records 01 to 11 describe AM data,
- Records 21 to 31 describe FM data,
- Records 41 to 52 describe TV data.

The data is stored in ASCII code format and is separated in records of a length of 80 characters. Each record is numbered and corresponds to a group of data and to a type of station. The following table lists all the records available:

Record Content	Record Number		
	AM	FM	TV
Station Data	01+02+03	21+22+23	41+42+43
Feeds Information	04		44
AM Antenna Parameters	05		
Augmentation Data	06		
Extended Hours of Operation Data	10		
Applicant Name (comment no. 1)		26	47
Details on Limitations			47
EHAT Contour Data		28	49
3 mV/m Service Contour Data (S3)		30	
500 uV/m Service Contour Data (S500)		31	
A Service Contour Data			51
B Service Contour Data			52

Several records are created for each station. For every station, the first record indicates how many records are following (last field in records 01, 21 and 41).

Records 04, 05 and 06 for AM, 28 to 31 for FM, and 44 and 49 to 52 for TV can be repeated.

This is because these records list variables data that can have multiple occurrences (i.e. antenna parameters and augmentation).

A.4 Technical Requirements

To run the CONDUMP program, the following requirements should be met :

Free disk space should be at least equal to the size of the DBF database files to be converted.

Free conventional (low) RAM memory on your PC should be at least 480K.

DOS 3.3 or higher should be used.

The program should run in a DOS window if you prefer using Windows, assuming other requirements are met. Expect some performance slowdown if using this approach.

A.5 CONFIG.SYS

If using DOS 6.x and EMM386 (see CONFIG.SYS file), ensure the NOVCPPI keyword is used in the EMM386 device statement in CONFIG.SYS.

ie. `DEVICE=C:\DOS\EMM386.EXE NOEMS NOVCPPI`

The CONFIG.SYS file should contain the following FILES and BUFFERS specifications as a minimum :

```
FILES=55
BUFFERS=20
```

B.0 INDEXIT PROGRAM

The INDEXIT program was developed to create index files for Broadcast data files stored in dBASE format. The program will operate on any xBase compatible database file.

B.1 Program Inputs

The program requires four parameters to control its operation as shown by the following syntax:

```
INDEXIT <DBFName ><Key Expression><Index name><[C|D]><[U]>
```

where

C|D = > Clipper (NTX) | dBASE (NDX) type indexing

U = Unique (No duplicate keys)

the fifth parameter <U> is optional and is not required.

Note that both <DBFName> and <Index name> may contain DOS path specifications. If no path information is provided, the current directory is assumed.

<Key Expression> must be a valid xBase expression. It may be a compound expression or a simple field name, but must meet xBase syntax requirements.

B.2 Program Outputs

INDEXIT creates the named index file<Index name>, based on the index expression <Key Expressions>. The file extension of the index file will be ".NTX" if a Clipper style index was selected, or ".NDX" if a dBASE style was selected. The file is created in the current directory unless a path is specified as part of the file name.

A brief screen display appears to describe the indexing activity.

B.3 Technical Requirements

To run the INDEXIT program, the following requirements should be met:

Free disk space should be at least equal to the size of the anticipated index file. If in doubt, free disk space should equal or exceed the size of the database being indexed.

Free conventional (low) RAM memory on your PC should be at least 480K. DOS 3.3 or higher should be used.

The program should run in DOS windows if you prefer using Windows, assuming other requirements are met. Expect some performance slowdown if using this approach.

If INDEXIT is operating on a LAN, it assumes that it will have exclusive access to the database file being indexed. If it cannot gain this exclusive use of the file, no indexing is performed and the program returns an error code (DOS errorlevel) of 1.

Note that while the INDEXIT program does not overwrite any database information, any problems resulting from its usage are not the responsibility of Industry Canada or the author of the program.

B.4 Provided Batch File

A batch file named MAKENTX.BAT is provided with the INDEXIT program to show correct usage of the program. It may be used as a model for developing Indexing batch files for other applications. Part of the file is shown below as an illustration.

Not that if the desired index key is a compound expression (more than one field), the field names may be concatenated as shown in the italicized program call. Also note that NO imbedded blanks are permitted in the compound expression.

```
@ECHO OFF
::
::Creates required index files for IC supported
::programs. Assumes INDEXIT.EXE and databases are in current directory
::
INDEXIT apatstat CALL_BANR APATSTA1.NTX C
INDEXIT apatkey S_NAME APATKEY1.NTX C
INDEXIT FMSTATIO CALL_SIGN+BANNER FMSTATI1.NTX C
INDEXIT TVSTATIO CALL_SIGN+BANNER TVSTATI1.NTX C
::
:END
```

B.5 Sample Program Call

```
INDEXIT TVSTATIO CALL_SIGN+BANNER TVSTATI1.NTX C
|                |                |            |
|                |                |            |      Indicates Clipper style index
|                |                |            |      Name of output Index file (.NTX optional)
|                |                |            |      Compound xBase expression (note "+" concatenation)
|                |                |            |      Name of database index (.DBF assumed)
```

C.0 DBBS RECORD LAYOUTS

AMSTATIO.DBF "AM stations"

Main station info for AM stations.

#	FIELD	NAME	TYPE	LEN	DEC	
1	PROVINCE		C	2	0	Province / State
2	CITY		C	20	0	City name
3	CALL_SIGN		C	12	0	Call sign of station
4	FREQUENCY		N	7	2	Frequency in kHz. Valid 530 to 1700.
5	CLASS		C	3	0	Class (A, B, C, CC, LP)
6	LATITUDE		N	7	0	N.Latitude of the AM Station's Transmitter.(ddmmss)
7	LONGITUDE		N	8	0	W.Longitude of the AM Station's Transmitter(dddmmss)
8	BANNER		C	2	0	Banner flag (A, C, O, P)
9	STATUS1		C	2	0	Application Status day-time
10	STATUS2		C	2	0	Application Status night-time
11	LATITUDE2		N	7	0	Day-time N.latitude coordinate in degrees if site different than night-time site.
12	LONGITUDE2		N	8	0	Day-time W.longitude coordinate in degrees if site different than night-time site.
13	BRDR_LAT		N	7	0	Latitude used when BORDER last calculated
14	BRDR_LONG		N	8	0	Longitude used when BORDER last calculated
15	BORDER		N	7	1	Closest distance to Canada US Border(km)
16	CAN_LAND		N	7	1	Closest distance to Canada Land Edge
17	USA_LAND		N	7	1	Closest distance to USA Land Edge
18	FRE_LAND		N	7	1	Closest distance to French Land Edge near Newfoundland
19	ST_CREAT		D	8	1	Date station entered in database
20	ST_MOD		D	8	1	Date station last modified
21	OK_DUMP		D	8	1	Last date of record update for the Consultants dump
22	DOC_FILE		N	5	0	I.C.'s file number
23	DEC_NUMBER		N	6	0	CRTC Decision Number
24	IFRBN_D		N	5	0	IFRB Number for day time
25	IFRBN_N		N	5	0	IFRB Number for night time
26	CLIST1		N	4	0	Change List number 1
27	CLIST2		N	4	0	Change List number 2
28	CLIST3		N	4	0	Change List number 3
29	CLIST4		N	4	0	Change List number 4
30	CLIST5		N	4	0	Change List number 5
31	CLIST6		N	4	0	Change List number 6
32	CLIST7		N	4	0	Change List number 7
33	CLIST8		N	4	0	Change List number 8
34	CLIST9		N	4	0	Change List number 9
35	CLIST10		N	4	0	Change List number 10
36	NETWORK		C	4	0	Network (CBCE, CBCF, IND, INDE, INDF, BCMH, or none)
37	CERT_NUMB		C	6	0	Broadcasting Certificate Number in format AANNNN
38	BC_MODE		C	1	0	Broadcasting Mode (Stereo, Mono)
39	UNATTENDED		C	1	0	Unattended Operation Code (Y, N)
40	AUTO_PROG		C	1	0	Automatic Programming Code (Y, N)
41	EUVALU		N	5	1	RSS Night Interference Free Value
42	POWERDAY		N	7	0	Power in watts Day Time
43	PAR_RMS_D		N	8	2	RMS value mV/m Day Time
44	Q_DAY		N	7	2	Reduced Q factor Day Time
45	POWERNIGHT		N	7	0	Power in watts Night Time
46	PAR_RMS_N		N	8	2	RMS value mV/m Night Time
47	Q_NIGHT		N	7	2	Reduced Q factor Night Time
48	POWERCRI		N	7	0	Power in watts Critical Hours of Operation
49	PAR_RMS_C		N	8	2	RMS value during Critical hours of OPS.

50 Q_CRIT N 7 2 Reduced Q factor during Crit. hours OPS.
 51 CHANNEL N 4 0 4 digit Frequency in kHz. Ex: 1250

APATDAT.DBF "Antenna PATtern DATa" Detail records for pattern points.

#	FIELD NAME	TYPE	LEN	DEC	
1	PATT_KEY	N	6	0	Pattern key number used in all APAT files.
2	ANGLE	N	8	4	Angle in Degrees; AZIMUTH.
3	GAIN	N	8	4	RADIATION at ANGLE. (dB above ERPVPK)

APATDESC.DBF "Antenna PATtern DEScriptions" Description record of pattern.

#	FIELD NAME	TYPE	LEN	DEC	
1	PATT_KEY	N	6	0	Pattern key number used in all APAT files.
2	HOR_VER	C	1	0	Pattern Type; H or V.
3	PATT_NUMB	N	1	0	Unused
4	PATT_TYPE	C	12	0	Type of Pattern; BRIEF, THEO, PRECISE
5	PUNITS	N	1	0	Unused
6	NUMPOINTS	N	3	0	Number of points in APATDAT file.
7	PATT_DATE	D	8	0	Last date of change

APATKEY.DBF "Antenna PATtern KEY" File holding pattern names and counter.

#	FIELD NAME	TYPE	LEN	DEC	
1	S_NAME	C	12	0	Station name "CALL_SIGN"
2	PATT_KEY	N	6	0	Pattern key number used in all APAT files.

APATSTAT.DBF "Antenna PATtern STation" Link of pattern keys to Callsign/banners.

#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station name "CALL_SIGN" + "BANNER"
2	PATT_KEY	N	6	0	Pattern key number used in all APAT files.

AUGMENT.DBF "AM station augmentations" "Many" child of AM stations

#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station identification
2	DNC_CODE	C	1	0	D, N, C: Day, Night, Critical indicator
3	NUMBER	N	2	0	Augmentation segment number.
4	RADIATION	N	8	2	Radiation at central AZIMUTH (mV/m)
5	CENTER_AZ	N	5	1	Central AZIMUTH of Augmentation (degrees)
6	SPAN	N	5	1	Span of Augmentation (degrees)

CITY.DBF "City names" Lookup table for station locations

#	FIELD NAME	TYPE	LEN	DEC	
1	PROVINCE	C	2	0	Provincial or State code
2	NAME	C	20	0	City name.
3	LATITUDE	N	7	0	N.Latitude (city centre or 1st station)(ddmmss)
4	LONGITUDE	N	8	0	W.Longitude (city centre or 1st station)(dddmmss)
5	CREAT_DT	D	8	0	Date city record created
6	MOD_DT	D	8	0	Data city record modified

COMMENTS.DBF "Comments"					"One" child of all station types.
#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station identification
2	NAME	C	40	0	Name of license
3	ADDR1	C	40	0	Address line # 1
4	ADDR2	C	40	0	Address line # 2
5	ADDR3	C	40	0	Address line # 3
6	ADDR4	C	40	0	Address line # 4
7	HQCOMM	M	10	0	General Headquarters comments
8	RGCOMM	M	10	0	General Regional comments
9	EDETAILS	M	10	0	Details on Limitations; English
10	FDETAILS	M	10	0	Details on Limitations; French

CONTOURS.DBF "Station contours"					"Many" child of FM and TV stations.
#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station identification
2	AZIMUTH	N	5	1	Azimuth; degrees from true North
3	VALU_DIST	N	10	4	Height in Meters above Sea Level or distance in kilometres between the transmitter site and the contour point.
4	NAME	C	4	0	Contour name; AM (EUN, 5000, 500D, 500N) FM (HAAT,3000, 500) TV (HAAT, GRDA, GRDB)
5	LAT_END	N	8	4	Calculated end-point N.latitude (decimal fraction)
6	LONG_END	N	8	4	Calculated end-point W.longitude(decimal fraction)

EXTEND.DBF "AM stations extended hours of operations"					"Many" child of AM.
#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station identification
2	NUMBER	N	2	0	Extended Period Number
3	ANT_SYSTEM	C	1	0	Antenna System Used for the Extended Operation (D, N)
4	START1	C	4	0	Month and Day to Start the Extended Operation
5	END1	C	4	0	Month and Day to End the Extended Operation
6	START2	N	4	0	Hour and Minute to Start Extended Operation
7	END2	N	4	0	Hour and Minute to End Extended Operation
8	POWER	N	7	0	Station's Power in Watts
9	RMS	N	7	2	RMS value of Radiation in mV/m at 1 Km

FEEDS.DBF "TV - source of feed signals"					"Many" child of TV
#	FIELD NAME	TYPE	LEN	DEC	
1	CALLS_BANR	C	14	0	Station identification
2	FEED_ID	C	1	0	Feed Identifier; A or B
3	FEED_CHAN	N	4	0	0, 2 - 83, or 2500 - 2680
4	LINK_TYPE	C	1	0	Type of FEED LINK; O, U, S, C
5	FEED_CALL	C	12	0	Name of the SOURCE of the FEED
6	FEED_LAT	N	7	0	N.Latitude of the FEED SOURCE(ddmmss)
7	FEED_LONG	N	8	0	W.Longitude of the FEED SOURCE(dddmmss)

FMSTATIO.DBF "FM stations"

#	FIELD NAME	TYPE	LEN	DEC	
1	PROVINCE	C	2	0	Province / State code
2	CITY	C	20	0	City name.
3	CALL_SIGN	C	12	0	Call sign of station
4	FREQUENCY	N	7	2	Frequency in MHz 88.1 to 107.9
5	CLASS	C	3	0	Class of Station; A, A1, B, B1, C, C1, C2, D, LP, VLP; For Canadian Stations, A, A1, B, C, C1, LP, VLP; For Non-Canadian Stations, A, B, B1, C, C1, C2, D
6	LATITUDE	N	7	0	N.Latitude of the FM Station's Transmitter(ddmmss)
7	LONGITUDE	N	8	0	W.Longitude of the FM Station's Transmitter(dddmmss)
8	BANNER	C	2	0	AL, AP, AU, CP(US Only), DE, IC, IL, OP, PC, RE, TD, TO, UA, UC, UN: Allotment, Approved, Authorized, Construction Permit, Denied, Incomplete, Illegal, Operational, Proposed Channel, Referred to CRTC, Tentative Deletion, Temp. Operation, Approved by CRTC, Under Consideration, Unacceptable
9	SS_CODE	C	5	0	Short Spacing Code; "*0#aa"
10	NETWORK	C	4	0	Network affiliation: CANC, CBC, CBCE, CBCF, IND, INDE, INDF, Space
11	ANT_MODE	C	1	0	Antenna Mode; O, D; Omnidirectional or Directional
12	BC_MODE	C	1	0	Broadcasting Mode: S, M, Space; Stereo, Mono
13	BRDR_LAT	N	7	0	N.Latitude used when BORDER last calculated
14	BRDR_LONG	N	8	0	W.Longitude used when BORDER last calculated
15	BORDER	N	7	1	Closest distance to Canada US Border(km)
16	CAN_LAND	N	7	1	Closest distance to Canada Land Edge
17	USA_LAND	N	7	1	Closest distance to USA Land Edge
18	FRE_LAND	N	7	1	Closest distance to French Land Edge near Newfoundland
19	ST_CREAT	D	8	1	Date station entered in the database
20	ST_MOD	D	8	1	Date station was last modified
21	OK_DUMP	D	8	1	Last date of record Modification for a Consultants dump
22	DOC_FILE	N	5	0	I.C. file number; any 5 Numeric digits
23	DEC_NUMBER	N	6	0	CRTC Decision Number "YNNNNN"
24	UNATTENDED	C	1	0	Unattended Operation Code (Y, N)
25	CERT_NUMB	C	6	0	Broadcasting Certificate Number "FANNNN"
26	SCMO	C	1	0	Subsidiary Carrier Multiple Operation Code Y or N
27	AUTO_PROG	C	1	0	Automatic Programming Code; Y, N
28	BEAM_TILT	N	5	1	Beam Tilt Angle in Degrees; -10.0 to 10.0
29	EHAATT	N	7	1	Effective Height of Antenna Above Terrain -1,200.0 to 2,000.0 meters
30	ERP_VAV	N	7	0	ERP Vertical Average in Watts
31	ERP_VPK	N	7	0	ERP Vertical Peak Power in Watts 0 to over 5,000,000
32	ERPHAV	N	7	0	ERP Horizontal Average in Watts 0 to over 360,000
33	ERPHPK	N	7	0	ERP Horizontal Peak Power in Watts 0 to over 360,000
34	GROUND_LEV	N	6	1	Ground Level at Tower Base above Sea Level in Meters: 0.0 to 9,999.9
35	OVERALL_H	N	5	1	Overall Height Above ground in Meters 0.0 to 999.9 meters
36	RAD_CENTER	N	6	1	Radiating Center Above Mean Sea Level

TVSTATIO.DBF "TV stations"

#	FIELD NAME	TYPE	LEN	DEC	
1	PROVINCE	C	2	0	Province / State
2	CITY	C	20	0	City name
3	CALL_SIGN	C	12	0	Station call sign
4	FREQUENCY	N	7	2	Frequency in MHz. (too many to list)
5	CLASS	C	3	0	Class of Station; A, B, C, D, F, N, R, S, LP, VLP
6	LATITUDE	N	7	0	Latitude coordinate in degrees of the Station's Transmitter
7	LONGITUDE	N	8	0	Longitude coordinate in degrees of the Station's Transmitter
8	BANNER	C	2	0	AL, AP, AU, CP, DE, IC, IL, OP, PC, RE, TD, TO, UA, UC, UN; Allotment, Approved, Authorized, Construction Permit, Denied, Incomplete, Illegal, Operational, Proposed Channel, Referred to CRTC, Tentative Deletion, Temp. Operation, Approved by CRTC, Under Consideration, Unacceptable
9	LIMITE	C	5	0	Limitation Identification code "LAAAA"
10	NETWORK	C	4	0	Network; AECC, ASN, CANC, CBCE, CBCF, CTV, GTN, HC, INDE, INDF, KNOW, MITV, MM, NN, PATV, R-QF, TSN, TVA, TVO, and Space
11	ANT_MODE	C	1	0	Antenna Mode: O, D, Space; Omnidirectional or Directional
12	BC_MODE	C	1	0	Broadcasting Mode; S, P, B, Space; Stereo, Second Audio Channels or Both
13	OFFSET	C	1	0	Refers to TV Off-set Code. Space, +, -, Z.
14	OFF_PREC	C	1	0	Refers to Off-set Precision. Valid Y, Space.
15	BRDR_LAT	N	7	0	Latitude used when BORDER last calculated
16	BRDR_LONG	N	8	0	Longitude used when BORDER last calculated
17	BORDER	N	7	1	Closest distance to Canada US Border(km)
18	CAN_LAND	N	7	1	Closest distance to Canada Land Edge
19	USA_LAND	N	7	1	Closest distance to USA Land Edge
20	FRE_LAND	N	7	1	Closest distance to French Land Edge near Newfoundland
21	ST_CREAT	D	8	1	Date station entered in database
22	ST_MOD	D	8	1	Date station last modified
21	OK_DUMP	D	8	1	Last date of record Modification for a Consultants dump
24	DOC_FILE	N	5	0	I.C. file number
25	DEC_NUMBER	N	6	0	CRTC Decision Number: "YNNNNN"
26	UNATTENDED	C	1	0	Unattended Operation Code (Y, N)
27	CERT_NUMB	C	6	0	Broadcasting Certificate Number "TANNNN"
28	CLOSE_CAP	C	1	0	Closed Captioning; Y or N
29	ALLOC_ZONE	N	1	0	Allocation Planning Zone 0, 1 or 2
30	BEAM_TILT	N	5	1	Beam Tilt Angle in Degrees; -10.0 to 10.0
31	EHAATT	N	7	1	Effective Height of Antenna Above Terrain -1,200.0 to 2,000.0 meters
32	ERPVAV	N	7	0	ERP Visual Average in Watts
33	ERPVPK	N	7	0	ERP Visual Peak Power in Watts 0 to over 5,000,000
34	ERPAAV	N	7	0	ERP Aural Average in Watts 0 to 1,000,000
35	ERPAPK	N	7	0	ERP Aural Peak Power in Watts 0 to 1,000,000
36	ERPVTA	N	7	0	ERP Peak Visual Power at Tilt Angle in Watts 0 to more than 5,000,000
37	ERPATA	N	7	0	ERP Average Power at Tilt Angle in watts 0 to 5,000,000
38	GROUND_LEV	N	6	1	Ground Level at Tower Base above Sea Level

39	OVERALL_H	N	5	1	Overall Height Above ground in Meters	in Meters: 0.0 to 9,999.9
40	RAD_CENTER	N	6	1	Radiating Center Above Ground Level	0.0 to 999.9
41	CHANNEL	N	4	0	CHANNEL; 2 - 83, or 2,500 - 2,680	0.0 to 5,000.0 metres

NOTES:

- Latitudes are currently expressed in degrees, positive for Northern Hemisphere and negative for Southern Hemisphere. Unless otherwise indicated latitudes are expressed in +-DDMMSS.
- Longitudes are currently expressed in positive degrees only and have the meaning of West. Some longitudes exceed 180 degrees. Unless otherwise noted longitudes are expressed in +-DDDMMSS.
- Unless otherwise noted, antenna heights are in meters(m) and distance is expressed in kilometres(km)

The following index key expressions are utilized for data processing within the Broadcast Database system at Industry Canada. They are provided as a guide when using the included Index Creation Utility.

Index file	Key expression
AMSTATI1.NTX	CALL_SIGN+BANNER
AMSTATI2.NTX	CITY
AMSTATI3.NTX	SUBSTR(STR(LONGITUDE,7,0),1,3) + SUBSTR(STR(LATITUDE,6,0),1,2)
AMSTATI4.NTX	CHANNEL
APATDAT1.NTX	PATT_KEY
APATDAT2.NTX	STR(PATT_KEY,6)+STR(ANGLE,8,4)
APATDES1.NTX	PATT_KEY
APATKEY1.NTX	S_NAME
APATKEY2.NTX	PATT_KEY
APATSTA1.NTX	CALLS_BANR
APATSTA2.NTX	CALLS_BANR+STR(PATT_KEY)
AUGMENT1.NTX	CALLS_BANR
AUGMENT2.NTX	CALLS_BANR+DNC_CODE
AUGMENT3.NTX	CALLS_BANR+DNC_CODE+STR(NUMBER)
BDBSDIC1.NTX	ALIAS
BDBSREP1.NTX	RI_REPORT
BDBS_ER1.NTX	ERRCODE
BDBS_SY1.NTX	DATAPATH
CITY1.NTX	PROVINCE+NAMEData dictionary of ALS data extract for Broadcast use

Structure for database: P:\ALS\DIV1\ALSDIV1.DBF
 Number of records : 219212
 Last update : 93/07/08

Field	Field Name	Type	Length	Dec	Description
1	LICENSEE	Character	25		Licensee name
2	COMPNY_COD	Numeric	10		Company code
3	DISTRICT	Numeric	2		IC District office No
4	DIV_CODE	Numeric	1		Divulgateion code (1)freely distributable (2)do not divulgate

*** F.G. WARNING *** Do NOT rely exclusively on this field

*** You MUST NOT disclose also

Company codes starting with
 17.....
 0217.....
 0817.....
 0917.....
 1017.....
 1217.....
 1517.....
 5217.....
 5617.....

5	CALL_SIGN	Character	10		Station Callsign
6	LOCATION	Character	25		Region,city,province unformatted
7	LATITUDE	Numeric	6		North latitude of tx
8	LONGITUDE	Numeric	7		West longitude of tx
**** F.G. of Station could be a RX only ****					
9	SITE_ELEV	Numeric	5		Ground level in feet(meters)?
**** F.G. site elevation -MTRS AMSL *****					

10	FREQ_TX	Numeric	13	6	Tx frequency in MHz
11	FREQ_RX	Numeric	13	6	Rx frequency in MHz
12	STATUS	Numeric	1		Status of Station

**** F.G. Frequency status
Status - 0 - Pending
1 - Individually authorized
2 - Authorized to be billed
3 - Authorized for future
4 - Invoiced
5 - Authorized paid/licence held
6 - Active
7 - Under reconsideration
8 - Transferred
9 - Cancelled *****

13	ERP_DBW	Numeric	5	1	tx Effective Radiated Power
14	ELEV_ANGLE	Numeric	7	3	Elevation angle from horizon of main beam in degrees

*** F.G. TX antenna elevation angle - beam tilt from horizontal ground *****
15 ANT_HEIGHT Numeric 4 height of antenna Radiation centre above mean sea level in meters?

*** F.G. TX antenna height AGL-MTRS of radiating elements *****
16 AZIMUTH Numeric 5 1 Azimuth of main beam (degrees from True North).

*** F.G. Azimuth from true north of antenna's direction of maximum radiation ***
17 ANT_GAIN Numeric 4 1 antenna gain in dbW
18 AZM_MLOBE Numeric 5 1 Azimuth of main lobe (degrees from True North).

*** F.G. TX antenna beamwidth - Half power beamwidth distance of 3dB from the antenna
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19	ANTMOD_NO	Character	8		Antenna mode
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*** F.G. Antenna model number *****

** Total ** 157

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CITY2.NTX           PROVINCE
COMMENT1.NTX       CALLS_BANR
CONTOUR1.NTX       CALLS_BANR
CONTOUR2.NTX       CALLS_BANR+NAME
CONTOUR3.NTX       CALLS_BANR+NAME+STR(AZIMUTH,5,1)
DATES1.NTX          CALLS_BANR
EXTEND1.NTX        CALLS_BANR
EXTEND2.NTX        CALLS_BANR+ANT_SYSTEM+STR(NUMBER,2)
FEEDS1.NTX         CALLS_BANR
FEEDS2.NTX         CALLS_BANR+FEED_ID
FMSTATI1.NTX       CALL_SIGN+BANNER
FMSTATI2.NTX       CITY
FMSTATI3.NTX       SUBSTR(STR(LONGITUDE,7,0),1,3) + SUBSTR(STR(LATITUDE,6,0),1,2)
KEYWORDS.NTX      longwd
LOGIN1.NTX         LOGID
LOOKUP1.NTX        FIELDNAME
LOOKUP2.NTX        FIELDNAME+CODE
PARAMS1.NTX        CALLS_BANR
PARAMS2.NTX        CALLS_BANR+DNC_CODE+STR(TOWER_NUMB)
PROVINC1.NTX       PROVINCE
REGION1.NTX        CALLS_BANR
SCREEN1.NTX        TABLE
TVSTATI1.NTX       CALL_SIGN+BANNER
TVSTATI2.NTX       CITY

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