

GBPPR 'Zine



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Welcome to **Green Bay Professional Packet Radio's** (www.gbppr.org) crappy magazine!

Lots of telecom stuff in this issue. Some old and some new. No fucking red boxing.

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DMS-100 Residential Line CLASS Office Data

RESOFC

Table Name : Residential Line CLASS Office Data

Functional Description of Table RESOFC

Table RESOFC contains data pertaining to Custom Local Area Signaling Services (CLASS) features. CLASS features are public network features targeted for the residential market.

For each CLASS feature, table RESOFC controls whether the feature is enabled or disabled for the whole office. If disabled, no CLASS line can use that feature even if assigned. Table RESOFC also controls the attributes that are associated with each feature.

The CLASS features that are supported are shown below.

- * Automatic Call Back (ACB)
- * Automatic Recall (AR)
- * CLASS Message Waiting Indicator (CMWI)
- * Calling Name Delivery (CNAMD)
- * Calling Number Delivery Blocking (CNDB)
- * Distinctive Ringing/Call Waiting (DRCW)
- * Selective Call Acceptance (SCA)
- * Selective Call Rejection (SCRJ)
- * Spontaneous Call Waiting Identification with Disposition (DSCWID)
- * Anonymous Call Rejection (ACRJ)
- * Call Logging (CALLOG)
- * Calling Name Delivery Blocking (CNAB)
- * Calling Number Delivery (CND)
- * Customer Originated Trace (COT)
- * Calling Number Delivery Dialable Number (DDN)
- * Selective Call Forwarding (SCF)
- * Spontaneous Call Waiting Identification (SCWID)

For more information on these features, refer to the *Feature Description Manual*, 297-1001-801.

A default tuple is added to this table when the software package implementing the CLASS feature is initialized in the office. Tuples cannot be added by the customers. Existing tuples can only be modified but they cannot be deleted.

Datafill Sequence

The following tables must be datafilled before table RESOFC: CLLI, ANNS, ANNMEMS, DRAMTRK

The call logging entry in table RESOFC is added automatically.

If the operating company wishes to have repeat announcements for AR two-level activation, fields BADIGITS and TIMEOUT must be set to a non-zero value.

Table Size

Memory for this table is statically allocated. This table cannot be extended.

The tuple size has increased to accommodate a maximum of four new announcements identifiers. The internal table storing this information is increased in size by nine protected data words.

Customer Data Schema *Reference Manual*, volume 6 of 8 BCS36 and up

DMS-100 Residential Line CLASS Office Data

Field Descriptions

Field names, subfield names, and valid data ranges for table RESOFC are described below.

Field Descriptions for Table RESOFC

Field or Subfield	Entry	Explanation
FEATNAME	ACB, ACRJ, AR, CALLOG, CMWI, CNAB, CNAMD, CNDB, CND, COT, DDN, DRCW, DSCWID, SCA, SCF, SCRJ or SCWID	<i>Class Feature Name</i> This field is the key to the table. Enter a CLASS feature as described below: * ACB (Automatic Call Back) * ACRJ (Anonymous Call Rejection) * AR (Automatic Recall) * CALLOG (Call Logging) * CMWI (CLASS Message Waiting Indicator) * CNAB (Calling Name Delivery Blocking) * COT (Customer Originated Trace) * CNAMD (Calling Name Delivery) * CNDB (Calling Name Delivery Blocking) * CND (Calling Number Delivery) * DN (Calling Number Delivery Dialable) * DRCW (Distinctive Ringing/Call Waiting) * DSCWID (Spontaneous Call Waiting Identification with Disposition) * SCA (Selective Call Acceptance) * SCF (Selective Call Forwarding) * SCRJ (Selective Call Rejection) * SCWID (Spontaneous Call Waiting Identification)
ENABLED	Y or N	<i>Enabled</i> Enter Y (yes) to specify that the feature is enabled within the office. Enter N (no) to indicate the feature is disabled. Note: The DSCWID feature is only available if field ENABLED is set to Y.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
ACCESS	SUBSCR or UNIVER	<p><i>Feature Access</i></p> <p>This field determines who can access the feature. Enter SUBSCR for subscribers only. Enter UNIVER for all residential (RES) line access to the feature.</p> <p>Note 1: The DSCWID feature is only available if field ACCESS is set to SUBSCR.</p> <p>Note 2: The CNAB feature is only available if field ACCESS is set to UNIVER.</p> <p>Note 3: For feature ACB and AR, if the entry in field ACCESS is changed, the entire datafill for the feature must be re-entered.</p>
FEATDATA	see subfield	<p><i>Feature Data</i></p> <p>This field consists of subfield FEATNAME.</p>
FEATNAME	ACB, ACRJ, AR, CALLOG, CMWI, CNAB, CNAMD, CNDB, CND, COT, DDN, DRCW, DSCWID, SCA, SCF, SCRJ or SCWID	<p><i>Class Feature Name</i></p> <p>Enter a CLASS feature and datafill its refinements as described below:</p> <p>Enter ACB and datafill refinements on page 5. Enter ACRJ and datafill refinements on page 8. Enter AR and datafill refinements on page 8. Enter CALLOG and datafill refinements on page 13. Enter CMWI and datafill refinements on page 14. Enter CNAB and datafill refinements on page 15. Enter COT and datafill refinements on page 17. Enter CNAMD. No refinements require datafill. Enter CNDB and datafill refinements on page 16. Enter CND and datafill refinements on page 15. Enter DDN. No refinements require datafill. Enter DRCW and datafill refinements on page 22. Enter DSCWID and datafill refinements on page 23. Enter SCA and datafill refinements on page 23. Enter SCF and datafill refinements on page 24. Enter SCRJ and datafill refinements on page 23. Enter SCWID and datafill refinements on page 26.</p>

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DMS-100 Residential Line CLASS Office Data

FEATNAME = ACB

If the entry in field FEATNAME is ACB, datafill refinements BILLING_OPTION, T2, T5, T6, T10, TSCAN, N, RINGCYCL, RINGAPPL, TERMSCAN, COINLINE, HUNTLINE, PBXLINE and FLASHACT as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is ACB and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.
T2	3 to 12	<i>Time 2</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter the length of time (in minutes) that the originating switch waits between stopping recall ringing and sending out a message request to reactivate the queue position. The default is 5.
T5	2 to 10	<i>Time 5</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter the length of time (in seconds) that the originating switch allows for a response from the terminating switch. The default is 3.
T6	5 to 35	<i>Time 6</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter the length of time (in minutes) that the originating switch scans or waits for a free notification from the terminating switch. The default is 30.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
T10	60 to 180	<p><i>Time 10</i></p> <p>If the entry in field FEATNAME is ACB, datafill this refinement. Enter the length of time (in minutes) for the queue sanity timer for both the originating and terminating switches.</p> <p>The default is 180.</p>
TSCAN	3 to 120	<p><i>Time Scanning</i></p> <p>If the entry in field FEATNAME is ACB, datafill this refinement. Enter the length of time (in seconds) between busy/idle queries when the originator is performing originating scanning.</p> <p>Note: T11 in the terminating node is set equal to refinement TSCAN + 5 seconds.</p> <p>The default is 120.</p>
N	0 to 10	<p><i>N</i></p> <p>If the entry in field FEATNAME is ACB, datafill this refinement. Enter the tolerance timer for aligning values of T6 timer and queue entry timer (T7) at the terminating switch. If the entry in refinement T6 is greater than the entry in refinement N when the originator receives a service timeout message from the terminating switch, a message is sent to reset T7 to use what is left of T6.</p> <p>The default is 5.</p>
RINGCYCL	2 to 7	<p><i>Ring Cycle</i></p> <p>If the entry in field FEATNAME is ACB, datafill this refinement. Enter the number of 6 second ring cycles that recall ringing is given.</p> <p>Note: T8 is set equal to field RINGCYCL x 6 + 5 seconds.</p> <p>The default is 5.</p>

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
RINGAPPL	1 to 12	<i>Ring Apply</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter the number of times unanswered recall ringing is given to a calling party. The default is 2.
TERMSCAN	Y or N	<i>Terminating Scan</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter Y if the originating switch requests terminating scan. Otherwise, enter N if the switch never requests a terminating scan. The default is Y.
COINLINE	ACCEPT or DENY	<i>Coin Line</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter whether the originating switch accepts or denies an ACB for a return line type of coin line and directory number (DN) match of match. The default is DENY.
HUNTLINE	ACCEPT or DENY	<i>Hunt Line</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter whether the originating switch accepts or denies an ACB for a return line type of hunt line and DN match of match or no match. The default is DENY.
PBXLINE	ACCEPT or DENY	<i>Private Branch Exchange Line</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter whether the originating switch accepts or denies an ACB for a return type of Private Branch Exchange (PBX) line and DN match of no match. The default is DENY.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
FLASHACT	Y or N	<i>Flash Activation</i> If the entry in field FEATNAME is ACB, datafill this refinement. Enter Y to specify that the Residential Enhances Services (RES) line with feature ACB can flash after receiving a busy tone and dial the respective activation code. Otherwise, enter N. The default is Y.

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FEATNAME = ACRJ

If the entry in field FEATNAME is ACRJ, datafill refinement ACRJ_ANSWRSUP as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
ACRJ_ANSWRSUP	Y or N	<i>ACRJ Answer Supervision</i> If the entry in field FEATNAME is ACRJ, datafill this refinement. Enter Y if answer supervision is required. Otherwise, enter N.

-end-

FEATNAME = AR

If the entry in field FEATNAME is AR, datafill refinements BILLING_OPTION, T2, T5, T6, T10, TSCAN, RINGCYCL, RINGAPPL, TERMSCAN, COINLINE, HUNTLINE, PBXLINE, FLASHACT and ACTLEVEL as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is AR and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
T2	3 to 12	<i>Time 2</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter the length of time (in minutes) that the originating switch waits between stopping recall ringing and sending out a message request to reactivate the queue position. The default is 3.
T5	2 to 10	<i>Time 5</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter the length of time (in seconds) that the originating switch allows for a response from the terminating switch. The default is 3.
T6	5 to 35	<i>Time 6</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter the length of time (in minutes) that the originating switch scans or waits for a free notification from the terminating switch. The default is 30.
T10	60 to 180	<i>Time 10</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter the length of time (in minutes) for the queue sanity timer for both the originating and terminating switches. The default is 180.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
TSCAN	3 to 120	<p><i>Time Scanning</i></p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter the length of time (in seconds) between busy/idle queries when the originator is performing originating scanning.</p> <p>Note: T11 in the terminating node is set with a value equal to field TSCAN + 5 seconds.</p> <p>The default is 120.</p>
N	0 to 10	<p>N</p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter the tolerance timer for aligning values of T6 timer and queue entry timer (T7) at the terminating switch. If the entry in refinement T6 is greater than the entry in refinement N when the originator receives a service timeout message from the terminating switch, a message is sent to reset T7 to use what is left of T6.</p> <p>The default is 5.</p>
RINGCYCL	2 to 7	<p><i>Ring Cycle</i></p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter the number of 6 second ring cycles that recall ringing is given.</p> <p>Note: T8 is set equal to field RINGCYCL x 6 + 5 seconds.</p> <p>The default is 5.</p>
RINGAPPL	1 to 12	<p><i>Ring Apply</i></p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter the number of times unanswered recall ringing is given to a calling party.</p> <p>The default is 5.</p>

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
TERMSCAN	Y or N	<i>Terminating Scan</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter Y if the originating switch requests terminating scan. Otherwise, enter N if the switch never requests a terminating scan. The default is Y.
COINLINE	ACCEPT or DENY	<i>Coin Line</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter whether the originating switch accepts or denies an AR for a return line type of coin line and directory number (DN) match of match. The default is DENY.
HUNTLINE	ACCEPT or DENY	<i>Hunt Line</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter whether the originating switch accepts or denies an AR for a return line type of hunt line and DN match of match or no match. The default is DENY.
PBXLINE	ACCEPT or DENY	<i>Private Branch Exchange Line</i> If the entry in field FEATNAME is AR, datafill this refinement. Enter whether the originating switch accepts or denies an AR for a return type of Private Branch Exchange (PBX) line and DN match of no match. The default is DENY.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
FLASHACT	Y or N	<p><i>Flash Activation</i></p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter Y to specify that the Residential Enhances Services (RES) line with feature AR can flash after receiving a busy tone and dial the respective activation code. Otherwise, enter N.</p> <p>For BCS36 and up, this field has no affect on the table.</p> <p>Note: Changes to this field take place immediately.</p> <p>The default is Y.</p>
ACTLEVEL	ONELEVEL or TWOLEVEL	<p><i>Activation Level</i></p> <p>If the entry in field FEATNAME is AR, datafill this refinement. Enter ONELEVEL is the subscriber can access the feature by dialing the feature access code. Enter TWOLEVEL if the subscriber is prompted to dial 1 after dialing the feature access code and datafill refinements BADDIGITS and TIMEOUT.</p> <p>The default is ONELEVEL.</p>
BADDIGITS	0 to 7	<p><i>Bad Digits</i></p> <p>If the entry in field FEATNAME is AR, and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. This field determines the number of times that a subscriber may enter the wrong input during two-level activation. If this number is exceeded then the call is routed to NACK (nil-acknowledgement) treatment.</p>
TIMEOUT	0 to 7	<p><i>Time Out</i></p> <p>If the entry in field FEATNAME is AR, and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. This field determines the number of times that a subscriber may allow two-level digit collection to time out. If this number is exceeded then the call is routed to NACK (nil-acknowledgement) treatment.</p>

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = CALLOG

If the entry in field FEATNAME is CALLOG, datafill refinement CALLOG_TIMEOUT and CALLOUT_PRIMARY_DATA as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
CALLOG_TIMEOUT	2 to 30	<i>Call Logging Timeout</i> If the entry in field FEATNAME is CALLOG, datafill this refinement. The values 2 to 30 indicate how long the call log feature waits for input before terminating the call log session. The value is in minutes.
CALLOG_ PRIMARY_DATA	NAME or NUMBER	<i>Call Logging Primary Data</i> If the entry in field FEATNAME is CALLOG, datafill this refinement. This field indicates if the name or number is displayed in the first field of the call logging item on the SESAME terminal. If NAME is entered, the name is displayed in the first field of a call log item at the SESAME set. Likewise, if NUMBER is entered, the number is placed in the first field of the call log item at the SESAME set.

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = CMWI

If the entry in field FEATNAME is CMWI, datafill refinements MSGTYPE and RETRSMIT as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
MSGTYPE	SINGLE or MULTIPLE	<i>Message Type</i> If the entry in field FEATNAME is CMWI, datafill this refinement. Enter either SINGLE or MULTIPLE depending on how the CMWI subscriber in the office receives message waiting information.
RETRSMIT	0 to 14	<i>Retransmit</i> If the entry in field FEATNAME is CMWI, datafill this refinement. Enter the maximum number of attempts that are allowed for transmission of the message waiting information to the subscriber's set. After reaching the maximum, the CMWI message is discarded until the next lamp audit process executes and verifies that the lamp should be turned on. A CMWI message is then sent to the set by the lamp audit process.

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = CNAB

If the entry in field FEATNAME is CNAB, datafill refinement ANNCS, CNABANNC and ANNCLLI as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
ANNCS	alphanumeric (1 to 16 characters or \$)	<i>Announcement</i> If the entry in field FEATNAME is CNAB, datafill this refinement. This field is datafilled with a \$ (dollar sign) if special dial tone is used for confirmation of successful CNAB activation.
CNABANNC	CNABCONF	<i>Calling Name Delivery Blocking Announcement</i> If the entry in field FEATNAME is CNAB, datafill this refinement. Enter the CNAB announcement CNABCONF.
ANNCLLI	alphanumeric (1 to 16 characters)	<i>Announcement Common Language Location Identifier</i> If the entry in field FEATNAME is CNAB, datafill this refinement. Enter the announcement Common Language Location Identifier (CLLI) name.

-end-

FEATNAME = CND

If the entry in field FEATNAME is CND, datafill refinement CND_MSGTYPE as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
CND_MSGTYPE	SINGLE or MULTIPLE	<i>CND Message Type</i> If the entry in field FEATNAME is CND, datafill this refinement. Enter whether the data message format is sent to the Customer Premises Equipment (CPE) is single or multiple.

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = CNDB

If the entry in field FEATNAME is CNDB, datafill refinements BILLING_OPTION, ANNCS, CNDBANNC and ANNCLLI as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is CNDB and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.
ANNCS	see subfield	<i>Announcement</i> If the entry in field FEATNAME is CNDB, datafill this refinement. This field consists of subfields CNDBANNC and ANNCLLI.
CNDBANNC	CNDBCONF	<i>CNDB Announcement</i> If the entry in field FEATNAME is CNDB, datafill this refinement. Enter CNDBCONF for CNDB confirmation.
ANNCLLI	alphanumeric (1 to 16 characters)	<i>Announcement Common Language Location Identifier</i> If the entry in field FEATNAME is CNDB, datafill this refinement. Enter the announcement CLLI datafilled in tables CLLI, ANNS, ANNMEMS and DRAMTRK for CNDB confirmation.

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = COT

If the entry in field FEATNAME is COT, datafill refinements BILLING_OPTION, ANNCS, COTANNID, COTCLLI and ACTLEVEL as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is COT and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.
ANNCS	alphanumeric (1 to 16 characters)	<i>Announcement</i> If the entry in field FEATNAME is COT, datafill this refinement. Enter up to two announcement Common Language Identifier Locations (CLLI). If less than two CLLIs are required, end the list with a \$ (dollar sign).
COTANNID	COTCONF or COTFAIL	<i>Customer Originated Trace Announcement Identifier</i> If the entry in field FEATNAME is COT, datafill this refinement. Enter COTCONF for a successful trace. Otherwise, enter COTFAIL for a partial trace. If COTCONF is not entered, the hard coded feature confirmation tone (2 beeps) is given for a successful COT trace. Similarly, if COTFAIL is no entered, then the feature reorder tone (fast busy tone) for 5 seconds is given.
COTCLLI	alphanumeric (1 to 16 characters)	<i>Customer Originated Trace Tone CLLI</i> If the entry in field FEATNAME is COT, datafill this refinement. Enter the announcement CLLI for the COTCONF and COTFAIL. Note: The announcement for table CLLI must be previously datafilled in tables CLLI, ANNS, ANNMEMS and DRAMTRK.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
ACTLEVEL	ONELEVEL or TWOLEVEL	<p><i>Activation Level</i></p> <p>If the entry in the field FEATNAME is COT, datafill this refinement. Enter ONELEVEL to allow the subscriber to access the feature by dialing the feature access code and datafill refinements SECLANG, SANNCS, COTANNID and COTCLLI.</p> <p>Enter TWOLEVEL if the subscriber is prompted to dial a 1 after dialing the feature access code to enable the COT feature and datafill refinements EXPIRIES, BADDIGITS, COTPRMT1, COTPRMTN and SECLANG.</p>

-end-

ACTLEVEL = ONELEVEL

If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is ONELEVEL, datafill refinements SECLANG, SANNCS, COTANNID and COTCLLI as described below.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
SECLANG	Y or N	<p><i>Second Language</i></p> <p>The field appears on the switch as SECOND_LANGUAGE. If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is ONELEVEL, datafill this refinement. Enter Y if the secondary language announcement is available for the COT feature and datafill refinement SANNCS. Otherwise, enter N and datafill refinement COTANNID.</p>
SANNCS	alphanumeric (1 to 16 characters)	<p><i>Announcement Common Language Location Identifier</i></p> <p>If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is ONELEVEL and the entry in SECLANG is Y, datafill this refinement. Enter up to two announcement CLLIs. If less than two CLLIs are required, end the list with a \$ (dollar sign).</p>

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
COTANNID	SCOTCONF or SCOTFAIL	<i>Customer Originated Trace Announcement Identification</i> If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is ONELEVEL, datafill this refinement. Enter SCOTCONF for a successful trace. Otherwise, enter SCOTFAIL for a partial trace. If SCOTFAIL is not entered, then the hard coded feature confirmation tone (2 beeps) is given for a successful COT trace. Similarly, if SCOTFAIL is not entered, then the feature reorder tone (fast busy tone) for 5 seconds is given.
COTCLLI	alphanumeric (1 to 16 characters)	<i>Customer Originated Trace CLLI</i> The field appears on the switch as SECOND_LANGUAGE. If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is ONELEVEL, datafill this refinement. Enter the announcement CLLI for the COTCONF and COTFAIL. Note: The announcement for table CLLI must be previously datafilled in table CLLI, ANNS, ANNMEMS and DRAMTRK.

-end-

ACTLEVEL = TWOLEVEL

If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill refinements EXPIRIES, BADIGITS, COTPRMT1, COMPRMTN and SECLANG as described below.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
EXPIRIES	0 to 5	<i>Expires</i> If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter the number of times the two-level digit collection is allowed to time out. If this number is exceeded the call is routed to NACK (nil-acknowledgement) treatment.

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DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
BADIGITS	0 to 5	<p><i>Bad Digits</i></p> <p>If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter the number of times two level activation wrong datafill is allowed. If this number is exceeded the call is routed to NACK (nil-acknowledgement) treatment.</p>
COTPRMT1	alphanumeric (1 to 16 characters)	<p><i>Customer Originated Trace Prompt for Feature 1</i></p> <p>If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter the CLLI of the first prompting announcement provided to the user during two-level activation. This CLLI must be previously datafilled in tables CLLI, ANNS and ANNMEMS.</p>
COTPRMTN	alphanumeric (1 to 16 characters)	<p><i>Customer Originated Trace Prompt for nth Level</i></p> <p>If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter the CLLI of the repeat prompting announcement provided to the user during a two-level activation. This CLLI must be previously datafilled in tables CLLI, ANNS and ANNMEMS.</p>
SECLANG	Y or N	<p><i>Second Language</i></p> <p>The field appears on the switch as SECOND_LANGUAGE. If the entry in field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter Y if the secondary language announcement is available for the COT feature and datafill refinements SANNCS, COTANNID, COTCLLI, SCOTPRMT1 and SCOTPRMTN as described below.</p> <p>Otherwise, enter N and datafill refinements COTANNID and COTCLLI as described below.</p>

-continued-

DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
		Note: The following fields are for secondary language announcements for successful and unsuccessful trace. They can be datafilled as follows:
	COT Announcements (field SANNCS)	Datafill
	0 (zero) COT announcements	Is the secondary language, both entries of a vector are empty.
	1 COT announcement	Only one vector entry is datafilled. It is qualified with SCOTCONF for successful trace announcement. Otherwise, it is qualified with SCOTFAIL for unsuccessful trace announcement.
	2 COT announcements	Both vector entries are datafilled. They are qualified with SCOTCONF for successful trace announcement and with SCOTFAIL for unsuccessful trace announcement.
SANNCS	alphanumeric (1 to 16 characters)	<i>Announcement Common Language Location Identifiers</i> If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL and the entry in refinement SECLANG is Y, datafill this refinement. Enter up to two announcement CLLIs. If less than two CLLIs are required, end the list with a \$ (dollar sign).
COTANNID	SCOTCONF or SCOTFAIL	<i>Customer Originated Trace Announcement Identification</i> If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL, datafill this refinement. Enter SCOTCONF for a successful trace. Otherwise, enter SCOTFAIL for a partial trace. If SCOTCONF is not entered, then the hard coded feature confirmation tone (2 beeps) is given for a successful COT trace. Similarly, if SCOTFAIL is not entered, then the feature reorder tone (fast busy tone) for 5 seconds is given.

-continued-

DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
SCOTPRMT1	alphanumeric (1 to 16 characters)	<p><i>Second Language COT Prompt for Feature 1</i> If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL and the entry in refinement SECLANG is Y, datafill this refinement.</p> <p>Enter a secondary language announcement for the initial prompt for two-level activation of COT feature 1.</p>
SCOTPRMTN	alphanumeric (1 to 16 characters)	<p><i>Second Language COT Prompt for nth Level</i> If the entry in the field FEATNAME is COT and the entry in refinement ACTLEVEL is TWOLEVEL and the entry in refinement SECLANG is Y, datafill this refinement.</p> <p>Enter a secondary language announcement for the Nth level prompt for two-level activation of COT feature.</p>

-end-

FEATNAME = DRCW

If the entry in field FEATNAME is DRCW, datafill refinements BILLING_OPTION and MAXSIZE as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<p><i>Billing Option</i> If the entry in the field FEATNAME is ACB, AR, CNDB, COT, DRCW, SCA, SCF or SCRJ and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.</p>
MAXSIZE	0 to 8191	<p><i>Maximum Size</i> If the entry in the field FEATNAME is DRCW, SCA, SCF, or SCRJ, datafill this refinement. Enter the maximum size of the selective call list for the office. The recommended size is 31. The lesser of this field and parameter SLE_ITEMS_IN_SEGMENT in table OFCENG controls the maximum size of the list.</p>

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = DSCWID

If the entry in field FEATNAME is DSCWID, datafill refinements WAITANNC and REALERT as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
WAITANNC	alphanumeric (1 to 16 characters)	<i>Wait Announcement</i> If the entry in the field FEATNAME is DSCWID, datafill this refinement. Enter the announcement CLLI. This is the announcement received by the waiting party when the WAIT option is chosen by the DSCWID subscriber.
REALERT	Y or N	<i>Realert</i> If the entry in the field FEATNAME is DSCWID, datafill this refinement. Enter Y if a realert is desired. Otherwise, enter N. The default is Y.

-end-

FEATNAME = SCA or SCRJ

If the entry in field FEATNAME is SCA or SCRJ, datafill refinements BILLING_OPTION, MAXSIZE and ANSWRSUP as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is SCA or SCRJ and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.
MAXSIZE	0 to 8191	<i>Maximum Size</i> If the entry in the field FEATNAME is DRCW, SCA, SCF or SCRJ, datafill this refinement. Enter the maximum size of the selective call list for the office. The recommended size is 31. The lesser of this field and parameter SLE_ITEMS_IN_SEGMENT in table OFCENG controls the maximum size of the list.

-continued-

DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
ANSWRSUP	Y or N	<i>Answer Supervision</i> Enter Y when answer supervision is returned when a rejected call for SCA goes to SCA treatment or for SCRJ goes to SCRJ treatment. Otherwise, enter N. This applies long distance charges for the call.

-end-

FEATNAME = SCF

If the entry in field FEATNAME is SCF, datafill refinements BILLING_OPTION, MAXSIZE, SCRNCL, RINGMEM and NUMCALLS as described below, then go to field FNALANN.

ACCESS = UNIVER

If the entry in field ACCESS is UNIVER, datafill refinements BILLING_OPTION, MAXSIZE, SCRNCL, RINGMEM and NUMCALLS as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
BILLING_OPTION (BCS35-)	NOAMA or AMA	<i>Billing Option</i> If the entry in the field FEATNAME is SCF and the entry in field ACCESS is UNIVER, datafill this refinement. Enter AMA (Automatic Message Accounting) to enable billing. Otherwise, enter NOAMA.
MAXSIZE	0 to 8191	<i>Maximum Size</i> If the entry in the field FEATNAME is SCF, datafill this refinement. Enter the maximum size of the selective call list for the office. The recommended size is 31. The lesser of this field and parameter SLE_ITEMS_IN_SEGMENT in table OFCENG controls the maximum size of the list.
SCRNCL (BCS35-)	NSCR	<i>Screening Class</i> If the entry in the field FEATNAME is SCF and the entry in field ACCESS is UNIVER, datafill this refinement. Enter NSCR for no screening class.

-continued-

DMS-100 Residential Line CLASS Office Data

Field or Subfield	Entry	Explanation
RINGMEM (BCS35-)	NORING RING, or NA	<i>Ring Member</i> If the entry in the field FEATNAME is SCF and the entry in field ACCESS is UNIVER, datafill this refinement. Enter NORING, RING or NA (not applicable).
NUMCALLS (BCS35-)	1 to 1024	<i>Number of Calls</i> If the entry in the field FEATNAME is SCF and the entry in field ACCESS is UNIVER, datafill this refinement. Enter a number to indicate the number of calls.

-end-

DMS-100 Residential Line CLASS Office Data

FEATNAME = SCWID

If the entry in field FEATNAME is SCWID, datafill refinement ACKTONE as described below, then go to field FNALANN.

Conditional Datafill for Table RESOFC

Field or Subfield	Entry	Explanation
ACKTONE	Y or N	<i>Acknowledgement Tone</i> Enter Y if an acknowledgement tone is desired. Otherwise, enter N. Field ENABLED must be datafilled Y to allow delivery of calling party identification during call waiting for SCWID subscribers.

-end-

FEATNAME = All Entries

Datafill the following refinements for all features.

Field Descriptions for Table RESOFC

Field or Subfield	Entry	Explanation
FNALANN	see subfields	<i>Feature Not Allowed Announcement</i> This field consists of subfields POTS_ACCESS and FNAL_CLLI.
POTS_ACCESS	00 to 99	<i>POTS Access</i> Enter the two digit plain ordinary telephone service (POTS) access code for activation of the CLASS feature that is used in POTS translation. The entry in this subfield must be identical to the table access code that is datafilled in table IBNXLA and used by the Meridian Digital Centrex (MDC) (Integrated Business Network (IBN)) lines.
FNAL_CLLI	alphanumeric (1 to 16 characters)	<i>Announcement Common Language Location Identifier</i> Enter the announcement CLLI for the announcement given when the subscriber tries to activate the feature to which the line has not subscribed. If the feature is disabled, (field ENABLE set to N) then POTS lines get PDIL (Partial Dial) treatment and CLASS lines get FNAL (Feature Not Allowed) treatment. The CLLI must first be datafilled in tables CLLI, ANNS, ANNMEM and DRAMTRK.

-end-

DMS-100 Residential Line CLASS Office Data

Datafill Example

Example of datafill for table RESOFC are shown below.

 Datafill Examples for Table RESOFC

Example of a MAP display.

KEY ENABLED		FEATDATA																	
		FNALANN																	
ACB	Y																		
SUBSCR		ACB	5	3	30	180	60	5	5	2	Y	DENY	DENY	DENY	N	\$			
AR	Y																		
SUBSCR		ONELEVEL	5	3	30	180	60	5	5	2	Y	DENY	DENY	DENY	Y				
COT	Y																		
SUBSCR		COT			ONELEVEL	\$	N											\$	
DSCWID	N																		
										SUBSCR	DSCWID					NILWAITANNC	Y		

Table History

BCS36 Default values for feature ACB and AR were added. Description of field ACCESS and of refinement FLASHACT for features ACB and AR was clarified.

DMS-100 Residential Line CLASS Office Data

Supplementary Information

This section provides information on announcement CLLIs and dump and restore procedures for table RESOFC.

Announcement CLLIs

Table 1 shows examples of announcement CLLIs.

Table 1 Announcement CLLIs

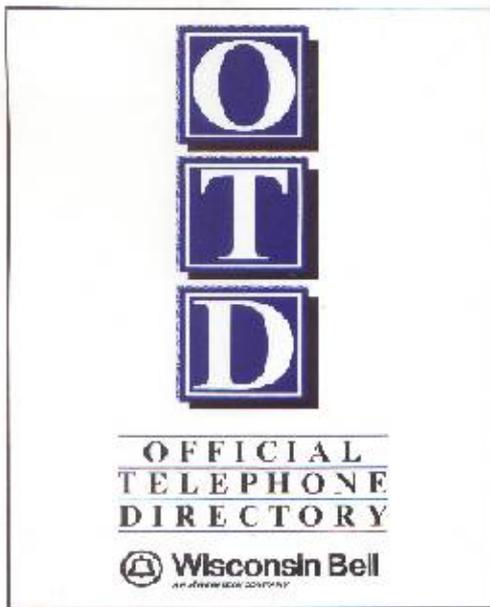
CLLI	Announcement
cllix	Primary Language Trace Success
clliy	Primary Language Trace Failure
cllil	Primary Language Initial Prompt
cllin	Primary Language nth Level Prompt
cllia	Secondary Language Trace Success
cllib	Secondary Language Trace Failure
cllis1	Secondary Language Initial Prompt
cllisn	Secondary Language nth Level Prompt

Dump and Restore

If the entry in field FEATNAME is COT, copy all existing fields from the old tuple to the new tuple. Initialize the new fields added by this feature to their NIL values in the new tuple. Follow the existing restore table procedure with the new tuple. Otherwise, copy with existing restore table procedure with old tuple. For two-level activation, fields BADIGITS and TIMEOUT are datafilled to 0 (zero) if the old tuple is datafilled two-level.

If a feature AR tuple is previously datafilled as one-level activation, fields BADIGITS and TIMEOUT do not appear.

WI Bell – Official Telephone Directory



This is a scan of an old *Wisconsin Bell/Ameritech Official Telephone Directory* (OTD). This is the internal phone book used by the phone company for keeping track of all their secret phone numbers. It is highly prized by hackers/phreaks. This version is quite old now, so it should be safe to give out. Most of the phone numbers no longer are in operation or have been changed. It can still be a good reference for studying your telephone company's operations hierarchy.

Scanned were only the cover (shown above), the first few pages of the index, the entire *General Services Section*, two pages of *Emergency Operations* section and one page of the *Emergency Residence Numbers* section. The other 100 pages or so contain an entire list of employee names, numbers and office locations. It also has central office contact numbers and their locations. There is an *Organizational List* containing contact numbers and locations from everyone from lawyers, accountants to trunk administrators. The *Emergency Residence Numbers* section contains a list of the personal home phone numbers of the major employees to contact in case of an emergency. The final section is the corporate wide office contact phone numbers.

WI Bell – Official Telephone Directory



February, 1991

Official Telephone Directory

Executive and General Departments
722 N. Broadway • Milwaukee, WI 53202
Telephone: Toll Free - Dial '1' & Then 800 924-3131
For in-dialing 678 & extension number

TABLE OF CONTENTS

White Pages

- Informational Pages
- Alphabetical Listings

Blue Pages

- General Services Section

Yellow Pages

- Organizational Listings in RC Sequence
- Authorized Sales Representatives of Wisconsin Bell
- Central Office Locations

Pink Pages

- Emergency Operations
- Departmental Operations Centers
- Emergency Operating Center Staff (HEOC/ERC)
- Emergency Residence Numbers

Green Pages

- Ameritech Companies, Subsidiaries & Wisconsin Locations
- Bellcore
- Rotational Employees
- Wisconsin Bell Communications Inc.

TO ORDER MORE DIRECTORIES OR
TO MAKE CHANGES IN THE DIRECTORY - SEE PAGE 2

PROPRIETARY INFORMATION
Previous Directory Must Be Shredded.

Page 1

WI Bell – Official Telephone Directory

Local Calling

Official Centrex Dialing Guide — Metro Milwaukee

All company telephone numbers with the following first three digits can call each other by simply dialing the four digit extension number.

678 549 768 535 797

To dial between 456 business office numbers dial 8 and the four digit number.

Other Important Numbers

To Report Trouble - Milwaukee Area 9 611
Information Metroplan Area 9 1 411
Information - Other than Local
..... 9 1 Area Code (If Required) 555-1212
Employee Locator —
 Metro Milwaukee 678-6271
 All Others Call Toll Free - Dial '1' and Then 393-3542

NOTE: Although the procedures to activate features are the same in every Centrex the codes differ. The following activation codes apply only for Metro Milwaukee Centrex lines with a 678, 549, 797, 535 and 768 prefix. All other Centrex users should verify their particular activation codes before reporting trouble.

To Transfer A Call

1. Depress the switchhook once and release it.
2. Listen for steady dial tone.
3. Dial the desired four or five digit extension number.

When the intended party answers, announce the call, depress the switchhook once and release it. Your call is now connected to the other extension and you may hang up.

Consultation Hold

To hold an existing call while consulting with another party:

1. Depress the switchhook.
2. Listen for steady dial tone.
3. Dial the number of the consulted party.

When consultation is completed, depress the switchhook twice to connect original party and drop third party.

General Services Section

SERVICES

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AMACC Net Svcs R4 845 N 35 6561	Administrative Support Ctrs (ASC) —
AMARC	722 N Broadway —
See TNSC (Telecommunications Network Svc Ctr)	14fl North 2041
API-Ameritech Publishing Inc See Green Pages	14fl South 3580
ARSB FE Hotline Distb Svcs R111 918 N 26 0244	15fl 2364
ASI-Ameritech Services Inc See Green Pages	Supv Clk 2828
ASI Service Consultant ASI	740 N Broadway —
1H117 W24300 Riverwood Dr Wksh 523-7911	1fl 4132
Accident Benefits Benfts R1000 722 N Brdy 3062	2fl 3409
Accident Reporting 6215	Supv Clk 3163
Accounting Standards FASC Admin —	3fl 2375
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Final Accts Info 6438	3fl East 17950 W Corporate Dr Brkfld 792-8090
WATS Info 4579	Supv Clk 792-8080
WATS (Ind Co) 6563	3fl West 17950 W Corporate Dr Brkfld 792-8301
852's-Non-Svc Ord Advice 6438	Supv Clk 792-8344
MA 9 Report 6459	2400 Kossow Rd Wksh 797-1307
Out-Of-Svc Outages 6409	Supv Clk 797-1306
Tax Exemptions 6438	2600 N Mayfair Rd 3055
Activities Announcement Coordinator 523-8505	Supv Clk 5681
Address Changes-Co Mail Sup Svcs 801 N 35 2414	804 N Milwaukee —
Administrative Bulletins Adm Svcs 3fl 722 N Brdy 4267	3fl 4546
Administrative Support Ctrs (ASC) Adm Svcs —	Supv Clk 4200
Appleton 4321 W College Appl 393-3022	4fl 4646
Eau Claire 304 S Dewey Eau Cl 393-3700	Supv Clk 6200
Green Bay 1543 Park Place Grn By 393-3939	3044 S Logan Av 747-8645
Madison 316 W Washington Mdsn 393-3400	Supv Clk 6200
Supv Clk 252-2969	2fl 733 N Van Buren 5770
W156 N4969 Pilgrim Rd Men Fls 5865	Supv Clk 2895
722 N Broadway —	633 W Wisconsin Av —
1fl 3435	9fl West 7761
3fl 4195	9fl East 7760
5fl 2098	11fl 0976
Supv Clk 2099	14fl 3819
6fl 6092	Supv Clk 5709
Supv Clk 4536	2430 10th Av S Milw 768-5840
7fl 4096	801 N 35 2668
Supv Clk 2140	845 N 35 —
8fl 2785	G-1 3717
Supv Clk 3294	1-A 4530
9fl 2924	1-B 3892
Supv Clk 4671	Supv Clk 6716
10fl 4088	2fl 6713
Supv Clk 4745	N15 W24250 Riverwood Dr Wksh 3219
11fl 6943	Supv Clk 0057
Supv Clk 6771	N17 W24300 Riverwood Dr Wksh —
12fl 2893	1 Fl 523-8922
Supv Clk 2194	Supv Clk 523-8927
13fl 2344	2 Fl 523-8938
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	3 Fl 523-8508
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General Services Section

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Business Usage	2160
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Public Communications	2160
Residence Svcs	3989
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Ameritech Savings Plans-Call Amer	
Transtech	
Toll Free-Dial '1' & Then	800 248-2411
Ameritech Services Inc (ASI)	See Green Pages
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Toll Free-Dial '1' & Then	800 924-6988
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Center—	
Managers	735-3344
Accounts 221 W Wash Appl	
Toll Free-Dial '1' & Then	800 924-1000
Orders 221 W Wash Appl	
Toll Free-Dial '1' & Then	800 924-5678
Applications Cntl Ctr Data Sys—	
Operations R172 845 N 35	4666
Support R160 845 N 35	3490
Applied Data Network Institute	
N17 W24300 Riverwood Drive Wksh	523-1588
Archives	See Records Center
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Forms 1311722 N Brdy	0065
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MTAS	0350
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Fuel Tanks/Pumps	523-8604
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2406 S 111	393-2277
State Div Toll Free-Dial '1' & Then	
221 W Wash Appl	393-2886
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411 E Kilbourn Av Toll Free-Dial '1' &	
Then	393-1766
918 N 26	3291
845 N 35 Toll Free-Dial '1' & Then	393-1766
N15 W24250 Riverwood Dr Wksh Toll	
Free-Dial '1' & Then	393-1766
Out Of Hours Emerg No	535-5303
Or Toll Free-Dial '1' & Then	393-2447
Repair Centers—	
Milw Div 2406 S 111	0995
State Div—	
Appleton 2580 American Dr	735-3840
Eau Claire 2716 E Davey	839-5707
Green Bay 3198 Ridge Rd	433-4099
Janesville 525 Wright Rd	755-5516
Madison 316 W Wash Av	252-2399

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Appleton—	
Toll Free-Dial '1' & Then	735-3206
Toll Free-Dial '1' & Then	393-3206
Eau Claire	839-5677
Fox Valley-Fond Du Lac—	
Toll Free-Dial '1' & Then	929-1009
Toll Free-Dial '1' & Then	800 924-3368
Green Bay—	
Toll Free-Dial '1' & Then	433-4126
Toll Free-Dial '1' & Then	393-2422
Madison	252-2908
Milwaukee	778-3130
Milwaukee Toll Free-Dial '1' & Then	393-2427
BOFADS Sls & Svc 611 740 N Brdy	6518
BSP Coordinator Sup Svcs 801 N 35	3466
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Computer Data Sys	Misc Accts Info	6298
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Acquisition/Movement/Replacement Data	Customer Guide-Directory	
Sys N15 W24250 Riverwood Dr Wksh	1fl 225 S Executive Dr Brkfld	797-1004
Computerized Filing Index Adm Svcs 801 N 35		
2713		
Conference Planning Adm Svcs—	D	
R150 722 N Brdy—	DBAC/DBAS-Net SS—	
Conf Arrangements Off Premises	2140 Davidson Wksh Toll Free-Dial '1' &	
Food Svc Catering On Premises	Then	393-3344
Audio-Visual Equipment	Inwats Intercept Toll Free-Dial '1' & Then	393-3344
Or Call Toll Free-Dial '1' & Then	After Hrs Emergency	549-7358
393-2885	Computer Oper	549-7360
Conference Rooms Adm Svcs—	Adm Clk	549-7360
Madison—	Data Ctr-Howell Av Data Sys 7737 S Howell Av --	768-0441
Reservations 316 W Wash	Data Ctr-Pewaukee Data Sys	
252-2336	N15 W24250 Riverwood Dr Wksh	549-7626
Milwaukee—	Data Ctr-35th St Data Sys R221 845 N 35	6396
Reservations	Data Network Requests Data Sys	
R3a 722 N Brdy	N15 W24250 Riverwood Dr Wksh	5995
R102 722 N Brdy	Data Products Marketing	678-2380
R403 722 N Brdy	Data Services Data Sys—	
R404 722 N Brdy	Batch Computer Jobs Assntce	4626
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2089	Helpline	0157
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523-2885	Toll Free-Dial '1' & Then	393-2744
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Confidential Information Coordinator Security	Pewaukee Data Ctr	7639
15fl 722 N Brdy	Or	
2466	Toll Free-Dial '1' & Then	393-2475
Contributions Corp Comm 13fl 722 N Brdy	EAS Help Desk	4644
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Corp Credit Card	N15 W24250 Riverwood Dr Wksh	549-7509
2014	Training-Mainframe & Personal Computer	
Corporate Accounting ASC 2	2fl 733 N Van Buren	4636
740 N Broadway Milw	Data Systems Manual Publication Data Sys	
678-5891	N15 W24250 Riverwood Dr Wksh	6213
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678-4935	CRIS/SORD/Billing—	
Corporate Budgeting-MR/IBPS Acctg Oprns	Billing Support	6128
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13fl 722 N Brdy	Preferred Svc-Milw	226-5555
2594	In-State Inquiries	
Corporate Planning Corp Ping 14-S fl 722 N Brdy	Toll Free-Dial '1' & Then	800 242-7160
5678	Dial Dictation Service Adm Svcs—	
Corporate Records Secy R1600-C 722 N Brdy	Internal Dictation	0181
2789	External Dictation	5996
Corporate Television Corp Com—	Or Call Toll Free-Dial '1' & Then	393-1800
Rm 103 722 N Brdy—		
Control Room		
3376		
Supervisor		
2416		
Videotape Bookings		
2293		
Correspondence Course See Training Center		
2400 Kossow Road Wksh		
Credit Unions—		
Appl 103 E Wash		733-7648
Eau Cl 405 S Farwell		836-0077
Fn D L 45 E Sheboygan		921-8777
Grn By 501 Clinton		436-7744
Mdsn 555 W Wash Av		258-7000
Mntwc 1126 S 10		684-7148
Milw 12700 W Blu Mnd Rd		784-2040
Milw R312 757 N Brdy		225-2440
Osh 203 Church Av		235-1665
CRIS Help Line Data Sys 6fl 740 N Brdy		6777
CRIS Reports Data Sys		6229

General Services Section

5	SERVICES	DINING—FINANCING
	Dining Services Adm Svcs—	Economic Development Pub Affrs 2660
	Special Food Arrangements	Educational Programs Corp Comm 6105
	Corporate Dining Room Reservations 3613	13fl 722 N Brdy
	Catering On Premises—	Emergency Operating Ctr Hdqtrs Net P&E
	4fl 740 N Brdy 3026	24 Hours A Day
	4fl 918 N 26 2421	7 Days A Week
	Lower Level 845 N 35 6323	Employee Activities Pioneer Ofc
	Lower Level N17 W24300 Riverwood Dr Wksh 523-1765	R401 722 N Brdy 2446
	Madison 10fl 316 W Wash Av Mdsn 252-2018	Employee Booklets & Brochures Corp Com
	Waukesha 2140 Davidson Rd Wksh 549-7314	13fl 722 N Brdy 2526
	Direct Marketing-Telemarketing Ctr	Employee Location Information Net Svcs
	1fl 17950 W Corporate Dr Brkfld 792-8411	2140 Davidson Rd Wksh 6271
	Directories Sis Oprns—	Employee Profile Data Base 5fl 722 N Brdy 7860
	Local-Foreign-Official Telephone Dir	Employee Verification R267 845 N 35th 0927
	5611 W Mill Rd Milw 462-3458	Employment Ofc Pers—
	Street Address Directories	Management Employment R101 722 N Brdy 3483
	1fl 225 S Exec Dr Brkfld 797-1044	Regular Or Temporary Help
	Directory White Pages Operation	Rm 105 845 N 35th
	1fl 225 S Exec Dr Brkfld 797-1686	Toll Free-Dial '1' & Then 800 924-3675
	Directory Advertising Service Center (DASC)	Engineering Resource Ctr
	3fl 200 S Exec Dr Brkfld 797-5836	3fl N17 W24300 Riverwood Dr 523-8513
	Directory No Administration Center DNAC—	Environmental Staff
	R315-D 918 N 26—	Equal Employment Opportunity
	STF 4488	Counselor Pers 12fl 722 N Brdy 2993
	Metro South-Fox Valley 3713	Exchange Carrier Relations External Affrs—
	Metro North-Mdsn-Eu Cl 3726	7fl 722 N Brdy—
	Directory Yellow Pages Organization	Network Facility Projects 2809
	See Green Pages-Ameritech Publishing	Opr Svcs Bus Ofc WATS 3036
	Disability Plans-LTD Benfts R1000 722 N Brdy 3062	Special Svcs 2365
	Discrimination Complaints-EEO Pers—	Toll Settlements & CABS 3631
	12fl 722 N Brdy 2371	Expense Statement
	12fl 722 N Brdy 2993	Inquiries-420's Acctg Oprns 6601
	Distributed Computers Data Sys	
	N15 W24250 Bell Dr Wksh 5995	F
	Distribution Sup Svcs—	FASC Administration R117 845 N 35 6043
	801 N 35—	FCC Docket Management Information Rev
	Mail Label Info 2414	9fl 722 N Brdy 3596
	Publications (WB) 2nd One Time Orders 2432	FCC Tariff Distribution Rev
	Documentation Coordinator Sup Svcs 801 N 35 2225	FMAC (FAC Mtce & Adm Ctr) Net Svcs
	Drafting Adm Svcs—	R205 918 N 26
	Engineering/Technical Drawing Maps &	Toll Free-Dial '1' & Then 393-2671
	Charts 801 N 35 2560	FA Personal Code Cards ASCG1 845 N 35 6056
	Or Call Toll Free-Dial '1' Then 393-2560	Facsimile Assistance Adm Svcs—
	DSOC (Dist Svcs Oprns Ctr) Distb Svcs—	3fl 722 N Brdy 2065
	Madison-Janesville-Eau Claire	Or Call Toll Free-Dial '1' & Then 393-2065
	R204 316 W Wash Mdsn 252-5490	Facsimile Transmissions 6319
	Appleton 5fl 221 W Wash Appl 730-5010	6467
	Metro North 7721 W Fond du Lac Av 358-6179	Facsimile Directories To Order Call Toll
	Metro South 3045 W Grange Av 393-1414	Free-Dial '1' & Then 393-2666
	E	Fairway Residential Customer Service
	EAS Assistance (Executive Administration	Center 405 Fairway Brkfld
	System) Data Sys	Toll Free-Dial '1' & Then 800 924-5678
	24 Hours Daily	Field Assistance Bureau-CPC/SS Net SS
 4644	FAB Inquiries
	EFAP (Employee And Family Assistance	2fl N17 W24300 Riverwood Dr Wksh 523-8800
	Program)—	Final Accounts/Pars/Wats—
	Corporate Coordinator 3357	Accts Info—
	Eau Claire 839-5830	Advance Payments 6329
	Fox Valley 735-3890	Collection Report 4822
	Madison 252-2309	Deposits 4896
	Milw 2148	Installation Billing 6476
	ESAC (Electronic Systems Assistance Ctr) Net	NSF 6535
	Svcs R103 918 N 26 3696	Financial Research Acctg Oprns 2819
	EMERGENCY 289-0000	Financial Studies/Analysis Acctg Oprns 3382
	Eau Claire Residential Customer Service	Financing & Bank Oprns Treas—
	Center 304 S Dewey Eau Claire—	Bank Loans & Coml Paper 3639
	Managers 839-5685	Operations 2889
	Toll Free-Dial '1' & Then 800 924-1000	Special Studies 2312

General Services Section

FLOOR—INTERNAL

Floor Space Reports Sup Svcs—	
31N17 W24300 Riverwood Dr Wksh	523-8572
Clk	523-8573
Foreign Exchange Cross Boundary Service	
Toll Free-Dial '1' & Then	
Rm 501 316 W Wash Mdsn	393-2403
Forms Adm Svcs—	
Administration Control & Procurement Of	
Company Forms 801 N 35	2713
Or Call Toll Free-Dial '1' & Then	393-3676
Forms Clerk Adm Svcs 801 N 35	6731
434 Orders Sup Svcs	2432
Frame Rooms-Service Orders Net Svcs—	
Aetna Ct Bldg	
257-518	
778	771-0024
Brdy Bldg	
224-271-272-273-276-277-278-289-347-765	273-0024
E Capitol Dr Bldg	
229-332-961-962-963-964	964-0024
Cedarburg Bldg 243-375-377	377-0024
Cleveland Av Bldg	
321-327-541-543-545-546	543-0024
County Line Rd Bldg 242-354-355	354-0024
Fairway Dr Bldg 782-784-785-786	785-0024
Fond du Lac Av Bldg	
353-358-461-462-463-464-466-527	466-0024
Forest Home Av Bldg 425-529	425-0024
Good Hope Rd Bldg 228-241-351-352	352-0024
Hartland 367-538-966	367-0024
Muskego Bldg 422-679	422-0024
Oconomowoc Bldg 567-569	4318
Park Place Bldg 359 11301 W Calumet Milw ---	359-0022
Pilgrim Rd Bldg 251-255	251-0024
252-781-783	781-0024
Port Washington Bldg 284	
301 W Grand Av Pt Wash	4101
Sussex 246	246-0022
Wis Av Bldg 542-544-547-549	549-7666
E Wis Av Bldg 691	691-0024
N 4th St Bldg 263-264-265-372-374-562	265-0024
N 26th St Bldg	
342-344-395-399-456-678-799-931-933	344-0024
S 26th St Bldg	
383-384-643-645-647-671-672	672-0024
N 41st St Bldg	
442-444-445-447-638-871-873	449-0008
Furniture & Ofc Eqpt Sup Svcs—	
Budget-261C Capital	
31N17 W24300 Riverwood Dr Wksh	523-8567
New Purchases	523-8568
Used-Storage & Refurbishing	
31N17 W24300 Riverwood Dr Wksh	523-8569
Clk	523-8571
Furniture Moves & Transfers	1 393-Furn
Moves-Internal R150 722 NBrdy	2100

G

Garage	See Automotive Operations
General Bulletins Adm Svcs 311 722 NBrdy	4267
Government Relations Pub Affrs—	
Federal/State Madison	252-2621
Local	2545
Graphics Art & Composition Adm Svcs	
801 N 35	2608
Or Call Toll Free-Dial '1' & Then	393-2608

SERVICES

6

Green Bay Residential Customer Service	
Center 205 S Jefferson Grn By—	
Managers	433-4041
Toll Free-Dial '1' & Then	800 924-5678
Green Sheet Corp Com	2372
Group Life Benfts R1000 722 NBrdy	3571
Guard Sup Svcs—	
722 NBrdy	2328
804 N Milw	289-1811
N15 W24250 Riverwood Dr Wksh	7118
N17 W24300 Riverwood Dr Wksh	523-5016
918 N 26	3291
845 N 35	6169
316 W Washington—	
Mifflin	252-2551
W Washington	252-2406
221 W Wash Appl	735-3328

H

Handicapped Services	See Special Needs Center
Health Assessment Coordinator	678-4590
Health Insurance Plans Benfts	
R1000 722 NBrdy	3065
Health Services—	
Rm 1005 722 NBrdy	2092
Information & Appointments	2092
EFAP	3357
Disability	2093
Wellness	4817
Heart Sole	4650
Help Desk	4644
Or	
Toll Free Dial '1' & Then	393-2744
Help Desk (Packet Switching)	
See PNCC (Packet Network Control Ctr)	
Hopkins Residential Customer Service	
Center 7721 W Fond Du Lac Av—	
Managers	535-5292
Toll Free-Dial '1' & Then	800 924-1000
House Services Sup Svcs—	
Toll Free-Dial '1' & Then	393-2622
Or Call	797-1179

I

ID Cards Security 1511 722 NBrdy	3408
IIN Marketing	678-4044
ISSC Net Svcs	
Interfunctional Special Services	
Coordination	
R406 918 N26	3911
Idea Connection Process Personnel	
ASC 12 722 NBrdy	4332
Incentive Co-Ordinator-Residence	
411 804 N Milw	4676
Independent Company Relations	
See Exchange Carrier Relations	
Independent Co Settl Reviews-Comptroller	3554
Information Bulletin	See Trend Bulletin
Information Services Data Systems—	
845 N 35—	
Marketing Information Systems—	
CRIS Reports Mktg IDP	6229
Number Services Support (Directory Support)	4333
Service Order Interfaces	6210
Intercept Records	See DBAC/dBAS
Interior Design Sup Svcs	523-8566
Internal Auditing Audit 1511 722 NBrdy	6082

General Services Section

7	SERVICES	INTERNAL F—M
Internal Financial Reports Acctg Oprns	2076	Continued From Last Column
J		
Job Function Code Administration		Loop Assignment Ctrs—
ASC-1B 845 N 35 Milw	6043	Green Bay Areas—
Junior Achievement Corp Comm 13fl 722 N Brdy	6105	(414)—
		336-337-388-432-433-434-435-437-
		465-468-469-487-494-497-498-499-
		536-682-683-684-743-834-846
		(715)—
		582-732-735
		735-3930
		RCC (Recent Change Ctr)
		No Facs
		433-4016
		Oshkosh-Fond du Lac Area—
		(414)—
		231-232-235-236-294-295-324-361-
		386-387-424-426-452-457-458-459-
		467-485
		623-685-688-689-885-887-921-922-
		923-929
		735-3930
		RCC (Recent Change Ctr)
		No Facs
		929-1070
		Milwaukee Metro—
		Skyline Area-7721 W Fond du Lac Av—
		112-113-114-116-120-221-222-223-
		224-225-226-227-229-256-257-258-
		259-263-264-265-271-272-273-274-
		276
		277-278-287-289-291-332-342-344-
		345-347-372-374-442-444-445-447-
		449-453-456-471-475-476
		562-575-678-765-771-774-778-799-
		844-871-873-874-931-933-935-936-
		937-961-962-963-964-976
		Toll Free-Dial '1' & Then
		393-2284
		Moraine Area-7721 W Fond du Lac Av—
		228-241-242-243-246-251-252-253-
		255-284-334-338-351-352-353-354-
		355-357-358-359-367-375-377
		438-461-462-463-464-466-527-535-
		538-628-673-675-677-781-783-966
		Toll Free-Dial '1' & Then
		393-2284
		No Facs
		535-5323
		RCC (Recent Change Ctr)—
		7721 W Fond du Lac Av
		535-5305
		Fax
		535-5334
M		
		MAC/LAC Distb Svcs—
		4fl 221 W Wash Appleton—
		(414)—
		566-721-722-725-727-729-730-731-
		734-735-738-739
		735-3930
		(715)—
		258-341-344-345-346-582-732-735
	
		735-3930
		Asst Mgr
		735-3065
		R304 316 W Wash Av Madison—
		(414)—
		245-248-249-261-262-279-472-473-
		563-567-569-674-728-763
		(608)—
		221-222-231-233-238-241-244-246-
		249-251-252-255-256-257-258-262-
		263-264-266-267-271-273
		274-275-356-362-364-365-522-752-
		754-756-757-795-873-882-883
		Continued On Next Page
Leaves Of Absence Benfts R1000 722 N Brdy	4471	
Legal Dept R1608 722 N Brdy	2129	
Legislation Pub Affrs—		
Federal/State Madison	252-2621	
Local	2545	
Liability Insurance Secy	2331	
Lobby Entrance Sup Svcs—		
722 N Brdy	2328	
918 N 26	3291	
Parking Lot 845 N 35	6169	
East 845 N 35	6633	
221 W Wash Appl	735-3328	
Loop Assignment Ctrs Distb Svcs—		
Capital-316 W Wash Av Mdsn—		
LAC—		
(414)—		
245-248-279-472-473-563-674-728-		
763		
(608) 882-883		
.....		
	252-2816	
ESS	252-2707	
DPAC	252-2804	
MAC/LAC—		
(414)—		
261-262-567-569		
(608)—		
221-222-231-233-238-241-244-246-		
249-251-252-255-256-257		
258-262-263-264-266-267-271-273-		
274-275-291-356-362-364-365-		
522-752-754-755-756-795-873-		
936		
(815)—		
389		
.....		
	252-2033	
Or Toll Free-Dial '1' & Then	800 472-6414	
S O Receipt-Batch	252-2041	
Fox Valley-221 W Wash Appl—		
Appleton Area—		
(414)—		
532-566-582-721-722-725-727-729-		
731-733-734-735-738-739-757-		
766-779-788-982		
(715) 258-341-344-345-346		
.....		
	735-3930	
RCC (Recent Change Ctr)	735-3272	
No Facs	735-3063	
(715)—		
232-235-239-273-373-386-392-394-		
398-399-425-532-549-561-644-		
682-723-726-742		
746-749-779-832-834-835-836-839-		
893		
.....		
	839-5772	
Or Toll Free-Dial '1' & Then	800 472-6669	
Continued On Next Column		

General Services Section

M A—MEDICAL

Continued From Last Page	
MAC/LAC—	
R304 316 W Wash Av Madison—	
(715)—	
232-235-239-273-373-386-392-394-	
398-399-425-532-549-561-644-682-	
723-742-746-749	
779-832-833-834-835-836-839-893	
(815)—	
389	
Field Asst	252-2033
So Beloit Ill Field Asst	362-3705
Or Call Toll Free-Dial '1' & Then	393-2280
S O Clk	252-2041
Supv	252-2040
Metro South DSOC-3045 W Grange Av—	
Lakeshore—	
Mitchell-281-282-382-383-384-421-	
423-456-481-482-483-643-645-647-	
649-671-672-744-747-761-764-768-	
769	
789-799 Call	761-4001
Racine-551-552-553-554-631-633-634-	
636-637-639-652-654-656-657-658-	
681-694-697-835-859-878	
886 Toll Free-Dial '1' & Then	393-2286
Waukesha-254-321-327-422-425-521-	
529-541-542-543-544-545-546-547-	
548-549-662-679-691-782-784-785-	
786	
792-796-797 Call	761-4001
CPC/MAC Dist Svcs—	
N17 W24300 Riverwood Dr Wksh	
Toll Free-Dial '1' & Then	393-3124
Or Call	523-8735
Milwaukee Metro—	
Skyline Area-7721 W Fond du Lac Av—	
112-113-114-116-120-221-222-223-	
224-225-226-227-229-256-257-258-	
259-263-264-265-271-272-273-274-	
276	
277-278-287-289-291-332-342-344-	
345-347-372-374-442-444-445-447-	
449-453-456-471-475-476	
562-575-678-765-771-774-778-799-	
844-871-873-874-931-933-935-936-	
937-961-962-963-964-976	
Toll Free-Dial '1' & Then	393-2284
Moraine Area-7721 W Fond du Lac Av—	
228-241-242-243-246-251-252-253-	
255-284-334-338-351-352-353-354-	
355-357-358-359-367-375-377	
438-461-462-463-464-466-527-535-	
538-628-673-675-677-781-783-966	
Toll Free-Dial '1' & Then	393-2284
No Facs	535-5323
Field Asst	466-9928
Mgr	535-5042
RCC (Recent Change Center) Metro	
South—	
3045 West Grange Av Milw	761-0987
Fax	761-4896
MAC Help Line Distb Svcs—	
8fl 722 N Brdy	3940
Out Of Hours/Bellboy	935-6892
MITRE Field Support Group Acctg Oprns	
R261 845 N 35	0178
MMIS Mktg 2fl 804 N Milw	2519

SERVICES

8

MMOC	
See TNSC (Telecommunications Network Svc Ctr)	
Madison Business Sales & Service	
Ctr Sis Oprns 316 W Wash Mdsn	252-2077
Madison Residential Customer Service	
Center Rm 504 316 W Wash Mdsn—	
Managers	252-2110
Toll Free-Dial '1' & Then	800 924-1000
Mail Rooms Sup Svcs—	
Appleton 221 W Wash Av Appl	735-3310
Supv Clk	730-5127
Madison 316 W Wash Av Mdsn	252-2390
Milwaukee—	
R110 740 N Brdy	2733
918 N 26	6085
R139 845 N 35	6289
Oshkosh 315 Algoma Blvd Osh	735-3092
Waukesha N17 W24300 Riverwood Dr	523-8925
Mailing Label Information (RC And/Or	
Unique Lists) Sup Svcs 801 N 35	
	2414
Maintenance Engineering-Central Otc Eqpt	
Net Svcs—	
Change Notices/Circuit Modifications	1048
Switching Eqpt & Power	3507
Major Action Corp Comm 13fl 722 N Brdy	6105
Management Employment Pers	
R101 722 N Brdy	2146
Management Job Evaluation Pers	
12fl 722 N Brdy	2010
Management Relocation Pers 12fl 722 N Brdy	2010
Management Requisition Line—	
	6828
Or	
Toll Free-Dial '1' & Then	800 924-5000
Management Requisitions (EXTERNAL)	
5fl 722 N Brdy	4963
Management Requisitions (INTERNAL)	
5fl 722 N Broadway	0869
Marketing Budgets Mktg 2fl 804 N Milw	2750
Marketing Education Ctr Mktg—	
3rd Fl 17950 W Corporate Dr Brkfld	792-8226
3rd Fl 17950 W Corporate Dr Brkfld—	
Computer Room	792-8227
Library	792-8228
Marketing Locator Ctr Sis & Svc	
3fl East 17950 W Corporate Dr Brkfld	792-8094
Marketing Results Mktg 2fl 804 N Milw	2519
Marketing Support Data Sys—	
CRIS & MKIS Reports	789-3900
Microcomputer Support Helpline	0341
Marketing Technical Support	678-2489
Matching Gifts Corp.Com—	
Forms 13fl 722 N Brdy	0065
Information 13fl 722 N Brdy	2310
Materials Management ASI—	
Cable Distribution/Transportation	
313 S Curtis Rd	3529
Cable Management 313 S Curtis Rd	3512
Distribution—	
Milw—	
Day 313 S Curtis Rd	4458
Night 313 S Curtis Rd	2870
Eau Claire 930 Malden Av Eau Cl	839-5577
Out Of Hours Contact CRASB	
313 S Curtis Rd	535-5068
Mechanization Help Line Data Sys	
6fl 740 N Brdy	6777
Medical Dept	
See Health Safety And Environmental Protection	
Medical Insurance Benfts R1000 722 N Brdy	3065

General Services Section

9	SERVICES	MESSAGE—P
Message Investigation Ctr Net Svcs 315 Algoma Blvd Osh	236-5510	Notary Public Secy— R1600 722 N Brdy
Message Processing & Ind Co Settlements Acctg Oprns—		3196 2129
ALM Cntrl Desk	5653	Number List Service Sls & Svc
AMA Cntrl Desk	4327	2349
AMA Receipt	4328	Number Services Support Information Services Off Tel Dir White Pages 911
Ind Co Settlement	6408	4333
Manual Messages	6565	O
Meeting Arrangements	2887	Occasional/Temporary Services Employees
Mgmt Selection Sys	See Empl Profile Data Base	311 N17 W24300 Riverwood Dr Wksh
Micro Computers Data Sys N15 W24250 Riverwood Dr Wksh	5995	523-8506 393-1942
Microfilm-Fiche Adm Svcs— 801 N 35	3216	Or Call Toll Free-Dial '1' & Then
Or Call Toll Free-Dial '1' & Then	393-3216	Occupational Health Care/Worker's Comp
Micrographics Ctr Adm Svcs— 801 N 35	3216	678-4656
Com Svcs	3216	Office Equipment ASI 111 N17 W24300 Riverwood Dr Wksh
Software Support	3597	523-7941
Source Documents & Security	3216	Office Supplies & Stationery ASI 111 N17 W24300 Riverwood Dr Wksh
Microwave Radio Net S S R205 918 N 26	393-2671	523-7910
Mileage Measurement Sls & Svc R602 316 W Wash Av Mdsn	252-2208	Official Communications Services Info Svcs— N15 W24250 Riverwood Dr Wksh
Milw Business Sales & Service Ctr 1211 633 W Wis		Voice—
Toll Free-Dial '1' & Then	800 924-2000	Business Office
Milw Residence Marketing Center Mktg 405 Fairway Dr Brkfld		4919
Minicomputer		Or Toll Free-Dial '1' & Then
See TNSC (Telecommunications Network Svc Ctr)		393-2666
Minority & Women's Business Enterprise Program ASI 111 N17 W24300 Riverwood Dr Wksh	523-7914	Data—
Mobile Radio Mtce Channels (Official Svc Only) Net Svcs—		Network
Appleton 2601 W 2 Appl	735-3807	5995
Eau Claire 930 Malden Av Eau Cl	839-5582	Workstations
Milwaukee-Waukesha-West Bend-Lake Geneva RADCOM (Contract)	771-6900	5995
Motor Pool Reservations		Ordertyping-Business Sls & Svcs— Milw 1211 633 W Wis Av
See Automotive Operations		0226
Motor Vehicles		Mdsn R404 316 W Wash Av
N		252-2697
NCC Data Sys—		Ordertyping-Residence Sls & Svc— Appl 311 221 W Wash Av
Data Network Operations-Pewaukee N15 W24250 Riverwood Dr Wksh	7639	735-3396 839-5628
Data Network Operations-Howell 7737 S Howell Av	0507	Green Bay
Help Desk	4644	See Appleton
NDCC/EADAS Net Svcs R103 918 N 26	3332	Hopkins 7721 W Fond du Lac Av
Network Control Ctr (Corp Data Svcs) Data Sys	4644	535-5283
Network Management Center Net Svcs R314 918 N 26	3211	Mdsn Rm503 316 W Wash Av
Network Operations Planning Ctr (NOPC) Data Sys R430 740 N Brdy	6123	252-2025
Network Service Center Net Svcs R314 918 N 26	3211	Summit 2745 S 13
New Product Development Marketing	678-2380	5855
New Products Support Data Sys N15 W24250 Bell Dr Wksh	0612	Orderwriting-Business Sls Oprns— Milw 1211 633 W Wis Av
News Line Corp Com—		3993
Coordinator	2372	Mdsn R602 316 W Wash Av
Recording	3511	252-2077
Or Toll Free-Dial '1' & Then	393-3511	OSPE-Design Centers—
		Capital—
		Eau Claire
		839-5800
		Janesville
		755-5600
		Madison
		252-2750
		Fox Valley—
		Appleton
		735-3240
		Fond du Lac
		929-1000
		Green Bay
		433-4100
		Metro North—
		Moraline
		3567
		Skyline
		0333
		Metro South—
		S 13 St
		3477
		Racine
		636-0551
		Waukesha
		4092
		P
		PICS—
		Actuation—
		Eau Claire/Madison
		523-8719
		Fox Valley
		523-8720
		Milwaukee/Racine
		523-8720
		Non-Emergency After 4:00 PM
		523-8945
		Emergency Contacts (Out-Of-Service Conditions)—
		Evenings Weekends & Holidays—
		Surveillance Center
		Toll Free-Dial '1' & Then
		393-2447
		PSC Of Wis Tariff Distribution Rev
		2601

General Services Section

PACKETING—R	SERVICES	10
Packeting Switching See PNCC (Packet Network Control Ctr)	Property & Cost Operations Acctg Oprns—	
Partnership Schools 13fl 722 N Brdy	Corp Acctg Process Cntrl	6662
Pay & Time Acctg Meth ASC G1 845 N 35	Cost Acctg	6502
Paycheck Distribution Treas	Estimates & KCJO's	6367
Payment Centers—	Key Entry	6662
(Capitol Court) 5500 W Capitol Dr	Property Records	6583
801 N 35	Vouchers	6601
316 W Wash Mdsn	W-1 (Invoice Unit)	6583
252-2146	Public Affairs (Government Relations)—	
Payroll Allotments—	Federal/State Madison	252-2621
R267 845 N 35—	Local	2545
Credit Union	Public Communications—	
2951	Intra-Co 2420 Kossow Rd Wksh	549-7208
Direct Deposit	Or Call Toll Free-Dial '1' & Then	800 924-2772
Employee Change Report (ECR)	Public Telephone Installation & Maintenance Ctr	549-7220
Group Life Ins	Public Eye—	
Management Savings Plan	Intra-Co 2420 Kossow Rd Wksh	549-7220
Non-Management Savings Plan	Or Call Toll Free-Dial '1' & Then	393-2600
Savings Bonds	Public Relations — See Corporate Communications	
2951	Public Suggestions Analysis	
Tax Cards	Coordinator Corp Affrs 12fl 722 N Brdy	4138
2355	Publications (WB)—One-Time Orders Sup Svcs	
Payroll Preparation—	801 N 35	2432
R261 845 N 35—	Pulse Measurement—	
Check Processing	Large & Major Bus	4136
Or	Res & Gen Bus/X-Carrier	2701
Or	Purchasing ASI—	
6573	General Information	523-7929
Or	Order Processing	523-7921
Or		
6177	Q	
Or	Quality Assurance ASI	
6341	1fl N17 W24300 Riverwood Dr Wksh	523-7902
Or	Quality Of Work Life Pers—	
6249	QWL Coordinator 12fl 722 N Brdy Milw	3047
Or	Toll Free-Dial '1' & Then	393-3047
6178	QWL Facilitator 12fl 722 N Brdy Milw	3689
Report Distribution	Toll Free-Dial '1' & Then	393-3689
6639	QWL Facilitator 205 S Jefferson Grm By	433-4195
Pension Info	Toll Free-Dial '1' & Then	393-2195
See Benefit Ofc	QWL Facilitator 316 W Wash Av Mdsn	608 252-1281
Personal Computers Data Sys—	Toll Free-Dial '1' & Then	393-2265
Acquisition N15 W24250 Riverwood Dr Wksh	QWL Facilitator 12fl 722 N Brdy	0639
5995	Toll Free-Dial '1' & Then	393-2775
Support N15 W24250 Riverwood Dr Wksh	QUEST Award Administrator Personnl	
5995	12fl 722 N Brdy	4138
Software Acquisition	Quick Copy Adm Svcs—	
N15 W24250 Riverwood Dr Wksh	Mezzanine 740 N Brdy	4786
5995	N17 W24300 Riverwood Dr	523-1771
Training 2fl 733 N Van Buren	R135 845 N 35	4288
4636		
Photo Service Adm Svcs 801 N 35	R	
3216	RC Administration—	
Pioneer Ofc R401 722 N Brdy	ASC G1 845 N 35	6056
2518	RCC (Recent Change Ctr) Distb Svcs—	
Placement Bureau—	4fl 221 W Wash Appleton—	
Pers 12fl 722 N Brdy	(414) Green Bay Area—	
4338	336-337-432-433-434-435-437-465-	
Associate Information Resource-Line—	468-469-494-497-498-499-682-683-	
(AIR-LINE) Milwaukee	684-834-846	
2645	(414) Oshkosh-Fond du Lac Area—	
Toll Free-Dial '1' & Then	231-233-235-236-294-295-424-426-	
800 924-3364	452-457-458-459-685-688-921-922-	
Question Line—	923-929	
Milwaukee	735-3930	
2648	Asst Mgr	735-3270
Toll Free-Dial '1' & Then		
800 924-3376	Continued On Next Page	
PNCC (Packet Network Control Ctr) Net		
Svcs—		
R116 918 N 26		
4420		
Toll Free-Dial '1' & Then		
393-1234		
Pole Location Record Acctg Oprns		
R280b 845 N 35		
6379		
Political Action Committee (PAC) Pub Affrs		
R310 740 N Brdy		
2545		
Practices-Catalogs-Handbooks Sup Svcs		
801 N 35		
2432		
Press Update/Clips 13fl 722 N Brdy		
3635		
Printing Services Adm Svcs—		
801 N 35—		
In-House Prtg		
2387		
Or Call Toll Free-Dial '1' & Then		
393-2679		
Purchasing ASI		
1513		
Product Evaluation ASI		
1fl N17 W24300 Riverwood Dr Wksh		
523-7906		
Production Control-Data Processing		
Jobs Data Sys R221 845 N 35		
4666		
Program Bookings Corp Com 13fl 722 N Brdy		
2013		
Property & Cost Methods Acctg Oprns—		
Accounts Payable Methods		
6769		
BSDOPAC Methods		
5561		
Property Records Methods		
5890		

General Services Section

11	SERVICES	R C—RIGHT
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RCC (Recent Change Ctr)—		RCC (Recent Change Ctr)—
4fl 221 W Wash Appleton—		Metro South District—
(414) Oshkosh-Fond du Lac Area—		3045 West Grange Av Milw—
RCC	735-3272	(414)—
(715)—		254-281-282-321-327-382-383-384-
232-235-239-273-373-386-392-394-		421-422-423-425-481-482-483-
398-399-425-532-549-561-644-682-		521-529-541
723-726-742-746-749-779		543-544-545-546-547-548-549-551-
832-834-835-836-839-893		552-553-554-631-632-636-637-
Eau Claire	839-5772	639-643-645-647-649-652-654-
Or Call Toll Free-Dial '1' & Then	800 472-6669	656-657-658
R304 316 W Wash Av Madison—		662-671-672-679-681-691-694-697-
(414) 567-569		744-747-761-762-764-768-769-
(608) 241-244-249-262-263-264-266-		782-784-785-786-789-792-796
267		859-878-886
.....	252-2114	761-0987
Or Call Toll Free-Dial '1' & Then	393-2114	761-4896
(414) 248		Radio Mtce Net Svcs R205 918N26
(608) 271-273-274-362-364-365		Radio Surveillance Net Svcs R205 918N26
(815) 389		READY TECH 2400 Kossow Rd Wksh
.....	252-2145	797-1244
So Beloit III Field Asst	362-2092	Real Estate Taxes Secy R1600 722NBrdy
Or Call Toll Free-Dial '1' & Then	393-2115	Records Ctrs Adm Svcs—
(414) 245-279		Milw 3281N41
(608) 882-883		Out-Of-Hrs Emergency Call
(715) 239-392-394-532-644-682-723-		Or Call Toll Free-Dial '1' & Then
726		393-2271
.....	252-4650	Records Mgmt Adm Svcs
Or Call Toll Free-Dial '1' & Then	393-2118	Corporate Records/Forms
(608) 231-233-238-873		Retention/Destruction-CFI
(715) 386-549-749		801N35
.....	252-2139	2713
Or Call Toll Free-Dial '1' & Then	393-2117	Refunds-Commissions Treas
(608)—		6419
221-222-251-252-255-256-257-752-		Registration-Information Center Classes
754-755-756		2ND Fl 733N Van Buren
.....	252-2802	6838
Or Call Toll Free-Dial '1' & Then	393-2116	Regulatory Appeals Pub R 13fl 722NBrdy
Information Questions	252-2707	2036
Supv	252-2660	Remote Computer Svcs Coord Data Sys
Metro North Service Area—		5750
7721 W Fond du Lac Av Milw—		Repair Svcs
(414) Skyline Area—		See Centralized Repair Svc & Attendant Bureau
112-113-114-116-120-221-222-223-		(CRSAB)
224-225-226-227-229-256-257-		Reservations-Travel Agcy—
258-259-263-264-265-271-272		Airline, Hotel, Auto
273-274-276-277-278-287-289-291-		Call Collect
332-342-344-345-347-372-374-		453-7381
442-444-445-447-449-453-456-		Or Call Toll Free-Dial '1' & Then
471-475-476		800 828-2883
562-575-678-765-771-774-778-799-		24 Hour Emergency Service Toll Free-Dial
844-871-873-874-931-933-935-		'1' & Then
936-937-961-962-963-964-976		800 847-4282
(414) Moraine Service Area—		Residence Incentive Co-Ordinator
228-241-242-243-246-251-252-255-		4fl 804N Milw
284-334-338-351-352-353-354-		4676
355-357-358-359-367-375-377		Residence Training Mktg—
438-461-462-463-464-466-527-535-		Course Development 6fl 740NBrdy
538-628-673-675-677-781-783-		3910
966		Training Ctr 2400 Kossow Rd Wksh
.....	678-4151	797-1397
Manager	535-5305	Residential Customer Service Centers—
RCC	393-2443	Residence—
Toll Free-Dial '1' & Then	535-5306	Appl RCSC 221 W Wash Apple
Order Coordination	535-5334	735-3344
Fax		Eau Claire RCSC 304 S Dewey Eau Claire
		839-5685
Continued On Next Column		Fairway RCSC 405 Fairway Dr Brkfld
		797-1454
		Green Bay RCSC 205 S Jefferson Green
		Bay
		433-4041
		Hopkins RCSC 7721 W Fond du Lac Av
		Milw
		535-5292
		Madison RCSC R504 316 W Wash Mdsn
		252-2110
		Summit RCSC 2745 S13 Milw
		7826
		Business—
		Madison R404 316 W Wash Mdsn
		252-2077
		Milw 12fl 633 W Wis Av
		3993
		Results Secy 15fl 722NBrdy
		2331
		Right Of Way Matters Distb Svcs 7fl 722NBrdy
		2464

General Services Section

S—SURVEILLANCE

S	
SCC (Switching Control Centers) Net Svcs—	
Eau Claire 304 S Dewey Eau Cl	839-5504
Fox Valley—	
East 611 221 W Wash Appl	735-3471
West 611 221 W Wash Appl	735-3895
Madison R804 316 W Wash Av Mdsn	252-2760
Milw Metro No R313 918 N 26	3980
Milw Metro So R32 918 N 26	6002
Racine Metro So 411 7th Rac	636-0620
Out Of Hours All Locations	3980
SORD Helpline Data Sys 611 740 N Brdy	6777
SSARB Net Svcs—	
Pwr Ind Svc Spec Svcs	
Appl	
Toll Free-Dial '1' & Then	800 852-8461
Mdsn	
Toll Free-Dial '1' & Then	800 362-3969
Milw	678-0886
SSC Net Svcs—	
R310 918 N 26 Milw—	
Mtce	0602
Prov-Access	6217
Prov-Traditional	0697
Dispatch	344-0034
Admin	0332
411 221 W Wash Appl—	
Mtce Toll Free-Dial '1' & Then	393-3314
Prov Toll Free-Dial '1' & Then	393-3315
R401 316 W Wash Mdsn—	
Mtce	252-2601
Prov-Northwest LATA	252-6910
Prov-Southwest LATA	252-2631
SUMIT	
Safety & Environmental Protection	
Lwr Level N17 W24300 Riverwood Dr Wksh	523-1774
Sale Of Wire/Quick Quotes Distb Svcs	
7721 W Fond du Lac Av	778-3130
Savings Plans-Call Amer Transtech	
Toll Free-Dial '1' & Then	800 248-2411
Schlage Cards Security 1511 722 N Brdy	3415
Scholar Program Corp Comm 1311 722 N Brdy	6105
Scrap Disposition ASI	
111 N17 W24300 Riverwood Dr Wksh	523-7911
SEC Report Preparation Acctg Oprns	2585
Security Offices—	
24 Hour Answering Service	
Daily Weekends & Holidays	
Milwaukee 1511 722 N Brdy	3415
Self Study Office	
See Training Center 2400 Kossow Rd Wksh	
Service Club Memberships Corp Com	
1311 722 N Brdy	2594
Service Codes & Rates Distribution Rev	4750
Service Credit Benfts R1000 722 N Brdy	4471
Service Manager Adm Svcs—	
R150 722 N Brdy	2885
Airline Ticket Distribution	2885
Audio Visual	2936
Conference Planning	2887
Motor Pool Reservations Toll Free-Dial '1' & Then	393-1766
Moves-Internal	2100
Supv Clerk	2083
Travel Agency	453-7381
Travel Complaints	3613
Or Call Toll Free-Dial '1' & Then	393-2885

SERVICES

12

Service Order Interfaces Bus/Res/IDP Data	
Sys—	
R22 845 N 35—	
ABCS-Credit Cards (CCSS)	6048
ABCS Data Management	6048
ARSB-Host	4931
Bad Debt	4931
Brookfield Cable (Bus Sys)	6048
CISR	6048
COGS	6048
CONVRTBO	4931
CRAS	4931
CRIS Sale	4931
DENS	6048
Equal Access	4931
LEIS	6048
MAC/SORD	4931
MAC In House	6446
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MMS	6446
Netman	6048
Oshkosh Toll Error Corr	4931
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SOI/APL	6048
SORCES	6048
SORD-TIRKS	6048
Street Address (MAC)	4931
Telstore	4931
TPRS	6048
Or Call Systems Analyst	6210
Service Recognition Prgm Benfts	
R1000 722 N Brdy	3065
Shuttle Bus Sup Svcs—	
722 N Brdy	2733
845 N 35	6289
Sickness Benefits Benfts R1000 722 N Brdy	3062
Sickness Disability Coordinator	678-3110
SORD Help Line Data Sys 611 740 N Brdy	6777
Space Planning	
311 N17 W24300 Riverwood Dr Wksh	523-8562
Speakers Corp Com 1311 722 N Brdy	2013
Special Needs Center (SNC) Sis Oprns	
R105 740 N Brdy	2130
Sponsorships Corp Comm 1311 722 N Brdy	2310
Stationery Supply Service ASI	
111 N17 W24300 Riverwood Dr Wksh	523-7910
Statistical Studies & Sampling Acctg Oprns	
Status Of Svc/Eqpt Requests-Corp Data	2819
Svcs Data Sys N15 W24250 Bell Dr Wksh	5995
Stock Inquiries Treas—	
Stock Transfer Assistance R5 845 N 35	2631
Individual Acct Info	
Toll Free-Dial '1' & Then	800 233-1342
Street Address Directory Rental Sis & Svc	
111 225 S Exec Dr Brkfld	797-1044
Student Toll R501 316 W Wash Av Mdsn	
Toll Free-Dial '1' & Then	800 924-6988
Suggestions-Idea Connection	
Process Personnel ASC 12 722 N Brdy	4332
Summit Residential Customer Service	
Center 2745 S 13—	
Managers	7826
Toll Free-Dial '1' & Then	800 924-1000
Supervisor's Reference Guide Pers	
1211 722 N Brdy	2049
Support Ctr Help-Line Data Sys R160 845 N 35	7832
Surveillance Center Dist Svcs	
7721 W Fond Du Lac Av Milw	393-2447

General Services Section

13	SERVICES	SWITCH—TRAVEL
Switch Rooms Net Svcs—		
N 2nd Av Bldg 377	6110	
N 4th St Bldg 263-264-265-372-374-562	6110	
N 26th St Bldg		
222-342-344-638-678-799-931-933-4A	6002	
S 26th St Bldg		
383-384-643-645-647-671-672	6002	
N 41st St Bldg		
442-444-445-447-638-871-873	6110	
Aetna Ct Bldg		
257-258-453-475-476-771-774-778	6002	
Brdy Bldg 224-271-272-273-276		
278-289-347-395-765-888	6110	
E Capitol Dr Bldg 332-961-962-963-964		
Cleveland Av Bldg 321-327-541-543-545	6002	
County Line Rd Bldg 242-354-355		
Fairway Dr Bldg 782-784-785-786-Tandem	6002	
Fond du Lac Av Bldg		
353-461-462-463-464-466	6110	
Forest Home Av Bldg 425-529		
Good Hope Rd Bldg 241-351-352	6110	
Hartford 673		
Hy E Bldg 367-538-966	6002	
Howell Av Bldg 762-764-768		
Jackson 677	6110	
Muskego Bldg 422-679		
Newburg 675	6110	
Oconomowoc 567-569		
Pewaukee 679	6002	
Pilgrim Rd Bldg 251-252-255-781-783		
Port Washington 284	6110	
Sussex 246		
West Bend 334-338	6110	
Wis Av Bldg 542-544-547-549		
E Wis Av Bldg 691	6002	
Switching Control Centers Net Svcs—		
Eau Claire 304 S Dewey Eau Cl	839-5504	
Fox Valley—		
East 6th 221 W Wash Appl	735-3471	
West 6th 221 W Wash Appl	735-3895	
Madison R804 316 W Wash Av Mdsn		
Milw Metro No R313 918 N26	3980	
Milw Metro So R32 918 N26	6002	
Racine Metro So 411 7th Rac	636-0620	
Out Of Hours All Locations	3980	
System Letters	See Bellcore Letters	
T		
T-Carrier Net S S R205 918 N26		
TASC Ctr Net S S 24 hrs R313 918 N26	2836	
TRM Coordinator Admin Svcs 801 N35		
TNDS/NDCC Net Svcs R120 918 N26	3332	
TNSC (Telecommunications Network Svc Ctr)		
Net 55—		
918 N26		
Computer Room	0151	
MMOC	0151	
Maintenance R101	6027	
Operations R114	0151	
Technical Support R101	6190	
Toll Free-Dial '1' & Then	393-1867	
Tariff Distribution Rev—		
FCC	2253	
PSC Of Wis	2601	
Tariff Information Rev—		
FCC	2810	
PSC Of Wis	2924	
Taxes Secy—		
Real Estate & Special Assessments		
R1600 722 N Brdy	3233	
Taxes Asst Comptroller—		
Federal Income	2342	
State Income	3056	
Sales Use & Excise	2169	
Other	2169	
Technical Information Coordination Admin Svcs—		
Bellcore, AT&T		
Telecommunications Vendors Documentation (Practices, Drawings, References, Etc)		
Bellcore And Bell System Letters		
Documentation 801 N 35	3466	
BCR/System Letters 801 N 35	2567	
Technical Support-Howell Data Ctr Data Sys		
7737 S Howell Av	0482	
Telco Credit Unions See Credit Unions		
Telecommunications Network Svc Ctr		
See TNSC (Telecommunications Network Svc Ctr)		
Telemarketing Ctr Sls Oprns		
1117950 W Corporate Dr Brkfld	792-8411	
Telephone Pioneers Ofc R401 722 N Brdy		
Telephone Service	2518	
See Official Communications Services		
Temporary/Occasional Services Employees		
3fl N17 W24300 Riverwood Dr Wksh	523-8506	
Or Call Toll Free-Dial '1' & Then	393-1942	
Terminal		
Acquisition/Movement/Replacement Data		
Sys N15 W24250 Bell Dr Wksh	5995	
Timeshare Coordinator Data Sys		
5fl 724 N Brdwy	2829	
TRKS Admin Net Svcs		
2 FIN17 W24300 Riverwood Dr Wksh	523-8830	
Tracing Records & File Adm Svcs 801 N 35	2219	
Training Hmn Rsrcls		
Training And Development Center—		
2400 Kossow Rd Wksh—		
Milw Area	797-1300	
Outside Milw Toll Free-Dial '1' & Then	393-1300	
Bellcore TEC Registration—		
Milw Area	797-1372	
Outside Milw Toll Free-Dial '1' & Then	393-1372	
Correspondence Courses—		
Milw Area	797-1317	
Outside Milw Toll Free-Dial '1' & Then	393-1317	
Meeting/Conference Facilities—		
Milw Area	797-1368	
Outside Milw Toll Free-Dial '1' & Then	393-1368	
Out-Of-Company Vendor Registration—		
Milw Area	797-1368	
Outside Milw Toll Free-Dial '1' & Then	393-1368	
Ready Tech		
Self Study Office—	797-1244	
Milw Area	797-1317	
Outside Milw	797-1317	
Toll Free-Dial '1' & Then	393-1317	
Training & Development Center		
Registration—		
Milw Area	797-1369	
Outside Milw Toll Free-Dial '1' & Then	393-1369	
Transition Management Net Svcs		
R403 918 N26	4987	
Travel Arrangements-Agcy—		
Airline, Hotel, Auto	453-7381	
Or Call Toll Free-Dial '1' & Then	800 828-2883	

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General Services Section

TRAVEL A—YELLOW

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Travel Arrangements-Agcy—	
24 Hour Emergency Service Toll Free-Dial '1' & Then	800 847-4282
Treasury-Cashier's Ofc—	
R 1600 722 N Brdy	2014
R 5 845 N 35	6203
Corp Credit Card	2014
Trend Corp Com—	
Ads 1311 722 N Brdy	2013
Distribution	2635
Editor 1311 722 N Brdy	2372
Trend Bulletin	2372
Tuition Aid Human Res 511 722 N Brdy	7860
Or 511 722 N Brdy	0869

U

Underground Cable Locating Distb Svcs	
7721 W Fond du Lac Av	535-5023
Unemployment Compensation Pers	
12 F 722 N Brdy	4964
United Way 111 N 17 W 24300 Riverwood Dr Wksh—	523-8931
Upgrade & Transfer Bureau Pers	
1211 722 N Brdy	4338

V

Vehicle Repairs	See Automotive Operations
Video Products Marketing	678-2380
Videotape Bookings Corp Com 1311 722 N Brdy	2293
Vision Care Claims—	
Preferred Svc-Milwaukee	226-6300
In-State Inquiries	
Toll Free-Dial '1' & Then	800 242-7160
Voice Messaging System (VMS) Nss—	
N15 W24250 Riverwood Dr Wksh—	7794
Outage Updates	0922

SERVICES

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Volunteer Speaker Panel Bookings Corp Com	
1311 722 N Brdy	2013
Vouchers Acctg Opms R273 845 N 35	6601

W

WATS Coordinator Net Svcs R315-D 918 N 26	3726
WATS Info Acctg Opms	6617
White Page Directory Operation	
111 225 S Exec Dr Brkfld	797-1686
Wire-Business Marketing	678-5765
Wire Sales 6812 Aetna Ct	1-393-2427
Word Processing Ctrs Adm Svcs—	
311 722 N Brdy	5991
Or Call Toll Free-Dial '1' & Then	393-1972
Transcription	5991
Internal Dictation	0181
External Dictation	0181
Or Call Toll Free-Dial '1' & Then	393-1800
Facsimile Ctr	2065
Or Call Toll Free-Dial '1' & Then	393-2065
Facsimile Transmissions	6319
	6467
311 17950 W Corporate Dr Brkfld	792-8086
2400 Kossow Rd Wksh	797-1308
N17 W24300 Riverwood Dr Wksh—	523-8928
1411 633 W Wis Av	4508
Workers Compensation Benfts	
R 1000 722 N Brdy	3062
Workers Compensation Nurse	
R 1005 722 N Brdy	4656

Y

Yellow Pages Directory Organization	
See Green Pages—Ameritech Publishing	

Emergency Operations

Emergency Operations

Headquarters Emergency Operating Center (HEOC) 414 678-3181
Room 340, 740 N. Broadway, Milwaukee

Facsimile: 414 678-2719
Alternate Facsimile: 414 678-6319
EAS Account: WI _ HEOC.MESSAGE
Emergency FX: 608 251-8446
Alternate Tel. Nos. 414 271-9922
414 272-0794
414 332-0210
414 383-1543
High Frequency Radio 414 678-0019

Emergency Relocation Center (ERC) 414 549-7045
Room 126, N15 W24250 Bell Dr., Waukesha

Facsimile: 414 549-7680
Emergency FX: 608-251-7380
High Frequency Radio 414-549-7179

Ameritech Services (Ameritech Bell Group)

Functional Point of Contact 708 605-2748
Home 708 810-0185
Pager 800 759-7243 PIN #70314

Alternate Functional Point of Contact 708 605-3708
Home 708 888-3733
Pager 800 759-7243 PIN #70313

FAX 708 605-2008

Emergency Operating Center

Room 2C, 1900 E. Golf Road, Floor 2,
Schaumburg, IL 60173

Numbers listed are non-hunting 708 619-5265
..... 708 619-5266
..... 708 619-5267
..... 708 619-5268
..... 708 619-5269
..... 708 619-5270
..... 708 619-5271
..... 708 619-5272
..... 708 619-5273
..... 708 619-5274

Bellcore-Natl. Emergency Control Center (NECC) 201 829-3862
-Natl. Emergency Relocation Center (NERC) 201 689-4275

Facsimile: 201 644-0532

Emergency Operations

Departmental Operations Centers (Full Time Coverage)

Distribution and Interoffice Facilities - Distribution Services

Department

24 Hour Surveillance,

Statewide Primary 1 393-2447
Alternate 414-535-5303

District Emergency Operating Centers (DEOC)

Milwaukee Metro-South 414-678-6262

3045 W. Grange Ave., 1st Floor - Lge. Conf. Rm.

Milwaukee Metro-North 414-535-1955

7721 W. Fond du Lac Av., 2nd Floor

Appleton 414-730-5000

221 W. Washington St.,

5th Floor, Conference Room 5A

Madison 608-252-2706

316 W. Washington Av., Lower Level-Conf. Rm.

Information Services - Network Switched Services Department

Data Network Operations 414-678-7639
or 1-393-2744

Data Network Help Desk 414-678-4644
or 1-393-2744

Operations Control Center 414-549-7626

Applications Control Center Operations 414-678-4666

Switching Facilities - Network Switched Services Department

Network Management Center (NMC) 414-678-3211

918 N. 26 St., Room 314, Milwaukee

Facsimile 414-678-6272

Switching Control Centers (SCC):

Out-of-hours, all locations 414-678-3980

Milwaukee Metro-South 414-678-6002

918 N. 26 St., Room 32

Milwaukee Metro-North 414-678-3980

918 N. 26 St., Room 313

Appleton, 221 W. Washington St., 6th Floor

Fox Valley 414-735-3471

Eau Claire, 304 S. Dewey 715-839-5504

Madison, 316 W. Washington Av., Room 804 608-252-2760

Racine Metro-South, 411 Seventh St. 414-636-0620

Facilities Maintenance & Administration

Center (FMAC) 1-393-2671

918 N. 26th St., Room 205, Milwaukee

Special Service Center (SSC)

Out Of Hours, All Locations 414-678-0290

918 N 26th St., Room 310, Milwaukee

Emergency Residence Numbers

EMERGENCY RESIDENCE NUMBERS

EXECUTIVE—

Allen B K President	228-6992
Durand J O VP-Finance & Secy	784-0118
Geroux J L VP-External Affairs	608 238-9955
Jackson L T VP-Sales & Service	567-4095
Kehm A R VP-Human Resources	421-4554
Valent L R VP & Genl Counsel	317 823-1158
Ware J J Sr Dir-Quality	784-6001

A

ACCOUNTING OPERATIONS—

Eichner R A Compt	241-3329
Davis P E Dist Mgr-Acctg	642-7217
Dickinson R J Dist Mgr-Acctg	421-9483

ADMINISTRATIVE SERVICES/SAFETY—

Nerby R Dist Mgr-Admin Svcs & Safety	608 833-7324
Ferguson P Mgr-Reprod	263-4943
Gill S M Stf Mgr-Admin Svcs	786-0658
Haas J A Mgr-Environment	327-4227
Hackbarth Larry Mgr-Micro/TIRM	544-5851
Hauser H Stf Mgr-Admin Svcs	962-5102
Kirk C Stf Aide	633-7770
Klamish D Mgr-Conf & Travel	466-7956
Knight C Mgr-Conf & Travel	444-3367
Krause D M Stf Mgr-Admin Svcs	321-8674
Kromraj B Mgr-Graphics	643-0342
Patterson N Stf Mgr-Admin Svcs	257-2583
Psychal P J Stf Mgr-Envtl Hth & Prot	421-9235
Sims R Mgr-Drafting & Distb	444-4342
Skozak G T Mgr-Environment	358-3855
Smith M Stf Supr-Admin Svcs	228-6860
Subel S Mgr-Rcd Ctr & Forms	761-3466
Vitrano R Stf Aide	774-0384

C

CORPORATE COMMUNICATIONS—

Butenhoff C M Director-Corp Comm	784-7657
Deptolla R J Stf Mgr-Corp Comm	242-7664
Hart R A Dist Stf Mgr-Corp Comm Plan	421-8819
Kapocius V F Dist Stf Mgr-Media Comm	421-4153
Moore J E Dist Stf Mgr-Emp Info	277-1196
Regan W F Dist Stf Mgr-Community Relations	375-3898

CORPORATE PLANNING—

Farrar L A Stf Mgr-Corp Ping	462-4616
Valaska George Director-Corp Ping	962-4335

D

DISTRIBUTION SERVICES—

Nelson T K Genl Mgr-Distb Svcs	782-2383
Anderson K S Area Mgr-Distb Svcs	337-9193
Borgen D W Area Mgr-Distb Svcs	608 754-6633
Brophy J R Oprns Mgr-Distb Svcs	788-6336
Butler F T Dist Mgr-Distb Svcs	442-0511
Byrnes J W Mgr-Distb Svcs	642-3290
Constable J R Area Mgr-Distb Svcs	784-1997
Croett L A Dist Mgr-OSP Eng	332-2526
Duxstad D E Mgr-Distb Svcs	544-1245
Emergreen K J Oprns Mgr-Distb Svcs	538-1133
Faulkner S C Oprns Mgr-Distb Svcs	608 837-1033
Frey M Area Mgr-Distb Svcs	782-7559
Goranson Betty Oprns Mgr-Distb Svcs	789-7561
Grael F P Div Mgr-Distb Svcs	608 273-6528

Continued On Next Column

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DISTRIBUTION SERVICES—

Groeschel T G Area Mgr-Distb Svcs	730-0354
Gunderson D S Dist Mgr-OSP Eng	782-1883
Gunkel P E Dist Mgr-Distb Svcs	542-3251
Hadden J R Area Mgr-Distb Svcs	367-2089
Haldiday J D Div Mgr-Distb Svcs	961-7799
Hansen T G Area Mgr-Distb Svcs	337-0770
Higgins M A Stf Mgr-Distb Svcs	569-9556
Holloway R Area Mgr-Distb Svcs	289-0307
Johnson D A Area Mgr-Distb Svcs	715 832-9693
Johnson R H Mgr-Distb Svcs	542-9090
Kaurzich T Area Mgr-Distb Svcs	859-3010
Keller E W Oprns Mgr-Distb Svcs	965-3260
Klumb D E Area Mgr-Distb Svcs	608 655-4497
Koehler L M Dist Mgr-OSP Eng	608 837-4450
Krebs B H Area Mgr-Distb Svcs	652-4776
Loomis M G Area Mgr-Distb Svcs	735-0485
Lund R A Area Mgr-Distb Svcs	284-5886
Mulkey E J Area Mgr-Distb Svcs	965-2266
Nelson Stanley V Area Mgr-Distb Svcs	608 846-2785
Netzler J J Mgr-Distb Svcs	761-2780
Oas P J Area Mgr-Distb Svcs	608 836-5317
Pinter J B Dist Mgr-Distb Svcs	715 878-4439
Plautz J M Area Mgr-Distb Svcs	544-1114
Polaszky J E Dist Mgr-Distb Svcs	567-7958
Randolph M J Oprns Mgr-Distb Svcs	332-6707
Riedl P T Dist Mgr-OSP Eng	734-0569
Schoeberle D D Area Mgr-Distb Svcs	608 837-4377
Schoenke T G Area Mgr-Distb Svcs	608 241-4427
Spilth R C Dist Mgr-Distb Svcs	734-3855
Tennessee A J Area Mgr-Distb Svcs	922-8750
Trachta W F Dist Mgr-Distb Svcs	786-6202
Wachholz D L Area Mgr-Distb Svcs	782-6690
Weston D J Div Mgr-Distb Svcs	786-2237
Wierzbic R Area Mgr-Distb Svcs	968-2548
Wyatt B J Oprns Mgr-Distb Svcs	931-8523

E

EXTERNAL AFFAIRS—

Smith S L Dir-Exch Carr Rel	242-6473
Morley K B Dir-Spec Assign	351-0627
Daugherty G A Stf Mgr-ECR	784-2134
Delaney G L Mgr-ICS Reviews	784-4291
Froysted J L Stf Mgr-ECR	529-0666
Gillinger J P Dist Mgr-ECR	782-0445
Holton J M Mgr-ICS Reviews	968-2065
Langnes R K Stf Supr-ECR	425-2933
Minkel E J Stf Supv-ECR	453-6090
Papera M E Mgr-ECR	639-1188
Perone M F Stf Mgr-ECR	242-4433
Smith G M Stf Mgr-ICS Reviews	282-7323
Spano J M Mgr-ECR	781-6953
Utsey E Stf Mgr-ECR	463-7258
Walker R A Director-Reg Affairs	786-2121
Wardman M J Stf Mgr-ECR	549-1187

H

HUMAN RESOURCES—

Kehm A R VP-Human Resources	421-4554
Baumgart W A Director-Trng	547-3198
Gillard R C Div Mgr-Human Resources	782-3077
Hoemke J B Dist Mgr-Human Resources	786-0597

Continued On Next Page

DMS-100 Automatic Dial Back

DIALBACK

Table Name : Automatic Dial Back

Data Forms : 2550A, B

Functional Description of Table DIALBACK

Table DIALBACK enhances the security of dial-up ports.

The current method of dialing into a DMS from a remote site consists of the following steps:

1. Place the call.
2. Receive an answer tone.
3. Send an originate tone.
4. Initiate login by entering <BREAK> login.
5. Supply the required user identification (userID) and password.

Once the userID and password are verified, the remote user can access the system. If the userID or password, or both, are incorrect, access is not allowed. The knowledge of a userID and password allow anybody to gain access to a DMS switch. Feature BC1043 (Automatic Dial Back) eliminates this possibility by providing a second layer of security.

After a remote user logs in, the system disconnects the modem. It then calls the user back and the remote user is required to log in again. Only after this second login is the user allowed access to the DMS. A remote knowing a dial-back ID and password is not able to access the system unless the call originates from the correct remote site.

Feature package NTX293AA (Enhanced Security Package II) is required for dial-back to function properly.

Datafill Sequence

There is no requirement to datafill other tables prior to table DIALBACK.

Table Size

Memory is dynamically allocated up to a maximum of 256 tuples.

Customer Data Schema *Reference Manual, volume 3 of 8* BCS36 and up

DMS-100 Automatic Dial Back

Field Descriptions

Field names, subfield names and valid data ranges for table DIALBACK are described below.

Field Descriptions for Table DIALBACK

Field or Subfield	Entry	Explanation
ID	alphanumeric (up to 16 characters)	<i>Dial-Back Identifier</i> Enter a dial-back identifier, the key to the table which is used to identify the Directory Number (DN) used in the dial-back.
DIRNUM	alphanumeric (up to 30 characters with no imbedded blanks)	<i>Directory Number</i> Enter a dial-back DN. In addition to the normal digits found in a telephone number, the following special characters are used to control the dialing of the number
	Char/Digit -----	Meaning -----
	0 to 9	A digit
	A	Ignored on Rixon modem; abort call if no dial tone on CTS212AH modem.
	D	Ignored on Rixon modem; automatic dial the rest of the number on the CTS212AH modem.
	N	# (valid only if selected dial type is tone)
	P	Pulse dial the rest of the number
	S	* (valid only if selected dial type is tone)
	T	Tone dial the rest of the number
	W	Wait a few seconds (modem dependent Rixon: 4 seconds)
	_	Ignored (for clarity only)

In some cases the command interpreter (CI) can disallow certain combinations of characters and digits in field DIRNUM. For example, the DN 9A5551212 (which specifies that the call is aborted if there is no dial tone after dialing 9) can be misinterpreted by the CI because it looks like a valid hexadecimal address. To solve this problem, an underscore (_) can be inserted preceding the number, for example, _9A5551212.

-continued-

DMS-100 Automatic Dial Back

Field or Subfield	Entry	Explanation
MISCINFO	alphanumeric (up to 36 characters with no imbedded blanks)	<i>Miscellaneous Information</i> Enter any miscellaneous information that the operating company wishes to associate with the tuple. For example, the physical location of the DN or address. Field MISCINFO cannot contain imbedded blanks, since the blank is used as a terminator in the table editor. Underscores (_) are suggested as a replacement.

-end-

Datafill Example

An example of datafill for table DIALBACK is shown below.

The example consists of a remote user with an ID of JOHNSMITH with a DN of 234-5678, which can be tone dialed but must access a dial pulse tie line first. The access number for the tie line is 88. After the tie line is connected, dial tone must be received before completing the dialing. The address of the DN is 1111 Happy Road, ANYTOWN.

Datafill Examples for Table DIALBACK

Example of a MAP display.

ID	DIRNUM	MISCINFO
JOHNSMITH	88AT234_5678	1111_HAPPY_ROAD_ANYTOWN

Table History

BCS36 A note requiring the use of cable CAO15 was added.

DMS-100 Automatic Dial Back

Supplementary Information

This section provides information on product descriptive information related to table DIALBACK.

Dial Back

The special dial-back login sequence is performed only if the correct hardware and firmware are available and the dial-back flag associated with the modem is set.

The first login is a special dial-back login which requires a dial-back ID and password. The second login is the normal login currently used to gain access to the system. The passwords associated with the dial-back IDs are assigned and maintained by the operating company. Passwords are required to have a minimum length.

After the dial-back ID and password are obtained, the modem is disconnected and the remote user is expected to hang up. A brief explanatory message is displayed before the disconnect. A random number of garbage characters can appear on the user's terminal due to the disconnect. This is expected and is no cause of alarm. No attempt is made to inform the user whether the ID and password which were entered were correct. A person trying to break into the system would not immediately know whether he was successful. If the attempt is successful (a correct ID and password pair are entered), a dial-back is performed.

After a short delay to allow the originator to hang up the line and set up the modem, the system then begins to dial-out on a second modem using the Directory Number (DN) associated with the dial-back ID that the user first entered. There is a one-to-one mapping between dial-back IDs and DNs (that is, the DN is a function of the dial-back ID). The manner in which this number is determined provides an indirect level of security since the called number (the one the system calls) is not calling number (the number of the remote site) unless the proper dial-back ID is entered. The amount of time elapsed between the modem disconnect and the completion of the return call varies between 80 and 240 seconds for the Rixon modem (slightly less for the CTS212AH modem). The time is dependent on the baud rate of the port, the load on the switch, the length of the DN dialed, the number of dial-backs attempted and the type of modem used for the dial-back. The operating company is responsible for assigning and maintaining the DNs associated with the dial-back IDs.

Once the call is connected, the following message is displayed and the user is automatically prompted to login:

```
DIALBACK COMPLETE
```

It is important that the user does not hit the <BREAK> key in order to obtain the logon prompt as this reinitiates the dial-back sequence and causes the automatic login to abort.

Commands

If feature package NTX293AA (Enhanced Security Package II) is present in the switch, the following command interpreter (CI) commands are available: LOGINCONTROL, DIALBACKPW and SHOWDBPW, and office parameter DIALBACKPW_ENCRYPTED in table OFCOPT.

The CI command LOGINCONTROL permits the operating company to turn dial-back on and off for a specific port, as well as change three dial-out-related values (number of rings for each dial-back attempt, number of dial-back attempts and the type of dial line).

The CI command DIALBACKPW allows the operating company to change dial-back passwords. This must be a privileged command in order to prevent security violations. The security of this feature depends on the operating company assigning appropriate command classes for this command.

The CI command SHOWDBPW can be used to show dial-back passwords. It is only available if the office parameter DIALBACKPW_ENCRYPTED is not set.

The dial-back, by the system, is made on a line different from the one which was used for the incoming call. At least two modems must be connected to the switch. The CI command LOGINCONTROL is used to specify whether a modem is used as an answer modem or a dial-out modem when the dial-back function is active.

Tables

Field MODEM specifies which type of modem (if any) is connected to the port. This field can be changed to any acceptable value by using the table editor.

Table DIALBACK, stores dial-back-related data. It contains fields for the dial-back ID, the DN and one for any miscellaneous data which the operating company wishes associated with a specific DN or dial-back ID.

Modems

The Companion CTS212AH Smart Modem and the Rixon R212A Intelligent Modem can be used with feature BC1043 (Automatic Dial Back). Both of the above mentioned modems satisfy the following requirements:

- ◆ **Disconnect** It must be possible to disconnect the modem by toggling the Data Terminal Ready (DTR) line of the RS232C interface. The use of a control character sequence to disconnect is not recommended.
- ◆ **Auto-Dial** The modem must be capable of autodialing any number without the need for manual intervention.
- ◆ **Auto-Answer** The ability to answer incoming calls is a necessary property. It must also be possible to toggle the modem into and out of autoanswer mode by using control characters.

- ◆ **Modem Ready** It must be possible to force the modem's Data Set Ready (DSR) line of the RS232C interface on.
- ◆ **Disconnect** One of the requirements of the disconnect is that the call is dropped. If the system modem disconnects, then there cannot be any guarantee that the call was dropped. To ensure the call was dropped, the outgoing dial-back call is placed on a line different from the one on which the original call was received. This method requires that at least two modems exist on the system.

Note 1: *The operation of the Rixon is sensitive to cable length. If the cable is too long, the MODEM UNSTABLE log report can occur frequently.*

Note 2: *Outgoing dial-back modems as set with the CI command LOGINCONTROL with device DIALBACK DIAL require that the Digital Coupling Device (DCD) (Input/Output Controller [IOC] connector pin-31) and Call-Through Simulator (CTS) (pin-34) leads are tied high with a strap in the IOC connector. Otherwise, the DMS cannot send the modem initialization string and the SECU122 log reports (DIALBACK FAILED. NO MODEM AVAILABLE) are generated.*

Cable CAOX15 must be used for the dial-back modems to operate correctly. This cable has pin-31 and pin-37 strapped at the IOC end to allow the DMS to send initialization strings to the modem.

Since outgoing calls are placed on one of these other modems, the requirement that the line connected to the first modem be dropped is unnecessary. In most cases, the line is dropped when the system disconnects its modem. The only time this does not occur is when the original call was placed through a cross-bar or step-by-step switch. In these two cases, only the originator can drop the call.

An abnormal modem disconnect can also occur if the modem detects noise on the line or the physical connection between the user's modem and the DMS is broken. Telephone lines to which the modems are connected generally do not have Call Waiting feature since it produces an audible tone that the modem regards as noise. This is not mandatory requirement, but only a suggested one since modems disconnected in this way can be hung. It is then necessary to force busy (BSY) and Return-the-Port-to-Service (RTS) twice before the modem is again available. It can also be necessary to re-enable the consoles (that is, the dial-in and dial-out modems) using the command LOGINCONTROL.

Disconnects that occur during login prompting (for dial-back password or CI password) can cause the login process to hang the port indefinitely. All dial-back ports must have a login time-out and an idle time-out set using the command LOGINCONTROL.

Note: Read and write access to this table must be restricted by the operating company. Datafill dial-back IDs and DNs of the modems on which feature Automatic Dial Back is enabled in table CUSTPROF.

LoJack III – Theory of Operation

Forward

This document describes the theory of operation and the transmitter tuning procedure for the third generation LoJack Vehicle Locating Unit (VLU) transmitter. Please refer to Motorola Schematic 79D43701L01 for circuit and part reference.

The LoJack III VLU (LJU3) is a VHF radio transceiver controlled by a remote network of computer activated transmitters. It is meant to be the tracked device in a vehicle location and recovery system. The VLU and associated antenna assembly are mounted in a secret location within the vehicle in a standby state until activated via a radio signal broadcast. Active state transmissions consist of periodic transmissions of coded data that can be tracked by a compatible tracking receiver.

Overview

The LJU3 employs a phase continuous Fast Frequency Shift Keyed (FSK) sub-carrier at 1200 bps data rate. The sub-carrier data modulation method complies to the following specifications:

Sub-Carrier Modulation : Phase continuous FSK
 Bit Rate : 1200 bits per second
 Modulation Rate : 1200 baud
 Binary "0" : One and one half cycles of 1800 Hz sine wave
 Binary "1" : One cycle of 1200 Hz sine wave

The transmitter modulation is adjusted to between 3.9 and 4.2 kHz deviation in the factory.

The transmitter uses a digital-to-analog circuit from the microprocessor through a lowpass filter to generate the sub-carrier signals. Filter characteristics are provided with the submitted documentation. An emission designator of 13K2F2D is being requested for the device. The necessary bandwidth was calculated according to the formula $B = 2M + 2DK$ given for frequency modulation digital signals. This calculation was based on the system's rated maximum modulating frequency of 1800 Hz and frequency deviation of 4 kHz.

The uplink modulation consists of a two-frequency FSK:

Binary "0" : 17.92 mSec low frequency
Binary "1" : 17.92 mSec high frequency

The transmitter modulation is adjusted to between 250 and 350 Hz low to high. The modulation bandwidth of the uplink message is much smaller than the bandwidth required for normal MSK data.

The LJU3 transceiver is shipped without an antenna to LoJack. The unit is installed (hidden) in a vehicle with an antenna attached. The typical LoJack antenna is 50 Ohms, passive and omni-directional. The installation of the unit in the vehicle tends to reduce the effectiveness of the omni-directional radiation pattern.

Transmitter

The LJU3 transmitter is a 2.0 Watt RF output, VHF FM device operating at 173.075 MHz. The transmitter is comprised of the following subsections: power supply, microprocessor controlled bias/modulation, baseband filter, crystal oscillator/modulation/tripler, 2nd frequency tripler, preamplifier, driver amplifier, power amplifier, transmit/receive switch and lowpass harmonic filter.

Power Supply

The LJU3 is designed to be powered from a vehicle's 12 Volt power system. In the event that the vehicle power goes out of regulation, the LJU3 module contains an internal non-rechargeable 6 Volt lithium-manganese battery cell. The unit will operate the transmitter from the primary vehicle power supply under normal operating conditions. Before powering the transmitter, the microprocessor measures the primary power supply voltage. If the supply is out of range, the transmitter is powered from the back-up battery.

The 12 Volt primary supply to the transmitter is regulated down to 8.2 Volts to power the transmitter. When the back-up battery is used the cell voltage (6 Volts), combined with the loss in the switching and protection circuitry, limits the voltage.

A precision voltage reference is also provided to the transmitter to provide for increased oscillator frequency stability and to provide for controlled biasing of the preamplifier stage. This reference voltage is switched on by the microprocessor.

Microprocessor

The microprocessor is a Motorola MC68HCL11E9 microcontroller. It uses an external 8 MHz crystal and an internal 2 MHz bus. The microcontroller performs the following functions related to the transmitter: power switching, power amplifier bias control, reference voltage switching, generation of the modulation signal, and carrier frequency tuning.

As detailed in the *Power Supply* section, the microprocessor checks the voltage at the primary power supply to determine if the transmitter should be operated from primary or back-up power. The microprocessor also uses a 6-bit discrete Digital-to-Analog Converter (DAC) circuit to provide a DC bias to the MOSFET power amplifier device and to control a voltage reference circuit that is used in the transmitter section. Finally, the microprocessor also uses a discrete 8-bit DAC circuit to tune the receiver and to tune and modulate the transmitter.

Baseband Filter

The baseband filter is a passive, two-pole lowpass filter. The filter smooths the output of the 8-bit DAC to reduce the high frequency components in the sinusoidal MSK signal used to modulate the carrier frequency.

Crystal Oscillator / Modulator / Tripler

The transmitter's crystal oscillator triples the 19.23055 MHz crystal frequency to 57.69165 MHz. The frequency is pulled using a varactor diode in series with the oscillator crystal. A buffer circuit isolates the crystal oscillator from the next tripler stage and a capacitor coupled, three-stage, bandpass filter provides harmonic attenuation.

2nd Tripler

The 2nd tripler stage triples the 57.69165 MHz frequency to the 173.075 MHz carrier frequency and provides power gain before the transmitter signal is fed to the preamplifier stage. The 2nd tripler also provides additional harmonic filtering using a capacitor coupled, three-stage, bandpass filter.

Preamplifier

The output of the 2nd tripler is fed into the preamplifier stage. This stage uses the voltage provided by the voltage reference to bias a bipolar transistor into Class A. The stage amplifies the signal provided by the 2nd tripler and provides the higher amplitude signal to the driver stage of the transmitter. The preamplifier stage uses a fixed value T-matching circuit to match the output impedance of the 2nd tripler to the input impedance of the preamplifier transistor and a "shunt-L, series-C" combination to match to the input impedance of the RF driver transistor.

RF Driver

The RF driver stage consists of a Class C biased bipolar transistor. The transistor uses feedback to insure stability and amplifies the signal delivered by the preamplifier stage for delivery to the power amplifier stage. The driver is matched to the power amplifier using capacitive tapped coupling.

RF Power Amplifier

The RF Power Amplifier (PA) is a MOSFET. It is biased from the microprocessor through a 6-bit DAC. The digital-to-analog circuit has bypass capacitance in the form of C3 and C75 to minimize any transference of RF between the microprocessor and the PA and vice versa. The PA is matched to the transmitter switch via the first section of the lowpass harmonic filtering.

Harmonic Filter

The harmonic filter in the transmitter consists of two sections. The first section consists of two "series-L, shunt-C" circuits (L25, C109, L24, C107) that provides both lowpass filtering and impedance matching from the PA to the transmitter switch. After the transmitter switching diode a second section of filtering consists of a T-circuit (C114, L23, C117). This circuit (coupled to the antenna via C113) provides filtering for the transmitter and receiver and insures that the antenna is matched to the transmitter and receiver circuits.

Transmit / Receive Switch

The transmit/receive switch allows the use of a single antenna for both transmit and receive functions. PIN diodes D13 and D10 are unbiased in the receive mode. In this mode both diodes are of high impedance which isolates the transmitter from the antenna. When the transmitter is powered, both diodes are biased on via L18 and R123. This causes both diodes to look like low impedance circuits, D13 then connects the transmitter to the antenna.

Transmitter Tuning

The LoJack III will be electronically tuned in a manufacturing test bay. The tuning procedure is as follows:

Center Frequency Tuning

Establish two-way serial communications to the LJU3 unit. Command the unit to turn on the transmitter with no PA bias and no modulation. Measure the carrier frequency. Move the modulation digital-to-analog value until the frequency is as close to 173.075 MHz as the step size allows. The frequency must be within 5 ppm (~1 kHz) of 173.075 MHz. Store the level in EEPROM. If the center frequency can not be obtained, that is, within test limits – fail unit.

MSK Modulation Tuning

Establish two-way serial communications to the LJU3 unit. Command the unit to turn on the transmitter with no PA bias and no modulation. Measure the center frequency. Move the modulation digital-to-analog value until the center frequency is as close to 173.075 MHz + 5200 Hz as the step size allows. Calculate the difference between the center frequency measurement digital-to-analog value and the value used to move the carrier to 173.075 MHz + 5200 Hz. Load this value into EEPROM. Using test software, engage MSK modulation and measure the deviation. Insure that the deviation falls between 3800 and 4200 Hz. (Since there is a lowpass filter in the DAC section, the MSK modulation will be lower than the frequency shift that was measured using a steady carrier signal. This is why 5200 Hz is measured during this test using as a carrier offset, but the same value of digital-to-analog results in an average of 4000 Hz MSK modulation.)

Uplink Modulation Tuning

Establish two-way serial communications to the LJU3 unit. Command the unit to turn on the transmitter with no PA bias and no modulation. Measure the center frequency. Move the modulation digital-to-analog value until the center frequency is as close to 173.075 MHz + 1950 Hz as the step size allows. Move the modulation digital-to-analog value until the center frequency is as close to 173.075 MHz – 1950 Hz as the step size allows. Using the two frequencies measured in this section and the center frequency measurement, calculate the digital-to-analog values for 300 Hz modulation inside of these two measured frequencies.

Also calculate two more sets of frequencies that will create a pair of inner modulation frequencies. The inner pairs should be equally spaced between the outer. (Approximately +/- 600 Hz around the center frequency.)

This will result in four discrete uplink message frequency pairs. Two about 600 Hz away from the center frequency of 173.075 MHz and the other two that are further out. The outer frequencies are defined by the outer most frequency in the modulating pair. This frequency is defined to be at 1950 Hz away from the center or less. This insures that the uplink pairs all remain well within the allowable occupied bandwidth and emissions masks.

PA Bias

Establish two-way serial communications to the LJU3 unit. Command the unit to turn on the transmitter with no PA bias and no reference voltage. This will bias the transmitter with no RF present. Measure the current into the unit. Increase the PA bias digital-to-analog value until the current level increases by 25 to 55 mA. The bias level that is the lowest in the range should be stored in EEPROM. If bias level between 25 to 55 mA is not obtained – fail unit.

Turn on transmitter, including PA bias and reference. Measure the RF power output of the transmitter. If RF power output is above 2.4 Watts or below specification, adjust PA bias down or up respectively until power output is in spec. If power output is not in spec within two digital-to-analog step sizes – fail unit.

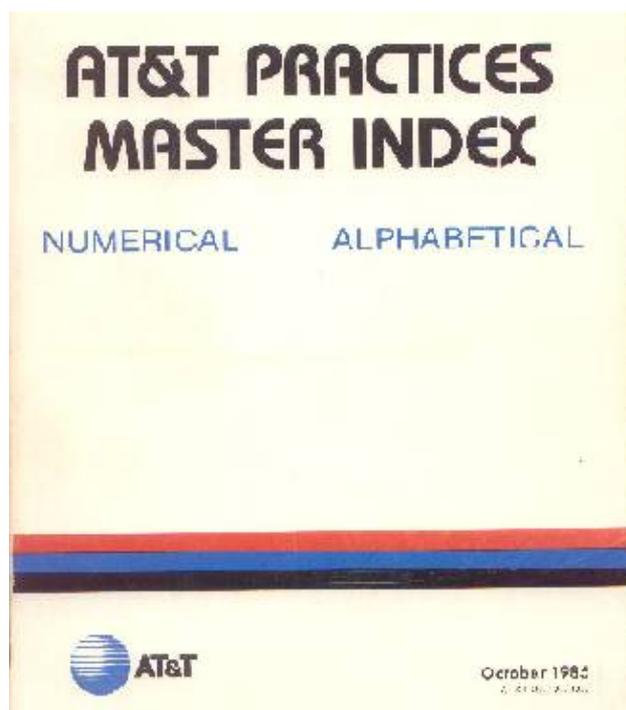
FCC §90.20(e)

(6) The frequency 173.075 MHz is available for stolen vehicle recovery systems on a shared basis with the Federal Government. Stolen vehicle recovery systems are limited to recovering stolen vehicles and are not authorized for general purpose vehicle tracking or monitoring. Mobile transmitters operating on this frequency are limited to 2.5 Watts power output and base transmitters are limited to 300 Watts ERP. F1D and F2D emissions may be used within a maximum authorized 20 kHz bandwidth. Transmissions from mobiles shall be limited to 200 milliseconds every 10 seconds, except that when a vehicle is being tracked actively transmissions may be 200 milliseconds every second. Alternatively, transmissions from mobiles shall be limited to 1800 milliseconds every 300 seconds with a maximum of six such messages in any 30 minute period. Transmissions from base stations shall be limited to a total time of one second every minute. Applications for base stations operating on this frequency shall require coordination with the Federal Government. Applicants shall perform an analysis for each base station located within 169 km (105 miles) of a TV Channel 7 transmitter of potential interference to TV Channel 7 viewers. Such stations will be authorized if the applicant has limited the interference contour to fewer than 100 residences or if the applicant:

- (i) Shows that the proposed site is the only suitable location;
- (ii) Develops a plan to control any interference caused to TV reception from the operations; and
- (iii) Agrees to make such adjustments in the TV receivers affected as may be necessary to eliminate interference caused by its operations.

The licensee must eliminate any interference caused by its operation to TV channel 7 reception within 30 days of the time it is notified in writing by the Commission. If this interference is not removed within the 30-day period, operation of the base station must be discontinued. The licensee is expected to help resolve all complaints of interference.

AT&T Operations Support Practice Index



This is a scan of the *Operations Support Systems – Operation, Maintenance, and Administration* section of the *AT&T Practices Master Index*, as shown above.

This practice (*Master Index*) provides an index to all practices developed and maintained by AT&T Technologies, Inc., and identified under the 9–digit numbering plan. These practices are documents authorized by AT&T Technologies, Inc., as the recommended instructions and criteria for planning, engineering, installing, operating, and maintaining telecommunications equipment and software products designed and manufactured by AT&T Technologies, Inc. These practices also play an important part in the training of personnel.

A 9–digit (XXX–YYY–ZZZ) numbering plan is used for AT&T Practices with each practice being assigned an unique 9–digit number in accordance with the subject matter covered. This plan permits organizing information into various categories to simplify and improve indexing. This plan also provides a convenient means for ordering, distributing, and filing practices.

In the 9–digit numbering plan, the first three digits, **XXX**, identify major categories of information and are referred to as **division** numbers. The fourth digit, xxx–**Y**, identifies a subdivision of a given category of information and is referred to as the **layer** number. The fifth and sixth digits, xxx–y**YY**, represent a further breakdown and are referred to as **sublayer** numbers. This scheme permits the breakdown of a division into subcategories of information. The last three digits, xxx–yyy–**ZZZ**, identify individual practices within a grouping (layers and sublayers) and are referred to as **key** numbers.

AT&T Operations Support Practice Index



Numerical Index, Division 190
AT&T 190-000-000, Issue 45

Operations Support Systems Operation, Maintenance, and Administration

1. Purpose

- 1.01** This index provides a listing of documents in Division 190.
- 1.02** This index reverted to Issue 1 in July 1985. Prior to that date there had been 99 issues of the index.

2. How to Use This Index

- 2.01** For additional index information, refer to *AT&T Master Index — 9-digit Numbered Documents* AT&T 000-000-002. The Master Index contains all divisional indexes.

3. Conventions Used

- 3.01** A bullet (●) indicates an item that has been added or changed since the previous issue of the index.
- 3.02** An open square (□) indicates a cancelled item. Information relating to the cancellation, if necessary, will be shown in a note following the item. Cancelled items and related notes will be deleted upon reissue of the index.
- 3.03** A square with an enclosed "A" (◻) indicates an archived item. An archived document is one that, in all probability, will never be revised and/or has had no distribution activity for an extended period of time. Archived documents can be ordered.

- 3.04** A solid square (■) indicates that distribution of this item is limited.

- 3.05** A solid circle with an enclosed "1" (●) indicates an item that will not be distributed on standing order.

- 3.06** A solid triangle (▲) indicates a TOP (Task Oriented Practice).

- 3.07** An electronic media symbol (Ⓜ) indicates an item is available on CD-ROM, magnetic tape, or other electronic media.

- 3.08** Addendums, revisions, and supplements are listed *above* the associated document. Appendixes are listed *under* the associated document.

4. How to Order Documentation

- 4.01** To order this document:
- Within the continental United States, call 1-800-432-6600.
 - In Canada, call 1-800-256-1242.

5. How to Comment on This Index

- 5.01** AT&T values your opinion. We would like to know how well the index meets your needs.

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Please send comments on this index to:

AT&T Number Assignment Administrator
2400 Reynolda Rd., Department 4051
Winston-Salem, NC 27106-4696

6. Contents of Division

6.01 This division is arranged in layers as follows:

190-0 Index and Equipment Test Lists

- 000 Index
- 001 Equipment Test Lists
- 099 Customer Information Releases (CIRs)

190-1 Operational Support Systems

- 101 CMS (Circuit Maintenance System 3A)
- 102 CAROT (Centralized Automatic Reporting on Trunks) 2/Generic 2 (Centralized Automatic Reporting on Trunks)
- 103 CAROT 2/Generic 3 (2CAROT3) and Generic 4 (2CAROT4) (Centralized Automatic Reporting on Trunks)
- 104 RTTU/CTTU (Remote Trunk Test Unit/Central Trunk Test Unit)
- 105 ATA (Automatic Trouble Analysis)
- 106 MDT (Maintenance Data Transmitter)
- 107 Programmable Scanner/Distributor — ATA (Automatic Trouble Analysis)
- 108 TREAT (Trouble Report Evaluation and Analysis Tool) System
- 110 No. 2 — Applications
- 130 SCC (Switching Control Centers)
- 135 BILLDATS II Collector
- 140 Frame Control Center — Frame Work Station

190-2 Surveillance and Control Systems

- 200 TCAS (T Carrier Administration System)
- 201 Alarm Centers
- 202 FMAC (Facility Maintenance and Administration Center)
- 203 SFMAC (Satellite Facility Maintenance Administration Center)
- 205 SCOTS (Surveillance and Control of Transmission Systems)

- 206 TMAS
 - 207 COMPULERT
 - 208 TRANSVU II Network Surveillance and Control Systems
 - 209 ACORN Network Control System
 - 210 TASC (Telecommunications Alarm Surveillance and Control) System
 - 211 DACSCAN™
 - 215 TOPAS (Testing Operation Provisioning Administration System)
 - 216 CONNECTVU
 - 220 RMMS (Regional Maintenance Management System)
- ### 190-3 Central Office Maintenance Management
- 305 COMMS (Central Office Maintenance Management System) — Preventive Maintenance
 - 306 SCANS (Software Change Administration and Notification System)
- ### 190-4 Network Operations Systems
- 401 NSC (Network Service Center)
 - 402 LSU (Local Storage Unit) and CMDR (Centralized Message Detail Recorder)
 - 406 NTMS (Network Traffic Management System)
 - 407 FASTAR (Fast Automatic Restoration)
 - 408 MFOS (Multifunction Operations Systems)
 - 422 TNM (Total Network Management)
- ### 190-5 Engineering and Administration Systems
- 510 EADAS (Engineering and Administrative Data Acquisition System)
 - 511 EADAS 1A (Engineering and Administrative Data Acquisition System — 1A)
 - 512 EADAS/NORGEN (Engineering and Administrative Data Acquisition System — Network Operations Report Generator)
 - 514 SONDS (Small Office Network Data System) and PDT-2A (Pollable Data Terminal No. 2A)
 - 519 NAC (Network Administration Center)
 - 520 COSMOS (Computer System for Main Frame Operations) — Network Administration
 - 521 RMAS (Remote Memory Administration System) and RMAP (Remote Memory Administration Position)
 - 540 EADAS/NM (Engineering and Administrative Data Acquisition System/Network Management)

AT&T Operations Support Practice Index

Numerical Index, Division 190

AT&T 190-000-000, Issue 45

190-7 Integrated and Force Administration System -701 IFFAS (Integrated Facilities and Force Administration System)

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190-001-012	1	Automatic Trouble Analysis (ATA) — Operations Support and Processors
190-001-013	1	Automatic Trouble Reporting System (ATRS) — Operations Support and Processors
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190-001-016	1	Integrated Facilities and Force Administration (IFFAS) — Operations Support and Processors
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190-099-015TD	4	MACSTAR I Software, End Customer Management System (ECMS), Operations Systems
190-099-040TD	3	MACSTAR II Software End Customer Management System (ECMS), Operations Systems
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190-101 CMS (Circuit Maintenance System 3A)

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190-101-110	1	Software
190-101-112	1	Circuit Identification (CID) Reconciliation Guidelines
190-101-113	2	Data Merge Guidelines for TIRKS and SSS Load Tapes
190-101-120	2	Features

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190-101-137	1	700 Through 799 — Interface Message Applications
190-101-138	3	800 Through 899 — Job Aids
190-101-139	3	900 Through 999 — Administrative Reports

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190-101-160	3	System Administration Functions — Special Service Center
190-101-161	1	Analysis Report Generator — Description
190-101-162	1	Report Generator — Description
190-101-170	3	System Operator — Description and Operating Procedures
190-101-175	1	Operations Systems — MMOC Operator's Handbook
190-101-180	2	Maintenance, Trouble Analysis, and Correction

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190-102-010	2	TOSC Operations and Administration	190-103-001	1	Centralized Automatic Reporting On Trunks (CAROT) 2CAROT6 — Controller User's Guide (1-93). This manual includes the binder and tabs for practices 190-103-011, 190-103-232, 190-103-231, 190-103-234, 190-103-135, 190-103-522, 190-103-521, and 190-103-520
190-102-015	3	Analysis of Test Results — CAROT Center and Remote User	190-103-002	1	Centralized Automatic Reporting On Trunks (CAROT) 2CAROT6 — Remote User's Terminal Guide (1-93). This manual includes the binder and tabs for practices 190-103-012, 190-103-133, and 190-103-234
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▲190-102-305	2	Remote User Terminal Operating Procedures			
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190-103-105	3	2CAROT3 — CAROT/CMS Interface Description	190-103-212	1	2CAROT4 — Controller Administration
190-103-018	1	2CAROT5 — Analysis of Test Results	190-103-213	1	2CAROT4 — Data Base Description and Transactions
190-103-110	1	2CAROT4 — General System Description	190-103-214	1	2CAROT4 — Circuit Order Activity — Implementation and Description
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* PDP is registered trademark of Digital Equipment Corporation

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●■ 190-408-512	1	MFOS 5.4 SCS Commands and Reports	●■ 190-410-411	2	NETSTAR Workstation User Guide
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●■ 190-408-526	1	MFOS 5.4 DCRS Commands and Reports	■ 190-410-513	1	NETSTAR Console User Guide (Italcable Phase 2)
●■ 190-408-531	1	MFOS 5.4 APS System Administration	190-422 TNM (Total Network Management) Generic 2.3		
●■ 190-408-532	1	MFOS 5.4 APS User Guide	●■ 190-422-007	1	Common Platform Input Messages
●■ 190-408-533	1	MFOS 5.4 APS Commands and Reports	TNM Surveillance Module (TSM) 2.3		
●■ 190-408-541	1	MFOS 5.4 CCS System Administration	●■ 190-422-100	1	TSM (TNM Surveillance Module) User Guide
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●■ 190-408-611	1	MFOS 6.1 SCS Software Installation — Operation and Maintenance Procedures	●■ 190-422-103	1	TSM Input Messages
●■ 190-408-612	1	MFOS 6.1 SCS Routine and Corrective Maintenance — Operation and Maintenance Procedures	●■ 190-422-104	1	TSM Output Messages
●■ 190-408-613	1	MFOS 6.1 SCS Commands and Reports	●■ 190-422-107	1	TSM Transition
●■ 190-408-621	1	MFOS 6.1 SMS Subsystem Administrator — Operation and Maintenance Procedures	TSM Application Guides 2.3		
●■ 190-408-622	1	MFOS SMS User Guide — Operation and Maintenance Procedures	●■ 190-422-109	1	TSM Application Guide — Contains 1AEAPS, 1A ESS, 1 ESS, 2 ESS, 2B ESS, 2STP, and 3 ESS

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● 190-422-121	1	TSM Application Guide — Contains BILLDATS , D5, DACS, DACS 2, DACS 3, DACS 4, DATAKIT , DATAKIT II, DMS 10, and DMS 100
● 190-422-131	1	TSM Application Guide — Contains GTD-5, NCP, NDB, PSS, SELF, and UDCI
● 190-422-141	1	SCCS 13.3.1 to TNM Generic 2 Data Base Upgrade Guide

TNM Integration Module (TIM) 2.3

● 190-422-200	1	TIM User Guide
● 190-422-201	1	TIM Administrator Guide
● 190-422-202	1	TIM Description
● 190-422-203	1	TIM Output Messages

TNM/TSM/TIM Feature Packages

● 190-422-300	1	TNMTRAN Feature Package
● 190-422-301	1	SS7(DSC) Feature Package
● 190-422-302	1	SS7 Feature Package
● 190-422-303	1	NTMOS Host I/F Feature Package
● 190-422-304	1	Event Correlation Ph. 1 Feature Package

5XPRESS™ (TNM)

● 190-422-322	1	5XPRESS (TNM) User Guide
● 190-422-323	1	5XPRESS Switch Maintenance Expert 2.3 — Administration Guide

190-5 Engineering and Administration Systems

190-510 EADAS (Engineering and Administrative Data Acquisition System)

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● 190-510-060	1	Load Measurement Facilities — General Description — Network Design
● 190-510-061	3	Determination of Quantities — Network Switching Engineering

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190-510-200	2	Descriptive Supplement for Network Maintenance
190-510-202	1	Traffic Data Converter SD-3B213-01 — Description
190-510-203	1	Pollable Data Terminal No. 1A (PDT-1A) SD-3B232-01 — Description
190-510-204	2	Central Unit — Operating Procedures
190-510-205	2	Central Unit — Trouble Sectionalizing

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190-510-217	2	SD-3B213-01 Associated With Traffic Usage Recorder (TUR) SD-95738-01 Equipped With Individual Circuit Usage Recorder (ICUR) Through Tests From Central Control Unit (CCU)

Pollable Data Terminals — PDT-1A and PDT-2A

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190-510-223	1	PDT-1A SD-3B232-01 — Trouble Locating Procedures
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● 190-510-406	1	Implementation — Coordination	● 190-511-060	2	Load Measurement Facilities — Description and Determination of Quantities — Network Switching Engineering — Operational Support Systems
● 190-510-410	1	Central Control Unit Operation	190-511-100	1	Description
● 190-510-411	1	Load EADAS Generic — Position Practice	190-511-101	1	230A Repeater SD-5P001-01 — Description
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● 190-510-418	1	System Definitions	● 190-512-000	1	General Description — Miscellaneous Systems
● 190-510-420	1	Surveillance Applications	● 190-512-005	1	NORGEN — Record Base — Management and Administration — Miscellaneous Systems
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● 190-510-472	1	Student Manual — Central Control Unit Management Training	● 190-512-022	3	No. 2/2B ESS Switches — Description
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Any Questions?

Editorial and Rants

How to Piss off Hippies / Wackos / Nutcases

During those "Fur is Murder" rallies, point out that fur occurs naturally in nature and will biodegrade when in the garbage. Unlike the fake "plastic" clothes they are wearing, which are made from cancer-causing chemicals and will be around for 10,000 years to come – killing thousands of animals who will choke on them.

During those "Save the Whales" rallies, point out that the people who kill whales use their *entire* remains for goods & services. Even the whale blubber is used. Unlike the rich, pampered hippy that goes through 14 cans of hair spray (artificial) a day just to look good on TV.

During those "Stop the Oil Tankers" rallies, point out that oil occurs naturally in nature. It's really just liquid solar energy. It's been in the ground for over 100 million years or so. It rises to the surface (tar pits) and has killed animals and plants for millions of years. It's also used to produce the plastic in your nutcase CDs and DVDs.

During those "Nuclear Power is Bad" rallies, point out the entire universe is a fucking nuclear waste dump, including the sun, which radiates dangerous energy of all kinds. Humans have these things called "brains", lets start using them.