

ELECTRONIC CASH REGISTERS

CHD 5010T/3010T



DRIVER DESCRIPTION



Computer Hardware Design SIA

Revision history:

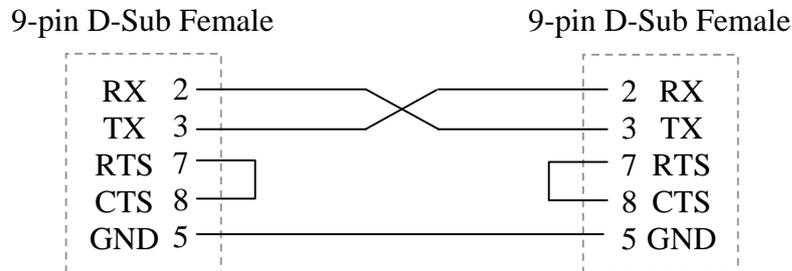
Version	Date	Description of modifications	Author
1.12	17-07-2003	1. Revision history started. 2. Changes in financial report output in [4.4]: PERCENT ITEM/TOTAL ADD-ON PERCENT ITEM/TOTAL DISCOUNT 3. Modem related stuff added in [6.x]	VlaR
1.13	21-07-2003	1. Command numbers of report commands are changed in [4.] 2. New commands added: [4.8] Linked PLU record modify [4.9] Cooking message record modify 3. Note about auto-sorting is added in [4.] 4. Configuration for new Acorp M56SCD modem is added in [6.x] 5. Description of new [CommandNumberTranslation] section is added in [7.]	VlaR
1.14	29-07-2003	1. PC-Modem configuring command added in [6.5] 2. Fixed bug with client number in [4.2]	VlaR
1.15	12-09-2003	1. New INI-file parameter <i>Language</i> added	NN
1.16	14-10-2003	1. New command for CHD5010 added: [4.10] Send logo bitmap	NN
1.17	01-12-2003	1. New INI-file parameter <i>UseNumericIndexInReports</i> added	NN
1.18	9-12-2003	1. Fixed bug in ECR-Modem cable [6.1]	VlaR
1.19	30-12-2003	1. Fixed bug in PLU group range [4.1]	VlaR
1.20	27-02-2004	1. Added DIP switch settings for old U.S. Robotics Sportster modem in [6.2] and [6.5]	VlaR
1.21	27-10-2004	1. Configuration for new Zyxel Omni.net ISDN modem added	VlaR
1.22	15-02-2005	1. New command added: PLU record erase in [4.1] 2. Language/codepage translation settings changed (see [5] <i>CodePage</i> parameter description)	NN
1.23	25.02.2005	1. Driver is ported to Linux. See description of directory structure in [8]	OP VlaR
1.24	29.04.2005	1. PLU record erase command syntax updated	NN
1.25	09.05.2005	1. New commands added: Linked PLU report read, Linked PLU report read and clear	NN
1.26	20.01.2006	1. New command added: Read ECR type	NN
1.27	24.01.2006	1. New financial report " <i>Negative Sales</i> " field added	NN

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For questions and/or suggestions please write to support@chd.lv.

1. PC - ECR CONNECTION CABLE



2. DRIVER USAGE

chd_drv.exe /AutoDetect Auto-detect all connected ECRs and create INI-file

chd_drv.exe [/K<n>] [/F] command filename

Options:

- /K<n> ECR logical number (use settings from INI-file section [ECR_n]).
Needed if more than one ECR defined in INI-file
- /F Use ';' as CSV file data field delimiter, otherwise use comma

chd_drv.exe /H

- /H Show default help
- /H1 Show CHD3010T commands & options
- /H2 Show CHD5010T commands & options
- /H3 Show commands & options compatible with driver beta versions
- /H4 Show commands & options compatible with CHD4010 driver
- /H5 Show service commands & options

3. DRIVER RETURN CODE (ERRORLEVEL)

- 0 – OK
- 1 – Error (except of error(s) in input file)
- 2 – One or more errors found in input file
- 3 – Modem failed to connect

4. COMMAND DESCRIPTION

- 500 *PLU table send*
Send PLU record list clearing all previous PLU records from ECR memory.
- 501 *PLU record add/modify*
Add or modify existing PLU records. If record with the same PLU number already exists in ECR memory it will be replaced with new data, otherwise PLU record will be added to ECR PLU list.
- 502 *PLU sales report read*
Read report for all sold PLU.
- 503 *PLU sales report read and clear*
Read and clear report for all sold PLU.
- 504 *PLU periodical sales report read*
Read periodical report for all sold PLU.
- 505 *PLU periodical sales report read and clear*
Read and clear periodical report for all sold PLU.
- 506 *PLU record erase*
Erase PLU records from ECR memory.
- 509 *PLU stock counters send*
Send PLU stock counters.
- 511 *DEPARTMENT record modify*
Modify existing department records.
- 512 *DEPARTMENT sales report read*
Read sales report for each department
- 513 *DEPARTMENT sales report read and clear*
Read and clear sales report for each department
- 514 *DEPARTMENT periodical sales report read*
Read periodical sales report for each department
- 515 *DEPARTMENT periodical sales report read and clear*
Read and clear periodical sales report for each department
- 520 *CLIENT table send* (Works only with CHD 5010T)
Send client record list clearing all previous client records from ECR memory.
- 521 *CLIENT record add/modify* (Works only with CHD 5010T)

Add or modify existing client records. If record with the same client number already exists in ECR memory it will be replaced with new data, otherwise client record will be added to ECR client record list.

- 522 *CLIENT sales report read* (Works only with CHD 5010T)
Read report for each client used during sales.
- 523 *CLIENT sales report read and clear* (Works only with CHD 5010T)
Read and clear report for each client used during sales.
- 532 *Financial report read*
Read financial report
- 533 *Financial report read and clear*
Read financial report and clear report counters
- 534 *Financial periodical report read*
Read financial periodical report
- 535 *Financial periodical report read and clear*
Read financial periodical report and clear report counters
- 542 *Clerk report read*
Read report for each clerk
- 543 *Clerk report read and clear*
Read report for each clerk and clear report counters
- 544 *Clerk periodical report read*
Read periodical report for each clerk
- 545 *Clerk periodical report read and clear*
Read periodical report for each clerk and clear report counters
- 552 *Cashier report read*
Read report for each cashier
- 553 *Cashier report read and clear*
Read report for each cashier and clear report counters
- 554 *Cashier periodical report read*
Read periodical report for each cashier
- 555 *Cashier periodical report read and clear*
Read periodical report for each cashier and clear report counters
- 562 *Hourly report read*
Read hourly report

- 563 *Hourly report read and clear*
Read hourly report and clear report counters
- 571 *Linked PLU record modify*
Modify existing linked PLU records.
- 572 *Linked PLU sales report read*
Read linked PLU report.
- 573 *Linked PLU sales report read and clear*
Read linked PLU report and clear report counters.
- 581 *Cooking message record modify*
Modify existing cooking messages.
- 680 *Logo bitmap send* *(Works with CHD 5010T only)*
Send bitmap logo, which can be printed with or instead of receipt header.

NOTES

- Driver always sorts all input file records before sending to ECR. If duplicate records are found then driver will report an input file error. If you need to ignore such errors you can set IgnoreDuplicates=1 in INI-file. In this case only last from duplicate records will be sent to ECR.
- Driver also supports most of CHD4010 communication driver commands (see /H4 help option). But these commands are implemented for compatibility with legacy applications only and not recommended for new applications!

4.1. PLU COMMANDS

Command 500 – PLU table send

Command 501 – PLU record add/modify

Command line examples:

```
chd_drv.exe 500 plu_all.csv
```

```
chd_drv.exe 501 plu_new.csv
```

Input file format:

Description	Type	Value
PLU code	Numeric	1...10 ¹³ -1
Price	Numeric	0-999999999
Name	String	Max 18 chars
Department	Numeric	1-99
Group	Numeric	0-99
Tax	Numeric	0-8
Secondary price	Numeric	0-999999999
Negative flag	Numeric	0-1
HALO/LALO	Numeric	0-77
COOK CODE	Numeric	0-19
T.O.S./KITCHEN CODE	Numeric	0-99
Linked PLU1 number	Numeric	0-50
Linked PLU2 number	Numeric	0-50
Linked PLU3 number	Numeric	0-50

NOTE: For detailed information about these fields see Programming Manual.

Input file example:

```
1, 15, "PLU 1", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
2, 34, "PLU 2", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
7, 110, "PLU 7", 8, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
```

Command 502 – PLU sales report read

Command 503 – PLU sales report read and clear

Command 504 – PLU periodical sales report read

Command 505 – PLU periodical sales report read and clear

Command line examples:

```
chd_drv.exe 502 plu_xrep.csv
chd_drv.exe 503 plu_zrep.csv
chd_drv.exe 504 plu_acc_xrep.csv
chd_drv.exe 505 plu_acc_zrep.csv
```

Output file format:

Description	Type	Value
PLU code	Numeric	1...10 ¹³ -1
Total sold amount	Numeric	0-9999999999999
Total sold quantity	Numeric	0-9999999999999

Output file example:

```
00000000000001,000000000000068,000000000002000
000000000000007,-00000000000440,-00000000004000
```

Command 506 – PLU record erase

Command line examples:

```
chd_drv.exe 506 plu_to_erase.csv
```

Input file format:

Description	Type	Value
PLU code	Numeric	1...10 ¹³ -1

NOTE: The same input file format as in PLU send command can be used

Input file example:

```
1, 15, "PLU 1", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
2, 34, "PLU 2", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
7
```

Command 509 – PLU stock counter send

Command line example:

```
chd_drv.exe 509 plu_stock.csv
```

Input file format:

Description	Type	Value
PLU code	Numeric	1...10 ¹³ -1
Quantity	Numeric	0-9999999

Input file example:

```
1, 68000
2, 4500
7, 156000
```

4.2. CLIENT COMMANDS

Client commands work only with CHD 5010T!

Command 520 – CLIENT table send

Command 521 – CLIENT record add/modify

Command line examples:

```
chd_drv.exe 520 client_all.csv
chd_drv.exe 521 client_new.csv
```

Input file format:

Name	Type	Value
Client number	Numeric	1...10 ¹⁶ -1
Specific caption line 3	String	Max 30 chars
Specific caption line 3	String	Max 30 chars
Specific caption line 3	String	Max 30 chars
Specific caption line 4	String	Max 30 chars
Discount rate (0.00%-99.99%)	Numeric	0-9999

Input file example:

```
1, "John Smith", "NY, New York", "Avenue 3/45", "phone: 723345", 1500
2, "John Black", "NY, New York", "Avenue 7/47", "phone: 712345", 3000
```

Command 522 – CLIENT sales report read

Command 523 – CLIENT sales report read and clear

Command line examples:

```
chd_drv.exe 522 client_xrep.csv
```

chd_drv.exe 523 client_zrep.csv

Output file format:

Name	Type	Value
Client number	Numeric	1...10 ¹⁶ -1
Total transaction amount	Numeric	0-9999999999999999
Transaction count	Numeric	0-9999
Total discount amount	Numeric	0-9999999999999999

Output file example:

```
00000000000000000001,0000000000002000,00006,-000000000000300
00000000000000000002,-000000000000500,00001,0000000000000150
```

4.3. DEPARTMENT COMMANDS

Command 511 - DEPARTMENT record modify

Command line example:

chd_drv.exe 510 dept.csv

Input file format:

Name	Type	Value
Department number	Numeric	1-99
Department name	String	Max 36 chars
Department tax	Numeric	0-8
HALO/LALO	Numeric	0-77
Group number	Numeric	1-9
Price	Numeric	0-999999999
Secondary price	Numeric	0-999999999
Service rate (0.00%-99.99%)	Numeric	0-9999
Status/Ticket type	Numeric	0-37
Reserved	Numeric	0

Input file example:

```
1, "Department1", 1, 0, 0, 0, 0, 0, 0, 0
2, "Department2", 1, 0, 0, 0, 0, 0, 0, 0
5, "Department5", 2, 0, 0, 450, 0, 0, 0, 0
```

- Command 512 - DEPARTMENT sales report read**
- Command 513 - DEPARTMENT sales report read and clear**
- Command 514 - DEPARTMENT periodical sales report read**
- Command 515 - DEPARTMENT periodical sales report read and clear**

Command line example:

```
chd_drv.exe 512 dept_xrep.csv
chd_drv.exe 513 dept_zrep.csv
chd_drv.exe 514 dept_acc_xprep.csv
chd_drv.exe 515 dept_acc_zprep.csv
```

Output file format:

Description	Type	Value
Department	Numeric	1-99
Total sold amount	Numeric	0-999999999999
Total sold quantity	Numeric	0-999999999999

Output file example:

```
01,0000000000001501,0000000000007123
02,-000000000000021,-000000000001000
```

4.4. FINANCIAL REPORT COMMANDS

- Command 532 – Financial report read**
- Command 532 – Financial report read and clear**
- Command 534 – Financial periodical report read**
- Command 535 – Financial periodical report read and clear**

Command line example:

```
chd_drv.exe 532 fin_xrep.csv
chd_drv.exe 533 fin_zrep.csv
chd_drv.exe 534 fin_acc_xrep.csv
chd_drv.exe 535 fin_acc_zrep.csv
```

Output file format:

Description	Type	Value
Report line description	String	
Value1	Numeric	$-(10^{14}-1) - (10^{14}-1)$
Value2	Numeric	$0 - (10^8-1)$

Report line description	Value1	Value2
NON-TAXABLE	Amount	0
TAXABLE-1 WITH TAX	Amount	0
TAXABLE-1 W/O TAX	Amount	0
TAX 1 TOTAL	Amount	0
TAXABLE-2 WITH TAX	Amount	0
TAXABLE-2 W/O TAX	Amount	0
TAX 2 TOTAL	Amount	0
TAXABLE-3 WITH TAX	Amount	0
TAXABLE-3 W/O TAX	Amount	0
TAX 3 TOTAL	Amount	0
TAXABLE-4 WITH TAX	Amount	0
TAXABLE-4 W/O TAX	Amount	0
TAX 4 TOTAL	Amount	0
TAXABLE-5 WITH TAX	Amount	0
TAXABLE-5 W/O TAX	Amount	0
TAX 5 TOTAL	Amount	0
TAXABLE-6 WITH TAX	Amount	0
TAXABLE-6 W/O TAX	Amount	0
TAX 6 TOTAL	Amount	0
TAXABLE-7 WITH TAX	Amount	0
TAXABLE-7 W/O TAX	Amount	0
TAX 7 TOTAL	Amount	0
TAXABLE-8 WITH TAX	Amount	0
TAXABLE-8 W/O TAX	Amount	0
TAX 8 TOTAL	Amount	0
TAXABLE WITH TAX TOTAL	Amount	0
TAXABLE W/O TAX TOTAL	Amount	0
TOTAL TAX	Amount	0
TAX-1 GRAND TOTAL	Amount	0
TAX-2 GRAND TOTAL	Amount	0
TAX-3 GRAND TOTAL	Amount	0
TAX-4 GRAND TOTAL	Amount	0
TAX-5 GRAND TOTAL	Amount	0
TAX-6 GRAND TOTAL	Amount	0
TAX-7 GRAND TOTAL	Amount	0
TAX-8 GRAND TOTAL	Amount	0
TAXABLE GRAND TOTAL W/TAX	Amount	0
TAXABLE GRAND TOTAL W/O TAX	Amount	0
TAX GRAND TOTAL	Amount	0
NON-TAXABLE GRAND TOTAL	Amount	0
GRAND TOTAL & Z-COUNTER	Amount	Count*
GROSS SALE	Amount	0
ADJUSTMENT	Amount	0

NET SALE	Amount	0
CONVERSION NET	Amount	0
AMOUNT ADD-ON	Amount	Count
AMOUNT DISCOUNT	Amount	Count
PERCENT ITEM ADD-ON	Amount	Count
PERCENT TOTAL ADD-ON	Amount	Count
PERCENT ITEM DISCOUNT	Amount	Count
PERCENT TOTAL DISCOUNT	Amount	Count
RETURN	Amount	Count
VOID/EC	Amount	Count
NEGATIVE SALES	Amount	Count
TENDER MEDIA (1-30)	Amount	Count
MEDIA IN DRAWER 1 (1-30)	Amount	0
FC IN DRAWER (1-4)	Amount	Currency decimals
RECEIVED ON ACC	Amount	Count
PAID OUT	Amount	Count
NO-SALE	0	Count

* - Not implemented yet.

Output file example:

```
"NON-TAXABLE",20402
"TAXABLE-1 WITH TAX",769
"TAXABLE-1 W/O TAX",768
"TAX 1 TOTAL",1
...
"AMOUNT ADD-ON",500,1
"AMOUNT DISCOUNT",-500,1
```

4.5. CLERK COMMANDS

Command 542 – Clerk report read

Command 543 – Clerk report read and clear

Command 544 – Clerk periodical report read

Command 545 – Clerk periodical report read and clear

Command line example:

```
chd_drv.exe 542 clerk_xrep.csv
chd_drv.exe 543 clerk_zrep.csv
chd_drv.exe 544 clerk_acc_xrep.csv
chd_drv.exe 545 clerk_acc_zrep.csv
```

Output file format:

Description	Type	Value
Clerk number	Numeric	1 – 99
Report line description	String	
Amount	Numeric	$-(10^{14}-1) - (10^{14}-1)$
Count	Numeric	$0 - (10^8-1)$

Report line description	Value1	Value2
NET SALE	Amount	Count
COMMISSION	Amount	0
ITEM VOID	Amount	Count
RETURN	Amount	Count
RECEIVED ON ACC	Amount	Count
PAID OUT	Amount	Count
NO-SALE	0	Count
SERVER TIP	Amount	Count
TENDER MEDIA (1-30)	Amount	Count

Output file example:

```

1, "NET SALE", 0, 0
1, "COMMISSION", 0, 0
1, "ITEM VOID", 0, 0
1, "RETURN", 0, 0
1, "RECEIVED ON ACC", 0, 0
1, "PAID OUT", 0, 0
1, "NO-SALE", 0, 0
1, "SERVER TIP", 0, 0
1, "TENDER MEDIA 1", 0, 0
1, "TENDER MEDIA 2", 0, 0
1, "TENDER MEDIA 3", 0, 0
1, "TENDER MEDIA 4", 0, 0
1, "TENDER MEDIA 5", 0, 0
...

```

4.6. CASHIER COMMANDS

Command 552 – Cashier report read

Command 553 – Cashier report read and clear

Command 554 – Cashier periodical report read

Command 555 – Cashier periodical report read and clear

Command line example:

```

chd_drv.exe 552 cashier_rep.csv
chd_drv.exe 553 cashier_rep.csv
chd_drv.exe 554 cashier_rep.csv
chd_drv.exe 555 cashier_rep.csv

```

Output file format:

Description	Type	Value
Cashier number	Numeric	1 – 9
Report line description	String	
Amount	Numeric	$-(10^{14}-1) - (10^{14}-1)$
Count	Numeric	$0 - (10^8-1)$

Report line description	Value1	Value2
NET SALE	Amount	Count
COMMISION	Amount	0
ITEM VOID	Amount	Count
RETURN	Amount	Count
RECEIVED ON ACC	Amount	Count
PAID OUT	Amount	Count
NO-SALE	0	Count
TENDER MEDIA (1-30)	Amount	Count

Output file example:

```

...
6, "NET SALE", 22079, 17
6, "COMMISION", 0, 0
6, "ITEM VOID", 21, 2
6, "RETURN", 0, 1
6, "RECEIVED ON ACC", 447020, 8
6, "PAID OUT", -100, 1
6, "NO-SALE", 0, 1
6, "TENDER MEDIA 1", 22079, 17
6, "TENDER MEDIA 2", 0, 0
6, "TENDER MEDIA 3", 0, 0
6, "TENDER MEDIA 4", 0, 0
6, "TENDER MEDIA 5", 0, 0
...

```

4.7. HOURLY REPORT COMMANDS

Command 562 – Hourly report read

Command 563 – Hourly report read and clear

Command line example:

chd_drv.exe 562 hour_xrep.csv

chd_drv.exe 563 hour_zrep.csv

Output file format:

Description	Type	Value
Hour	Numeric	1 – 24
Amount	Numeric	0 – (10 ¹⁴ -1)
Count	Numeric	0 – (10 ⁸ -1)

Output file example:

```

...
13,200,2
14,0,0
15,409,4
16,20802,3
17,868,8
...

```

4.8. LINKED PLU COMMANDS

Command 571 – Linker PLU record modify

Command line example:

```
chd_drv.exe 571 link_plu.csv
```

Input file format:

Description	Type	Value
Linked PLU number	Numeric	1-50
Price	Numeric	0-999999999
Name	String	Max 18 chars
Department	Numeric	1-99
Group	Numeric	0-9
Tax	Numeric	0-8
Secondary price	Numeric	0-999999999
Sign	Numeric	0-1

NOTE: The same input file format as in PLU commands can be used too

Input file example:

```

1, 15, "PLU 1", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
2, 34, "PLU 2", 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0
7, 110, "PLU 7", 8, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0

```

Command 572 – Linked PLU sales report read

Command 573 – Linked PLU sales report read and clear

Command line examples:

chd_drv.exe 572 link_plu_xrep.csv

chd_drv.exe 573 link_plu_zrep.csv

Output file format:

Description	Type	Value
PLU code	Numeric	1...10 ¹³ -1
Total sold amount	Numeric	0-999999999999
Total sold quantity	Numeric	0-999999999999

Output file example:

```
000000000000001,000000000000068,000000000002000
000000000000007,-00000000000440,-00000000004000
```

4.9. COOKING MESSAGE COMMANDS

Command 581 – Cooking message record modify

Command line example:

chd_drv.exe 581 cook_msg.csv

Input file format:

Description	Type	Value
Cooking message number	Numeric	1-30
Caption	String	Max 18 chars
Cooking code	Numeric	0-9

Input file example:

```
1, "Message 1", 1
2, "Message 2", 2
...
```

4.10. LOGO BITMAP SEND COMMAND

Command 680 – Logo bitmap send

Command line example:

chd_drv.exe 680 logo.bmp

Input file format is the standard B/W (monochrome) bitmap.

Bitmap width is always fixed to 432 pixels, but height should be selected by:
(Keylock in PRG-position) 18 [#NS] 3 [#NS] *HeightCode* [CASH] [#NS]

HeightCode	Logo bitmap height
0	32 pixels
1	64 pixels
2	128 pixels
3	192 pixels
4	256 pixels
5	320 pixels
6	384 pixels
7	448 pixels

ECR is waiting for logo from driver in special logo downloading mode:
(Keylock to S-position) 659608 [CASH].

To enable logo bitmap printing:
(Keylock in PRG-position) 18 [#NS] 2 [#NS] 10 [CASH] [#NS]

4.11. READ ECR TYPE COMMAND

Command 690 – Read ECR type

Command line example:

```
chd_drv.exe 690 EcrType.csv
```

Output file format:

ECR type	Value
CHD5010T with flat keyboard	CHD5010T Flat
CHD5010T with stroke keyboard	CHD5010T Stroke
CHD3010T	CHD3010T

Output file example:

```
CHD5010T Flat
```

5. STANDARD INI-FILE SETTINGS

CHD5010T driver needs a configuration INI-file located in its directory. If driver cannot find the INI-file then it will automatically execute ECR auto detection and create the file.

INI configuration file consists of a default section named [Common] and several sections [ECR_n] describing each ECR connected.

[Common] section

This section may contain following settings:

DbgErrorLog = 0...3

- 0 = do not write debug info
- 1 = write debug info only in case of unrecoverable error
- 2 = write debug info in case of any error
- 3 = always write debug messages

CodePage = DOS | RIM

Code page to use for particular language (supported for Latvian language only).

By default no codepage translation is used.

Delimiter = any character

CSV-file field delimiter. By default is ','. Can be overridden by command line /F switch.

IgnoreDuplicates = 0...1

Ignore input file records with duplicating numbers, i.e. do not interpret them as a syntax error. By default is 0.

[ECR_n] section

This section may contain following settings:

ComNumber

Serial port number. By default is 1.

NetworkID

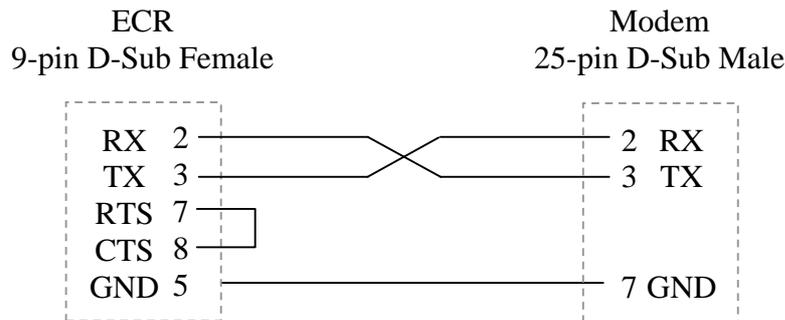
ECR network identifier (ECR number within ECR network). By default is 1.

On ECR this can be set by command 21 in PRG mode (for details see CHD3010T/5010T documentation).

6. CONNECTION TO REMOTE ECR VIA MODEM

Driver can use one or more AT-compatible (Hayes) modems connected to serial ports to make connections to remote ECR(s). Remote ECR needs some modem too. In case of remote ECR network only master ECR needs modem. To get faster connecting it is recommended to use the same modems on both sides.

6.1. ECR - MODEM CABLE



6.2. ECR MODEM CONFIGURING

1. Temporary connect your modem to some PC with standard serial modem cable.
2. Configure your terminal program to use serial port with [baud=19200, parity=n, stop=1].
3. From terminal program issue the following command to modem:

For U.S. Robotics Sportster modem:

```
AT&F1E0M0Q1Y0&B1&D0&H0&N10&R1S0=1S19=2&W0
```

For Planet ME-560R modem:

```
AT&F0+MS=11,0,19200,19200,0,0,19200
ATE0M0Q1&D0&K0&Y0S0=1S30=12&W0
```

For Acorp (Conexant) M56SCD modem:

```
AT&F0+MS=V34,0,19200,19200,19200,19200
ATE0M0Q1&D0&K0&Y0S0=1S30=12&W0
```

For Zyxel Omni.net ISDN modem:

```
AT&ZI4=PhoneNumber
AT&FE0Q1&D0&H0S0=1S20=5S15=2S50=10&W0
```

4. For old U.S. Robotics Sportster modem with DIP-switch, set DIP-switch as above: 1,4,8-down, 2,3,5,6,7-up.
5. Disconnect modem from the PC. Now this modem is ready for use with ECR.

6.3. ECR CONFIGURATION

Configuration of ECR is the same as for direct PC connection except of PARITY must be set to NONE.

6.4. PC - MODEM CABLE

For connecting of modem to PC where driver will run the standard modem serial cable should be used. In case of serial port is missing on PC the driver can work with USB to serial port converters.

6.5. PC MODEM CONFIGURING

It is recommended to configure modem to load factory default settings (with hardware flow enabled) at power-on by issuing following command (this should be done only once):

For U.S. Robotics Sportster modem:

```
AT&F1Y0&W0
```

For Planet ME-560R and Acorp (Conexant) M56SCD modems:

```
AT&F0&Y0&W0
```

For Zyxel Omni.net ISDN modem:

```
ATZ4
```

For old U.S. Robotics Sportster modem with DIP-switch, set DIP-switch as above:

1,2,4,6-up, 3,5,7,8-down

6.6. MODEM RELATED SETTINGS IN INI-FILE

Driver can auto-detect only directly connected (local) ECR(s). The configuration of remote ECR(s) and local modem(s) should be entered into INI-file manually:

[ECR_n] section

ModemDialNumber

Phone number used to dial remote ECR (or ECR network).

ModemPreferences

Optional parameter that forces using of particular [ModemPreferences_m] section instead of default [ModemPreferences] section.

[ModemPreferences], [ModemPreferences_m] section

DialString

Provides first part of dial command send to modem. The second part of this command will be phone number provided in “ModemDialNumber” of [ECR_n] section. As Windows can reconfigure modem it is recommended to load modem factory default settings (with hardware flow enabled) just before dialing command in the “DialString”:

For U.S. Robotics Sportster modem:

DialString = AT&F1M0DT

For Planet ME-560R and Acorp (Conexant) M56SCD modems:

DialString = AT&F0M0DT

For Zyxel Omni.net ISDN modem:

DialString = AT&FB20S42.6=1DI

ModemDialReplyTranslation

Optional parameter that forces using of particular [ModemDialReplyTranslation_m] section instead of default [ModemDialReplyTranslation] section where translation of possible modem replies into program return codes in case of unsuccessful dial attempt can be defined.

[ModemDialReplyTranslation], [ModemDialReplyTranslation_m] section

This optional section describes translation of unsuccessful dial attempt response received from modem into program return code. For example:

BUSY = 13

NO ANSWER = 14

6.7. EXAMPLES OF INI-FILE WITH REMOTE ECR(S)

This is an example of INI –file for two remote ECRs installed in different places and connected by using one local modem:

[Common]

DbgErrorLog = 1

[ECR_2]

ComNumber = 1

NetworkID = 1

ModemDialNumber = 7111111

[ECR_3]

ComNumber = 1

NetworkID = 1

ModemDialNumber = 7222222

[ModemPreferences]

DialString = AT&F1M0DT

This is an example of INI –file for one local ECR and network of two remote ECRs (only master has modem) connected by using one local modem (with translation of its unsuccessful dial replies into program return code defined):

```
[Common]
DbgErrorLog = 1

[ECR_1]
ComNumber = 1
NetworkID = 1

[ECR_2]
ComNumber = 2
NetworkID = 1
ModemDialNumber = 7333333

[ECR_3]
ComNumber = 2
NetworkID = 2
ModemDialNumber = 7333333

[ModemPreferences]
DialString = AT&F1M0DT

[ModemDialReplyTranslation]
ERROR = 11
NO DIAL TONE = 12
BUSY = 13
NO ANSWER = 14
NO CARRIER = 15
```

This is an example of INI –file for two remote ECRs connected by using two different local modems:

```
[Common]
DbgErrorLog = 1

[ECR_1]
ComNumber = 1
NetworkID = 1
ModemDialNumber = 7444444
ModemPreferences = Planet

[ECR_2]
ComNumber = 2
NetworkID = 1
ModemDialNumber = 7555555
ModemPreferences = Sportster
```

[ModemPreferences_Planet]

DialString=AT&F0MODT

[ModemPreferences_Sportster]

DialString=AT&F1MODT

DialReplyTranslation = Sportster

[ModemDialReplyTranslation]

ERROR = 10

NO DIALTONE = 11

BUSY = 12

NO CARRIER = 13

[ModemDialReplyTranslation_Sportster]

ERROR = 10

NO DIAL TONE = 11

BUSY = 12

NO CARRIER = 13

7. ADVANCED INI-FILE SETTINGS

All settings above are optional. By default its set to optimal values. But in certain situations advanced users (for example service personnel) may want to change these settings.

[Common] section

StandardLog = 0...1

Use or do not use the standard log file. Standard log file contain started, finished, statistics and also error messages. By default is 1.

DefaultECR

Section (configuration) number used if command line do not contain /Kn option.

Language

ECR language to use if unable to detect ECR type and language.

UseNumericIndexInReports = 0 ...1

Use or not record #1 and record #2 of ECR protocol as report line index instead of description string in financial, clerk, and cashier reports.

[ECR_n] section

ComSettings

Additional serial port configuration string in windows “mode” utility format (for a details see windows help). By example “baud=9600 parity=n”.

DetectEcrType = 0...1

0 = Do not detect ECR type (useful for old CHD5010 firmware)

1 = Detect ECR type (default)

Language

ECR language to use if unable to detect ECR type and language.

ComWTTC

Data write total timeout constant in milliseconds.

ComByteTimeMult

This value affects maximum allowed time gap between two sequential bytes.

MasterEcrCommMaxTime

Maximal communication time between ECR and PC for master ECR in milliseconds.

MasterSlaveCommMaxTime

Maximal communication time between master and slave ECRs in milliseconds.

Applies until detected as master.

EcrOperationMaxTimeDefault

Default maximal command execution (ECR operation) time in milliseconds.

EcrOperationMaxTime501

Maximal execution time in milliseconds for “PLU record add/modify” command.

EcrOperationMaxTime502

Maximal execution time in milliseconds for “PLU report read [and clear]” commands.

EcrOperationMaxTime521

Maximal execution time in milliseconds for “CLIENT record add/modify” command.

EcrOperationMaxTime522

Maximal execution time in milliseconds for “CLIENT report read [and clear]” commands.

ComRetryCount

Retry count on communication errors.

ComBsySleepTime

Sleep time in milliseconds on BSY response from ECR.

ComNakSleepTime

Sleep time in milliseconds on NAK response from ECR.

ComGarbageSleepTime

Sleep time in milliseconds on bad response from ECR

ExitSleepTime

Sleep time in milliseconds before driver successful exit.

ExitErrorSleepTime

Sleep time in milliseconds before driver exit when some error occurred.

ModemCommMaxTime

Maximal allowed communication time between modems

ModemConnectMaxTime

Maximal allowed modem connection time

ModemDisconnectTime

Time needed for modem to disconnect

ModemFastReplyMaxTime

Echo or fast reply wait time

ModemReplyMaxByteInterval

Maximal interval between bytes in modem reply

[CommandNumberTranslation] section

This section allows change the number of any command. For example if you define "550 = 532" in this section that will change "Financial report read" command number (532) to old one (550).

8. DIRECTORY STRUCTURE

Input/output file location is detected from the command line. If it does not contain full path than current working directory is used.

Location of configuration and log files depends on the operating system used:

- Windows version of the driver reads *configuration* INI-file from the directory, where the driver is located. The same directory is used to write *standard* and *debug* log files.
- Linux version of the driver reads *configuration* INI-file from directory */etc/chd_fdrv*. *Standard* and *debug* log files are written to */var/log/chd_fdrv* (driver has to be granted write access to these files).