ELECTRONIC CASH REGISTERS

CHD5510T, CHD5010T
CHD3550T, CHD3010T

DRIVER DESCRIPTION

CHD

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: [4.7] Linked PLU record modify [4.8] 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. INI-file [CommandNumberTranslation] section added [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 *Language* 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 *UseNumericIndexInReports* 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] *CodePage* 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 "*Negative Sales*" field added	NN
1.28	11.04.2006	1. Logo bitmap send for CHD3010 added [4.9]	NN
1.29	11.04.2006	1. Command number for CHD3010 logo bitmap send changed to 681	NN
1.30	26.05.2006	1. Connecting ECR no network section added [7] 2. Receipt header bitmap send procedure and command number changed [4.9].	NN
1.31	31.05.2006	1. Clerk record modify and table read commands added [4.5] 2. PLU table read command description added [4.1] 3. DEPARTMENT table read command added in [4.3] 4. CLIENT table read command description added [4.2] 5. Linked PLU table read command description added [4.7] 6. Cooking message table read command added in [4.8]	NN
1.32	14.06.2006	1. New INI-file parameter *UseDecimalPoint* added [5]	NN
1.33	20.06.2006	1. Zero PLU, department and linked PLU groups are alowed	NN
1.34	28.06.2006	1. Minor documentation style changes	NN
1.35	20.07.2006	1. Logo bitmap sizes for CHD3550T and CHD5510T added	NN
1.36	24.08.2006	1. Electronic journal commands added [4.11]	NN
1.37	06.09.2006	1. New INI-file parameter *AmountDecimalCount* added [5]	NN
-	21.12.2006	1. Configuration adjusted for Sweex modem in [6.2] 2. New modem cable added in [6.1]	VlaR
-	08.03.2007	1. PLU and department flag fields updated	NN
-	23.05.2007	1. Fiscal report commands added	NN
-	09.07.2007	1. Department price flags / ticket type field updated	NN

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

INTRODUCTION

CHD_DRV is a command line tool for exchanging data with CHD3550T, CHD3010T, CHD5510T and CHD5010T ECR-s. It provides sets of commands for PLU, department, casher etc. data modification, allows to reads various reports, set ECR receipt header and footer messages and much more. It even allows setting a bitmap picture as an ECR receipt header. In short – if some ECR data can be modified manually, it can be modified using CHD_DRV.

1. CONNECTING TO ECR

CHD_DRV can be connected to local or remote ECR in several ways. In the first case ECR must be connected to PC via serial cable (see picture below) or via standard network cable. Connecting ECR to network is described in details in section 7.

PC to ECR serial cable
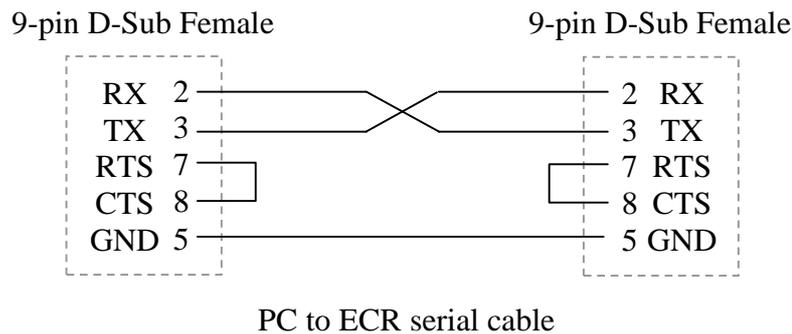
In the other case ECR can be connected via modem (described in section 6) or via network (described in section 7).

2. DRIVER USAGE

chd_drv.exe /AutoDetect   Auto-detect all locally connected ECR-s and create an INI-file.

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

Parameters:

Command	command to execute (see chapter 4)
Filename	input or output file name depending on a command.

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 CHD3550T commands & options
/H4	Show CHD5510T commands & options

Note: Use /H[n]s for service command help.

/H5	Show commands & options compatible with CHD4010 driver
/H6	Show obsolete 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. DRIVER COMMANDS

Command usage notes

- By default driver do not use decimal point in amount, price, quantity and percent fields. To enable decimal point support you can set *UseDecimalPoint*=1 in driver INI-file

- Driver always sorts 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 /H5 help option). However these commands are implemented for compatibility with legacy applications only and are not recommended for new applications!

Command index

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.

507   *PLU table read*
Read 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

517   *DEPARTMENT table read*
Read department records from ECR memory

520   *CLIENT table send*
Send client record list clearing all previous client records from ECR memory.

521   *CLIENT record add/modify*
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*
Read report for each client used during sales.

523   *CLIENT sales report read and clear*
Read and clear report for each client used during sales.

527   *CLIENT table read*
Read client records from ECR memory

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

541   Clerk record modify
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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
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545   Clerk periodical report read and clear
Read periodical report for each clerk and clear report counters

547   Clerk table read
Read clerk records from ECR memory

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.

577   Linked PLU table read
Read linked PLU table from ECR memory

581   Cooking message record modify
Modify existing cooking messages.

587   Cooking message table read
Read cooking message table from ECR memory.

650   Electronic journal status read
Reads electronic journal record count

652   Electronic journal data read
Reads electronic journal records

653   *Electronic journal data read and clear*
Reads and clear electronic journal records

670   *Logo bitmap send*
Send bitmap logo, which can be printed with or instead of receipt header.

690   *ECR type read*
Reads ECR type.

701   *Fiscal report Z counter range set*
Sets fiscal report Z counter range

702   *Fiscal report date range set*
Sets fiscal date counter range

703   *Fiscal report read*
Reads fiscal report for previously set range

4.1. PLU COMMANDS

Command 500 – PLU table send
Command 501 – PLU record add/modify

NOTE: Table send command clears all previous PLU records from ECR memory.

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	0.00-999999.99
Name	String	Max 18 chars
Department	Numeric	1-99
Group	Numeric	1-99, 0 – no group
Tax	Numeric	0-8
Secondary price	Numeric	0.00-999999.99
Price flags	Bit flags	Bit 0 – negative item Bit 6 – allow zero price 1 Bit 7 – allow zero price 2
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 see Programming Manual.

Input file example:

```
1, 0.15, "PLU 1", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
2, 0.34, "PLU 2", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
7, 1.10, "PLU 7", 8, 0, 1, 0.00, 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	$1\dots10^{13}-1$
Total sold amount	Numeric	0.00-999999999999.99
Total sold quantity	Numeric	0.000-99999999999.999

Output file example:

```
1, 0.68, 2.000
7, -4.40, -4.000
```

Command 506 – PLU record erase

Command line example:

chd_drv.exe 506 plu_to_erase.csv

Input file format:

Description	Type	Value
PLU code	Numeric	$1\dots10^{13}-1$

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

Input file example:

```
1, 0.15, "PLU 1", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
2, 0.34, "PLU 2", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
7
```

Command 507 – PLU table read

Command line examples:

chd_drv.exe 507 plu.csv

Output file format is the same as PLU send / modify command input file format.

Output file example:

```
1, 0.15, "PLU 1", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
2, 0.34, "PLU 2", 1, 0, 1, 0.00, 0, 0, 0, 0, 0, 0, 0
```

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	0.000-9999.999

Input file example:

```
1, 68.000
2, 4.500
7, 156.000
```

4.2. CLIENT COMMANDS

Command 520 – CLIENT table send
Command 521 – CLIENT record add/modify

NOTE: Table send command clears all previous client records from ECR memory.

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 1	String	Max 30 chars
Specific caption line 2	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	0.00-99.99

NOTE: For detailed information see Programming Manual.

Input file example:

```
1, "John Smith", "NY, New York", "Avenue 3/45", "phone: 723345", 15.00
2, "John Black", "NY, New York", "Avenue 7/47", "phone: 712345", 30.00
```

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	0.00-999999999999.99
Transaction count	Numeric	0-9999
Total discount amount	Numeric	0.00-999999999999.99

Output file example:

```
1, 20.00, 6, 3.00
2, -5.00, 1, -1.50
```

Command 527 – CLIENT table read

Command line examples:

chd_drv.exe 527 client.csv

Output file format is the same as CLIENT send / modify command input file format.

Output file example:

```
1, "John Smith", "NY, New York", "Avenue 3/45", "phone: 723345", 15.00
2, "John Black", "NY, New York", "Avenue 7/47", "phone: 712345", 30.00
```

4.3. DEPARTMENT COMMANDS

Command 511 - DEPARTMENT record modify

Command line example:

chd_drv.exe 511 dept.csv

Input file format:

Name	Type	Value
Department number	Numeric	1-99
Department name	String	Max 18 chars
Department tax	Numeric	0-8
HALO/LALO	Numeric	0-77
Group number	Numeric	1-9, 0 – no group
Price	Numeric	0.00-999999.99
Secondary price	Numeric	0.00-999999.99
Service rate (0.00%-99.99%)	Numeric	0.00-99.99
Price flags / Ticket type	Bit flags	Bit 0 – itemized ticket Bit 1 – print ticket Bit 2 – consolidated ticket Bit 4 – single item Bit 5 – negative item Bit 7 – allow zero price
Reserved	Numeric	–

NOTE: For detailed information see Programming Manual.

Input file example:

```
1, "Department1", 1, 0, 0, 0.00, 0.00, 0.00, 0, 0
2, "Department2", 1, 0, 0, 0.00, 0.00, 0.00, 0, 0
5, "Department5", 2, 0, 0, 4.50, 0.00, 0.00, 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	0.00-999999999999.99
Total sold quantity	Numeric	0.000-99999999999.999

Output file example:

```
1, 14.21, 7.000
2, -0.20, -1.000
```

Command 517 – DEPARTMENT table read

Command line examples:

chd_drv.exe 517 dept.csv

Output file format is the same as DEPARTMENT modify command input file format.

Output file example:

```
1, "Department1", 1, 0, 0, 0.00, 0.00, 0.00, 0, 0
2, "Department2", 1, 0, 0, 0.00, 0.00, 0.00, 0, 0
```

4.4. FINANCIAL REPORT COMMANDS

Command 532 – Financial report read
Command 533 – 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", 204.02, 0
"TAXABLE-1 WITH TAX", 76.90, 0
"TAXABLE-1 W/O TAX", 76.80, 0
"TAX 1 TOTAL", 1.00, 0
...
"AMOUNT ADD-ON", 5.00, 1
"AMOUNT DISCOUNT", -5.00, 1
```

4.5. CLERK COMMANDS

Command 541 - Clerk record modify

Command line example:

chd_drv.exe 541 clerk.csv

Input file format:

Name	Type	Value
Clerk number	Numeric	1-99
Clerk name	String	Max 18 chars
Pass code	Numeric	0-999
HALO/LALO	Numeric	0-77
Commission rate (0.00%-99.99%)	Numeric	0.00-99.99
Commission factor	Numeric	0-2
Prohibit operations	Numeric	0-77
Supervisor	Numeric	0-1

NOTE: For detailed information see Programming Manual.

Input file example:
```
1, "Clerk 1", 111, 0, 0.00, 0, 0, 0
2, "Clerk 2", 123, 0, 10.00, 0, 0, 1
```

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
COMMISION	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",0.00,0
1,"COMMISION",0.00,0
...
```

Command 547 – Clerk table read

Command line examples:

chd_drv.exe 547 clerk.csv

Output file format is the same as clerk modify command input file format.

Output file example:

```
1, "Clerk 1", 111, 0, 0.00, 0, 0, 0
2, "Clerk 2", 123, 0, 10.00, 0, 0, 1
```

4.6. 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	$0 – (10^{14}-1)$
Receipt count	Numeric	$0 – (10^{8}-1)$

Output file example:

```
...
13, 2.00, 2
14, 0.00, 0
15, 4.09, 4
16, 208.02, 31
17, 8.68, 8
...
```

Command 571 – Linked 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	0.00-999999.99
Name	String	Max 18 chars
Department	Numeric	1-99
Group	Numeric	1-9, 0 – no group
Tax	Numeric	0-8
Secondary price	Numeric	0.00-999999.99
Sign	Numeric	0-1

NOTE: For detailed information see Programming Manual.

Input file example:

```
1, 0.45, "Linked PLU 1", 1, 1, 8, 0.00, 0
2, 0.23, "Linked PLU 2", 1, 1, 8, 0.00, 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	0.00-99999999999.99
Total sold quantity	Numeric	0.00-99999999999.999

Output file example:

```
1, 0.68, 2.000
7, -4.40, -4.000
```

Command 577 – Linked PLU record read

Command line examples:

chd_drv.exe 577 link_plu.csv

Output file format is the same as linked PLU modify command input file format.

Output file example:

```
1, 0.45, "Linked PLU 1", 1, 1, 8, 0.00, 0
2, 0.23, "Linked PLU 2", 1, 1, 8, 0.00, 0
```

4.8. 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

NOTE: For detailed information see Programming Manual.

Input file example:

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

Command 587 – Cooking message record read

Command line examples:

chd_drv.exe 587 cook_msg.csv

Output file format is the same as cooking message modify command input file format.

Output file example:

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

4.9. LOGO BITMAP SEND COMMAND   2

Command 670 – Logo bitmap

Command line example:

chd_drv.exe 670 logo_320x240.bmp

Input file should be a standard B/W (monochrome) bitmap.
Bitmap width depends on ECR type:

ECR type	Logo bitmap width
CHD3010	240 pixels
CHD3550	384 pixels
CHD5010	432 pixels
CHD5510	384 pixels

Bitmap height can be selected by:
(Keylock in PRG-position) 18 [#/NS] 3 [#/NS] *HeightCode* [CASH] [#/NS]

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

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

4.10. READ ECR TYPE COMMAND

Command 690 – Read ECR type

Command line example:

chd_drv.exe 690 EcrType.csv

Output file format:

Description	Type	Value
ECR model	String	

Output file example:

CHD5010T

4.11. ELECTRONIC JOURNAL COMMANDS

NOTE: Electronic journal commands are country specific and are supported by the specific ECR firmware only.

Command 650 – Electronic journal status read

Command line examples:

chd_drv.exe 650 EJ.csv

Output file format:

Description	Type	Value
Total EJ record count	Numeric	0 – 99999999
Currently used EJ record count	Numeric	0 – 99999999

Output file example:

```
10000, 135
```

Command 652 – Electronic journal data read
Command 653 – Electronic journal data read and clear

Command line examples:

chd_drv.exe 652 EJ.csv
chd_drv.exe 653 EJ.csv

Output file format:

Description	Type	Value
Electronic journal record	String	

Output file example:

```
ECR#0000    RECEIPT#00000017
DEPARTMENT 1          0.01
- - - - - - - - - - - - - - -
NON-TAXABLE           0.01
- - - - - - - - - - - - - - -
AMOUNT                0.01
...
```

4.12. FISCAL REPORT COMMANDS

Command 701 – Fiscal report Z counter range set

Command line example:

chd_drv.exe 701 Z_Range.csv

Input file format:

Description	Type	Value
Table number	Numeric	1 – financial report (Z) 2 – VAT changes 3 – LOGO changes 4 – FM disconnect log 5 – printer log 6 – technician log
Report type	Numeric	0 – summary report 1 – detailed report
Start Z counter	Numeric	0 – 999999
End Z counter	Numeric	0 – 999999

Input file example (Z counter range):

```
1, 0, 1, 7
```

Command 702 – Fiscal report date range set

Command line example:

chd_drv.exe 702 Date_Range.csv

Input file format:

Description	Type	Value
Table number	Numeric	1 – financial report (Z) 2 – VAT changes 3 – LOGO changes 4 – FM disconnect log 5 – printer log 6 – technician log
Report type	Numeric	0 – summary report 1 – detailed report
Start date	Date	DD–MM–YY DD – two digit day, MM – two digit month, YY – two digit year
End date	Date	DD–MM–YY DD – two digit day, MM – two digit month, YY – two digit year

Input file example (date range):

```
1, 0, 01-05-07, 21-05-07
```

Command 703 – Fiscal report read

Command line example:

chd_drv.exe 703 Report.txt

Output file format:

Description	Type	Value
Fiscal report line	String	

Output file example:

```
...
FROM Z:0005                                 18-05-2007 St:12:34
TO   Z:0005                                 18-05-2007 St:12:34
- - - - - - - - - - - - - - - - -
Z:5                                         18-05-2007 St:12:34
TAXABLE W/TAX TOTL                                        10.00
TAXABLE W/O TAX TL                                         8.25
TAXABLE-E WT 0.00%                                         5.00
...
```

5. STANDARD INI-FILE SETTINGS

To work properly 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.

UseDecimalPoint = 0…1
Use or do not use decimal point in amount, price, quantity and percent fields.
By default is 0.

AmountDecimalCount
Number of decimal in price and amount fields. By default is 2.

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 ECR 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 also has to be connected to a modem. In case of remote ECR network only master ECR needs modem. It is recommended to use the same modems on both sides.

6.1. ECR - MODEM CABLES

```
        ECR                              Modem
   9-pin D-Sub Female            25-pin D-Sub Male

     RX   2 ─────────╲   ╱────────── 2  RX
     TX   3 ─────────╱   ╲────────── 3  TX
     RTS  7 ─┐
     CTS  8 ─┘
     GND  5 ─────────────────────── 7 GND


        ECR                              Modem
   9-pin D-Sub Female            9-pin D-Sub Male

     RX   2 ─────────────────────── 2  RX
     TX   3 ─────────────────────── 3  TX
     RTS  7 ─┐
     CTS  8 ─┘
     GND  5 ─────────────────────── 5 GND
```
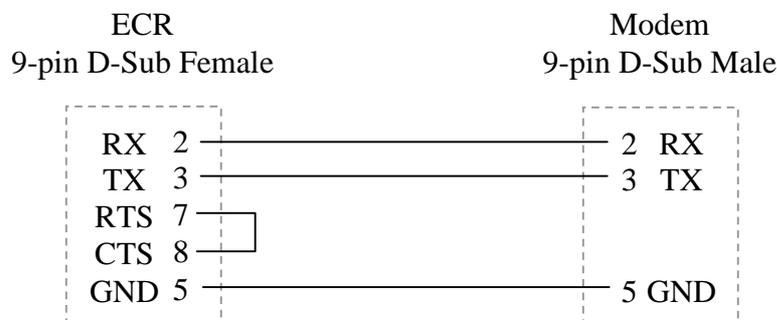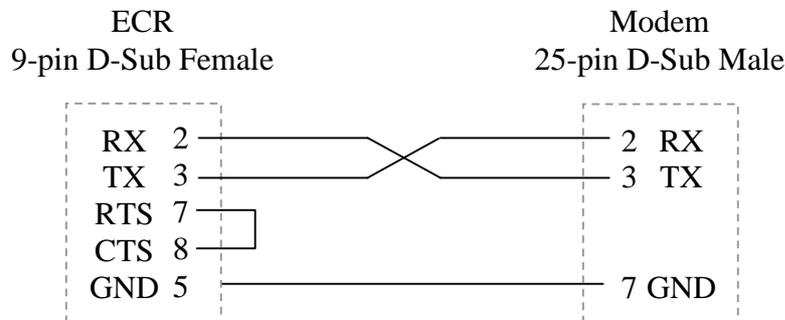
6.2. ECR MODEM CONFIGURING

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(s) to modem:

   For U.S. Robotics Sportster modem:
   AT&F1E0M0Q1Y0&B1&D0&H0&N10&R1S0=1S19=2&W0

   For Planet ME-560R modem (2 commands!):
   AT&F0+MS=11,0,19200,19200,0,0,19200

ATE0M0Q1&D0&K0&Y0S0=1S30=12&W0

For Acorp (Conexant) M56SCD and Sweex MO050 modems (2 commands!):
AT&F0+MS=V34,1,19200,19200,19200,19200
ATE0M0Q1&D0&K0&Y0S0=1S30=12&W0

For Zyxel Omni.net ISDN modem (2 commands!):
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, Acorp (Conexant) M56SCD and Sweex MO050 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 INI-FILE SETTINGS

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, Acorp (Conexant) M56SCD and Sweex MO050 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&F0M0DT

[ModemPreferences_Sportster]
DialString=AT&F1M0DT
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. CONNECTING TO ECR THROUGH ETHERNET

Some ECR models have a build-in network card and can be connected to network. Accessing ECR through a network can significantly improve data exchange speed and reliability.

7.1. CONFIGURING ECR

Then connecting to network ECR must be assigned an IP address and UDP port on which it will listen for data exchange requests. Also a gateway address and subnet mask must be set. For security reasons it is required to specify an IP address from which ECR will be accessed.

ECR network settings can be programmed in the following way:

Move key-lock to PRG-position
53 [#/NS]
ECR IP address [CASH]
IP address from which ECR will be accessed [CASH]
UDP port [CASH]
Gateway [CASH]
Network mask [CASH]
[#/NS]

7.2. NETWORK RELATED INI-FILE SETTINGS

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

[ECR_n] section

IpAddress
ECR IP address.

UdpPort
ECR data exchange UDP port.

NetworkEcrCommMaxTime
Maximal communication time between network ECR and PC in milliseconds.

8. ADVANCED INI-FILE SETTINGS

All settings below are optional. By default they are 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).

9. 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).