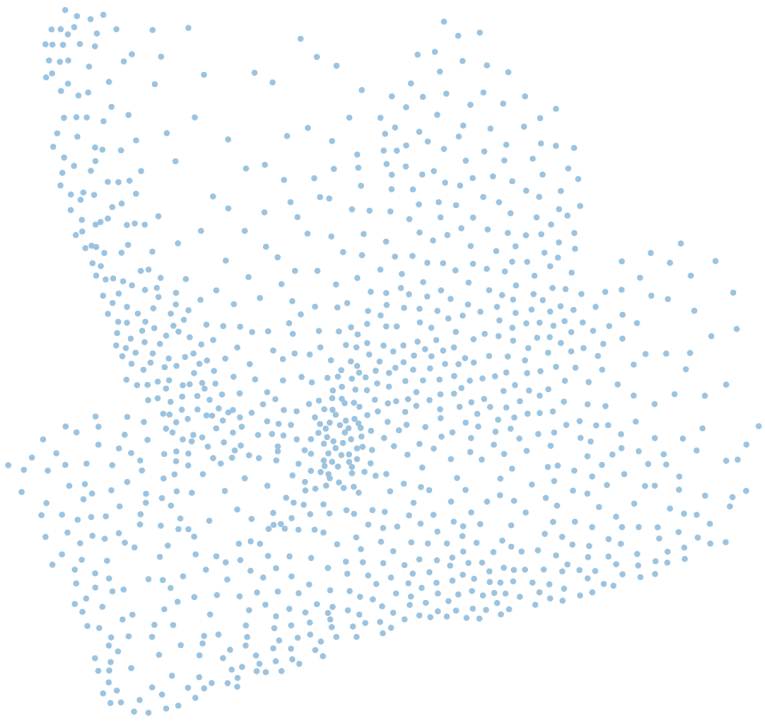
FLOWBIRD
Urban
Intelligence

The CWT Service Menu

Applications involved:
CWT



The CWT Service Menu
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Flowbird

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Table of content

1 Introduction

1.1 About the CWT Service Menu

The CWT Service menu provides several tools to manage the terminal.

The service menu can be used to change a few functions in one or a few terminals.

1.2 List of major changes

The list below contains major changes since the last released version.

Chapter/Area	Page	Change	Issue
Initial draft			1

1.3 Related manuals

Related manuals can be found on our partner area

WebOffice User Guide	Common user guide
WebOffice Support Guide	User guide for Support administrators. Currently, this user group is only found within the Flowbird group and its subsidiaries.
CWT [model name] Installation & Maintenance	Describes how to install and maintain the CWT Terminal.
CWT Software Configuration Handbook	Describes how to set up the functions used in the application program in CWT terminals.
CWT User Interface Design Handbook	Describes settings related to the CWT user interface, that is, the information presented in the CWT display.
MP 104 System – System Manual	Describes, among other things, the commands used for controlling and configuring MP 104 terminals.

How-to guides

How-to guides explain how to configure several features that need e.g. WebOffice and CWT terminals amongst other applications.

Below we list the How-to guides that involve WebOffice:

- How to configure Flowbird GO Plus
- How to configure Permit in WebOffice
- How to configure WebOffice HUB
- How to Retrieve Files from a CWT
- How to set up Digital Receipts
- How to set up External Payments
- How to set up Flowbird Access for garage entry
- How to set up Flowbird Connect for EV Charging
- How to set up Flowbird GO Barrier
- How to set up MyParking
- How to set up Ongoing Purchase
- How to set up Overpayment
- How to set up Post Payment
- How to set up Purchase Pre-Requisites
- How to set up Recall
- How to set up and use the Wallet
- How to use the Tariff Editor

2 The CWT Service menu

2.1 Accessing the service menu

CWT Compact CWT 21XX

The service menu is automatically displayed as the terminal enters service mode when you open the cabinet door.

See *CWT Installation & Maintenance Manual* for instructions on how to open the cabinet door with the electronic locks.

NOTE:
After you have opened the upper door, the electronic lock will be closed again after a 15 s timeout to save power. Because the terminal is in the service mode, you cannot prove your identity and get the necessary privilege to open the door again. Instead, you have to press an Open Upper Door key shown in the start

page of the service menu to open the lock mechanism again. The base door lock also has a 15 s timeout, but you can still run the normal application and open the door by identifying yourself as usual.

2.2 Service menu layout

The Service menu provide several tools to manage the terminal

The list below depicts the service menu as it is configured in the standard configuration.

- Force Heartbeat 8
- Software update 8
  - Update application -> Main Application Update from CAB files
  - Update Main AVR -> Update from HEX files
  - Update Coin AVR -> Update from HEX files
  - Update Piezo AVR -> Update from HEX files
  - Update OS -> Load OS image from BIN files
  - Update OS bootloader (eboot) -> Load OS image from BIN files
- Terminal 9 -> Display terminal information
- Events 9 -> display current events
- Date and time 9
  - Date -> set the date
  - Time -> set the time
- ExternalPayUnitDlls -> gives access to additional actions for the external Pay Unit(s) installed
- Utilities 12
  - Force Heartbeat 8
  - Copy system logs -> copy the system logs to an external drive commonly connected to a USB port
  - Test purchase mode 12 -> make a test purchase
  - Measure Battery Voltage -> measure and display the current battery voltage
  - Scan Modem Network Status ->
  - Manual Collection XpayUnit -> make a collection for the selected pay unit
  - Export config 13 -> export the current configuration to an external drive commonly connected to a USB port. the default filename will be saved_cwtconfig.xml
  - Import config from file 16 -> import a configuration file in .xml format from an external drive

- Export idConfig 16 -> export the current CWT id configuration to an external drive commonly connected to a USB port. the default filename will be saved_cwtid.xml
- Import idConfig from file 16 -> import a cwtid configuration file in .xml format from an external drive
- Update printer firmware ->
- Update Gebe Fonts -> update the fonts in the GeBe printer

- SystemInformation 17 -> display system information

2.2.1 Force Heartbeat

Executing this command forces the terminal to start a Heartbeat session to WebOffice

2.2.2 Software update

The CWT contains the operating system, the CWT application and up to four different firmwares for the AVR microcontrollers on CPU board, termination board, coin board and optional E-lock boards.

IMPORTANT:
If OS 3.12.0.2 isn´t installed on the terminal, the OSLOG data may be overwritten after an update of the terminal's Windows CE operating system and a backup copy of the settings therefore needs to be saved and reinstalled during the updating procedure if OSLOG data should be saved.

AVR firmwares

The CWT application and the AVR firmwares, except the E-lock firmware, can be updated via WebOffice.

All AVR firmwares, except the E-lock firmware, can also be updated via the service menu. See below.

The E-lock AVR firmware and bootloader files can only be updated from a PC (see Updating the AVR firmware from a PC 23).

This is how you update AVR firmwares and the application software via the service menu:

Menu heading	Description
Software update Update term AVR Update coin AVR Update main AVR Update application	Insert the USB memory stick containing the updated program and select the appropriate device and folder. Select the file. Updating will start. The terminal should restart upon completion. Otherwise, restart manually.

Windows OS

The operating system (Windows CE5 or EC7) can be updated from a PC or USB stick.
See documents below for a description on how to update the OS:

- CWT-C OS Update for CPU board version 0401-E0502 Rev A and earlier
- CWT-C OS Update for CPU board version 0501-E0150

2.2.3 Terminal information

The terminal identity (ID), a unique name for each terminal, can only be set using the service menu, either by entering it character by character or by loading the information as part of a *cwtid.xml* file.

See also Setting the CWT identity in cwtid.xml in the CWT Software Configuration Handbook, regarding the terminal ID setting.

Cannot be altered via the service menu just for browsing!

Attributes in cwtid.xml

terminalId

Terminal ID specified by file: cwtid.xml.

terminaGuid

Hexadecimal character string generated by the WebOffice when the Terminal ID is initiated the first time in the WebOffice.

2.2.4 Events

This page allows you to view current event status in the CWT. It is also possible to cease certain alarms.

The only possible way to cease the seismic alarm is through this part of the service menu.

2.2.5 Date and time

2.2.5.1 Setting the Date

Important:
The terminal enters "Out of order state" when the terminal date is 12 months older then the CWT software timestamp.

STN display

After selecting this option, select the setting you want to change

Examples are for the CWT 2110/15 models but work the same in the Compact with an STN display. The buttons are in the Compact below the screen

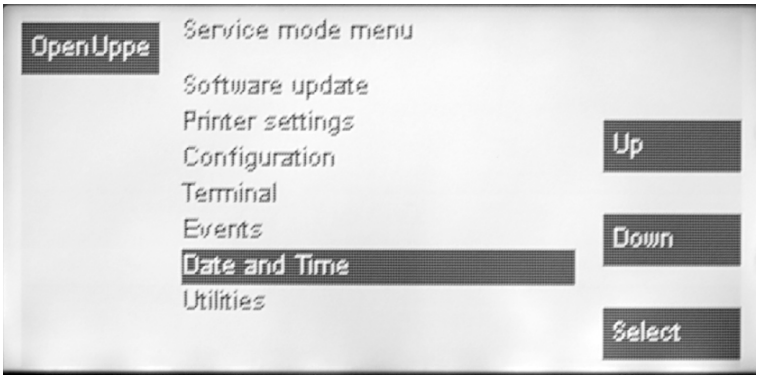


Figure 11. Select the date and time setting function.

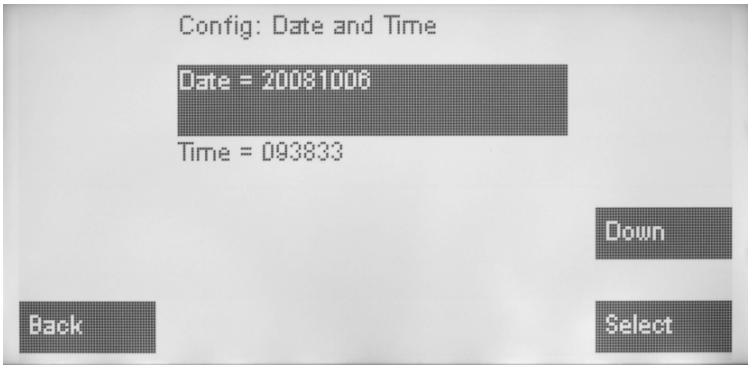


Figure 12. Select the date setting function.

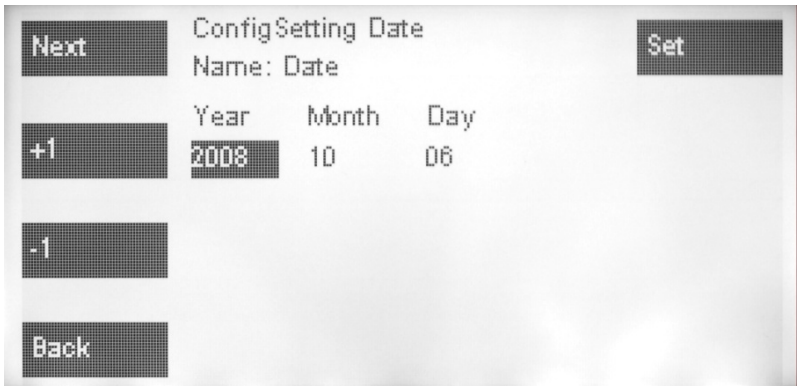


Figure 13. Change the date setting using the display buttons. Pressing the Set button stores the change.

TFT display

To change the date and time using a TFT touch screen you need to connect a PC keyboard to the USB interface connector on the termination board or at the back of the main board. Then continue as described below:

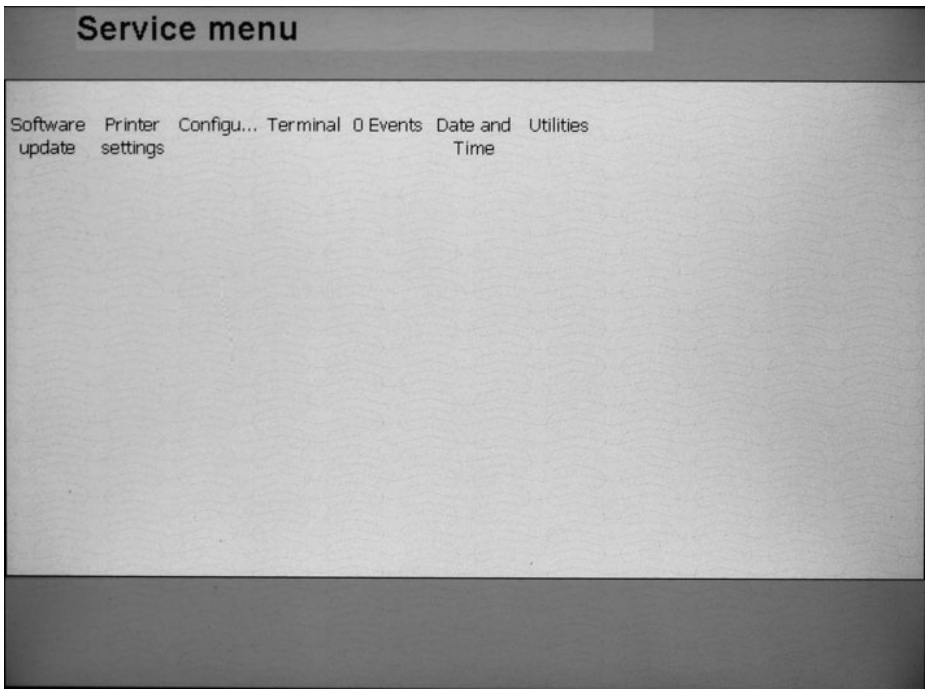


Figure 14. Select the Date and Time caption.

Figure 15. Select the Date caption and press the Show button.

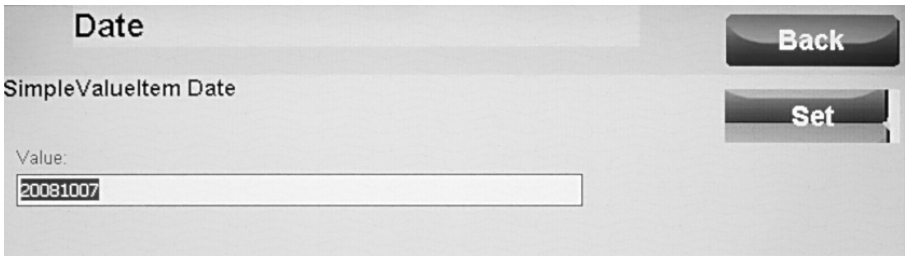


Figure 16. Select the date.

Now change the date as you would do using your ordinary PC keyboard. When finished, touch the Set button to store the change.

2.2.5.2 Setting the Time

The principles for setting the time are the same as those used to set the date as described above.

2.2.6 ExternalPayUnitDlls

The content of this sub menu depends on the external pay unit(s) installed

2.2.7 Utilities

- Force Heartbeat 8
- Copy system logs -> copy the system logs to an external drive commonly connected to a USB port
- Test purchase mode 12 -> make a test purchase
- Measure Battery Voltage -> measure and display the current battery voltage
- Scan Modem Network Status ->
- Manual Collection Xpay Unit 13 -> make a collection for the selected pay unit
- Export config 13 -> export the current configuration to an external drive commonly connected to a USB port. the default filename will be saved_cwtconfig.xml
- Import config from file 16 -> import a configuration file in .xml format from an external drive
- Export idConfig 16 -> export the current CWT id configuration to an external drive commonly connected to a USB port. the default filename will be saved_cwtid.xml
- Import idConfig from file 16 -> import a cwtid configuration file in .xml format from an external drive
- Update printer firmware ->
- Update Gebe Fonts -> update the fonts in the GeBe printer

2.2.7.1 Force Heartbeat

Executing this command forces the terminal to start a Heartbeat session to WebOffice

2.2.7.2 Test purchase mode

CWT 21XX

It is possible to make test purchases in the CWT without charge and without affecting the statistics.

- Test purchase mode is entered from the service menu or by inserting a test token. See more about test token settings in Pay unit element.
- Closing the Upper door will exit the Test purchase mode if the test mode is triggered from the service menu.

- Test purchase mode started with test token is active ONLY until a test purchase is accepted or rejected.
- The user interface is the same as in the normal application.
- A test purchase tariff id MUST be defined, see more: testPurchasesTariffPackageId under Payment Element
- When accepting purchases all pay units are rejected.
- No purchase or transaction data is saved.
- A ticket is printed with the same layout as usual but with the text “NOT VALID”. The text “NOT VALID” is printed in a default position if the ticket layout does not contain @TP which otherwise specifies where the text should be printed. The string “NOT VALID” can be translated.
- An event is sent to WebOffice when a test purchase is made.
- Purchase number is not increased.

2.2.7.3 Manual Collection Xpay Unit

This option allows for executing a manual collection on an external pay unit. As the method differs per pay unit no detailed description is given here

2.2.7.4 Export configuration to file

This function is used to export the current terminal configuration to an external memory device such as a USB memory stick.

The exported file (*saved_cwtconfig.xml)* is a copy of the *currentconfig.xml* file stored on the SD memory card. If you wish to use the *saved_cwtconfig.xml* file to set up other terminals, you first need to change the file name to *cwtconfig.xml*.

- CWT Compact 13
- CWT 2110/2115 14
- CWT 2120 15

2.2.7.4.1 CWT Compact

- Select the location of your USB device. Normally called Hard Disk
- Select the folder to save to
- After selecting the file is saved to the folder and you will return to the Utilities menu

2.2.7.4.2 CWT 2110/2115

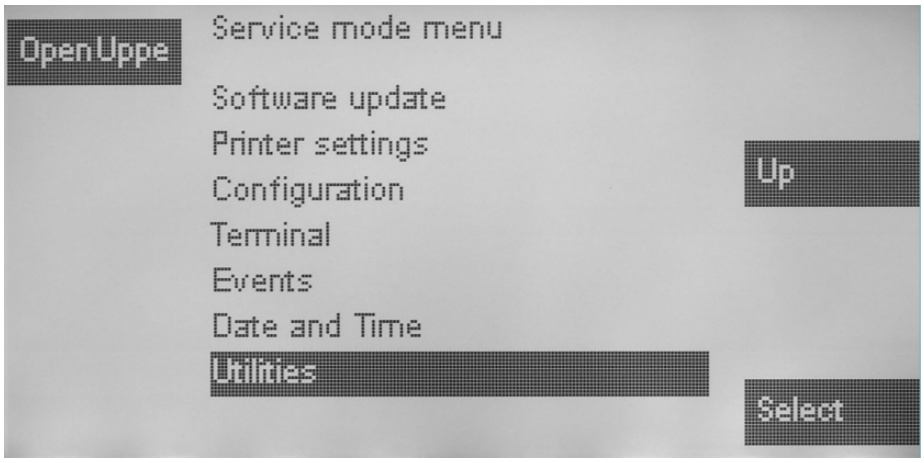


Figure 17. Select Utilities.

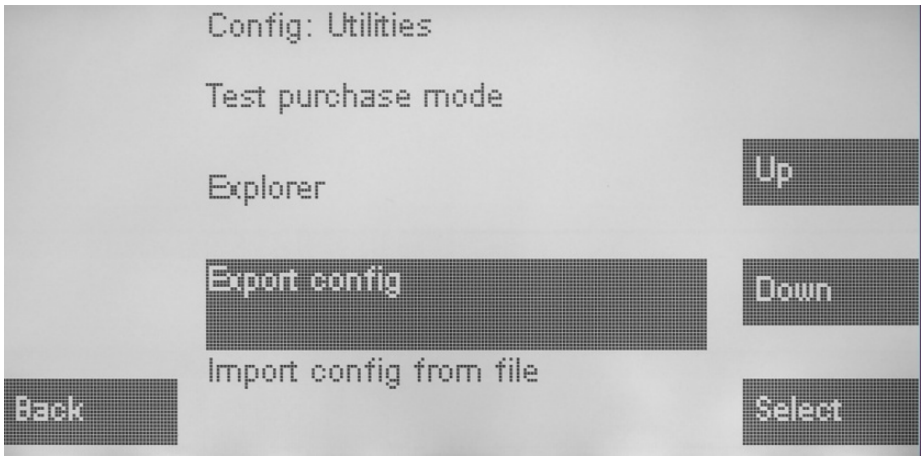


*Figure 18. Select **Export config**(uration).*

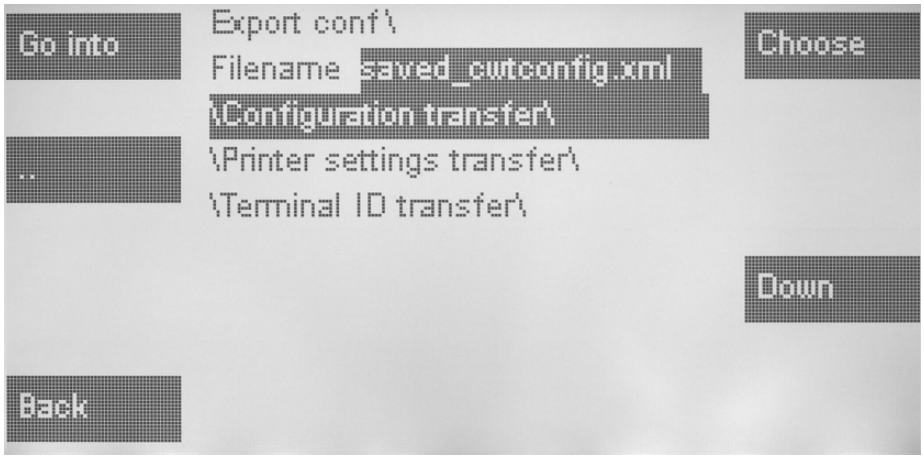


*Figure 19. Press **Choose** to store the file in the root or mark the desired folder and press **Go into**.*

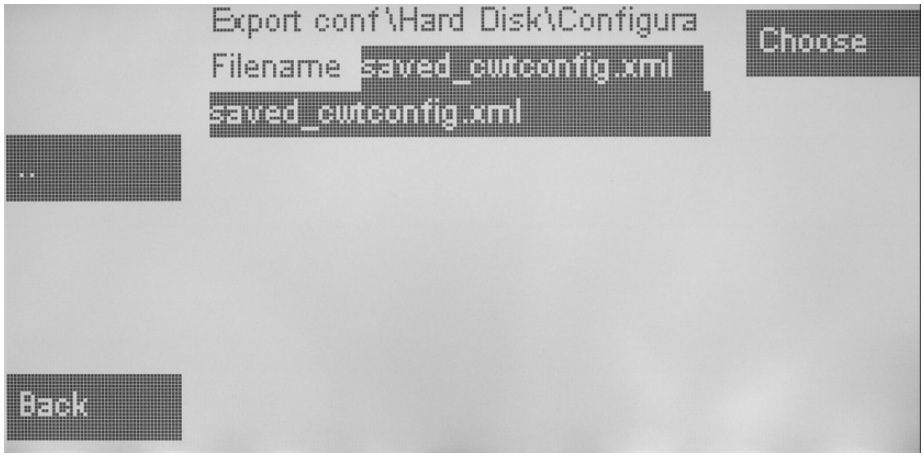


*Figure 20. Existing folder **Configuration transfer** selected. An existing file with the same name (as illustrated above) will be overwritten without any warning. Pressing the **Choose** button starts the file export.*

2.2.7.4.3 CWT 2120

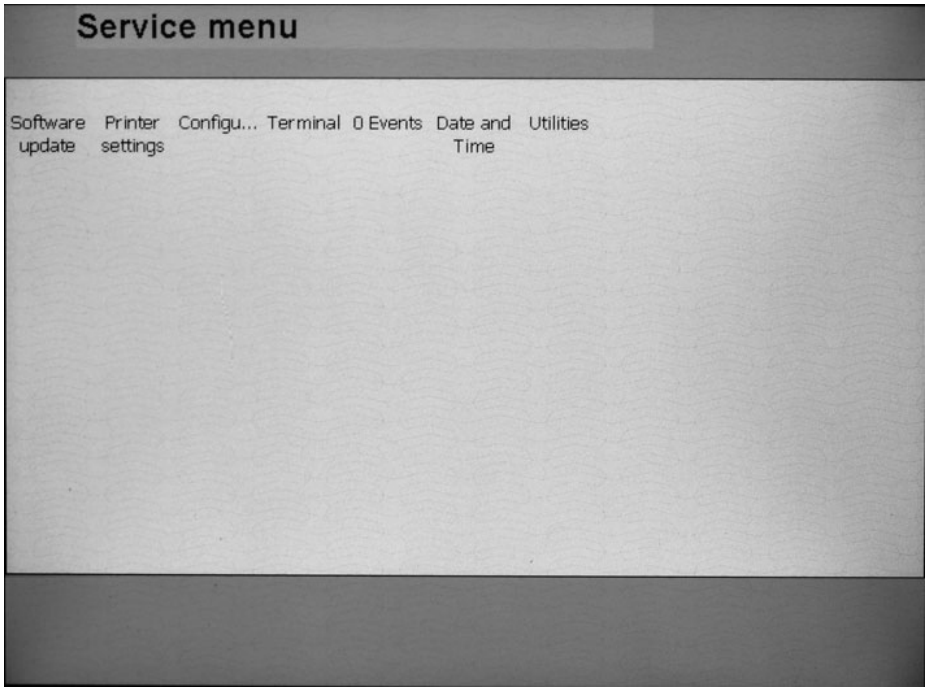


*Figure 21. Select **Utilities**.*

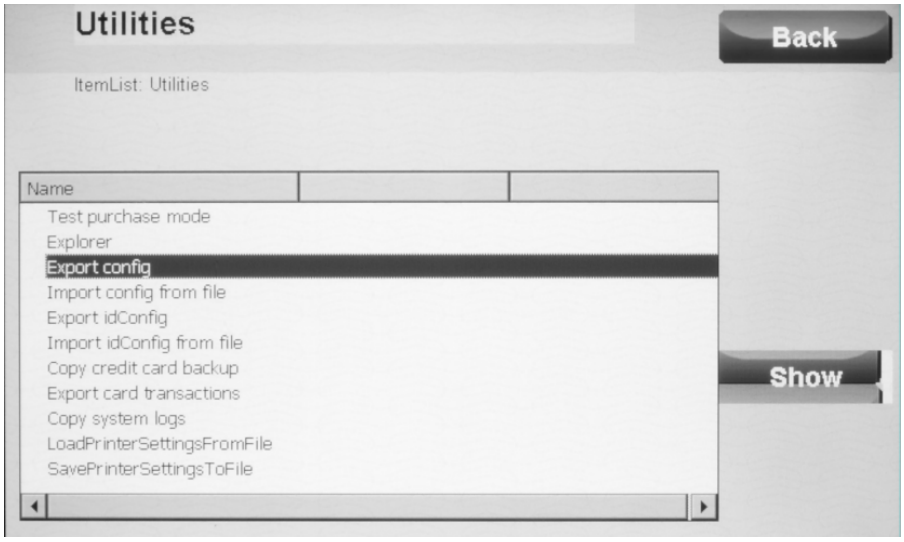


*Figure 22. Select **Export config** and press the **Show** button..*

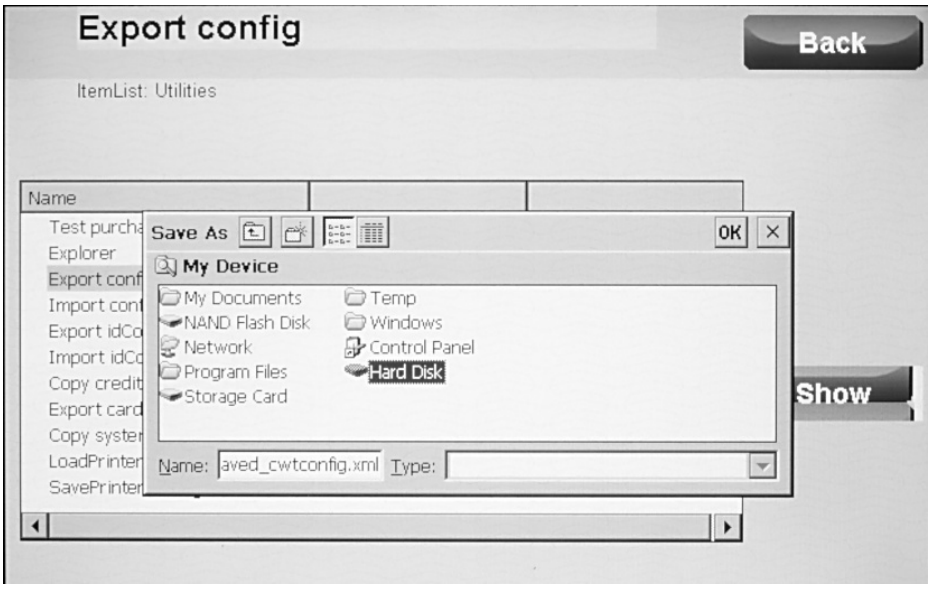


*Figure 23. Select **Hard disk** (shown only if a memory device is connected and press **OK** button.*

The Utilities screen will be shown when the copying process completes after a few seconds.

2.2.7.5 Import configuration from file

Importing a configuration means importing a *cwtconfig.xml* file from an external memory device. The procedure is the same as the export configuration procedure described above and therefore does not require any further description.

2.2.7.6 Export Id configuration to file

The procedure is similar to the export configuration procedure described above and therefore does not require any further description.

2.2.7.7 Import Id configuration from file

The procedure is similar to the export configuration procedure described above and therefore does not require any further description.

2.2.8 SystemInformation

Enter topic text here.

2.3 Service Menu User Interface

This is the service menu User Interface definition as it is used in the Standard configuration

Example:

```
<!-- The servicemode menu definition (Content in the main menu and
submenus of the service menu) -->
<SM:ItemList Name="ServiceMenu" Label="Service menu">
   <Items>
      <SM:ForceCwoHeartbeat Name="ForceCwoHeartbeat" Label="Force
Heartbeat"/>
      <SM:ItemList Name="SoftwareUpdate" Label="Software update">
         <Items>
            <SM:ApplicationUpdate Name="MainAppUpdate" Label="Update
Application" DefaultPath='\Hard Disk' FilePattern="CAB files|*.cab"/>
            <SM:AvrUpdate Name="MainUpdate" Label="Update Main AVR"
Module="MAIN" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:AvrUpdate Name="CoinUpdate" Label="Update Coin AVR"
Module="COIN" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:AvrUpdate Name="PiezoUpdate" Label="Update Piezo AVR"
Module="PIEZO" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:LoadOSImage Name='LoadOSImage' Label='Update OS'
DefaultPath='\Hard Disk' FilePattern='BIN files|*.bin'/>
            <SM:LoadOSImage Name='LoadOSImage' Label='Update OS bootloader
(eboot)' DefaultPath='\Hard Disk' FilePattern='BIN files|*.bin'/>
         </Items>
      </SM:ItemList>
      <SM:CoreIdConfig Name="TerminalInformation" Label="Terminal"
XPath="/d:cwt">
         <Items></Items>
      </SM:CoreIdConfig>
      <SM:EventList Name="Events" Label="Events"/>
      <SM:ItemList Name="DateTime" Label="Date and Time">
         <Items>
            <SM:DateSetter Name="Date" Label="Date"/>
            <SM:TimeSetter Name="Time" Label="Time"/>
         </Items>
      </SM:ItemList>
      <SM:ExternalPayUnitDllList Name="ExternalPayUnitDlls"
Label="ExternalPayUnitDlls"/>
      <SM:ItemList Name="Utilities" Label="Utilities">
         <Items>
            <SM:ForceCwoHeartbeat Name="ForceCwoHeartbeat" Label="Force
Heartbeat"/>
            <SM:LogBackup Name="LogBackup" DisplayFiles="False"
Label="Copy system logs" DefaultPath="\Hard Disk" DefaultFilename=""/>
            <!--<SM:SendTestSms Name="SendTestSms" Label="Send Test
SMS"/>-->
            <SM:TestPurchase Name="TestPurchase" Label="Test purchase
mode"/>
            <!-- Start BatteryVoltage & ModemNetworkStatus -->
            <SM:BatteryVoltage Name="BatteryVoltage" Label="Measure
Battery Voltage"/>
            <SM:ModemNetworkStatus Name="ModemNetworkStatus" Label="Scan
Modem Network Status"/>
            <!-- End  BatteryVoltage & ModemNetworkStatus-->
            <SM:ManCollection Name="ManCollection" Label="Manual
Collection XpayUnit"/>
```

```
            <SM:XmlConfigExport Name="ExportConfig" Label="Export config"
DefaultPath="\Hard Disk" DefaultFilename="saved_cwtconfig.xml"/>
            <SM:XmlConfigImport Name="ImportConfig" Label="Import config
from file" DefaultPath="\Hard Disk" FilePattern="XML files|*.xml"/>
            <SM:XmlIdConfigExport Name="ExportIdConfig" Label="Export
idConfig" DefaultPath="\Hard Disk" DefaultFilename="saved_cwtid.xml"/>
            <SM:XmlIdConfigImport Name="ImportIdConfig" Label="Import
idConfig from file" DefaultPath="\Hard Disk" FilePattern="XML files|
*.xml"/>
            <SM:UpdatePrinterFirmware Name='UpdatePrinterFirmware'
Label='Update printer firmware' DefaultPath='\Hard Disk' FilePattern='BIN
files|*.bin'/>
            <SM:UpdatePrinterFirmware Name='UpdateGebeFonts' Label='Update
Gebe Fonts' DefaultPath='\Hard Disk' FilePattern='BIN files|*.gbe'/>
            <!--<SM:EncryptionKeyImport Name="ImportEncryptionKey"
Label="Import new encryption key" DefaultPath="\Hard Disk"
FilePattern="XML files|*.xml"/>-->
            <!--<SM:Execute Name="Explorer" Label="Explorer"
Program="explorer.exe"/>-->
            <!--<SM:CardTransactionsExport Name="ExportCardTransactions"
DisplayFiles="False" Label="Export card transactions" DefaultPath="\Hard
Disk"/>
            <SM:CreditCardTransactionBackup Name="CardBackup"
DisplayFiles="False" Label="Copy credit card backup" DefaultPath="\Hard
Disk" DefaultFilename=""/>-->
            <!--<SM:TTPLoadSettings Name="LoadPrinterSettings"
Port="LPT1:" Label="LoadPrinterSettingsFromFile"
DefaultFilename="printersettings.xml"/>
            <SM:TTPSaveSettings Name="SavePrinterSettings" Port="LPT1:"
Label="SavePrinterSettingsToFile"
DefaultFilename="saved_printersettings.xml"/>-->
         </Items>
      </SM:ItemList>
      <SM:SystemInformationList Name="SystemInformation"
Label="SystemInformation"/>
   </Items>
</SM:ItemList>
```

2.4 How to use the service menu

CWT Compact CWT 21XX

Due to continual software improvements the order in which the attributes are listed there are not necessarily the same as you will find in the terminal. In addition, some functions may have been added to or removed from the terminal software since this issue of the manual was published.

- Using the CWT 2110/2115 service menu 18
- Using the CWT 2120 service menu 20
- Using the CWT Compact STN service menu 21
- Using the CWT Compact TFT service menu 22

2.4.1 Using the CWT 2110/2115 service menu

CWT 21XX

The service menu contains a number of menu headings and dynamic control buttons.

To understand how the menu system works in CWT 2110/2115 we will show you how to change the time and date setting as an Example:.

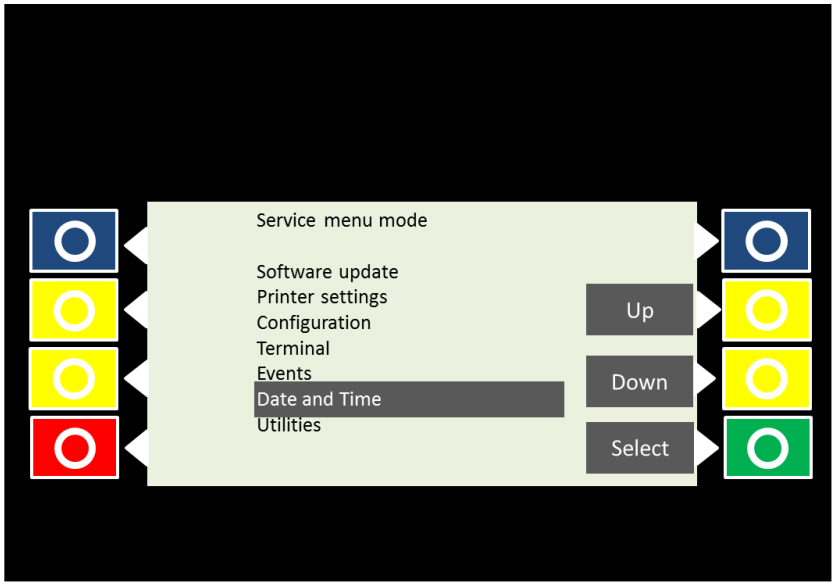


Figure 2. Service menu start page.

Mark *Date and Time* (use *Up* and *Down* buttons) and then press the *Select* button.

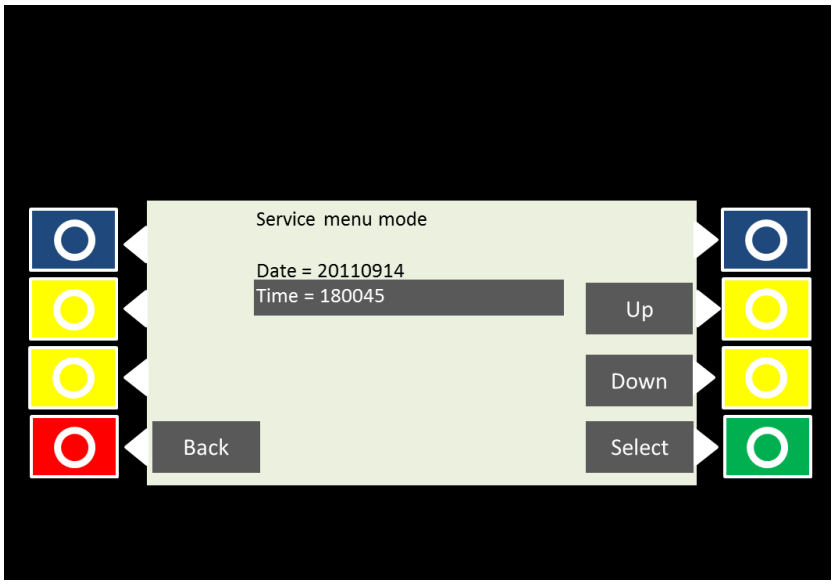


Figure 3. The Time and date settings section.

The available date and time functions are now presented. If there are more functions in the list, step down with the *Down* button. Numbers are the set value whereas “True” or “False” indicates whether the function is activated or not.

Mark the *Time* function with the *down* button.

Open the *Time* page by pressing the *Select* button.

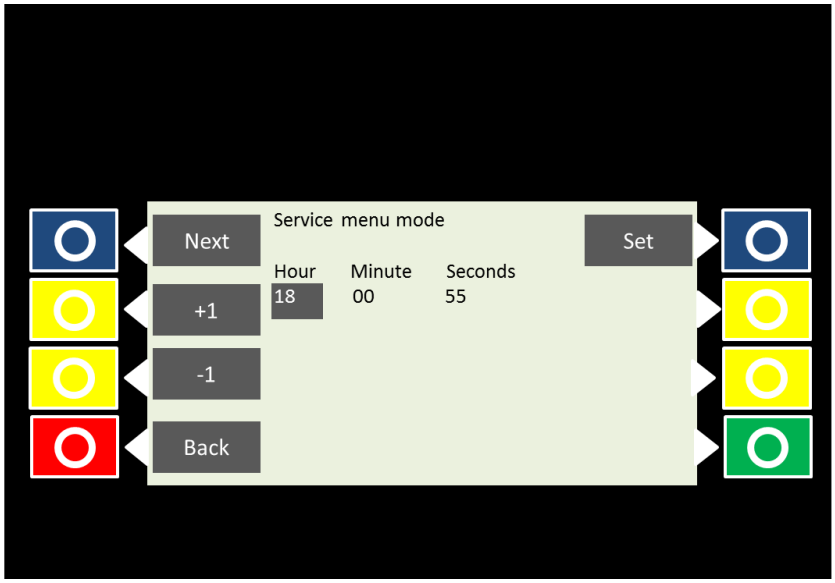


Figure 4. "Time" page opened.

The *Hour* can now be changed with help of the “+1” and “-1” buttons. Use the *Next* button to change between Hour, minute or seconds. Use the *Set* button to confirm the time.

IMPORTANT:
The time and date settings can be updated during a heartbeat from WebOffice.

2.4.2 Using the CWT 2120 and Compact touch service menu

CWT 21XX

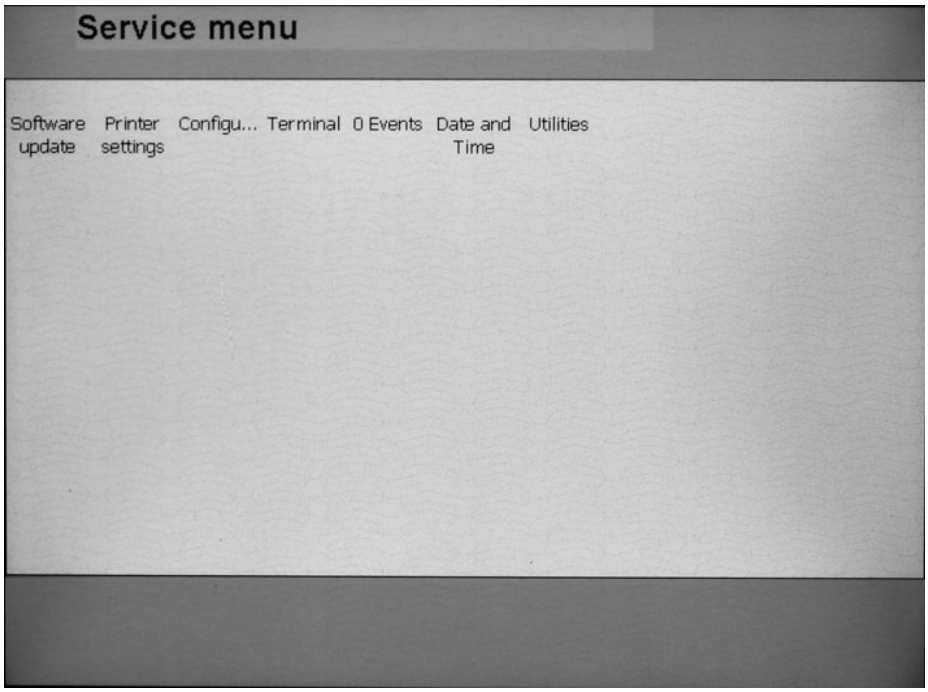


Figure 8. CWT 2120 service menu start page (only top of display window shown) .

In the CWT 2120 and the CWT compact Touch, you select functions and values by touching the desired alternative lightly with one of your fingertips.

2.4.3 Using the CWT Compact STN service menu

CWT Compact

The service menu contains a number of menu headings and dynamic control buttons.

To understand how the menu system works in CWT Compact we will show you how to change the time setting as an Example:.

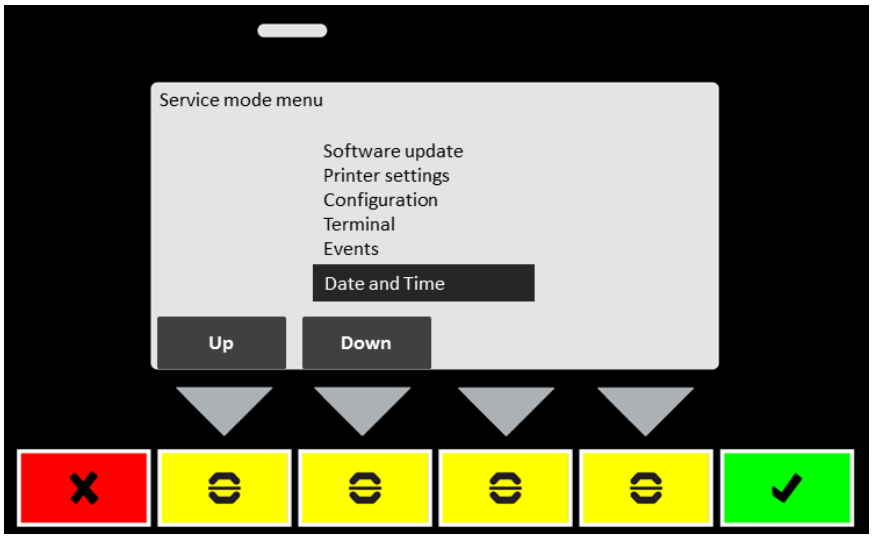


Figure 5. Service menu start page.

Mark *Date and Time* (use *Up* and *Down* buttons) and then press the *green* button on the keyboard.

Figure 6. The Date and Time settings section.

The available date and time functions are now presented. If there are more functions in the list, step down with the *Step* button. Numbers are the set value whereas “True” or “False” indicates whether the function is activated or not.

Mark the *Time* function with the *Step* button.

Open the *Time* page by pressing the Green button.

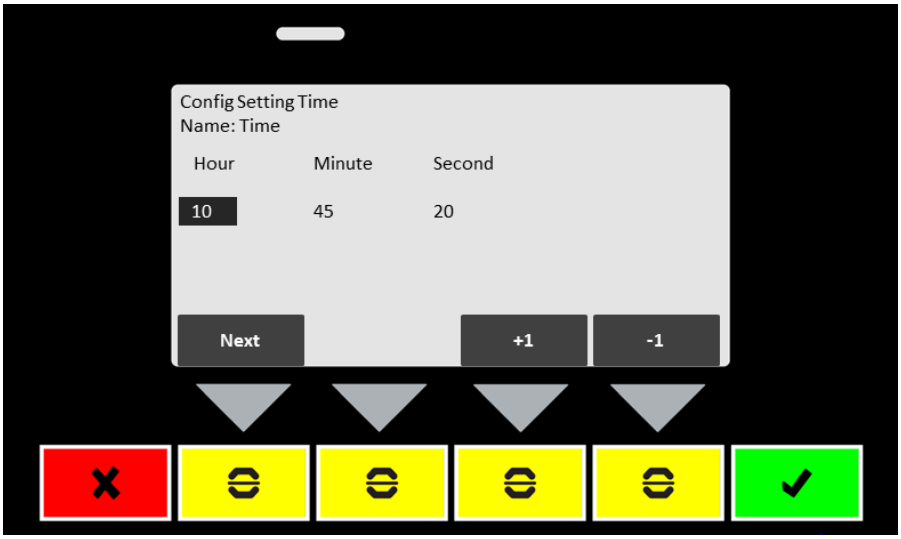


Figure 7. "Time" page opened.

The *Hour* can now be changed with help of the “+1” and “-1” buttons. Use the *Next* button to change between Hour, minute or seconds. Use the Green button to confirm the time.

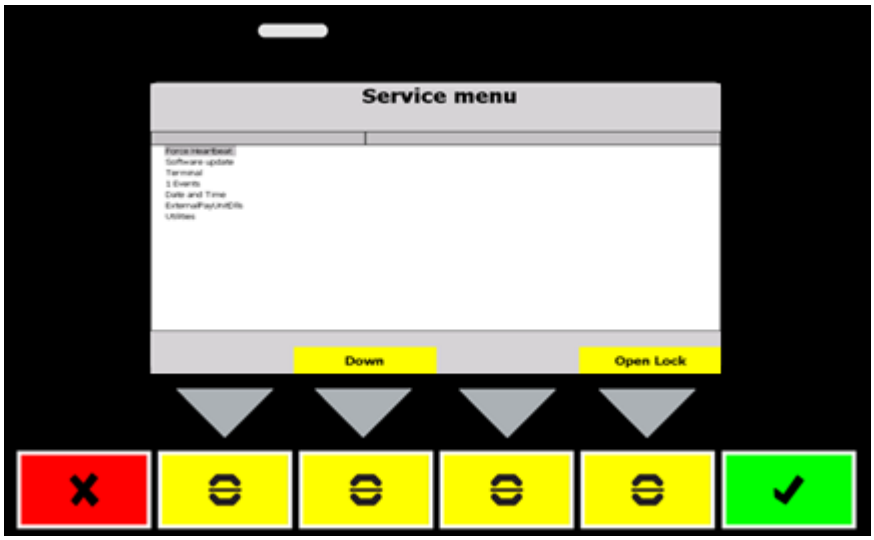
IMPORTANT:
The time and date settings can be updated during a heartbeat from WebOffice.

2.4.4 Using the CWT Compact TFT service menu

CWT Compact

The service menu contains a number of menu headings and dynamic control buttons.

The TFT service menu works in the same way as the STN service menu. The only difference is that the display is in colour



2.5 Offline Support

It is possible to use a CWT without a connection to WebOffice. Collection history, balance and the 20 latest events can be printed on a ticket from the service menu. To get this functionality, contact your local Flowbird Support agent. Below, the default functionality for offline support in the service menu is described.

Print Eventlog: Prints the 20 latest events on a receipt.

Print collection history: Prints the latest collections on a receipt. The layout of the receipt is determined by a attribute see collectionHistoryTicketId in the section Pay unit account element.

Note:
A collection is NOT made with this command. It only prints the results of the latest collections.

Print balance: Prints the current balance in the terminal. The layout of the receipt is set by a attribute, see balanceTicketId in the section Pay unit account element.

By disabling the heartbeat function (cwoHeartbeatInterval="0"), the terminal will not search for a connection to WebOffice. To prevent the database from filling up with operational data, offline terminals must add a attribute, dataCollection timeLimit and the actionproperties in Schedule element, to clean old data from the database. These attributes can also be used for terminals connected to WebOffice to clean old or corrupt transactions that are no longer compatible with WebOffice.

3 Related information

- Updating the AVR firmware from a PC 23
- Changing CWT 21XX software and AVR firmwares 23

3.1 Updating the AVR firmware from a PC

This appendix has been moved to a separate document

See documents below for a description on how to update the different AVR

- CWT 21xx AVR update instructions

3.2 Changing CWT 21XX software and AVR firmwares

CWT 21XX

The CWT contains the operating system, the CWT application and up to four different firmwares for the AVR microcontrollers on CPU board, termination board, coin board and optional E-lock boards.

IMPORTANT:
If OS 3.12.0.2 isn´t installed on the terminal, the OSLOG data may be

overwritten after an update of the terminal's Windows CE operating system and a backup copy of the settings therefore needs to be saved and reinstalled during the updating procedure if OSLOG data should be saved.

The CWT application and the AVR firmwares, except the E-lock firmware, can be updated via WebOffice.

All AVR firmwares, except the E-lock firmware, can also be updated via the service menu. See below.

The E-lock AVR firmware and bootloader files can only be updated from a PC (see Appendix M , p.).

The operating system (Windows CE) can be updated from a PC (see Appendix N) or USB stick (see *Updating the Windows CE operating system from a USB memory device* in the CWT Installation and Maintenance manual).

This is how you update AVR firmwares and the application software via the service menu:

Menu heading	Description
Software update Update term AVR Update coin AVR Update main AVR Update application	Insert the USB memory stick containing the updated program and select the appropriate device and folder. Select the file. Updating will start. The terminal should restart upon completion. Otherwise, restart manually.

4 Configuration override

The main purpose is to be able to have a common configuration over terminal of the same type with smaller differences in the hardware. There is no need to have different configurations when e.g. the display type is changed.

The elements to override are listed in the cwtconfigoverride.xml file. Add the cwtconfigoverride.xml file to the root of the SD-card to change the parts specified in the override file.

You can change more that one item in one go when using the service menu . Reboot when all changes are made.

Today following elements support override:

```
<CORE>
   <CORE><logging>
   <CORE><measurements>
<CALENDAR>
<PAYMENT>
<PAYUNIT>
<COMMUNICATION>
```

There is no WebOffice support for updating the cwtconfigoverride.xml file in the 4.28 CWT app release.

Note:
We recommend to use the cwtconfigoverride.xml for overriding.

Example of a display override:

This override will change the existing display type to the type listed in the cwtconfigoverride.xml file

```
<cwt>
   <CORE TftDisplayType="Mitsubishi-800x480"/>
</cwt>
```

4.1 Service menu additions

The following lines are added to the service menu to support Configuration Override.

Overriding the display type

```
<SM:ItemList Name="Display" Label="Display">
   <Items>
      <SM:ConfigOverride Name="Mitsubishi" Label="Mitsubishi"
XmlConfig="[cwt][CORE TftDisplayType='Mitsubishi-800x480'/] [/cwt]"/>
      <SM:ConfigOverride Name="KOE" Label="KOE" XmlConfig="[cwt][CORE
TftDisplayType='KOE-800x480'/] [/cwt]"/>
   </Items>
</SM:ItemList>
```

Overriding the shared modem property

```
<SM:ItemList Name="sharedModem" Label="sharedModem">
   <Items>
      <SM:ConfigOverride Name="SharedFalse" Label="sharedFalse"
XmlConfig="[cwt][COMMUNICATION] [ethernet] [sharedModem
useSharedModem='false'/][/ethernet]  [/COMMUNICATION] [/cwt]"/>
      <SM:ConfigOverride Name="SharedTrue" Label="sharedTrue"
XmlConfig="[cwt][COMMUNICATION] [ethernet] [sharedModem
useSharedModem='true'/][/ethernet][/COMMUNICATION] [/cwt]"/>

    </items>
</SM:ItemList>
```

When the service technician chooses a new configuration parameter in the service menu the parameter is merged with the existing configuration and then validated. If the operation succeeded then a pop-up panel is shown, indicating that the user needs to reboot the terminal for the parameter change to take effect.

If the operation fails a pop-up panel is also shown, which indicates that it failed. Specifically if there is a validation error, a Windows pop-up will be displayed with information about why it did not validate.

The override command must be writte in a specific format due to the nature of XML. See Format of the file 26

The configuration override command(s) are listed in the Standard configuration 28 at the end of the main menu.

Note:
Note all possible commands are included in the standard configuration.

Element

`SM:ConfigOverride`

Defines a configuration override in the service menu

Attributes of the ConfigOverride element

XmlConfigRaw

The XML string to be added or merged. Use this if there are '[' or ']' characters in the string.

```
XmlConfigRaw="&lt;cwt&gt;&lt;CORE TftDisplayType=&quot;Mitsubishi-800x480&quot;/&gt; &lt;/cwt&gt;"
```

XmlConfig

The XML string to be added or merged where '[' and ']' is automatically translated to '<' and '>' respectively.

Example:

```
XmlConfig="[cwt][CORE TftDisplayType='Mitsubishi-800x480'/] [/cwt]"
```

4.1.1 Format of the file

Since the XAML file format uses XML, some characters may not be used, and therefore a special string needs to be used instead of the special characters.

Special character	string	Comment
<	<	Never allowed
>	>	Never allowed
&	&	Never allowed
"	"	Not allowed inside two "
'	'	Not allowed inside two '

Example:

The string that should be added to cwtconfigoverride:

```
<cwt><CORE TftDisplayType="Mitsubishi-800x480"/> </cwt>
```

What it looks like, when the special characters are replaced:

```
XmlConfig="&lt;cwt&gt;&lt;CORE TftDisplayType=&quot;Mitsubishi-
800x480&quot;/&gt;&lt;/cwt&gt;"
```

Since the string is contained in double quotes (“), you may use apostrophes (‘) in the string:

```
XmlConfig="&lt;cwt&gt;&lt;CORE TftDisplayType='Mitsubishi-800x480'/&gt;
&lt;/cwt&gt;"
```

Since the previous string is still hard to read, one may use ‘[‘ and ‘]’ as start and end of the tag (NOT XML standard), if you use the XmlConfig property:

```
XmlConfig="[cwt][CORE TftDisplayType='Mitsubishi-800x480'/] [/cwt]"
```

4.2 TFT panels

The following panels are added for the Configuration Override.

ServiceModePleaseRebootTerminalPopup

This popup will be displayed after changing the display type

```
<TFT:PopupPanel MxStyle="{PanelStyle1}"
Name="ServiceModePleaseRebootTerminalPopup" >
   <Controls>
      <TFT:Label MxStyle="{DebugLabelStyle}"
FormattedText="ServiceModePleaseRebootTerminalPopup"/>
      <TFT:Label MxStyle="{PopupTextLabelStyle}"
Name="ServiceModePleaseRebootTerminalLabel"
FormattedText="ServiceModePleaseRebootTerminalText"/>
      <TFT:Button MxStyle="{SelectButtonStyle}" FormattedText=”OK"
Name="ContinueButton" Click="OnCloseCurrentPopup" />
   </Controls>
</TFT:PopupPanel>
```

ServiceModeConfigOverrideFailedPopup

This panel will be displayed when the change could not be made

```
<TFT:PopupPanel MxStyle="{PanelStyle1}"
Name="ServiceModeConfigOverrideFailedPopup" >
   <Controls>
      <TFT:Label MxStyle="{DebugLabelStyle}"
FormattedText="ServiceModeConfigOverrideFailedPopup"/>
      <TFT:Label MxStyle="{PopupTextLabelStyle}"
Name="ServiceModeConfigOverrideFailedLabel"
FormattedText="ServiceModeConfigOverrideFailedText"/>
      <TFT:Button MxStyle="{SelectButtonStyle}" FormattedText=”OK"
Name="ContinueButton" Click="OnCloseCurrentPopup" />
   </Controls>
</TFT:PopupPanel>
```

4.3 Translation

To translate the configuration override panel texts add the following lines to the translation.xml file:

- ServiceModeConfigOverrideFailedText
- ServiceModePleaseRebootTerminalText

Example:

```
<data key="ServiceModeConfigOverrideFailedText" value="Could not change
configuration"/>
<data key="ServiceModePleaseRebootTerminalText" value="Please reboot the
terminal for settings to be applied"/>
```

4.4 Standard configuration

Some elements of the Configuration override functionality are added to the service menu

Important:
If more than one element must be overridden, place ALL elements in the cwtconfigoverride.xml file

Currently we support:

- Mitsubishi/KOE, för 9" Touch

5 Appendix

Enter topic text here.

5.1 Service Menu UI for CWT 4.28

Note:
Some parts are commented out as they are not used currently

```
<!-- The servicemode menu definition (Content in the main menu and
submenus of the service menu) -->
<SM:ItemList Name="ServiceMenu" Label="Service menu">
   <Items>
      <SM:ForceCwoHeartbeat Name="ForceCwoHeartbeat" Label="Force
Heartbeat"/>
      <SM:ItemList Name="SoftwareUpdate" Label="Software update">
         <Items>
            <SM:ApplicationUpdate Name="MainAppUpdate" Label="Update
Application" DefaultPath='\Hard Disk' FilePattern="CAB files|*.cab"/>
            <SM:AvrUpdate Name="MainUpdate" Label="Update Main AVR"
Module="MAIN" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:AvrUpdate Name="CoinUpdate" Label="Update Coin AVR"
Module="COIN" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:AvrUpdate Name="PiezoUpdate" Label="Update Piezo AVR"
Module="PIEZO" DefaultPath='\Hard Disk' FilePattern="HEX files|*.hex"/>
            <SM:LoadOSImage Name='LoadOSImage' Label='Update OS'
DefaultPath='\Hard Disk' FilePattern='BIN files|*.bin'/>
            <SM:LoadOSImage Name='LoadOSImage' Label='Update OS bootloader
(eboot)' DefaultPath='\Hard Disk' FilePattern='BIN files|*.bin'/>
         </Items>
      </SM:ItemList>
      <SM:CoreIdConfig Name="TerminalInformation" Label="Terminal"
XPath="/d:cwt">
         <Items></Items>
      </SM:CoreIdConfig>
      <SM:EventList Name="Events" Label="Events"/>
      <SM:ItemList Name="DateTime" Label="Date and Time">
         <Items>
            <SM:DateSetter Name="Date" Label="Date"/>
```

```
            <SM:TimeSetter Name="Time" Label="Time"/>
         </Items>
      </SM:ItemList>
      <SM:ExternalPayUnitDllList Name="ExternalPayUnitDlls"
Label="ExternalPayUnitDlls"/>
      <SM:ItemList Name="Utilities" Label="Utilities">
         <Items>
            <SM:ForceCwoHeartbeat Name="ForceCwoHeartbeat" Label="Force
Heartbeat"/>
            <SM:LogBackup Name="LogBackup" DisplayFiles="False"
Label="Copy system logs" DefaultPath="\Hard Disk" DefaultFilename=""/>
            <!--<SM:SendTestSms Name="SendTestSms" Label="Send Test
SMS"/>-->
            <SM:TestPurchase Name="TestPurchase" Label="Test purchase
mode"/>
            <!-- Start BatteryVoltage & ModemNetworkStatus -->
            <SM:BatteryVoltage Name="BatteryVoltage" Label="Measure
Battery Voltage"/>
            <SM:ModemNetworkStatus Name="ModemNetworkStatus" Label="Scan
Modem Network Status"/>
            <!-- End  BatteryVoltage & ModemNetworkStatus-->
            <SM:ManCollection Name="ManCollection" Label="Manual
Collection XpayUnit"/>
            <SM:XmlConfigExport Name="ExportConfig" Label="Export config"
DefaultPath="\Hard Disk" DefaultFilename="saved_cwtconfig.xml"/>
            <SM:XmlConfigImport Name="ImportConfig" Label="Import config
from file" DefaultPath="\Hard Disk" FilePattern="XML files|*.xml"/>
            <SM:XmlIdConfigExport Name="ExportIdConfig" Label="Export
idConfig" DefaultPath="\Hard Disk" DefaultFilename="saved_cwtid.xml"/>
            <SM:XmlIdConfigImport Name="ImportIdConfig" Label="Import
idConfig from file" DefaultPath="\Hard Disk" FilePattern="XML files|
*.xml"/>
            <SM:UpdatePrinterFirmware Name='UpdatePrinterFirmware'
Label='Update printer firmware' DefaultPath='\Hard Disk' FilePattern='BIN
files|*.bin'/>
            <SM:UpdatePrinterFirmware Name='UpdateGebeFonts' Label='Update
Gebe Fonts' DefaultPath='\Hard Disk' FilePattern='BIN files|*.gbe'/>
            <!--<SM:EncryptionKeyImport Name="ImportEncryptionKey"
Label="Import new encryption key" DefaultPath="\Hard Disk"
FilePattern="XML files|*.xml"/>-->
            <!--<SM:Execute Name="Explorer" Label="Explorer"
Program="explorer.exe"/>-->
            <!--<SM:CardTransactionsExport Name="ExportCardTransactions"
DisplayFiles="False" Label="Export card transactions" DefaultPath="\Hard
Disk"/>
            <SM:CreditCardTransactionBackup Name="CardBackup"
DisplayFiles="False" Label="Copy credit card backup" DefaultPath="\Hard
Disk" DefaultFilename=""/>-->
            <!--<SM:TTPLoadSettings Name="LoadPrinterSettings"
Port="LPT1:" Label="LoadPrinterSettingsFromFile"
DefaultFilename="printersettings.xml"/>
            <SM:TTPSaveSettings Name="SavePrinterSettings" Port="LPT1:"
Label="SavePrinterSettingsToFile"
DefaultFilename="saved_printersettings.xml"/>-->
         </Items>
      </SM:ItemList>
      <SM:ItemList Name="Display" Label="Display">
                     <Items>
                        <SM:ConfigOverride Name="Mitsubishi"
Label="Mitsubishi" XmlConfig="[cwt][CORE TftDisplayType='Mitsubishi-
800x480'/] [/cwt]"/>
                        <SM:ConfigOverride Name="KOE" Label="KOE"
XmlConfig="[cwt][CORE TftDisplayType='KOE-800x480'/] [/cwt]"/>
                     </Items>
               </SM:ItemList>
      <SM:SystemInformationList Name="SystemInformation"
```

```
Label="SystemInformation"/>
   </Items>
</SM:ItemList>
```

5.2 Config Override Example file

This is an example cwtconfigoverride.xml file

This file is used at R&D to change some settings to allow the terminal to communicate with the test servers without having to change the original cwtconfig.xml file.

It gives a good example of what can be done with configuration override.

```
<?xml version="1.0"?>
<cwt>
   <CORE powerSaveMode="Mains" powerSaveTimer="0"
printCloseDoorTicket="false" TftDisplayType="Ampire-1024x768" > <!--
powerSaveTimer="0" -->
      <ambientLightSensor samplingPeriod="0" />
      <batteryVoltage samplingPeriod="0" />
      <solarCurrent samplingPeriod="0"  />
      <sleepCurrent samplingPeriod="0" />
      <mainBoardTemperature samplingPeriod="0" />
      <terminationBoardTemperature samplingPeriod="0" />
      <SDCardMemory samplingPeriod="0" />
      <modemSignalStrength samplingPeriod="0" />
   </CORE>
   <PAYMENT currency="752" />
   <PAYUNIT name="Ext0" >
      <extendedproperties>
         <properties name="TmsServerIp1" value="185.149.63.6" />
         <properties name="TmsServerPort1" value="19577" />
      </extendedproperties>
   </PAYUNIT>
   <PAYUNIT name="Ext1" >
      <extendedproperties>
         <properties name="TmsServerIp1" value="185.149.63.6" />
         <properties name="TmsServerPort1" value="19577" />
      </extendedproperties>
   </PAYUNIT>
   <PAYUNIT name="Ext2" >
      <extendedproperties>
         <properties name="TmsServerIp1" value="185.149.63.6" />
         <properties name="TmsServerPort1" value="19577" />
      </extendedproperties>
   </PAYUNIT>
   <COMMUNICATION useModem="false" cwoHeartbeatInterval="4"
cwoHostName="gateway-regtest.caleaccess.com" >
      <ethernet useDHCP="true">
         <sharedModem useSharedModem="false" />
      </ethernet>
   </COMMUNICATION>
</cwt>
```

Keyword index