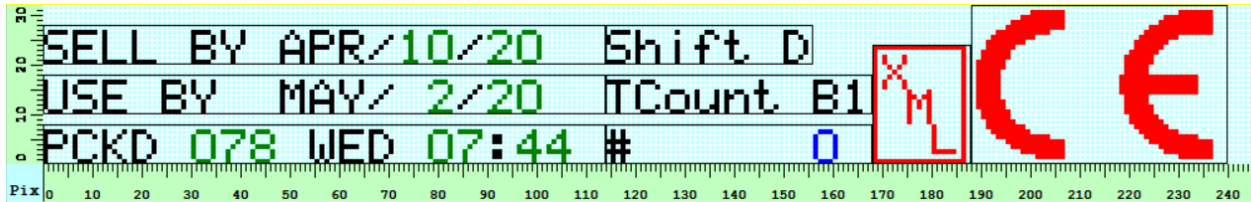


Hitachi UX-161

Message Send and Retrieve using Modbus

A Simple example



I call it a simple example because it simply has one of about everything:

- Plain Text
- Time based settings
 - Month – With month name substitution
 - Day – With offsets and leading zero suppress
 - Year
 - Hour
 - Minute
 - Julian Date
 - Day-Of-Week – With day name substitution
 - Shift Code
 - Time Count
- Counter
- User Pattern
 - Fixed Layout
 - Free Layout

No user application will probably use all these elements at once, but all applications will use some of these elements.

Step One: Defining the Message

The first step is to find a way to represent the layout in human readable form. The most flexible way I have found is to use the industry standard language XML. It is universally known, and interfaces have been developed in multiple computer languages.

It looks long but is basically two sections:

- A Printer section defining printer wide settings.
- A Message Section defining the items that make up the message.
 - A column Section within the message showing the column layout.
 - An item section within the column showing the individual items in a column.
 - Date Block.
 - Count Block.
 - Time Count
 - Shift

Within the text, there are Calendar, Count, and User Pattern settings that are to be passed on to the printer. These are indicated by enclosing them in braces: “{” and “}”. For example:

- { {MMM} / {DD} / {YY} } == Month, day, and year will be provided by the printer
- { {TTT} {777} {hh} : {mm} } == Julian date, day-of-week, hour, and minute will be provided by the printer.
- { {CCCCC} } == Counter provided by the printer
- {X/0} and {Z/2} == Fixed “X” and Free “Z” user pattern locations

The extra set of braces allow for multiple Calendar and Counter blocks in the same item.

So, below is the XML representation for the message above.

```
<Label Version="Serialization-1">
  <Printer Make="Hitachi" Model="UX-D161W" Nozzle="1">
    <PrintHead Orientation="Reverse_Forward" />
    <ContinuousPrinting RepeatInterval="0" PrintsPerTrigger="1" />
    <TargetSensor Filter="Complete" SetupValue="50" Timer="0" />
    <CharacterSize Width="10" Height="90" />
    <PrintStartDelay Forward="78" Reverse="78" />
    <EncoderSettings HighSpeedPrinting="HM" Divisor="1" ExternalEncoder="Off" />
    <InkStream InkDropUse="2" ChargeRule="Normal" />
    <Substitution Delimiter="/" StartYear="2000" RuleNumber="1">
      <Rule Type="Month" Base="1">JAN/FEB/MAR/APR/MAY/JUN/JUL/AUG/SEP/OCT</Rule>
      <Rule Type="Month" Base="11">NOV/DEC</Rule>
      <Rule Type="DayOfWeek" Base="1">MON/TUE/WED/THU/FRI/SAT/SUN</Rule>
```

```

</Substitution>
<Logos>
  <Logo Layout="Free" Height="32" Width="52" Location="2" RawData="00 00 00 00 00 F8 1F 00 00 FE 7F 00 80 FF FF 01
C0 FF FF 03 E0 FF FF 07 E0 1F F8 07 F0 07 E0 0F F8 01 80 1F F8 00 00 1F FC 00 00 3F 7C 00 00 3E 3C 00 00 7E 3E 00 00 7C
3E 00 00 7C 3E 00 00 7C 1E 00 00 78 1E 00 00 78 1E 00 00 78 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
C0 03 00 00 FC 3F 00 00 FF 7F 00 80 FF FF 01
C0 FF FF 03 E0 FF FF 07 F0 CF F3 0F F0 C3 C3 0F F8 C1 83 1F FC C0 03 3F 7C C0 03 3E 7C C0 03 3E 3E C0 03 7C 3E C0 03 7C
3E C0 03 7C 3E C0 03 7C 1E 00 00 7C 1E 00 00 7C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 " />
  <Logo Layout="Fixed" DotMatrix="Size18x24" Location="0" RawData="FF FF FF 01 00 80 01 80 B1 01 00 8A 01 00 84 01
00 8A 01 80 B1 01 7F 80 01 20 80 01 18 80 01 20 80 01 7F 80 FD 00 80 05 00 80 05 00 80 05 00 80 05 00 80 01 00 80 FF FF
FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 " />
</Logos>
</Printer>
<Message Layout="SeparateSetup" Nozzle="1">
  <Column InterLineSpacing="2">
    <Item>
      <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
      <Date Block="1" SubstitutionRule="1" RuleName="">
        <Offset Day="24" Hour="-12" Minute="-30" />
        <ZeroSuppress Day="Space" />
        <Substitute Month="True" />
      </Date>
      <Text>SELL BY {{MMM}}/{DD}}/{YY}} </Text>
    </Item>
    <Item>
      <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
      <Date Block="1" SubstitutionRule="1" RuleName="">
        <Offset Day="45" />
        <ZeroSuppress Day="Space" />
        <Substitute Month="True" />
      </Date>
      <Text>USE BY {{MMM}}/{DD}}/{YY}} </Text>
    </Item>
    <Item>
      <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
      <Date Block="1" SubstitutionRule="1" RuleName="">
        <Substitute DayOfWeek="True" />
      </Date>
      <Text>PCKD {{TTT}} {777} {hh}:{mm}} </Text>
    </Item>
  </Column>
  <Column InterLineSpacing="2">
    <Item>
      <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
      <Date Block="1" SubstitutionRule="1" RuleName="">
        <Shifts>
          <Shift ShiftNumber="1" StartHour="0" StartMinute="0" EndHour="7" EndMinute="59" ShiftCode="D" />
        </Shifts>
      </Date>
    </Item>
  </Column>
</Message>

```

```

        <Shift ShiftNumber="2" StartHour="8" StartMinute="0" EndHour="15" EndMinute="59" ShiftCode="E" />
        <Shift ShiftNumber="3" StartHour="16" StartMinute="0" EndHour="23" EndMinute="59" ShiftCode="F" />
    </Shifts>
</Date>
<Text>Shift {E}</Text>
</Item>
<Item>
    <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
    <Date Block="1" SubstitutionRule="1" RuleName="">
        <TimeCount Interval="HalfHour" Start="A1" End="X2" ResetTime="6" ResetValue="A1" />
    </Date>
    <Text>TCount {FF} </Text>
</Item>
<Item>
    <Font InterCharacterSpace="1" IncreasedWidth="1" DotMatrix="Size5x7" />
    <Counter Block="1">
        <Range Range1="000000" Range2="999999" JumpFrom="000199" JumpTo="000300" />
        <Count InitialValue="000000" Increment="1" Direction="Up" ZeroSuppression="True" />
        <Reset Type="Nothing" Value="" />
        <Misc UpdateIP="0" UpdateUnit="1" ExternalCount="False" Multiplier="" SkipCount="" />
    </Counter>
    <Text># {{CCCCC}} </Text>
</Item>
</Column>
<Column InterLineSpacing="0">
    <Item>
        <Font InterCharacterSpace="2" IncreasedWidth="1" DotMatrix="Size18x24" />
        <Text>{X/0}</Text>
    </Item>
</Column>
<Column InterLineSpacing="0">
    <Item>
        <Font InterCharacterSpace="2" IncreasedWidth="1" DotMatrix="Size24x32" />
        <Text>{Z/2}</Text>
    </Item>
</Column>
</Message>
</Label>

```

Step Two: Sending a Message to the Printer

// Sending Logos

// Set 52x32 Free Logo to location 2

```
Get[6500+0000] User_Pattern_Free_Registration[1] = 24576
Get[6511+0504] User_Pattern_Free_Width[2] = 52
Set[0000] Start_Stop_Management_Flag = 1
Set[6510+0504] User_Pattern_Free_Height[2] = 32
Set[6511+0504] User_Pattern_Free_Width[2] = 52
Set[6500+0000] User_Pattern_Free_Registration[1] = 24576
Set[6512+0504] User_Pattern_Free_Data = 00 00 00 00 00 F8 1F 00 00 FE 7F 00 80 FF FF 01
C0 FF FF 03 E0 FF FF 07 E0 1F F8 07 F0 07 E0 0F F8 01 80 1F F8 00 00 1F FC 00 00 3F 7C 00
00 3E 3C 00 00 7E 3E 00 00 7C 3E 00 00 7C 3E 00 00 7C 1E 00 00 78 1E 00 00 78 1E 00 00 78
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 C0 03 00 00 FC 3F 00
Set[6512+0584] User_Pattern_Free_Data = 00 FF 7F 00 80 FF FF 01 C0 FF FF 03 E0 FF FF 07
F0 CF F3 0F F0 C3 C3 0F F8 C1 83 1F FC C0 03 3F 7C C0 03 3E 7C C0 03 3E 3E C0 03 7C 3E C0
03 7C 3E C0 03 7C 3E C0 03 7C 1E 00 00 7C 1E 00 00 7C 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00
Set[0000] Start_Stop_Management_Flag = 2
```

// Set Size18x24 Fixed Logo to location 0

```
Set[0000] Start_Stop_Management_Flag = 1
Set[0013] User_Pattern_Size = Size18x24
Set[0000] Start_Stop_Management_Flag = 2
Get[2D00+0000] User_Pattern_Fixed_Registration[1] = 49152
Set[0000] Start_Stop_Management_Flag = 1
Set[2D00+0000] User_Pattern_Fixed_Registration[1] = 49152
Set[2D20+0000] User_Pattern_Fixed_Data = FF FF FF 01 00 80 01 80 B1 01 00 8A 01 00 84 01
00 8A 01 80 B1 01 7F 80 01 20 80 01 18 80 01 20 80 01 7F 80 FD 00 80 05 00 80 05 00 80 05
00 80 05 00 80 01 00 80 FF FF FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Set[0000] Start_Stop_Management_Flag = 2
```

// Sending Substitutions

```
Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[1AC1] Start_Year = 2000
Set[1AF4+0000] Month[1] = "JAN"
Set[1AF4+0003] Month[2] = "FEB"
Set[1AF4+0006] Month[3] = "MAR"
Set[1AF4+0009] Month[4] = "APR"
Set[1AF4+000C] Month[5] = "MAY"
Set[1AF4+000F] Month[6] = "JUN"
Set[1AF4+0012] Month[7] = "JUL"
Set[1AF4+0015] Month[8] = "AUG"
Set[1AF4+0018] Month[9] = "SEP"
Set[1AF4+001B] Month[10] = "OCT"
Set[1AF4+001E] Month[11] = "NOV"
Set[1AF4+0021] Month[12] = "DEC"
Set[1CBC+0000] DayOfWeek[1] = "MON"
Set[1CBC+0003] DayOfWeek[2] = "TUE"
Set[1CBC+0006] DayOfWeek[3] = "WED"
Set[1CBC+0009] DayOfWeek[4] = "THU"
```

```

Set[1CBC+000C] DayOfWeek[5] = "FRI"
Set[1CBC+000F] DayOfWeek[6] = "SAT"
Set[1CBC+0012] DayOfWeek[7] = "SUN"
Set[0000] Start_Stop_Management_Flag = 2

// Deleting old message

// Get number of items

Get[0008] Number_Of_Items = 8

// Calculate number of columns

Get[1040+0000] Line_Count[1] = 3
Get[1040+0048] Line_Count[4] = 3
Get[1040+0090] Line_Count[7] = 1
Get[1040+00A8] Line_Count[8] = 1

// Delete all columns but the first one

Set[0000] Start_Stop_Management_Flag = 1
Set[1022] Delete_Column = 4
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[1022] Delete_Column = 3
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[1022] Delete_Column = 2
Set[0000] Start_Stop_Management_Flag = 2

// Set first column to line count of 1 and clear the item

Set[0000] Start_Stop_Management_Flag = 1
Set[1024] Column = 1
Set[1025] Line = 1
Set[1000] Print_Erasure = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set the format to the smallest size

Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0000] Dot_Matrix[1] = "5x8"
Set[0000] Start_Stop_Management_Flag = 2

// Loading new message

// Set column 1 to 3 items

Set[0000] Start_Stop_Management_Flag = 1
Set[1024] Column = 1
Set[1025] Line = 3
Set[0000] Start_Stop_Management_Flag = 2

// Set ILS for items 1 to 3

Set[0000] Start_Stop_Management_Flag = 1
Set[1041+0000] Line_Spacing[1] = "2"
Set[1041+0018] Line_Spacing[2] = "2"
Set[1041+0030] Line_Spacing[3] = "2"
Set[0000] Start_Stop_Management_Flag = 2

```

// Fill in item 1

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0000] Dot_Matrix[1] = "Size5x7"
Set[1043+0000] InterCharacter_Space[1] = "1"
Set[1044+0000] Character_Bold[1] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0000] Characters_per_Item[1] = 19
Set[0084+0000] Print_Character_String[1] = "SELL BY
<F2><61><F2><51><F2><51>/<F2><52><F2><52>/<F2><50><F2><70>  "
Set[0000] Start_Stop_Management_Flag = 2
```

// Fill in item 2

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0018] Dot_Matrix[2] = "Size5x7"
Set[1043+0018] InterCharacter_Space[2] = "1"
Set[1044+0018] Character_Bold[2] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0001] Characters_per_Item[2] = 19
Set[0084+0026] Print_Character_String[20] = "USE BY
<F2><61><F2><51><F2><51>/<F2><52><F2><52>/<F2><50><F2><70>  "
Set[0000] Start_Stop_Management_Flag = 2
```

// Fill in item 3

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0030] Dot_Matrix[3] = "Size5x7"
Set[1043+0030] InterCharacter_Space[3] = "1"
Set[1044+0030] Character_Bold[3] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0002] Characters_per_Item[3] = 19
Set[0084+004C] Print_Character_String[39] = "PCKD <F2><66><F2><56><F2><56>
<F2><59><F2><59><F2><59> <F2><53><F2><53>:<F2><54><F2><74>  "
Set[0000] Start_Stop_Management_Flag = 2
```

// Add column 2

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1023] Add_Column = 2
Set[0000] Start_Stop_Management_Flag = 2
```

// Set column 2 to 3 items

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1024] Column = 2
Set[1025] Line = 3
Set[0000] Start_Stop_Management_Flag = 2
```

// Set ILS for items 4 to 6

```
Set[0000] Start_Stop_Management_Flag = 1
Set[1041+0048] Line_Spacing[4] = "2"
Set[1041+0060] Line_Spacing[5] = "2"
Set[1041+0078] Line_Spacing[6] = "2"
Set[0000] Start_Stop_Management_Flag = 2
```

// Fill in item 4

```
Set[0000] Start_Stop_Management_Flag = 1
```

```

Set[1042+0048] Dot_Matrix[4] = "Size5x7"
Set[1043+0048] InterCharacter_Space[4] = "1"
Set[1044+0048] Character_Bold[4] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0003] Characters_per_Item[4] = 7
Set[0084+0072] Print_Character_String[58] = "Shift <F2><5B>"
Set[0000] Start_Stop_Management_Flag = 2

// Fill in item 5

Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0060] Dot_Matrix[5] = "Size5x7"
Set[1043+0060] InterCharacter_Space[5] = "1"
Set[1044+0060] Character_Bold[5] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0004] Characters_per_Item[5] = 10
Set[0084+0080] Print_Character_String[65] = "TCount <F2><6C><F2><7C> "
Set[0000] Start_Stop_Management_Flag = 2

// Fill in item 6

Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0078] Dot_Matrix[6] = "Size5x7"
Set[1043+0078] InterCharacter_Space[6] = "1"
Set[1044+0078] Character_Bold[6] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0005] Characters_per_Item[6] = 9
Set[0084+0094] Print_Character_String[75] = "#
<F2><6A><F2><5A><F2><5A><F2><5A><F2><5A><F2><7A> "
Set[0000] Start_Stop_Management_Flag = 2

// Add column 3

Set[0000] Start_Stop_Management_Flag = 1
Set[1023] Add_Column = 3
Set[0000] Start_Stop_Management_Flag = 2

// Set column 3 to 1 items

Set[0000] Start_Stop_Management_Flag = 1
Set[1024] Column = 3
Set[1025] Line = 1
Set[0000] Start_Stop_Management_Flag = 2

// Fill in item 7

Set[0000] Start_Stop_Management_Flag = 1
Set[1042+0090] Dot_Matrix[7] = "Size18x24"
Set[1043+0090] InterCharacter_Space[7] = "2"
Set[1044+0090] Character_Bold[7] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0006] Characters_per_Item[7] = 1
Set[0084+00A6] Print_Character_String[84] = "<F1><40>"
Set[0000] Start_Stop_Management_Flag = 2

// Add column 4

Set[0000] Start_Stop_Management_Flag = 1
Set[1023] Add_Column = 4

```



```

Set[0000] Start_Stop_Management_Flag = 2

// Set column 4 to 1 items

Set[0000] Start_Stop_Management_Flag = 1
Set[1024] Column = 4
Set[1025] Line = 1
Set[0000] Start_Stop_Management_Flag = 2

// Fill in item 8

Set[0000] Start_Stop_Management_Flag = 1
Set[1042+00A8] Dot_Matrix[8] = "Size24x32"
Set[1043+00A8] InterCharacter_Space[8] = "2"
Set[1044+00A8] Character_Bold[8] = "1"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[0020+0007] Characters_per_Item[8] = 1
Set[0084+00A8] Print_Character_String[85] = "<F6><42>"
Set[0000] Start_Stop_Management_Flag = 2

// Get number of Calendar and Count blocks used

Get[1049+0000] Number_of_Calendar_Blocks[1] = 1
Get[1048+0000] First_Calendar_Block[1] = 1
Get[1049+0018] Number_of_Calendar_Blocks[2] = 1
Get[1048+0018] First_Calendar_Block[2] = 2
Get[1049+0030] Number_of_Calendar_Blocks[3] = 1
Get[1048+0030] First_Calendar_Block[3] = 3
Get[1049+0048] Number_of_Calendar_Blocks[4] = 1
Get[1048+0048] First_Calendar_Block[4] = 4
Get[1049+0060] Number_of_Calendar_Blocks[5] = 1
Get[1048+0060] First_Calendar_Block[5] = 5
Get[104B+0078] Number_Of_Count_Blocks[6] = 1
Get[104A+0078] First_Count_Block[6] = 1

// Load settings for Substitution rule 1

Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set up calendar 1

Set[0000] Start_Stop_Management_Flag = 1
Set[19C2+0000] Offset_Day[1] = 24
Set[19C3+0000] Offset_Hour[1] = -12
Set[19C4+0000] Offset_Minute[1] = -30
Set[19C7+0000] Zero_Suppress_Day[1] = "Space"
Set[19CB+0000] Substitute_Month[1] = "True"
Set[0000] Start_Stop_Management_Flag = 2

// Load settings for Substitution rule 1

Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set up calendar 2

Set[0000] Start_Stop_Management_Flag = 1
Set[19C2+0020] Offset_Day[2] = 45
Set[19C7+0020] Zero_Suppress_Day[2] = "Space"

```

```

Set[19CB+0020] Substitute_Month[2] = "True"
Set[0000] Start_Stop_Management_Flag = 2

// Load settings for Substitution rule 1

Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set up calendar 3

Set[0000] Start_Stop_Management_Flag = 1
Set[19D2+0040] Substitute_DayOfWeek[3] = "True"
Set[0000] Start_Stop_Management_Flag = 2

// Load settings for Substitution rule 1

Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set up calendar 4

Set[0000] Start_Stop_Management_Flag = 1

// Set up shifts

Set[1CE0+0000] Shift_Start_Hour[1] = "0"
Set[1CE1+0000] Shift_Start_Minute[1] = "0"
Set[1CE2+0000] Shift_End_Hour[1] = "7"
Set[1CE3+0000] Shift_End_Minute[1] = "59"
Set[1CE4+0000] Shift_String_Value[1] = "D"
Set[1CE0+0010] Shift_Start_Hour[2] = "8"
Set[1CE1+0010] Shift_Start_Minute[2] = "0"
Set[1CE2+0010] Shift_End_Hour[2] = "15"
Set[1CE3+0010] Shift_End_Minute[2] = "59"
Set[1CE4+0010] Shift_String_Value[2] = "E"
Set[1CE0+0020] Shift_Start_Hour[3] = "16"
Set[1CE1+0020] Shift_Start_Minute[3] = "0"
Set[1CE2+0020] Shift_End_Hour[3] = "23"
Set[1CE3+0020] Shift_End_Minute[3] = "59"
Set[1CE4+0020] Shift_String_Value[3] = "F"
Set[0000] Start_Stop_Management_Flag = 2

// Load settings for Substitution rule 1

Set[0000] Start_Stop_Management_Flag = 1
Set[0012] Substitution_Rule = 1
Set[0000] Start_Stop_Management_Flag = 2

// Set up calendar 5

Set[0000] Start_Stop_Management_Flag = 1

// Set up Time Count

Set[0000] Start_Stop_Management_Flag = 1
Set[1CDE] Update_Interval_Value = "HalfHour"
Set[1CD4] Time_Count_Start_Value = "A1"
Set[1CD7] Time_Count_End_Value = "X2"
Set[1CDD] Reset_Time_Value = "6"
Set[1CDA] Time_Count_Reset_Value = "A1"
Set[0000] Start_Stop_Management_Flag = 2

```

```

Set[0000] Start_Stop_Management_Flag = 2

// Set up count 1

Set[0000] Start_Stop_Management_Flag = 1
Set[1FF4+0000] Count_Range_1[1] = "000000"
Set[2008+0000] Count_Range_2[1] = "999999"
Set[2022+0000] Jump_From[1] = "000199"
Set[2036+0000] Jump_To[1] = "000300"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[1FE0+0000] Initial_Value[1] = "000000"
Set[2020+0000] Increment_Value[1] = "1"
Set[2021+0000] Direction_Value[1] = "Up"
Set[2060+0000] Zero_Suppression[1] = "True"
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[205E+0000] Type_Of_Reset_Signal[1] = "Nothing"
Set[204A+0000] Reset_Value[1] = ""
Set[0000] Start_Stop_Management_Flag = 2
Set[0000] Start_Stop_Management_Flag = 1
Set[201E+0000] Update_Unit_Unit[1] = "1"
Set[201C+0000] Update_Unit_Halfway[1] = "0"
Set[205F+0000] External_Count[1] = "False"
Set[2061+0000] Count_Multiplier[1] = ""
Set[206B+0000] Count_Skip[1] = ""
Set[0000] Start_Stop_Management_Flag = 2

// Send printer settings

Set[0000] Start_Stop_Management_Flag = 1
Set[19A4] Character_Orientation = "Reverse_Forward"
Set[19AF] Repeat_Interval = "0"
Set[19AE] Repeat_Count = "1"
Set[19B2] Target_Sensor_Filter = "Complete"
Set[19B3] Target_Sensor_Filter_Value = "50"
Set[19B1] Target_Sensor_Timer = "0"
Set[19A3] Character_Width = "10"
Set[19A0] Character_Height = "90"
Set[19A5] Print_Start_Delay_Forward = "78"
Set[19A6] Print_Start_Delay_Reverse = "78"
Set[19A2] High_Speed_Print = "HM"
Set[19A8] Pulse_Rate_Division_Factor = "1"
Set[19A7] Product_Speed_Matching = "Off"
Set[19A1] Ink_Drop_Use = "2"
Set[19B4] Ink_Drop_Charge_Rule = "Normal"
Set[0000] Start_Stop_Management_Flag = 2

```