POS Support in Teldat C

User Manual

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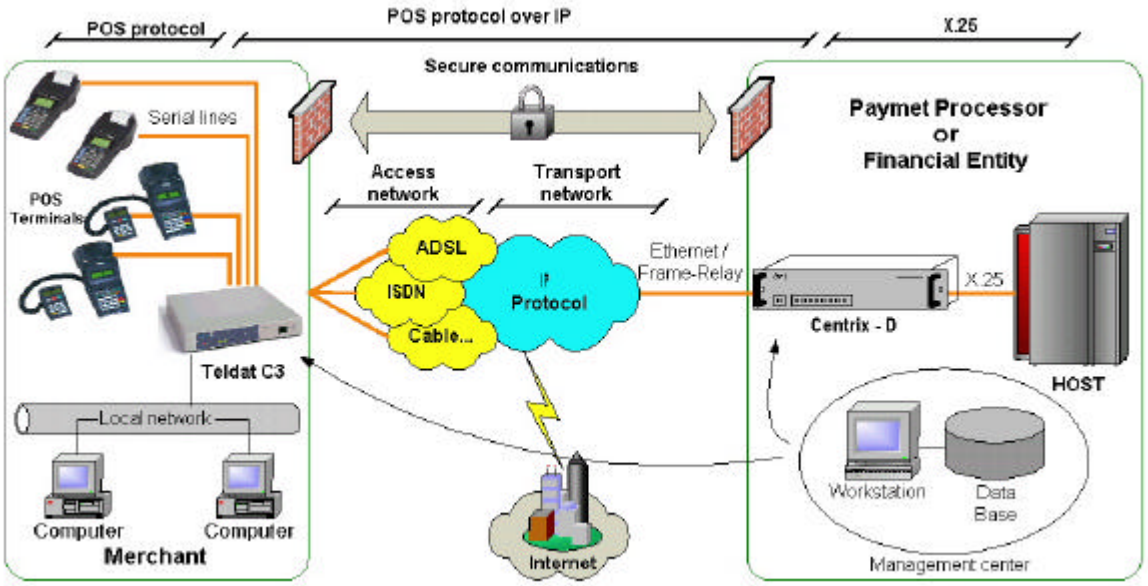
INDEX

Chapter 1
Introduction

1. Introduction

The user scenario for dataphone over ADSL is as shown in the following figure:



The Teldat ***TELDATC3*** and ***Centrix-D*** are the devices that carry out encapsulation and decapsulation of the dataphone protocol in IP.

The ***TELDATC3*** is the device installed at the shop and is responsible for packeting the POS calls in IP protocol and transmitting them.

The ***Centrix-D*** is the concentrator device located in the central offices, which receive the IP connection petitions from the multiple remote devices, and delivers them to the HOST in traditional X.25 format.

The transport protocol between the ***Teldat C*** and ***Centrix-D*** is TELDAT's own protocol: ***TRMTP*** (***TRivial Message Transport Protocol***) in secure mode. The ***TRMTP*** in secure mode is a protocol based on UDP which ensures that all information messages reach the remote end, detects the reception of duplicated messages for discarding purposes and ensures that the arrival order of the messages is correct.

The following chapters will explain the distinct configuration and monitoring possibilities for dataphone protocol in the TELDATC3.

Chapter 2
Dataphone Protocol: UDAFO Net

1. UDAFO NET

The **UDAFO** interfaces permit you to connect the device serial interfaces to the POSs.

The ***Teldat C*** devices support POS interfaces (***TeldatC3*** family), and by default have the **WAN** interface configured in the case of ***TeldatC3-1*** or the **T1**, **T2**, **T3** and **T4** interfaces as **UDAFO** for the rest of the versions.

1.1. UDAFO Parameters

The basic configurable parameters of the UDAFO interface are as follows:

- **Speed:** Rate of the asynchronous serial line through which the dataphone receives and transmits. The default value is 2400 bps.
- **Protocol:** The protocol used by default in communications with the POS is DOV (Data over Voice).
- **Local UDP Port:** Number of the UDP port opened at reception in order to receive the messages coming from the **Centrix-D**. The UDP port used at reception by default is 20001.
- **Remote UDP Port:** Number of the UDP port configured at reception in the **Centrix-D**. The default UDP port used for transmission is 20001.
- **Remote IP Address: Centrix-D** IP Address where the dataphone protocol packets encapsulated in IP are going to be sent.
- **Serial Control Signal:** This parameter permits the use of a serial communication port control signal with the POS in order to start and end the transactions. Normally this signal is DTR, which the POS activates in order to begin the transactions and deactivates it to end the said transmission. When this function is not active, the control signal is ignored. Generally, this option should be enabled when the communication protocol with the POS is DAT.

There also exist another series of configurable parameters belonging to the TRMTP protocol:

- **N1:** Maximum length of the message data field.
- **N2:** Maximum number of message retransmissions.
- **T1:** ACK wait time, before re-transmitting.
- **T2:** Wait time in order to exit an error state (Transmitter).
- **T3:** Inactivity time in order to exit the DATA state (Transmitter) and provoke the sending of an EOT. **This time must be greater that the maximum time used to carry out a transaction in the TELDATC3**.
- **T4:** Inactivity timer in order to return to an idle state OFF (Receiver).

We strongly recommend that you do not modify the timer values and use the ones given by default.

The following must be fulfilled: T2>T1 and T2>T3.

2. Configuration of the general UDAFO parameters

In order to enter the configuration process, follow the steps given below:

1. At the (*) prompt, enter **PROCESS 4** or simply **P 4**. This will take you to the configuration prompt *Config>*.

```
*P 4
Config>
```

2. Introduce the **LIST DEVICES** command. Subsequently, you obtain the numbers of the interfaces the device has assigned as UDAFO. In the following example you can observe that the interfaces 2,3,4,and 5 correspond to the UART1, UART2, UART3 and UART4 ports and are UDAFO.

```
Config>LIST DEVICES

Con    Ifc Type of interface                  CSR     CSR2  int
---      6 Router->Node                         0             0
---      7 Node->Router                         0             0
ADSL1    1 Async Transfer Mode           FA200A60 FA203F00   55
LAN1     0 Quicc Ethernet                FA200A00 FA203C00   5E
UART1    2 UDAFO Interface               D0000100 F0000001   26
UART2    3 UDAFO Interface               D0000000 F0000001   26
UART3    4 UDAFO Interface               D0010100 F0000001   26
UART4    5 UDAFO Interface               D0010000 F0000001   26
Config>
```

3. Subsequently, introduce the **NETWORK** command following by the number of the UDAFO interface you wish to configure. In the generic examples, the character # has been used to indicate the number.

```
Config>NETWORK #
UDAFO Interface Configuration
UDAFO-# Cfg>
```

If for example, the interface was number 1:

```
Config>NETWORK 2
UDAFO Interface Configuration
UDAFO-2 Cfg>
```

The net UDAFO configuration commands are numerated and described in this section. All the UDAFO configuration commands must be introduced at the UDAFO (UDAFO # Cfg>) prompt. The letters appearing in **bold** are the minimum number of letters that must be entered in order to execute the command.

Command	Functions
? (HELP)	Lists the configuration commands or lists any parameters associated to a command.
LIST	Displays the UDAFO interface configured information.
ENABLE	Enable the handling of some interface functionalities.
DISABLE	Disable the handling of some interface functionalities.
SET	Configures interface's general parameters.
TCP-MENU	Permits you to enter the TCP protocol parameter configuration menu.
TRMTP-MENU	Permits you to enter the TRMTP protocol parameter configuration menu.
EXIT	Returns to the previous prompt.

2.1. ? (HELP)

The **?** (HELP) command serves to list all the available commands included in the normal prompt level. In the same way, you can enter **?** after a specific command name in order to obtain the associated options.

Syntax:

```
UDAFO-# Cfg> ?
```

Example:

```
UDAFO-2 Cfg>?
LIST
ENABLE
DISABLE
SET
TCP-MENU
TRMTP-MENU
EXIT
UDAFO-2 Cfg>
```

2.2. LIST

The **LIST** command is used in the UDAFO configuration process in order to display the general parameters of the interface: POS reception and transmission rate through the serial interface and the transport mode used.

Syntax:

```
UDAFO-# Cfg>LIST
Link speed                          :  2400 (bit/sec)
Transfer Mode                       : TRMTP
Protocol Type                       : DOV
Signal Control                      : Disabled.
UDAFO-# Cfg>
```

2.3. ENABLE

The **ENABLE** command is used in the UDAFO configuration process in order to enable the handling of some UDAFO interface functionalities.

Syntax:

```
UDAFO-2 Cfg>ENABLE ?
SIGNAL-CONTROL
UDAFO-2 Cfg>
```

a) ENABLE SIGNAL-CONTROL

This command is used to enable the handling of the UDAFO serial interface control signal (DTR).

Example:

```
UDAFO-2 Cfg>ENABLE SIGNAL-CONTROL
UDAFO-2 Cfg>
```

2.4. DISABLE

The **DISABLE** command is used in the UDAFO configuration process in order to disable the handling of some UDAFO interface functionalities.

Syntax:

```
UDAFO-2 Cfg>DISABLE?
SIGNAL-CONTROL
UDAFO-2 Cfg>
```

a) DISABLE SIGNAL-CONTROL

This command is used to disable the handling of the UDAFO serial interface control signal (DTE).

Example:

```
UDAFO-2 Cfg>DISABLE SIGNAL-CONTROL
UDAFO-2 Cfg>
```

2.5. SET

Use the **SET** command in the UDAFO configuration process in order to configure the general UDAFO interface parameters.

Syntax:

```
UDAFO-2 Cfg>SET ?
MODE
PROTOCOL
SPEED
UDAFO-2 Cfg>
```

a) SET MODE

This configures the IP transport mode that is going to be used to encapsulate the dataphone protocol packets. The available transport protocols are TRMTP and TCP.

Example:

```
UDAFO-2>SET MODE TRMTP
UDAFO-2>
```

b) SET PROTOCOL

This command permits you to configure the protocol between the **TELDATC3** and the POS. The available protocols are DOV (Data Over Voice) the concentrator protocol (DAT), TRANS (DOV transparent over TCP), VISANET and 7COMM

Syntax:

```
UDAFO-# Cfg>SET PROTOCOL ?
7COMM
DOV
DAT
TRANS
VISANET
```

Example:

```
UDAFO-2 Cfg>SET PROTOCOL DOV
UDAFO-2 Cfg>
```

c) SET SPEED

This command specifies the interface reception and transmission speed. The range of values is between 300 and 64000 bps.

Example:

```
UDAFO-2 Cfg>SET SPEED
Enter link speed (300 - 64000) [2400]? 1200
UDAFO-2 Cfg>
```

2.6. TCP-MENU

Permits you to enter the TCP protocol parameters configuration menu. This transport mode is not compatible with the VISANET protocol.

Syntax:

```
UDAFO-# Cfg>TCP-MENU
```

Example:

```
UDAFO-2 Cfg>TCP-MENU
-- UDAFO TCP Configuration Menu --
UDAFO TCP Cfg>
```

2.7. TRMTP-MENU

This permits you to enter the TRMTP protocol parameters configuration menu as explained in section 3. This transport mode is not compatible with the TRANS and 7COMM protocols.

Syntax:

```
UDAFO-# Cfg>TRMTP-MENU
```

Example:

```
UDAFO-2 Cfg>TRMTP-MENU
UDAFO TRMTP Configuration Menu --
UDAFO TRMTP Cfg>
```

2.8. EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
UDAFO-# Cfg>EXIT
```

Example:

```
UDAFO-2 Cfg>EXIT
Config>
```

3. Configuring the TRMTP global parameters

TRMTP is a proprietor protocol that permits sending information through UDP messages, carry out error and retransmission control, making this a communication protocol oriented towards connection over UDP. TRMTP is generally used in environments where the transfer of information between the ***TELDAT C*** and the HOST is carried out through ***CENTRIX-D*** devices. In this way the connection between the ***TELDAT C*** and the ***CENTRIX-D*** is carried out via TRMTP.

This transport mode is not compatible with the TRANS and 7COMM protocols.

In order to access the TRMTP configuration parameter menu, execute the ***TRMTP-MENU*** command from the UDAFO net configuration process.

Syntax:

```
UDAFO-# Cfg>TRMTP-MENU
```

Example:

```
UDAFO-2 Cfg>TRMTP-MENU
-- UDAFO TRMTP Configuration Menu --
UDAFO TRMTP Cfg>
```

The available configuration commands are as follows:

Command	Functions
? (HELP)	Lists the configuration commands or lists any parameters associated to a command.
LIST	Displays the configured information for the TRMTP protocol.
PROFILES	Permits you to enter the profile configuration menu.
RESTORE	Restores the default values of the TRMTP parameters.
SET	Configures interface's general parameters.
EXIT	Returns to the previous prompt level.

TRMTP parameter configuration commands

3.1. LIST

Use the **LIST** command in order to view the TRMTP protocol general parameters i.e. the local UDP port and the maximum length of the messages to be transmitted and received.

These parameters have the same value for all the profiles configured in this UDAFO interface.

Example:

```
UDAFO TRMTP Cfg>LIST
Local UDP Port                      : 20001
Max. length of messages        (N1) :  1400 (bytes)
UDAFO TRMTP Cfg>
```

3.2. PROFILES

Through this command you can enter the profile configuration menu, as described in section 4 of this chapter.

Syntax:

```
UDAFO TRMTP Cfg>PROFILES
-- UDAFO TRMTP PROFILE CONFIGURATION --
PROF UDAFO Config>
```

3.3. SET

Through the **SET** command you can configure the TRMTP protocol general parameters: the local UDP port and the maximum length of the messages to be transmitted and received (N1).

Syntax:

```
UDAFO TRMTP Cfg>SET ?
LOCAL-PORT
N1
UDAFO TRMTP Cfg>
```

a) SET LOCAL-PORT

This parameter permits you to configure the local UDP port where the TRMTP messages destined to this interface are going to be received. **Each interface must have a distinct local port**: if the local port value is repeated for distinct interfaces, only one of the interfaces will initiate correctly. The range of valid values is between 0 and 65535. Ports 20002 to 20004 are used by default.

Example:

```
UDAFO TRMTP Cfg>SET LOCAL-PORT
Enter local UDP port value (0 - 65535) [20002]?
UDAFO TRMTP Cfg>
```

b) SET N1

Configures the N1 parameter or the maximum length of the message data field that can be transmitted and received by TRMTP. The permitted values are between 1 – 1400 octets. The default value is 1400.

Example:

```
UDAFO TRMTP Cfg>SET N1
Enter max. length of messages (1 - 1400) [1400]? 1400
UDAFO TRMTP Cfg>
```

3.4. RESTORE

Restores the default values for the **Local UDP port** (20002) and **Max. Length of messages N1** (1400) parameters.

Syntax:

```
UDAFO TRMTP Cfg>RESTORE
```

Example:

```
UDAFO TRMTP Cfg>RESTORE
UDAFO TRMTP Cfg>
```

3.5. EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
UDAFO TRMTP Cfg>EXIT
```

Example:

```
UDAFO TRMTP Cfg>EXIT
UDAFO-2 Cfg>
```

4. Configuring the TRMTP profiles

The **TRMTP profiles** permit you to **associate a determined NRI to the HOST IP address through that which is going to carry out the connection** as well as configuring the specific TRMTP protocol parameters for each one of the destinations, HOST or **CENTRIX-D**, with those requiring connection.

These parameters are, among others: the IP address and the remote Centrix-D UDP port with that which the communication will be established, the number and time of the TRMTP protocol retransmissions, the recuperation timers versus TRMTP errors etc. Each of these parameters is configurable, both for the main destination with which the connection is first tried, as well as for the other two Backup possibilities should the first connection fail.

Each of the configured profiles must be characterized by a different name. This must be a combination of letters and numbers with a maximum length of 15 characters.

The choice of one destination or another is made based on the NRI that arrives in the call Request packet sent by the Dataphone. You can also introduce "wildcard" (X) characters in order to carry out the routing of the transactions.

The available configuration commands are as follows:

Command	Functions
? (HELP)	Lists the configuration commands or any parameter associated to a command.
ADD	Adds a new profile to those already configured.
DELETE	Deletes a profile.
LIST	Lists the configured profiles together with their main parameters.
PROFILE	Permits you to enter into a specific profile configuration menu.
EXIT	Returns to the previous prompt level.

4.1. ADD

Permits you to add a new profile to those already configured. Through this command, a quick profile configuration can be carried out where you configure the profile name, the NRIs pertaining to the said profile and the **CENTRIX-D** IP address and UDP port which acts as the main destination.

In order to configure the IP addresses and the UDP ports of the Backup **CENTRIX-D**s, you need to enter the configuration menu for this profile.

The rest of the TRMTP parameters are configured with the default values and should only be modified by an expert.

Syntax:

```
PROF UDAFO Config>ADD
```

Example:

```
PROF UDAFO Config>ADD
Profile Name[]? HOST1
NRI? 217XXXXXXXXXXX
-- Main destination: --
Enter remote IP address  [0.0.0.0]? 201.66.3.1
Enter remote UDP port value (0 - 65535) [20001]? 20001
PROF UDAFO Config>
```

In this example, a new profile named HOST1 has been created to which all the NRIs that begin with 217 pertain to and whose packets will be sent in the first place to the UDP 2001 port with IP address 201.66.3.1.

4.2. DELETE

By introducing the name, you can delete a profile from the list of configured profiles.

Syntax:

```
PROF UDAFO Config>DELETE
```

Example:

```
PROF UDAFO Config>DELETE
Profile Name[]? HOST1
PROF UDAFO Config>
```

4.3. LIST

Lists a simplified table containing the configured profiles with the addresses and ports for the different destinations for each profile.

Syntax:

```
PROF UDAFO Config>LIST
```

Example:

```
PROF UDAFO Config>LIST

------------------------------------------------------------------------------
Name               Main Remote Add    Second Remote Add  Third Remote Add
NRI                Remote UDP Port    Remote UDP Port    Remote UDP Port
------------------------------------------------------------------------------
HOST1              201.66.3.1         0.0.0.0            0.0.0.0
217XXXXXXXXXXX     20001              20001              20001
------------------------------------------------------------------------------
HOST2              202.55.3.1         0.0.0.0            0.0.0.0
334337558456934    20001              20001              20001
------------------------------------------------------------------------------
PROF UDAFO Config>
```

4.4. PROFILE

This command permits you to enter into the configuration menu of each of the created profiles in order to configure, list or modify the parameters for each one of the possible destinations for this profile.

Example:

```
PROF UDAFO Config>PROFILE
Profile Name[]? HOST1
HOST1 PROFILE Config>
```

The commands available within the profile configuration menu are:

Command	Functions
? (HELP)	Lists the configuration commands or lists any parameters associated to a command.
LIST	Lists all the TRMTP parameters for this profile.
SET	Permits you to configure each one of the profile parameters.
EXIT	Returns to the previous prompt.

Profile menu configuration commands.

a) LIST

Lists all the TRMTP parameters for each of the destinations for this profile.

Example:

```
HOST1 PROFILE Config>LIST
Called NA: 217XXXXXXXXXXX

---------PRINCIPAL DESTINATION-------------
Remote IP Address                    : 201.66.3.1
Remote UDP Port                      : 20001
Max. num of retransmissions    (N2) :     3
Answer timer                   (T1) :     5 (secs)
Tx error recuperation timer    (T2) :    40 (secs)
Tx inactivity timer            (T3) :    30 (secs)
Rx inactivity timer            (T4) :   100 (secs)

-----------SECOND DESTINATION--------------
Remote IP Address                    : 0.0.0.0
Remote UDP Port                      : 20001
Max. num of retransmissions    (N2) :     3
Answer timer                   (T1) :     5 (secs)
Tx error recuperation timer    (T2) :    40 (secs)
Tx inactivity timer            (T3) :    30 (secs)
Rx inactivity timer            (T4) :   100 (secs)

-----------THIRD  DESTINATION--------------
Remote IP Address                    : 0.0.0.0
Remote UDP Port                      : 20001
Max. num of retransmissions    (N2) :     3
Answer timer                   (T1) :     5 (secs)
Tx error recuperation timer    (T2) :    40 (secs)
Tx inactivity timer            (T3) :    30 (secs)
Rx inactivity timer            (T4) :   100 (secs)

HOST1 PROFILE Config>
```

b) SET

Permits you to configure the parameters for each one of the profile destinations: both the principal destination and the two Backups as well as modifying the profile NRI.

Syntax:

```
HOST1 PROFILE Config>SET ?
NRI
PRINCIPAL
SECOND-DESTINATION
THIRD-DESTINATION
HOST1 PROFILE Config>
```

· *SET NRI*

Permits you to modify the NRI configured for this profile.

Example:

```
HOST1  PROFILEConfig>SET NRI
NRI? 2174XXXXXXXXXX
HOST1  PROFILEConfig>
```

In order to modify the TRMTP parameters for each of the destinations, you need to execute the command *SET* + the destination you wish to modify (*PRINCIPAL, SECOND-DESTINATION, THIRD-DESTINATION*) + the parameter you wish to configure.

For example, in order to configure the second destination IP address, execute: *SET SECOND IP*

Example:

```
HOST1 PROFILE Config>SET SECOND IP
Enter remote IP address[0.0.0.0]? 204.5.6.2
HOST1 PROFILE Config>
```

The configurable parameters for each of the destinations (PRINCIPAL, SECOND, THIRD) are as follows:

Syntax:

```
HOST1 PROFILE Config>SET PRINCIPAL ?
N2
IP address
PORT remote
T1
T2
T3
T4
HOST1 PROFILE Config>
```

· *N2*

Configures the N2 parameter or the maximum number of permitted retransmissions in order to be able to send a message through TRMTP. The permitted values are from 0 – 65535. Values 0 and 1 indicate that retransmissions will not be carried out. The default value is 3.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL N2
Enter max. number of retransmissions (0 - 65535) [3]?
HOST1 PROFILE Config>
```

· *IP address*

This parameter permits you to configure the remote ***Centrix-D*** IP address where the messages generated by the TRMTP are sent and from which messages will also be received.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL IP
Enter remote IP address [0.0.0.0] ? 192.168.0.1
HOST1 PROFILE Config>
```

· *PORT*

This parameter permits you to configure the remote device UDP port where the messages generated by TRMTP are sent. The range of valid values is from 0 to 65535. Port 20001 is used by default.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL PORT
Enter remote UDP port value (0 - 65535) [2001] ?
HOST1 PROFILE Config>
```

· *T1*

Configures the T1 parameter or acknowledge wait timer for a TRMTP message. Once this times out the message is retransmitted. The permitted values are from 1 to 65535 seconds. The default value is 10 seconds.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL T1
Enter T1 value (Ack Wait)(1 - 65535)(secs) [10] ?
HOST1 PROFILE Config>
```

· *T2*

Configures the T2 parameter or the errors recovery timer in TRMTP. When a transmission error occurs, the TRMTP system for this interface becomes inactive, once the T2 times out, the TRMTP system returns to an active state and from this point onwards tries to synchronize with the receptor when it is going to send a confirmation message. The permitted values are from 1 to 65535 seconds and it is recommended that this is greater than T1. The default value is 40 seconds.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL T2
Enter T2 value (Tx Error)(1 - 65535)(secs) [40] ?
HOST1 PROFILE Config>
```

· *T3*

Configures the T3 parameter or the inactivity timer between transmitted TRMTP confirmation messages. This timer sets the inactivity time between sent messages. This starts up each time a TRMTP confirmation message is transmitted. When this times out, the TRMTP transmission sends an EOT command to the remote end, indicating that it is closing the TRMTP "session" and that the next confirmation message will be preceded by a synchronization phase i.e. in order to send more messages to the Centrix-D you have to establish a new TRMTP session. The permitted values are from 0 to 65535 seconds and it is recommended that this is less than T2.

The T3 value must be greater than the duration time for a dataphone transaction as each time a TRMTP session closes in the *CENTRIX-D* , the X.25 calls associated to the said session are released. The default value is 30 seconds.

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL T3
Enter T3 value (Tx inac.)(1 - 65535)(secs) [30] ?
HOST1 PROFILE Config>
```

· *T4*

Configures the T4 parameter or the inactivity timer between received TRMTP confirmation messages. This timer sets the inactivity time between received messages. It starts up each time a TRMTP confirmation message is received. Once this times out, the TRMTP receptor passes to an idle state and the next confirmation message to be received has to be preceded by a synchronization phase. The permitted values are from 1 to 65535 seconds. It is recommended, although not essential, that this value is similar to the T3 value. The default value is 100 seconds.

> ***We strongly recommend that the timer values are not modified and the default values are used.***
>
> ***The following must be fulfilled: T2>T1 and T2>T3.***

Example:

```
HOST1 PROFILE Config>SET PRINCIPAL T4
Enter T4 value (Rx inac.)(1 - 65535)(secs) [100]?
HOST1 PROFILE Config>
```

c) EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
HOST1 PROFILE Config >EXIT
```

Example:

```
HOST1 PROFILE Config> EXIT
PROF UDAFO Config>
```

4.5. EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
PROF UDAFO Config>EXIT
```

Example:

```
PROF UDAFO Config>EXIT
UDAFO TRMTP Cfg>
```

5. Configuring the TCP global parameters

TCP is a standard protocol which is used to send characteristic IP information. TCP is a communication protocol oriented towards a connection. TCP is generally used in environments where the transfer of information between the ***TELDAT C*** and the HOST is carried out directly without the intervention of the ***CENTRIX-D*** devices. In this way, connection between the ***TELDAT C*** and the HOST is carried out through TCP.

This transport mode is not compatible with the VISANET protocol.

In order to access the TCP configuration parameters menu, execute the ***TCP-MENU*** command from the net UDAFO configuration process.

Syntax:

```
UDAFO-# Cfg>TCP-MENU
```

Example:

```
UDAFO-2 Cfg>TCP-MENU
-- UDAFO TCP Configuration Menu --
UDAFO TCP Cfg>
```

The available configuration commands are as follows:

Command	Functions
? (HELP)	Lists the configuration commands or lists any parameters associated to a command.
LIST	Displays the configured information for the TCP protocol.
PROFILES	Permits you to enter the profile configuration menu.
SET	Configures the general parameters of the interface.
EXIT	Returns to the previous prompt.

5.1. LIST

Use the **LIST** command in order to view the TCP protocol general parameters i.e. the local IP address and the maximum length of the messages to be transmitted and received.

These parameters have the same value for all the profiles configured in this UDAFO interface.

Example:

```
DAFO TCP Cfg>LIST
Local  IP Address                  : 0.0.0.0
Length of Rx buffer                :  1024 (bytes)
Length of Tx buffer                :  1024 (bytes)
UDAFO TCP Cfg>
```

5.2. PROFILES

Through this command you can enter the profile configuration menu, as described in section 6 of this chapter.

Syntax:

```
UDAFO TCP Cfg>PROFILES
-- UDAFO TCP PROFILE CONFIGURATION --
PROF UDAFO Config>
```

5.3. SET

Through the **SET** command you can configure the TCP protocol general parameters: the local IP address and the maximum length of the messages to be transmitted and received.

Syntax:

```
UDAFO TCP Cfg>SET ?
IP local
RX-BUFFER
TX-BUFFER
UDAFO TCP Cfg>
```

a) SET IP local

This parameter permits you to configure the local IP address which will be sent towards the HOST on establishing the TCP session.

Example:

```
UDAFO TCP Cfg>SET IP local
Enter local IP address  [0.0.0.0]?192.11.33.222
UDAFO TCP Cfg>
```

b) SET RX-BUFFER

Configures the maximum size of the message data field that can be received by TCP. The permitted values are from 100 – 1400 octets. The default value is 1024.

Example:

```
UDAFO TCP Cfg>SET RX-BUFFER
Enter max. length of Rx buffer (100 - 1400) [1024]? 300
UDAFO TCP Cfg>
```

c) SET TX-BUFFER

Configures the maximum size of the message data field that can be transmitted by TCP. The permitted values are from 100 – 1400 octets. The default value is 1024.

Example:

```
UDAFO TCP Cfg>SET TX-BUFFER
Enter max. length of Tx buffer (100 - 1400) [1024]? 300
UDAFO TCP Cfg>
```

5.4. EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
UDAFO TCP Cfg>EXIT
```

Example:

```
UDAFO TCP Cfg>EXIT
UDAFO-2 Cfg>
```

6. Configuring TCP profiles

The **TCP profiles** permit you to **associate a determined NRI to the HOST IP address with that which is going to carry out the connection** as well as configuring the specific TCP protocol parameters for each one of the destinations, HOST, with those requiring connection.

These parameters are, among others: the IP address and the remote HOST TCP port with that which the communication is going to be established and the wait time the TCP session is established at. Each of these parameters is configurable, both for the main destination with which the first connection is tried, as well as for the other two Backup possibilities should the first connection fail.

Each of the configured profiles must be characterized by a different name. This must be a combination of letters and numbers with a maximum length of 15 characters.

The selection of one destination or another is made based on the NRI that arrives in the call Request packet sent by the Dataphone. You can also introduce "wildcard" (X) characters in order to carry out the routing of the transactions.

The available configuration commands are as follows:

Command	Functions
? (HELP)	Lists the configuration commands or any parameter associated to a command.
ADD	Adds a new profile to those already configured.
DELETE	Deletes a profile.
LIST	Lists the configured profiles together with their main parameters.
PROFILE	Permits you to enter into a specific profile configuration menu.
EXIT	Returns to the previous prompt.

6.1. ADD

This permits you to add a new profile to those already configured. Through this command, a quick profile configuration can be carried out where you configure the profile name, the NRIs pertaining to the said profile and the HOST IP address and TCP port that act as the main destination.

In order to configure the Backup HOSTs IP addresses and the TCP ports, you need to enter the configuration menu for this profile.

Syntax:

```
PROF UDAFO Config>ADD
```

Example:

```
PROF UDAFO Config>ADD
Profile Name[]? HOST_TCP1
NRI? 23XXXXXXX
-- Main destination: --
Enter remote IP address []? 192.21.33.14
Enter remote TCP port value (0 - 65535) [20002]?20001
PROF UDAFO Config>
```

In this example, a new profile named HOST1_TCP1 has been created to which all the NRIs that begin with 23 pertain to and whose packets will be sent in the first place to the TCP 20001 port with IP address 192.21.33.14.

6.2. DELETE

By introducing the name, you can delete a profile from the list of configured profiles.

Syntax:

```
PROF UDAFO Config>DELETE
```

Example:

```
PROF UDAFO Config>DELETE
Profile Name[]?HOST_TCP1
PROF UDAFO Config>
```

6.3. LIST

Lists a simplified table containing the configured profiles with the addresses and ports for the different destinations for each profile.

Syntax:

```
PROF UDAFO Config>LIST
```

Example:

```
PROF UDAFO Config>LIST

-------------------------------------------------------------------------------
Name               Main Remote Add    Second Remote Add  Third Remote Add
NRI                Remote TCP Port    Remote TCP Port    Remote TCP Port
-------------------------------------------------------------------------------
PP                 2.2.22.2
4343434            20002              20002              20002
-------------------------------------------------------------------------------
HOST_TCP1          192.21.33.14
23XXXXXXX          20001              20002              20002
-------------------------------------------------------------------------------
PROF UDAFO Config>
```

6.4. PROFILE

This command permits you to enter into the configuration menu of each of the created profiles in order to configure, list or modify the parameters for each one of the possible destinations for this profile.

Example:

```
PROF UDAFO Config>PROFILE
Profile Name[]?HOST_TCP1
HOST1 PROFILE Config>
```

The available commands within a profile configuration menu are as follows:

Command	Functions
? (HELP)	Lists the configuration commands or lists any parameters associated to a command.
LIST	Lists all the TCP parameters for this profile.
SET	Permits you to configure each one of the profile parameters.
EXIT	Returns to the previous prompt level.

a) LIST

Lists all the TRMTP parameters for each of the destinations for this profile.

Example:

```
HOST_TCP1 PROFILE Config>LIST
Called NA: 23XXXXXXX
Send ACKs?: NO

---------PRINCIPAL DESTINATION-------------
Remote IP Address                  : 192.21.33.14
Remote TCP Port                    : 20002
Timeout                            :     5 (secs)

-----------SECOND DESTINATION--------------
Remote IP Address                  :
Remote TCP Port                    : 20002
Timeout                            :     5 (secs)

-----------THIRD  DESTINATION--------------
Remote IP Address                  :
Remote TCP Port                    : 20002
Timeout                            :     5 (secs)

HOST1 PROFILE Config>
```

b) SET

Permits you to configure the parameters for each one of the profile destinations: both the main destination and the two Backups as well as modifying the profile NRI.

Syntax:

```
HOST1 PROFILE Config>SET ?
ACK_SENDING
NRI
PRINCIPAL
SECOND-DESTINATION
THIRD-DESTINATION
HOST1 PROFILE Config>
```

· SET ACK_SENDING

Permits you to configure for each profile the possibility of sending an ACK message to the HOST as a response to each correctly received message and correctly acknowledged by the POS. I.e. if you configure the YES option, each time a message is received from the HOST, this is sent to the POS. When the POS acknowledges the message to the Teldat C3, this in turn sends an ACK to the HOST. Through this, the HOST can make sure that a message has correctly reached the POS.

Example:

```
HOST_TCP1 PROFILE config>SET ACK_SENDING
Send ACKs (NO=0, YES=1) [0]? 1
HOST_TCP1 PROFILE config>
```

· SET NRI

Permits you to modify the NRI configured for this profile.

Example:

```
HOST_TCP1 PROFILE Config>SET NRI
NRI? 2174XXXXXXXXXX
HOST_TCP1 PROFILE Config>
```

In order to modify the TCP parameters for each of the destinations, you need to execute the command *SET* + the destination you wish to modify (*PRINCIPAL, SECOND-DESTINATION, THIRD-DESTINATION*) + the parameter you wish to configure.

For example, in order to configure the second destination IP address, execute: *SET SECOND IP*.

Example:

```
HOST_TCP1 PROFILE Config>SET SECOND IP
Enter remote IP address[0.0.0.0]? 204.5.6.2
HOST_TCP1 PROFILE Config>
```

The configurable parameters for each of the destinations (PRINCIPAL, SECOND, THIRD) are as follows:

Syntax:

```
HOST_TCP1 PROFILE Config>SET PRINCIPAL ?
REMOTE-IP
PORT remote
TIMEOUT
HOST_TCP1 PROFILE Config>
```

· *REMOTE-IP*

This parameter permits you to configure the HOST IP address where messages generated by the TCP will be sent and from which messages will be received.

Example:

```
HOST_TCP1 PROFILE Config>SET PRINCIPAL REMOTE-IP
Enter remote IP address [2.2.2.2]? 192.23.54.89
HOST_TCP1 PROFILE Config>
```

· *PORT remote*

This parameter permits you to configure the remote device UDP port where the messages generated by TRMTP are sent. The range of valid values is from 0 to 65535. Port 20001 is used by default.

Example:

```
HOST_TCP1 PROFILE Config>SET PRINCIPAL PORT
Enter remote TCP port value (0 - 65535) [20002]? 20001
HOST_TCP1 PROFILE Config>
```

· *TIMEOUT*

This parameter permits you to configure the wait time established for a TCP session. In cases when during an attempt to establish a TCP session this time is surpassed, the connection attempt with this HOST is abandoned.

Example:

```
HOST_TCP1 PROFILE Config>SET PRINCIPAL TIMEOUT
Enter TCP timeout value (0 - 100)(secs) [5]? 10
HOST_TCP1 PROFILE Config>
```

c) EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
HOST_TCP1 PROFILE Config>EXIT
```

Example:

```
HOST_TCP1 PROFILE Config>EXIT
PROF UDAFO Config>
```

6.5. EXIT

Use the **EXIT** command to return to the previous prompt level.

Syntax:

```
PROF UDAFO Config>EXIT
```

Example:

```
PROF UDAFO Config>EXIT
UDAFO TCP Cfg>
```

7. Monitoring

In order to enter the UDAFO monitoring process, follow the steps given below:

1. At the (*) prompt, enter **PROCESS 3** or **P 3**. This will take you to the monitoring prompt +.

```
*P 3
+
```

2. At the (+) prompt, enter the command **NETWORK**, and the number that identifies the UDAFO interface you wish to monitor, which we will generically call # .

```
+NETWORK #
UDAFO Console
UDAFO-#>
```

If for example, the interface was 2, the following will appear:

```
+NETWORK 2
UDAFO Console
UDAFO-2>
```

Below the UDAFO monitoring commands are enumerated and described. All the UDAFO monitoring commands must be entered at the UDAFO prompt (UDAFO- #>). The letters written in **bold** are the minimum number of characters that must be entered in order to activate the command.

Command	Functions
? (HELP)	Lists the available commands or their options.
CLEAR	Clears the terminal statistic counters.
LIST	Displays terminal statistic information.
EXIT	Exits the UDAFO monitoring environment.

7.1. ? (HELP)

The **?** (HELP) command serves to list all the available commands included in the normal prompt level. You can also enter a **?** after a specific name of a command to obtain its options.

Syntax:

```
UDAFO-#>?
```

Example:

```
UDAFO-2>?
CLEAR
LIST
EXIT
UDAFO-2>
```

7.2. CLEAR

Command to clear the statistics.

Syntax:

```
UDAFO-#>CLEAR ?
ALL
STATISTICS
TRANSACTIONS
UDAFO-#>
```

a) CLEAR ALL

Deletes all the interface statistics: transactions and traffic.

b) CLEAR STATISTICS

Deletes all the interface traffic statistics.

c) CLEAR TRANSACTIONS

Deletes all the transaction statistics.

Syntax:

```
UDAFO-#>CLEAR TRANSACTIONS ?
OK
WRONG
UDAFO-#>
```

· *CLEAR TRANSACTIONS OK*

Transaction statistics deletion successfully completed.

· *CLEAR TRANSACTIONS WRONG*

Deletes the transaction attempt statistics where these have been abandoned due to error.

7.3. LIST

Permits you to view different traffic, transactions parameters etc from the terminal connected to this interface.

Syntax:

```
UDAFO-2>LIST ?
ALL
STATISTICS
SIGNAL-CHANGES
TRANSACTIONS
UDAFO-2>
```

a) LIST ALL

Lists all the interface traffic statistics and the signal states.

Example:

```
UDAFO-2>LIST ALL
Udafo State 1

Disconnects received from host     : 0
Disconnects transmitted to host     : 0

Bytes sent to interface            : 0
Bytes received from interface      : 0

--------------TRMTP STATISTICS----------
Bytes sent over INF messages       : 0
Bytes received over INF messages   : 0
INF messages sent                  : 0
INF messages received              : 0
TST messages received              : 0
EOT messages received              : 0
ACK messages received              : 0
NAK messages received              : 0
T1 Timeouts detected               : 0
T2 Timeouts detected               : 0
T3 Timeouts detected               : 0
T4 Timeouts detected               : 0
N2 overflows detected              : 0
Errors or congestion detected      : 0

RTS Changes 0
CTS Changes 1
DSR Changes 0
DTR Changes 0
CD  Changes 0

UDAFO-2>
```

b) LIST STATISTICS

Lists all the interface traffic statistics as well as the current state of the UDAFO net.

Example:

```
UDAFO-2>LIST STATISTICS
Udafo State 1

Disconnects received from host     : 0
Disconnects transmitted to host     : 0

Bytes sent to interface            : 0
Bytes received from interface      : 0

--------------TRMTP STATISTICS----------
Bytes sent over INF messages       : 0
Bytes received over INF messages   : 0
INF messages sent                  : 0
INF messages received              : 0
TST messages received              : 0
EOT messages received              : 0
ACK messages received              : 0
NAK messages received              : 0
T1 Timeouts detected               : 0
T2 Timeouts detected               : 0
T3 Timeouts detected               : 0
T4 Timeouts detected               : 0
N2 overflows detected              : 0
Errors or congestion detected      : 0

UDAFO-2>
```

The UDAFO net status can take the following values, depending on the protocol used. For the DOV and DAT protocols the values that these can take and their significance are as follows:

1.- ENQ sent towards the dataphone (only DAT) and wait for STX.

2.- Waiting for STX character.

3.- Waiting for ETX character (end of block).

4.- Waiting for errors control field (LRC) and a message sent to the HOST.

5.- Error in the received data parity. NAK is sent.

6.- Waiting for HOST response to a message sent. Received message is sent to POS.

7.- Waiting ACK.

8.- Disconnection.

9.- Waiting for HOST end of transaction confirmation.

The meaning of the rest of the fields is as follows:

Disconnects received from host	Dataphone protocol disconnections received from the HOST.
Disconnects transmited to host	Dataphone protocol disconnections sent to the HOST.
Bytes sent to interface	Bytes sent to the interface.
Bytes received from interface	Bytes received from the interface.
Bytes sent over INF messages	Bytes transmitted in INF or confirmed messages.
Bytes received over INF messages	Bytes received in INF or confirmed messages.
INF messages sent	Transmitted INF or confirmed messages.
INF messages received	Received INF or confirmed messages.
TST messages received	Received TST synchronized messages.
EOT messages received	Received EOT messages.

ACK messages received	Received ACK messages.
NAK messages received	Received NAK messages.
T1 Timeouts detected	T1 timer timeouts detected.
T2 Timeouts detected	T2 timer timeouts detected.
T3 Timeouts detected	T3 timer timeouts detected.
T4 Timeouts detected	T4 timer timeouts detected.
N2 overflows detected	Excess retransmission detected.
Error or congestion detected	Transmission failures due to detected error or congestion.

c) LIST SIGNAL-CHANGES

Lists the changes registered in the asynchronous interface control signals.

Example:

```
UDAFO-2>LIST SIGNAL-CHANGES
RTS Changes 1
CTS Changes 0
DSR Changes 0
DTR Changes 1
CD  Changes 1
UDAFO-2>
```

d) LIST TRANSACTIONS

Through this command you can view the last transactions carried out with the dataphone connected to this interface, both those carried out successfully and those that were not able to be completed.

Syntax:

```
UDAFO-2>LIST TRANSACTIONS ?
OK
WRONG
UDAFO-2>
```

· LIST TRANSACTIONS OK

Lists the last transactions successfully completed. You can enter the number of transactions you wish to view after the command.

Example:

```
UDAFO-2>LIST TRANSACTIONS OK

T     IP ADDRESS    NRI               T/START  T/END    DATE
0     202.1.1.90    323423323442344   19:05:46 19:05:52 20/09/00
1     201.1.1.90    323423323442344   18:09:29 18:09:34 20/09/00

UDAFO-2>
```

The meaning of the various fields is as follows:

T Type of transaction.

IP ADDRESS	HOST IP address with that that carried out the connection.
NRI	X.25 address called by the dataphone.
T/START	Indicates the operation start time.
T/END	Indicates the operation end time.
DATE	Indicates the date the operation was carried out

The types of possible transactions are (for DOV and DAV protocols only):

0: Authorization or purchase

1: Refunds

2: Repetition

3: Query

4: Close

5: Select account - entity

6: Detail operations

8: Account query

9: Transactions query

M: Memory/load initialization

U: Unknown transaction.

· *LIST TRANSACTIONS WRONG*

Lists the most recent transactions that could not be successfully completed. After the command you can enter the number of transactions you wish to view.

Example:

```
UDAFO-2>LIST TRANSACTIONS WRONG 2

T     IP ADDRESS    NRI             CAUSE  T/START  T/END    DATE
U        0.0.0.0    323423323442344   1    19:05:46 19:05:46 20/09/00
0       1.1.1.90    323423323442344   3    19:05:29 19:05:44 20/09/00

UDAFO-2>
```

The meaning of the fields is as follows:

T	Type of transaction.
IP ADDRESS	HOST IP address that established the connection (if this proceeds).
NRI	X.25 address called by the dataphone.
CAUSE	Reason why the connection failed.

T/START	Indicates the operation start time
T/END	Indicates the operation end time.
DATE	Indicates the date the operation was carried out

The possible values for the **CAUSE** field are:

1.- The NRI sent by the Dataphone does not correspond to any configured profile.

2.- Disconnection received from the HOST: operation rejected by the HOST.

3.- EOT received from the POS: operation not valid for the dataphone.

4.- It was not possible to establish IP connection with the destination.

5.- TRMTP/TCP connection end due to Timeout (T3).

7.- Invalid NRI format.

8.- Timeout waiting for the end of the POS message.

9.- Timeout waiting for the beginning of the POS message in E5.

10.- Number of retransmission messages sent to the POS surpassed, for NAK.

11.- Number of retransmission messages sent to the POS surpassed, for timeout.

12.- Number of erroneous frames received surpassed.

13.- Message from the POS is too short.

14.- Number of erroneous frames received in E2 surpassed.

15.- Timeout waiting for the beginning of the message from the POS in E2.

16.- Timeout waiting for ACK from the POS.

Chapter 3
Quick Configuration/Monitoring

1. Introduction

To make the handling of the TELDATC3 router simpler, a quick configuration menu has been developed as well as a basic monitoring menu, which puts together, in clear short summary, the configuring and monitoring possibilities for the parameters related to the dataphone protocol.

This chapter describes the possibilities and operation mode for the said quick configuration and monitoring menu. These menus are located within the general quick configuration and monitoring menus of the Teldat C router family (Please see the Teldat C Routers Family Installation Manual Dm274-I).

2. Quick Configuration

This section describes how to configure the device through the commands interface (CLI – Command Line Interface) using the quick configuration menu from the console or TELNET. This process consists of three stages:

1. **Configure the required parameters,** executing the suitable commands.
2. **Generate and save the configuration,** through the **MAKE** command from the quick configuration menu. Firstly proceed to the device configuration generation through the values entered in the previous stage in order to subsequently save the said configuration in the device's non-volatile memory.
3. **Restart** the device by executing the **RESTART** command located in the device's general menu. This must be done in order to activate the new configuration.

In order to access the quick configuration menu, you need to enter **QUICK** from the general configuration menu and from there, to access the POS configuration, enter **POS**:

```
*PROCESS 4
User Configuration
Config>QUICK
Quick Configuration Menu
Quick Config>POS
POS Quick Configuration Menu
Udafo Quick Config>
```

In order to exit the quick configuration menu, enter **EXIT** two times, one from the POS Quick Configuration Menu prompt, and other from the Quick Configuration Menu prompt.

```
Udafo Quick Config>EXIT
Quick Config>EXIT
Config>
```

2.1. Configuring the POS ports

You can configure the following parameters from the quick configuration menu:

- Asynchronous serial interface speed. (300-64000) (bps).
- POS protocol: Currently this supports the following protocols:
  - DOV, Data Over Voice (0).
  - DAT, Concentrated DATAPHONE protocol (1).
  - VISANET (2). (Does not support TCP transport).
  - TRANS, DOV transparent (3). (Does not support TRMTP transport).
  - 7COMM (4). (Does not support TRMTP transport).

- Transport mode: This supports the following modes:
  - TCP (0).
  - TRMTP (TRivial Message Transport Protocol) (1).

Depending on the transport mode, you can configure:

For TRMTP:

- Local UDP port (0-65535). This parameter permits you to configure the local UDP port where the TRMTP messages with destination to this interface will be received. **Each interface must have a different local port:** if the local port value is repeated for different interfaces, only one of the interfaces will correctly initialize.

For TCP:

- Local IP address.

- Serial port control signal: This parameter permits the use of a serial communication port control signal with the POS in order to start and end the transactions. Normally this signal is DTR, which the POS activates in order to begin the transactions and deactivates it to end the said transmission. When this function is not active , the control signal is ignored. Generally, this option should be enabled when the communication protocol with the POS is DAT.

In order to configure the parameters for each of the serial interfaces, simply enter the **SET** command followed by the interface you wish to configure (**TERMINAL1, TERMINAL2, TERMINAL3, TERMINAL4**) in the POS quick configuration menu.

Example:

```
Udafo Quick Config>SET TERMINAL2
Enter link speed (300 - 64000) [2400]? 2400
Select Protocol (DOV=0, DAT=1, VISANET=2, TRANSP=3, 7COMM=4) [0]? 0
Select Transport Mode (TCP=0, TRMTP=1) [1]? 1
Enter local UDP port value (0 - 65535) [20003]? 20002
Enable serial line signal control (DISABLED=0, ENABLED=1) [0]?
Udafo Quick Config>
```

In order to list the current configuration of the terminals you must enter the **LIST TERMINAL** command.

Example:

```
Udafo Quick Config>LIST TERMINAL

Terminal  Speed  Protocol   Transport Local Port or IP Address  Signal Control
--------  -----  --------   --------- ------------------------  --------------
UART1     2400   TRANSP     TCP       192.23.33.1               DISABLED
UART2     2400   DAT        TRMTP     20002                     ENABLED
UART3     9600   DAT        TRMTP     20003                     ENABLED
UART4     2400   DOV        TRMTP     20004                     DISABLED
Udafo Quick Config>
```

2.2. Configuring the TRMTP profiles

The TRMTP is a proprietor protocol which permits sending information through UDP messages, carrying out errors and retransmissions control, becoming a communication protocol orientated to connection over UDP. TRMTP is generally used in environments where the transfer of information between the ***TELDAT C*** and the HOST is carried out through the ***CENTRIX-D*** devices. In this way, the connection between ***TELDAT C*** and ***CENTRIX-D*** is carried out via TRMTP.

These TRMTP profiles permit you to associate a determined X.25 NRI to the ***CENTRIX-D*** IP address with that which is going to carry out the connection, as well as configuring the specific TRMTP protocol parameters for each of the destinations.

The parameters that are configured in the quick configuration menu for each created TRMTP profile are as follows:

- Profile name: String of characters to identify the profile. Up to 15 characters.
- NRI: (or set of NRI) destination HOST X.25 NRI. You are permitted to use the **'X'** character as a wildcard.
- IP address: ***CENTRIX-D*** through that which the communication will be established. Up to 3 addresses can be configured. In this way, in cases where a connection attempt fails with one IP address, an attempt is carried out with the subsequent one.
- Remote UDP port: Number of the UDP port through which the ***CENTRIX-D*** waits to receive the transactions that must be forwarded to X25.
- Specific TRMTP parameters that should be known:
    - N2 (0-65535): Maximum number of TRMTP packet retransmissions.
    - T1 (1-65535): ACK wait time.
    - T2 (1-65535): Wait time in order to exit an error state (Transmitter).
    - T3 (1-65535): Transmission inactivity time, which when this times out an end of connection EOT is sent. **This time must be greater that the maximum time used to carry out a transaction in the TELDATC3**.
    - T4 (1-65535): Inactivity time in reception.

We recommend that the timer values are not modified and the default values are used.

The following should be fulfilled: T2>T1 y T2>T3.

In order to add a new TRMTP profile, enter the command: **ADD TRMTP**.

Example:

```
Udafo Quick Config>ADD TRMTP
Profile Name[]? HOST_TRMTP1
NRI? 21703XXXXXXXXX
-- Main destination: --
Enter remote IP address []? 212.13.56.8
Enter remote port value (0 - 65535) [20001]? 2001
Use TRMTP default configuration (Yes/No)(Y)? N
Enter max. number of retransmissions (0 - 65535) [3]? 9
Enter T1 value (Ack Wait) (1 - 65535)(secs) [5]?
Enter T2 value (Tx Error) (1 - 65535)(secs) [50]?
Enter T3 value (Tx inac.) (1 - 65535)(secs) [45]?
Enter T4 value (Rx inac.) (1 - 65535)(secs) [100]?
-- Secondary destination: --
Enter remote IP address []? 196.24.34.12
Enter remote port value (0 - 65535) [20001]? 24003
Use TRMTP default configuration (Yes/No)(Y)?
-- Third destination: --
Enter remote IP address []?
Enter remote port value (0 - 65535) [20001]?
Use TRMTP default configuration (Yes/No)(Y)?
Udafo Quick Config>
```

In order to list the configured TRMTP profiles, enter the **LIST TRMTP** command.

Example:

```
Udafo Quick Config>LIST TRMTP


--- TRMTP PROFILE Configuration ---
-------------------------------------------------------------------------------
Name               Main Remote Add    Second Remote Add  Third Remote Add
NRI                Remote Port        Remote Port        Remote Port
-------------------------------------------------------------------------------
HOST_TRMTP1        212.13.56.8        196.24.34.12       0.0.0.0
21703XXXXXXXXXX    2001               24003              20001
N2:                9                  3                  3
T1 (secs):         5                  5                  5
T2 (secs):         50                 50                 50
T3 (secs):         45                 45                 45
T4 (secs):         100                100                100
-------------------------------------------------------------------------------
Udafo Quick Config>
```

You can modify, delete etc., the profiles through the following commands:

- **CHANGE TRMTP:** Permits you to modify the parameters for a profile.
- **DELETE TRMTP:** Permits you to delete a profile associated to the introduced name.

Example:

```
Udafo Quick Config>CHANGE TRMTP
Profile Name[]? HOST_TRMTP1
NRI? 233XXXXXXXXX
-- Main destination: --
Enter remote IP address [212.13.56.8]?
Enter remote port value (0 - 65535) [2001]?
Use TRMTP default configuration (Yes/No)(Y)?
-- Secondary destination: --
Enter remote IP address [196.24.34.12]?
Enter remote port value (0 - 65535) [24003]?
Use TRMTP default configuration (Yes/No)(Y)?
-- Third destination: --
Enter remote IP address [0.0.0.0]?
Enter remote port value (0 - 65535) [20001]?
Use TRMTP default configuration (Yes/No)(Y)?
Udafo Quick Config>
```

Example:

```
Udafo Quick Config>DELETE TRMTP
Profile Name[]? HOST_TRMTP1
Udafo Quick Config>
```

2.3. Configuring the TCP profiles

TCP is a standard protocol which is used to send characteristic IP information. TCP is a communication protocol oriented towards a connection. TCP is generally used in environments where the transfer of information between the ***TELDAT C*** and the HOST is carried out directly without the intervention of the ***CENTRIX-D*** devices. In this way the connection mode between the ***TELDAT C*** and the HOST is direct via TCP.

The TCP profiles permit you to associate a determined X.25 NRI to the HOST IP address through that which the connection is going to be carried out.

The parameters that you can configure in the quick configuration menu for each created TCP profile are:

- Profile Name: String of characters that identifies the profile. Up to 15 characters.
- NRI: (or set of NRI) destination HOST X.25 NRI. The character "**X**" can be used as a wildcard.
- IP Address: HOST through that which the connection is going to be carried out. Up to 3 possible IP addresses can be configured. In this way, in cases where a connection attempt fails with one IP address, an attempt is made with the subsequent one.
- Remote TCP Port: Number of the TCP port through which the HOST waits to receive the transactions.
- The TIMEOUT value, waiting for the establishment of the TCP session.
- Sending an ACK to the HOST. This permits you to configure for each profile the possibility of sending an ACK message to the HOST as a response to each correctly received message and correctly acknowledged by the POS. I.e. if you configure the YES option, each time a message is received from the HOST, this is sent to the POS. When the POS acknowledges the message to the Teldat C3, this in turn sends an ACK to the HOST. Through this, the HOST can make sure that a message has correctly reached the POS.

To add a new TCP profile, enter the **ADD TCP** command.

Example:

```
Udafo Quick Config>ADD TCP
Profile Name[]? HST_TCP1
NRI? 234XXXXXX
Send ACKs (NO=0, YES=1) [0]?
-- Main destination: --
Enter remote IP address []? 23.23.23.23
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
-- Secondary destination: --
Enter remote IP address []?
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
-- Third destination: --
Enter remote IP address []?
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
Udafo Quick Config>
```

In order to list the configured TCP profiles, enter the **LIST TCP** command.

Example:

```
Udafo Quick Config>LIST TCP


--- TCP PROFILE Configuration ---
-------------------------------------------------------------------------------
Name              Main Remote Add   Second Remote Add  Third Remote Add  ACKs
NRI               Remote Port       Remote Port        Remote Port
                  Timeout (secs)    Timeout (secs)     Timeout (secs)
-------------------------------------------------------------------------------
HST_TCP1          23.23.23.23       0.0.0.0            0.0.0.0           NO
234XXXXXX         20002             20002              20002
                  5                 5                  5
-------------------------------------------------------------------------------
Udafo Quick Config>
```

You can modify, delete etc., the profiles through the following commands:

- **CHANGE TCP:** Permits you to modify the parameters for a profile.
- **DELETE TCP:** Permits you to delete a profile associated to the introduced name.

Example:

```
Udafo Quick Config>CHANGE TCP
Profile Name[]? HST_TCP1
NRI? 25XXXXXXXXX
Send ACKs (NO=0, YES=1) [0]?
-- Main destination: --
Enter remote IP address [23.23.23.23]?
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
-- Secondary destination: --
Enter remote IP address [0.0.0.0]?
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
-- Third destination: --
Enter remote IP address [0.0.0.0]?
Enter remote port value (0 - 65535) [20002]?
Enter TCP timeout value (0 - 100)(secs) [5]?
Udafo Quick Config>
```

Example:

```
Udafo Quick Config>DELETE TCP
Profile Name[]? HST_TCP1
Udafo Quick Config>
```

3. Quick Monitoring

Through the quick monitoring menu, you can consult the statistics for the most recent 1000 transactions successfully carried out and the latest 500 that could not be completed.

These statistics are saved in the non-volatile memory i.e. they are not lost when the device is switched off.

In order to access the quick monitoring menu, you need to enter **QUICK** from the general monitoring menu and from there access the POS monitoring by entering **POS**.

```
*PROCESS 3

+QUICK
Quick Monitor Menu
Quick Monitor>POS
POS Quick Monitor Menu
Udafo Quick Monitor>
```

3.1. Transactions successfully carried out

In order to view the transactions that have been successfully carried out, enter the command **LIST COMPLETED**.

Example:

```
Udafo Quick Monitor>LIST COMPLETED
Type number of transactions you want to view [10]?

T     IP ADDRESS        NRI               T/START  T/END    DATE      INT
0        172.16.8.75    342323232333110   16:56:43 16:56:52 15/02/01  2
0       172.24.78.37    342323232333110   11:58:22 11:58:33 15/02/01  4
0        172.16.8.75    342323232333110   17:41:32 17:41:35 12/02/01  2
0        172.16.8.75    342323232333110   15:46:52 15:47:03 12/02/01  2
0        172.16.8.75    342323232333110   18:20:13 18:20:36 11/02/01  2
0        172.16.8.75    342323232333110   16:37:42 16:37:57 11/02/01  2
0        172.16.8.75    342323232333110   10:12:50 10:13:34 11/02/01  2
0        172.16.8.75    342323232333110   18:24:46 18:24:49 09/02/01  3
0        172.16.8.75    342323232333110   14:27:57 14:28:04 08/02/01  3
0        172.16.8.75    342323232333110   19:11:49 19:11:53 05/02/01  3

Udafo Quick Monitor>
```

The meaning of the distinct fields is as follows:

T	Type of transaction.
IP ADDRESS	HOST IP address that established the connection.
NRI	X.25 address called by the dataphone.
T/START	Indicates the operation start time
T/END	Indicates the operation end time.
DATE	Indicates the date the operation was carried out

INT Number of the interface that the POS is connected to and through which the transaction was carried out.

The types of possible transactions are:

0: Authorization or purchase

1: Refund

2: Repeat

3: Queries

4: Close

5: Select account-entity

6: Detail operations

8: Credit query

9: Transactions query

M: Memory/load initialization

U: Unknown transaction

3.2. Incomplete transactions

In order to view the transactions that were not successfully completed, enter the command **LIST INCOMPLETED**.

Example:

```
Udafo Quick Monitor>LIST INCOMPLETED
Type number of transactions you want to view [10]?

T   IP ADDRESS        NRI             CAUSE  T/START  T/END    DATE      INT
U     172.24.78.37    342323232333110   5    12:05:42 12:06:29 15/02/01  3
U     172.24.78.37    342323232333110   5    12:04:25 12:05:12 15/02/01  3
U      172.16.8.75    342323232333110   4    12:04:23 12:04:38 15/02/01  2
U      172.16.8.75    342323232333110   4    12:03:59 12:04:23 15/02/01  2
0     172.24.78.37    342323232333110   3    11:57:42 11:58:00 15/02/01  4
U     172.24.78.37    342323232333110   3    11:56:11 11:56:14 15/02/01  4
U      172.16.8.75    342323232333110   4    10:58:49 10:59:04 15/02/01  2
U      172.16.8.75    342323232333110   4    10:58:25 10:58:49 15/02/01  2
U      172.16.8.75    342323232333110   4    10:55:06 10:55:21 15/02/01  2
U      172.16.8.75    342323232333110   4    10:54:42 10:55:06 15/02/01  2

Udafo Quick Monitor>
```

The meaning of the distinct fields is as follows:

T Type of transaction.

IP ADDRESS HOST IP address that established the connection.

NRI X.25 address called by the dataphone.

CAUSE The reason why the connection failed.

T/START Indicates the operation start time

T/END Indicates the operation end time.

DATE Indicates the date the operation was carried out.

INT Number of the interface that the POS is connected to and through which the transaction was carried out.

The cause field indicates why the transaction was not successfully completed. These are as follows:

1.- The NRI sent by the Dataphone does not correspond to any configured profile.

2.- Disconnection received from the HOST: operation rejected by the HOST.

3.- EOT received from the POS: operation not valid for the dataphone.

4.- It was not possible to establish IP connection with the destination.

5.- TRMTP connection end due to Timeout (T3).

7.- Invalid NRI format.

8.- Timeout waiting for the end of the POS message.

9.- Timeout waiting for the beginning of the POS message in E5.

10.- Number of retransmission messages sent to the POS surpassed, for NAK.

11.- Number of retransmission messages sent to the POS surpassed, for timeout.

12.- Number of erroneous frames received surpassed.

13.- Message from the POS is too short.

14.- Number of erroneous frames received in E2 surpassed.

15.- Timeout waiting for the beginning of the message from the POS in E2.

16.- Timeout waiting for ACK from the POS.

17.- Time out in E2, without having received a data message.

Chapter 4
Dataphone Protocol Events

1. Dataphone protocol events monitoring

This permits you to monitor events in real time that have arisen over one or various UDAFO interfaces, where the POS's are connected, when the events system for this protocol is enabled.

The way these are enabled from the configuration menu is as follows:

```
*PROCESS 4
User Configuration
Config>EVENT

-- ELS Config --
ELS Config>ENABLE TRACE SUBSYSTEM UDAFO ALL
ELS Config>EXIT
Config>SAVE
Save configuration [n]? Y

Saving configuration...OK
Config>
```

These can also be enabled from the monitoring menu at any time without this being stored in the configuration, in the following way:

```
*PROCESS 3
Console Operator
+EVENT

-- ELS Monitor --
ELS>ENABLE TRACE SUBSYSTEM UDAFO ALL
ELS>EXIT
+
```

In order to view the events, once established, simply enter:

```
* PROCESS 2
02/12/01 17:41:32  UDAFO.001 Rx Data from TPV 1 bytes, nt 2 state 1
02/12/01 17:41:32  UDAFO.003 Rx EOT from TPV, nt 2
02/12/01 17:41:32  UDAFO.001 Rx Data from TPV 14 bytes, nt 2 state 1
02/12/01 17:41:32  UDAFO.001 Rx Data from TPV 5 bytes, nt 2 state 3
02/12/01 17:41:32  UDAFO.011 NRI 34343422888 connecting 172.66.3.1,nt 2
02/12/01 17:41:32  UDAFO.014 Sending message to Host 17 bytes, nt 2
```

The events list available for the UDAFO protocol is as follows:

UDAF.001

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.001 Rx Data from POS *bytes_number* bytes, nt *net*

Long Syntax:

UDAF.001 Rx Data from POS *bytes_number* bytes, network *net*

Description:

Data has been received from POS.

UDAF.002

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.002 Rx ACK from POS, nt *net* st *state*

Long Syntax:

UDAF.002 Rx ACK control character from POS, network *net* state *state*

Description:

An ACK control character has been received from the POS.

UDAF.003

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.003 Rx EOT from POS, nt *net* st *state*

Long Syntax:

UDAF.003 Rx EOT control character from POS, network *net* state *state*

Description:

An EOT control character has been received from the POS.

UDAF.004

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.004 Rx NAK from POS, nt *net* st *state*

Long Syntax:

UDAF.004 Rx NAK control character from POS, network *net* state *state*

Description:

A NAK control character has been received from the POS.

UDAF.005

Level: Unusual external error, ERROR-AE/UE-ERROR

Short Syntax:

UDAF.005 Rx LRC/CRC Error message from POS, nt *net*

Long Syntax:

UDAF.005 A block with LRC/CRC error has been received from POS, network *net*

Description:

A message has been received from the POS with an error in LRC/CRC.

UDAF.006

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.006 Tx ACK to POS, nt *net* st *state*

Long Syntax:

UDAF.006 Tx ACK control character to POS, network *net* state *state*

Description:

An ACK control character has been transmitted to the POS.

UDAF.007

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.007 Tx EOT to POS, nt *net* st *state*

Long Syntax:

UDAF.007 Tx EOT control character to POS, network *net* state *state*

Description:

An EOT control character has been transmitted to the POS.

UDAF.008

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.008 Tx NAK to POS, nt *net* st *state*

Long Syntax:

UDAF.008 Tx NAK control character to POS, network *net* state *state*

Description:

A NAK control character has been transmitted to the POS.

UDAF.009

Level: Unusual external error, ERROR-AE/UE-ERROR

Short Syntax:

UDAF.009 Error: Wrong S message, nt *net*

Long Syntax:

UDAF.009 A S message was expected and it has not been received properly. Network *net*

Description:

Waiting for an S message, this has not been correctly received.

UDAF.010

Level: Unusual external error, ERROR-AE/UE-ERROR

Short Syntax:

UDAF.010 NRI *nri* not included in profile, nt *net*

Long Syntax:

UDAF.010 NRI *nri* received from POS is not included in configuration profile list. Network *net*

Description:

The NRI received from the POS is not included in any of the configured profiles.

UDAF.011

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.011 NRI *nri* connecting *ip_host_address*,nt *net*

Long Syntax:

UDAF.011 NRI *nri* is trying the connection against *ip_host_address* Host. Network *net*

Description:

Trying to connect with the HOST with %I address.

UDAF.012

Level: Unusual external error, ERROR-AE/UE-ERROR

Short Syntax:

UDAF.012 Failure connection, nt *net*

Long Syntax:

UDAF.012 The connection against Host has failed. Network *net*

Description:

Connection with the HOST has failed.

UDAF.013

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.013 Transaction OK, nt *net*

Long Syntax:

UDAF.013 The transaction has been completed successfully. Network *net*

Description:

The transaction has been successfully completed.

UDAF.014

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.014 Sending message to Host *bytes* bytes, nt *net*

Long Syntax:

UDAF.014 Trying to send message to Host with *bytes* bytes. Network *net*

Description:

Sending message to HOST.

UDAF.015

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.015 Rx *message_type* TRMTP Msg: *bytes* bytes, nt *net* st: *state*

Long Syntax:

UDAF.015 A TRMTP Message of *message_type* type has been received,*bytes* bytes. Network *net* state *state*

Description:

A TRMTP message has been received.

UDAF.016

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.016 Trying retransmission, nt *net*

Long Syntax:

UDAF.016 Trying TRMTP message Retransmission. Network *net*

Description:

A TRMTP message has been retransmitted.

UDAF.017

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.017 Retransmission to POS. nt *net*

Long Syntax:

UDAF.017 Trying retransmission to POS. Network *net*

Description:

A message to the POS has been retransmitted.

UDAF.020

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.020 Rx *message_type* TCP Packet: *bytes* bytes. Nt *net*, st: *state*

Long Syntax:

UDAF.020 A TCP Packet of *message_type* type has been received,*bytes* bytes. Network *net* state *state*

Description:

A message has been received from TCP.

UDAF.021

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.021 TCP Session Closed. Nt *net*, st *state*

Long Syntax:

UDAF.021 The TCP session has been closed. Network *net* state *state*

Description:

TCP session has been closed.

UDAF.022

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.022 TCP Session Remote Closed. Nt *net*, st *state*

Long Syntax:

UDAF.022 The TCP session has been closed by the remote HOST. Network *net* state *state*

Description:

A TCP session has been closed by request of the remote HOST.

UDAF.023

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.023 TCP Session Opened. Nt *net*, st *state*

Long Syntax:

UDAF.023 The TCP session has been opened by the remote HOST. Network *net* state *state*

Description:

A TCP session has been opened by request of the remote HOST.

UDAF.024

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.024 Tx Message to POS,*bytes* bytes nt *net* st *state*

Long Syntax:

UDAF.024 Tx Message to POS,*bytes* bytes network *net* state *state*

Description:

A message has been sent to the POS.

UDAF.025

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.025 Rx Message from POS *bytes_number* bytes, nt *net* st *state*

Long Syntax:

UDAF.025 Rx Message from POS *bytes_number* bytes, network *net* state *state*

Description:

A correct message has been received from the POS.

UDAF.026

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.026 Rx Bad Message from POS, nt *net* st *state*

Long Syntax:

UDAF.026 Rx Bad Message from POS, network *net* state *state*

Description:

An erroneous message has been received from the POS.

UDAF.027

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.027 Serial Control Signal *message_type*, nt *net* st *state*

Long Syntax:

UDAF.027 Serial Control Signal change to *message_type*, network *net* state *state*

Description:

A change to ON or OFF has been detected in the Serial Control Signal.

UDAF.028

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.028 Tx ENQ to POS, nt *net* st *state*

Long Syntax:

UDAF.028 Tx ENQ control character to POS, network *net* state *state*

Description:

An ENQ control character has been sent to the POS.

UDAF.029

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.029 Timeout wait POS, nt *net* st *state*

Long Syntax:

UDAF.029 Timeout waiting data from POS, network *net* state *state*

Description:

Time for waiting for data from the POS has timed out.

UDAF.030

Level: Per packet trace, TRAZA-P/P-TRACE

Short Syntax:

UDAF.030 Sending Release to X25 Gateway. nt *net,* st *state*

Long Syntax:

UDAF.030 Trying to send a Release message to X25 Gateway. Network *net* state *state*

Description:

A release message has been sent to the X25 gateway.

2. An example of events for a correct transaction

This is an example of the events which you can view after a correct transaction through TRMTP:

```
*PROCESS 2
06/02/02 10:25:59  UDAFO.001 Rx Data from POS 1 bytes, nt 4
06/02/02 10:25:59  UDAFO.003 Rx EOT from POS, nt 4 st 1
06/02/02 10:25:59  UDAFO.001 Rx Data from POS 13 bytes, nt 4
06/02/02 10:25:59  UDAFO.025 Rx Message from POS 13 bytes, nt 4 st 4
06/02/02 10:25:59  UDAFO.011 NRI 323245457798 connecting 172.66.3.1,,nt 4
06/02/02 10:25:59  UDAFO.014 Sending message to Host 11 bytes, nt 4
06/02/02 10:25:59  UDAFO.015 Rx ACK TRMTP Msg: 0 bytes, nt 4 st: 6
06/02/02 10:25:59  UDAFO.015 Rx TST TRMTP Msg: 0 bytes, nt 4 st: 6
06/02/02 10:25:59  UDAFO.015 Rx INF_DATA TRMTP Msg: 2 bytes, nt 4 st: 6
06/02/02 10:25:59  UDAFO.024 Tx Message to POS,4 bytes nt 4 st 6
06/02/02 10:26:00  UDAFO.001 Rx Data from POS 1 bytes, nt 4
06/02/02 10:26:00  UDAFO.002 Rx ACK from POS, nt 4 st 7
06/02/02 10:26:00  UDAFO.028 Tx ENQ to POS, nt 4 st 7
06/02/02 10:26:00  UDAFO.001 Rx Data from POS 28 bytes, nt 4
06/02/02 10:26:00  UDAFO.025 Rx Message from POS 28 bytes, nt 4 st 4
06/02/02 10:26:00  UDAFO.014 Sending message to Host 26 bytes, nt 4
06/02/02 10:26:00  UDAFO.015 Rx ACK TRMTP Msg: 0 bytes, nt 4 st: 6
06/02/02 10:26:02  UDAFO.015 Rx INF_DATA TRMTP Msg: 17 bytes, nt 4 st: 6
06/02/02 10:26:02  UDAFO.024 Tx Message to POS,19 bytes nt 4 st 6
06/02/02 10:26:02  UDAFO.001 Rx Data from POS 1 bytes, nt 4
06/02/02 10:26:02  UDAFO.002 Rx ACK from POS, nt 4 st 7
06/02/02 10:26:02  UDAFO.028 Tx ENQ to POS, nt 4 st 7
06/02/02 10:26:03  UDAFO.001 Rx Data from POS 1 bytes, nt 4
06/02/02 10:26:03  UDAFO.003 Rx EOT from POS, nt 4 st 2
06/02/02 10:26:03  UDAFO.013 Transaction OK, nt 4
06/02/02 10:26:03  UDAFO.030 Sending Release to X25 Gateway. nt 4, st 2
06/02/02 10:26:03  UDAFO.015 Rx ACK TRMTP Msg: 0 bytes, nt 4 st: 9
06/02/02 10:26:03  UDAFO.001 Rx Data from POS 1 bytes, nt 4
06/02/02 10:26:03  UDAFO.003 Rx EOT from POS, nt 4 st 1
```