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1.1   Documentation Presentation
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This manual is designed for users installing a TSX MAP PC7 42 Mapway interface board and its driver software in an IBM PC-AT or compatible microcomputer connected to a MAP network or a Mapway network.

The complete documentation set and the points covered are described below:

The Reference Manual (TSX DR MAP V4E) covers Mapway network:

* Operating principles,
* Installation and testing principles,
* Implementation of Control, Adjust and Diagnostic functions,
* Technical characteristics,
* Terminology including a glossary of terms.

Specialized User's Manuals (including this manual) are available for each device or family of devices that can be connected to a MAP or a Mapway network. The main points covered by these manuals include:

* The description of the device,
* The installation or connection of the device to the network,
* The network performance,
* The network operation with Telemecanique terminals or programs,
* Remote diagnostics via the network.

These manuals are A5 format manuals that can be inserted in an A5 format binder with dividers. The TSX DAC 1 binder must be ordered separately.

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1.2   **General**
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The TSX MAP PC7 42 board and its driver software permit the connection to a MAP or Mapway network of:

- Telemecanique FTX 507 workstations,
- Monitor 77 supervision systems,
- Any PC-AT compatible microcomputer with an ISA bus that runs OS/2 (version 1.1, 1.2 or 1.3),
- CCX 57 cell controllers.

It also permits the connection to a Mapway network of any PC-AT compatible microcomputer with an ISA bus that runs DOS (version 3.3 or 4.01).

The board is installed in one of the available extension slots in the microcomputer (AT standard 62 + 36 pin double connector) and permits communication with:

- Mapway modules:
  - TSX MAP 1074 modules in TSX7 and PMX7 PLCs,
  - TSX MAP VAX74 boards in DEC MicroVAX minicomputers,
  - TSX MAP VAX174 boards in DEC IVAX minicomputers,
  - NUM 22130 modules in NUM 760 numerical controls from NUM SA.

- MAP modules:
  - TSX MAP 100 (Carrier band, 5M bits/s) in TSX7 and PMX7 PLCs,
  - TSX MAP 110 (Broad band, 10M bits/s) in TSX7 and PMX7 PLCs.

The interface board is supplied with 3 1/2" and 5 1/4" diskettes containing, depending on the version specified:

- DOS driver software and a test program: TSX MAPDS PC74,
- OS/2 driver software: TSX MAPS2 PC7 42.

1.3   Interface Board Hardware Presentation
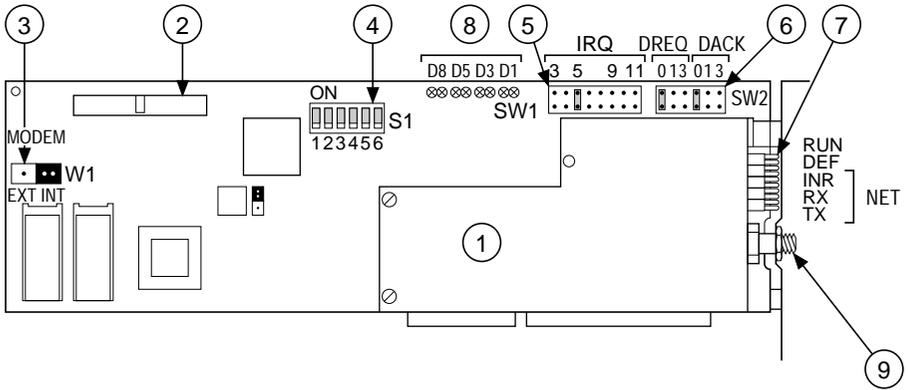
The interface board comprises the following components:

① A Modem baby board.

② An 802.4G standard connector for the optional connection of a carrier band external Modem.

③ A jumper (W1) for Modem selection (on-board or external).

④ A row of micro-switches (S1) for board address selection in the microcomputer I/O address field.

⑤ Jumpers (SW1) for Interrupt Request (IRQ) level selection.

⑥ Jumpers (SW2) for Direct Memory Access (DMA) channel selection and DMA Acknowledge (DACK) selection.

⑦ Five front panel LEDs, identified as:
RUN, DEF (failure), INR (In Ring), RX (Reception), TX (Transmission).

⑧ Eight indicator LEDs. When the interface board is operating correctly, they successively display the network and station number of the interface board over a two second display cycle for each LED.
If an interface failure occurs, they display an error code.

⑨ A type F female connector for connecting the interface board to the network.

2.1   Initial Preparations

Before installing a TSX MAP PC7 42 Mapway interface board and loading its driver software in a microcomputer, the following parameters must be set on the board:

- An available DMA channel (0, 1 or 3),
- An available IRQ level (3, 4, 5, 7, 9, A, B or F),
- A board address in the microcomputer I/O address field. This address is between 200 and 3F8 (in hexadecimal) modulo 8 (200, 208, 210 ...),
- A network number between 0 and 7F (in hexadecimal). Network address 0 is only allowed if a single segment network is configured,
- A station number between 0 and 3F (in hexadecimal).

The following default values are factory set on the board:

- DMA = 0,
- IRQ = 5,
- Board address = 200 in hexadecimal (all micro-switches in S1 in the OFF position).

Important: Before installing the TSX MAP PC7 42 Mapway interface board in a microcomputer, be sure to check that the factory set default values for DMA channel, IRQ level and board address are not already used by other boards installed in the PC. If there is a possible addressing conflict, change the default settings by referring to the table below.

	IRQ	DMA	Board address (hex)
Recommended values	5 F B A 3	0 3	200 210 ... 270 280 ... 2A8 320 ... 358 398
Possible but not recommended values (possible address conflicts with other PC boards)	7 4 9	1	All other addresses from 278 to 3F8 modulo 8, other than the intervals listed above.
Illegal values			2B8 (Reserved for LPT1) 378 (Reserved for LPT2) 278 (Reserved for LPT3)

Note: If the factory set default DMA, IRQ and board address values are not used by other boards in the microcomputer, it is recommended they be used. These are the same values recommended for FTX 507 and Monitor 77 stations.

2.2   **Board Address Selection**

The previously selected board address (refer to sub-section 2.1) is set from S1 micro-switches on the board. They allow an address to be set over 16 bits, from 200 to 3F8, modulo 8 in hexadecimal notation.

Address bit	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
value	0	0	0	0	0	0	1		S1 micro-switches					0	0	0
number								1	2	3	4	5	6			
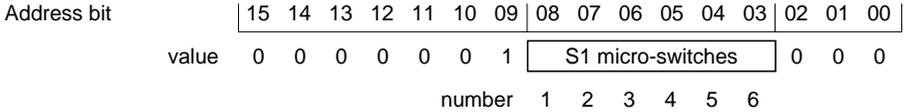
The "ON" position of a micro-switch corresponds to logic state 1 of the address bit.
The "OFF" position of a micro-switch corresponds to logic state 0 of the address bit.

Examples:

Address value 210 (in hexadecimal)

Hexadecimal	0	2	1	0
Binary	0 0 0 0	0 0 1 0	0 0 0 1	0 0 0 0

Values to
set on S1
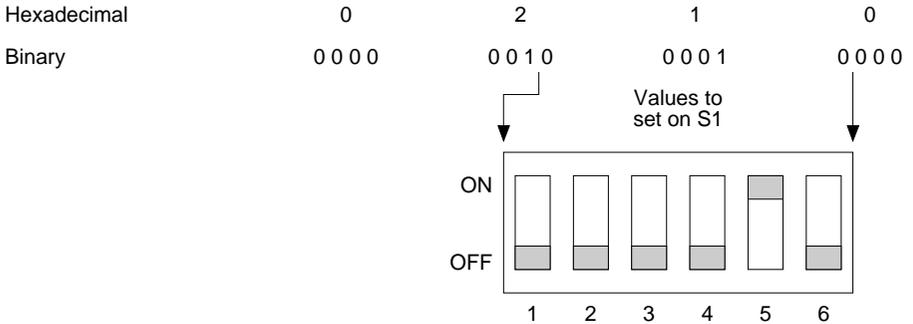
Address value 320 (in hexadecimal)

Hexadecimal	0	3	2	0
Binary	0 0 0 0	0 0 1 1	0 0 1 0	0 0 0 0

Values to
set on S1
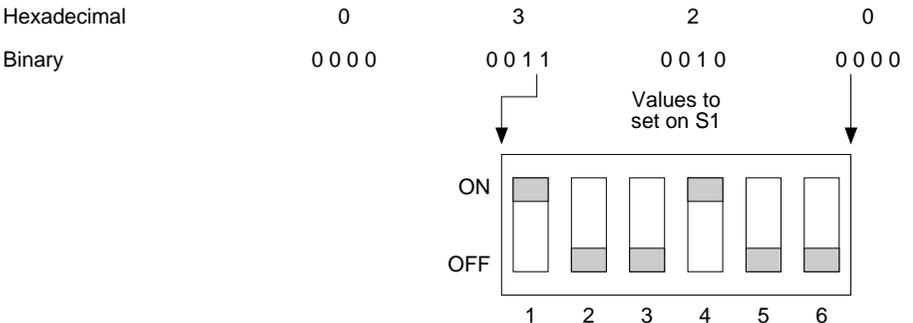
2.3 DMA Channel Selection

The selected DMA channel is set on the interface board using the DREQ and DACK jumpers (SW2). Telemecanique recommends selecting DMA channel 0.

Important: Both jumpers must be set to the same value.
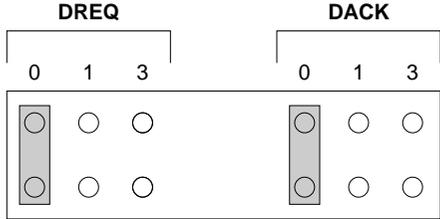
2.4 Interrupt Level Selection

The selected IRQ interrupt level selected is set on the interface board using jumper SW1. Telemecanique recommends selecting IRQ5.

Note: The interrupt levels recommended by IBM are:
- IRQ3 Serial port 2 (COM2),
- IRQ4 Serial port 1 (COM1),
- IRQ5 Parallel port 2 (LPT2),
- IRQ7 Parallel port 1 (LPT1 or PRN),
- IRQ9 PC network (PC network or IBM token ring).
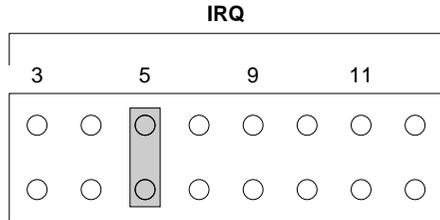
2.5 Installing the Board in the Microcomputer

After ensuring that address micro-switch S1 and the IRQ (SW1) DRQ and DACK (SW2) jumpers are correctly set:

- Insert the Mapway interface board into an available double connector (62 + 36 pin) extension slot in the microcomputer,
- Connect the interface board to the Mapway network through the type F connector,
- Power-up the microcomputer.

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3.1   Installation
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Once the microcomputer is powered-up with the correctly configured Mapway interface installed, when the DOS prompt (C:\>), is displayed on-screen:

① Insert the TSX MAPDS PC74 driver diskette into a diskette drive.

② Copy the MAPPC7.SYS file to the root directory of the system disk.

Example: If the system disk is C: and the TSX MAPDS PC74 driver diskette is in diskette drive A, type:

COPY A:\MAPPC7.SYS C:\

③ Use a text editor or a word processor to modify the CONFIG.SYS file located in the root of the system disk and add the following line to it:

DEVICE = C:\MAPPC7.SYS NET=XX STA=XX DMA=XX INT=X BASE=XXX

Important: X must be a hexadecimal number. The parameters, their sequence and the use of "=" signs is required. They correspond to network number, station number, DMA channel, IRQ level and board I/O address respectively.

Example: If the board is defined as Mapway network station 3A on network 05 and if the default configuration parameter values are used, the user should type:

DEVICE = C:\MAPPC7.SYS NET=05 STA=3A DMA=00 INT=5 BASE=200

④ If no CONFIG.SYS file is present in the microcomputer, the user must create one.

⑤ Once the CONFIG.SYS file has been created or updated it should be saved to the system disk and the PC rebooted for the changes to take effect. Simultaneously press the <Ctrl> <Alt> and <Del> keys to reboot the system. It is necessary to reboot the PC so that DOS can install the Mapway network driver into PC RAM.

Reminder: Installation of the DOS driver permits connection to the Mapway network only.

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3.2   Checking the Installation
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There are two stages in checking correct installation of the TSX MAP PC7 42 board and its driver software:

* Self-tests by the driver software when the microcomputer is powered-up or rebooted,
* Running the PC7TEST.EXE test program included on the diskette.

Before using any applications that communicate via a Mapway network, be sure to test correct installation using the PC7TEST.EXE program.

These tests let the user check that:

* The selected DMA, IRQ and board address parameters do not conflict with the original configuration of the microcomputer before the Mapway interface board was installed,
* The selected network and station parameters assign the correct Mapway network address to the microcomputer.

Checks performed by the driver software

Once the power-up sequence is complete and if the correct set-up parameters where selected, the message "INSTALLATION OK" is displayed on-screen and the green RUN LED lights and the red DEF LED remains extinguished.

If the red DEF LED lights and the error code displayed by the error indicator LEDs (D1 to D8) is "0010 0010" (22 in hex.), then the network and station values selected in the CONFIG.SYS file are already used on the Mapway network.

If another message is displayed on-screen (usually a DOS error message), then the driver software is incorrectly installed. The usual causes are:

* The DMA, IRQ and board address parameters set on the board and in the CONFIG.SYS file are different (remember, all CONFIG.SYS file parameters must be in hexadecimal notation),
* The DMA, IRQ and board address parameters conflict with the configuration of other boards installed in the microcomputer,
* The TSX MAP PC7 42 interface board is not actually installed in the microcomputer.

Checks performed by the PC7TEST.EXE program

The PC7TEST.EXE program can be run in two ways:

* Local mode test,
* Remote module test.

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Local mode test

This test checks that the DMA, IRQ and board address parameters are recognized as valid and allow communication between the Mapway interface board and the microcomputer ISA extension bus.

When the DOS prompt is displayed and the TSX MAPDS PC74 diskette in diskette drive A, type:

A:\PC7TEST and press <Enter>

The following information will be displayed on-screen:

- The version number of the DOS driver software,
- The Mapway network and station numbers stored by the DOS network driver software for the TSX MAP PC742 interface board,
- Validity of DMA, IRQ and board address parameters,
- Station identity.

Remote module test

This test checks that communication on the Mapway network with another Mapway interface on the same network segment is performed correctly.

When the DOS prompt is displayed and the TSX MAPDS PC74 diskette in diskette drive A, type:

A:\PC7TEST <target station address> and press <Enter>

The following information will be displayed on-screen:

- The version number of the DOS driver software,
- The Mapway network and station numbers stored by the DOS network driver software for the TSX MAP PC7 42 interface board,
- Validity of DMA, IRQ and board address parameters,
- Target station identity.

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4.1   Installation

The driver software is installed from a full-screen OS/2 session.
When the OS/2 prompt [C:\] is displayed:

① Insert the TSX MAPS2 PC7 42 diskette into a diskette drive,
② Select the diskette drive that contains the diskette, e.g. A: for diskette drive A. The
   [A:\] is displayed,
③ Start the driver software installation procedure by typing INSTALL and pressing
   <Enter> to confirm.

The following screen is displayed:

```
                INSTALLATION  DU  DRIVER  MAPWAY

                 MAPWAY  DRIVER  INSTALLATION

              (c)  TELEMECANIQUE  1990/1991,  V4.5
```

Press <Enter> to continue:

④ Press <Enter>. The following screen is displayed:

```
                MAPWAY  OS/2  DRIVER  INSTALLATION
Before installing a TSX MAP PC742 Mapway interface board in a
microcomputer, the parameters listed below must be set on the board:
. An available DMA channel (0, 1, or 3),
. An available IRQ level (3, 4, 5, 7, 9, A, B or F),
. A board address in the microcomputer I/O address field. This
  address is between 200 and 3F8 (in hexadecimal),
. A network number between 0 and 127,
. A station number between 0 and 63.
The following default values are factory set on the board:
. DMA = 0,
. IRQ = 5,
. Board address = 200 in hexadecimal.
Before installing the Mapway OS/2 driver, the correct board configura-
tion parameters must also be entered.
```

Press <Enter> to continue:

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⑤ Press <Enter>. The following screen is displayed for the user to select the interrupt level:

```
              INTERRUPT LEVEL SELECTION ...
The IRQ interrupt level selected must be set on the Mapway interface by
positioning the SW1 jumper.
                          1 IRQ3
                          2 IRQ4
                          3 IRQ5
                          4 IRQ7
                          5 IRQ9
                          6 IRQA
                          7 IRQB
                          8 IRQF
Enter values of 1 to 8 depending on the interrupt level selected.
The default value is 3 (IRQ5).
```

Enter the interrupt level (press <Enter> to accept IRQ5):

Select a different interrupt level if the default setting is unacceptable.

⑥ Press <Enter>. The following screen is displayed for the user to select the board address:

```
              BOARD ADDRESS SELECTION ...
The physical address of the board in the microcomputer address field must
be set on the micro-switches marked S1 on the Mapway interface system
board.

The address must be between 200 and 3F8 (in hexadecimal notation)
modulo 8 (200, 208, 210 ...). The default value is 200.
```

Enter the interface board address (press <Enter> to accept 200):

Select a different address if the default setting is unacceptable.

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⑦ Press <Enter>. The following screen is displayed for the user to select the DMA channel:

```
                   DMA  CHANNEL  SELECTION  ...

The DMA channel selected must be set on the Mapway interface by
positioning the DREQ and DACK jumpers located at SW2. Both jumpers
must be set to the same value.

                    0 = DMA Channel 0
                    1 = DMA Channel 1
                    3 = DMA Channel 3

Enter a value of 0, 1 or 3 depending on the DMA Channel selected.
The default value is 0 (DMA Channel 0).
```

Enter the DMA Channel (press <Enter> to accept DMA Channel 0):

Select a different DMA Channel if the default setting is unacceptable.

⑧ Press <Enter>. The following screen is displayed for the user to select the network number:

```
                   NETWORK  NUMBER  SELECTION  ...

The network number selected must be between 0 and 127.
Number 0 must be selected if the network comprises only a single
segment.
The default value is 0.
```

Enter the network number (press <Enter> to accept 0):

Select the network number to assign to the TSX MAP PC 742 interface board.

⑨ Press <Enter>. The following screen is displayed for the user to select the station number:

```
                   STATION  NUMBER  SELECTION  ...

The station number selected must be between 0 and 63.
The default value is 0.
```

Enter the station number (press <Enter> to accept 0):

Select the station number to assign to the TSX MAP PC 742 interface board.

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⑩   Press <Enter>. The screen below permits selection of the network:

```
                        NETWORK SELECTION
Which network do you want to use?

1    MAPWAY Network
2    MAP Network

Enter 1 or 2 for the required network.
The default value is 1 (MAPWAY Network).
```

Enter your selection (<Enter> for Mapway):

⑪   Press <Enter>. The following screen is displayed for the user to check the selections
made:

```
                    INSTALLATION   VALIDATION
You have selected the following values for the installation
parameters:
    1     Interrupt level      :
    2     Board  address       :
    3     DMA  channel         :
    4     Network  number      :
    5     Station number       :
    6     Network              :      M A P W A Y

Press:

- <Enter> to validate the selections made and start installation,
- A and <Enter> to abort the installation,
- The number of the parameter to modify and <Enter> to change
  the value of a parameter,
- M and <Enter> to display the MAC parameters if a MAP network
  is selected.
```

Enter your selection:

Once the user validates the selections made by pressing <Enter> or modifies the value
of a parameter,
• MAP OS/2 driver files are copied to the various X-TEL sub-directories,
• The CONFIG.SYS file is automatically updated to support the driver.

Note: If the installation procedure is run when the OS/2 driver is already installed,
the Installation Validation screen is displayed for the user to check the
previously configured values.

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⑫ Once the installation procedure has been run, the following screen is displayed:

```
                    CONFIGURATION  CHECK...

The installation procedure can perform a check on the program configuration
of the XTEL Software Workshop installed under OS/2.

If you have just completed the last program installation required before
starting the XTEL Software Workshop, you can run a complete check on the
program configuration. If not, run the complete check once you have
installed all XTEL software.

1    Last installation completed, run configuration check,
2    Run check later, other programs still waiting to be installed in the
     Software  Workshop.
```

Your choice:

Choosing 1 runs the X-TEL Software Workshop program installation check procedure.

Once the installation check procedure is complete or if the user chooses 2, OS/2 driver installation is complete:

```
         MAPWAY  DRIVER  INSTALLATION  IS  COMPLETED

The installation procedure is completed.

The system must be rebooted for the changes to take effect.
Press the <Ctrl> <Alt> <Del> keys together to reboot.
```

Press <Enter> then reboot the system

Enter   Returns the user to the full-screen OS/2 session.

The OS/2 driver will only install after the microcomputer is rebooted.

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5.1   Definition of Parameters

The installation of the OS/2 driver for connecting a TSX PC742 interface board to a MAP network necessitates the definition of:

- An available DMA channel (defined in Section 2),
- An available IRQ level (defined in Section 2),
- A board address in the microcomputer I/O address field (defined in Section 2),
- A network number (between 0 and 127),
- A station number (between 0 and 63).

In addition to the parameters above, a knowledge of the following MAC (Medium Access Control) parameters is necessary:

Hi_Pri_Token_Hold_Time

This is the maximum time during which a station that holds the token can send frames of the highest priority (class 6).

The value of this parameter (between 0 and 3FF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 µs).

The default value of the Hi_Pri_Token_Hold_Time parameter is 200H (i.e. 52 ms).

Target_Rotation_Time_For_Access_Class_4

This is the target average rotation time of the token for messages of class 4 priority.

The value of this parameter (between 0 and 7FFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 µs).

The default value of the Target_Rotation_Time_For_Access-Class_4 parameter is 7FFFH (i.e. 3.4s).

Target_Rotation_Time_For_Access_Class_2

This is the target average rotation time of the token for messages of class 2 priority.

The value of this parameter (between 0 and 7FFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 µs).

The default value of the Target_Rotation_Time_For_Access-Class_2 parameter is 4000H (i.e. 1.7 s).

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Target_Rotation_Time_For_Access_Class_0

This is the target average rotation time of the token for messages of class 0 priority.

The value of this parameter (between 0 and 7FFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 μs).

The default value of the Target_Rotation_Time_For_Access-Class_0 parameter is 1000H (i.e. 0.4 s).

Target_Rotation_Time_For_Ring_Maintenance

This is the timer value that is reloaded on each token pass. If it reaches zero and the Inter_Solicit_Count timer is also at zero, the station will not start the search for the next station (transmission of a Solicit_Successor frame).

The value of this parameter (between 0 and 7FFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 μs).

The default value of the Target_Rotation_Time_For_Ring-Maintenance parameter is 7FFFH (i.e. 3.4 s).

Ring_Maintenance_Time_Initial_Value

This is the initial value of the Target_Rotation_Time_For-Initial_Value parameter when a new station is inserted into the network.

The value of this parameter (between 0 and FFFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 μs).

The default value of the Ring_Maintenance_Time_Initial-Value parameter is 7FFFH (i.e. 3.4 s).

Max_Inter_Solicit_Count

This is the number of times that a station must hold the token before it initiates the search for a new station (transmission of a Solicit_Successor frame).

The value of this parameter (between 10 and FF in hexadecimal) corresponds to a number of tokens.

The default value of the Max_Inter_Solicit_Count parameter is FFH (i.e. 255).

RWR_Max_Retry_Limit

This is the maximum number of retries when sending a RWR (Request With Response) frame.

The value of this parameter is between 0 and 7 in hexadécimal.

The default value of the RWR_Max_Retry_Limit parameter is 1.

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Slot_Time

This is the worst case time that any station must wait for a response from another station (acknowledgement, token passing, etc.). The Slot_Time must be the same for all the devices on the network.

The value of this parameter (between 10 and 1FFF in hexadecimal) corresponds to a number of units of time. This unit of time is 64 byte-times (a byte-time represents the transfer time of a byte at 5M bits/s, i.e. 1.6 µs).

The default value of the Slot_Time parameter is 100H (i.e. 26.2 ms).

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5.2   Installation

The first phase of the installation of the OS/2 driver for connecting the TSX MAP PC7 42 interface board to a MAP network is the same as for connecting the board to a Mapway network:

• Start the installation procedure,
• Select the interrupt level,
• Select the board address,
• Select the DMA channel,
• Select the network number,
• Select the station number.

For further details concerning this phase, refer to Section 3.

Once the parameters above have been defined, and after selection of the station number, select the MAP network on the following screen:

```
                    NETWORK  SELECTION
Which network do you want to use ? :

    1        MAPWAY  Network
    2        MAP  Network

Enter 1 or 2 for the required network

The default value is 1 (MAPWAY Network)
```

Enter your selection (Press <Enter> for Mapway)

Select the number 2 (MAP network).

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Press <Enter>, the screen below permits selection of the physical media:

```
                   SELECTING  THE  PHYSICAL  MEDIA

A MAP network will at present support two types of physical media:

    1 = Carrier Band
    2 = Broad Band

Enter 1 or 2 depending on the type of media selected.

The default value is 1 (Carrier Band).
```

Select media (press <Enter> for Carrier Band) :

The selection of 1 (Carrier Band) leads directly to the MAC parameter selection screen described below.

The selection of 2 (Broad Band) requires in addition:

- Selection of the channel on which the stations transmit (channel P-Q, R-S or T-U),
- Selection of the transmission level (from 30,5 dBmV to 53 dBmV in incremets of 1,5 dBmV),
- The complementary information concerning the hardware installation described in the Appendix to this manual, Section 6.2.

The validation of these selections calls up the MAC parameter selection screen:

```
                   MAC  PARAMETER  SELECTION

The following MAC parameter values have been selected:

1   HI_PRI_TOKEN_HOLD_TIME                       :    0200H
2   TARGET_ROTATION_TIME_FOR_ACCESS_CLASS_4      :    7FFFH
3   TARGET_ROTATION_TIME_FOR_ACCESS_CLASS_2      :    4000H
4   TARGET_ROTATION_TIME_FOR_ACCESS_CLASS_0      :    1000H
5   TARGET_ROTATION_TIME_FOR_RING_MAINTENANCE    :    7FFFH
6   RING_MAINTENANCE_TIME_INITIAL_VALUE          :    7FFFH
7   MAX_INTER_SOLICIT_COUNT                      :    00FFH
8   RWR_MAX_RETRY_LIMIT                          :    0001H
9   SLOT_TIME                                    :    0100H

Press :

-  <Enter> to validate the parameter values selected,
-  A and <Enter> to abort the modification of these parameters,
-  D and <Enter> to select the default value,
-  The number of the parameter to modify and <Enter> to change
   the value of a parameter
```

Enter your selection.

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The "MAC Parameter Selection" screen presents:

• The default values at the time of the first installation of the driver,
• The previously selected values if the installation procedure is initiated after the MAP driver is already installed.

The request to modify one of these parameters leads to a specific screen.
Its validation causes the return to the "MAC Parameter Selection" screen.

Once all the entries have been made, <Enter> validates the parameters and displays a screen that summarizes the various selections that have been made:

```
                   INSTALLATION   VALIDATION

 You have selected the following values for the installation
 parameters :

 1  Interrupt level        :           7  Medium          :
 2  Board address          :           8  Broadband Channel :
 3  DMA  channel           :           9  Broadband Level   :
 4  Network  number        :
 5  Station number         :
 6  Network                : M A P

 Press :

 -  <Enter> to validate the selections made and start installation,
 -  A and <Enter> to abort the installation,
 -  The number of the parameter to modify and <Enter> to change the value
    of a parameter,
 -  M and <Enter> to display the MAC parameters if a MAP network is
    selected.
```

Enter your selection.

Remark : The Medium, Broadband Channel and Broadband Level parameters are not displayed unless the Broad band physical medium has been selected.

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Once this operation is completed, the following screen is displayed:

```
                    CONFIGURATION  CHECK

The installation procedure can perform a check on the program configuration
of the XTEL Software Workshop installed under OS/2.

If you have just completed the last program installation required before
starting the XTEL Software Workshop, you can run a complete check on the
program configuration. If not, run the complete check once you have
installed all XTEL software.

1   Last installation completed, run configuration check, .
2   Run check later, other programs still waiting to be installed in the
    XTEL  Software  Workshop.
```

Enter your selection.

Choosing 1 runs the XTEL Software Workshop program installation check procedure.

Once the installation check procedure is complete or if the user chooses 2, the
installation of the OS/2 driver for a MAP network is completed:

```
        MAPWAY  DRIVER  INSTALLATION  IS  COMPLETED

The installation procedure is completed.

The system must be rebooted for the changes to take effect.
Press the <Ctrl> <Alt> <Del> Keys together to reboot.
```

Press <Enter> then reboot the system.

Enter   Returns the user to the full-screen OS/2 session.

The installation of the OS/2 driver becomes effective only after the microcomputer is
rebooted.

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6.1   Installation of Two TSX MAP PC7 42 Boards
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This Sub-section describes the procedure for installing two TSX MAP PC7 42 interface boards in the same microcomputer.

This procedure assumes that:

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• The directory under which XTEL has been installed is C:\
• The drive containing the TSX MAPS2 PC7 42 (OS/2 driver) diskette is A:

① Install the first driver using the standard installation procedure (A: install).

② Type: *Copy A:\XPROSYS\EXE\DMPW02.SYS C:\XPROSYS\EXE*

③ Edit the C:\XPROSYS\CONFIG.XPR file so as to replace the line:
   XPRODRVL=TSXPC01 MAPWAY01 ...

   by the line:

   XPRODRVL=TSXPC01 MAPWAY02 ...

④ Edit the C:\CONFIG.SYS file so as to delete the lines:
   • *REM TE INSTALLATION DRIVER MAPWAY*
   • *REM TE END INSTALLATION DRIVER MAPWAY*

⑤ Continue editing the C:\CONFIG.SYS file so as to replace the line:
   DEVICE=C:\XPROSYS\EXE\DMPW01.SYS   NETWORK=AA   STATION=BB INT=CC DMA=DD BASE=XXXH

   by the line:

   DEVICE=C:\XPROSYS\EXE\DMPW02.SYS   NETWORK=AA   STATION=BB INT=CC DMA=DD BASE=XXXH

⑥ Install the second driver using the standard installation procedure (A: install).

Important

The selection of the mode of communication is made on the XTEL User window by selecting the Communication menu and then the driver required, taking into account the following remark:
• The first driver installed is referenced by MAPWAY02,
• The second driver installed is referenced by MAPWAY01.

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6.2   Installation of a MAP PC7 42 Board in a Broad Band Network

This Sub-section describes the installation of the additional hardware required for connecting a TSX MAP PC7 42 interface board to a Broad Band network.

Hardware Installation

This connection requires the use of a modem in the form of a PC format board installed next to the TSX MAP PC7 42 board. This modem is not supplied by Telemecanique (example : "CONCORD Series 1210 BroadBand Modem" board for PC-AT). For further details, refer to the manufacturer's documentation.

• Position the "MODEM" jumper of the TSX MAP PC7 42 board to the position "EXT" (for external modem),
• Connect the TSX MAP PC742 board to the modem by a ribbon cable having at each end a 40-pin female connector (item 2 of Sub-section 1.3) conforming to MIL-C-83503 standard,
• The connection to the Broad Band network is made through the external connector of the modem, and not through that of the TSX MAP PC7 42 board.

Software Installation

The software installation is performed as described in Sub-section 5.2 of this manual.