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## 1.1 Documentation structure

This document is designed for users who wish to set up a FIP module and its driver in an FTX 507, FTX 417 or CCX 57/77 type terminal, or an IBM PC/AT or compatible, to connect it to a FIPWAY network or FIPIO fieldbus.

The complete documentation set is organized in the following way :

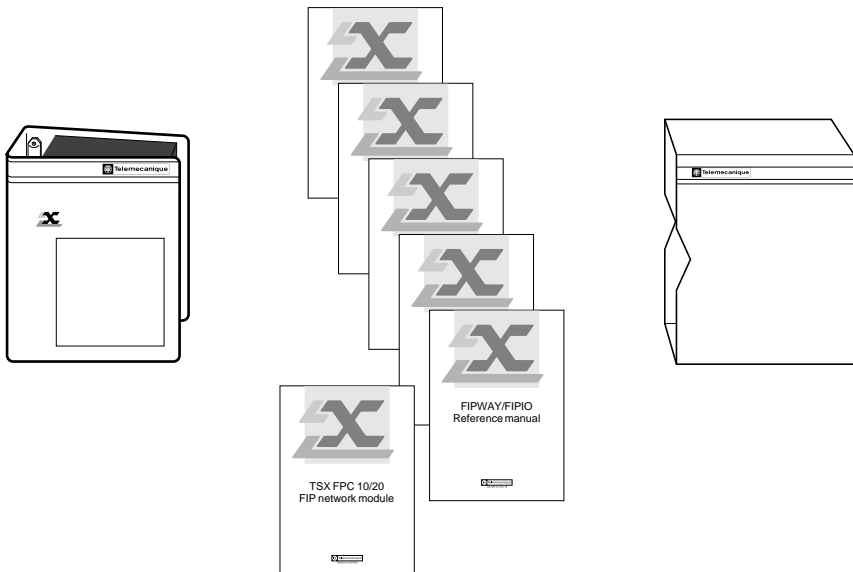
**A reference manual** (reference TSX DR FIP V5E) which presents :

- FIPWAY network and FIPIO fieldbus operating principles
- Network installation and checking principles
- Operating, adjustment and diagnostics functions
- Technical characteristics of the FIPWAY network and FIPIO fieldbus

**Specialized manuals** (such as this document) are available for each setup program or module which can be connected to FIPWAY or FIPIO. The main points covered by these manuals include :

- Description of the device
- How to set up or connect the device on the network
- Network performance
- Operation with Telemecanique terminals or software
- Diagnostics functions via the network

The documentation is presented in A5 format and can be inserted in a binder with dividers (to be ordered separately, reference TSX DAC1).



## 1.2 General

---

The TSX FPC 10 module connects an FTX 507 or CCX 7 type terminal or IBM PC/AT type PC or compatible, to a FIPWAY network or FIPIO fieldbus. These terminals must operate under OS/2 (version 1.3 or later) or DOS (version 3.30 or later).

The TSX FPC 10 module is made up of three parts :

- A half format extension card, which can be plugged into a slot with a 16-bit connector (double connector)
- A diskette containing the OS/2 driver for communication with the card and the driver installation software (TSX FPC SS)
- A diskette containing the DOS driver for communication with the card and the driver installation software (TSX FPC SD)

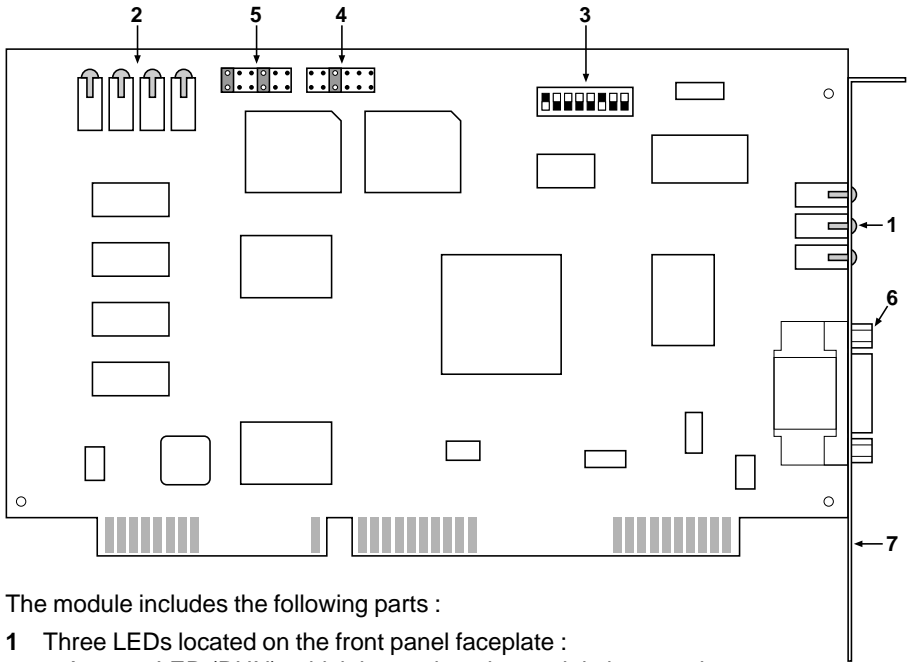
The procedure for installing this card is described in Section 2.

The TSX FPC 20 module connects an FTX 417 terminal running under OS/2 (version 1.3 or later) or DOS (version 3.30 or later) to a FIPIO fieldbus. It is made up of three parts :

- A special extension card, which is located between the support arms of the terminal screen
- A diskette containing the OS/2 driver for communication with the card and the driver installation software (TSX FPC SS)
- A diskette containing the DOS driver for communication with the card and the driver installation software (TSX FPC SD)

The procedure for installing this card is described in Section 3.

## 2.1 Physical appearance



The module includes the following parts :

- 1 Three LEDs located on the front panel faceplate :
  - A green LED (RUN), which is on when the module is operating.
  - A red LED (DEF), which is on with a steady light when a serious fault has been detected in the module. It flashes during the self-tests which are executed when the module is switched on or when a minor fault is detected (addressing fault, etc).
  - A yellow LED (COM) which is on when the module is transmitting or receiving response type frames. It flashes during the self-tests which are executed when the module is switched on.
- 2 Four LEDs facing upwards at the rear of the card , which are used for diagnostics (these are reserved for internal use).
- 3 Dipswitches (SW3) used for selecting the basic module address in the microcomputer I/O space.
- 4 A jumper (SW2) for selecting the IRQ (Interrupt Request) level.
- 5 Jumpers (SW1) for selecting the DMA (Direct Memory Access) channel together with jumper DMA\_RQ (DMA Request) which is associated with jumper DMA\_ACK (DMA Acknowledge).
- 6 A 15-pin female SubD high density connector for connecting the module to the network via cable TSX FP CE 030.
- 7 A metal plate, fixed to the card, which holds it in position on the chassis.

---

## 2.2 Hardware installation

---

### 2.2-1 Preparation

Before installing a TSX FPC 10 module and its driver in a terminal, it must be configured with the following parameters :

- An available DMA channel number (5, 6 or 7).
- An available IRQ channel number (3, 5, 10, 11 or 15).
- A basic address so that the addresses occupied by the module can be defined (it occupies 16 consecutive addresses starting with the basic address in the microcomputer I/O space). The base 16 address (10H) must be between 100H and 3F0H. Example : 100H, 110H, 120H, etc).
- A network number between 0 and 7FH : network number 0 is only allowed if it is a single segment network. The network number is selected when the relevant driver (DOS or OS/2) is installed.
- A station number between 0 and 3FH. The station number is selected when the relevant driver (DOS or OS/2) is installed.

The card is assigned the following default values :

- DMA = 5
- IRQ = 10
- Basic address = 210H (therefore by default the module will use addresses between 210H and 21FH).

If the default parameters are not taken by other cards in the terminal configuration, it is recommended that they are used.

Before installing the TSX FPC 10 module in the terminal, check that neither the default values of DMA and IRQ nor any of the 16 addresses occupied by the module have already been reserved by other cards in the terminal. If they have been, change the default values, taking into account the prohibited addresses listed in the table on the following page.

The following table lists, for the main peripherals or cards used, the following information :

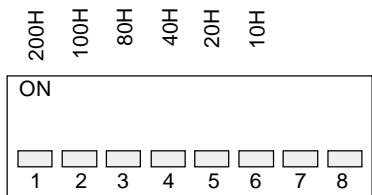
- The addresses occupied
- The corresponding IRQ channel
- The corresponding DMA channel
- The prohibited basic address for the TSX FPC 10 module

Card or peripheral	Addresses occupied	IRQ channel	DMA channel	Prohibited basic address
LPT1	378H - 37FH	7	(*)	370H
LPT2	278H - 27FH	7	(*)	270H
COM1	3F8H - 3FFH	4	(*)	3F0H
COM2	2F8H - 2FFH	3	(*)	2F0H
COM3	3E8H - 3EFH	4	(*)	3E0H
COM4	2E8H - 2EFH	3	(*)	2E0H
VGA register	102H	9	(*)	100H
Hard disk	1F0H - 1F8H	14	(*)	1F0H
Diskette	3F0H - 3F7H	6	(*)	3F0H
TSX MAP PC74 card	200H - 207H	5	0	200H
TSX ETH PC10 card	320H - 327H	11	(*)	320H

(\*) Not applicable

**2.2-2 Selection of the card address**

The basic address of the card, which has already been selected (Section 2.2-1) must be coded using dipswitches SW3 on the module. Each one has a different value (200H, 100H, 80H, 40H, 20H and 10H). They are used to code an address on 16 bits, from 100H to 3F0H.

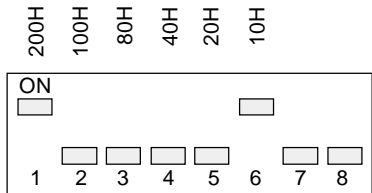


The basic address of the card is obtained by adding together the values corresponding to those dipswitches which are set to ON. Dipswitches 7 and 8 must remain set to OFF.

**Examples :**

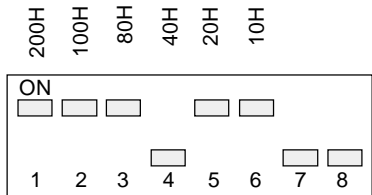
Basic address = 210H

This address corresponds to values 200H and 10H. Dipswitches 1 and 6 are therefore set to ON.



Basic address = 3B0H

This address corresponds to values 200H, 100H, 80H, 20H and 10H. Dipswitches 1, 2, 3, 5 and 6 are therefore set to ON.



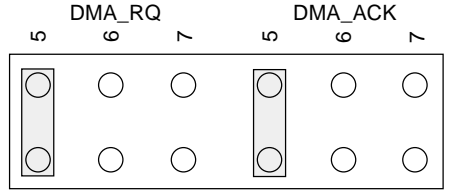


**2.2-3 Selection of the DMA channel**

The selected DMA channel must be set on the module by the pair of jumpers DMA\_RQ and DMA\_ACK (SW1). Telemecanique recommends channel DMA 5.

**Important :** The two jumpers must be set to the same value.

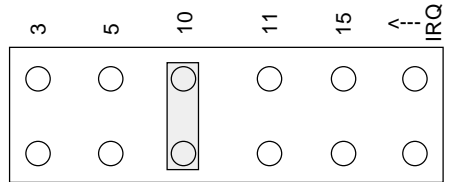
Note : The DMA channels used by other cards and peripherals are listed in Section 2.2-1.



**2.2-4 Selection of the interrupt channel**

The selected IRQ interrupt channel must be set on the module using jumper SW2. Telemecanique recommends channel IRQ 10.

Notes : The IRQ channels used by other cards and peripherals are listed in Section 2.2-1. The jumper must not be set to the "IRQ" position.



**2.2-5 Installing the module in the terminal**

The power must always be off when installing or removing a TSX FPC 10 module from the terminal (it should also be off when modifying the basic address, the interrupt level or the DMA channel).

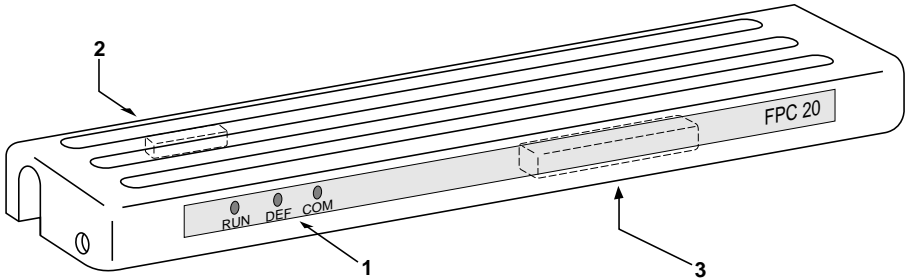
First correctly set the addressing dipswitches SW3, and jumpers IRQ (SW2) and DMA (SW1). Then :

- Insert the module in an empty slot with a 16-bit connector (double connector)
- Connect the module to the network using cable TSX FP CE 030
- Switch the terminal on.

ENGLISH



### 3.1 Physical appearance



This module includes the following parts :

- 1 Three LEDs located on the front panel, above the keyboard :
  - A green LED (RUN), which is on when the module is operating
  - A red LED (DEF) which is on with a steady light when a serious fault is detected in the module. It flashes during the self-tests which are executed when the module is switched on or when there is a minor fault (addressing fault, etc)
  - A yellow LED (COM) which is on when the module is transmitting or receiving response type frames. It flashes during the self-tests which are executed when the module is switched on.
- 2 A 15-pin female SubD high density connector, which can be accessed at the rear of the module, which is used to connect it to the FIPWAY network or FIPIO fieldbus.
- 3 A connector, located under the module, connects it to the FTX 417 terminal.

## 3.2 Hardware installation

### 3.2-1 Selection of the parameters

The user does not need to make any adjustments on the card. The card address in the terminal I/O addressing field, the interrupt channel and the DMA channel are predefined.

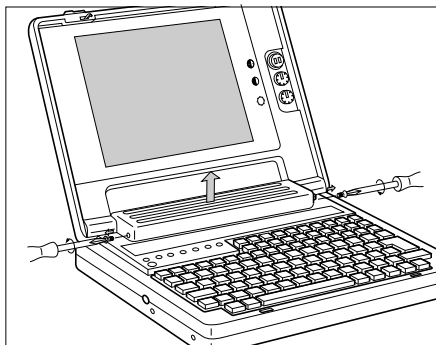
The selected values are :

- Card address = 210H
- Interrupt channel = 10
- DMA channel = 5

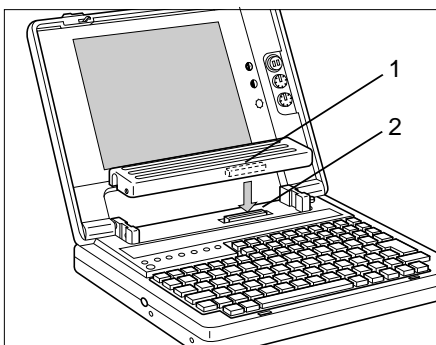
### 3.2-2 Installing the module in the terminal

The installation of the TSX FPC 20 module in an FTX 417 terminal must always be performed with the power off, in the following way :

Lift out the basic interface unit. To do this, loosen the two screws on either side of the unit using a Phillips screwdriver.



Position the TSX FPC 20 module with the connector on the card (No. 1) facing the connector on the terminal (No. 2). Gently insert the unit then tighten the screws on either side.



## 4.1 First installation

### 4.1-1 Launching the installation procedure

The installation procedure for the drivers is identical under DOS and OS/2. It is also common to both the TSX FPC 10 and TSX FPC 20 module.

The FIP DOS driver is installed under DOS with diskette TSX FPC SD.  
The FIP OS/2 driver is installed under OS/2 with diskette TSX FPC SS.

When the "prompt" for the selected operating system, C:\> or [C:], appears on screen the following must be performed :

- Insert the corresponding diskette in a drive
- Select the drive containing the diskette by typing, for example, A:  
The "prompt" A:\> or [A:] then appears
- Launch the drive installation procedure by typing the command INSTALL then confirming with <Enter>.

The following message then appears :

```

INSTALLATION DRIVER FIP OS/2

FIP DRIVER INSTALLATION

(C) TELEMECANIQUE 1993, V1.0

```

Press <Enter> to continue :

- Type <Enter>. The following screen then appears :

#### INSTALLING THE FIP OS/2 DRIVER

To install the FIP driver, you will have to enter its configuration parameter values.

These parameters specify the operating mode for the driver and, depending on the selections made, its Network/Station address or the local and PLC connection points.

Press <Enter> to continue :

After pressing <Enter>, the screen VALIDATING THE INSTALLATION is displayed. This screen is used to modify and validate the various parameters.

**Note :** If the DOS integrator (for a FIP DOS driver) or the X-TEL Software Workshop (for a FIP OS/2 driver) is not installed, the first screen to appear will offer the choice of installation language (English, French, German, Italian or Spanish).

**4.1-2 Modifying the parameters**

The screen VALIDATING THE INSTALLATION enables the modification of all of the module parameters :

- The operating mode is the first parameter which may be modified. This is the parameter for selecting the type of network (FIPWAY or FIPIO) to which the module will be connected.
- Network address (for a FIPWAY network)
- Station address (for a FIPWAY network)
- Local connection point (for a FIPIO network)
- PLC connection point (for a FIPIO network)
- Basic address
- DMA channel number
- IRQ interrupt level

The default screen (or when the FIPWAY operating mode has been selected) is as follows :

**VALIDATING THE INSTALLATION**

The installation parameters are set to the following values :

<1> Operating Mode	:	[FIPWAY,FIPIO]
<2> Network Address	:	[0..127]
<3> Station Address	:	[0..63]
<4> Basic Address	:	[100..3F0] Mod 10
<5> DMA Channel	:	[5,6,7]
<6> IRQ Number	:	[3,5,10,11,15]

Make the following entries :

- <Enter> to confirm the selections made and complete the modification,
- Q and <Enter> to cancel the modifications made,
- Enter the number of the parameter to modify and press <Enter> to change the value of a parameter.

Your choice :

The user may either confirm the default selections, quit the current installation, or modify the value of one of the parameters as illustrated above.

Selecting the FIPIO operating mode brings up the following screen :

```

                                VALIDATING THE INSTALLATION

The installation parameters are set to the following values :

<1> Operating Mode           :           [FIPWAY,FIPIO]
<2> Local Connection Point   :           [0..63]
<3> PLC Connection Point     :           [0..63]
<4> Basic Address            :           [100..3F0] Mod 10
<5> DMA channel              :           [5,6,7]
<6> IRQ Number               :           [3,5,10,11,15]

Make the following entries :
- <Enter> to confirm the selections made and complete the
  modification,
- Q and <Enter> to cancel the modifications made,
- Enter the number of the parameter to modify and press <Enter> to
  change the value of a parameter.

```

Your choice :

The user may either confirm the default selections, quit the current installation, or modify the value of one of the parameters as illustrated above.

### Modifying the operating mode (FIPWAY mode)

Confirming selection <1> brings up the following screen :

```

                                SELECTING THE OPERATING MODE...

The FIP driver can use two different operating modes :

      <1>  FIPWAY
      <2>  FIPIO

Enter the value <1> or <2> depending on the mode selected.

The default value is <1> (FIPWAY).

```

Your choice ( <Enter> for FIPWAY ) :

<Enter> confirms the selection of FIPWAY and returns the user to the VALIDATING THE INSTALLATION screen. The user must then select the network and station addresses of the terminal.

### **Modifying the network address (FIPWAY mode)**

Confirming selection <2> brings up the following screen :

```
                SELECTING THE NETWORK ADDRESS...

The network address must be between 0 and 127.

The default value is 0.
```

Your choice ( <Enter> for 0 ) :

Select the network number to be assigned to the TSX FPC 10 or TSX FPC 20 module.

### **Modifying the station address (FIPWAY mode)**

Confirming selection <3> brings up the following screen :

```
                SELECTING THE STATION ADDRESS...

The station number must be between 0 and 63.

The default value is 31.
```

Your choice ( <Enter> for 31 ) :

Select the station number to be assigned to the TSX FPC 10 or TSX FPC 20 module.

### **Modifying the operating mode (FIPIO mode)**

Confirming selection <1> brings up the following screen :

```
                SELECTING THE OPERATING MODE...

The FIP driver can use two different operating modes :

        <1>  FIPWAY
        <2>  FIPIO

Enter the value <1> or <2> depending on the mode selected.

The default value is <1> (FIPWAY).
```

Your choice ( <Enter> for FIPWAY ) :

Confirming selection <2> selects the FIPIO fieldbus and returns the user to the VALIDATING THE INSTALLATION screen. The user must then select the local connection point and the PLC connection point.



---

**Modifying the local connection point (FIPIO mode)**

Confirming selection <2> brings up the following screen :

```
SELECTING THE LOCAL CONNECTION POINT...

The local connection point value must be between 0 and 63.

63 is a special case. It corresponds to a station designated as
privileged on the FIPIO bus.

The default value is 63.
```

Your choice ( <Enter> for 63 ) :

Select the local connection point to be assigned to the TSX FPC 10 or TSX FPC 20 module. This address corresponds to the point where the terminal is connected on the FIPIO fieldbus. If a terminal is connected at the predefined address, 63, it can access the entire architecture without any configuration. If it is connected at a different address, it can access all the devices connected on FIPIO but cannot go beyond the FIPIO fieldbus controlling PLC.

**Modifying the PLC connection point (FIPIO mode)**

Confirming selection <3> brings up the following screen :

```
SELECTING THE PLC CONNECTION POINT...

The PLC connection point value must be between 0 and 63.

The default value is 0.
```

Your choice ( <Enter> for 0 ) :

Select the connection point to be assigned to the PLC.

This parameter corresponds to the connection point of the FIPIO fieldbus controlling PLC processor. It must be set to 0.

### **Modifying the card address**

Confirming selection <4> brings up the following screen :

```
SELECTING THE CARD ADDRESS...

The physical address of the card in the I/O addressing field of the
microcomputer is encoded with the SW1 dip-switches on the interface
board.

This address must be between 100 and 3F0 (in hexadecimal notation)
and must be a multiple of 10 : 100, 110, 120 ...

The default value is 210.
```

Card address ( <Enter> for 210 ) :

Value 100H must be selected for an FTX 417 terminal.

For an FTX 507, CCX 57/77, etc, type terminal, if the default value is not suitable (conflict with other cards), select the card address based on the information given in Section 2.2. The address entered must, of course, be consistent with that physically coded on the TSX FPC 10 card.

### **Modifying the DMA channel number**

Confirming selection <5> brings up the following screen :

```
SELECTING THE DMA CHANNEL...

The DMA channel selected must be set on the interface board using
the DMA_RQ and DMA_ACK jumpers at SW1. The two jumpers must be set
to the same value.

    <5> = DMA Channel 5
    <6> = DMA Channel 6
    <7> = DMA Channel 7

Enter the value <5>, <6> or <7> depending on the selected DMA channel .

The default value is <5> (DMA Channel 5).
```

Choose DMA Channel ( <Enter> for DMA Channel 5 ) :

The default value must be selected if an FTX 417 is used. If the default value is not suitable (conflict with other cards in an FTX 507 type terminal, etc), select the DMA channel based on the information given in Section 2.2. The DMA channel number entered must, of course, be consistent with that physically coded on the TSX FPC 10 card.

### Modifying the interrupt level

Confirming selection <6> brings up the following screen :

```
                SELECTING AN INTERRUPT LEVEL...

The interrupt level (IRQ) selected is set on the interface board by
jumper SW2.

    <1>  IRQ3
    <2>  IRQ5
    <3>  IRQ10 (IRQAh)
    <4>  IRQ11 (IRQBh)
    <5>  IRQ15 (IRQFh)

Enter a value from <1> to <5> corresponding to the selected IRQ level .

The default value is <3> (IRQ10) .
```

Interrupt level ( <Enter> for IRQ10 ) :

The default value must be selected if an FTX 417 type terminal is used. If the default value is not suitable (conflict with other cards in an FTX 507 type terminal, etc), select the interrupt level based on the information given in Section 2.2. The interrupt level entered must, of course, be consistent with that physically coded on the TSX FPC 10 card.

### 4.1-3 Validating the installation

All entries or modifications are validated on the VALIDATING THE INSTALLATION screen by pressing the <Enter> key.

- The FIP DOS driver files are copied to various subdirectories of the DOS user interface or under C:\XDOSDRV if the DOS user interface is not installed.
- The FIP OS/2 driver files are copied to various subdirectories of the X-TEL Software Workshop or under C:\XPRODRV if the X-TEL Software Workshop is not installed.
- The CONFIG.SYS file is automatically updated.

When this operation is complete, the installation software presents a screen for checking the configuration.

The following are examples of screens for installing the FIP OS/2 driver (the procedure is identical under DOS) :

#### CONFIGURATION CHECK...

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

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

<1> Last installation completed, run configuration check,

<2> Run check later; Other programs still waiting to be installed in the X-TEL Software Workshop.

Your choice :

Selection 1 launches a checking procedure for the X-TEL workshop software.

At the end of this check or if 2 is selected, the installation of the FIP OS/2 driver is complete :

#### INSTALLATION COMPLETE...

The installation procedure is complete.

For the changes to take effect you must restart your system.

Press the <Ctrl> <Alt> <Del> keys together to restart your system.

Press <Enter> then restart your system

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

The FIP OS/2 driver is not recognized until the terminal has been initialized.

## 5.1 Modifying using the installation diskettes

It is possible to modify the parameters of a FIP DOS or FIP OS/2 driver which has already been installed on a terminal (or another FIP driver can be added if a second TSX FPC 10 network card needs to be installed in an FTX 507, CCX 57/77, etc, type terminal). To do this, launch the installation procedure as described in Section 4.1-1. The following message will then be displayed :

```

INSTALLATION DRIVER FIP OS/2
FIP OS/2 DRIVER INSTALLATION
(C) TELEMECANIQUE 1993, V1.0
    
```

Press <Enter> to continue :

Press <Enter>. The terminal detects the presence of a FIP driver and displays the following screen :

```

                INSTALLING A SECOND FIP DRIVER

Your software configuration already comprises an installed FIP
driver.

Do you want to :
    <1>  MODIFY it?
    <2>  INSTALL a second driver?

The default selection is <1>.
    
```

Your choice ( <Enter> for MODIFY ) :

Note : If a second FIP driver has already been installed, a screen for selecting the driver to modify appears :

```

                SELECTING THE DRIVER TO MODIFY

Your software configuration comprises two installed FIP drivers.

Which driver do you want to modify :
    <1>  DFPW01.SYS
    <2>  DFPW02.SYS

The default value is <1>.
    
```

Your choice ( <Enter> for DFPW01.SYS ) :

**Note :**

The installation of a new driver is described in Section 5.3.

**Important :**

When modifying a FIP driver which has been already installed, it is essential that all the other tools which use this driver are closed.

After confirming one of the screens on the preceding page, the MODIFYING THE INSTALLATION screen appears. This screen is used to modify and confirm the various parameters and displays the previous values :

ENGLISH

**MODIFYING THE INSTALLATION**

The installation parameters are set to the following values :

<1> Operating Mode	:	[FIPWAY,FIP10]
<2> Network Address	:	[0..127]
<3> Station Address	:	[0..63]
<4> Basic Address	:	[100..3F0] Mod 10
<5> DMA Channel	:	[5,6,7]
<6> IRQ Level	:	[3,5,10,11,15]

Make the following entries :

- <Enter> to confirm the selections made and complete the modification,
- Q and <Enter> to cancel the modifications made,
- Enter the number of the parameter to modify and press <Enter> to change the value of a parameter.

Your choice :

The user can either confirm the default selections as described in Section 4.1-3, quit the current installation, or modify the value of one of the parameters as described in Section 4.1-2.

If the basic address, the IRQ interrupt level or the DMA channel parameters are modified, the user is invited to set the corresponding parameters on the module and to restart the terminal. The terminal does not have to be restarted if any other parameters are modified.

**A SYSTEM RESTART IS REQUIRED**

Essential system parameters (basic address, DMA channel or IRQ level) have been modified. These changes must be loaded by the interface card.

It is possible to continue to work in progress, however the modifications made will only take effect after the workstation is restarted.

Press the <Ctrl> <Alt> and <Del> keys together to restart your system.

## 5.2 Modifying from the terminal

### 5.2-1 Modifying the FIP DOS driver

The following parameters can be modified using a special command on a terminal in which a FIP DOS driver has been installed :

- The operating mode (FIPWAY or FIPIO)
- The network and station addresses (for a FIPWAY network)
- The local and PLC connection points (for a FIPIO fieldbus)

When the DOS "prompt" appears on screen, the above parameters can be modified using the following command :

**C:\>DFPWAY <driver n°> RESET <network type> <parameter1> <parameter2>**

- driver n°** : is the number of the FIP DOS driver to be modified (1 or 2)
- network type** : is the type of network (this is the FIPWAY or FIPIO character string depending on the type of network to be modified)
- parameter1** : in the case of a FIPWAY network, this is the network number (its value will be between 0 and 127)  
in the case of a FIPIO fieldbus, its value must be 0
- parameter2** : in the case of a FIPWAY network, this is the station number (its value will be between 0 and 63)  
in the case of a FIPIO fieldbus, this is the local connection point (its value will be between 0 and 63).

#### Example

FIP DOS driver number 2, configured for a FIPIO fieldbus, is to be modified to have the following characteristics : FIPWAY network, network number 6, station number 22. The syntax will be as follows :

C:\>DFPWAY 2 RESET FIPWAY 6 22

#### Important

Parameters which are modified using this command are not stored. When the terminal is restarted, the parameters used will be those which were specified during installation.

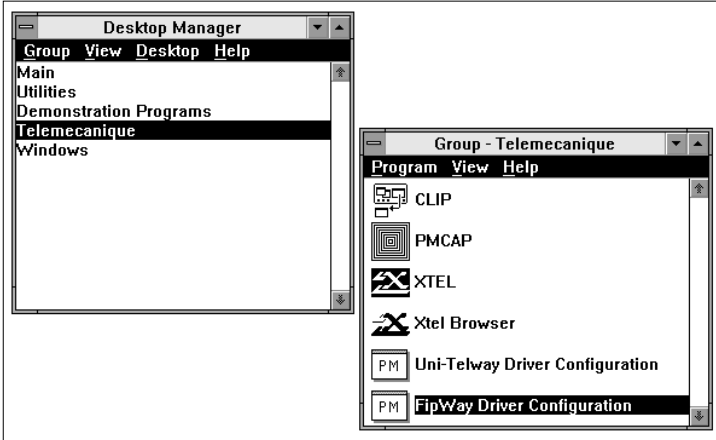
#### Reading the parameters

Driver configuration parameters (operating mode, station and network addresses for FIPWAY or connection points for FIPIO) are read using the following command :

**C:\>DFPWAY <driver n°> CONF**

### 5.2-2 Modifying the FIP OS/2 driver

The configuration of a FIP OS/2 driver which is installed on a terminal is modified from the **Group Telemecanique** window.



When the user clicks on **FIPWAY Driver Configuration**, a screen appears for modifying the configuration parameters of the driver which has already been installed.

Note : If a second FIP OS/2 driver has already been installed, the following screen appears for selecting the driver to be modified :

```
SELECTING THE DRIVER TO MODIFY

Your software configuration comprises two installed FIP drivers.

Which driver do you want to modify :
    <1> DFPW01.SYS
    <2> DFPW02.SYS

The default value is <1>.
```

Your choice ( <Enter> for DFPW01.SYS ) :

**Note :**

The installation of a new driver is described in Section 5.3.



**Important :**

When modifying a FIP OS/2 driver which has already been installed, it is essential that all other tools which use this driver are closed.

After pressing <Enter>, the MODIFYING THE INSTALLATION screen appears. This screen is used to modify and confirm the various parameters and displays the previous values :

**MODIFYING THE INSTALLATION**

The installation parameters are set to the following values :

<1> Operating Mode	:	[FIPWAYE,FIPIO]
<2> Network Address	:	[0..127]
<3> Station Address	:	[0..63]
<4> Basic Address	:	[100..3F0] Mod 10
<5> DMA Channel	:	[5,6,7]
<6> IRQ Level	:	[3,5,10,11,15]

Make the following entries :

- <Enter> to confirm the selections made and complete the modification,
- Q and <Enter> to cancel the modifications made,
- Enter the number of the parameter to modify and press <Enter> to change the value of a parameter.

Your choice :

The user can either confirm the default selections as described in Section 4.1-3, quit the current installation, or modify the value of one of the parameters as described in Section 4.1-2.

If the basic address, the IRQ interrupt level or the DMA channel parameters are modified, the user is invited to set the corresponding parameters on the module and to restart the terminal. The terminal does not have to be restarted if any other parameters are modified.

**A SYSTEM RESTART IS REQUIRED**

Essential system parameters (basic address, DMA channel or IRQ level) have been modified. These changes must be loaded by the interface card.

It is possible to continue work in progress, however the modifications made will only take effect after the workstation is restarted.

Press the <Ctrl> <Alt> and <Del> Keys together to restart your system.

E  
N  
G  
L  
I  
S  
H

---

### 5.3 Installing a second driver

---

This function adds a second TSX FPC 10 module to an FTX 507, CCX 57/77, etc, type terminal.

Type <2> then <Enter> on the INSTALLING A SECOND FIP DRIVER screen (see Section 5.1) to access the VALIDATING THE INSTALLATION screen. This is used to modify and confirm the various parameters and displays the default values :

**VALIDATING THE INSTALLATION**

The installation parameters are set to the following values :

<1> Operating Mode	:	[FIPWAY,FIP10]
<2> Network Address	:	[0..127]
<3> Station Address	:	[0..63]
<4> Basic Address	:	[100..3F0] Mod 10
<5> DMA Channel	:	[5,6,7]
<6> IRQ Number	:	[3,5,10,11,15]

Make the following entries :

- <Enter> to confirm the selections made and complete the modification,
- Q and <Enter> to cancel the modifications made,
- Enter the number of the parameter to modify and press <Enter> to change the value of a parameter.

Your choice :

The user may confirm the default selection, quit the current installation, or modify the value of one of the parameters as described in Section 4.1-2.

The addresses of these two modules must not overlap. In the same way, IRQ interrupt levels and DMA channels must be assigned separately for each module.

The parameters of the second FIP driver are confirmed as described in Section 4.1-3.

## FIPIO Bus Interface card for Agent TSX FPP 01 device

### Setting up the PCMCIA format card

- **At device level**

Switch off device, insert the TSX FPP 01 card into the PCMCIA slot on the device.

- **At FIPIO bus connection level**

The FIPIO bus is connectionned via a TSX FP ACC 4 dust and damp proof T- junction box. Connect the end of the TSX FPP 01 extension cable to the terminal port of the TSX FP ACC4 box.

- **Wiring precautions**

It is strongly recommended that the TSX FPP 01 card connection cable be kept some distance from neighbouring power supply cables.

- **Recommendations for usage**

Do not connect or disconnect the card when the device is powered-up.

