Chapter 1. Installation

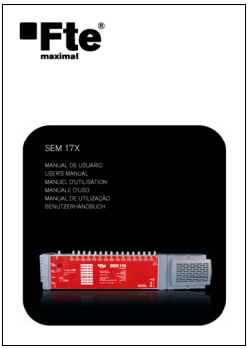
1.1. Safety Measures

1.- Never place the equipment next to hot sources.
2.- Never undergo the equipment to temperatures that exceed the level of operation of the device.
3.- Do not expose the equipment to dripping or splashing.
4.- Do not place objects filled with liquids on the equipment.
5.- Respect ventilation slots of this equipment. Avoid covering them with any object.
6.- Keep clean and without obstacles a minimum radius of 40 cm around this equipment.
7.- Avoid locations with possibilities of spilling liquids on the inside of the device, and with important changes of temperature.
8.- Never open the equipment yourself due to electric risk. In case of problems, go always to qualified technicians..
9.- Never, under no circumstances, open the equipment connected to the electrical net.
10.- During the handling it is better to disconnect the equipment of the electrical net.
11.- Respect the electricity security rules during the assembling. Use materials that obey the current law.
12.- The connecting plug must be accessible in a fast and simple way to have a fast disconnection.
13.- Never touch the plug with wet hands. Also, disconnect always the device before handling the connections..
14.- Never put any heavy object over the device, as it could get damaged.
15.- If the equipment is going to remain some time without use, it is recommendable to disconnect it from the electrical net.
16.- The repairmen and the maintenance of the equipment must be done by TV and radio specialist technicians.

1.2. Box Content



SEM 17X



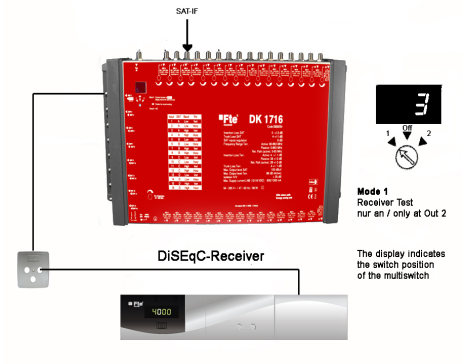
User's Guide

1.3. Description and connections

This family of multiswitches is used to make installations with a certain number of connected users and it is compatible with digital and analogical signals.
The models available allow us to distribute 16 polarities of 4 different satellites for 8, 12, 16, 24 or 32 receivers, making an independent commutation in order to receive in each receiver the 4 polarities of each satellite.
All the models of this family are provided with an inner amplification in order to avoid the derivation loses and the distribution of the terrestrial band 80-862MHz is active, the also have a passive return path of 5-65MHz.
The commutation criterion of the satellite signal will be made by the means of Toneburst or DiseqC 2.0 (13/18V and 0-22kHz).
These models can be used with single, twin and Quattro LNC, they also include an additional generator of 22kHz, in order to use LNC QUAD.
The feeding input has a LED that shows the status of the device, the level of input is 94-264V AC and its consumption is 38 W, it is also provided with electric protections in order to avoid overvoltage.

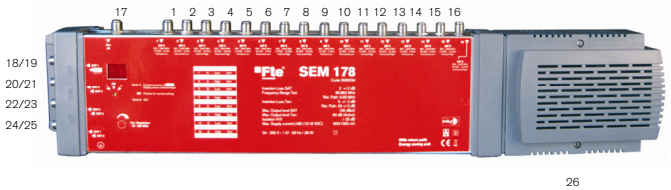
Switch-position-indicator

The position indicator switch makes easier the installation of the device verifying the compatibility of the receiver with the multiswitch. Normally a receiver with DiSEqC carries the installation of 4 LNCs, this 4 LNCs usually correspond to four different satellites with their four corresponding bands. The eight first inputs of the multiswitch can be controlled by the means of Toneburst protocol analogical signal, the next 8 inputs can only be programmed by the means of DiSEqC.
In order to verify the compatibility and make a correct installation we must follow the following steps:



1.- The system must be fed by and connected to LNCs.
2.- The satellite receiver must be connected to the output "Out 2" of the multiswitch and it is advisable to connect a Tv to the receiver in order to verify the correct running of the system.
3.- The switch must be in "Mode 1".
4.- If the receiver has DiSEqC, it will recognize the 4 LNCS by the means of DiSEqC command.
5.- In the display that the multiswitch incorporates it could be verified that the tuned band in the receiver corresponds to a fixed input, since it shows all the time the satellite input that the receiver is communicating to.
6.- Once the installation is finished, we must put the switch in the "Off" position.

SEM 178



1-4	INPUT SAT A 950 – 2400 MHz (1.V/Low, 2.H/Low, 3.V/High, 4.H/High): Satellite signal input A
5-8	INPUT SAT B 950 – 2400 MHz (5.V/Low, 6.H/Low, 7.V/High, 8.H/High): Satellite signal input B
9-12	INPUT SAT C 950 – 2400 MHz (9.V/Low, 10.H/Low, 11.V/High, 12.H/High): Satellite signal input C
13-16	INPUT SAT D 950 – 2400 MHz (13.V/Low, 14.H/Low, 15.V/High, 16.H/High): Satellite signal input D
17	INPUT 5 – 862 MHz : Terrestrial signal input
18-25	47-2300MHz: Output (SAT + TERR) *
26	AC IN: Supply power cable (230V AC, 50Hz)

(*) Note: In order to identify the outputs in the others models it is indicated with arrow in the direction of the connector and the number of the respective output.

1.4. Accesories and example of installation

Accesories



Parabolic antenna 80cmØ
Mod. PR 80 Code. 0798021

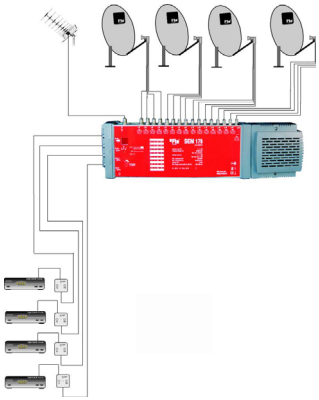


LNC Universal Quattro
Mod. LNC 544 Code.0400067



Satellite digital receiver
Mod. MAX S202 Code.0720024

Example of installation



Example of an installation for 8 users with 16 satellite polarities distributed by a SEM 178 multiswitch. It allows the full reception (analogical and digital) of four satellites. In this case, in order to get to the different polarities of the four satellites, the receiver must have DiSEqC 1.0 or upper commutation standards, if the receiver only has the Toneburst analogical signal, it will only be possible to access to 8 satellite polarities.

Chapter 2. Technical features

Ref.	SEM 178	SEM 1712	SEM 1716	SEM 1724	SEM 1732
Code	0930034	0930036	0930038	0930040	0930042
Nr. of TERR/SAT inputs	1/16				
Outputs	8	12	16	24	32
Terrestrial					
Frequency margin	80-862 MHz				
Losses	0+/-2 dB				
Max. Output level	95 dB	93 dB		90 dB	89 dB
Regulation	20 dB				
Return path					
Frequency margin	5-65 MHz				
Losses	20+/-2dB	23+/-2dB	25+/-2dB	28+/-2dB	30+/-2dB
Satellite					
Frequency margin	950-2400 MHz				
Losses	0+/-2 dB				
Max. Output level	105 dBµV				
Regulation	-	6 dB			
H,V Isolation	>25 dB				
Isolation between outputs	>40 dB				
Feeding	94-265V, 47-63Hz				
Max power LNC	600 mA / 13V; 1300 mA /18V				
Dimensions (mm)	540x110x80	540x190x80		540x350x80	

Chapter 3. Conformity Declaration

CONFORMITY DECLARATION

"WE , FTE MAXIMAL, DECLARE THAT THE PRODUCTS
SEM 178, SEM 1712, SEM 1716,
SEM 1724 AND SEM 1732
ARE IN CONFORMITY WITH FOLLOWING DIRECTIVES
Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC"

If you wish a copy of the conformity declaration, please contact to the company