

## FM UHF Studio Links – FM Receivers

UTX-15M  
URX-15M  
RX-12

These new UHF links are designed for long and medium distance applications, STL's, backbones, multi-hop systems and other broadcast requirements, whenever the purpose is to deliver with broadcast-quality up to four high-quality audio channels (two are optional) or data flows.

UTX-15/S  
URX-15/S  
RX-12/S

The radio link is available from 180MHz up to 450MHz: it is made in a single 2-unit rack that permits a fast and easy integration with existing telecommunication systems, without any degradations about the levels, the modulations and the impedance



The output power is continuously adjustable up to 15W; several alarms to keep under control the working conditions of the amplifier are available.

The excellent spectral purity and the special design of the conversion oscillators endow these equipment with

an excellent Signal to Noise ratio, both in transmission and reception stage.

Both Transmitter and Receiver are agile: this means friendly use for installation and readjustments

CODE	MODEL	DESCRIPTION
F891	UTX-15/M	15W Mono/MPX UHF Transmitter 180-450 MHz
F892	UTX-15/S	15 W Stereo/UHF Transmitter 180-450 MHz
F889	URX-15/M	UHF Mono/MPX Receiver 180-450 MHz
F890	URX-15/S	UHF Stereo Receiver 180-450 MHz
F887	RX-12	FM Mono/MPX Receiver 87,5-108 MHz
F887.01	Rx-12/S	FM Mono/MPX/Stereo Receiver 87,5-108 MHz

## Technical data

FREQUENCY		DESIGN DATA	
Modulation	solid state direct FM frequency synthesised crystal ref. thermal compensated	Pre & De emphasis	Flat or 75 or 50 µs
Range	180-450MHz (tx_range 50Mhz bandwidth; rx_range 5MHz /for 50MHz bandwidth tuning filter is required)	Amplitude response TX	(Mono) ± 0,15 dB (from 30 Hz to 15 KHz) - 40dB from 19 kHz to 100 kHz (MPX) ± 0,1 dB (from 40 Hz to 100 KHz) (SCA) 1 dB (from 20 KHz to 100 KHz)
System Capacity	1 stereo program or 1 mono program and one subcarrier (SCA) Better than 2 pp	Audio frequency response RX	(Mono) < 0,15 dB (from 30 Hz to 53 KHz); < -45 dB (from 19 kHz to 100 kHz) (MPX) < 0,2 dB (from 30 Hz to 53 KHz) < 1 dB (from 53 Hz to 75 kHz) < 3 dB (from 75 kHz to 100 kHz) > 40 dB (from 120 kHz to 1 MHz)
Setting	Directly digitally programmable on the front panel in 100 kHz steps	Display Meter	Frequency, power output, voltage, temperature, lock, input level meter, input level set, pre-emphasis value, pre-emphasis set, carrier enable, temperature alarm set, -3dB power down alarm set
Fine frequency Adjustment	International multiturn trimmer	Protections	Alarm Frequency programming error Local oscillator locked in Heat sink temperature exceeds that set RF output power below 2,5 W (TX version) RF output power below squelch threshold (RX version) Power supply voltage of a module outside the permitted range
RF OUTPUT SPECIFICATIONS VIDEO PERFORMANCE		REMOTE CONTROL	
Harmonics suppression	< - 80 dBc	Output Connector	DB9 connectors (command - CD: transmitter power ; RX: RS232 signal; TX: RS232 signal; ALL1 & ALL 2: alarm output signal; GND: earth ;
Spurious Emission	< - 80 dBc	STANDARDS COMPLIANCE	
Residual Asynchrony AM	> 60 dB Weighed	Radio spectrum	RTTE
Residual Synchrony AM	> 60 dB Weighed	EMC	ETS 449, ETS-339, ETS-384, CCIR-450, CCIR-412, CCIR-559, CCIR-468
S/N RATIO (weighted)	> 70 dB (referred to ± 75 KHz)	Safety	EN 60950 - EN 60215
Distortion	0.05% or less for 75 kHz FM deviation	R&TTE	Declaration of Conformity with regards to the Directive 1999/5/EC
Probe	BNC connector RF 0 dBm; BNC connector LF 12 dBm	TEMPERATURE	
AUDIO SPECIFICATIONS		Nominal range	0° to 45° C (Meets ETS 300 019 requirements)
Mono/MPX Impedance	600 Ohm bal. or 10 KOhm unbal., XLR female Connector	Storage range	- 30° to 50° C
SCA Impedance	10 KOhm unbal., BNC Connector	Maximum relative Humidity	90% non condensing
Mono/MPX SCA Level	From 0 to + 12 dBm	Max Operating Altitude	2500 mt. a.s.l.
Left, and Right Impedance	600 Ohm bal. or 10 KOhm unbal, XLR female Connector		
Left, Right Level	From - 6 to + 12 dBm		
Stereo Separation	> 60 dB (40 Hz to 15KHz)		
THD	< 0,15% From 30 Hz to 15 KHz with de-emphasis		
RECEIVER SPECIFICATIONS			
Selectivity Static	3 dB @ ± 150 KHz; 60 dB @ ± 450 KHz; 80 dB @ ± 600 KHz		
Selectivity Dynamic	± 300 KHz @ +5 dB; ± 400 KHz @ +38 dB; ± 500 KHz @ +40 dB		
Sensitivity Mono (deviation ± 75 KHz)	15 mV (S/N = 60 dB with bandwidth = 30 ÷ 15 KHz)		
Sensitivity Stereo (deviation ± 75 KHz)	150 mV (S/N = 60 dB with bandwidth = 30 ÷ 15 KHz decoded, de-emphasis)		



SPECIFICATIONS	UTX15	URX15	RX12
Rf output power	15 W		
Output Connector	N Type Female 50 Ohm	N Type Female	N Type Female 50 Ohm
Dimensions (W x H x D) mm	482 x 88 x 500	482 x 884 x 500	482 x 88 x 500
Weight	12 Kg	12 Kg	12 Kg
Power consumption	Approx. < 130 VA	Approx. < 90 VA	Approx. < 90 VA
Nr. of power supply	1 from 230 V a.c. ± 10%	1 from 230 V a.c. ± 10%	1 from 230 V a.c. ± 10%
DC Power Supply	24 V (18-26 V)	24 V (18-26 V)	24 V (18-26 V)
Cooling	Forced Air	Forced Air	Forced Air