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**10 kW TV
TRANSMITTERS
AND
TRANSPOSERS**



PRINCIPALI CARATTERISTICHE:

- > Costruzione modulare.
- > Raffreddamento forzato.
- > Controlli A.G.C. e A.L.C.
- > Precorrezione di linearità a 3 pendenze.
- > Eccellente figura di rumore.
- > Tecnologia LDMOS nelle versioni UHF.
- > Digital ready.
- > Cambio del canale dal pannello frontale (opzionale).
- > Predisposto per OFFSET di precisione.
- > Display digitale multifunzione.
- > Circuito di "soft-start".
- > Basso consumo.
- > Circuito di "economy" in assenza di segnale d'ingresso.
- > Filtro vestigiale di tipo S.A.W.
- > Power limiter incorporato.
- > Rigenerazione dei sincronismi (SCT).
- > Limitatore automatico del livello del bianco e dei sincronismi (SCT).
- > Modulatore multi-standard (SCT).
- > Disponibile in versione stereo/dual sound.

MAIN FEATURES:

- > Modular construction.
- > Forced air cooling.
- > AGC and ALC controls.
- > 3-slope linearity precorrection.
- > Excellent noise figure.
- > LDMOS technology in UHF versions.
- > Digital ready.
- > Channel change from front panel (optional).
- > Pre-set for precision OFFSET.
- > Multifunction digital display.
- > Soft-start circuit.
- > Low power consumption.
- > Economy circuit in case of input signal lack.
- > SAW vestigial filter.
- > Incorporated power limiter.
- > Sync restore (SCT).
- > Automatic white level and sync limiter (SCT).
- > Multistandard modulator (SCT).
- > Available in stereo/dual sound versions.

CARACTERÍSTICAS PRINCIPALES:

- > Construcción modular.
- > Ventilación forzada.
- > Controles A.G.C. y A.L.C.
- > Precorrección de linealidad de 3 pendientes.
- > Excelente figura de ruido.
- > Tecnología LDMOS en versiones UHF.
- > Digital ready.
- > Cambio de canal desde el panel frontal (opcional).
- > Configurado para OFFSET de precisión.
- > Display digital multifunciones.
- > Circuito de "soft-start".
- > Bajo Consumo.
- > Circuito de "economy" en ausencia de señal de entrada.
- > Filtro vestigial de tipo S.A.W.
- > Limitador de potencia integrado.
- > Regeneración de sincronismos (SCT).
- > Limitador automático del nivel del blanco y de los sincronismos (SCT).
- > Modulador multi-estándar (SCT).
- > Disponible en versión estéreo/audio dual.



SCT 103UB 10 kW UHF TRANSMITTER

Questa serie di trasmettitori televisivi a stato solido con potenza d'uscita di 10 kW rappresenta la nuova generazione di apparati prodotti da Screen Service. L'ottima efficienza e le ridotte dimensioni che li caratterizzano rendono possibile l'utilizzo di potenze elevate anche in siti poco spaziosi. Ogni singolo amplificatore funziona in modo completamente autonomo essendo dotato al proprio interno sia degli alimentatori, che dei ventilatori di raffreddamento, con velocità variabile in funzione della temperatura, che dei circuiti di protezione. Ciò facilita le operazioni di manutenzione evitando la necessità di alimentatori esterni da laboratorio.

L'opzione "dual-driver" consente di ottenere un elevato livello di ridondanza. Tutte le funzioni ed i parametri di funzionamento dell'apparato sono gestiti da microprocessore e controllabili tramite una serie di display multifunzione o tramite le interfacce, analogiche e digitali, collocate sui pannelli posteriori di ogni singolo stadio. Gli apparati di questa serie mantengono ottime caratteristiche operative anche quando utilizzati per la trasmissione di segnali digitali e consentono un bassissimo "de-rating" grazie alla elevata linearità ed al sovradimensionamento degli stadi di amplificazione.

MODEL-SPECIFIC DATA

Model	Output band	Dimensions	Number of amplifiers	Nominal analog output power (p.s.)	Digital output power (rms) without filter (Shoulders -36 dB @ $F_0 \pm 4.3$ MHz)	
					DVB-T	ATSC
SCT, SCR *						
103FB	VHF I	2 x 40 RU	8	10 kW	2.5 kW	4 kW
103TB	VHF III	2 x 40 RU	8	10 kW	2.5 kW	4 kW
103UM	UHF	1 x 42 RU	4	10 kW	2.5 kW	4 kW
103UB	UHF	2 x 40 RU	8	10 kW	2.5 kW	4 kW

* SCT Series = analog transmitters
SCR Series = transposers

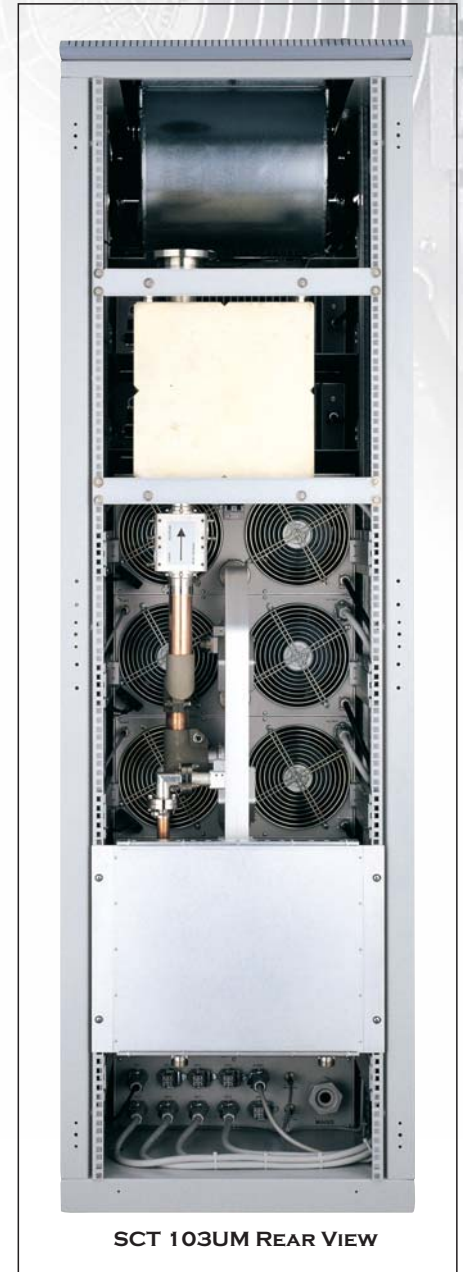
Specifications and characteristics are subject to change without notice.



**SCT 103UM 10 kW
UHF TRANSMITTER**



**SCT 103UB 10 kW
UHF TRANSMITTER
WITH DUAL DRIVER OPTION**



SCT 103UM REAR VIEW

This series of solid-state 10 kW output power television transmitters constitutes the new generation of equipment produced by Screen Service. The excellent efficiency and reduced size characterizing these transmitters permit the use of high output powers even in cramped spaces.

Each amplifier works autonomously, thanks to its own internal power supply, internal cooling fans with variable speeds for different temperatures, and protection circuits. This facilitates maintenance operations and eliminates the need for spare external power supplies.

The "dual driver" option allows a high level of redundancy.

All the functions and parameters of the equipment are operated by a microprocessor and can be checked by means of a set of multifunction displays or analogue and digital interfaces located on the rear panels of each individual stage.

The units in this series maintain optimal operating characteristics even when used for the transmission of digital signals and assure a very low de-rating thanks to a very substantial linearity and to the oversizing of the amplification stages.

Esta serie de transmisores de televisión de estado sólido con potencia de salida de 10 kW representa la nueva generación de aparatos fabricados por Screen Service. La excelente eficiencia y dimensiones reducidas que los caracterizan, posibilitan la utilización de potencias elevadas incluso en lugares con poco espacio.

Cada amplificador funciona de manera completamente autónoma al estar dotado en su interior tanto de alimentadores, de ventiladores de refrigeración, con velocidad variable en función de la temperatura, como de circuitos de protección. Ello facilita las operaciones de mantenimiento evitando la necesidad de alimentadores externos de laboratorio.

La opción "dual-driver" permite alcanzar un elevado nivel de redundancia.

Todas las funciones y los parámetros de funcionamiento del aparato están gestionados por un microprocesador y se controlan a través de una serie de visualizadores multifunciones o por las interfaces, analógicas y digitales, colocadas en los tableros traseros de cada uno de las etapas.

Los aparatos de esta serie presentan excelentes características de funcionamiento incluso cuando se utilizan para la transmisión de señales digitales y permiten un "de-rating" muy bajo, gracias a su gran linealidad y al sobredimensionamiento de las etapas de amplificación.

10 kW TV TRANSMITTERS AND TRANSPOSERS

ANALOG

TECHNICAL CHARACTERISTICS

TRANSMITTER VERSION

VIDEO PARAMETERS

Number of inputs	2 (mono version), 1 (stereo version)
Input impedance	75 Ω
Input level	1 V p.p. ± 3 dB
White / Sync level limiter	95%
2T K factor	< 1.5%
Amplitude / frequency response	± 0.5 dB (throughout the vision band)
Differential gain	< 5%
Differential phase	< 3°
Tilt (50 Hz)	< 2%
Tilt (15 kHz)	< 2%
Group delay	± 35 ns (throughout the vision band)
Vestigial side-band filter	SAW for all standards
Sync pulse compression	< 3%
S/N ratio (weighted)	> 60 dB
ICPM	< 3°
Luminance non linearity	< 4%
Field time bar tilt	< 2%
Line time bar tilt	< 2%

AUDIO PARAMETERS

Number of inputs	2
Input impedance (balanced)	600 Ω or > 5 k Ω , selectable
Input level	0 dBm ± 6 dB
Carrier level	-10 dB (adjustable)
Modulation capability	± 120 kHz
Frequency response (30 Hz to 15 kHz)	± 0.4 dB
T.H.D. (30 Hz to 15 kHz)	< 0.4%
Pre-emphasis	50 μ s or 75 μ s or flat
S/N ratio (un-weighted)	> 60 dB
Sound transmission	Dual sound coding to IRT or FM single sound and NICAM 728 (-13, -20 dB) or FM single sound
Stereo / Dual sound option	Available
Stereo separation (equivalent)	Better than -55 dB (typ.)

TRANSPOSER VERSION

Input frequency bands	VHF I, VHF III, UHF (agile)
Input impedance	50 Ω
Input matching	> 26 dB
Input level amplitude	-30 to -75 dBm
A.G.C. + A.L.C. dynamic	> 45 dB
Noise figure	< 5 dB (typ.)

GENERAL

Available standards	B, D, G, H, I, K, M, N
Colour system	PAL, NTSC, SECAM
Output connector	3+1/8" EIA
Output impedance	50 Ω
Working class	AB
Protections	Overpower Adjustable exciter power limiter VSWR Overvoltage Overcurrent Overtemperature RF fold-back on HI-VSWR (optional)
Frequency stability	1 ppm (optional 1×10^{-10} /day, 3×10^{-8} /year)
External reference frequency input	5 MHz or 10 MHz
Offset steps (optional)	1 Hz (CCIR), 0.999000999 Hz (FCC)
I.M.D. at rated output power	better than -57 dBc (-60 dBc typical)
Harmonics (with output filter)	-60 dB or better
Spurious emissions (with output filter)	-60 dB or better
External control and monitoring interfaces	logic and analog signal outputs, enable input, RS 485 TCP/IP (optional) SNMP (optional)
Cooling	Forced air
Operating temperature	-10°C to +45°C
Maximum relative humidity	90%, non condensing
Maximum operating altitude	2500 m a.s.l. (> 2500 m on request)
Mains power supply	220 / 400 V AC $\pm 15\%$ 3-phase



Screen Service

SCREEN SERVICE

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