ShibaSoku®

TG73A

TELEVISION INSTRUMENTS

MPEG-2 TS SIGNAL GENERATOR

General

The TG73A is an MPEG-2 TS (Transport Stream) signal generator conforming to both MPEG-2 system specifications and transmission and operating conditions for the ISDB-S BS digital broadcasting.
It enables to record an MPEG-2 TS, in which signals required for audio/video tests of Digital IRD (DIRD) and Set Top Box (STB) are multiplexed, and an ISDB-S TS having a frame configuration in which TMCC of BS digital broadcast is multiplexed, in the built-in hard disk drive (HDD).
The recorded signals can continuously be output at the designated bit rate.
Linked to a personal computer, the TG73A allows to add and alter MPEG-2 TS and ISDB-S TS, enabling to output custom-tailored signals.
By combining the TG73A, ShibaSoku's RM73A satellite digital converter which can cope with a wide-range bit rate and features good versatility and expansion and ShibaSoku's RC931A synthesized frequency converter, you can obtain compact "ISDB-S central digital signal source system".

Note: Company names and product names are registered trade-mark of each company.

Features

- ISDB-T TS consisting of TMCC multiple frames conforming to both MPEG-2 TS and TS synthesized output of BS digital broadcast makes the TG73A applicable to almost digital broadcasts.
- Packet length of TS copes with 188, 204 and 208 bytes.
- Internal or external sync clock is selectable.

Specifications

●Basic specifications
- TS recorded in the built-in HDD can be output.
- TS can be recorded in the built-in HDD via network.
- Clock rate setting of output signals.
- Remote operation via GP-IB(option).
- TS synthesizing and TMCC forming functions by the software in the external personal computer (optional functions).
- Transmission rate 0.5 to 60 Mbps
- HDD memory capacity
  4GB (standard, 2GB x 2 partitions)
  Note: Max. 16GB by adding two optional 8 GB HDD's silicone disk is also usable (optional).
- Controllable TS Max. 100 types (depending on the HDD memory capacity)

●TS standards that can be integrated to the TG73A
- MPEG-2 TS

Multiplex system	Conforming with to ISO/IEC 13818-1 MPEG-2
Transmission rate	0.5 to 60 Mbps (dependent on stream)
Packet length	188, 204, 208 Byte (dependent on stream)
Multiplexed data	Dependent on stream
Video data	MPEG-2 MP@ML, MPEG-2 MP@HL ... etc.
Audio data	MPEG-1 Layer2, MPEG-2 AC3, MPEG-2 AAC ... etc.
Program arrangement information	Dependent on stream
PSI data	PAT, NIT, CAT, PMT ... etc.
SI data	SDT, EIT ... etc.
Reproducing time	Dependent on stream Reproducing time = total bit / transmission rate
File length	Dependent on stream Max. 2 GB (dependent on HDD partition capacity) In unit of packet length
Date format	Binary The data starts from 47 Hex sync signal.

●Input signals

Reference clock	External clock signal for synchronization
Connector type	BNC (BNC140 or equivalen)
Input level	LVDS, DC cut,50 Ω termination, comparator reception Amplitude: ≥100 mVp-p
Frequency	0.5 to 60MHz, duty 50%±10% TS bit rate or equivalent
NET	For network signal
Connector type	RJ-45
Input level	Conforming with 10 BASE-T and 100 BASE-TX
Remote control	GP-IB interface (option)
Connector type	Conforming with IEEE std 488.1-1987
Level	Conforming with IEEE std 488.1-1987

Specifications

●Output signals

・Parallel output

Parallel data	Parallel data, sync signal
Connector type	D-SUB 25 pins (FDB-25S of equivalent)
Output level	LVDS
Pin assignment	DVB parallel or equivalent
Data rate	0.0625 to 7.5 Mbyte/s
F sync	Frame sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
SF sync	Super frame sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)

・Serial output

Serial data	Serial data signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
Data rate	0.5 to 60 Mbps
Serial clock	Serial clock signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
Frequency	0.5 to 60 MHz
Packet	Packet sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
Data	Data sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
F sync	Frame sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)
SF sync	Super frame sync signal
Connector type	BNC (BNC140 or equivalent)
Output level	LVDS (only positive polarity is used)

●Options

・TG73A0001	GP-IB controlling interface Extension boards are mounted in the main frame.
・TG73A0002	4GB SCSI HDD for addition Max. two units can be housed inside the cabinet in addition to the standard built-in HDD. Max. memory capacity by these three HDD's is 8 GB.
・TG73A0003	8 GB SCSI HDD for addition Max. two units can be housed inside the cabinet in addition to the standard built-in HDD. Max. memory capacity by these three HDD's is 12 GB. By replacing the standard HDD with the 8 GB HDD, max. memory capacity is increased to 16 GB
・TG73A0010	TMCC forming and plural TS synthesizing software Windows software controlled by the external personal Computer TMCC editing and TS synthesization are performed by the external personal computer under the off-line status. TS data before and after synthesization are handled as data file.

●General specifications

Powrer supply	AC 90 to 132, 198 to 250 V, 50/60Hz	
Power consumption	Max. 300 VA	
Operating temperature range	0℃ to 40℃	
Relative humidity	10% to 85% RH (non- dewing)	
Dimensions	426(W) x 149(H) x 460(D) mm (excluding protruding parts)	
Weight	Approx.15kg (Weight increases by 1 kg when a HDD is added)	
Accessories	Power cord	x 1
	3P-2P conversion connector	x 1
	User's manual	x 1
	Support software	x 1 set
	FTP software	x 1 set

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