

Multi-channel Signal Processor

FA-505 "THE Processor"

FOR.A[®]
INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY

MULTI-CHANNEL SIGNAL PROCESSOR

FA-505

THE PROCESSOR

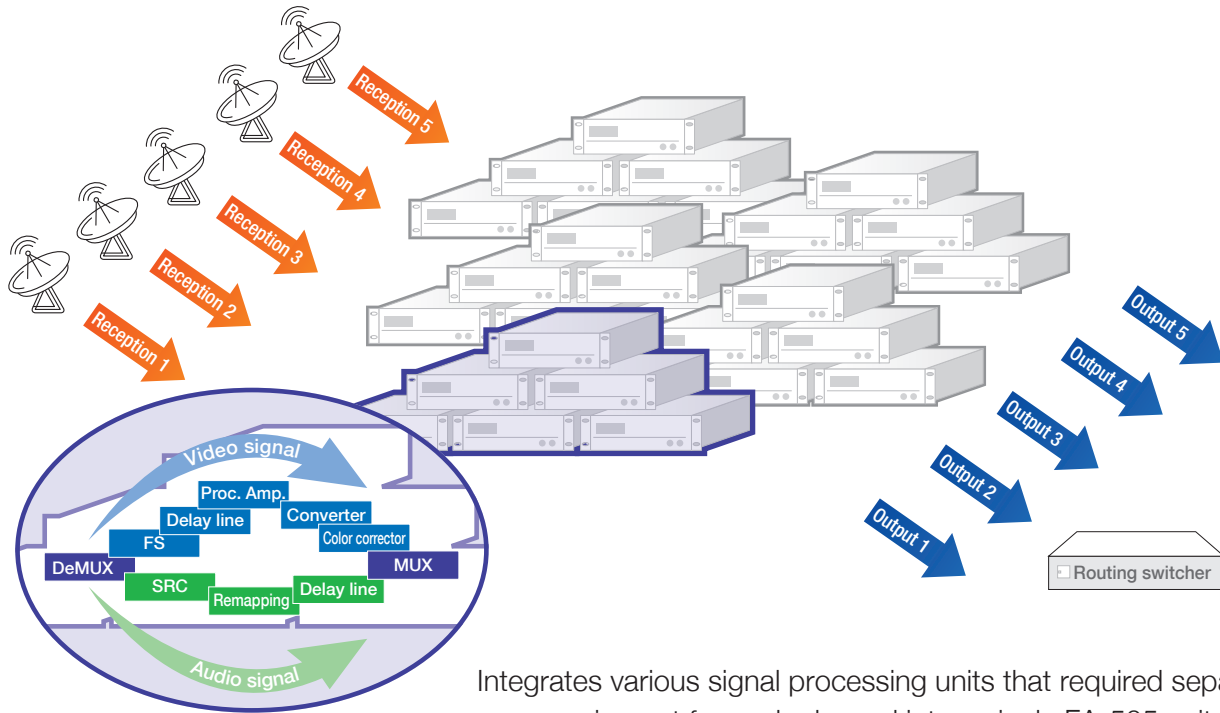


All-Round Frame Synchronizer

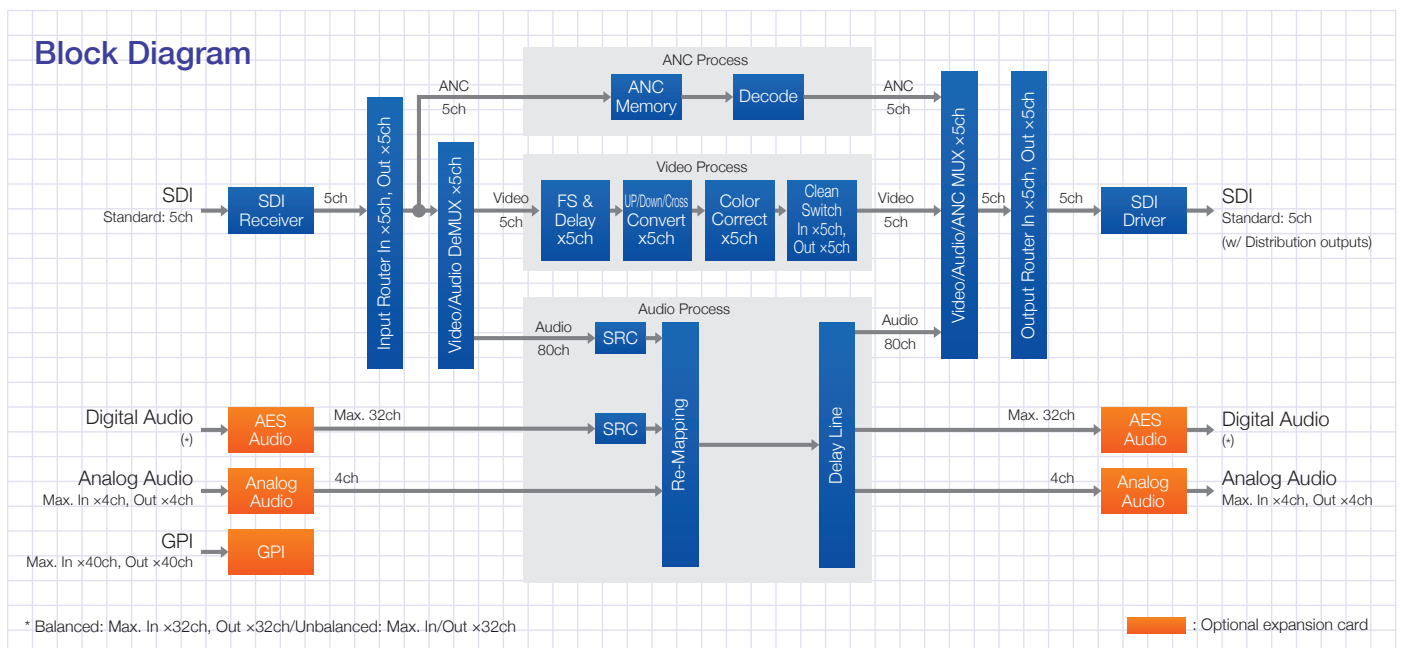
The FA-505 is a frame synchronizer equipped with the various functions you need for video production and that enables multi-channel routing (5 video inputs and 5 video outputs).

It supports 3G-SDI and HD/SD-SDI input/output as standard and naturally includes all the typical features of a frame synchronizer as well as a color corrector (standard) enabling up/down/cross conversion of a variety of video signals. For audio signal processing, it is highly versatile with delay adjustment and remapping functions plus a sampling rate converter. By combining these varied options, a single unit can provide the optimal functionality for all video production scenes, including transmission, outside broadcasting, news reporting, production, editing and distribution.

Comprehensive & More Compact



Integrates various signal processing units that required separate equipment for each channel into a single FA-505 unit



Abundant Functions as Standard

5 3G/HD/SD-SDI Inputs/Outputs

5 SDI inputs have been included in the standard configuration. For SDI input, signals are synchronized independently in the FA-505, so during switchover there is no shock even if asynchronous signals are input; that means a clean switch in both video and audio. An I/O bypass function has also been provided in case power is cut or there is an emergency.

Digital Audio I/O

For embedded audio, there are 16 channels per 3G/HD-SDI synchronous/asynchronous input, and there are 16 channels per synchronous input in SD-SDI. That means support for up to 80 channels with all 5 inputs. Many types of signal processing are possible, including SDI embedding and de-embedding, and if an optional expansion card is installed, A/D and D/A conversions are also possible, thus flexibly supporting even multi-channel audio content. Additionally, individual sampling rate converters are provided. Signal processing without any phase gap between channels is possible for such processes as delay adjustment, level adjustment, down-mixing and remapping. Also, users needn't worry about ancillary data being erased such as closed captions and time code due to signal processing.

Up/Down/Cross Converter

In addition to A/D and D/A conversion, an up/down/cross converter is standard equipment on the FA-505. In addition to bi-directional conversion between HD and SD, the FA-505 also offers bi-directional conversion between 1080i format and 720p format (IP conversion).

Color Corrector

In addition to the Proc. Amp., the FA-505 incorporates a color correction capability. This enables you to perform color corrections with 3 color correction modes and also reproduce the original colors in the selected color space using the gamma adjustment, clip, and various level adjustment capabilities.

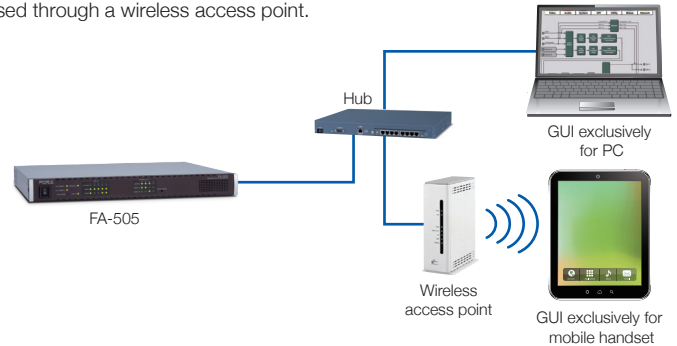
Powerful Frame Synchronizer

FOR-A's frame synchronizers have always exhibited superior performance when processing video with poor quality signals. Synchronizer modes that can be selected among from Frame, Line, and AVDL. Adjustment range in AVDL mode is 5H in HD and 1H in SD. Moreover, in every mode both H and V ancillary data can be passed through.

* If input/output formats differ, there are limitations on the packets that can be passed through.

GUI Control

An in-built Web server combined with the GUI exclusively for PC (see the figure below) means users can change settings of various functions of the FA-505 from a PC (windows) over a network. Mobile and tablet terminals can also be used through a wireless access point.



Other Features (Standard)

- Video/audio delay
- Monitoring and control of HV from a Web browser
- SNMP monitoring and control (partial)

Options

FA-10RU

Remote Control Unit



One-touch switching of video input channels. Enjoy efficient color correction during frequent channel switching.

FA-AUX30

AUX Extension Panel



Offers one-touch assignment and activation of common functions in the operator's routine.

FA-10DCCRU

Remote Control Unit for Color Correction



FA-50PS

Redundant Power Supply Unit

Expansion Cards

4 slots in the rear panel can be used to expand the necessary functions.

- FA-10AES-BL Balanced Digital Audio I/O
- FA-10AES-UBL Unbalanced Digital Audio I/O
- FA-10AES-UBLC Unbalanced Digital Audio Out (an extension cable for the FA-10AES-UBL)
- FA-10ANA-AUD Analog Audio I/O
- FA-10GPI GPI I/O



Expansion slots A - D



LAN port

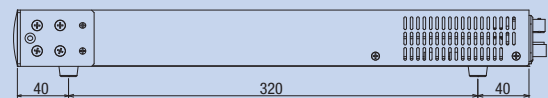
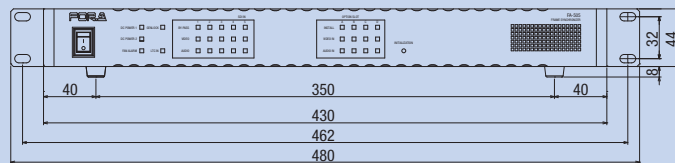
3G/HD/SD-SDI ports

GENLOCK IN port

Specifications

Video Formats	3G: 1080/59.94p (Level A/B), 1080/50p (Level A/B), HD: 1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/59.94p, 720/50p, 1080/29.98PsF, 1080/24PsF, SD: 525/60, 625/50
Video Inputs	3G-SDI: 3 Gbps (Level A/B), HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps, 75Ω, BNC × 5
Video Outputs	3G-SDI: 3 Gbps (Level A/B), HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps, 75Ω, BNC × 10 *Distribution output for each channels
Genlock Input	BB: NTSC 0.429 Vp-p/PAL 0.45 Vp-p or Tri-level Sync: 0.6 Vp-p, 75Ω, BNC × 1, loop-through (to be terminated with 75Ω terminator, if unused)
Sync Modes	Frame Sync mode, Line Sync mode, AVDL mode, AVDL (Minimum) mode
Video Delay	Maximum 8 frames (in Frame Sync mode)
Video Processing Functions	Up converter, Down converter, Cross converter, Aspect converter, Proc. Amp., Color corrector
Proc. Amp.	Video level: 0.0% to 200.0% Chroma level: 0.0% to 200.0% Black level: -20.0% to 100.0% HUE: -179.8° to +180°
Video Clip	YPBPR mode, RGB mode
Color Correction	Balance mode, Differential mode, Sepia mode
Audio Input	
Embedded Audio	3G/HD: 16 channels (Group 1 to 4), 48 kHz, 16 to 24-bit, synchronous/asynchronous, 3G Level B: 16 channels (Link A) SD: 16 channels (Group 1 to 4), 48 kHz, 16 to 24-bit, synchronous only
Audio Input (optional)	
FA-10AES-BL (AES/EBU)	Balanced, 0.2 Vp-p to 7.0 Vp-p, 110Ω, 25-pin D-sub (female), Maximum 4 pairs of stereo channels, 32/44.1/48 kHz, 16 to 24-bit
FA-10AES-UBL (AES/EBU)	Unbalanced, 1.0 Vp-p, 75Ω, BNC × 4 (also serve as AES/EBU outputs), Maximum 4 pairs of stereo channels, 32/44.1/48 kHz, 16 to 24-bit
FA-10ANA-AUD (Analog Audio)	<Line Input> Balanced or unbalanced, 4 channels (2 stereo channels), 25-pin D-sub (female) × 1 (also serves as analog audio output) 600Ω/Hi-impedance, 48 kHz, 24-bit Input level: -10 dBu to +8 dBu <Mic Input> Balanced or unbalanced, 2 channels (1 stereo channel), 25-pin D-sub (female) × 1 (also serves as line input CH1/CH2) 600Ω/Hi-impedance, 48 kHz, 24-bit Input level: -55 dBu to -30 dBu
Audio Output	
Embedded Audio	3G/HD: 16 channels (Group 1 to 4), 48 kHz, 16/20/24-bit, synchronous/asynchronous (3G Level-B (Embedded Link-A only)) SD: 12 channels (Group 1 to 3), 48 kHz, 16/20/24-bit, synchronous only
Audio Output (optional)	
FA-10AES-BL (AES/EBU)	Balanced, 3.3 Vp-p, 110Ω, 25-pin D-sub (female) × 1, Maximum 4 pairs of stereo channels, 48 kHz, 16/20/24-bit
FA-10AES-UBL (AES/EBU)	Unbalanced, 1.0 Vp-p, 75Ω, BNC × 4, Maximum 4 pairs of stereo channels, 48 kHz, 16/20/24-bit
FA-10ANA-AUD (Analog Audio)	Balanced or unbalanced, 4 channels (2 stereo channels) 25-pin D-sub (female) × 1 (also serves as analog audio input) Less than 100Ω: 48 kHz, 24-bit Output level: -10 dBu to +8 dBu
Audio Delay	5 ms to 1,000 ms (adjustable in 1 ms steps)
Audio Processing	Sampling rate converter (SRC), Gain control, Down mix, Channel re-mapping, Channel mute (can be set per a channel)
Interface	Ethernet (100Base-TX/1000Base-T): RJ-45 × 1
Interface (optional)	FA-10GPI: 25-pin D-sub (female) × 1
Temperature / Humidity	0°C to 40°C / 30% to 90% (no condensation)
Power	100 V AC to 240 V AC ±10%, 50/60 Hz (Redundant power supply as standard)
Consumption	90 WAC (86 W) (100 V AC to 120 V AC), 108 WAC (78 W) (220 V AC to 240 V AC) (without options)
Dimensions / Weight	430 (W) × 44 (H) × 400 (D) mm / 7.0 kg
Consumables	Power supply unit (to be replaced every 5 years), Cooling fan (to be replaced every 6 years)
Accessories	Operation manual (CD-ROM), Setup guide, AC cord, Rack mount brackets
Options	FA-10RU: Remote Control Panel FA-10DCCRU: Remote Control Panel for Color Correction FA-AUX30: AUX Extension Panel (with a connection capability with the FA-10RU or FA-10GPI) FA-10AES-BL: Balanced Digital Audio I/O FA-10AES-UBL: Unbalanced Digital Audio I/O FA-10AES-UBL: Extension Cable for Unbalanced Digital Audio Output of the FA-10AES-UBL (When the cable is connected to the terminal, it exclusively functions as an output terminal.) FA-10ANA-AUD: Analog Audio I/O FA-10GPI: GPI I/O FA-50PS: Redundant power supply

Dimensions



Unit: mm



Head Office: 3-8-1 Ebisu, Shibuya-ku, Tokyo 150-0013, Japan

ISO 9001 and 14001 certified
(Sakura R&D)

<http://www.for-a.com/>

FOR-A Corporation of America: Tel: +1 714 894 3311
11155 Knott Ave., Suite G&H, Cypress, CA 90630, U.S.A.

FOR-A Corporation of America East Coast Office: Tel: +1 201 944 1120
2 Executive Drive, Suite 670, Fort Lee Executive Park, Fort Lee NJ 07024, U.S.A.

FOR-A Corporation of America Distribution & Service Center: Tel: +1 352 371 1505
2400 N.E. Waldo Road, Gainesville, FL 32609, U.S.A.

FOR-A Corporation of America Miami Office: Tel: +1 305 931 1700
5200 Blue Lagoon Drive, Suite 760, Miami, FL 33126, U.S.A.

FOR-A Corporation of Canada: Tel: +1 416 977 0343
346A Queen Street West, Toronto, Ontario M5V 2A2, CANADA

FOR-A Europe S.r.l.: Tel: +39 039 879 778
Via Volturmo, 37, 20861 Brugherio MB, Italy

FOR-A UK Limited: Tel: +44 (0)20 3044 2935
Trident Court, 1 Oakcroft Road, Chessington, KT9 1BD, UK

FOR-A Italia S.r.l.: Tel: +39 039 881 086/103
Via Volturmo, 37, 20861, Brugherio MB, Italy

FOR-A Corporation of Korea: Tel: +82 (0)2 2637 0761
1007, 57-5, Yangsan-ro, Yeongdeungpo-gu, Seoul 150-103, Korea

FOR-A China Limited: Tel: +86 (0)10 8721 6023
708B Huateng Building, No. 302, 3 District, Jinsong, Chaoyang, Beijing 100021, China

FOR-A Middle East-Africa Office: Tel: +971 (0)4 551 5830
Dubai Media City, Al Thuraya Tower 2, Office 1407, P.O. Box 502688, Dubai, UAE

Agiv (India) Private Limited (FOR-A India): Tel: +91 22 2405 1258
85, V.N. Purav Marg Sion-Chunabhatti (E) Mumbai - 400 022, India