



PRODUCT CONFIGURATION AND SPECIFICATIONS

A Single Unit SMPTE/EBU Generator/Reader/Synchronizer and AutoLocator

Slaves any MCI tape transport to audio/video/film master machines providing a SMPTE/EBU or Video "house sync" source, with an extremely low displacement of ± 50 microseconds (typical).

- ★ Generates SMPTE, EBU, video drop frame codes.
- ★ Generates codes synced to 50/60 Hz external power freq, composite video signal with selections of odd/even field and vertical serration user programmable.
- ★ Allows change of user bits as code is being generated without affecting code continuity.
- ★ Limitation to lock is only a function of the amount of tape.
- ★ Frame mode slew rate limited by fast forward/rewind speed.
- ★ Sync mode slew rate — Fast lock $\pm 50\%$
Slow lock $\pm 1.25\%$
- ★ Reads either tach pulses (no wide-band amplifiers required) or high-speed time code for chase function.
- ★ Advance/retard "lip sync" capability at rate of 3 frames/sec.
- ★ Code display indicates absolute difference between master and slave.
- ★ Adjusted time code display subtracts the offset to absolute time code difference.
- ★ Park slave capability allows machine to stop within a frame of "time code" display.
- ★ Punch "in/out" record at selected programmable sequence.
- ★ 10 scratch pad memory locations.
- ★ AutoLocator Mode:
- ★ Automatic Read/Write of tape position counter and 10 memory locations recorded in an unused portion of the tape (approx. 30 seconds) for use in later sessions without having to enter it manually.
- ★ Real time display.
- ★ Shuttle function between 2 points.
- ★ Numerous production features for music/video/film applications.
- ★ Aesthetically designed and simple to use and service.
- ★ Compatible and simple interface with MCI transports.
- ★ Available mounted with JH-24 Remote.

Lock Characteristics

Synchronization accuracy between slave and master:

using 2 MCI transports, SMPTE code at 15 ips
better than ± 50 microseconds typical

Time to lock from stop:

using two MCI machines, with machines in stop mode from controlled park, Fast Lock mode
less than 4 seconds

Permissible offset:

± 23 hours, 59 minutes, 59 seconds, 29 frames

Fast Lock:

Slew rate: $\pm 50\%$ of speed
Lock in range: length of tape
Capstan slew within 10 seconds
Fast wind if outside 10 seconds at 240 ips
Variable speed lock: slave will lock to master at $\pm 24\%$ of speed range

Slow Lock:

Slew rate: 1.25% of speed
Lock in range: length of tape
Capstan slew only, no fast wind mode

Input From Master

Code: EBU, SMPTE, or SMPTE/Drop Frame (NTSC color video—with JH-48)

Lvl: -3 dBv ref .775v rms min

Speed range: $\pm 25\%$ of standard fixed tape speeds of 7.5, 15, 30 ips

Input impedance: 50k ohms

Command Signals

Stop, Play, Fast Forward, Rewind, Record

High state: +6 to +24v

Low state: 0 to 4v
all active low inputs

Direction Sense

Motion Forward

Motion Reverse

High state: +6 to +24v

Low state: 0 to 4v
active high inputs

Tape Count Pulses

8 pulses/15" of tape travel

High state: +6 to +24v

Low state: 0 to 4v
active high inputs

Inputs From Slave

Code: See Master

Command Signals: See Master

Power

± 15 v @ .25 amps

+24v @ 1 m/a

Specifications subject to change as innovative advancements in technology are incorporated.

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Outputs To Slave

Commands

Play, Stop, Record 0v to +24v active low

Locate 0v to +15v active low

Analog Control Voltage

+12v to -12v

0v = no motion

+12v = Fast Forward

-12v = Fast Rewind

Capstan speed control output

19.2 kHz $\pm 50\%$

0 to 5v TTL output

Size

133.4mm (5¼") deep x 171.5mm (6¾") high x 292.1mm (11½") wide

Power

Mains

105, 115, 240 vac 50/60 Hz

30 watts @ 115 vac 60 Hz

Other

from slave supplies

Interface

Interfaces any combination of MCI equipment.

Interfaces for other equipment by request.

Code Output

Type: EBU, SMPTE, SMPTE/Drop Frame (NTSC color video—with JH-48)

Amplitude: -3 dBv, ref .775v rms

General Synchronization
internal, crystal, or line

Reference Input

Code type: EBU, SMPTE, SMPTE/Drop Frame (NTSC color video—with JH-48)

Other: Pilotone, etc. 50 Hz or 60 Hz