



# 300Synch Chopper Synchronizer

The Scitec Instruments Chopper Synchronizer allows the Scitec 300C and 300CD optical chopper to be synchronized as “slave” to any other chopper or arbitrary periodic external “master” reference signal.

The master unit can be any chopper that puts out an AC reference signal. It can be another manufacturer’s chopper, a Scitec chopper, or a signal generator. The Synchronizer will accept:

- All types of TTL signals
- All types of CMOS signals
- Square, sine, triangular, sawtooth, or similar waveforms from 100 millivolts peak to peak to 10 volts peak to peak

All the above with up to +/- 50V DC offset. Square waves are preferred as reference signals as they produce least phase jitter.

The slave reference signal must be TTL, like the reference of the 300C and 300CD. While we do not warrant that the synchronizer will operate with (“enslave”) all other choppers having TTL reference output, we are aware that it does work with some at least.

Set up is simple. See diagram below. The time to lock the Model 300C/CD slave chopper onto the master frequency is typically 20-30 seconds (120 max) from the time the chopper power is turned on. Full synchronization of phase between master and slave is typically 5 minutes.

Phase of the slave can be varied with respect to the master by -200 to +200 degrees.

Power required is 110V/60Hz or 230V/150Hz user settable. Accessories needed are one cable between master and synchronizer, 2 cables between synchronizer and slave. All connectors are BNC.

