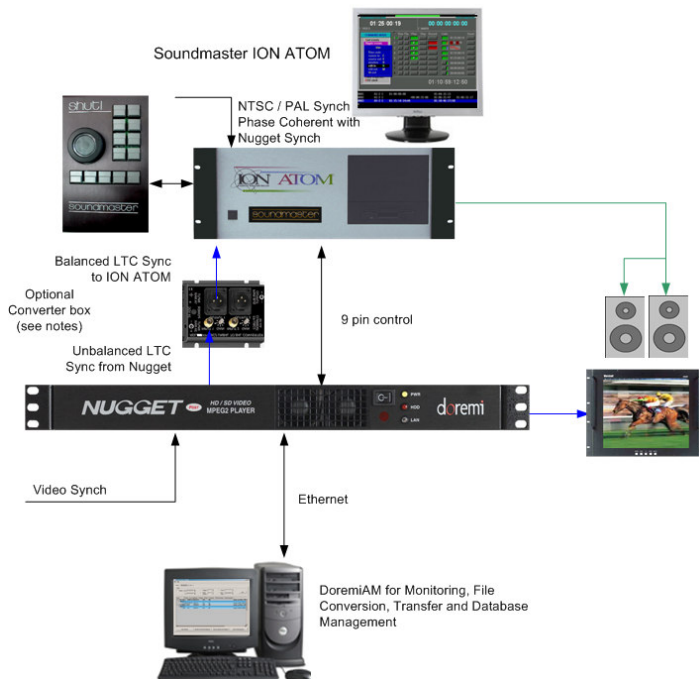


## Using Nugget-Post with the Soundmaster ION ATOM

Synchronizing systems together always provides a challenge, however Nugget offers a wide variety of choices. This application sets out to describe how Nugget-Post can operate together with the Soundmaster ION ATOM system.



With its LTC reader capability, Soundmaster ION ATOM provides a highly accurate lock to time code solution as well as a programmable control interface enabling a simple way to reliably synchronize the Nugget.

Feed the ATOM with a Standard Definition (SD--NTSC/PAL) video sync that is phase coherent with the bi-level or tri-level sync connected to the Nugget.

Connect the LTC (longitudinal time code) from the Nugget-Post into an appropriate LTC reader port on the ATOM hardware and make sure the LTC reader is assigned to the RS 422 port chosen (see the notes at the end of this document for more information on LTC connectivity).

Within the ATOM ensure that the machine setup file "NUGGETLV" is used to autocalibrate the appropriate ATOM RS 422 port. (Please contact Soundmaster Group to obtain this if it is not already on your system).

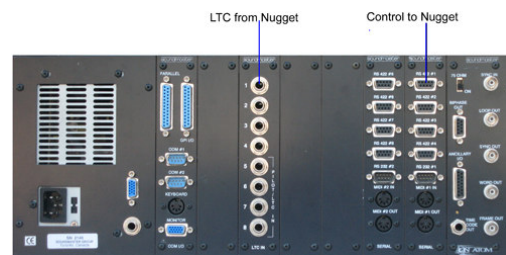
Once you are sure that the Nugget-Post is ready to be remotely controlled and that LTC is available to the ATOM you are ready to operate.

The next step is to undertake some basic calibration.

First "autocalibrate" the appropriate ATOM port and allow the Nugget to stop on its own. This is especially crucial when synchronizing 23.976 fps with 29.97 fps time code or 24 fps with 25 fps within the Soundmaster ION operating environment.

**Important:**

Using the DoremiAM the Nugget-Post should be set so that the Stop and Play Latencies are set to zero (0).



## Using Nugget-Post with the Soundmaster ION ATOM

When synchronizing 23.976/29.97 within ION, ensure that System Switch 3-13 is set to a "1" (Allow 6Hz mode).

When synchronizing 24/25 within ION, ensure that this switch is set to a "2" (Allow 1Hz mode). In this mode, even if the Nugget is selected as the "Master" within ION, it will also be synchronized to force the correct HD/SD relationship.

To confirm that this is working correctly, play the Nugget and select the "offset" display on the ION Control Screen. When it locks, the offset should be "0" subframes (if it is within +/- 2 subframes this is acceptable).

However, if the Nugget consistently locks to a higher value, autocalibrate again. If after a third autocalibrate the offset is not "0" or within the tolerance, you should check the video sync that is feeding the Nugget and the ATOM hardware to ensure it is correct, and determine that all the proper settings are in place on the Nugget-Post to have it reference properly to this sync and that other important **Nugget-Post** settings described in the manual are in place, particularly that the **Stop and Play Latencies** are set to **zero (0)**.

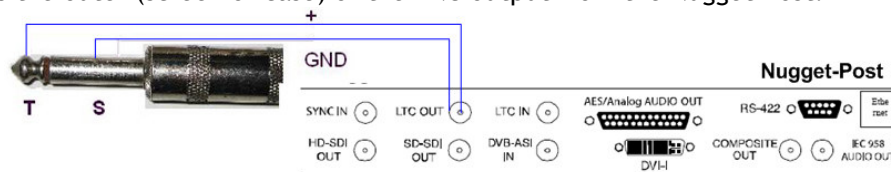
It is important to note because LTC signals are analog audio, LTC can sometimes be susceptible to level mismatches between the LTC source and the LTC input.

The specified LTC output of Nugget-Post is a 1Vp-p unbalanced signal supplied via a BNC connector on its rear panel (see the Nugget-Post manual for details). The LTC Reader Module of the ION ATOM accepts either balanced or unbalanced signals.

The descriptions below show the unbalanced and balanced wiring options for the LTC input to the ION ATOM.

### Unbalanced

For cable length below 10 meters the Nugget-Post unbalanced LTC output may be connected to the input of the LTC Reader Module using a cable wired as shown below. The + is the inner and the GND is the outer (screen or case) of the BNC output from the Nugget-Post.



### Balanced

For longer cable runs or noisy environments, use an active audio balancing device like the Peavey IA 10/4, Canford Audio FP-UBC2, Datavideo BAC-03 or any other balanced audio distribution amplifier and make sure the long cable run is balanced. The diagram below shows how this could be achieved.

