

# PSAP Master Clock Installation

Synchronizing the PSAP communication equipment requires careful thought and planning. This document is designed as a guide and overview for the entire project. Four separate categories of task are necessary for a complete job.

## Preliminary Planning

- 1 - Select a vendor to provide a master clock that meets or exceeds the NENA specifications for synchronization of the PSAP communication equipment.
- 2 - Create an initial list of equipment to be synchronized. Examples: ANI/ALI controller, Logging Recorder, Computer Aided Dispatch (CAD), Radio, etc.
- 3 - Assign a manager from the PSAP as contact for the project and interface with various vendors. This person must have authority to make decisions regarding all phases of the installation.

## Project Management

- 1 - Create a detail list of equipment to be synchronized by manufacture, model number and software/hardware version.
- 2 - Contract for the installation of the antenna for the master clock.
- 3 - Contact all equipment manufactures to determine what additional hardware and software is necessary for each individual product to accept a synchronized clock source. Determine physical and electrical interface to network with the master clock.
- 4 - Provide a detail list of hardware/software options that must be ordered by manufacture with pricing and delivery intervals to the PSAP manager.
- 5 - Determine interface type and data stream format.
- 6 - Determine the number and location of any wall mounted time displays including pricing for each display.
- 7 - Provide a detailed project schedule including all major and minor milestones with time line.
- 8 - Define and assign each task to the appropriate person (e.g. licensed electrician, bell technician, RAN installer).
- 9 - Be aware of and be prepared to work within all local building codes and requirements (labor unions, permits, local ordinances, etc.).

## System Design Engineering

- 1 - Select a physical location to install the master clock receiver.
- 2 - Select location of the wall mounted time displays.
- 3 - Determine most efficient cable runs to all equipment on the synchronization list.
- 4 - Develop a detailed ordering guide including equipment configuration, cables, time taps, backboard blocks, cable interfaces and miscellaneous parts for a complete installation.
- 5 - Provide pricing information and ordering information for all miscellaneous parts and equipment.
- 6 - Provide a detail line drawing and interface specification for all equipment to be synchronized.

## Installation

- 1 - Install and provide power to the clock hardware in the selected cabinet or equipment rack.
- 2 - Connect the antenna to the clock receiver.
- 3 - Install interface cabling for all equipment to be synchronized by the clock receiver to the agreed upon demarc point.

## Turn Up

- 1 - Test output at each demarc for proper data stream format before connecting to target equipment.