



Gatekeeper Student Protector SP-210 System N404 DVR Firmware Configuration Guide

For the following camera configuration:

Two SP-210 and One SP-100

Applies to 1123 release of firmware for the N404

Note:

This document describes the how to configure the firmware in a N404 for use with a Gatekeeper Systems Stop Arm Camera System.

A camera installation and aiming guide associated with Gatekeeper System Stop Arm Camera System is available.

A hardware installation document is available that describes how to wire a NiTRO™ 404 DVR with the supplied cables for a one and two camera SP-210 (license plate reading camera) system.

Copies of these documents are available by calling Gatekeeper Service Support at 604.864.6187

Gatekeeper Systems

Firmware Configuration Guide – Stop Arm Camera System

Applies to the 1123 Release of Firmware for the NiTRO™ 404

Two SP-210 and One SP100

For States/Provinces with only back license plates
Configuration items in **bold italics** vary from factory default configuration

Connection of Cameras to N404 DVR

The cameras must be connected as follows

SP-210 = channel 1
SP-210 = channel 2
SP-100 = channel 3

Channel 4 = No connection

Firmware Release 1123 for a NiTRO™ 404

The configuration instructions described below only apply to firmware release S5R16_V3_0_1123.
Commonly referred to as 1123.

It is extremely important that the license plate reading cameras (SP210) be plugged into video channel number one and Video channel number two and the overview camera SP100 plugged into video channel number 3 of the N404.

Firmware configuration

The following section describes how the firmware must be configured for use with a Gatekeeper Systems Stop Arm Camera system.

Live Menu Configuration

- The text in red shows the changes from the factory default settings

Menu -> Live -> OSD -> **ON** This turns on the text that is burnt into the video

Menu -> Live -> Camera Title -> CH 01 -> **Back/Front** Enter text
Menu -> Live -> Camera Title -> CH 02 -> **Back/Front** Enter text

This needs to be configured with either the words Back or Front depending on which stop arm camera is connected to each channel.

Menu -> Live -> Camera Title -> CH 03 -> **Overview** Enter text

Press escape to exit – be sure to save the setting when prompted to.

Record Menu Configuration

Menu -> Record ->

Ch	Size	Quality	FPS	Record Mode	Net	Audio
01	D1	High	30	Manual	Off	ON
02	D1	High	30	Manual	Off	ON
03	D1	Normal	10	Manual	Off	ON
04	D1	Normal	10	Off	Off	ON

- Note: 30 FPS for the Stop arm camera and 10 fps for the overview camera
- Manual means that the recording will start based on triggers (STP and WRN triggers – configured latter in this doc.

Press escape to exit – be sure to save the setting when prompted to.

Number of Cameras – This selects deinterlacing on channel 1 and 2

Menu -> Record -> Channel Mode -> **3 Channel Separate**

This is very important. With 3 channel Separate channels 1 and 2 are deinterlaced. Leaving the configuration in the factory default 4 Channel Separate only deinterlaces channel 1 and should not be done.

Press escape to exit – be sure to save the setting when prompted to.

System Menu Settings

Menu -> System -> Time Zone -> **Location specific** This set the time zone to your time zone.

Menu -> System -> Date/Time -> **Check** This syncs the DVR time to GPS time

- Enter escape to exit – be sure to save the setting when prompted to.

Peripherals Menu Settings

Menu -> Peripherals -> Burn In -> **On** Turns on the GPS on screen display

Menu -> Peripherals -> Time Sync -> **On** This syncs the DVR time to GPS time

- Press escape to exit – be sure to save the setting when prompted to.

Motor Menu Settings

Menu -> Motor -> Vehicle ID -> **ENTER BUS NUMBER**

Menu -> Motor -> Line -> **ALLOWS ANOTHER LINE TO ADDED TO OSD (On Screen Display)**

Menu -> Motor ->Speed Check -> **From GPS** Displays vehicles speed on OSD

Alarm Menu Settings

Menu -> Alarm -> Post Event Record -> **5 seconds**

Menu -> Alarm

No	Record	Tip	Level	Toggle	Beep
01	Off	ALM	High	Off	Off
02	01+02+03	STP	High	Off	Off
03	01+02+03	WRN	High	Off	Off
SPD	Off	V:	High	Off	Off
PANIC	Off	PANI	High	Off	Off

This configuration item starts the select video channel to start recording based on the status of the Stop arm and Warning lights.

Press escape to exit – be sure to save the setting when prompted to.

The DVR must be restarted after the above configuration changes Menu -> System -> OS Reboot

After configuring the N404 it is important to test to see that the video is only recorded when the warning lights are on or the stop arm is deployed. The recording should stop 5 seconds after the stop arm is retracted. Each recorder should have video from one stop arm camera and the overview camera.