



BirdDog PLAY

API Source Switching

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Introduction

In this document we will explore how to use an API to switch the NDI source sent to a BirdDog PLAY. To do this, we use the BirdDog API to send HTTP POST commands to the PLAY device and dynamically change the source it receives.

Please refer to the following BirdDog API Documentation for detailed information on the available commands and their usage.

- <https://birddog.tv/AV/API/index.html>
- <https://birddog.tv/AV/API/index.html#api-NDIDECODE-connectToPost>

Getting Started

To get started, you will need the following:

- Hostname / IP Address of the BirdDog PLAY device.
- NDI Source name that you want to send to the PLAY.
- A control platform or method capable of sending API commands, such as Bitfocus Companion with a Streamdeck, or any 3rd party control platform that can send CURL application/json GET and POST commands or JavaScript.

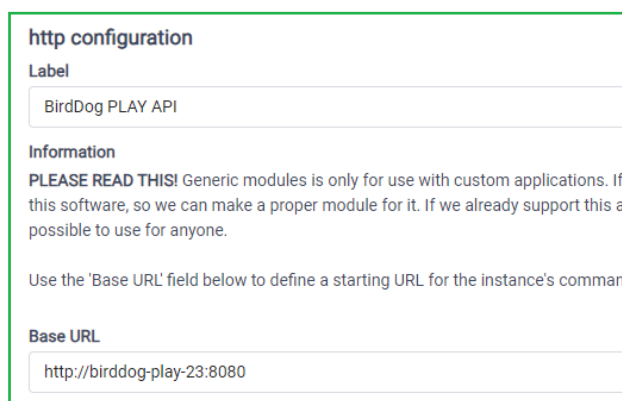
Procedure

In this example we will use Companion with a Streamdeck to send a FULL NDI source from a BirdDog STUDIO to the BirdDog PLAY device using our API.

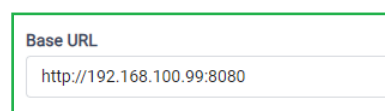
1. Create a new **Generic HTTP Request Connection** in Companion. Press the **EDIT** button.



2. Input the hostname or IP address of the BirdDog PLAY device, starting with "http://" and ending with the port number ":8080".



or





3. Create a new button with a **Press** action with the module and select POST.

BirdDog PLAY API	
POST	Add
GET	Add
PUT	Add
PATCH	Add
DELETE	Add

4. Add the following info:
 - a. Enter "/connectTo" as the URI, which corresponds to the command for source switching.
 - b. In the **Body** field, input {"sourceName":"STUDIO-NDI (HDMI)"} to specify the desired source name (replace my source with yours). You can find the source names of your NDI streams from NDI Studio Monitor, BirdDog Central, BirdDog DYNO, or NDI Analysis.
 - c. Select "application/json" as the **Content Type**.

Press actions	
BirdDog PLAY API: POST	URI
Delay	/connectTo
0 ms	Body
	{"sourceName":"STUDIO-NDI (HDMI)"}
⌵	header input(JSON)
	Content Type
	application/json

5. Test your button and start switching sources via the BirdDog API!
With the configured button, you can now send API commands to switch the NDI source received by the Bird-Dog PLAY device.



Glossary

API

An API (Application Programming Interface) is a set of definitions and protocols for building and integrating application software

Domain

A domain contains a group of computers that can be accessed and administered with a common set of rules. Domain can also refer to the IP address of a website on the Internet.

DNS

DNS (Domain Name System) is a system used by the Internet and private networks to translate domain names into IP addresses.

mDNS

mDNS (Multicast DNS) refers to the use of IP multicast with DNS to translate domain names into IP addresses and provide service discovery in a network that does not have access to a DNS server.

Ethernet

Ethernet, standardized as IEEE 802.3, refers to a series of technologies used to connect computers and other devices to a LAN (Local Area Network) or wide area network (WAN).

Firmware

Firmware is a class of software held in non-volatile memory that provides the low-level control for a device's hardware.

Gigabit Ethernet (GigE)

An Ethernet capable of transmitting frames at a rate of a gigabit per second. A Gigabit capable Ethernet network is recommended for NDI production workflows.

Hostname

The hostname is what a device is called on a network. The hostname is used to distinguish devices within a local network.

IGMP

IGMP (Internet Group Management Protocol) is the protocol used in IP multicasting that allows a host to report its multicast group membership to networked routers in order to receive data, messages, or content addressed to the designated multicast group.

IP

IP (Internet Protocol) is the communications protocol for the Internet, many wide area networks (WANs), and most local area networks (LANs) that defines the rules, formats, and address scheme for exchanging datagrams or packets between a source computer or device and a destination computer or device.

LAN

LAN (Local Area Network) is a network that connects computers and devices in a room, building, or group of buildings. A system of LANs can also be connected to form a WAN (Wide Area Network).

Mbps

Mbps (Megabits per second) is a unit of measurement for data transfer speed, with one megabit equal to one million bits. Network transmissions are commonly measured in Mbps.



NDI

NDI (Network Device Interface) is a standard allowing for transmission of video using standard LAN networking. NDI® comes in two flavours, NDI® and NDI|HX. NDI® is a variable bit rate, I-Frame codec that reaches rates of around 140Mbps at 1080p60 and is visually lossless. NDI|HX is a compressed, long-GOP, H.264 variant that achieves rates around 12Mbps at 1080p60.

Packet (Frame)

A packet is a unit of data transmitted over a packet-switched network, such as a LAN, WAN, or the Internet.

PELCO

PELCO is a camera control protocol used with PTZ cameras. See also VISCA.

PoE

Power over Ethernet

Port

A port is a communications channel for data transmission to and from a computer on a network. Each port is identified by a 16-bit number between 0 and 65535, with each process, application, or service using a specific port (or multiple ports) for data transmission. Port can also refer to a hardware socket used to physically connect a device or device cable to your computer or network.

PTZ

Pan, tilt and zoom.

RJ45

A form of standard interface commonly used to connect computers onto Ethernet-based local area networks (LAN).

RS422, RS485, RS232

Physical Layer, serial communication protocols.

Subnet

Subnet or subnetwork is a segmented piece of a larger network.

Tally

A system that indicates the on-air status of video signals usually by the use of a red illuminated lamp.

TCP

TCP (Transmission Control Protocol) is a network communications protocol which enables two host systems to establish a connection and exchange data packets, and ensures data is delivered, intact, to the correct destination.

UDP

UDP (User Datagram Protocol) is an alternative protocol to TCP that is used when reliable delivery of data packets is not required.

VISCA

VISCA is a camera control protocol used with PTZ cameras. See also PELCO.

WAN

WAN (Wide Area Network) is a network that spans a relatively broad geographical area, such as a state, region, or nation.



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