iNS2: "iNS" iNavigator 2-Wire Push Button Station

The "iNS" iNavigator 2-Wire Push Button Station (iNS2 PBS) is the pedestrian interface to the iNavigator Accessible Pedestrian System. A system consists of a Control Unit (PN iCCU-S2, iCCU-C2, iCCU-S, or iCCU-C) and a Push Button Station. The iNS2 PBS is an MUTCD compliant PBS and provides valuable information and cues via both a vibrating arrow button and audible sounds, making the intersection accessible for all pedestrians. All sounds emanate from the front and back of the unit. A sunlight-visible red LED latches "ON" along with a tactile feedback "bounce" to confirm the button has been pushed. The vandal-resistant design of the iNS2 PBS includes the body, which houses the ADA compliant push button (shown), a faceplate (5X7 sign shown), and mounting hardware.
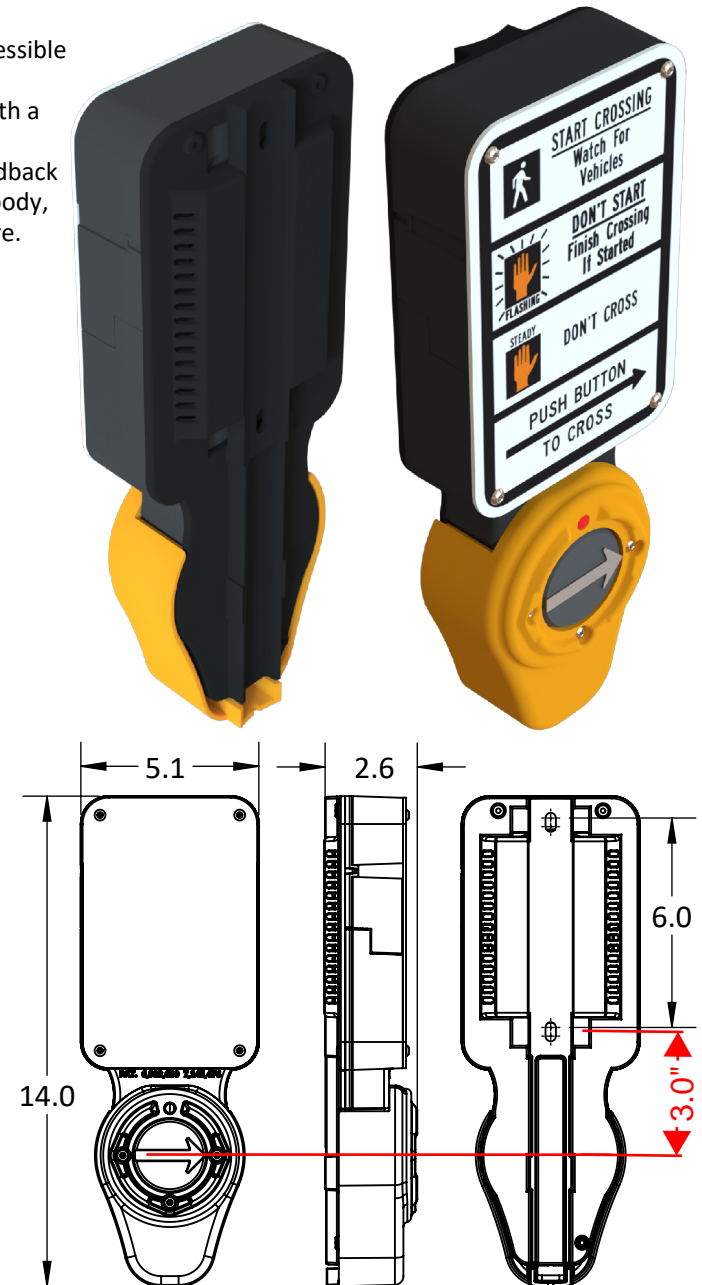
By interfacing with the Central Control Unit (CCU) that installs in the Traffic Cabinet, the iNS2 PBS can provide the following standard features:

- Operates over a single pair of wires
- All PBS wired in parallel, individually assignable to any phase
- 16 buttons can operate on a single iCCU (dependent on power requirements and wire runs)
- All sounds are synchronized
- 4 Locate Tone selectable options
- 13 Walk Sound selectable options, 3 of them custom options
- 7 Clearance Sound selectable options
- Walk, Clearance, and Don't Walk sounds automatically adjust to ambient
- Separate ambient response settings for Locate Tone (for quiet ambient conditions)
- Most sounds have independent Min/Max settable limits
- Button vibrates during Walk
- Button push confirmed by latching LED, tactile bounce, and audible "wait" sound
- Extended button push can boost volume for next Walk and Clearance
- Direction of travel message with extended button push, capable
- Extended Push Priority: mutes all but selected crosswalk, capable
- Extended Push activation settings: 0-6 second range, 0.5 second increments
- Beaconing and Ping Pong features available
- Select audio messages, change settings, and perform firmware updates wirelessly using iOS (9.0+) or Android (5.0+) devices, or a Windows PC with Polara's Bluetooth Dongle (PN iN-DGL, purchased separately)
- Built in health/event logging feature, up to 1000 events
- False walk detection: four independent checks
- External speaker option at time of order
- External button input for bike lanes, horses, etc.
- Warranty: 3 year limited

An iNS2 PBS can operate as an iNS3 (Ped-Head Based System). It comes with a 3-position terminal block to connect to a Ped-Head Control Unit. See iNS3 Quick Start Guide for more information.

For optimum functionality, Polara recommends a dedicated pair of wires be routed to each PBS. Using IMSA 50-2 Cable is an ideal choice. The ground shield does not need to be connected.

Dimensions are in inches. iNS25BN0-Y unit shown.

![POLARA]

Operating Specifications

Parameter	Rating
Operating Temp. Range	-34°C to +74°C (-30°F to +165°F)
Storage Temp. Range	-45°C to +85°C (-50°F to +185°F)
Operating Force	3.0 lbs max, option of 3 adjustable programmed forces
Switch Operating Life	Greater than 20 million operations
Max. Volume	100 dB @ 1 meter

Design Compliance

Functionality Test Type	Compliance
Temperature and Humidity	MUTCD 2009-4E
Transient Voltage Protection	NEMA TS2
Transient Suppression	NEMA TS2
Mechanical Shock and Vibration	NEMA TS2
iNS3 PBS Enclosure	NEMA 250 Type 4X
Electrical Reliability	NEMA TS2

Notes:
1. Lab tested to applicable sections of referenced standards
2. All specifications are subject to change without notice
3. All specifications are typical unless otherwise specified

Termination View: iNS2 Operating as iNS3 PBS

iNS3 or iNS2 (acting in a 3-wire system)

A 3 Wire Cable (General Cable: C2831A or equivalent) must be routed between each iNS3 PBS and Ped Head Control Unit (iPHCU3S). This cable is not supplied with the iNS3 PBS, but is available separately in precut 12 ft, 25 ft, and 50 ft lengths.

iNS3 PBS Cables	
Part No.	Length
iN3-CABLE-12	12 ft
iN3-CABLE-25	25 ft
iN3-CABLE-50	50 ft

Terminal screws on each iNS3 PBS include washer (clamping plates) intended for bare wire. Crimp terminals are not recommended.

Ped Call Terminal on left. 3-position terminal block on right (for operating as iNS3)

Dimensions are in inches.

---

iNS23TN1-X

iNS2 5 A N 0 - B - BD-ES

Additional Options
Button Options
NA - No Arrow
BD - Bi-Directional Arrow
Other Options
WPC - With pole cap
ES - External Speaker option

Button Cover Color
Back plate is always black.
B - Black
G - Green
Y - Yellow

Audio Message Option
0 - Standard messages
1 - Custom Messages

Braille
N - No braille on faceplate
B - Braille on faceplate

Faceplate
MUTCD Compliant	Non-MUTCD Compliant
V - 9x12 R10-3	A - 5x7- International
U - 9X12 R10-3b	B - 5x7- International
T - 9x15 R10-3e	C - 9X12- Countdown
	D - 5X7 or 9x12- International
	O - No Faceplate

Size of Front Plate Adapter
5 - 5" x 7"
9 - 9" x 12"
3 - 9" x 15"

Navigator Family
iNS2 - iNavigator S 2-Wire Push Button