

# ARINC 801

## Connector Inspection & Cleaning

### Technical Note



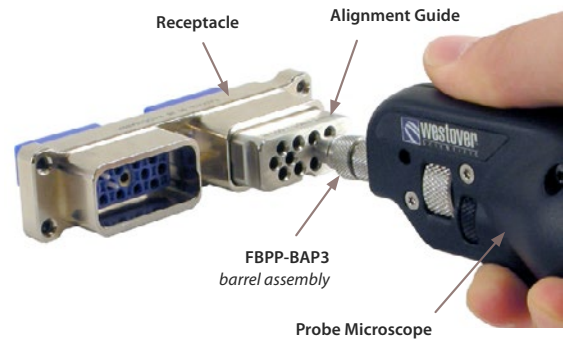
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**OVERVIEW**  
ARINC 801, Key Terms & Inspection Overview

Westover Scientific  
**ARINC 801**

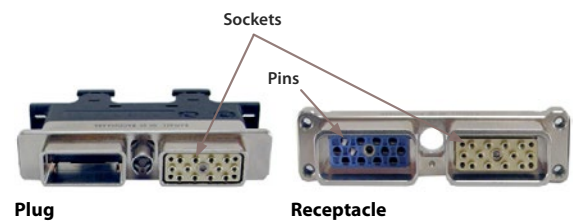
## Overview

**ARINC 801** is the most frequently used specification for fiber optic connectors in aerospace applications. Established by the Airlines Electronic Engineering Committee (AEEC), ARINC 801 is part of the ARINC 800 series of fiber optic standards for avionics networking. All ARINC 801 connectors utilize a 1.25mm ferrule and are mated in a pin & socket configuration. While all of the ARINC 801 connectors utilize a “plug & receptacle” design, there are different design types within the standard.



## Key Terms

- **Plug:** the **male** interface of an ARINC 801 connection.
- **Receptacle:** the **female** interface of an ARINC 801 connection.
- **Pin:** the **exposed** 1.25mm ferrules.
- **Socket:** the **unexposed** ferrules inside the alignment sleeves.

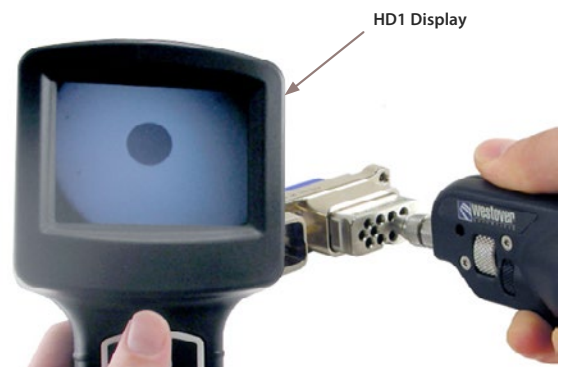


## Inspection Overview

Visual inspection is the only way to validate the condition of a fiber end-face. Proper inspection and cleaning of fiber optic connectivity is vital to the efficiency and longevity of the fiber optic network; failure in doing so can and will lead to costly downtime and permanent damage. Practicing proper inspection methods is critical at installation and throughout the life of the fiber.

### ***You should always INSPECT BEFORE YOU CONNECT...***

- Microscopic contamination of fiber optic interfaces compromises optical transmission
- Mating dirty connectors leads to equipment damage and costly downtime
- Debris particles dig into the fiber creating pits, chips and embedded matter
- Contamination must be removed prior to mating connectors



## ARINC 801 Connector Types

**Type 1: Circular**



**Type 2: Rectangular**



**Type 3: ARINC 404A**






**Type 4: ARINC 600**



## ARINC 801 Inspection & Cleaning Guides

Westover Scientific offers a series of alignment guides that fit the shell sizes of the respective plug and receptacle of various ARINC 801 connectors. These guides provide a compatible interface for the inspection and cleaning of pins or sockets specific to each type of connector. When used in conjunction with Westover's Professional Series probe microscopes and portable display units, Westover's ARINC 801 alignment guides provide the means for a quick and easy inspection of these rugged, multi-termini connectors, in a field or factory environment. In addition, these guides can also be used with Westover's CleanBlast™ system to clean away debris and dirt from the optical end-faces of ARINC 801 connectivity.

**Note:** Westover will design and build guides for any ARINC 801 interconnect requested. Below are guides that have already been designed.

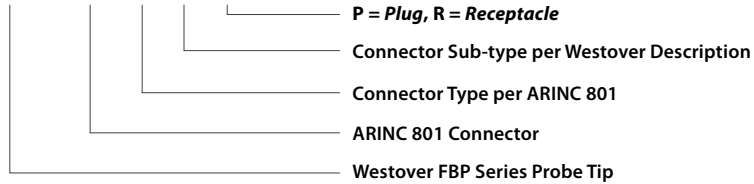
Type 1: Circular	Type 2: Rectangular	Type 3: ARINC 404A	Type 4: ARINC 600
		<i>Engineered to Order</i>	
<b>FBPT-A801-1-001-P</b> 13-04 Shell, Plug <i>Build to Order</i>	<b>FBPT-A801-2-001-P</b> F12, Pins, Plug <i>In Stock</i>		<b>FBPT-A801-4-001-P</b> 12 Fiber, Plug <i>In Stock</i>
<b>FBPT-A801-1-001-R</b> 13-04 Shell, Receptacle <i>Build to Order</i>	<b>FBPT-A801-2-001-R</b> F12, Sockets, Receptacle <i>In Stock</i>		<b>FBPT-A801-4-001-R</b> 12 Fiber, Receptacle <i>In Stock</i>
<b>FBPT-A801-1-002-P</b> 15-06 Shell, Plug <i>In Stock</i>	<b>FBPT-A801-2-002-P</b> F12, Sockets, Plug <i>In Stock</i>		<b>FBPT-A801-4-002-P</b> 36 Fiber, Plug <i>Build to Order</i>
<b>FBPT-A801-1-002-R</b> 15-06 Shell, Receptacle <i>In Stock</i>	<b>FBPT-A801-2-002-R</b> F12, Pins, Receptacle <i>In Stock</i>		<b>FBPT-A801-4-002-R</b> 36 Fiber, Receptacle <i>Build to Order</i>
<b>FBPT-A801-1-003-P</b> 21-16 Shell, Plug <i>Build to Order</i>			
<b>FBPT-A801-1-003-R</b> 21-16 Shell, Receptacle <i>Build to Order</i>			

**INSPECTING & CLEANING**  
Instructions

Westover Scientific  
**ARINC 801**

**Westover Part Numbering Configuration**

**FBPT-A801-1-001-P**



*Example:*

**FBPT-A801-2-001-R**

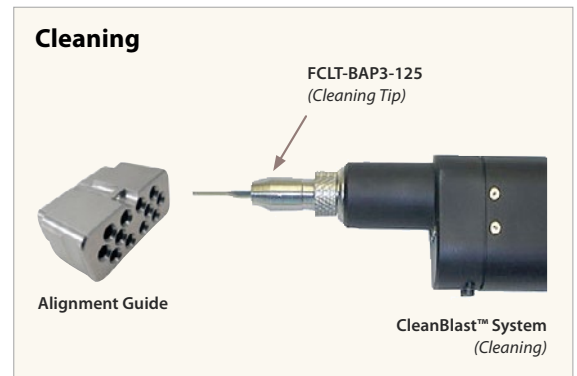
- ARINC 801
- Type 2
- F12 Shell Size with Sockets
- Receptacle

**Inspecting & Cleaning**

**NOTE:**

- For **INSPECTION**, all A801 guides interface with the **FBPP-BAP3** barrel assembly.
- For **CLEANING**, all A801 guides interface with the **FCLT-BAP3-125** cleaning tip.

**Tools**



**Operation**



**1.** Select the appropriate alignment guide for the connector being inspected, align the geometry and insert into the connector.



**2.** Insert the probe w/ barrel assembly (FBPP-BAP3) or the CleanBlast™ system w/ cleaning tip (FCLT-BAP3-125) into the guides.



**3.** Initiate inspection or cleaning.

