Model 1073A
Distribution Amplifier

The Arbiter Systems®, Inc. Model 1073A Distribution Amplifier is designed to buffer and distribute signals generated by sources such as Arbiter Systems' GNSS Synchronized Clocks (1201B/C, 1202B/C, . . .), GPS Satellite Controlled Clocks (1088B, 1093B/C, . . .), and GPS Substation Clock (1094B). The Model 1073A includes three separate channels, each with four high-drive-capability outputs, to buffer your choice of signals. Each channel has a limiting amplifier to stabilize the peak-to-peak signal level. Each input is galvanically isolated with a transformer or optical isolator to break ground loops and reject common-mode signals. Standard isolation is 2000 volts rms.

Each channel may use independent signals or, for applications requiring more than four outputs, may use the same signal. Channel A may drive channels B and C or channel B may drive channel C. These selections are made with internal jumpers. For fiber-optic input signals, Option 01 provides an 820 nm, Type ST optical fiber input for channel A.

Each input and output may be individually ac- or dc-coupled. In dc-coupled mode, the Model 1073A can distribute 5 V CMOS/TTL logic-level signals, such as one pulse per second (1 PPS) and unmodulated IRIG-B timecode. In ac-coupled mode (intended for frequencies of 100 kHz or greater), the Model 1073A can receive and distribute timebase and reference frequency signals up to 10 MHz. Input and output configuration may be independently selected. For example, a channel may receive an ac-coupled 5 MHz input, and one output of that channel may be set for dc-coupled (logic-level) output while the other three are set for ac-coupled outputs. Settings are made with internal jumpers.

Because of the limiting amplifiers and frequency limit when ac coupled, the Model 1073A is not suitable for distribution of modulated IRIG-B signals.

Intended primarily for unattended operation, the Model 1073A has no display or keyboard. A front-panel LED indicates that power is applied and the unit is operating. Power options include 85 Vac to 264 Vac or 110 Vdc to 370 Vdc with an IEC-320 detachable cordset, 85 Vac to 250 Vac or 110 Vdc to 350 Vdc terminal strip inlet with surge withstand, or 10 Vdc to 60 Vdc terminal strip inlet with surge withstand.
Model 1073A Specifications

I/O Configuration

**Configuration**

Channels: Three, each with four outputs

**Mode**

Independent: Each channel independently driven
Common A/B: B/C outputs driven by A or B input
Selection: Internal push-on jumpers

**Inputs**

DC coupled: Opto-isolator (HCPL2601) in series with 562-ohm resistor
Level: 5 mA at 5 volts, nominal
Polarity: Center conductor positive
Frequency: DC to 5 MHz
AC coupled: RF transformer; 50 ohms
Level: 0 dBm to +15 dBm (0.6 Vpp to 3.6 Vpp)
Frequency: 100 kHz to 10 MHz
Selection: Internal push-on jumpers
Isolation: 2000 Vrms, minimum, to common

**Outputs**

Driver: Each output, 74HC125 quad buffer
Coupling: AC (0.1 μF capacitor) or dc
Selection: Internal push-on jumpers
Level: 5 Vpp, open-circuit
Frequency: 2.5 Vpp (+12 dBm), into 50 ohms
Impedance: 50 ohms

**Connectors**

Input: Isolated 50-ohm BNC, 1 per channel
Output: 50-ohm BNC, four per channel
Fiber Optic: Type ST, for 62.5/125 μm multimode fiber, optional (1073opt01)

**Interface**

Operator: Status LED, Power On (green)

**Certifications and Approvals**

CE mark/label and certificate

Power Requirements

**Standard (Option 07)**

Voltage: 85 Vac to 264 Vac, 47 Hz to 440 Hz, 20 VA max. or 110 Vdc to 370 Vdc, 15 W max.
Inlet: IEC-320 with fuse and mating cordset. Specify cordset P01 - P10

**General**

**Physical**

Size: 1 RU rack mount or tabletop; 260 mm deep FMS. Rack mounts included
(25 in x 15 in x 9 in), shipping

Weight: 2 kg (4.5 lbs), net
3.2 kg (7 lbs), shipping

**Environmental**

Temperature: Operating: 0 °C to +50 °C
(-20 °C to +70 °C typical)
Nonoperating: -40 °C to +75 °C

Humidity: Noncondensing

EMC: Radiated susceptibility: passes walkie-talkie test
Conducted emissions: power supply complies with FCC 20780, Class A and VDE 0871/6.78 Class A
Surge withstand capability (SWC), power inlet: designed to meet ANSI/IEEE C37.90-1 and IEC 801-4

**Options**

**I/O Options**

Fiber-Optic Input 1073opt01

**General Options**

On/Off Switch 1073opt04

**Power Options (select only one)**

IEC-320 Power Inlet,
85 Vac to 264 Vac, 110 Vdc to 370 Vdc1073opt07
Terminal Power Strip, Surge Withstand
10 Vdc to 60 Vdc 1073opt08
Terminal Power Strip, Surge Withstand
85 Vac to 250 Vac, 110 Vdc to 350 Vdc1073opt10
## Model 1073A Specifications

### Accessories

#### Included
- Description | Order No.  
--- | ---  
19 in Rack Mount Kit | AS0028200  
Quick Setup Guide | PD0053200  
Power Cord (with Option 07) | P09

#### Available
- Description | Order No.  
--- | ---  
Power Cord | P01 - P10  
Operation Manual | AS0045800  
BNC (Male) Breakout to 100 mm Wires | AP0003400  
BNC (Female) Breakout to 100 mm Wires | AP0008900  
BNC (Female) Breakout to Screw Terminal | AP0014900  
BNC (Male) Breakout to Screw Terminal | AP0015000  
19 in Rack Slide Kit | AS0033100  
24 in Rack Mount Kit | AS0056600

### Cordset and Plug Styles

The following are the available IEC-320 mating cordset plug style and specifications:

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>Specification</th>
<th>Rating</th>
</tr>
</thead>
</table>
| P01 | Continental Europe | CEE 7/7 | 220V  
P02 | Australia/NZ/PRC | AS 3112-1981 | 240V  
P03 | U.K. | BS 1363 | 240V  
P04 | Denmark | Afsnit 107-2-01 | 240V  
P05 | India | BS 546 | 220V  
P06 | Israel | SI 32 | 220V  
P07 | Italy | CEI23-16/VI1971 | 220V  
P08 | Switzerland | SEV 1011.1959 | 220V  
P09 | North America and ROC | NEMA 5-15P and CSA C22.2 #42 | 120V  
P10 | Japan | JIS5303 | 120V  

Arbiter Systems, Inc. · 1324 Vendels Circle, Suite 121 · Paso Robles, CA 93446 · USA  
Tel: +1.805.237.3831 · Fax: +1.805.238.5717 · E-mail: sales@arbiter.com · Internet: http://www.arbiter.com