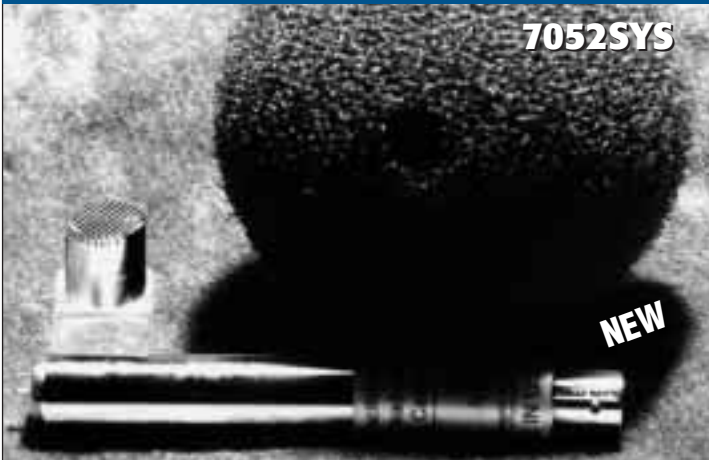




Pacific, Inc.

Precision Microphones and Systems for the End User and OEM



7052SYS

NEW



MK438

NEW

Outdoor Microphone System



SA6001

NEW

*ACoustAlarm™
Sound Level
Alarm System*



PS9200KIT



S17KIT

Includes: **PS9200** - 2 Channel Power Supply, **4012** - 1/2 Inch Preamp and Cable, **PS9** (110 Vac) or **PS29** (220 Vac) adaptor, **WS1** 3 Inch Windscreen, choice of Type 1 1/2 Inch Mic: **•7012** - FF - 40 kHz - 15 mV/Pa **•7013** - Pr - 20 kHz - 12 mV/Pa **•7046** - FF - 20 kHz-50 mV/Pa **•7047** - Pr - 10 kHz - 40 mV/Pa ...and... **SC1** - Fitted Storage Case (shown) **Options:** "G" Gain Stage, SC2 Locking Case, 511 E Calibrator, 1 or 1/4 Inch Mics and Preamps, DM2-22 and more... **New PS9200Kit-1/4** Microphone System

S17 Simple Intensity™ Probe, rugged side by side configuration per IEC 1043, up to 100 mm Mic to Mic Spacing, 18 Inch Extension w/Tripod Mount. Your choice of phased Matched 1/2 Inch Mic Pair, **7012 PM** (15mv) or **7046I** (50mV). **PS9200** - 2 Channel Power Supply, **4012** (2)- 1/2 Inch Preamps and Cables, **PS9** (110 Vac) or **PS29** (220 Vac) adaptor, **SC1** - Fitted Storage Case (shown) **Options:** "G" Gain Stage, SC2 Locking Case, 511 E Calibrator, DM2-22. **Optional 7016PM** 1/4 Inch Mics, requires AD0016x2

ACoustics Begins with ACO™

www.acopacific.com

PS9200

Precision Microphone Power Supply Family



- 2 and 4 Channel Models
- 3 way operation, Internal 9Vdc Battery AC Wall Adapter, External 6 to 16Vdc
- Over 40 hours battery life (One 4012 Preamp and Mic)
- Power On/Off Battery Indicator
- Output AC Coupled
- Industry Standard Connectors
- Input - 5 pin XLR or Lemo 7 pin
- Output - BNC Coaxial
- Locking Toggle Switch
- 2 Channel Internal Gain Stage Optional

Specifications:

Preamplifier Supply:
Voltage - (+) 28Vdc±5%
Current - 10 mA total
Noise - 0.001% typical

Polarization Supply:
Voltage - (+) 200 Vdc±2% max 0.5% typical
Current - Limited by 11 Meg Ohm source
Noise - 0.0001% typical
Switching Frequency - >70kHz typical

Signal Decoupling Capacitor: 10uF Tantalum

Power Requirements - DC:

Voltage Input 4.5 to 18Vdc
Operational Range 5.5 to 16Vdc
Current @ 9 Vdc - One channel - 4 mA typical
Low Battery Indication: 6.3 Vdc typical
Battery - 9Vdc Alkaline (NEDA 1604A)

Accessories:

PS9: 110VAC Adapter
PS29: 220VAC Euro Adapter

Options:

PS9250: 50 Vdc Preamp Voltage - Permits Higher Output Voltage - 40Vpp

PS9200: (L7 & PS9204L7) - 2 & 4 Channel Units with 7 pin Lemo Connector
Lemo Pinout Compatible with HP, Norsonics and B&K

GAIN STAGE: "G" Options

0 to 60 dB Fixed Gain
"A" Weighting w/Gain
Gain Factory Select, 20 or 40 dB standard
External switching of Gain or Gain Modes
Bandwidth: 2 Hz to 100kHz ± 0.5dB
Input Noise: Broadband 2 Hz to 100kHz <10uV
"A" Weighted <3uV

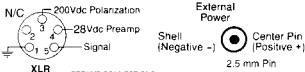
Output Capacitor: 100uf (1.5uF option)

Output Impedance: <10 ohms

Drive Capability: 3000pf 1 V p-p @ 100kHz

Maximum Output: 3.3Vrms @ 12Vdc

Input Impedance: >50 Kilohms



CONNECTION DRAWINGS

4012

1/2 Inch Microphone Preamplifier



4012 & 4012L7

• Detachable cable permits:

- Ease of installation
- Storage of Mic and Preamp
- Ease of repair

- Low power
- Wide Frequency Response
- High Input Impedance
- Low noise

Specifications:

Microphone Connection: 11.7mm - 60 UNS Thread

Power: 28 Vdc @ 1 mA typical

Insertion Loss: <0.25 dB typical @ 22 pF (DM2-22)

Output Voltage: 7Vrms @ 1 kHz (28 Vdc)

Frequency Response: 2Hz to 200kHz ± 0.5db typical

Noise @ 22pF:

- "A" weighted - 1.4 uV typical
- Linear 20Hz to 20Hz - 3uV typical
- Input Impedance: >25GΩ || 0.1 pF typical

Options:

XLR & Lemo Versions

1 inch Preamplifier - 4022 (4012+AD0122)

1/4 Inch Preamplifier - 4016 (4012+AD0016)

Accessories:

- CA4012-0 - Unterminated Cable - 2 meters
- CA4012-5 - 5 Pin XLR Cable - 2 meters - Supplied w/4012
- CA4012-L7 - Lemo HP, Norsonic, B&K Pinout - Supplied w/4012L7
- Custom Cable Preamp CA4012-X-Y X=Connector Lemo 7 pin (-L7) XLR 5 pin (-5) Y=Length in Ft.
- Extension CE4012-X-Y
- AD0122 - 1 to 1/2 inch adapter
- AD0016 - 1/4 to 1/2 inch adapter
- DM2-XX-Dummy Microphone

The **SA6000 ACOustAlarm™** Family of Sound Alarms was developed in response to the increased emphasis on hearing conservation in the workplace and environment.



The ACOustAlarm™ SA6000 family of SPL alarms feature:

- ◆ Programmable Alarm Thresholds
- ◆ Over 80 dB dynamic range - 54 to 134 dB SPL
- Other Ranges Available - Factory Option
- ◆ A, C and Lin Weighting (Internally Selected)
- ◆ True RMS detection
- ◆ True Measurement Microphone 7052S Type 1.5"™
- ◆ Calibration Traceable to International Standards
- ◆ Key Lock protection of Programing Functions
- ◆ Water, Corrosion and Shock Resistant Design
- ◆ Selectable Alarm Time Constant - Internal
- ◆ Remote Signalling Options Available
- ◆ Remote Microphone Option
- ◆ Mic Calibration with 511E (optional)
- ◆ True rms display of SPL (optional)
- ◆ Detachable Mic - up to 300 feet (optional)
- ◆ WS1 Windscreen - WS1-80T (Rain Treated- option)
- ◆ 24 Vac Power

Applications:

- Industrial
- Machine/ Plant Noise, Fault Detection
- Environmental
- Pass By Noise, Community Compliance,
- Amphitheatres, Auditorium, Stage, Monitor Rooms
- Equipment Yards, Construction Sities

4212 ACOtron™

CCLD* Powered (2-20 mA)
PCB ICP™ and B&K
DeltaTron® compatible

New 7052SYS MK224SYS
(mic + 4212) Combos

ICP™ Adapters:
PSIEPE4 & ICP1248



Specifications:

Frequency Response: @ 22pF

100 Hz to >100 kHz less than ± 0.1 dB 50 mdb typ.
30 Hz to >100 kHz less than ± 0.2 dB typical
Lower Limits -2 dB 10 Hz, -3 dB 8 Hz typ.

Loss (Attenuation):

re: 1 kHz and 250 Hz (-)1.4 dB typical
Change for 2 mA to 20 mA CCLD adjustment
0.1 dB typical
Change for 15-30 Vdc CCLD supply change
0.05 dB typical

Input Impedance: 1GΩ || 0.6 pF typical

Noise: @ 22pF

1.5 uV "A" weighted, 8 uV 20 kHz typical

Output Performance: 1% THD (18-30 Vdc CCLD)
4 mA/20 kHz - 14 Vpp - 5 nF Load typical
20 mA/20 kHz - 14 Vpp - 50 nF Load typical

THD: @ 100mV rms:
20 kHz <-80 dB, 1 kHz -80 dB Typ.

Output Connector: BNC Socket (Female)

Power: 2-20 mA, 18 to 30 Vdc recommended

Microphone Connection: 11.7mm - 60 UNS Thread

Temperature: Operating -20 to 60°C

Option: 4212RA & RAS Right Angle Preamps

*Constant Current Line Drive

Specialty Preamps



40X12 (XLR)

40L12 (Lemo)

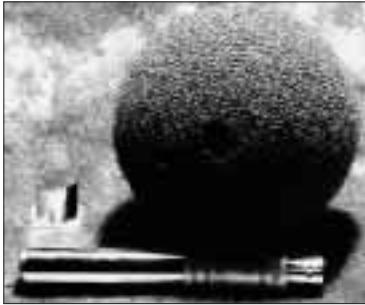
4212RAS

4012RA

4012RAS & 4212RA AVAILABLE-NOT SHOWN

◆ ACOUSTICAL INTERFACE™ SYSTEM ◆

7052SYS Type 1.5™ Measurement Microphone System



7052S FF Capsule
4212 ACOtron™
ICP™ Preamp
WS1 Windscreen

Also Available:

MK224SYS
PSIEPE4
ICP1248
WS1-80T

The 7052SYS Type 1.5™ measurement microphone system offers a cost effective options to acoustics measurements. Compatible with ACOtron™, IEPE, CCLD, PCB ICP™, and B&K Deltatron® equipment. The 7052SYS provides >20 kHz response, <20 dBA noise floor, with 20 mV/Pa sensitivity (<14dBA with the MK224). The WS1 3" Windscreen rounds out the package.

- LOW COST
- RUGGED SIDE BY SIDE CONFIGURATION-PER IEC 1043
- 18 INCH EXTENSION • TRIPOD MOUNTING
- 12.5 MM TO 100 MM MICROPHONES SPACING
- USES STANDARD ACO PACIFIC 4012 PREAMPS
- COMPATIBLE WITH PS9200 POWER SUPPLY
- DETENT DESIGN - NO SPACERS TO LOSE

SI7KIT AVAILABLE FOR ADDITIONAL SAVINGS
INCLUDES: 1/2 INCH MATCHED PAIR, 2-4012 PREAMPS, W/ CABLE
PS9200, AC ADAPTER AND SC1 FITTED STORAGE CASE & SI7
NEW - SI7BNC FOR USE WITH 4212 PREAMP

PHASE MATCHED PAIRS

Matching Specifications:

Phase - 31.5 Hz to 1 kHz less than 0.2 deg.
Less than 0.05 degrees typical @ 1 kHz
Less than 1.0 degree typical @ 5 kHz

SI7 Sound Intensity Probe "Simple Intensity"



Amplitude Matching:

0.5 dB Hz to 12.5 kHz
0.3 dB typical

Microphone Selection:

7012PM - Field to 40 kHz, 15 mV/Pa
7046I - Free Field to 20 kHz, 50 mV/Pa
7016PM - Free Field to 100 kHz, 3 mV/Pa

VERY RANDOM™ NOISE GENERATOR



3024 White, Pink & 1kHz
Noise Generator

Application:

Signal Source for:
Intensity Calibrators
Reverberation Testing
Vibration Applications
Electronic Applications

Features:

Pink and White Noise
1 kHz Sinewave
Step/Variable Attenuator to -52dB
Crystal Controlled DDS
Direct Speaker Drive
Portable-Battery and AC Power

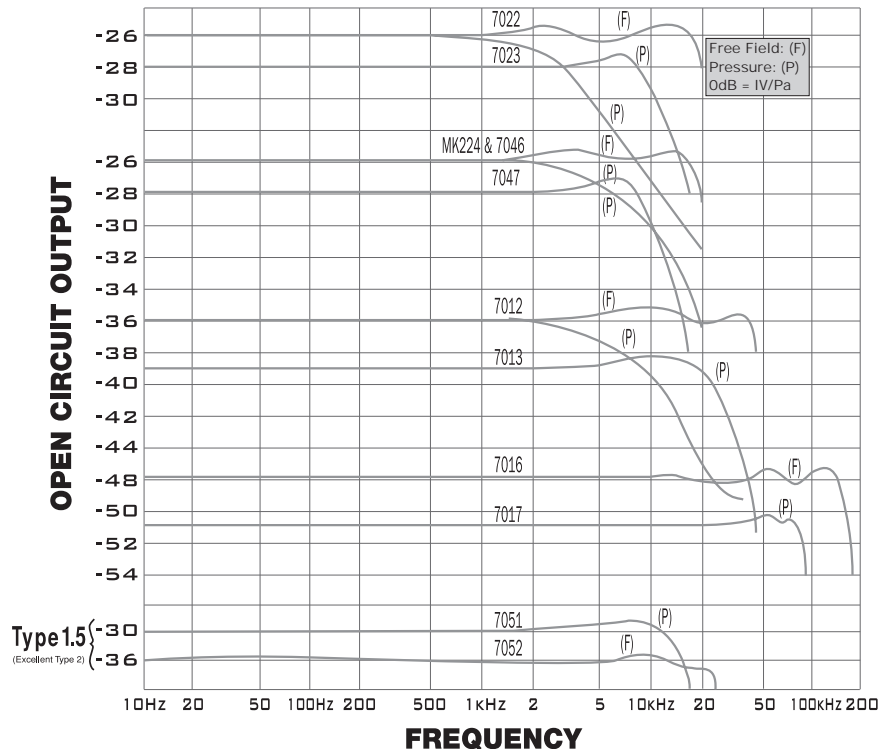
Specifications:

White Noise Generator
Pseudo Random
Line Spectrum - 119uHz
Sequence - 2.33 Hours
Symmetrical Gaussian
1.6 Hz to 39 kHz (-3dB)
Pink Noise Generator
Filter- 6 poles, 5 Zeros
Slope - 3dB/Oct +/- .25dB
Distortion -35dB @ 1 Vrms
(.775Vrms, OdBm Optional)
Power- 9V Alkaline (LR6/1604A) 2 each
AC - 12 Vac @ 500mA
PS12 - 110 Vac Adapter supplied

The "Alternative" Family



FREQUENCY RESPONSE



SOUND INTENSITY

NOISE GENERATOR

FREQUENCY RESPONSE

Specifications for The "Alternative" Family of Products

TYPE 1										TYPE 1.5™ (Excellent Type 2)	
ACO Pacific Model No.	7022	7023	7012	7013	7046	7047	MK224	7016	7017	7051	7052
Nominal Diameter	1 Inch		← 1/2 Inch →				1/4 Inch		1/2 Inch		
Response Characteristic	Free Field 0°	Pressure	Free Field 0°	Pressure	Free Field 0°	Pressure	Free Field 0°	Free Field 0°	Pressure	Pressure	Free Field 0°
OPEN CIRCUIT SPECIFICATIONS											
Frequency Response ± 2dB	2Hz to 20kHz	2Hz to 10kHz	2Hz to 40kHz	2Hz to 20kHz	2Hz to 20kHz	2Hz to 10kHz	8Hz to 18kHz	5Hz to 120kHz	5Hz to 70kHz	3Hz to 12.5kHz	3Hz to 20kHz
Sensitivity dB re: 1V/Pa (mv/Pa)	-26dB (50)		-36dB (15)	-38dB (12.5)	-26dB (50)	-28dB (40)	-26dB (50)	-49dB (3)	-58dB (1)	-29dB (35)	-34dB (20)
Dynamic Range (3% THD) Typ.	8dBA-150dB		18dBA-160dB		12dBA-145dB		14dBA-145dB	35dBA-164dB	45dBA-175dB	18dBA-148dB	20dBA-148dB
Nom. Polarization Cartridge Cap.	60pF		18pF		20pF		18pF	6.5pF		18pF	18pF
Polarization Voltage	← 200 Vdc →						0 Vdc	200 Vdc		0 Vdc	0 Vdc
Temperature Coefficient -10°C to +50°C	+ 0.007dB/C°				(-30°C to ±80°C < +0.25dB)						0.01 dB/C°
Influence of Humidity 55°C - 95%	<±0.1dB (non condensing)										
Long Term Stability 20°	>900 years/dB						>250 years/dB	>900 years/dB		>250 years/dB	
MECHANICAL DIMENSIONS											
Height of Cartridge with grid	18.5 mm		12.7 mm		16.7 mm		10.5 mm		13 mm		
Without grid	17.0 mm		11.5 mm		15.5 mm		15.5 mm		9.0 mm		12.0 mm
Diameter of Cartridge with grid	23.77 mm		← 13.2 mm →				7.0 mm		13.2 mm		
Without grid	23.77 mm		← 12.7 mm →				6.35 mm		12.7 mm		
Thread for Grid or Coupler	23.11 mm 60UNS2		← 12.7 mm 60UNS2 →				6.36 mm 60UNS2		12.7 mm 60UNS2		
Thread for Preamp Mounting	23.11 mm 60UNS2		← 12.7 mm 60UNS2 →				5.7 mm 60UNS2		12.7 mm 60UNS2		
Equivalent Bruel and Kjaer Type	4145	4144	4133/4191	4134/4192	4165	4166	4155/4189	4135	4136	-	-
Companion Preamp	4022 (4012 + AD0122)		4012				4012E, 4212	4016 (4012 + AD0016)		4012E, 4212	

◆ ACCESSORIES ◆



511E & 511ES124 Sound Level Calibrator

- **1000 Hz:**
0 dB Reference Point for:
A,B,C,D, Weighting
- **2 Output Levels:** Permits
Range testing
94 dB SPL = 1Pa
104 dB SPL (ES124-124dB SPL)
- **Accuracy: Meets IEC942**
±0.3 dB @ 23C - Type 1L
±0.5 dB 0 to 50C
- **Power 9Vdc:** (NEDA 1604A)
- **Mic Diameter:** up to 1 1/8 Inches
1/2 inch adapter Q3* Included
- **Adapters:**
Q1 - 1 inch Q2 - 20mm
Q3* 1/2 inch Q7 1/4 inch
*Supplied with 511E

NEW

• **511ES124**
94/124 dB SPL @ 1 kHz

124dB SPL

4012 Accessories:

- AD0122** - 1 inch Mic to 1/2 inch Preamp Adapter
- AD0016** - 1/4 inch Mic to 1/2 inch Preamp Adapter
- DM2-22** - 1/2 inch Dummy Mic/BNC -22pF input
- DM2-1K-1000pF** - Values to 0.1uFd - Special Order

Windscreens:

- WS1** - For 1/2 inch Microphones - 3" diameter
- WS7** - For 1/2 inch Microphones - 7" diameter

Rain Resistant Windscreens:

- WS1-80T** - For 1/2 inch Microphones - 3" diameter
- WS7-80T** - For 1/2 inch Microphones - 7" diameter



IEPE/ICP™(PCB) ADAPTERS

ICP1248

- ◆ XLR 3 Pin Male Connection conforms to Industry Standard Balanced Phantom Power Configurations.
- ◆ Operates from 18-48 Vdc (12 Vdc reduced performance)
- ◆ BNC Male Coaxial Cable Connection
- ◆ Supplies 4 mA Constant Current From Balanced Phantom Sources

NEW

PSIEPE4

- ◆ Adapt your PS9200 to power your ACOtron™, ICP™ or CCLD devices.
- ◆ The PSIEPE4 supplies a low noise 4 mA constant current from the PS9200's 28Vdc.
- ◆ Now you can operate your microphone on one channel while you power an accelerometer.
- ◆ BNC Male Coaxial Cable Connection



WS7-80T & WS1-80T

Treated Windscreens



SA6000 Family SLARM™ Sound Level Alarm w/DynLeq™ & Wireless^(option)



- PDA & Laptop Displays
- Wired
- Wireless
- Optically Isolated Signal (Alarm) outputs
- Mic Calibration with 511E (opt)
- WS1 Windscreen standard - WS1-80T (treated- opt)
- 12 V Power

The SLARM™ family of SPL alarms feature:

- Wireless Alarm, Display, History and Control (opt)
- Programmable: dBSPL Alarm Settings, Leq Periods, F/S response
- A,C and Lin(Z) Weighting - Selections, and Profiles
- Real-time Clock Calendar (Optional) Permits Multiple Profiles and History
- True RMS detection with >100 dB Dynamic range Standard 20 to 120 dBSPL, 40 to 140dBSPL Optional to <20dBA and > 175 dBSPL
- 7052S Type 1.5™ Titanium Measurement Mic (std)
- MK224 Type 1 (opt)
- Remotable Mic/Preamp - to > 300 feet
- Mic Calibration with 511E (opt)

The SA6000 ACOustAlarm™ Family of SLARM™ Sound Alarms™ was developed in response to the increased emphasis on hearing conservation both in the workplace and community. DynLeq™ and ACOustAlert™ technology combine to make the SLARM™ a powerful monitoring and sound level alarm system.

DynLeq™ is an adaptive dual Leq of the community noise level. Sound Levels exceeding the surrounding environment's average will Alert/Alarm when the Short Leq exceeds the Long Leq by a preset amount. Maximum SPL/Leq exceedence Alarms still function for individual and multiple events.

Options include:

- Wireless PDA/Computer Interface
- A Variety of Remote Displays, Controls and Outdoor Microphones
- NEMA and other Packaging
- Data Storage (History and Events)
- Data Analysis on PDA and PC
- Wireless Remote Displays and Alarms

Applications:

- Community/Environmental
- Auditoriums, Amphitheaters, Discos, Churches, Clubs, Movies, Classrooms, Rehearsal Halls, Hospitals, Offices, Studio Monitor Rooms, Drive by Noise Enforcement are but a few...
- Industrial
- Machine/Plant Noise, Machine Fault Detection, Assembly Lines, Marshalling Yards, Warehouses, Construction Sites, Product Testing and many more applications...

ACOustics Begins With ACO™

7052PH
Phantom Powered
Measurement Mic System
and 4048 Preamp



- **7052S Type 1.5™ Mic**
(Titanium Diaphragm)
- **4048 ACOtron™**
(Phantom Powered Preamp)
- **WS1 Windscreen**

Also Available:

- **MK224 Type 1 Mic**
(MK224PH)
- **WS1-80T Treated Windscreen**
- **4048 ACOtron™**
Phantom Powered Preamp
- **ICP1248**
Phantom to ICP™(PCB) Convertor
- **High SPL Options**
To greater than 175 dBSPL(7017 Mic)

The **7052PH Type 1.5™** phantom powered measurement microphone system offers a cost effective solution to acoustic measurements from phantom powered sources. Designed to work with from 48 to 24 Vdc Phantom Power, the **7052PH** features the **7052S**. The rugged **Titanium diaphragm** provides excellent longterm stability and temperature performance. The companion **4048 ACOtron™** preamp offers both **low noise and a wide dynamic range**. A WS1 3" Windscreen is included.

SPECIFICATIONS:

7052S 1/2 Inch Electret Free Field Microphone

Type 1.5™ - a superior Type 2

Frequency Response: <3 Hz to > 20kHz typ.(capsule)

Sensitivity: 22 mV/Pa (-33 dBV/Pa) typ.

Dynamic Range (capsule) 1% THD:<20dBA-150dBSPL

Diaphragm Material: Titanium

TempCo: 0.01 dB/C

Mounting Thread: 11.7 mm 60UNS2

WS1 3 Inch Windscreen

Mounting: 1/2 Inch Hole Porosity: 20 ppi

WS1-80T Water Resistant Treatment-80 ppi Optional

DS7052PH Version 2 Copyright ACO Pacific, Inc 2004

4048 ACOtron™ 1/2 Inch Phantom Preamp

Input Freq. Response@ 22 pF : 5 Hz to 200 kHz (-2 dB)

Loss @22 pF: 1.5 dB typ.

Noise Floor @ 22 pF: <1.5uV typ. about 16dBA w/7052S

Output Performance 48 to 24 V Phantom:

1 kHz - ~14 Vpp (5Vrms) into a 5000pF load <1% THD

Power Supply Sensitivity: <0.1 dB

Mic Mounting Thread: 11.7 mm 60UNS2

Power/Output Connector: XLR 3 pin -male

Options

Windscreens: WS7, WS1-80T and WS7-80T(treated)

MK224 Type 1 50 mV/Pa mic (MK224PH)

511E SPL Calibrator

Custom High SPL Options - to >175 dBSPL (7017 mic)

ACOustics Begins With ACO™