

# Pedals, Effects, Switches & Ebtech® Audio Solution Devices

A Division of Sound Enhancements, Inc. 185 Detroit Street Cary IL 60013 Dealer Hotline 800-284-5172 Phone 847-639-4646 Fax 847-639-4723 [Sales ext 31 & 11, Technical Support ext 12] www.morleypedals.com

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# **New Products**

more stuff you need - available now!



# George Lynch Triplet

Route your guitar to three amps! See Page 13

# Stereo Chorus Volume

A combination Chorus & Volume Pedal for Electric or Acoustic Guitars. See Page 15





#UMX

Exterminate that annoying Ground Hum once and for all! See Page 20

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# Bad Horsie Wah

## the world's first switchless Wah - get the original!

Still the best selling switchless Wah pedal in the universe! Steve's Wah tone and Morley's modern features make this a sure fire hit for all musical styles. No mechanical parts like pots and switches means nothing to wear out!





www.vai.com

- Switchless design. Simply step on to engage Wah and step off to go to bypass automatically. The first of it's kind! No Switches to go bad.
- · Wah sweep, pitch and "Q" are set to Steve's demanding specifications.
- · Electro-Optical design. No pots to wear out!
- "Clear-Tone" buffer circuit ensures pure guitar tone and maintains signal level in bypass and Wah mode. Suitable for Guitar or Bass.
- LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.

#### More Morley users:



Joboi www.gtrbque.com



Bill Peck www.bill-peck.com



Mark Wood www.markwoodmusic.com



Toshi Iseda www.toshiiseda.com



Marc Pattison www.marcpattison.com

# Bad Horsie Z Contour Wah

two wah modes, adjustable level and frequency





It's a Bad Horsie and then some! The Bad Horsie 2 has two foot-switchable Wah modes: Bad Horsie Wah or Contour Wah. In contour mode you can dial in the frequency and level of the Wah. Still the easiest Wah to use with the only truly switchless circuitry available. Whatever Wah tone you're looking for, you'll find it in this pedal!

- Two foot-selectable Wah modes
- · Switchless design. Simply step on to engage Wah and step off to go to bypass automatically!
- · Wah sweep, pitch and "Q" are set to Steves demanding specifications
- · Electro-Optical design. No pots to wear out!
- "Clear-Tone" buffer circuit ensures pure guitar tone and maintains signal level in bypass and Wah mode. Suitable for Guitar or Bass.
- Dual LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.

#### More Morley users:



Sean Yseult www.rockcitymorgue.com



www.jayefoucher.com

**Brad Gillis** 





Michael Anderson

Page 4 www.sevenwitches.net

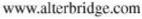


# Mark Tremonti Power Wah

# be loud be proud







- Switchless design. Simply step on to engage Wah and step off to go to bypass automatically! No switch to go bad!
- Boost knob adds up to a full 20 dB of Wah gain that cuts through!
- The Wah tone is a hybrid of traditional and modern Wah voicings
- Wah sweep, pitch and "Q" are set to Mark's specifications
- · Electro-Optical design. No pots to wear out!
- "Clear-Tone" buffer circuit ensures pure guitar tone and maintains signal level in bypass and Wah mode. Suitable for Guitar or Bass.
- · Diamond Plate style footpad for no-slip Wah Wah action
- · LED indication, easy access battery compartment and 2-year warranty.
- Proudly Made in the U.S.A.

## More Morley users:



Glen Alvelais of Testament www.testamentlegions.com



Erin Fyfe
of Doom Society
www.doomsociety.com



Andy Martin www.andymartinmusic.com



Chris Wilson www.chriswilson101.com



Bizz of Genitorturers www.genitorturers.com

# Classic Wah

# a blast from the past

The sound that made Morley famous! Classic Morley Wah tone is back in this rugged, Electro-Optical Wah pedal. Classic styling paired with a road-worthy metal housing.



· Electro-Optical design (No pots to wear out!)

- · Classic Wah tones of Morley pedals from 70's and 80's
- · LED indication, easy access battery compartment and two-year warranty
- · Proudly Made in the U.S.A.

#### More Morley users:



www.curtisguitar.com



Andrea Quarterone
Curtis Fornadley www.quarterone.com



Chris Freeman of GS Megaphone www.gsmegaphone.com



MSRP \$119

Adrian Galysh www.adriangalysh.com



Brian Malone and Eric Hersemann of Diabolic www.diabolicblastmasters.com



Amber Jade www.amberjade.com



Bill Maloof

# little Alligator Volume

#### volume via vai

Smooth, studio quality volume set the way Steve likes it. We know it's more than a typical volume pedal. We invite you to find out for yourself.

Model PLA MSRP \$139





- Familiar Linear taper. Great for violin-like volume swells
- . Minimum Volume knob controls perfect balance between Lead and Rhythm volume levels.
- Electro-Optical design (No pots to wear out!)
- Suitable for use in front of amp or in FX Loop (send and return)
- · LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.

# More Morley users:



Debbie Barlow



Snake of Skinlab www.skinlab1.com



Gregory Bruce Campbell



Eric Vandervort of Slavemachine www.slavemachine.com



Ken Tyler www.alchemedia-labs.com

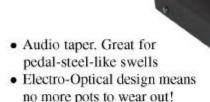


Joey Stuckey www.joevstuckey.com

# PRO SERIES VOLUME

smooth, consistent audio taper

Model PVO MSRP \$134



- · Minimum Volume knob controls perfect balance between Lead and Rhythm volume levels.
- LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.



Jerry France



Jimmy O



www.jimmyo.com



More

Morley

users:

Tommy Bolan of N.Y.C. www.nyctheband.com

Joshua Podolsky www.joshuacraigpodolsky.com Share Ross

of Bubble www.planetbubble.com

# **Dual Bass Wah**

## Wah for bass or guitars tuned low

Our Dual Bass Wah has two footswitchable Wah modes. Select either traditional Wah or "Funk Wah" for percussive slappin' and poppin' playing.



- Switchless design. Simply step on to engage Wah and step off to go to bypass automatically! From the inventors of the switchless Wah pedal!
- Electro-Optical design (No pots to wear out!)
- "Clear-Tone" buffer circuit ensures pure tone and maintains signal level in bypass and Wah mode. Suitable for Bass or Guitar.
- Great for use with 7 string guitars and detuned strings.
- · LED indication, easy access battery compartment and two-year warranty.
- · Proudly Made in the U.S.A.

## More Morley users:



Bill "The Buddha" Dickens www.billthebuddhadickens.com



www.quietriotonline.com



Dave Pomerov www.davepomerov.com



Philip Bynoe www.philipbynoe.com



Jaugo III-X www.jauqoiii-x.com

# PRO SERIES II WAH

for the Wah Wah maniac in you

traditional Wah sound with modern Morley® features

# Model PWA-II MSRP \$149

- · Made in the U.S.A.
- · Level knob controls Wah output level · Electro-Optical design. No pots to wear out!
- · "Clear-Tone" buffer ensures no volume loss and maintains guitar personality in Wah mode and bypass. Better than "True Bypass".
- . "High O" Wah tone delivers traditional Wah tones that cut through
- Switch is next to foot pedal. Switch Wah on/off at any Wah position.
- · LED indication, easy access battery compartment and two-year warranty.

## More Morley users:



Michael Fath www.michaelfath.com



Joy Basu www.joybasu.com



DJ Ashba www.djashba.com



Hott Soss www.hottsoss.com



Chris Debaldo (L) and Wayne Swinny of Saliva www.saliva.com



Dean Cramer www.funnymoneyband.com



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# PRO SERIES II WAH VOLUME

double the fun

# Model PWV-II MSRP \$159



- · Electro-Optical design. No pots to wear out!
- "Clear-Tone" buffer ensures no volume loss and maintains guitar personality in Wah and volume modes. Better than "True Bypass"
- . "High Q" Wah tone delivers traditional Wah tones that cut through
- · LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.



Ronny North www.ronnynorth.com





Scott Huckabay www.scotthuckabay.com



Jerry Outlaw



Marcus Henderson Phil X www.drist.com



More Morley users:

Gina Schock

of the Go Go's

Mark Schenker www.funnymoneyband.com



Mel Morley www.midimel.com

# PRO SERIES II DISTORTION WAH VOLUME

if you can only take one pedal to the gig, this is it!

Handy three-in-one pedal that combines tube-like distortion, wailing Wah and handy Volume control in one fire-breathing pedal

# Model PDW-II MSRP \$195



- Proudly Made in the U.S.A.
- Volume is set to smooth audio taper
- Electro-Optical design (No pots to wear out!)
- Level, Drive and Tone knobs control distortion sounds
- Dual foot-switches (for Distortion on/off & Wah/Vol)
- "Clear-Tone" buffer ensures no volume loss and maintains guitar personality in all modes. Better than "True Bypass"
- "High O" Wah tone delivers traditional Wah tones that cut through
- LED indication, easy access battery compartment and two-year warranty.



Maxine Petrucci of Titania

Stuart Smith

www.stuartsmith.com



Rene Benton www.renebenton.com



More Morley users:

Howard Leese

Doc Powell www.docpowell.com

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www.powdermusic.com

# George Lynch Tripler

## use more amps!



Model TRIPLER MSRP \$149



www.georgelynch.com

- Route your guitar signal to three amps.
- Select or combine any combination of all three outputs.
- · Boost knob ensures you get max guitar level to all three amps.
- · Each channel has LED indication so you know what's on or off.
- Powers off one 9V battery or optional Morley 9V adapter.
- · Cold Rolled Steel Housing will withstand years of use and abuse.
- · Get that thick, ferocious tone that only a three amp set-up can provide.
- Two Year Warranty & Proudly Made in the U.S.A.



"Metal Mike" Chlasciak www.planetshred.com



Rob Galpin www.funnymoneyband.com

More Morley users:



Marc Serrano of Unloco www.unloco.com



Matt Olson of Rearview Mirror www.rvmonline.com



Scott Digoia www.mrscottsmusic.com

# ABY Selector / Combiner

1 to 2 or 2 to 1, your choice

# Model ABY MSRP \$85

Made in the U.S.A.

Route one signal to two outputs or two inputs to one output. Then, choose between A or B individually OR combine both A & B simultaneously!



- · Route one guitar to two amplifiers. Switch back and forth or combine amps for different guitar tones (see figure #1).
- Route two guitars to one amplifier (see figure #2). Makes guitar changes quick. Have that backup guitar ready if you break a string!
- . Silent tuning. Hook up an amp to A and a tuner to B. You can tune silently or hit combine switch to tune while playing.





Todd Duane www.toddduane.com

# More Morley users:



Janice Marie of a Taste of Honey www.tastebudsrecords.com



Ira Dean of Trick Pony www.trickpony.com



Guitar Shorty www.guitarshorty.org

# Stereo Chorus Volume

## combo chorus and volume pedal



- · Designed for use with Electric guitar, Acoustic Guitar or Bass
- Combination Chorus and volume pedal. Use the Chorus by itself, the volume by itself of both at same time.
- · Rate and Speed controls for Chorus
- · Dual outputs for two amp set up
- · Volume control is Electro-Optical. No pot to wear out!
- Dual LED indication, easy access battery compartment and two-year warranty.
- Proudly Made in the U.S.A.

## More Morley users:



Swhitch www.swhitch.com



Blues Saraceno www.bluessaraceno.com



Rich Ward (L) aka Duke LaRue of Fozzy with Chris Jericho

www.fozzyrock.com



Vernon Neilly www.vernonneilly.com

# MORLEY® 9V Adapter

power up, save money on batteries

Model Morley 9V MSRP \$19 Using other brand adapters may cause your Morley® to hum. Please use only Morley® adapter.



ELECTRONIC SPECIFICATIONS USA VERSION INPUT: 120 VAC/60Hz/8.4VA OUTPUT: 9VDC, 300mA POLARITY: CENTER NEGATIVE

EUROPEAN VERSION INPUT: 220 VAC/50Hz/8.4VA OUTPUT: 9VDC, 300m/A POLARITY: CENTER NEGATIVE

We use a regulated power supply. This means that rather than place this additional circuitry in the pedal, we put it in the adapter. Why? Better battery life and less circuitry in our pedals to keep your guitar's volume and tone pure!

- 9VDC 300mA Regulated Power
- Compatible with Boss, Budda, Danelectro, DOD, Dunlop, Ibanez, Marshall, Real McCoy & Snarling Dog.
- It is a regulated power supply. Which means less noise on standard pedals and no hum on pedals that require a regulated supply (like Morley for example).
- 300mA allows you to run more pedals off of one power supply.
   Great for powering pedal boards

#### ADAPTER MEASUREMENTS

Adapter size: 2.63"(L) x 2.10"(W) x 1.63" (H) Plug Dim: 0.22"(OD) x 0.080" (ID) x 0.440" Plug Length

# Friends Of Morley Go to www.morleypedals.com for artist website links

DOUG ABRAHAMS CYRIL ACHARD JOEY ALLEN - WARRANT ALON GLEN ALVELAIS CHRIS ANDERSON MICHAEL ANDERSON MICHAEL ANGELO CARMINE APPICE ANDY AQUINO TOM ARAYA - SLAYER DJASHBA ROY ASHEN GWYN ASHTON



Andy West www.xen.com

TREY AZAGTHOTH - MORBID ANGEL CLINT BAHR - TRIPOD DAN BALDRICH ROB BALDUCCI ANTHONY BAMBINO DEBBIE BARLOW - SICKCIRCLE ROBERT BARRY - EMERSON LAKE & PALMER JOY BASU - JESSICA SIMPSON JASON BECKER TEDDY BELLO - FIVE SMOOTH STONES RENE BENTON GREG BERGDORF - ZEBRAHEAD RUSSELL BERGQUIST - ANNIHILATOR BIZZ - GENITORTURERS JEFF BLACK JOE BOCHAR - JOBOJ JOE BOETTCHER - KEEP TOMMY BOLAN - N.Y.C. JIMMY BONES - KID ROCK MIKE BOSSIER - AUDIO TERROR REGIME ANDY BRAUER - EARTH WIND & FIRE MEREDITH BROOKS STEVE BROWN - TRIXTER RODNEY BROWNING - DISHWALLA PETER BUCK - REM GLEN BURTNIK - STYX JON BUTCHER - THIN LIZZY KEVIN CADOGEN - THIRD EYE BLIND CHRIS CAFFERY - SAVATAGE MIKHAL CALDWELL - CHOP SHOP WILL CALHOUN - LIVING COLOR PHIL CAMPBELL - MOTORHEAD MICAH CARLI - HAWTHORNE HEIGHTS



DENNIS DEYOUNG - STYX

PAT DIPUCCIO - CONDORS

MIKEY DOLING - SOULFLY

ANI DIFRANCO

SCOTT DIGIOIA

AL DIMEOLA

ROB CARLTON - PEACE UNION BLAINE CARTRIGHT - NASHVILLE PUSSY

CHRISTOPHER CASTELLI - ESCAPE FROM EARTH

SCOTT CASH - STATLER BROTHERS



John Jorgenson www.johnjorgenson.com

STEVE DOUCETTE - PERFECT STRANGERS MIKE DROGOS - OTTO'S JACKET TODD DUANE JD DWORKOW EVERLAST MICHAEL FATH JOHN FAITORUSO - STEREOMUD TIM FITCH - JOHNNY LANG SCOTT FLESHER THOMAS FLOWERS - OLEANDER DJ FOCUS CURTIS FORNADLEY JAYE FOUCHER OZ FOX - STRYPER JERRY FRANCE CHRIS FREEMAN - GS MEGAPHONE ERIC FRIEDMAN - SUBMERSED PETE FRIESEN - ALICE COOPER JACK FROST RICH FUGERE - TRISTATE KILLING SPREE AL FUNCTION - SIX ERIN FYFE - DOOM SOCIETY MARK GAGLIARDI - OUTRIDER MIKE GALLAHER ROB GALPIN - FUNNY MONEY ADRIAN GALYSH JEFF GEORGE - STONE SOUP DEANO GEORGE GERRY GESSIE DAVE GHAZARIAN - COR JACK GIBSON - EXODUS BRAD GILLIS - NIGHT RANGER HENRY OO ALJON GO CRAIG GOLDIE - DIO SEAN GOULD - BAND CAMP MERRITT GRANT - OVERKILL GUUG - MUDVAYNE KEITH GURLAND - TRIPOD JIM GUSTAFSON - POOBAH MICHAEL GUY ABDUL HAKEEM JEFF HANNEMAN - SLAYER FRANK HANNON - TESLA BRIAN HARRAH - PROFESSIONAL MURDER MUSIC JONATHIN HARRIS MORRIS HAYES - "NPG" NEW POWER GENERATION MARCUS HENDERSON - DRIST ERIC HERSEMANN - DIABOLIC RUDY HEWLETT - LR.A.T.E. CHRIS HINSON - BLUES TRAVELER BRIAN HITT MARK HITT TIM HOFFA - STRAIGHT IACKET CHRIS HOLT - LIQUID GANG GARY HOLT - EXODUS SCOTT HUCKABAY RICK HUNOLT - EXODUS STEVE HUNTER JIMMY ISAACS - JAMES TAYLOR TOSHLISEDA CHRIS ISELE RIC IVANISEVICH - OLEANDER CLINT JACKSON - JACK JACKSON AMBER JADE ANDRES JARAMILLO - AGONY MARTY JENKINS JOHN JORGENSON AL JOURGENSEN - MINISTRY ROB K - BELOW ZERO RON KEEL - IRONHORSE NICK KELLIES JONATHAN KEELUM - JONAH33 MARK KENDALL - GREAT WHITE

JOSH KERBIS

KERRY KING - SLAYER

JERRY DONAHUE - HELLECASTERS

DAN DONEGAN - DISTURBED



Kristo Panos of Sloth www.slothmusic.com



Ron Keel of Ironhorse www.ironhorseband.com

TONY KING - BROOKS & DUNN CURT KIRKWOOD TROY KLONTZ ADAM KOLE LENNY KRAVITZ PATRICK LACHMAN LARRY LALONDE - PRIMUS MICHAEL LARDIE - GREAT WHITE DUKE LARUE - FOZZY WESLEY LEATHERS - DOOBIE BROTHERS BARRY LEDERER - BROOKS & DUNN JAKE E. LEE HOWARD LEESE - HEART, HEAVEN AND EARTH MATT LEFEVRE ADAM LEVINE - MAROON 5 JOSH LOCKWOOD - CAPITAL EYE BETO LOVATO TOMMY LOYA - CYPRESS HILL ROGELIO LOZANO - CYPRESS HILL GEORGE LYNCH TONY MACALPINE BEN MACDONALD - FUNCTIONING ADDICTS BRIAN MALONE - DIABOLIC BILL MALOOF DARRELL MANSFIELD ROBERT MARCELLO DAVID MARSHALL - JAMIE O'NEAL ANDY MARTIN JIM MARTIN TOM MARTINI - INTELLEGENT LIFE GINO MARTINO - ENUFF Z'NUFF J MASCIS - DINOSAUR JR Mike Scaccia and TOM MASSMAN MICHAEL MATHEVIC - STEELHEART Al Jourgensen FLATTUS MAXIMUS - GWAR of Ministry ED MAY - 3RDRAIL KEVIN McCORMICK - JACKSON BROWN MARK McGEE - GREGG ALLMAN MIKE MEEKS - ONE SLACK MIND ERIC MEYER - DARK ANGEL KEITH MILLER - PLEX'D STEVE MILLER TOM MILLER - GREGG ALLMAN LARRY MITCHELL CRAIG MONTOYA - EVERCLEAR RONNIE MONTROSE KEVIN MOONEY - AGENT MOONEY MEL MORLEY JEFF MULLIN - 3RD RAIL CURRAN MURPHY - ANNIHILATOR VERNON NEILLY KEITH NELSON - BUCKCHERRY CHRIS NEUBAUER - VIRGINIA RANGERS DAN NOONAN - DEPSWA CHRIS NORRIS - DARKEST HOUR RONNY NORTH - NORTH ЛММҮ О FELTON OFFARD - BARRY MANILOW MATT OLSON - REAVIEW MIRROR ANDRE O'NEAL - LUTHER VANDROSS LEE OSKAR JERRY OUTLAW - DYEA KRISTO PANOS - SLOTH MARC PATTISON BILL PECK JEREMY PENICK - DEPSWA MAXINE PETRUCCI - TITANIA DAVE PHELPS - SICKCIRCLE AL PITRELLI - MEGADETH JOSHUA PODOLSKY Insomnia JOHN POMPLIN - PROJECT 814 www.insomniatheband.com JEREMY POPOFF - LIT DOC POWELL PAUL PRIESTLY - LONGTIME DEAD NIGEL PULSFORD - BUSH ANDREA QUARTERONE MEEGS RASCON - FINATA, COAL CHAMBER WILL RAY - HELLECASTERS VERNON REID - LIVING COLOR

ANDY REISS - REBA MCINTYRE DAVID REYES - ROBERT MUNIZ LUCKY RIGGS - REAL BY DESIGN SHARE ROSS - BUBBLE BRIAN ROWE - EXCALIBER MICK ROWE - MINDSET? RYAN ROXIE - SLASH'S SNAKEPIT, ALICE COOPER JUDAH ROYDES - CESCA RUBEN RUIZ - 'N SYNC JAY RUSNAK - IRONHORSE ERIK RUTAN - MORBID ANGEL GABE SANCHEZ - INSOMNIA, SLOW BURN ERIC SANDS - MAN ON FIRE BLUES SARACENO SCOTT SARGEANT - SKINLAB MIKE SCACCIA - MINISTRY MIKE SCHLEIBAUM - DARKEST HOUR GINA SCHOCK - THE GO GO'S NEIL SCHON - JOURNEY BEN SCHULTZ - BAREPOOT SERVANTS MIKE SCOTT - "NPG" NEW POWER GENERATION PATRICK SCOTT - FEWER MOVING PARTS CHRISTOPHER SERNEL - ESCAPE FROM EARTH MARC SERRANO - UNLOCO BRIAN SETZER GUITAR SHORTY BEN SHREVE - GS MEGAPHONE PAT SIMMONS - DOOBLE BROTHERS ALEX SKOLNICK MARK SLAUGHTER - SLAUGHTER ROBERT SMITH - THE CURE STUART SMITH - HEAVEN AND EARTH CORY SMOOT - MENSREA JEFFREY RYAN SMOOTS SNAKE - SKINLAB BRIT SODZ - STRAIGHT JACKET ROBERT SPATES JEFF STINCO - SIMPLE PLAN STINGER - LIQUID GANG JOEY STUCKEY GREG SUTTON - MEDIA RUYTER SUYZ - NASHVILLE PUSSY LOUIS SVITEK - MINISTRY MICHAEL SWEET - STRYPER



WAYNE SWINNY - SALIVA JESSE TAYLOR - MORTAL OBSESSION TENDURE - TENDURES DREAM RONTHAL - BUMBLEFOOT CHESTER THOMPSON - SANTANA SHON THOMPSON - CESCA ANDY TIMMONS NICHOLASTIROZZI MARK TREMONTI - ALTERBRIDGE, CREED BREIT TUGGLE - FLEETWOOD MAC, DAVID LEE ROTH KENTYLER - BLACK PLANET STEVE VAL ERIC VANDERVORT MICHAEL VANGEROV - LIQUID BLUE PHIL VERONE - SAIGON KICK RICH WARD - SICKSPEED CESCA WATERFIELD JEFF WATERS - ANNIHILATOR JIM WEIDER - THE BAND DAVE WEINER -STEVE VAI BILL WENZLOFF - INSOMNIA, SLOW BURN LESLIE WEST - MOUNTAIN LEIGH WILLIAMS - PROJECT ABSOLUTE ZERO CHRIS WILSON

VICTOR "THE SNAKEMANNN" WOLDER MARK WOOD

JT WOODRUFF - HAWTHORNE HEIGHTS GREGG WRIGHT DAVE WRONSKI - SLACKTONE

PHIL X - POWDER JIMMY YEAGER MATT YINGLING - SMACKDOWN NEIL ZAZA

JEFF ZONA - LEE GREENWOOD

## More Friends Of Morley

(Bass Players)

Go to www.morleypedals.com for artist website links

JENNIFER ARROYO - KITTJE RACHEL BOLAN - SKID ROW REX BROWN - DOWN GEEZER BUTLER - BLACK SABBATH PHILIP BYNOE - RING OF FIRE, STEVE VAI GREGORY B. CAMPBELL CHARLIE COLIN - TRAIN RANDY COVEN MARCELO D. RAPP - SOULFLY IRA DEAN BILL "THE BUDDHA" DICKENS JERRY DIXON - WARRANT STEEV ESQUIVEL - SKINLAB TONY FRANKLIN DANN GLENN FABRIZZIO GROSSI STU HAMM WILL HARRIS - LONG TIME DEAD JOHN HOWARD - LEE GREENWOOD JAUQO III-X- JAUQO IIIX UNIT ANTHONY JOYNER - TIM McGRAW TOM KAZ - COLLIDER FUZZ KMAC - DISTURBED EDDIE KOHEN - CHOP SHOP WILL LEE - LATE NIGHT ORCHESTRA JANICE MARIE - A TASTE OF HONEY MICHAEL McKEEGAN - THERAPY BYRON MILLER - LUTHER VANDROSS TOM MILLER - GREGG ALLMAN CHAD MONTROSE - SWHITCH ERIC NAGY - LIQUID GANG CHRIS NEUBAUER - VIRGINIA RANGERS JASON NEWSTEAD - OZZY DAVE NOVOTNY - SALIVA ERIK O'DELL - SICKCIRCLE DAVE POMEROY CHUCK RAINEY REDNESS - REAL BY DESIGN RICH ROSS RUDY SARZO - QUIET RIOT JIM SEGUIN - MALFUNKTION JEFF SCHARTOFF - P.M.M. BILLY SHEEHAN MARK SHENKER - FUNNY MONEY LEE SKLAR DAN SKWERES - SLOW BURN T.M. STEVENS - OUT OF CONTROL CACHE TOLMAN - RIVAL SCHOOLS KATHY VALENTINE - THE GO GO'S JOEY VERA - ARMORED SAINT D.D. VERNI - OVERKILL BRIAN WADE - AUDIO TERROR REGIME SHAWN WAINWRIGHT - D'YEA KEVIN WALKER - NAJEE BOB WENZLOFF - INSOMNIA ANDY WEST SEAN YSEULT - ROCK CITY MORGUE



Dann Glenn www.dannglenn.com



Victor "The Snakemannn" www.snakemannn.com



Marcello D. Rapp of Soulfly www.soulfly.com

# More Friends Of Morley

(Industry Professionals)

CRAIG BAKER - BLACK SABBATH ANDY BATTYE - SYSTEM OF A DOWN SEAN BERESFORD - LIVING COLOR BUDDY BLAZE JAMES BOMANN - THIRD EYE BLIND ANDREW BURNS - THE CORRS KENNY CARRUTH - SOULFLY GRADY CHAMPION - DOWN NEIL CITRON - LANA LANE TONY DELEONARDO - GOO GOO DOLLS ROGER DESOUZA - MOTORHEAD GIL DIVINE - THE WHITE STRIPES JD DWORKOW - RICHIE SAMBORA TIM FITCH - JOHNNY LANG GARY GILMORE - CULT MATES STUDIO ED HALVERSON - TSO ZACH HARMON - METALLICA ERNIE HUDSON - CREED JIMMY ISAACS - JAMES TAYLOR ROY KELLEY - SALIVA GAVIN MENZIES - BILLY IDOL THOMAS NORDEGG - STEVE VAI DANNY O'NEIL - TRIXTER BILLY PAIGE - KID ROCK BRIAN SATEIA - SALIVA JIMMY WINGATE - GREGG ALLMAN TIM WRIGHT - MINISTRY



Gil Divine James Bomann



## ground hums worst enemy

Musicians who play live know that Ground Loop Hum can virtually ruin a show. Ground Loop Hum is very hard to get rid of since it does not follow any set rules and safety is always cause for concern when lifting grounds with ground lift adapters. Often, the systems used to prevent hum can cause a potentially dangerous condition resulting in electrical shocks, sometimes with serious results.



Model Hum X™ MSRP \$90

Suitable for use on any grounded 110V outlet

Max Current: 15 Amp

The Hum  $X^{\mathbb{M}}$  filters out unwanted voltage and current in the ground line that cause ground loop hum while simultaneously maintaining a solid, safe ground. Simply place the Hum  $X^{\mathbb{M}}$  on the end of the power cord of the equipment that has a Ground Loop and plug the Hum  $X^{\mathbb{M}}$  into the wall outlet. Ground Loop is gone and audio signal remains intact. Easy to use, easy to install, absolutely safe and completely effective!

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# EBTECH® Hum Eliminator™

## get rid of ground loop hum

Eliminates ground loop hum. Also converts balanced and unbalanced signals. Available in 2 channel box, 8 channel rack or combo 4 x 4 unit





Do you hear hum or buzz in your audio signal? Are long unbalanced lines across stage creating noise problems? Get the Hum Eliminator™. Almost all AC hum (60Hz in the US), is caused by ground loops. These ground loops act like radio antennae picking up hum and noise. The Hum Eliminator™ completely eliminates this by breaking the ground loops, making it impossible for the signal lines to pick up the AC hum and noise in the first place. Just plug in the Hum Eliminator™ into the signal lines between offending pieces of equipment and you're done. Quick and easy. No buzz, no hum. No signal degradation. No filtering. No noise gates. No dangerous ground lifts.

- . Eliminates AC hum / 60Hz buzz and noise
- Breaks ground loops safely while leaving all signal grounds intact
- Completely passive design (requires no power)
- Converts automatically between balanced and unbalanced lines
- 1/4" TRS "smart" jacks (tip, ring, sleeve) inputs and outputs
- Automatically translates signal voltages to match difference in ground potential
- Frequency response 20Hz to 70kHz +/- 0.5dB
- Distortion less than 0.005% THD @ 1kHz
- Crosstalk better than -97dB
- Maximum source impedance 1kOhm. Minimum load impedance 10kOhm
- Two-Year Warranty
- · Proudly Made in the U.S.A.
- HE-8 is single rack space 19"L x 1.5"H x 6.5" deep
- HE-2 dimensions 3.5"L x 4.75"W x 1.5"H (with bumpons)

# EBTECH® Hum Eliminator™ Applications

The Hum Eliminator™ does more than just prevent AC hum from being picked up by your sound systems. It also can be used as one of the most cost-effective ways to convert unbalanced signals to true balanced signals.

GROUND LOOPS - The Hum Eliminator prevents ground loop antennae from forming and picking up AC hum. AC hum & noise is almost always caused by a loop antenna effect across signal lines between two or more pieces of gear, or by long unbalanced cables picking up noise. Loop antenna(e) are basically a type of radio antenna, which tend to pick up the 60Hz (and harmonics) AC signal being broadcast by a building's electrical current. These loop antennae are closed circuits usually along the ground wires and hence are commonly called ground loops.

BALANCED / UNBALANCED - Unbalanced signals are more susceptible to picking up electrical noise & RF interference than balanced signals are. The longer the unbalanced cable, the greater the chance of a problem. The Hum Eliminator™ is one of the most cost-effective ways to convert between unbalanced signals and true balanced signals.

MIXERS/RECORDING - Many mixers have either unbalanced or "impedance balanced" monitor outs / aux sends. Use a Hum Eliminator" to get true balanced monitor outs for noise-free performance. When using more than one mixer (or submixing), there's a huge chance of getting ground loops (and that buzzl). Use Hum Eliminators" to prevent these ground loops. Eliminating hum is one of the biggest challenges facing studios. Many studios will run all of their line level gear through Hum Eliminators" to help ensure noise-free recording.

KEYBOARDS / SAMPLERS / SYNTHS • Most keyboards, samplers, and synthesizers have unbalanced -10dBV outputs. Use a Hum Eliminator™ to balance the signals if using with other -10dBV equipment. To use a -10dBV unbalanced device with a +4dBu balanced device, use an EBTECH® Line Level Shifter™ (see pages 23 & 24).

LIVE SOUND / DJ MIXERS - A common problem with live performance is long unbalanced cables picking up hum along the way. Balanced signals are more immune to picking up noise. Use the Hum Eliminator™ to balance long unbalanced signals. Mobile DJs or bands never know when setting up their system if they're going to get a hum or not. The electrical wiring changes from one building to another. What works fine at one gig might not work at the next. It's worth the low cost to keep a Hum Eliminator™ available, nobody can afford to lose a gig because of hum problems. Some DJs run everything in their rig through Hum Eliminators to play it safe. The main outs on most DJ mixers are -10dBV unbalanced RCA. When using with a +4dBu power amp, over 2/3rd's of the amp's volume can be lost. Use an EBTECH® Line Level Shifter™ (see pages 23 & 24).

POWER AMPLIFIERS - Running multiple amplifiers can create ground loops between the amplifiers, which will pick up the dreaded hum and buzz. Run each amplifier's input line through a Hum Eliminator<sup>®</sup> to prevent this problem.

GUITARS - Many guitar players use rack and pedal effects. They can get buzz from ground loops that these devices create. Use a Hum Eliminator™ to eliminate that buzz. When using two or more guitar amplifiers, ground loops can form between the amplifiers. Because of the tremendous amounts of gain in guitar amps, the buzz can get so bad that the amplifiers will actually squeal (especially with tube amplifiers). Simply run the feed to each amp through one channel of a Hum Eliminator™.

COMPUTER SOUND CARDS - Most sound cards have unbalanced inputs and outputs. Balance these with the Hum Eliminator™. Even balanced sound cards have tremendous susceptibility to ground loops because of the computer's power supply. If you hear a buzz, use a Hum Eliminator™.

BROADCASTING / VIDEO - Press Boxes have many feeds all going to different gear; which can create lots of ground loops and hum. Use a Hum Eliminator™ on these feeds to eliminate the problem. Using a Hum Eliminator™ on the audio feed of a video camera can help prevent video hum (snow).

# EBTECH<sup>®</sup> Line Level Shifter<sup>™</sup>

#### convert signal levels & prevent hum

Increase or decrease signal voltage (-10dBV and +4dBu) without adding noise.

Also eliminates ground loop hum & converts balanced and unbalanced signals.

Available in 2 channel box, 8 channel rack or combo 4 x 4 unit





What do you do when you need to connect a low volume, -10dBV output (like a cassette deck or CD player) into a high volume, +4dBu input (like a multi-track recorder or DAT machine)? Get the Line Level Shifter™. The Line Level Shifter™ uses the physics of inductance and impedance matching to increase or decrease the signal voltage without the added noise of active electronics. The Line Level Shifter™ also converts back and forth between balanced and unbalanced signals automatically. This is great because most -10dBV signals are unbalanced and most +4dBu signals are balanced. The Line Level Shifter™ also contains Ebtech's Hum Eliminator™ technology to break ground loops that cause AC hum.

- · Completely passive design (requires no power)
- Converts back and forth between -10dBV and +4dBu
- Converts automatically between balanced and unbalanced lines
- . 1/4" TRS "smart" jacks (tip, ring, sleeve) inputs and outputs
- Built in Hum Eliminator™ technology eliminates AC hum/60Hz buzz/noise
- Automatically translates signal voltages to match difference in ground potential
- Frequency response 10Hz to 40kHz +/- 1dB into 10kOhm load
- Distortion less than 0.002% THD @ 1kHz
- Crosstalk better than -97dB
- · Maximum source impedance 1kOhm. Minimum load impedance 10kOhm
- Two-Year Warranty
- Proudly Made in the U.S.A.
- LLS-8 is single rack space 19"L x 1.5"H x 6.5" deep
- LLS-2 dimensions 3.5"L x 4.75"W x 1.5"H (with bumpons)

# EBTECH® Line Level Shifter™ Applications

What's converting between -10dBV and +4dBu all about? Most consumer music gear has -10dBV inputs/outputs, while most pro gear has +4dBu inputs/outputs (which is 11dB greater or 3.5 times louder). Additionally, the -10dBV signal lines are unbalanced and are susceptible to picking up noise, whereas the pro gear lines are generally balanced and more immune to picking up noise.

Incorrectly matching the signal levels between gear can result in volumes that are too low, having to turn up the gain and increase the noise floor. It also limits the range of volume control between all inputs, which makes it difficult to get a good mix and can potentially overload the -10dBV inputs. The Line Level Shifter converts between unbalanced and balanced lines as needed and always converts between -10dBV and +4dBu.

The Line Level Shifter™ also eliminates hum, just like the EBTECH® Hum Eliminator™ (see pages 21 & 22 for further detail). The difference is that the Line Level Shifter™ always steps up or down your signal. Below are more specific applications for the Line Level Shifter™.

DJ MIXERS - Most DJ mixer main outs are unbalanced -10dBV RCA and most power amps have balanced +4dBu inputs. When going from a -10dBV DJ mixer to a +4dBu power amp, over 2/3rd's of the amp's volume is lost. That turns a 600-watt amp down to 175 watts. Many DJs prefer the feature set of a particular -10dBV unit and the few DJ mixers that have +4dBu outputs can cost much more than a -10dBV DJ mixer. Use a Line Level Shifter™ to get all of the lost power back and get rid of hum at the same time!

MIXERS / RECORDING - Almost everyone hooks up a -10dBV, unbalanced output from a consumer CD player, DAT, Minidisc, etc., to an otherwise high performance system. You will get a better signal-to-noise ratio (SNR) using the Line Level Shifter™ rather than by turning up the mixer's input gain. You can also balance the lines at the same time. Getting the best noise floor means adding the least amount of active gain. Recording with unbalanced -10dBV outputs (keyboards, effects units, drum machines, computers, etc.) often requires a lot of active gain. Use the Line Level Shifter™ to run these units up to balanced +4dBu and provide the best mix you can get. Some high-end mixers only have +4dBu inputs. When -10dBV equipment is hooked up to these inputs, use a Line Level Shifter™ to get a better signal level. Tape return levels are often mismatched with the mixer. They either overload the mixer's input or don't drive it loud enough. The Line Level Shifter™ works both ways, either stepping the signal up or down.

KEYBOARDS / SAMPLERS / SYNTHS - Most keyboards, samplers, and synthesizers have 1/4" unbalanced -10dBV outputs. The Line Level Shifter™ converts these outputs to +4dBu for use with a +4dBu mixer or other +4dBu device without losing volume. Balancing the outputs can help make long signal runs hum and noise free.

COMPUTER SOUND CARDS · Most sound cards have unbalanced -10dBV inputs/outputs. A Line Level Shifter™ allows the sound card to work with a +4dBu device and eliminates hum at the same time. Even balanced sound cards have tremendous susceptibility to ground loops because of the computer's power supply. If you hear a buzz, use a Hum Eliminator™ (see pages 21 & 22)

BROADCASTING · Broadcasters frequently need to hook up a consumer -10dBV output CD player, DAT, etc. to a balanced +4dBu input. The Line Level Shifter™ allows this to be done without losing volume and eliminates hum at the same time.

AUDIO / VIDEO • The audio inputs on most video camcorders are unbalanced -10dBV. When running a sound mix from a +4dBu output to the camera, use a Line Level Shifter™ to ensure its input is not overloaded and the signal is not distorted. Use a Line Level Shifter™ when running the audio feed from a -10dBV VCR / DVD to a +4dBu sound system to get the best possible signal quality.

# EBTECH® Swizz Army 6-in-1 Cable Tester

arm yourself against bad cables



Model SWIZZ-CT MSRP \$180

> MADE IN THE U.S.A

Checks XLR, 1/4", RCA, 1/8", TT & MIDI cables for continuity and/or intermittent connections. Also detects opens and shorts for each pin. Also includes include test tone generator (+4, -10, Mic), phantom power detector, grounded XLR shield detector and cable wiring display.

CABLE WIRING DISPLAY: Clearly shows which pin is wired to what. The Cable Wiring Display clearly chows continuity, opens and shorts for each pin. This also perfect for determining custom/adapter wiring - such as XLR-1/4", 1/8" stereo dual RCA, etc...

INTERMITTENT DETECT AND DISPLAY: Normally when testing for intermittent shorts, if you blink while testing for a short, you may just miss it. The Swizz Army 6-in-1 stores and displays intermittent information until you reset it! It tells you which line has a problem!

INSTALLED CABLE TESTING: Great for diagnosing cables that are inside building walls. Connect the Swizz Army 6-in-1 to one end of the cable to see if any lines are shorted together. Then, connect a shorting connector onto the other end of the cable and see if the lines are good.

TEST TONE GENERATION: Generates a 1kHz (440Hz) tone at +4dBu, -10dBV and mic levels.

PHANTOM POWER DETECT: Displays when a DC voltage present on Pin 2 (tip) and Pin 3 (ring), individually.

GROUNDED SHIELD DETECT: Confirms that the XLR connector shield is connected to Pin 1 (grounded).

Runs on 2 AA batteries (not included). Two-Year Warranty.

# Have Questions? Need Assistance? We are here to help!

If you need any type of assistance please call on us. We are happy to help. We simply ask you do the following before contacting us:

- Read the appropriate instruction manual and associated product information thoroughly. The answer to most common questions can be found in the instruction in this catalog. See pages 27 through 38
- Should you need to contact us directly for assistance, please be prepared to the necessary time required to properly diagnose a problem or answer a question thoroughly. Most detailed diagnostics require extended phone conversations or 2 - 4 detailed email sessions.
- 3. Technical support is available Monday through Friday between 8:00am and 4:00pm central time. If you need assistance outside of those hours, leave a voice mail with your name, telephone number and a brief message. Your call will be returned as quickly as possible (usually within 1 business day). Email is answered within 1 business day.

# Morley® and Ebtech® products are warranted for two years from date of purchase.

For technical support, customer service, diagnostic service or assistance of any kind for products shown in this catalog:

Toll Free 1-800-284-5172 ext 12 or 14 Direct Phone 1-847-639-4646 ext 12 or 14

Fax 1-847-639-4723

www.morleypedals.com info@morleypedals.com

www.ebtechaudio.com info@ebtechaudio.com

## THANK YOU FOR CHOOSING A MORLEY® PEDAL. YOU NOW OWN THE BEST PEDAL MADE!

Please take a few minutes to familiarize yourself with the features of your new pedal. With common sense handling, it will last for years. We hope you enjoy using it as much as we enjoyed building it. Feel free to call on us if you have any questions, comments or suggestions.

#### WARRANTY (ALL PEDALS)

All Morley® pedals are warranted for two years from date of purchase. To obtain warranty service, contact the store where purchased, call Morley 24 hours a day at 847-639-4646 (ext 14) or email us at info@morleypedals.com

#### CONNECTIONS (ALL PEDALS):

9V: Use only Morley's 9 VDC 300 milliamp regulated adapter. Center Polarity is negative.

IN: Input jack. Plug instrument into this jack using 1/4" guitar cable.

OUT: Connect amplifier to this jack using a 1/4" guitar cable.

Morley Pedals (except Model PLA) are NOT recommended for use in effects loops.

NOTE: You'll find cords fit very tightly into the input/output jacks. The tight fit helps prevent the cord from being accidentally unplugged. Make sure cords are completely plugged in for best results.

#### ELECTRO-OPTICAL CIRCUITRY (ALL PEDALS):

The light from the LED (Light Emitting Diode) that shines on the LDR (Light Dependent Resistor) is controlled by a shutter placed between the two devices. Our unique Electro-Optical design ensures smooth pedal control without unwanted noise typical with potentiometer (pot) controlled pedals.

#### AC ADAPTER (ALL PEDALS)

All Morley pedals use Morley's 9VDC 300 milliamp regulated adapter. Center pin polarity is negative. Using a non-regulated adapter could cause a low frequency hum in your amplifier. Using an adapter with the wrong polarity may damage the pedal.

#### BATTERY (ALL PEDALS)

All Morley pedals are designed to use one 9V battery when not using an adapter. We suggest you use a good quality alkaline battery. To prolong battery life, unplug your cord completely from the input jack when not using the pedal. When the pedal is not used for extended periods, remove the battery from the pedal or replace it every six months to prevent leakage problems.

#### BATTERY REPLACEMENT (ALL PEDALS)

When battery becomes weak, the effect will become weak and signal may become slightly distorted. Remove the battery door located on the bottom of the pedal (a short cord is attached to the door to help prevent loss). Once the door is off, the old battery can be removed and a new battery plugged in. Make sure the polarity (+/-) is correct before inserting the new battery. When you replace the battery door, you will notice it fits tight against the battery. This prevents battery from rattling inside the pedal.

#### MARK TREMONTI POWER WAH FEATURES (MODEL MARK 1)

The Mark 1 pedal is designed to be the ultimate live performance Wah. The switchless feature makes turning Wah on/off as easy as possible. The BOOST knob allows your guitar be heard over the band.

- BOOST control: Controls Wah output. Adds up to 20dB of Wah Boost.
- Electro-Optical Switching: Your pedal features Electro-Optical switching circuitry that allows the Power Wah
  to go into WAH mode without actuating a switch.
- Silent Switching: To further enhance the noiseless operation of our Electro-Optical design, we've added FET silent switching. Standard foot switches will pop and click when switching from WAH to Bypass.
- Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal. Ensures a strong, clean & consistent output level in Wah or bypass mode.
- ADJUSTABLE OFF DELAY: Refer to instructions for adjusting VAI-1 Off Delay (page 29).

#### MARK 1 SPECIFICATIONS

POWER: 9 Volt Battery or Morley's 9VDC 300 milliamp regulated adapter (center pin in negative)

CURRENT DRAW: 12 mA @ 9 VDC

CONTROLS: Boost WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah effect on or Bypassed.

#### CLASSIC WAH FEATURES (MODEL CLW)

- WAH On/Off Switch: This switch turns the Wah effect on/off.
- LED WAH On/Off Indicator: A red LED located above the Wah switch serves as on on/off indicator.
   When the LED is on, Wah is engaged. When the LED is off, the pedal is in bypass mode.

#### CLW SPECIFICATIONS

POWER: 9 Volt Battery or 9VDC 300 milliamp regulated adapter (center pin is negative)

CURRENT DRAW: 5 mA @ 9 VDC

WEIGHT: 3.3 lb/ 1.51 kg

INDICATOR: Wah mode LED on, Bypass mode LED off

#### DUAL BASS WAH FEATURES (MODEL PBA-2)

- Dual Wah Modes: The PBA-2 has two Wah modes "Traditional" and "Funk Wah", Use the footswitch located to the left of the foot pedal to select Wah type.
- WAH level Control: This knob controls the overall output level of the Wah effect. It functions in either "Traditional" or "Funk Wah" modes.
- Electro-Optical Switching: Allows the PBA-2 to go into Wah mode without actuating a switch.
- Silent Switching: Equipped with FET silent switching that prevents "popping" when actuating Wah mode.
- Wah On/Off LED Indicator: An LED located to the right of foot pedal serves as a Wah on/off indicator.
   When this LED is on, Wah is engaged. When the LED is off, the pedal is in bypass mode.
- . Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal.

#### PBA-2 SPECIFICATIONS

POWER: 9 Volt Battery or 9VDC 300 milliamp regulated adapter (center pin is negative)

CURRENT DRAW: 12 mA @ 9 VDC

CONTROLS: Wah Level WEIGHT: 3.2 lb./ 1.46 kg

INDICATORS: Wah mode LED on, Bypass mode LED off.

Funk Wah LED on, Traditional Wah LED off.

#### BAD HORSIE WAH FEATURES (MODEL VAI-1)

- Electro-Optical Switching: Your pedal features Electro-Optical switching circuitry that allows the Bad Horsie pedal to go into Wah mode without actuating a switch.
- Silent Switching: To further enhance the noiseless operation of our Electro-Optical design, we've added FET silent switching. Standard foot switches will pop and click when switching from Wah to Bypass. Your Bad Horsie offers a smooth and quiet transition, making this pedal ideal for studio recording as well as live performances.
- Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal. Ensures a strong, clean & consistent output level in Wah or bypass mode.

ADJUSTABLE OFF DELAY: The Bad Horsie Wah has a unique switchless feature. Steve's personal preference was to have a slight delay time on the bypass (when you take your foot off it takes about one second for the pedal to automatically switch to bypass). After numerous requests for this to be adjustable, we incorporated an adjustment located in the pedal. The pedals are still set to Steve's specifications at the factory. If you would like to adjust the off time, follow these steps:

- Remove four bottom cover screws and bottom cover.
- 2) Locate trim-pot labeled "WAH OFF DELAY" (it is about 3 inches up and about 1-1/2" left from the center heel end of pedal.
- 3) Use a miniature screwdriver (like the ones used for eyeglasses) to turn the center adjustment of the trimpot to customize it for your setting.
- Turning the trim-pot clockwise shortens the off delay time. Counter-clockwise lengthens the off delay time. The off delay time can be adjusted from instantaneous up to 3.5 seconds.
- 5) If you have questions about this procedure, feel free to call 847-639-4646 (ext 14).

#### VAI-1 SPECIFICATIONS

POWER: 9 Volt Battery or Morley's 9VDC 300 milliamp regulated adapter (center pin in negative)

CURRENT DRAW: 12 mA @ 9 VDC

WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah effect on or Bypassed

#### BAD HORSIE 2 CONTOUR WAH FEATURES (MODEL VAI-2)

The VAI-2 is a Bad Horsie Wah with the additional choice of CONTOUR mode. Click the footswitch to the left of the foot pedal to engage CONTOUR mode (the left side LED turns ON). The contour mode allows you to alter the Wah tone and level.

- CONTOUR control: Adjusts the tone (shelving) of the Wah when in CONTOUR mode.
- LEVEL control: Adjusts the Wah output level in CONTOUR mode.
- Electro-Optical Switching: Your pedal features Electro-Optical switching circuitry that allows the Bad Horsie 2 pedal to go into Wah mode without actuating a switch.
- Silent Switching: To further enhance the noiseless operation of our Electro-Optical design, we've added FET silent switching. Standard foot switches will pop and click when switching from Wah to Bypass.
- . Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal. Ensures a strong, clean & consistent output level in Wah or bypass mode.
- ADJUSTABLE OFF DELAY: Refer to instructions for adjusting VAI-1 Off Delay time above.

#### VAI-2 SPECIFICATIONS

POWER: 9 Volt Battery or Morley's 9VDC 300 milliamp regulated adapter (center pin in negative)

CURRENT DRAW: 16 mA @ 9 VDC

CONTROLS: Contour, Level WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah effect on or Bypassed. Contour mode on/off.

#### LITTLE ALLIGATOR VOLUME FEATURES (MODEL PLA)

The PLA is designed to have a Familiar Linear taper but with Optical control. It is also suitable for use in front of the amp or in the FX loop (send and return).

- · Power On/Off Indicator: LED located above the Min Vol knob serves as power on/off indicator.
- . Minimum Volume Control: Used to create Rhythm and Lead volume settings \*

\* To set Rhythm and Lead volumes: With the pedal in the "off" position (toe up), turn the minimum volume control clockwise (right) until you achieve a suitable rhythm volume through your amp. Then push the pedal to the toe forward position and compare volumes. Continue to adjust the Min Vol control until suitable Rhythm and Lead Volumes are achieved. Once set, you can play rhythm with the pedal "off" (toe up) and move the pedal forward (toe down) for solos. When you return to rhythm, move the pedal back to "off" position. This eliminates hunting for your original rhythm volume.

NOTE: Because of the many varieties of instruments, pickups and amps, the minimum volume control may have no effect until it is turned half or more of its travel - this is normal.

#### PLA SPECIFICATIONS

POWER: 9V Battery or Morley 9VDC 300 mA regulated adapter (center pin is negative)

CURRENT DRAW: 2.5 mA @ 9 VDC

CONTROLS: Minimum Volume

TAPER: Linear

WEIGHT: 3.3 lb./ 1.51 kg INDICATOR: Power LED on

#### PRO SERIES VOLUME FEATURES (MODEL PVO)

The main difference between the PLA and the PVO is the taper (PLA is linear and PVO is audio) and the PLA is designed for use in front of amp or FX loop. The PVO is designed for use in front input of amp only.

- Power On/Off Indicator: LED located above the Minimum Volume knob serves as power on/off indicator.
- · See above PLA instructions above for setting Minimum Volume.

#### PVO SPECIFICATIONS

POWER: 9V Battery or Morley 9VDC 300 mA regulated adapter (center pin is negative)

CURRENT DRAW: 2.5 mA @ 9 VDC

CONTROLS: Minimum Volume

TAPER: Audio

WEIGHT: 3.3 lb./ 1.51 kg INDICATOR: Power LED on

#### PRO SERIES II WAH FEATURES (MODEL PWA-II)

- . WAH level Control: This knob controls the output level of the Wah effect.
- WAH On/Off Switch: This switch turns the Wah effect on/off.
- . "High Q" Wah: Morley's New and Improved Wah tone circuit.
- LED WAH On/Off Indicator: When the LED is on, Wah is engaged.
- Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal ensuring no volume or tone is lost.

#### PWA-II SPECIFICATIONS

POWER: 9V Battery or 9VDC 300 mA regulated adapter (center negative)

CURRENT DRAW: 5 mA @ 9 VDC

WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah mode LED on, LED off: bypass

#### PRO SERIES II WAH/VOLUME FEATURES (MODEL PWV-II)

- WAH level Control: This knob controls the output level of the Wah effect.
- WAH On/Off Switch: This switch turns the Wah effect on/off. The pedal is in volume mode when the Wah is turned off
- . "High Q" Wah: Morley's New and Improved Wah tone circuit.
- LED WAH On/Off Indicator: When the LED is on, Wah is engaged.
- Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal ensuring no volume or tone is lost.

#### PWV-II SPECIFICATIONS

POWER: 9V Battery or 9VDC 300mA regulated adapter (center negative)

CURRENT DRAW: 5 mA @ 9 VDC

WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah mode LED on, LED off: volume mode

#### PRO SERIES II DISTORTION WAH VOLUME FEATURES (MODEL PDW-II)

- LED indication: Located above the "WAH" and "Distortion" switches.
- VOLUME / WAH Switch: Switches between Wah and Volume modes.
- "High Q" Wah: Morley's New and Improved Wah tone circuit.
- DISTORTION On/Off Switch: Turns the distortion effect on/off.
- · DRIVE control: Adjusts the amount of distortion.
- TONE control: Colors distortion.
- · LEVEL control: Adjust the amount of output from the distortion.
- Buffer Circuit: Morley's "Clear Tone" buffer circuit prevents "loading" of the guitar signal ensuring no volume or tone is lost.

#### PDW-II SPECIFICATIONS

POWER: 9V Battery or 9VDC 300 mA regulated adapter (center negative) CURRENT DRAW: 7 mA @ 9 VDC

WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Wah mode LED on, Bypass mode LED off.

Distortion mode LED on, bypass mode LED off.

#### GEORGE LYNCH TRIPER INSTRUCTIONS

The Tripler is designed to route one input signal to three output paths. The jacks are 1/4" mono and are not designed to translate a stereo signal appropriately.

#### GETTING STARTED:

- 1) Plug Guitar into jack marked INPUT.
- Using appropriate cable type and length, connect three amps to jacks #1, 2 & 3.
- You can now select or combine each amp in any combination by stepping on the switch for the appropriate amp. LED indicators show which amp is on/off.
- The Boost knob controls the overall output of the Guitar to all three outputs.



IMPORTANT: DO NOT USE THE TRIPLER ON A POWERED SPEAKER LINE! YOU WILL DAMAGE THE TRIPLER, THE AMP AND THE SPEAKER(S).

#### TRIPLER SPECIFICATIONS

POWER: 9V Battery or Morley 9V 300 milliamp regulated adapter (center pin is negative) CONTROLS: Boost

INDICATOR: Channel switched on or off.

#### ABY SELECTOR / COMBINER INSTRUCTIONS

The ABY was designed with two basic set-ups in mind:

- 1) Routing one input signal to two output paths (see Example #1)
- 2) Routing two input signals to one output path (see Example #2)





IMPORTANT: DO NOT USE THE ABY ON A POWERED SPEAKER LINE! YOU WILL DAMAGE THE ABY, THE AMP AND THE SPEAKER(S).

#### ABY SPECIFICATIONS

POWER: 9V Battery (for LED Indication ONLY - ABY will function without a battery) LED INDICATORS: Channel switched on or off.

#### STEREO CHORUS VOLUME INSTRUCTIONS (Model SCV)

The Stereo Chorus Volume (SCV) is both a Chorus pedal and a Volume pedal in one handy pedal. You can use the volume control by itself, the chorus by itself or use both effects together. The SCV is suitable for use with electric Guitar, Acoustic Guitar or Bass. It requires one 9V battery or optional Morley adapter for power.

#### GETTING STARTED:

- Plug into jack marked IN.
- 2) Connect cable from SCV jack marked OUT to amplifier.
- 3) If using Chorus in Stereo mode, connect additional cable from jack marked STEREO OUT to a second amplifier
- 4) Volume control is always engaged. Simply move foot treadle to adjust volume.
- 5) Foot treadle has no effect on Chorus Effect.

#### IMPORTANT:

When either OUT jack is used separately, chorus will be present when engaged.

When both OUT jacks are used for Stereo Chorus set up, the jack marked OUT will be "Dry" (no chorus) and the jack marked STEREO OUT will be "wet" (with Chorus). The separation of "wet" and "dry" outputs to two different amps will create a wide spatial effect that you'll find full sounding and pleasing.

#### SCV FEATURES

- · CHORUS SWITCH: Turns on/off Chorus effect
- CHORUS RATE: Adjusts the Speed of the Chorus
- CHORUS DEPTH: Adjusts the amount of Chorus pitch bend
- DUAL OUTPUTS: Use either individually or both for stereo applications
- LED INDICATION: Right side LED shows power on. The left side LED lights when Chorus Effect is engaged
- ELECTRO-OPTICAL CIRCUITRY: Volume is controlled via optical circuitry. No pot to wear out and get scratchy!

#### SCV SPECIFICATIONS

POWER: 9 Volt Battery or Morley's 9VDC 300 milliamp regulated adapter Center polarity is negative. Using wrong polarity will damage pedal.

CURRENT DRAW: 19 mA @ 9 VDC

CONTROLS: Rate, Depth WEIGHT: 3.3 lb./ 1.51 kg

INDICATOR: Power on, Chorus on/off,

What is a Ground Loop?

When you hear hum in an audio system, it's almost always caused by a loop antenna effect between two or more pieces of gear, across signal lines. A loop antenna is formed by having a loop of wire where the beginning and end of the loop are connected - the loop can be any shape. The loop antenna(e) is basically a form of radio antenna and they lend to pick up the 60Hz AC signal being broadcast by a building's electrical wiring. They also pick up 120Hz, 180Hz, and all the other harmonics of 60Hz and, usually to a lesser degree, electrical noise being broadcast from all over such as radio, TV, hair dryers, etc. These loop antennae are closed circuits usually through the ground wires and hence are commonly called ground loops.

Examples of Ground Loops:

1. Going up the AC power cord ground from the electrical system wiring to a keyboard, going across a signal line ground from the keyboard to a mixer across the signal ground, down the mixer's power cord ground reconnecting

- ground from the keyboard to a mixer across the signal ground, down the mixer's power cord ground reconnecting to the electrical system wiring.

  2. Going across the signal ground from a mixer to a reverb unit, going from the reverb unit across the signal ground back to the mixer and reconnecting inside the mixer.

  3. Going up the AC power cord to the mixer, across the signal ground to the amplifier, down the amplifier's power cord ground and reconnecting to the electrical system wiring.

  4. Going up the AC power cord to a guitar amplifier, going across the input signal ground to an effects device left channel output, from the effects device right channel output to another guitar amplifier, down the second guitar amplifier's power cord ground and reconnecting to the electrical system wiring.

Which connection has the Ground Loop? (AKA Playing Audio Detective)
Identify the ground loop causing the trouble; not all ground loops cause noise or hum. For complex systems you may need to repeat these steps starting with a different piece of equipment in various combinations to locate the problem:

- Strip the system down to one piece, such as the mixer, by disconnecting all interconnects and AC cords except for the mixer.

2. Add one piece of equipment at a time; hook up AC and interconnects (making sure all grounds are connected and in good condition) then listen for hum or noise.

3. Turn on and off the power each time you switch equipment to avoid pops and shorted outputs.

4. Proceed until you find the offending piece(s) causing the problem.

5. Plug the Hum Eliminator™ in all lines between the offending equipment and the rest of the system. For example... insert the line outs of the keyboard into the inputs of the Hum Eliminator™, then insert the line outs of the Hum Eliminator™ into the inputs of the mixer.

It is often helpful to listen through a pair of headphones. Quite often you will only hear hum coming from a particular input channel on a mixer and that is where the ground loop will be. Alternatively, if you hear hum coming out the speakers with all the mixer's channels turned down, it's likely that the problem is between the mixer and amplifier or other equipment that comes after the mixer.

Another common path for ground loops is through a chassis into the rack and then into another chassis. Test this by removing the chassis from the rack. The Hum Eliminator™ will help but you should also try isolating the chassis from the rack with electrical tape and insulating the rack screws with rylon washers.

Note: Never use the Hum Eliminator™ between an amplifier and speaker or the equipment may become damaged. Only use the Hum Eliminator™ on non-powered audio signals.

What about removing or lifting the AC ground or signal ground? These methods have some real drawbacks: Removing or disabling the AC ground:

• Can cause electroculion

Can cause distortion due to floating signal references
 Can cause some pieces of equipment to oscillate or become damaged
 Can cause current and noise meant for the AC ground to be dumped down the interconnect (line level) to another piece of equipment instead

- Cutting the shield at one end of the interconnect cable:

   Can hinder the ability of the cable to serve as a signal return

   Can cause distortion and/or clipping of the signal since there is no voltage translation matching (shifting a signal to match ground and power supply).

   Can alter the cable's frequency response.

   Can defeat the shielding effect.

- Why using the Hum Eliminator™ is the safer and better solution:

  1. The Hum Eliminator™ is completely transparent; its audiophile quality components won't change your sound. With a flat frequency response from 20Hz to 70kHz (beyond range of human hearing) the Hum Eliminator™ is the answer.

  2. The Hum Eliminator™ breaks the ground loop, keeping all AC grounds intact. It provides isolated signal returns and performs automatic voltage translation matching.

  3. The Hum Eliminator™ automatically converts from unbalanced to balanced without signal loss. With the Hum Eliminator™ you can run a signal across a room from a pre-amp, effects unit or keyboard without picking up AC hum from power cords and without the signal loss you get from a DI box. Balanced outputs from the Hum Eliminator benefit from true common mode rejection (CMR), canceling out noise from AC power cords and other resurres.
- other sources.

  4. The Hurn Eliminator™ will match any ground potential difference between two pieces of equipment. If the ground of your keyboard is 6 volts higher than the ground of your mixer, the Hurn Eliminator™ will shift the entire signal of the keyboard down by 6 volts to compensate without affecting the keyboard at all.

  5. The Hurn Eliminator™ is equipped with "smart jacks" (TRS); so you can run all types of line level signals; balanced

or unbalanced.

#### Hum Eliminator™ INSTRUCTION MANUAL

See also "What is a Ground Loop" pg 34 and "Hum Eliminator Applications" pg 22

#### WHAT WILL THE HUM ELIMINATOR™ SOLVE?

The Hum Eliminator<sup>TM</sup> is a unity gain signal and ground path isolator designed to break ground loops. Hum and noise caused by the presence of a ground loop can be stopped by inserting the Hum Eliminator<sup>TM</sup> in the line level signal path (+4dBu or -10dBV). This eliminates the ground loop without degrading your signal. The Hum Eliminator<sup>TM</sup> will not reduce hum or noise normally generated by a piece of equipment. In other words, for noisy preamps and noisy single coil pickups, a noise gate is the proper solution.

#### USING THE HUM ELIMINATOR™

Identify the ground loop causing the trouble; not all ground loops cause noise or hum. For complex systems you may need to repeat these steps starting with a different piece of equipment in various combinations to locate the problem:

- Strip the system down to one piece, such as the mixer, by disconnecting all interconnects and AC cords except for the mixer.
- Add one piece of equipment at a time; hook up AC and interconnects (making sure all grounds are connected and in good condition) then listen for hum or noise.
- 3) Turn on and off the power each time you switch equipment to avoid pops/shorted outputs.
- 4) Proceed until you find the offending piece(s) causing the problem.
- 5) Plug the Hum Eliminator™ in all lines between the offending equipment and the rest of the system. For example, insert the line outs of the keyboard into the inputs of the Hum Eliminator™, then insert the line outs of the Hum Eliminator™ into the inputs of the mixer.

Note: Never use the Hum Eliminator™ between an amplifier and speaker or the equipment may become damaged. Use only on non-powered line level signals.

With a rack of amplifiers, we recommend putting an 8 channel single rack space Hum Eliminator™ in front of your amps' inputs so you do not have to solve ground loop problems during sound checks.

A common path for ground loops is through a chassis into the rack and then into another chassis. Test this by removing the chassis from the rack. The Hum Eliminator™ will help but you should also try isolating the chassis from the rack with electrical tape and insulating the rack screws with nylon washers.

Most ground loop problems can be solved using the Hum Eliminator™. Patience is a necessity when attempting to solve ground loops! Many popular mixers with TRS balanced line inputs do not have common mode rejection. They drop the inverted signal, creating unbalanced inputs! To get the benefits of balanced inputs, run your balanced line into the Hum Eliminator™ and run a mono 1/4" line from the Hum Eliminator outputs to the mixer's TRS inputs. This way you are running a balanced line all the way up to the Hum Eliminator™ and you will not lose common mode rejection.

#### Line Level Shifter™ INSTRUCTIONS

See also: "What is a Ground Loop" pg 34 & "Line Level Shifter Applications" pg 24

#### MAKING THE CONNECTION

The Line Level Shifter™ is designed to allow you to use equipment with different line level requirements at their correct gain settings. This will reduce noise and enable you to use any piece of equipment.

Balanced or unbalanced lines may be used at either level. However, normally the only balanced signals will be on the +4dBu side. Balanced signals will give you the advantage of common mode rejection (CMR), canceling out any noise picked up by balanced lines as they run near AC power.

#### USING THE LINE LEVEL SHIFTER™

The TRS smart jacks do all of the rewiring for you. For unbalanced signals just use standard 1/4" two conductor connectors. For balanced signals use 1/4" three conductor (TRS) connectors.

TRS connectors are sometimes called stereo plugs but remember to never use stereo or multiple channels in one connector with the Line Level Shifter<sup>TM</sup>. Stereo requires two separate channels, Use a "Y" cable with one stereo plug and two mono plugs (one for each channel of the Line Level Shifter<sup>TM</sup>).

TIP = + or - (just be consistent between +4dBu & -10dBV)
RING = + or - (just be consistent between +4dBu & -10dBV)
SI FEVE = Ground

#### THE INS AND OUTS OF IMPEDANCE

Quality products are designed to have low impedance (<100 ohms) at the line level output jacks and high impedance (>10K ohms) at the line level input jacks. The Line Level Shifter™ operates best under these conditions, giving the full 11db gain desired. However, the Line Level Shifter™ has been designed to work in less ideal situations with only a modest reduction of gain in the -10dBV to +4dBu direction. There is no effect when going from +4dBu to -10dBV.

		Noad			
		1Meg	100k	50k	10k
	0	.007	.078	.155	.748
	10	.008	.091	.180	.853
R <sub>source</sub>	50	.013	.142	.279	1.260
	100	.020	.205	.401	1.743
	300	.046	453	.873	3.445
	600	.085	.812	1.536	5.500
	1000	136	1.269	2.348	7.650

R ....

R source = Output impedance of equipment (-10dBV) in ohms R load = Input impedance of equipment (+4dBu) in ohms

#### Swizz Army 6-in-1 Cable Tester INSTRUCTION MANUAL

Included in package: 1 Swizz Cable Tester with 4 rubber feet attached. Not Included: 2 AA batteries

The 6-in-1 works with six different types of connectors: XLR, 1/4" (mono or Tip/Ring/Sleeve), RCA, 1/8" (mono or Tip/Ring/Sleeve), TT, and MIDI.

The Swizz Army Cable Tester works in three main modes of operation: Cable Test Mode: To use, move the On switch to the Cable Test position. Installed Cable Test Mode: To use Installed Cable Test mode, hold down the Reset button while moving the On switch to the Cable Test position. The Power ON LED will blink to indicate the unit is in Installed Cable Mode.

Test Tone Mode: To generate test tones through the OUT jacks, move the On switch to the Test Tone position.

#### CABLE TEST MODE:

To use Cable Test Mode, move the On switch to the Cable Test position. Insert one end of a cable into any OUT jack, and the other end into any IN jack. The Swizz Army shows you which input pins are connected to each output pin by lighting its LED in the Cable Wiring Display. The Grounded Shield LED will also light if the XLR OUT plug pin 1 is internally connected to the plug housing (this is optional on some XLR cables).

#### TESTING FOR INTERMITTENT CONNECTIONS:

While in Cable Test Mode, pressing Reset stores the current Cable Wiring Display and clears the Intermittent LEDs. If any change occurs in the wiring displayed, the Intermittent LED corresponding to any Input pin which had the change will light and stay lit until the next time Reset is pressed. In this way you'll know if you have an intermittent cable even if it was intermittent for such a small period of time that you may have not seen the LED flicker.

#### INSTALLED CABLE TEST MODE:

To use Installed Cable Test mode, hold down the Reset button while moving the On switch to the Cable Test position. The Power ON LED will blink to indicate the unit is in Installed Cable Mode.

Disconnect both ends of a suspect cable from the equipment it is attached to. Attach one end of the cable to the appropriate Output jack and leave the other end disconnected. The Cable Wiring Display works as before except it now shows any connections between OUT pins, not between OUT and IN pins. If there are no shorts between signals in the cable, then none of the LEDs in the Cable Wiring Display will light. Next, place a shorting jack on the other end of the cable. If the signals in the cable have no opens, then they'll make it all the way to the shorting jack and the Cable Wiring Display will show all pins as being shorted to each other. The display does not show a pin shorted to itself. The Intermittent testing feature works in the same way as Cable Test Mode.

## Swizz Army 6-in-1 Cable Tester INSTRUCTION MANUAL (continued)

Test Tone Mode: To generate test tones through the OUT jacks, move On switch to the Test Tone position.

Warning: DO NOT use Test Tone Mode for MIDI cables. The Swizz Army™ does not generate MIDI data. While we won't guarantee it, the audio test tone should not harm MIDI equipment if connected.

A test tone is placed on the Pin2 / Tip signal of all OUT jacks. The level can be set to either +4 dBu, -10 dBV, or Mic level (approximately -50dBV). Note that battery voltage level will effect the accuracy of the test tone output level. The Test Tone Mode is intended for use in checking audio system integrity and the rough setting of signal levels only and not for use as a voltage standard.

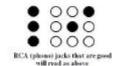
1kHz / 440Hz Selection: Pressing Reset during Test Tone Mode will switch the test tone frequency between 1kHz and 440Hz. The selection is indicated by its LED: On = 1kHz, Off = 440Hz. Test tone frequency accuracy is +/- 0.1% and is unaffected by battery voltage.

Phantom Power Detect: During Test Tone Mode, pins 2 and 3 are monitored for external DC voltage as commonly supplied to microphones. The Phantom LEDs will light any time the presence of a DC voltage greater than 5V is detected.

#### CONNECTOR PIN DIAGRAMS

Pin 2 0

Balanced (TRS) D4", D8", XLR, MIDI & TT that are good will read as above



1/4", 1/8", TT. Connectors missing

Pin 3 still work

Lanced Coop Usesed

Pin 2

Pin 5 Pin 1 Po (ground)

MIDI CABLE

Note 2 of the five pins are unused

Pin 2/Tip Pin I/Slesve RCA (phono)

0

0

XLR pin numbers are visable

on the connector

Mono (TR) 1/4", 1/8" & TT cables that are good will read as above

READOUT DIAGRAMS

TESTING A CABLE

- To test if the cable is good, set the SWIZZ ARMY to "Cable Test Mode". Insert both ends into the SWIZZ ARMY (in/out).
- Balanced 1/4", 1/8", XLR, MIDI, and TT cables will read as a big check mark if cable is good.
- If the LED's look anything other than in diagrams above, there is a cable fault. The additional LED's that light up indicate which wires have the fault.
- . To test for an intermittent short in a cable, insert one end of the cable into the IN jack of the SWIZZ ARMY and set it to "Cable Test Mode". Press the reset button to make sure it's clear. Move the cable around. If there's an intermittent short in the cable, the LED corresponding to the shorted wire will light up and stay lit until you press the reset button. Checking again would verify your findings.



HUM ELIMINATOR: Place on audio line to get rid of ground loop. Also converts between balanced/unbalanced signals

HUM X: Gets rid of Ground Hum at the source while maintaining safe ground.

LINE LEVEL SHIFTER: Converts back and forth between -10dBV and +4dBu. Also breaks ground loops and converts between balanced/unbalanced signals

#### SWIZZ ARMY 6-in-1 CABLE TESTER:

- · Checks for continuity, opens and shorts for each pin.
- . Display reads and stores information until reset.
- Test tone generator (+4, -10, Mic)
- Phantom power detector
   Grounded XLR shield detector
- Checks XLR, 1/4", RCA, 1/8", TT & MIDI cables

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