MODEL 400
Single Channel Mic Processor

OPERATING INSTRUCTIONS

VALLEY
INTERNATIONAL, INC.

VALLEY 400 MICROPHONE PROCESSOR
OWNERS MANUAL

PURPOSE

The Valley 400 Mic Processor is the only dedicated
signal processor specifically designed for vocal microphones.
It provides the necessary link between the mic and the
console via a microphone preamplifier, 3-band tone EQ
control, compressor, expander, noise gate, and de-esser.
It's purpose is to give the engineer total control over the
incoming signal and provide the ability to create the desired
sound.

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INTRODUCTION

Thank you for purchasing the **Valley International, Inc.**
Model 400 Mic Processor. We are certain it will give you
years of trouble free operation and service. Valley Products
are manufactured to the highest standards in Nashville,
Tennessee, using quality components and materials. We have
over a decade of experience in the manufacture and
installation of products used in various facets of the
professional audio industry.

Since 1976, Valley has been dedicated to designing and
creating signal processing devices that provide the user with
ultimate value and function. The reliability and performance
of Valley International products is recognized by recording
and broadcast engineers as well as commercial installers,
worldwide.

If you have any question regarding application or
operation of the Model 400 or any other Valley product,
please feel free to call us at any time at **615/370-5901** and
ask for our customer service department.

VALLEY 400 MICROPHONE PROCESSOR
OWNERS MANUAL

DESCRIPTION

It often happens that products that fit the most
basic operations are the last to be designed and
manufactured. Such is the case for the Valley 400 Microphone
Processor, a product dedicated to the very beginning of the
signal chain--the microphone. Though signal processing has
been occurring for decades with a variety of instruments and
devices (even some of our own), no one has thought to package
them in such a way that is optimal for the microphone alone.
(In this case we are specifically talking about spoken word
applications. The 400 is not intended for use with musical
program materials.) The most frequent use of microphones
today, is for the spoken word: from broadcast to public
address. This application has its own fundamental problems
that, until now, have never been singularly addressed.

The Model 400 is truly a dedicated microphone processor,
composed of six individual processing sections including a
Microphone preamplifier, 3-band tone control, Compressor,
Expander, Noise gate, and a De-esser. These six sections are
electronically integrated, in order to unify several
functions that work together. They are under your control to
help you shape and create the desired sound. The unique
versatility of the 400 enables you to operate many of these
processor functions individually or together.

Thus, the Valley 400 provides you with the precise tools
necessary to shape your announcer's voice. It is the missing
complement to audio excellence.

THE FRONT PANEL CONTROLS AND FUNCTIONS

    The controls of the Model 400 are ergonomically designed
for ease of operation. By following the front panel
controls, you are in turn following the path of the signal.
The adjustments you make here directly effect the signal, in
the sequence that you select them. In this fashion, you can
easily see what is occurring to your signal and how to effect
the optimum signal processing available at any given time.

THE MICROPHONE PREAMPLIFIER
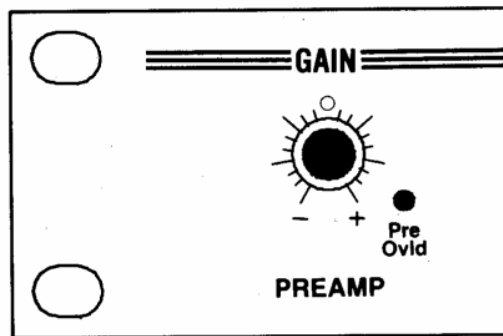
    More often than not, the weakest link in the signal
chain is right at the beginning of it--in this case the
microphone preamplifier. Most on-air consoles cannot provide
the high quality preamp necessary to handle today's top
technology microphones. Instead of passing along a high
quality signal, they amplify any existing noise or distortion
to the detriment of the signal. Worse yet, a low quality
preamp can add its own noise and/or distortion to the system
and pass this amplified signal down the chain.

    Valley pioneered and revolutionized low noise, low
distortion preamp technology almost a decade ago. Thanks to
the 400, you can take your high-quality microphones and
properly link them to your system with a preamplifier which,
in most cases, is superior to that in your console.

    The PREAMP GAIN control is adjustable from 43 to 60 dB.
An LED indicates when the preamp is being overloaded.

THE 3-BAND EQ/TONE CONTROL
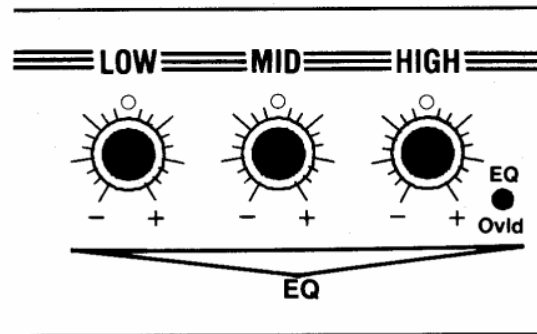
The specially designed tone controls are contoured
specifically for the spoken word. The high and low frequency
controls are shelving at 2.3 kHz and 200 Hz respectively.
The mid-frequency is boost and cut at 2.1 kHz. The three
EQ controls provide boost or attenuation of 20 dB. An LED
indicates overload of the EQ section.

THE COMPRESSOR
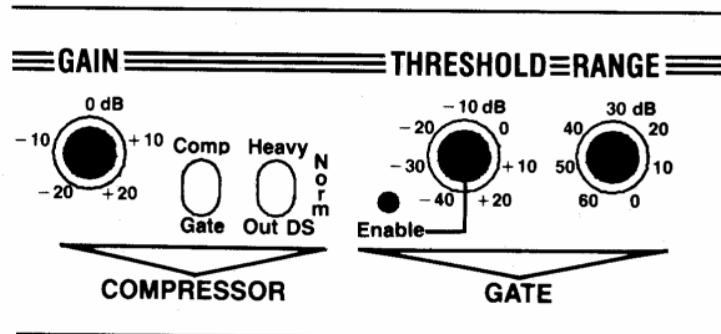
The Model 400 Compressor has an interactive Expander
that works with it to cut out and virtually eliminate any
residual noise. These two components are intercoupled when
the input signal falls 10 dB below the compressor Threshold.
The Expander is then activated to reduce the noise at a slope
of 1:2. See the Expander section for more information.

The Compressor itself offers over 20 dB of compression
at a ratio of 20:1. Threshold is fixed at 0 dB, attack time
is 1 ms, release time is .5 ms per 20 dB of recovery in this
automated, program dependent section.

Additionally, the Compressor works in conjunction with
the De-esser, thereby allowing a uniform, natural process to
occur and preventing a choppy signal. See the De-esser
section for further details.

THE EXPANDER

When the Compressor is in (active), the Expander is
interactively following with downward expansion at a slope of
1:2. Their release characteristics are intercoupled, so that
when the input signal falls 10 dB below the threshold of the
Compressor, the Expander will take over and reduce the gain.

The ultimate amount of attenuation that the Expander can
produce is controlled by the RANGE control. Should you wish
to have some ambient room sound to be passed through the
signal chain in the absence of the announcer's voice, you
simply simply select what you want to come through by
adjusting the RANGE control. This is really important to
eliminate DEAD AIR. The standard type of noise gate just
attenuates, and when the announcer goes away, the signal goes
away as well. The result is dead air, and a Program Director
down your throat. With the 400, simply by adjusting the
RANGE control you can allow some room noise leakage to come
through, thus eliminating dead air.

THE DE-ESSER

Designed to handle announcer sibilance problems, the De-
esser section of the Valley 400 has two modes. NORMAL is for
mild problems. It handles sibilant transients from 8 kHz and
above. For more serious sibilance, the HEAVY mode may be
selected. This eliminates sibilance from 4 kHz and above.

As stated previously the De-esser section works in
conjunction with the Compressor control. This is very
different from other types of equipment that utilize
compressors or limiters in conjunction with de-essers. In
those types of units, for example, the limiting section may
be causing 20 dB of gain reduction...then the de-esser sees
the signal, and it decreases the gain another 10 to 20 dB, or
whatever. Both processors, operating independently, reduce
the gain by about 40 dB. The result is a choppy over-
processed sound.

In the 400, the Compressor always knows what the De-
esser is doing and vice versa. The result is an interaction

that allows the Compressor and the De-esser to work together.

Taking the above example, when the De-esser needs to cut gain by 20 dB to remove the undesired sibilance and the Compressor is already doing 20 dB of gain reduction, you won't end up with this problem. The two interacting processors actually split the difference and arithmetically average out the required gain reduction, so both functions are satisfied. In this case, you would only end up with 25-30 dB of gain reduction, as opposed to doing 40 dB and chopping the signal up. The resulting signal is more natural sounding.

Through this interaction, the Valley 400 becomes an intelligent processor. The two stages or sections monitor each other's actions, giving a smooth signal transition. The De-esser can be used independently as well. However, the processing is less offensive when the compressor and de-esser are used together. Gain reduction and de-essing tend to go hand-in-hand.

THE NOISE GATE

The Noise Gate can only be used when the Compressor is disabled. This was done purposely, because the correct way to control noise rush- up in a compressor is not with a Noise Gate, but with an Expander. The Expander section therefore, simply converts to the Noise Gate section when the Compressor Mode switch is in GATE.

Noise Gates are notoriously and easily misused. We felt it was necessary to incorporate one in the Valley 400 for applications where a compressor is not necessary. To make it more effective as well as foolproof, the 400 employs a relatively slow release time that is program dependent to prevent the trailing sounds of the spoken word from being chopped off. The RANGE control is still active, so you can remove as much or as little of the ambient noise as desired. The aforementioned program directors will be happy with this touch.

Noise Gate controls include THRESHOLD and RANGE. The RANGE control is used for the Expander in the Compress mode. The Expander ignores the GATE THRESHOLD setting. Range is adjustable from 0 to -60 dB of attenuation, Threshold from -40 to +20 dB. In order to take the Expander or Gate out of the circuit simply move the Range control to 0, where it will not be doing any attenuation whatsoever.
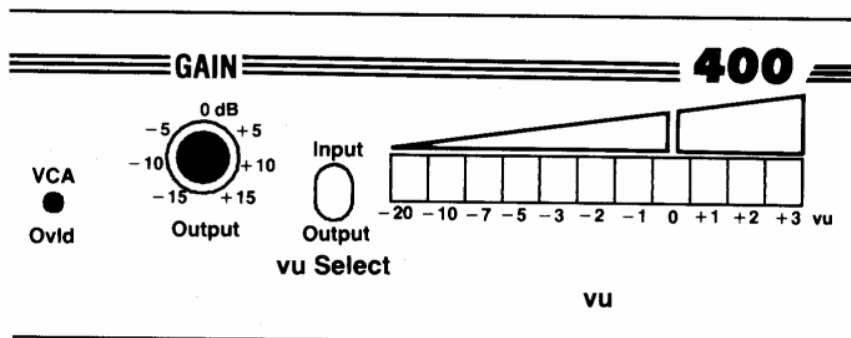
GAIN REDUCTION METER

40 30 20 15 12 9 7 5 3 2 1 dB
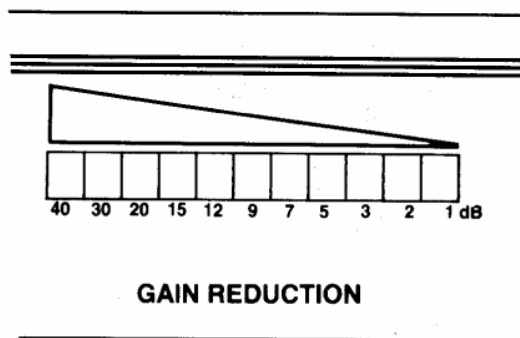
GAIN REDUCTION

Indicates amount of gain reduction caused by the Compressor, Expander, and De-esser.

OUTPUT GAIN CONTROL

GAIN **400**

0 dB
−5   +5
−10   +10
VCA
−15   +15
Output

Input

Output
vu Select

−20 −10 −7 −5 −3 −2 −1 0 +1 +2 +3 vu

Ovld

vu

Sets the quiescent or idle gain of the voltage controlled amplifier (VCA). It has a range of plus or minus 15 dB.
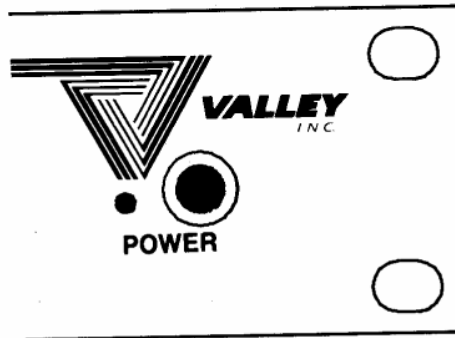
VOLUME INDICATOR SELECT SWITCH

This switch transfers the volume indicator source from the input of the processor to the output of the VCA.

VOLUME INDICATOR

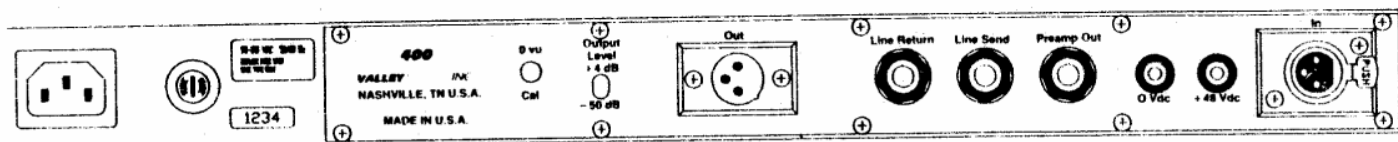LED meter indicates volume from the source selected by the Volume Indicator Select Switch.

POWER SWITCH & INDICATOR

    Power switch turns the Valley 400 on. It is located on
the right side of the unit. LED indicates when power is on.

THE BACK PANEL

THE MICROPHONE CONNECTION

Microphones are plugged into an electronically balanced XLR type connector.

THE PHANTOM POWER CONNECTION

An external 48 volt phantom power supply may be connected to the Model 400 by a banana jack. Note: You must use an actual phantom power supply as there is NO POWER REGULATOR OR FILTER.

THE PREAMP OUT

A 1/4", 3-conductor phone jack gives you access to the post EQ signal. This line level output is available if you only want to make use of the Preamplifier and Equalizer of the Model 400.

THE LINE SEND & RETURN

A balanced line level Send and Return is available via 1/4", 3-conductor phone jacks. These connections allow other outboard signal processing equipment or effects to merge into the signal path.

THE OUTPUT

Differentially balanced output with XLR type connector.

THE MIC/LINE SWITCH

This switch enables you to switch the output from low
impedance, high level (+4 dBm nominal from 50 ohm) to mic
level and impedance (-50 dB nominal from 150 ohm). In this
way the 400 may be used for a variety of consoles and
connections.

THE vu CAL

Screwdriver adjustment for the front panel mounted LED
Volume Indicator allows you to calibrate the meter for 0 vu.

SIGNAL FLOW DIAGRAM
This diagram illustrates the signal flow in the 400.
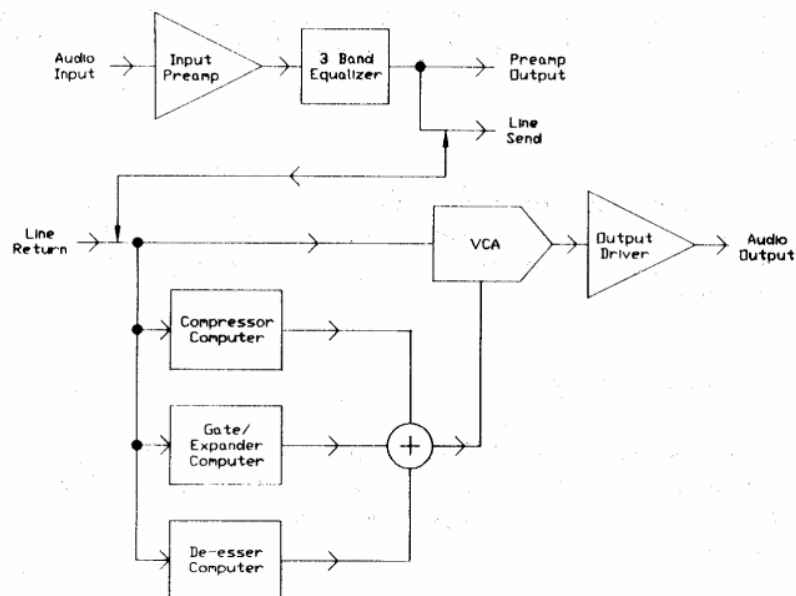
CONNECTIONS

Everyone has connections in the audio business. Knowing
how to use them is the key to success. Why should it be any
different with signal processing equipment? The Model 400 is
electronically balanced in and out and easily interfaces with
your microphone and console.

Below you will see, pictured in block diagram form, the
basic connections. The Model 400 will install easily into
your system.


```
        5           4             3             2        1
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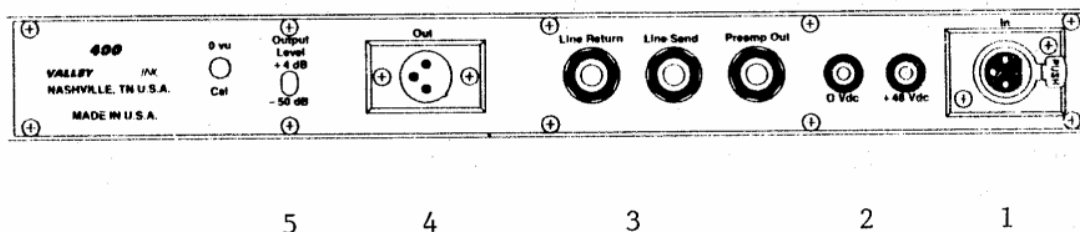
1)   Microphone is connected to MIC INPUT.

2)   Connect PHANTOM POWER SUPPLY if necessary.

3)   Hook up outboard equipment if desired to SEND and
RECEIVE jacks.

4)   Connect console and Model 400 via the balanced XLR
output.

5)   Adjust MIC/LINE switch to proper position.

THE OPERATIONS/COMPRESSOR IN

1)   Plug in microphone.

2)   Select appropriate level switch position (mic or line).

3)   A) Connect output at line level into the console.
     OR
     B) Connect output at mic level into mic input of board.

4)   Select INPUT on vu SELECT SWITCH.

5)   Speak into microphone and adjust PREAMP GAIN until 0 vu
bar indicates.

6)   Adjust EQ to desired effect. Note: from approximately
horizontal left to horizontal right there is only about 4dB
of change available. From there it increases exponentially,
and you can really crank it up.

7)   To COMPRESS or not to COMPRESS, that is the decision.

8)   Flip compressor mode switch to COMP.

9)   Adjust INPUT GAIN control for amount of compression
desired as idicated by the GAIN REDUCTION METER. Apparent
loudness will be increasing. Use your ears!

10) Determine if DE-ESSING is required. If so select mode:
HEAVY or NORMAL. If De-essing not required, leave switch in
OUT position.

11) The EXPANDER is now adjusted depending on how much
ambient noise you want to come through: for no Expansion
leave RANGE control at 0, for some ambient noise adjust RANGE
somewhere between 10 and 20, to eliminate ambient noise
completely set between 30 and 50.

12) Switch vu SELECT to OUTPUT position.

13) Adjust OUTPUT GAIN control to derive desired output
level.

THE OPERATIONS/NOISE GATE IN

1)   Plug in microphone.

2)   Select appropriate level switch position (mic or line).

3)   A) Connect output at line level into the console.
     OR
     B) Connect output at mic level into mic input of board.

4)   Select INPUT on vu SELECT SWITCH.

5)   Speak into microphone and adjust PREAMP GAIN until 0 vu
bar indicates.

6)   Adjust EQ to desired effect. Note: from approximately
horizontal left to horizontal right there is only about 4dB
of change available. From there it increases exponentially,
and you can really crank it up.

7)   Flip compressor mode switch to GATE. Note: INPUT GAIN
control is still active but the COMPRESSOR is out of the
signal chain.

8) Determine if DE-ESSING is required. If so select mode:
HEAVY or NORMAL. If De-essing not required, leave switch in
OUT position.

9) The NOISE GATE is now ready for use. The THRESHOLD is
adjusted to the point where the noise gate opens up reliably
during spoken words. The RANGE may be suitably adjusted,
depending on how much ambient noise you want to come through:
for some ambient noise adjust RANGE somewhere between 10 and
20, to eliminate ambient noise completely set between 30 and
50.

10)   Switch vu SELECT to OUTPUT position.

11) Adjust OUTPUT GAIN control to derive desired output
level.

THE SPECIAL CONFIGURATIONS

MIX MINUS
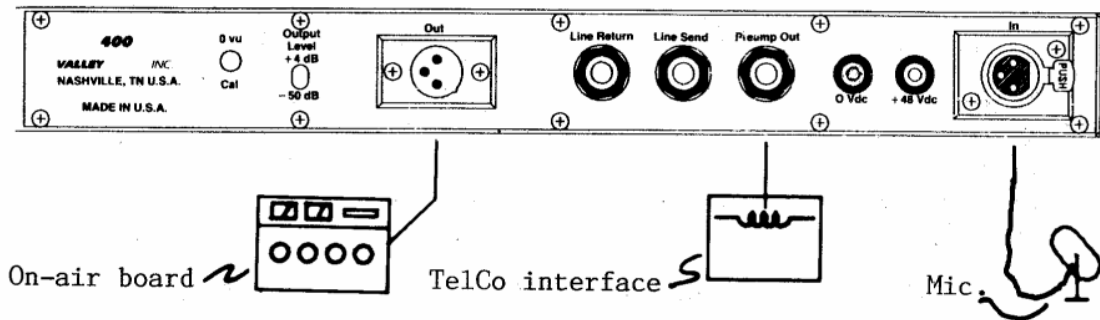
This application allows you to use the Model 400 for
talk show formats. The microphone signal is fed into a telco
device. The announcer's voice must be present both at the
transmitter and the telephone line. To perform this
application, take the PREAMP OUT at line level and feed it
into the telco device. The 400 main output is fed to the on-
air console either at line or microphone level.

OUTBOARD PROCESSING
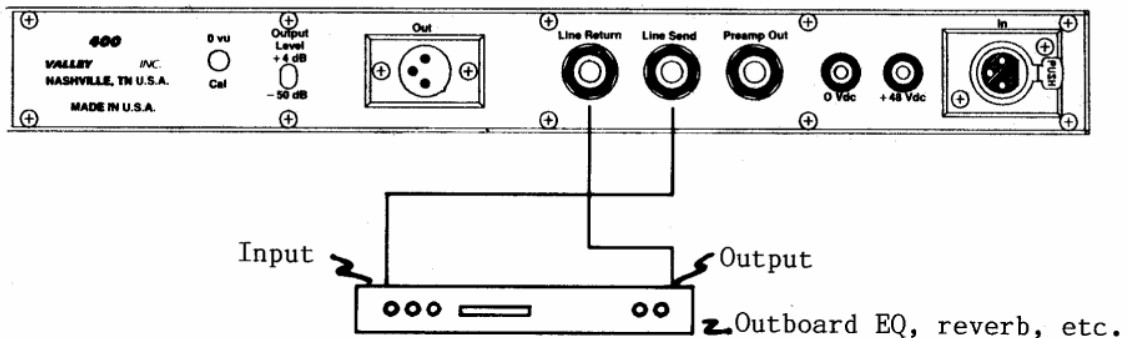
Use the line level SEND and RETURN to interface outboard
processing equipment. These connections are normalled, so if
you insert a 3-conductor phone plug into LINE SEND, it will
break the signal chain. You must plug back into RETURN to
complete the chain. Use only three-conductor plugs for the
1/4" outputs of the 400, and do not ground the tip or ring
connections even when feeding unbalanced lines.

The processor loop requires no termination, nor does it
provide any termination. It will drive 600 ohms, and
presents a high impedance to equipment as used as a source.

SPECIFICATIONS

Input	GUARANTEED	TYPICAL	UNITS
Input Impedance:	> 13	---	kohm
Input CMRR (60–15 kHz):	37	60	dB
EIN @60 dB gain, with 200 ohm source:	–127	–129	dB
Input Gain Range:	----	43 to 60	dB
Line Return Input Impedance:	---	40	kohm
Line Return CMRR (60–15 kHz):	37	40	dB
Line Return Max. Input Before Clipping:	+24	–26	dB

OUTPUT

	GUARANTEED	TYPICAL	UNITS
Preamplifier Output Source Impedance:	<50	44	ohm
Line Send Output Source Impedance:	<50	44	ohm
Preamp Out and Line Send Max. Output, bal.:	24	26	dBm (600)
Preamp and EQ Distortion @ 0 dB Out, Into 600 ohm:	<.05	.01	% 1 kHz THD + Noise
	<.05	.01	% IMD PER SMPTE
Range of EQ Control:	±18	±20	dB

SPECIFICATIONS (CONTINUED)	GUARANTEED	TYPICAL	UNITS
Low Freq. Shelving fo:		280	Hz
Mid Freq. fc:		2	kHz
High Freq. Shelving fo:		2.5	kHz
Compressor Threshold:		0	dB
Compressor Ratio:		20:1	dB/dB
Compressor Attack Time:		1	ms
Compressor Release Time:		1	s/20 dB
Compressor Gain Range:		±20	dB
Expander Slope:		1:2	dB/dB
Expander Attack Time:		10	µs
Expander Release Time:		1	s/20 dB
Expander or Gate Max. Attenuation:		60	dB
Gate Slope:		1:20	dB/dB
Gate Attack Time:		10	µs
Gate Release Time:		2	s/20 dB
Line Output Source Impedance:	50	44	ohm
Line Output Attenuator Source Impedance:		150	ohm
Line Output Max. Level Before Clipping:	+24	+26	dB
Line Output Attenuator Nominal Output Level:		-50	dB
Signal Processor Static Distortion:	<.1	.05	%

SPECIFICATIONS (CONTINUED)	GUARANTEED	TYPICAL	UNITS
Output Noise and Hum, Rsource=600 ohm, Rload =600 ohm, Processor Only:	-83	-85	dB
RFI Rejection: (Electric Field, .1 to 400 MHz)	60	72	dB

NOTE: 0 dB refers to 0.775 Vrms; All noise measurements made
with rms-responding meters in a 20 kHz noise bandwidth; THD
measurements made with 3rd order low-pass filter having -3 dB
point @ 30 kHz. Specifications are subject to change without notice.

Electrical

Mains Input Voltage: 90-130/190-250 Vac, 50-60 Hz

Power Consumption: 14 VA Max.

Uses standard IEC cord and connector set.

RF and transient protection provided in power supply.

Mechanical

The 400 is packaged in a 1.75"X19" (482mmX1u) steel rack
mount package 8.5" (216mm) deep. Access to the 400's inputs
and outputs is achieved with 1/4" diameter, 3-conductor
plugs, such as Switchcraft 260, 290 series or equivalent,
and XLR or QG type 3-pin audio connectors.

Warranty

VALLEY 400 MICROPHONE PROCESSOR
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THE VALLEY PRODUCT LINE

810 KEPEX II

The KEyable Program EXpander is the world's most
versatile noise gate and expander. Its variable slope and
variable attack and release times suit it to all production
noise reduction chores.

APPLICATIONS: Noise reduction; Noise gating for
percussion instruments; Electronic music effects.
PACKAGE: 800 series module

811 GAIN BRAIN II

Gain Brain's Linear Integration Detection and Peak
Reversion Correction allow this limiter/compressor to
preserve correct musical relationships throughout the audio
spectrum.

APPLICATIONS: Limiting vocals, string instruments,
etc.;Enhancing apparent loudness of mixed program.
PACKAGE: 800 series module

812 MAXI-Q

This 3-band fully parametric equalizer features an
unique tune mode for rapid set-up and a 7 octave range for
each of the three filter sections providing unsurpassed
flexibility and ease of operation.

APPLICATIONS: Notching objectionable noises such as
acoustic feedback; General use as filter set; may be
used in conjunction with dynamics processors for vocal
stressing, de-essing, frequency selective gating, or
other interactive Signal processing functions.
PACKAGE: 800 series module

815 DYNAMIC SIBILANCE PROCESSOR

This unique tool allows sibilance to be removed from
vocal tracks and even completed mixes without affecting or
coloring the program information.

APPLICATIONS: Removing sibilance from master tapes when
cutting master disks; Control of sibilance for FM
broadcasting; Removal of sporadic high frequency noise
without added coloration.
PACKAGE: 800 series module

PR-2A

Valley's 800 series modules may be housed and powered by
this 2-module, 1.75"X19" (482mmX1u) enclosure. Ideal for
stereo processing using any two Valley modular products, or
for interactive signal processing using Maxi-Q and Kepex or
Gain Brain.

PR-10A

The PR-10 is a 5.25"X19" (482mmX3u) enclosure is
designed to house and power up to ten 800 series modules.
Valley's new rugged rack design features split power sources
and tough aluminum and steel construction, perfect for road
use or for permanent installations.

400 MICROPHONE PROCESSOR

Combining a high quality, low-noise microphone pre-
amplifier with a full complement of processing functions
including EQ, limiting/compression, expansion and gating, the
Model 400 is the complete microphone channel processor.
Among the features of this product are a Volume Indicator (vu
meter) and separate gain reduction meter, a pre-fader patch
for outboard processing or processor-only access, a de-esser,
and switch-selectable line level/microphone level balanced
output.

APPLICATIONS: Live studio broadcast; ENG and ENG post-
production; Mix minus interface for on-air consoles,
audio and video production.
PACKAGE: 1.75"X19" (482mmX1u) rack mount enclosure

430 DUAL LIMITER/EXPANDER/GATE

This multi-function signal processor can perform any of
18 variations of limiting, gating, expansion, AGC, envelope
following, keying, or voice-over gain reduction.

APPLICATIONS: General production and post production
processing and sweetening. May be coupled for stereo
operation or used as a two channel device.
PACKAGE: 1.75"X19" (482mmX1u) rack mount enclosure

440 LIMITER/COMPRESSOR/EXPANDER

Only from Valley could you expect so much signal
processing power in a single unit. The Model 440 can

simultaneously compress, limit, expand, and perform
dynamic sibilance processing for suppression of objection-
able sibilance in mixed material. An "Auto" control mode
reduces set-up of the compressor and expander sections to the
selection of more or less processing at the turn of a single
control. Use of Linear Integration, Peak Reversion
Correction, Anticipatory Release Computation, and fully
interactive control assures freedom from processing artifacts
and distortion. The 440 is the best dynamics processor on the
market today at any price.

    APPLICATIONS: AGC and compression/expansion for
    broadcast; Production and post-production sweetening;
    AGC/compression, limiting, and clipping for uplink
    program feeds; compression and sibilance suppression for
    all post- production processes.
    PACKAGE: 1.75"X19" (482mmX1u) rack mount enclosure

GATEX FOUR-CHANNEL GATE/EXPANDER

    For the first time, you can buy four high quality gates
in a single package for about the same amount you'd expect to
pay for a single unit. That's not all; the GATEX's two ex-
pand modes are perfect for keyboards, strings and general
noise reduction chores.

    PACKAGE: 1.75"X19" (482mmX1u) rack mount enclosure

610 DUAL COMPRESSOR/EXPANDER

By combining the best features of Valley technology, such as Linear Integration, Peak Reversion Correction, and symmetrical release, the 610 provides the capacity to perform interactive expanded compression so imperceptibly, you may not believe your ears. This device has been called the best available by producers and mastering engineers world-wide because of its incomparable transparency and ease of operation. The 610 simultaneously limits or compresses and performs one-way apparent noise reduction. No other stereo signal processor on the market can touch it for the price.

APPLICATIONS: Production and post-production sweetening; Processing noisy mixes; AGC and noise suppression for program feeds in broadcast or cable installations; Processing noisy STL feeds and down-link program sources; May be coupled for stereo operation or used as 2-channel device.

PACKAGE: 3.25"X19" (482mmX2u) rack mount enclosure

HH2X2B LEVEL MATCHING INTERFACE

You've seen these in every station or studio in which you've visited or worked; now you know who makes them! The HH2X2B is invaluable for interfacing professional equipment to semi-pro and musical instrument electronics, as well as CD and VCR feeds. Line level inputs and sources are balanced with XLR connectors, while -10 dB inputs and sources are unbalanced with RCA phono (HI-FI) connectors.

APPLICATIONS: Amplifier/attenuator set for connecting -10 dB sources and inputs to +4 dB and +8 dB recording and production equipment.

PACKAGE: 1.7"HX8.5"WX4.9"D (43mmX216mmX125mm) steel package. Requires external power supply (included with each unit). 1.75"X19" (482mmX1u) rack mount adapter available.

Important Information
for
Valley Model 400 Users

The Valley Model 400 Microphone Processor owes its startling clarity and exceptionally low noise figure to the use of an unique proprietary transformerless balanced microphone preamplifier.
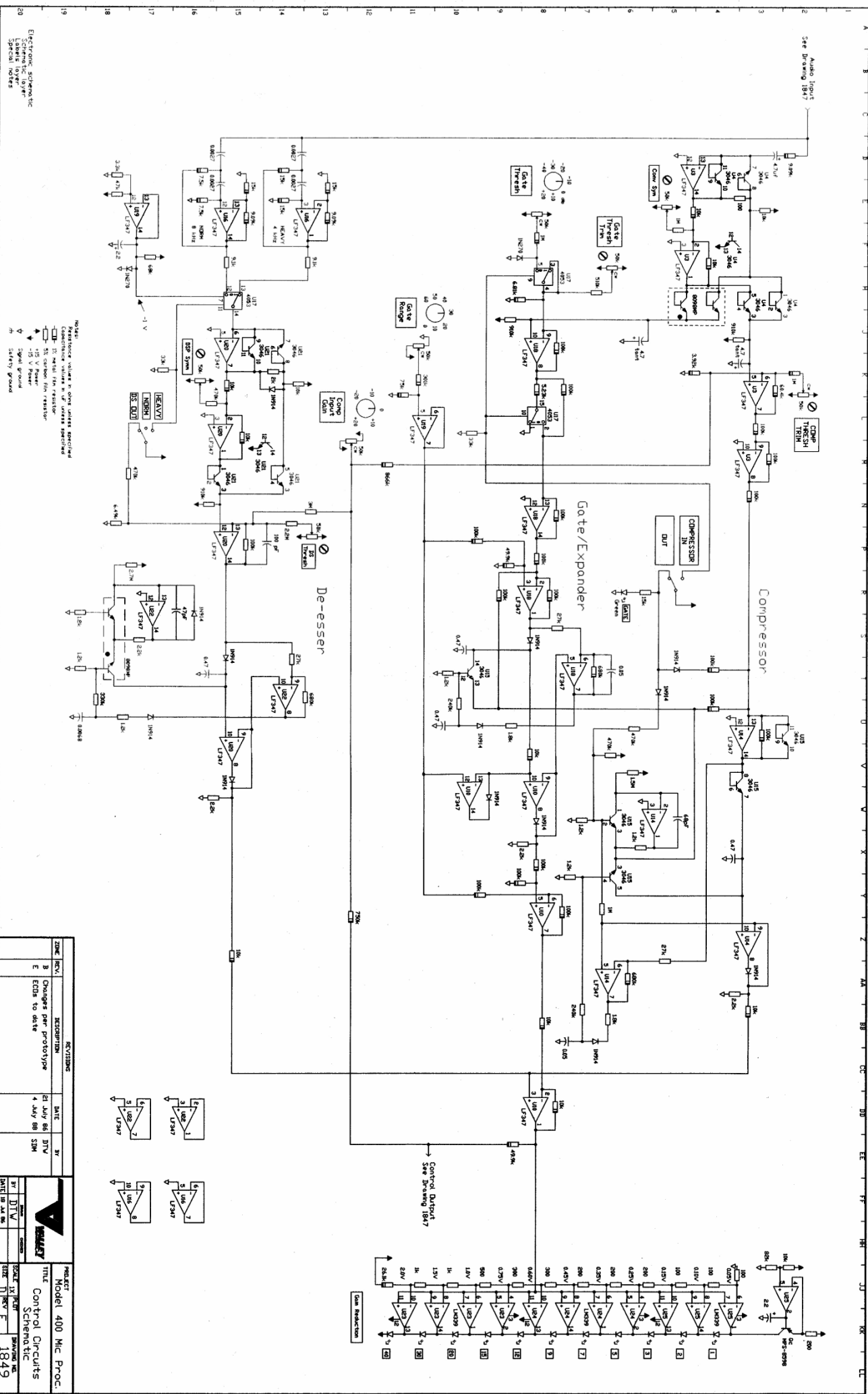
The preamplifier is capable of rejecting broadband common mode signals more completely than is possible by use of a transformer (CMRR > 100 dB), but must be installed in such a way as to present equal line impedances at radio frequencies from the high and low outputs of the microphone to the high and low inputs (pins 3 and 2) of the Model 400.

In most installations, the use of foil-shielded wire having two conductors and a ground will provide satisfactory results, with only slight degradation in the quality of the signal from the microphone. Please note, however, that for optimum performance, especially in the presence of a strong RF field, the Model 400 should be installed using a high-quality microphone cable.

Microphone cable suited for use with the Model 400, or any high-quality, low noise microphone preamplifier, should have three Litz wire conductors and a wrapped, stranded copper shield. Several manufacturers produce such cable, which is specifically designed for use with microphones; among them are Canare, Mogami, Monster Cable, and Gotham Audio. In using the cable, follow the wiring diagram shown below.
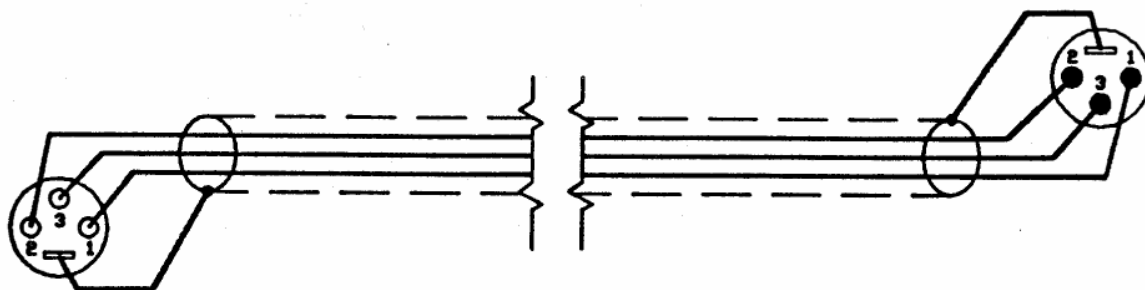
If ready-made microphone cables are used, inspect the connectors to insure that pin 1 is not connected to the shield or the shield of the connector itself.

Audio Path Schematic — Model 400 Mic Proc.

Notes:
Resistance values in ohms unless specified
Capacitance values in uF unless specified
#1 Break J1 for separate signal and safety grounds
#2 Use J2 for 110V, J3 for 220V
   1% metal film resistor
   5% carbon film resistor

Electronic schematic
Schematic
Labels layer
Special notes

Audio Input
See Drawing 1847

De-esser

Gate/Expander

Compressor

Gain Reduction

Control Output
See Drawing 1847

Comp Sym
Gate Thresh
Gate Thresh Trim
Gate Range
Comp Input Gain
DS Sym
HEAVY
NOTCH
DS OUT
DSP Sym
DS Thresh
COMP THRESH TRIM
COMP THRESH IN
COMPRESSOR IN
GATE
Green

NOTCH 8 kHz
HEAVY 4 kHz

Notes:
Resistance values in ohms unless specified
Capacitance values in µF unless specified
5% metal film resistor
5% carbon film resistor
+15 V Power
-15 V Power
Signal ground
Safety ground

Electronic schematic
Schematic layer
Labels layer
Special notes