

Soundgas Type 636P2 User Guide

Note:

1. This is a generic version of the guide. Individual units will also be supplied with frequency response plots specific to that Type 636P2.
2. This guide also has an added appendix with additional notes from Ben, chief engineer on this project, and a brief history of how we came to develop the unit from Tony.

Thank you for purchasing the Soundgas Mic Preamplifier Type 636P2 based on the high gain preamp stage of the infamous Grampian Type 636 Reverb. A quick tour of the controls and connections should be enough for you to start using your unit. Below that are frequency response curves for your specific units, and additional information on this magical circuit.

QUICK START GUIDE:

Rear Panel:

- **Channel 1 & 2 Balanced XLR Inputs/Outputs** - patch your unit in to have a constant source of balanced, in phase with the source, versatile Germanium amplification and texture.
- **Power socket** - IEC socket
- **Fuse Holder** - 100 mA for 240VAC (UK/EU) / 200mA for 115VAC (USA/Japan)
- **Voltage Switch** - Ensure correct voltage selected for your region and correct fuse for your chosen voltage. We will send your unit ready for use in the region we ship to with the correct fuses and IEC.

Front Panel (from left to right):

- **Power Switch**
- **Channel 1 controls:**
- **Break In** - A balanced jack input that allows you to interrupt the rear XLR input without interrupting the rear XLR output. This gives you the option to connect, for example, a mic, synth, guitar or drum machine. Please note: if you are using an unbalanced jack (which is fine), you may get some bleed if you are still inputting a signal via the rear inputs (not something you're likely to do intentionally).
- **Impedance** - allows you to lower or increase the input impedance to match the input source and/or which provides interesting/alternative sonic results.
- **Gain** - lots of gain, no pain :)
- **Break Out** - Allows you to interrupt the signal to the rear output with the key difference that it bypasses the balancing transformers. This allows patching the channel in as a fuzz/overdrive, but returns the circuit to completely original Grampian spec, delivering a raw unbalanced signal out-of-phase with the source.
- **Overload Light** The response of this will vary depending on the input source. We have calibrated it to begin illuminating when a -60dB 1K sine wave begins to clip.
- **Channel 2 controls:** as Channel 1.

IMPORTANT NOTES:

1. This is a very high gain preamp and we urge caution when starting. Please begin with a low gain when putting a new signal through it.
2. We are in no way accountable for blown speakers, minds or trousers.

MORE INFORMATION:

For more information and history relating to the original Grampian Type 636 Reverb please visit the "Resources" section on our website. This unit came into existence because we set out to create a modern version that truly replicated the magic of the original 1960s reverb units. Having done that, we made a standalone preamp unit which became the Type 636P. It is this that is found (twice!) inside the unit you have in front of you.

In replicating the preamp stage of the original 636s and adding our own buffer stage, each channel uses a configuration of 4 Germanium Transistors: New Old Stock, sourced and paired with tender loving care. In each unit there are 2 x AC107s, 4 x OC45s and either 2 x AC188s or 2 x AC128s. Each transistor is chosen to ensure maximum amplification with minimal leakage.

This achieves the super high gain circuit where 0.001 volts AC input at 1k will produce 0.85 volts into a 600 ohm load output. In decibels -60dB input will produce +1 dB output within a 5% tolerance. Or to put it another way: it's loud!

The original 636 returns a signal out of phase with the source. To "correct" this and make the unit easier to use in a studio we introduced balancing output transformers designed by AML and manufactured by Carnhill. These enable the unit to return a balanced signal in phase with the source.

SOME ADDITIONAL THOUGHTS ON USAGE FROM BEN:

The units were originally intended as mic pres: using a SM 58 through them never sounded so fat. Alternatively using a Grampian Ribbon mic provides creamy delicious sonics, or the Grampian DP4 mics ensure a frazzle that is compelling. We have used the unit to mic up snares with a ribbon mic piped through the rear balanced, in phase output and then a DP4 for the snare bottom through the unbalanced out of phase "Break Out" output. (other mics are available)

The 636P2 is also a great tool for reamping, enriching or toughening up stems with that wonderful Germanium texture. If you tickle the input and find that sweet spot of gain stems will sound super rich with analogue warmth. Alternatively if you so desire absolutely annihilating your sonics with that lush harmonic distortion that Germanium delivers then drive the input and the gain til your heart's content.

Whilst the units are intended to be dual mono there is a definite pleasure in using them as stereo units with similar gain and frequency response. Though due to the nature of the Germanium crystal and its atmospheric reaction there will be subtle variations in gain and frequency responses.

If you use the 636P2 as an instrument DI it is absolutely crackers on drum machines and synths, from clear solid analogue warmth to absolute frazzled distorted crunch and fuzz.

As Pete Townshend discovered back in the sixties, you can plug in your electric guitar and crank the gain to max and achieve the most compelling distortion fuzz you've ever heard.

HISTORY OF THE SOUNDGAS TYPE 636 PROJECT BY TONY:

I've been using Grampian 636s for getting on for 30 years having 'discovered' one entirely by chance back when they languished unappreciated and unrecognised (it cost me around £70 and needed a fair bit of work - even then it was very noisy and more than a little unreliable). I knew nothing at the time of their history and use by Pete Townshend and Lee Scratch Perry, nor what it was that made these unprepossessing grey boxes so very special. They reacted to liberal overload abuse with such unbridled (and unequalled) ferocity that I was immediately hooked and thus began my infatuation with the Grampian Type 636. I now know, thanks to Huw, that this germanium transistor based circuit is of a slightly odd design (which explains why so few people seem able to figure out how to fix them well).

To say I am proud and humbled by our team's endeavours over the past three tumultuous years is an understatement. It all began when "Doctor" Huw rebuilt a Grampian Type 636 for our much-missed friend Philippe Zdar for his Motorbass studio. That unit had been stored on its side for 20-30 years with the battery at the top and was almost completely destroyed by acid leakage. I mentioned that as he'd almost built a new one in the process might that in fact be possible?

We'd never manufactured anything (Huw had custom built guitar pedals and synth modules). The new design had to be as authentic as possible but with lower noise and more low end: Huw triumphed and we cautiously set out to make ten replica Type 636s using refurbished vintage Gibbs tanks.

As soon as Huw had designed the 636, we discussed whether the mic preamp alone could be built in a standalone unit, and one appeared pretty quickly on my bench soon after (built into an old Binson Echorec faceplate we had lying around). Covid-19 played havoc with our plans and with Huw's health, and what would eventually become the 636P had to wait.

In the meantime we continued building small batches of Type 636s to satisfy demand and keep our newly-employed studio engineer Ben busy during lockdowns. There are now around 80 Soundgas Type 636s in existence and while we've no plans to make more using vintage tanks, we do have a new 636 reverb project in mind.

The 636P prototypes duly came along - the P designation in honour of Ben's Dad, Pete Hirst, who sadly passed away while the 636P was in development. In classic Soundgas style, what was intended as a prototype became the production version - the no-nonsense, minimal, aesthetic seemed fitting for our monstrous sonic wolf in sheep's clothing. Plaudits started coming - 'the only drive/fuzz I need' and 'this is the sound I've been searching for my whole life, thank you' are two that have stuck in my head. Again, what

started as a low key project has ballooned and we continue to handbuild small batches of Type 636Ps in our workshops.

At present, all 636 units are entirely built by our team here in Crich, England in the grand tradition of old school British audio manufacturing: made by hand by talented people who obsess over - and focus on - sonic detail above all else. My thanks and appreciation go out to our dedicated tech team who have created - or helped in the creation of - these units: Huw, Max, Ben, Oli, Will, and Ryan.

Thank you for purchasing this unit: we hope it brings you much joy and truly wonderful noises. Your support is very much appreciated by us all.

Do please share your experiences and music made with your Type 636P2 with us: this is what drives us - hearing what our friends and customers create with these incredible devices.

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More information: soundgas.com