

# INDUSTRIAELECTRIC

THANK YOU FOR CHOOSING INDUSTRIAELECTRIC. THE 4046-M NEEDS TO BE POWERED WITH A 9VDC (NEGATIVE CENTER TIP) BOSS, ONE SPOT, STYLE ADAPTOR. DEPENDING ON WHAT POWER SUPPLY YOU HAVE IT MAY NEED TO HAVE ITS OWN SUPPLY. IT MAY OR MAY NOT WORK WITH AN ISOLATED SUPPLY, BECAUSE THE CIRCUIT IS OBSCURE. THIS MAY VARY WITH DIFFERENT POWER SUPPLIES.

CURRENT DRAW: 44 MA

## 4046-M

THE 4046-M IS A VCO (VOLTAGE CONTROLLED OSCILLATOR) THAT TRACKS THE INCOMING SIGNAL'S PHASE AND LOCKS ONTO IT. IT THEN SPLITS THE OSCILLATOR SIGNAL INTO TWO HARMONIC VOICES WITH DIFFERENT INTERVALS FOR EACH SYNTH VOICE. THEN IT'S PUT THROUGH A VERY UNIQUE AND PRIMITIVE MODULATOR CIRCUIT WHICH THEN CAN BE TOTALLY MANGLED OR CAN CREATE VERY UNIQUE AND USEFUL SOUNDS.

## CONTROLS

### SYNTH SECTION

#### M: (MASTER)

THE OVERALL OUTPUT OF THE PEDAL

#### S1L: (SYNTH 1 LEVEL)

THE OVERALL OUTPUT OF THE FIRST SYNTH VOICE

#### S2L: (SYNTH 2 LEVEL)

THE OVERALL OUTPUT OF THE SECOND SYNTH VOICE

**P: (PUSH)**

THIS CONTROLS THE ATTACK OF THE INPUT SIGNAL TO THE VCO

**R: (RELEASE)**

THIS CONTROLS THE RELEASE OF THE VCO AND PHASE LOOP AFTER YOUR SIGNAL HAS STOPPED PLAYING, SIMILAR TO THE RELEASE IN A ADSR ENVELOPE

**L: (LOCK)**

THIS CONTROLS HOW THE VCO LOCKS ONTO THE INCOMING SIGNAL, IT RANGES FROM A TIGHT PHASE LOCK TO UNCONTROLLABLE PHASE LOOPING MADNESS

**R: (REGULATE)**

THIS IS A GATE CONTROL, TO EITHER THE LEFT OR RIGHT IT'S GATES OFF THE CONSTANT LOOPING VCO. STRAIGHT UP THE MIDDLE IT RELEASES THE VCO'S CONSTANT SCREAMING AND CAN BE USED TO DRONE OUT ALONE, WITH THE INTERNAL MODULATOR OR FOR NOISE APPLICATIONS

**G: (GENERATE)**

THIS IS THE OVERALL GAIN CONTROL

**S10: (SYNTH 1 OCTAVE)**

THIS IS THE INTERVAL OR OCTAVE SWITCH FOR THE FIRST SYNTH VOICE WHICH IS IN A HIGHER FREQUENCY RANGE

**S20: (SYNTH 2 OCTAVE)**

THIS IS THE INTERVAL OR OCTAVE SWITCH FOR THE SECOND SYNTH VOICE WHICH IS IN A LOWER FREQUENCY RANGE

**LL: (LOOP LENGTH)**

THIS SWITCH IS DIRECTLY TIED INTO THE RELEASE KNOB AND IT CONTROLS THE LENGTH OF THE VCO'S PHASE LOOP WHICH CAN BE LENGTHENED OR SHORTENED WITH THE RELEASE CONTROL

**O/D: (OFF/DIRECT)**

THIS SWITCH BREAKS THE CONNECTION FROM THE INTERNAL MODULATOR AND ROUTES THE TWO SYNTH VOICES DIRECTLY OUT TO IT'S CORRESPONDING OUTPUT JACK (**SDO: (SYNTH DIRECT OUTPUT)**)

**SDL: (SYNTH DIRECT LEVEL)**

THIS IS THE OVERALL OUTPUT OF THE TWO SYNTH VOICES, WHEN THE OFF/DIRECT SWITCH ABOVE IT IS ENGAGED

**MODULATOR SECTION**

**R/B/A: (RING / BIT / ARP)**

THIS SWITCHES BETWEEN THREE DISTINCT MODULATION MODES WHICH ARE VERY PRIMITIVE. A RING MODULATOR, A UNIQUE DATA/SAMPLE/BIT REDUCTION MODULATOR, AND A UNIQUE LFO/TREMOLO/ARPEGGIATOR. COMBINED WITH THE TWO SYNTH VOICES, IT OPENS UP EXTREMELY UNIQUE SOUNDS IN EACH OF THE MODULATOR MODES AND THE DIFFERENT INTERVALS OF THE OCTAVES CHANGES THE REACTION OF THE MODULATOR. ALSO WHEN USING THE MODULATOR ALONE, IT PROVIDES COOL MODULATION SOUNDS BUT IT'S SECRET LIES IN DRIVING IT WITH DIFFERENT EFFECTS. IT WILL CHANGE THE SOUND AND TEXTURES DRASTICALLY WHEN PUTTING DIFFERENT EFFECTS AND AUDIO SOURCES INTO THE MI: MODULATOR INPUT.

**MC: (MODULATOR CHANNELS)**

THIS SWITCHES BETWEEN THE THREE AVAILABLE AND DISTINCT MODULATOR CHANNELS FOR EACH MODULATOR MODE

**MS: (MODULATOR SWEEP)**

THIS IS THE OVERALL FREQUENCY SWEEP FOR THE MODULATOR

**MR: (MODULATOR RANGE)**

THIS IS THE OVERALL RANGE (TEXTURE) FOR THE MODULATOR

## **IN'S AND OUT'S**

### **I: (INPUT)**

THIS JACK IS THE MAIN INPUT INTO THE CIRCUIT AND ROUTES IT THROUGH THE TWO SYNTH VOICES AND MODULATOR WHEN THEY ARE CONNECTED

### **MI: (MODULATOR INPUT)**

THIS JACK IS THE INPUT TO THE MODULATOR SECTION AND IT BYPASS THE TWO SYNTH VOICES

### **SDO: (SYNTH DIRECT OUT)**

THIS JACK WHEN THE O/D SWITCH IS ENGAGED, BREAKS THE INTERNAL CONNECTION OF THE SYNTH VOICES AND MODULATOR AND ROUTES ONLY THE SYNTH VOICES DIRECTLY OUT

### **O: (OUTPUT)**

THIS JACK IS THE MAIN OUTPUT FOR BOTH INTERNAL SYNTH/MODULATOR CONNECTIONS AND WHEN ONLY THE MODULATOR IS BEING PROCESSED ALONE

### **BYPASS:**

THE BOTTOM RIGHT FOOTSWITCH BYPASSES THE ENTIRE EFFECT(S)

## **SPECIAL FUNCTIONS AND PATCHING**

THERE ARE ENDLESS POSSIBILITIES AND SOUNDS WITHIN THIS MACHINE, ONE VERY UNIQUE AMONG THE MANY FUNCTIONS AND SOUNDS IS THIS PRIMITIVE ARPEGGIATOR SETTING.

PATCH THE SDO JACK AND MI JACK TOGETHER

SET THE O/D SWITCH TO THE D POSITION

SET THE R/B/A SWITCH TO THE A POSITION

TURN THE MC SWITCH TO POSITION 2

TURN BOTH THE MS AND MR KNOBS FULLY DOWN TO THE LEFT, TURN THE SDL KNOB FULLY TO THE RIGHT AND USE THE M KNOB TO CONTROL THE OVERALL OUTPUT

NOW STRUM A SINGLE STRING OR PLAY WHATEVER AUDIO SOURCE INTO THE MAIN INPUT AND SLOWLY TRUN UP THE MR KNOB TO THE RIGHT. BEFORE A QUARTER OF THE WAY YOU SHOULD HEAR IT GO FROM A LOW-PASS FILTERED TONE INTO A UNIQUE RHYTHMIC WAVESHAPING OF THE TWO DISTINCT SYNTH VOICES. SETTING DIFFERENT OCTAVE INTERVALS EXPANDS THE SPACING IN BETWEEN THE TWO VOICES GIVING THEM THEIR OWN SEPARATE RHYTHMS. ALSO ADJUST THE S1L AND S2L KNOBS TO DISTINGUISH THE VOICES EVEN MORE, WHEN PATCHED IN LIKE THIS AND NO ADUIO IS PLAYING THROUGH, IT HAS ITS OWN UNIQUE PRIMITIVE DRUM BEAT. FUTHER MANIPULATION OF THE MS AND MR KNOBS WILL YEILD DIFFERENT RHYTHMIC SPEEDS AND A VERY WIDE RANGE OF EFFECTS.

AS ALWAYS WITH MY PEDALS, THERE ARE A MASSIVE AMOUNT OF SOUNDS TO BE DISCOVERED, EVEN TO THIS DAY, I AM ALWAYS HEARING ABOUT AND FINDING NEW SOUNDS WHEN OTHER PEOPLE OR I PLAY THEM. THIS PEDAL IS VERY INTERACTIVE, VERY NOISY AND VERY EXPERIMENTAL. TAKE IT SLOW, TWEAK AND HAVE FUN!



**WARRANTY:**

**ALL INDUSTRIALELECTRIC DEVICES COME WITH A 1 YEAR WARRANTY, PARTS AND LABOUR. THE WARRANTY IS VOIDED IF THE DEVICE IS DAMAGED BY ACCIDENTALLY / INTENTIONALLY USING IMPROPER POWER SUPPLIES (DAMAGING OR FRYING THE CIRCUIT) ACCIDENTAL / INTENTIONAL SPILLS (DAMAGING OR FRYING THE CIRCUIT WITH LIQUIDS) OR ACCIDENTAL / INTENTIONAL MISUSE AND ABUSE OF THE DEVICE AND CIRCUIT (PHYSICAL, FILTH, HEAT, COLD, MOISTURE, DIY OR TAMPERING)**

**IF THERE IS A PROBLEM WITHIN THE 1 YEAR WARRANTY, WE DO NOT COVER THE SHIPPING OF THE DEVICE BACK TO US BUT WE DO COVER THE PARTS, LABOUR AND SHIPPING OF THE DEVICE BACK TO YOU. AFTER THE 1 YEAR WARRANTY IF THERE IS A PROBLEM, SHIPPING BOTH WAYS IS NOT COVERED AND THERE WILL BE A PARTS AND LABOUR FEE FOR THE REPAIR.**

**THANK YOU SO MUCH! I REALLY APPRECIATE IT!**

**ANDREW**

**WWW.INDUSTRIALELECTRIC.COM**

**WWW.INDUSTRIALELECTRIC@HOTMAIL.COM**