VC RELABI GENERATOR
ADDAC405

LFO 1
LFO INT/EXT
OFF
FREQ.
GAIN

PLAY MODE
PAUSE
RESET
ADVANCE
TRIGGER

LFO 2
MODE FREE/LOCK1
OFF
FREQ.
GAIN

TOP THRESHOLD

RELABI WAVE

LFO 3
MODE FREE/LOCK1
OFF
FREQ.
GAIN

BOTTOM THRESHOLD

LFO4
MODE FREE/LOCK1
OFF
FREQ.
GAIN

GATE LENGTH
− ATTENUVERTER +

CV CONTROLS

− LFO 1 +
− LFO 2 +
− TOP THRESH. +
− BOT.THRESH. +

ALL OUTS
RELABI WAVE
G. LENGTH IN
TRIGGER IN

OUTPUT 1
OUTPUT 2
OUTPUT 3
OUTPUT 4

2020
ADDAC SYSTEM

ADDAC System
Instruments for Sonic Expression
Est.2009

ADDAC System™
10th Year Anniversary . 2009 -> 2019
INSTRUMENTS FOR SONIC EXPRESSION

INTRODUCING
ADDAC405
VC RELABI
GENERATOR
USER'S GUIDE . REV01
October.2020

ADDAC
System

From Portugal with Love!

# Welcome to:
# ADDAC405 VC RELABI GENERATOR USER'S GUIDE
Revision.01 October.2020

# DESCRIPTION

In 2009 John Berndt coined and defined the term Relabi in his essay "Relabi": Patterns of Self-Erasing Pulse, these are his own words: "Relabi, Def.: The experience of a palpably coordinated plurality of events that appears to be cyclical but simultaneously suspends identification of a uniform pattern, preventing a resolved sense of pulse. Relabi therefore seems equally pulsed and unpulsed at the same time. It is an experiential gestalt, a quality of experience, greater than the sum of its parts (it forms a sustained unity in experience, albeit of a new kind)."
He also makes the question: "Why would anyone want this Relabi experience? I maintain that much of what is exciting in musical forms involves an interplay between the setting up and denying of pulse expectations."

Inspired by this idea we developed this module that is both a gate/trigger and cv generator that can be freely used to trigger events or act as a complex modulation source.
Four Sine LFOs are internally generated, each has controls for gain, frequency and mute(off). These 4 LFOs are then mixed together to generate what Berndt named the "Relabi Wave" this "wave" becomes a complex bipolar CV source. This ±5v bipolar "wave" can be monitored on the 2 dedicated leds and is also available at it's own Output.

Secondary LFOs Functions:
All secondary function can be changed by quickly toggling the switch from the the Up position (FREQ.) to the Middle position (OFF) and back to the Up position, to monitor this change the Trigger Button Led will blink once for the Left Function and twice for the right function (INT/EXT & FREE/LOCK1).

LFO1 INT/EXT:
 - Left function INT sets the LFO as an INTernal LFO, in this case the CV input will change the Frequency or Gain depending on the switch position.
 - Right function EXT sets the CV input to be a direct CV input into the LFOs mix, this CV input will then be mixed with the remaining active LFOs to create the "Relabi Wave". In this setting the Gain switch position has no effect as the CV can already be attenuated by the dedicated attenuverter.

LFO2, 3 & 4 FREE/LOCK1:
 - Left function FREE sets each LFO to be independent from LFO1.
 - Right function LOCK1 sets each LFO to be locked to the LFO1 frequency, in this case the Frequency setting will operate as a divider/multiplier of LFO1 (1/16, 1/8, 1/4, 1/3, 1/2, 1/1.5, 1/1.33333, 1*1.25, 1*1.333333f, 1*1.5, 1*1.75, 1*2, 1*3, 1*4, 1*5, 1*6, 1*7, 1*8).

# DESCRIPTION

The Relabi Wave will then be comparated to 2 Threshold points defined by the Top and Bottom Threshold controls.
Every time the Relabi Wave crosses one of these thresholds each specific Output will go on accordingly:
Output 1: Relabi Wave goes higher than Top Threshold
Output 2: Relabi Wave goes lower than Top Threshold
Output 3: Relabi Wave goes higher than Bottom Threshold
Output 4: Relabi Wave goes lower than Bottom Threshold

These 4 Outputs are variable length Gate outputs defined by the Gate Length controls.

Top Threshold Led Goes On When the Relabi Wave is higher than the threshold setting.
Bottom Threshold Led Goes On When the Relabi Wave is lower than the threshold setting.

The 4 Outputs are also converted to a Trigger and mixed down into the ALL OUTS jack.

## MEMORY
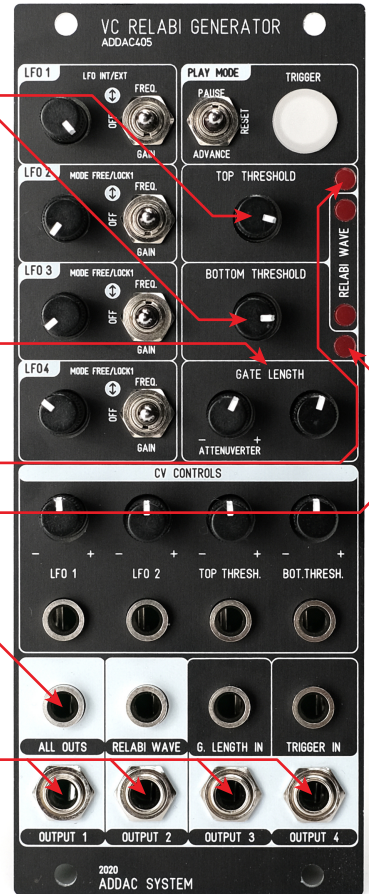All LFO settings are saved in memory and recovered upon start-up.

## PLAY MODES
PAUSE: in PAUSE mode the Trigger Button and Trigger Input will pause the generator and the Button Led will go ON.

RESET: at every TRIGGER Button Push or Trigger Input all LFOs will Reset and synchronize, this allows to generate repeateable patterns.

ADVANCE: at every TRIGGER Button Push or Trigger Input the generator will start running at its own time until it reaches the next cross point and then will pause, using the ALL OUTS this allows for a very peculiar kind of trigger delay.
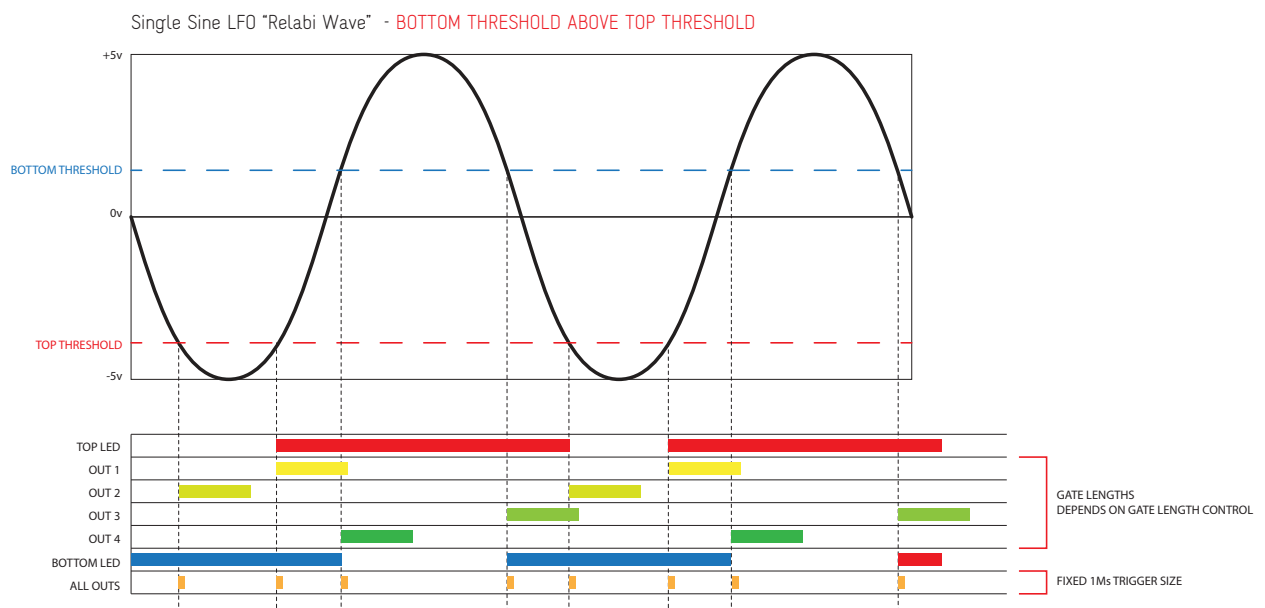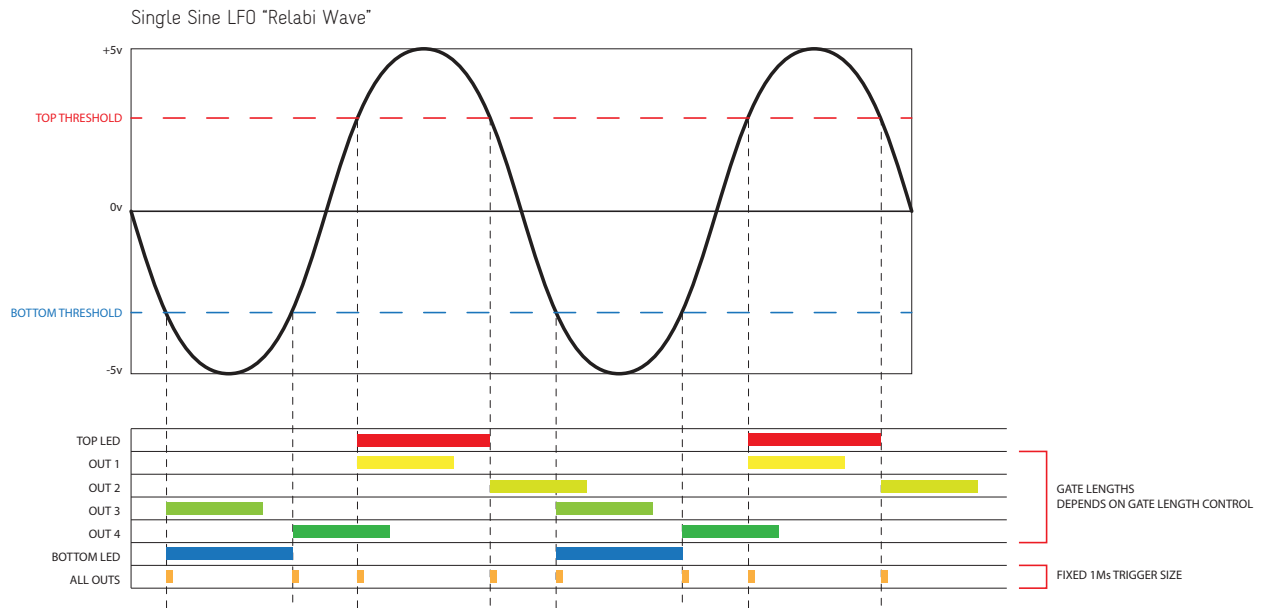
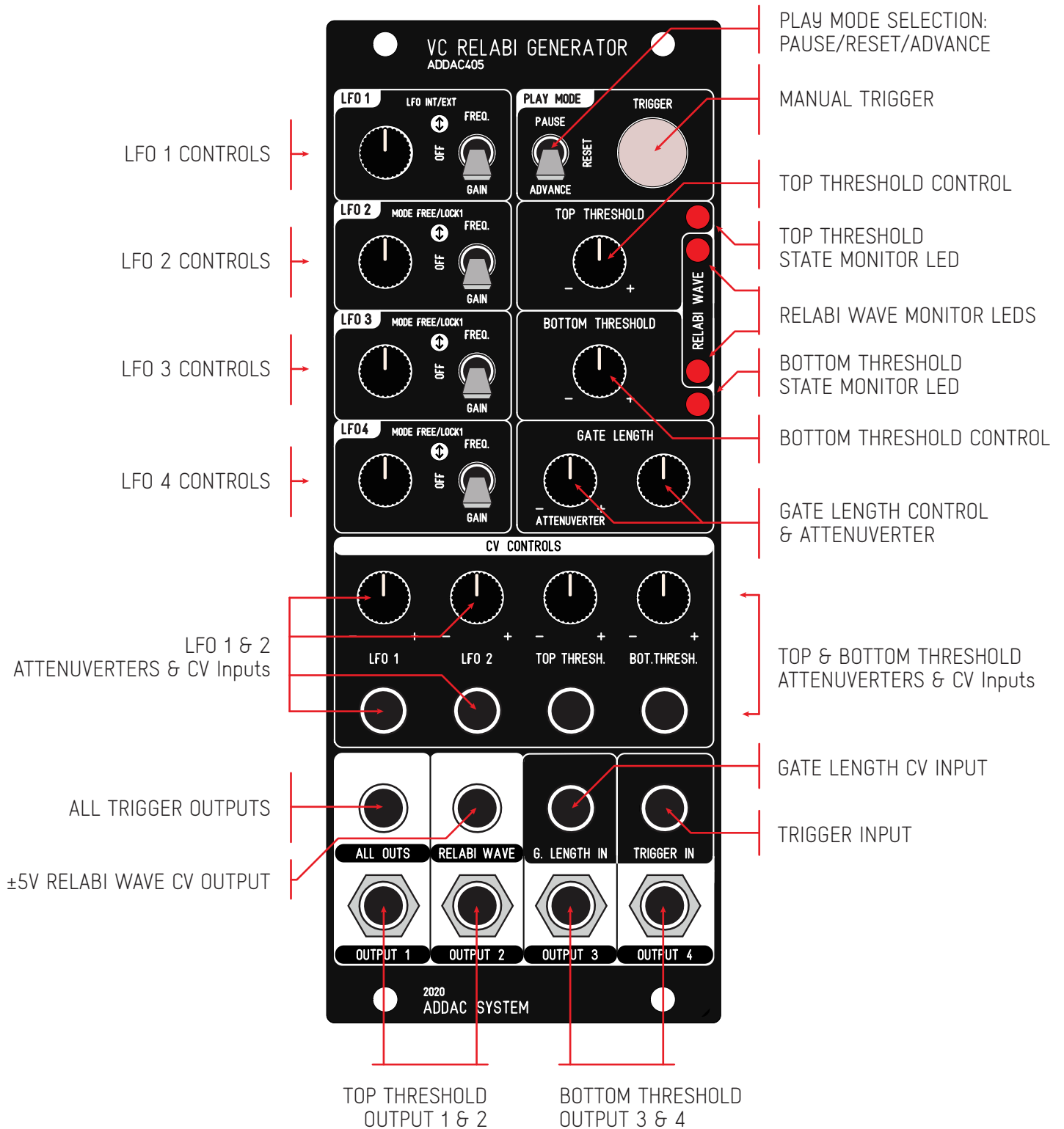This module will also be available as a full DIY kit.

Tech Specs:
10HP
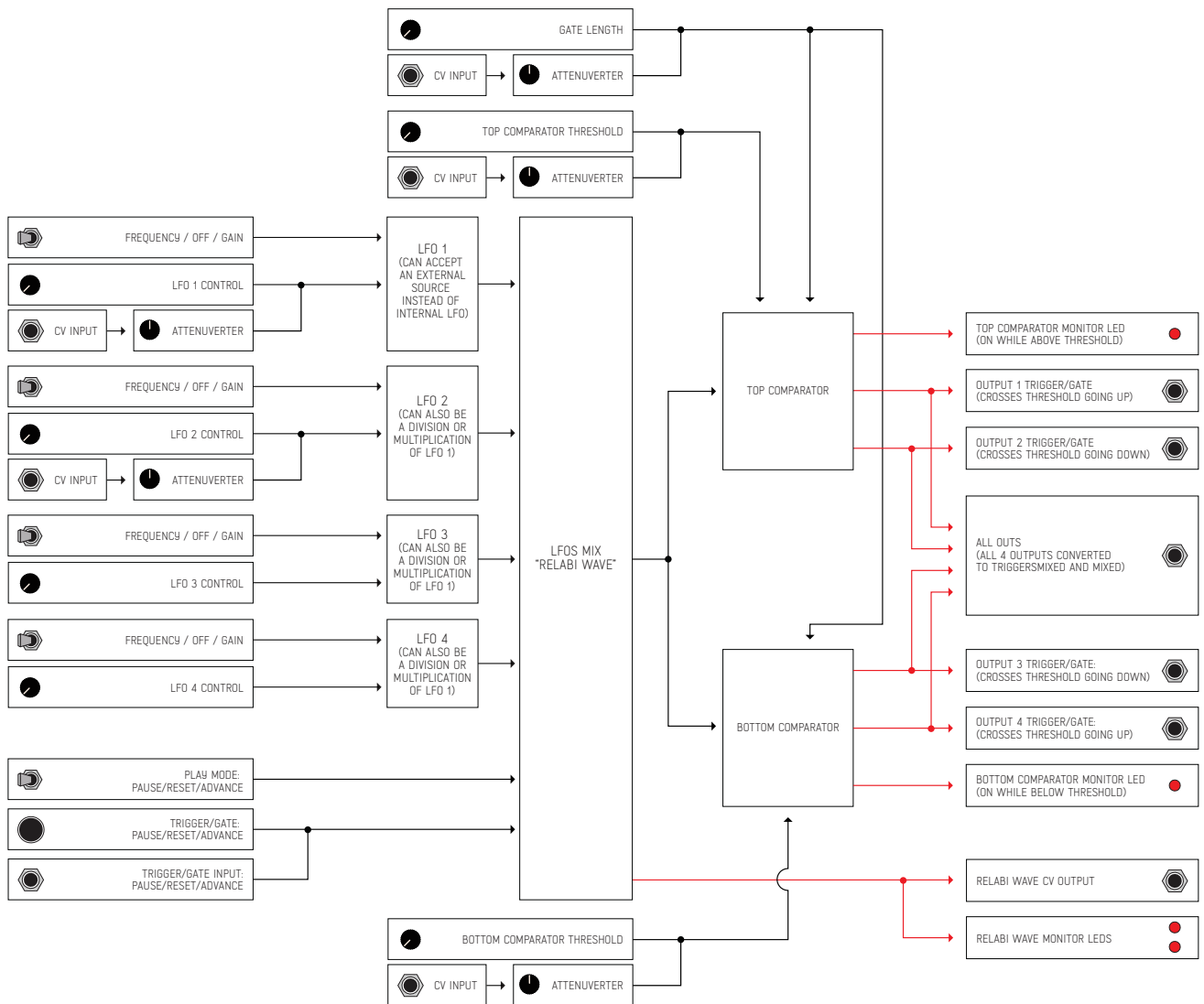4cm deep
100mA +12V
40mA -12V

# ADDAC405
# VC RELABI GENERATOR LOGIC TRUTH TABLE

Single Sine LFO "Relabi Wave"



Single Sine LFO "Relabi Wave" - BOTTOM THRESHOLD ABOVE TOP THRESHOLD

# CONTROLS DESCRIPTION

LFO 1 CONTROLS

LFO 2 CONTROLS

LFO 3 CONTROLS

LFO 4 CONTROLS

LFO 1 & 2
ATTENUVERTERS & CV Inputs

ALL TRIGGER OUTPUTS

±5V RELABI WAVE CV OUTPUT

**VC RELABI GENERATOR**
ADDAC405

LFO 1 · LFO INT/EXT · FREQ. · OFF · GAIN

LFO 2 · MODE FREE/LOCK1 · FREQ. · OFF · GAIN

LFO 3 · MODE FREE/LOCK1 · FREQ. · OFF · GAIN

LFO4 · MODE FREE/LOCK1 · FREQ. · OFF · GAIN

PLAY MODE · PAUSE · RESET · ADVANCE · TRIGGER

TOP THRESHOLD · − · +

RELABI WAVE

BOTTOM THRESHOLD · − · +

GATE LENGTH · ATTENUVERTER

CV CONTROLS

LFO 1 · LFO 2 · TOP THRESH. · BOT.THRESH. · − · +

ALL OUTS · RELABI WAVE · G. LENGTH IN · TRIGGER IN

OUTPUT 1 · OUTPUT 2 · OUTPUT 3 · OUTPUT 4

2020
ADDAC SYSTEM

PLAY MODE SELECTION:
PAUSE/RESET/ADVANCE

MANUAL TRIGGER

TOP THRESHOLD CONTROL

TOP THRESHOLD
STATE MONITOR LED

RELABI WAVE MONITOR LEDS

BOTTOM THRESHOLD
STATE MONITOR LED

BOTTOM THRESHOLD CONTROL

GATE LENGTH CONTROL
& ATTENUVERTER

TOP & BOTTOM THRESHOLD
ATTENUVERTERS & CV Inputs

GATE LENGTH CV INPUT

TRIGGER INPUT

TOP THRESHOLD
OUTPUT 1 & 2

BOTTOM THRESHOLD
OUTPUT 3 & 4

# ADDAC405
## VC RELABI GENERATOR SIGNAL FLOW DIAGRAM

**ADDAC405** USER'S GUIDE
Revision.01 October.2020