Using the Argonaut VI Band Switch ACC1

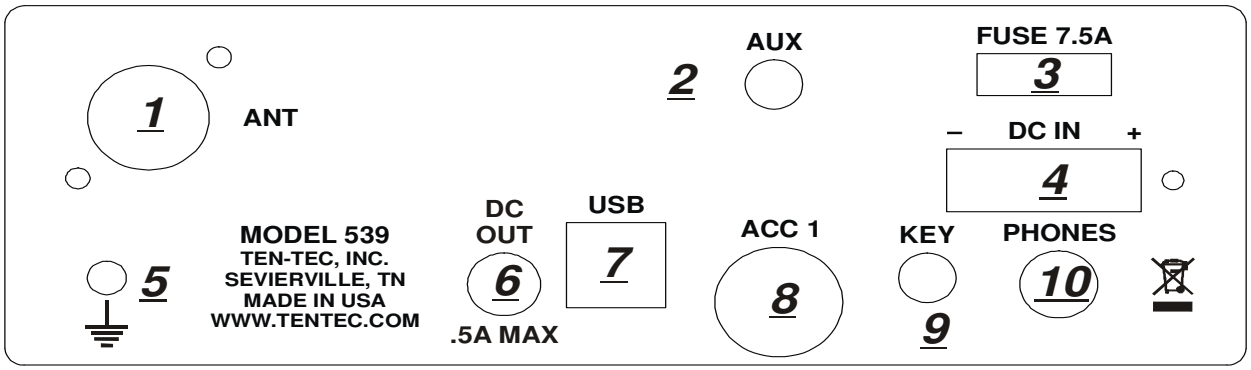


Fig 1 Argonaut VI Rear Panel

Introduction

The Argonaut VI provides band information that can be used by external devices. This information is available as an output on the clock, data, enable lines provided on the ACC1 (8) connector on the back panel. Internally these clock/data/enable lines are 3V, however, they go through a single gate buffer that provides two features. It protects the internal 3V lines from getting corrupted by external devices, and it also translates them to 5V logic levels. Therefore, output pins from the Argonaut VI Model 539 are 5V logic level. If you are going to drive the Model 418 100W amp with something other than the 539 then the driving voltage should be 5V Logic Levels. Even though these lines are protected, care should be taken to not drive these lines with an external device. Doing so could generate unknown conditions within the Argonaut VI hardware.

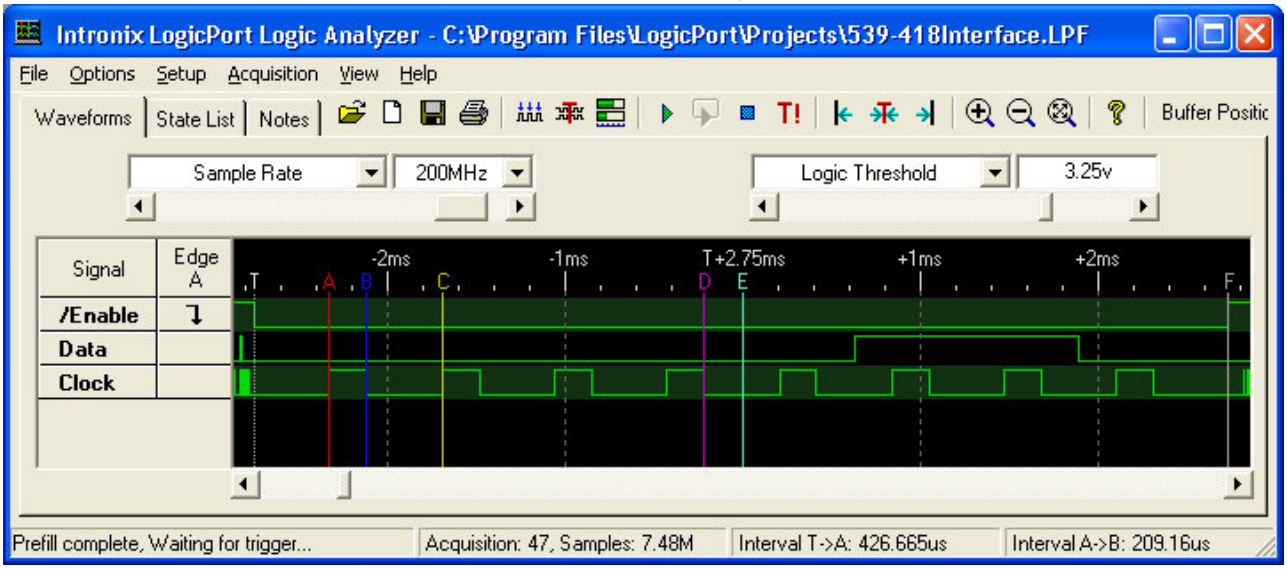
The data is transmitted given a protocol that covers all HF bands + 6 meters. The protocol is expandable and therefore external devices decoding the information should take care to handle data length that will grow in time adding new features as they are developed. Taking care to decode the information that they are looking for and discarding the other data bits.

The data is represented as packed Binary Coded Decimal, where a range of bits defines a specific data item. The bit definition is as follows:

Bits 7:4 (MSB)	Bits 3:0 (0=LSB)
Tbd, Future Definition For all cases, should be Binary 0000	Band Selected Decimal Binary Meaning 1 0001 160meters 2 0010 80meters 3 0011 60meters * 4 0100 40meters 5 0101 30meters 6 0110 20meters 7 0111 17meters 8 1000 15meters 9 1001 12meters * 10 1010 10meters 11 1011 6meters * 12 1100 2meters * 13 - 15 1101 - 1111 tbd * * = Defined in protocol, but will not be sent by 539 because it doesn't support these bands.

Table 1 Bit Definitions

Data bits are clocked in MSB first. The following trace shows 20 meters selected.



Timings for the clock/data/enable generated by the Argonaut VI are shown in the above example. As shown, the Clock High Time is ~210us and then Low for ~420us, yielding one clock pulse every 630us. These times do not have to be exact. Clock High Time can be decreased to no less than 80us and low time of 160us. If problems arise, use the recommended 210us Clock High Time and 420us Clock Low Time.

ACC 1 (8)

The Argonaut VI is equipped with an 8 pin accessory connector. Refer to following figure for the pin definitions as viewed from the rear panel. (This drawing shows the orientation of the connector as viewed directly from the back of the Argonaut VI, whereas the User Manual is rotated for easier viewing from above.)

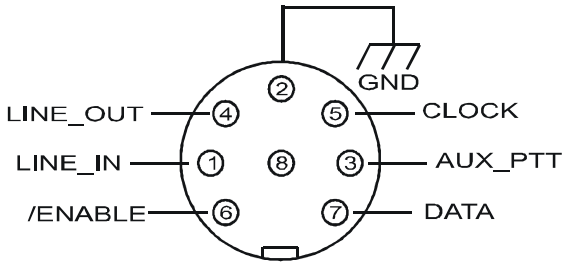


Figure 2 ACC1 Pin out

The pin out and function are listed in the following table:
Note: lines that required for this to operate properly are denoted with RQD in the Pin column.

Pin	Name / Direction	Usage
1	Line In / Input	Please refer to the Argonaut VI Model 539 user manual.
2 RQD	Ground	Grounding
3	Aux PTT / Input	Please refer to the Argonaut VI Model 539 user manual.
4	Line Out / Output	Please refer to the Argonaut VI Model 539 user manual.
5 RQD	Clock / Output	Clock Pin for Linear Amplifier Control Model 418. Active high. This pin should be ignored unless /Enable line is active. This pin is used as the Clock line for other devices/ICs internally; therefore it must not be driven by an external device.
6 RQD	/Enable / Output	/Enable Pin for Linear Amplifier Control Model 418 /Enable is active low (i.e. low logic level during the 8 bit Data stream)
7 RQD	Data / Output	Data Pin for Linear Amplifier Control Model 418. Active high. Must be stable prior to the rising edge of the Clock Pulse. This pin is used as the Data line for other devices/ICs internally; therefore it must not be driven by an external device.
8	Amp Key Line	Please refer to the Argonaut VI Model 539 user manual.

Table 2 ACC1 Pin out