Info on the Oric serial interfaces

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Most of the serials for Oric (all?) use the ACIA 6551 as communication controller.

Some interfaces simply signals directly used by the 6551 (the levels are then TTL) but usually are added level converters for RS232 compatibility.

These converters of levels allow a limited number of signals, then for the sake of economy, almost all the serials for Oric are incomplete: some signal of the RS232 standard does therefore not supported. For example, a component such as the MAX232 allows only two input and two signals output, i.e. a single control modem input and output signal.

In addition to the address in memory of the ACIA 6551, the serials for Oric differ so the choice of managed signals. This choice is not innocent with a component such as the 6551, which implements the RS232 Protocol "in his way"... Indeed, the DCD input signal must be active (at low level) that the 6551 accept data arriving on the PIN receipt RxD (i.e., that the operation of the receiver is directly related to the State of this PIN): it is an information to keep in mind if you want to connect a modem to your Oric, because you receive no data until the modem is not connected to another via the telephone line)which means that you will not receive any echo of dialing commands). Similarly, the CTS input signal has a direct impact on the operation of the transmitter of the 6551: CTS must be active (low level) so that the 6551 actually sends data. If you connect a modem to your Oric, verify that the modem activates well this signal.

To avoid these problems, some interfaces do not use these input signals (the corresponding pins of the 6551 are connected to ground), other support generally one or two input signals (of DCD, CTS and DSR; RI is not supported by the 6551 but nothing prevents someone to direct this signal to an other input pin for an application from Server BBS for example...)

Even if you connect the Oric to another computer via a null-modem link, the remarks above are to be taken into account. There are also at least two types of null-modem, one with a binding cables three sons (emission, reception, mass) with local connections of control signals, the other with cross-connections of the control signals. Received control signals can be very different depending on the type of cable used and the fact that your interface handles or non-control output (DTR, RTS) signals.

In short, you have understood, at the hardware level, in the absence of a true extension series sold by Oric International, it is a real jungle, there may be a very high diversity of Oric serial interfaces (and I failed the basic interfaces that do not connect the interrupt the 6551... INTR PIN).

Difficult therefore to programs which work for all of these interfaces, and if you have a serial interface, you need to know quite precisely how it works.

On the other hand, I think that there are not many people who have serials on Atmos, while of course all Telestrat are equipped with. I am therefore in favour of the recommendation of a "standard interface" for Atmos, inspired by that of the

Telestrat, and which allow to reduce this diversity and simplify connections: same address for ACIA ($031C), and minimum support of two control signals from the modem (DCD, DTR). I chose not to use the RTS/CTS pair because flow control using these signals may have to lose data with the functioning of the ACIA 6551 (when a character is being transmitted), and the DCD pin provides information more important than DSR in the case of a connection to a modem (and null-modem connections signals whether the connected computer is ready).

The interface-specific info series the Telestrat

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The Telestrat uses a 6551 ACIA to manage communications series, this component allows you to fly \* a \* serial communication, but at the back of the Telestrat found both an RS232 and a DIN (for Minitel) plug: one of the two jacks can work both! The selection of the decision-making is done by software (using some commands of HyperBasic force one or other of the catch, for example SSAVE selects the RS232 interface, while MPRINT selects the Minitel interface).

If you are developing a program without using HyperBasic, consider position bit 4 of the port A of the VIA2.

For example:

POKE #321, PEEK(#321) GOLD 16

to activate RS232 socket.

The DIN of the Telestrat socket

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Voltages on the DIN plug are TTL levels (0 and 5V), the socket was designed to connect to Minitel (originally on the Stratos, the socket pinout was slightly different: on the motherboard Telestrat amendments pass a signal with a diverter...). Not all the conventional signals to control a modem are present on this socket.

Taking the Telestrat RS232

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Caution, the socket could make you believe that the serial port is a DCE (Data Communication Equipment) port. No, it is a Data Terminal Equipment (DTE) port as on all computers: you should probably use a gender changer or a specific cable.

The Telestrat contains circuits MC1488/MC1489 torque, which allows him 3 input (RxD, DCD and CTS) and 3 output (TxD, DTR, RTS) to the RS232 socket signals: DSR and RI signals can therefore be used (the ACIA DSR input is curiously connected to the + 5V instead of the mass).