Simulate the function Part 1

The simulation in TARGET 3001! is a matter of the schematic, so we switch over to it:



In order to simulate the LED function we need a voltage source, and a load resistance. Those components will not be part of the layout therefore they don't have a package. Find such components in the database. See sidebar icon:



It will open the component browser close to the sources. Select the V_SINUS and import it:

TARGET 3	001! compo	onents			
Component	Package	Options E	dra Impo	rt/Expo	rt Update Debug
Quick select	Parametrica Search Con	I search Pack nponent types a <u>I</u>	age My conduction	omponer Compor	nts from before V15 nent lists <mark>Ity component</mark>
stiftleiste	Referenzsymb	ole Zeichnun	gsrahmen	Generic,	. simulation and modeling
V_EXP V_FM V_pulse V_PWL V_SINUS 0402YD10 0-0HM 2259.181	DARAT2A	SCHALTER T	HT		
V_SINU Manufact Descriptic	S <u>IB</u> urer: <not on: Voltage</not 	E ciear> source SINU	JS		Import component Without warranty!
ARGET 3001	Componer			1	

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After we have placed it, the schamatic might look that way:



Following the convention that in a schematic the sources should be on the left hand side it is necessary to rotate the diode because we have to recognise it's polarity. Delete the connections then touch and hold the diode at it's handle cross <u>M1H</u>. Press right mouse key <u>M2</u> two times in order to rotate it. Now connect it new. Reduce the size of the font by a double click each on the text and entering to the dialog smaller font hights and widths. Connect the source pins towards the connector pins and confirm each the suggested signal names (+) and (GND).

Concatenate signals		x
When inserting this sig will concatenate seve	nal segment, you ral signals!	1
	+ + K	
These signals will b	e concatenated to:	
	or	
or Signal: 🚦		
_	-	

oncatenate signals	X
When inserting this signal segment, you will concatenate several signals!	
- + GND	
These signals will be concatenated to:	
or	
or Signal:	-
	_

That's the way the schematic looks now:



The load resistance we pick from the database. Open it by the key **[Ins]** and enter a bare "R" to the search line of the "Quick select" tab.

TARGET	3001! components
Componen	It Package Options Extra Import/Export Opdate Debug
Outiel: celeet	
QUICK SEIECU	Parametrical search Package My components from before V15
	Search Component types and groups Component lists Image: Search in component description Report missing or faulty component R Search ?
R	
11377 com	nponents; 1 hits (green); search: [Component: R]
Componen	it name
μ47810C μA7812C μA7815C μA7824C 08_6224_ <	KTER KTER KTER _020-KYOCERA
R Manufact Descripti	turer: <not clear=""> Import component Without warranty!</not>
1.00	1 Componer ARGET 3001 Package
DIN	E Pitch = 10 160000mm

Import it to the schematic and and connect it accordingly. Having done some font adjustments the schematic now might look like this:



Now we set the values for source and load, first <u>M11</u> on the handle cross of the resistor. Now we enter component value "200", this stands for 200 Ohm:

Position:	24,130	1000 36,8	330000	mm	
	chang	change X and Y position 🔹			
🛛 Symbol No.:	1	📝 Suffix:	a		
🖉 Swap No.:	0	📝 Page:	1		
V Insert:					
Component: F	11, R }	⊘ No.: 1		ID=1753	
Value:	No pac	kage placed yet (ł	nandle witho	ut checkmark)	
Simulation values	: Cor	mponent info	Pr	operties	
				1	

Press OK. Now press <u>M11</u> upon the handle cross of the sinus source:

Position:	-13,9	-13,970000 27,305000		mm
	char	nge X and Y positior	ı ▼	
🗸 Symbol No.:	1	V Suffix:	a	
🔽 Swap No.:	0	🔽 Page:	1	
✓ Insert: Automatically Insert as Next ▼				
Component:	Sim1, V_SINU	S		ID - 20745
Prefix:	Sim	 		ID=23740
🔽 Value:	12			
			No pac	kage required
Simulation valu		Component info	Pro	perties
Variants	Cor	nponent info V11	Data s	heet V11

We define it's component value by 12 (meant is 12 V). By the use of the "Simulation values" button in the same dialog we set the frequency. In the following dialog press button "Edit". Afterwards a setting of the parameters can be done:



At "FREQ" enter value 50. Now the preliminaries are done. We confirm all dialogs and the schematic is ready for simulation.