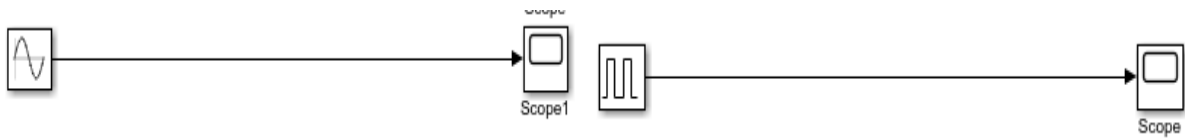
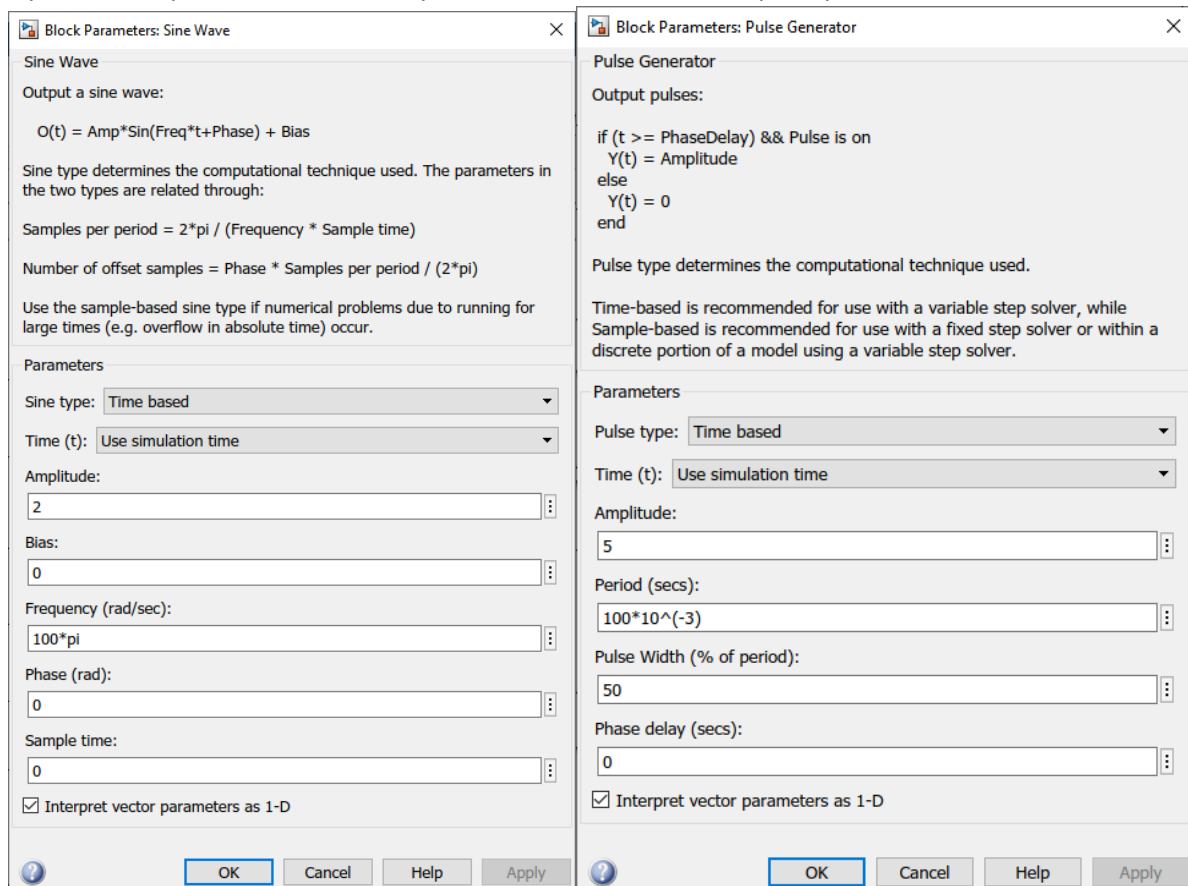


Пункт 2: поставил на поле источники синусоидального тока и тока прямоугольного тока.



Пункт 3: настроил источники синусоидального тока и тока прямоугольного тока.



Пункты 4-5: Установил осциллографы и соединил их с источниками

Пункт 6: Настроил параметры моделирования

Configuration Parameters: Balashov_LR1/Configuration (Active)

Search

- Solver
- Data Import/Export
- Math and Data Types
- Diagnostics
- Hardware Implementation
- Model Referencing
- Simulation Target

Simulation time

Start time: 0.0 Stop time: 0.2

Solver selection

Type: Variable-step Solver: auto (Automatic solver selection)

▼ Solver details

Max step size: 2e-3 Relative tolerance: 1e-3

Min step size: auto Absolute tolerance: auto

Initial step size: auto ☒ Auto scale absolute tolerance

Shape preservation: Disable All

Number of consecutive min steps: 1

Zero-crossing options

Zero-crossing control: Use local settings Algorithm: Nonadaptive

Time tolerance: 10*128*eps Signal threshold: auto

Number of consecutive zero crossings: 1000

Issue a diagnostic if consecutive zero crossings occur

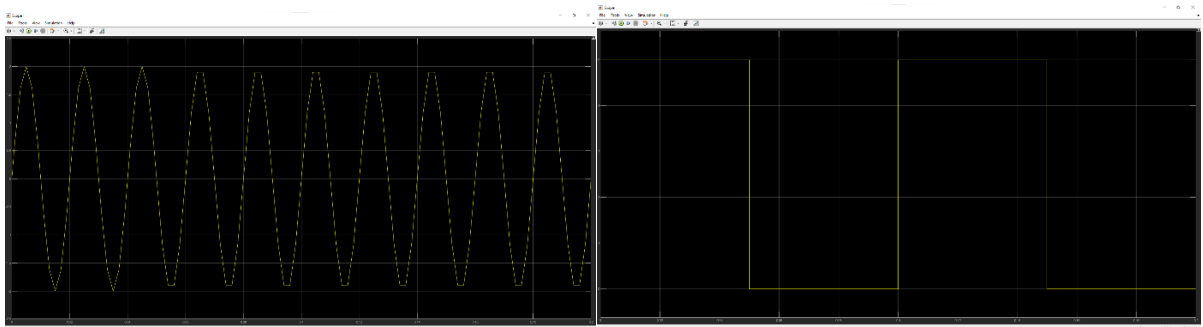
Tasking and sample time options

☐ Automatically handle rate transition for data transfer

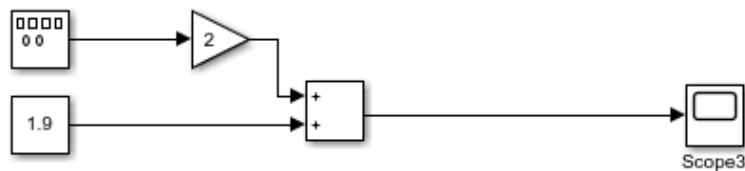
☐ Higher priority value indicates higher task priority

OK Cancel Help Apply

Пункт 7: Результат:



Пункт 8: Изучил источники сигналов и блоки из Math Operations



Signal generator, Constant and Gain

Block Parameters: Constant

Constant

Output the constant specified by the 'Constant value' parameter. If 'Constant value' is a vector and 'Interpret vector parameters as 1-D' is on, treat the constant value as a 1-D array. Otherwise, output a matrix with the same dimensions as the constant value.

Main Signal Attributes

Constant value:

1.9

☒ Interpret vector parameters as 1-D

Sample time:

inf

OK Cancel Help Apply

Block Parameters: Signal Generator

Signal Generator

Output various wave forms:
 $Y(t) = \text{Amp} * \text{Waveform}(\text{Freq}, t)$

Parameters

Wave form: sine

Time (t): Use simulation time

Amplitude:

2

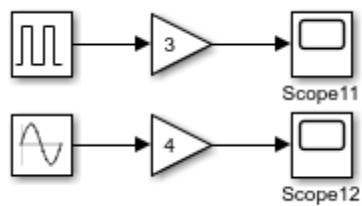
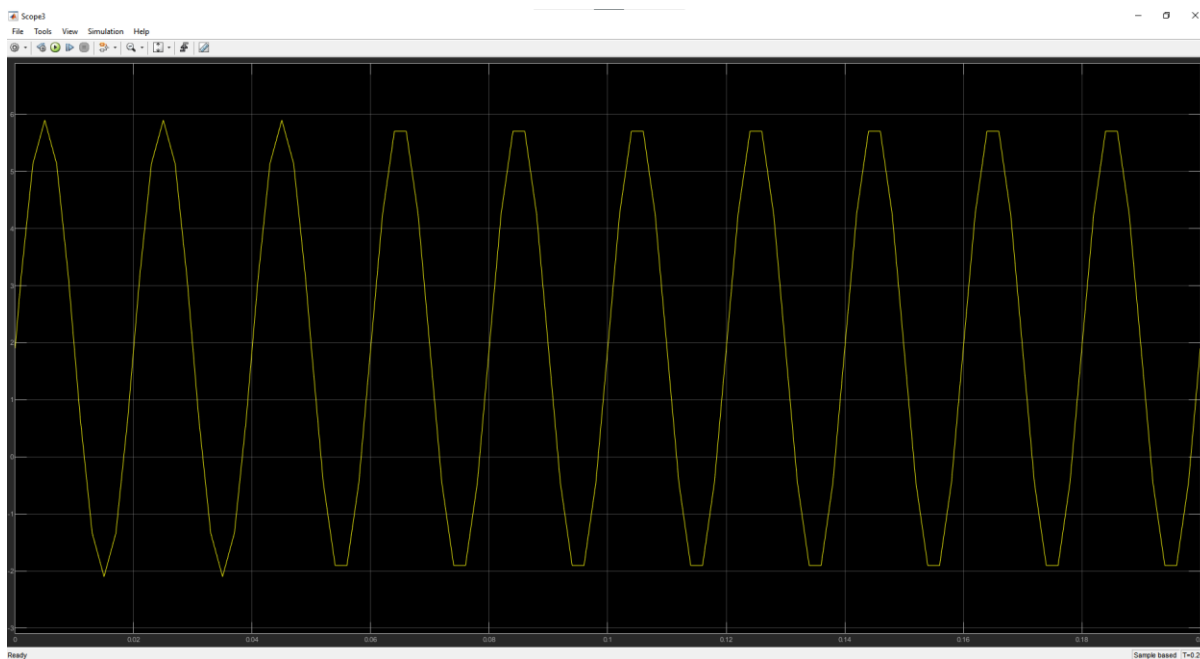
Frequency:

100*pi

Units: rad/sec

☒ Interpret vector parameters as 1-D

OK Cancel Help Apply



Block Parameters: Gain

Gain

Element-wise gain ($y = K .* u$) or matrix gain ($y = K * u$ or $y = u * K$).

Main Signal Attributes Parameter Attributes

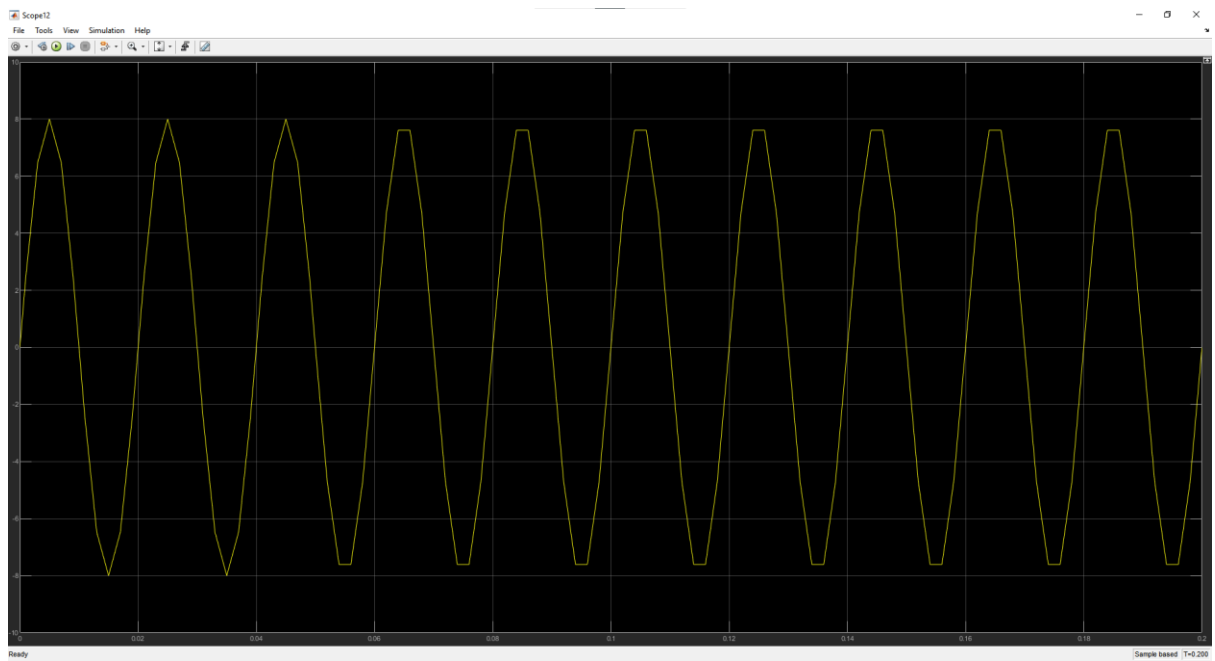
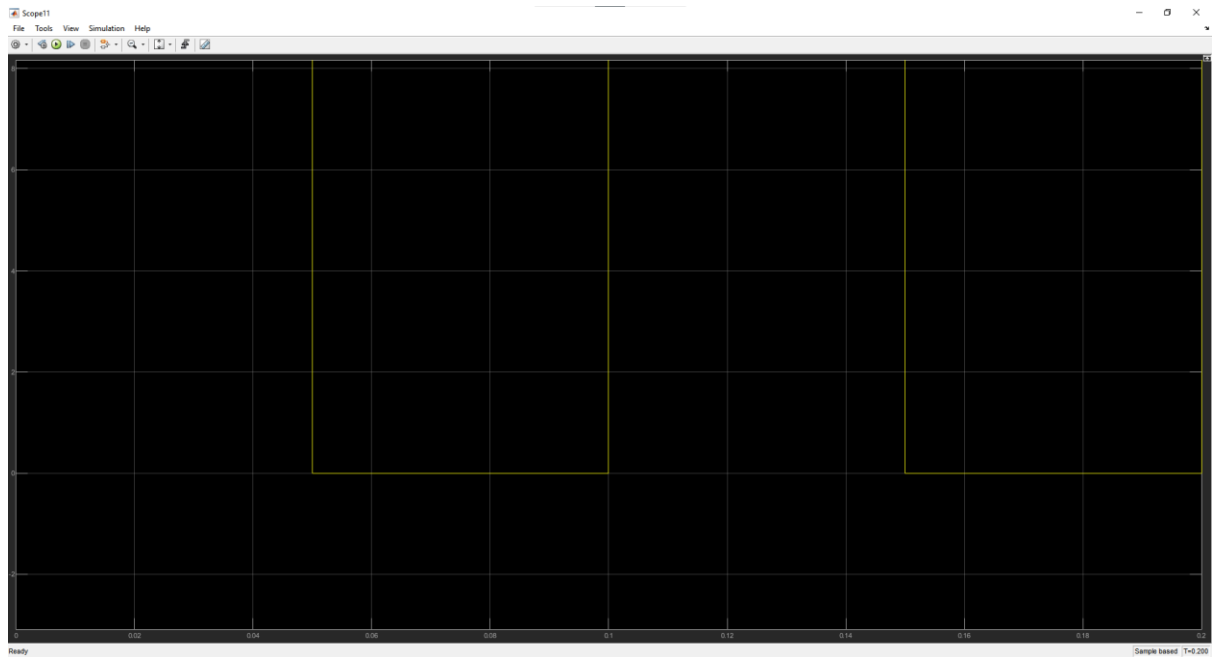
Gain:

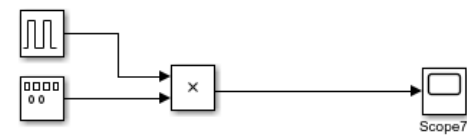
2

Multiplication: Element-wise($K .* u$)

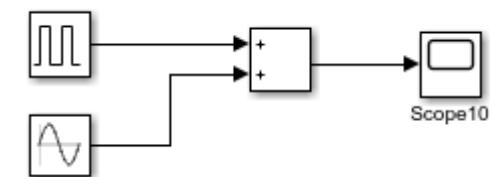
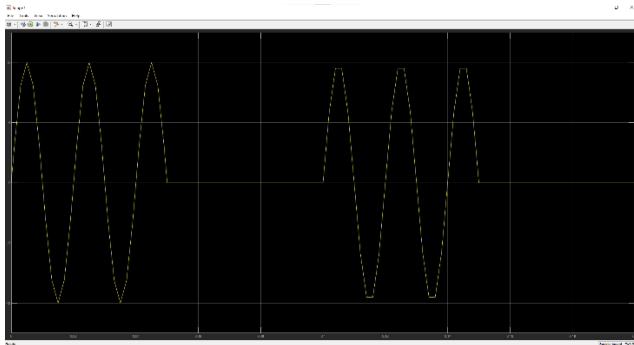
OK Cancel Help Apply

Gain для усиления сигналов



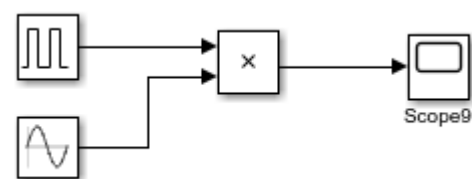
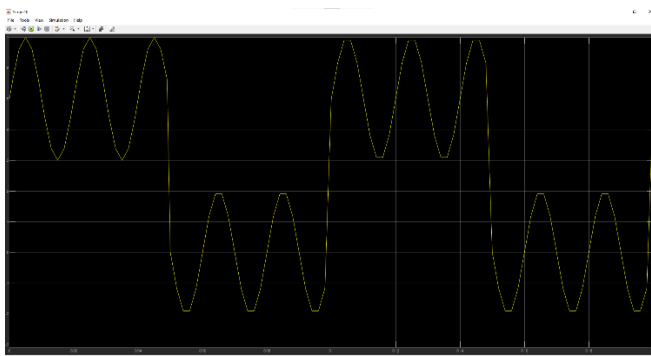


Signal generator и прямоугольный сигнал перемножены



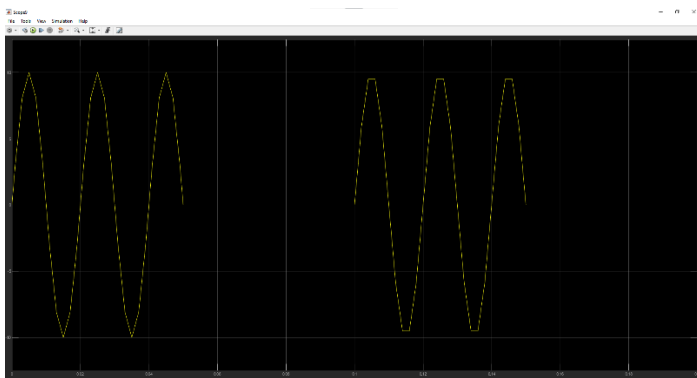
Синусоидальный и прямоугольный сигналы

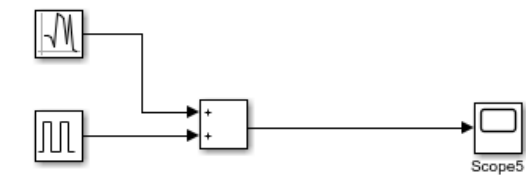
суммированы



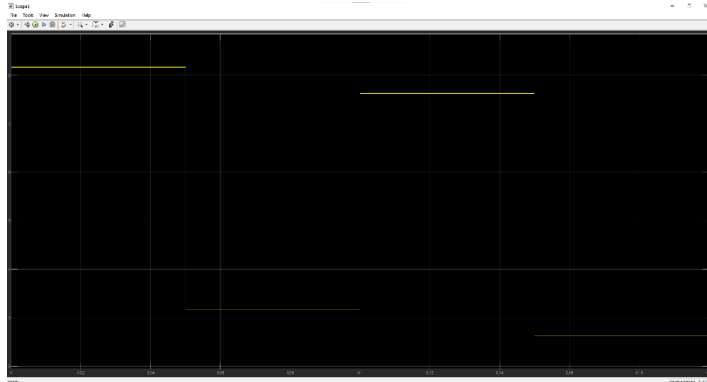
Синусоидальный и прямоугольный сигналы

перемножены





Random number и прямоугольный сигнал сложены



Random number и Step перемножены



Block Parameters: Random Number

Random Number

Output a normally (Gaussian) distributed random signal. Output is repeatable for a given seed.

Parameters

Mean:

2

Variance:

1

Seed:

0

Sample time:

0.1

☒ Interpret vector parameters as 1-D

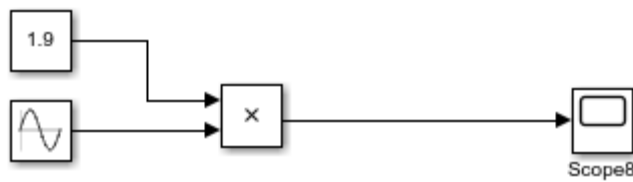
?

OK

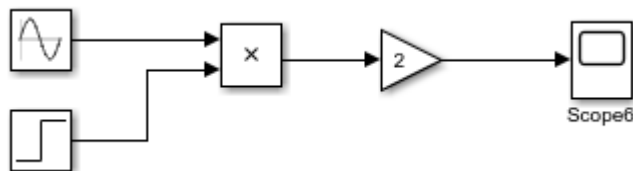
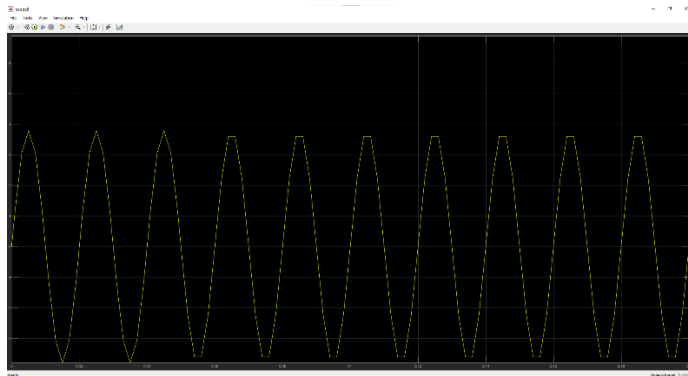
Cancel

Help

Apply

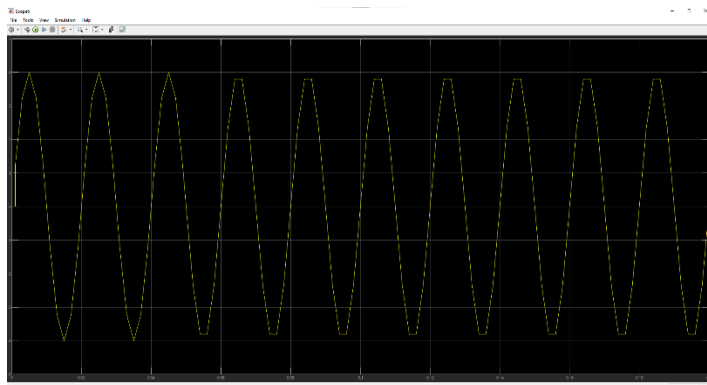


Constant и синусоидальный перемножены



Step и синусоидальный перемножены и

усилены



Block Parameters: Step

×

Step

Output a step.

MainSignal Attributes

Step time:

⋮

Initial value:

⋮

Final value:

⋮

Sample time:

⋮

☒ Interpret vector parameters as 1-D

☒ Enable zero-crossing detection

?

OK

Cancel

Help

Apply

Пункт 9: построил измеритель действующего значения заданного синусоидального сигнала

