

```
ans =  
    "Tracker step 6: demodulated 60 symbols."  
  
ans =  
    "Tracker step 7: demodulated 70 symbols."  
  
ans =  
    "Tracker step 8: demodulated 80 symbols."  
  
ans =  
    "Received message analyzed."  
  
ans =  
    "DEMODULATION RESULT 1"  
  
ans =  
    struct with fields:  
        version: "2"  
        ACQUISITION_OK: 1  
        TRACKING_OK: 1  
        DEMODULATION_OK: 1  
        SV_ID: '000001'  
        message_ID: '0011'  
        message_body: '010100110001110011001011101110'  
        CRC: '000110111100100010100001'  
        ACKed: 1  
        isACKmessage: 1  
        estimatedDopplerStart: 53.0505  
        estimatedDopplerEnd: 69.8736  
        estimatedDelay: 0.0282  
        estimatedPhase: 1.8455  
  
ans =  
    "Results saved in MM_test_4.98_12.6_f1_d500_s10_c5.json"  
  
Elapsed time is 7.819101 seconds.  
.  
ans =  
    "Generation test signal completed."  
  
Elapsed time is 0.340070 seconds.  
  
ans =  
    "Acquisition search 10.0% completed."
```

```
ans =  
    "Acquisition search 20.0% completed."  
  
ans =  
    "Acquisition search 30.0% completed."  
  
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0109  
        idStartTime: 281652  
        idDopplerShift: 51  
        mean: 1.5912e-10  
        meanSquare: 5.2354e-09  
        phase: 1.8455  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 1"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 1  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010100110001110011001011101110'  
    CRC: '000110111100100010100001'  
    ACKed: 1  
    isACKmessage: 1  
    estimatedDopplerStart: 53.0505  
    estimatedDopplerEnd: 69.8736  
    estimatedDelay: 0.0282  
    estimatedPhase: 1.8455
```

```
ans =  
    "Results saved in MM_test_5.32_12.6_f1_d500_s10_c5.json"  
Elapsed time is 7.807545 seconds.  
.  
ans =  
    "Generation test signal completed."  
Elapsed time is 0.335587 seconds.  
ans =  
    "Acquisition search 10.0% completed."  
  
ans =  
    "Acquisition search 20.0% completed."  
  
ans =  
    "Acquisition search 30.0% completed."  
  
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."
```

ans =

struct with fields:

```
    maxPeak: 0.0087
   idStartTime: 281652
idDopplerShift: 51
        mean: 3.5145e-09
   meanSquare: 3.3124e-09
        phase: 1.8455
```

ans =

"Tracker step 1: demodulated 10 symbols."

ans =

"Tracker step 2: demodulated 20 symbols."

ans =

"Tracker step 3: demodulated 30 symbols."

ans =

"Tracker step 4: demodulated 40 symbols."

ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 1"

ans =

struct with fields:

```
    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 1
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110011001011101110'
    CRC: '000110111100100010100001'
    ACKed: 1
    isACKmessage: 1
    estimatedDopplerStart: 53.0505
    estimatedDopplerEnd: 69.8736
    estimatedDelay: 0.0282
    estimatedPhase: 1.8455
```

ans =

```
"Results saved in MM_test_5.65_12.6_f1_d500_s10_c5.json"
```

Elapsed time is 7.811043 seconds.

.

ans =

```
"Generation test signal completed."
```

Elapsed time is 0.338510 seconds.

ans =

```
"Acquisition search 10.0% completed."
```

ans =

```
"Acquisition search 20.0% completed."
```

ans =

```
"Acquisition search 30.0% completed."
```

ans =

```
"Acquisition search 40.0% completed."
```

ans =

```
"Acquisition search 50.0% completed."
```

ans =

```
"Acquisition search 60.0% completed."
```

ans =

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0069  
    idStartTime: 281652  
    idDopplerShift: 51  
        mean: 3.9494e-09  
    meanSquare: 2.0972e-09  
    phase: 1.8455
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =

    "Tracker step 8: demodulated 80 symbols."

ans =

    "Received message analyzed."

ans =

    "DEMODULATION RESULT 1"

ans =

    struct with fields:

        version: "2"
        ACQUISITION_OK: 1
        TRACKING_OK: 1
        DEMODULATION_OK: 1
        SV_ID: '000001'
        message_ID: '0011'
        message_body: '010100110001110011001011101110'
        CRC: '000110111100100010100001'
        ACKed: 1
        isACKmessage: 1
        estimatedDopplerStart: 53.0505
        estimatedDopplerEnd: 69.8736
        estimatedDelay: 0.0282
        estimatedPhase: 1.8455

ans =

    "Results saved in MM_test_5.98_12.6_f1_d500_s10_c5.json"

Elapsed time is 7.823928 seconds.
.
ans =

    "Generation test signal completed."

Elapsed time is 0.338323 seconds.

ans =

    "Acquisition search 10.0% completed."

ans =

    "Acquisition search 20.0% completed."

ans =

    "Acquisition search 30.0% completed."
```



```
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0055  
        idStartTime: 281652  
        idDopplerShift: 51  
            mean: 3.3459e-09  
        meanSquare: 1.3270e-09  
        phase: 1.8455  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."
```

```
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."  
  
ans =  
    "Tracker step 7: demodulated 70 symbols."  
  
ans =  
    "Tracker step 8: demodulated 80 symbols."  
  
ans =  
    "Received message analyzed."  
  
ans =  
    "DEMODULATION RESULT 1"  
  
ans =  
    struct with fields:  
        version: "2"  
        ACQUISITION_OK: 1  
        TRACKING_OK: 1  
        DEMODULATION_OK: 1  
        SV_ID: '000001'  
        message_ID: '0011'  
        message_body: '010100110001110011001011101110'  
        CRC: '000110111100100010100001'  
        ACKed: 1  
        isACKmessage: 1  
        estimatedDopplerStart: 53.0505  
        estimatedDopplerEnd: 69.8736  
        estimatedDelay: 0.0282  
        estimatedPhase: 1.8455  
  
ans =  
    "Results saved in MM_test_6.31_12.6_f1_d500_s10_c5.json"  
  
Elapsed time is 7.803144 seconds.  
.  
ans =
```

"Generation test signal completed."

Elapsed time is 0.334944 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

```
    maxPeak: 0.0044
   idStartTime: 281652
 idDopplerShift: 51
         mean: 2.0009e-10
    meanSquare: 8.3949e-10
```

```
phase: 1.8455
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 1"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"  
  ACQUISITION_OK: 1  
    TRACKING_OK: 1  
  DEMODULATION_OK: 1  
        SV_ID: '000001'  
    message_ID: '0011'
```

```
        message_body: '010100110001110011001011101110'  
          CRC: '000110111100100010100001'  
        ACKed: 1  
        isACKmessage: 1  
estimatedDopplerStart: 53.0505  
estimatedDopplerEnd: 69.8736  
estimatedDelay: 0.0282  
estimatedPhase: 1.8455
```

```
ans =
```

```
"Results saved in MM_test_6.64_12.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.833124 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.340211 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0806  
    idStartTime: 281652  
    idDopplerShift: 52  
        mean: 6.8931e-08  
    meanSquare: 3.3505e-07  
    phase: 1.6072
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 000000000000000011111111  
> In MessageAnalyzer/analyzeMessage (line 85)  
In RECEIVER (line 260)
```

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
        version: "2"
    ACQUISITION_OK: 1
        TRACKING_OK: 1
    DEMODULATION_OK: 0
        SV_ID: '000001'
        message_ID: '0011'
    message_body: '010100110001110011001011101110'
        CRC: '000110111100100001011110'
        ACKed: 0
        isACKmessage: 1
estimatedDopplerStart: 63.1515
estimatedDopplerEnd: 78.6807
estimatedDelay: 0.0282
estimatedPhase: 1.6072
```

ans =

"Results saved in MM_test_2.32_25.4_f1_d500_s10_c5.json"

Elapsed time is 7.822476 seconds.

ans =

"Generation test signal completed."

Elapsed time is 0.335807 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

```
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0506  
        idStartTime: 281652  
        idDopplerShift: 52  
        mean: 4.8065e-08  
        meanSquare: 1.3235e-07  
        phase: 1.6072  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."
```


ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 0000000000000001111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110011001011101110'
    CRC: '000110111100100001011110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 63.1515
    estimatedDopplerEnd: 78.6807
    estimatedDelay: 0.0282
    estimatedPhase: 1.6072

```

ans =

"Results saved in MM_test_2.99_25.4_f1_d500_s10_c5.json"

Elapsed time is 7.828096 seconds.

ans =

"Generation test signal completed."

Elapsed time is 0.341077 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

```
    maxPeak: 0.0321
   idStartTime: 281652
idDopplerShift: 52
         mean: 3.1490e-08
   meanSquare: 5.2988e-08
         phase: 1.6072
```

```
ans =  
"Tracker step 1: demodulated 10 symbols."
```

```
ans =  
"Tracker step 2: demodulated 20 symbols."
```

```
ans =  
"Tracker step 3: demodulated 30 symbols."
```

```
ans =  
"Tracker step 4: demodulated 40 symbols."
```

```
ans =  
"Tracker step 5: demodulated 50 symbols."
```

```
ans =  
"Tracker step 6: demodulated 60 symbols."
```

```
ans =  
"Tracker step 7: demodulated 70 symbols."
```

```
ans =  
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 0000000000000001111111  
> In MessageAnalyzer/analyzeMessage (line 85)  
In RECEIVER (line 260)  
In RECEIVERTest/globalTest (line 115)
```

```
ans =  
"Received message analyzed."
```

```
ans =  
"DEMODULATION RESULT 0"
```

```
ans =  
struct with fields:  
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1
```

```
    DEMODULATION_OK: 0
        SV_ID: '000001'
        message_ID: '0011'
        message_body: '010100110001110011001011101110'
        CRC: '000110111100100001011110'
        ACKed: 0
        isACKmessage: 1
estimatedDopplerStart: 63.1515
estimatedDopplerEnd: 78.6807
estimatedDelay: 0.0282
estimatedPhase: 1.6072
```

ans =

```
"Results saved in MM_test_3.65_25.4_f1_d500_s10_c5.json"
```

Elapsed time is 7.938462 seconds.

.
ans =

```
"Generation test signal completed."
```

Elapsed time is 0.339593 seconds.

ans =

```
"Acquisition search 10.0% completed."
```

ans =

```
"Acquisition search 20.0% completed."
```

ans =

```
"Acquisition search 30.0% completed."
```

ans =

```
"Acquisition search 40.0% completed."
```

ans =

```
"Acquisition search 50.0% completed."
```

ans =

```
"Acquisition search 60.0% completed."
```

ans =

```
"Acquisition search 70.0% completed."
```

ans =

```
"Acquisition search 80.0% completed."
```

```
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
struct with fields:  
    maxPeak: 0.0201  
    idStartTime: 281652  
    idDopplerShift: 52  
        mean: 8.1548e-09  
    meanSquare: 2.0942e-08  
    phase: 1.6072  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."  
  
ans =  
    "Tracker step 7: demodulated 70 symbols."  
  
ans =  
    "Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 0000000000000001111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
  ACQUISITION_OK: 1
    TRACKING_OK: 1
  DEMODULATION_OK: 0
    SV_ID: '000001'
  message_ID: '0011'
  message_body: '010100110001110011001011101110'
        CRC: '000110111100100001011110'
    ACKed: 0
  isACKmessage: 1
estimatedDopplerStart: 63.1515
estimatedDopplerEnd: 78.6807
estimatedDelay: 0.0282
estimatedPhase: 1.6072
```

```
ans =
```

```
"Results saved in MM_test_4.32_25.4_f1_d500_s10_c5.json"
```

```
Elapsed time is 8.027968 seconds.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.343723 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0127  
    idStartTime: 281652  
    idDopplerShift: 52  
        mean: 6.4301e-09  
    meanSquare: 8.3876e-09  
    phase: 1.6072
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 000000000000000011111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110011001011101110'
    CRC: '000110111100100001011110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 63.1515
    estimatedDopplerEnd: 78.6807
    estimatedDelay: 0.0282
    estimatedPhase: 1.6072
```

```
ans =
```

```
"Results saved in MM_test_4.98_25.4_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.872156 seconds.
```

```
.
```



```
ans =  
    "Generation test signal completed."  
Elapsed time is 0.345892 seconds.  
ans =  
    "Acquisition search 10.0% completed."  
ans =  
    "Acquisition search 20.0% completed."  
ans =  
    "Acquisition search 30.0% completed."  
ans =  
    "Acquisition search 40.0% completed."  
ans =  
    "Acquisition search 50.0% completed."  
ans =  
    "Acquisition search 60.0% completed."  
ans =  
    "Acquisition search 70.0% completed."  
ans =  
    "Acquisition search 80.0% completed."  
ans =  
    "Acquisition search 90.0% completed."  
ans =  
    "Acquisition search 100.0% completed."  
ans =  
struct with fields:  
    maxPeak: 0.0101  
    idStartTime: 281652  
    idDopplerShift: 52
```

```
mean: 8.6981e-10
meanSquare: 5.2341e-09
phase: 1.6072
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 00000000000000011111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
        version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
        SV_ID: '000001'
        message_ID: '0011'
        message_body: '010100110001110011001011101110'
        CRC: '000110111100100001011110'
        ACKed: 0
        isACKmessage: 1
    estimatedDopplerStart: 63.1515
    estimatedDopplerEnd: 78.6807
    estimatedDelay: 0.0282
    estimatedPhase: 1.6072
```

ans =

```
"Results saved in MM_test_5.32_25.4_f1_d500_s10_c5.json"
```

Elapsed time is 7.839477 seconds.

.

ans =

```
"Generation test signal completed."
```

Elapsed time is 0.345639 seconds.

ans =

```
"Acquisition search 10.0% completed."
```

ans =

```
"Acquisition search 20.0% completed."
```

ans =

```
"Acquisition search 30.0% completed."
```

ans =

```
"Acquisition search 40.0% completed."
```

ans =

```
"Acquisition search 50.0% completed."
```

ans =

```
"Acquisition search 60.0% completed."
```

ans =

```
"Acquisition search 70.0% completed."
```

```
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
struct with fields:  
    maxPeak: 0.0080  
    idStartTime: 281652  
    idDopplerShift: 52  
        mean: 6.5319e-09  
    meanSquare: 3.3135e-09  
        phase: 1.6072  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."  
  
ans =  
    "Tracker step 7: demodulated 70 symbols."  
  
ans =
```

"Tracker step 8: demodulated 80 symbols."

Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 0000000000000001111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010100110001110011001011101110'  
    CRC: '000110111100100001011110'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 63.1515  
    estimatedDopplerEnd: 78.6807  
    estimatedDelay: 0.0282  
    estimatedPhase: 1.6072
```

ans =

"Results saved in MM_test_5.65_25.4_f1_d500_s10_c5.json"

Elapsed time is 7.917672 seconds.

.
ans =

"Generation test signal completed."

Elapsed time is 0.339917 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

```
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0064  
        idStartTime: 281652  
        idDopplerShift: 52  
        mean: 3.2325e-09  
        meanSquare: 2.0954e-09  
        phase: 1.6072  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."
```

ans =

"Tracker step 4: demodulated 40 symbols."

ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 0000000000000001111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
    version: "2"
  ACQUISITION_OK: 1
    TRACKING_OK: 1
  DEMODULATION_OK: 0
    SV_ID: '000001'
  message_ID: '0011'
  message_body: '010100110001110011001011101110'
    CRC: '000110111100100001011110'
    ACKed: 0
  isACKmessage: 1
estimatedDopplerStart: 63.1515
estimatedDopplerEnd: 78.6807
estimatedDelay: 0.0282
estimatedPhase: 1.6072
```

ans =

"Results saved in MM_test_5.98_25.4_f1_d500_s10_c5.json"

Elapsed time is 7.841467 seconds.

.
ans =

"Generation test signal completed."

Elapsed time is 0.340462 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:


```
        maxPeak: 0.0051
      idStartTime: 281652
idDopplerShift: 52
        mean: 2.7357e-09
      meanSquare: 1.3265e-09
        phase: 1.6072
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error no ack: received CRC 0001101111100100001011110 and CRC remainder 000000000000000011111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

struct with fields:

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010100110001110011001011101110'  
    CRC: '000110111100100001011110'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 63.1515  
    estimatedDopplerEnd: 78.6807  
    estimatedDelay: 0.0282  
    estimatedPhase: 1.6072
```

ans =

```
"Results saved in MM_test_6.31_25.4_f1_d500_s10_c5.json"
```

Elapsed time is 7.846928 seconds.

.

ans =

```
"Generation test signal completed."
```

Elapsed time is 0.335755 seconds.

ans =

```
"Acquisition search 10.0% completed."
```

ans =

```
"Acquisition search 20.0% completed."
```

ans =

```
"Acquisition search 30.0% completed."
```

ans =

```
"Acquisition search 40.0% completed."
```

ans =

```
"Acquisition search 50.0% completed."
```

ans =

```
"Acquisition search 60.0% completed."
```

ans =

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0040  
    idStartTime: 281652  
    idDopplerShift: 52  
        mean: 1.4587e-09  
    meanSquare: 8.3909e-10  
    phase: 1.6072
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error no ack: received CRC 000110111100100001011110 and CRC remainder 000000000000000011111111
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010100110001110011001011101110'  
    CRC: '000110111100100001011110'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 63.1515  
    estimatedDopplerEnd: 78.6807  
    estimatedDelay: 0.0282  
    estimatedPhase: 1.6072
```

ans =

"Results saved in MM_test_6.64_25.4_f1_d500_s10_c5.json"

Elapsed time is 7.896369 seconds.

.

ans =

"Generation test signal completed."

Elapsed time is 0.349279 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

```
ans =  
    "Acquisition search 30.0% completed."  
  
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0844  
        idStartTime: 281651  
        idDopplerShift: 53  
        mean: 6.0729e-08  
        meanSquare: 3.3482e-07  
        phase: 2.4094  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
```

```
    ACQUISITION_OK: 1
```

```
    TRACKING_OK: 1
```

```
    DEMODULATION_OK: 0
```

```
    SV_ID: '000001'
```

```
    message_ID: '0011'
```

```
    message_body: '010100110001110100100111101101'
```

```
    CRC: '111110111000110010101011'
```

```
    ACKed: 0
```

```
    isACKmessage: 1
```

```
    estimatedDopplerStart: 73.2525
```

```
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

```
ans =
```

```
"Results saved in MM_test_2.32_51_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.852184 seconds.
```

```
.
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.345279 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0531
    idStartTime: 281651
    idDopplerShift: 53
        mean: 1.5046e-08
    meanSquare: 1.3227e-07
        phase: 2.4094
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```


In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
        version: "2"
    ACQUISITION_OK: 1
        TRACKING_OK: 1
    DEMODULATION_OK: 0
        SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110100100111101101'
        CRC: '111110111000110010101011'
        ACKed: 0
    isACKmessage: 1
estimatedDopplerStart: 73.2525
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

ans =

"Results saved in MM_test_2.99_51_f1_d500_s10_c5.json"

Elapsed time is 7.848950 seconds.

ans =

"Generation test signal completed."

Elapsed time is 0.353666 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

```
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0336  
        idStartTime: 281651  
        idDopplerShift: 53  
        mean: 9.9067e-09  
        meanSquare: 5.2967e-08  
        phase: 2.4094  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."
```

ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 011111.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110100100111101101'
    CRC: '111110111000110010101011'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 73.2525
    estimatedDopplerEnd: 94.6054
    estimatedDelay: 0.0282
    estimatedPhase: 2.4094

```

ans =

"Results saved in MM_test_3.65_51_f1_d500_s10_c5.json"

Elapsed time is 7.849242 seconds.

.
ans =

"Generation test signal completed."

Elapsed time is 0.350788 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

maxPeak: 0.0211

```
idStartTime: 281651
idDopplerShift: 53
    mean: 4.5223e-09
    meanSquare: 2.0908e-08
    phase: 2.4094
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010100110001110100100111101101'  
    CRC: '111110111000110010101011'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 73.2525  
    estimatedDopplerEnd: 94.6054  
    estimatedDelay: 0.0282  
    estimatedPhase: 2.4094
```

```
ans =
```

```
"Results saved in MM_test_4.32_51_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.854642 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.345912 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0134  
        idStartTime: 281651  
        idDopplerShift: 53  
        mean: 4.2315e-09  
        meanSquare: 8.3821e-09  
        phase: 2.4094  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."
```

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 011111.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110100100111101101'
    CRC: '111110111000110010101011'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 73.2525
    estimatedDopplerEnd: 94.6054
    estimatedDelay: 0.0282
    estimatedPhase: 2.4094

```

ans =

"Results saved in MM_test_4.98_51_f1_d500_s10_c5.json"

Elapsed time is 7.851281 seconds.

.

ans =

"Generation test signal completed."

Elapsed time is 0.347777 seconds.

ans =


```
"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

    maxPeak: 0.0106
    idStartTime: 281651
    idDopplerShift: 53
        mean: 8.5180e-09
    meanSquare: 5.2337e-09
        phase: 2.4094

ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
```

```
ACQUISITION_OK: 1
```

```
TRACKING_OK: 1
DEMODULATION_OK: 0
SV_ID: '000001'
message_ID: '0011'
message_body: '010100110001110100100111101101'
CRC: '111110111000110010101011'
ACKed: 0
isACKmessage: 1
estimatedDopplerStart: 73.2525
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

ans =

```
"Results saved in MM_test_5.32_51_f1_d500_s10_c5.json"
```

Elapsed time is 7.837351 seconds.

.
ans =

```
"Generation test signal completed."
```

Elapsed time is 0.347040 seconds.

ans =

```
"Acquisition search 10.0% completed."
```

ans =

```
"Acquisition search 20.0% completed."
```

ans =

```
"Acquisition search 30.0% completed."
```

ans =

```
"Acquisition search 40.0% completed."
```

ans =

```
"Acquisition search 50.0% completed."
```

ans =

```
"Acquisition search 60.0% completed."
```

ans =

```
"Acquisition search 70.0% completed."
```

ans =

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0084  
    idStartTime: 281651  
    idDopplerShift: 53  
        mean: 2.2300e-09  
    meanSquare: 3.3110e-09  
    phase: 2.4094
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
  ACQUISITION_OK: 1
    TRACKING_OK: 1
  DEMODULATION_OK: 0
    SV_ID: '000001'
  message_ID: '0011'
  message_body: '010100110001110100100111101101'
    CRC: '111110111000110010101011'
    ACKed: 0
  isACKmessage: 1
estimatedDopplerStart: 73.2525
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

```
ans =
```

```
"Results saved in MM_test_5.65_51_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.831398 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.337243 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =  
    "Acquisition search 30.0% completed."  
  
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0067  
        idStartTime: 281651  
        idDopplerShift: 53  
        mean: 5.2896e-09  
        meanSquare: 2.0953e-09  
        phase: 2.4094  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110100100111101101'
    CRC: '111110111000110010101011'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 73.2525
```

```
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

```
ans =
```

```
"Results saved in MM_test_5.98_51_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.938968 seconds.
```

```
.
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.349851 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```



```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0053
    idStartTime: 281651
    idDopplerShift: 53
        mean: 1.7820e-09
    meanSquare: 1.3258e-09
        phase: 2.4094
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 011111.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
        version: "2"
    ACQUISITION_OK: 1
        TRACKING_OK: 1
    DEMODULATION_OK: 0
        SV_ID: '000001'
        message_ID: '0011'
    message_body: '010100110001110100100111101101'
        CRC: '111110111000110010101011'
        ACKed: 0
        isACKmessage: 1
estimatedDopplerStart: 73.2525
estimatedDopplerEnd: 94.6054
estimatedDelay: 0.0282
estimatedPhase: 2.4094
```

ans =

"Results saved in MM_test_6.31_51_f1_d500_s10_c5.json"

Elapsed time is 7.993175 seconds.

ans =

"Generation test signal completed."

Elapsed time is 0.370051 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

```
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0042  
        idStartTime: 281651  
        idDopplerShift: 53  
        mean: 1.8864e-09  
        meanSquare: 8.3883e-10  
        phase: 2.4094  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."
```

ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 011111.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 111110111000110010101011 and CRC remainder 100100000111010011100000

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010100110001110100100111101101'
    CRC: '111110111000110010101011'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 73.2525
    estimatedDopplerEnd: 94.6054
    estimatedDelay: 0.0282
    estimatedPhase: 2.4094

```

ans =

"Results saved in MM_test_6.64_51_f1_d500_s10_c5.json"

Elapsed time is 7.910186 seconds.

.
ans =

"Generation test signal completed."

Elapsed time is 0.346097 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

maxPeak: 0.0752

```
idStartTime: 281649
idDopplerShift: 55
    mean: 1.0962e-07
    meanSquare: 3.3507e-07
    phase: -2.2880
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010111011110101100101111011'  
    CRC: '000010110101000100100110'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 93.4545  
    estimatedDopplerEnd: 104.4550  
    estimatedDelay: 0.0282  
    estimatedPhase: 3.9952
```

```
ans =
```

```
"Results saved in MM_test_2.32_102.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.915055 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.350033 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0473  
        idStartTime: 281649  
        idDopplerShift: 55  
        mean: 3.2903e-08  
        meanSquare: 1.3238e-07  
        phase: -2.2880  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."
```


ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 001001.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010111011110101101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 93.4545
    estimatedDopplerEnd: 104.4550
    estimatedDelay: 0.0282
    estimatedPhase: 3.9952

```

ans =

"Results saved in MM_test_2.99_102.6_f1_d500_s10_c5.json"

Elapsed time is 7.908245 seconds.

.

ans =

"Generation test signal completed."

Elapsed time is 0.348175 seconds.

ans =

```
"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

    maxPeak: 0.0299
    idStartTime: 281649
    idDopplerShift: 55
        mean: 1.8713e-08
    meanSquare: 5.3002e-08
        phase: -2.2880

ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
```

```
ACQUISITION_OK: 1
```

```
TRACKING_OK: 1
DEMODULATION_OK: 0
SV_ID: '000001'
message_ID: '0011'
message_body: '010111011110101101100101111011'
CRC: '000010110101000100100110'
ACKed: 0
isACKmessage: 1
estimatedDopplerStart: 93.4545
estimatedDopplerEnd: 104.4550
estimatedDelay: 0.0282
estimatedPhase: 3.9952
```

```
ans =
```

```
"Results saved in MM_test_3.65_102.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.874249 seconds.
```

```
.
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.348657 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0188  
    idStartTime: 281649  
    idDopplerShift: 55  
        mean: 1.0261e-08  
    meanSquare: 2.0945e-08  
    phase: -2.2880
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
> In MessageAnalyzer/validateAndSplitMessage (line 110)
In MessageAnalyzer/analyzeMessage (line 71)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
> In MessageAnalyzer/analyzeMessage (line 85)
In RECEIVER (line 260)
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
  ACQUISITION_OK: 1
    TRACKING_OK: 1
  DEMODULATION_OK: 0
    SV_ID: '000001'
  message_ID: '0011'
  message_body: '010111011110101101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
  isACKmessage: 1
estimatedDopplerStart: 93.4545
estimatedDopplerEnd: 104.4550
estimatedDelay: 0.0282
estimatedPhase: 3.9952
```

```
ans =
```

```
"Results saved in MM_test_4.32_102.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 8.055019 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.345650 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =  
    "Acquisition search 30.0% completed."  
  
ans =  
    "Acquisition search 40.0% completed."  
  
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0119  
        idStartTime: 281649  
        idDopplerShift: 55  
        mean: 1.3884e-08  
        meanSquare: 8.3882e-09  
        phase: -2.2880  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
```

```
    ACQUISITION_OK: 1
```

```
    TRACKING_OK: 1
```

```
    DEMODULATION_OK: 0
```

```
    SV_ID: '000001'
```

```
    message_ID: '0011'
```

```
    message_body: '010111011110101100101111011'
```

```
    CRC: '000010110101000100100110'
```

```
    ACKed: 0
```

```
    isACKmessage: 1
```

```
    estimatedDopplerStart: 93.4545
```



```
estimatedDopplerEnd: 104.4550
estimatedDelay: 0.0282
estimatedPhase: 3.9952
```

```
ans =
```

```
"Results saved in MM_test_4.98_102.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.891607 seconds.
```

```
.
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.350358 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```

```
ans =
```

```
"Acquisition search 70.0% completed."
```

```
ans =
```

```
"Acquisition search 80.0% completed."
```

```
ans =
```

```
"Acquisition search 90.0% completed."
```

```
ans =
```

```
"Acquisition search 100.0% completed."
```

```
ans =
```

```
struct with fields:
```

```
    maxPeak: 0.0094
    idStartTime: 281649
    idDopplerShift: 55
        mean: 1.2675e-08
    meanSquare: 5.2360e-09
        phase: -2.2880
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```
    version: "2"
  ACQUISITION_OK: 1
    TRACKING_OK: 1
  DEMODULATION_OK: 0
    SV_ID: '000001'
  message_ID: '0011'
  message_body: '010111011110101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
    isACKmessage: 1
estimatedDopplerStart: 93.4545
estimatedDopplerEnd: 104.4550
estimatedDelay: 0.0282
estimatedPhase: 3.9952
```

ans =

"Results saved in MM_test_5.32_102.6_f1_d500_s10_c5.json"

Elapsed time is 7.854603 seconds.

ans =

"Generation test signal completed."

Elapsed time is 0.355191 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

```
ans =  
    "Acquisition search 50.0% completed."  
  
ans =  
    "Acquisition search 60.0% completed."  
  
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0075  
        idStartTime: 281649  
        idDopplerShift: 55  
        mean: 5.8828e-09  
        meanSquare: 3.3130e-09  
        phase: -2.2880  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."
```

ans =

"Tracker step 5: demodulated 50 symbols."

ans =

"Tracker step 6: demodulated 60 symbols."

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 001001.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010111011110101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 93.4545
    estimatedDopplerEnd: 104.4550
    estimatedDelay: 0.0282
    estimatedPhase: 3.9952

```

ans =

"Results saved in MM_test_5.65_102.6_f1_d500_s10_c5.json"

Elapsed time is 7.879092 seconds.

.
ans =

"Generation test signal completed."

Elapsed time is 0.354937 seconds.

ans =

"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

maxPeak: 0.0059

```
idStartTime: 281649
idDopplerShift: 55
    mean: 6.5382e-09
meanSquare: 2.0964e-09
    phase: -2.2880
```

```
ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"  
    ACQUISITION_OK: 1  
    TRACKING_OK: 1  
    DEMODULATION_OK: 0  
    SV_ID: '000001'  
    message_ID: '0011'  
    message_body: '010111011110101101100101111011'  
    CRC: '000010110101000100100110'  
    ACKed: 0  
    isACKmessage: 1  
    estimatedDopplerStart: 93.4545  
    estimatedDopplerEnd: 104.4550  
    estimatedDelay: 0.0282  
    estimatedPhase: 3.9952
```

```
ans =
```

```
"Results saved in MM_test_5.98_102.6_f1_d500_s10_c5.json"
```

```
Elapsed time is 7.835900 seconds.
```

```
.
```

```
ans =
```

```
"Generation test signal completed."
```

```
Elapsed time is 0.342351 seconds.
```

```
ans =
```

```
"Acquisition search 10.0% completed."
```

```
ans =
```

```
"Acquisition search 20.0% completed."
```

```
ans =
```

```
"Acquisition search 30.0% completed."
```

```
ans =
```

```
"Acquisition search 40.0% completed."
```

```
ans =
```

```
"Acquisition search 50.0% completed."
```

```
ans =
```

```
"Acquisition search 60.0% completed."
```



```
ans =  
    "Acquisition search 70.0% completed."  
  
ans =  
    "Acquisition search 80.0% completed."  
  
ans =  
    "Acquisition search 90.0% completed."  
  
ans =  
    "Acquisition search 100.0% completed."  
  
ans =  
    struct with fields:  
        maxPeak: 0.0047  
        idStartTime: 281649  
        idDopplerShift: 55  
        mean: 2.3066e-09  
        meanSquare: 1.3264e-09  
        phase: -2.2880  
  
ans =  
    "Tracker step 1: demodulated 10 symbols."  
  
ans =  
    "Tracker step 2: demodulated 20 symbols."  
  
ans =  
    "Tracker step 3: demodulated 30 symbols."  
  
ans =  
    "Tracker step 4: demodulated 40 symbols."  
  
ans =  
    "Tracker step 5: demodulated 50 symbols."  
  
ans =  
    "Tracker step 6: demodulated 60 symbols."
```

ans =

"Tracker step 7: demodulated 70 symbols."

ans =

"Tracker step 8: demodulated 80 symbols."

Warning: Error. Incorrect received tail 001001.

> In MessageAnalyzer/validateAndSplitMessage (line 110)

In MessageAnalyzer/analyzeMessage (line 71)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110

> In MessageAnalyzer/analyzeMessage (line 85)

In RECEIVER (line 260)

In RECEIVERTest/globalTest (line 115)

ans =

"Received message analyzed."

ans =

"DEMODULATION RESULT 0"

ans =

struct with fields:

```

    version: "2"
    ACQUISITION_OK: 1
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010111011110101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 93.4545
    estimatedDopplerEnd: 104.4550
    estimatedDelay: 0.0282
    estimatedPhase: 3.9952

```

ans =

"Results saved in MM_test_6.31_102.6_f1_d500_s10_c5.json"

Elapsed time is 7.874982 seconds.

.

ans =

"Generation test signal completed."

Elapsed time is 0.343019 seconds.

ans =

```
"Acquisition search 10.0% completed."

ans =

"Acquisition search 20.0% completed."

ans =

"Acquisition search 30.0% completed."

ans =

"Acquisition search 40.0% completed."

ans =

"Acquisition search 50.0% completed."

ans =

"Acquisition search 60.0% completed."

ans =

"Acquisition search 70.0% completed."

ans =

"Acquisition search 80.0% completed."

ans =

"Acquisition search 90.0% completed."

ans =

"Acquisition search 100.0% completed."

ans =

struct with fields:

    maxPeak: 0.0038
    idStartTime: 281649
    idDopplerShift: 55
        mean: 4.4223e-09
    meanSquare: 8.3951e-10
        phase: -2.2880

ans =
```

```
"Tracker step 1: demodulated 10 symbols."
```

```
ans =
```

```
"Tracker step 2: demodulated 20 symbols."
```

```
ans =
```

```
"Tracker step 3: demodulated 30 symbols."
```

```
ans =
```

```
"Tracker step 4: demodulated 40 symbols."
```

```
ans =
```

```
"Tracker step 5: demodulated 50 symbols."
```

```
ans =
```

```
"Tracker step 6: demodulated 60 symbols."
```

```
ans =
```

```
"Tracker step 7: demodulated 70 symbols."
```

```
ans =
```

```
"Tracker step 8: demodulated 80 symbols."
```

```
Warning: Error. Incorrect received tail 001001.
```

```
> In MessageAnalyzer/validateAndSplitMessage (line 110)
```

```
In MessageAnalyzer/analyzeMessage (line 71)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
Warning: Error no ack: received CRC 000010110101000100100110 and CRC remainder 001111001010000011100110
```

```
> In MessageAnalyzer/analyzeMessage (line 85)
```

```
In RECEIVER (line 260)
```

```
In RECEIVERTest/globalTest (line 115)
```

```
ans =
```

```
"Received message analyzed."
```

```
ans =
```

```
"DEMODULATION RESULT 0"
```

```
ans =
```

```
struct with fields:
```

```
    version: "2"
```

```
ACQUISITION_OK: 1
```

```
    TRACKING_OK: 1
    DEMODULATION_OK: 0
    SV_ID: '000001'
    message_ID: '0011'
    message_body: '010111011110101100101111011'
    CRC: '000010110101000100100110'
    ACKed: 0
    isACKmessage: 1
    estimatedDopplerStart: 93.4545
    estimatedDopplerEnd: 104.4550
    estimatedDelay: 0.0282
    estimatedPhase: 3.9952
```

ans =

```
"Results saved in MM_test_6.64_102.6_f1_d500_s10_c5.json"
```

Elapsed time is 7.844825 seconds.

```
.
Done RECEIVERTest
```

ans =

```
1x1200 TestResult array with properties:
```

```
Name
Passed
Failed
Incomplete
Duration
Details
```

Totals:

```
1200 Passed, 0 Failed, 0 Incomplete.
14760.314 seconds testing time.
```

>>