

**queue**

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# Chapter 1

## queue

### 1.1 queue.library

Copyright

GNU Library General Public License

Warranty

Function Reference

### 1.2 Copyright

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the

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[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

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<signature of Ty Coon>, 1 April 1990  
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That's all there is to it!

## 1.4 Function Reference

queue.library/QOpen()  
queue.library/QClose()  
queue.library/QAddMsg()  
queue.library/QRemMsg()  
queue.library/QReplyMsg()  
queue.library/QFlush()  
queue.library/QAllocMsg()  
queue.library/QFreeMsg()

## 1.5 SHW Wabnitz

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## 1.6 queue.library/QOpen()

NAME

QOpen

SYNOPSIS

```
qh = QOpen(name, mode, sigbit)
D0          A0    D0    D1
```

```
QHandle = QOpen(STRPTR, ULONG, ULONG)
```

FUNCTION

This function opens a message queue either for reading or writing. If you want both you have to open the queue twice.

INPUTS

name - The name of the message queue  
mode - QMODE\_SEND or QMODE\_LISTEN  
sigbit - A signal allocated by AllocSignal()

RESULT

qh - A handle for the message queue

## 1.7 queue.library/QClose()

NAME

QClose

SYNOPSIS

```
num = QClose(qh)
      D0          A0
```

```
ULONG QClose(QHandle)
```

FUNCTION

Closes a message queue if the calling task has no messages left in the queue. This function can only fail for handles opened with QMODE\_SEND.

INPUTS

qh - The handle of the queue to be closed

RESULT

num - Number of messages still in the queue

## 1.8 queue.library/QAddMsg()

NAME

QAddMsg

---

## SYNOPSIS

```
QAddMsg(qh, msg)
        A0 A1
```

```
void QAddMsg(QHandle, QMessage *)
```

## FUNCTION

Appends a message to a message queue. All tasks listening to the queue are signalled. If nobody is listening the message is placed in the handle's reply list immediately and the current task signals itself ;-)

## INPUTS

qh - A message queue handle  
msg - A message

## 1.9 queue.library/QRemMsg()

## NAME

```
QRemMsg
```

## SYNOPSIS

```
QRemMsg(qh, msg)
        A0 A1
```

```
void QRemMsg(QHandle, QMessage *)
```

## FUNCTION

Attempts to remove a message from the queue. The removal is delayed until no task refers to the message anymore. This function can be used to implement timeouts.

## INPUTS

qh - A message queue handle  
msg - A message

## NOTE

When one or more tasks refer to the message to be removed it is marked as "removed" and cannot be read with QGetMsg() by other tasks.

## 1.10 queue.library/QGetMsg()

## NAME

```
QGetMsg
```

## SYNOPSIS

```
msg = QGetMsg(qh)
D0          A0
```

```
QMessage *QGetMsg(QHandle)
```

---

## FUNCTIONS

Retrieves the next message in the queue if the handle has been opened with QMODE\_LISTEN or the the next message in the handle's reply list if the handle has been opened with QMODE\_SEND.

## INPUTS

qh - A message queue handle

## RESULT

msg - A message or NULL

## NOTE

All tasks get a chance to read every message in the queue with the possible exception of messages removed with QRemMsg().

## 1.11 queue.library/QReplyMsg()

## NAME

QReplyMsg

## SYNOPSIS

QReplyMsg(qh)  
A0

void QReplyMsg(QHandle)

## FUNCTIONS

This function should be used if the current message is no longer required but the next message cannot be processed immediately.

## INPUTS

qh - A message queue handle

## NOTE

QGetMsg() automatically replies the last message. It is not necessary to use QReplyMsg() before QGetMsg(). A task which might block indeterminately should use QReplyMsg() to allow the originator of it's current message to reclaim it.

## 1.12 queue.library/QFlush()

## NAME

QFlush

## SYNOPSIS

QFlush(qh)  
A0

void QFlush(QHandle)

## FUNCTIONS



Kicks all removed but not yet dequeued messages out of the queue and into the reply lists of the corresponding handles.

#### INPUTS

qh - A message queue handle

#### NOTE

Shouldn't be necessary.

## 1.13 queue.library/QAllocMsg()

#### NAME

QAllocMsg

#### SYNOPSIS

msg = QAllocMsg(size)

D0                    D0

QMessage \*QAllocMsg(ULONG)

#### FUNCTIONS

Allocates a new message. If size is non-zero msg -> qm\_Data is initialized and points to the payload of the message. On AmigaOS versions/clones which support MEMF\_SHARED\_READ this memory is write protected for other tasks.

#### INPUTS

size - Size of the payload to be allocated

#### RESULT

msg - A message or NULL

## 1.14 queue.library/QFreeMsg()

#### NAME

QFreeMsg

#### SYNOPSIS

QFreeMsg(msg, size)

A0    D0

void QFreeMsg(QMessage \*, ULONG)

#### FUNCTIONS

Deallocates a message (and payload).

#### INPUTS

msg - A message to be deallocated

size - Size of the payload to be deallocated

#### NOTE

msg -> qm\_Data must be zero if there is no payload

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to be deallocated.

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