

ADBOp Transmit command byte

#include <DeskBus.h>

ADB Manager

OSErr **ADBOp**(*data*, *compRout*, *buffer*, *commandNum*);
Ptr *data* ; address of optional data area
ProcPtr *compRout* ; pointer to completion routine
Ptr *buffer* ; pointer to variable-length data buffer
short *commandNum* ; value given to the command byte
returns Error Code; 0=no error

Use **ADBOp** to send the command byte specified by the value in *commandNum* field and instruct a bus-connected mouse or keyboard to SendReset, Flush, Talk, or Listen.

data is an optional data area for local completion routine storage.

compRout is a completion routine structure.

buffer is a data area whose length is contained in its first byte.

commandNum is the value of the command byte signifying SendReset, Flush, Talk or Listen.

Returns: an operating system Error Code. It will be one of:

noErr	(0)	No error
Err	(-1)	Unsuccessful completion

Notes: **ADBOp** executes only when the bus is idle. The rest of the time it is held in a command queue. **ADBOp** returns an error if the command queue is full.

On entry, D0 holds the *commandNum* short and register A0 contains a pointer to a parameter block whose fields are:

	<u>Out-In</u>	<u>Name</u>	<u>Type</u>	<u>Size</u>	<u>Offset</u>	<u>Description</u>
->		buffer	<u>Ptr</u>	4	0	Address of buffer for 8-bytes data (max.), 1 byte length prefix
->		compRout	<u>Ptr</u>	4	4	Completion routine address
->		data	<u>Ptr</u>	4	8	Optional data area for local storage

compRout points to a completion routine which is passed the parameters for:

1) *commandNum* in D0 (these are the commands to the device to: SendReset, Flush, Listen and Talk);

2) a pointer in A0 to a buffer storing the bus device's send and receive data as a variable length Pascal string (but not exceeding 8 data bytes and a one-byte length prefix);

3) a pointer in A1 to the completion routine itself; and

4) a pointer in A2 to an optional data area designed to hold the completion routine's data.

The completion routine is called when the **ADBOp** procedure has finished execution and has the same meaning as the service routine passed to the

SetADBInfo procedure.

On exit, D0 holds the short signifying the result code that signals noErr (0) or an unsuccessful completion (-1).

Apple Tech Note #206 points out some clarifications for the way completion routines are called:

First, if you don't want to call a completion routine, pass a NIL Ptr to the **ADBOp** routine.

Second, if you want to call a particular address's already-active routine, call GetADBInfo before you call **ADBOp** and pass the routine pointer. GetADBInfo returns to **ADBOp**.

Third, pass your own pointers to the **ADBOp** call if you want to set up your own completion routine and data area.

There are also several bugs identified in the Tech Note.

For example, the Talk command up to and including System 6.0.4 for the SE, SE/30, Mac II Ilx and Ilcx, returned an incorrect count byte when it timed out.

The Listen command, likewise up to and including System 6.0.4 for the SE, SE/30, Mac II Ilx and Ilcx transferred a different number of bytes than the supplied count byte.

The Listen command up to and including System 6.0.4 for the Mac Portable sends spurious data in the 7th and 8th bytes for any data count higher than 6.

A bug in the Macintosh SE, SE/30, Mac II, Ilx, and Ilcx implementations of the ADB Manager up to and including System 6.0.4 resulted in the completion routines passed to the **ADBOp** routine not always being called.