

**NAME**

ioctl\_list - list of ioctl calls in Linux/i386 kernel

**DESCRIPTION**

This is Ioctl List 1.3.27, a list of ioctl calls in Linux/i386 kernel 1.3.27. It contains 421 ioctls from `</usr/include/{asm,linux}/*.h>`. For each ioctl, its numerical value, its name, and its argument type are given.

An argument type of `const struct foo *` means the argument is input to the kernel. `struct foo *` means the kernel outputs the argument. If the kernel uses the argument for both input and output, this is marked with `// I-O`.

Some ioctls take more arguments or return more values than a single structure. These are marked `// MORE` and documented further in a separate section.

This list is very incomplete.

**ioctl structure**

Ioctl command values are 32-bit constants. In principle these constants are completely arbitrary, but people have tried to build some structure into them.

The old Linux situation was that of mostly 16-bit constants, where the last byte is a serial number, and the preceding byte(s) give a type indicating the driver. Sometimes the major number was used: 0x03 for the **HDIO\_\*** ioctls, 0x06 for the **LP\*** ioctls. And sometimes one or more ASCII letters were used. For example, **TCGETS** has value 0x00005401, with 0x54 = T indicating the terminal driver, and **CYGETTIMEOUT** has value 0x00435906, with 0x43 0x59 = C Y indicating the cyclades driver.

Later (0.98p5) some more information was built into the number. One has 2 direction bits (00: none, 01: write, 10: read, 11: read/write) followed by 14 size bits (giving the size of the argument), followed by an 8-bit type (collecting the ioctls in groups for a common purpose or a common driver), and an 8-bit serial number.

The macros describing this structure live in `<asm/ioctl.h>` and are `_IO(type,nr)` and `{_IOR, _IOW, _IOWR}(type,nr,size)`. They use `sizeof(size)` so that `size` is a misnomer here: this third argument is a data type.

Note that the size bits are very unreliable: in lots of cases they are wrong, either because of buggy macros using `sizeof(sizeof(struct))`, or because of legacy values.

Thus, it seems that the new structure only gave disadvantages: it does not help in checking, but it causes varying values for the various architectures.

**RETURN VALUE**

Decent ioctls return 0 on success and -1 on error, while any output value is stored via the argument. However, quite a few ioctls in fact return an output value. This is not yet indicated below.

```
// Main table.
// <include/asm-i386/socket.h>
0x00008901  FIOSETOWN    const int *
0x00008902  SIOCSPGRP   const int *
0x00008903  FIOGETOWN   int *
0x00008904  SIOCGPGRP   int *
0x00008905  SIOCATMAR   int *
0x00008906  SIOCGSTAMP  timeval *

// <include/asm-i386/termios.h>
0x00005401  TCGETS      struct termios *
0x00005402  TCSETS      const struct termios *
0x00005403  TCSETSW     const struct termios *
```

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0x00005404 TCSETSFC      const struct termios *
0x00005405 TCGETA      struct termio *
0x00005406 TCSETA      const struct termio *
0x00005407 TCSETAW     const struct termio *
0x00005408 TCSETAF     const struct termio *
0x00005409 TCSBRK      int
0x0000540A TCXONC      int
0x0000540B TCFLSH      int
0x0000540C TIOCEXCL    void
0x0000540D TIOCNXCL    void
0x0000540E TIOCSCTTY   int
0x0000540F TIOCGPGRP   pid_t *
0x00005410 TIOCSPGRP   const pid_t *
0x00005411 TIOCOUTQ    int *
0x00005412 TIOCSTI     const char *
0x00005413 TIOCGWINSZ  struct winsize *
0x00005414 TIOCSWINSZ  const struct winsize *
0x00005415 TIOCMGET    int *
0x00005416 TIOCMBIS    const int *
0x00005417 TIOCMBIC    const int *
0x00005418 TIOCMSET    const int *
0x00005419 TIOCGSOFTCAR int *
0x0000541A TIOCSSOFTCAR const int *
0x0000541B FIONREAD    int *
0x0000541B TIOCINQ     int *
0x0000541C TIOCLINUX   const char * // MORE
0x0000541D TIOCCONS    void
0x0000541E TIOCGSERIAL struct serial_struct *
0x0000541F TIOCSSERIAL const struct serial_struct *
0x00005420 TIOCPKT     const int *
0x00005421 FIONBIO     const int *
0x00005422 TIOCNOTTY   void
0x00005423 TIOCSETD    const int *
0x00005424 TIOCGETD    int *
0x00005425 TCSBRKP     int
0x00005426 TIOCTTYGSTRUCT struct tty_struct *
0x00005450 FIONCLEX    void
0x00005451 FIOCLEX     void
0x00005452 FIOASYNC    const int *
0x00005453 TIOCSERCONFIG void
0x00005454 TIOCSERGWILD int *
0x00005455 TIOCSERSWILD const int *
0x00005456 TIOCGLCKTRMIOS struct termios *
0x00005457 TIOCSLCKTRMIOS const struct termios *
0x00005458 TIOCSERGSTRUCT struct async_struct *
0x00005459 TIOCSERGETLSR int *

0x0000545A TIOCSERGETMULTI struct serial_multiport_struct *
0x0000545B TIOCSERSETMULTI const struct serial_multiport_struct *

// <include/linux/ax25.h>
0x000089E0 SIOCAX25GETUID const struct sockaddr_ax25 *
0x000089E1 SIOCAX25ADDUID const struct sockaddr_ax25 *
0x000089E2 SIOCAX25DELUID const struct sockaddr_ax25 *

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0x000089E3  SIOCAX25NOUID      const int *
0x000089E4  SIOCAX25DIGCTL     const int *
0x000089E5  SIOCAX25GETPARMS  struct ax25_parms_struct * // I-O
0x000089E6  SIOCAX25SETPARMS  const struct ax25_parms_struct *

// <include/linux/cdk.h>
0x00007314  STL_BINTR          void
0x00007315  STL_BSTART         void
0x00007316  STL_BSTOP          void
0x00007317  STL_BRESET         void

// <include/linux/cdrom.h>
0x00005301  CDROMPAUSE         void
0x00005302  CDROMRESUME        void
0x00005303  CDROMPLAYMSF      const struct cdrom_msf *
0x00005304  CDROMPLAYTRKIND   const struct cdrom_ti *
0x00005305  CDROMREADTOCHDR   struct cdrom_tochdr *
0x00005306  CDROMREADTOCENTRY struct cdrom_tocentry * // I-O
0x00005307  CDROMSTOP          void
0x00005308  CDROMSTART         void
0x00005309  CDROMEJECT         void
0x0000530A  CDROMVOLCTRL       const struct cdrom_volctrl *
0x0000530B  CDROMSUBCHNL       struct cdrom_subchnl * // I-O
0x0000530C  CDROMREADMODE2    const struct cdrom_msf * // MORE
0x0000530D  CDROMREADMODE1    const struct cdrom_msf * // MORE
0x0000530E  CDROMREADAUDIO    const struct cdrom_read_audio * // MORE
0x0000530F  CDROMEJECT_SW     int
0x00005310  CDROMMULTISESSION struct cdrom_multisession * // I-O
0x00005311  CDROM_GET_UPC      struct { char [8]; } *
0x00005312  CDROMRESET         void
0x00005313  CDROMVOLREAD       struct cdrom_volctrl *
0x00005314  CDROMREADDRAW     const struct cdrom_msf * // MORE
0x00005315  CDROMREADCOOKED   const struct cdrom_msf * // MORE
0x00005316  CDROMSEEK          const struct cdrom_msf *

// <include/linux/cm206.h>
0x00002000  CM206CTL_GET_STAT int
0x00002001  CM206CTL_GET_LAST_STAT int

// <include/linux/cyclades.h>
0x00435901  CYGETMON           struct cyclades_monitor *
0x00435902  CYGETTHRESH        int *
0x00435903  CYSETTHRESH        int
0x00435904  CYGETDEFTHRESH     int *
0x00435905  CYSETDEFTHRESH     int
0x00435906  CYGETTIMEOUT       int *
0x00435907  CYSETTIMEOUT       int
0x00435908  CYGETDEFTIMEOUT    int *
0x00435909  CYSETDEFTIMEOUT    int

// <include/linux/ext2_fs.h>
0x80046601  EXT2_IOC_GETFLAGS  int *

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0x40046602  EXT2_IOC_SETFLAGS      const int *
0x80047601  EXT2_IOC_GETVERSION          int *
0x40047602  EXT2_IOC_SETVERSION          const int *

// <include/linux/fd.h>

0x00000000  FDCLRPRM                      void
0x00000001  FDSETPRM                      const struct floppy_struct *
0x00000002  FDDEFPRM                      const struct floppy_struct *
0x00000003  FDGETPRM                      struct floppy_struct *
0x00000004  FDMSGON                       void
0x00000005  FDMSGOFF                      void
0x00000006  FDFMTBEG                     void
0x00000007  FDFMTTRK                     const struct format_descr *
0x00000008  FDFMTEND                     void
0x0000000A  FDSETEMSGTRESH               int
0x0000000B  FDFLUSH                      void
0x0000000C  FDSETMAXERRS                 const struct floppy_max_errors *
0x0000000E  FDGETMAXERRS                 struct floppy_max_errors *
0x00000010  FDGETDRVSTYP                 struct { char [16]; } *
0x00000014  FDSETDRVPRM                  const struct floppy_drive_params *
0x00000015  FDGETDRVPRM                  struct floppy_drive_params *
0x00000016  FDGETDRVSTAT                 struct floppy_drive_struct *
0x00000017  FDPOLLDRVSTAT                struct floppy_drive_struct *
0x00000018  FDRESET                      int
0x00000019  FDGETFDCSTAT                 struct floppy_fdc_state *
0x0000001B  FDWERRORCLR                  void
0x0000001C  FDWERRORGET                  struct floppy_write_errors *

0x0000001E  FDRAWCMD                     struct floppy_raw_cmd *    // MORE // I-O
0x00000028  FDTWADDLE                    void

// <include/linux/fs.h>

0x0000125D  BLKROSET                      const int *
0x0000125E  BLKROGET                      int *
0x0000125F  BLKRRPART                     void
0x00001260  BLKGETSIZE                    unsigned long *
0x00001261  BLKFLSBUF                     void
0x00001262  BLKRASET                      int
0x00001263  BLKRAGET                      int *
0x00000001  FIBMAP                        int *                      // I-O
0x00000002  FIGETBSZ                      int *

// <include/linux/hdreg.h>

0x00000301  HDIO_GETGEO                   struct hd_geometry *
0x00000302  HDIO_GET_UNMASKINTR           int *
0x00000304  HDIO_GET_MULTCOUNT           int *
0x00000307  HDIO_GET_IDENTITY             struct hd_driveid *
0x00000308  HDIO_GET_KEEPPSETTINGS        int *
0x00000309  HDIO_GET_CHIPSET              int *
0x0000030A  HDIO_GET_NOWERR              int *
0x0000030B  HDIO_GET_DMA                  int *
0x0000031F  HDIO_DRIVE_CMD                int *                      // I-O
0x00000321  HDIO_SET_MULTCOUNT           int
0x00000322  HDIO_SET_UNMASKINTR           int

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0x00000323  HDIO_SET_KEEPSETTINGS  int
0x00000324  HDIO_SET_CHIPSET      int
0x00000325  HDIO_SET_NOWERR      int
0x00000326  HDIO_SET_DMA          int

// <include/linux/if_eql.h>
0x000089F0  EQL_ENSLAVE           struct ifreq * // MORE // I-O
0x000089F1  EQL_EMANCIPATE        struct ifreq * // MORE // I-O
0x000089F2  EQL_GETSLAVECFG       struct ifreq * // MORE // I-O
0x000089F3  EQL_SETSLAVECFG       struct ifreq * // MORE // I-O
0x000089F4  EQL_GETMASTRCFG       struct ifreq * // MORE // I-O
0x000089F5  EQL_SETMASTRCFG       struct ifreq * // MORE // I-O

// <include/linux/if_plip.h>
0x000089F0  SIOCDEVPLIP           struct ifreq * // I-O

// <include/linux/if_ppp.h>
0x00005490  PPPIOCGFLAGS          int *
0x00005491  PPPIOCSFLAGS          const int *
0x00005492  PPPIOCGASYNCMAP       int *
0x00005493  PPPIOCSASYNCMAP       const int *
0x00005494  PPPIOCGUNIT           int *
0x00005495  PPPIOCSINPSIG         const int *
0x00005497  PPPIOCSDEBUG          const int *
0x00005498  PPPIOCGDEBUG          int *
0x00005499  PPPIOCGSTAT           struct ppp_stats *
0x0000549A  PPPIOCGTIME           struct ppp_ddinfo *
0x0000549B  PPPIOCGXASYNCMAP      struct { int [8]; } *
0x0000549C  PPPIOCSXASYNCMAP      const struct { int [8]; } *
0x0000549D  PPPIOCSMRU            const int *
0x0000549E  PPPIOCRASYNCMAP       const int *
0x0000549F  PPPIOCSMAXCID         const int *

// <include/linux/ipx.h>
0x000089E0  SIOCAIPXITFCRT        const char *
0x000089E1  SIOCAIPXPRISLT        const char *
0x000089E2  SIOCIPXCFGDATA        struct ipx_config_data *

// <include/linux/kd.h>
0x00004B60  GIO_FONT              struct { char [8192]; } *
0x00004B61  PIO_FONT              const struct { char [8192]; } *
0x00004B6B  GIO_FONTX             struct console_font_desc * // MORE // I-O
0x00004B6C  PIO_FONTX             const struct console_font_desc * //MORE
0x00004B70  GIO_CMAP              struct { char [48]; } *
0x00004B71  PIO_CMAP              const struct { char [48]; }

0x00004B2F  KIOCSOUND             int
0x00004B30  KDMKTONE              int
0x00004B31  KDGETLED              char *
0x00004B32  KDSETLED              int
0x00004B33  KDGBKBTYP             char *
0x00004B34  KDADDIO               int // MORE
0x00004B35  KDDELIO               int // MORE
0x00004B36  KDENABIO              void // MORE

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0x00004B37  KDDISABIO      void                // MORE
0x00004B3A  KDSETMODE      int
0x00004B3B  KDGETMODE      int *
0x00004B3C  KDMAPDISP      void                // MORE
0x00004B3D  KDUNMAPDISP    void                // MORE
0x00004B40  GIO_SCRNMAP     struct { char [E_TABSZ]; } *
0x00004B41  PIO_SCRNMAP     const struct { char [E_TABSZ]; } *
0x00004B69  GIO_UNISCRNMAP struct { short [E_TABSZ]; } *
0x00004B6A  PIO_UNISCRNMAP const struct { short [E_TABSZ]; } *
0x00004B66  GIO_UNIMAP      struct unimapdesc * // MORE // I-O
0x00004B67  PIO_UNIMAP      const struct unimapdesc * // MORE
0x00004B68  PIO_UNIMAPCLR   const struct unimapinit *
0x00004B44  KDGKBMODE      int *
0x00004B45  KDSKBMODE      int
0x00004B62  KDGKBMETA      int *
0x00004B63  KDSKBMETA      int
0x00004B64  KDGKBLED       int *
0x00004B65  KDSKBLED       int
0x00004B46  KDGKBENT       struct kbentry *    // I-O
0x00004B47  KDSKBENT       const struct kbentry *
0x00004B48  KDGKBSSENT     struct kbsentry *   // I-O
0x00004B49  KDSKBSSENT     const struct kbsentry *
0x00004B4A  KDGKBDIACR     struct kbdiacr *
0x00004B4B  KDSKBDIACR     const struct kbdiacr *
0x00004B4C  KDGETKEYCODE    struct kbkeycode * // I-O
0x00004B4D  KDSETKEYCODE    const struct kbkeycode *
0x00004B4E  KDSIGACCEPT     int

// <include/linux/lp.h>
0x00000601  LPCHAR          int
0x00000602  LPTIME          int
0x00000604  LPABORT         int
0x00000605  LPSETIRQ        int
0x00000606  LPGETIRQ        int *
0x00000608  LPWAIT          int
0x00000609  LPCAREFUL       int
0x0000060A  LPABORTOPEN     int
0x0000060B  LPGETSTATUS     int *
0x0000060C  LPRESET         void
0x0000060D  LPGETSTATS     struct lp_stats *

// <include/linux/mroute.h>
0x000089E0  SIOCGETVIFCNT   struct sioc_vif_req * // I-O
0x000089E1  SIOCGETSGCNT    struct sioc_sg_req * // I-O

// <include/linux/msdos_fs.h>
0x82307201  VFAT_IOCTL_READDIR_BOTH  struct dirent [2]
0x82307202  VFAT_IOCTL_READDIR_SHORT  struct dirent [2]
0x80047210  FAT_IOCTL_GET_ATTRIBUTES  __u32 *
0x40047211  FAT_IOCTL_SET_ATTRIBUTES  const __u32 *

// <include/linux/mtio.h>
0x40086D01  MTIOCTOP        const struct mtop *

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0x801C6D02  MTIOCGET          struct mtget *
0x80046D03  MTIOCPOS          struct mtpos *
0x80206D04  MTIOCGETCONFIG   struct mtconfiginfo *
0x40206D05  MTIOCSETCONFIG   const struct mtconfiginfo *

// <include/linux/netrom.h>
0x000089E0  SIOCNRGETPARMS   struct nr_parms_struct *           // I-O
0x000089E1  SIOCNRSETPARMS   const struct nr_parms_struct *
0x000089E2  SIOCNRDECOBS     void
0x000089E3  SIOCNRRTCTL      const int *

// <include/linux/sbpcd.h>
0x00009000  DDIOCSDBG        const int *
0x00005382  CDROMAUDIOBUFSIZ int

// <include/linux/scc.h>
0x00005470  TIOSCCINI        void
0x00005471  TIOCCHANINI      const struct scc_modem *
0x00005472  TIOCGKISS        struct ioctl_command *           // I-O
0x00005473  TIOCSKISS        const struct ioctl_command *
0x00005474  TIOSCCSTAT       struct scc_stat *

// <include/linux/scsi.h>
0x00005382  SCSI_IOCTL_GET_IDLUN      struct { int [2]; } *
0x00005383  SCSI_IOCTL_TAGGED_ENABLE  void
0x00005384  SCSI_IOCTL_TAGGED_DISABLE void
0x00005385  SCSI_IOCTL_PROBE_HOST     const int *           // MORE

// <include/linux/smb_fs.h>
0x80027501  SMB_IOC_GETMOUNTUID      uid_t *

// <include/linux/sockios.h>
0x0000890B  SIOCADDRT             const struct rtentry *           // MORE
0x0000890C  SIOCDELRT             const struct rtentry *           // MORE
0x00008910  SIOCGIFNAME          char []
0x00008911  SIOCSIFLINK          void
0x00008912  SIOCGIFCONF          struct ifconf *                   // MORE // I-O
0x00008913  SIOCGIFFLAGS         struct ifreq *                     // I-O
0x00008914  SIOCSIFFLAGS         const struct ifreq *
0x00008915  SIOCGIFADDR          struct ifreq *                     // I-O
0x00008916  SIOCSIFADDR          const struct ifreq *
0x00008917  SIOCGIFDSTADDR       struct ifreq *                     // I-O
0x00008918  SIOCSIFDSTADDR       const struct ifreq *
0x00008919  SIOCGIFBRDADDR       struct ifreq *                     // I-O
0x0000891A  SIOCSIFBRDADDR       const struct ifreq *
0x0000891B  SIOCGIFNETMASK        struct ifreq *                     // I-O
0x0000891C  SIOCSIFNETMASK        const struct ifreq *
0x0000891D  SIOCGIFMETRIC         struct ifreq *                     // I-O
0x0000891E  SIOCSIFMETRIC         const struct ifreq *
0x0000891F  SIOCGIFMEM            struct ifreq *                     // I-O
0x00008920  SIOCSIFMEM            const struct ifreq *
0x00008921  SIOCGIFMTU            struct ifreq *                     // I-O
0x00008922  SIOCSIFMTU            const struct ifreq *

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0x00008923  OLD_SIOCGIFHWADDR  struct ifreq *      // I-O
0x00008924  SIOCSIFHWADDR       const struct ifreq * // MORE
0x00008925  SIOCGIFENCAP        int *
0x00008926  SIOCSIFENCAP        const int *
0x00008927  SIOCGIFHWADDR       struct ifreq *      // I-O
0x00008929  SIOCGIFSLAVE        void
0x00008930  SIOCSIFSLAVE        void
0x00008931  SIOCADDMULTI        const struct ifreq *
0x00008932  SIOCDELMULTI        const struct ifreq *
0x00008940  SIOCADDRTOLD        void
0x00008941  SIOCDELRTOLD        void
0x00008950  SIOCDDARP           const struct arpreq *
0x00008951  SIOCGARP            struct arpreq *     // I-O
0x00008952  SIOCSARP           const struct arpreq *
0x00008960  SIOCDDARP           const struct arpreq *
0x00008961  SIOCGRARP          struct arpreq *     // I-O
0x00008962  SIOCSRARP          const struct arpreq *
0x00008970  SIOCGIFMAP         struct ifreq *      // I-O
0x00008971  SIOCSIFMAP         const struct ifreq *

// <include/linux/soundcard.h>

0x00005100  SNDCTL_SEQ_RESET   void
0x00005101  SNDCTL_SEQ_SYNC    void

0xC08C5102  SNDCTL_SYNTH_INFO  struct synth_info * // I-O
0xC0045103  SNDCTL_SEQ_CTRLRATE int *                // I-O
0x80045104  SNDCTL_SEQ_GETOUTCOUNT int *
0x80045105  SNDCTL_SEQ_GETINCOUNT int *
0x40045106  SNDCTL_SEQ_PERCMODE void

0x40285107  SNDCTL_FM_LOAD_INSTR const struct sbi_instrument *

0x40045108  SNDCTL_SEQ_TESTMIDI const int *
0x40045109  SNDCTL_SEQ_RESETSAMPLES const int *
0x8004510A  SNDCTL_SEQ_NRSYNTHS int *
0x8004510B  SNDCTL_SEQ_NRMIDIS int *
0xC074510C  SNDCTL_MIDI_INFO   struct midi_info *  // I-O
0x4004510D  SNDCTL_SEQ_THRESHOLD const int *
0xC004510E  SNDCTL_SYNTH_MEMAVL int *                // I-O
0x4004510F  SNDCTL_FM_4OP_ENABLE const int *
0xCFB85110  SNDCTL_PMGR_ACCESS struct patmgr_info * // I-O
0x00005111  SNDCTL_SEQ_PANIC   void

0x40085112  SNDCTL_SEQ_OUTOFBAND const struct seq_event_rec *

0xC0045401  SNDCTL_TMR_TIMEBASE int *                // I-O
0x00005402  SNDCTL_TMR_START   void
0x00005403  SNDCTL_TMR_STOP    void
0x00005404  SNDCTL_TMR_CONTINUE void
0xC0045405  SNDCTL_TMR_TEMPO   int *                // I-O
0xC0045406  SNDCTL_TMR_SOURCE  int *                // I-O
0x40045407  SNDCTL_TMR_METRONOME const int *
0x40045408  SNDCTL_TMR_SELECT  int *                // I-O
0xCFB85001  SNDCTL_PMGR_IFACE  struct patmgr_info * // I-O
0xC0046D00  SNDCTL_MIDI_PRETIME int *                // I-O
0xC0046D01  SNDCTL_MIDI_MPUMODE const int *

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0xC0216D02 SNDCTL_MIDI_MPUCMD struct mpu_command_rec * // I-O
0x00005000 SNDCTL_DSP_RESET void
0x00005001 SNDCTL_DSP_SYNC void
0xC0045002 SNDCTL_DSP_SPEED int * // I-O
0xC0045003 SNDCTL_DSP_STEREO int * // I-O
0xC0045004 SNDCTL_DSP_GETBLKSIZE int * // I-O
0xC0045006 SOUND_PCM_WRITE_CHANNELS int * // I-O
0xC0045007 SOUND_PCM_WRITE_FILTER int * // I-O
0x00005008 SNDCTL_DSP_POST void
0xC0045009 SNDCTL_DSP_SUBDIVIDE int * // I-O
0xC004500A SNDCTL_DSP_SETFRAGMENT int * // I-O
0x8004500B SNDCTL_DSP_GETFMTS int *
0xC0045005 SNDCTL_DSP_SETFMT int * // I-O

0x800C500C SNDCTL_DSP_GETOSPACE struct audio_buf_info *
0x800C500D SNDCTL_DSP_GETISPACE struct audio_buf_info *
0x0000500E SNDCTL_DSP_NONBLOCK void
0x80045002 SOUND_PCM_READ_RATE int *
0x80045006 SOUND_PCM_READ_CHANNELS int *
0x80045005 SOUND_PCM_READ_BITS int *
0x80045007 SOUND_PCM_READ_FILTER int *
0x00004300 SNDCTL_COPR_RESET void
0xCFB04301 SNDCTL_COPR_LOAD const struct copr_buffer *

0xC0144302 SNDCTL_COPR_RDATA struct copr_debug_buf * // I-O
0xC0144303 SNDCTL_COPR_RCODE struct copr_debug_buf * // I-O

0x40144304 SNDCTL_COPR_WDATA const struct copr_debug_buf *
0x40144305 SNDCTL_COPR_WCODE const struct copr_debug_buf *

0xC0144306 SNDCTL_COPR_RUN struct copr_debug_buf * // I-O
0xC0144307 SNDCTL_COPR_HALT struct copr_debug_buf * // I-O

0x4FA44308 SNDCTL_COPR_SENDMSG const struct copr_msg *
0x8FA44309 SNDCTL_COPR_RCVMSG struct copr_msg *
0x80044D00 SOUND_MIXER_READ_VOLUME int *
0x80044D01 SOUND_MIXER_READ_BASS int *
0x80044D02 SOUND_MIXER_READ_TREBLE int *
0x80044D03 SOUND_MIXER_READ_SYNTH int *
0x80044D04 SOUND_MIXER_READ_PCM int *
0x80044D05 SOUND_MIXER_READ_SPEAKER int *
0x80044D06 SOUND_MIXER_READ_LINE int *
0x80044D07 SOUND_MIXER_READ_MIC int *
0x80044D08 SOUND_MIXER_READ_CD int *
0x80044D09 SOUND_MIXER_READ_IMIX int *
0x80044D0A SOUND_MIXER_READ_ALTPCM int *
0x80044D0B SOUND_MIXER_READ_RECLEV int *
0x80044D0C SOUND_MIXER_READ_IGAIN int *
0x80044D0D SOUND_MIXER_READ_OGAIN int *
0x80044D0E SOUND_MIXER_READ_LINE1 int *
0x80044D0F SOUND_MIXER_READ_LINE2 int *
0x80044D10 SOUND_MIXER_READ_LINE3 int *
0x80044D1C SOUND_MIXER_READ_MUTE int *
0x80044D1D SOUND_MIXER_READ_ENHANCE int *
0x80044D1E SOUND_MIXER_READ_LOUD int *
0x80044DFF SOUND_MIXER_READ_RECSRC int *

```

```

0x80044DFE  SOUND_MIXER_READ_DEVMASK  int *
0x80044DFD  SOUND_MIXER_READ_RECMAK  int *
0x80044DFB  SOUND_MIXER_READ_STEREO  int *
0x80044DFC  SOUND_MIXER_READ_CAPS    int *

0xC0044D00  SOUND_MIXER_WRITE_VOLUME  int * // I-O
0xC0044D01  SOUND_MIXER_WRITE_BASS    int * // I-O
0xC0044D02  SOUND_MIXER_WRITE_TREBLE  int * // I-O
0xC0044D03  SOUND_MIXER_WRITE_SYNTH   int * // I-O
0xC0044D04  SOUND_MIXER_WRITE_PCM     int * // I-O
0xC0044D05  SOUND_MIXER_WRITE_SPEAKER int * // I-O
0xC0044D06  SOUND_MIXER_WRITE_LINE    int * // I-O
0xC0044D07  SOUND_MIXER_WRITE_MIC     int * // I-O
0xC0044D08  SOUND_MIXER_WRITE_CD      int * // I-O
0xC0044D09  SOUND_MIXER_WRITE_IMIX    int * // I-O
0xC0044D0A  SOUND_MIXER_WRITE_ALTPCM  int * // I-O
0xC0044D0B  SOUND_MIXER_WRITE_RECLEV  int * // I-O
0xC0044D0C  SOUND_MIXER_WRITE_IGAIN   int * // I-O
0xC0044D0D  SOUND_MIXER_WRITE_OGAIN   int * // I-O
0xC0044D0E  SOUND_MIXER_WRITE_LINE1   int * // I-O
0xC0044D0F  SOUND_MIXER_WRITE_LINE2   int * // I-O
0xC0044D10  SOUND_MIXER_WRITE_LINE3   int * // I-O
0xC0044D1C  SOUND_MIXER_WRITE_MUTE    int * // I-O
0xC0044D1D  SOUND_MIXER_WRITE_ENHANCE int * // I-O
0xC0044D1E  SOUND_MIXER_WRITE_LOUD    int * // I-O
0xC0044DFF  SOUND_MIXER_WRITE_RECSRC  int * // I-O

// <include/linux/umsdos_fs.h>

0x000004D2  UMSDOS_READDIR_DOS        struct umsdos_ioctl * // I-O
0x000004D3  UMSDOS_UNLINK_DOS         const struct umsdos_ioctl *
0x000004D4  UMSDOS_RMDIR_DOS          const struct umsdos_ioctl *
0x000004D5  UMSDOS_STAT_DOS           struct umsdos_ioctl * // I-O
0x000004D6  UMSDOS_CREAT_EMD          const struct umsdos_ioctl *
0x000004D7  UMSDOS_UNLINK_EMD         const struct umsdos_ioctl *
0x000004D8  UMSDOS_READDIR_EMD        struct umsdos_ioctl * // I-O
0x000004D9  UMSDOS_GETVERSION         struct umsdos_ioctl *
0x000004DA  UMSDOS_INIT_EMD           void
0x000004DB  UMSDOS_DOS_SETUP          const struct umsdos_ioctl *
0x000004DC  UMSDOS_RENAME_DOS         const struct umsdos_ioctl *

// <include/linux/vt.h>

0x00005600  VT_OPENQRY                 int *
0x00005601  VT_GETMODE                 struct vt_mode *
0x00005602  VT_SETMODE                 const struct vt_mode *
0x00005603  VT_GETSTATE                struct vt_stat *
0x00005604  VT_SENDSIG                 void
0x00005605  VT_RELDISP                 int
0x00005606  VT_ACTIVATE                int
0x00005607  VT_WAITACTIVE              int
0x00005608  VT_DISALLOCATE             int
0x00005609  VT_RESIZE                  const struct vt_sizes *
0x0000560A  VT_RESIZEX                 const struct vt_consize *

```

// More arguments. Some ioctl's take a pointer to a structure which contains additional pointers. These are documented here in alphabetical order.

**CDROMREADAUDIO** takes an input pointer *const struct cdrom\_read\_audio \**. The *buf* field points to an output buffer of length *nframes \* CD\_FRAMESIZE\_RAW*.

**CDROMREADCOOKED**, **CDROMREADMODE1**, **CDROMREADMODE2**, and **CDROMREADRAW** take an input pointer *const struct cdrom\_msf \**. They use the same pointer as an output pointer to *char []*. The length varies by request. For **CDROMREADMODE1**, most drivers use *CD\_FRAMESIZE*, but the Optics Storage driver uses *OPT\_BLOCKSIZE* instead (both have the numerical value 2048).

**CDROMREADCOOKED** char [*CD\_FRAMESIZE*]  
**CDROMREADMODE1** char [*CD\_FRAMESIZE* or *OPT\_BLOCKSIZE*]  
**CDROMREADMODE2** char [*CD\_FRAMESIZE\_RAW*]  
**CDROMREADRAW** char [*CD\_FRAMESIZE\_RAW*]

**EQL\_ENSLAVE**, **EQL\_EMANCIPATE**, **EQL\_GETSLAVECFG**, **EQL\_SETSLAVECFG**, **EQL\_GETMASTERCFG**, and **EQL\_SETMASTERCFG** take a *struct ifreq \**. The *ifr\_data* field is a pointer to another structure as follows:

**EQL\_ENSLAVE** *const struct slaving\_request \**  
**EQL\_EMANCIPATE** *const struct slaving\_request \**  
**EQL\_GETSLAVECFG** *struct slave\_config \* // I-O*  
**EQL\_SETSLAVECFG** *const struct slave\_config \**  
**EQL\_GETMASTERCFG** *struct master\_config \**  
**EQL\_SETMASTERCFG** *const struct master\_config \**

**FDRAWCMD** takes a *struct floppy\_raw\_cmd \**. If *flags & FD\_RAW\_WRITE* is nonzero, then *data* points to an input buffer of length *length*. If *flags & FD\_RAW\_READ* is nonzero, then *data* points to an output buffer of length *length*.

**GIO\_FONTX** and **PIO\_FONTX** take a *struct console\_font\_desc \** or a *const struct console\_font\_desc \**, respectively. *chardata* points to a buffer of *char [charcount]*. This is an output buffer for **GIO\_FONTX** and an input buffer for **PIO\_FONTX**.

**GIO\_UNIMAP** and **PIO\_UNIMAP** take a *struct unimapdesc \** or a *const struct unimapdesc \**, respectively. *entries* points to a buffer of *struct unipair [entry\_ct]*. This is an output buffer for **GIO\_UNIMAP** and an input buffer for **PIO\_UNIMAP**.

**KDADDIO**, **KDDELIO**, **KDDISABIO**, and **KDENABIO** enable or disable access to I/O ports. They are essentially alternate interfaces to 'ioperm'.

**KDMAPDISP** and **KDUNMAPDISP** enable or disable memory mappings or I/O port access. They are not implemented in the kernel.

**SCSI\_IOCTL\_PROBE\_HOST** takes an input pointer *const int \**, which is a length. It uses the same pointer as an output pointer to a *char []* buffer of this length.

**SIOCADDRT** and **SIOCDELRT** take an input pointer whose type depends on the protocol:

Most protocols *const struct rentry \**  
 AX.25 *const struct ax25\_route \**  
 NET/ROM *const struct nr\_route\_struct \**

**SIOCGIFCONF** takes a *struct ifconf \**. The *ifc\_buf* field points to a buffer of length *ifc\_len* bytes, into which the kernel writes a list of type *struct ifreq []*.

**SIOSIFHWADDR** takes an input pointer whose type depends on the protocol:

Most protocols *const struct ifreq \**  
 AX.25 *const char [AX25\_ADDR\_LEN]*

**TIOCLINUX** takes a *const char \**. It uses this to distinguish several independent subcases. In the table below, *N + foo* means *foo* after an N-byte pad. *struct selection* is implicitly defined in

*drivers/char/selection.c*

```
TIOCLINUX-2 1 + const struct selection *
TIOCLINUX-3 void
TIOCLINUX-4 void
TIOCLINUX-5 4 + const struct { long [8]; } *
TIOCLINUX-6 char *
TIOCLINUX-7 char *
TIOCLINUX-10 1 + const char *
```

// Duplicate ioctls

This list does not include ioctls in the range **SIOCDEVPRIVATE** and **SIOCPRIV**  
**VATE**.

0x00000001	FDSETPRM	FIBMAP
0x00000002	FDDEFPRM	FIGETBSZ
0x00005382	CDROMAUDIOBUFSIZ	SCSI_IOCTL_GET_IDLUN
0x00005402	SNDCTL_TMR_START	TCSETS
0x00005403	SNDCTL_TMR_STOP	TCSETSW
0x00005404	SNDCTL_TMR_CONTINUE	TCSETSF

## SEE ALSO

[ioctl\(2\)](#)

## COLOPHON

This page is part of release 3.74 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <http://www.kernel.org/doc/man-pages/>.