

TELEDRIIVE

USER MANUAL

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ABOUT THIS MANUAL

WHAT'S IT FOR? This manual is about the TELEDRIE, which is a disk drive option for the ICL OPD and Merlin TONTO. The manual is divided into five sections to help you find your way around. The sections are introduced here in a comprehensive index to help you locate information quickly.

WHAT'S IN IT? **I BEFORE YOU START** Page 2

Advice about the correct use of equipment. Choosing a suitable location, and what you need before you start.

II GETTING STARTED Page 5

Setting up the TELEDRIE for operational use with the computer.

- A: Unpack and Check
- B: Positioning the Unit
- C: Data Save
- D: Connect to Computer & Other interfaces
- E: Data Restore

III OPERATING YOUR TELEDRIE Page 7

Disk-based utilities.

- A: Redirection of L and R
- B: Format a disk

Using microdrive utilities with disks.

- C: Copying cartridges and disks
- D: Microdrive utilities
- E: RAMDISK

IV MAINTENANCE AND TROUBLESHOOTING Page 13

Normal maintenance and help if something goes wrong.

V TECHNICAL DETAILS Page 14

Gives a list of technical information about your TELEDRIE.

I. BEFORE YOU START

Before following the Teledrive installation procedure, please remove and check the serial number on your Rompack.

(This applies to two-slot Rompacks only).

The number on your Rompack should look something like this: F2443/04 035/xxxxxx. The first set of digits represents the model number of your Rompack. All Rompacks should start with F2443, followed by two digits which will change. Where these last two digits are 02; 04; 05; only certain serial numbers will work. The serial number starts with a three digit number, which is then followed by a six digit number.

If you have one of the above mentioned model numbers, only the serial numbers given below, or any number above that, will work with the Teledrive.

F2443/02 - 045/008251

F2443/04 - 035/002551

F2443/05 - 035/001001

DISK MEDIA

These disk drives are of the highest quality and should therefore, only be used with high quality floppy disks to avoid premature wearing of the drive mechanism and magnetic reader heads. PCML Ltd can accept no responsibility for any problems which may occur if low quality media is used.

Tests have shown the following brands are suitable, however other brands may be of similar quality.

JVC
Sony
Maxell
Fuji

NOTE: Single sided disks can now be used if formatted using the 'SD' option on the format screen.

Floppy diskettes which conform to the standards required by these drives can be obtained from PCML Ltd. Please telephone us for details.

PLEASE KEEP ALL PACKING MATERIALS AS YOUR GUARANTEE MAY BE INVALIDATED IF THE UNIT IS RETURNED FOR REPAIR WITH IMPROPER PACKING MATERIALS.

PROPER USE OF THE TELEDRIVE

The TELEDRIVE has been designed, manufactured and tested to meet international standards for data processing equipment. As with any electrical apparatus, however, you must be careful when using it.

- | | | | |
|-----------|---|--------------|--|
| DO | Read the operating instructions carefully before you try to use the TELEDRIVE. | DON'T | Continue to use the TELEDRIVE if you have any doubt about it working normally or if it is damaged in any way. Disconnect it from the computer. Consult your supplier. |
| DO | Ensure that all electrical connections (including mains plug and interface lead) are properly made in accordance with the instructions. | DON'T | Trail wires across gangways or under carpets. |
| DO | Keep your fingers and other objects away from connectors, apertures and other moving parts of the TELEDRIVE. | DON'T | Obstruct the disc slots in the TELEDRIVE, this could cause damage. |
| DO | Disconnect the TELEDRIVE from the mains before carrying out any maintenance procedures. | DON'T | Remove any fixed covers unless you are qualified to do so and even then disconnect the TELEDRIVE from the mains and the computer before you start. (Unqualified persons may invalidate the user's guarantee) |
| DO | Periodically check that leads have not become damaged or worn. | DON'T | Position the TELEDRIVE near heat sources such as radiators. High temperatures may cause overheating of the unit and shorten its life. |
| DO | Remove micro-diskette before removing power from TELEDRIVE. | | |

WHAT YOU NEED To install the TELEDRIE you require:

- An operational host computer (ICL OPD or Merlin TONTO).
- A screwdriver, with a blade about 5mm wide.
- A standard 3-pin mains plug fitted with a 3amp fuse.
- A mains supply outlet (240v 50Hz) already installed for use with a standard UK 3-pin plug.
- The items listed in II.A overleaf which are delivered with the TELEDRIE unit.

The 3-pin plug should be connected as follows:

Green/Yellow	to Earth	E
Brown or Red	to Live	L
Blue or Black	to Neutral	N

The mains outlet should be within easy reach of the power lead supplied otherwise you may require an extension lead. It is recommended that the mains outlet should be of the switched type and should preferably be in the same socket as the host computer, so less likely to be switched off by mistake.

WARNING

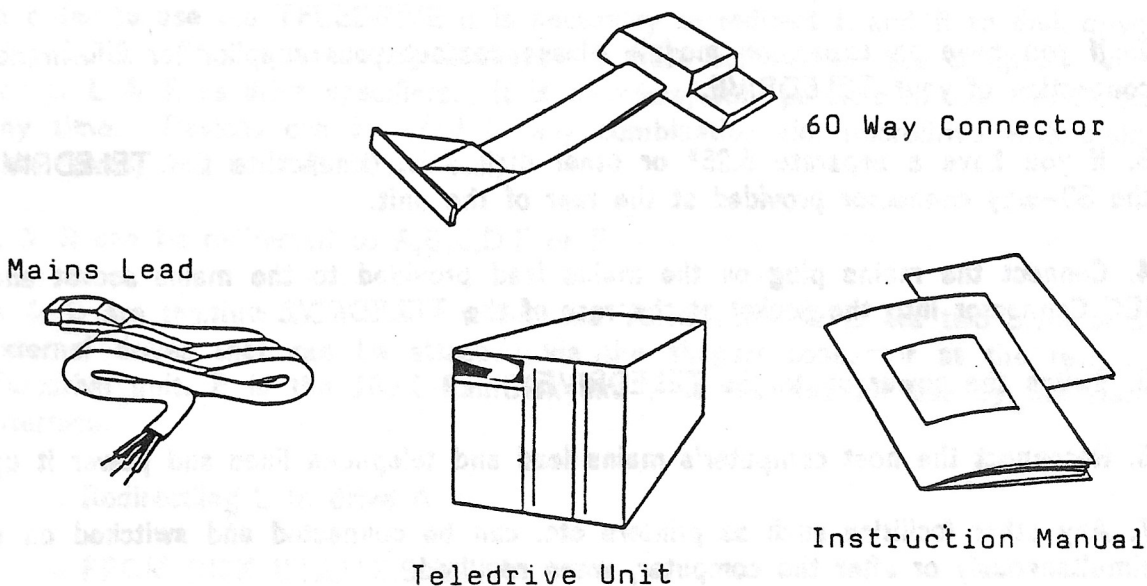
The safety of this equipment relies on it not being connected to an impendant neutral (IT) power distribution system (as defined in BS6204). This type of power supply is found only outside the UK (notably in parts of FRANCE), where you should check the type of supply with your local authority. If your supply is of the IT type, you must fit an isolation transformer between the supply outlet and the mains lead of the TELEDRIE. If in doubt, consult a qualified electrician.

II. GETTING STARTED

A. Unpack and Check

CAUTION: HANDLING EQUIPMENT

After unpacking the TELEDRIVE, check that you have the following items:



Contact your supplier immediately if anything is missing or is obviously damaged.

Keep the packing materials in case you need to return the TELEDRIVE for service or repair.

Now fill in and return the guarantee card.

B. Positioning of the unit

The TELEDRIVE has been designed to integrate fully with the ICL OPD/Merlin Tonto range, it can be placed as a stand alone unit to the right of the computer, or when operated with other approved interfaces, stacked with them.

C. Data Save

Before switching off your host computer you may like to save any data still stored in the machine, either by using the SAVE STORE command, or by other means.

D. Connection to the Computer and Other Interfaces

Ensure that the host computer is disconnected from the mains supply and the telephone lines. The mains socket of the TELEDRIE is fitted with a fuse holder with 500 MA cartridge fuse. There is no switch fitted to the TELEDRIE, like the computer this is switched on when the mains supply is connected.

1. If you have no expansion modules connect the 60-way ROMCAP connector on the left side of the unit to a socket on the ROMPACK with the lead provided. (It is preferable to use one of the right hand sockets on the ROMPACK.)
2. If you have an expansion module please contact your supplier for information on connection of your TELEDRIE.
3. If you have a separate 5.25" or other disk unit, connect to the TELEDRIE via the 30-way connector provided at the rear of the unit.
4. Connect the mains plug on the mains lead provided to the mains socket and the IEC Connector into the socket at the rear of the TELEDRIE unit.
5. Switch the power on to the TELEDRIE.
6. Reconnect the host computer's mains lead and telephone lines and power it up.
7. Any other facilities such as printers etc. can be connected and switched on either simultaneously or after the computer, when required.

SWITCHING ON

On switching on the computer, it will start its self-checking procedure and after approximately 1 to 2 seconds after switching on the TELEDRIE, the left hand disk drive operating light will illuminate for approximately half a second. The Initialisation screen will be displayed with the "Teledrive V2.0" message in the bottom left hand messaging area (This may not appear if other devices are connected, such as a printer).

E. DATA RESTORE

Any data saved before power down of your host computer can be loaded from microdrive in the normal way.

INSERT A DISKETTE

The arrow indented in the plastic, indicates that the diskette must be loaded into the drive with the arrow going first at the bottom of the drive.

III OPERATING YOUR TELEDRIIVE

Disk-based utilities

Redirection and Format reside on your utility disk. To load them you can use the 'DISK UTILITIES' application, which can be found within the applications menu. Place utility disk in drive A (or B).

A. REDIRECTION OF L AND R (Normally Left and Right microdrive)

In order to use the TELEDRIIVE it is necessary to redirect L and R to disk drives, or RAMDISK. This is necessary because the base software of the computer will only accept L & R as drive specifiers. It is therefore, only possible to use two devices at any time. Devices can be used in any combination (ie. microdrive with disk; two disk drives; disk with RamDisk; etc.).

L & R can be redirected to A,B,C,D,E or F.

A & B are the two 3.5in drives within the Teledrive. C & D are two 3.5in or 5.25in external drives that can be attached via the shugart connector at the rear of the Teledrive unit. E is the 180K RamDisk and F is reserved for use by the HardDisk interface.

Redirectiing L to drive A

FROM DISK UTILITIES MENU

Select	L & R Redirection
Type A	To change drive L from Microdrive to Left hand Disk drive.
Press f1	To accept drive redirection.
	Automatically returns to Disk Utilities Menu.

EITHER: Type 0 to remove utilities,
or Press START to exit (but stay resident).

B. NOW FORMAT A DISK

Insert	Disk to be formatted in left drive
Select	Format Disk from Disk Utilites Menu
Enter	Disk name .eg TEST
Type A	To format left hand disk drive.
	Enter formatting options (or use default: 720K per disk)
Press f1	To accept format operation.
	Format proceeds (Taking approx. 1.5 minutes).
Type N	No further disks to format

EITHER: Type 0 to remove utilities, or Press START to exit.

Floppy disks are now accessed as if they were microdrives using 'L' and 'R'. The following shows microdrive utilities being used on floppy disks.

C. COPYING CARTRIDGES AND DISKS

The copy procedure is the same for microdrives, floppy disks and RAMDISK, using the Copy Cartridge option on the Microdrive Utilities Menu.

1. COPY FROM MICRODRIVE TO FLOPPY DISK

To copy a Microdrive to a floppy disk, place microdrive cartridge to be copied in right microdrive (L should be redirected to Drive A).

FROM TOP LEVEL MENU

Go into	Housekeeping Menu
Select	Microdrive Utilities
Select	Copy Cartridge
Type R	R defined as the source drive (It is not necessary to name the cartridges)
Press f1	Copy procedure begins.

The computer copies files individually, asking whether each file should be copied. Either type Y or N (Yes or No) to enable the computer to copy specified files, or press f1 for ALL files to be copied.

When copying is finished there is the opportunity to have a Copy Report.

Press Y	Copy Report displayed
Y or N	Y to copy further cartridges or diskettes. N to return to Microdrive Utilities Menu.

2. COPY FROM FLOPPY DISK TO FLOPPY DISK

In order to copy from floppy disk to floppy disk it is necessary to redirect both L & R to the left and right disk drives (A and B).

FROM TOP LEVEL MENU

	With 'DISK UTILITY' loaded
Go into	Applications Menu
Select	DISK UTILITY
Select	L & R Redirection
Type A	Redirects 'L' to drive A
Type B	Redirects 'R' to drive B
Press f1	Saves redirection and returns to Disk Utilities Menu

Insert source diskette in left hand drive A
Place target diskette in Right hand drive B

Press START Displays Top Level Menu
Go into Housekeeping Menu
Select Microdrive Utilities
Select Copy Cartridge
Type L or R Specifies your source drive

It is not necessary to name the cartridges.

Press f1 Copy procedure begins
Press f1 ALL files will be copied
Type Y For Copy Report
Y or N Y to copy further cartridges or diskettes
 N to return to Microdrive Utilities Menu

3. COPY FROM FLOPPY DISK TO RAMDISK.

In order to copy from floppy disk to RAMDISK it is necessary to redirect L or R to RAMDISK (E).

FROM TOP LEVEL MENU

With 'DISK UTILITY' loaded
Go into Applications Menu
Select DISK UTILITY
Select L & R Redirection
Type A Redirects 'L' to drive A
Type E Redirects 'R' to drive E
Press f1 Saves redirection and returns to Disk
 Utilities Menu

Insert source diskette in left hand drive (A)

Press START Displays Top Level Menu
Go into Housekeeping Menu
Select Microdrive Utilities
Select Copy Cartridge
Type L Specifying L (drive A) as source drive

It is not necessary to name the cartridges.

Press f1 Copy procedure begins
Press f1 ALL files will be copied
Type Y For Copy Report
Y or N Y to copy further cartridges or diskettes
N to return to Disk Utilities Menu

4. OTHER COMBINATIONS OF COPYING

By redirecting L and R to various devices any combination of copy can be done.

Floppy disk to Microdrive
Microdrive to RAMDISK
RAMDISK to Microdrive
RAMDISK to Floppy disk
Microdrive to Microdrive

It is important to remember that when copying from floppy disk or RAMDISK it is possible for the device being copied from to hold more data than the device being copied to. If this is so the copy will proceed, however, copy errors will be shown in the Copy Report.

NB. All the aforementioned copy routines were operated via the Microdrive utilities. All of these utilities can be used with your TELEDRIIVE except for the Format Cartridge option.

D. MICRODRIVE UTILITIES

1. DISPLAY CARTRIDGE DETAILS

FROM MICRODRIVE UTILITIES MENU

Select	Cartridge Report
Press ENTER	Bypasses cartridge name
Type R	R indicates drive
Press f1	Name of cartridge, state, expected life and Report Option given.
Type Y	The file list display shows the files on cartridge/disk.

2. COPY FILE

FROM MICRODRIVE UTILITIES MENU

Select	Copy File
Enter	Source filename and drive (L or R)
Enter	Destination filename and drive (L or R)
Press f1	Copy proceeds if file found
Y or N	Y for further copies
	N return to Microdrive Utilities Menu

3. CREATE A FILE

This routine allows you to create a file which you can write to at a later date.

FROM MICRODRIVE UTILITIES MENU

Select	Create File
	Enter name of file to create
Type L or R	Specify drive to create file on

A message appears showing the number of empty blocks of store on the disk (owing to the limitations in the base software of the host computer this value will stay at '200', although the amount of free space is considerably more than this). Respond to the prompt.

Press f1	After a short delay the File created message will be displayed
Y or N	Y for further copies
	N to return to Microdrive Utilities Menu

4. DELETE FILE

To delete a file from a microdrive, floppy disk or RAMDISK, use the Delete File option from the Microdrive Utilities Menu.

FROM MICRODRIVE UTILITIES MENU

Select	Delete File
	Enter name of file to delete
	Specify cartridge name (or press ENTER)
Type L or R	Specifying drive to delete file from
Press f1	Displays confirm deletion required (if found)
Type Y	File deleted message displayed

4. RENAME A FILE

Files can be renamed using the Rename File option in the Microdrive Utilities Menu.

FROM MICRODRIVE UTILITIES MENU

Select	Rename File
	Enter name of file to rename
	Specify cartridge name (or press ENTER)
Type L or R	Specifying drive to rename file on
Press f1	File renamed message displayed (if found)
Y or N	Y for further files to be renamed
	N to return to Microdrive Utilities Menu

E. RAMDISK

The TELEDRIE is provided with 256K of memory, part of which is used to support the disk drives; the remainder of approx 180K can be used as a RAMDISK (reduced to 72K with CP/M running). This allows save and load operations at machine memory speed, which is twice as fast as floppy disk drives and considerably faster than microdrives. It is important to remember that the RAMDISK must be saved frequently to microdrive or diskette; as with the store in your host computer all data will be lost when the unit is switched off.

The RAMDISK is not formatted at power on. To format, load in 'DISK UTILITY' which will automatically format RamDisk to 180K, unless CP/M is running, and in this case it will format to 72K. The RamDisk can also be formatted using the 'FORMAT DISK' option.

To use the RAMDISK simply redirect L or R to drive E. After redirection the RAMDISK is used in exactly the same manner as microdrive.

To FORMAT RAMDISK

FROM TOP LEVEL MENU

	With 'DISK UTILITY' loaded
Go into	Applications Menu
Select	DISK UTILITY'
Select	Format Disk
	Enter the required disk name
Type E	Specifies drive to format
	No options are necessary unless a 72K RamDisk is required (option 'SM')
Press f1	Formats RAMDISK
Y or N	Y for further disk to format
	N to return to Disk Utilities Menu

IV MAINTENANCE AND TROUBLESHOOTING

The TELEDRIE needs very little maintenance. If any thing does go wrong, the troubleshooting information in this section should guide you through most problems.

Maintenance

Cleaning:

Clean the TELEDRIE casing whenever it seems necessary due to accumulation of dirt and dust. Use a clean, damp, lint free cloth and a little water based household cleaner. Take care not to spill water onto or inside the TELEDRIE.

!!!

DO NOT use acetone or other solvents as these may damage the finish and diskette covers.

Troubleshooting

TELEDRIE power light fails to illuminate.

Check 13amp fuse in mains plug and 500ma fuse in power socket.

TELEDRIE left drive light does not illuminate at power on.

If after powering on the TELEDRIE (with the host computer switched off) the left drive light fails to illuminate, power down the unit and wait for about 30 seconds. Repeat the power on process and if light still fails to illuminate then consult your supplier.

'Teledrive V2.0' Message does not appear after powering on

Check you RomPack serial number with those listed on page 2 of this manual. The 'Teledrive V2.0' message may also not appear if you have any other devices connected i.e. Printer.

If you have any problems not covered by this manual contact your supplier.

V TECHNICAL SPECIFICATION

Physical

Size: 270mm (length) x 110mm (width) x 105mm (height)
10.6" (length) x 4.3" (width) x 4.1" (height)

Weight: 3.05kg

Power Requirements: 220/240 volts, 50 HZ Europe.
110/115 volts, 60 HZ USA.

Operating Environment

Temperature: 5 - 25 C

Humidity: 20 - 85% RH

Controls

Power: Unit powered up on installation of Euro Connector

Lights: Drive select indicators

Drives: Diskette eject button

Drives

Type: 3.5" Double Sided

Power: + 12V ... (1.6W), + 5V ... (0.9W)

Rotational Speed: 300 RPM

Access Time, Track to Track: 3ms

Settling Time: 15ms

Track Density: 135tpi

MTBF: 12,000 (Powered on hours)

Capacity: 720 Kb formatted

Tracks: 160

Base Unit

Controller: Hitachi HD64180 microprocessor
controlled drive interface with on-board
DMA channels.

RAM: 256Kb on board

Diskette

Type: 3.5" double sided medium

Size: 3.5" (90 x 94mm)

Recording Surfaces: 2