Copicode Alpha

User and Technical Manual V1.0

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1

INTRODUCTION

Thank you for your choosing an **Advanced Technologies** product!

With the **Copicode Alpha**, you can control the use of a copier or similar device. A USER enters a special code or codes on the **Copicode Alpha** keyboard to "unlock" the copier. The **Copicode Alpha** in turn stores usage information, like the total number of copies made by size and type of copy, for various individual USERS (accounts) or groups of USERS engaged in various individual activities (jobs) or groups of activities.

The **Copicode Alpha** keyboard is alphanumeric, meaning that the special (access) codes used to identify accounts and jobs can be in numbers or letters. When passwords are used on the **Copicode Alpha**, they can be alphanumeric as well.

The **Copicode Alpha** utilizes three input signalling devices called optos. They can be programmed in different ways, making the **Copicode Alpha** a flexible control device.

All ADMINISTRATION functions on the **Copicode Alpha** are accessible through clear menus in English. An optional printer can be used to make a hard copy of all data displayable on the **Copicode Alpha**.

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GLOSSARY

ACCOUNT: Shown as "**ACC**" on the **Copicode Alpha** screen, this is the name given to a memory zone in the **Copicode Alpha**, where the number of copies made by (or in the name of) one person (or entity) is stored. In order to make copies, the "owner" of an account (called the USER) has to enter an alphanumeric code called an access code (maximum 16 characters).

JOB: Shown as "**JOB**" on the **Copicode Alpha** screen, this is the name given to a memory zone in the **Copicode Alpha**, where the number of copies made for one job (e.g., a department in a company, a client, or a client matter) is stored. When jobs are used, an alphanumeric access code is also required (maximum 16 characters).

PASSWORD: Turned on in the ADMINISTRATION menu, and shown as "**PASS**" on the **Copicode Alpha** screen, a USER is asked to enter an alphanumeric access code (called a password) in addition to an account access code, to use the copier (maximum 16 characters).

ACCESS CODE: This is a generic term for an alphanumeric "string" used to identify either:

- an account,
- a password,
- a job, or
- the ADMINISTRATOR code.

ADMINISTRATOR : Shown as "**ADM**" on the **Copicode Alpha** screen, this is the person who knows the ADMINISTRATION menu access code.

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GENERAL PRINCIPLES

As stated before, the **Copicode Alpha** controls access to a copier or similar device. The **Copicode Alpha** unlocks (allows use of) the copier it is attached to, when a USER enters his/her access code(s).

How the Alpha controls the copier it is attached to depends on the mode (one of eight) it is set for (see next page).

The **Copicode Alpha** safely stores its usage and setup information electronically, in nonvolatile memory, for at least 10 years. Typically, this memory stores about 1,500 accounts, but it can be expanded to accomodate as many as 6,000 accounts. The number of accounts varies, depending on whether or not you choose to use passwords with each account, and whether you choose two level accounting (accounts plus jobs) or just one level accounting (accounts only).

A maximum number of copies can be assigned for each account and job used.

The **Copicode Alpha** can run in one of eight modes, namely:

A - Management of USER accounts:

1 - access gained by entering a (preloaded) account name only (default value),
2 - access gained by entering a (preloaded) account name and password,
3 - access gained by entering a (preloaded) account password only,
4 - access gained by entering a name, such that an account of that name is created if it did not already exist (lawyer mode).

B - Management of USER accounts *and* jobs:

1 - access gained by entering a (preloaded) account name and job name,
2 - access gained by entering a (preloaded) account name, password and job name,
3 - access gained by entering a (preloaded) account password and job name,
4 - access by entering an account name and job name, such that an account and job of those names are created if they did not already exist (lawyer mode).

It's your job to decide which of these operational modes best suits your organization. Note that passwords apply only to accounts, not jobs.

The following two examples illustrate the meanings of account, password and job when using the **Copicode Alpha**:

EXAMPLE 1 :

The **Copicode Alpha** -- at Smith & Smith Co. -- is set up for mode A-1, i. e. access to the copier is gained by entering the preloaded name of an account.

The Smith & Smith Co. employs 100 people, each one of them having a different account. Mr. Jones has been allotted the Jones account.

When Mr. Jones wants to make copies, he just types in his name, followed by the (E) key. Now every copy will be charged to the Jones account, until he strikes any number key or the [STOP] key, or until a "nonuse" timeout occurs.

EXAMPLE 2 :

The **Copicode Alpha** -- at St. John's School -- is set up for mode B-3 (access to the account is given by entering a preloaded password and 1 of 100 preloaded job names).

St John's School has 30 classes taught by 40 different teachers. Each teacher is alloted an account (bearing the teacher's name) together with an account password. Each class at the school corresponds to a job.

Mrs. White, the mathematics teacher, has the White account, and wants to make copies for her 1A class (job 1A).

To use the copier, she:

- types in her password: Whi99, and
- types in the class name (job): 1A.

Each copy made by Mrs. White will be charged both to the White account and job 1A.

The **Copicode Alpha** has two additional features worthy of note:

- the number of copies per account can be limited,
- the number of copies per job can be limited.

As soon as either an account limit or job limit is reached, the copier will stop, and the **Alpha** will display the reason why.

The ADMINISTRATOR, through a special access code, can run the ADMINISTRATION program, allowing him/her to:

- preload or change USER access codes,
- set or change the copy limits on any account or job,
- display the number of copies already made for any account or job,
- print out a paper copy of all the information stored in the **Copicode Alpha** (an optional printer is required).

MEMORY SIZE:

The standard size **Copicode Alpha** memory allows a maximum 1,500 accounts (see detailed calculations on page 37), when no jobs are being used.

If some jobs are in use, the maximum number of accounts (for a standard size memory) will be reduced according to the following rule:

```
number of accounts + number of jobs = 1500
```

For example, if the number of pre-loaded jobs is 100, then the maximum number of accounts available in the **Copicode Alpha** is 1,400.

Optional additional memory modules can be added to increase the theoretical maximum number of accounts to 6,000.

ADDITIONAL MANAGEMENT LEVEL

The two management levels in the **Copicode Alpha** (accounts and jobs) may be extended to a third level when you connect an optional printer to the **Copicode Alpha**. See p. 37 for details.

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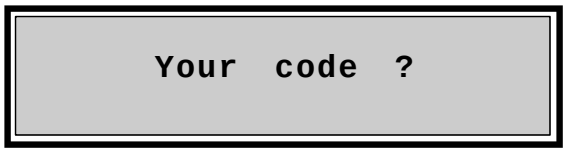
THE COPICODE ALPHA AND ITS USERS

If preloaded access codes are used, the ADMINISTRATOR must inform each USER of the copier of his/her access code (account name). If there are perloaded passwords and/or jobs too, then USERS will need to knows these codes too. When the **Copicode Alpha** is waiting for a preloaded access code (account name) entry, it displays:

Any USER knowing his/her preloaded account name may enter it on the keyboard of the **Copicode Alpha** at this time. Each entry is acknowledged on the screen. When pressing keys, each character entered may be displayed either as that character, or as a star " * " (when keeping access codes secret is important). Adjustment of this feature is detailed in the EXTENDED CONFIGURATION section of this manual. See p. 41.

The end of the access code must be acknowledgeded by striking (E) ; a wrong character entry can be corrected by striking (C) .

If passwords have been defined by the ADMINISTRATOR, the **Copicode Alpha** then asks for that account's corresponding password code, displaying:



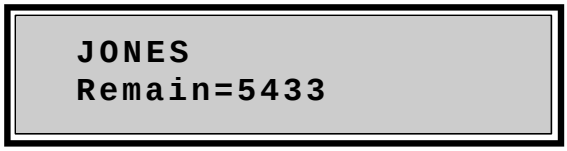
If jobs have been defined by the ADMINISTRATOR, the **Copicode Alpha** then asks for the corresponding job code, displaying:

If three wrong entries are entered in a row, the **Alpha** displays the following message for approximately one minute:

After correct entry of an access code(s), the copier is ready for use. In this state, the **Copicode Alpha** displays two fields:

The first field is the name of the account, and the second field is the number of copies made so far on that account.

It is easy to find out the number of copies remaining in an account by pressing key F1 . The **Copicode Alpha** then displays:



In this example, 5,433 copies are left in the JONES account, given a maximum of 10,000 copies allotted to the Jones account (4,567 + 5,433 = 10,000).

If jobs are being used, it is easy to find out the number of copies made under the currently used job by pressing key F2 . The **Copicode Alpha** then displays:

In this example, 9,871 copies have been made using job 12. By pressing F2 again, the previous display returns. This is true for the F1 key as well.

After the last copy is made, press STOP to disable the copier. If you forget to press this key, the **Copicode Alpha** will automatically disable the copier after a delay preset by the ADMINISTRATOR (usually 60 seconds).

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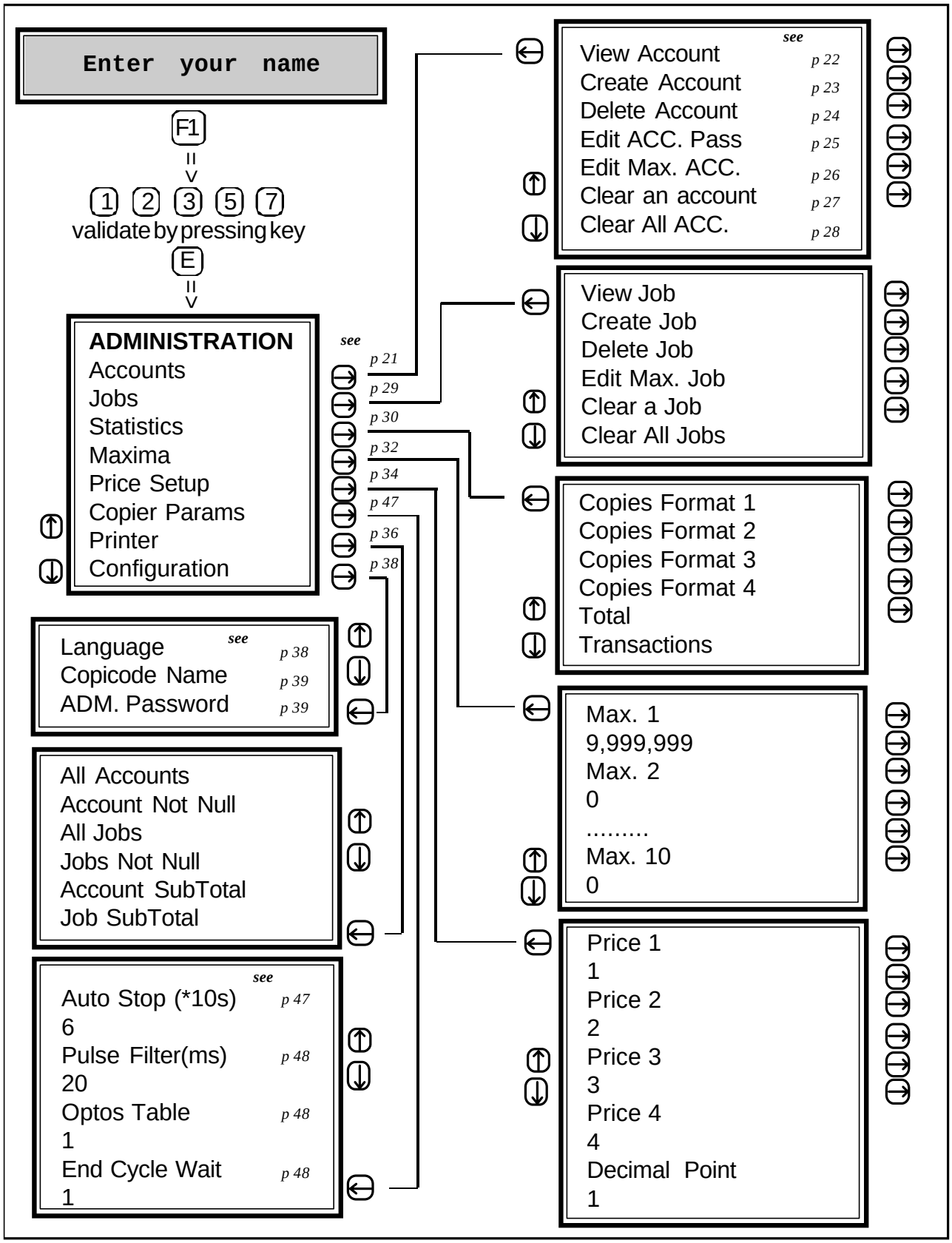
THE COPICODE ALPHA AND ITS ADMINISTRATOR

All **Copicode Alpha** functions are accessible by means of menus. A menu is a set of messages corresponding to management functions. Due to the size of the **Copicode Alpha** display (2 lines of 16 characters), only one message can be displayed at a time. Some keys on the **Copicode Alpha** keyboard have special meaning when used with a specific menu (see table 1 following).

Table 1

Key	Meaning when in ADMINISTRATION mode
⊖→	Two possibilities : - Perform the function corresponding to the present display, or - Enter into a submenu corresponding to the present display
⊖←	Exit the menu or submenu
⊕↓	Go to the next item of the menu you are in
⊕↑	Get to the previous item of the menu you are in

All **Copicode Alpha** menus and their manual links are summarized in the following chart:



symbols ↑ → ↓ ← represent keys on the keyboard
key → also gives (shift) access to white characters on the keyboard

5.1. SEQUENCE OF MENUS

Managing copies made on a copier equipped with a **Copicode Alpha** is accomplished through the main menu called ADMINISTRATION.

Access to the ADMINISTRATION menu is provided by pressing the key F1 and by entering the ADMINISTRATOR code. This default (factory) code is set to 1 2 3 5 7.

Later on in this manual, you will learn how to change this code (see p. 39) or return it to the default value (see p. 52).

To gain access to the ADMINISTRATION menu, the **Copicode Alpha** prompts you to enter your access code when it displays:

```
Enter  your  name
```

Instead, press key F1

```
ADM.  Password
```

It is here that you enter the ADMINISTRATOR code. For security, you'll see a " * " displayed on the screen each time you press a key. Acknowledge the end of your entry by pressing the E key. A wrong character entry can be corrected by striking C .

The ADMINISTRATION menu will now be displayed, with the following menu elements:

a)

```
ADMINISTRATION
Accounts
```

b)

Press key ↓

```
ADMINISTRATION
Jobs
```

c)

Press key ↓

```
ADMINISTRATION
Statistics
```

d)

Press key ↓

```
ADMINISTRATION
Maxima
```

continued on next page

e) *Press key* ⇩ **ADMINISTRATION** **Price Setup**	*g)* *Press key* ⇩ **ADMINISTRATION** **Printer**
f) *Press key* ⇩ **ADMINISTRATION** **Copier Params**	*h)* *Press key* ⇩ **ADMINISTRATION** **Configuration** *End of the main menu*

To exit the ADMINISTRATION menu, press key ⇦; your **Copicode Alpha** will return to USER functionality. If no keypad activity occurs for four minutes while in the ADMINISTRATION menu, the **Copicode Alpha** will automatically return to USER functionality.

Note : Key ⇧ and ⇩ may be kept depressed for fast scrolling within menus and submenus.

As shown above, the ADMINISTRATION menu has 8 elements. You can enter into and act upon any of these menu elements by striking the key ⇨.

Each menu element is described in detail on the following pages.

5.2. ACCOUNTS

The menu element "Accounts" gathers into one submenu all operations related to accounts. To explore this submenu, just press ⊖ when the message "Accounts" is displayed on the screen.

a)

ADMINISTRATION
Accounts

Press key ⊖

b)

The submenu "Accounts" comes up on the screen with the following messages:

ACCOUNTS:
View Account

c)

Press key ⊕

ACCOUNTS:
Create Account

d)

Press key ⊕

ACCOUNTS:
Delete Account

e)

Press key ⊕

ACCOUNTS:
Edit ACC. Pass

f)

Press key ⊕

ACCOUNTS:
Edit Max. ACC.

g)

Press key ⊕

ACCOUNTS:
Clear an Account

h)

Press key ⊕

ACCOUNTS:
Clear All ACC.

End of submenu "Accounts"

Each item of the "Accounts" submenu is described in the following pages. To exit this sub-menu, strike ⊖ . This will return you to the ADMINISTRATION menu.

VIEW ONE OR SEVERAL ACCOUNTS

You can view activity on one or several accounts by going to the "Accounts" submenu and pressing ⊖. At this point, you are presented with several possible choices.

The details of each choice are explained below:

a)

Access to viewing one or several accounts

```
ACCOUNTS:
View Account
```

b)

Press key ⊖

```
Enter your name
```

c1) - 1st possibility

Read a single account by entering the account name, (for example, JONES)

E

```
JONES
132
```

c2) - 2nd possibility

Read several (or all) nonzero accounts by pressing key ⊕

```
JONES
132
```

Press key ⊕

```
JIM
456
```

Press key ⊕

```
ELISABETH
1978
```

d)

At any time, the total number of copies that have been made by all USERS may be displayed by pressing key F1

```
Total Accounts
2566
```

e)

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
View Account
```

f)

Return to ADMINSTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

CREATE ONE OR SEVERAL ACCOUNTS

You can create one or several accounts by scrolling through the "Accounts" submenu and pressing ⊖ when the screen displays "Create Account".

The details of creating one or several accounts are as follows:

a)

Access to creating one or several accounts

```
ACCOUNTS:
Create Account
```

b)

Press key ⊖

```
Enter your name
```

Enter an account name (for example, HELEN)

E

```
HELEN
```

*The **Copicode Alpha** will now store this new account, unless:*

*the account you entered already exists, in which case the **Copicode Alpha** displays*

```
JONES
Already Exists
```

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
View Account
```

Return to ADMINISTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

Most of the **Copicode Alpha** keys show a letter *and* a symbol. To "shift" the keys to use the symbol desired, simultaneously press the key ⊖ and the letter key showing the symbol desired.

DELETE ONE OR SEVERAL ACCOUNTS

You can delete one or several accounts by scrolling through the "Accounts" submenu and pressing ⊖ when the screen displays "Delete Account".

The details of deleting one or several accounts are as follows:

a)

Access to deleting one or several accounts

```
ACCOUNTS:
Delete Account
```

b)

Press key ⊖

```
Enter your name
```

Enter the account name (for example, HELEN)

E

```
HELEN
1856
```

Press key

C

*The **Copicode Alpha** requests confirmation of this deletion:*

```
HELEN
C=Cancel          E=OK
```

Accept the deletion by pressing key

E

```
JONES
132
```

*The **Copicode Alpha** now displays the account directly preceding the one deleted.*

Attention ! ! When an account is deleted, all information associated with it (password, number of copies made, etc.) are also deleted!

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
Delete Account
```

Return to ADMINISTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

CREATE OR MODIFY AN ACCOUNT PASSWORD

You can create or modify an account password by scrolling though the "Accounts" submenu and pressing ⊖ when the screen displays "Edit ACC. pass".

The details of creating or modifying passwords are as follows:

a)

Access to creating or modifying passwords

```
ACCOUNTS:
Edit ACC. Pass
```

b)

Press key ⊖

```
Enter your name
```

Enter an existing account name (for example, HELEN)

E

```
HELEN
543210
```

To modify the password, press key

C

```
HELEN
▮
```

Enter the new password 0 1 2 3 4 5

E

```
HELEN
0 1 2 3 4 5
```

*The **Copicode Alpha** displays the account name with its new password*

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
Edit ACC. Pass
```

Return to ADMINISTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

MODIFY AN ACCOUNT MAXIMUM

(See section 5.5 on p. 32 to learn how to enter initial account and job maxima values.)

You can modify an account maximum by scrolling to the "Accounts" submenu and pressing ⊖ when the screen displays "Edit Max. ACC.".

The details of modifying an account maximum are as follows:

a)

Access to modifying account maximum

```
ACCOUNTS:
Edit Max. ACC.
```

b)

Press key ⊖

```
Enter your name
```

Enter an existing name (for example, HELEN)

E

```
HELEN
Max. 1
```

To modify the account maximum, press key

C

```
HELEN
```

Enter a number between 1 and 10 (depending on maxima setup, see section 5.5), for example 4, then press key

E

```
HELEN
Max. 4
```

*The **Copicode Alpha** displays the account with its new maximum*

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
Edit Max. ACC.
```

Return to ADMINISTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

CLEAR AN ACCOUNT

You can clear an account of its copy total by scrolling through the "Accounts" submenu and pressing ⊖ when the screen displays "Clear an Account".

The details of clearing an account are as follows:

a)

Access to clearing an account

```
ACCOUNTS:
Clear an Account
```

b)

Press key ⊖

```
Enter your name
```

Enter an existing name (for example, HELEN)

E

```
HELEN
1856
```

Press key

C

*The **Copicode Alpha** requests confirmation of this clearing*

```
HELEN
C = Cancel        E = OK
```

Confirm by pressing key

E

```
HELEN
0
```

*The **Copicode Alpha** displays the account with its cleared copy total*

Return to submenu "Accounts" by pressing ⊖

```
ACCOUNTS:
Clear an Account
```

Return to ADMINISTRATION menu by pressing ⊖

```
ADMINISTRATION
Accounts
```

CLEAR ALL ACCOUNTS

You can clear all accounts by scrolling through the "Accounts" submenu and pressing ⊖ when the screen displays "Clear All ACC.".

The details of clearing all accounts are as follows:

a)

Access to clearing all accounts

```
ACCOUNTS:
Clear All ACC.
```

b)

Press key

⊖

```
! WARNING !
C=Cancel          E = OK
```

*The **Copicode Alpha** requests confirmation for clearing all accounts*

Confirm by pressing key

E

```
ACCOUNTS:
Clear All ACC.
```

*The **Copicode Alpha** may display a waiting message depending on how long it takes to clear all the accounts*

Return to submenu "Accounts" by pressing

⊖

```
ADMINISTRATION
Accounts
```

5.3. JOBS

The menu element "Jobs" gathers into one submenu all operations related to jobs. To explore this submenu, just press ⊖ when the message "Jobs" is displayed on the screen.

a)

```
ADMINISTRATION
Jobs
```

Press key ⊖

b)

The submenu "Jobs" comes up on the screen with the following messages:

```
JOBS:
View Job
```

c)

Press key ⊕

```
JOBS:
Create Job
```

d)

Press key ⊕

```
JOBS:
Delete Job
```

e)

Press key ⊕

```
JOBS:
Edit Max. Job
```

f)

Press key ⊕

```
JOBS:
Clear a Job
```

g)

Press key ⊕

```
JOBS:
Clear All Jobs
```

End of submenu "Jobs"

Elements in the submenu "Jobs" can be edited in exactly the same way as the corresponding elements in the "Accounts" submenu. *The only difference is that jobs do not use passwords.*

5.4. STATISTICS

The menu element "Statistics" gathers into one submenu all operations related to usage statistics. To explore this submenu, just press ⊖ when the message "Statistics" is displayed on the screen.

a)

```
ADMINISTRATION
Statistics
```

Press key ⊖

b)

The submenu "Statistics" comes up on the screen with the following messages:

```
Copies Format 1
159753
```

c)

Press key ⊕

```
Copies Format 2
25369
```

d)

Press key ⊕

```
Copies Format 3
7210
```

e)

Press key ⊕

```
Copies Format 4
1254
```

f)

Press key ⊕

```
Total
193586
```

g)

Press key ⊕

```
Transactions
100580
```

End of submenu "Statistics"

Note: Menu items from "statistics" cannot be changed (cleared, modified).

The term "Copies Format" refers to the size and type of copies being monitored by the Copicode Alpha. Typically this function applies only to Ricoh Aficio, and some Xerox and Sharp copiers. By definition,

Format 1 = Letter, B&W
Format 2 = Larger sizes, B&W
Format 3 = Letter, Color
Format 4 = Larger sizes, Color.

Note: The total represents the total value of all copies made, i.e., the sum of four products, namely:

TOTAL = (FORMAT 1*PRICE 1)+(FORMAT 2*PRICE 2)
+ (FORMAT 3*PRICE 3)+(FORMAT 4*PRICE 4)

The term "Transactions" refers to the number of times a USER or an ADMINISTRATOR has entered a code on the **Copicode Alpha**. It represents the overall usage of the unit.

5.5. MAXIMA

The menu element "Maxima" gathers into one submenu all operations related to upper limits on copier usage, by account and job. In explore this submenu, just press ⊖ when the message "Maxima" is displayed on the screen.

a)

```
ADMINISTRATION
Maxima
```

Press key ⊖

b)

The submenu "Maxima" comes up on the screen with the following messages:

```
Max. 1
200000
```

c)

Press key ⊕

```
Max. 2
10000
```

d)

Press key ⊕

```
Max. 3
10000
```

e)

Press key ⊕

```
Max. 4
10000
```

f)

Press key ⊕

```
Max. 5
10000
```

g)

Press key ⊕

```
Max. 6
10000
```

h)

Press key ⊕

```
Max. 7
10000
```

h)

Press key ⊕

```
Max. 8
50000
```

i)

Press key ⊕

```
Max. 9
1234567
```

j)

Press key ⊕

```
Max. 10
9999999
```

End of submenu "Maxima"

The **Copicode Alpha** allows you to limit the number of copies made against an account or a job. The **Copicode Alpha** features 10 general settings equal to 10 maximum values not to be exceeded. For each account or job, the **Alpha** disables the copier whenever the maximum is reached.

The various maxima values can be modified by pressing key (C).

You just have to enter the new value and confirm it by pressing (E) .

For example :

Change Max. 1 value

Press key (C)

Enter the new maximum (for example, 500) then confirm by pressing (E)

To return to the ADMINISTRATION menu, press key (←)

***Note** : Access to the copier can be temporarily locked to a set of USERS having the same maximum by changing their Max. value to **0**.*

5.6. PRICE SETUP

The menu item "Price Setup" gathers into one submenu all operations related to copy type pricing. To explore this submenu, just press ⊖ when the message "Price Setup" is displayed on the screen.

a)

Press key ⊖

b)

The submenu "Price Setup" comes up on the screen with the following messages:

c)

Press key ⊕

d)

Press key ⊕

e)

Press key ⊕

f)

Press key ⊕

End of submenu "Price Setup"

When multiple prices can and are being used (Ricoh Aficio, Xerox, Sharp), you can set copy prices by size (letter vs. legal, or letter vs. ledger) and type (B&W vs. color). When a particular copy size and type are selected by the USER, the **Copicode Alpha** knows which of the four prices to charge. As each copy of a particular size and type is made, it is charged to the account being used (and job, if used).

By default, the prices are:

price 1 = 1
price 2 = 2
price 3 = 3
price 4 = 4

The various price values can be changed by pressing (C) .

You just have to enter the new value and confirm it by pressing (E) .

For example :

Change Price 1 value

Press key (C)

Enter the new price (for example, 2), then confirm by pressing (E)

To return to the ADMINISTRATION menu, press (←)

DECIMAL POINT

When prices 1 through 4 are expressed in cash (rather than units or copies), account and jobs values should be shown with a decimal point followed by two figures.

The parameter "Decimal Point" (found just below "Price 4") may be set to:

- **1** to get a display *with* a decimal point,
or
- **0** to get a display *without* a decimal point.

When using decimal point notation, an account value of 5,000 becomes 50.00 (as in $50.00), and a price of 10 becomes 0.10 (as in 10¢).

5.7. PRINTING

The **Copicode Alpha** is equipped with an eight pin DIN printer output port located on the right side of the unit.

The **Copicode Alpha** automatically detects the presence of an attached printer and prints whatever is on the display. In addition to printing in "hardcopy screen" mode, the printing submenu allows particular reports to be printed out.

In explore this submenu, just press ⊖ when the message "Printer" is displayed on the screen.

a)

ADMINISTRATION
Printer

Press key ⊖

b)

The submenu "Printer" comes up on the screen with the following messages:

PRINTER:
All Accounts

c)

Press key ⊕

PRINTER:
Account Not Null

d)

Press key ⊕

PRINTER:
All Jobs

e)

Press key ⊕

PRINTER::
Jobs Not Null

f)

Press key ⊕

Account SubTotal
0

g)

Press key ⊕

Job SubTotal
0

End of submenu "Printer"

Pressing key ⊖ initiates printing of the report shown.

ADDITIONAL MANAGEMENT LEVEL AT PRINTING

The two items "Acccount SubTotal" and "JobSubTotal" indicated in the printing submenu are not actually reports, but parameters.

For example, if "Account SubTotal" is set to **1** and one chooses to print all accounts, all accounts will be printed in alphabetical order (as expected), but a subtotal will also be printed when the accounts *first character* changes. For example, a subtotal will be printed once all accounts beginning with the character A are finished printing, another subtotal is printed once all accounts beginning with the character B are finished printing, and so on. If "AccountSubTotal" is set to **2**, a subtotal will be printed for all accounts having the same first two characters, etc. Account names are limited to 16 characters.

The same subtotaling convention applies to jobs when "JobSubTotal" is set to **1**, **2**, etc.

This subtotaling convention gives you another level of management besides accounts and jobs, allowing you to sort and charge copying activity through your own "naming" convention.

For example, consider this possibility:

In a school, a teacher's name may be preceded with a 2 character code specifying the subject taught:

- for english => EN,
- for mathematics => MA, and
- for history => HI.

Mr. Matthew, an english teacher, would have the account: ENMATTHEW.
If "Account SubTotal" is set to **2**, "All Accounts" printing will include a subtotal for each subject.

5.8. CONFIGURATION

The menu element "Configuration" gathers into one submenu all operations related to the **Copicode Alpha** configuration. To explore this submenu, just press ⊖ when the message "Configuration" is displayed on the screen.

a)

```
ADMINISTRATION
Configuration
```

Press key ⊖

b)

The menu "Configuration" comes up on the screen with the following messages:

```
Language
1
```

c)

Press key ⊕

```
COPICODE NAME
Copicode Alpha 1
```

d)

Press key ⊕

```
ADM. Password
12357
```

End of submenu "Configuration"

The various configuration parameter values can be changed by pressing key (C) .

You just have to enter the new value and confirm it by pressing (E) .

DEFINITION OF PARAMETERS

- **Language**:

Use this parameter to select in which language messages will be displayed on the **Copicode Alpha** screen. Select the number corresponding to the language desired.

- **Copicode Name**:

  You may enter an alphanumeric string uniquely identifying your **Copicode Alpha**. This name will be printed out on the standard reports mentioned earlier. This feature is particularly useful when you have multiple **Copicode Alpha** printouts.

- **ADM. Password**:

  This is the access code the ADMINISTRATOR needs to gain access to the ADMINISTRATION menu.

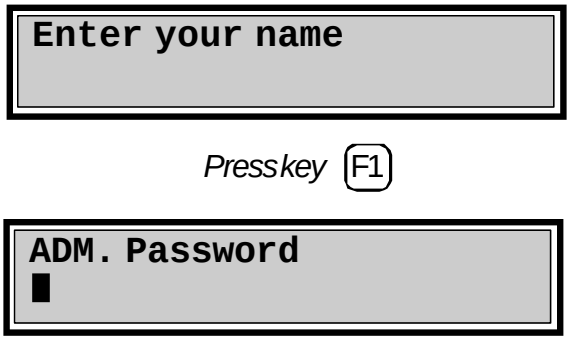
  You are certainly welcome to change this code, but should you forget the new ADMINISTRATOR code, go to p. 52 to learn how to restore the default value (1 2 3 5 7).

5.9. EXTENDED CONFIGURATION

Access to an "EXTENDED CONFIG" menu is gained by pressing key F1 and entering the code 1 2 3 5 7 *, or the changed ADMINISTRATOR code followed by "*".

Should you forget what the changed ADMINISTRATOR code is, see p. 52 to learn how to restore the default ADMINISTRATOR code (1 2 3 5 7).

The **Copicode Alpha** prompts you to enter your access code when it displays:



Enter the ADMINISTRATOR code followed by key "" (this keystroke is achieved by simultaneously pressing ⇧ and J* . Confirm your entry by pressing the key E .*

A wrong character entry can be corrected by pressing key C .

a) *The "EXTENDED CONFIG" menu comes up on the screen with the following messages:* **EXTENDED CONFIG:** **Erase Database**	d) *Press key* ↓ **Key Echoed** **1**
b) *Press key* ↓ **Copicode Mode** **1**	e) *Press key* ↓ **Name Size** **10**
c) *Press key* ↓ **With Job** **1**	f) *Press key* ↓ **Password Size** **7** *End of main menu*

To exit this menu, press key ←; your **Copicode Alpha** will become available to the copier users again.

Note : Key ↑ and ↓ may be held down for scrolling inside this menu.

Attention !
If you modify the parameters "Name Size" and "Password size", you must also perform the "Erase Database" operation. Once the **Copicode Alpha** *database is erased, all information (names, passwords, statistics) linked to any and all accounts and jobs will be lost. It will be like starting over. It is therefore advisable to know well in advance what these parameter sizes will be, lest you have to enter a significant amount of data later.*

DESCRIPTION OF PARAMETERS

- **Erase Database**:

This erases the **Copicode Alpha** database completely, as described above. The nonvolatile memory inside the **Alpha** will be reformatted. To be used when new lengths of account names and passwords are needed, or just to start over.

- **Copicode Mode**:

This determines which of the eight possible modes the **Copicode Alpha** will use to control access to its copier:

1 = entry of an account name only,
2 = entry of an account name and password,
3 = entry of an account password only,
4 = account name automatically created.
In mode 4, USERS can automatically create an account if it does not already exist. This helps the ADMINISTRATOR create accounts quickly, and helps lawyers create client accounts each time a new client is added to the firm's list of clients.

The default value here is **1**.

- **With Job**:

This determines whether the **Copicode Alpha** asks, or does not ask for the entry of a job after the entry of an account name:

0 = no jobs used,
1 = jobs used.

The default value here is **0**.

- **Key Echoed**:

This determines whether the **Copicode Alpha** "echoes" keystrokes on the display, or replaces them with "*".

0 = key echo is replaced by "*" on the screen;
for example, the entry of ROBERT will display * * * * *.
1 = key echo is displayed normally;
for example, the entry of ROBERT will display ROBERT.

The default value here is **1**.

Key echo refers only to the display of account names and/or passwords, not jobs.

- **Name Size**:

This sets the maximum number of characters the **Copicode Alpha** will allow when entering an account *or* job. This parameter's value is adjustable between **4** and **16**. The default value here is **10**.

- **Password size**:

  This sets the maximum number of characters the **Copicode Alpha** will allow when entering a password. This parameter is adjustable between **0** and **16**. The default value here is **7**.

NUMBER OF ACCOUNTS AND JOBS CALCULATED

The maximum number of accounts and/or jobs is determined by the name size and password size. The maximum number of accounts plus jobs is calculated as follows:

```
31,743 / (12 + Name Size + Password size)
```

For example, the maximum quantity of possible accounts with the default values is:

```
31,743 / (12+10+7) = 31,743 / 29 = 1094 accounts
```

If you don't want passwords, you can then set the password length to **0**. Moreover, if a length of 8 characters is enough for your account name, the maximum quantity of accounts plus jobs then becomes:

```
31,743 / (12+8+0) = 31,743 / 20 = 1587 accounts
```

For convenience, when the **Copicode Alpha** is switched on, and after the unit version is displayed, the **maximum number of accounts and jobs** is displayed based on the two factors mentioned.

6

INSTALLING THE COPICODE ALPHA

6.1. MECHANICAL ATTACHMENT

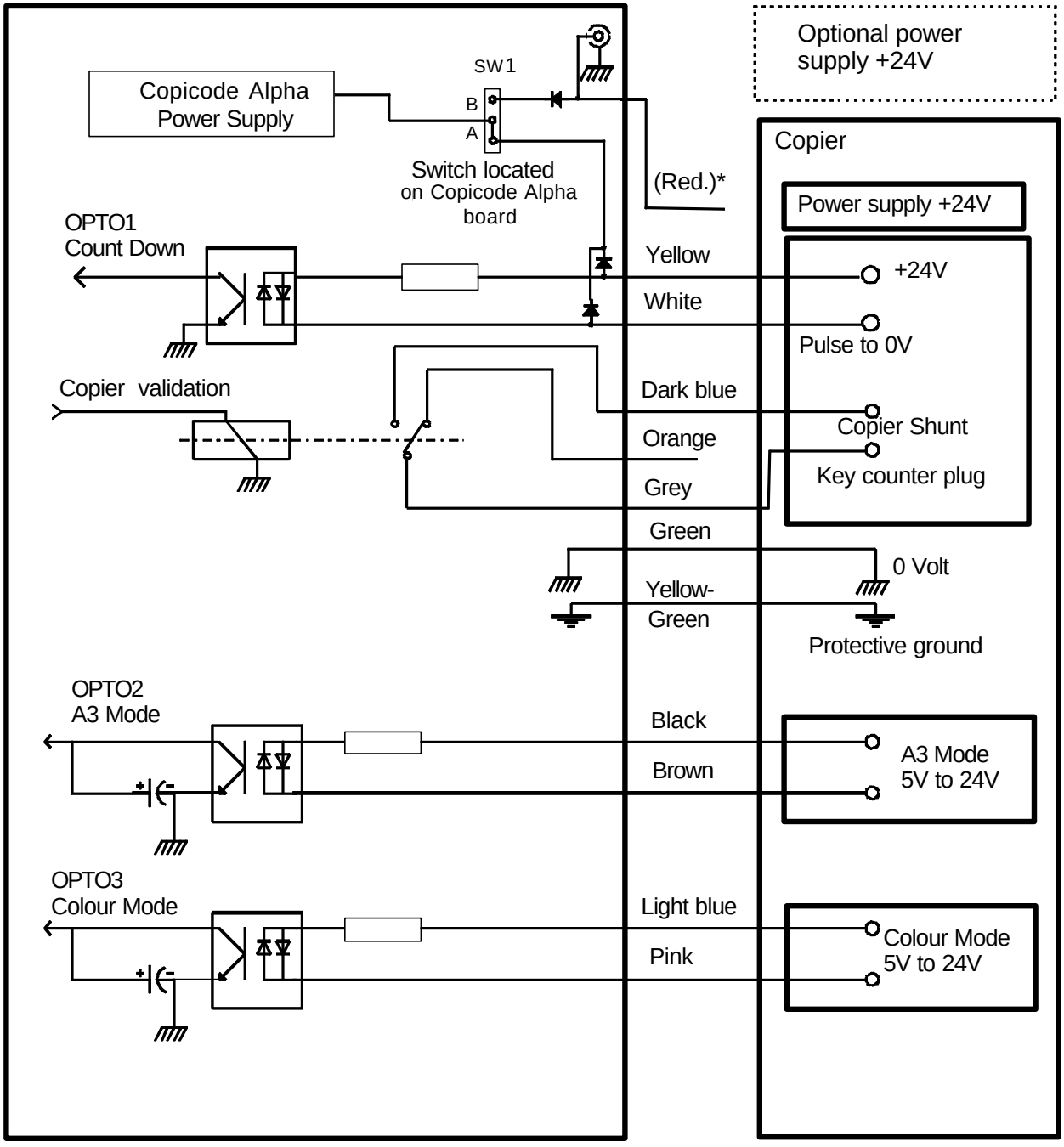
The **Copicode Alpha** is supplied with a two-sided tape on its back for easy attachment to a flat surface on the copier.

6.2. ELECTRICAL CONNECTION

The **Copicode Alpha** must be connected to its copier by a certified copier technician. Typically, the **Copicode Alpha** is electrically connected to its copier like a key counter. The **Copicode Alpha** can draw its power from the copier, although most of the time an external +24 VDC wall adaptor is supplied.

When full voltage isolation between the **Copicode Alpha** and its copier is required, an external power supply is mandatory. This power supply may be connected to the power jack on the rear side of the unit, or somewhere in the actual output harness. In either case, switch SW1 located on the **Copicode Alpha** main board has to be set to "B" (its default position).

Copicode Alpha Copier interface



* The red wire is rarely used; usually a separate power supply is used, or the copier power is used.

6.3. COPIER PARAMETERS

The menu item "Copier params" gathers into one submenu all technical operations associated with the **Copicode Alpha** control of the copier. In explore this submenu, just press ⊖ when the message "Copier params" is displayed on the screen.

a)

```
ADMINISTRATION
Copier params
```

Press key ⊖

b) The menu "Copier params" comes up on the screen with the following messages:

```
Auto Stop (*10s)
6
```

c)

Press key ⊕

```
Pulse Filter(ms)
20
```

d)

Press key ⊕

```
Optos Table
1
```

e)

Press key ⊕

```
End Cycle Wait
5
```

End of submenu "Copier params"

The various parameter values can be changed by pressing key (C).

You just have to enter the new value and confirm it by pressing (E).

DEFINITION OF PARAMETERS

- **Auto Stop (*10s)**:

this parameter sets the maximum amount of time with no copying activity, after which the **Copicode Alpha** automatically ends the current transaction. This parameter's value is adjustable between **0** and **99**, with each increment in its value corresponding to **10** seconds. For example, setting this parameter to **50** would set the "no activity" timeout to 500 seconds. Note that if you were to set this parameter to **0**, the "no activity" timeout would be infinity.

This parameter is factory adjusted to **6** (60 seconds).

- **Filter Pulse(ms)**:

This parameter represents the minimum number of milliseconds which the copier counting pulse must last to be considered as a valid pulse. This parameter is adjustable between 1 and 999, and is intended to protect against spurious counting pulses coming from "bouncing" switches (a relative rarity).

For optimal setting of this parameter, use trial and error:

- If this parameter is set too high, the **Copicode Alpha** may disregard legitimate counting pulses.
- If this parameter is set too low, the **Copicode Alpha** will count more copies than were actually made.

- **Optos Table**:

The **Copicode Alpha** can manage up to 4 different prices according to the size and type of copy made (letter vs. larger, B&W vs. Color). This feature is currently only usable with copiers delivering status signals (Ricoh Aficio, some Xerox and Sharp).
This parameter determines how the **Copicode Alpha** interprets the signals coming to optos 1 through 4 when deciding how to charge prices 1 through 4.

At this time, this parameter may have only one of two values:

- Value **1**: Opto 2 and Opto 3 tell the **Copicode Alpha** the current copy size and type being selected (letter vs. larger, B&W vs. color). The price corresponding to the selection made will be charged to the account (and/or job) entered as soon as Opto 1 receives a copy pulse.

- Value **2**:
  A copy pulse on Opto 1 results in a charge of price 1.
  A copy pulse on Opto 2 results in a charge of price 2.
  A copy pulse on Opto 3 results in a charge of price 3.

- **End Cycle Wait**:

This parameter represents the number of seconds the **Copicode Alpha** will wait for possible copy pulses, after a USER has asked for the the transaction to stop by pressing the key [STOP]. This time is adjustable from **0** to **99** seconds, but is usually set to **5** (default value). This parameter is especially useful on copiers which send the copy pulse at the end of the copy cycle.

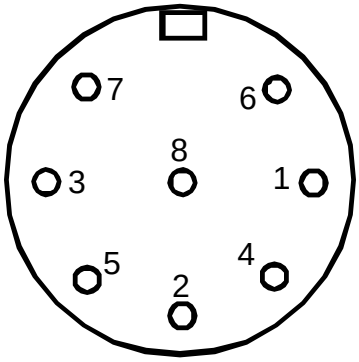
6.4. PRINTER CONNECTION

In order to print statistics and other information stored in the **Copicode Alpha**, perform the following procedure:

1 - Connect the printer to **Copicode Alpha**'s circular DIN plug.
2 - Switch on printer.
3 - Call up the required information as you would for screen display.

Specification of the RS232 communication hookup to the optional printer is described in following table:

Printer output specification



View from the outside of the DIN female connector

1 = RS232 : CTS (Clear to Send)
Active if the printer is ready (incoming signal)

2 = RS232 : 0 volt

3 = RS232 : TxD (Transmit Data)
Data output to the printer (outgoing signal)

4 = RS232 : RxD (Receive Data)
Data input from a PC (incoming signal)

5 = RS232 : RTS (Request to Send)
Active if the **Copicode Alpha** is ready to receive (outgoing signal)

6 = RS485 : not connected

7 = RS485 : not connected

8 = +24V

bit rate:	1200 bits/second
number of data bits:	7
parity:	none
stop bits:	2
flow control:	RTS/CTS

7

TROUBLE-SHOOTING

Screen remains off

Surely an interface wiring problem:

- check green wire (ground) connection (chassis vs. logic).
- copier is not supplying +24 VDC on one of copier pulse terminals; then +24 VDC must be supplied via the red wire. Also check SW1 switch inside the unit. See copier interface wiring schematic.

No counting of copies

The problem may come from the interace wiring, or an internal **Copicode Alpha** parameter is misadjusted:

- check yellow and white wires.
- check 1 and 2 prices.
- reduce "PulseFilter(ms)" parameter.

ADMINISTRATOR CODE LOSS

The ADMINISTRATOR access code can be reset to its default value (1 2 3 5 7) by the following steps:

- switch off the copier (and unit) and jump the copier enable loop with a wire.
- press key C and keep it depressed while turning the copier on.
- with key C still depressed, make a copy.
- the ADMINISTRATOR code has now been restored to its original value, i. e. 1 2 3 5 7.

Error messages

- **EEP Error** - **Config. Error** - **Stat. Error**:
  Information in the **Copicode Alpha** is compromised, probably due to a power failure. Typing the code 1 2 3 5 7 E clears this error.

- **Memory Full**:
  The **Copicode Alpha** memory is full. You must:
  - either delete old accounts or jobs before creating new ones, or
  - add new memory chips.

8

TECHNICAL SPECIFICATIONS

TYPE:	Copicode Alpha
FUNCTION:	Management of copies by alphanumeric access codes
ELECTRONICS:	VLSI microprocessor
MEMORY:	EEPROM
SERVICE CONDITIONS:	
- Moisture	20 % - 90 % RH
- Temperature	32 - 122° F
USE:	Indoors
DIMENSIONS:	4"L x 2.6"H x 7.2"D
WEIGHT:	0.9 lb.
POWER SUPPLY:	24 VDC
POWER CONSUMPTION:	1 W maximum