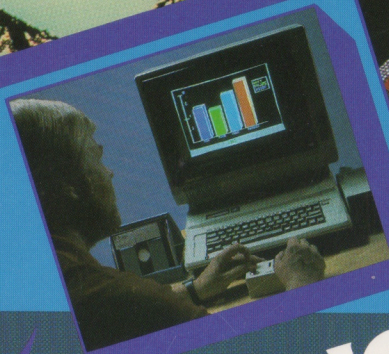
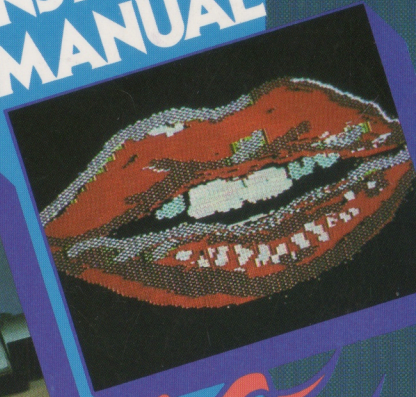


INSTRUCTION MANUAL



**FLYING
COLORSTM**
COMPUTER GRAPHICS SOFTWARE

THE COMPUTER COLORWORKS PRESENTS



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Instruction Manual by Glen Hamilton & Kathren Martz

INSTRUCTION MANUAL

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STATEMENT OF LIMITED WARRANTY

The Computer Colorworks software and instruction manuals are sold "AS IS". The Computer Colorworks warrants, to the original purchaser, the program medium to be free from defects in materials and faulty workmanship under normal use and service for ninety (90) days from the date of purchase.

If during this period a defect should occur, the medium may be returned to The Computer Colorworks or an authorized dealer for replacement without charge. Your sole and exclusive remedy in the event of a defect is limited to replacement of the medium.

Replacement will be made for a nominal fee if damaged after the warranty period. Send the diskette with five dollars and proof of purchase to The Computer Colorworks, 3030 Bridgeway, Sausalito, California 94965.

No warranty, expressed or implied, is made with respect to quality, performance, merchantability, or fitness for a particular purpose. In no event shall Computer Colorworks or anyone else involved in the creation and production of this software be liable for direct, indirect, special, or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

INTRODUCTION

FLYING COLORS™ is an interactive software package which allows you to create high resolution drawings in a variety of colors.

Using a joystick, paddles, or similar input device, you can draw and use many built-in options to enhance your abilities. Easy-to-use menus let you draw lines and symmetrical shapes rapidly, and a "Smart Fill" option will shade objects with vibrant colors of your choice. For detail work, a "Micro" mode does fast and accurate touch-ups.

Other features such as variable width and shape brushes will make your time more productive and enjoyable. Furthermore, it is as easy to erase as it is to paint. Drawings can be readily stored and retrieved from disk to be used in your own programs. Any Apple™ standard Hi-Res screen may be loaded and modified as well.

In addition to these features, you can make a "slide" show of your creations using the projector module included on the diskette. Whether it's for business or fun, after just a few minutes of practice you'll be creating beautiful high resolution pictures in truly flying colors.

Apple is a trademark of Apple Computer Corporation.

EQUIPMENT YOU NEED

- Apple II Plus or Apple IIe computer with 48K or more memory.
- One or more disk drives.
- A monitor or television (preferably color).
- Input device (joystick, paddles, or similar device).

PRELIMINARY SETUP

FLYING COLORS™ uses the Apple paddle input port to communicate with the user. Therefore a joystick, paddles, or similar device must be connected before using this program. See your Apple user's manual for assistance in connecting your input device.

CARE OF THE DISKETTE

This diskette will give many hours of use over a long period of time if you follow normal diskette handling precautions. If you are unfamiliar with proper handling procedures, review the section in the DOS manual on diskette handling. Especially avoid exposure to liquids, extreme heat, and hungry dogs! Also to avoid bending the diskette, insert it into the drive with care.

Never open the disk drive door while drive is in operation. As with any diskette, information contained on it may be damaged, preventing the program from loading properly.

LOADING THE PROGRAM

Insert the FLYING COLORS™ diskette into disk drive, close drive door, then turn on computer and monitor. The Computer Colorworks logo should appear in a few seconds. If it doesn't, turn the computer power OFF, remove and reinsert the diskette, then turn on computer power to try again. Sometimes a diskette will not be seated properly in the drive.

On the logo picture, you will be asked which program you want (FLYING COLORS™ or PROJECTOR). Press the "F" key on the keyboard for Flying Colors or "P" for slide projector. For now, select "F". The logo will remain on the screen for a few seconds while the program is loading.

Once loaded, you will be reminded to remove the FLYING COLORS™ diskette and to insert a pictures diskette. It can be a blank diskette, an initialized one, one that already contains various pictures you created previously, or one containing pictures that were saved by another program from one of the Apple Hi-Res screens.

We suggest you PRACTICE WITH A BLANK DISKETTE. FLYING COLORS™ allows you to initialize a diskette so as to save time and effort of having pre-initialized diskettes available.

You will not be able to store pictures on the FLYING COLORS™ diskette. Remove it from the drive and insert a blank diskette for your pictures.

GENERAL INFORMATION

All commands are made with three controls on your input device to allow full use of the program:

CONTROL	FUNCTION	PURPOSE
JOYSTICK	CURSOR (blinking shape)	used as a brush and as a pointer
BUTTON 0	BRUSH-TIP	selections/draw
BUTTON 1	MENU	appear/disappear

The CURSOR (blinking shape) on the screen is your brush and is used to draw, color, or place shapes on the drawing area. Sometimes it is simply used as a pointer to show the computer what you want and where to put it. The blinking shape shows the position of the brush on the drawing area, and appears as a "+" or whatever shape brush you are using.

BUTTON 0 is the BRUSH-TIP. It has two functions. One is to make a menu selection (tell the computer to do what you are pointing to with the cursor). The other function is to let you draw. Think of the Brush-tip as controlling ink flow in a drawing pen. In our case it controls the flow of paint on your brush. When Button 1 is pressed, your brush is touching the drawing area.

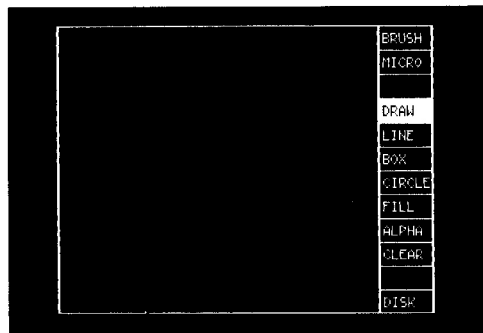
BUTTON 1 shows the MENU. The menu isn't any different than one in a restaurant except this menu lets

you choose the type of operation you want such as circles, boxes, lines, colors, etc. The Menu Button may be pressed any time you want the menu to appear or disappear. When pressed, it will abort the drawing function in progress. More later.

We refer to the controls by their function names (MENU, BRUSH-TIP, and CURSOR), so make a mental note, or better yet, label the controls on your input device. If you aren't sure which buttons control the menu & brush-tip, press each of them a few times. The button controlling the menu selection will cause it to alternately appear and disappear each time the button is pressed.

GETTING STARTED

Before creating any serious works of art, take time to become familiar with the commands and PRACTICE BY USING THE MENU SELECTIONS IN THE ORDER PRESENTED.



TO MAKE A MENU SELECTION

The Menu appears on the right side of the screen. The input device (joystick, paddles, etc.) is used to move the Cursor (blinking shape) over one of the words in the menu. Press the Brush-tip control once and release to select that mode. The word will highlight to remind you later what mode you selected. You will remain in that mode until another one is selected. The MICRO mode can be combined with other modes to give even greater capabilities. The drawing area for your pictures will be on the screen most of the time. If you call for the menu, part of your picture will be temporarily covered by the menu until you make it disappear. Let's start with a clean slate by clearing the screen as described below. Continue trying each of the Menu options in the order presented in this manual.

EXPLANATION OF MENU CHOICES

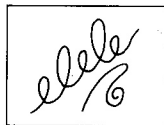
Each of the following word commands appear in the main menu. A brief description of each will be given along with an explanation on how to use it.

CLEAR erases the entire drawing area (picture) and draws a white border around it.

Move the Cursor (blinking shape) over the word labeled CLEAR in the menu. Press the Brush-tip control. The word will highlight to acknowledge your selection. Pressing the Brush-tip once more will clear the drawing

area. Because this function clears your entire picture, you must press the Brush-tip TWICE. This helps prevent accidental erasure of a picture you wish to save. If you accidentally press the Brush-tip while the cursor is over the word CLEAR, press the Menu Button or select another menu option to escape the clear.

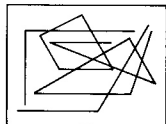
Remember: Press twice to clear.



DRAW lets you draw *free-hand* on the drawing area in any color.

Move the cursor over the menu word labeled DRAW. Press the Brush-tip once. The word DRAW highlights, and the menu remains on the drawing area. You are now ready to draw. Move the Cursor where you want to begin drawing. Press and hold the Brush-tip to draw while using the Cursor as your brush. You may press the Menu Button at any time to eliminate or retrieve the menu.

NOTE: If you try to draw over the menu while it is on the screen, it will get out of your way by disappearing as soon as you bump into it with the Cursor. You may recall it at any time by pressing the Menu Button, however, part of your picture will be covered by the menu. Your full picture reappears as soon as you eliminate the menu.



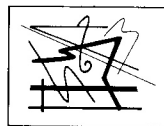
LINE lets you draw lines quickly from one point to anywhere else on the drawing area.

Move the Cursor over the Menu word LINE and press the Brush-tip once. The word LINE will highlight and you

will be ready to make a line. Move the Cursor where you want one end of the line and “pin” it down by pressing the Brush-tip once. If the menu is in your way, eliminate it by pressing the Menu Button. Now move the Cursor where you want the other end of the line and “pin” it down by pressing the Brush-tip once again. The line will be drawn, and you may draw another one using the same procedure or make another menu selection.

NOTE: If you change your mind and decide not to draw this line, press the Menu Button BEFORE the second “pinning” to abort the line. You will remain in the line mode however.

You may want to clear the drawing area before continuing. Until now you have been drawing only in white if you haven’t been cheating. Now you will learn how to draw in a variety of colors.



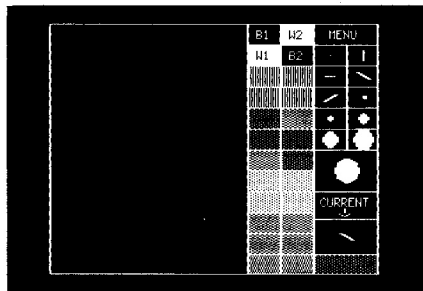
BRUSH lets you select from a number of brush widths, shapes, and colors to use for drawing and detailing. For example you may choose to paint the outline of a tree trunk in brown and the leaves in green.

TO SELECT A BRUSH move the Cursor over the word BRUSH on the menu and press the Brush-tip. A color chart and brush chart will appear. Move the Cursor over the brush type you want and press the Brush-tip once. The brush will be selected and shown under the word “CURRENT” on the chart. That’s a reminder of what

brush style you are currently using. You may recall the MAIN MENU by selecting the word MENU with the cursor and pressing the Brush-tip.

The brush you chose can be used to draw or make boxes, lines, and circles. It will be used on all further menu selections until another brush is selected.

NOTE: It takes longer to draw with a broad brush. Draw slowly to allow time for the computer to keep up with your movement.



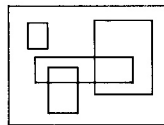
TO CHOOSE A COLOR move the Cursor over the word BRUSH in the main menu and press the Brush-tip. The brush charts will appear. Now move the Cursor over the color you want and press the Brush-tip to tell the computer that's the one you want. The new color selection will be shown below the window labeled "CURRENT", and used in all further modes until you choose another one.

By selecting the word MENU and pressing the Brush-tip, you will retrieve the MAIN MENU. The most recent mode will still be in effect (DRAW, LINE, BOX, CIRCLE, or MICRO).

NOTE: You may choose both a color and a brush in either order when you select the BRUSH option. Also there are actually two color charts arranged side by side. Due to the technique the Apple computer uses to display color, strange coloring results may be produced at the boundaries if a color from one chart is placed on your picture next to a color from the other chart.

Use the LINE and DRAW modes with various brush sizes and colors to make a drawing. When you're finished practicing, clear the drawing area before continuing.

We are now going to try using some simple shapes, so choose a nice, solid color and a small brush for the next few menu options to clearly see how they operate. Feel free to clear the drawing area whenever you desire.

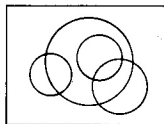


BOX creates squares and rectangles of any size or shape.

As with all other menu options, select the word BOX with the Cursor and Brush-tip. As usual the menu will remain on the screen, and the word BOX will highlight. Move the Cursor where you want one corner of the box located, and "pin" it down by pressing the Brush-tip

once. Now move the Cursor to create the size and shape box you want. When you are pleased with the box, "pin" it down by pressing the Brush-tip once more.

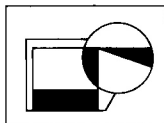
You may decide not to draw this box by pressing the Menu Button BEFORE the second "pinning". However, you will remain in the BOX mode until another one is selected.



CIRCLE draws any size circle at any place on the drawing area.

Select the CIRCLE mode from the main menu. The word CIRCLE will highlight and you will be ready to make a circle. Move the cursor where you want the center of the circle, and "pin" it down by pressing the Brush-tip once. Now move the Cursor to create the size circle you want. When you're pleased with its size, "pin" it down by pressing the Brush-tip once more.

As with the LINE and BOX modes, you may decide not to draw this circle by pressing the Menu Button BEFORE the second "pinning". You will remain in the circle mode until you choose another mode.



FILL will fill selected shapes or the entire drawing area with a color of your choice.

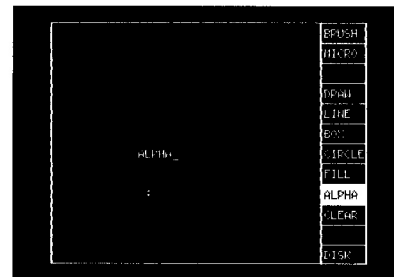
Choose the FILL mode from the main menu. The familiar brush and color chart will appear. Place the Cursor over the color you want, and press the Brush-tip to get the color.

You will notice the letter "F" follows the cursor move-

ment. It is a reminder that you are using the FILL mode. You may now fill any areas with the new color. To do so, place the Cursor inside the area to be filled, and press the Brush-tip. Presto! It's done.

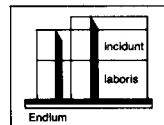
The FILL can be aborted by pressing the Menu Button before filling with a color.

As mentioned previously, if you place a color from the left column of colors on your picture next to a color from the right column, strange coloring results may occur. Furthermore, it is not possible to fill over patterned colors, only solid colors.



ALPHA mode allows you to add text to your picture any place on the drawing area by typing on the computer keyboard.

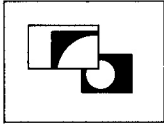
Select the ALPHA mode from the main menu. Move the Cursor where you want the first character to appear and press the Brush-tip. Next enter the text on the keyboard. Note as you type that an underline character will show you where the next character will be placed.



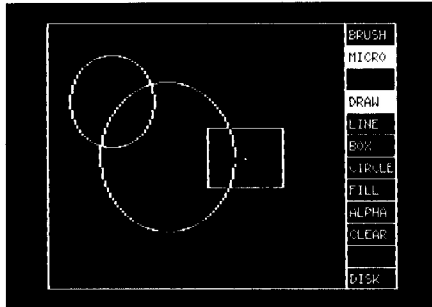
The cursor may be moved to another area and the Brush-tip pressed to start text entry in a new location. A second line will begin beneath the start of the first line if you press the "RETURN" key on the keyboard or when the right edge of the drawing area is touched by the underline character.

A maximum of 40 characters can be typed on one line. Once the return key is pressed, the first line cannot be erased except by drawing over the letters with a color in DRAW mode.

Normal cursor control commands will work for moving up, down, left, and right. Text can be written only in white.



MICRO allows for very accurate free-hand drawing. MICRO is a "super mode" which is used in conjunction with one of the normal modes (DRAW, LINE, CIRCLE, BOX, ALPHA, or FILL).



In this mode, Cursor movement is confined to a small square (micro-field) on the screen (approximately 2x2 inches on a 12 inch monitor). Normal Cursor CONTROLLER movements will move the Cursor only a small distance on the drawing area. This permits you to make detailed drawings, corrections, or additions to any portion of the picture. The micro-field, however, is moveable.

Select the word MICRO from the main menu. The word MICRO will highlight and the MICRO mode is activated. Move the Cursor where you want to do detailed work and press the Brush-tip once. The micro-field will surround the cursor.

You may change the location of the "micro-field" by bumping its sides with the Cursor. Bumping a side while the Brush-tip is pressed (you are drawing), changes the micro-field only a tiny amount. For ease of use, the menu disappears when touched by the micro-field. To get the menu back, simply press the Menu Button. The micro-field will disappear until the Brush-tip is pressed again.

To escape the MICRO mode, press the Menu Button, select the word MICRO from the menu (which will be highlighted), and press the Brush-tip. The word MICRO will no longer be highlighted indicating you are out of this mode. MICRO is toggled on and off by selecting the word MICRO.

NOTE: If the micro-field seems to have "hung up" on the

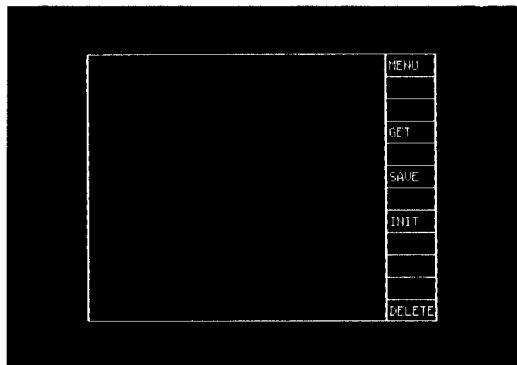
edge of the drawing area, move the cursor controller with a quick motion to regain control.

Normally the first press of the Brush-tip in any mode will start that function, however when using the MICRO mode, the first press of the Brush-tip only places the micro-field on the screen.

DISK OPERATIONS

DISK will perform all disk drive operations for getting and saving pictures and initializing blank diskettes.

Select the word **DISK** in the usual manner using the Cursor and Brush-tip. A SECOND Menu will appear and show the functions **MENU**, **GET**, **SAVE**, **INIT** and **DELETE**. Each of these functions are described in detail below.



MENU leads you back to the main menu.

Select the word **MENU** in the usual manner using the cursor and Brush-Tip. You will be returned immediately to the main menu.

Before using the next option you will need to have a picture on the screen for storing to the disk. If there is not, then create a quick one.

INIT will initialize your blank diskette to prepare it for saving and retrieving pictures. This option is similar to the "INIT" command in Applesoft Basic.

Select the word **INIT** from the disk menu. Don't be surprised to see a warning: ARE YOU SURE YOU WANT TO INITIALIZE A DISKETTE? Y/N Press the "N" key to abort the initialization and return to the menu. Press "Y" to continue. You will then see the message PLACE A BLANK DISKETTE IN THE DRIVE. PRESS RETURN KEY WHEN READY. After about a minute the diskette will be formatted and ready to save pictures. It will not be a diskette you can "BOOT".

SAVE will store your picture on diskette for future use by this program, by the projector, or by a program of your own. Pictures can be saved only on initialized diskettes as described above.

Select the word **SAVE** from the disk menu with the Cursor and Brush-tip. You will be prompted with "DO YOU WANT A CATALOG? Y/N" This gives you an opportunity to see all disk file names before saving a picture. Press the

"N" key if you don't want a catalog. Otherwise press the "Y" key and a catalog will appear. The prompt "PICTURE NAME" will be shown next. This is your cue to enter the name you want to assign to the picture.

After typing a name on the keyboard and pressing the "RETURN" key, you will see the disk drive light come on, and the picture will be saved.

When the save is complete, you may select and perform other disk operations or return to the main menu by selecting the word MENU. About fourteen pictures can be saved on a diskette assuming no other programs are on it.

GET retrieves previously stored pictures from disk. They can be pictures you have drawn and saved or ones saved by another program (assuming they are in standard Hi-Res binary format.)

Select the word GET from the menu in the usual manner. You will be asked "DO YOU WANT A CATALOG? Y/N" As with the SAVE option you have an opportunity to view the diskette catalog. Then the message "PICTURE NAME?" will appear. Enter the name of the picture you want loaded to the computer for display. The picture will be loaded in a few seconds, and the DISK menu will reappear.

WARNING: If you have a picture already on the screen, save it on disk if you want to keep it. Any time you load a picture from the disk you will destroy the picture

already in the computer.

With your new picture just loaded you may now select other disk functions or return to the main menu by selecting the word MENU on the screen.

DELETE will erase old pictures from diskette.

Select the word DELETE from the disk menu with the Cursor and Brush-tip. As you might expect, the option to view the catalog is given. Following it will be the message "PICTURE NAME." Type the name of the picture you want deleted and press the "RETURN" key. A second chance to abort will be given before the picture is deleted from disk. When complete you may select and perform other disk functions or return to the main menu.

SUMMARY OF MENU OPERATIONS

CLEAR	erases picture on the screen (PRESS TWICE).
DRAW	permits free-hand drawing.
BRUSH	gives a selection of brush sizes, shapes and colors for drawing.
LINE	makes straight lines.
CIRCLE	makes circles.
BOX	makes squares and rectangles.
FILL	fills any area with a color or texture.
ALPHA	lets you add text to pictures.
MICRO	changes scale to allow precise drawing.
DISK	displays disk operations menu.
INIT	initializes a blank diskette.
SAVE	stores pictures on diskette.
GET	retrieves pictures from diskette.
DELETE	deletes a picture from diskette.
MENU	displays main menu.

TIPS AND HINTS

a. To draw on a colored background, clear the drawing area and use the FILL option. Place the Cursor anywhere on the screen and fill with the color of your choice.

b. To erase the picture border, FILL it with black.
Note: Since there are two vertical color charts, there are also two blacks! Choose the black color from the chart where you plan to use other colors.

c. Any color will fill over any other color, but remember that filling over "patterned" colors will not be precise. (The computer sees only one of the several colors in the pattern and fills only that one.) Try it.

d. When you want to draw in color while using the BOX, CIRCLE, or LINE functions, the color will not appear until after the final placement of the object on the drawing area.

e. To erase a portion of your picture, it's easier to use a broad brush and draw with the same color as the background.

f. Leaks of color may occur if you try to FILL a shape which is not completely closed. Leaks are less likely to occur with a broad brush size. You may be able to correct undesired leaks by using the FILL option and filling in the desired areas with the same color as was originally over the filled area (background). Circles, boxes and lines will be "closed" when a solid color is used, and no leaks will occur when they are filled. Patterned colors may not necessarily be closed and will produce strange results. To be safe, save the picture to disk before doing complex fills.

g. If you try to draw with a color which is the same as the color of the background of the picture, obviously you will not see any results!

h. The "ESC" key on your keyboard duplicates the function of the Menu Button. Either may be used.

USING PICTURES IN YOUR OWN PROGRAMS

At times you may want to use the pictures you've created in a program of your own. To do so, enter the following statements in your Applesoft Basic program. You may assign any line numbers you desire. Substitute the actual name of your picture for the words "PICTURE NAME" on line 9010.

```
9000 HGR2
9010 PRINT CHR$(4); "BLOAD PICTURE NAME,
      A$4000"
```

To bring back your text screen, use the command "TEXT" in your program at the appropriate place.

To display a picture which already is loaded in Hi-Res page 2, execute the following statements in your program.

```
POKE 49232,0: POKE 49234,0: POKE 49237,0:
POKE 49239,0
```

A FINAL NOTE

We hope you enjoy FLYING COLORS™ and find it useful. We have tried to make the software and manual as easy to use as possible. Please feel free to send your complaints; ideas or suggestions to us.

Also if you do a lot of drawing or other work with graphics, you are likely to want something easier to use than paddles or a joystick. Ask your dealer to show you the DIGITAL PAINTBRUSH™ from The Computer Colorworks.™

The DIGITAL PAINTBRUSH™ lets you draw as naturally as you do with a pencil or paintbrush. You hold the "paintbrush" in your hand. When you press down, it draws the same as a pencil would. You call the FLYING COLORS™ menu by pressing the side of the "brush." The DIGITAL PAINTBRUSH™ is an accurate drawing instrument for sketching or tracing. It is also a quantitative digitizer for scientific work.

Another fine professional product from the folks at The Computer Colorworks.™

(1083A)

FLYING
COLORS™

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