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micro adventure™

no.1 SPACE ATTACK

MICRO ADVENTURE™

#1 SPACE ATTACK

by

Eileen Buckholtz

and

Ruth Glick

A Parachute Press Book

Designed by Gene Siegel

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To our courageous ACT coordinators,
Jane and Joan, and to our special ACT team
of writers and programmers

Warning: The following information is crucial to the success of your mission. Read it carefully. It may save your life.

As a certified member of ACT (the Adventure Connection Team) your job, as always, is to defend the cause of good against evil. It won't be easy, because BRUTE (the Bureau of Random Unlawful Terror and Evil — an international organization bent on wreaking havoc throughout the world) will be fighting you every step of the way. Your computer expertise will be vital to this mission. So turn on your home system. Throughout this adventure you'll be called upon to program it to get the ACT team out of some really tough spots.

Look for the box chart next to the program instructions. It will tell you which micros will run each program. If the program won't run as is on your computer, consult the Reference Manual in the back of the book — fast! Good luck. This message will be erased from memory in 30 seconds.

CHAPTER 1

This is not a drill. This is for real. Stand by for urgent communication from ACT Central. Drop whatever you're doing and go immediately to your computer terminal.

The urgent message on your micro snaps you to attention! By the time you get there, the printer has already spewed out an eight-line message.

GPS!BDU!FZFT!POMZ
TFDSFUTQBDF!TUBUJPO!
JO!EFFQ!USPVCMF
BDU!UFBN!SFQRSU!UP!
DBQF!DBOBWFSBM!1911
HPPE!MVDL!PSJPO
PO!UIJT!NJTTJPO

Unlocking the desk drawer, you bring out ACT's latest code book — the most recent issue of *X-Men Comics*. To the untrained eye it looks quite ordinary. But once the special transparency has been slipped over the next to the last page, the lines of a BASIC program leap into view.

PROGRAM 1

```
 10 INPUT "TYPE IN MESSAGE " ;M$
 20 L=LEN(M$)
 30 FOR N=1 TO L
 40 A=ASC(MID$(M$,N,1))-1
 50 PRINT CHR$(A);
 60 NEXT N
 70 PRINT
 80 PRINT "IS THERE ANOTHER MESSAGE
    TO DECODE?"
 90 INPUT "ANSWER YES OR NO" ;B$
100 IF B$="YES" THEN GOTO 10
110 END
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PCjr	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		

See page 105 of the Reference Manual for TI 99/4A and Atari 400/800.

Input the program. Line 80 must be typed as one line on your computer. Run it, then input the encoded message one line at a time.

"Holy space shot!" you gasp. "In less than 12 hours I'll be on my way to a secret U.S. space station orbiting the earth. The installation is in deep trouble, and only ACT has a chance to save it." As always, you'll be the team's computer expert. But who else will be along on the mission? And will you be in time?

You power down your home terminal and switch on the special portable unit that ACT has provided for field assignments. It's state-of-the-art hardware packed into a machine the size of a pocket radio.

If you know ACT, and you definitely do, a chauffeured vehicle -- anything from a Maserati to a milk truck — will be arriving at once. As you step outside, a newspaper delivery van pulls up to your door. The driver's massive shoulders are hunched over the wheel, and he's wearing a cap with a visor pulled down over his eyes.

"Code name?" he rasps as you pull open the van door.

"Orion."

You see him slip a nasty-looking pistol back

With a lurch forward, the van is on its way. But not for long. In a few blocks it comes to a screeching halt in front of a newsstand. "We've got to make this look authentic. Open the door and toss out one of those bundles of paper."

The bundles are heavier than you expected, but you manage to heave one onto the sidewalk.

Three paper drops later, you see the driver glancing nervously into the rearview mirror. What could scare a tough-looking guy like him? It doesn't take a genius to figure it out. A long black hearse has just pulled up where you dropped off your last bundle of papers. As you watch, a man in a black leather jacket hops out, snatches up your papers, and throws them inside. Somehow he doesn't look as if he's from the Eternal Peace Funeral Parlor. And you can't figure out what he wants with a bunch of newspapers.

"Hang on," your driver shouts. "The heck with our cover. I'm going to make a run for it."

The van shoots forward like a speedboat. You grab frantically for a handhold.

"That guy looked more like a BRUTE agent than a mortician," you comment, and then gasp as you realize what you've just said. "Are *they* involved in this mission?"

"Unfortunately, they're interested in everything we do," the driver says as he shifts into sixth gear and the van roars away from your

have something else — machine guns! You hear the bullets pinging off the van's armor plate.

"Do we have a chance?" you ask nervously. Will this mission end before it even starts?

"If we can make it to Tuttle Air Force Base before they hit our tires . . ."

Just then there is an explosion beneath you and a loud whoosh of air. At the same time the van swerves to the right, and the driver struggles to maintain control.

You'd like to close your eyes and think that this is all a bad dream. But you just can't. You stare at the windshield in front of you — it's almost like watching a movie. But this is a lot worse than 3D!

You look away for an instant . . . and when you look back you scream in horror, "Oh, no, they've got us!" Because there, directly in front of you, is a solid brick wall!

CHAPTER 2

You can hardly believe your eyes, but instead of putting on the brakes, the driver is heading straight at the brick wall! "Here we go!" he yells.

You throw your arms up over your head and tense yourself for the impact. But just as you're about to smash into the wall, a section of it slides up and you zip underneath. Unfortunately, so does the hearse!

Ahead you can see a huge cargo plane waiting for you with its front open like the jaws of a gigantic shark. To your amazement, the newspaper van speeds right inside. And this time, the jaws snap closed before your pursuers can follow. The van has barely stopped before you feel the plane speeding down the runway and rising into the air.

The driver turns to you and says nonchal-

"Go ahead and get some sleep," he advises. "You're probably going to need it before all this is over."

You start to close your eyes but they snap open again. "By the way, what's your name?" you ask the driver as he starts to climb out of the van.

"Just call me Hot Wheels."

That figures, you think as you drift off to sleep.

Mission Day 01 Time 0815

The sound of your code name wakes you.

"Get Orion to the launchpad immediately," someone shouts. "We only have a 30-minute window for this shot. Otherwise it's 24 hours before the space station comes around again."

You're fully awake now! The plane has landed at Cape Canaveral, and you're being dragged off the plane and hustled to the launch-site. "Hey, wait a minute — what about the mission briefing?" you ask.

"You'll get it in space."

An Air Force sergeant stands you up and tells you to take off your clothes—right down to your underwear. Another sergeant hands you a silver-colored space suit that fits as if it was made especially for you. And it probably was. Over the zippered pocket is a red ACT emblem.

"Where's the rest of the team?" you want to know.

"Already aboard."

In an instant, so are you. First you take the long elevator up the gigantic rocket gantry. Then it's through the hatch and into the ship.

You know this is a life-or-death mission you're on, but walking into the control room is the biggest thrill of your life. "Beam me up, Scotty," is on the tip of your tongue, but you control yourself. You get a quick look at the other silver-suited bodies as someone straps you into a padded recliner.

"Stand by for countdown sequence," the pilot's voice echoes through your earphones.

You wait tensely for the old familiar countdown that you've seen so many times on TV newscasts. But this time, something is wrong — really wrong.

"Oh great," the pilot mutters. "Mission Control, we've got a problem. The countdown program's gone haywire. If someone doesn't stop it, we're liable to fry right here on the launchpad."

In a millisecond you size up the situation. It's probably a bug in the software, and you're the only one aboard who could isolate it fast enough to do any good. "I'm a computer expert," you volunteer. "Let me have a go at it."

In the back of your mind you're wondering

"Great! See what you can do with this program," the pilot exclaims, nearly ripping you off your couch and slamming you into the empty co-pilot's seat.

"Is this the panel that controls the on-board computer?" you ask, pointing to a keyboard and monitor.

"Affirmative."

You check the status of the system. It's running the countdown program. But there's definitely something screwy going on.

"What is it?" the pilot questions tensely.

"I don't know yet," you answer, wishing you had a few hours rather than a few minutes to isolate the problem.

"Do you think you can fix it?" the pilot presses, leaning nervously on your shoulder.

You don't answer. You're already punching in the command to get a listing of the program.

Type the following program in your computer and run it. Line 30 must be typed as one line on your computer. The same is true for lines 110 and 120. Then it's up to you to find the bug that keeps the rocket from getting off the ground.

PROGRAM 2

```
10 N=10
```

```
 40 N=N+1
 50 IF N >= 100 THEN GOTO 110
 60 FOR I=1 TO 300
 70 NEXT I
 80 GOTO 20
 90 PRINT "BLAST-OFF"
100 END
110 PRINT "ROCKET HAS OVERHEATED
    ON THE LAUNCH PAD"
120 PRINT "THIS HAS BEEN YOUR FIRST
    AND FINAL ACT"
130 END
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PCjr	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		✓

This program should run on all personal computers in the guide chart above. See page 107 of the Reference Manual for TI 99/4A. If you need help in finding the problem that keeps the rocket from blasting off, check page 107.

"I think I've got it," you say tentatively.

CHAPTER 3

As the countdown goes 10, 9, 8, 7, 6 . . . , you hear six simultaneous sighs of relief.

"Quick, strap yourself in!" the pilot shouts. "This mission is *go*."

The rest of the passengers cheer.

. . . 5, 4, 3, 2, 1, IGNITION, BLAST OFF!

The roar of the rocket engines is deafening. And the G force presses you back against the couch, making you feel like a bug being squashed under a giant's heel. Fortunately, it's over pretty quickly.

While you're still recovering, one of the passengers unstraps the safety harness and sits up. Through his face plate you catch a glimpse of his features. He looks like a giant bulldog. *Gee, I'm glad that guy's on our side,* you think, noting that his physique would make the Dallas

doesn't play for the NFL. Instead of your ACT insignia, you see a colonel's oak-leaf cluster.

"All right, I'm Colonel Helen Grace," she barks, removing her helmet, "military liaison for this mission. And I'll have you ACT recruits in shape before you know it."

"Colonel?" someone behind you asks tentatively.

"You bet your sweet K rations," she shoots back. "Ballistics are my field. I designed the weaponry on that hummer we're headed for. That's why I'm here." She pauses and favors you with what almost looks like a motherly smile. "And Orion here is our computer expert — and not half bad at that."

You nod self-consciously, but you can't help feeling pleased.

"Why don't the rest of you introduce yourselves so we can start getting acquainted?" the colonel continues, all business again.

As she speaks, everybody is removing helmets. You see a passenger who's the size of a 12-year-old kid fumbling with his. When it finally comes off, you're amazed to see a short, bald man with bifocals and a short pointy beard. You recognize him at once from previous missions. He's a world-class linguist — code name Dr. Macron. The last you heard he'd retired. If ACT is desperate enough to call a 70-year-old man

In a thin but very precise voice he introduces himself to the group. "I don't know how ACT snatched me off the subway between 157th and 158th Streets, but I think I'm glad to be here, even though I didn't eat lunch — or did I?"

Everyone is shooting him puzzled looks. *Is this guy for real?* they seem to be saying. You'd be wondering, too, except that you've seen "this guy" in action. He knows 128 natural languages and can translate from any one to any other at 40 words per minute. So what if he doesn't remember whether he had lunch or not.

Just then you see that someone else has not only taken off his helmet but unfastened his seat belt.

"No, wait, don't. We're in freefall," warns a young woman with curly red hair and intense green eyes.

But it's too late. The guy is already out of his seat and floating around the cabin like a goldfish in a tank of water. "Whee!" he exclaims just before Colonel Grace's huge hamlike hand whips out and nabs him by the heel.

She turns to the young woman who shouted the warning. "Thank you, Professor Lowell. Your code name's certainly appropriate. For those of you who don't know, Lowell was a famous astronomer in the early part of this century. Our Professor Lowell is also an astronomer -- and

Why ACT sent someone from Astro Toys is beyond me. This ship is not a toy. And we're not here to play!''

But her attempt at discipline doesn't work. Dr. Macron has inadvertently unsnapped his buckle, too. You watch as he starts floating slowly upward.

''Hang on, I'll be right there,'' you tell him, reaching for your own release latch. All too soon you've joined him.

''Hey, this is neat!'' you say, echoing Tinker's sentiments. The only problem is that you can't control where you're going. After knocking your elbow on a bulkhead, you're a little relieved when Colonel Grace snags you back to your seat.

''All right, everybody!'' she snaps. ''Enough foolishness. We only have 63 minutes and 32 seconds before we dock at Rodeo I. Let's get down to business.''

You'd almost forgotten why you're here. But Colonel Grace has brought the team down to earth, so to speak.

''What's Rodeo I?'' Tinker asks. ''I've never heard of it.''

''Of course you haven't,'' the colonel shoots back. ''It's secret. In fact, it's the U.S.-staffed eye-in-the-sky station. And it's so hush-hush that most of the military doesn't even know it exists.''

''And it's in some sort of grave danger,''

Red. We're getting some desperate messages from the station, but they keep asking us to retransmit because everything they're getting back from us is garbled. As far as we can tell, some sort of alien force has the station under partial control. And they've deactivated the weaponry."

Suddenly the fun and games are over.

"Is that the worst of it?" Tinker asks tensely.

"Not exactly," the colonel admits, drumming her fingers against the bulkhead. "Unfortunately, when the big guns are out, the station goes into a self-destruct mode. It's going to blow itself up in 36 hours — "

"— and we're going to be on it when it does," Professor Lowell finishes for her.

This time there's a unanimous gasp from the ACT team. You can feel your chest tighten and your heart begin to pound. You were prepared for danger and adventure when you joined up, but not for certain death.

Colonel Grace seems to read your thoughts. "Listen, it can't be hopeless. ACT wouldn't send a crack team on a suicide mission. We'll get to work on the problem the minute we dock. But meanwhile, let's not panic. I've been in spots that were just as tight as this — and I'm still here to tell the tales."

To your amazement, the colonel launches into a story about the time she was lowered by

The story breaks the ice and everybody — even the pilot — jumps in with recollections of close calls. The whole team is talking at once, and nobody is really listening to anybody else. Everyone has a story of danger and intrigue to tell, except for Dr. Macron. He keeps repeating, "I remember the time when . . ." But he's never quite able to remember what it was he wanted to remember.

Funny how time flies when you're having fun, you think ironically. It seems like only a few moments later when you hear Professor Lowell exclaim, "Look!" as she points toward a starboard bulkhead. Suddenly, what used to be a curving blank wall has become a porthole.

"I thought you'd like to see the docking operation," the pilot explains.

All eyes turn toward the opening. Looming up ahead is the space station. It looks like an immense metallic 10-gallon hat. So that's why they call it Rodeo I.

"I didn't know we had anything this large in space," Professor Lowell admits. "How big is that thing?"

"About the size of a football stadium," the pilot answers. He pauses and shakes his head. "But remember, this is highly classified information. No one can know of the existence of this station after the mission — that is, if the station

in fascination as your craft fires its retrorockets and maneuvers under the wide brim. There you see several slots that must be moorings for spacecraft.

"There's a problem with the automated locking system. I'm going to have to handle this manually," the captain reports calmly. But when the ship overshoots the port, you can hear him mumbling under his breath, "I'll dock this sucker if it's the last thing I do."

Your eyes widen. You cross your fingers and watch.

CHAPTER

4

Luckily, on the next pass, the pilot edges up to an empty berth, and your ship comes to rest with only a slight clank.

"Whew!" the pilot exclaims. And then he turns to the ACT team. "Well, it's been nice knowing you," he says.

"What do you mean? Aren't you going to stay to take us back?" Professor Lowell questions.

"No. I'm not being paid for hazardous duty. Besides, I have to take the station's nonessential personnel back to Earth. If everything turns out okay, I'll be back to pick you up. If not . . ."

No one wants to think about the "if not" as you walk through the air lock into the spaceship. The gravity is less than Earth normal, you

everybody has assembled in the Operations Center and you take a look at the haggard crew. They look beaten — slumped shoulders, bloodshot eyes, tired and grim expressions on their faces. This is a life-or-death situation. And they know it.

A tall, uniformed man with a three-day growth of beard and deep circles under his eyes makes an effort to square his shoulders before shaking hands with Colonel Grace. "Thank goodness you're here, ma'am. I'm Captain Garrety. We didn't know whether anyone had received our distress call."

At that moment, two ensigns hurry in carrying a stretcher. The rest of the crew looked bad enough. But at least they were on their feet.

"Peterson, our communications officer," the captain explains sadly. "He's been on watch for 64 continuous hours trying to decode the Earthside messages. But the last thing he gasped before he collapsed was that he wanted to be there if help arrived."

Garrety leans down and takes Peterson's slack jaw in his hand. "It's all right, man. *Your* messages got through. Help has arrived. Can you understand me?"

With that, Peterson's eyes snap open. And in the next second, he's pushed the captain out of the way and is sitting bolt upright.

"Hiiieee-ya!" he screams, slicing the side

jumps up on the operations console. "Please transmit! Please transmit!" he shouts.

"His mind must have snapped from the pressure," says a lieutenant. "Get a strait jacket."

"You'll never get it on him," someone warns. "Peterson's got his black belt in karate. He can turn you to mashed fruit with those hands."

You stare wide-eyed at the scene. If Peterson is one of the good guys — boy, is ACT in trouble.

But before Garrety can call for reinforcements, the demented COMMS operator slumps over on the console.

"Grab him," the captain orders. As they carry him out, Garrety turns to the ACT team. "Sorry," he apologizes, turning to Colonel Grace. "We've all been under a lot of pressure, but it's been particularly hard on Peterson."

The colonel nods. "I suggest you keep him sedated until we can get to the bottom of what's going on up here. Now, let's get down to business. Give us a recap of your situation, Captain."

"Two out in the bottom of the ninth," a female lieutenant quips. "We're losing 12 to zip and you're up." Her words are an attempt at humor, but there's desperation in her voice.

Colonel Grace shoots her a disapproving look. "I hardly think that's an accurate assessment of the situation."

alien signals we're intercepting are getting stronger, which undoubtedly means they're getting closer. Our weaponry is still out." He stops and looks at his watch. "And now we only have 30 hours before the station self-destructs."

"Is that all?" Tinker asks, with a childlike grin.

"Not quite. We've been out of toilet paper for the past week."

"Well, at least one of your problems is easy to solve. A gross of toilet paper was included in the requisitions we brought," Colonel Grace notes. "But let's go back to your original list." She pauses and looks around at the ACT team members. "We don't know whether the communications malfunction is a hardware or software problem. So why doesn't Orion get busy testing the programs while Tinker checks out the equipment?" Her words are phrased like a question, but they're definitely an order.

"Let me show you to the COMMS Center," Lieutenant Baker offers.

You and Tinker follow the lieutenant down a metal ladder that leads to a long, tubelike corridor. It looks just like the inside of a vacuum cleaner hose. Reaching up, you stop and push at one of the accordion pleats. But to your surprise, it's rigid.

The lieutenant laughs. "Everybody does

"Lowest bid?" Tinker asks as he takes a closer look.

"How did you guess?"

"This material was developed for one of our combat action toys. It had to withstand 20 tons of pressure or two hours with a seven-year-old — whichever provided the most stress. And all for fifty cents a square foot."

You and Baker are a few paces down the corridor when you realize Tinker isn't with you. Turning, you see him rubbing his fingers on the accordion pleat above his head.

"What's wrong?" you ask.

"Come here and look at this."

The two of you study the area of the ceiling he's pointing to. There's a hairline crack in the plastic material.

"I guess this stuff isn't as tough as you thought," you observe.

Tinker shakes his head. "This isn't a stress-related fault. It must have been slit and seamed back together. Look at where the glue has leaked."

The lieutenant stares at Tinker with new respect. "You know, I've walked this corridor hundreds of times and never seen that," she says.

"I guess it's my eye for details," he remarks offhandedly. "What's up there, anyway?"

"Air ducts."

"Well, maybe someone was repairing

"Anyway," she adds, "we don't have time to do anything about it right now. I have to get you to the COMMS Center ASAP."

Mission Day 01 Time 1500

The Communications Center is small, but designed for maximum efficiency. You enter by a ladder in the ceiling. And as you climb down, you feel as though you're descending into a two-person diving bell. There's instrumentation over every square inch of the curved interior surface. In the center are two empty chairs, each facing identical semicircles of communications equipment.

"I didn't realize you had two identical sets of hardware," you call to Baker.

"It's supposed to be a dual, fail-safe system," she explains. "But we're experiencing a double critical fault."

"In plain English, you mean neither of them is working?" Tinker prompts.

"You got it."

You turn to Tinker and see that he's whipped a screwdriver out of a pocket in his suit. You can see his eyes light up as though he's itching to dismantle the works.

"Stay on your side of the system," you warn. "If you tinker with mine, I'll never be able

"Check," he says, getting to work enthusiastically.

Unlike Tinker, you're not really sure where to start. Then a message starts coming across over the Earth-station link. As you tear off the printout, you see that it is indeed garbled. In fact, it looks as if it could have been typed by a chicken pecking for corn on the keys. Sitting back in your chair, you scratch your head and study the unreadable text for a moment.

You'd like to think about this objectively in a logical fashion — just the way you'd tackle any other routine problem. But it's almost impossible to concentrate. As you stare at the bits of the message, you keep seeing something else — a picture of the space station being blown to bits, and you along with it.

CHAPTER 5

Listen here, dummy! you scold yourself. If you don't solve this problem, your nightmares are going to be reality. Resolutely you force yourself to look at the garbled characters once more. And then, suddenly, that old light bulb goes off in your head.

Come to think of it, the format of this stuff looks a lot like the coded messages ACT sends to you. Could the station be using the same decoder program? And more to the point, could it be that someone's disabled the automatic decryption software? There's only one way to know for sure.

PROGRAM 3

```
 10 INPUT "TYPE IN MESSAGE ";M$
 20 L=LEN(M$)
 30 FOR N=1 TO L
 40 A=ASC(MID$(M$,N,1))+1
 50 PRINT CHR$(A);
 60 NEXT N
 70 PRINT
 80 PRINT "IS THERE ANOTHER MESSAGE
    TO DECODE?"
 90 INPUT "ANSWER YES OR NO ";B$
100 IF B$="YES" THEN GOTO 10
110 END
```

Type the above program into your system and list it. Line 80 must be typed as one line.

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PC jr.	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		

This program runs on all computers checked above. For others, see page 109.

"Hey up there!" you shout to Baker. "Where do you keep your manual copy of the code book?"

Sure enough, it's there — the same issue of X-Men Comics where you used to read ACT's original communiqué.

Compare the program on page 27 to the BASIC program on page 3, and see if you can change the COMMS Center's software to make it run correctly.

After carefully comparing the two programs, you spot the problem.

"Wow, I think I've got it," you call over your shoulder to Tinker.

"That's great, because I've checked this baby over and there's nothing wrong."

The words are hardly out of his mouth before your efforts are put to the acid test. *Beep. Beep. Beep.* The I/O channel signals an incoming communiqué.

Type in the garbled message below and see if you've finally got the decoder on the right track.

IFZ!EJEEMF!EJEEMF
U!F!DBU!BDE!UIF!GJEEMF
UIF!DPX!KVNQFE!PWFS!UIF!NPPO

"Hey, how come they're sending nursery rhymes?" Tinker laughs.

"I guess because they're getting tired of trans-

ceived. We'd better let them know that we read them loud and clear."

The little dog laughed to see such sport and the dish ran away with the spoon. You type the next part of the rhyme into the system.

"What's all the commotion down there?" Baker asks.

"We did it," Tinker bubbles and then looks at you. "Or rather, Orion did it. But if it had been a hardware problem, I would have fixed it," he adds under his breath.

Baker is too relieved to quibble over credit. She pulls out her communicator and calls the captain. "Sir, good news from the COMMS Center. The ACT team members have restored communications with Earth."

"Good work!" Captain Garrety booms. "Baker, you start decoding that stack of backlogged messages. Orion and Tinker, report to the wardroom immediately."

Mission Day 01 1800 hours

Luckily, Baker is good at giving directions. After getting lost only twice, you and Tinker arrive just as Colonel Grace is making assignments.

"Dr. Lowell, I'd like you to check out the station's observatory. You may be able to pick up some leads on the alien presence up there."

The astronomer looks excited at the pros-

stars," she confesses excitedly. "I wish I had a month up here and not just . . . ?"

"24 hours," Tinker finishes helpfully.

Dr. Lowell pales. "Yes, well, I'd better make the most of the time I have." She's out the door before she finishes the sentence.

The colonel turns to Dr. Macron. "We're all counting on you to translate these alien messages."

He nods. "All I need is a quiet place with a lot of table space," he assures her.

"How about the Media Center?" Captain Garrety asks.

"Perfect."

The captain takes him aside and begins explaining how to get there.

Colonel Grace goes on with the assignments, noting that she and Tinker will be going on a space walk outside the station to inspect the weaponry firsthand. Tinker looks a little green around the gills at the prospect.

However, it's the captain's directions to Dr. Macron that make you a little queasy. "I know you can't miss the Media Center," you hear him conclude.

Uh-oh, you think as you see Macron toddling out the door with a big stack of messages under each arm. He may be a crackerjack linguist, but you remember the time he went across the

"Do you have an assignment for me?" you ask Colonel Grace quickly.

"Not right now. Just be on alert in case there's trouble."

"I think there's trouble now," you mumble under your breath as you start off after Dr. Macron. Luckily, you passed the Media Center on your way back from the COMMS Center. So you should be able to find it again.

For an old guy, Macron is surprisingly spry. By the time you get out in the corridor, he's already 100 meters away and, just as you suspected, heading in the wrong direction.

"Hey, Dr. Macron, wait up!" you shout. But he's already turned the corner and can't hear you. Speeding up, you round the bend and then stop. You see him talking to a crew member and assume the guy is going to set him straight. But just as you're about to turn back to the wardroom, Macron slumps to the floor. The crew member has hit him with some kind of club!

You try to come to his rescue. But somehow your feet are glued to the corrugated metal floor.

"Stop!" you manage to yell.

The assailant swivels around, and you get a quick glimpse of his rather ordinary-looking features. Somehow that puts your muscles in motion, and you run forward. You hear the attacker growl deep in his throat. With lightning speed he pulls open a heavy door, shoves Dr. Macron

so fast now that you don't have time to panic. You reach the guy's side just as the door clangs shut. Desperately, you ram him in the stomach with your head. But, without comment, he pushes you aside and holds you out of the way with a long arm. He seems to be holding you impossibly far away from his body. All you can do is keep flailing at him while he fiddles with a key pad next to the door. Finished, he drops you on the floor and runs off.

It takes a minute for you to climb to your feet and get your breath back. You try the door handle, but it's locked tight. And through the glass plate in the door you can see Dr. Macron slumped in the corner of a small room. A red light above his head is flashing: *Warning. Sixty seconds till automatic air lock evacuation.*

The horror of what's just happened and what's going to happen hits you at once: In 60 seconds all the air is going to be pumped out of that room. And you can't do anything about it.

CHAPTER 6

There's got to be some way to save Dr. Macron! The door is protected by a computer combination. Maybe you can figure out how to get it open. You look at the key pad the crew member programmed and see a button marked PAUSE. *That's worth a try,* you think.

You push it, activating the speaker. "Your last command has been delayed for three minutes," a mechanical voice announces. "Enter cancel code or command will be executed in two minutes 50 seconds."

Well, that bought you some time, you think, but not much. However, you have broken password schemes before. With a little luck, maybe you can get into this one.

the numeric pad, which looks like a calculator. The cancel sequence or the door combination could be anything from the captain's birthday to a telephone number.

Just to see how the system reacts, you type in today's date.

Buzz. The harsh sound makes you jump backward.

"I'm sorry, you have entered an illegal code," the computer voice informs you. "Due to security alert, phase two protection has been installed."

You feel a bead of sweat form at your hairline and slowly trickle down your face. Wiping it away with the back of your hand, you look at the phase two operating instructions posted beside the door. The small print explains that you're going to get zapped if you enter another illegal code.

"One minute 50 seconds."

Perspiration begins to run down your face. And suddenly your fingers feel cramped. As you flex them, you notice an outlet next to the key pad. It looks like a serial port. Luckily, you have a serial interface cable that just might let you tap into this microprocessor. Pulling out your portable computer, you quickly make the connections and wait.

"1 minute 20 seconds."

time to reprogram the door. The best you can hope for is to look at the control program and find out what code it's looking for. You call for a listing, knowing that if you make a wrong move, you're dead, and so is Dr. Macron.

Type in this program and list it. Line 10 must be typed as a single line on your computer. The same is true for lines 40, 60, 80, and 130.

PROGRAM 4

```
 10 INPUT "ENTER FIRST NUMBER OF
    COMBINATION";N
 20 IF N=99 THEN GOTO 130
 30 IF N< >32 THEN GOTO 100
 40 INPUT "ENTER SECOND NUMBER OF
    COMBINATION";N
 50 IF N < >48 THEN GOTO 100
 60 INPUT "ENTER THIRD NUMBER OF
    COMBINATION";N
 70 IF N < >61 THEN GOTO 100
 80 PRINT "AIR LOCK IS OPEN. YOU MAY
    PROCEED."
 90 END
100 PRINT "SECURITY VIOLATION!"
110 PRINT "INTRUDER IS TERMINATED"
120 END
130 PRINT "S.O.S. SENT TO CONTROL
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PCjr	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		

This program runs on all computers marked above. For others, check page 110 of the Reference Manual.

Find the three-number combination buried in the software. Then run the program on your computer and enter the appropriate combination to unlock the door. Keep this program handy. You may need it again soon. If you need help, see page 109 of the Reference Manual.

The red light inside the air lock chamber stops flashing and the door clicks. It worked!

Rushing inside, you grab Dr. Macron by the shoulders and drag him into the corridor. In the back of your mind you realize that moving him might be taking a chance. But so would staying inside that air lock.

You can see the linguist is in really bad shape. He's breathing, but just barely. There's a bright red gash on the top of his head. And his face is as white as his beard. What are you going to do? You can't leave him here alone, but you need to get help. If only there were a way to signal for aid. Maybe there is.

Now that you have the listing of the door controller program you see that there's one function that will turn on the alarm in the control room.

Run the program again and enter the alarm key.

In less than a minute, the corridor is full of armed reinforcements, led by Captain Garrety himself. Suddenly, a dozen lethal-looking laser guns are pointed in your direction.

"Don't shoot — it's me, Orion!" you cry out. "I set off the alarm to get help."

"Hold your fire," the captain orders. "Orion is a member of the ACT team. What happened here?" he asks.

"Sir, there's a traitor aboard this station. He ambushed Dr. Macron and stuffed him in the air lock."

The captain sucks in his breath. "What do you mean, a traitor! We'll discuss the details in

Two medics arrive and take the unconscious old man away. It makes your chest tighten to see how small and frail he looks. You want to go along to make sure he's all right. But the captain puts a restraining hand on your shoulder.

"I need a full report from you right away."

Mission Day 01 2100 hours

You sink into a chair in the captain's quarters and wait while he calls the rest of the ACT team together.

"Sorry we don't have more room. But this may be the only place we can talk freely."

You look around the tiny room. Colonel Grace and Tinker, who have been practicing for their space walk, are in bulky space suits. They look like miniature versions of the Goodyear blimp. Barely able to bend at the waist, they perch on the edge of the captain's bunk while he and Professor Lowell sit on the desk. You've got the only chair.

"Exactly what happened?" Colonel Grace prompts. You wouldn't think a blimp could look businesslike, but she manages.

You're about to answer when Captain Garrety holds up his hand. "Much as I want to get on with the problem at hand, I think we'd better take a lunch break first. Do you realize you've

here to think about food. But the captain's words make your stomach growl.

"So what's for lunch?" Tinker asks. "I could go for a chili dog."

Captain Garrety grins and presses a panel in the wall near his desk. It slides up to reveal a computer key pad. "I can order anything from a steak and baked potato to bean soup right here in my quarters," he explains.

"Steak and baked potato! That sounds great — cancel the chili dog," Tinker exclaims.

"Sorry, you don't have time for anything quite so elaborate," Garrety points out.

He punches in an order, and a few seconds later a small, covered bowl appears in the slot under the keyboard.

You're suddenly starving! Maybe it's cheeseburgers. Or ice cream. That would be good, too. But when he takes the cover off with a flourish, the eager look vanishes from your face. There in the bowl is a bunch of pills.

"That's lunch?" Tinker wails, echoing your disappointment.

"What did you expect?" Colonel Grace asks. "We've only got time for emergency rations. But I can assure you they're quite satisfying. We tested them at Camp Roberts in a NASA exchange program."

Professor Lowell reaches out and takes a

"Not bad," she concedes. "It's lemon-flavored."

You select a red one — it tastes a little like a plum.

"These won't do for long periods of time," Captain Garrety points out. "Not enough bulk. But in the short run, they provide plenty of energy along with essential vitamins and minerals."

The lunch break is over almost before it starts. As she chews her last pill, Colonel Grace says, "All right, why don't you tell us what happened to Dr. Macron?"

Quickly you fill in the members of the ACT team.

When you finish, Garrety shakes his head sadly. "I can't believe it was a member of my crew. The personnel for Rodeo I were hand-picked. But there's no other explanation."

"Right," Colonel Grace agrees. "Orion, do you think you can identify the assailant?"

"I got only a quick look at his face." You pause for a moment trying to remember some distinguishing mark, like a scar or a wart. But nothing comes to mind. Finally, you shake your head. "He looked pretty ordinary. But maybe if I saw him again, I could identify him."

"Let me call up our personnel records," the captain suggests. "I'll put it on the big screen so everyone can see."

onds, a profile and front view of Sergeant James Able fills the screen.

You shake your head. "It's not him. Go on."

It takes only a few minutes for you to review digitized photographs of every person on the station — all the way down to Stephen Zakar. None of the faces looks familiar.

"Sorry," you mumble. "I don't understand it. That guy's just not here."

The captain sighs, "It's not your fault, Orion. I guess the intruder isn't a member of the crew. But how could there be anyone else aboard this station without our knowing about it?"

There's an eerie silence as the implications of his words sink in. "Do you think there's an alien aboard disguised as a crew member?" says Professor Lowell.

Garrety turns in her direction. "I suppose it's possible. I'm going to put phase three of our security protection into action, just in case."

"What does that mean?" Tinker inquires.

"Everyone is going to have to wear a special identification badge. It will automatically be scanned whenever anyone passes a security station. That way, at least we'll know if anyone's moving around in unauthorized areas."

At that moment, a red light flashes above the screen.

The face of a medic appears on the screen. "Sir, Dr. Macron has regained consciousness and is asking for Orion."

The news perks up everyone's spirits.

Colonel Grace looks at you. "Don't just stand there with a grin on your face. Get to sick bay."

"Yes, sir!" You're halfway out the door when you realize you don't have any idea how to get there. "Say, Captain, you wouldn't happen to have a map I could —"

Before you can complete the sentence, he hands you a clear plastic disk about the size of a coaster. "I should have thought of this before," he admits. "But everybody on board knows the station so well that we haven't used them since orientation."

"What are they, anyway?" Tinker asks, practically snatching the disk out of your hand.

"A map of the station." As the captain speaks he distributes disks to everyone on the ACT team.

"I don't want to sound dumb," Professor Lowell admits, "but how do you use it?"

"Were you all issued space watches?" Garrety continues.

Everyone nods.

"Well, if you push the function key with the # sign, that will activate the disk. It will

betical order. Press the one you want, and a lighted line will lead you to its location."

"Hey, neat," Tinker exclaims. "What's the chance of Astro Toys marketing this baby?"

"Less than zero," the captain answers. "Next question."

Disk in hand, you hurry down the corridor toward sick bay. With the help of this super map, you make it on the first try.

Inside the sterile white room, Dr. Macron is stretched out on a high, narrow bed. He has a big bandage on his head and he looks very pale. He moves slightly. And to your amazement, the mattress gurgles.

"Water bed," the medic explains. "It's the best way to keep him comfortable. And it's easy to keep it at body temperature."

"Is that you, Orion?" the old man asks, his eyelids fluttering open.

You move closer to the bed. "I'm right here."

"Thank you for saving my life."

You don't know what to say. All those stock phrases like *My pleasure* or *Think nothing of it* just don't seem appropriate. So you finally settle for "umm."

But Dr. Macron is too weak to notice your discomfort. "There's something else you must do," he whispers.

"You're going to have to try and translate them."

Your eyes widen in shock. "I couldn't even pass beginning Spanish. How do you expect me to tackle something like that?"

The old man sighs and closes his eyes for a moment, trying to gather strength to continue.

"Run a frequency analysis . . . . " Even as he speaks, he's drifting off to sleep again. You reach out to shake his shoulder gently. But the medic stops you.

"He's had enough for now. You've got to let him rest."

"But I can't do this by myself," you plead.

"You're going to have to. I've already let you push Dr. Macron to his limit. If you don't let him rest now, he might not make it."

You nod slowly, knowing he's right. And you know that if you can't translate those messages, the whole space station might not make it.

CHAPTER 7

As you stand there in the sick bay, you feel as though you're about to take a final exam for a course you never took. Dr. Macron may think that you can get somewhere with those alien messages, but you're not so sure.

"Are you okay?" the medic asks. He reaches in a cabinet and brings out a foot-high stack of papers. "These were brought in with Dr. Macron."

You look at the huge stack of papers, and you realize there's no way you can do this by yourself.

"Can I use your intercom?" you ask.

"Of course."

Quickly you call the captain and explain

fessor Lowell," he responds. "Would she be any help to you?"

"Send her down." At this point if they'd offered you the Wicked Witch of the West, you would have taken her on --- broomstick and all.

"I'm also sending along an armed guard for your protection," Garrety continues.

"Is that necessary?"

"Yes. The last person who tried to work on those messages was nearly killed."

You look over at the injured linguist, and a shiver runs down your spine. When you rescued him, it was like a reflex reaction. And you hardly had time to think about the danger to yourself. You realize the captain is right.

"There must be an important clue in those messages," Garrety continues. "And you and Lowell are our only hope for finding it now."

You're saved from answering by the opening of the door. It's the astronomer --- looking as grim as you feel. With her is an armed MP.

You hand Professor Lowell half the stack of output and the two of you head off for the Media Center, followed by the guard.

"What do you want me to do?" she asks, setting down her share of the papers on a table.

You wish you had a good answer. "Dr. Macron suggested a frequency analysis."

"You mean we're going to try and find which symbols are used most often so we can get some

done anything like this before?'' you ask hopefully.

''Well, I did have statistics in college. But I'm a little rusty.''

''Not as rusty as I am,'' you mutter under your breath, suddenly very glad that at least one of you has some idea how to proceed.

The astronomer spends 10 minutes describing how this routine ought to work. ''But I don't have the foggiest idea how to get it working on the computer,'' she admits.

''Just leave that to me,'' you say. ''You pick out a section of the intercept.''

''I think these will be suitable,'' she says, showing you the following list.

```
66,82,85,84,69
49,32,84,79,32
66,82,85,84,69
50,80,82,69,80
65,82,69,32,70
79,82,32,66,82
85,84,69,32,65
84,84,65,67,75
32,45,84,72,69
32,66,73,71,32
66,82,85,84,69
0,0,0,0,0
```

since she has zero computer experience, you know that's only wishful thinking.

Sighing, you get back to work. A half hour later, you've finally gotten a version of the thing that you hope is going to do the trick. But there's only one way to find out for sure.

The program will run on all computers marked in the chart on the next page. For others, see page 112. Line 30 must be typed as one line.

With the help of this program you'll find out which two-digit numbers appear most often in the "alien" intercept. Unfortunately Orion was in such a hurry, he left a bug in the program. If you run the program before fixing the bug, you don't really need to type in all the sample data to discover what the program is doing wrong — three or four lines of intercept (each line is five numbers separated by commas) followed by a line of 0,0,0,0,0 will do fine.

PROGRAM 5

```
10 DIM F(99), Q(5)
20 PRINT "TYPE IN LINE OF INTERCEPT"
30 PRINT "EXACTLY AS SHOWN WITH
   COMMAS"
40 PRINT "ENTER 0,0,0,0,0 TO STOP"
50 INPUT Q(1), Q(2), Q(3), Q(4), Q(5)
60 IF Q(1)=0 THEN GOTO 110
```

```
 90 NEXT I
100 GOTO 20
110 FOR K=1 TO 99
120 J=J+1
130 IF J < 18 THEN GOTO 160
140 INPUT "HIT ANY LETTER TO CONT";L$
150 J=0
160 PRINT "#";K,"APPEARS";F(1);"TIMES"
170 NEXT K
180 END
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PC jr.	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		

You stare at the readout from the program. How come all the readouts are zero? That can't be right, not after you typed in all that data.

"What's wrong?" the professor asks.

You shake your head. "There must be a bug in this program somewhere. I need to check it out a little more."

Carefully, you go over the program. And sure enough, there it is.

figure out what's wrong with the program, check page 111 of the Reference Manual.

Whew, you've finally got it working. But that's only the first step. Now the two of you have got to make sense out of the results — and that's not going to be easy.

"Why do you suppose Dr. Macron suggested a frequency analysis on an alien language?" you ask Professor Lowell.

She shakes her head. "I guess he wanted us to look for some pattern."

The two of you spread the output sheets on a large table and begin sorting through the results. At first you feel as though you're looking for one typo in a 10,000-line program. But gradually you do begin to see at least one pattern. The numbers 66,82,85,84, and 69 are the most frequently used. And you find as you look at the messages that they're used in sequence over and over again.

"They must represent an important word," Professor Lowell observes.

You nod, thinking about the numbers. There's something familiar about all this. But you can't quite figure out what it is. You're so deep in thought that you don't notice your arm hitting the loose-leaf, bound computer reference manual on the table. It falls to the floor with a *thunk* and the spring closure pops open. Suddenly

a six-armed robot when all of a sudden your eyes take in the page in your hand. Your mouth drops open. "Holy cow!" you shout.

"What is it?" Professor Lowell urges.

"ASCII," you shout, waving a table from the book in the air. "It's the ASCII codes."

"Who's Askey?" she asks.

"ASCII is not a person. It's a code. ASCII codes are the numbers that are used for representing all the characters inside a computer."

The young woman's green eyes sparkle as she takes in your meaning.

"I'll bet if we assign the ASCII equivalent letters to these numbers, we'll be able to read the messages."

"That sounds like the best lead we've had so far. Let's try that repeated number combination."*

"The first number is 66. That would be B. The next is 82."

"That's an R," the professor supplies.

You don't know whether to be excited or sick as the rest of the word emerges.

"Oh no," the professor voices your dismay. "It spells BRUTE."

*An ASCII code equivalent chart which you may

CHAPTER 8

You and Professor Lowell are horrified. All along you had assumed you were dealing with aliens — and for all you know, they might still be up there. But if they are, they've already made friends with BRUTE. And that kind of alliance could spell curtains for ACT.

"We'd better tell the captain," you sigh.

Lowell presses the button on her communicator and you're put through to him.

"Have you made any progress?" Garrety asks.

"Yes, we've got good news and bad news,"

"We've found the key to translating the alien intercept."

"Good work," he congratulates you. In the background you can hear crew members cheering.

"Hold the applause," you caution. "The bad news is that they're working with BRUTE."

You hear the captain groan. "BRUTE?" he echoes. "What do they have to do with all this?"

"We don't know for sure," you admit. "The only thing we do know is that the word BRUTE appears four times in the small message sample we used for analysis. Our next step is to run the entire intercept through a conversion program."

"How long will that take?" the captain asks.

"It's a very simple program. We'll have the results shortly."

"Then get to it. And report to the bridge as soon as you finish," Garrety orders. "Nobody up here is going to breathe until we know what's really going on."

Quickly you write a program that will read in the numeric values and print out the ASCII equivalents.

Write a simple program to do this. Hint: Use the ASC function in BASIC to do the conversion.

If you have trouble, consult the Reference

An hour later you've run through enough of the messages to know that BRUTE is up to something big.

Quickly you and Professor Lowell gather up your output and throw open the door of the Media Center. The armed guard outside snaps to attention. You'd forgotten all about him. But now that you know what you're up against, you're sure glad he's around.

When the three of you hit the bridge, all eyes turn anxiously in your direction.

"Well, spit it out," the captain demands. "We can take it."

"Sir," you begin. "There's more good news and more bad news."

"Go on."

"The good news is that *there are no aliens*."

Everybody stands up, clapping their hands. But you hold your hand up for silence.

"But the messages were real," a communications officer protests. "If it's not aliens, who's up here in space with us?"

"That brings me to the bad news," you continue. "Unfortunately, as we suspected, it's BRUTE."

"And they're not up there star-gazing," Professor Lowell interjects. "They're planning to take over the space station."

You shake your head. "Sorry. If you look at the plain text of these intercepts, you'll see what's going on."

Garrety takes the output and begins reading out loud to the crew. ". . . they've been up here for three weeks. They've got several heavily armored space vehicles . . . they're responsible for disabling our weaponry . . . and all their plans are coming to a head in the next 15 hours."

It sounds pretty grim, all right.

"Do you think . . .?" you start to ask the captain. But he shakes his head.

"I think we should retire to my quarters." There's a long pause before he says, "I don't know what we're going to do. With the weaponry disabled, perhaps this time BRUTE really is unstoppable."

You begin to protest that there's always hope, when you feel the captain's fingers pinching your shoulder. His fierce expression warns you to hold your observations until later.

You and Professor Lowell follow him off the bridge and down the corridor.

Mission Day 02 Time 0215

"Why didn't you want me to say anything?" you ask the captain, as soon as he's closed the door to his quarters.

to think that we have already given up. That might give us some kind of an edge; you never know.''

''Well, Captain, what do you suggest we do now?'' asks Professor Lowell.

''We really need to get a reading on the position and number of the BRUTE ships. It's crucial that we know just how many of them are up there. Do you think you could find that information with the equipment in the observatory?''

''But surely your instruments on the bridge would be quicker and more accurate,'' Professor Lowell points out.

Garrety nods. ''You're right, but I'd rather not let our BRUTE intruder know what's going on by having the calculations performed from the bridge.''

''I see. Well, I'll try, but it may take a little time. I'm used to looking at things that are light-years away, not right in my own backyard, so to speak.'' She's reaching for the panel that releases the door, when it suddenly slides open and she jumps back in shock.

''What is it?'' you ask.

But she doesn't have to answer. Colonel Grace, still wearing her bulky space walk ensemble, rolls into the room, followed closely by Tinker. Even though you've seen the dynamic duo in their space walk getup before, it's still

I've got the hang of waddling around in this thing. All you do is pretend you're a giant-size version of the Pillsbury Dough Boy.''

Colonel Grace laughs. ''I haven't had so much fun since the quicksand survival course at Fort Ord.''

''Have I missed anything good?'' Tinker asks, propping himself against the captain's bunk again.

''It depends on what you mean by good,'' Professor Lowell shoots back. In terse words she sums up what's been going on. Colonel Grace shows no sign of alarm at the news of BRUTE's involvement. ''Let's go,'' she orders, ''there's work to be done.'' But, despite the urgency of the situation, even she can't stifle a yawn.

Captain Garrety holds up his hand. ''Wait a minute,'' he says. ''I hate to delay your space walk any longer than necessary. But the ACT team hasn't gotten any sleep in over 24 hours. Taking a space walk in that condition would be risking your lives.''

Since there's no night and day on the space station, the urgency of the mission has made you forget all about sleeping. Up until now, your adrenaline has been keeping you going. But suddenly you realize how tired you really are.

Of course, Colonel Grace isn't willing to surrender to this basic human need without a fight.

would be dangerous now. But wouldn't delaying it be even more dangerous?''

The captain shakes his head. ''You could be right. But as long as I'm the commander of this station, I make the decisions. And right now I'm ordering the ACT team to get some rest. And besides, getting the equivalent of a night's sleep won't take as long as you think,'' the captain explains.

''What do you mean?'' Colonel Grace challenges him.

''We have several accelerated sleep chambers on board. After an hour in one of them, you'll feel as though you've had a full night's rest. They're not for long-term use. But for emergencies, they work better than the reruns on the late-night movie.''

You nod, remembering how those late-night dogs always put you to sleep before the first commercial.

''Well, I'm certainly willing to give it a try,'' Professor Lowell concedes. ''Now that you mention it, I can hardly keep my eyes open.''

''All right, you can tuck us in,'' Colonel Grace adds. ''But only for an hour.''

The four of you follow Captain Garrety down the hall toward a part of the station you've never seen. This time you're accompanied by a different armed guard. He's a freckle-faced man with a

"The sleep chambers are this way." The captain is pointing down a short hall with rounded doors on either side. They look like watertight portholes on a submarine.

He stops at the first one and pushes a button. Peering inside you see that the room itself is rounded, with a cushioned mattress sunk into the middle of the floor. As you glance around the curved white walls, you feel as though you're inside an egg.

"How will we know when to get up?" Professor Lowell questions.

"We'll program these chambers for an hour's sleep," Garrety replies. "All you have to do is lie down, and the computer will take care of the rest. Why don't you be the first to try it out?" he urges.

"All right," Professor Lowell agrees.

Everyone watches as the astronomer steps inside the egg and lies down gingerly on the mattress.

"My, this is really comfortable."

"You'll be sound asleep almost as soon as I close the door," the captain promises. After securing the porthole, he keys in a few commands. "Now let me get the rest of you settled," he offers.

One by one, the members of the ACT team disappear into the chambers. And then it's your turn. As you step through the door, a little shiver

"Something wrong?" the captain asks, taking in your sudden pallor.

"I don't know," you admit. "I just have this funny feeling, that's all."

"It's probably just lack of sleep," Garrety says. "An hour from now you'll feel like a new person."

"Yeah," you agree, trying to sound convinced. But it's no good. Your intuition is screaming that you'd better stay on your guard.

CHAPTER 9

Staying on guard is impossible. The minute your body touches that low white mattress, your eyelids flutter closed. Within minutes, you're off to dreamland.

At first the dreams are great. In fact, they're like one of those laser shows where the music is coordinated to swirling lights and rainbow bursts of color. Somehow, even though you're asleep, you know the whole thing is being generated by the sleep chamber, not by your own mind. You drift with the cascading colors and the rising and falling musical notes . . . until something odd happens.

Suddenly you can see a figure in the dream. He seems to be dancing with the colored lights, letting them wrap around his silver space suit so

make-believe world. And his form is oddly distorted. Sometimes his arms seem twice as long as they should be. Sometimes they undulate like spaghetti in a pot of boiling water. You catch glimpses of his limbs and body — his face is always in shadow. Straining your eyes, you lean forward, trying desperately to see his features. Somehow you feel it's terribly important to get a look at them. But you don't know why.

And then you get your chance. For a brief, unguarded second, he turns in your direction, and you hear yourself gasp — even though you're really not surprised at who it is. It's the man who attacked Dr. Macron!

Now you understand what's happening. He's after you. And not just in your dream. Even though you're asleep, you know this is for real.

Desperately, you try to struggle toward consciousness. But it's no good. Instead, you feel yourself slipping deeper into sleep. The bright lights that have been with you all through this dream start to blur and fade like a watercolor painting left in a rainstorm. Then the music dims.

You feel your sleep growing deeper and deeper, covering you like layers of blankets. It feels so nice and peaceful. You snuggle down under the warm coverings. You don't want to wake up. You never want to wake up. In fact, you couldn't wake up if your life depended on it.

into one blinding white light. And you feel it sucking you forward.

Suddenly there's a hand on your shoulder, trying to shake you awake.

"Go away. Want to sleep," you mumble, trying to turn over and pull the covers over your head.

"Orion," a voice urges. "Orion, wake up."

Whoever it is just won't leave you alone. So you might as well open your eyes. "What do you want?" you ask. It takes a moment to realize you're staring into Lieutenant Baker's worried face.

"Captain," she calls. "Orion's awake."

The words bring Garrety rushing into the room.

"Thank goodness," he exclaims. "I thought we'd lost you."

"Lost me?" you question weakly.

"Someone tampered with the programming codes and reset the thing in fast forward."

You try to sit up. But Baker puts a restraining hand on your shoulder. "Take it easy until you get your strength back," she urges.

You're so weak that there's really nothing else you can do. "What happened?"

Garrety shakes his head. "I wish I could tell you for sure. The only thing I do know is that the man who was supposed to be guarding

He waits while this information sinks in and then continues. "Luckily, Baker did a status check on the computer that was controlling the sleep chamber. The danger-zone reading made her hit the panic button. It set off the alarm down here. And when she did a visual scan of the area, she saw someone who looked like Parker, the man we thought we sent to guard this place, running out of the area."

"Well," you tell Garrety, "at least you know who the traitor is."

Garrety shakes his head. "I wish we did."

You look confused. "But you said it was the guard who came down here with us - - the guy with the pug nose and freckles. Parker, right?"

Garrety shakes his head. "The guy who came down here *looked* like Parker, all right. But while he was fiddling with the controls on the sleep chambers, the real Parker was in the wardroom having a cup of coffee. Half a dozen officers were with him at the time."

"But that's impossible!" you gasp. "He couldn't be two places at the same time."

"I know," the captain agrees. "But we've already compared the retina patterns of the man who was in the wardroom with the records in sick bay. They check out. He's definitely Woodrow Wilson Parker."

"So the man who was guarding you is an

You nod, suddenly remembering the face of the man in your dream — the same man who hit Dr. Macron. You don't know what's going on. But you do know one thing. That man didn't look anything like the guard who came down to the sleep chamber with the ACT team.

CHAPTER 10

Although you'd like to rest for a few more minutes, Captain Garrety insists that you get to your feet, and he leads you down the hall to the space station's gym. The other ACT members are already busy pedaling stationary bikes, pushing leg weights, and jumping rope.

You look around in confusion. The last thing you feel like doing is exercising. But before you know it, Baker is helping you onto an automatic rowing machine. "Exercise is the only way to counteract the effects of sleep chamber over-acceleration," she explains.

Ten minutes of frantic rowing later, you feel almost as tired as when you entered the sleep chamber. But you force yourself to keep going.

with a tray of steaming mugs. "All right, everybody. That's enough," he calls. "Come over and have some of our Med Center's famous elixir."

You obey and take a swallow of the steaming green liquid. "Gee — this tastes like chicken soup!" you exclaim.

The captain beams. "Yes, it's amazing what modern technology can do with specially processed beet greens and a few nutrients and spices."

You almost gag, wishing Garrety had kept his explanations to himself. But he doesn't notice, since Tinker is already inquiring about the merchandising rights to the formula.

While the team members drain their mugs, Captain Garrety gets back to business. "A room-by-room search of the station has already been in progress for more than an hour. If the man impersonating Parker is anywhere aboard this vessel, we'll find him."

As if responding to the captain's words, an excited crew member bursts into the gym.

"Did you find the impostor?" the captain asks.

The crewman shakes his head. "All we found was this — stuffed into an air duct." He hands his superior officer a discarded silver uniform. Obviously, it was removed fast, since the whole front is ripped. "And we found this, too," he adds, holding up what looks like the electronic

the guard who escorted us down here," Professor Lowell observes.

Garrety nods. "You're right, but the badge is a phony. Look, there's no transponder on the back, just a black circle."

"Let me see that," Professor Lowell says. "You know," she muses, "if you hold this up to the light, you can see a zodiac sign in the circle."

"A zodiac sign?" you ask.

"Yes, it's Scorpio." She points to the outline. "See it?"

"You mean this outline of a scorpion?"

"That's it."

"What do you think it means?" Tinker asks.

Professor Lowell shrugs. "I don't know. But maybe it's a clue."

"It just doesn't make sense," Colonel Grace says. "Where is the intruder? There are only so many places on a closed installation like this where a man could hide. It's not as if he could take a walk around the block, you know."

Captain Garrety shakes his head. "Maybe when we find him, we can ask where he's been — and whether he's a Scorpio."

That gets a laugh from all assembled — but not a very merry one.

"Sir, we do have one source of information," you volunteer.

and I only had time to decode a few of the early intercepts. But since they don't know we've broken their code, they're still talking to each other."

"You know, you're right," Colonel Grace agrees. "Since those BRUTEs don't know we're listening in, their communications may provide the clue we need to catch the intruder."

Before the colonel has finished talking, Garrety has opened a channel to the COMMS Center. "Get busy on those BRUTE messages," he orders. "And bring me anything that mentions the intruder aboard this station."

Professor Lowell leans over and pats you on the back. "Good thinking."

"Yes," Colonel Grace agrees. "We may be on the way to solving one of our problems. But we're not out of the woods yet. There's still the weaponry, you know. I think it's time for that little space walk Tinker and I have been practicing."

The weaponry! With all the stir created by the intruder, you'd forgotten all about it. But suddenly everybody in the room is looking at the clock and making the same calculations you are. If those laser guns aren't put back in working order, the whole station's going to blow in less than eight hours.

CHAPTER 11

Tinker clears his throat nervously and looks at Colonel Grace. "So what are we waiting for?" he asks with as much bravado as he can muster.

"Nothing," the colonel assures him. "Let's get going."

"Right," Tinker agrees.

"I feel like a sausage," says Tinker as two technicians help him into his bulky space suit.

"Think of it as a challenge," Colonel Grace tells him.

Just then, one of the technicians calls Colonel Grace back. "Would you mind waiting a second, ma'am?" he says. "I want to check your oxygen tanks."

The colonel waits while he takes a pressure

"I don't understand it. This tank is only one-quarter full. And I *know* they were fully charged when they were issued."

"Let me see that," the captain orders, and checks the gauge himself. "You're right," he exclaims. "We'd better make sure that all the tanks are full — and in working order."

Tinker and Colonel Grace wait nervously for a new tank to be brought up. No one wants to think about what happened to the defective one, although everybody has a pretty good idea. Those tanks were left in the hall outside the sleep chambers in the sleep lab. When the intruder reset the door controls, he must have let some oxygen out of the tanks, too — just in case.

It seems like forever before the new equipment appears. But finally you're watching as the technicians fit the space walkers' helmets in place.

Mission Day 02 Time 0600 hours

"Well, let's get it over with," Colonel Grace barks. "The sooner we get out there, the sooner we'll be able to fix those guns — but why the dumb so-and-so who designed them put the diagnostic panels outside, I'll never know," she mutters. You and everyone else know that she's the one who designed those panels, but it's hard to laugh at her joke.

"Um, after you," Tinker says.

a movie ticket. She seems quite casual as the captain programs the door opening sequence.

The heavy metal door slides open with a whoosh. Quickly Colonel Grace steps inside, followed closely by Tinker.

"Good luck," you whisper just before the door slides closed behind them.

Tinker gives you a thumbs up sign and then turns his back so he can watch the other door — the one that leads to the exterior of the station. You see the red light go on, and you clench your fist. You remember the last time you saw that light go on — when Dr. Macron was trapped in that air lock. *Everything's going to be okay,* you tell yourself, hoping desperately that it's really true.

It takes about 60 seconds for all the air to be pumped out of the little room. As you watch, the door in the opposite wall slides open. And suddenly you're staring out into the blackness of space.

Colonel Grace steps up to the opening. You see her take a cord at her waist and attach it to a metal ring just outside the opening. Then she pushes herself outside and disappears.

Tinker hesitates for a moment and then jumps. Before you know it, he too has disappeared.

"Come over to the observation window,"

You and Professor Lowell follow him over to a large porthole that looks out over the weapons bays. As you watch, Colonel Grace and Tinker glide into view.

Funny, inside the station they looked clumsy in those bulky suits. But out in space, they're really quite graceful. They look a little like underwater divers as they use their arms and legs to maneuver into position. It looks like fun. And all at once you can't help wishing you were out there with them.

The captain adjusts a speaker by the porthole.

"Grace and Tinker, do you read me?" he asks.

"Loud and clear," they both answer at once.

"Hey, you were right," Tinker adds. "This is fun." As he speaks, he pushes off from the side of the station and then catches himself on a piece of machinery protruding from the metal wall.

"Watch it!" Colonel Grace reprimands him. "We're not out here to play. Let's get to work. You check the wiring on the laser cannons. I'll run that hardware diagnostic."

You see Tinker open a panel between what looks like two jet engines. Carefully he sets it down on the top of one of the barrels. But instead of staying put, it floats up like a helium balloon

disappear inside one of the laser barrels, and then her shoulders and torso. Finally, all that's sticking out are heavily padded legs and space boots.

"Are you all right in there?" Captain Garrety asks into the microphone.

"Roger," the colonel responds. "Just running the tests now."

You can't see Colonel Grace, but you can hear her crooning to the ballistic equipment, like a mother trying to comfort a sick child. "Come on, baby. Tell Mama what's wrong," she urges. "I'm going to make it all better."

You and Professor Lowell glance at each other and then look quickly away. You'd always thought that Colonel Grace was tough as rawhide. And now that she's revealing the softer side of her nature, it's almost embarrassing.

"I think I've found something," Tinker calls out excitedly over the intercom system. "There's a loose connection in the controller."

"Can you fix it?" the captain asks anxiously.

"Yes," Tinker acknowledges, pulling a special wrench out of his belt and attacking the control panel.

He's so intent on what he's doing that he seems oblivious to the sounds that are coming in over the speaker. But you and the rest of the group gathered around the porthole aren't. Colo-

says. And then she makes a strange sound — a cross between a witch's cackle and a howl.

You and Professor Lowell exchange glances. Colonel Grace is a little nuts? So what else is new? You don't know how you'd act out there, either. Maybe she's only a little overstimulated.

Just then, a report from the Med Center flashes on the screen above the porthole. "Captain Garrety, acknowledge at once."

"Captain here."

"Our vital sign monitors are picking up an abnormally low level of oxygen in Colonel Grace's blood."

"But we checked their tanks just before they went out there," one of the technicians protests. "They were full."

"Nevertheless, her level is continuing to fall," the Med Center insists.

The report is interrupted by a burst of laughter from Colonel Grace. "This station isn't big enough for the both of us," she chortles. "So I'm getting out of here."

You see her feet begin to wiggle. Soon her torso emerges and then her shoulders. As you watch, her head finally pops out of the laser gun barrel. For a moment she floats there, facing the station. And then she starts to fumble with her lifeline.

"Oh no, it must be lack of oxygen!" Pro-

CHAPTER 12

"Tinker, do something fast," the captain orders.

For a heart-stopping moment, the toy maker looks confused.

"It's Colonel Grace. She's out of oxygen, and she's gone berserk!" you shout.

Wildly, Tinker looks around and locates the colonel. But by that time she's managed to disconnect her lifeline. As you all watch in horror, she starts to float away from the space station — singing, "Off I go, into the wild black yonder . . ."

As she drifts past Tinker, he reaches out and grabs one of her legs.

"What are you doing?" she screeches. "Let me go, you worm!"

on, you old bird — calm down so I can help you.''

But Colonel Grace is too far gone. She's reciting, ''One, two, buckle my shoe,'' and struggling to get away from Tinker.

''Can't we help them?'' you plead.

''I've already signaled our emergency rescue team to gear up, but unfortunately it will take another two minutes before they'll reach them.''

You feel so helpless! You can see things are getting worse. Colonel Grace is now up to ''Five, six, pick up sticks,'' and has the toy maker's head tucked under her arm like a football. And with her other hand she's fumbling with the release catch on *his* lifeline!

His line is the only thing that's keeping both ACT members from floating off into deep space. If Colonel Grace undoes it, she and Tinker are both as good as gone.

Tinker is valiantly trying to wrench himself away from her stranglehold. With an enormous effort he swings his legs up toward the back of her head. You see them connect, but without much force. Then the impossible happens. Colonel Grace stops struggling. Her body goes limp.

''Quick, push her into the air lock!'' the captain shouts into his intercom. ''She must have finally run out of oxygen.''

way rushes to the door. By the time you get there, the rescue squad has also arrived. And when the door opens, they strip off Colonel Grace's helmet in a split second.

"Start the oxygen!" somebody shouts.

In a moment you hear her cough and sputter. "What's all the commotion about?" she asks weakly.

"We're not sure yet. But someone wanted to make your space walk permanent," Captain Garrety says gravely. "Tinker saved your life," he adds.

Tinker grins. "Gee, if I'd realized I was risking my life —"

Before he can finish, one of the technicians approaches the captain. "Look what we found, sir!" he exclaims, pointing at one of Colonel Grace's air tanks.

"What is it, man?"

"There's a false gauge on it — set to show more oxygen than was really inside. Actually, the tank was just about empty."

"How could somebody do that? We were all right here when the equipment was being checked," Professor Lowell points out.

"Don't you remember — this is a replacement tank," you remind them.

Professor Lowell's eyes widen. "Then the new tanks that were brought up must have been

hadn't happened, maybe the weapons would be operational now."

At those words, Tinker slaps his forehead and says, "Captain, in all the excitement, I forgot to mention that I think I found the problem with the laser cannons. There was a wire disconnected in the controller."

"Did you fix it before Colonel Grace went berserk?" the captain asks and then, realizing what he's said, looks apologetically at the out-of-commission officer on the floor.

"What do you mean, *berserk*?" she demands, struggling to sit up.

The captain clears his throat. "Well, ummum, there wasn't much oxygen in your tank. . . ." he trails off.

"Are you telling me that I went into low oxygen hysteria?" she presses.

"Yes," Professor Lowell interjects. "But, of course, you couldn't help it."

Colonel Grace nods. "Some of it's coming back to me now — and it's not a pretty picture." Pausing, she looks up at Tinker. "Guess I was quite a handful." She grins at him weakly.

"Yeah, it certainly would have been easier if I hadn't been trying to subdue one of the toughest officers around."

"I hate to break into this tender scene," the captain breaks in, "but Tinker still hasn't

"Well, there's only one way to find out," the captain announces. "Let's go up to the bridge and try it out."

Everyone starts filing out the door; even Colonel Grace is moving slowly to her feet. "Don't strain yourself, Colonel," Garrety cautions. "I'll order a stretcher."

"Stretcher!" Colonel Grace harumphs. "I've never been carried out of action yet. And I don't intend to start now."

This time it's the colonel who wins the standoff.

Mission Day 02 Time 0900

On the bridge, you can feel the tension crackling in the air like static electricity.

"Power up the weapons subsystem and see if it responds," the captain orders.

"Aye aye, sir," the operator, Lieutenant Winchester, affirms. "But it's going to take a few minutes to warm it up."

Garrety turns to the ACT team. "While we wait, let's get a quick status report from the COMMS Center." He throws a switch in the command console, and a picture of Baker flashes up on the large screen opposite his chair. She's surrounded by piles of yellow paper.

"Anything interesting in those messages?"

discover who wiped out that missing shipment of toilet paper. BRUTE diverted it as a practice exercise. And one other thing. They seem to be talking a lot about something called the *diordna*, but we don't know what that is."

"*Diordna*," Garrety repeats. "That doesn't mean anything to me." He looks around the bridge. "Sound familiar to any of you?"

No one has any good ideas.

"Can't help you on that one," the captain informs Baker. "But we really need some hard information about that intruder. If you're not getting much from the early messages, why don't you start from the other end and do the last ones first."

"Yes, sir."

The captain and everybody else turns their attention back to the weapons operator. But while you watch the start-up procedures scroll off the screen, you're turning that strange word around in your head. *Diordna . . . diordna. Could it be some sort of code?*

But before you can give it any more thought, a message from the weapons system flashes on the screen:

Weapons System Activated
Ready for Firing Instructions

"Affirmative," the operator confirms.

The next thing you hear is a loud cheer, followed by an urgent communiqué from the COMMS Center.

"Captain," Baker warns, "don't activate the weapons system."

"We already have. What's the problem?"

"Captain, I followed your orders and translated the last message exchanged between the BRUTE ships." She pauses, and then begins again in a trembly voice. "Their sensor can detect the reactivation of our weapons system. Before it's fully operational, they're going to attack us."

"But it's fully operational now," Garrety begins. "And nothing's happened —"

The words are knocked out of his mouth by the impact of a laser bolt hitting the station.

"Battle stations, battle stations!" the captain shouts into his communicator. "Red Alert. The station is under attack."

"Lock in on the coordinates, Lieutenant Winchester, and fire," the captain orders.

Winchester follows orders. But, a moment later, another bolt scores a direct hit on the station, and you're knocked off your feet.

"Winchester, fire! Now!" Garrety shouts.

"I did, sir, but the guidance system isn't working correctly."

"Has it been down so long you've forgotten

out of the way and taken over the weapons console himself. But when he aims and fires, he gets exactly the same results. His shot misfires, and an enemy bolt hits the station!

"The shields can't take much more of this," Garrety warns. "What do you think is wrong?"

"I don't know," Winchester practically shrieks. "It just won't respond to my commands. And without control of the weapons, we're defenseless."

CHAPTER 13

You look at the captain's grim expression and know what he's thinking. *We've conquered one problem after another. But it's all been for nothing.* Then an idea begins to form in your mind.

"Listen," you hear yourself saying, "it might be a problem in the weapons guidance software."

Suddenly you can feel every eye on the bridge turn in your direction. Now that you've opened your mouth, you'd better follow through. "Let me have a look," you offer, wondering if there's any chance of fixing the system before BRUTE blows you to bits.

Quickly Winchester tells you how to call for a listing of the guidance program.

PROGRAM 7

```
 10 P=10: U=0: B=0
 20 A=INT(RND*4)+1
 30 CLS
 40 ON A GOSUB 180,210,240,290
 50 INPUT "COMMAND"; C
 60 C=5
 70 IF A<>C THEN GOTO 150
 80 U=U+1: P=P-1
 90 ON C GOSUB 210,180,290,240
100 PRINT " DIRECT HIT!!!"
110 FOR I=1 TO 300: NEXT I
120 IF P > 0 THEN GOTO 20
130 PRINT "ACT"; U, "BRUTE"; B
140 END
150 PRINT "OOPS! YOU MISSED!"
160 B=B+1: P=P-1
170 GOTO 110
180 FOR I=1 TO 10: PRINT: NEXT I
190 PRINT "**********>"
200 RETURN
210 FOR I=1 TO 10: PRINT: NEXT I
220 PRINT TAB(10) "<**********"
230 RETURN
240 FOR I=1 TO 10: PRINT TAB(10) "*"
250 NEXT I
260 PRINT TAB(9) "***"
270 PRINT TAB(10) "*"
280 RETURN
```

```
320 FOR I=1 TO 10: PRINT TAB(10) "*"
330 NEXT I
340 RETURN
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PCjr	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓								

Check pages 115–116 of the Reference Manual for changes for other computers.

"Our shields may go any minute," Garrety whispers in your ear. "But take your time," he adds. "You don't want to make a mistake."

Your teeth clenched, you examine the listing. This is another first — your first chance to debug a program in real time while under live attack.

The guidance system works something like a computer game. Run it as is. It keeps track of your hits and misses and after 10 shots it gives you your score. When BRUTE fires, an arrow at the bottom will show what direction their missile is coming from. You need to fire back a shot that

in the system, BRUTE always wins. Correct the bug and get the guidance system working. Now take over the controls yourself; try another 10 shots, and see how well you score against a BRUTE attack.

"Try it now," the captain instructs you. "Hurry. BRUTE has just launched a barrage of 10 shots and our shields will never hold out against them." Saying a silent prayer, you give it your best shot.

You lock in on target and fire. This time you can feel the vibrations of each direct hit.

"It worked," someone shouts. "You got them!"

Pleased with your performance, you turn the console back to Lieutenant Winchester. But the captain is less optimistic. "We don't have enough power left to wage a full-scale attack against two vessels. We can only hope they don't know that and back off." Turning to Lieutenant Winchester, he orders, "Fire an offensive shot."

"But Captain, you just said —" the junior officer starts to protest.

"It's the only way to convince them that we're fully capable of surviving an attack."

Without another word, Winchester follows orders. And the captain's strategy seems to work. You brace yourself for another enemy bolt, but it doesn't come.

Do you think they've fallen for your bluff? you ask Garrety.

But before he can answer, the communications watch officer breaks in. "Captain! Captain! We're getting a direct audio and visual communiqué from the BRUTE vessel."

"Put it on the big screen," Garrety commands.

All eyes widen as a picture comes into focus on the white surface at the front of the bridge.

"Is that guy for real?" you whisper to Tinker, as everyone stares in disbelief at the weird figure whose head and shoulders fill the picture. He looks like a refugee from a Halloween party. His face peeks out from beneath a purple hood. And his eyes are covered by a purple Lone Ranger mask. But somehow the cruel line of his mouth tells you he's not here to dunk for apples.

When he begins to speak, the powerful threat in his voice makes you shiver. "Ah, Captain Garrety and members of the ACT team, thank you for your undivided attention," he rasps.

"I'm afraid you have us at a disadvantage," the captain shoots back.

His hand gestures toward his concealing costume. "If you're referring to this little disguise, it's just a precaution. We in the upper echelons of BRUTE never disclose our identities. However, if you're referring to the fact that I have your station at my mercy — yes, well, that's as

our weapons system, I assure you we have the capacity to blast you out of the sky," Garrety bluffs.

The purple BRUTE permits himself a sardonic chuckle. "Now, Captain, didn't your mother teach you not to tell lies? The android we planted aboard your station has kept us fully informed as to the status of your weapons."

Android, you think with a sick feeling. *Android — Diordna. Of course, now you remember that strange word that Baker found over and over again in the BRUTE intercepts. They were talking about their android. Only they were spelling it backwards in their communications. Why didn't you think of that?*

Just then, a flutter of motion at the periphery of your vision makes your head snap to the right. A crew member has emerged from the shadows at the edge of the bridge and walked boldly to the center of the room. With heart-stopping dread, you recognize his face. It's the same man who tried to do in Dr. Macron.

As all of you watch in horror, he reaches up with mechanical precision and peels a thin layer of synthetic skin off his face. With it come all the features that made him look human.

Everyone gasps and takes an involuntary step backwards. Gleaming metal has replaced flesh and blood. In place of his mouth is a voice

"So that's how BRUTE is getting a picture of us," someone says.

The big BRUTE looks in his direction. "A plus in observation. In fact, let me introduce your most loyal crew member — or at least loyal to me," the purple BRUTE intones.

Your eyes never waver from the gruesomely faceless figure at the center of the bridge.

"He's the state-of-the-art model of our Diordna series of androids," the big BRUTE continues proudly. "He's able to mimic human action so realistically that you can't tell he's a machine."

"You won't get away with this!" Colonel Grace challenges, shaking her fist angrily at the screen.

"Oh, I beg to differ, Colonel," the BRUTE commander contradicts. "We already have. We intercepted one of your drone supply ships, removed some nonessential paper products, and replaced them with the Diordna. Since our machine didn't have to breathe, it could hide in the airless cargo hold and slip away quite easily."

Nonessential paper products, you think, shaking your head. *So that explains the missing toilet paper!*

"But to get to the point," the big BRUTE continues, "we want your space station. Surrender immediately or die."

CHAPTER

14

"We will never surrender," Captain Garrety vows. "If you try to board, we'll fight you hand to hand in the corridors."

"Oh, I think not," the big BRUTE disagrees. "Our Diordna has planted a canister of highly lethal nerve gas in your ventilation system. Unless we have your surrender in" — he pauses and looks down at his watch — "shall we say 15 minutes, he's programmed to detonate the release mechanism."

Suddenly, you're too scared to be scared. All you can think about is, *Where is that canister? Where is that canister?* Then an image pops into your head. It's an image from the very beginning

"Tinker," you whisper urgently, "Remember that seam on the way to the COMMS Center? Didn't it lead to the ventilation system?" The toy maker's eyes light up, and you realize he knows what you're talking about. But as he looks toward you, the android's head also swivels in your direction. As the synthetic man takes several steps backward and blocks the exit from the bridge, you realize he knows what you're talking about, too.

"That must be it. That must be where the canister is hidden," Tinker hisses.

"Yes, but we'll never get by the android. He's stronger than Superman. Remember, I've tangled with him before."

"Just get him to turn in your direction and keep him occupied for 30 seconds," Tinker instructs. "I'll do the rest."

Easy for him to say, you think, taking a step forward. You don't know what he has in mind, but you've got to help him. It may be your only chance.

However, keeping the android busy, even for 30 seconds, isn't going to be easy.

As you inch closer, the android's arm lengthens, and you remember how he held you off outside the air lock.

Ducking down, you go for his legs. The android bends over to swat you away, and in a

shoulder and a wave of pain shoots down your arm. You feel like a metal can caught in a trash compactor.

"Help . . ." you gasp. And then, as the terrible pressure pushes you toward the floor, heavy steps echo behind you. Suddenly, you hear a hissing sound from behind the android. And then, to your relief and amazement, the metal hand on your shoulder slowly disengages.

A high-pitched squeal issues from the speaker in the android's head. Colonel Grace pulls you to safety just seconds before its mechanical body collapses on the deck.

"Good work, man. But what in the name of all that's holy did you do to it?" Captain Garrety asks Tinker.

"Got it with a shot of liquid screwdriver. I always keep a can in my back pocket just in case. It loosened up his access panel enough so that I could reach in and disable one of his primary circuits."

"Boy, what luck that you grabbed the right thing," someone crows.

"Luck had nothing to do with it," Tinker retorts. "BRUTE must have stole the design for this from our Astro Development Labs. I know this baby inside out."

"You mean the canister's not going to go off?" Professor Lowell asks hopefully.

woods yet. I know how this model works. We've got to feed in the password to turn off the sequence."

"But we don't know the password," someone wails.

The command "password" seems to bring the android back to life — at least partially. "Enter zodiac code. Enter zodiac code," it begins to repeat in a grinding metallic voice.

Zodiac code! This could be a break!

"Do you think it could be that Scorpio sign on the back of the fake badge?" you ask.

Tinker breaks into the conversation. "You mean the one Professor Lowell spotted? Oh boy, that's got to be it!"

Colonel Grace, who has absorbed every word of the exchange, looks directly up at the big BRUTE on the screen. "So we've got you beat after all," she taunts.

"Don't count on it." His voice booms over the speaker and reverberates around the room. Looking up, you see a self-satisfied, evil smirk on the big BRUTE's lips. "When the system is disabled, it won't accept the Scorpio password anymore. Only my super-user executive code will work now. And there's no way you could know that — unless you've seen the tattoo on my chest."

"Do you think he's telling the truth?" you

"About the tattoo or the super-user password?" he asks.

"Both."

"I'm afraid so — at least the password part," Tinker admits. "That's how it's designed. But I do have one ace up my sleeve. If we can get at the programmable read-only memory, maybe we can trick the system into thinking it's still functioning — so it will accept the Scorpio password, after all."

You nod, knowing it's a real long shot. But what do you have to lose when the only alternative is getting zapped by a canister of poison gas?

You see Colonel Grace glance quickly in your direction. Her determined expression makes you wonder if she's going to try to "hold 'em off at the pass." The suspicion is confirmed when she moves so that she's blocking the android's camera.

"I guess you do have us over a barrel, so to speak," she says, playing directly to the big BRUTE's ego.

"So you're finally acknowledging that fact," he shoots back. "Start saying your goodbyes. You've only got three minutes left."

You and Tinker exchange glances. Things are pretty grim. But Colonel Grace must know that you do have a slim chance — if she can keep the big BRUTE busy so he doesn't have time to

Hooking your portable computer into a plug in the android's back, you call for a listing of the control program.

Input the program and list it.

PROGRAM 8

```
 10 INPUT "ENTER PASSWORD"; C$
 20 S$="DISABLED"
 30 IF S$="DISABLED" THEN GOTO 170
 40 IF C$ <> "SCORPIO" THEN GOTO 170
 50 FOR I=1 TO 5
 60 PRINT "CIRCUIT #"; I; " DEACTIVATED"
 70 FOR K=220 TO 880 STEP 5
 80 SOUND K, 0.5
 90 NEXT K
100 NEXT I
110 FOR K=880 TO 220 STEP -5
120 SOUND K, 0.5
130 NEXT K
140 PRINT "ALL CIRCUITS SHUT DOWN"
150 PRINT "YOU REALLY TURN ME OFF"
160 END
170 PRINT "GET READY TO BE GASSED"
180 PRINT "PSSSSSSSSSSSS"
190 FOR J=1 TO 5
200 SOUND 220, 2: SOUND 146, 2
210 NEXT J
220 PRINT "BY THE TIME YOU SEE THIS"
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PCjr	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓								

Sound effects are different for each system. See pages 118–120 of the Reference Manual for changes.

Find out why the program won't accept the Scorpio password. Fix it so that the password will work. And run it. If you need help see page 118 of the Reference Manual.

"All circuits shut down," the android grinds out.

"What?" the big BRUTE shrieks.

"While Colonel Grace was keeping you busy, we reprogrammed the android's PROM," Tinker explains.

"And we've also just gotten word that there's a contingent of fighter missiles headed in your direction — and toward your companion ship," Captain Garrety informs him. "Too bad for you; it's all over," he adds.

You see the big BRUTE's face turn as purple as his hood. "All right, so ACT has foiled

Almost before the words are out of his mouth, you hear an engine revving up in the background. You glance over at the radar screen in time to see both BRUTE ships disappear so fast that they might never have been there.

"Where did they go?" Professor Lowell asks.

Colonel Grace shakes her head. "All I can say is that BRUTE knows when it's time to retreat."

"Then the station's saved, and we're out of danger," someone says.

"Right," you agree. Finally, the reality of what's just happened sinks in. "Hey, we did it! We really did it!" you shout.

Suddenly you and Tinker and Colonel Grace and Professor Lowell and Captain Garrety and everybody else in the Command Center are jumping up and down and slapping each other on the back. In the midst of the celebration, something makes you take a good look at Colonel Grace. You can hardly believe it, but there are tears in her eyes.

"Hey, what's the matter?" you whisper.

"I'm just so proud of the ACT team," she murmurs. "Two days ago you were a bunch of raw space recruits. And look what you've accomplished."

"But we couldn't have done it without you,"

That's what this was all about. We never would have won this round with BRUTE without a 200 percent effort from every member of the ACT team."

"Do you think they're gone for good?" the weapons officers asks.

"Oh, it's safe to predict that they won't make another attempt to take over this installation," Colonel Grace assures him. "But they're never gone for long."

You and the other ACT members nod in agreement. Colonel Grace is probably right. BRUTE never makes the same mistake twice. But you know as sure as the stars come out at night that they'll be up to their old tricks again somewhere else soon. And it will be up to you and ACT members the world over to stop them.

REFERENCE MANUAL

Note to User: The programming activities in this book have been designed for use with the BASIC programming language on the IBM PC, PCjr, Apple II Plus or Apple IIe (with Applesoft BASIC), Commodore 64, Vic 20, TI 99/4A, Atari 400/800, Radio Shack TRS 80 Level 2 or greater, and the Radio Shack Color Computer. Each machine has its own operating procedures for starting up BASIC. So make sure you're in BASIC before trying to run any of these programs.*

The version of the program included in the text will generally run on most of the computers listed above. However, a few of the commands

used are not available on some home systems. If the program as given does not run on one of the micros listed above, modification instructions will be included in this reference manual. TI 99/4A users please note: The Texas Instruments version of regular BASIC doesn't allow multiple statements on a line or the word GOTO following a THEN. Multiple statements on the same line should be entered as one statement per line number and any THEN GOTO line number should be entered as just THEN line number.

Even if you're using a computer other than the ones mentioned, the programs may still work, since they are always written in the most generalized BASIC.

If you need help with one of the computer activities in the *Micro Adventure*, or want to understand how a program works, you'll find what you need in this manual.

Naturally, programs must be typed into your computer *exactly* as given. If the program should run on your computer but you're having problems, do a list on the program and check your typing before you try anything else. Even a misplaced comma or space might cause an error of syntax that will prevent the whole program from working.

TERMS YOU NEED TO KNOW

Here are some common terms that will help you understand the explanations in this manual.

Arrays are groups of two or more logically related data elements in a program that have the same name. However, so that the individual elements in the array can be used, each is also identified by its own address (called an *index* by programmers). You can think of an array as an apartment building. One hundred people might live at the Northwest Apartments (or 100 pieces of information might be stored in the NW Array). But each unit within the building has a number (like Apt 14), so that it can be located and receive mail. In the NW Array, 14 could be the index to find a particular piece of information, and would be written NW (14). If you put the 26 letters of the alphabet into an array called Alpha, then Alpha (2) would equal B because B is the second letter of the alphabet.

ASCII (pronounced *asskee*) is the standard code used by most microcomputers to represent characters such as letters, numbers, and punctuation. A chart of the ASCII codes appears in the appendix to this manual.

ASC is a function in BASIC that will supply a character's ASCII code. For example ASC("A") will give you the number 65.

of the programming activities in this book will ask you to find and fix a bug so that the program will work correctly.

Functions are ready-made routines that perform standard calculations in a program. It's sort of like having a key on a calculator that computes a square root or the cosine of a number. The programming language BASIC comes with a number of standard functions to perform certain tasks. For example, the function SQR (x) will find the square root of any number when x is replaced by that number. You might want to check the BASIC manual that came with your computer to see which functions are available on your system.

INT is a function that changes any number that you supply into a whole number or integer. For example INT(4.5) will return the value 4. For numbers greater than 0, INT just throws away any fractions and supplies you with the whole number.

Loops are sections of programs that may be repeated more than once — usually a specified number of times, or until certain conditions are met. For example, if you wanted to write a program that would count from 1 to 100, a loop could be used to keep adding 1 to a counter var-

statements or GOTO commands. You'll find many examples of these in the programs in this book.

Random Number Generator This function, which is called RND in BASIC, lets you generate numbers at "random" just as though you were throwing a set of dice and didn't know which number was going to come up next. In most home computers, the RND function returns a fraction between 0 and 1. To get numbers in a larger range, the program must multiply the fraction by a larger number. For example, RND * 10 will produce numbers between 0 and 10.

REM This command is used to tell the computer that whatever is on a particular line is just a comment or a remark and should not be executed. An example might look like this:
10 REM THIS PROGRAM COUNTS DOWN.

Variables are names used to represent values that will change during the course of a program. For example, a variable named D$ might represent any day of the week. It may help you to think of a variable as a storage box, waiting to receive whatever information you want to put in. Variables that deal with strings of characters are always followed by a dollar sign. Variables that end in a percent sign always hold integers (whole numbers like 1, 2, 3, 500). Variables with a pound sign or no special character at the end hold num-

characters allowed in a variable name varies from computer to computer.

PROGRAM 1

What the Program Does

In order to receive your mission instructions from ACT, you must decode their scrambled message. When you run the program and type in the garbled message, the program will automatically decode it.

Modifications for Other Micros

The Atari 400/800 and the TI 99/4A do not have a MID$ function, so extracting a character from the string must be handled differently. On the INPUT statement, Atari BASIC doesn't allow prompt messages. And TI uses a : instead of a ; to separate the prompt from the variable.

Atari 400/800 — Make the following changes:

```
 5 DIM M$(45)
10 PRINT "TYPE IN MESSAGE"
15 INPUT M$
40 A=ASC(M$(N,N+1))-1
```

TI 99/4A — Substitute the following lines:

```
10 INPUT "TYPE IN MESSAGE ":M$
40 A=ASC(SEG$(M$,N,1))-1
```

How the Program Works

The message is scrambled because the next letter in the alphabet is substituted for each letter in the message. This means the word ACT would appear as BDU. You've probably made up codes like this yourself and decoded them by hand. Well, the computer program is designed to do this automatically — and much faster. But there's one more wrinkle added. Numbers and special characters like spaces are also replaced with their next highest ASCII value. A space — with the ASCII value of 32 — becomes 33, which is an exclamation mark.

The message must be stored by the program so it can be decoded. In this case, it's being stored in a variable named M$.

In order to get a readable message, the program must subtract 1 from the ASCII value of each garbled character in the message.

Can you tell which line in the program does this? In other words, which line is telling the computer to subtract 1 from something?

It's line 40.

```
40 A=ASC(MID$(M$,N,1))-1
```

The MID$ function isolates each character in the message so the program can work on it separately. The ASC function provides the ASCII

computer simply subtracts one from that number to get the ASCII value of the decoded character.

Line 50 of the program instructs the computer to print out the character whose ASCII value has just been determined. This decoding operation is performed for every character in the message. Lines 30 through line 60 are a loop that instructs the computer to repeat this process for every character in the message. Once decoded it reads:

SECRET SPACE STATION IN DEEP TROUBLE
ACT TEAM REPORT TO CAPE CANAVERAL
0800
GOOD LUCK ORION
ON THIS MISSION
YOU'RE GOING TO NEED IT

PROGRAM 2

What the Program Does

The countdown sequence is running backwards. It's counting up instead of going down toward zero. In order to get the rocket off the launchpad, you must change the countdown sequence so that it works correctly.

Modifications for Other Micros

How the Program Works

You will notice that the letter N appears frequently in the program. N is used here as a variable to represent the number of seconds before launch. In this program, N starts out at 10 seconds. But someone must have tampered with the countdown program. Look what's happening in line 40. The countdown is getting bigger not smaller. You can tell because N=N+1 means that one more is being added to the value of N. Lines 20 through 80 form a loop that will keep on adding one more and one more and one more to the value of N until N is over 100.

How would you change the program to make it count down instead of up? It's as easy as changing the plus sign in line 40 to a minus.

```
40 N=N-1
```

Make the change and run the program again, with the change and see what happens. Now the loop in lines 20 through 80 will make the N count down instead of up. And when it gets to zero, you'll blast off.

Bon Voyage!

PROGRAM 3

What the Program Does

like Program 1 — the program you used to read ACT's original message.

Modifications for Other Micros

Atari 400/800 and TI 99/4A — Lines must be modified as explained for Program 1.

How the Program Works

Compare the two programs and see how this one is different. Hint: Look at line 40. Instead of subtracting 1 from the ASCII value to decode the message, the program is adding 1 and coming up with more gibberish. Change the program so it will work correctly and run it.

Line 40 should be:

```
40 A=ASC(MID$(M$,N,1))-1
```

By the way, if you run this program without changing the plus one to a minus one, you can use the program to encode English messages into ACT code.

PROGRAM 4

What the Program Does

This is the security program for controlling the air locks on the space station. Crew members

Modifications for Other Micros

TI 99/4A — Change the following:
Remove the word **GOTO** from lines 20, 30, 50, and 70

```
10 INPUT "ENTER FIRST NUMBER":N
40 INPUT "ENTER SECOND NUMBER":N
60 INPUT "ENTER THIRD NUMBER":N
```

Atari 400/800 — Change the following:

```
10 PRINT "ENTER FIRST NUMBER"
15 INPUT N
40 PRINT "ENTER SECOND NUMBER"
45 INPUT N
60 PRINT "ENTER THIRD NUMBER"
65 INPUT N
```

How the Program Works

The combination is embedded in the listing of the program. If you're having trouble finding it, see lines 30, 50, and 70.

That's right, the correct numbers are 32, 48, 61. They're checked for in this order because a BASIC program executes line numbers in order (lowest number to highest number line), unless you tell it otherwise. If you enter the first number correctly (on line 30), the program will ask for the second number. If you enter the second number correctly, it will request the third number.

But getting Dr. Macron out of the air lock only solves half your problem. Since he's injured, you can't leave him. But you need to get help. Fortunately, the security program is also equipped to do this. Look at the listing again — particularly line 20. You'll notice that if a 99 is entered before the combination, the program will bypass asking for any additional numbers and will send an immediate SOS message to the control center. To do this, rerun the program, entering 99 for your first input.

PROGRAM 5

What the Program Does

Dr. Macron has suggested a frequency analysis to give you some clues that may lead to deciphering the alien messages. The alien "words" seem to be expressed as groups of five two-digit numbers, separated by commas. This program will read in each group and keep track of how many times every individual number is used. However, Orion's first attempt at writing this program has a bug in it. In line 160, instead of printing out the contents of each letter's frequency, it repeatedly prints out the frequency of number 1 — F(1). Orion probably made a typing

Modifications for Other Micros

Atari 400/800 — Make this change:

```
10 DIM F(99),Q(5),L$(1)
```

TI 99/4A — Remove the word GOTO from lines 60 and 130.

How the Program Works

The program uses two arrays — F and Q. F is used to store the number of times each two-digit number appears. (In other words, it is a frequency counter.) Q holds each five-number group that you input from the keyboard. Suppose you input the number 21, for example. That tells the program to add one more to the frequency count it is maintaining for the number 21, which it is keeping in F(21). It's like stuffing another piece of mail into a mailbox called 21 in post office F.

Actually, line 160 should look like this:

```
160 PRINT "#";K, "APPEARS";F(K);"TIMES"
```

When the sample has been processed, the corrected program will print out the results of the frequency analysis for you to examine.

Run the program and look at the data. Which sequence of numbers appears most frequently?

numbers correspond to? Oh no! They spell out B-R-U-T-E. You should have suspected they had something to do with the trouble aboard the space station.

PROGRAM 6

What the Program Does

Converting each number in the message to its ASCII character by hand could take all day. A quicker approach would be to use the program below. Line 40 must be typed as one line on your computer.

```
 10 DIM Q(5)
 20 A$=""
 30 PRINT "TYPE IN LINE OF INTERCEPT"
 40 PRINT "EXACTLY AS SHOWN WITH
    COMMAS"
 50 PRINT "TO STOP TYPE 0,0,0,0,0"
 60 FOR J=1 TO 4
 70 INPUT Q(1),Q(2),Q(3),Q(4),Q(5)
 80 IF Q(1)=0 THEN GOTO 150
 90 FOR I=1 TO 5
100 A$=A$+CHR$(Q(I))
110 NEXT I
120 NEXT J
130 PRINT A$
```

Modifications for Other Micros

Atari 400/800 — Make these changes:

```
 10 DIM Q(5),A$(35)
100 A$(LEN(A$)+1)=CHR$(Q(I))
```

TI 99/4A — Make these changes:
Remember to remove the word **GOTO** from line 80.

```
100 A$=A$ & CHR$(Q(I))
```

IBM	APPLE		Radio Shack		Commodore		TI	ATARI
PC & PC jr.	II+	IIe	TRS-80	Color	64	VIC-20	99/4A	400/800
✓	✓	✓	✓	✓	✓	✓		

Enter the program in your computer and run it on the intercepted messages Professor Lowell selected. The messages read:

```
BRUTE 1 TO BRUTE 2

PREPARE FOR BRUTE ATTACK
```

PROGRAM 7

What the Program Does

Tinker has gotten the weapons working again. But there's something else wrong. They're not responding correctly to the operator's commands. No matter which direction he fires in, the guns always miss.

Modifications for Other Micros

For the Atari 400/800, which does not have a TAB function, just replace the TAB(10) in lines 220, 240, 270, 300, and 320 with " " (There should be 10 spaces between the quotation marks.) TAB(9) should be done the same way in lines 260 and 319 with 9 spaces between the quotation marks. Also make the following changes:

```
20 A=INT(RND(0)*4) + 1
30 PRINT CHR$(125)
```

Radio Shack Color Computer — Make these changes:

```
20 A=RND(4)
30 CLS(0)
```

Radio Shack TRS-80 — Make this change:

Apple — Make these changes:

```
20 A=INT(RND(1)*4)+1
30 HOME      (For APPLESOFT BASIC)
*Note — If you're using Integer BASIC on your
Apple use
30 CALL -936
```

COMMODORE 64 and VIC 20 — Make these changes:

```
20 A=INT(RND(1)*4)+1
30 PRINT CHR$(142)
```

TI 99/4A — Replace line 30 with:

```
30 CALL CLEAR
```

Also note TI BASIC does not allow multiple statements on a single line. (Extended TI BASIC does — but they must be separated by double colons :: instead of single colons as shown in this program.) You can turn the multiple commands on lines 10, 80, 160, 180, 210, 240, 290, and 320 into separate line numbers by putting each command on a different line and giving it its own line number. For example line 10 would be expanded to:

```
10 P=10
12 U=0
14 B=0
```

Remember to remove the word GOTO from lines 70 and 120.

How the Program Works

The program uses a random number generator (called RND) to determine from which direction BRUTE is firing at you. When BRUTE fires, an arrow made of asterisks will show what direction the missile is coming from. You need to fire back a shot that will disable the missile before it hits the station.

Look at lines 50 and 60 of the program. 50 asks for your command — either a 1, 2, 3, or 4, which correspond to directions. In this program, 1 stands for fire left, 2 stands for fire right, 3 is fire up, and 4 is fire down. (You can write the firing commands on an index card and set it above your keyboard to remind you which number stands for each direction.)

Right now, the operator is missing every time because someone has tampered with the program and added line 60 — which effectively ignores what you put into line 50. It sets the command to 5, which the program interprets as a miss. After you miss 10 times, the program will summarize your defeat. The score is ACT 0, BRUTE 10.

How would you get the program working

line numbers and statements the same when you do this.

PROGRAM 8

What the Program Does

You and Tinker study the listing of the Diordna's programmable read-only memory. Because the android is disabled, it won't accept the Scorpio deactivation code. If you run the program as is, you're going to get gassed. There's no way you can stop the android from releasing that canister. (If you don't believe that's true, do a simulation test run of the program and see.)

Modifications for Other Micros

Atari 400/800 — Substitute the following lines:

```
  5 DIM S$(8),C$(7)
 10 PRINT "ENTER PASSWORD"
 15 INPUT C$
 70 SOUND 0,42,2,15
 80 FOR J=1 TO 400
 90 NEXT J
110 FOR I = 1 TO 3
120 SOUND 0,230,10,8
125 FOR K=1 TO 400: NEXT K
130 NEXT I
```

Commodore 64 — Substitute the following lines:

```
 70 POKE 54296,15
 80 POKE 54273,34: POKE 54272,75
 85 POKE 54273,38: POKE 54272,126
 90 POKE 54272,43: POKE 54272,52
110 POKE 54273,43: POKE 54272,52
120 POKE 54272,34: POKE 54272,75
130 POKE 54273,0: POKE 54272,0
190 POKE 54273,34: POKE 54272,75
200 POKE 54273,36: POKE 54272,85
210 POKE 54273,0: POKE 54272,0
```

VIC-20 — Make these changes:

```
 70 POKE 36878,15
 80 FOR L=130 TO 254
 90 POKE 36876,L
 92 FOR M=1 TO 40: NEXT M
 95 NEXT L
110 FOR L=254 TO 130 STEP -1
120 POKE 36876,L
122 FOR M=1 TO 40: NEXT M
125 NEXT L
130 POKE 36876,0
190 FOR N=1 TO 10
200 POKE 36876,143
210 POKE 36876,135
215 NEXT N
240 POKE 36876,0
250 END
```

```
 80 CALL SOUND(10,K,20)
120 CALL SOUND(10,K,20)
200 CALL SOUND(10,220,20)
205 CALL SOUND(10,146,20)
```

Remember to remove the word GOTO from lines 30 and 40.

Radio Shack Color Computer — Make these changes:

```
 70 FOR K=32 TO 147 STEP 10
 80 SOUND K,5
110 FOR K=1 TO 5
120 SOUND 108,5
125 SOUND 89,5
200 SOUND 125,5
205 SOUND 89,5
```

The Radio Shack TRS-80 does not have sound capability so just delete lines 80, 120, and 200. Creating sound on the APPLE is a very involved process using machine language routines and clicking on the speaker. If you're into advanced programming, add your own subroutine calls for lines 80, 120, and 200. If not, just delete these lines and the program will run — very quietly.

How the Program Works

thinking it's still okay — or in computer jargon that its "status is enabled."

Look at the listing of the program and find the line where the status is set. It's line 20. Change this line to 20 S$="ENABLED"

Now run the program and you'll be a hero.

On most systems, you can generate sound effects with this program. Lines 70 through 130 and lines 190 through 210 control the sound. However, the actual format of the sound statements will vary from computer to computer.

The sound works as is on the IBM PC.

APPENDIX

ASCII Code	Character
0-32	Special system control characters
32	Space (will look blank)
33	!
34	"
35	#
36	$
37	%
38	&
39	'
40	(
41	)
42	*
43	+
44	,

ASCII Code	Character
47	/
48	0
49	1
50	2
51	3
52	4
53	5
54	6
55	7
56	8
57	9
58	:
59	;
60	<
61	=
62	>
63	?
64	@
65	A
66	B
67	C
68	D
69	E
70	F
71	G
72	H
73	I
74	J

78	**N**
79	**O**
80	**P**
81	**Q**
82	**R**
83	**S**
84	**T**
85	**U**
86	**V**
87	**W**
88	**X**
89	**Y**
90	**Z**
91	**[**
92	****
93	**]**
94	**^**
95	**—**
96	**`**
97-122	lower case letters
126-255	alternate character set — on some computers these codes are used to represent graphic symbols. Check the ASCII chart in the back of your computer's user guide for what these codes mean on your system.

CODE NAME: ORION

Your name is Orion, and you've received an urgent message from a distant space station. Something is wrong. Dead wrong.

The space station is under alien attack. As the computer whiz on the ACT (Adventure Connection Team) only YOU can save it.

You must use your micro to:

- decode the alien messages
- break into the enemy's security system
- play the deadly game of laser attack

***Space Attack* is more than a great adventure story. It's danger, action, and suspense—plus computer programs for you to run.**

The programs will run in BASIC on the IBM PC, PC jr., APPLE IIe, COMMODORE 64, VIC 20, TI99/4A, ATARI 400/800, RADIO SHACK TRS80 (Level 2 or greater)

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