BILL'S HOME TECH
Home & Small Business Tech Solutions

BILL'S COMPLETE MANUALS

DVD, Blu-ray & VCR Players

Hooking up older players to a new TV, adapters, picture fixes and saving your tapes — explained in plain English

A plain-English guide for families and grandparents

Take your time — you can't break it

Written for you by Bill — Bill's Home Tech

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For DVD, Blu-ray & VHS players with today's TVs · facts current November 2026

What's Inside

This is your guide to keeping your movies and home videos playing on a brand-new TV. New TVs dropped many of the jacks older players use, and that's the whole puzzle: which cable, which adapter, which input, and what to do when the picture looks wrong. Read it in any order and at your own pace. Every step is numbered, every jack is described by its color and shape, and the last part shows you how to save precious family tapes before the players that read them are gone.

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PART 1

Getting Started

Why your new TV has fewer jacks than your old one, how to recognize every plug on the back of your player, and how to work out exactly what you need before you buy anything.

CHAPTER 1

A Note from Bill

Hello, and welcome. Maybe you just brought home a beautiful new TV, carried the DVD player over from the old one, and found that the cables don't fit anywhere. Maybe there's a VCR in the closet with thirty years of birthdays and holidays on tape, and you'd like to watch them again. Or maybe the picture comes up, but it's black and white, stretched, or rolling. Whichever it is, this guide is for **you**.

I'm Bill. I've spent more than 30 years working with technology, and these days I help folks here in Portage County feel at home with theirs. Hooking an older player to a new TV is a very common puzzle, and the good news is that it nearly always has a simple answer once you know what the jacks are called. I wrote this guide the way I'd explain it kneeling behind your TV: patiently, in plain English, and without trying to sell you anything.

What this guide will do for you

- Explain why new TVs dropped the yellow, red and white jacks, and what replaced them.
- Help you identify every plug on your player and your TV by color and shape.
- Walk you through connecting a DVD or Blu-ray player with one HDMI cable.
- Show you the right kind of adapter for an older VCR or DVD player — and warn you about the cheap cables that can't possibly work.
- Fix the common picture and sound problems: no signal, black and white, stretched, rolling, silent.
- Help you decide how to save your family videotapes for good, by a service or yourself.

The big promise: you can't break it

Plugging a cable into the wrong jack won't hurt your TV or your player. The worst that happens is no picture, or a strange-looking one, and you move the plug. The one thing worth a little care is a precious videotape: an old tape that's moldy or damaged should not go into a player at all. Chapter 19 explains why.

WHAT THIS DOES FOR YOU

Why this matters

Your movie collection and your home videos don't have to go in a box in the basement. With the right connection, the discs you already own will often look better on a new TV than they did on the old one, and the tapes can be watched, shared and saved.

And I'm only a phone call away

If anything in this guide leaves you unsure, call me at **(330) 200-8042**. There's no such thing as a silly question about the back of a TV.

Let's start with why your new TV looks so different from the old one.

— Bill

CHAPTER 2

Why Your New TV Has Fewer Jacks

If you turn a TV from the 1990s or 2000s around, you'll often find a whole panel of colored jacks. Turn a new one around and you may see only a few flat HDMI ports, a USB port, an antenna jack and maybe one small round hole. That isn't a mistake. TV makers have been removing the old jacks for years.

What happened to yellow, red and white

The yellow, red and white plugs are called **composite** (or "AV") connections. The yellow one carries the picture; the red and white carry the sound. They carry an **analog** signal, the kind of picture TVs used before digital TV. They're limited to standard definition, about the sharpness of an old tube TV.

Today almost everything — streaming sticks, cable boxes, game consoles, Blu-ray players — uses **HDMI**, a single digital cable that carries both a sharp picture and the sound. With fewer people using the old jacks, makers stopped including them so they could make TVs thinner and cheaper. Some TVs kept one small round **AV in** jack that needs a special adapter; many kept nothing at all.

What happened to the green, blue and red jacks

Some older DVD players also have **component** video: three plugs colored green, blue and red. Component gives a sharper picture than composite, but it's analog too, and it has largely disappeared from new TVs as well. Chapter 3 shows how to tell the two red plugs apart.

The antenna jack is still there

Nearly every TV still has a round, threaded **coax** jack for an antenna or cable. That's how many VCRs used to connect, through "channel 3." It's still there, but whether the TV can still tune a VCR's old-style signal depends on the model. Chapter 11 explains.

GOOD TO KNOW

A TV store's word for it

You may hear salespeople call the old jacks "legacy" connections. It simply means old-style. A TV's spec sheet lists them under **inputs** or **connectivity**; if it doesn't mention composite or AV, assume it doesn't have them.

WHAT THIS DOES FOR YOU

What this does for you

Knowing the TV changed — not your player — saves you from thinking your trusty DVD player is broken. In most cases it's fine; it just needs a different cable or a small adapter.

CHAPTER 3

Know Your Jacks: A Field Guide

Before buying anything, take a flashlight and look at the back of your player and the back (or side) of your TV. Write down what you see. This table will help you name it.

Name	What it looks like	Carries	Found on
HDMI	Flat, wide port, a bit like a squashed trapezoid. One plug.	Sharp digital picture and sound together	Every new TV; DVD players from the mid-2000s on; every Blu-ray player
Composite (AV)	Three round plugs: yellow, red, white	Yellow = picture; red and white = sound	VCRs, older DVD players, camcorders
Component	Three round plugs: green, blue, red (plus red and white for sound)	A sharper analog picture; no sound	Many older DVD players, some VCR/DVD combos
S-Video	Small round plug with four tiny pins	Picture only, a little better than yellow	Better VCRs, camcorders
Coax (RF)	Round, threaded jack with a thin center wire	Picture and sound together, as a TV channel	VCRs ("Out to TV"), antennas, cable
AV in mini jack	One small round hole, like a headphone jack, labeled AV IN	Composite, through a special breakout cable	Some newer TVs
Optical audio	Small square port, often glows red	Digital sound only	TVs, players, soundbars

Telling the two kinds of red apart

This is where many people get stuck. A red plug might be sound (part of the yellow-red-white set) or picture (part of the green-blue-red component set). Look at the label next to the jack on the player:

- **Audio R** or **R** — the red jack is sound (the right speaker).
- **Pr**, **Cr** or **R-Y** — the red jack is part of component video, the picture.
- **Y** on a green jack, **Pb** or **Cb** on a blue one — that's component video as well.

Out versus in

A player's jacks are marked **OUT** (they send the picture to the TV). A VCR or recorder may also have **IN** jacks for recording from something else. Always connect a player's **OUT** to the TV's **IN**. On a VCR, the coax jack marked **ANT IN** or **IN FROM ANT** is for an antenna, and **OUT TO TV** is the one that goes to the TV.

TIP

Take a picture

Use your phone to photograph the back of the player and the back of the TV, close enough to read the labels. It's the easiest way to ask for help at a store — or from me — and to remember what went where.

WHAT THIS DOES FOR YOU

What this does for you

Once you can name the jacks, every other step in this guide gets easy. It also keeps you from buying the wrong adapter, which is the most common (and most annoying) mistake.

CHAPTER 4

What You Have and What You Need

With your notes from Chapter 3, find your situation in this table. It points you to the chapter that walks you through it.

Your player has	Your TV has	What to use	Chapter
HDMI	HDMI	One HDMI cable. The best picture, and the easiest.	5
Yellow-red-white only	Yellow-red-white jacks	The cable you already have.	8
Yellow-red-white only	An AV IN mini jack	The TV maker's AV breakout adapter.	8
Yellow-red-white only	HDMI only	A powered composite-to-HDMI converter box.	9
Component (green-blue-red)	HDMI only	A powered component-to-HDMI converter box.	9
Coax only (old VCR)	Coax antenna jack	A coax cable and channel 3 or 4 — if the TV can tune it.	11
A DVD/VCR combo	HDMI	Often HDMI for both, but check — some combos send tapes only over yellow.	12

If you have a choice, choose HDMI

If your player has both HDMI and the older jacks, use HDMI. It's one cable instead of three, the picture is sharper, and many players and TVs can then work together so one remote controls both (the "Ways … Make Life Easier" topic shows how).

Keep the old TV?

If you still have an older TV with all the jacks and room for it, a VCR in a spare room or bedroom with that TV is a perfectly good answer. It needs no adapters at all.

HEADS UP

Measure before you buy

Converter boxes and HDMI cables are inexpensive, but buying the wrong one wastes a trip. Check that you've written down both ends: what's on the player and what's on the TV.

WHAT THIS DOES FOR YOU

What this does for you

Five minutes with this table tells you exactly what to buy — often nothing at all — and which chapter to turn to next.

PART 2

Hooking Up the Easy Way: HDMI

Most DVD players from the last twenty years, and every Blu-ray player, have an HDMI port. Here's how to connect one, find it on the TV, and set it up so the picture fits.

CHAPTER 5

Connecting a DVD or Blu-ray Player with HDMI

If your player has an HDMI port, you're in luck. One cable carries the picture and the sound, and it plugs in only one way.

What you need

- An **HDMI cable** long enough to reach, with a little slack. Three to six feet is typical. A basic "High Speed" HDMI cable is plenty for DVD and regular Blu-ray; a 4K Blu-ray player is best with a "Premium High Speed" or "Ultra High Speed" cable.
- A free **HDMI port** on the TV (or on your soundbar, if it has an HDMI input — see Chapter 17).
- A free power outlet for the player.

Step by step

1. Turn the TV and the player off.
2. Plug one end of the HDMI cable into the port marked **HDMI OUT** on the back of the player.
3. Plug the other end into any **HDMI** port on the TV. Note its number (HDMI 1, HDMI 2 and so on) — it's printed next to the port.
4. Plug in the player's power cord and turn on the TV, then the player.
5. Press the **Input** or **Source** button on the TV remote and choose the HDMI number you used (Chapter 6 has the details).
6. You should see the player's logo or menu. Put in a disc to test it.

Which HDMI port?

Any HDMI port will work for a disc player. If one port is labeled **ARC** or **eARC**, save it for a soundbar if you have one or might get one (Chapter 17).

> TIP
>
> **Push it all the way in**
>
> An HDMI plug that's only partly in is the most common cause of "No Signal." Push firmly on both ends until it stops. If the TV is on the wall, a short right-angle HDMI adapter can help in a tight space.

HEADS UP

You don't need an expensive cable

For a DVD or Blu-ray player, a reasonably priced cable from a known brand works just as well as one that costs ten times as much. Gold plating and fancy packaging don't make a digital picture better.

WHAT THIS DOES FOR YOU

What this does for you

One cable, plugged in once, and you're watching. HDMI also lets the TV and player talk to each other, which can mean one remote for both.

CHAPTER 6

Choosing the Right Input

A TV can show many things: the antenna, a cable box, a streaming stick, your DVD player. Each plugs into a different jack, called an **input** (some TVs say **source**). If the TV is on the wrong one, you'll see "No Signal" or the wrong thing entirely.

Finding the button

TV	The button is usually called	Then look for
Samsung	Source (or the Home button, then Source)	HDMI 1, HDMI 2, or the device's name
LG	Input (or the Home button, then the input list)	HDMI 1, HDMI 2, AV
Roku TV (TCL, Hisense, others)	Home, then the input tiles on the home screen	Tiles named HDMI 1, HDMI 2, AV
Google TV (Sony, TCL, Hisense)	Input (a square with an arrow) or Settings	Inputs list
Vizio	Input	HDMI-1, HDMI-2, Comp/AV

Button names vary from model to model, so if you don't see one of these, look for a picture of a box with an arrow going into it. Some TVs also show the list when you press the Home button.

Step by step

1. Turn the player on first, so the TV can see it.
2. Press **Input** or **Source** on the TV remote.
3. Use the arrow buttons to highlight the HDMI number you plugged into (or **AV** for yellow-red-white).
4. Press **OK** or **Select**. Give it a few seconds; the picture can take a moment to appear.

Give the input a name

Most TVs let you rename an input so the list says **DVD** or **VCR** instead of HDMI 2. On a Samsung TV, press Source, highlight the input, press up and choose **Edit**. On a Roku TV, highlight the input's tile, press the star (*****) button and choose **Rename input**. Other TVs have a similar option in the input list or under **Settings**.

TIP

Let the TV show you how

Many newer Samsung TVs have a **Connection Guide** in the Source menu that shows a picture of where each kind of device plugs in. Other brands often have a similar guide under Inputs.

WHAT THIS DOES FOR YOU

What this does for you

Naming the inputs means nobody has to remember which number is the DVD player. Grandkids, visitors and you at 10 p.m. will all find it the first time.

CHAPTER 7

Getting the Player's Settings Right

A DVD or Blu-ray player has its own setup menu, separate from the TV's. When a player moves from an old tube TV to a new flat one, a couple of its settings may still be set for the old TV. That can make the picture look squeezed or boxed in.

Opening the player's menu

1. With no disc playing, press **Setup**, **Home** or **Menu** on the *player's* remote (not the TV's).
2. Look for a section called **Setup**, **Settings**, **Screen** or **Video**.
3. Use the arrows and **Enter** or **OK** to move around. **Return** or **Back** goes back a step.

The settings that matter

Setting	What to choose
TV type or screen format	Set it to **16:9** (widescreen) for any flat-screen TV. "4:3" is for old square tube TVs.
Output resolution	Leave it on **Auto** for HDMI. The player and TV agree on the best setting by themselves.
Audio output (digital)	If there's no sound through a soundbar or receiver, try **PCM** instead of **Bitstream** (Chapter 17).
Control for HDMI (HDMI-CEC)	Turn it **On** so the TV remote can work the player. Sony calls it **Control for HDMI**.

On Sony Blu-ray players such as the BDP-S3700, **Control for HDMI** is in the player's **HDMI Settings**. Sony's manual suggests turning the player off and on again after changing an HDMI connection, and switching the setting off and back on if it stops working after a power failure.

What about the disc menu?

Pressing **Menu** or **Top Menu** while a disc is in brings up the disc's own menu — the one with **Play Movie**, **Scene Selection** and **Special Features**. Subtitles and languages for that movie are usually set there, or with the player's **Subtitle** and **Audio** buttons.

GOOD TO KNOW

Upscaling

Most DVD players with HDMI, and every Blu-ray player, **upscale** DVDs: they stretch the picture smoothly to fit a high-definition TV. A DVD still won't look as sharp as a Blu-ray, but it usually looks better than it did through yellow-red-white.

WHAT THIS DOES FOR YOU

What this does for you

Two minutes in the player's menu can fix a picture that looks too narrow or too short, and set up one-remote control — without buying anything.

PART 3

Older Players: VCRs and Yellow-Red-White

VCRs and older DVD players speak the old analog language. Here's how to connect them to a TV that still has the jacks, the adapter that works when it doesn't, the cables that can't work, and the antenna-jack trick from the old days.

CHAPTER 8

Connecting with Yellow, Red and White

If your TV still has yellow, red and white jacks, or one small round jack labeled **AV IN**, you can connect a VCR or older DVD player without buying a converter box. The picture will be standard definition — the same as it always was — but it will work.

If the TV has three colored jacks

1. Turn the TV and the player off.
2. On the back of the player, find the jacks marked **VIDEO OUT** (yellow) and **AUDIO OUT** (red and white). They may be grouped under **OUT** or **LINE OUT**.
3. Plug the yellow plug into the player's yellow jack, red into red, white into white.
4. On the TV, find the matching jacks, usually labeled **AV IN**, **VIDEO IN** or **COMPOSITE**, and plug in the other ends the same way: color to color.
5. Turn on the TV and the player, press **Input** or **Source**, and choose **AV** (some TVs say **Composite** or **Video**).
6. Press **Play** on the VCR with a tape in. The picture should appear within a few seconds.

If the TV's jack is green instead of yellow

Some TVs save space by sharing one set of jacks between composite and component. The picture jack is then colored **green** and labeled something like **Y/VIDEO**. In that case the yellow plug goes into the green jack, and red and white go into the audio jacks beside it. If you plug yellow into green and get a black-and-white picture, see Chapter 14.

If the TV has one small AV IN jack

Some newer TVs have a single small round jack, about the size of a headphone jack, labeled **AV IN**. It needs a short **breakout adapter**: a mini plug on one end and yellow, red and white jacks on the other. Your old cable plugs into those jacks.

- Some TVs come with the adapter in the box — look in the bag with the remote and the manual.
- If yours didn't, get the one your TV maker lists for your model. Not every mini-plug adapter is wired the same way; the wrong one can put the picture on the sound wire and give you no picture at all.

- Search the maker's support site for your TV's model number and "AV adapter" or "composite adapter."

Only one sound plug?

Many older VCRs are **mono**: they have one white or yellow-ringed audio jack instead of red and white. Plug that into the TV's **white** (left) audio jack. Most TVs then play it from both speakers; if yours plays it from only one side, an inexpensive "Y" splitter cable that feeds one plug into both red and white fixes it.

TIP

Wiggle-free cables

Old yellow-red-white cables get loose and corroded. If the picture flickers when you touch the cable, a fresh one is a cheap fix and a good first step.

WHAT THIS DOES FOR YOU

What this does for you

If the jacks are there, you can be watching your tapes in five minutes, with nothing to buy.

CHAPTER 9

Converter Boxes: The Adapter That Works

If your new TV has only HDMI ports, a VCR or older DVD player needs a small **converter box**. It takes the old analog signal and turns it into digital HDMI. This is the adapter that actually works, and for most families it's the answer.

How to recognize the right one

- It's a **small box** (often about the size of a deck of cards), not just a cable.
- It has **yellow, red and white jacks** (or green, blue and red for component) on one side and an **HDMI port** on the other.
- It needs **power**, usually from a small USB cable. A box with no power plug of any kind can't be doing any converting.
- It's labeled for the direction you need: **AV to HDMI**, **RCA to HDMI**, **composite to HDMI**, or **component to HDMI** (also written **YPbPr to HDMI**).

HEADS UP

Check the direction

Converters work one way only. An **HDMI to AV** box does the opposite job — it lets a new streaming stick feed an old TV. For a VCR going into a new TV you want **AV to HDMI**.

Setting it up

1. Plug the player's yellow, red and white cable into the converter's matching **IN** jacks.
2. Plug an HDMI cable from the converter's **HDMI OUT** into any HDMI port on the TV.
3. Give the converter power. Use the USB wall adapter if one came with it, or a phone charger. The TV's own USB port often works, but some TVs turn it off when the TV is off, and a weak port can make the picture drop out.
4. If the converter has a small switch, set it to **NTSC** (the U.S. standard) and **1080p** or **720p**. Either resolution is fine; try the other if your TV won't show a picture.
5. Turn on the TV and choose the HDMI input you used. Then press Play on the player.

What to expect

The converter can't add detail that was never on the tape. A VHS tape on a big new TV will look soft and a bit fuzzy, just as it did on the old TV, only bigger. That's normal. Sitting a little farther back helps, and so does setting the TV's picture size to show the tape's original square shape (Chapter 15).

TIP

Component players

If your DVD player has green, blue and red **component** jacks as well as yellow, a component-to-HDMI converter will usually give a noticeably sharper picture than composite. VCRs don't benefit — they only send composite or S-Video.

WHAT THIS DOES FOR YOU

What this does for you

One small, inexpensive box lets the player you already own work with any new TV, no matter how few jacks it has.

CHAPTER 10

The Cables That Can't Work

Online stores are full of cables that have an HDMI plug on one end and yellow, red and white plugs on the other, with nothing in between. They look like exactly what you need. For a VCR or older DVD player going into a new TV, they can't work.

Why not

Yellow-red-white carries an analog signal; HDMI carries a digital one. Changing one into the other takes a small computer chip and power — that's what the converter box in Chapter 9 is. A plain cable has no chip and no power, so the TV simply sees nothing and says **No Signal**. The player isn't broken, and neither is the TV.

How to spot one before you buy

- No box in the middle of the cable, and no USB or power plug anywhere.
- Reviews full of "didn't work" and "no signal."
- A listing that says it works "both ways" or for every device. Real converters work in one direction only.

HEADS UP

If you already bought one

Return it if you can. A few of these cables are made for a narrow purpose — such as a special device whose HDMI port actually sends an analog signal — but none of them will connect a VCR to an HDMI-only TV.

Other things that won't help

- A coax-to-HDMI adapter with no power. Same problem: no chip, no conversion.
- An expensive HDMI cable. The cable isn't the issue; the signal is.
- A new TV remote. If the TV has no analog jacks, no setting will make one appear.

WHAT THIS DOES FOR YOU

What this does for you

Knowing which product can't work saves you money, a return trip, and an evening of thinking something is wrong with your VCR.

CHAPTER 11

VCRs and the Antenna Jack (Channel 3 or 4)

Years ago, many people connected a VCR with a single round coax cable, and watched tapes on **channel 3** or **channel 4**. The VCR made its own little TV channel. Every new TV still has an antenna jack, so it's natural to try this again — but it often doesn't work any more.

Why it may not work

The VCR sends an old-style **analog** channel. Over-the-air TV went digital years ago, and newer TVs are built for digital channels. Some still include the older analog tuner that can find a VCR on channel 3; many newer models don't, and they'll never find the VCR's channel however you scan.

Trying it anyway

1. Connect a coax cable from the VCR's **OUT TO TV** (or **RF OUT**) jack to the TV's **ANT IN** or **CABLE/ANTENNA** jack. Screw it on finger-tight.
2. On the back of the VCR, find the small **CH 3 / CH 4** switch, if there is one. Set it to 3.
3. On the TV, choose the **Antenna**, **TV** or **Live TV** input, and set the signal type to **Antenna** or **Air** if asked.
4. Turn the VCR on, put in a tape and press Play.
5. Run the TV's **channel scan** (often under **Settings** > **Channels** or **Broadcasting**), or tune straight to channel 3 if the TV lets you.
6. If nothing appears on 3, set the switch to 4 and try channel 4.

> **HEADS UP**
>
> **A scan can remove your antenna channels**
>
> On some TVs a new channel scan replaces the list of over-the-air channels. If you use an antenna, plug it back in and scan again when you're done with the VCR.

The better way

Even when channel 3 works, the picture is usually worse than yellow-red-white. If your VCR has a yellow **VIDEO OUT** jack, use Chapter 8 or 9 instead. Almost every VCR made after the early 1990s has one.

GOOD TO KNOW

Channel 3 with a cable box

If a cable or satellite box is connected to the VCR by coax, the VCR usually needs to be on channel 3 or 4 to show the box. That's separate from how the VCR connects to the TV.

WHAT THIS DOES FOR YOU

What this does for you

You'll know in a few minutes whether the antenna jack is an option — and if it isn't, you won't spend an evening scanning for a channel the TV can't receive.

CHAPTER 12

DVD/VCR Combos and Recorders

A combo player plays both DVDs and tapes in one box. They were popular, and many families still have one. They're also the best way to keep watching tapes, because new VCRs are no longer made: the last company making them, Funai of Japan, stopped production in July 2016.

Connecting a combo

- **If it has HDMI**, start there: one HDMI cable to the TV, as in Chapter 5.
- Then play a **tape**. On many combos the HDMI output carries both the DVD and the tape. On some, the tape picture only comes out of the **yellow** jack, and you'll see nothing over HDMI when you switch to VCR.
- If the tape won't show over HDMI, look in the combo's setup menu for an HDMI or "upconvert" setting for the VCR side. If there isn't one, connect the yellow-red-white jacks as well (Chapter 8 or 9) and use that input for tapes.
- Press the **DVD** or **VCR** button on the combo's remote (or on the front) to choose which side you're using.

DVD recorders and VCR/DVD recorders

Some combos can also **record** a tape onto a blank DVD. That was once the most popular way to save home movies. If you have one that still works, it can still do the job — use blank discs of the type the manual lists, and **finalize** each disc when it's done (an option in the recorder's menu), or it won't play in other players. Chapter 23 covers more modern ways to save tapes.

> **TIP**
>
> **Keep the remote**
>
> Many combo features — switching between DVD and VCR, tracking, the setup menu — are easier or only possible from the combo's own remote. Universal remotes may miss some buttons. Tape a note with the model number to the back of the remote.

WHAT THIS DOES FOR YOU

What this does for you

A working combo is precious now. Getting it connected right means one box handles both your movie discs and your family tapes.

PART 4

When the Picture or Sound Is Wrong

No signal, black and white, stretched, rolling or silent: the common problems, what causes them, and the fixes to try in order.

CHAPTER 13

No Signal or a Blank Screen

"No Signal" means the TV is looking at an input where nothing is coming in. It's the most common message of all, and it's almost never a broken player. Work down this list in order.

Try these, in order

1. **Is the player on?** Look for a light or a display on the front. Press its power button.
2. **Is the TV on the right input?** Press **Input** or **Source** and pick the one the player is plugged into (Chapter 6). Try each HDMI and AV input in turn if you're not sure.
3. **Are both ends pushed all the way in?** Unplug the cable at the player and the TV, then push each end in firmly.
4. **Is there a disc or tape in, and playing?** Some players show nothing at all until you press Play.
5. **Using a converter box?** Check that it has power — usually a small light. Try a different USB power source, and flip its 720p/1080p switch.
6. **Using a plain HDMI-to-RCA cable with no box?** It can't work. See Chapter 10.
7. **Turn everything off**, unplug the player and the TV from the wall for one minute, then plug them in and turn on the TV first, then the player.
8. **Try another HDMI cable or port.** Cables do fail, especially ones that have been bent sharply.

If the player's menu shows but discs don't

If you see the player's logo or setup menu but a disc won't start, the connection is fine and the problem is the disc. Chapter 18 covers discs that won't play.

SCAM ALERT

Be careful searching for a support number

If you search online for help with a TV or player, the top results can be paid ads for fake "support" companies. They may ask for remote access to your computer or payment by gift card. Get support numbers only from the maker's own website or the printed manual. Roku, for example, says it never charges activation or support fees.

WHAT THIS DOES FOR YOU

What this does for you

Nine times out of ten, the fix is in the first three steps. You'll get your picture back without buying anything or calling anyone.

CHAPTER 14

Black and White, Rolling or Flickering

When the picture comes up but looks wrong, the symptom usually tells you the cause. Find yours below.

Picture is black and white

- **Yellow plug in a green jack.** On TVs that share jacks (Chapter 8) the green jack accepts composite, but on TVs with full component jacks, green carries only brightness. The result is a black-and-white picture. Move the yellow plug to the yellow or **VIDEO** jack, or to the green jack only if it's labeled **Y/VIDEO**.
- **Component plugs mixed up.** If you use green-blue-red, check that each color matches. Two reds swapped (the sound red and the picture red) is a classic mistake — see Chapter 3.
- **Converter set wrong.** If your converter has a **PAL/NTSC** switch, set it to **NTSC**.
- **A tape from overseas.** Tapes recorded in Europe, Australia and much of the world use a different system (PAL). A U.S. VCR shows them in black and white, rolling, or not at all.

Picture rolls, jumps or has lines across it

- **Tracking.** VCRs have a tracking adjustment, usually **Tracking +** and **–** buttons or the channel buttons during playback. Press them slowly until the lines go away. Many VCRs have **Auto Tracking**; pressing Stop and Play again restarts it.
- **A worn or stretched tape.** Very old or often-played tapes can wobble no matter what. If it's a family tape, stop and think about saving it soon (Chapter 21).
- **Dirty heads.** If every tape looks snowy, the VCR's heads may need cleaning (Chapter 19).
- **A weak converter power supply.** A converter on a weak USB port can make the picture drop out or flicker. Try a wall adapter.

Picture brightens and darkens on store-bought tapes

Many movies sold or rented on VHS were recorded with **copy protection**, the best-known being Macrovision. It was designed to confuse recording equipment. Plain TVs ignored it, but some converter boxes, capture devices and recorders react to it: the picture may slowly brighten and dim, roll, or show a warning. Your own home videos don't have it.

- Try the tape directly through yellow-red-white on a TV that has those jacks.

- Try a different converter; they don't all react the same way.
- For store-bought movies, it's usually simpler to buy the film again on DVD or digitally than to fight the protection.

Digital copy protection (HDCP)

HDMI has its own protection, called **HDCP**. A Blu-ray or streaming picture won't pass through a device that isn't allowed to receive it, such as a video recorder or capture box, and you may get a blank screen or an error. Connect the player straight to the TV, try the cable the other way round, and take any recorder or splitter out of the chain.

WHAT THIS DOES FOR YOU

What this does for you

Knowing which symptom points to which cause turns a frustrating evening into a two-minute fix — usually moving one plug or pressing a tracking button.

CHAPTER 15

Stretched, Squeezed or Boxed In

Old TVs were nearly square — a shape called **4:3**. New TVs are wide — **16:9**. Most tapes and many older DVDs are square-shaped, so they won't fill a wide screen naturally. You can stretch them to fill it, but people then look short and wide.

What "right" looks like

- **Black bars on the left and right** for a tape or a TV show from before about 2009. That's the correct shape.
- **Black bars above and below** for many movies, even on a wide TV, because films are often wider still. That's correct too.
- **Black bars on all four sides** usually means two settings are fighting each other. Fix it with the steps below.

Fixing the shape

1. Start with the **player**: in its setup menu, set the TV type or screen format to **16:9** (Chapter 7).
2. Then the **TV**: while the picture is showing, open the picture settings — often the **Settings**, **Menu** or star (*****) button — and look for **Picture Size**, **Aspect Ratio**, **Zoom** or **Wide**.
3. For tapes and older shows, choose **4:3** or **Original**. For widescreen DVDs and Blu-ray, choose **16:9**, **Auto** or **Original**.
4. If people look stretched, you've chosen a fill or stretch setting. If there are bars on all four sides, try **Zoom**, or go back to the player and check its screen format.

GOOD TO KNOW

TVs remember each input

Most TVs remember the picture size for each input separately. Set it once on the DVD or VCR input and it stays that way, without changing your cable box or streaming stick.

TIP

Converter boxes and shape

Some composite-to-HDMI converters stretch everything to fill the screen. If the converter has a **4:3/16:9** switch, use it; if not, the TV's picture-size setting can usually put it right.

WHAT THIS DOES FOR YOU

What this does for you

Grandma looks like Grandma again, not short and wide. A minute in the settings and it stays fixed.

CHAPTER 16

No Sound or Sound Out of Step

A picture with no sound is almost always a cable or a setting. Here's the order to check.

No sound at all

1. **Check the volume and mute** on the TV remote — and on the soundbar remote if you have one.
2. **Yellow-red-white?** Make sure the red and white plugs are in, at both ends. The yellow one carries no sound.
3. **Component?** Green, blue and red carry only the picture. You also need red and white audio plugs, or an HDMI or optical connection for sound.
4. **Sound going somewhere else?** If the TV's speaker setting is set to a soundbar or optical output that's off, the TV goes quiet. Check the TV's **Sound** > **Sound Output** (names vary).
5. **Through a soundbar or receiver?** In the player's audio settings, try **PCM** instead of **Bitstream** (Chapter 17).
6. **Only on some tapes?** Try the VCR's **Audio** or **Hi-Fi/Normal** button. Very old tapes sometimes have sound only on the "normal" track.

Sound only from one side

A mono VCR connected to only the white jack may play from one speaker. See "Only one sound plug?" in Chapter 8.

Voices don't match lips

When sound runs ahead of or behind the picture, it's usually a soundbar or converter adding a small delay. Many TVs have a setting to fix it. On LG TVs it's **AV Sync Adjustment** under **Sound** > **Additional Settings**; other TVs call it **Audio Delay** or **Lip Sync**. Some soundbars have their own setting in their app or remote.

TIP

Hard to hear the words?

If the sound works but voices are hard to make out, a soundbar's dialogue or speech mode can help a great deal. Our companion guide on TV listening, headphones and dialogue covers it in detail.

WHAT THIS DOES FOR YOU

What this does for you

These six checks find almost every missing-sound problem, without having to understand how any of it works inside.

PART 5

Sound, Discs and Players

Adding a soundbar, why some discs won't play, keeping discs, tapes and players in good shape, and what you can still buy today.

CHAPTER 17

Soundbars and Your Disc Player

A soundbar makes movies sound fuller and voices clearer. The trick is getting the sound from the player, through the TV, to the soundbar. The simplest arrangement works for nearly everyone.

The simple way

1. Connect the **player** to the **TV** with HDMI, as in Chapter 5 — any ordinary HDMI port.
2. Connect the **soundbar** to the TV's HDMI port marked **ARC** or **eARC**, using the soundbar's **HDMI** or **HDMI TO TV** port.
3. On the TV, set the sound output to the soundbar (often **Settings** > **Sound** > **Sound Output**), and turn on the TV's HDMI-CEC setting if it's off (Anynet+ on Samsung, SIMPLINK on LG, 1-touch play and system audio control on Roku TVs).
4. Play a disc. The sound now goes from the player to the TV and back out to the soundbar.

If there's no ARC port

If the TV or soundbar has no ARC, use an **optical** cable (the small square plug) from the TV's **Optical** or **Digital Audio Out** to the soundbar. It carries regular surround sound but not the newest formats such as Dolby Atmos.

If a disc plays with no sound

Some Blu-ray discs use sound formats the TV can't pass along to a soundbar. Open the player's **Audio** settings and change **Digital Audio Output** (or **BD Audio**, or similar) from **Bitstream** to **PCM**. PCM means the player decodes the sound itself, so everything downstream can play it.

VCRs and soundbars

A VCR or older DVD player connected by yellow-red-white or a converter box plays through the TV, and the TV sends that sound on to the soundbar the same way. Nothing extra to set up.

HEADS UP

Use the right HDMI port on the TV

A soundbar plugged into an HDMI port that isn't the ARC one gives no sound at all. The port's label is printed right beside it.

WHAT THIS DOES FOR YOU

What this does for you

One remote for the volume, clearer voices in movies, and no tangle of extra boxes.

CHAPTER 18

Discs That Won't Play: Region Codes and More

If a disc won't play, or the player says "Cannot play this disc" or "Region code error," one of a few simple things is usually to blame.

Region codes

Movie studios divide the world into **regions**, and most players sold in a region only play discs from that region. In the United States:

Disc	U.S. region
DVD	**Region 1** (the U.S., Canada and U.S. territories). Discs marked Region 0 or "ALL" play anywhere.
Blu-ray	**Region A** (the Americas and parts of East Asia). Region B is Europe, Africa, the Middle East, Australia; Region C is much of the rest of Asia.
4K Ultra HD Blu-ray	Almost always **region free**. A bonus regular Blu-ray in the same box may still be region-locked.

Look for a small globe icon with a number or letter on the back of the case. A disc bought on a trip abroad, or from an overseas online seller, may not play here. European DVDs are also in a different TV system (PAL), which many U.S. players and TVs can't show.

Other common reasons

- **The wrong kind of player.** A DVD player can't play Blu-ray discs. A regular Blu-ray player can't play 4K Ultra HD Blu-ray discs (the black case with "4K Ultra HD" across the top). A 4K player plays all three.
- **A home-burned disc that wasn't finalized.** A DVD made on a recorder must be finalized on that recorder before other players can read it.
- **Smudges and scratches.** Clean the disc (Chapter 19). Library and rental discs are often the culprits.
- **Player software.** Blu-ray players get updates that help them play newer discs. Panasonic, for example, released an update for its DP-UB820 4K player in October 2026 to improve disc playback. Look in the player's **Setup** > **System** or **Software Update** menu.

HEADS UP

"Region-free" players

You'll see players sold as "multi-region" or "region-free." They're usually modified versions of standard models, sold by third parties. They can work, but the maker's warranty may not apply.

WHAT THIS DOES FOR YOU

What this does for you

You'll know whether a disc is worth fighting with — and know what to check on the case before buying a movie from overseas.

CHAPTER 19

Caring for Discs, Tapes and Players

Discs and tapes last a long time with a little care. Tapes need the most attention, because once a tape is damaged, the picture on it can be gone for good.

Cleaning a disc

1. Hold the disc by its edges, or with a finger through the center hole.
2. Wipe the shiny side with a soft, clean, lint-free cloth, in straight lines from the center out to the edge — not in circles.
3. For sticky smudges, dampen the cloth slightly with plain water, then dry the disc.
4. Never use paper towels, household cleaners or solvents.

Check a tape before you play it

Before you put an old family tape into a VCR, look at it through the little window, and lift the flap on the front gently to look at the tape itself.

- **White or gray fuzzy spots, or a powdery film** on the tape edge or the reels mean **mold**. Don't play it. Mold can wreck the tape and spread into the VCR's heads and onto the next tape.
- **Crinkled, snapped or loose tape**: don't play it either.
- **Sticky, squealing or smelly** tapes are breaking down. Stop the VCR and eject.

Archivists advise handling moldy tapes as little as possible, keeping them apart from other tapes (a sealed plastic bag is fine for now), and having them cleaned by a professional before they're played. If you use a conversion service (Chapter 22), tell them about any moldy tapes and ask how they handle them before you send them.

Storing tapes and discs

- Somewhere cool and dry, in the main part of the house — a closet shelf, not the attic, garage or a damp basement.
- Tapes stand upright, like books, in their sleeves, rewound to the end.
- Away from speakers, TVs and other strong magnets.
- Discs in their cases, standing up, out of the sun.

Keeping a VCR running

If every tape looks snowy, the VCR's **heads** may be dirty. A head-cleaning tape can help, but use it sparingly, following its directions — too much can wear the heads. Don't take the VCR apart. A VCR that chews tapes or makes grinding noises should be retired before it eats something precious.

STAY SAFE

Unplug before you look inside

Never put fingers, tools or cleaning sprays inside a player that's plugged in. If a disc or tape is stuck, turn the player off, unplug it, and see the maker's instructions.

WHAT THIS DOES FOR YOU

What this does for you

A few seconds of looking before you press Play can save a one-of-a-kind family tape — and your VCR.

CHAPTER 20

Buying a Player Today

If your player has given up, here's an honest picture of what you can still buy as of November 2026.

VCRs: used only

No company makes new VCRs. The last one stopped in 2016. Used and refurbished VCRs and DVD/VCR combos are sold online and in thrift and secondhand stores. If you buy one, buy from a seller who tests it and offers returns, and test it first with a tape you don't care about.

DVD and Blu-ray players: fewer choices

- Basic **DVD players** and standard **Blu-ray players** are still sold by big-box and online stores, usually at modest prices. Every Blu-ray player also plays DVDs.
- Fewer big brands make them. Samsung and LG have stopped making Blu-ray players, and in October 2026 Sony was reported to have stopped selling its last 4K Ultra HD Blu-ray player in Japan. Panasonic still makes 4K players, such as the DP-UB820, though stores' stock and prices vary.
- A **game console with a disc drive** can also play DVDs and Blu-ray, if one is already in the house.

What to look for

Feature	Why it matters
HDMI output	Essential for any new TV. Every Blu-ray player has it.
Plays what you own	DVD only? Any player. Blu-ray? A Blu-ray player. 4K discs? A 4K Ultra HD player.
Simple remote	Big Play, Stop and Eject buttons make life easier.
Streaming apps	Nice to have, but your TV probably already has them.
Region	Buy a U.S. model for U.S. discs (Chapter 18).

TIP

Don't throw away the old player yet

Even if you buy a new DVD or Blu-ray player, keep a working VCR until your family tapes are saved (Part 6). It may be the last one in the family.

WHAT THIS DOES FOR YOU

What this does for you

You'll buy only what you need, know what to expect, and keep the one machine that's hardest to replace.

PART 6

Saving Your Family Videos

Birthdays, weddings and holidays on tape won't last forever, and the machines that play them aren't made any more. Here's how to turn them into digital files your whole family can watch.

CHAPTER 21

Why Save Your Tapes Now

Videotape is magnetic, and it slowly fades and breaks down with age. Many family tapes are now 30 or 40 years old. At the same time, no new VCRs have been made since 2016, and the ones still around are getting older too. You don't have to do it all this week, but it's worth starting.

Getting organized first

1. Gather every tape in one place. Check closets, the basement and relatives' houses.
2. Sort them by **type**, using the table below. Services price and handle each type differently.
3. Label each tape with a number, and start a simple list: number, what's written on the label, and the year if you know it.
4. Put the most precious ones — a wedding, a late parent's voice — at the top of the list.
5. Check each tape for mold or damage before doing anything else (Chapter 19).

Type	What it looks like	Plays in
VHS	The full-size tape, about the size of a paperback	A VHS VCR or DVD/VCR combo
VHS-C	A small tape from a compact camcorder	A VHS VCR, using a VHS-C adapter cassette
8mm, Hi8, Digital8	Small tapes, like an audio cassette	The camcorder that made them, or a service
MiniDV	Very small tapes from 2000s camcorders	A MiniDV camcorder, or a service
Betamax	Like VHS, but a little smaller	A Betamax player, or a service

GOOD TO KNOW

Only the tapes that matter

Store-bought movies on tape aren't usually worth converting. They're often copy-protected (Chapter 14), and the films are easy to find on DVD or streaming. Spend your money on the tapes nobody else has.

WHAT THIS DOES FOR YOU

What this does for you

An hour of sorting turns a box of mystery tapes into a short, clear list — and tells you exactly what a service will charge, or how long the job will take you.

CHAPTER 22

Using a Service to Convert Your Tapes

For most families, a service is the easiest way. You drop off or mail your tapes, and you get back digital files (and the original tapes).

The kinds of service

- **Drop-off at a store.** Walmart and CVS photo counters take tapes for transfer. The work is done by an outside company, Capture (formerly YesVideo), and the tapes are sent away to be copied. Ask at the counter how long it will take.
- **Mail-in kits.** Companies such as Legacybox and Capture send you a box; you fill it and mail it back. Legacybox sells kits by the number of items, so a half-empty kit still costs the full price.
- **Local video shops.** A local transfer business keeps the tapes close to home. Ask friends or your library for a recommendation.

What it costs, as of November 2026

Prices vary widely and change with sales. Some drop-off counters price by each 30 minutes of tape, and mail-in services commonly charge roughly $20 to $40 a tape, more for higher-quality or "upscaled" files. Capture, for example, listed standard-quality transfers at $19.99 a tape in 2026. Check the price on the company's own website or at the counter before you order.

Questions to ask before you send anything

- Do I get my original tapes back? (You should.)
- What do I get: a download, a USB drive, DVDs? A download or USB drive of **MP4** files is the most useful today.
- How long will the download stay available, and is there a monthly fee to keep it online?
- Do you charge for blank or empty tapes, or for tapes longer than two hours?
- Can you handle moldy or broken tapes, and what does it cost?
- Is there tracking for the box both ways?

TIP

Don't send everything at once

Send a small first batch, check the results, then send the rest. Keep your numbered list, and make a phone photo of the tapes before they go.

SCAM ALERT

Deals that look too good

Ads promising to convert "unlimited tapes" for a tiny price, from a company with no address or phone number, are a warning sign. Look the company up with the Better Business Bureau, pay by credit card, never by gift card or wire, and never mail tapes you can't bear to lose to a company you can't find any record of.

WHAT THIS DOES FOR YOU

What this does for you

Someone else does the slow work with professional equipment, and you get files that play on phones, computers and TVs — while your originals come home safe.

CHAPTER 23

Doing It Yourself

If you have a working VCR and some patience, you can save tapes yourself. The one thing to know: it happens in **real time**. A two-hour tape takes two hours to copy.

Try the library first

Many Ohio libraries now have a **Memory Lab** or media transfer station where you can copy tapes yourself, usually free, with the equipment already set up. The Akron-Summit County Public Library, next door to Portage County, has a Media Transfer Station you can book. Some libraries even lend a VCR-and-converter kit to take home. Bring a USB flash drive to save the files, and ask your own library what it offers.

What you need at home

- A working **VCR** (or the camcorder for small tapes) with a yellow-red-white output.
- A **USB video capture device**: a small adapter with yellow-red-white jacks on one end and a USB plug on the other. Well-known examples include the Elgato Video Capture and the ClearClick Video2USB. Availability and prices change, so check current listings.
- A **computer** with enough free space: very roughly 1 to 2 GB for each hour of tape, depending on the settings.
- Or, instead of a computer, a **standalone recorder** that records straight to a USB drive or SD card. These are simpler but give you fewer choices.

The basic steps

1. Connect the VCR's yellow-red-white outputs to the capture device, and plug it into the computer.
2. Install the software that came with the device, or use free software it recommends.
3. Put in a tape, rewind it, and press Record in the software, then Play on the VCR.
4. Let it run to the end. Stay nearby the first time in case the picture needs tracking (Chapter 14).
5. Stop recording, give the file a clear name such as **1989 Christmas at Mom's**, and save it.
6. Copy the file somewhere safe right away (Chapter 24).

HEADS UP

Discs you bought can't be copied this way

Commercial DVDs and Blu-ray discs are copy-protected, and HDMI capture of them is blocked (Chapter 14). This method is for your own home videos.

WHAT THIS DOES FOR YOU

What this does for you

You control every step, it can cost little or nothing, and the tapes never leave your house.

CHAPTER 24

Watching and Sharing the Digital Copies

Once your tapes are files, they're easy to enjoy — and easy to lose if they live in only one place. A little planning keeps them safe for the grandchildren.

Keep more than one copy

- Keep the files on at least **two** devices, such as the computer and a USB hard drive.
- Put a third copy in an online service such as Google Photos, iCloud Photos or OneDrive, so a fire or a failed drive can't take everything.
- Give a USB drive with copies to another family member.

Watching on the TV

- **From a USB drive**: many TVs have a USB port and a media player app that plays MP4 files. On Roku TVs it's the Roku Media Player (the "Ways … Make Life Easier" topic shows how).
- **From your phone**: if the files are in Google Photos or on an iPhone, you can cast or AirPlay them to a TV that supports it.
- **From a DVD**: some services can also make DVDs, which still play in any DVD player.

Sharing with family

Online photo services let you share an album link so relatives can watch from anywhere. Our companion guide on making a photo slideshow can help you mix the videos with your photos.

> **TIP**
>
> **Keep the tapes for now**
>
> Once you've checked that every file plays all the way through and you have copies in two places, you can decide whether to keep the tapes. Many families keep the most precious ones anyway.

WHAT THIS DOES FOR YOU

What this does for you

Your family's history goes from a box in the closet to something everyone can watch on a phone or TV, with copies safe in more than one place.

PART 7

When to Call Bill & Your Cheat-Sheet

An honest word about when a hand is worth it, and a one-page summary to keep near the TV.

CHAPTER 25

When to Call Bill

Most of what's in this guide you can do yourself, at your own pace. But part of being helpful is being honest about when a hand saves you time and worry. Here's my straight advice, with no pressure.

Times it's well worth a call

- **The TV is on the wall** and the jacks are hard to reach or see.
- **You're not sure what to buy** — a converter box, a cable, a new player — and you'd rather get it right the first time.
- **A combo player, a soundbar and a cable box** all need to work together, with one remote if possible.
- **The picture still looks wrong** after working through Chapters 13 to 16.
- **Saving family tapes**: setting up a capture device and computer, checking a service's files, or making sure the copies are backed up in two places.
- **Helping a parent** who wants to keep watching their tapes and discs on a new TV, with simple written instructions by the set.

What I don't do

I'm a technology helper, not a repair shop. I can't fix the mechanical insides of a VCR or a disc player, and I don't clean moldy tapes — that's a job for a professional tape service. I'll tell you honestly if a player is worth keeping.

What working with me is like

I work at your pace, explain what I'm doing in plain words, and never talk down to anyone. I'll tell you honestly when something isn't worth your money. I've been doing this kind of work for more than 30 years, and I serve Portage County, Ohio, in person, and folks farther away by remote help.

FROM BILL

How to reach me

Call **(330) 200-8042** or book a time at **billshometech.com/book**. My help is **$49 remote · $99 in your home**. This guide is yours to keep for free; if you'd like a hand, I'm only a phone call away.

GOOD TO KNOW

You may meet Sophie first

When you call or visit billshometech.com, you might be greeted by **Sophie**, my AI receptionist. She can answer quick questions and help you book a time. A real person — me — does the actual help.

Thank you for taking the time with this guide. Enjoy your movies — and those family tapes.

— Bill

CHAPTER 26

Your DVD, Blu-ray & VCR Cheat-Sheet

Keep just this page near the TV. The whole guide, boiled down.

The essentials

Situation	What to do
Player has HDMI	One HDMI cable to any HDMI port on the TV. Best picture.
TV has yellow-red-white	Color to color. Choose the AV input.
TV has one small AV IN jack	Use the TV maker's AV breakout adapter.
TV has only HDMI	A powered AV-to-HDMI converter box. Not a plain cable.
Plain HDMI-to-RCA cable	Can't work for a VCR. Return it.
Channel 3 / 4 by coax	Often doesn't work on new TVs. Use yellow-red-white instead.
No Signal	Player on? Right input? Plugs pushed in? Converter powered?
Black and white	Yellow plug in the wrong jack, converter on PAL, or an overseas tape.
Rolling or lines	Use the VCR's tracking buttons.
Stretched picture	Player screen format 16:9; TV picture size 4:3 or Original for tapes.
No sound	Red and white plugged in? Mute? Try PCM for soundbars.
Disc won't play	Clean it; check the region (U.S.: DVD 1, Blu-ray A); right player type?
Moldy tape	Don't play it. Bag it and ask a professional service.
Saving tapes	Service, library Memory Lab, or a USB capture device. Keep two copies.

Write it down once

Keep handy	
TV brand & model	_____
Player brand & model	_____
Player's HDMI or AV input on the TV	_____
Soundbar on HDMI port	_____
Converter box (brand) and its power	_____
Tape list kept at	_____
Service used & date sent	_____
Where the digital copies are kept	_____

When something's wrong, in order

1. Is the player on, and is there a disc or tape playing?
2. Press **Input** or **Source** and pick the right input.
3. Push every plug in firmly, at both ends.
4. Converter box? Check its power light.
5. Turn everything off, unplug for one minute, then TV on first, player second.
6. Look up the symptom in Chapters 13 to 16.
7. Still stuck? Call Bill at (330) 200-8042.