

La prise Péritel

Péritel (l'[abréviation](#) de *péritélévision*) est un [connecteur](#) audio et vidéo utilisé en Europe qui permet une connexion rapide et fiable des signaux audio et vidéo [analogiques](#) au moyen d'un connecteur à 21 contacts. Il est aussi connu sous le [sigle](#) **SCART** (qui signifie *Syndicat des constructeurs d'appareils radiorécepteurs et téléviseurs*).

Historique

Elle a été définie et annoncée en [1978](#), et rendue alors obligatoire sur tous les [téléviseurs](#) commercialisés en France à partir de [1981](#). On n'en trouve jamais ou presque jamais en [Amérique](#). Plutôt que l'appellation **Péritel** (utilisée essentiellement en [France](#)), certains pays utilisent le terme **SCART**.

La prise Péritel est définie par la norme européenne EN 50049-1 publiée par le [CENELEC](#).

Description

Les signaux pouvant transiter par ce connecteur sont les suivants :

- Entrée [vidéo composite](#)
- Sortie vidéo composite
- Entrée [vidéo à composantes séparées](#) (Y/C ou [S-Vidéo](#)) (suivant modèles)
- Sortie vidéo à composantes séparées (Y/C ou S-Vidéo) (suivant modèles)
- Entrée [RVB](#) (suivant les appareils, aussi appelés [RGB](#))
- Sortie RVB (suivant modèles)
- Entrée [YUV](#)
- Sortie YUV
- Entrée son (stéréo sur certains modèles)
- Sortie son (stéréo sur certains modèles)
- Signaux de télécommande (sur certains modèles, selon compatibilité)
- Commutation lente (vidéo + son)
- Commutation rapide (vidéo + RVB, permet l'incrustation vidéo, selon les appareils)

Selon le type des appareils, certaines possibilités peuvent ne pas être disponibles. Par exemple :

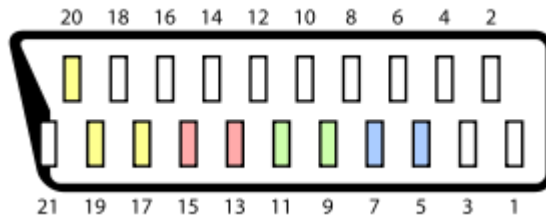
- un [magnétoscope](#) n'a ni entrée, ni sortie RVB (sauf de très rares exceptions)
- un téléviseur dispose rarement de sortie RVB
- un récepteur satellite numérique a une sortie RVB, mais un récepteur analogique n'en a pas.

Par ailleurs, certains de ces signaux transitent par les mêmes contacts, on ne peut donc pas en disposer en même temps :

- l'entrée et la sortie RVB sont communes.
- Le signal de couleur (C) des entrées et sorties composites (Y-C) est également partagé avec les signaux RVB (c'est une extension postérieure à la norme d'origine).
- Le signal YUV (extension postérieure à la norme d'origine) est généralement transmis sur les broches dévolues au signal RVB mais certains appareils font passer le signal Y sur la broche d'entrée ou sortie vidéo composite.

Enfin, les signaux de télécommande ne sont pas normalisés (bien qu'il s'agisse en principe de signaux à la norme I²C). Les commandes utilisées dépendent donc du constructeur (tout comme avec les télécommandes [infrarouges](#)).

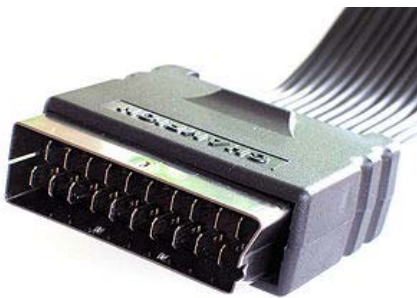
SCART



Pin out

Female connector seen from the front

- Pin 1 Audio output (right)
 - Pin 2 Audio input (right)
 - Pin 3 Audio output (left/mono)
 - Pin 4 Audio ground
 - Pin 5 RGB Blue ground (pin 7 ground)
 - Pin 6 Audio input (left/mono)
 - Pin 7 RGB Blue up
S-Video C down¹⁾ Component Pb up²⁾ Pin 8 Status & Aspect Ratio up³⁾ [0-0.4V → off, 5-8V → 16:9, 9.5-12V → on/4:3]
 - Pin 9 RGB Green ground (pin 11 ground) Pin 10 Clock / Data 2⁴⁾ Control bus (AV.link) Pin 11 RGB Green up Component Y up²⁾
 - Pin 12 Reserved / Data 1⁴⁾ Pin 13 RGB Red ground (pin 15 ground)
 - Pin 14 pin 12 & pin 16 ground Pin 15 RGB Red up S-Video C up Component Pr up²⁾ Pin 16 Blanking signal up RGB-selection voltage up [0-0.4V → composite, 1-3V → RGB]
 - Pin 17 Composite video output ground (pin 19 ground)
 - Pin 18 Composite video input ground (pin 20 ground)
 - Pin 19 Composite video output S-Video Y output Pin 20 Composite video input S-Video Y input Pin 21 pin 8 & pin 10 ground ¹⁾ rarely supported.
- ²⁾ non-standard extension.
³⁾ from STB to VCR when used for unattended recording
⁴⁾ protocol not standardised, e. g. [2B](#).
⁵⁾ bi-directional .
- *output/input* denotes symmetrical links
up/down denotes links to/from the TV set



A male SCART connector (21-pin)

Type and connector Production history Designer Designed 1970s
 Specifications Audio signal Bi-directional Stereo Video signal (bi-directional), (uni-directional) or [S-Video](#) (sometimes bi-directional)
 Data signal [2B](#) and widescreen switching Pins 21 (21 wires:RGB/10 wires:CVBS)
 10 (10 wires:CVBS)

Origins

The SCART connector first appeared on television sets in 1977. It became compulsory on all new television sets sold in France starting from January 1980. ^{[2][3]}

Before SCART came, consumer TV sets did not offer a standardized way of inputting signals other than antenna ones, and even antenna connectors differed between countries. Assuming other connectors even existed, devices made by different companies could have different and incompatible standards. For example, a domestic could output a [video](#) signal through a German-originated [-style connector](#), an American-originated [connector](#), an SO259 connector, or a [connector](#).

Usage

The SCART system was intended to simplify connecting audio-video equipment (including , , players and [consoles](#)). To achieve this it gathered all of the analogue signal connections into a single cable with a unique connector that made incorrect connections nearly impossible.

The signals carried by SCART include both and (with composite synchronisation) , input/output and digital signalling. The standard was extended at the end of the 1980s to support the new [-Video](#) signals. In addition, a TV can be awakened from standby mode or switched to video mode through a SCART connector.

[] Daisy Chaining



SCART sockets, common side (female connectors)

SCART is bi-directional regarding standard composite video and analog audio. A television set will typically send the antenna audio and video signals to the SCART sockets all the time and watch for returned signals, to display and reproduce them instead. This allows "transparent" set-top boxes, without any tuner, which just "hook" and pre-process the television signals. This feature is used for analog Pay TV like [Plus](#) and was in the past used for decoding .

VCR will typically have two SCART sockets, one connecting to the television set ("up", "primary" or "1"), and another one for the set-top box or other devices ("down", "secondary" or "2"). When idle or powered off, the VCR will forward the signals from the television set to the set-top decoder and send the processed result back to the television set. When a scrambled show is recorded, the VCR will drive the set-top box from its own tuner and send the unscrambled signals to the television set for viewing or simple recording control purposes. Alternatively, the VCR could use the signals from the television set, in which case it would be inadvisable to change channels on the television set during the recording.

The "down" socket can also be used to connect other devices, such as DVD players or game consoles. As long as all devices have at least one "up" and "down" socket, this allows for connecting a virtually unlimited number of devices to a single SCART socket on the TV set. While

Audio and Video signals can travel both "up" to the TV set and "down" to devices farther away from the TV, this is not true for RGB (and non-standard YP_RP_B) signals, which can only travel towards the TV set.

Direct Connections

As the pins for Audio and (Composite) Video use the same pins on "up" and "down" connectors (and require a crosslinked cable), it is also possible to connect two devices directly to each other without paying attention to the type of the socket.

However, this no longer works when S-Video signals are used. As straight links (RGB Red and Blue up) were re-purposed to carry chrominance information, the S-Video pinouts are different for "up" and "down" SCART connectors. Further, they are often not fully implemented.

RGB overlays (fast switching)

SCART also enables a device to command the television set to very quickly switch between signals, in order to create overlays in the image. In order to implement or , a SCART set-top box does not have to process and send back a complete new video signal, which would require full decoding and re-encoding of the color information, a signal-degrading and costly process, especially given the presence of different standards in Europe. The box can instead ask the television set to stop displaying the normal signal and display a signal it generates internally for selected image areas, with -level granularity. This can also be driven by the use of a "transparent" color in a teletext page.

Status and Aspect Ratio (slow switching)

SCART allows a connected device to bring it in and out of *standby* mode or to switch it to the AV channel. A VCR or other playback device will optimally power on when a cassette is inserted, power on the television set (or switch it to video mode) and then start playing immediately if the cassette's write protection tab is absent. When turned off, the VCR will ask the television set to power off as well, which the set will do if it had been powered on by the VCR's request and if it remained in video mode all along. Only some TV sets will do this—most only implement automatic switching to and from the SCART input.

The same signal can be used by a [receiver](#) or [top box](#) to signal a VCR that it is supposed to start and stop recording ("pin 8 recording"). This configuration usually requires that the VCR be farther from the TV set than the source, so the signal usually travels "down".

SCART also supports automatic switching. This is an extension of the functionality of a pin which previously only indicated to the TV set that an external signal should be displayed. Ideally, a widescreen source should offer three operating modes in order to deal with widescreen signals:

- either assume that the television set is widescreen or capable of otherwise dealing with widescreen pictures,
- or assume that it is standard and not capable of dealing with widescreen pictures, in which case one should allow the user the option to:
 - either display the full image in format
 - or display the center of the image, with sides truncated, as if into.

In the first case, the widescreen pin allows to indicate the current signal format, which allows widescreen sets to adjust the image width, and widescreen-capable standard sets to compress the image vertically. In the second case, the widescreen SCART signal is never active and the signal source performs the adaptations itself so that the image has always a standard format as a result. In practice, some sources will assume that the television set is always capable of widescreen functionality and hence never perform the adaptations. Some source will not even issue the

widescreen signal or maintain it at the same level all the time. Other sources might offer the option of truncating the sides, but not of letterboxing, which requires significantly more processing. Notably, the circuitry of the early widescreen standard decoders (eg. the *Visiopass*) could not letterbox. The limitations apply mostly to satellite television receivers, while DVD players can always at least letterbox and often *zoom*.

Data bus

The use of the data pins was not standardised in the original SCART specification, resulting in the use of several different protocols, both proprietary protocols and semi-proprietary protocols based on standards such as [2B](#).

Some of the most creative usages appeared in analog satellite receivers. The function of decoding hybrid, time-compressed analog-digital transmissions into RGB and analog audio was akin to making a digital receiver out of an analog one. The D²B pins (10 and 12) were used for communicating with [dish](#) positioners and for driving magnetic , before these became incorporated into . The daisy-chaining features were used to connect both a Pay TV decoder and a dish positioner/polarizer to a single *Decoder* socket on the receiver.^[4]

EN 50157-1 introduced [.link](#) as a standardised protocol to carry advanced control information between devices. It is a single-wire serial data and allows carrying remote control information and to negotiate analogue signal types (e.g. RGB). AV.link is also known as nexTViewLink or under different trade names such as SmartLink, Q-Link, EasyLink, etc. It appears as the Consumer Electronics Control channel in .

Cordset Types

The original SCART specification provided for different cable (cordset) types denoted by a key colour. However, colour coding is rarely used in practice and cables often use different, non-standard configurations.

Type	Ring color	Pins	Description	Symmetric	
U	Universal	black	1-20, 21	Fully wired cable.	no
V	Video only	white	17-20, 21	Only composite wires.	yes
C	Combined	grey	1-4, 6, 17-20, 21	Composite Video and Audio	yes
A	Audio only	yellow	1-4, 6, 21	Audio	yes
B	Bus	green	10, 12, 21	Only data connections	¹

¹ depends on protocol used.