

# Selecting the correct interconnect cables

*Precision Interface Technology*® interconnect cables have been specifically designed for precision transmission of audio as well as digital and certain ultrasonic signals. P.I.T. cables guarantee ultimate performance and bring *clear* improvements.

The Swiss-made *Precision Interface Technology*® (in short P.I.T.) interconnect cables provide singular performance. As the various cables use identical connectors, different P.I.T. cables types look identical from the outside. However, the construction and connection between the various types differ. FM ACOUSTICS supplies optimized cables for practically any combination of audio components.

Only through careful analyses of system characteristics and interfacing requirements can an audio system achieve optimal performance. This fact is frequently neglected. Input and output circuits of electronics react differently, depending on the characteristics of the cable, on the type of shielding methods used, how the cable is terminated, how the individual wires are connected internally, how the various conductors are connected to the various parts of the electronics, etc.

In a given system one connection will give optimal results - but this connection may not give optimal results in other systems. Therefore, different versions of P.I.T. cables are available so optimal performance in any system is achieved.

A multitude of cable versions are necessary to guarantee optimal interfacing of the various types of input and output circuits of audio electronics. It is of utmost importance that the correct interconnect cables are selected.

This information is supplied as a guideline as not all manufacturers of electronics and producers of cables adhere to connection and earthing standards. While the following interconnect versions should cover most applications, other versions may be required in certain special situations. FM ACOUSTICS has an application laboratory. If there is a specific requirement, please ask your local agent who will discuss the possibilities with FM ACOUSTICS.

Each cable version is available in the standard lengths as indicated on page 2. Any other length is made on a special order basis.

## FEATURES

P.I.T. cables exclusively use FORCESHIELD, a proprietary dual shielding technology that:

- achieves signal-to-noise ratio and interference rejection of up to **150 dB** (50 to 80 dB higher than the other "quality" interconnects)
- features zero inductance
- unique triple shielding
- eliminates interference by **100%** proper conduction to ground
- provides unparalleled shield coverage of **99.9%** and this even when the cable is bent (where other cables loose shielding efficiency)
- uses unique "floating shield" technology

One of the unique features of P.I.T. interconnect cables is that they can guarantee star grounding - provided that the equipment is connected to star grounding standards and all connections are made with *Precision Interface Technology*® interconnects.

All P.I.T. cables are coded with a "S" clip on one end. This "S" indicates the "Source", the component from where the signal is sent. Make sure that the cable is installed with the "S" at the **Source** side! This is **not** - as often claimed - due to any directionality of the cables (audio frequencies are obviously non-directional: AC = alternating current...) but it is due to grounding arrangements and requirements.

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### Attention:

Fake copies of P.I.T. cables have been offered in certain countries. Hints: they often lack the "S" code and identification number (a number tag around the cable near one of the connectors starting with "CA"). Also every original *Precision Interface Technology*® cable carries an individual serial number.

Do not accept the cable if it does not come in the blue velvet pouch printed „Precision Interface Technology“ in dark gold lettering. Other details can only be analyzed by official agents. Since 2007 all cables have been specially coded - to help distinguish the originals from fakes. If in doubt, contact the official representative who will assist you in verification. The performance difference to the fake cables is large; (for instance the copyists fail to understand why 3 different „balanced“ line level cables are required and that only one type can be correct for a given interface - all three versions look the same from the outside).

Installing fake cables one may end up with non-optimal system interfacing and - at worst - even damaged components. Fakes are not worth the initial „savings“.

## CONNECTORS

The connectors used in P.I.T. cables are professional "XLR" 3-pin with true balanced as well as pseudo-balanced equipment. "Phono" connectors (also called "RCA" or "Cinch" connectors) are used in single-ended domestic equipment. Large quality differences between the various makes of XLR and RCA/Phono connectors and receptables exist. P.I.T. precision connectors accommodate the tolerances of the various receptables and avoid pitfalls common to other phono connectors. They guarantee optimal connection with practically all types of phono receptables.

### *Precision Interface Technology*® interconnect cables

Below a list of the standard cables in the *Precision Interface Technology*® range. Should you have difficulty determining the correct cable in the following list, contact your distributor for assistance. Please describe in detail all of the components in your system and also explain which units are connected to mains earth as well as which have a connection between electrical ground and chassis. If schematics or other information describing the internal connection of the equipment used is available, please include this information. This often helps to determine the correct type of cable.

Note: The last digit in the cable No. indicates the length of the P.I.T. cable as follows:

Cable Code	Meter	feet
CA-25..1	= 0.6 ~	2
CA-25..2	= 1.2 ~	4
CA-25..3	= 3 ~	10
CA-25..4	= 5 ~	16

Any other length is available on special order. These cables are made in matched pairs.

Code: "F" = Female connector  
"M" = Male connector

#### CA 25011 - CA 25014



**Phono M**

**Phono M**

Single-Ended Phono - Phono cable for line level signals. The P.I.T. Phono connectors will work perfectly with all Phono receptacles of decent quality. They automatically compensate for tolerances found in typical Phono/RCA receptables.

#### CA 25031 - CA 25034



**XLR F**

**Phono M**

Special interconnect cable for some balanced XLR outputs to unbalanced inputs using Phono connectors (e.g., from a pseudo-balanced line stage to a power amplifier having RCA/Phono input connectors).

**Note:** For equipment that has truly balanced outputs (FM ACOUSTICS), type CA 2504X (see below) is the correct choice.

#### CA 25021 - CA 25024



**Phono M**

**XLR M**

Phono - XLR cable for connection of **un**-balanced electronics using Phono connectors (such as e.g. preamplifiers) with equipment having balanced XLR inputs (e.g. balanced line stages & power amplifiers). This cable type can also be used with units that have XLR inputs that are pseudo-balanced or unbalanced.

#### CA 25041 - CA 25044



**XLR F**

**Phono M**

XLR F - Phono M cable for interconnecting equipment having true balanced outputs with equipment having unbalanced inputs. The unit connected to the XLR F side must be able to withstand a continuous short circuit.

For instance, the CA -2504X cable can be used between an FM 266-MKIIR Balanced Line Stage and an unbalanced power amplifier having Phono/RCA receptables.

When Pin 2 is shorted to Pin 1 (=Ground) absolutely no change in level or distortion nor any other negative influence should be on the signal appearing on Pin 3. This is a sign of true balancing.

**Attention:** with certain equipment short-circuiting either Pin 2 or Pin 3 to Pin 1 (ground) can result in damage! Before connecting this cable verify that your balanced unit can indeed handle such a connection without being damaged and make sure that it will remain absolutely stable! If unsure, use CA 2503. type cable.

Damages due to connecting the wrong cable type are not covered by any warranty.

### CA 25071 - CA 25072



**Phono M**

**Stereo Jack**

These cables are to connect high quality headphones and preamplifiers.

### CA 25081 - CA 25084



**XLR F**

**XLR M**

XLR F - XLR M **unbalanced** line level cable. For **unbalanced** connection of equipment having XLR connectors. This cable is also used for units with "balanced" outputs that cannot handle a short circuit.

### CA 25091 - CA 25094



**XLR F**

**XLR M**

XLR F - XLR M balanced cable. This cable is for interconnection of all equipment with balanced inputs and outputs, provided that Pin 1 of the unit on the source side (S) is connected to mains earth (the 3rd Pin on the mains connector) either directly or through the unit's chassis. Not for use with microphones, as the microphone would not be shielded.

### CA 25101 - CA 25104



**XLR F**

**XLR M**

XLR F - XLR M balanced cable for use in balanced systems and equipment where only one of the units has connection between earth and ground. These cables are for use when connecting e.g. balanced preamplifier such as the FM 266-MKIIR to an FM ACOUSTICS power amplifier.

It is also for applications in which the balanced preamplifier and the balanced amplifier are not connected to mains earth.

### CA 25111 - CA 25114



**XLR F**

**XLR M**

XLR F - XLR M cable for interconnecting balanced outputs to equipment having unbalanced XLR type inputs, a relatively rare situation.

### CA 25121 - CA 25124



**XLR F**

**XLR M**

Identical to CA -2509. series for use where an inversion of phase is required: Pin 2 of source side is connected to Pin 3 of load side - and vice versa.

### CA 25131 - CA 25134



**XLR F**

**XLR M**

It is also for applications in which the balanced preamplifier and the balanced amplifier are not connected to mains earth.

Other types of cables and connectors are available on special order. Ask your distributor.



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