

# Selecting the correct interconnect cables

The Swiss-made *Precision Interface Technology*® (P.I.T. for short) interconnect cables provide singular performance.

As the various versions use identical connectors, different P.I.T. cables look identical from the outside. The interior connection and construction between the various types, however differs.

A multitude of cable versions is necessary to guarantee perfect interconnection of the various types of input and output circuits of audio electronics. To guarantee ultimate system performance it is of utmost importance that the **correct** interconnect cables are selected. FM ACOUSTICS supplies optimized cables for any combination of audio components. P.I.T. cables guarantee ultimate performance and bring clearly noticeable improvements.

Only through careful analyses of system characteristics and requirements can an audio system achieve ultimate performance. This fact is frequently neglected. Input and output circuits of electronics react differently, depending not only on the characteristics of the cable, but also on the type of shielding method 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 *Precision Interface Technology*® cables for various applications are available. They provide ultimate performance in any system.

P.I.T. interconnect cables have been specifically designed for precision transmission of audio, certain digital and ultrasonic signals.

The following information is supplied as a guideline as by far 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 a special cable applications laboratory. If you have a specific requirement or question, please contact FM ACOUSTICS.

Beside a few exceptions, 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 make exclusive use of FORCESHIELD; a proprietary new dual shielding technology that:

- achieves a signal-to-noise ratio and interference rejection of **132 dB** (which is 30 to 50 dB higher than the other quality interconnects)
- thanks to the dual bifilar shield guarantees zero inductance
- 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 FM ACOUSTICS "floating shield" technology

One of the truly 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 (often this is the side of the equipment working at lower audio voltage, e.g., the preamplifier in a preamplifier-power amplifier connection). Make sure that the cable is installed with the "S" at the correct side (the **Source** side)! There can be a noticeable performance difference.

This is **not** - as often claimed - due to any directionality of the cables. (Audio frequencies are non-directional: AC = alternating current) but it is due to grounding arrangements and requirements.

## CONNECTORS

The connectors used in P.I.T. cables have been optimized in several important respects. Professional "XLR" 3-pin connectors are used with true balanced and pseudo-balanced equipment. "Phono" connectors (also called "RCA" or "Cinch" connectors) are used in single-ended domestic and in some semi-professional equipment.

Considerable quality differences between the various makes of XLR and RCA/Phono connectors exist. P.I.T. precision connectors accommodate the tolerances of the various receptacles and avoid the pitfalls common to other Phono connectors. They guarantee perfect connection with 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 finding the correct cable in the following list, contact your distributor or FM ACOUSTICS 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 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. of P.I.T. indicates the **length** of the 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**

Phono - Phono cable for low and line levels. The P.I.T. Phono connectors will work perfectly with all Phono receptacles of decent quality. They automatically compensate for tolerances found in Phono/RCA receptables.

#### CA 25021 - CA 25024



**Phono M - XLR M**

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

#### CA 25031 - CA 25034



**XLR F - Phono M**

Special interconnect cable for pseudo-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 and can handle the "pro float test", type CA 2504X is recommended (see below).

#### CA 25041 - CA 25044



**XLR F - Phono M**

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

continuous short circuit (when Pin 2 is shorted to Pin 1 (=Ground) there must be absolutely no change in level, distortion or any other change of the signal on Pin 3).

The CA -2504X cable is the one to be used between e.g. an FM 222 Balanced Phono Linearizer/Preamplifier and an unbalanced preamplifier having Phono/RCA receptables.

**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! 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. Pin 2 is open on the female XLR.

This cable is also used for units with balanced output 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 with microphones and in balanced systems and equipment where only one of the units has connection between earth and ground. These cables are e.g. for use when connecting e.g. an FM 266 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 (when both are groundlifted).

### 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.

Other types of cables and connectors are available on special order. Contact the cable engineering department with your requirement.



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