



The Fibreoptic Industry Association

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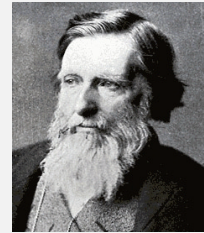
### The Law of Business

John Ruskin 1819-1900

“There is hardly anything in the world that someone cannot make a little worse and sell a little cheaper, and the people who consider price alone are that person’s lawful prey.

It is unwise to pay too much, but it is also unwise to pay too little. When you pay too much, you lose a little money, that is all. When you pay too little, you sometimes lose everything because the thing you bought is incapable of doing the thing you bought it to do.

The common law of business balance prohibits paying a little and getting a lot .... it can’t be done. If you deal with the lowest bidder it is well to add something for the risk you run. And if you do that you will have enough to pay for something better.”



## THE MK. II FIA APPROVED INSTALLER SCHEME

### Supplier selection

How do you differentiate between suppliers of services? How do you know, in advance, whether one supplier is going to provide you with a better service than another? Obviously one of the best ways is to base your judgement on experience - either your own or that of someone you trust. When it comes to the installation of cabling infrastructures that is not always possible. Unless you have an incumbent “small works” installer, you may only require the services of an installer once every three to five years. Three years is a long time in the installation business - staff may have changed, standards may have been revised - and past experience cannot always be relied upon. Even if you do have an incumbent installer, they may not be capable of taking on complete installations or refurbishment projects so you have to look elsewhere.

The options for the selection of installers for larger telecommunications cabling infrastructures are limited. If you want a “manufacturer’s warranty” for the finished job, the cabling system supplier may require that you select one of their “approved” installers. These days a “supplier approval” is awarded based upon commercial performance (i.e. the volume of business delivered to the supplier by that installer) mixed with a variable requirement for product training. The examination of “reference” sites is frequently waived due to the contractual difficulties it creates. Nevertheless, no supplier wants to work with installers that cause problems so this system is, to some extent, self-regulating. But are problems always a bad thing? It rather depends who is on the receiving end of the problem - installers who cause “problems” by standing up for their customers in the face of poor supplier service may actually be just what the client actually needs.

An alternative is to consider selection from a more independent source such as an “approved installer” list from an industry association. The Fibreoptic Industry Association (FIA) has operated an Approved Installer Scheme for many years based upon the application of the relevant installation standard for fibre optic cabling (which at the time was BS 7718) and systems assurance in accordance with ISO 9000. The competence of personnel was also addressed by reference to City & Guilds 3466 qualification.

A number of substantive changes to these foundations have automatically forced a change to the scheme. Specifically, the withdrawal of BS 7718 in September 2003, the subsequent publication of BS 6701:2004 and its mandatory link to European standards (further reinforced this year) and the migration to City and Guilds 3666 qualifications all demanded a completely new “installer approval” approach. Two fundamental questions were posed to the FIA Council at the beginning of 2005 - “should be the FIA Approved Installer Scheme be replaced at all?” and if so “what with?”



### The need for independent Installer Approval

Before answering these questions it is necessary to review the commercial changes that have occurred in the market. These have created something of a paradox for high performance balanced optical fibre cabling installations. On one hand, the business has become increasingly competitive and commoditisation has led to the envelopment of telecommunication cabling within general mechanical and electrical (M&E) contracts subsequently managed by non-specialists more used to plumbing, gas-fitting and electrical installations. On the other hand, the technical challenges faced by installers have not reduced - in fact some would say they have increased.

Faced with these market conditions, installers need to complete projects on time and cannot afford to be delayed by arguments over technical or contractual performance because they need to maximise the profit margins available. As always, clients demand operational, maintainable and repairable installations that are completed on time, with few contract variations and no need to litigate. Therefore, somewhat surprisingly, the objectives of the client are not in competition with the needs of the installer. The words of John Ruskin in his "Law of Business" are as pertinent today as when they were first penned.

It is the role of an Approved Installer Scheme to produce a match between the two parties based upon their stated needs.

**The FIA Approved Installer Scheme - founded on risk aversion**

The FIA decided that their Mk.II Approved Installer Scheme, launched late in 2006, should be based on the concept of "risk aversion". Some are surprised by this analysis - suggesting that "good" installers should undertake "high quality" installations - unfortunately "high quality" is a most elusive characteristic and is difficult to define - and if we cannot define "high quality" then we should not rely on it too much. Others have considered that "competence" should be the benchmark. Again, this is not so easily addressed - primarily because competence is a personal characteristic. There are plenty of competent people who can do their jobs very well indeed but they work for organisations that use their skills inappropriately or incorrectly and render them incompetent as a result. So the employment of competent people may not be the key criterion we might have initially imagined.

Risk aversion is good for all parts of the supply chain. "Risk averse" installers will ask the pertinent questions of their suppliers in order to use their products correctly and from the supplier's perspective, installers that minimise risk will be more soundly-based from a commercial viewpoint. These same installers will employ competent persons in a professional manner - emphasising rather than undermining their competence. Installers committed to the "reduction of risk" will be very careful not to over-commit and will have a good understanding of the requirements of the various standards they are asked to work to - thereby reducing the risk not only for themselves but for their clients.

The FIA are pleased to offer Approved Installer status to organisations who are committed to being "risk averse". Do such paragons of virtue exist? Well yes they do - there are actually quite a few of them. They are frequently not the biggest players and they are not also always the lowest bidders but because they are averse to, and seek to manage, risk they may be the lowest cost option at the end of the day. The new FIA Approved Installers Scheme is targeted to provide "risk averse" installers with the recognition due to them.

**Approval, a certificate, a badge and more ..... so much more**

It is a sad fact that most approved installer schemes are based upon strict acceptance criteria but with minimal, if any, audit regimes. Indeed, the Mk. I FIA AIS was founded in this tradition. In comparison, to operate a "risk averse" installation business an installer needs to do more than meet a set of externally-defined criteria and, equally, the approval agency needs to provide considerably more assistance on a day-to-day basis.



Approved Installers are obviously allowed to advertise their approved status. However, for the Mk. II AIS the FIA agreed that there was much more to be done than simply awarding approval, giving out a certificate and the all-important logo, and then leaving installers and clients to their own devices.

The FIA do not simply wish to approve companies that can already demonstrate risk aversion, we want to encourage new organisations to take up the mantle. To do so installers require a substantial input of information and management tools in a number of areas including design and planning, field supervision/management and overall quality assurance.


The responsibility for the accuracy and provision of these tools lies with the FIA Approved Installer Directorate.

**The Approved Installer Database**

Any worthwhile approval scheme has to emphasise quality assurance and installation practice in accordance with recognised standards.

The publication of BS 6701:2004 "locked-in" other primary installation standards including BS 7671, BS EN 60825 and the BS EN 50174 series of standards. This provided the FIA with a significant opportunity - embedding risk-managed and best installation practices into a single quality assurance tool - the FIA Approved Installer Database (AID).

The AID takes the form of an Access database that is supplied to each FIA Approved Installer that contains all the risk elements that the installer may encounter. There are four logical areas of risk - "design/specification", "construction", "installation" and "customer" - and each area comprises a number of sub-groups leading to a total of almost 300 individual elements. The Approved Installer records (as a "YES", a "NO" or "N/A") those risk assessments that apply to each installation at one or more stages of an installation.

|   |  |
|---|--|
| Welcome to the<br><b>APPROVED INSTALLER DATABASE</b>                                  |  |
|  |  |
| COMPANY   | <input type="text" value="ACME INSTALLATION COMPANY"/> |
| FIA MEMBERSHIP No.  | <input type="text" value="765"/>                       |
| APPROVED INSTALLER No.  | <input type="text" value="AI0001"/>                    |
| VIEW EXISTING RECORD  |  |
| Select PROJECT  | <input type="text"/>                                   |
| Select RECORD   | <input type="text"/>                                   |
| <input type="button" value="VIEW ALL PROJECTS/RECORDS"/>                              |  |
| CREATE NEW DATA   |  |
| <input type="button" value="ADD NEW PROJECT"/>  |  |
| <input type="button" value="ADD NEW RECORD"/>   |  |
| <input type="button" value="EXIT"/>   |  |

## RISK ASSESSMENT MAIN MENU

| PROJECT NAME   | RECORD ID | START DATE | END DATE   |
|----------------|-----------|------------|------------|
| UNIVERSAL DATA | 1811      | 11/11/2006 | 25/11/2006 |

| DESIGN/SPECIFICATION | CONSTRUCTION   | INSTALLATION   | CUSTOMER                            |
|----------------------|--|--|-------------------------------------|
| D1: QA Overview      | APPROVED INSTALLER No. AI0001  |  |                                     |
| D2: Safety           | PROJECT NAME/ID UNIVERSAL DATA   |  |                                     |
| D3: Environment      | <b>DESIGN/SPECIFICATION CHECKLIST</b>  |  |                                     |
| D4: Documentation    | <b>QA Overview</b>   |  |                                     |
| D5: Survey           | RECORD ID 1811   | Click on highlighted index letters for typical table of responsibilities |                                     |
| D6: Customer service |  | Yes  | No NA                               |
|                      | Is there an Installation Specification (InSpec)?                               | <b>A</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | InSpec addresses other necessary building services?                            | <b>B</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | InSpec addresses alarms and associated controls?                               | <b>C</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | InSpec addresses atmospheric control systems?                                  | <b>D</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | InSpec addresses other relevant infrastructures?                               | <b>E</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | InSpec details applicable legislation/regulations?                             | <b>F</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | InSpec details applicable site contacts?                                       | <b>G</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | InSpec contains Technical Specification? <input type="text" value="TechSpec"/> | <b>H</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | InSpec contains Scope of Work? <input type="text" value="Scope of Work"/>      | <b>I</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | InSpec agreed with customer?   | <b>J</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | Is change control in place for InSpec?   | <b>K</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | Quality Plan agreed with customer? <input type="text" value="Quality Plan"/>   | <b>L</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | Is change control in place for Quality Plan?                                   | <b>M</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |
|                      | Installed system power requirements advised to customer?                       | <b>N</b> <input type="checkbox"/>  | <input checked="" type="checkbox"/> |
|                      | Is a "paper trail" audit system defined and in place?                          | <b>O</b> <input checked="" type="checkbox"/>                             | <input type="checkbox"/>            |

## Site Operation of the scheme

Presented as a series of check sheets each sheet completed or partially completed will represent a snapshot of those activities being performed at the time the check was carried out. As sheets are submitted and the information subsequently loaded into the FIA Approved Installer Database (AID) a much wider picture of installer performance will accrue, possibly spread over a number of projects. Completed in this way the scheme does not place an onerous burden upon the installer.

Upon completion of each project, the Approved Installer is required to submit the record-keeping i.e. the contents of the AID for that project via e-mail to the FIA.

The FIA will undertake an audit of one or more of the installations recorded - against the contents of the database. Equally importantly, the FIA will use the statistical trends contained in the total dataset provided by all Approved Installers to address specific shortfalls in risk management.

## On-line access to best "risk-managed" practice

On its own the AID would simply represent an added load for the installer so the FIA has provided an unparalleled degree of local and on-line assistance, hyperlinked from each risk element that explains in detail the relevant requirements of the current and future standards. In essence, this package brings the Approved Installer and the FIA into a partnership in support of risk-managed installations. This represents the most comprehensive support package provided with any approval system.

The format and the level of detail that is provided by the support package is not just useful to the installer. It can be used in conversations with clients and consultants to assist in the development of their requirements. It can also be used as a tool to promote the concept of "risk averse installation" and, of course, the Approved Installer to all those in the supply chain. Indeed, the presentations of the AIS already undertaken indicate that this is a very powerful selling point for the entire scheme.

It is also worth noting that the content of the AID and its support package is not specific to optical fibre - but covers the installation of all telecommunications cabling addressed by BS 6701:2004. The provision of software tools and on-line assistance that can be applied not only to optical fibre but also to other telecommunications cabling projects will be of benefit to a number of our members.

## Involvement of all

Whilst the above has concentrated mainly on the installer the scheme is designed and supports use by Consultants, Designers, even the Customer, in fact all those that may be involved in a Telecoms Project. The scheme includes a "paper-trail" matrix highlighting which skill party needs to receive what and includes the customer. In fact the AIS enable the customer to carry out a basic audit on the installation during its progress and/or on completion.

Finally, it has to be pointed out that the AID is not a static system. The elements of risk aversion and the corresponding data in the support packages may change as standards change and as a result of input from Approved Installers and other FIA Directorates.

## The future

Clearly, the Mk. II FIA Approval Scheme is substantially more sophisticated than its predecessor. The reaction from all parts of the market has been very positive. The risk-management systems operated by the Approved Installers provide confidence to both their clients and the FIA. So much so in fact that Approved Installers and their customers have automatic free access to the FIA Arbitration Scheme, created to provide technical advice and support where there is a dispute relating to the work or services provided by a Member.

Peter Lythgoe, FIA Installation Director and author of the new Approved Installer Scheme along with his fellow FIA Directors, especially Mike Gilmore, Technical Director, firmly believe that the adoption of the scheme by installers and recognition by consultants and communications managers will bring significant enhancements to installations by delivering the requirements of the relevant standards directly into projects.