



Portable 3D system for Digital Cinemas

Installation, set up and troubleshooting guide



Rentme3d

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Forward

This guide is designed to help you set up our rental systems in your theatre. Initial installation is straightforward and subsequent swaps between screens is even easier – we remain there to help however so do call us if, after reading this, you still have problems.

Installation is recommended in three steps

1. Pre programming the 3D format on the projector – this can be done before the 3D kit arrives
2. Installing the emitters in the theatre
3. Testing

This manual also covers unpacking, cleaning and repacking the kit

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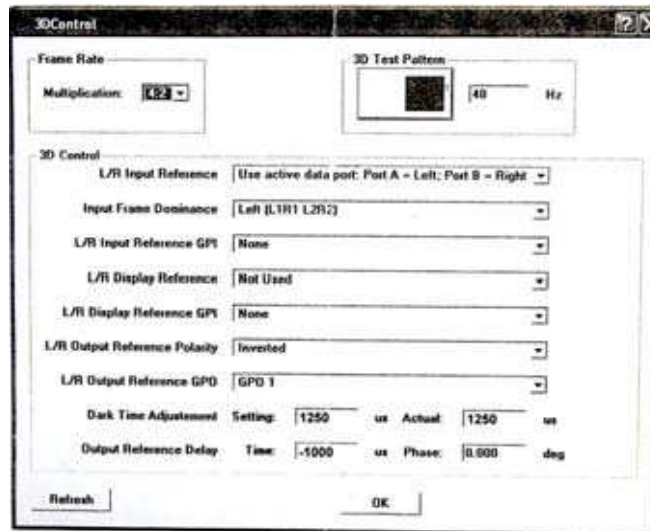


STEP 1 – Programming the projector for 3d

You may need technician privileges in order to do this – consult your service provider or give us a call



If the projector is set to the 3D mode, the glasses should function and provide a stereoscopic image. However, unless the projector's Dark Time and Reference Delay times are properly set the image will be less than optimal. These settings are adjusted on the projector's 3Dcontrol panel. A typical 3DControl window is shown below.

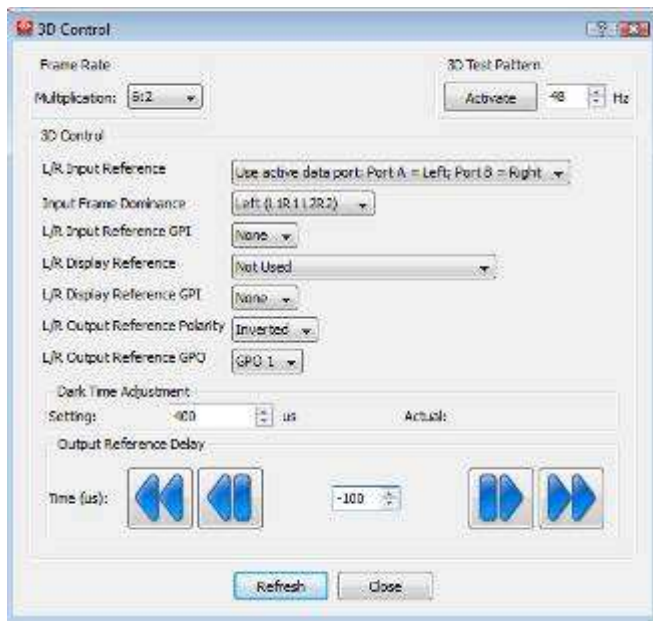


1. Log on to your projector with “engineer” rights
2. Ensure that the projector has an appropriate pcf file for Active Glasses 3d. This will be typically 185_YCxCz or 235_YCxCz.
3. Assign two new macros, one for each ratio of 3D
4. Assign the apt pcf files for these macros. At this stage use the existing 2D geometry files
5. Build a new Extra file for 3D. Name this “active3d_extra” or similar
6. In the apt extra file, set the following variables for proper 3D operation
 - Frame Rate: 4:2 for double flash, 6:2 for triple flash (use Triple flash)
 - L/R Input Reference: Use active data port: Port A = Left; Port B = Right
 - Input Frame Dominance: Left
 - L/R input Reference GPI: None
 - L/R Display Reference: Not Used
 - L/R Display Reference: None
 - L/R Output Reference Polarity: Inverted (change if the 3D image appears reversed)
 - L/R Output Reference GPO: GPO 1
 - Dark Time: 400 - 500 μ sec for double flash, 700 - 800 μ sec for triple flash
 - Output Reference Delay: -100 μ sec for double flash, -200 μ sec for triple flash (note: these are negative values)
 - Output Reference Phase: 0 deg. You should just be able to set these parameters and forget them but it is advisable to view some actual 3D non-deghosted footage to insure that ghosting is not present. If it is, adjust the Output Reference Delay to minimize them. This is most easily done by freezing the image and then adjusting the delay time to minimize the ghost. If the delay time is set at -100 μ sec, try increasing it in increments of -100 μ sec. If the ghost gets worse go the other direction.

If the movie is being triple flashed as Disney often requires, a second problem, colour banding or posterization, can occur. This will be evident in large mid-tone areas that slowly transition from one shade of gray or colour to another. Instead of being continuous, the transition will be in steps or bands. This occurs because, while the lenses of the glasses go to the opaque state very rapidly, the transition to the transparent state occurs slowly enough that it takes a significant portion of the frame interval. Normally this would just

result in a small decrease in brightness, but, because of the way a DLP projector modulates light, there can also be a reduction of colour depth. The solution is to increase the dark time so the lens has more time to open before the frame is displayed and to make the delay time more negative so the lens starts opening earlier – again allowing it to more fully open before the frame starts. There are limits to how far these parameters can be pushed, however. If the dark time is increased too much, the picture can become unstable and begin to break up along the top. If the delay time is increased too much, ghosting will occur. On the projectors that we were able to test, the values listed above provided an excellent compromise.

7. Now run some 3D footage. You don't need to have the 3d kit installed at this stage. Check
 - a. The image geometry – typically you will need to set new lens or scaling files to zoom 3d up a little from the 2d image
 - b. The colours. Make sure the correct pcf file is being used – if not, the image can appear to be missing the red information
 - c. Make sure both 3d signals are present – you should see a ghosted image with 3D content and a good image with 2d
8. Label the projector macros accordingly
9. If required, set up commands in the server or automation to run the new 3D formats



BARCO SETTINGS

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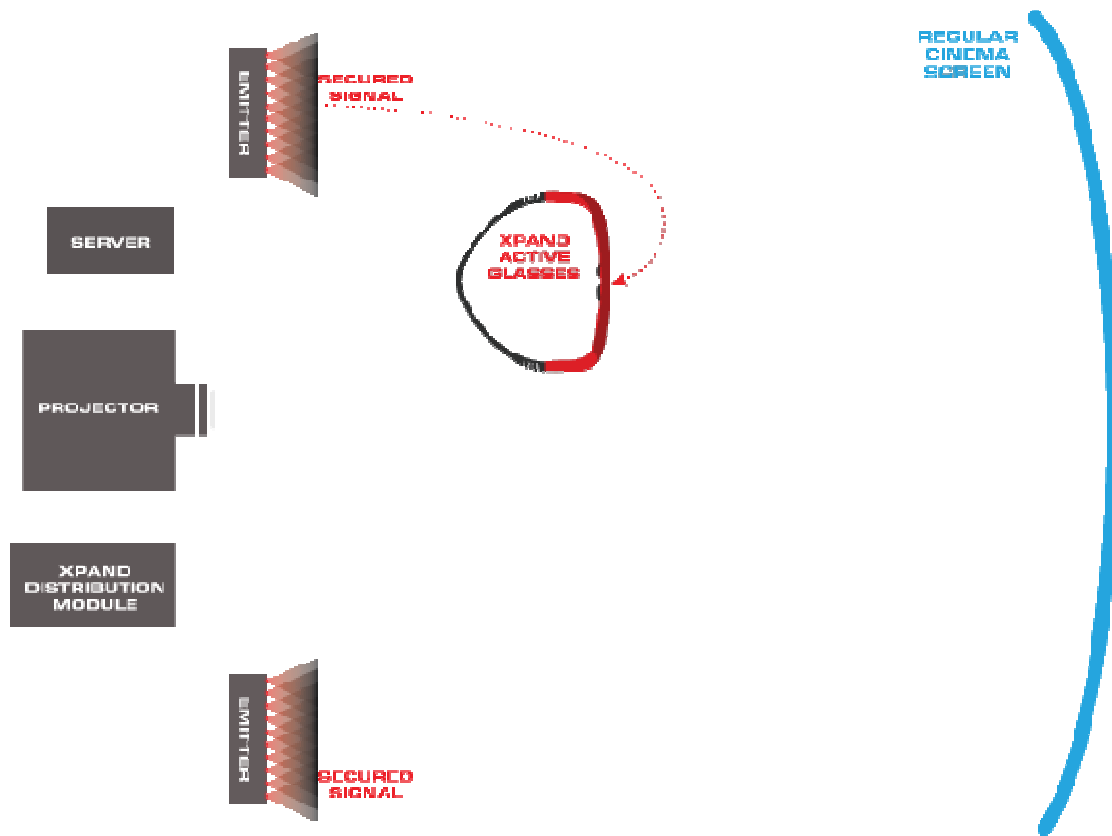
2. Locating the emitters

When your theatre booked the system, you will have been told how many emitters you will need. This varies with the size of the theatre and the number of seats, however options are usually;

Under 120 seats – a single emitter is placed in the projection room porthole, facing the screen.
Up to 300 seats – two emitters are placed in the front corners of the theatre, facing the audience, high enough to reach each viewer without obstruction. They can also be placed at the back of the theatre as shown in the drawing

Up to 500 seats – two emitters are placed 1/3 of the way down the theatre, nearer the stage, at high level. A third emitter is placed at high level in the centre of the screen

Over 500 seats – talk to us !



In all but the single emitter's case., cables need to be run to the emitters from the projector. We can either supply these cables in advance of where easy routing is not possible the theatre can buy their own for ongoing use.

These are 9pin multicore cables with a D connector on each end, male at the projector and female at the emitter. Run these cables soas to be safe and free from risk of damage.

3. Unpacking the 3d kit

By now you should have received the 3d kit. Check it's contents;

Large theatre Emitter box

- 1 x distribution module
- 1 x 37p D cable to 9pd cable, for use between the projector and the distributor
- 1 x power supply for the distributor
- 1 x DVD, with instructions and content
- This manual !
- 1 x active glasses tester
- 2 x emitters with brackets
- 100m 9pin D cables for emitters (if not already supplied)

OR

Small theatre Emitter box

- 1 x distribution module / emitter combined
- 1 x 37p D cable to 9pd cable, for use between the projector and the distributor
- 1 x power supply for the distributor

- 1 x DVD, with instructions and content
- This manual !
- 1 x active glasses tester

In addition, you may receive emitter stands and additional emitters if required

On the DVD, you will find

- XpanD “put your glasses on” trailer
- Trailers – African Adventure, U23D, FlyMeToThe Moon etc
- Pcf files for the projector
- A pdf copy of this manual
- A video demonstrating this set up (coming soon)



Emitter kit – lower layer – Distribution module, 2 x emitter cables, power supply



Emitter kit – upper layer – glasses tester, 2 x long range emitters

Glasses

Glasses are packed in three different configurations

20s

Pack these face down, 1 row of 11 and 3 of 3



50s

Pack these as 2 x levels of 25 (2 rows of 11, face down, with three facing up). A foam spacer is provided between the layers



80s

Pack these as two layers of 35 (2 rows of 16 facing down, plus 3 facing up) and a further 10 flat on the top layer. 2 x foams are provided



It is absolutely vital that you check that glasses on receipt as claims for damaged or lost glasses will only be accepted on the day of receipt.

4. Installing the distribution module

1. Plug the emitter cables into the distribution module (not required in the case of the combined emitter unit)
2. Plug the projector cable into the “Frame sync” socket of the distribution module
3. Plug in the power supply and turn the unit on. Now check that the emitter cable LEDs are on and that the red LEDs on each emitter is on
4. Turn the unit off and plug the other end of the projector cable into the projector. On some Christie machines, this is on the underside of the projector
5. The switches on the controller are as follows;
 - a. Local emitter – the dist unit has a small local emitter to provide a control signal to the projection room. Leave this off if you can
 - b. Set up frame sync – leave off
 - c. Laser pointer – leave off
 - d. Invert polarity – if required, if the 3d appears backwards

5. Loading the DCP

- Load the 3D content as usual. We recommend playing the “XPand 3D trailer” immediately before the show
- Any 2D content on a 3D show will need to be addressed as “3D”. Most servers have this facility
- Don't forget to select the new 3D macro on the projector, either via the server or manually

At this stage you may wish to check the light output of your projector. Active glasses are the most light efficient of any 3D system, however by definition 3D is not as bright on screen as 2D. You may wish to check the lamp focus, increase the current or install a new lamp.

You are now ready to screen your 3D feature !



Operational issues

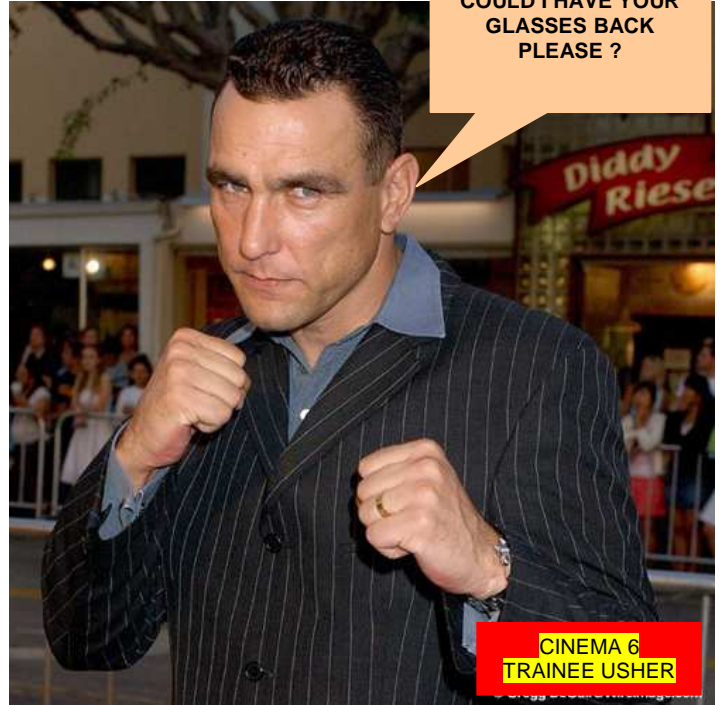
Glasses cleaning

Glasses need cleaning each show. We can provide special wipes for this purpose, or you can use a lint free cloth with a tiny amount of anti-bacterial window cleaner to gently wipe the units each show. NEVER use solvents or spirits

Getting the glasses back

We have talked to a lot of clients about this, and most agree that once a procedure is in place, it works. The key to getting the glasses back is presence – having an attendant at the theatre door and making it an expectation that each client hands you a pair of glasses on the way out. . We strongly recommend screening the 3D “return your glasses” trailer at the beginning of the programme – this clearly advises the client that the glasses need to be returned. However the key to getting the glasses back is controlling the exit of the cinema – once this is done effectively, most of our clients experience few if any glasses losses. Tips;

- signpost any fire exits “Door alarmed”
- control the theatre so that there is only one point of exit
- position an attendant at the exit BEFORE the credits roll
- insist on a pair of glasses from each customer
- if the client says “I’ve left them on the seat” suggest that the client returns and gets them
 - softly enforcing the “no glasses, no exit” policy
- allow only one pair of glasses to be held in the projection room – these are easily forgotten



Returning some glasses during the run

We are happy to take glasses back at any time during your booking, however we need to be notified of this on the MONDAY prior to the pickup (Friday). Please call our office to confirm – we will then despatch a courier either on the following Thursday night or Friday. If we don't hear from you on the Monday, we will continue the booking with the full glasses contingent

Returning the kit

Simply clean the glasses, make a note of any lost or damaged glasses and have the gear ready for our courier to pick up. Equipment needs to be ready by 11am on the Friday, or earlier as advised. It is important to check that all the gear is included as often the kit goes straight to another theatre – if you opt for insurance, up to 2% of the glasses will be covered against loss or damage however no other kit is covered and we will have no alternative but to charge for lost or late items.

Troubleshooting

3D doesn't work at all, anywhere

1. Check that a 3D DCP is being screened – you should see some double imaging on screen.
2. Try another pair of glasses
3. Try turning the local emitter (in the projection room) on. If this works then the problem is with the emitters or cabling in the theatre
4. Check the "Frame Sync from projector" led on the distribution unit. This should be flashing – if not check your projector macro and connection

Glasses are flashing on and off slowly by themselves

The batteries are getting low – give us a call and we will send a new set of glasses

Some glasses don't work anywhere in the theatre

Sounds like the glasses may be faulty – give us a call

Glasses appear to be blotchy

This is fairly normal – light pink and green areas often appear after a period of non use. This doesn't normally affect operation

Glasses are cracked

The glasses are pretty durable but no item will resist the most determined vandal. Loss or damage like this is covered by your 2% insurance (if taken)

Help with glasses for kids

We can supply reduced size arms and nose pieces for small children, however in practice our clients find this more of a problem (running the second inventory) than not, and losses are usually high. Most kids over 5 are OK with the standard glasses

Some parts of the theatre aren't covered

Possible causes are insufficient coverage or insufficient emitters. Make sure

- all emitters are working (unplug one at a time to check)
- all emitters are at high level and have line of sight to every seat

Each emitter should cover 150 seats, approximately 10 to 15 rows deep and 20 seats wide. For some theatres, it is a good idea to install one at the front and one at the back, bouncing the signal off the screen.

3D appears in reverse

Apply the REVERSE setting in the macro or on the distributor

A few customers cant see the 3D effect

First thing to do here is offer them another set of glasses and make sure where they are sitting is covered. However in practice, around 5% of the population have a reduced perspective of depth

and this 5% will find it harder or impossible to experience the 3D effect. Needless to say, folk with one eye either disabled or diminished will fall into this category. However we sometimes receive complaints about a poor 3D effect in certain films. This can be the directors intent – to use the 3D as a tool rather than an effect or gimmick. A simple test is to remove the glasses – if you see a ghosting that is not visible with the glasses on, 3D is working.

The image is a vibrant green and pink

The projector is running in the wrong colourspace – or there is 2D content on a 3D show. Check your macro selection, 3d addressing of non-3d content and your projector set up.

Image in 3D is blue and yellow – reds are hard to see

Incorrect pdf file is installed on the projector – should be CxCyz



TERMS AND CONDITIONS OF SALE / TRADE

Special hire terms

Charge rates

See our charge out pages for current rates

Theatre admission returns

You need to send us a written report each week, outlining every 3D show and admission numbers. This needs to get to us each Friday following the week of screenings. We may check this return against your distributors return. If we do not receive this, we will invoice you assuming 75% occupancy throughout the week.

Payment

Payment is due 30 days after presentation of our invoice. If payment is received in full during this period, we will offer a discount on the flat weekly hire rate based on our usual sliding scale. If any or all payments are overdue, this discount will not be applied and all weeks will be charged at our standard (week 1) rate. Refer to our full terms and conditions of sale. We reserve the right to charge interest and collection fees – refer to our full terms and conditions

Insurance

We strongly recommend that you take out insurance against loss or damage of glasses. This insurance, which is charged on a weekly basis, covers you for loss or damage of up to 2% of the glasses stock held on site. By paying this charge, we indemnify the theatre against such loss of, for example, up to 4 sets of glasses per week (assuming stocks held on site are 200 glasses). You must advise us in advance if you want to take the insurance option.

Non insurance

If you choose not to take our out insurance, any loss or damage of glasses will be chargeable at our current rate

Delivery and pickup

We offer free delivery and pickup of all gear within the UK and Ireland.

Lost items

On receipt, you need to check the inventory and advise us within 24 hours of any missing items – following this period we will assume that all has arrived on site

Equipment failure

We make every effort to test and maintain our equipment to the highest standards, however on occasion things do fail. In the event of a failure, you must call us as soon as possible to see what we can do to help you. If, in the sole opinion of Future Projections, a 3D failure has been caused by the non performance of our equipment, our liability is limited to crediting the equipment rental from the date we have been notified of the failure to the date of rectification.

In the case of individual glasses failure, please advise us immediately and we will credit the hire of that headset for the week, providing (at your option) future credits or a replacement headset.

DEFINITIONS

"Buyer" means the person who buys or agrees to buy the Goods from the Seller

"Terms" means the terms of sale as set out in this document and any special terms as agreed in writing by the Seller.

"Delivery Date" means the date specified by the Seller when the equipment and Goods are to be delivered and installed.

"Goods" means any projector and other related equipment and any other goods and equipment which the Buyer agrees to buy from the seller.

"Price" means the Price for the Goods and Work excluding carrier packing, insurance and VAT.

"Seller" means Future Projections Limited (Company Registration Number 3797445) whose registered office is situated at Unit 2 Windsor Centre Windsor Court SE279NT.

"Work" means the supply and installation and the servicing and repair of the Goods by the Seller.

TERMS APPLICABLE

These Terms shall apply to all contracts for the sale of Goods and Work by the Seller to the Buyer to the exclusion of all other terms including any terms or conditions which the Buyer may purport to apply under any purchase order confirmation of order or similar document.

All orders for Goods or Work shall be deemed to be an offer by the Buyer to purchase Goods pursuant to these Terms.

Acceptance of delivery of the Goods shall be deemed conclusive evidence of the Buyer's acceptance of these Terms.

Any variation to these Terms (including any special terms and conditions agreed between the parties) shall be inapplicable unless agreed in writing by the Seller.

THE PRICE AND PAYMENT

The Price shall be the Seller's quoted price for the Goods and Work as varied by agreement. The Price is exclusive of VAT, which shall be due at the rate ruling on the date of the Seller's invoice.

Payment of the Price and VAT and shall be due within 30 days of the date of the invoice. Time for payment shall be of the essence.

Interest on overdue invoices shall accrue from the date when payment becomes due from day to day until the date of payment at a rate of 4% above HSBC's base rate from time to time in force and shall accrue at such a rate after as well as before any judgment.

Unless otherwise agreed in writing between the Buyer and the Seller, payment for the Work shall be made in accordance with the following terms: - Regular monthly stage payments shall be paid by the Buyer to the Seller the first such payment being due on the last day of the month following that in which the Goods are despatched or the Work is due to commence as appropriate.

Each such stage payment shall comprise the total value of Work executed and materials and Goods delivered to site for use thereon by the Seller prior to the date of such stage payment together with any other amounts then due, less only the aggregate amount of any previous stage payments and any agreed retention but subject to no other deductions whatsoever.

In respect of any materials or Goods which through no fault of the Seller are held in store, the value of the same together with any charges in respect of storage or rehandling shall be included in each monthly stage payment.

If the Buyer fails to make any payment when due the Seller may, at its option, and without prejudice to any other rights under the contract, suspend further Works until such Payment is made or terminate the contract. The Seller shall be entitled to charge in full with all interest where applicable interest on the outstanding balance of all overdue accounts from the time of default to time of payment (as well after as before judgment) calculated on an annual basis at a rate of 4% above the base lending rate of HSBC.

Notwithstanding anything contained herein the Seller shall be under no liability for loss and profits, revenue, contracts or business or any other form of consequential or indirect loss or damage of any nature whatsoever and however caused or arising.

GOODS AND WORK

The quantity and description of the Goods and/or Work shall be as set out in the Seller's quotation.

WARRANTIES AND LIABILITY

The Seller warrants that the Goods and/or Work will at the time of delivery correspond to the description given by the Seller and, except where the Buyer is dealing as a consumer (as defined in the Unfair Contract Terms Act 1977 Section 12), all other warranties, conditions or terms relating to fitness for purpose, merchantability or condition of the Goods and/or Work implied by statute or common law or otherwise are excluded, including any loss or damage caused by or arising from the incorrect operation of the Goods concerned, misuse, neglect, fire, flood, explosion howsoever caused and act of God and all consequential loss howsoever caused.

ADVANCED REPLACEMENT GOODS

Our warranty, and those of most of our suppliers is "return to base" – goods need to be returned to us for evaluation and repair. In the event of a failure, we may have available "advanced replacement items", to serve as either an interim loan item or a replacement unit pending warranty evaluation by the manufacturer. When we send these items, we treat these as a purchase – the client purchases the advance replacement item off us, we invoice for this and all carriage and once we receive the faulty goods back and verify the warranty claim we credit the cost of the goods. Clients need to agree these terms in writing prior to advance replacements being sent.

DELIVERY OF THE GOODS

Delivery of the Goods shall be made to the Buyer's address on the Delivery Date, which is an estimate only. The Buyer shall make all arrangements necessary to take delivery of the Goods at the agreed location with the appropriate room / space for the Goods whenever they are tendered for delivery

Time for delivery is not of the essence of the contract

The Seller shall not be liable for any loss or damage whatever due to failure by the Seller to deliver the Goods (or any of them) promptly or at all.

ACCEPTANCE OF THE GOODS AND WORK

The Buyer shall be deemed to have accepted the Goods and/or Work 7 days after the date of the invoice relating to such Goods.

After acceptance the Buyer shall not be entitled to reject Goods and/or Work, which are not in accordance with the contract.

TITLE AND RISK

The Goods shall be at the Buyer's risk as from delivery.

In spite of delivery having been made title in the Goods shall not pass from the Seller until the Buyer shall have paid the Price plus VAT in full for such Goods.

Until title in the Goods passes to the Buyer in accordance with clause 8.2 the Buyer shall hold the Goods and each of them on a fiduciary basis as bailee for the Seller.

The Seller shall be entitled to recover the Price (plus VAT) notwithstanding that title in any of the Goods has not passed from the Seller.

Until such time as title in the Goods passes from the Seller the Buyer shall upon request deliver up the Goods. If the Buyer fails to do so the Seller may enter upon any premises owned occupied or controlled by the Buyer where the Goods are situated and repossess the Goods. On the making of such request the rights of the Buyer under clause 8.4 shall cease.

The Buyer shall not pledge or in any way charge by way of security for any indebtedness any of the Goods which are the property of the Seller. Without prejudice to the other rights of the Seller, if the Buyer does so all sums whatever owing by the Buyer to the Seller shall forthwith become due and payable.

The Buyer shall insure and keep insured the Goods to the full Price against "all risks" to the reasonable satisfaction of the Seller from the date of delivery until the date that property in the Goods passes from the Seller, and shall whenever requested by the Seller produce a copy of the policy of insurance. Without prejudice to the other rights of the Seller, if the Buyer fails to do so all sums whatever owing by the Buyer to the Seller shall forthwith become due and payable.

If requested by the Seller, the Buyer shall promptly deliver the prescribed particulars of this contract to the Registrar in accordance with the Companies Act 1985 Part XII as amended. Without prejudice to the other rights of the Seller, if the Buyer fails to do so all sums whatever owing by the Buyer to the Seller shall forthwith become due and payable.

REMEDIES OF BUYER

Where the Buyer rejects any Goods and/or Work then the Buyer shall have no further rights whatever in respect of the supply to the Buyer of such Goods and/or Work or the failure by the Seller to supply Goods and/or Work which conform to the contract of sale.

Where the Buyer accepts or has been deemed to have accepted any Goods and/or Work then the Seller shall have no liability whatever to the Buyer in respect of those Goods.

The Seller shall not be liable to the Buyer for late delivery or short delivery of the Goods.

The Buyer shall inspect the Goods and/or Work on delivery and after installation and shall within 3 days after delivery or after installation notify the Seller of any alleged defect, shortage of quantity, damage or failure to comply with description or sample. If the Buyer shall fail to comply with these provisions the Goods and/or Work shall be conclusively presumed to be in accordance with the contract and free from any defect or damage which would be apparent on a reasonable examination of the Goods and/or Work, the Buyer shall be deemed to have accepted the Goods and/or Work.

If the Goods and/or Work are not in accordance with the contract for any reason the Buyer's sole remedy shall be limited to the Seller making good any shortage by replacing such Goods and/or Work or, if the Seller shall elect, by refunding a proportionate part of the Price.

The Seller's liability to the Buyer, whether for any breach of contract or otherwise, shall not in any event exceed the Price and the Seller shall be under no liability for any direct loss and/or expense or indirect loss and/or expense suffered by the Buyer or liability to third parties incurred by the Buyer.

GOVERNING LAW

This contract is subject to the Law of England and Wales.

The Seller warrants all Work carried out and covered by this estimate for a period of 6 months in respect of labour and workmanship. The Seller shall repair or replace defective Goods at his discretion. Any parts or Goods supplied and fitted by the Seller shall carry the warranty (if any) given by the manufacturer of that item. The Buyer shall during the relevant period ensure that the equipment is operated and maintained correctly.

CABLING AND OTHER ITEMS

The Seller shall where reasonably possible conceal electrical cable within containment provided by others or otherwise as agreed. Price does not include the lifting and replacement of floorboards for the purpose of concealing cable.

Cables affixed to walls ceilings and doors shall be affixed to the surface thereof and the quotation or estimate or Price does not include the costs of concealing such cable.

The Buyer shall give the Seller access to its premises of not less than 8.5 clear hours per day between the hours of 7.00 am and 5.00 pm Monday to Saturday for the purpose of carrying out any act and the services and Work under the terms of this agreement.

The Buyer shall provide without charge to the Seller adequate facilities for the storage of materials equipment and tools during the carrying out of the Work and for a reasonable time before commencement and after completion.

Materials equipment and tools stored at the Buyer's premises or premises under his control shall be stored at the sole risk of the Buyer. In the event of destruction damage or theft of materials equipment and tools stored at the Buyer's premises or premises under his control the Seller shall be entitled to payment in full in respect thereof except that the Buyer shall not be liable or any loss occasioned solely by the negligence of the employees or agents of the Seller.

The Work will be performed during the Seller's normal working hours.

The Work shall be executed within the period of time stated in the quotation or in accordance with a programme of work to be agreed in writing with the proviso that the date stated in the quotation or such programme shall be subject to confirmation after all the specifications and measurements have been taken and agreed. The Seller shall be afforded proper access to site to enable specification and measurements to be taken. Any alteration or deviation from programme shall thereafter only be made by mutual agreement.

A fair and reasonable extension of time to the period stated in the quotation or to the agreed programme shall be made by the Buyer in the event of the Seller suffering delays caused by war riot civil commotion force majeure acts of god inclement weather strikes lockouts or any other form of industrial action shortages of labour or materials delay in delivery of materials by suppliers or sub-contractors or any other unforeseen circumstances beyond the Seller's reasonable control.

The Buyer must give the minimum period of notice stated in the quotation in writing before the Seller is obliged to commence work on site. The Buyer shall provide free and adequate access to the site at all times. Hard standings and approach roads suitable for the Seller's vehicles shall be available to allow for the safe handling of materials and a suitable area for storage of materials. Any hutting, which may be required, shall be made available within close proximity to the place at which the work is to be carried out.

The Buyer shall provide on site, at no charge to the Seller, all equipment and facilities required to enable the Seller to fulfil the requirements of the Buildings (Safety, Health and Welfare) Regulations, the Factories Act and all other applicable legal requirements.

The Seller's insurances in respect of public liability and third party liability indemnify the Buyer or his or her agent against any claims arising from damage to the premises at which the Seller is working and/or injury to any person or persons within or adjacent to those premises provided that such injury is due to proved negligence on the part of the Seller or on the part of its employees. Save as provided in this paragraph the Seller has no obligations to indemnify the Buyer or to insure.

The Buyer will be responsible for insuring in the joint names of the Buyer and the Seller against loss and damage by fire, lightning, explosion, storm, tempest, flooding bursting or overflowing of water tanks, apparatus and pipes, earthquake, aircraft and other aerial devices or articles dropped there from, riot and civil commotions all Work executed and all uninstalled materials and Goods delivered to or placed on or adjacent to the site or the Buyer's premises and shall maintain such insurance until practical completion of the Work.

In the event of such loss or damage, the Seller will reinstate or make good such loss or damage and carry out and complete the Work. The reinstatement and making good of such loss or damage shall be deemed to be variation under paragraph 16.6 below. If it is just and equitable the Seller may determine its engagement under the contract within 28 days of the occurrence of such loss or damage.

The Buyer will be entitled to vary the design, quality and quantity of the Work subject to agreeing acceptable adjustment with the Seller to the price payable and the period for completion of the Work and any other terms of the contract of which these Conditions form part which the Seller may consider relevant. The Buyer will be responsible for the removal of all rubbish arising from the execution of the Work at no cost to the Seller.

RoHS Compliance Statement

The RoHS directive restricts the use of certain hazardous substances commonly used in the manufacturing of electronic equipment and requires producers of electronic equipment to reduce the concentration of these hazardous materials which include:

- Lead
- Mercury
- Cadmium
- Hexavalent Chromium
- Polybrominated Biphenyls (PBB)
- Polybrominated Diphenyl Ethers (PBDE)

The RoHS directive states that as of July 1, 2006, electrical and electronic equipment manufacturers must eliminate the use of all of the above materials. Although RoHS is a European Union (EU) Directive, manufacturers of EEE outside Europe must also abide by this legislation if the equipment they produce is ultimately imported into an EU member state. . . In our role as an integrator, installer and service provider, we ensure that all products, cables, parts and supplies sourced are compliant and the ROHS certification provided or available.

You can be assured that we here, at Future Projections Ltd are concerned with a smooth transition to insure a continuous flow of product and to continue to maintain a high level of service to our customers.

WEEE Compliance Statement

The European Union also adopted Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), with requirements that went into effect August 13, 2005. WEEE is intended to reduce the disposal of waste from electrical and electronic equipment by establishing guidelines for prevention, reuse, recycling and recovery.

Future Projections Ltd has addressed its practices and processes to conform to the requirements in this important Directive.

As a distributor of electrical and electronic devices, we accept our joint responsibility to ensure safe and appropriate disposal and recycling of electronic based equipment at the end of it's lifespan as required and defined under WEEE regulations. Where equipment has been supplied and installed by ourselves, our installations are considered for the purposed of WEEE regulations to be fixed installations or in some cases large scale industrial tools and therefore outside the scope of the regulations. Where items are considered applicable to WEEE regulations, we ensure that the manufacturer or UK importer maintains a "take back" facility and that all products are marked with the crossed "wheeled bin" symbol. Whilst there are no obligations for distributors in relation to sales of nonhousehold EEE, or for the take-back of non-household WEEE, as part of the supply chain for non-household EEE, we endeavour to assist producers and non-household end-users in discharging their obligations under the WEEE Regulations.

All sales are recorded and records retained for a minimum of four years.

WEEE regulations apply only to new sales. We operate an "in house" scheme for the return of WEEE applicable items to manufacturers and suppliers. As an alternative we often recycle such goods in-house for support and spare part functions of similar equipment in the field. We prioritise reuse of appliances as whole appliances, in either their original form or as spare parts of modified assembly.