

# DRILLER/DERRICKMAN COMMUNICATIONS



TDS-009 Issue 01 Zitel Technical Bulletin

Thank you for your interest in Zitel - we are a UK based manufacturer of PAGA and Intercom products.

Our systems are mainly designed for use in the Hazardous Oil, Gas and Petrochemical industries.

The MT50 Driller's talkback is primarily designed to provide two way voice communications between strategic locations on the rig, including the critical link between Drilling control room and Derrick man.

Equipment is hazardous area certified to enable safe operation in a potentially explosive atmosphere and is of robust pattern to ensure long trouble free life in the demanding working conditions of a drilling installation.

## ZITTEL MT50 TALKBACK INTERCOM SYSTEM

Hands free voice communications between the Derrick man and Driller is a mandatory requirement for efficient and safe rig operations. The TDS-009 bulletin covers the Zitel solution to this critical requirement (note the MT50 is capable of multi subscriber operation but this paper is specifically limited to Driller / Derrick man communications).

The system comprises of a central MT50 amplifier (which can be safe or Zone 1 hazardous area located) and is also powered from this position. The MT50 extends connections to (1) the Derrick man and (2) the Driller positions by standard twisted pair shielded field cables.

The drilling control room or 'dog house' is the nerve center for drilling operations and can be equipped with dual MT50 master position talk back hardware to serve driller and assistant driller :-



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## Drillers control room

The driller position consists of the following:-

- a) long reach goose neck microphone mounted on a flexible stem
- b) loudspeaker
- c) foot / knee / thigh push to talk paddle
- d) momentary action push button volume control

Drilling control house talkback facilities usually have to squeeze into confined spaces and use available room. Essential intercom components are shown above and are designed to survive drilling operations and each is certified for safe use in a potentially explosive atmosphere



*MG600Exi intrinsically safe microphone transmits voice to Monkey board*



*HS8EXMNT explosion proof loudspeaker – receives speech from the monkey board*



*FKS01Ex explosion proof actuator designed to control the talk back system on a hands free basis.*



*Explosion proof push button incremental volume control sets receive volume to Driller's loudspeaker*

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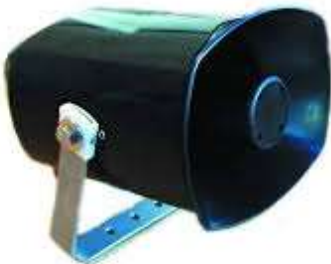
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## Monkey board Derrick man position

The Derrick man position is equipped with two or more MG600Exi noise cancelling microphone capsules, which are specially designed to reduce back ground noise pick up and are supplied with MG6SM shock mounts. These units are small and unobtrusive and are positioned as close as is practical to the Derrick man to ensure clear speech transmission to the Driller position. A power full horn speaker ensures intelligible speech reception from the Dog house. There are no controls at this position.



*MG600Exi hazardous area certified surface mount noise cancelling microphone capsule provides quality speech transmission in noisy areas.*



*DSP15-15EMNT is a powerful 15 Watt horn loaded explosion proof loudspeaker broadcasting speech from the Dog house location.*

Enclosure material is corrosion / ultra violet proof polyester equipped with high grade stainless steel fastenings and fittings.

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## Central Equipment MT50 and MT50W

The system is energized at the central equipment panel which carries the amplifier, safety barriers and control logic. The panel supports up to eight subscriber stations.

Both Zone 1 hazardous area and safe area MT50 units are available, both feature a space saving compact design.



*The MT50-W is IP55 rated and is designed for safe area location*



*The MT50 base model is explosion proof and designed for use in Zone 1 hazardous areas*

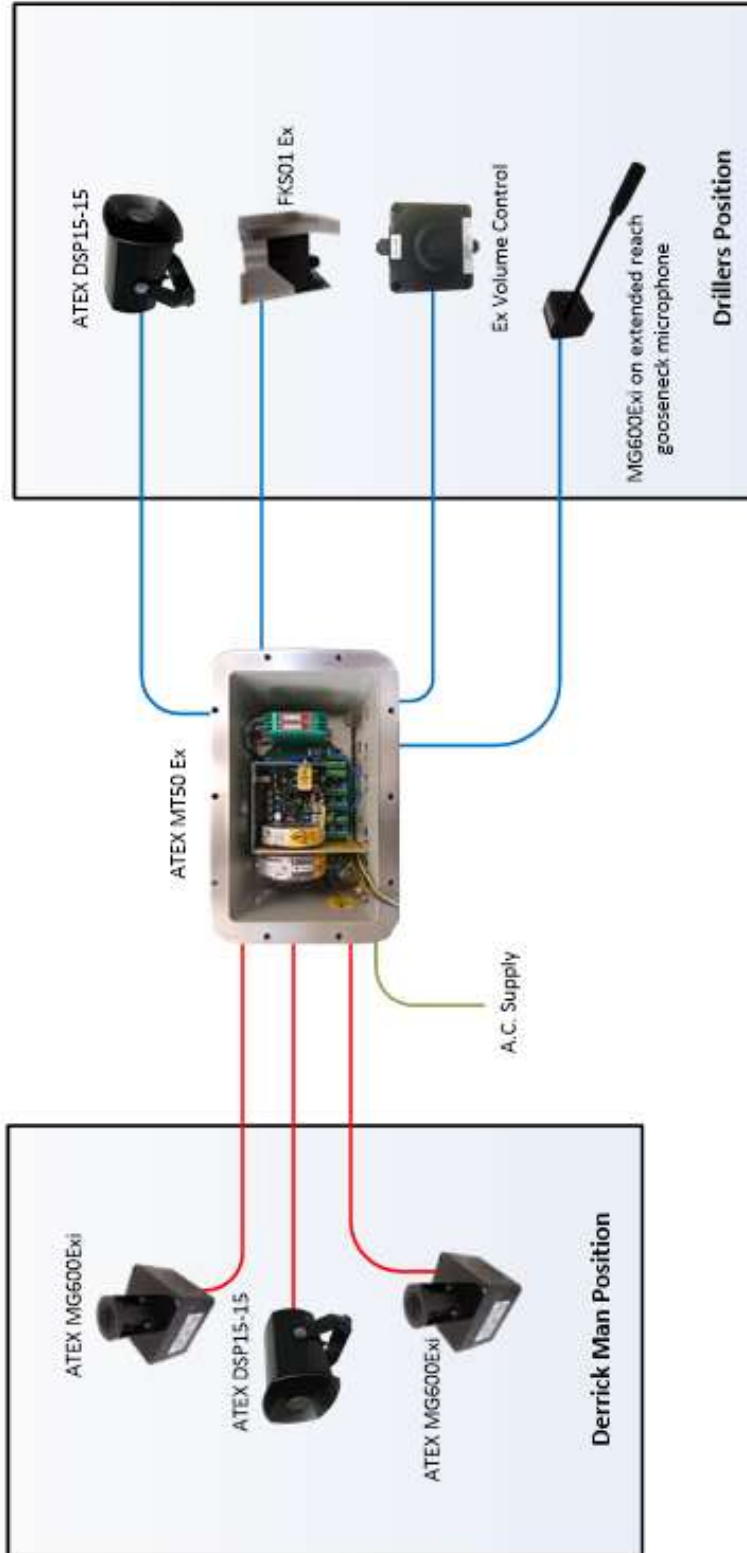
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