English

Common Warnings

PRODUCT MANUAL SAFETY INFORMATION

Magnetek, Inc. (Magnetek) offers a broad range of radio remote control products, control products and adjustable frequency drives, and industrial braking systems for overhead material handling applications. This manual has been prepared by Magnetek to provide information and recommendations for the installation, use, operation and service of Magnetek's material handling products and systems (Magnetek Products). Anyone who uses, operates, maintains, services, installs or owns Magnetek Products should know, understand and follow the instructions and safety recommendations in this manual for Magnetek Products.

The recommendations in this manual do not take precedence over any of the following requirements relating to cranes, hoists and lifting devices:

- Instructions, manuals, and safety warnings of the manufacturers of the equipment where the radio system is used,
- Plant safety rules and procedures of the employers and the owners of facilities where the Magnetek Products are being used,
- Regulations issued by the Occupational Health and Safety Administration (OSHA),
- Applicable local, state or federal codes, ordinances, standards and requirements, or
- Safety standards and practices for the overhead material handling industry.

This manual does not include or address the specific instructions and safety warnings of these manufacturers or any of the other requirements listed above. It is the responsibility of the owners, users and operators of the Magnetek Products to know, understand and follow all of these requirements. It is the responsibility of the owner of the Magnetek Products to make its employees aware of all of the above listed requirements and to make certain that all operators are properly trained. **No one should use Magnetek Products prior to becoming familiar with and being trained in these requirements.**

Throughout this document WARNING statements have been deliberately placed to highlight items critical to the protection of personnel and equipment.

WARNING – A warning highlights an essential operating or maintenance procedure, practice, etc. which if not strictly observed, could result in injury or death of personnel, or long term physical hazards.

WARNINGS SHOULD NEVER BE DISREGARDED.

The safety rules in this section are not intended to replace any rules or regulations of any applicable local, state, or federal governing organizations. Always follow your local lockout and tagout procedure when maintaining any radio equipment. The following information is intended to be used in conjunction with other rules or regulations already in existence. It is important to read all of the safety information contained in this section before installing or operating the Radio Control System.

GENERAL

Radio controlled material handling equipment operates in several directions. Quite frequently, the equipment is operated in areas where people are working in close proximity to the material handling equipment. **The operator must exercise extreme caution at all times**. Workers must constantly be alert to avoid accidents. The following recommendations have been included to indicate how careful and thoughtful actions may prevent injuries, damage to equipment, or even save a life.

PERSONS AUTHORIZED TO OPERATE RADIO CONTROLLED EQUIPMENT

Only properly trained persons designated by management should be permitted to operate radio controlled equipment.

Radio controlled equipment should not be operated by any person with insufficient eyesight or hearing or by any person who may be suffering from a disorder or illness, is taking any medication that may cause loss of equipment control, or is under the influence of alcohol or drugs.

SAFETY INFORMATION & RECOMMENDED TRAINING FOR OPERATORS

Anyone being trained to operate radio controlled equipment should possess as a minimum the following knowledge and skills before using the radio controlled equipment.

The operator should:

- have knowledge of hazards pertaining to equipment operation
- have knowledge of safety rules for radio controlled equipment
- have the ability to judge distance of moving objects
- know how to properly test prior to operation
- have knowledge of the use of equipment warning lights and alarms
- have knowledge of the proper storage space for a radio control receiver when not in use
- be trained in transferring a radio control receiver to another person
- be trained how and when to report unsafe or unusual operating conditions
- know and follow all applicable operating and maintenance manuals, safety procedures, regulatory requirements, and industry standards and codes

The operator shall not:

- change any settings or controls without authorization and proper training
- remove or obscure any warning or safety labels or tags
- leave power on the radio controlled equipment when the equipment is not in operation
- operate manual motions with other than manual power
- operate radio controlled equipment when low battery indicator is on

PRE-OPERATION TEST

Test all warning devices.

Test all direction and speed controls.

Test the receiver emergency stop.

WARNINGS

- ONLY QUALIFIED INSTALLERS SHOULD INSTALL THIS RADIO CONTROL EQUIPMENT. THIS MANUAL SHOULD BE CONSULTED TO MINIMIZE POTENTIAL HAZARDS WITH THE EQUIPMENT INTERFACED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- PRIOR TO INSTALLATION AND OPERATION OF THIS EQUIPMENT, READ AND DEVELOP AN UNDERSTANDING OF THE CONTENTS OF THIS MANUAL AND THE OPERATION MANUAL OF THE EQUIPMENT OR DEVICE TO WHICH THIS EQUIPMENT WILL BE INTERFACED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- ALL EQUIPMENT MUST HAVE A MAINLINE CONTACTOR INSTALLED AND ALL TRACKED CRANES, HOISTS, LIFTING DEVICES AND SIMILAR EQUIPMENT MUST HAVE A BRAKE INSTALLED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- AN AUDIBLE AND/OR VISUAL WARNING MEANS MUST BE PROVIDED ON ALL REMOTE CONTROLLED EQUIPMENT AS REQUIRED BY CODE, REGULATION, OR INDUSTRY STANDARD. THESE AUDIBLE AND/OR VISUAL WARNING DEVICES MUST MEET ALL GOVERNMENTAL REQUIREMENTS. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- FOLLOW YOUR LOCAL LOCKOUT TAGOUT PROCEDURE BEFORE MAINTAINING ANY REMOTE CONTROLLED EQUIPMENT. ALWAYS REMOVE ALL ELECTRICAL POWER FROM THE CRANE, HOIST, LIFTING DEVICE OR SIMILAR EQUIPMENT BEFORE ATTEMPTING ANY INSTALLATION PROCEDURES. DE-ENERGIZE AND TAGOUT ALL SOURCES OF ELECTRICAL POWER BEFORE TOUCH-TESTING ANY EQUIPMENT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- THE DIRECT OUTPUTS OF THIS PRODUCT ARE NOT DESIGNED TO INTERFACE DIRECTLY TO TWO STATE SAFETY CRITICAL MAINTAINED FUNCTIONS, I.E., MAGNETS, VACUUM LIFTS, PUMPS, EMERGENCY EQUIPMENT, ETC. A MECHANICALLY LOCKING INTERMEDIATE RELAY SYSTEM WITH SEPARATE POWER CONSIDERATIONS MUST BE PROVIDED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH OR DAMAGE TO EQUIPMENT.
- THE OPERATOR SHOULD NOT ATTEMPT TO REPAIR ANY RADIO CONTROLLER. IF ANY PRODUCT PERFORMANCE OR SAFETY CONCERNS ARE OBSERVED, THE EQUIPMENT SHOULD IMMEDIATELY BE TAKEN OUT OF SERVICE AND BE REPORTED TO THE SUPERVISOR. DAMAGED AND INOPERABLE RADIO CONTROLLER EQUIPMENT SHOULD BE RETURNED TO MAGNETEK FOR EVALUATION AND REPAIR. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- PRIOR TO OPERATING EQUIPMENT WITH THIS RADIO CONTROL SYSTEM, THE EQUIPMENT BEING CONTROLLED SHOULD BE INSPECTED FOR ANY DAMAGE. DO NOT OPERATE DAMAGED EQUIPMENT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- THIS RADIO CONTROL EQUIPMENT CONTAINS RADIO TRANSMITTERS AND RECEIVERS THAT RADIATE RADIO FREQUENCY ELECTROMAGNETIC WAVES. THIS EQUIPMENT HAS BEEN TESTED AND IS IN COMPLIANCE WITH STANDARDS EN 301 489-1 AND EN 301 489-3. ADDITIONALY, THE 433MHZ IS IN COMPLIANCE WITH STANDARD EN 300 220-2 AND THE 2.4GHZ IS IN COMPLIANCE WITH STANDARD EN 300 228-2. TO LIMIT THE OPERATORS EXPOSURE TO ELECTROMAGNETIC RADIATION AND ENSURE THE BEST POSSIBLE OPERATION OF THE EQUIPMENT, THE OPERATOR SHOULD AVOID PLACING ANY BODY PARTS NEAR OR IN CONTACT WITH THE UNIT'S ANTENNA.
- THIS RADIO CONTROLLER IS EQUIPPED WITH AN INFRARED TRANSMITTER. THE OPERATOR SHOULD BE AWARE OF THESE RISKS AND AVOID LOOKING DIRECTLY INTO THE INFRARED TRANSMITTER DURING OPERATION. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN INJURY.
- SOME EQUIPMENT THAT CAN BE INTERFACED WITH THIS RADIO CONTROLLER WILL HAVE MANUAL CONTROLS ALONG WITH THE RADIO CONTROLS. THE OPERATOR SHOULD BE PROPERLY QUALIFIED TO OPERATE THE EQUIPMENT WITH MANUAL CONTROLS. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- THE RADIO CONTROLLED EQUIPMENT OPERATOR IS RESPONSIBLE FOR THE SAFE OPERATION OF THE EQUIPMENT IN ALL ENVIRONMENTAL CONDITIONS. WHEN OPERATING THE EQUIPMENT, THE OPERATOR SHOULD ALWAYS SEEK A SAFE POSITION FROM WHICH TO OPERATE THE EQUIPMENT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- SOME EQUIPMENT THAT CAN BE CONTROLLED WITH THIS RADIO CONTROLLER WILL HAVE HIGH LEVELS OF ACOUSTIC NOISE. THE OPERATOR SHOULD BE AWARE OF THESE RISKS AND WEAR PROPER PROTECTIVE GEAR, INCLUDING HEARING PROTECTION, TO MINIMIZE THE RISK OF INJURY.
- SOME EQUIPMENT THAT CAN BE INTERFACED WITH THIS RADIO CONTROLLER WILL HAVE ENGINE EXHAUST FUME HAZARDS. THE OPERATOR SHOULD BE AWARE OF THESE RISKS AND SHOULD NOT OPERATE THE RADIO CONTROLLER IN AN ENVIRONMENT WHERE THERE IS AN INSUFFICIENT SUPPLY OF FRESH AIR. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- THE RADIO CONTROLLED EQUIPMENT OPERATOR IS RESPONSIBLE FOR THE SAFE HANDLING OF ALL LOADS IN ALL ENVIRONMENTAL CONDITIONS. WHEN OPERATING THE EQUIPMENT IN LOW LIGHT CONDITIONS, THE OPERATOR SHOULD ENSURE THAT THE EQUIPMENT CAN BE SAFELY OPERATED AND ALL INDICATORS ON THE EQUIPMENT AND RADIO CONTROLS CAN BE SEEN. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

- DO NOT ASSUME THE POWER IS OFF IN THE RECEIVER BECAUSE THE TRANSMITTER IS TURNED OFF. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- DURING ACTIVATION OF THE MACHINE STOP SWITCH ON THE RADIO CONTROLLER, THE CONTROLLED MACHINE MAY HAVE COMPONENTS THAT WILL REMAIN IN MOTION. THE INSTALLER SHOULD MINIMIZE THESE RISKS WITH BRAKES OR OTHER DEVICES TO ENSURE THAT ALL PARTS OF THE EQUIPMENT IS PUT INTO A SAFE STATE DURING A MACHINE STOP SHUT DOWN. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- POWER SUPPLY FAILURE CAN LEAD TO UNSAFE CONDITIONS IN SOME EQUIPMENT BEING CONTROLLED BY THE RADIO CONTROLLER. THE INSTALLER SHOULD BE AWARE OF THESE RISKS AND INSTALL THE RADIO CONTROLLER IN A MANNER THAT MINIMIZES THE IMPACT A POWER SUPPLY FAILURE WILL HAVE ON RADIO CONTROLLED EQUIPMENT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- UNSTABLE LOADS OR EQUIPMENT CAN LEAD TO UNSAFE CONDITIONS IN SOME EQUIPMENT. THE INSTALLER SHOULD BE AWARE OF THESE RISKS AND INSTALL THE RADIO CONTROLLER IN A MANNER THAT MINIMIZES UNSTABLE EQUIPMENT OR LOAD CONDITIONS. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.
- KNOW AND FOLLOW PROPER BATTERY HANDLING, CHARGING AND DISPOSAL PROCEDURES. IMPROPER BATTERY PROCEDURES CAN CAUSE BATTERIES TO EXPLODE OR DO OTHER SERIOUS DAMAGE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

French

Avertissements courants

INFORMATIONS DE SECURITE DU MANUEL DE PRODUIT

Magnetek, Inc. (Magnetek) propose un vaste choix d'appareils de télécommande radio, d'appareils de commande et de variateurs de fréquence, ainsi que des systèmes de freinage industriels pour les applications de manutention aérienne. Ce manuel a été rédigé par Magnetek pour fournir des informations et des recommandations pour l'installation, l'utilisation, le fonctionnement et l'entretien des produits et des systèmes de manutention Magnetek (produits Magnetek). Quiconque utilise, entretient, répare, installe ou possède des produits Magnetek doit connaître, comprendre et suivre les instructions et les consignes de sécurité fournies dans ce manuel pour les produits Magnetek.
Les recommandations fournies dans ce manuel n'ont pas la priorité sur les exigences suivantes relatives aux grues, aux treuils et aux dispositifs de levage:

- Les instructions, les manuels et les consignes de sécurité des fabricants de l'équipement avec lequel le système radio est utilisé,
- Les règles et procédures de sécurité pour les employés et les propriétaires d'installation dans lesquelles les produits Magnetek sont utilisés,
- Les réglementations émises par l'OSHA (Agence pour la santé et la sécurité au travail),
- Les codes, ordonnances, normes et exigences locales, nationales et fédérales, ou
- Les normes de sécurité en vigueur dans le secteur de la manutention aérienne.

Ce manuel ne contient pas et n'aborde pas les instructions spécifiques et les consignes de sécurité de ces fabricants ni aucune des exigences indiquées ci-dessus. Les propriétaires, les utilisateurs et les opérateurs de produits Magnetek sont tenus de connaître, de comprendre et de se conformer à toutes ces exigences. Les propriétaires de produits Magnetek sont tenus d'informer leurs employés sur toutes les exigences mentionnées ci-dessus et de s'assurer que tous les opérateurs sont correctement formés. **Personne ne doit utiliser de produits Magnetek avant de s'être familiarisé avec ces exigences et d'être formé en conséquence.**

Tout au long de ce document, des AVERTISSEMENTS ont été placés délibérément de manière à mettre en évidence les éléments essentiels à la protection du personnel et des équipements.

AVERTISSEMENT - Un avertissement souligne une procédure ou une pratique d'utilisation ou d'entretien essentielle qui, si elle n'est pas strictement respectée, peut entraîner des blessures ou la mort du personnel, ou des risques matériels à long-terme.

LES AVERTISSEMENTS NE DOIVENT JAMAIS ETRE IGNORES.

Les règles de sécurité décrites dans cette section n'ont pas pour but de remplacer les règles ou réglementations des organismes gouvernementaux en vigueur au niveau local, national ou fédéral. Toujours suivre la procédure locale de verrouillage et d'étiquetage pour entretenir l'équipement radio. Les informations suivantes doivent être utilisées conjointement avec d'autres règles ou réglementations déjà existantes. Il est important de lire toutes les consignes de sécurité fournies dans cette section avant d'installer ou d'utiliser le système de radiocommande.

GENERALITES

L'équipement de manutention radiocommandé fonctionne dans plusieurs directions. L'équipement est très souvent utilisé dans des zones où des personnes travaillent à proximité de l'équipement de manutention. **L'opérateur doit faire preuve d'une extrême prudence en permanence.** Les opérateurs doivent être constamment vigilants pour éviter les accidents. Les recommandations suivantes ont été incluses pour expliquer comment des actions prudentes et réfléchies peuvent éviter de blesser les personnes ou d'endommager les équipements, voire sauver des vie.

PERSONNES AUTORISEES A UTILISER L'EQUIPEMENT RADIOCOMMANDE

Seules des personnes correctement formées et désignées par la direction sont autorisées à utiliser des équipements radiocommandés.
Les équipements radiocommandés ne doivent pas être utilisés par des personnes ayant une vue ou une audition insuffisantes ou par des personnes souffrant de troubles ou de maladies, sous médicaments pouvant causer une perte de contrôle de l'équipement, ou sous l'influence d'alcool ou de drogues.

CONSIGNES DE SECURITE ET FORMATION RECOMMANDEES POUR LES OPERATEURS

Toute personne formée pour utiliser des équipements radiocommandés doit posséder au minimum les connaissances et les compétences suivantes avant d'utiliser l'équipement radiocommandé.
L'opérateur doit:

- connaître les dangers relatifs à l'utilisation de l'équipement
- connaître les règles de sécurité de l'équipement radiocommandé
- être capable d'estimer la distance des objets en mouvement
- savoir comment effectuer correctement les essais préalables
- savoir comment utiliser les témoins et les alarmes de l'équipement
- savoir comment stocker correctement le récepteur de radiocommande lorsqu'il n'est pas utilisé.
- être formé au transfert d'un récepteur de radiocommande à une autre personne
- savoir comment et quand signaler des conditions d'utilisation dangereuses ou inhabituelles
- connaître et se conforme à tous les manuels d'utilisation et d'entretien, aux procédures de sécurité, aux exigences réglementaires et aux normes et codes industriels applicables.

L'opérateur ne doit pas:

- modifier les paramètres ou les commandes sans autorisation et sans formation adéquate
- détacher ou masquer des étiquettes d'avertissement ou de sécurité
- laisser l'équipement radiocommandé sous tension pendant que l'équipement n'est pas utilisé
- effectuer des mouvements manuels autrement qu'avec une commande manuelle
- utiliser l'équipement radiocommandé lorsque l'indicateur de batterie faible est allumé

ESSAI PREALABLE

Tester tous les systèmes d'avertissement.

Tester toutes les commandes de sens de marche et de vitesse.

Tester l'arrêt d'urgence du récepteur.

AVERTISSEMENTS

- SEULS DES INSTALLATEURS QUALIFIES DOIVENT INSTALLER CET APPAREIL DE RADIOCOMMANDE. CE MANUEL DOIT ETRE CONSULTE POUR REDUIRE LES RISQUES POTENTIELS POUR L'EQUIPEMENT RADIOCOMMANDE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- AVANT D'INSTALLER ET D'UTILISER CET EQUIPEMENT, LIRE ET COMPRENDRE PARFAITEMENT LE CONTENU DE CE MANUEL ET DU MANUEL D'UTILISATION DE L'EQUIPEMENT OU DU DISPOSIF AUQUEL CET EQUIPEMENT EST RELIE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- TOUS LES EQUIPEMENTS DOIVENT ETRE DOTES D'UN CONTACTEUR PRINCIPAL ET TOUTES LES GRUES SUR CHENILLES, LES TREUILS, LES DISPOSITIFS DE LEVAGE ET EQUPEMENTS SIMILAIRES DOIVENT ETRE EQUIPES D'UN FREIN. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- UN SYSTEME D'AVERTISSEMENT SONORE ET/OU VISUEL DOIT ETRE PREVU SUR TOUS LES EQUIPEMENTS TELECOMMANDES, CONFORMEMENT AUX CODES, REGLEMENTATIONS OU NORMES INDUSTRIELLES. CES SYSTEMES D'AVERTISSEMENT SONORES ET/OU VISUELS DOIVENT REPONDRE A TOUTES LES EXIGENCES GOUVERNEMENTALES. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- SUIVRE LA PROCEDURE DE VERROUILLAGE ET D'ETIQUETAGE LOCALE AVANT D'ENTRETENIR UN QUELCONQUE EQUIPEMENT TELECOMMANDE. TOUJOURS COUPER L'ALIMENTATION ELECTRIQUE DE LA GRUE, DU TREUIL, DU DISPOSITIF DE LEVAGE OU DE TOUT EQUIPEMENT SIMILAIRE AVANT D'ENTREPRENDRE DES PROCEDURES D'INSTALLATION. DESACTIVER ET ETIQUETER TOUTES LES SOURCES D'ALIMENTATION ELECTRIQUE AVANT DE TESTER LES EQUIPEMENTS AU TOUCHER. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- LES SORTIES DIRECTES DE CE PRODUIT NE SONT PAS CONCUES POUR ETRE INTERFACEES DIRECTEMENT AVEC DES FONCTIONS CRITIQUES DE SECURITE A DEUX ETATS, A SAVOIR AIMANTS, VENTOUSES DE LEVAGE, POMPES, EQUIPEMENTS D'URGENCE, ETC. UN SYSTEME DE RELAIS INTERMEDIAIRE A VERROUILLAGE MECANIQUE AVEC ALIMENTATION SEPAREE DOIT ETRE PREVU. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAINER DE GRAVES BLESSURES OU LA MORT, OU ENDOMMAGER L'EQUIPEMENT.
- L'OPERATEUR NE DOIT PAS ESSAYER DE REPARER LA RADIOCOMMANDE. EN CAS DE PROBLEMES CONCERNANT LES PERFORMANCES OU LA SECURITE DU PRODUIT, L'EQUIPEMENT DOIT ETRE IMMEDIATEMENT MIS HORS SERVICE ET LE PROBLEME DOIT ETRE SIGNALE AU SUPERVISEUR. UNE RADIOCOMMANDE ENDOMMAGEE OU QUI NE FONCTIONNE PAS DOIT ETRE RENVOYEE A MAGNETEK POUR EVALUATION ET REPARATION. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- AVANT D'UTILISER UN EQUIPEMENT AVEC CET APPAREIL DE RADIOCOMMANDE, L'EQUIPEMENT COMMANDE DOIT ETRE EXAMINE A LA RECHERCHE DE DETERIORATIONS. NE PAS UTILISER UN EQUIPEMENT ENDOMMAGE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAINER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'EQUIPEMENT.
- L'APPAREIL DE RADIOCOMMANDE CONTIENT DES EMETTEURS ET DES RECEPTEURS RADIO QUI EMETTENT DES ONDES ELECTROMAGNETIQUES A FREQUENCE RADIO. CET APPAREIL A ETE TESTE ET EST CONFORME AUX NORMES EN 301 489-1 ET EN 301 489-3. DE PLUS, LE 433MHZ EST CONFORME A LA NORME EN 300 220-2 ET LE 2.4GHZ EST CONFORME A LA NORME EN 300 228-2. POUR LIMITER L'EXPOSITION DE L'OPERATEUR AU RAYONNEMENT ELECTROMAGNETIQUE ET ASSURER UN FONCTIONNEMENT OPTIMAL DE L'EQUIPEMENT, L'OPERATEUR DOIT EVITER DE PLACER DES PARTIES DU CORPS A PROXIMITE OU EN CONTACT AVEC L'ANTENNE DE L'APPAREIL.
- LA RADIOCOMMANDE EST EQUIPEE D'UN EMETTEUR INFRAROUGE. L'OPERATEUR DOIT CONNAITRE CES RISQUES ET EVITER DE REGARDER DIRECTEMENT DANS L'EMETTEUR INFRAROUGE PENDANT L'UTILISATION. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAINER DES BLESSURES.
- CERTAINS EQUIPEMENTS POUVANT ETRE INTERFACES AVEC CETTE RADIOCOMMANDE SONT DOTES DE COMMANDES MANUELLES EN PLUS DES COMMANDES RADIO. L'OPERATEUR DOIT ETRE SUFFISAMMENT QUALIFIE POUR UTILISER L'EQUIPEMENT AVEC DES COMMANDES MANUELLES. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.

- L'OPERATEUR D'EQUIPEMENTS RADIOCOMMANDES EST RESPONSABLE DU FONCTIONNEMENT SANS DANGER DE L'EQUIPEMENT DANS TOUS LES ENVIRONNEMENTS. PENDANT L'ACTIONNEMENT DE L'EQUIPEMENT, L'OPERATEUR DOIT TOUJOURS RECHERCHER UNE POSITION D'OU IL POURRA MANOEUVRER L'EQUIPEMENT EN TOUTE SECURITE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- CERTAINS EQUIPEMENTS POUVANT ETRE COMMANDES AVEC CETTE RADIOCOMMANDE ONT DES NIVEAUX DE BRUIT ELEVES. L'OPERATEUR DOIT CONNAITRE CES RISQUES ET PORTER DES EQUIPEMENTS DE PROTECTION APPROPRIES, Y COMPRIS UN CASQUE ANTI-BRUIT, POUR REDUIRE LES RISQUES DE BLESSURES.
- CERTAINS EQUIPEMENTS POUVANT ETRE INTERFACES AVEC CETTE RADIOCOMMANDE PRESENTENT DES RISQUES DE FUMEES D'ECHAPPEMENT. L'OPERATEUR DOIT CONNAITRE CES RISQUES ET NE DOIT PAS UTILISER LA RADIOCOMMANDE DANS UN ENVIRONNEMENT OU L'ALIMENTATION D'AIR FRAIS EST INSUFFISANTE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- L'OPERATEUR D'EQUIPEMENTS RADIOCOMMANDES EST RESPONSABLE DE LA MANIPULATION SANS DANGER DE TOUTES LES CHARGES, DANS TOUS LES ENVIRONNEMENTS. LORSQUE L'EQUIPEMENT EST UTILISE AVEC UN FAIBLE ECLAIRAGE, L'OPERATEUR DOIT S'ASSURER QUE L'EQUIPEMENT PEUT ETRE MANOEUVRE SANS DANGER ET QUE TOUS LES INDICATEURS SUR L'EQUIPEMENT ET LES COMMANDES DE LA RADIO SONT BIEN VISIBLES. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- NE PAS SUPPOSER QUE L'ALIMENTATION EST COUPEE DANS LE RECEPTEUR PARCE QUE L'EMETTEUR EST ETEINT. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- LORSQUE L'INTERRUPTEUR D'ARRET DE LA MACHINE EST ACTIVE SUR LA RADIOCOMMANDE, IL EST POSSIBLE QUE CERTAINS COMPOSANTS DE LA MACHINE COMMANDEE RESTENT EN MOUVEMENT. L'INSTALLATEUR DOIT REDUIRE CES RISQUES A L'AIDE DE FREINS OU D'AUTRES DISPOSITIFS POUR GARANTIR QUE TOUTES LES PIECES SONT SECURISEES PENDANT LA PROCEDURE D'ARRET DE LA MACHINE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- UNE PANNE D'ALIMENTATION PEUT DONNER LIEU A DES CONDITIONS DANGEREUSES DANS CERTAINS EQUIPEMENTS COMMANDES PAR LA RADIOCOMMADE. L'INSTALLATEUR DOIT CONNAITRE CES RISQUES ET INSTALLER LA RADIOCOMMANDE DE MANIERE A REDUIRE L'IMPACT QU'UNE PANNE D'ALIMENTATION AURA SUR L'EQUIPEMENT RADIOCOMMANDE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- DES CHARGES OU DES EQUIPEMENTS INSTABLES PEUT DONNER LIEU A DES CONDITIONS DANGEREUSES DANS CERTAINS EQUIPEMENTS. L'INSTALLATEUR DOIT CONNAITRE CES RISQUES ET INSTALLER LA RADIOCOMMANDE DE MANIERE A REDUIRE L'INSTABILITE DE L'EQUIPEMENT OU LES CONDITIONS DE CHARGE. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.
- CONNAITRE ET SUIVRE LES PROCEDURES CORRECTES DE MANIPULATION, DE CHARGE ET D'ELIMINATION DES BATTERIES. DES PROCEDURES INCORRECTES PEUVENT FAIRE EXPLOSER LES BATTERIES OU PROVOQUER DE GRAVES DEGATS. LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER DE GRAVES BLESSURES OU LA MORT ET ENDOMMAGER L'ÉQUIPEMENT.

German

Allgemeine Warnung

SICHERHEITSHINWEISE FÜR PRODUKTHANDBUCH

Magnetek, Inc. (Magnetek) bietet eine breit gefächerte Palette an funkferngesteuerten Produkten, Steuer- und Regeltechnikprodukten und Frequenzumrichtern sowie industriellen Bremsanlagen für Anwendungen in der flurfreien Fördertechnik. Dieses Handbuch wurde von Magnetek erstellt, um Informationen und Empfehlungen für die Installation, Verwendung, Bedienung und Wartung der Fördertechnikprodukte und -systeme von Magnetek (Magnetek-Produkte) bereitzustellen. Jede Person, die Magnetek-Produkte verwendet, bedient, wartet, repariert, installiert oder besitzt sollte die Anweisungen und Sicherheitsempfehlungen in diesem Handbuch für Magnetek-Produkte kennen, verstehen und befolgen.

Die Empfehlungen in diesem Handbuch haben Vorrang vor allen folgenden Anforderungen in Bezug auf Krane, Hubwerke und Hebezeuge:

- Anweisungen, Handbücher und Sicherheitshinweise der Hersteller der Anlagen und Geräte, in denen das Funksystem verwendet wird,
- Werksicherheitsvorschriften und -verfahren der Arbeitgeber und der Besitzer der Anlagen, in denen die Magnetek-Produkte verwendet werden,
- Vorschriften und Richtlinien im Rahmen des Arbeitsschutzgesetzes,
- geltende nationale oder lokale Vorschriften, Richtlinien, Normen und Anforderungen oder
- Sicherheitsnormen und -verfahren für die flurfreie Fördertechnikindustrie.

Dieses Handbuch umfasst oder behandelt nicht die konkreten Anweisungen und Sicherheitshinweise dieser Hersteller oder anderer oben aufgeführter Anforderungen. Eigentümer, Benutzer und Bediener der Magnetek-Produkte sind dafür verantwortlich, alle diese Anforderungen zu kennen, zu verstehen und zu befolgen. Der Eigentümer der Magnetek-Produkte ist dafür verantwortlich, seine Arbeitnehmer über alle oben aufgeführten Anforderungen in Kenntnis zu setzen und sicherzustellen, dass alle Bediener richtig geschult sind. **Niemand darf Magnetek-Produkte verwenden, bevor er sich nicht mit diesen Anforderungen vertraut gemacht hat und in diesen geschult worden ist.**

In diesem Dokument sind WARNHINWEISE bewusst platziert, um kritische Punkte für den Schutz von Personal und Betriebsmitteln hervorzuheben.

WARNUNG: Eine Warnung hebt ein wesentliches Betriebs- oder Wartungsverfahren usw. hervor. Nichtbeachtung könnte Verletzungen oder Tod von Personal oder langfristige physische Gefahren zur Folge haben.

WARNUNGEN DÜRFEN NIEMALS MISSACHTET WERDEN.

Die Sicherheitsrichtlinien in diesem Abschnitt sollen keine Vorschriften oder Richtlinien geltender staatlicher, nationaler, lokaler oder anderer Regulierungsbehörden ersetzen. Bei der Wartung von Funkgeräten immer die geltenden Verfahren zum Freischalten und Sichern gegen

Wiedereinschalten beachten. Die folgenden Informationen sind in Verbindung mit anderen bereits existierenden Vorschriften und Richtlinien zu nutzen. Es ist wichtig, alle Sicherheitshinweise in diesem Abschnitt zu lesen, bevor das Funksteuersystem installiert oder betrieben wird.

ALLGEMEINES

Funkgesteuerte Fördertechnikanlagen arbeiten in verschiedenen Richtungen. Die Anlage wird recht häufig in Bereichen betrieben, in denen Personen in enger Nähe zu Fördertechnikanlagen arbeiten. **Der Bediener muss jederzeit äußerste Vorsicht walten lassen.** Arbeitnehmer müssen ständig wachsam sein, um Unfälle zu verhüten. Die folgenden Empfehlungen wurden eingeschlossen, um zu zeigen, wie vorsichtige und durchdachte Handlungen Verletzungen oder Sachschäden vermeiden oder sogar Leben retten können.

ZUM BETRIEB DER FUNKGESTEUERTEN ANLAGEN BEFUGTE PERSONEN

Nur ausreichend geschulte Personen, die vom Management benannt werden, darf es erlaubt werden, funkgesteuerte Anlagen zu bedienen. Funkgesteuerte Anlagen dürfen von keiner Person mit mangelndem Sehvermögen oder Gehör oder von einer Person, die an einer Erkrankung oder Krankheit leidet, Medikamente einnimmt, die zum Verlust der Kontrolle über Anlagen führen können, oder unter dem Einfluss von Alkohol oder Drogen steht, bedient werden.

SICHERHEITSHINWEISE UND EMPFOHLENE SCHULUNG FÜR BEDIENER

Jeder, der für die Bedienung von funkgesteuerten Anlagen geschult ist, muss mindestens die folgenden Kenntnisse und Fertigkeiten besitzen, bevor er die funkgesteuerte Anlage benutzt.

Der Bediener muss:

- Kenntnisse über Gefahren im Zusammenhang mit der Anlagenbedienung haben
- Kenntnisse der Sicherheitsrichtlinien für funkgesteuerte Anlagen haben
- die Fähigkeit haben, die Entfernung zu beweglichen Objekten zu beurteilen
- wissen, wie vor dem Betrieb richtig zu testen ist
- Kenntnisse der Verwendung der Warnleuchten und Alarme der Anlage haben
- Kenntnisse des richtigen Aufbewahrungsraums für einen Funksteuerempfänger haben, wenn er nicht in Gebrauch ist
- in der Übertragung eines Funksteuerempfängers an eine andere Person geschult sein
- geschult sein, wie und wann unsichere oder ungewöhnliche Betriebsbedingungen gemeldet werden
- alle geltenden Bedienungs- und Wartungsanleitungen, Sicherheitsverfahren, Gesetzesvorschriften und Industrienormen und -vorschriften kennen und beachten

Der Bediener darf nicht:

- Einstellungen oder Steuerungen ohne Genehmigung und richtige Schulung ändern
- Warn- oder Sicherheitsschilder oder -kennzeichnungen entfernen oder verdecken
- die Stromversorgung der funkgesteuerten Anlage eingeschaltet lassen, wenn die Anlage nicht in Betrieb ist
- manuelle Bewegungen mit anderer Kraft als manueller Kraft betätigen
- funkgesteuerte Anlagen betreiben, wenn die niedrige Batteriespannungsanzeige aktiv ist

PRÜFUNG VOR DEM BETRIEB

Alle Warnvorrichtungen prüfen.

Alle Richtungs- und Geschwindigkeitssteuerungen prüfen.

Den Not-Halt des Empfängers prüfen.

WARNHINWEISE

- NUR QUALIFIZIERTE INSTALLATEURE DÜRFEN DIESE FUNKSTEUERANLAGE INSTALLIEREN. DIESE ANLEITUNG MUSS KONSULTIERT WERDEN, UM POTENZIELLE GEFAHREN MIT ANGEKOPPELTER ANLAGE ZU MINIMIEREN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- VOR INSTALLATION UND BETRIEB DIESER ANLAGE DEN INHALT DIESES HANDBUCHS UND DIE BEDIENUNGSANLEITUNG DER ANLAGE ODER DES GERÄTS, MIT DER BZW. DEM DIESE ANLAGE GEKOPPELT WIRD, LESEN UND SICH DAMIT VERTRAUT MACHEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- BEI ALLEN ANLAGEN MUSS EIN NETZSCHÜTZ INSTALLIERT SEIN UND BEI ALLEN KETTENKRANEN, HUBWERKEN, HEBEZEUGEN UND ÄHNLICHEN ANLAGEN MUSS EINE BREMSE EINGEBAUT SEIN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- AN ALLEN FERNGESTEUERTEN ANLAGEN MUSS EINE AKUSTISCHE UND/ODER VISUELLE WARNVORRICHTUNG WIE DURCH GESETZE, VORSCHRIFTEN, RICHTLINIEN ODER INDUSTRIENORM VORGESCHRIEBEN, VORGESEHEN WERDEN. DIESE AKUSTISCHEN UND/ODER VISUELLEN WARNVORRICHTUNGEN MÜSSEN ALLE STAATLICHEN ANFORDERUNGEN ERFÜLLEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- VOR DER WARTUNG FERNGESTEUERTER ANLAGEN DAS ANWENDBARE VERFAHREN ZUM FREISCHALTEN UND SICHERN GEGEN WIEDEREINSCHALTEN BEFOLGEN. VOR VERSUCH VON INSTALLATIONSVERFAHREN IMMER DIE GESAMTE ELEKTRISCHE STROMVERSORGUNG VOM KRAN, HUBWERK, HEBEZEUG ODER EINER ÄHNLICHEN AUSRÜSTUNG ENTFERNEN. VOR DER BERÜHRUNGSSTROMMESSUNG VON ANLAGEN ALLE ELEKTRISCHEN STROMVERSORGUNGSQUELLEN FREISCHALTEN UND GEGEN WIEDEREINSCHALTEN SICHERN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DIE DIREKTEN AUSGÄNGE DIESES PRODUKTS SIND NICHT FÜR DIE DIREKTE ANKOPPLUNG AN SICHERHEITSKRITISCHE, DAUERGESCHALTETE FUNKTIONEN MIT ZWEI ZUSTÄNDEN AUSGELEGT, D. H., MAGNETE, VAKUUMHEBER, PUMPEN, NOTBETRIEBSMITTEL USW. EIN MECHANISCH VERRIEGELNDES ZWISCHENRELAISSYSTEM MIT GESONDERTEN STROMVERSORGUNGSASPEKTEN MUSS VORGESEHEN WERDEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DER BEDIENER DARF KEINEN REPARATURVERSUCH AN FUNKSTEUERTEILEN VORNEHMEN. FALLS PRODUKTLEISTUNGS- ODER SICHERHEITSBEDENKEN AUFTRETEN, MUSS DIE ANLAGE SOFORT AUSSER BETRIEB GENOMMEN UND DIES DER AUFSICHTFÜHRENDEN PERSON GEMELDET WERDEN. BESCHÄDIGTE UND FUNKTIONSUNTÜCHTIGE FUNKSTEUERANLAGEN MÜSSEN

ZUR ÜBERPRÜFUNG UND REPARATUR AN MAGNETEK ZURÜCKGESENDET WERDEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.

- VOR BETRIEB VON ANLAGEN MIT DIESER FUNKSTEUERANLAGE MUSS DIE GESTEUERTE ANLAGE AUF SCHÄDEN UNTERSUCHT WERDEN. BESCHÄDIGTE ANLAGEN NICHT BETREIBEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DIESE FUNKSTEUERANLAGE ENTHÄLT FUNKSENDER UND -EMPFÄNGER, DIE ELEKTROMAGNETISCHE FUNKFREQUENZWELLEN AUSSENDEN. DIESES FUNKGERÄT WURDE GEPRÜFT UND ERFÜLLT DIE NORMEN EN 301489-1 und EN 301489-3. AUSSERDEM ERFÜLLEN DIE 433 MHz DIE NORM EN 300220-2 UND DIE 2,4 GHZ ERFÜLLEN NORM EN 300228-2. ZUR BEGRENZUNG DER ELEKTROMAGNETISCHEN STRAHLENBELASTUNG VON BEDIENERN UND SICHERSTELLUNG DES BESTMÖGLICHEN BETRIEBS DER GERÄTE MUSS DER BEDIENER VERMEIDEN, KÖRPERTEILE IN DIE NÄHE ODER IN KONTAKT MIT DER ANTENNE DES GERÄTS ZU BRINGEN.
- DIESE FUNKSTEUERUNG VERFÜGT ÜBER EINEN INFRAROTSENDER. DER BEDIENER MUSS DIESE RISIKEN KENNEN UND MUSS ES VERMEIDEN, WÄHREND DES BETRIEBS DIREKT IN DEN INFRAROTSENDER ZU BLICKEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE VERLETZUNG ZUR FOLGE HABEN.
- EINIGE ANLAGEN, DIE MIT DIESER FUNKSTEUERUNG GEKOPPELT WERDEN KÖNNEN, HABEN MANUELLE STEUERUNGEN ZUSAMMEN MIT DEN FUNKSTEUERUNGEN. DER BEDIENER MUSS ORDNUNGSGEMÄSS QUALIFIZIERT SEIN, UM DIE ANLAGE MIT MANUELLEN STEUERUNGEN ZU BEDIENEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DER BEDIENER DER FUNKGESTEUERTEN ANLAGE IST FÜR DEN SICHEREN BETRIEB DER ANLAGE UNTER ALLEN UMGEBUNGSBEDINGUNGEN VERANTWORTLICH. BEI BETRIEB DER ANLAGE MUSS DER BEDIENER IMMER EINE SICHERE POSITION SUCHEN, VON DER AUS ER DIE ANLAGE BEDIENT. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- EINIGE ANLAGEN, DIE MIT DIESER FUNKSTEUERUNG BEDIENT WERDEN KÖNNEN, HABEN HOHE PEGEL AN AKUSTISCHEM GERÄUSCH. DER BEDIENER MUSS SICH DIESER RISIKEN IMMER BEWUSST SEIN UND ORDNUNGSGEMÄSSE SCHUTZKLEIDUNG, EINSCHLIESSLICH GEHÖRSCHUTZ, TRAGEN, UM DIE GEFAHR VON VERLETZUNGEN ZU MINIMIEREN.
- EINIGE ANLAGEN, DIE MIT DIESER FUNKSTEUERUNG GEKOPPELT WERDEN KÖNNEN, HABEN GEFAHREN IM HINBLICK AUF MOTORABGASE. DER BEDIENER MUSS SICH DIESER RISIKEN BEWUSST SEIN UND DARF DIE FUNKSTEUERUNG NICHT IN EINEM UMFELD BETREIBEN, IN DEM EINE UNZUREICHENDE FRISCHLUFTZUFUHR VORLIEGT. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DER BEDIENER DER FUNKGESTEUERTEN ANLAGE IST FÜR DIE SICHERE HANDHABUNG ALLER LASTEN UNTER ALLEN UMGEBUNGSBEDINGUNGEN VERANTWORTLICH. BEI BETRIEB DER ANLAGE BEI UNGÜNSTIGEN LICHTBEDINGUNGEN MUSS DER BEDIENER SICHERSTELLEN, DASS DIE ANLAGE SICHER BETRIEBEN WERDEN KANN UND ALLE ANZEIGEN AN DER ANLAGE UND DEN FUNKSTEUERUNGEN GESEHEN WERDEN KÖNNEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- ES DARF NICHT VORAUSGESETZT WERDEN, DASS DIE SPANNUNG IM EMPFÄNGER AUSGESCHALTET IST, WEIL DER SENDER AUSGESCHALTET IST. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- WÄHREND DER BETÄTIGUNG DES MASCHINEN-STOPPSCHALTERS AN DER FERNSTEUERUNG KANN DIE GESTEUERTE MASCHINE BAUTEILE HABEN, DIE IN BEWEGUNG BLEIBEN. DER INSTALLATEUR MUSS DIESE GEFAHREN MIT BREMSEN ODER ANDEREN VORRICHTUNGEN MINIMIEREN, UM SICHERZUSTELLEN, DASS ALLE TEILE DER ANLAGE WÄHREND DER ABSCHALTUNG DURCH EINEN MASCHINENSTOPP IN EINEN SICHEREN ZUSTAND VERSETZT WERDEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- EIN AUSFALL DER STROMVERSORGUNG KANN ZU UNSICHEREN BEDINGUNGEN IN EINIGEN ANLAGEN FÜHREN, DIE VON DER FUNKSTEUERUNG BEDIENT WERDEN. DER INSTALLATEUR MUSS DIESE RISIKEN KENNEN UND DIE FUNKSTEUERUNG SO INSTALLIEREN, DASS DIE AUSWIRKUNG EINES AUSFALLS DER STROMVERSORGUNG AUF FUNKGESTEUERTE ANLAGEN MINIMIERT. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- INSTABILE LASTEN ODER GERÄTE KÖNNEN ZU UNSICHEREN BEDINGUNGEN BEI EINIGEN ANLAGEN FÜHREN. DER INSTALLATEUR MUSS DIESE RISIKEN KENNEN UND DIE FUNKSTEUERUNG SO INSTALLIEREN, DASS DIES INSTABILE GERÄTE- ODER LASTBEDINGUNGEN MINIMIERT. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.
- DIE ORDNUNGSGEMÄSSEN VERFAHREN FÜR DEN UMGANG MIT, DAS AUFLADEN UND DIE ENTSORGUNG VON BATTERIEN KENNEN UND BEACHTEN. UNSACHGEMÄSSE BATTERIEVERFAHREN KÖNNEN DAZU FÜHREN, DASS BATTERIEN EXPLODIEREN, ODER ANDERE SCHWERE SCHÄDEN ZUR FOLGE HABEN. NICHTBEACHTUNG DIESER WARNUNG KÖNNTE SCHWERE VERLETZUNGEN ODER TOD ODER SACHSCHÄDEN ZUR FOLGE HABEN.

Italian

Avvertenze comuni

MANUALE DI INFORMAZIONI SULLA SICUREZZA DEI PRODOTTI

Magnetek, Inc. (Magnetek) offre una vasta gamma di telecomandi radio, comandi, azionamenti a frequenza variabile e impianti di frenatura industriali per applicazioni di movimentazione aerea dei materiali. Il presente manuale è stato stilato da Magnetek per fornire informazioni e prescrizioni di installazione, uso, funzionamento e assistenza dei sistemi e prodotti di movimentazione dei materiali Magnetek (prodotti Magnetek). Chiunque utilizzi, azioni, installi prodotti Magnetek, ne sia il proprietario o si occupi della loro manutenzione e assistenza deve conoscere e rispettare le istruzioni e le prescrizioni di sicurezza relative agli stessi contenute in questo manuale.
Le prescrizioni riportate nel manuale non hanno la priorità rispetto ai seguenti requisiti relativi a gru, paranchi e dispositivi di sollevamento:

- Istruzioni, manuali e avvertenze di sicurezza dei costruttori delle apparecchiature su cui si utilizza l'impianto radio
- Regole e procedure per la sicurezza dello stabilimento adottate dai dipendenti e dai proprietari delle strutture in cui vengono usati i prodotti Magnetek
- Regolamenti promulgati dalla Occupational Health and Safety Administration (OSHA)
- Codici, ordinanze, norme e requisiti locali o statali applicabili e
- Norme e prassi di sicurezza del settore per la movimentazione aerea dei materiali.

Il presente manuale non comprende e non riporta le istruzioni e le avvertenze di sicurezza specifiche dei suddetti costruttori o qualsiasi altro requisito elencato in precedenza. È responsabilità dei proprietari, degli utilizzatori e degli operatori dei prodotti Magnetek conoscere, comprendere e seguire tutti i requisiti summenzionati. È responsabilità dei proprietari dei prodotti Magnetek accertarsi che i propri dipendenti siano consapevoli di tutti i requisiti elencati in precedenza e che tutti gli operatori siano adeguatamente addestrati. **L'uso dei prodotti Magnetek non deve essere consentito a chi non conosce tali requisiti e non è stato addestrato rispetto a essi.**

In questo documento sono state deliberatamente inserite AVVERTENZE che evidenziano aspetti fondamentali per la protezione del personale e delle apparecchiature.

AVVERTENZA: Ogni avvertenza evidenzia un'importante procedura, prassi o altro di funzionamento o manutenzione che, se non attentamente seguita, può causare al personale lesioni anche mortali o danni fisici a lungo termine.

LE AVVERTENZE NON DEVONO MAI ESSERE IGNORATE.

Le norme di sicurezza contenute in questa sezione non intendono sostituire alcuna norma o regolamento emanato da qualsiasi organizzazione regolamentatrice locale o statale competente in materia. Durante gli interventi di manutenzione di qualsiasi apparecchiatura radio, attenersi sempre alla procedura di bloccaggio ed etichettatura vigente in loco. Le seguenti informazioni devono essere applicate unitamente alle altre norme o regolamenti già in essere. Prima di installare o azionare il radiocomando, è importante leggere tutte le informazioni relative alla sicurezza contenute in questa sezione.

GENERALITÀ

L'apparecchiatura radiocomandata di movimentazione dei materiali agisce in diverse direzioni e molto spesso è azionata in aree in cui le persone lavorano nelle immediate vicinanze della stessa. **L'operatore deve quindi esercitare in ogni momento la massima cautela.** Per evitare incidenti, i lavoratori devono essere costantemente all'erta. Le seguenti prescrizioni sono state inserite per indicare come si possano evitare lesioni e danni alle apparecchiature e persino salvare vite umane agendo in modo prudente e attento.

PERSONE AUTORIZZATE AD AZIONARE LE APPARECCHIATURE RADIOCOMANDATE

Le apparecchiature radiocomandate devono essere azionate esclusivamente da persone adeguatamente addestrate designate dalla direzione. Le apparecchiature radiocomandate non devono essere azionate da persone con carenze visive o uditive o affette da disturbi o malattie, che assumono medicine che possono causare perdita del controllo dell'apparecchiatura o sotto l'effetto di alcool o droghe.

INFORMAZIONI DI SICUREZZA E ADDESTRAMENTO PRESCRITTO PER GLI OPERATORI

Chiunque venga addestrato all'azionamento delle apparecchiature radiocomandate, prima di poter iniziare deve possedere quanto meno le seguenti conoscenze e competenze.

L'operatore deve:

- conoscere i pericoli connessi all'azionamento dell'apparecchiatura
- essere al corrente delle norme di sicurezza relative all'apparecchiatura radiocomandata
- essere in grado di valutare la distanza degli oggetti in movimento
- sapere come eseguire i test appropriati prima dell'azionamento
- conoscere l'uso delle spie e degli allarmi dell'apparecchiatura
- sapere dove riporre adeguatamente il ricevitore del radiocomando quando non lo si usa
- essere addestrato al trasferimento a un'altra persona del ricevitore del radiocomando
- essere addestrato su come e quando segnalare condizioni operative non sicure o inusuali
- conoscere e seguire tutti i manuali di funzionamento e manutenzione, le procedure di sicurezza, i requisiti di regolamentazione e le norme e i codici del settore

L'operatore non deve:

- modificare impostazioni e comandi senza previa autorizzazione e adeguato addestramento
- rimuovere o nascondere alcuna avvertenza ed etichetta o targhetta di sicurezza
- tenere inserita l'apparecchiatura radiocomandata quando non è in uso
- eseguire i movimenti manuali mediante una potenza non manuale
- azionare l'apparecchiatura radiocomandata quando la spia segnala carica della batteria insufficiente

TEST PRIMA DELL'AZIONAMENTO

Testare tutti i dispositivi di segnalazione.

Testare tutti i comandi di direzione e velocità.

Testare l'arresto di emergenza del ricevitore.

AVVERTENZE

- L'APPARECCHIATURA DI RADIOCOMANDO DEVE ESSERE INSTALLATA ESCLUSIVAMENTE DA INSTALLATORI QUALIFICATI. CONSULTARE QUESTO MANUALE PER RIDURRE AL MINIMO I PERICOLI POTENZIALI POSTI DALL'APPARECCHIATURA INTERFACCIATA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- PRIMA DI INSTALLARE E METTERE IN FUNZIONE L'APPARECCHIATURA, LEGGERE E COMPRENDERE IL CONTENUTO DI QUESTO MANUALE E DEL MANUALE DI FUNZIONAMENTO DELL'APPARECCHIATURA O DEL DISPOSITIVO CON CUI DEVE INTERFACCIARSI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.

- SU TUTTE LE APPARECCHIATURE DEVE ESSERE INSTALLATO UN CONTATTORE LINEA PRINCIPALE E TUTTE LE GRU, I PARANCHI, I DISPOSITIVI DI SOLLEVAMENTO E LE APPARECCHIATURE ANALOGHE DEVONO ESSERE DOTATI DI FRENO. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- FORNIRE TUTTE LE APPARECCHIATURE RADIOCOMANDATE DI UN DISPOSITIVO DI SEGNALAZIONE ACUSTICO E/O VISIVO SECONDO QUANTO RICHIESTO DAL CODICE, DAL REGOLAMENTO O DALLA NORMA DI SETTORE. I DISPOSITIVI DI SEGNALAZIONE ACUSTICI E/O VISIVI DEVONO SODDISFARE I REQUISITI GOVERNATIVI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- PRIMA DI SOTTOPORRE A MANUTENZIONE QUALSIASI APPARECCHIATURA TELECOMANDATA, ESEGUIRE LA PROCEDURA DI BLOCCAGGIO ED ETICHETTATURA VIGENTE IN LOCO. PRIMA DI ESEGUIRE QUALSIASI PROCEDURA DI INSTALLAZIONE, DISINSERIRE SEMPRE OGNI FORMA DI ALIMENTAZIONE ELETTRICA ALLE GRU, AI PARANCHI, AI DISPOSITIVI DI SOLLEVAMENTO E ALLE APPARECCHIATURE ANALOGHE. PRIMA DI TESTARE MANUALMENTE QUALSIASI APPARECCHIATURA, DISATTIVARE ED ETICHETTARE TUTTE LE FONTI DI ALIMENTAZIONE ELETTRICA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- LE USCITE DIRETTE DI QUESTO PRODOTTO NON SONO PROGETTATE PER L'INTERFACCIAMENTO DIRETTO CON FUNZIONI COSTANTI A DUE STATI ESSENZIALI PER LA SICUREZZA, VALE A DIRE: MAGNETI, SOLLEVATORI A VUOTO, POMPE, APPARECCHIATURE DI EMERGENZA E COSÌ VIA. FORNIRE UN IMPIANTO RELÈ INTERMEDIO BLOCCAGGIO MECCANICO CON ALIMENTAZIONE SEPARATA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- L'OPERATORE NON DEVE MAI TENTARE DI RIPARARE IL RADIO CONTROLLER. SE SI RILEVANO PROBLEMI RELATIVI ALLE PRESTAZIONI DEL PRODOTTO O ALLA SICUREZZA, DISATTIVARE IMMEDIATAMENTE L'APPARECCHIATURA E SEGNALARLI AL RESPONSABILE. SE IL RADIO CONTROLLER È DANNEGGIATO E NON FUNZIONANTE, RISPEDIRLO A MAGNETEK PER LA VALUTAZIONE DEL DANNO E LA RIPARAZIONE. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- PRIMA DI AZIONARE L'APPARECCHIATURA CON IL RADIOCOMANDO, VERIFICARE CHE NON SIA DANNEGGIATA E SE È DANNEGGIATA NON METTERLA IN FUNZIONE. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- L'APPARECCHIATURA DI RADIOCOMANDO CONTIENE RADIOTRASMETTITORI E RADIORICEVITORI CHE IRRADIANO ONDE ELETTROMAGNETICHE A RADIOFREQUENZA. È STATA TESTATA ED È CONFORME ALLE NORME EN 301 489-1 ED EN 301 489-3. INOLTRE, L'APPARECCHIATURA DA 433MHZ È CONFORME ALLA NORMA EN 300 220-2 E QUELLA DA 2,4 GHZ È CONFORME ALLA NORMA EN 300 228-2. AL FINE DI LIMITARE L'ESPOSIZIONE DEGLI OPERATORI ALLE RADIAZIONI ELETTROMAGNETICHE E ASSICURARE IL MIGLIOR FUNZIONAMENTO POSSIBILE DELL'APPARECCHIATURA, L'OPERATORE DEVE EVITARE LA VICINANZA E IL CONTATTO DI QUALSIASI PARTE DEL CORPO CON L'ANTENNA DELL'UNITÀ.
- IL RADIO CONTROLLER È DOTATO DI TRASMETTITORE A INFRAROSSI. L'OPERATORE DEVE ESSERE CONSAPEVOLE DEI RISCHI CORRELATI ED EVITARE DI GUARDARE DIRETTAMENTE NEL TRASMETTITORE DURANTE IL FUNZIONAMENTO. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE LESIONI.
- ALCUNE APPARECCHIATURE INTERFACCIABILI CON IL RADIO CONTROLLER SONO EQUIPAGGIATE CON COMANDI MANUALI OLTRE CHE CON COMANDI RADIO. L'OPERATORE DEVE ESSERE ADEGUATAMENTE ADDESTRATO ALL'AZIONAMENTO DELL'APPARECCHIATURA MEDIANTE I COMANDI MANUALI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- L'OPERATORE DELL'APPARECCHIATURA TELECOMANDATA È RESPONSABILE DEL SUO FUNZIONAMENTO IN CONDIZIONI DI SICUREZZA IN TUTTE LE CONDIZIONI AMBIENTALI. DURANTE IL FUNZIONAMENTO DELL'APPARECCHIATURA, L'OPERATORE DEVE COLLOCARSI SEMPRE IN UNA POSIZIONE SICURA DA CUI AZIONARLA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- ALCUNE APPARECCHIATURE COMANDABILI TRAMITE IL RADIO CONTROLLER PRODUCONO LIVELLI ELEVATI DI RUMOROSITÀ. L'OPERATORE DEVE ESSERE CONSAPEVOLE DEI RISCHI CORRELATI E INDOSSARE DISPOSITIVI DI PROTEZIONE ADEGUATI, TRA CUI DISPOSITIVI DI PROTEZIONE ACUSTICA, PER RIDURRE AL MINIMO IL RISCHIO DI LESIONI.
- ALCUNE APPARECCHIATURE INTERFACCIABILI CON IL RADIO CONTROLLER COMPORTANO RISCHI CORRELATI AI FUMI DI SCARICO DEL MOTORE. L'OPERATORE DEVE ESSERE CONSAPEVOLE DEI RISCHI CORRELATI E NON AZIONARE IL RADIO CONTROLLER IN AMBIENTI CON ALIMENTAZIONE DI ARIA FRESCA INSUFFICIENTE. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- L'OPERATORE DELL'APPARECCHIATURA TELECOMANDATA È RESPONSABILE DELLA MOVIMENTAZIONE SICURA DI TUTTI I CARICHI IN OGNI CONDIZIONE AMBIENTALE. DURANTE IL FUNZIONAMENTO DELL'APPARECCHIATURA IN CONDIZIONI DI LUCE SCARSA, L'OPERATORE DEVE ASSICURARSI CHE SIA POSSIBILE AZIONARLA IN MODO SICURO E CHE TUTTI GLI INDICATORI DELLA STESSA E I RADIO COMANDI SIANO VISIBILI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- NON SI DEVE RITENERE CHE L'ALIMENTAZIONE DEL RICEVITORE SIA DISATTIVATA SOLO PERCHÈ IL TRASMETTITORE È DISINSERITO. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- IN CASO DI AZIONAMENTO DELL'INTERRUTTORE DI ARRESTO MACCHINA DEL RADIO CONTROLLER, ALCUNI COMPONENTI DELLA MACCHINA RADIOCOMANDATA POSSONO RESTARE IN MOVIMENTO. L'INSTALLATORE DEVE RIDURRE AL MINIMO I RISCHI CORRELATI MEDIANTE FRENI O ALTRI DISPOSITIVI AL FINE DI ASSICURARE CHE TUTTE LE PARTI DELL'APPARECCHIATURA VENGANO POSTE IN STATO DI SICUREZZA DURANTE L'ARRESTO MACCHINA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- I GUASTI DELL'ALIMENTAZIONE ELETTRICA POSSONO CREARE CONDIZIONI NON SICURE NEL CASO DI ALCUNE APPARECCHIATURE COMANDATE MEDIANTE RADIO CONTROLLER. L'INSTALLATORE DEVE ESSERE CONSAPEVOLE DEI RISCHI CORRELATI E MONTARE IL

RADIO CONTROLLER IN MODO DA RIDURRE AL MINIMO LE CONSEGUENZE DELLE INTERRUZIONI DELL'ALIMENTAZIONE ELETTRICA PER L'APPARECCHIATURA TELECOMANDATA. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.

- APPARECCHIATURA O CARICHI INSTABILI POSSONO CREARE CONDIZIONI NON SICURE NEL CASO DI ALCUNE APPARECCHIATURE. L'INSTALLATORE DEVE ESSERE CONSAPEVOLE DEI RISCHI CORRELATI E MONTARE IL RADIO CONTROLLER IN MODO DA RIDURRE AL MINIMO LE CONDIZIONI DI INSTABILITÀ DELL'APPARECCHIATURA O DEI CARICHI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.
- L'OPERATORE DEVE CONOSCERE E RISPETTARE LE PROCEDURE APPROPRIATE DI MOVIMENTAZIONE, RICARICA E SMALTIMENTO DELLE BATTERIE. PROCEDURE NON ADEGUATE POSSONO PROVOCARE L'ESPLOSIONE DELLE BATTERIE O PROVOCARE ALTRI GRAVI DANNI. LA MANCATA OSSERVANZA DI QUESTA AVVERTENZA PUÒ PROVOCARE GRAVI LESIONI ANCHE MORTALI E DANNI ALL'APPARECCHIATURA.

Japanese

全般的な注意事項

製品取扱説明書の安全情報

Magnetek, Inc. （以下「Magnetek」）は、頭上運搬装置用の無線遠隔操縦機、制御装置、可変（調整可能）周波数駆動、産業用ブレーキシステム等を幅広くお届けしております。 本説明書は、Magnetek の資材運搬関連製品およびシステム（以下「Magnetek 製品」）の設置/取り付け、使用、操作および保守サービスに関する情報や推奨事項を提供する目的で、Magnetek が用意いたしました。 Magnetek 製品を、使用、管理、保守、設置または所有される方には、本説明書に記載の手順および安全上の推奨事項を理解し、遵守していただくことをお願いしております。

本説明書にある推奨事項は、クレーン、ホイスト、吊り上げ装置に関する以下のいずれの要件にも優先するものではありません。

- 無線システムを使用する装置の製造業者から提供される作業指示書、取扱説明書、および安全上の警告
- Magnetek 製品を使用する施設の従業員および所有者のプラント安全規則や安全手順
- 労働衛生および安全管理局発行の法令（OSHA）
- 施設の管轄区域、市町村、都道府県、または国の条例、基準および要件
- 頭上運搬機械業界の安全規格および慣行

これらの製造業者に固有の作業指示書や安全上の警告、あるいは上記に示すその他の要件は、本説明書では一切取り扱っておりません。 これらの要件をすべて理解し、遵守する責任は、Magnetek 製品の所有者、ユーザー、およびオペレーターに委ねられています。 Magnetek 製品の所有者は、従業員に上記の要件をすべて認識させ、オペレーター全員が適切に訓練されていることを確認する責任があります。 **これらの要件に精通し、訓練を受ける前に Magnetek 製品を使用すべきではありません。**

このドキュメントは、作業員や機器の保護、欠陥や事故を制限するために、「警告」メッセージが強調されています。

警告 – 厳密に従わなければ、作業員の傷害または死亡を招く、あるいは長期的な物理的危害を与える可能性がある重要な操作/保守手順, 慣行などを、「警告」によって強調しています。

警告を無視してはいけません。

このセクションの安全規則は、該当区域、市町村、都道府県、国の所轄官庁の条例または法令に代わるものではありません。 無線装置の保守を実施するときは、必ず所轄区域のロックアウト/タグアウト手順に従ってください。 以下の情報は、現存する他の規則や条例と併せて適用されるよう意図されています。 無線制御システムの設置または操作を行う前に、このセクションに記載の安全情報すべてに必ず目を通してください。

概要

無線制御による資材運搬機器は多方向に移動します。 作業員が作業する区域のすぐ近くで運搬機器が運転されることは、かなり頻繁にあります。 **オペレーターは常に細心の注意を払う必要があります。** 作業員は、事故を防止するために常に注意が必要です。 以下の推奨事項は、慎重かつ思慮深く行動することで、傷害または装置への損傷を防ぎ、命を救うケースさえあることを示すために含まれています。

無線操縦装置の操作を許可される者

制御装置の管理および監督者の任命により適切な訓練を受けた者のみに、無線制御装置の操作を許可します。

視力や聴力が弱い者、障害や疾病に罹患している可能性がある者、装置制御の不能につながる可能性がある薬を服用している者、アルコールまたは薬物の影響下にある者に、無線制御装置を操作させないでください。

オペレーター向けの安全情報 & 推奨トレーニング

無線操縦装置の操縦トレーニングを受ける者は、装置を使用する前に少なくとも以下の知識とスキルを習得しておく必要があります。

オペレーターに必要な知識とスキルとは：

- 装置の操作に関係する危険要因の知識
- 無線操縦装置に関する安全規則の知識
- 物体の移動距離を判断する能力
- 機器を操作する前の点検手順
- 機器の警告灯やブザーの使い方の知識
- 使用していない無線制御受信機を適切なスペースに収納する知識
- 別のユーザーへの無線制御受信機の譲渡に関するトレーニング
- 危険なまたは異常な運転状況をレポートする方法と、レポート時期に関するトレーニング
- 該当する操作・保守説明書、安全手順、規制要件、および業界標準・規範への理解と遵守

オペレーターが守きではな事

- 承認および適切なトレーニングなしに設定やコントロールを変更すること
- 警告、安全ラベルまたはタグを外したり隠したりすること
- 無線操縦装置を操作していないときに電源を入れたままにすること
- 人力以外の手段で手動運転を行うこと
- 低電池残量インジケータが点灯しているときに無線操縦装置を操作すること

操作前の点検

警告デバイスをすべて点検します。

方向および速度コントロールをすべて点検します。

受信機の緊急停止機能を点検します。

警告

- この無線操縦装置の設置は、正規資格を有する業者のみに行わせること。 この取扱説明書を参照して、この装置の接続に起因する潜在的な危険を最小限に抑えるように努めてください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- この装置を設置し操作する前に、本説明書と、装置またはこの装置を接続する機器の取扱説明書を一読し、内容への理解を深めること。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- すべての装置の設置は主線の張設業者に行わせること。牽引クレーン、ホイスト、吊り上げ装置および同種の装置にブレーキを設けること。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 規制、条例または業界基準の定めるところにより、すべての遠隔制御装置に可聴および/または可視警報手段を設置すること。 これらの可聴および/または可視警告装置は、行政上のあらゆる要件を満たす必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 遠隔操縦装置の保守を実施する前に、地元自治体などが定めるロックアウト/タグアウト手順に従うこと。 クレーン、ホイスト、吊り上げ装置または同様の装置について任意の設置手順を試みる前に、必ず電力をすべて遮断してください。 装置のタッチテストを実施する前に、すべての電源を切り、タグアウト（操作禁止を明示）を実施してください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- この製品の直接出力は、2段階のセーフティクリティカルな保守機能（磁石、真空吊り具、ポンプ、緊急装置等）に直接接続されるように設計されていません。 個別の電源機構と機械的ロッキング機能を備えた中継システムを装備する必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- オペレーターは、決して無線コントローラーの修理を行わないこと。 製品の性能や安全性の懸念が認められた場合, ただちに機器の操作を中止し、監督者に報告する必要があります。 破損し操作不能となった無線コントローラーは、評価および修理のために MAGNETEK まで返送してください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- この無線操縦システムを接続して装置を操縦する前に、操縦する装置を点検して故障等がないことを確認する必要があります。 故障している装置を操縦しないでください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- この無線操縦装置には、無線周波数電磁波を発する無線送信機と受信機が搭載されています。 この装置は、欧州の無線規格 EN 301 489-1 および EN 301 489-3 の適合性確認を済ませ、それらに準拠しています。 さらに、433MHZ は規格 EN 300 220-2 に準拠し、2.4GHZ は規格 EN 300 228-2 に準拠しています。 オペレーターに対する電子放射線の暴露を制限し、かつ可能な範囲で最高の装置操作を確実に行うために、オペレーターは装置のアンテナの付近で作業したり、アンテナに触れたりしないでください。
- この無線コントローラーには赤外線送信機が搭載されています。 オペレーターはこれらのリスクを認識し、操作中に送信機の赤外線を直接見ないようにしてください。 この警告に従わない場合、傷害が生じる恐れがあります。
- この無線コントローラーに接続可能な機器の中には、無線および手動による制御機能を備えているものがあります。 オペレーターは、手動制御により装置を操作するための適正資格を有する必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 運転無線操縦装置のオペレーターは、あらゆる環境条件下で装置を安全に操作する責任があります。 装置を操作している間、オペレーターは常に装置を安全に操作できる位置に配置するようにしてください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- この無線コントローラーにより操作可能な装置の中には、高レベルの騒音を出す装置があります。 オペレーターはこれらのリスクを認識し、傷害の危険性を最小限に抑えるために聴覚保護を含む適切な安全装備を着用する必要があります。
- この無線コントローラーを接続する装置の中には、エンジン排気の危険性を有するものがあります。 オペレーターはこれらのリスクを認識し、新鮮な空気が十分に供給されない環境では無線コントローラーを操作しないでください。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 無線操縦装置のオペレーターは、あらゆる環境条件ですべての負荷を安全に取り扱う責任があります。 暗い場所で装置を操作する場合、オペレーターは装置を安全に操作できること、および装置や無線コントロールのインジケータがすべて可視状態にあることを確認する必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 送信機の電源をオフにしたときに、受信機の電源もオフになるとは限りません。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 無線コントローラーの機械停止スイッチを投入している間、操作する機械の部品がまだ作動を続けている可能性があります。 設置業者は、機械の停止シャットダウン中に装置の全部品がすべて確実に安全な状態になるように、ブレーキやその他の装置を取り付け、これらのリスクを最小限に抑える必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。

- 電源装置の故障のために、無線コントローラーにより制御される装置が危険な状態に陥る可能性があります。 設置業者はこれらのリスクを認識し、電源故障が無線操縦装置に及ぼす影響を最小限に抑える方法で、無線コントローラーを取り付ける必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- 負荷や装置が不安定な場合、装置によっては危険な状態に陥る可能性があります。 設置業者はこれらのリスクを認識し、不安定な装置または負荷条件を最小限に抑える方法で無線コントローラーを取り付ける必要があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。
- バッテリーの適切な取扱、充電および廃棄手順を理解し、それらに従うこと。 バッテリーの取扱が不適切な場合、バッテリーの爆発やその他の深刻な損害をもたらす可能性があります。 この警告に従わない場合、重傷または死亡に至る、あるいは装置損傷が発生する恐れがあります。

Russian

Общие предупреждения

ИНФОРМАЦИЯ ПО ТЕХНИКЕ БЕЗОПАСНОСТИ РУКОВОДСТВА ПО ЭКСПЛУАТАЦИИ ПРОДУКЦИИ

Компанией Magnetek, Inc. (Magnetek) предлагается широкий ассортимент продукции с дистанционным радиоуправлением, управляющего оборудования, частотно-регулируемых приводов и промышленных тормозных систем для применения в подвесных системах для транспортировки материалов. Настоящее руководство подготовлено компанией Magnetek с целью предоставления информации и рекомендаций по установке, эксплуатации, работе и техническому обслуживанию продукции и систем компании Magnetek для транспортировки материалов (продукции компании Magnetek). Любое лицо, отвечающее за эксплуатацию, работу, техническое обслуживание и установку продукции компании Magnetek или владеющее ним должно ознакомиться, уяснить и соблюдать инструкции и рекомендации по технике безопасности, которые приведены в настоящем руководстве для продукции компании Magnetek.

Рекомендации, приведенные в настоящем руководстве, не имеют преимущественного значения относительно любых следующих требований, относящихся к кранам, подъемникам и подъемным устройствам:

- Инструкции, руководства и предупреждения по технике безопасности производителей оборудования, в котором используется радиосистема,
- Заводские правила техники безопасности и процедуры работы служащих и владельцев производственных мощностей, на которых используется продукция компании Magnetek,
- Правила, изданные администрацией по технике безопасности и охране труда (OSHA),
- Применимые нормы и правила, постановления, стандарты и требования местного уровня, уровня штата и федерального уровня, или
- Стандарты и нормы техники безопасности, относящиеся к подвесным системам для транспортировки материалов.

В настоящем руководстве не описываются и приводятся ссылки на конкретные инструкции и предупреждения техники безопасности данных производителей или любые иные требования, перечисленные выше. Владельцы, пользователи и операторы продукции компании Magnetek несут ответственность за знание, понимание и соблюдение всех данных требований. Владелец продукции компании Magnetek несет ответственность за ознакомление всех своих служащих со всеми перечисленными выше требованиями и гарантию соответствующего обучения всех операторов. **Ни одному лицу не разрешается пользоваться продукцией компании Magnetek до ознакомления и обучения данным требованиям.**

В различных разделах настоящего документа сознательно приведены предписывающие ПРЕДУПРЕЖДЕНИЯ для обращения внимания на моменты, критические для обеспечения безопасности персонала и оборудования.

ПРЕДУПРЕЖДЕНИЕ – Предупреждение служит для обращения внимания на важную процедуру, технику и т.п. эксплуатации или технического обслуживания, несоблюдение которой может привести к травме или смерти персонала, или продолжительной опасности для здоровья.

КАТЕГОРИЧЕСКИ ЗАПРЕЩАЕТСЯ ИГНОРИРОВАТЬ ПРЕДУПРЕЖДЕНИЯ.

Правила техники безопасности, приведенные в настоящем разделе, не служат для замены каких-либо правил или норм любых соответствующих правительственных организаций местного уровня, уровня штата или федерального уровня. При техническом обслуживании любого радиооборудования необходимо обязательно придерживаться местных процедур блокировки и маркировки. Приведенная ниже информация предназначена для использования в сочетании с другими, уже применяемыми правилами или нормами. Перед установкой или эксплуатацией системы радиоуправления необходимо ознакомиться со всей информацией по технике безопасности, приведенной в настоящем разделе.

ОБЩАЯ ИНФОРМАЦИЯ

Радиоуправляемое оборудование для транспортировки материалов функционирует в нескольких направлениях. Достаточно часто оборудование для транспортировки материалов работает в местах, где рядом с ним работают люди. **Оператор должен постоянно быть предельно внимательным**. Рабочие должны быть постоянно начеку для предотвращения возможных несчастных случаев. Следующие рекомендации приведены для описания того, каким образом осторожные и продуманные действия могут способствовать предотвращению травм и повреждения оборудования, или даже спасти жизнь.

ЛИЦА, УПОЛНОМОЧЕННЫЕ ДЛЯ РАБОТЫ С РАДИОУПРАВЛЯЕМЫМ ОБОРУДОВАНИЕМ

К эксплуатации радиоуправляемого оборудования могут допускаться только соответственно обученные лица, назначенные руководством.

К эксплуатации радиоуправляемого оборудования не должны допускаться любые лица с дефектами зрения или слуха; лица, которые могут страдать от какого-либо расстройства или болезни; лица, принимающие лекарственные средства, которые могут отрицательно сказаться на способности управлять оборудованием; или лица, находящиеся под воздействием алкоголя или наркотических средств.

ИНФОРМАЦИЯ ПО ТЕХНИКЕ БЕЗОПАСНОСТИ И РЕКОМЕНДОВАННОЕ ОБУЧЕНИЕ ДЛЯ ОПЕРАТОРОВ

Любое лицо, обучаемое работе с радиоуправляемым оборудованием, перед допуском к работе с таким оборудованием должно обладать, как минимум, следующими знаниями и навыками.

Оператор должен:

- быть осведомленным об опасностях, присущих работе оборудования
- знать правила техники безопасности при работе с радиоуправляемым оборудованием
- быть способным оценивать расстояние до движущихся объектов/между ними
- быть осведомленным о правильном порядке проведения испытаний оборудования перед его эксплуатацией
- быть осведомленным об использовании предупреждающих ламп/светоиндикаторов и сигналов тревоги оборудования
- быть осведомленным о надлежащем месте хранения неиспользуемого приемника радиоуправления
- быть обучен порядку передачи приемника радиоуправления другому лицу
- быть обучен тому, каким образом и в каком случае следует сообщать о небезопасных или нетипичных условиях эксплуатации
- знать и соблюдать все применимые руководства по эксплуатации и техническому обслуживанию, правила техники безопасности, законодательные/нормативные требования, а также промышленные стандарты и правила

Оператор не должен:

- изменять какие-либо настройки или средства управления без разрешения и соответствующего обучения
- снимать или закрывать какие-либо предупреждающие таблички или обозначения, или же таблички и обозначения по технике безопасности
- оставлять включенным питание радиоуправляемого оборудования, когда оно не работает
- выполнять ручные движения каким-либо способом, отличным от физического усилия
- работать с радиоуправляемым оборудованием при включенном индикаторе низкого заряда аккумулятора

ПРЕДЭКСПЛУАТАЦИОННЫЕ ИСПЫТАНИЯ

Проверьте все предупреждающие устройства.

Проверьте все средства управления, отвечающие за направление и скорость перемещения.

Проверьте функцию аварийного останова приемника.

ПРЕДУПРЕЖДЕНИЯ

- УСТАНОВКА ДАННОГО РАДИОУПРАВЛЯЕМОГО ОБОРУДОВАНИЯ МОЖЕТ ВЫПОЛНЯТЬСЯ ТОЛЬКО КВАЛИФИЦИРОВАННЫМИ МОНТАЖНИКАМИ. ДЛЯ СВЕДЕНИЯ К МИНИМУМУ ПОТЕНЦИАЛЬНЫХ ОПАСНОСТЕЙ, СВЯЗАННЫХ С СОПРЯЖЕННЫМ ОБОРУДОВАНИЕМ, СЛЕДУЕТ ОЗНАКОМИТЬСЯ С НАСТОЯЩИМ РУКОВОДСТВОМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ДО УСТАНОВКИ И ЭКСПЛУАТАЦИИ ДАННОГО ОБОРУДОВАНИЯ НЕОБХОДИМО ОЗНАКОМИТЬСЯ И УЯСНИТЬ СОДЕРЖАНИЕ НАСТОЯЩЕГО РУКОВОДСТВА И РУКОВОДСТВА ПО ЭКСПЛУАТАЦИИ ОБОРУДОВАНИЯ ИЛИ УСТРОЙСТВА, С КОТОРЫМ НАСТОЯЩЕЕ ОБОРУДОВАНИЕ СОПРЯЖЕНО. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ВСЕ ОБОРУДОВАНИЕ ДОЛЖНО БЫТЬ ОСНАЩЕНО ЗАМЫКАТЕЛЕМ ЛИНИИ СЕТИ ЭЛЕКТРОСНАБЖЕНИЯ, А ВСЕ ГУСЕНИЧНЫЕ/КОНВЕЕРНЫЕ КРАНЫ, ПОДЪЕМНИКИ, ПОДЪЕМНЫЕ УСТРОЙСТВА И ДРУГОЕ ПОДОБНОЕ ОБОРУДОВАНИЕ ДОЛЖНЫ БЫТЬ ОСНАЩЕНЫ ТОРМОЗОМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- В СООТВЕТСТВИИ С ТРЕБОВАНИЯМИ НОРМ, ПРАВИЛ ИЛИ ПРОМЫШЛЕННОГО СТАНДАРТА, ВСЕ ОБОРУДОВАНИЕ С ДИСТАНЦИОННЫМ УПРАВЛЕНИЕМ ДОЛЖНО БЫТЬ СНАБЖЕНО ЗВУКОВЫМИ И/ИЛИ ВИЗУАЛЬНЫМИ СРЕДСТВАМИ ПРЕДУПРЕЖДЕНИЯ. ТАКИЕ ЗВУКОВЫЕ И/ИЛИ ВИЗУАЛЬНЫЕ УСТРОЙСТВА ПРЕДУПРЕЖДЕНИЯ ДОЛЖНЫ СООТВЕТСТВОВАТЬ ВСЕМ ПРАВИТЕЛЬСТВЕННЫМ ТРЕБОВАНИЯМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ПЕРЕД ВЫПОЛНЕНИЕМ ТЕХНИЧЕСКОГО ОБСЛУЖИВАНИЯ ЛЮБОГО ОБОРУДОВАНИЯ С ДИСТАНЦИОННЫМ УПРАВЛЕНИЕМ НЕОБХОДИМО ВЫПОЛНИТЬ МЕСТНЫЕ ПРОЦЕДУРЫ БЛОКИРОВКИ И МАРКИРОВКИ. ПЕРЕД ПОПЫТКОЙ ВЫПОЛНЕНИЯ ЛЮБЫХ ПРОЦЕДУР УСТАНОВКИ НЕОБХОДИМО ОБЯЗАТЕЛЬНО ПОЛНОСТЬЮ ОТКЛЮЧИТЬ ЭЛЕКТРОПИТАНИЕ КРАНА, ПОДЪЕМНИКА, ПОДЪЕМНОГО УСТРОЙСТВА ИЛИ ДРУГОГО ПОДОБНОГО ОБОРУДОВАНИЯ. ПЕРЕД ПРОВЕРКОЙ ЛЮБОГО ОБОРУДОВАНИЯ НА ПРИКОСНОВЕНИЕ НЕОБХОДИМО ОТКЛЮЧИТЬ И ПРОМАРКИРОВАТЬ ВСЕ ИСТОЧНИКИ ЭЛЕКТРОПИТАНИЯ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ПРЯМЫЕ ВЫВОДЫ ДАННОЙ ПРОДУКЦИИ НЕ ПРЕДНАЗНАЧЕНЫ ДЛЯ НЕПОСРЕДСТВЕННОГО СОПРЯЖЕНИЯ С КРИТИЧЕСКИМИ ДЛЯ ОБЕСПЕЧЕНИЯ БЕЗОПАСНОСТИ ПОДДЕРЖИВАЕМЫМИ ФУНКЦИЯМИ С ДВУМЯ СОСТОЯНИЯМИ, Т.Е., МАГНИТАМИ, ПОДЪЕМНИКАМИ С ВАКУУМНЫМ ЗАХВАТОМ, НАСОСАМИ, АВАРИЙНЫМ ОБОРУДОВАНИЕМ И Т.Д. НЕОБХОДИМО ОБЕСПЕЧИТЬ НАЛИЧИЕ ПРОМЕЖУТОЧНОЙ РЕЛЕЙНОЙ СИСТЕМЫ С МЕХАНИЧЕСКОЙ БЛОКИРОВКОЙ И АВТОНОМНЫМ (ОТДЕЛЬНЫМ) ПИТАНИЕМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ОПЕРАТОРУ ЗАПРЕЩАЕТСЯ ПЫТАТЬСЯ РЕМОНТИРОВАТЬ КАКОЙ-ЛИБО РАДИОКОНТРОЛЛЕР. ПРИ ОБНАРУЖЕНИИ ЛЮБЫХ НЕИСПРАВНОСТЕЙ, ОТНОСЯЩИХСЯ К ЭКСПЛУАТАЦИОННЫМ ХАРАКТЕРИСТИКАМ (ПРОИЗВОДИТЕЛЬНОСТИ) ПРОДУКЦИИ ИЛИ ТЕХНИКЕ БЕЗОПАСНОСТИ, ОБОРУДОВАНИЕ НЕОБХОДИМО НЕМЕДЛЕННО ВЫВЕСТИ ИЗ ЭКСПЛУАТАЦИИ И СООБЩИТЬ ОБ ЭТОМ РУКОВОДИТЕЛЮ. ПОВРЕЖДЕННОЕ И НЕИСПРАВНОЕ ОБОРУДОВАНИЕ РАДИОКОНТРОЛЛЕРА ДОЛЖНО БЫТЬ ВОЗВРАЩЕНО КОМПАНИИ MAGNETEK ДЛЯ ИЗУЧЕНИЯ И РЕМОНТА. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ПЕРЕД ЭКСПЛУАТАЦИЕЙ ОБОРУДОВАНИЯ С ДАННОЙ СИСТЕМОЙ РАДИОУПРАВЛЕНИЯ НЕОБХОДИМО ОСМОТРЕТЬ УПРАВЛЯЕМОЕ ОБОРУДОВАНИЕ НА ПРЕДМЕТ ЛЮБЫХ ПОВРЕЖДЕНИЙ. ЭКСПЛУАТАЦИЯ ПОВРЕЖДЕННОГО ОБОРУДОВАНИЯ ЗАПРЕЩЕНА. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.

- ДАННОЕ РАДИОУПРАВЛЯЕМОЕ ОБОРУДОВАНИЕ СНАБЖЕНО РАДИОПЕРЕДАТЧИКАМИ И РАДИОПРИЕМНИКАМИ, КОТОРЫМИ ИЗЛУЧАЮТСЯ РАДИОЧАСТОТНЫЕ ЭЛЕКТРОМАГНИТНЫЕ ВОЛНЫ. ДАННОЕ ОБОРУДОВАНИЕ БЫЛО ИСПЫТАНО И СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ СТАНДАРТОВ EN 301 489-1 И EN 301 489-3. КРОМЕ ЭТОГО, ЧАСТОТА В 433 МГЦ СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ СТАНДАРТА EN 300 220-2, А ЧАСТОТА В 2.4 ГГЦ СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ СТАНДАРТА EN 300 228-2. ДЛЯ ОГРАНИЧЕНИЯ ВОЗДЕЙСТВИЯ ЭЛЕКТРОМАГНИТНОГО ИЗЛУЧЕНИЯ НА ОПЕРАТОРОВ И ОБЕСПЕЧЕНИЯ НАИЛУЧШЕЙ РАБОТЫ ОБОРУДОВАНИЯ ОПЕРАТОРУ СЛЕДУЕТ ИЗБЕГАТЬ НАХОДИТЬСЯ ВБЛИЗИ АНТЕННЫ БЛОКА ИЛИ ПРИКАСАТЬСЯ К НЕЙ.
- ДАННЫЙ РАДИОКОНТРОЛЛЕР ОСНАЩЕН ИНФРАКРАСНЫМ ПЕРЕДАТЧИКОМ. ОПЕРАТОР ДОЛЖЕН БЫТЬ ОСВЕДОМЛЕН О ДАННЫХ РИСКАХ И ИЗБЕГАТЬ СМОТРЕТЬ ПРЯМО В ИНФРАКРАСНЫЙ ПЕРЕДАТЧИК ВО ВРЕМЯ РАБОТЫ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К ТРАВМЕ.
- НЕКОТОРОЕ ОБОРУДОВАНИЕ, КОТОРОЕ МОЖЕТ БЫТЬ СОПРЯЖЕНО С ДАННЫМ РАДИОКОНТРОЛЛЕРОМ, НАРАВНЕ СО СРЕДСТВАМИ РАДИОУПРАВЛЕНИЯ МОЖЕТ БЫТЬ ОСНАЩЕНО РУЧНЫМИ СРЕДСТВАМИ УПРАВЛЕНИЯ. ОПЕРАТОР ДОЛЖЕН БЫТЬ СООТВЕТСТВЕННО КВАЛИФИЦИРОВАН ДЛЯ ЭКСПЛУАТАЦИИ ТАКОГО ОБОРУДОВАНИЯ С ИСПОЛЬЗОВАНИЕМ РУЧНЫХ СРЕДСТВ УПРАВЛЕНИЯ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ОПЕРАТОР РАДИОУПРАВЛЯЕМОГО ОБОРУДОВАНИЯ НЕСЕТ ОТВЕТСТВЕННОСТЬ ЗА БЕЗОПАСНУЮ ЭКСПЛУАТАЦИЮ ОБОРУДОВАНИЯ В ЛЮБЫХ ОКРУЖАЮЩИХ УСЛОВИЯХ. ПРИ ЭКСПЛУАТАЦИИ ОБОРУДОВАНИЯ ОПЕРАТОР ДОЛЖЕН ОБЯЗАТЕЛЬНО ВЫБИРАТЬ БЕЗОПАСНОЕ МЕСТО ДЛЯ РАБОТЫ С ОБОРУДОВАНИЕМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- НЕКОТОРОЕ ОБОРУДОВАНИЕ, КОТОРОЕ МОЖЕТ УПРАВЛЯТЬСЯ С ПОМОЩЬЮ ДАННОГО РАДИОКОНТРОЛЛЕРА, ХАРАКТЕРИЗУЕТСЯ ВЫСОКИМ УРОВНЕМ АКУСТИЧЕСКИХ ШУМОВ. ОПЕРАТОР ДОЛЖЕН БЫТЬ ОСВЕДОМЛЕН О ДАННЫХ РИСКАХ И НАДЕВАТЬ СООТВЕТСТВУЮЩИЕ СРЕДСТВА ЗАЩИТЫ, ВКЛЮЧАЯ СРЕДСТВА ЗАЩИТЫ ОРГАНОВ СЛУХА, ДЛЯ СВЕДЕНИЯ К МИНИМУМУ РИСКА ПОЛУЧЕНИЯ ТРАВМЫ.
- НЕКОТОРОЕ ОБОРУДОВАНИЕ, КОТОРОЕ МОЖЕТ БЫТЬ СОПРЯЖЕНО С ДАННЫМ РАДИОКОНТРОЛЛЕРОМ, ХАРАКТЕРИЗУЕТСЯ ВЫСОКИМ УРОВНЕМ ОПАСНОСТИ ВСЛЕДСТВИЕ ВЫБРОСОВ ВЫХЛОПНЫХ ГАЗОВ. ОПЕРАТОР ДОЛЖЕН БЫТЬ ОСВЕДОМЛЕН О ДАННЫХ РИСКАХ И НЕ ДОЛЖЕН РАБОТАТЬ С РАДИОКОНТРОЛЛЕРОМ В УСЛОВИЯХ НЕДОСТАТОЧНОЙ ПОДАЧИ НАРУЖНОГО ВОЗДУХА. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ОПЕРАТОР РАДИОУПРАВЛЯЕМОГО ОБОРУДОВАНИЯ НЕСЕТ ОТВЕТСТВЕННОСТЬ ЗА БЕЗОПАСНУЮ ТРАНСПОРТИРОВКУ ВСЕХ ГРУЗОВ В ЛЮБЫХ ОКРУЖАЮЩИХ УСЛОВИЯХ. ПРИ ЭКСПЛУАТАЦИИ ОБОРУДОВАНИЯ В УСЛОВИЯХ НЕДОСТАТОЧНОЙ ОСВЕЩЕННОСТИ ОПЕРАТОР ДОЛЖЕН УБЕДИТЬСЯ В ВОЗМОЖНОСТИ БЕЗОПАСНОЙ ЭКСПЛУАТАЦИИ ОБОРУДОВАНИЯ, А ТАКЖЕ В ВИДИМОСТИ ВСЕХ ИНДИКАТОРОВ/УКАЗАТЕЛЕЙ НА ОБОРУДОВАНИИ И СРЕДСТВАХ РАДИОУПРАВЛЕНИЯ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- НЕ СЛЕДУЕТ ПОЛАГАТЬ, ЧТО ПИТАНИЕ ПРИЕМНИКА ОТКЛЮЧЕНО ПОТОМУ, ЧТО ОТКЛЮЧЕН ПЕРЕДАТЧИК. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- ПРИ ВКЛЮЧЕНИИ ПЕРЕКЛЮЧАТЕЛЯ ОСТАНОВА МАШИНЫ НА РАДИОКОНТРОЛЛЕРЕ В УПРАВЛЯЕМОЙ МАШИНЕ МОГУТ БЫТЬ КОМПОНЕНТЫ, КОТОРЫЕ ПРОДОЛЖАТ ДВИГАТЬСЯ. МОНТАЖНИК ДОЛЖЕН СВЕСТИ К МИНИМУМУ ТАКИЕ РИСКИ ПУТЕМ ИСПОЛЬЗОВАНИЯ ТОРМОЗОВ ИЛИ ДРУГИХ УСТРОЙСТВ ДЛЯ ОБЕСПЕЧЕНИЯ ПЕРЕВЕДЕНИЯ ВСЕХ КОМПОНЕНТОВ МАШИНЫ В БЕЗОПАСНОЕ СОСТОЯНИЕ ПРИ ЕЕ ОТКЛЮЧЕНИИ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- В НЕКОТОРОМ ОБОРУДОВАНИИ, КОТОРОЕ УПРАВЛЯЕТСЯ С ПОМОЩЬЮ РАДИОКОНТРОЛЛЕРА, НЕИСПРАВНОСТЬ С ЭЛЕКТРОПИТАНИЕМ МОЖЕТ ПРИВЕСТИ К НЕБЕЗОПАСНЫМ УСЛОВИЯМ. МОНТАЖНИК ДОЛЖЕН БЫТЬ ОСВЕДОМЛЕН О ДАННЫХ РИСКАХ И УСТАНАВЛИВАТЬ РАДИОКОНТРОЛЛЕР ТАКИМ ОБРАЗОМ, КОТОРЫЙ ПОЗВОЛЯЕТ СВЕСТИ К МИНИМУМУ ВЛИЯНИЕ НЕИСПРАВНОСТИ С ЭЛЕКТРОПИТАНИЕМ НА РАДИОУПРАВЛЯЕМОЕ ОБОРУДОВАНИЕ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- НЕПОСТОЯННЫЕ НАГРУЗКИ ИЛИ НЕУСТОЙЧИВАЯ РАБОТА ОБОРУДОВАНИЯ МОГУТ ПРИВЕСТИ К НЕБЕЗОПАСНЫМ УСЛОВИЯМ В НЕКОТОРОМ ОБОРУДОВАНИИ. МОНТАЖНИК ДОЛЖЕН БЫТЬ ОСВЕДОМЛЕН О ДАННЫХ РИСКАХ И УСТАНАВЛИВАТЬ РАДИОКОНТРОЛЛЕР ТАКИМ ОБРАЗОМ, КОТОРЫЙ ПОЗВОЛЯЕТ СВЕСТИ К МИНИМУМУ НЕУСТОЙЧИВУЮ РАБОТУ ОБОРУДОВАНИЯ ИЛИ НЕПОСТОЯННЫЙ РЕЖИМ НАГРУЗКИ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.
- НЕОБХОДИМО ЗНАТЬ И СОБЛЮДАТЬ СООТВЕТСТВУЮЩИЕ ПРОЦЕДУРЫ ПО ОБРАЩЕНИЮ, ЗАРЯДКЕ И УТИЛИЗАЦИИ АККУМУЛЯТОРОВ. НЕСООТВЕТСТВУЮЩЕЕ ВЫПОЛНЕНИЕ ПРОЦЕДУР РАБОТЫ С АККУМУЛЯТОРАМИ МОЖЕТ ПРИВЕСТИ КО ВЗРЫВУ АККУМУЛЯТОРОВ И ДРУГИМ ПОСЛЕДУЮЩИМ СЕРЬЕЗНЫМ ПОВРЕЖДЕНИЯМ. НЕСОБЛЮДЕНИЕ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К СЕРЬЕЗНЫМ ТРАВМАМ ИЛИ СМЕРТИ, ИЛИ ПОВРЕЖДЕНИЮ ОБОРУДОВАНИЯ.

Spanish

Advertencias comunes

INFORMACIÓN DE SEGURIDAD DEL MANUAL DEL PRODUCTO

Magnetek, Inc. (Magnetek) ofrece una amplia variedad de productos de control remoto por radio, productos de control y accionamientos de frecuencia ajustable, y sistemas de frenado industrial para aplicaciones de manipulación de materiales en altura. Magnetek preparó el presente manual para brindar información y recomendaciones para la instalación, el uso, el funcionamiento y la reparación de los productos y sistemas de manipulación de materiales Magnetek (Productos Magnetek). Quien utilice, opere, mantenga, repare, instale o posea Productos Magnetek

debe saber, comprender y respetar las instrucciones y las recomendaciones de seguridad que se incluyen en el presente manual para los Productos Magnetek.
Las recomendaciones que se incluyen en el presente manual no tienen prioridad ante ninguno de los siguientes requerimientos relativos a grúas, elevadores y dispositivos de elevación:

- Instrucciones, manuales y advertencias de seguridad de los fabricantes del equipo en el que se utiliza el sistema de radio,
- Normativas y procedimientos de seguridad de la planta de los empleadores y de los propietarios de centros en los que se utilizan los Productos Magnetek,
- Normativas publicadas por la Administración de Seguridad y Salud Ocupacional (Occupational Health and Safety Administration, OSHA),
- Códigos, ordenanzas, normas y requerimientos locales, estatales o federales que correspondan o
- Normas y prácticas de seguridad para la industria de manipulación de materiales en altura.

En el presente manual, no se incluyen ni abordan instrucciones específicas ni advertencias de seguridad de estos fabricantes ni ninguno de los otros requerimientos que se mencionan más arriba. Es responsabilidad de los propietarios, los usuarios y los operadores de los Productos Magnetek conocer, comprender y respetar todos estos requerimientos. Es responsabilidad del propietario de los Productos Magnetek hacer que sus empleados conozcan todos los requerimientos que se mencionan más arriba y garantizar que todos los operadores reciban la capacitación que corresponda. **Nadie debe usar los Productos Magnetek sin haberse familiarizado antes con estos requerimientos y haber recibido la capacitación sobre ellos.**
A lo largo del presente documento, se han incluido intencionalmente ADVERTENCIAS para destacar los puntos cruciales para la protección del personal y los equipos.
ADVERTENCIA – Con una advertencia se destaca un procedimiento, una práctica, etc. fundamental de funcionamiento o mantenimiento que si no se respeta estrictamente, podría provocar lesiones o la muerte del personal, o riesgos físicos de largo plazo.
NUNCA SE DEBE HACER CASO OMISO A LAS ADVERTENCIAS.
Las normativas de seguridad que se incluyen en esta sección no tienen por objetivo reemplazar ninguna regla ni ninguna normativa de las organizaciones reguladoras locales, estatales o federales aplicables. Respete siempre el procedimiento local de bloqueo y etiquetado para el mantenimiento del equipo de radio. La siguiente información está diseñada para usarse junto con las otras reglas o normativas ya existentes. Es importante leer toda la información de seguridad que se incluye en esta sección antes de instalar u operar el Sistema de Control Remoto por Radio.

INFORMACIÓN GENERAL

El equipo de manipulación de materiales con control remoto por radio funciona en diversas direcciones. Con frecuencia, el equipo se utiliza en lugares en los que hay gente que trabaja muy cerca del equipo de manipulación de los materiales. **El operador debe actuar con extremada precaución en todo momento.** Los trabajadores deben estar constantemente alerta para evitar accidentes. Se incluyeron las siguientes recomendaciones para indicar cómo actuar con cuidado y precaución para evitar lesiones, daños al equipo o incluso salvar una vida.

PERSONAS AUTORIZADAS PARA UTILIZAR EL EQUIPO CON CONTROL REMOTO POR RADIO

Únicamente se les debe permitir a aquellas personas que hayan recibido la capacitación correspondiente y hayan sido designadas por la administración que operen el equipo con control remoto por radio.
El equipo con control remoto por radio no debe ser operado por ninguna persona que tenga problemas visuales ni auditivos, ni por ninguna persona que sufra algún tipo de trastorno o enfermedad, que tome algún medicamento que pueda producir la pérdida del control de equipo, o que esté bajo el efecto del alcohol o drogas.

INFORMACIÓN SOBRE SEGURIDAD Y CAPACITACIÓN RECOMENDADA PARA LOS OPERADORES

Quien haya recibido la capacitación para operar equipos con control remoto por radio debe contar como mínimo con los siguientes conocimientos y competencias antes de usar dichos equipos.
El operador debe:

- conocer los riesgos relativos a la utilización del equipo
- conocer las normativas de seguridad para los equipos con control remoto por radio
- contar con la capacidad para calcular la distancia de los objetos en movimiento
- saber cómo probar correctamente antes de realizar una operación
- saber cómo se usan las luces y alarmas de advertencia del equipo
- conocer el lugar de almacenamiento adecuado para un receptor de control por radio cuando no esté en uso
- recibir capacitación sobre cómo transferir un receptor de control por radio a otra persona
- estar capacitado sobre cómo y cuándo informar condiciones de uso que generen inseguridad o sean inusuales
- saber y respetar todos los manuales de funcionamiento y mantenimiento, los procedimientos de seguridad, los requerimientos normativos y las normas, y los códigos industriales que correspondan

Al operador no se le permite:

- cambiar los ajustes ni los controles sin autorización y sin la capacitación adecuada
- extraer ni ocultar ninguna etiqueta de advertencia o seguridad
- dejar activado el equipo con control remoto por radio cuando el equipo no está en funcionamiento
- operar los movimientos manuales de otra manera que son sea manualmente
- operar el equipo con control remoto por radio cuando está encendido el indicador de nivel bajo de la batería

PRUEBA PREVIA AL USO

Pruebe todos los dispositivos de advertencia.
Pruebe todos los controles de dirección y velocidad.
Pruebe la parada de emergencia del receptor.

ADVERTENCIAS

- ÚNICAMENTE INSTALADORES CALIFICADOS PUEDEN INSTALAR EL EQUIPO DE CONTROL REMOTO POR RADIO. SE DEBE CONSULTAR ESTE MANUAL PARA REDUCIR AL MÍNIMO LOS RIESGOS POTENCIALES CON EL EQUIPO INTERCONECTADO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.

- ANTES DE LA INSTALACIÓN Y OPERACIÓN DEL PRESENTE EQUIPO, SE DEBE LEER Y COMPRENDER EL CONTENIDO DEL PRESENTE MANUAL Y DEL MANUAL DE FUNCIONAMIENTO DEL EQUIPO O DISPOSITIVO AL CUAL SE INTERCONECTARÁ ESTE EQUIPO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- TODO EL EQUIPO DEBE TENER INSTALADO UN CONTACTOR DE LÍNEA PRINCIPAL Y TODAS LAS GRÚAS, LOS ELEVADORES Y LOS DISPOSITIVOS DE ELEVACIÓN Y EQUIPOS SIMILARES SOBRE ORUGAS DEBEN TENER INSTALADO ALGÚN TIPO DE FRENO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- SE DEBE PROVEER ALGÚN MEDIO DE ADVERTENCIA SONORA Y/O VISUAL EN TODOS LOS EQUIPOS CON CONTROL REMOTO POR RADIO SEGÚN LO ESTABLECIDO POR LOS CÓDIGOS, LAS NORMATIVAS O LAS NORMAS DE LA INDUSTRIA. TALES DISPOSITIVOS DE ADVERTENCIA SONORA Y/O VISUAL DEBEN CUMPLIR CON TODOS LOS REQUERIMIENTOS GUBERNAMENTALES. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- RESPETE EL PROCEDIMIENTO LOCAL DE BLOQUEO Y ETIQUETADO ANTES DE REALIZAR EL MANTENIMIENTO DE LOS EQUIPOS CON CONTROL REMOTO POR RADIO. DESCONECTE SIEMPRE TODA LA ENERGÍA ELÉCTRICA DE LA GRÚA, EL ELEVADOR, EL DISPOSITIVO DE ELEVACIÓN O LOS EQUIPOS SIMILARES ANTES DE INTENTAR PROCEDIMIENTOS DE INSTALACIÓN. DESCONECTE LA ENERGÍA Y BLOQUEE TODAS LAS FUENTES DE ENERGÍA ELÉCTRICA ANTES REALIZAR PRUEBAS DE CONTACTO EN LOS EQUIPOS. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- LAS SALIDAS DIRECTAS DE ESTE PRODUCTO NO ESTÁN DISEÑADAS PARA INTERCONECTARSE DIRECTAMENTE A FUNCIONES DE DOS ESTADOS CRÍTICAS PARA LA SEGURIDAD, ES DECIR, IMANES, ELEVADORES POR VACÍO, BOMBAS, EQUIPOS DE EMERGENCIA, ETC. SE DEBE PROVEER UN SISTEMA DE RELÉS INTERMEDIOS PARA BLOQUEO MECÁNICO CON CONSIDERACIONES DE ENERGÍA POR SEPARADO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, O PODRÍA DAÑARSE EL EQUIPO.
- EL OPERADOR NO DEBE INTENTAR REPARAR NINGÚN DISPOSITIVO DE CONTROL POR RADIO. SI SE OBSERVA ALGÚN PROBLEMA DE RENDIMIENTO DEL PRODUCTO O DE SEGURIDAD, SE DEBE RETIRAR EL EQUIPO DEL SERVICIO DE INMEDIATO Y SE DEBE INFORMAR AL SUPERVISOR. LOS EQUIPOS DE CONTROL POR RADIO QUE ESTÉN DAÑADOS E INOPERABLES DEBEN DEVOLVERSE A MAGNETEK PARA SU EVALUACIÓN Y REPARACIÓN. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- ANTES DE OPERAR EL EQUIPO CON ESTE SISTEMA DE CONTROL POR RADIO, SE DEBE INSPECCIONAR EL EQUIPO QUE SE DESEA CONTROLAR PARA DETERMINAR SI PRESENTA ALGÚN DAÑO. NO OPERE EQUIPOS QUE ESTÉN DAÑADOS. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- EL PRESENTE EQUIPO DE CONTROL POR RADIO INCLUYE RADIOTRANSMISORES Y RECEPTORES QUE TRANSMITEN ONDAS ELECTROMAGNÉTICAS DE RADIOFRECUENCIA. EL PRESENTE EQUIPO HA SIDO PROBADO Y CUMPLE CON LAS NORMAS EN 301 489-1 Y EN 301 489-3. ADEMÁS, EL MODELO 433 MHZ CUMPLE CON LA NORMA EN 300 220-2 Y EL 2.4 GHZ CUMPLE CON LA NORMA EN 300 228-2. A FIN DE LIMITAR LA EXPOSICIÓN DEL OPERADOR A LA RADIACIÓN ELECTROMAGNÉTICA Y ASEGURAR EL MEJOR FUNCIONAMIENTO POSIBLE DEL EQUIPO, EL OPERADOR DEBE EVITAR COLOCAR PARTES DE SU CUERPO CERCA O EN CONTACTO CON LA ANTENA DE LA UNIDAD.
- EL DISPOSITIVO DE CONTROL POR RADIO ESTÁ EQUIPADO CON UN TRANSMISOR INFRARROJO. EL OPERADOR DEBE CONOCER ESTOS RIESGOS Y EVITAR MIRAR DIRECTAMENTE AL TRANSMISOR INFRARROJO DURANTE EL FUNCIONAMIENTO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES.
- ALGUNOS EQUIPOS QUE SE PUEDEN INTERCONECTAR CON ESTE DISPOSITIVO DE CONTROL POR RADIO, CUENTAN CON CONTROLES MANUALES ADEMÁS DE LOS CONTROLES POR RADIO. EL OPERADOR DEBE ESTAR DEBIDAMENTE CALIFICADO PARA OPERAR EL EQUIPO CON LOS CONTROLES MANUALES. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- EL OPERADOR DEL EQUIPO CON CONTROL REMOTO POR RADIO ES RESPONSABLE POR EL USO SEGURO DEL EQUIPO EN TODAS LAS CONDICIONES AMBIENTALES. AL OPERAR EL EQUIPO, EL OPERADOR SIEMPRE DEBE BUSCAR UNA POSICIÓN SEGURA DESDE LA CUAL OPERAR EL EQUIPO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- ALGUNOS EQUIPOS QUE SE PUEDEN CONTROLAR CON ESTE DISPOSITIVO DE CONTROL POR RADIO TIENEN NIVELES ELEVADOS DE RUIDO. EL OPERADOR DEBE CONOCER ESTOS RIESGOS Y UTILIZAR EQUIPO DE PROTECCIÓN ADECUADO, QUE INCLUYA PROTECCIÓN AUDITIVA, PARA MINIMIZAR EL RIESGO DE LESIONES.
- ALGUNOS EQUIPOS QUE SE PUEDEN INTERCONECTAR CON ESTE DISPOSITIVO DE CONTROL POR RADIO TIENEN RIESGOS POR GASES DE ESCAPE. EL OPERADOR DEBE CONOCER ESTOS RIESGOS Y NO DEBE OPERAR EL DISPOSITIVO DE CONTROL POR RADIO EN UN ENTORNO EN EL QUE EL SUMINISTRO DE AIRE FRESCO SEA INSUFICIENTE. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- EL OPERADOR DEL EQUIPO CON CONTROL REMOTO POR RADIO ES RESPONSABLE POR LA MANIPULACIÓN SEGURA DE TODAS LAS CARGAS EN TODAS LAS CONDICIONES AMBIENTALES. CUANDO SE OPERE EL EQUIPO EN LUGARES CON ESCASA ILUMINACIÓN, EL OPERADOR DEBE GARANTIZAR QUE SE PUEDA OPERAR DE MANERA SEGURA EL EQUIPO Y QUE SE PUEDAN VER TODOS LOS INDICADORES DEL EQUIPO Y DE LOS CONTROLES POR RADIO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- NO DÉ POR SENTADO QUE LA ENERGÍA ESTÁ DESCONECTADA EN EL RECEPTOR PORQUE EL TRANSMISOR ESTÉ APAGADO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- DURANTE LA ACTIVACIÓN DEL INTERRUPTOR DE DETENCIÓN DE LA MÁQUINA DEL DISPOSITIVO DE CONTROL POR RADIO, LA MÁQUINA CONTROLADA PUEDE TENER COMPONENTES QUE SIGAN EN MOVIMIENTO. EL INSTALADOR DEBE MINIMIZAR ESTOS RIESGOS CON FRENOS U OTROS DISPOSITIVOS A FIN DE ASEGURAR QUE TODAS LAS PIEZAS DEL EQUIPO QUEDEN EN CONDICIONES SEGURAS DURANTE UN APAGADO POR DETENCIÓN DE LA MÁQUINA. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.

- SI FALLA EL SUMINISTRO DE ENERGÍA SE PUEDEN PRODUCIR CONDICIONES DE INSEGURIDAD EN ALGUNOS EQUIPOS QUE SE CONTROLAN CON EL DISPOSITIVO DE CONTROL POR RADIO. EL INSTALADOR DEBE CONOCER ESTOS RIESGOS E INSTALAR EL DISPOSITIVO DE CONTROL POR RADIO DE MANERA TAL QUE SE MINIMICE EL IMPACTO QUE TIENE UNA FALLA EN EL SUMINISTRO DE ENERGÍA PARA EL EQUIPO CON CONTROL REMOTO POR RADIO. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- SI LOS EQUIPOS O LAS CARGAS ESTÁN INESTABLES SE PUEDEN GENERAR CONDICIONES DE INSEGURIDAD EN ALGUNOS EQUIPOS. EL INSTALADOR DEBE CONOCER ESTOS RIESGOS E INSTALAR EL DISPOSITIVO DE CONTROL POR RADIO DE MANERA TAL QUE SE MINIMICE LA INESTABILIDAD DE LOS EQUIPOS O LA CARGA. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.
- SE DEBEN CONOCER Y EMPLEAR PROCEDIMIENTOS ADECUADOS PARA MANIPULAR, CARGAR Y DESECHAR LAS BATERÍAS. SI LOS PROCEDIMIENTOS UTILIZADOS CON LAS BATERÍAS SON INADECUADOS, ÉSTAS PUEDEN EXPLOTAR O CAUSAR OTROS DAÑOS GRAVES. SI NO SE RESPETA ESTA ADVERTENCIA, SE PODRÍAN PRODUCIR LESIONES GRAVES O LA MUERTE, Y PODRÍA DAÑARSE EL EQUIPO.

Enrange MLTX2 Transmitter

Remote Equipment Control

MAGNETEK
ENRANGE

February 2013
Part Number: 198-00144-0001 R3

Your New Radio Remote

Thank you for your purchase of Magnetek's Enrange® brand MLTX2 Radio Remote Equipment Control. Magnetek has set a whole new standard in radio-remote performance, dependability, and value with this unique new line of handheld transmitters.

If your product ever needs modification or service, please contact one of our representatives at the following locations:

U.S. Service Information

For questions regarding service or technical information contact:
1.866.MAG.SERV
(1.866.624.7378)

World Headquarters:

Magnetek, Inc.
N49 W13650 Campbell Drive
Menomonee Falls, WI 53051

Telephone: 1.800.288.8178
Website: www.magnetekmobilehydraulic.com
e-mail: info@magnetekmh.com

Fax Numbers:
Main: 1.800.298.3503
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Service: 1.262.783.3508

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4090B Sladeview Crescent
Mississauga, Ontario
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TABLE OF CONTENTS

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926 Perkins Drive, Mukwonago, WI 53149

1.0 INTRODUCTION

Thank you for your purchase of Magnetek's Enrange® brand MLTX2 Radio Remote Equipment Control.

These instructions are to be used as a reference for personnel operating the Enrange® brand MLTX2 Radio Remote Equipment Control and the equipment that this Enrange® brand MLTX2 Radio Remote Equipment Control is attached to.

The user of these instructions should have basic knowledge in the handling of electronic equipment.

1.1 PRODUCT MANUAL SAFETY INFORMATION

Magnetek, Inc. (Magnetek) offers a broad range of radio remote control products, control products and adjustable frequency drives, and industrial braking systems for overhead material handling applications. This manual has been prepared by Magnetek to provide information and recommendations for the installation, use, operation and service of Magnetek's material handling products and systems (Magnetek Products). Anyone who uses, operates, maintains, services, installs or owns Magnetek Products should know, understand and follow the instructions and safety recommendations in this manual for Magnetek Products.

The recommendations in this manual do not take precedence over any of the following requirements relating to proper equipment operation:

- Instructions, manuals, and safety warnings of the manufacturers of the equipment where the radio system is used,
- Plant safety rules and procedures of the employers and the owners of facilities where the Magnetek Products are being used,
- Regulations issued by the Occupational Health and Safety Administration (OSHA),
- Applicable local, state or federal codes, ordinances, standards and requirements, or
- Safety standards and practices for the specific industry.

This manual does not include or address the specific instructions and safety warnings of these manufacturers or any of the other requirements listed above. It is the responsibility of the owners, users and operators of the Magnetek Products to know, understand and follow all of these requirements. It is the responsibility of the owner of the Magnetek Products to make its employees aware of all of the above listed requirements and to make certain that all operators are properly trained. **No one should use Magnetek Products prior to becoming familiar with and being trained in these requirements.**

WARRANTY INFORMATION

FOR INFORMATION ON MAGNETEK'S PRODUCT WARRANTIES BY PRODUCT TYPE, PLEASE VISIT WWW.MAGNETEKMOBILEHYDRAULIC.COM.

1.2 WARNINGS AND CAUTIONS

Throughout this document WARNING and CAUTION statements have been deliberately placed to highlight

items critical to the protection of personnel and equipment.

WARNING – A warning highlights an essential operating or maintenance procedure, practice, etc. which, if not strictly observed, could result in injury or death of personnel, or long term physical hazards. Warnings are highlighted as shown below:

WARNING

CAUTION – A caution highlights an essential operating or maintenance procedure, practice, etc. which if not strictly observed, could result in damage to, or destruction of equipment, or loss of functional effectiveness. Cautions are highlighted as shown below:

CAUTION

WARNINGS and CAUTIONS SHOULD NEVER BE DISREGARDED.

The safety rules in this section are not intended to replace any rules or regulations of any applicable local, state, or federal governing organizations. Always follow your local lockout and tagout procedure when maintaining any radio equipment. The following information is intended to be used in conjunction with other rules or regulations already in existence. It is important to read all of the safety information contained in this section before installing or operating the Radio Control System.

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2.0 CRITICAL INSTALLATION CONSIDERATIONS

WARNING

PRIOR TO INSTALLATION AND OPERATION OF THIS EQUIPMENT, READ AND DEVELOP AN UNDERSTANDING OF THE CONTENTS OF THIS MANUAL AND THE OPERATION MANUAL OF THE EQUIPMENT OR DEVICE TO WHICH THIS EQUIPMENT WILL BE INTERFACED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

FOLLOW YOUR LOCAL LOCKOUT TAGOUT PROCEDURE BEFORE MAINTAINING ANY REMOTE CONTROLLED EQUIPMENT. ALWAYS REMOVE ALL ELECTRICAL POWER FROM THE CRANE, HOIST, LIFTING DEVICE OR SIMILAR EQUIPMENT BEFORE ATTEMPTING ANY INSTALLATION PROCEDURES. DE-ENERGIZE AND TAGOUT ALL SOURCES OF ELECTRICAL POWER BEFORE TOUCH-TESTING ANY EQUIPMENT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

THE DIRECT OUTPUTS OF THIS PRODUCT ARE NOT DESIGNED TO INTERFACE DIRECTLY TO TWO STATE SAFETY CRITICAL MAINTAINED FUNCTIONS, I.E., MAGNETS, VACUUM LIFTS, PUMPS, EMERGENCY EQUIPMENT, ETC. A MECHANICALLY LOCKING INTERMEDIATE RELAY SYSTEM WITH SEPARATE POWER CONSIDERATIONS MUST BE PROVIDED. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH OR DAMAGE TO EQUIPMENT.

AFTER INSTALLATION BE SURE TO VERIFY THAT THE TRANSMITTER IS NOT INTERFERING WITH OTHER EQUIPMENT IN THE AREA. ALSO VERIFY THAT OTHER EQUIPMENT IS NOT INTERFERING WITH THE TRANSMITTER AND ITS ASSOCIATED EQUIPMENT. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT

2.1 GENERAL

Radio controlled equipment operates in several directions. Quite frequently, the equipment is operated in areas where people are working in close proximity to the material handling equipment. **The operator must exercise extreme caution at all times**. Workers must constantly be alert to avoid accidents. The following recommendations have been included to indicate how careful and thoughtful actions may prevent injuries, damage to equipment, or even save a life.

2.2 PERSONS AUTHORIZED TO OPERATE RADIO CONTROLLED MACHINERIES

Only properly trained persons designated by management should be permitted to operate radio controlled equipment.

Radio controlled equipment should not be operated by any person who cannot read or understand signs, notices, and operating instructions that pertain to the equipment.

Radio controlled equipment should not be operated by any person with insufficient eyesight or hearing or by any person who may be suffering from a disorder or illness, is taking any medication that may cause loss of equipment control, or is under the influence of alcohol or drugs.

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2.3 SAFETY INFORMATION AND RECOMMENDED TRAINING FOR RADIO CONTROLLED EQUIPMENT OPERATORS

Anyone being trained to operate radio controlled equipment should possess, as a minimum, the following knowledge and skills before using the radio controlled equipment.

The operator should:

- have knowledge of hazards pertaining to equipment operation
- have knowledge of safety rules for radio controlled equipment
- have the ability to judge distance of moving objects
- know how to properly test prior to operation
- be trained in the safe operation of the radio transmitter as it pertains to the equipment being operated
- have knowledge of the use of equipment warning lights and alarms
- have knowledge of the proper storage space for a radio control transmitter when not in use
- be trained in transferring a radio control transmitter to another person
- be trained how and when to report unsafe or unusual operating conditions
- test the transmitter emergency stop and all warning devices prior to operation; testing should be done on each shift, without a load
- be thoroughly trained and knowledgeable in proper and safe operation of the equipment that utilizes the radio control
- know how to keep the operator and other people clear of hazardous points
- know and follow the local lockout and tagout procedures when servicing radio controlled equipment
- know and follow all applicable operating and maintenance manuals, safety procedures, regulatory requirements, and industry standards and codes

The operator shall not:

- operate the equipment if the direction of travel or function engaged does not agree with what is indicated on the controller
- operate any damaged or malfunctioning equipment
- change any settings or controls without authorization and proper training
- remove or obscure any warning or safety labels or tags
- leave power on the radio controlled equipment when the equipment is not in operation
- operate any equipment using a damaged controller because the unit may be unsafe
- operate manual motions with other than manual power
- operate radio controlled equipment when low battery indicator is on

WARNING

THE OPERATOR SHOULD NOT ATTEMPT TO REPAIR ANY RADIO CONTROLLER. IF ANY PRODUCT PERFORMANCE OR SAFETY CONCERNS ARE OBSERVED, THE EQUIPMENT SHOULD IMMEDIATELY BE TAKEN OUT OF SERVICE AND BE REPORTED TO THE SUPERVISOR. DAMAGED AND INOPERABLE RADIO CONTROLLER EQUIPMENT SHOULD BE RETURNED TO MAGNETEK FOR EVALUATION AND REPAIR. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

2.4 TRANSMITTER UNIT

Transmitter switches should never be mechanically blocked ON or OFF. When not in use, the operator should turn the transmitter OFF. A secure storage space should be provided for the transmitter unit, and the transmitter unit should always be placed there when not in use. This precaution will help prevent unauthorized people from operating the material handling equipment.

Spare transmitters should be stored in a secure storage space and only removed from the storage space after the current transmitter in use has been turned OFF, taken out of the service area, and secured.

2.5 PRE-OPERATION TEST

At the start of each work shift, or when a new operator takes control of the equipment, operators should do, as a minimum, the following steps before operation of equipment:

Test all warning devices.

Test all direction and speed controls.

Test all functions

Test the transmitter emergency stop.

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2.6 HANDLING BATTERIES

WARNING

KNOW AND FOLLOW PROPER BATTERY HANDLING, CHARGING AND DISPOSAL PROCEDURES. IMPROPER BATTERY PROCEDURES CAN CAUSE BATTERIES TO EXPLODE OR DO OTHER SERIOUS DAMAGE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

Use only batteries approved by Magnetek for the specific product.

Do not dispose of a battery pack in fire; it may explode.

Do not attempt to open the battery pack.

Do not short circuit the battery.

Keep the battery pack environment cool during storage (i.e., not in direct sunlight or close to a heating source).

2.7 OPTIONAL RECHARGEABLE BATTERY CHARGING

For those transmitters equipped with rechargeable batteries and battery chargers, all users shall be familiar with the instructions of the charger before attempting to use.

Do not attempt to charge non-rechargeable battery packs in the charger.

Avoid charging partially discharged rechargeable batteries to help prolong battery cycle life.

Do not charge batteries in a hazardous environment.

Keep the battery pack environment cool during charging (i.e., not in direct sunlight or close to a heating source).

Do not short the charger.

Do not attempt to charge a damaged battery.

Use only Magnetek Enrange approved chargers for the appropriate battery pack.

Do not attempt to use a battery that is leaking, swollen or corroded.

Charger units are not intended for outdoor use. Only use charger units indoors.

2.8 BATTERY DISPOSAL

Before disposing of batteries consult local and governmental regulatory requirements for proper disposal procedure.

3.0 MLTX2 TRANSMITTER STANDARD CONFIGURATION AND OPERATION

WARNING

BEFORE OPERATING THE TRANSMITTER, FAMILIARIZE YOURSELF WITH ALL SAFETY INFORMATION IN THIS MANUAL, THE CORRESPONDING RECEIVER SYSTEM MANUAL, APPROPRIATE MANUAL SUPPLEMENTS AND ANY OTHER LOCAL, STATE, OR FEDERAL RULES OR REGULATIONS ALREADY IN EXISTENCE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

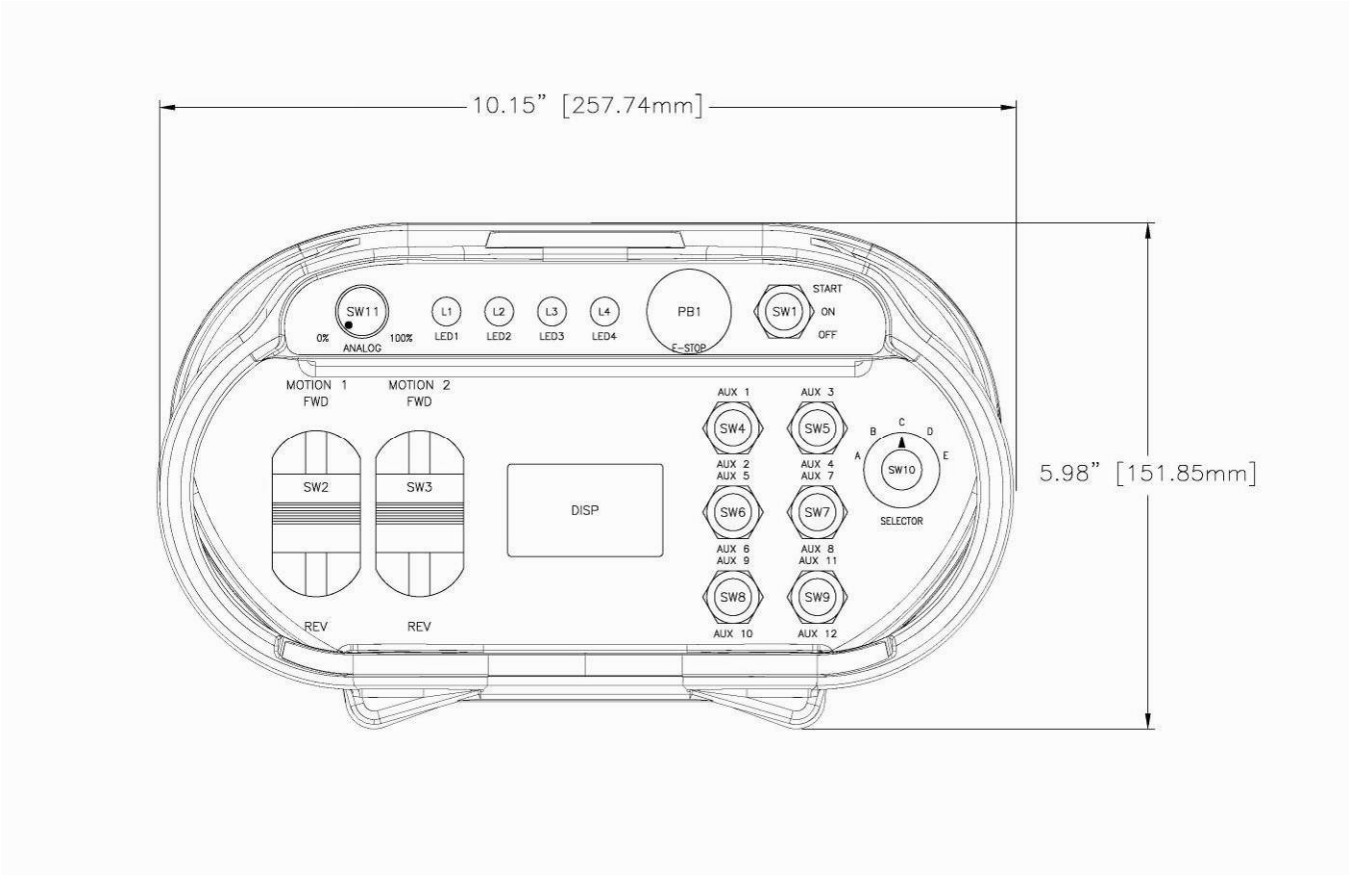

Figure 1: Typical MLTX2 Configuration

3.1 INSTALLING BATTERY PACK

Prior to utilizing the MLTX2 transmitter, the battery pack must be installed (the battery pack is optional if the unit is being utilized with the optional tethered feature).

3.1.1 Alkaline Battery Pack (BT129)

The MLTX2 comes standard with a battery pack (BT129) that holds three disposable AA alkaline batteries.

Figure 2: BT129 Battery Pack

To change the alkaline batteries in the battery pack, separate the inner tray from the outer housing (see Figure 2) and replace all the batteries with new ones.

Figure 3: Separated Alkaline Battery Pack

When reinserting the tray into the outer housing, make sure the grooves in the inner tray align with the slides in the outer housing. When placing the battery pack into the MLTX2 battery pocket, orient the battery pack so that the sticker is facing out (see Figure 4).

Figure 4: Installation of Battery Pack into MLTX2 transmitter

After installing the battery pack, install the battery cover over the battery and secure by tightening the thumbscrew at the end of the battery cover (see Figure 5).

Figure 5: Installation of Battery Cover

NOTE: For the battery level indicator on the MLTX2s equipped with either the standard status LED or the optional graphic user interface, the battery type dip switch settings need to be set for the battery pack being used in order to display the correct low battery level indication. See Section 3.1.3 for details on setting the battery type dip switches.

3.1.2 Optional NiMH Rechargeable Battery Pack (BT128)

NOTE: If using the optional rechargeable battery pack BT128, review and become familiar with the rechargeable battery charger manual prior to use.

The rechargeable battery pack BT128 is a sealed battery pack that has no user serviceable components within the battery pack.

Figure 6: BT128 Battery Pack

The rechargeable battery pack BT128 is shipped from the factory with a minimal charge and will need to be charged prior to use for the first time with the specified charger.

NOTE: When utilizing the optional tether mode on the MLTX2 transmitter, the battery pack will not be recharged from the tether power feed. The rechargeable battery pack only can be recharged using the specified charger.

When placing the battery pack into the MLTX2 battery pocket, orient the battery pack so that the sticker is facing out (see Figure 4).

After installing the battery pack, install the battery cover over the battery and secure by tightening the thumbscrew at the end of the battery cover (see Figure 5).

NOTE: For the battery level indicator on the MLTX2s equipped with the standard status LED or the optional graphic user interface, the battery type dip switch settings need to be set for the battery pack being used in order to display the correct low battery level indication. See Section 3.1.3 for details on setting the battery type dip switches.

3.1.3 Setting Battery Type Dip switches

For proper indication of the battery level on the MLTX2 transmitters, the battery type dip switch settings need to be set for the battery pack being used in the transmitter.

NOTE: The dip switch settings are set at the factory for the battery type ordered with the system. These settings will need to be changed only if the battery type changes.

The dip switches are accessed through the USB/IR cover on the bottom of the MLTX2 transmitter (see Figure 7).

Figure 7: USB/IR Cover Location and Cover Removal

Use the following table to properly set the dip switches for the correct battery type (see Figure 8 for dip switch view):

Battery P/N	Battery Type	Dip switch 1	Dip switch 2
BT129-0	4.5V Alkaline	Off	Off
BT128-0	3.6V NiMH	Off	On

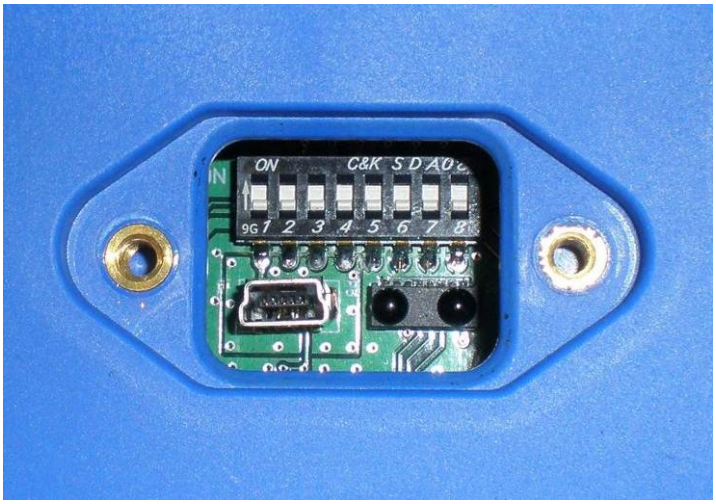

Figure 8: Dip switch block as viewed through USB/IR port

NOTE: The dip switch block switches are oriented so that the Off position is next to the number designator and the On position is up or away from the number designator.

3.2 TURNING THE TRANSMITTER ON AND OFF

The MLTX2 uses both a three position toggle switch labeled OFF-ON-START and a Machine Stop switch to turn the transmitter on or off.

Figure 9: Machine Stop Switch and OFF-ON-START toggle

3.2.1 Turning On the Transmitter (with Standard Status LED Indicator(s))

3.2.1.1 Transmitters Equipped with Separate Power/Status and Battery LED Indicators

First, the Machine Stop switch must be in the raised position (pulled out). Next, push the OFF-ON-START toggle switch to the START position and release it once the Power/Status LED lights up as a solid green color. Following the Power/Status LED turning on and illuminating, the unit will perform a routine initialization.

During initialization, the MLTX2 scans for any switches or motions that may be on during power up. If any switches or motions are on, the failure will be displayed as a solid red Battery LED, and then the MLTX2 will power itself down.

After a successful initialization, the MLTX2 will enter normal operation mode and display the normal operating status LED indications. See Section 3.6 for more information on the normal operation mode with standard status LED.

3.2.1.2 Transmitters Equipped with Single Status/Battery LED Indicator

First, the Machine Stop switch must be in the raised position (pulled out). Next, push the OFF-ON-START toggle switch to the START position and release it immediately. The unit will perform a routine initialization.

During initialization, the MLTX2 scans for any switches or motions that may be on during power up. If any switches or motions are on, the failure will power the MLTX2 down.

NOTE: There will be no LED indication of the failure on the Single LED equipped transmitters. If the Battery Status LED does not go into slow blinking mode as detailed in Section 3.6 after 15 seconds, reboot the transmitter by turning the OFF the transmitter and then turning the transmitter back ON.

After a successful initialization, the MLTX2 will enter normal operation mode and display the normal operating status LED indications. See Section 3.6 for more information on the normal operation mode with standard status LED.

3.2.2 Turning On the Transmitter (with Optional Graphic User Interface Screen)

First, the Machine Stop switch must be in the raised position (pulled out). Next, push the OFF-ON-START toggle switch to the START position and release it once the Magnetek logo appears on the LCD screen. Following the logo screen, the unit will perform a routine initialization.

During initialization, the MLTX2 scans for any switches or motions that may be on during power up. If any switches or motions are on, the failure will be displayed on the screen, and then the MLTX2 will power itself down.

After a successful initialization, the MLTX2 will enter the Normal Operation Mode and display the normal operating screen. See Section 3.7 for more information on the Normal Operation Mode with Optional Graphic User Interface.

NOTE: Holding the OFF-ON-START toggle in the START position for more than 5 seconds will put the device into Setup Mode. For normal use release the START toggle once the Magnetek logo appears. See Section 4.2 for more information on the Setup Mode.

3.2.3 Pulling In the Machine Stop Relay

Once the MLTX2 has been turned on (as described in Sections 3.2.1 or 3.2.2) and in the Normal Operating Mode, the Machine Stop relay in the receiver can be pulled in by pushing the OFF-ON-START toggle switch to the START position and then releasing.

NOTE: You must release the OFF-ON-START switch to the ON position after the unit is powered up, then push to the START position a second time to pull in the Machine Stop relay.

3.2.4 Turning Off the Transmitter

The transmitter can be turned off by pressing the OFF-ON-START toggle switch down to the OFF position. Once turned off, the Machine Stop relay in the receiver is immediately opened.

NOTE: If the unit has a standard status LED, it will illuminate solid red during the transmitter's power down process. Once the power down process is complete, the transmitter will turn off and the status LED will not be on.

NOTE: Depressing the Machine Stop switch will also turn the transmitter off and open the Machine Stop relay in the receiver. See Section 3.3 for more information on the Machine Stop switch.

3.3 MACHINE STOP SWITCH (FOR EMERGENCY STOPPING ONLY)

When the Machine Stop switch is depressed, the Machine Stop relay in the receiver is immediately opened.

Under normal operating conditions, the Machine Stop switch must be in the raised position or the transmitter and system will not operate.

NOTE: The Machine Stop Switch is to be used for emergency stopping only, not for normal system shut down.

3.4 POWER/STATUS AND BATTERY LED

The standard MLTX2 transmitter includes a Power/Status LED to let the operator know that the unit is functioning and Battery LED to indicate that the battery level is low (see section 3.6.1 for LED indication definitions)

NOTE: Single Status/Battery LED equipped units will indicate that the transmitter is on and the battery level from the single LED (see section 3.6.2 for LED indication definitions)

3.5 OPTIONAL GRAPHIC USER INTERFACE

The optional LCD screen located at the center of the device provides visual information during the operation of the MLTX2 transmitter. It is used to change configuration settings, confirm commands being operated, provide two-way feedback, and display transmitter diagnostic information such as battery life and signal strength.

The optional graphic user interface replaces the standard status LED when ordered.

3.6 NORMAL OPERATING MODE WITH STANDARD STATUS LED(S)

In normal operating mode, the MLTX2 utilizes the Power/Status and Battery LED(s) to communicate the watch dog timer within the CPU of the transmitter, the machine stop relay status and when the battery level is low.

3.6.1 Transmitters Equipped with Separate Power/Status and Battery LED Indicators

3.6.1.1 Watch Dog Indicator (Steady Slow Blinking Green Power/Status LED)

The blinking Power/Status LED represents the watch dog timer within the CPU of the unit. This indicates that the transmitter is powered on.

NOTE: The Power/Status LED should be continuously blinking at all times. If the LED is not blinking the transmitter will need to be rebooted to operate properly.

3.6.1.2 Machine Stop Relay Indicator (Rapidly Green Blinking Power/Status LED)

When the receiver is online with the transmitter and the machine stop relay is successfully pulled in, the Power/Status LED will rapidly blink green.

NOTE: If the receiver inactivity timer times out, the transmitter will revert back to the watch dog indicating status (steady slow blinking Green Power/Status LED). Following the procedure for pulling in the machine stop relay in section 3.2.3 will resume the rapidly blinking green Power/Status LED if the machine stop relay is successfully pulled in.

NOTE: This LED function is only available on the 2.4 GHz and 900 MHz equipped transmitters. On 433 MHz equipped transmitters, the watch dog indicator function in section 3.6.1.1 continues to operate after the machine stop relay is pulled in.

3.6.1.3 Low Battery Level Indicator (Blinking Red Battery LED)

The Battery LED will rapidly flash red when the battery level drops below 10%. The Power/Status LED will continue blinking for the watch dog indicator and machine stop relay indicator status.

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NOTE: If using an optional battery pack from what the unit was shipped from the factory with, the low battery level indicator will be inaccurate unless the dip switch settings are set to the correct battery type being used. See Section 3.1.3 for details to properly set the dip switches.

3.6.1.4 Shutdown Sequence Initiated Indicator (Solid Red Battery LED)

When the transmitter is turned off or if the machine stop is depressed, the transmitter will begin its shut down sequence. During the sequence, the Red Battery LED will illuminate solid.

NOTE: When the shutdown sequence is completed, all LEDs will turn off.

3.6.2 Transmitters Equipped with Single Status/Battery LED Indicator

NOTE: For specific LED function details, always refer to the transmitter drawings provided with the system.

3.6.2.1 Watch Dog Indicator (Steady Slow Blinking Red Status/Battery LED)

The slow blinking Battery/Status LED represents the watch dog timer within the CPU of the unit. This indicates that the transmitter is powered on.

NOTE: The Status/Battery LED should be continuously blinking at all times. If the LED is not blinking the transmitter will need to be rebooted to operate properly.

3.6.2.2 Low Battery Level Indicator (Rapidly Blinking Red Status/Battery LED)

The Status/Battery LED will rapidly flash red when the battery level drops below 10%.

NOTE: If using an optional battery pack from what the unit was shipped from the factory with, the low battery level indicator will be inaccurate unless the dip switch settings are set to the correct battery type being used. See Section 3.1.3 for details to properly set the dip switches.

3.6.2.3 Shutdown Sequence Initiated Indicator (Solid Red Battery LED)

When the transmitter is turned off or if the machine stop is depressed, the transmitter will begin its shut down sequence. During the sequence, the red Status/Battery LED may illuminate solid.

NOTE: If the shutdown sequence is started when the LED is not illuminated, the LED will stay in the off state during the shutdown process.

NOTE: When the shutdown sequence is completed, all LEDs will turn off.

3.7 NORMAL OPERATING MODE WITH OPTIONAL GRAPHIC USER INTERFACE

In normal operating mode, the MLTX2 displays real time information relating to the operation of the transmitter on the graphic user interface. Information may include Command Confirmation, Battery Life, Signal Strength, Two-Way Feedback, etc.

Figure 10: Normal operating screen on graphic user interface

3.7.1 Watch Dog Indicator (Spinning Arrow)

The spinning arrow represents the watch dog timer within the CPU of the unit.

NOTE: The arrow should be continuously spinning at all times. If the arrow is not spinning, the transmitter needs to be rebooted to operate properly.

3.7.2 Command Confirmation

Each time the user operates a control on the transmitter, a message will be displayed on the graphic user interface screen confirming what is being operated.

For example, if the second paddle is moved to its 4th position in the UP direction the display will show 'MTN2 D1 SP=4'. This translates to 'Motion 2, Direction 1, Speed 4'.

3.7.3 Battery Life Indicator

Remaining battery life is displayed in the bottom left hand corner of the graphic user interface screen.

Battery life is displayed in 5% increments.

NOTE: If using an optional battery pack from what the unit was shipped from the factory with, the battery life indicator will be inaccurate unless the dip switch settings are set to the correct battery type being used. See Section 3.1.3 for details to properly set the dip switches.

3.7.4 Signal Strength Indicator

The Signal Strength Indicator shows the radio signal strength at the receiver.

The Signal Strength Indicator is only available in systems equipped for Two-Way feedback (systems utilizing the 433 MHz frequency band do not have Two-Way feedback available). For such systems, Signal Strength is displayed at the bottom right hand corner of the graphic user interface screen.

Signal Strength is displayed in 5% increments.

NOTE: On 433 MHz systems, the signal strength indicator will show minimum signal strength regardless of the actual signal strength (systems utilizing the 433 MHz frequency band do not have Two-Way feedback).

3.7.5 Two-Way Feedback System

This option allows the user to view various parameters that may be important to the operation of the equipment on the graphic user interface display screen.

Parameters such as engine RPM, the torque or speed of a drive, temperature, current, or any other useful values can be sent from the receiver and displayed on the transmitter.

NOTE: Systems utilizing the 433 MHz frequency band do NOT have Two-Way feedback available.

3.8 JOYSTICKS AND PADDLES/LEVERS

To activate the desired motor functions, operate the Joystick or Paddle/Lever that corresponds to the desired motion.

To activate higher speed functions for those transmitter models so equipped, operate the Joystick or Paddle/Lever further to activate the desired speed.

3.9 ROTARY SELECTOR SWITCH

The rotary selector switch can be used to select various modes of operation.

A rotary switch can have 2 to 12 positions to select from.

3.10 AUXILIARY SWITCHES

These switches activate special function relays that control items such as grab attachments, magnets, lights, etc.

The auxiliary switches can be momentary or latched.

4.0 TRANSMITTER SETUP

The transmitter may have settings changed one of four ways.

For units without the optional graphic user interface, the built-in dip switch block can adjust the RF channel, RF Channel Setting Override function, and the battery type. The RF channel and access code can be programmed using the IR configuration link with a compatible receiver. All other settings can only be changed at the factory or with the optional RCP software.

For units with the optional graphic user interface, the Setup Mode can be used to edit configuration settings such as: Access Code, Channel Select, User Code, Transmitter Time Out, Backlight Time Out, Password Enable, Change Password, and more. The settings can also be changed with the optional RCP software.

NOTE: The IR configuration receiver link can adjust settings on both types of units (with and without the optional graphic user interface), but on units without the optional display the saved channel is only used if the override dip switch is set to ON. If the override dip switch is set to OFF, the dip switch settings set the RF channel.

NOTE: The optional RCP software can adjust settings on both types of units (with and without the optional graphic user interface) but on units without the optional display, the saved channel is only used if the override dip switch is set to ON. If the override dip switch is set to OFF, the dip switch settings set the RF channel.

4.1 TRANSMITTER SETUP SETTINGS WITH STANDARD STATUS LED

There are three settings that can be adjusted using the dip switch block: the battery life indication setting, the RF Channel Setting Override setting, and the RF Channel setting. In addition, the access code and channel can be changed using the IR configuration receiver link with a compatible receiver (contact the factory to determine if your receiver is compatible).

The Battery Life Indication setting can be set for the appropriate battery type using dip switch positions 1 and 2; this is detailed in Section 3.1.3. The RF Channel Setting Override, the RF Channel Setting Selection, and the IR Configuration are detailed in the following sections.

4.1.1 RF Channel Setting Override

The dip switch block can enable or disable the RF channel setting dip switch override. Dip switch position number 3 enables the channel from memory function, which enables the transmitter to utilize the channel setting that was set up with the optional RCP software in the transmitter's memory (instead of normally overwriting the channel settings with the dip switch settings in standard status LED equipped transmitters) or to use the channel that was set up using the IR configuration receiver option. This dip switch is located on the same block used for battery life indication and is visible through the USB/IR window (see Figure 11). To set the RF channel setting override, reference Figure 12 for dip switch settings for the override function.

4.1.2 RF Channel Setting Selection

The dip switch block can also set the RF channel setting. This dip switch block is the same block used for RF channel setting override and battery life indication. The dip switch block is visible through the USB/IR window (see Figure 11).

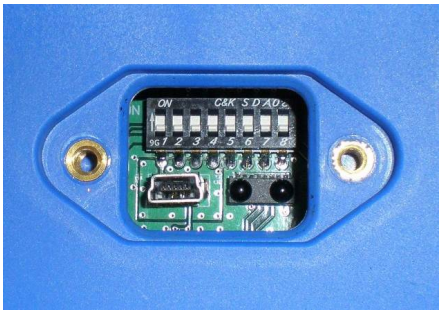
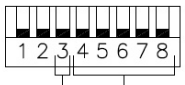


Figure 11: Dip switch block as viewed through USB/IR port

NOTE: The dip switch block switches are oriented so that the Off position is next to the number designator and the On position is up or away from the number designator.

Regardless of which radio frequency the transmitter was equipped with the RF channel dip switch settings are the same. Refer to Sections 6.2 and 6.3 for details on the specific RF channel details for the radio frequency that the transmitter is equipped with.

The following figure details the dip switch positions for each RF channel.



SWITCH POSITIONS

CHANNEL	SW4	SW5	SW6	SW7	SW8
1	DOWN	DOWN	DOWN	DOWN	DOWN
2	UP	DOWN	DOWN	DOWN	DOWN
3	DOWN	UP	DOWN	DOWN	DOWN
4	UP	UP	DOWN	DOWN	DOWN
5	DOWN	DOWN	UP	DOWN	DOWN
6	UP	DOWN	UP	DOWN	DOWN
7	DOWN	UP	UP	DOWN	DOWN
8	UP	UP	UP	DOWN	DOWN
9	DOWN	DOWN	DOWN	UP	DOWN
10	UP	DOWN	DOWN	UP	DOWN
11	DOWN	UP	DOWN	UP	DOWN
12	UP	UP	DOWN	UP	DOWN
13	DOWN	DOWN	UP	UP	DOWN
14	UP	DOWN	UP	UP	DOWN
15	DOWN	UP	UP	UP	DOWN
16	UP	UP	UP	UP	DOWN
17	DOWN	DOWN	DOWN	DOWN	UP
18	UP	DOWN	DOWN	DOWN	UP
19	DOWN	UP	DOWN	DOWN	UP
20	UP	UP	DOWN	DOWN	UP
21	DOWN	DOWN	UP	DOWN	UP
22	UP	DOWN	UP	DOWN	UP
23	DOWN	UP	UP	DOWN	UP
24	UP	UP	UP	DOWN	UP
25	DOWN	DOWN	DOWN	UP	UP
26	UP	DOWN	DOWN	UP	UP
27	DOWN	UP	DOWN	UP	UP
28	UP	UP	DOWN	UP	UP
29	DOWN	DOWN	UP	UP	UP
30	UP	DOWN	UP	UP	UP
31	DOWN	UP	UP	UP	UP
32	UP	UP	UP	UP	UP

FUNCTION	SW3
CHANNELS FROM DIPSWITCH	DOWN
CHANNELS FROM MEMORY	UP

Figure 12: Dip switch positions for RF channel selection

The dip switch settings will take effect upon the next power cycle of the transmitter.

NOTE: If using the optional RCP software on transmitters NOT equipped with the optional graphic user interface, the channel settings will read from the dip switch positions and not from memory when the channel from memory override function is not enabled. The RF channel set by the optional RCP software will not be used unless the memory override dip switch is set to ON. When the RF channel from memory override is NOT enabled, the dip switch positions set the RF channel used by the transmitter.

NOTE: If using the IR configuration receiver function on transmitters NOT equipped with the optional graphic user interface, the channel settings will read from the dip switch positions and not from memory when the channel from memory override function is not enabled. The RF channel set by the IR configuration receiver function will not be used unless the memory override dip switch is set to ON. When the RF channel from memory override is NOT enabled, the dip switch positions set the RF channel used by the transmitter.

NOTE: The transmitters equipped with the optional graphic user interface will read channel settings from memory and will not respond to dip switch changes for the channel setup. Only the dip switches for the battery life indication are functional on graphic user interface equipped transmitters.

4.1.3 IR Configuration Receiver

IR Cfg Recv function allows the transmitter to link, using IR, to a compatible receiver (contact the factory to determine if your receiver is compatible) and automatically setup the channel and access code to match the linked compatible receiver.

NOTE: If using the IR configuration receiver function on transmitters NOT equipped with the optional graphic user interface, the channel settings will read from the dip switch positions and not from memory when the channel from memory override function is not enabled. The RF channel set by the IR configuration receiver function will not be used unless the memory override dip switch is set to ON. When the RF channel from memory override is NOT enabled, the dip switch positions set the RF channel used by the transmitter.

4.1.3.1 IR Configuration Receiver On Transmitters Equipped with Separate Power/Status and Battery LED Indicators

To utilize the IR configuration receiver function and link to a compatible receiver, push the OFF-ON-Start toggle to the Start position and hold for more than 5 seconds. When the transmitter successfully enters the IR configuration mode, the Power/Status and Battery LED(s) will blink alternately continuously. After the LEDs are blinking alternately, point the IR window of the transmitter at the desired receiver to control and momentarily press the OFF-ON-Start toggle to the Start position and release.

If the link is successful, the LEDs will stop blinking and the transmitter will shut down. The new settings obtained from the IR configuration function will take effect upon the next power cycle of the transmitter.

If the link is unsuccessful with a compatible receiver, the Power/Status and Battery LED(s) will continue to blink alternately.

To cancel the IR configuration receiver without a successful link, move the OFF-ON-Start toggle to the OFF position.

4.1.3.2 IR Configuration Receiver On Transmitters Equipped with Single Status/Battery LED Indicator

To utilize the IR configuration receiver function and link to a compatible receiver, push the OFF-ON-Start toggle to the Start position and hold for more than 5 seconds. When the transmitter successfully enters the IR configuration mode, the Status/Battery LED will blink continuously. After the LED is blinking, point the IR window of the transmitter at the desired receiver to control and momentarily press the OFF-ON-Start toggle to the Start position and release.

If the link is successful, the LED will stop blinking and the transmitter will shut down. The new settings obtained from the IR configuration function will take effect upon the next power cycle of the transmitter.

If the link is unsuccessful with a compatible receiver, the Status/Battery LED will continue to blink.

To cancel the IR configuration receiver without a successful link, move the OFF-ON-Start toggle to the OFF position.

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4.2 USING THE TRANSMITTER IN SETUP MODE (WITH OPTIONAL GRAPHIC USER INTERFACE)

NOTE: The Setup Mode is only accessed on transmitters equipped with the optional graphic user interface. The units equipped with the standard status LED can only have the settings of the transmitter changed at the factory or by using the optional RCP software.

The Setup Mode can be used to edit configuration settings such as: Access Code, Channel Select, User Code, Transmitter Time Out, Backlight Time Out, Password Enable, Change Password, and more.

NOTE: No parameter changes will take effect until the user has selected 'Save and Exit' from the Setup Mode.

4.2.1 Entering Setup Mode

To enter the Setup Mode, first make sure the unit is OFF and the Machine Stop switch is raised. Next, push the OFF-ON-START toggle switch to the START position and hold it in the START position for more than 5 seconds until the setup screen appears.

The user will see a prompt for a four digit password if the password feature is enabled. If no password is enabled, then the adjustments in Section 4.2.2 will be available with no further input required from the user.

NOTE: The password feature is enabled by default from the factory.

Use the Joystick/Paddle to increment/decrement the value and toggle to the START position when finished. If the password is entered correctly, the device will enter Setup Mode. If it is entered incorrectly, the device will power down.

*NOTE: The factory default password to get into the setup menu is **0000**.*

4.2.2 Adjusting Settings in Setup Mode

To navigate through Setup Mode, the Joystick/Paddle designated (MTN 1) and OFF-ON-START switch are used. The Joystick/Paddle cycles through the menus and is also used to change parameters within the menus. Pushing the OFF-ON-START switch to the START position will toggle between the menu and its parameter(s). When adjusting larger values, the speed is dependent on how far the Joystick/Paddle is depressed.

NOTE: No parameter changes will take effect until the user has selected 'Save and Exit' from the Setup Mode.

4.2.2.1 Access Code

The Access Code determines which receiver will be controlled by the transmitter.

The Access Code in the MLTX2 transmitter must match the receiver Access Code or dip switches.

If the Access Codes settings on the receiver and transmitter do not match, no communication will occur.

The Access Code is a 20-bit binary value with a decimal equivalent of 0 - 1048575. It will be displayed as binary or decimal depending on the application.

4.2.2.2 Channel Select

The Channel Select setting determines the frequency that the MLTX2 is operating on.

The user can select channels 1-32 which correspond to the frequencies in Sections 6.2 and 6.3.

4.2.2.3 User Code

The User Code setting is a unique identifier that allows the user to select multiple modes when using the same channel. The receiver can be tuned to only 'hear' messages sent from a transmitter with the same user code.

4.2.2.4 Transmitter Timeout

This setting controls the amount of time that the transmitter can be inactive before it automatically shuts off.

The Timeout time can be set from 1 to 60 minutes.

When the unit times out, the transmitter will turn off.

Setting Timeout to 0 disables transmitter timeout.

WARNING

DO NOT ASSUME THE POWER IS OFF IN THE RECEIVER BECAUSE THE TRANSMITTER IS TURNED OFF. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

4.2.2.5 Backlight Timeout

The Backlight timeout setting controls the amount of time that the backlight will stay on after a command is pressed before it automatically shuts off.

Backlight Timeout can be set from 1 to 30 seconds.

Setting Timeout to disable will disable the backlight.

Setting Timeout to "always on" sets the backlight to be on continuously while the transmitter is on and active.

NOTE: Leaving the backlight on longer will decrease the battery run time and will require more frequent battery replacement (or recharges for optional rechargeable battery packs).

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4.2.2.6 Password Enable

This setting enables or disables the requirement of entering a password into the transmitter to enter Setup Mode.

When the disabled setting is selected the user will go directly into Setup Mode without being prompted to enter a password.

Magnetek strongly recommends enabling the Setup Mode password setting to prevent unauthorized or accidental changes to parameters.

NOTE: The unit is shipped with the password requirement enabled and utilizing the factory default password.

4.2.2.7 Change Password

This allows the user to change the password needed to enter the Setup Mode.

The password must consist of 4 digits.

4.2.2.8 IR Configuration Receiver

IR Cfg Recv function in the setup allows the transmitter to link to a compatible receiver by using IR (contact the factory to determine if your receiver is compatible) and automatically set up the channel and access code to match the linked compatible receiver.

After selecting this option, point the IR window of the transmitter at the desired receiver to control and momentarily press the OFF-ON-Start toggle to the Start position and release. The graphic user interface will display “Attempting” while scanning for the receiver’s IR signal. If the receiver is in range and IR link is made, the message will change to “Success”.

NOTE: The changes to the transmitter’s channel configuration and access code will not be saved until the operator selects the Exit with Save option to exit the Setup Mode.

If the receiver is not in range, the scan will time out and the graphic user interface will display “Failed”. The operator can reposition the transmitter and reattempt to establish the IR link with the receiver by toggling the Start position on the OFF-ON-Start toggle multiple times.

NOTE: The access code and channel will not be updated to match the desired receiver until “Success” is displayed. Once “Success” is displayed, subsequent “Failed” messages will not overwrite the access code and channel obtained in the successful IR link until a new successful IR link is made.

The IR configuration function will only update channel and access code information if the receiver and transmitter are programed at the factory with the same project identification number. If the receiver/transmitter pairing is not programmed with the same project identification number, the graphic user interface will display “Err Project ID” when an IR link is attempted. The IR link will not be successful and the access code and channel information in the transmitter will not be changed.

If the receiver and transmitter IR pair are not operating in the same frequency band, when an IR link is attempted the graphic user interface will display “Err RF Freq”. The IR link will not be successful and the access code and channel information in the transmitter will not be changed.

4.2.2.9 Exit Without Save

If the user does not wish to save any of the configuration changes made, the Exit Without Save option can be selected.

NOTE: None of the changes will be saved upon selection of this option. The transmitter will start up with the last saved configuration settings.

4.2.2.10 Exit With Save

Selection of this option saves all changes and exits the Setup Mode.

Upon exit, the device will start up with the new configuration settings.

5.0 OPTIONAL PROGRAMMING WITH RCP

Using the optional RCP software makes programming of the MLTX2 easier and allows for settings to be saved for future reference.

WARNING

THE USE OF RCP (RADIO CONTROL PROGRAMMER) IS INTENDED FOR USE BY AUTHORIZED PERSONS ONLY. CHANGES TO ANY RADIO DATA VALUE MAY LEAD TO UNEXPECTED, UNDESIRABLE, OR UNSAFE OPERATION OF EQUIPMENT AND FURTHERMORE MAY LEAD TO EQUIPMENT DAMAGE, PERSONAL INJURY, OR EVEN DEATH. ALL EQUIPMENT OPERATORS AND/OR PERSONNEL SHOULD BE NOTIFIED OF ANY RADIO DATA VALUE CHANGES THAT MAY AFFECT OPERATION.

5.1 ACCESS CODES

The receiver and transmitter must be programmed with the same access code to properly communicate with each other.

WARNING

TWO OPERATIONAL TRANSMITTERS WITH THE SAME ACCESS CODES OPERATING AT THE SAME TIME IS A DEFINITE SAFETY HAZARD. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

5.2 CHANGING RECIEVER ACCESS CODES

Receiver Access Code Programming. For detailed instructions on setting parameters including access codes, see the “Programming” section of the applicable receiver manual.

WARNING

AFTER CHANGING THE ACCESS CODES ON THE TRANSMITTER, TEST THE UNIT BY TURNING IT ON AND OFF NEAR THE APPROPRIATE RECEIVER. IF THE RECEIVER DOES NOT RESPOND, DO NOT ACTIVATE A FUNCTION BUTTON! THE TRANSMITTER MAY HAVE THE WRONG ACCESS CODE, WHICH COULD MOVE OTHER EQUIPMENT. RE-CHECK THE ACCESS CODE IN THE TRANSMITTER AND RETEST. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH, AND DAMAGE TO EQUIPMENT.

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WARNING

THE ACCESS CODES IN THE RECEIVER ARE UNIQUE AND FACTORY PRESET. DO NOT CHANGE THESE ACCESS CODES UNLESS YOU ARE REPLACING AN EXISTING RECEIVER AND ITS ACCESS CODE. CHANGING THIS CODE COULD MAKE IT COMMON WITH ANOTHER RECEIVER ACCESS CODE, WHICH COULD MOVE OTHER EQUIPMENT. NO TWO SYSTEMS IN ANY LOCATION SHOULD EVER HAVE THE SAME ACCESS CODES INDEPENDENT OF THE FREQUENCY. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH, AND DAMAGE TO EQUIPMENT.

5.3 CONNECTING THE MLTX2 TO A COMPUTER

The MLTX2 transmitter contains circuits that permit communication with a computer system via USB. The USB mini-B plug is located through the IR/USB port window as detailed in Section 3.1.3.

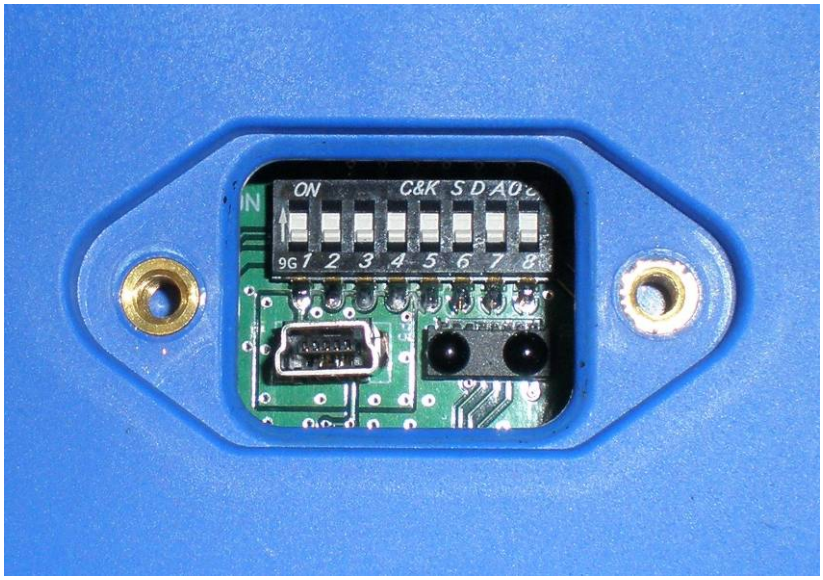


Figure 13: USB mini-B receptacle as viewed through USB/IR port

When plugging in the transmitter to a computer system, the transmitter batteries must be installed. The USB circuit does not provide power to the transmitter. Magnetek highly recommends using a fully charged battery pack when using USB and RCP with the transmitter.

5.4 PROGRAMMING WITH RCP

Read the section of the MLTX2 manual regarding additional operational features to familiarize you with the features listed below. The MLTX2 transmitter can be programmed using the optional RCP (Radio Control Programmer) software.

Magnetek RCP software makes the programming of the MLTX2 transmitter easier and allows the programmer to store all of the MLTX2 settings in files for later use or reference. The RCP software also allows the programmer to customize the MLTX2 transmitter display (on MLTX2s with optional graphic user interface) with language descriptions that are project or machine specific. Help is provided for each function at the bottom of the RCP screen. The RCP software allows you to select frequency, access code, transmitter power, as well as CAN configuration. Follow the steps below:

Install the RCP Software

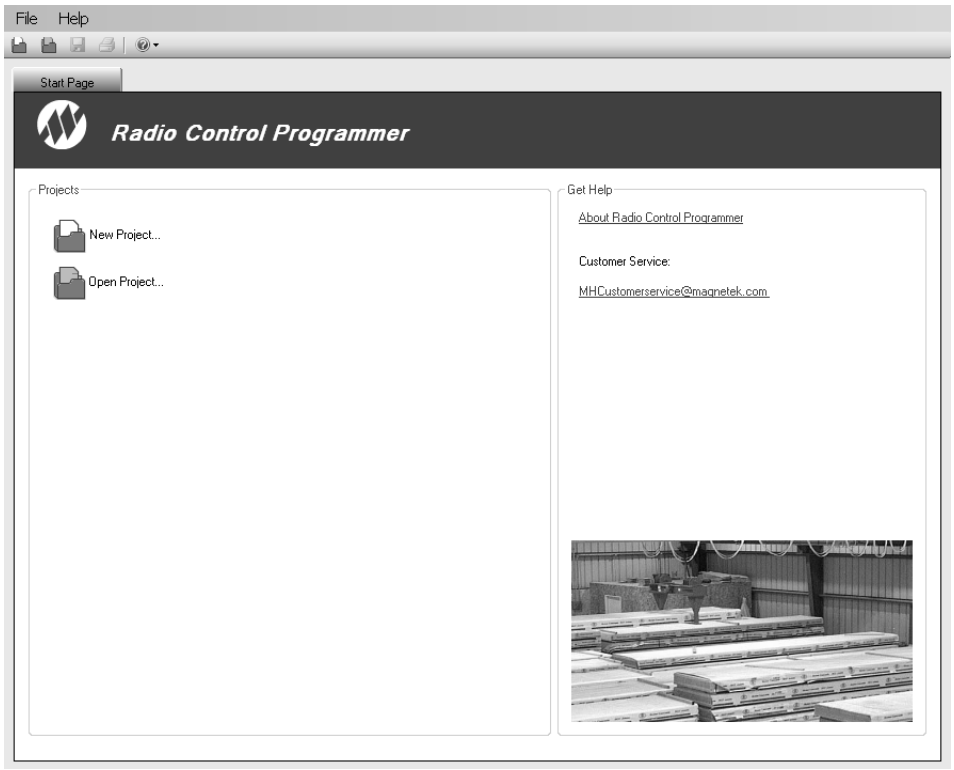
Install the RCP software onto your computer. The software is self-installing; simply insert the CD-ROM into your CD-ROM drive and follow the onscreen prompts. Refer to the installation instruction sheet for help. You will be prompted to enter an activation code. The code can be found on the CD jewel case and on the installation instructions. The software cannot be used without this code.

Run the RCP Software

After installation of the RCP Software, double click the RCP icon to launch the program.

Click on New Project or Open Project

Select “New Project” if you are creating a new program file. Select “Open Project” if you want to retrieve an existing program file. A list of recent projects will appear under “Open Project.” Clicking on one of these will open that project. It is recommended that you create a folder in which to save all programming files.



For New Projects, Select Device Type

After the New Projects icon is selected, a menu will open listing the available device types. Select the device type that matches the product you wish to program (selecting a project type will display a picture of the product for verification).

Receive Device Data Checkbox

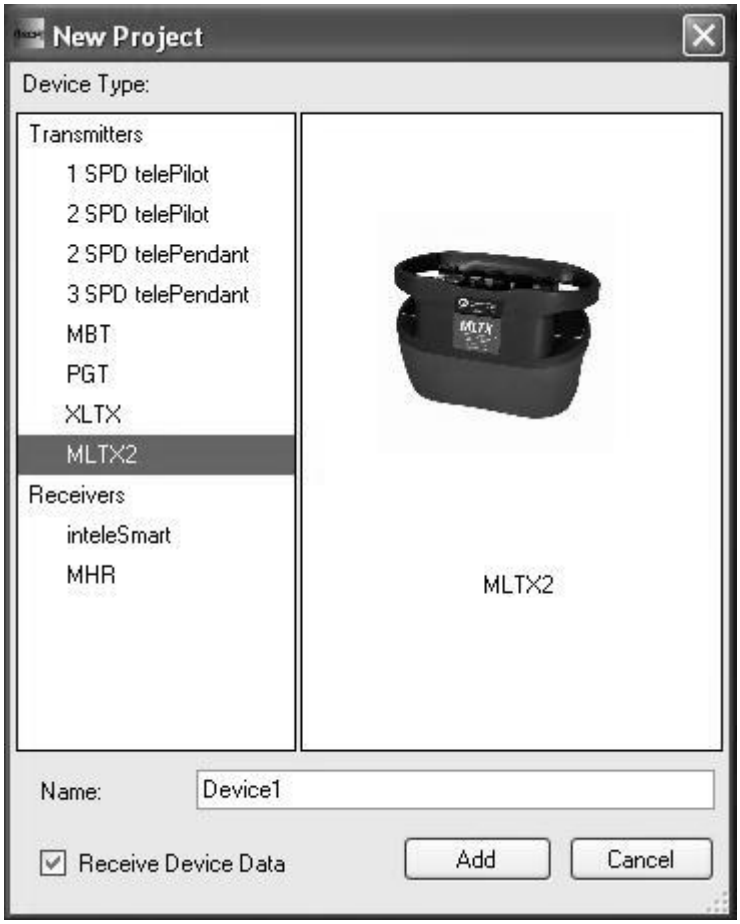
At the bottom of the New Project window there is a check box that allows the user to automatically download the setting values on the device upon connection.

NOTE: This check box is checked by default.

Having the "Receive Device Data" option checked will cause the program to automatically read the data that is currently on the device upon clicking the Add button.

WARNING

IF "RECEIVE DEVICE DATA" CHECKBOX IS UNCHECKED, THE RCP PROGRAM WILL OVERWRITE ALL SETTING VALUES ON THE DEVICE WITH DEFAULT VALUES AND ANY SETTINGS CHANGED BY THE OPERATOR UPON SENDING THE PROGRAM TO THE DEVICE. ALL STORED VALUE SETTINGS WITHIN THE DEVICE WILL BE REPLACED, INCLUDING ANY PROJECT-SPECIFIC VALUES. MAGNETEK STRONGLY RECOMMENDS THAT THE "RECEIVE DEVICE DATA" CHECKBOX BE LEFT CHECKED.



This screen also allows the programmer to create a specific name for the device to help keep track of device settings and changes. It is recommended that a unique name is chosen for each device programmed with RCP.

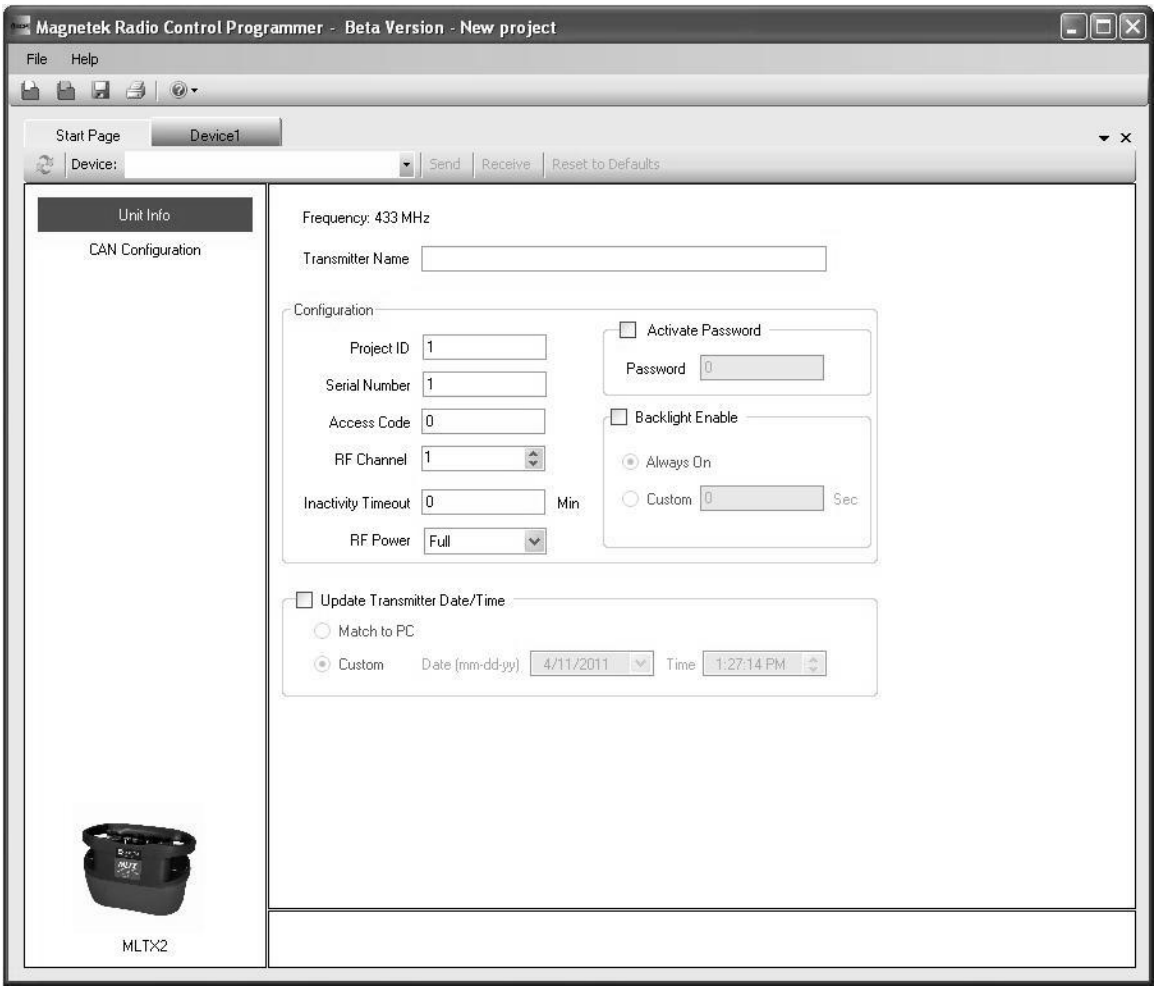
5.4.1 MLTX2 Configuration Pages

The MLTX2 transmitter has two configurable pages available to change settings on. The first page allows the configuration of general transmitter settings (Transmitter name, Access code, RF channel and etc.). The second page allows the configuration of the CAN bus network settings for models with the optional CAN connector equipped.

Unit Info Pages

This page allows the user to view the receiver's Project ID and serial number. The user can modify the transmitter name, access code, RF channel and activate the password. This page may also be used by the user to synchronize the internal clock on the transmitter with the connected PC or manually set the clock/date.

NOTE: Changing any of these details will require a reboot of the MLTX2 after the new information has been sent to the device.



Transmitter Name

The transmitter name field allows the user to create a custom name for the transmitter. The name can be up to 16 ASCII characters long.

Project ID

This section displays the Project ID for the unit. The Project ID is set by the factory and cannot be modified by the user.

Serial Number

This section displays the serial number for the unit. The serial number of the unit is set by the factory and cannot be modified by the user.

Access Code

The access code acts as the transmitter address. The transmitter will only transmit commands to receivers with the same address. This feature is selectable by the user.

NOTE: The transmitter must be set with the same access code as the receiver to properly communicate with each other.

WARNING

THE ACCESS CODES IN THE RECEIVER ARE UNIQUE AND FACTORY PRESET. DO NOT CHANGE THESE ACCESS CODES UNLESS YOU ARE REPLACING AN EXISTING RECEIVER AND ITS ACCESS CODE. CHANGING THIS CODE COULD MAKE IT COMMON WITH ANOTHER RECEIVER ACCESS CODE, WHICH COULD MOVE OTHER EQUIPMENT. NO TWO SYSTEMS IN ANY LOCATION SHOULD EVER HAVE THE SAME ACCESS CODES INDEPENDENT OF FREQUENCY. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH, AND DAMAGE TO EQUIPMENT.

RF Channel

The RF channel is user-selectable through the pull-down menu. This function is used to prevent interference with other radio devices. The user-selectable channels for 400 MHz, 900 MHz and 2.4 GHz systems are 1 through 32. See Sections 6.2 and 6.3 for channel frequency details.

NOTE: If using the optional RCP software on transmitters NOT equipped with the optional graphic user interface, the channel settings will read from the dip switch positions and not from memory when the channel from memory override function is not enabled. The RF channel set by the optional RCP software will not be used unless the memory override dip switch is set to ON. When the RF channel from memory override is NOT enabled, the dip switch positions set the RF channel used by the Transmitter.

Inactivity Timeout

The transmitter can be set to turn off after a period of time when no controls are activated. To restart the transmitter, the OFF-ON-START switch must be cycled through the start position. The factory default setting for the inactivity timeout is 15 minutes.

RF Power

The RF transmitting power of the unit is user-selectable through the pull-down menu. This function is used to reduce the operating range of the transmitter from the equipment being operated. The user-selectable options for RF power are Full, Half, Quarter and Minimum.

Activate Password

The password is used to restrict access to the configuration menu on the MLTX2. Having an active password prevents accidental changes to the transmitter.

Please familiarize yourself with this section before programming password.

If you choose to enable the password function, you can create a new password by selecting a four digit numerical password using numbers from 0 to 9. Be sure to write this password down in a safe place for future reference.

WARNING

ALWAYS REMEMBER TO STORE THE PASSWORD IN A SECURE LOCATION FOR ACCESS IF THE PASSWORD IS LOST OR FORGOTTEN. ONCE THE TRANSMITTER IS PROGRAMMED WITH A PASSWORD, THERE IS NO WAY TO DEFEAT THE PASSWORD WITHOUT USING THE RCP SOFTWARE TO EITHER READ THE PASSWORD OR REPROGRAM A NEW PASSWORD.

WARNING

THIS PASSWORD FUNCTION IS NOT TO BE USED AS A SECURITY DEVICE. THE PURPOSE OF THIS FUNCTION IS TO PREVENT ACCIDENTAL CHANGES TO THE TRANSMITTER SETTINGS. THE BEST FORM OF SECURITY IS ALWAYS TO LOCK UP THE TRANSMITTER WHEN NOT IN SERVICE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

The password default setting is to be disabled during initial programming by the RCP software. To enable password protection, check the box next to the phase “Activate password.”

WARNING

NOT ENABLING THE PASSWORD FUNCTION ALLOWS THE TRANSMITTER SETTINGS TO BE MODIFIED BY ANY UNAUTHORIZED USERS. IMPROPER TRANSMITTER SETTINGS COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

Backlight Enable

This section allows the user to enable the LCD display backlight (on systems equipped with optional graphic user interface LCD display) and select the period of time after transmitter activity that the backlight stays on.

The user has the option to check the “Always On” check boxed for backlight timeout. If this box is checked, the backlight will remain on continuously while the transmitter is active.

NOTE: The longer the backlight is turned on, the shorter the transmitter battery life will be.

The user can also enable the backlight to turn off or timeout after a period of time, the user can select the custom field and enter in the time (in seconds) that the backlight should be lit. The range of values is 1 to 30 seconds.

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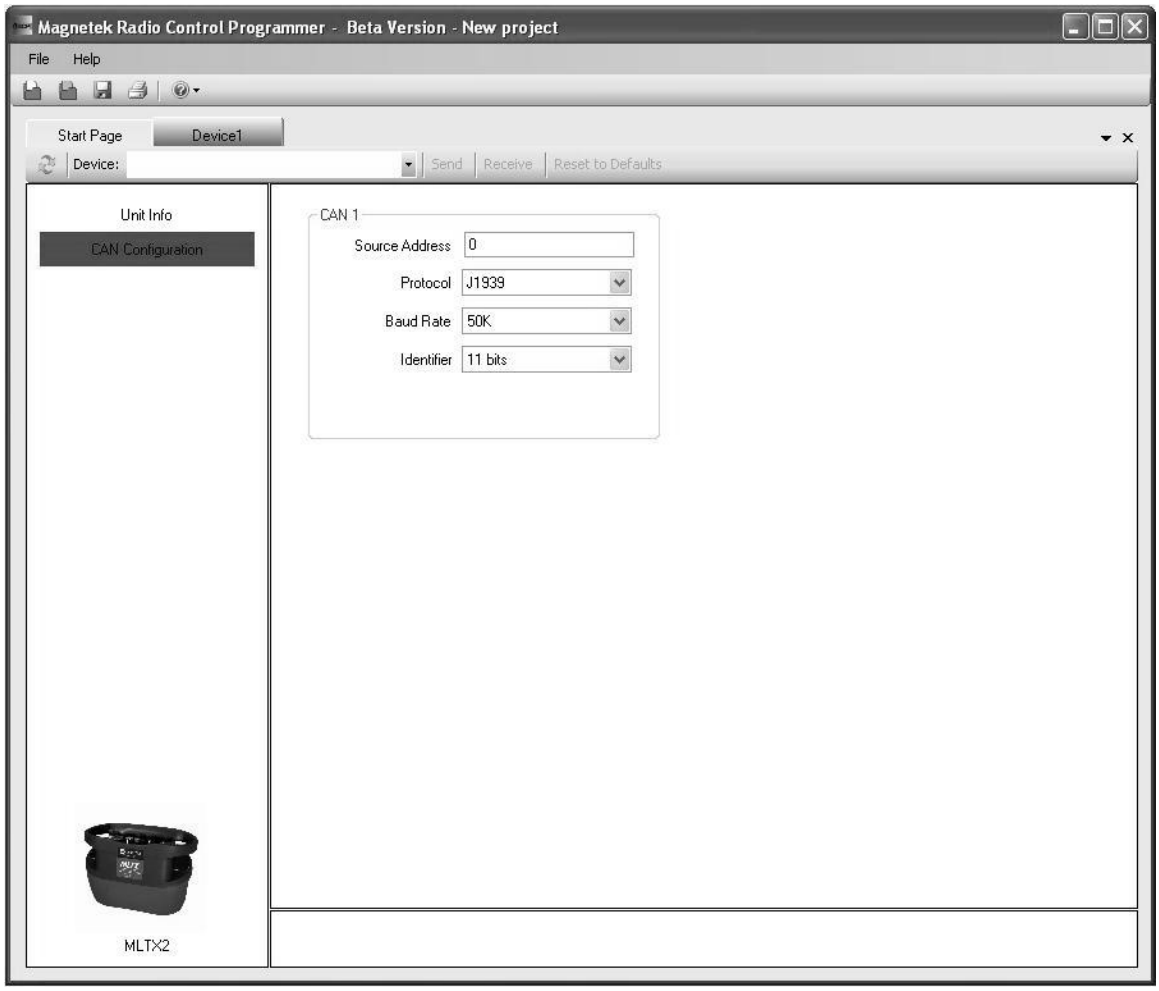
Update Transmitter Date/Time

This feature allows the user to reset the internal clock on the transmitter to the correct date and time. The user can select to match the clock on the PC that is connected to the unit or select a custom date and time.

CAN Configuration Page

This page allows the user to modify the CAN bus network communication settings.



Source Address

This is the address that the MLTX2 will use as the source address when transmitting messages on the CAN bus network.

Protocol

This pull down menu allows the user to modify the communication protocol for the CAN bus network. The user can select from the following options:

- J1939
- CAN Open
- Parker ICP
- High Country Tek DN
- OEM Controls

Baud Rate

This pull down menu allows the user to modify the communication speed of the CAN bus network. The user selectable options are 50k, 125k, 250k, and 500k.

Identifier

This pull down menu allows the user to select between an 11 bits or 29 bits identifier.

5.4.2 Saving, Downloading, and Reading the Programs and Other RCP Software Functions

CAUTION

TO PROGRAM OR READ DATA FROM THE MLTX2, THE TRANSMITTER MUST BE TURNED ON.

Saving the Programming File

Once programming is complete click the file tab at the top of the RCP screen to open the file menu. File location and name can be selected from this menu. Old files can be deleted, called up, modified and renamed by this same menu.

Sending a Program to the MLTX2

WARNING

AFTER EVERY PROGRAMMING OF THE TRANSMITTER, TEST THE UNIT BY UTILIZING THE APPROPRIATE RECEIVER. IF THE RECEIVER DOES NOT RESPOND, DO NOT ACTIVATE A FUNCTION BUTTON! THE TRANSMITTER MAY HAVE INCORRECT PROGRAMMING. RE-CHECK THE PROGRAMMING IN THE TRANSMITTER AND RETEST. AFTER ACTIVATION OF THE RECEIVER, FUNCTIONALLY TEST ALL COMMANDS ON THE TRANSMITTER BY INITIALLY JOGGING THE BUTTONS, THEN WITH A FULL MOVEMENT BEFORE RETURNING TO SERVICE. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO EQUIPMENT.

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To send a program file to a MLTX2 Transmitter

1. Plug in the USB programming cable or position.
2. Click the “send” button on the RCP screen. A dialog box will pop up confirming that you want to proceed. Check the box marked “I accept,” and then click the button “Continue send to radio.” On-screen prompts will confirm that the receiver has been programmed or if there are any issues.
3. Data will need to be sent separately for the Unit Info and CAN Configuration screens.

Receiving (Reading) the MLTX2 Programming

To read a program file from the MLTX2 Transmitter:

1. Plug in the USB programming cable.
2. Click “Receive” and follow on screen prompts.
3. RCP will confirm reception and automatically display current programming in the MLTX2 unit.

Reading the RCP Software Version

1. Select “Help”.
2. Select “About”.
3. The RCP Software Version number will be displayed.

Resetting MLTX2 Back to Factory Default Settings

1. Select “Reset to Defaults” button.
2. A dialog box will pop up confirming that you want to proceed. Click the button “OK” to restore the factory default settings. On-screen prompts will confirm that the transmitter has been reset to defaults or if there are any issues.
3. Power cycle the MLTX2 transmitter to implement the factory default values.

NOTE: Resetting the system back to factory defaults only restores the factory settings for the CAN configuration settings. All other settings will not be altered.

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6.0 TRANSMITTER RF CHANNEL CONFIGURATION SETTINGS

The RF channel can be set via the Setup Mode or the optional RCP software on systems equipped with the optional graphic user interface, or by using the dip switch block on systems not equipped with the optional graphic user interface. The following Sections 6.2 and 6.3 show the channels and protocols available for each transmitter radio frequency option.

NOTE: When using the optional RCP software on transmitters NOT equipped with the optional graphic user interface, the channel settings will read from the dip switch positions and not from memory when the channel from memory override function is not enabled. The RF channel set by the optional RCP software will not be used unless the memory override dip switch is set to ON. When the RF channel from memory override is NOT enabled, the dip switch positions set the RF channel used by the Transmitter.

6.1 FCC STATEMENTS

Compliance Statement (Part 15.19)
This device complies with Part 15 of FCC rules.
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)
Changes or modifications not expressly approved by the party responsible for compliance should void the user's authority to operate the equipment.

This portable transmitter with its antenna complies with FCC's RF exposure limits for general population/uncontrolled exposure.

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6.2 CHANNEL AND FREQUENCY DESIGNATIONS BY COUNT

433 MHz: TMS and TDMA

Channel Count	Channel Designator	Actual Frequency
01)	01	433.000 MHz
02)	02	433.050 MHz
03)	03	433.100 MHz
04)	04	433.150 MHz
05)	05	433.200 MHz
06)	06	433.250 MHz
07)	07	433.300 MHz
08)	08	433.350 MHz
09)	09	433.400 MHz
10)	10	433.450 MHz
11)	11	433.500 MHz
12)	12	433.550 MHz
13)	13	433.600 MHz
14)	14	433.650 MHz
15)	15	433.700 MHz
16)	16	433.750 MHz
17)	17	433.800 MHz
18)	18	433.850 MHz
19)	19	433.900 MHz
20)	20	433.950 MHz
21)	21	434.000 MHz
22)	22	434.050 MHz
23)	23	434.100 MHz
24)	24	434.150 MHz
25)	25	434.200 MHz
26)	26	434.250 MHz
27)	27	434.300 MHz
28)	28	434.350 MHz
29)	29	434.400 MHz
30)	30	434.450 MHz
31)	31	434.500 MHz
32)	32	434.550 MHz

Table 1.A

900 MHz: TMS and TDMA

Channel Count	Channel Designator	Actual Frequency
01)	1	903.30 MHz
02)	2	906.30 MHz
03)	3	907.80 MHz
04)	4	909.30 MHz
05)	5	912.30 MHz
06)	6	915.30 MHz
07)	7	919.80 MHz
08)	8	921.30 MHz
09)	A	902.30 MHz
10)	B	904.10 MHz
11)	C	904.30 MHz
12)	D	905.10 MHz
13)	E	905.50 MHz
14)	F	905.70 MHz
15)	G	906.60 MHz
16)	H	908.70 MHz
17)	I	908.90 MHz
18)	J	909.10 MHz
19)	K	910.10 MHz
20)	L	910.70 MHz
21)	M	911.00 MHz
22)	N	911.20 MHz
23)	O	912.00 MHz
24)	P	914.20 MHz
25)	Q	914.40 MHz
26)	R	914.60 MHz
27)	S	914.80 MHz
28)	T	915.80 MHz
29)	U	917.40 MHz
30)	V	923.20 MHz
31)	W	927.00 MHz
32)	X	927.30 MHz

Table 1.B

6.3 OPTIONAL FREQUENCIES AND CHANNELS

6.3.1 900 MHz: FHSS

Channel sets are designated between 1 and 32. The frequency range is between 902-928 MHz. The frequency hopping protocol does not use one particular frequency to transmit a message. Messages are transmitted over multiple frequencies in a predefined sequence or channel set. In doing so, this protocol is able to compensate for interference that may be present on a single frequency by sending the message across multiple frequencies.

6.3.2 2.4 GHz: FHSS

Channel sets are designated between 1 and 32. The frequency range is between 2402-2478 MHz. The frequency hopping protocol does not use one particular frequency to transmit a message. Messages are transmitted over multiple frequencies in a predefined sequence or channel set. In doing so, this protocol is able to compensate for interference that may be present on a single frequency by sending the message across multiple frequencies.

6.3.3 433 MHz Telemotive Legacy Channel Set: TMS and TDMA

Channel Count	Channel Designator	Actual Frequency
01)	AK01	439.8 MHz
02)	AK02	439.6 MHz
03)	AK03	439.4 MHz
04)	AK04	439.2 MHz
05)	AK05	439.0 MHz
06)	AK06	438.8 MHz
07)	AK07	438.6 MHz
08)	AK08	438.4 MHz
09)	AK09	438.2 MHz
10)	AK10	438.0 MHz
11)	AK11	437.8 MHz
12)	AK12	437.6 MHz
13)	AK13	437.4 MHz
14)	AK14	437.2 MHz
15)	AK15	437.0 MHz
16)	AK16	436.8 MHz
17)	AK17	436.6 MHz
18)	AK18	436.4 MHz
19)	AK19	436.2 MHz
20)	AK20	436.0 MHz
21)	AKA00	433.125 MHz
22)	AKA01	433.325 MHz
23)	AKA02	433.525 MHz
24)	AKA03	433.725 MHz
25)	AKA04	433.925 MHz
26)	AKA05	434.125 MHz
27)	AKA06	434.325 MHz
28)	AKA07	434.525 MHz
29)	AKA08	434.725 MHz
30)	AK38	432.4 MHz
31)	AK50	430.0 MHz

Table 2

6.3.4 419 MHz Extended Channel Set: TMS and TDMA

Channel Designator	Frequency	Channel Designator	Frequency
1*	418.950	44	417.500
2*	418.975	45	417.550
3*	419.000	46	417.600
4*	419.025	47	417.650
5*	419.050	48	417.700
6*	419.075	49	417.750
7*	419.100	50	417.800
8*	419.125	51	417.850
9*	419.150	52	417.900
10*	419.175	53	417.950
11*	419.200	54	418.000
12*	419.250	55	418.050
13*	419.275	56	418.100
14	416.000	57	418.150
15	416.050	58	418.200
16	416.100	59	418.250
17	416.150	60	418.300
18	416.200	61	418.350
19	416.250	62	418.400
20	416.300	63	418.450
21	416.350	64	418.500
22	416.400	65	418.550
23	416.450	66	418.600
24	416.500	67	418.650
25	416.550	68	418.700
26	416.600	69	418.750
27	416.650	70	418.800
28	416.700	71	418.850
29	416.750	72	418.900
30	416.800	73	419.350
31	416.850	74	419.400
32	416.900	75	419.450
33	416.950	76	419.500
34	417.000	77	419.550
35	417.050	78	419.600
36	417.100	79	419.650
37	417.150	80	419.700
38	417.200	81	419.750
39	417.250	82	419.800
40	417.300	83	419.850
41	417.350	84	419.900
42	417.400	85	419.950
43	417.450		

Table 3

*NOTE: Channels marked with * are approved for use in China*

7.0 OPTIONAL CAN BUS TETHER FEATURE

The MLTX2 transmitter can be ordered with an optional CAN bus tether feature. This feature allows for the operation of the transmitter as a wired transmitter with no wireless radio transmission. If the MLTX2 transmitter was ordered with the CAN bus tether feature, this section applies to features and operation of the transmitter in tether mode.

7.1 INSTALLATION OF TETHER CABLE

The tether cable is attached to the CAN connector on the transmitter by lining up the alignment groove and inserting the plug into the CAN connector receptacle. Twist the locking ring on the CAN plug clockwise to tighten it down and prevent accidental disengagement.

7.2 OPERATION OF TRANSMITTER IN TETHER MODE

With the tether cable attached, turn on the transmitter following the start-up sequence as outlined in Section 3.2.

During the start-up sequence the transmitter will automatically recognize that the tether cable is attached and communicating and switch into tether mode. Tether mode turns off the wireless transmitter and sends all command signals through the tether cable.

If the transmitter has the optional graphic user interface screen installed, visual verification of the transmitter being in tether mode can be observed on the screen.

NOTE: The transmitter must go through the start-up initialization sequence with the tether cable attached to activate tether mode.

All controls on the transmitter will work the same regardless of whether the transmitter is in tether mode or wireless mode.

NOTE: While the tether cable provides power to the transmitter when connected, it will not recharge batteries in the transmitter. To recharge batteries, you must only use the Magnetek Enrange *approved chargers for the appropriate battery pack.*

7.3 RETURNING TRANSMITTER TO WIRELESS MODE

To return the transmitter to wireless mode, power down the unit and disconnect the tether cable. Following the start up sequence from Section 3.2, restart the transmitter. The transmitter will automatically sense that it is no longer connected to the tether cable and start the unit in its normal wireless mode.

7.4 CAN CONNECTOR RECEPTACLE PIN-OUT DETAILS

The CAN connector receptacle located on the transmitter has specific pin assignments. It is very critical that these pin assignments are matched in the CAN cable assembly.

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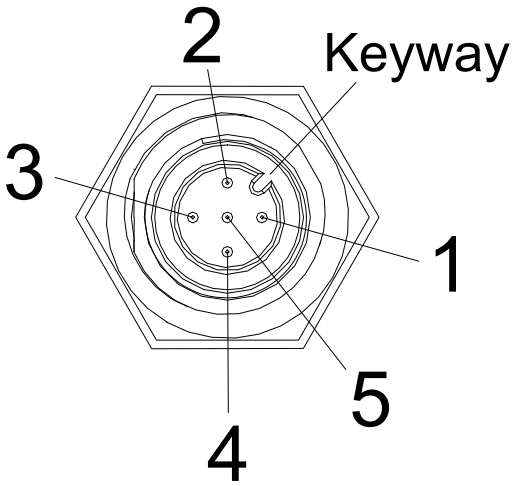

CONNECTOR PINOUT (MALE PIN CONNECTOR)	
5-PIN CONNECTOR	FUNCTION
PIN 1	SHIELD
PIN 2	+12/24VDC
PIN 3	-12/-24VDC (common)
PIN 4	CAN-H
PIN 5	CAN-L

Figure 14: CAN Connector Pin Out details

8.0 GENERAL TROUBLESHOOTING

Problems	Possible Reasons	Suggestions
Transmitter will not turn on	Batteries are dead or installed backwards; battery holder is damaged.	Replace the batteries and confirm they are installed according to the polarity marking in the battery pack. Inspect all battery pack contacts for damage. When installing the battery pack into the MLTX2, confirm it is installed with the label facing out.
	Transmitter is failing switch scan	Be sure all switches and motions are in the off position on startup. See Section 3.2 for more info.
	Transmitter Machine Stop Switch is down or pressed	Be sure the Machine Stop switch is pulled up.
Transmitter will not respond with the receiver	Incorrect system RF channel	Make sure the transmitter and receiver unit are both set to the same RF channel. See Section 4.2.2.
	Incorrect system access code	Make sure the transmitter and receiver both have the same access code. See Section 4.2.1.
	System out of range	Make sure that the startup procedure is initiated within 300 feet from the receiver location. If equipped with the Signal Strength Indicator, make sure the level is greater than 0%.
	The antenna on the receiver is missing, damaged, or improperly installed.	Inspect the antenna on the receiver for damage and try to locate the antenna in a location that is visible when operating the equipment at all times.

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8.1 TROUBLESHOOTING OPTIONAL TETHER OPERATION

Problems	Possible Reasons	Suggestions
Transmitter will not turn on	Connecting tether cable is not installed, installed improperly, or is damaged.	Inspect the tether cable and confirm that it is installed and secured correctly. Inspect all connectors, connector contacts and cable jacket for damage.
	Transmitter is failing switch scan	Be sure all switches and motions are in the off position on startup. See Section 3.2 for more info.
	Transmitter machine stop switch is down or pressed	Be sure the Machine Stop switch is pulled up.
Transmitter will not respond with the receiver in tether mode	System not in tether mode	Make sure that the startup procedure is initiated with the tether cable attached. Ensure that all tether cable connections are secure prior to startup.
	The tether cable or connectors are damaged	Inspect the tether cable and connectors for damage.
	CAN settings are incorrect	Verify that CAN settings match project specific CAN bus document
Transmitter will not respond with the receiver in wireless mode	System not in wireless mode	Make sure that the startup procedure is initiated with the tether cable detached. Ensure that the startup procedure is initiated within 300 feet from the receiver location.

8.2 ASSEMBLY AND REPLACEMENT PARTS

If your transmitter ever needs repair, we always recommend that you have Magnetek perform the repair. If you need to refer to a parts list, refer to your transmitter's drawing that was included in the shipment of your transmitter. Please contact Magnetek's service department at 1.866.MAG.SERV for information regarding parts and service.

9.0 EU DECLARATION OF CONFORMITY

MAGNETEK

EU Declaration of Conformity Certificate

For the following equipment:

Product	:	XLTX/MLTX2 Series Radio Remote Control Transmitter
Multiple Listee Model No.	:	XLTX, MLTX2
Manufacturer's Name	:	Magnetek, Inc.
Manufacturer's Address	:	N49 W13650 Campbell Drive Menomonee Falls, WI 53051 USA

The undersigned hereby declares on behalf of Magnetek, that the above-referenced product, to which this declaration relates, is in conformity with the provisions of CE Mark Directive (93/68/EEC), Machinery Safety Directive (MD) 2006/42/EC and Radio and Telecommunications Equipment Directive 1999/5/EC.

The standards relevant for the evaluation of the product referenced above conformity to the directive requirements are as follows:

EN 301 489-1 V1.9.2	EN 61010-1:2010
EN 301 489-17 V2.1.1	EN 13557:2003
EN ISO 13849-1	EN 12100:2010

The Technical Construction File is maintained at:

Magnetek, Inc
N49 W13650 Campbell Drive
Menomonee Falls, WI 53051 USA

The European contact for technical documentation is:

Brian Preston
Magnetek
20 Drakes Mews
Crownhill
Milton Keynes
MK8 OER
United Kingdom

Per Annex II.B of the Machinery Directive (2006/42/EC):

The machinery, product, assembly or sub-assembly covered by this Declaration of Conformity must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the applicable Directive(s). This statement is only necessary where the product is to be incorporated into a machine or system (e.g. a safety component).

Signature of Authorized Person:

Ben Stoller / Director - Radio Controls

For Magnetek, Inc.
Menomonee Falls, WI USA

January 3, 2013

Date of Issuance

MLTX2 Transmitter

Technical Specifications

Transmitter Specification

Temperature Range:

- -40°F to 185°F (-40°C to 85°C)

Environmental Protection:

- IP66 and NEMA 4 Transmitter

Operation Range:

• Non-Licensed Part 15	Up to 300 feet (91.44 m)
• Non-Licensed FHSS	Up to 3000 feet (914.4 m)

Frequency Range:

• Non-Licensed Part 15	430-439.8 MHz / 902-928 MHz
• Non-Licensed FHSS	902-928 MHz / 2.4-2.5 GHz
• Government Band	405-430 MHz

Output Power:

• Non-Licensed Part 15	Less than 1mW
• Non-Licensed FHSS	10 mW, 100 mW, 200 mW
• Government Band	1mW

RF Channels

• Non-Licensed Part 15	32 channels
• Non-Licensed FHSS	32 channels
• Government Band	Up to 1000 frequencies

Antenna:

- Internal
- External Optional

RF Type:

- TMS (Time Multiplexed Signaling)
- FHSS (Frequency Hopping Spread Spectrum)
- Microprocessor Controlled PLL synthesizer
- Transceiver

Response Time:

- Approximately 50 ms

Test & Certifications:

- FCC Approved Part 15, Part 90
- IEC 68-2-34 Random Vibration
- IEC 68-2-27 Shock Testing
- IEC 68-2-31 Drop & Topple
- SAE 1211 Dust Testing

Graphic Display:

- Backlit display
- 2" x 1.22" (51 x 31 mm)
- Multilingual with standard ACSII characters

Weight:

- Approximately 1.5 lbs (1.13 kg)

Dimensions:

- Approximately 6.5" x 4.9" x 4.6" (165 x 125 x 117 mm)

Transmitter Component Specifications

A total of 6 inputs are available for analog components.

Joystick:

- Dual Axis stepless/proportional, up to 2 per transmitter
- Optional stepless/proportional third Axis, 2 per transmitter (IP65)
- Square Gate standard, Plus Gate optional

Potentiometers:

- Single turn

A total of 12 Toggle Switches or 24 inputs are available for digital components.

Toggle Switch:

- 2 position momentary
- 2 position maintained
- 3 position momentary
- 3 position maintained
- 3 position maintained/momentary

Push Button:

- Momentary
- Red, Green, Blue, Black, Yellow

E-STOP:

- Military Grade Push/Pull

LED:

- Red, Yellow, Green, up to 4 per transmitter

Rotary Switch:

- Up to 12 positions per switch

Key Switch:

- 3 position maintained/momentary
- 2 position maintained

USB:

- Programming Port, Optional

Infrared Port:

- Programming Port, Optional

Labeling:

- Custom labels per application
- Multilingual
- Multi-Color

Note: Other components (joysticks, switches, potentiometers, etc.) may be available upon request. Consult the factory for compatibility.

P.O. Box 13615
Milwaukee, WI 53213
Toll-Free Phone 800.288.8178
Toll-Free Fax 800.298.3503

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Phone 262.783.3500
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Canada Facility
4090B Sladeview Crescent
Mississauga, Ontario
L5L 5Y5 Canada
Toll Free Phone: 800.792.7253
Fax: 905.8281526

www.magnetekmh.com

Battery and Charger

Battery Type:

- *Rechargeable:* 3.6 V NiMH, 3Cell Pack, 2100 mAh
- *Disposable:* Three AA Alkaline Pack, 2300 mAh

Service Life:

- *Rechargeable:* 500 cycles

Battery Contacts:

- Gold Plated

Battery Chargers:

- Maximum 3 chargers per power supply

*** Note: Charger will only work with rechargeable pack ***

Battery Charge Time:

- Fast Charge: approx. 2-3 hours

Charger Power:

- 120 Vac 60 Hz, 12/24 Vdc

Labeling

- Custom labels per application
- Multi-color
- Multilingual

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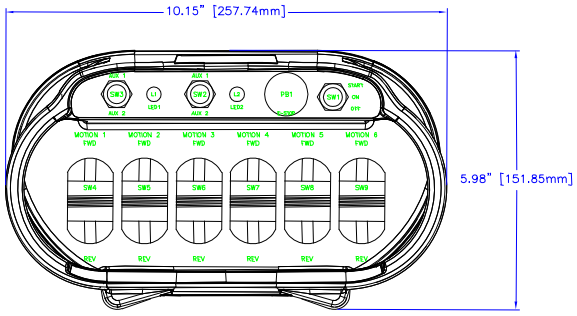
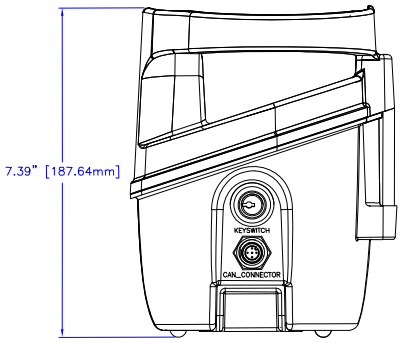
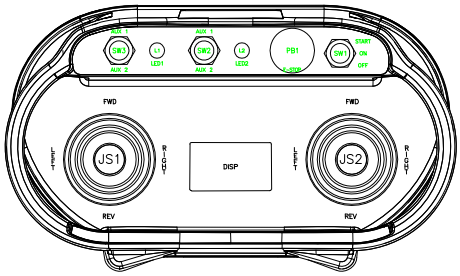
TYPICAL APPLICATION LAYOUTS



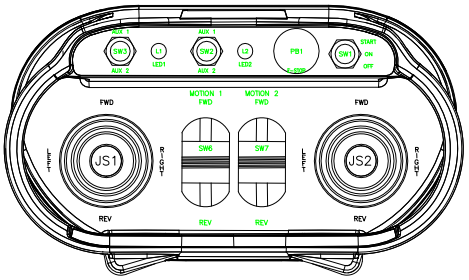
MLTX2 Configuration with 6 Paddles



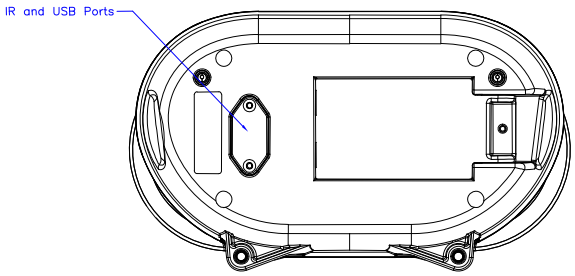
MLTX2 Side View with Keyswitch & CAN Connector



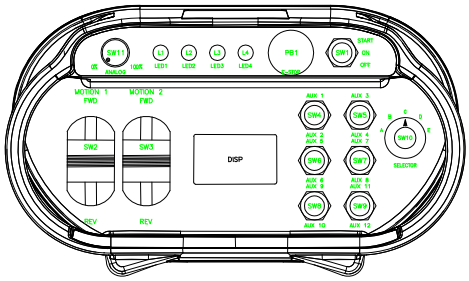
MLTX2 with 2 Joysticks & Display



MLTX2 with Joysticks & Paddles



IR and USB Port Location



MLTX2 with Display & Assorted Components

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Brochure No. MLTX2 Tech Specs